

## Mohnish Pabrai's Presentation and Q&A with students at the Boston College on October 27, 2022

Arvind: Mohnish, thank you so much for being here. As always, we're ecstatic to have you. I can't wait to jump right in.

Mohnish: Okay, well it's great to be here. I don't recall what year this is for us. Arvind do you know how many years it's been?

Arvind: I think its 13 or 14, it should be in that range.

Mohnish: All right, time is flying and it's good to see you and good to be with your class. The good news is that since you don't have any repeaters, I can use the same jokes, right? I don't have to keep coming up with new jokes. Alright, I'm always excited every year to speak to Arvind's class because it's such a hardworking and dedicated group. I think you guys have a treat in life having him as an instructor and all the amazing speakers he brings in, and somehow, he still finds room for me, which I'm surprised about every year. But I'll take what I can get. Anyway, what I'll do this time is I'm going to go through some slides which you can see is the Uber cannibal framework.

We'll get through these; I haven't timed this before. It's a new presentation, maybe 30 to 45 minutes, something like that. Then we can get into Q and A, what you have in mind and what Arvind has in mind, and it can be related to what I've presented, or it can be whatever else you want to talk about. We'll take it from there so that I'll get going. I think Charlie may be speaking to you soon, which is awesome. He has this quote, "pay close attention to the cannibals, the businesses that are eating themselves by buying back their stock". Basically what going we're to do in this presentation is what Charlie says in one sentence.

We're going to have about 45 slides to explain what he means by that one sentence, and then take it from there. I'm going to go through some different companies and what they've been doing in terms of buying back their shares and kind of what that's led to. There are a range of different businesses, and some of these you might be familiar with, and others you may not, but that's okay. The one that the poster child or there are two that are actually poster children of these cannibals, which are in our time, in the sense that they still continue to gobble up as much talk as they can. The first one is NVR, which is a mid-Atlantic home builder and NVR made some changes.

They went through bankruptcy or near bankruptcy experience in the early nineties. The CEO at the time did a bunch of soul searching and he basically changed their

complete business model in how they operate. In fact, now the home building industry, most of the other major players have shifted to his business model. What he started doing is three things, number one no dividends, number two no stock splits and number three the place where most home builders put their cash and capital is in purchasing land. He also went to a capital light model where, instead of having large land banks, he basically went to a model where they only had land for the next year or two of homes to be built. Beyond that, they had options on purchasing land from landowners.

What you notice over the last 28 years is the share price, which was \$5 and 50 cents in 94 is now approximately \$4,000. In fact, one thing to keep in mind about all these top prices is that, in general we are not at peak valuations right now. We've seen significant declines in equity. In fact, if you look at NVR they were close to 6,000 at the end of last year. The stock went from \$5 and 50 cents to about 4,000. It's not a dotcom and it's not a tech business, it's a home builder. It doesn't have a fancy PE I mean, it's trading at less than 10 times earnings, it's not like it's on some euphoric PE or anything. If you look at NVR as a business in 93, they had almost 18 million shares outstanding.

They have 3.3 million shares now. They've bought back 82% of their shares in the last 28 and a half years. No dividend, like I said, no stock splits. The stock's gone from \$5 and 50 cents to more than 4,000. It's a 727 bagger. Now earnings went up 150X, which is massive. We're going to look at a bunch of other companies soon, and you will notice that none of them took their earnings up, anything near that rate. This is a 27% annualized rate of return over almost 30 years. It's quite remarkable what they were able to do. There is a formula I came up with and I actually came up with this formula as I was putting these slides together. The best way to learn is to teach, which is why I love doing this class with Arvind because it forces me to learn.

I think the way to calculate the cannibal return formula is to look at the growth in earnings and multiply it with the shares left. You can take hundred as a numerator, and then 18 as the denominator in this case, which is the percentage of shares left. It's about 5.5 which is the multiple pop you get because of share reduction and then the multiple expansion. Like I said, because right now no one is buying any homes with 7% mortgage rates and all of that their multiple is pretty low. This predicts like a 783 X, and it's pretty close to that. Its 700 odd X in both cases. The second one, which is the poster child, is AutoZone. The interesting thing to remember about NVR and AutoZone is that these are very basic businesses.

These are not businesses that you would think of as being high flyers or kind of a high return equity or any of them, even though they've become that way. NVR is a

very high return equity business because basically they took away anything that takes up a lot of equity. If we look at Auto Zone, they had over 150 million shares outstanding about 24 years ago. Now they have 19 million shares outstanding, the shares outstanding have gone down a lot. It trades at the mid to high teens, kind of multiple. Again, if we look at the story here, 87% of the shares have been bought back in 24 years, no dividends. They didn't get the memo about not doing stock splits.

They've come into the stocks place, but if you adjust their stock, it's basically gone from 27 to 21.60. It's an 80 bagger. Over this 24-year period, earnings went up 11 X and it's a 20% annualize rate return. Again, if we look at our formula, you get about an 85 X and it's about 84 X, so it's pretty close. Then we get to the other one, which is AutoNation. Both AutoZone and AutoNation are ones that Eddie Lampert had a significant position and actually had influence on the board. Basically I think that's one of the reasons they went down this path of buying back the shares. AutoNation is basically a car dealer with dealerships all over the country. They've got all kinds of brands that they have dealerships for. They had 450 million odd shares outstanding and now it's about 56 million. Actually in their case it's a little bit distorted because their multiple is really low right now. They're trading it like four times earnings. Maybe this might be something interesting to look at. But anyways, 88% of its shares has gone in the last 24 years, no dividends. The stock is an eight bagger. The earnings have gone up just three times over this 24-year period. It's about a nine and a half percent rate of return. But one thing to just adjust is that, if their PE is of three or four times, the current PE then wouldn't have an eight bagger, it would really have like a 20 odd bagger, and those return annualized returns would change.

I haven't looked at AutoZone in a lot of detail and I haven't looked at specifically why it's at such a low multiple, because generally speaking the auto manufacturing business is not a great business. But the dealerships are a tremendous business. Especially if in their case, they've got a lot of like Porsche, Mercedes, and BMWs and so on type dealerships, basically, the back of the house which is doing all the parts and service that's a license to print money. It's very high return. The front of the house does really well on the used cars and the financing. The place where they don't do well is the new cars, because people can compare and shop and all of that, but they tend to make it on the financing and other aspects. Overall car dealerships are a very good business.

Then we look at H&R Block, and this one actually was a little surprising for me to look at. For 24 years, they had 400 odd million shares outstanding which is now about 160 million trades 10 times and historically traded a little higher. Again, in their case, they bought back 63% of share. They haven't been as rigorous on their

buybacks and as consistent. They've had dividends and all that. Stocks only gone up 3X and earnings have only gone up 1.4 times. I would've expected this business to actually have done better because it's actually a very stable franchise business where the tax code keeps getting more complicated. Most of us either need TurboTax or some preparer. An H&R block is a low cost producer amongst tax preparers.

But anyway, it's an 8% analyst return with reinvested dividends. Then we look at Jack in the Box. They used to have like 72 million shares outstanding, and Jack in the Box has been, over the years, kind of slimming down. They've been converting their company own stores into franchise stores and getting a little more capital right over the years. But again, this is one I would expect it would've done better than it's actually done. But anyway, the shares outstanding have gone from 70 odd million to 20 million. They've bought back 71% of their shares in 16 years. Earnings have been flat which is surprising, and just the 6.3% annualized return over that period. Recently they bought Del Taco, which is interesting. It's kind of like Taco Bell. We'll see what they'll do with that.

Usually, if you can run these businesses the way Burger King is running, which is mostly franchised all the way Dairy Queen runs then they're really good businesses. Then we have Apple, which is basically gotten buyback religion in the last 10 years. If we look at Apple, they used to have 26 billion shares outstanding, and it's about 16 billion now. They just reported earnings and they actually had a good quarter. Anyway, about 40% of shares have been bought back in the last 10 years. Again, split adjusted, it's a six bagger. In the last 10 years, the earnings have gone up 2 1/5 X. Apple's delivered about a 21 and a 1/5% annual greater return with the reinvested dividends.

We know that Warren has the stock, and I think Warren is very happy with them doing these buybacks and increasing his ownership every quarter or Berkshire's ownership. Then we have IBM, which also Berkshire used to own. IBM in the last 28 years, they had about 2.3 billion shares out, and now it's about 900 million. You can see that they basically stopped their buybacks in 2018. In fact, the share account has been going up after 2018. If you look at the entire period, it looks like a six bagger, and earnings went up 3X. But IBM is actually a business that you actually have to parse a little more carefully. If you look at the business from 2001 to 2022, which is 21 years, it's zero returns.

The reason it's zero returns is, it's actually a business in decline. Buffett bought the stock in 2011, and he sold the stock in 2017. For him, it was actually a loss. It was a negative return over that period. One of the things that's really important about Cannibals I think might be in the next slide, we'll actually get to that in a second.

Then you look at Sears. We have a number of stocks here where Eddie Lampert has his fingerprints, AutoZone, AutoNation and Sears, the buybacks have worked for AutoZone and AutoNation. They have not worked for Sears. The reason they didn't work for Sears is, he was buying back shares from 2006 to 2011 and took out about a third of the shares over that period. Eventually, Sears declared bankruptcy. If you look at this particular one that returns are zero, basically anything multiplied by zero is a zero. When we do buybacks, one thing to keep in mind that's really important is that it is okay for the business to be cyclical. For example, NVR is a cyclical business, the business's ebbs and flows, but we cannot have a business that goes into secular decline. The nature of capitalism is that, almost everything is going to go into a secular decline after a few decades or less. One needs to really have a viewpoint on what the business looks like 10 years from now, or 20 years from now. I remember recently, I was talking to Charlie, and he was musing about Apple, and he said, "they don't really have much in terms of book value". He was saying, look, if you own a car dealership, and the business kind of goes sideways or goes down, we've got the real estate and we've got a few hard assets and we can salvage something from all of that. Business like Apple is trading on a multiple of future earnings. It's not trading on one time book value or something. Apple is an interesting business because at least when I look at it, I don't see anything affecting their franchise for 10 years, but I can't make that statement for 20 years. What does Apple look like in 2042? I don't know, it could be a much stronger company than it is today, or it could be a much weaker company than it is today. I think 10 years from now, I would say that the odds are pretty high that Apple is still cranking best.

Anyway, I also parse NVR a little bit more than we did in the first go around, and this slide has a little bit more granular data on the amount of shares that are added to compensate management versus the shares bought back. If you look towards the bottom, there's a role. It says, "shares added through incentive plan". You can see in 94 was 2%, then 96, its 11%, and there's been a consistent number of shares that's been added. Now, they bought back so much that the net effect is still a reduction in share count. We looked at the net reduction in share count. But the thing is that, if you look at it's consistently through the entire period, approximately 5% of the business has been given away to the knights who manage the castle.

The CEO and the senior team is in effect extracting approximately 5% of the equity value every year as their compensation for running the ship. Of course, we have to pay the knights to run the castle, but how much we pay them does matter. If we look at NVR or the entire period you know, entire 28-year period, they bought back approximately 6% a year. But if you look at this period from 94 to 2005, during that period, they bought back nine more than 9% a year. If you look at the returns over that period, 94 to 2005, the NVR stock went up 128 X over that 11 year period,

which is 55% annualized. If we look at the period after that, which is, 2006 to 2012, they only bought back less than 2% a year.

Then again, 2013 to 2022, about 4%, and 17 to 22 is about 2%. This is much lower than the 6% overall or the 9% over that period. If we look at the annualized returns from 2006 onwards, it's a 6X, 12 and a half percent, not too bad. Then in the last five years, it's about 3% annualized. Now, that's not a long enough period. Their stock has also gone down about a third over that period. But we can also see that their buyback rate has gone down a lot. When we look at that formula we had, which is the multiple, the growth in earnings with the amount of shares that are reduced, and then any kind of multiple expansion you get, 2% annualized share con reduction is unlikely to get you to the promised land. We'll see a little bit more about this in a second. Now if we compare it to Apple, in this case, the knight or the knights who are running the castle are, on average, taking about 1% of the business every year. The shares added to the incentive plan is approximately 1%. Of course, the difference in those two companies is a massive amount of size difference, Apple has 400 billion or something in revenue and 2 trillion or something in market cap. If they take away 20 billion a year and give it to their worker bees and their senior management and so on, it's more palatable just because the size is so big. 1% is okay, it doesn't affect things that much.

5% is there, I mean, NVR has delivered over the years. Now, the other thing that's happened with Apple over the years is that, multiple has gone up. They've bought back an average of 5% a year and really from 2013 to 19, or five and a half percent, close to 6% a year. More recently, because the multiple has gone up, it's about three and a half percent. It's unlikely that Apple, unless they were to lever up, is going to be able to buy back more than 2 to 4% a year. The buyback rate is an interesting one to look at, just because it tells you something. Why did buybacks not work for IBM and Sears? We cannot have businesses. I mean, it's just common sense.

I own 10% of our business. I keep buying back the shares over time. I own 20% of the business. That's all fine if the value of the business has gone up over that period, earnings have gone up, everything's gone up, and then I get the kicker of more shares own or a bigger fraction of the business. But if the business is in decline, it's actually going to hurt you a lot because you never got the dividends, you never got to put it somewhere else. What can be a really great boost can end up being a terrible outcome because the business wanted to decline. It's really important that when we look at these cannibals, you have to look pretty deep into the future. Let's say if you look at a business like AutoZone in the absence of electric cars, if we continued with internal combustion engine cars, AutoZone is a great business.

Basically, their demographic that uses AutoZone really leverages AutoZone a lot after the cars are out of warranty or extended warranty, kind of cars that are more than 7, 8, 10, 12 years old type of cars. Because they've got so much expertise in the store and ability to quickly stock up or replenish the stores and so on, and they've got such high margins on their stuff it works. Now, electric cars are very small today, but they're going to become a larger and larger portion. California has a mandate that up to 2035 you cannot sell internal combustion merchant engine, new cars, the used cars are still there, but if by 2035 or 2040 or 2045, all cars sold are electric, then they would start feeling that. They'll already start feeling it even now because there's a small decline taking place every year, which is going to become a large decline.

Of course, they're demographic and they're servicing cars. What I'm saying is that I don't think AutoZone is going to go into a decline in 10 years, and they may not even go into a decline in 20 years (just because the lag from the time these cars). But, 30 years becomes questionable. AutoNation, because the franchise laws of the US and all of that being so tight, I think the business will be around. But again, what is being spent on service today with combustion engine cars versus what will get spent on service with battery powered cars is quite different. Not quite sure whether the back of the house is going to be a good business as it is today.

It may be because the cars are more complex, so only the dealer can deal with them and so on. But, what I'm saying is that, when we look at these businesses, it requires us to really go deep into the future and look at them because, if they're going to do these furious buybacks, then you need to look at that. Some things about the framework, (and then we'll dive in a little bit deeper) is that again, we've talked about stable or growing earnings. One needs to have a view from 2022 to 2042. Cyclical is okay, and we are a cyclical, but it typically don't lose much during downturns because they don't really build spec homes. Every home they build is already sold, and they just have a few models that people walk through and so on.

The only thing they lose when they go down is that, they overhead what it costs to run the businesses. They may not be able to sprint much. But if you look at this period from 2007 to 2009, which was pretty much the most extreme stress test you can put any home builder through and we was profitable through that period. Their profits dropped a lot, but they didn't lose money because of these characteristics. There's an interplay between the earnings growth, multiple expansion, and the amount of shares bought back. If a business is growing its earnings 15% a year which means the earnings are doubling every five years, 72 and 84% of the shares are taken out over a 20-year period, that's a hundred bagger.

You didn't need to have a really high rate. I mean, 15% is a healthy rate of growth, Apple is growing about 10% a year or something. If earnings wrote 10% a year, 80% of the shares are taken out, multiple expands by 50%, and it'll be a 50 bagger in 20 years. You can get some spectacular returns, even with 10, 15% consistent growers. In the end, what matters after 20 years is what percent of the shares are gone? What are the typical earnings in growth? Is the business still stable and growing? What multiple is a market awarding the business? The important thing in all these cannibal-oriented businesses is they shouldn't hold back from investing or reinvesting in their business if they've got great opportunities. AutoZone is still opening new stores, it's just that they're taking some of their excess capital and using that for buybacks.

The interesting thing to keep in mind about cannibals is, we had two very fine investing minds who make large mistakes with cannibals. We had Buffett with IBM and we had Eddie Lampert with Sears. Sears is the mistake, but Eddie's been a great investor beyond that, I mean, he did really well with AutoZone and a bunch of other things, and I think the Sears and Kmart buys were really good. It was just him trying to run those businesses for a long time, which was where the mistake lay. He actually got his money back pretty quickly by getting rid of some assets and some stores. Then I think he needed to just package and sell the whole thing and move on, which is where the mistake lies. If you look at some businesses, which I think look like great cannibal candidates, ADP for example, anything's going to happen because, disruption comes from all over the place, but I can't see their business really going into decline in 20 years. It hasn't gone to decline in 60 years. Illinois tool works just because it's like a mini-Berkshire Hathaway. Microsoft, I think looks very solid for a very long time. Alphabet, Amazon, Tencent well maybe not Tencent after what's happening in China, but at least Tencent two weeks ago or something. But it still might be okay. These are really good cannibal candidates. They need to prioritize internal growth at high ROE or buybacks. Only buyback when they don't have other stuff going on.

If we end up with a gifted capital allocator, (which is really hard to end up with) who knows when to throttle the buyback, when to increase, and when to decrease, then you really get magical returns. That's really hard to get because most management teams aren't really good at understanding when to do them. But we had one manager besides Buffett, and that was Henry Singleton who ran Teledyne and Henry Singleton, Charlie knew Henry and Henry could play chess blindfolded with 8 people at the same time and beat them all. He was just an amazing manager, amazing business person, and great capital allocator. He founded Teledyne in 1960 when he was 40 odd years old, and from 65 to 70, he acquired 130 companies issuing stock to acquire these companies. Typically, he was buying these companies

for kind of like around 10 times earnings, and he was issuing Teledyne stock to the sellers, and the Teledyne stock was trading between 40 and 70 times earnings.

Basically, you could think of it as a roll up, but it wasn't really. He was very heavily in aerospace. Then he branched out into a few other places, but he did a bunch of things, which is very similar to the way Constellation software runs, or maybe even some similarities to the way Berkshire runs. When he bought a company, even if he owned very similar related businesses, he left those companies alone. He left inefficiency in terms of, they didn't try to consolidate the back office, put all the HR under one company, put all the payroll and accounting under headquarters or any of that. He kept the business unit independent with the inefficiencies of running everything as a separate business. The reason he did that, to the same reason the Constellation does it, is he wanted to hold the managers accountable.

The managers had incentives. Typically, they were the owners that had sold on the business or maybe someone the owner had nominated to run the business. They paid very close attention to how these businesses were performing. Because they never integrated them with their acquisitions, they could easily do Apples to Apples comparisons and take care of that. Then in 1970 and 72, when the bear market set in and Teledyne stock nosedived, its PE fell below 10, and he could no longer use stock to buy things. What he did is, from 72 to 84, in 12 years, Henry bought back more than 90% of Teledyne's shares outstanding. His earnings in this 12 year period tripled. He was at approximately a dollar 64 a share in earnings, and by 1985, he was \$45 a share earnings.

The stock went up 40 X period. In fact, what Teledyne did is, most of the buybacks were not done in the open market. He issued tender offers to buy back shares, and the first tender offer was issued in 74, he offered to buy a million shares, I think for like \$20 a share, and 9 million shares got offered. He was really shocked at the number that was offered, and he took the entire 9 million, and then later he did six or seven of these tender offers, and he didn't have the cash because the amount he was buying back outstripped the earnings. What he did is exchanges. He told the shareholders that they could give Teledyne the stock they had, and in exchange they got 10% to ventures. Amazingly, all these people were really excited about taking the 10% a venture and giving him the stock.

Nobody in the seventies wanted to own stocks. It was a terrible period in terms of return, but it was a great period for Henry. You look at Henry in the sixties, he's issuing shares furiously and the seventies, he's buying back shares like crazy. If we do a comparison between Tim Cook and Henry Singleton, I know this is not a fair comparison because Tim didn't have the 1970s to work with, but Apple tripled its earnings in the last 10 years, and Teledyne tripled its earnings in 12 years. It took a

little longer than Apple. We have one for Tim and zero for Henry. In terms of the earnings growth. Apple bought back 39% of shares in 10 years, and Teledyne bought back 90% of shares in 12 years. Henry trounces Tim Cook and Apple is up 6X in 10 years, and Teledyne ends up 40X. Here you see earnings going up very similarly, or the buyback period is also very similar in terms of its 10 or 12 years, but you see a huge difference because the valuation Deltas allowed Henry to buy back. Henry was furious about the buybacks in the sense that he bought back well beyond the earnings of Teledyne, he took on debt to buy back the shares, and then later he retired all the debt. You see this 40X in 1985, and Henry knew Charlie, and he approached Charlie and Warren, I don't know exactly when, but my guess is somewhere in the mid-eighties, he approached them, and he wanted to, after this 40X, sell the entire thing to Berkshire. Berkshire was interested in buying Teledyne with a bunch of very high-quality businesses. He even had bought a bunch of insurance companies and whatever, but what Henry wanted, I told you, he pays just blindfolded with eight people and Windsor and all eight. He told Warren and Charlie that he wanted only Berkshire stock. He didn't want cash.

His final, I would say brushes on the painting, was to take the 40X. Then at that time, Berkshire shares were about 2000 or \$2,500 a share. It would've been about a 200X from then till now to his estate. Of course, Warren and Charlie balked at issuing Berkshire stock and so that deal never took place. But Henry still did fine. The interesting thing about Henry Singleton is the people he had on his board, he had [inaudible] [0:47:37], in Dallas, the Egyptian thinks, you can look him up on Google if you've not heard of him. He passed away recently. He had Arthur Rock, who was one of the first venture capitalists ever in Silicon Valley, fund Intel and whatever else.

He had Claude Shannon. Claude Shannon was a MIT professor, and he was a mentor to Ed Thorp. These are just amazing individuals. Henry himself was amazing, but he had some really good advisors around him. This an interesting person to study. There's a book that came out several years ago called *Distant Force* which was written by Henry's number two guy, I think George Roberts. It's a, it's a great book to read if, if you're looking to learn more about Henry. Again, furious pace of buybacks was key. Henry took on lots of debt that he paid back later, and Henry bought back well above the annual earning. He really recognized when he had an opportunity, and he went for it.

The key factor is how fast are the shares being retired? How quickly can we get to 80% shares gone? 80% shares gone means if the earnings are stable, you have a 5X if there's no earnings growth and no multiple expansion. You just get a 5X just based on shares being taken. Then you have to ask yourself, how much can earnings grow in this period? Earnings growth wrote this CRE to multiplying that 5X and

then like, Henry, can we buy back a lot of shares at low multiples and end up with high multiples and much higher earnings, and then we get to the Promised Land?. When you look at people like Henry Singleton and Warren Buffett, Buffett actually did not want to ever buy back shares. He had a little different ethos from Henry.

He did not, in his words, want to play gin and rummy with his shareholders. While Henry sort of thought his shareholders as faceless people, Buffett thinks of his shareholders as partners. He doesn't want to really make money off his partners. He wants to make money with his partners. That's why, for the longest time, Berkshire resisted buying back shares. I think only more recently he's given a lot of, I would say, disclosures and is willing to buy back, but he wants to make sure the other side has all the information or nearly all the information that he does. Anyway, a little bit different ethos between every Singleton and Warren Buffett. Rare to have CEOs who know when to do buybacks. This is a very rare skill, when to pause and when to issue shares.

If you actually end up with a CEO who's a great operator, a great capital allocator, and exceptional at knowing when to do the buybacks and when to issue shares. I mean, you are like living in a utopian world. It's great. It's not great to be buying back shares at huge multiples. That just doesn't work very well. There is magic in buybacks, and the magic really starts happening when you start taking out more than 80% of shares. You buy back half the shares, you get a 2X, If there's no change in anything else, you buy back two third, you get a three x, you buy back 80%, you get a 5X, 90% is 10X and just keeps going, 99% with a 100X. The interesting thing is, it really starts getting interesting after 80%, but what you also saw is to buy back 80% for most businesses can take two or three decades. You need a lot of stability in the business or a very long period of time, and you need to have a view that the business is going to be stable over that period of time.

I didn't want to leave you hanging without any value edition with all this mumbo jumbo. I got you a list that you can look at and you can go shopping based on this list. These are all the companies that have the highest tenure buybacks ordered by how much they bought back in the last 10 years. We've got like 167 companies that are bought back more than 30% of shares in the last 10 years. You have all kinds of companies over here you can look at that have done that. Then we also have another list of companies that have done a lot of buybacks in the last five years. Again, it's another list you can look at and see which ones of these is good. What I would do if I were looking at this list is, I would look at the ones that I have some way of knowing that the business is going to be stable 20 years from now, and probably the business is going to be bigger 20 years from now. Union Pacific is in there and there's a good chance that railroad is cranking 20 years from now as well. H and R block is probably going to be cranking 20 years from now. There's another

list you can take a look at. That's pretty much it. We're basically going over what you have on your mind. Thank you.

Arvind: That was great, Mohnish. Thank you. With that, I'll invite the students to ask any questions that they'd like. Please don't be shy. Just use the raise hand tool, and I'll call upon you. Josh.

Josh: Hi Mohnish. Thank you so much for speaking with us this evening. My question for you is, you seem to favor stocks that pay a dividend. Is there ever any instances where it makes sense to buy a stock that does not have a dividend, but has a greater chance for a higher return?

Mohnish: I actually don't favor stocks that issue dividends. I'm not sure where you reach that conclusion. I've never paid much attention to the dividend when I'm looking and making an investment. A dividend actually, first of all is a little bit suboptimal in the sense that you've got two layers of taxation going on. One of the things which we didn't talk about in the buybacks is that, they're returning capital to holders without Uncle Sam taking his piece. There is a little bit of efficiency that you get in those buybacks. But yeah, I think that if a company is not able to invest in its own business at a high rate of return, and don't have appreciation for buybacks, then yeah, they should dividend it out. Of course, that's the only choice left, rather than letting it sit on the balance sheet and earn on nothing and so on. But yeah, I would prefer that companies that have really stable and good businesses and that they're going to be stable and good for a very long period of time, that after they're done in investing in their business that they look at the buybacks. I would prefer that over the dividend.

Arvind: Mohnish, can you talk a little bit more about that? It's interesting because a business, there's inherently that tension between continued growth for a good business and then buying back the stock. It may not be an intelligent thing to do for a business that's particularly early and it's runway but maybe more of a mature business. It may be of some intelligence depending on the price of the stock and the moment in time. But the businesses that you're pointing to tend to be more mature when they're buying back stock and generating good returns. How do you think about that?

Mohnish: I think business should always give priority to its internal needs and its internal growth needs. The important thing which a lot of managers and CEOs don't think a lot about is a return they're likely to generate from that additional capital going into the business. If they've got a great mouse trap and that great mouse trap delivers very high returns and equity, it's a no brainer. You put your money there, but if your reinvestment opportunity is going to give you 8% return or something, then you

need to evaluate whether a dividend makes sense. If the stock is at a very high multiple, then maybe a dividend is a better way to go than a buyback and such. I think if you're looking at those three-options dividend buyback or internal investment and this is where most CEOs are useless, because they usually get promoted. The number one reason they get promoted is they're exceptional salespeople or exceptional marketing people, they're able to build a lot of, you know, relationships and so on.

The capital allocation aspect of their skill set is never really tested until they're in the top job. If someone ran R&D at Intel, they never allocated capital. They just did R&D of their end marketing, again, they never allocated capital. Then when they actually get the top job, that added piece, and I think that way Tim Cook has been a really good CEO because he felt like he didn't understand these things well. Then he asked himself, who are the best people who can help me learn these things? He reached out to Buffett to specifically understand how he should think about allocating capital and buybacks and dividends. I think Buffett gave him some good pointers. Then he's followed that playbook, and I'm sure they talk probably a few times a year. I'm sure Tim just tries to keep improving his skill set on that front in terms of how he thinks about it. Apple's a good example in the sense that they do need to invest in their business, but they also generate a lot of cash. They could do the buybacks, they could do the dividends, they could invest in the business, or they could do acquisitions. How you sift through all that is important.

Arvind: Yep. Other questions, Caleb? Yep. Joe, please.

Joe: Thank you for being with us. I'm moving forward. Do you think that your investment strategy is going to change with higher interest rates or geopolitical situations? Are you aiming towards a different industry or how are you thinking about that before?

Mohnish: Yeah. When I first started investing in the mid-nineties, interest rates were higher, and of course, they just kept falling until very recently when they went really low. The long-term interest rate I always assumed is somewhere between 7 to 9% or something, I just used to assume that. But actually, the way I invest is because I'm looking for so much dislocation, those are Mickey Mouse factors. If I think the investment case, for me, doesn't rest on whether the interest rate is 4% or 7%. I think that type of a delta should have no impact, or even between 2% and 7% wouldn't have much impact on the way I think about things.

For example, I was not able to convince this company to do buybacks if they ever went down that bad would be quite incredible. But I found this company in Turkey, Reysas, they're the number one owner of warehouses in Turkey, which they rent

out to blue chip companies like Mercedes and Ikea and Car Four and Amazon, and so on. 12 million square feet, 99% lease inflation index, very stable very stable recurring revenues. In 2019, when we made the investment, the market cap was 20 million, and the liquidation value was like 800 million. It was trading at two and a half percent of liquidation value. Kind of crazy, I thought it was a fraud when I first heard those numbers.

Now I think the market cap is north of 150 million, it's moved up, even though the lira has collapsed and such and used to collapse. The interest rates in that particular case are completely meaningless. Are they borrowing it at 2% or 7% or whatever? You just have such a huge gap. I think that I also own an airport operator that's based in Turkey, but they operate 15 airports in eight different countries. In that case, the market cap was under a billion, probably their earnings in a few years will be 2 or 300 million. Airports are really good businesses, and they usually traded very high multiples because they're such amazing businesses. In that case, if I'm correct about their trajectory of earnings, the interest rates really become irrelevant. What we are looking for is, we are looking for some very wide gaps between price and intrinsic value. When you have a wide enough gap between price and intrinsic value, you can have a wide range of interest rates that would all lead to a great result. Some may lead to a better result, but it'll all lead to a great result as long as you are thinking about the business is correct. That's how I think about it.

Arvind: Caleb

Caleb: Hi. First, thank you for speaking. As others have said. Your Dakshana Foundation aims to give back to society through alleviating poverty through promoting education. What do you find is the biggest challenge in mobilizing that capital into getting it to help with education from there? What do you think the biggest challenge for translating that education into actual economic growth mobility is?

Mohnish: Yeah, that's a good question. The rules for charity and philanthropy are a little bit different from the rules we use when we are making investments. One of the differences is that you go high risk, high return. When we invest, we are trying to go low risk, high return. We are trying to minimize the downside while retaining substantial upside. But when we are looking at charitable endeavors and it was really Buffett to help me understand this, he said, "you really need to swing for the fences". It's perfectly fine if you swing for the fences and you completely miss. If you think about, for example, the Gates Foundation and their drive to find a malaria vaccine, now that is high risk, high return, right?

No one's found a malaria vaccine so far, and they've put a good amount of money behind it. It may or may not ever give a return. We don't know. But I think if you ask Warren about that particular one, he would say it's the right thing to do. Because the thing is that, if they succeed, they have a huge trajectory change in improving human lives across the world. The issue we face in philanthropy, which is very different from the issues we face as capitalists is, when I'm a capitalist running a business, I get to choose what area I want to focus on, and I get to choose what areas I want to put capital into. I will typically choose areas which have the greatest promise. For example, someone might think about coming up with an app, right?

I mean some kind of app which has the possibility to go viral, doesn't cost much, gets millions of downloads, and then some kind of freeway model. They end up building a business that's worth a lot. That tableware endeavor is very low risk and has the potential of high returns. When you're trying to build an app or something, you want to try to pick areas that have great promise. If you build an app, it doesn't work. You go build another app, doesn't work, build a third app, and you keep going, and some point something might work. When we go to philanthropy, here's your choices. Climate change, education, poverty, homelessness, drug abuse, healthcare, poverty, each single one of these is a very difficult nut to crack, okay?

If you just look at the homeless situation in Los Angeles, it's not an easy problem to crack. In a capitalist society, no one would deal with that problem or if you apply a capitalist lens, you would say, I'm going to fail. What do I do? The odds of failure is very high, but Buffett would say try to come up with the best approach you can and go all in on it. You fail, it's okay, but the upside is so much if you get some success that we should try. When I set up Dakshana, I knew I had to go high risk, high return. The second thing that you do in philanthropy, which is different from running an investment funder, allocating capital, is you concentrate to an extreme.

In my fund, I might have 10 positions, typically when I make a bet it's 10%. In charity, what you really ought to do is, you should try to have only one bet. The one bet should absorb all your resources, like go all in. The one thing that would deliver the biggest bang for the buck and is likely to move the needle is what you want to focus on. What I did with Dakshana is, I knew that we had to go all in on a single cause. The single cause is relatively easy if you can measure between different endeavors. The second thing that we did is most charitable endeavors do not lend themselves to measurement. For example, if you were to say is it higher ROE or social return equity to humanity, to take care of the homeless population in LA. Or is it better to reduce the effects of climate change?

These are very hard questions to answer. It's really hard to get the data which would point you in the right direction. What I did is, I inverted the problem, like Munger

says, “always inward”, I only looked at causes where measurement was easy. If you have a homeless population and you give out needles to everyone, that's a really good thing to do. What is the impact of that versus taking some people off the street into temporary housing, which is better? I have no idea which is better. I don't know how to measure between those two endeavors, it becomes really hard. I'm not interested in going down paths where I can't measure outcomes. I wanted to measure outcomes. I had a bias towards education. Education generally gives you more measurable outcomes.

We ended up with a situation where we are able to identify really poor kids in India who are really bright and we are able to spend 2 or \$3,000 per kid and do some pretty extreme changes to them and their family's future wellbeing. These are kids who are coming from families that are making 30 to 100 dollars a month well below the poverty line and so on. We have some of these alums at Google making over half a million a year now. Sometimes they used to go hungry at night, didn't have even boiled rice to eat. You go from not having boiled rice to eat to making 50,000 a month at Google. That's great trajectory change. That's how I thought about it. Unfortunately, most charities don't think like this. They think about what feels good, they think about what pictures will look good. They think about how they can raise a lot of money, and they don't even care about how efficient or inefficient their fund raising is. In some cases, 90% of the money they raise goes into the process of raising the money. They still feel that's great because they end up at 10%

Arvind: Quinlan.

Quinlan: Thank you so much, Mohnish. My question is about your time allocation. I'm curious about how much percent of your time you spend on people and how much percent of your time you spend on business, learning industry knowledge and try to analyze. I also learned that you have owned two companies previously and used to be an entrepreneur in technology. How this allocation of time evolves along your journey.

Mohnish: Yeah, that's a great question. I went through in 1999 which is like, 23 years ago, I had these two industrial psychologists who did a complete like 360 on me. They had me take a bunch of tests and they talked to people close to me, like my wife and family and friends and employees and so on. At the end of all of that, they gave me what I think of as my owner's manual. They basically told me who I was, and each one of us is different. At that time I was running a business with 170 people, and I actually hated to go to work. I loved that business when it was just me alone in my bedroom trying to build it. It was really a lot of fun till it got past 20 or 30 people.

Then it just kept growing and my job turned into herding cats and HR and whatever. They couldn't even understand how I was even able to function because that's so far away from who I am. They explained to me who I am. Between our genetics and what happens in the first five or six years of our lives, who we are is hard coded. It's not going to change after the age of six. If you look at someone at the age of six and you see them at 96, they're going to look the same, same traits, their behaviors might be different, but the traits are the same. The traits are not going to change. What they told me is that I'm a guy who likes to play games, but I don't like to play any kind of games. I like to play very specific kind of games. I like to play single player games.

For example, they said, I'm not the kind of guy who likes to be on a soccer team where the outcome depends on the whole team and the other team. They said I like to play games which are more like singles tennis than soccer. But they also said there were two more works in my personality. I like to play games where I think I can win. I've got something which is telling me with my wiring, hey, I think this will be an easy game for me to play and win. Single player games, games that I can win, and games that need no people.

In 99 when I went through this testing, I was just about to start Pabrai Investment Funds and I was explaining to them that, look I'm starting this new fund and it's only going to be me, and so on and so forth. They encouraged me to leave my business as soon as possible. I started a CEO search and six months later I left that company which was great. I felt really good. Then a few months after that, someone offered to buy it and we moved on. When they looked at what Pabrai Investment funds was going to be, they said, this is perfect. This will work really well for you. One of them then says to me, they weren't wealthy people, these two psychologists or psychiatrists, they said I want to invest in your fund. I said, "Look man, I'm giving you like \$2,000 to do all of this, and then you're going to give me a hundred thousand dollars to go into the fund. I really don't want to lose money for you and all that".

He said, "no, I cracked your head open. I'm not going to lose any money". He was one of the first investors in Pabrai Investment funds, and he did quite well. He knew what he was doing. Now it's been 23 years and I still love it because there's no humans. When you say spending time with people, I want to spend no time with no people except Arvind. Once in a while, I like to talk to Arvind and his students. COVID gave me some experience working from home where there are very few humans. I switched recently to a hundred percent working from home because it becomes completely single player. The Dakshana Foundation has a lot of people but it's in India.

Most of the operations are in India. I don't really run it. I've got a team that runs it and their biggest complaint to me is that they hardly hear from me. I said, it runs better because you don't hear from them. I know that I will be unhappy if I am deeply involved in the operations of Dakshana because that is not a single player game. I actually didn't even want to have a foundation. I actually wanted to write someone checks, but then I couldn't find people who understood what to do with those checks properly. I was forced to do the foundation, but I tried to set it up in a manner where it's a ring fenced. Whenever I go to India, I basically spend all the time with the scholars and their families, the students we have. I spend no time with the management team and all the people and all that, and they complain, "you didn't come into the office".

I said, yeah, exactly. I don't want to come into the office and have meetings and so on. That's how I proceed. If there are less people around it's always better. I like to play Bridge single player game. I mean, it's a player with game with a partner, so two players, it's okay, it works. Investing works. That's not a team sport. These types of things worked really well. I think everyone should get their owner's manual so they know how to go through life.

Quinlan: Thank you so much, Mohnish for spending your time with us.

Mohnish: It's a lot of fun once a year. Not bad.

Ben: When looking at a new CEO, what is the appropriate timeframe to judge if they're good at allocating capital?

Mohnish: That's a hard question. In an ideal situation we would have a long to look at. Sometimes we can get that long history and sometimes we can't. If you can get that, if you can look at someone and look at a long history of what they've done, it's one of the dilemmas I actually have looking at right now. I'm looking at this business where the CEO looks good, but it's his first job as CEO. He's been like kind of CEO for like three years and before that he's kind of been COO and VP and so on. I don't have enough trademarks and I'm trying to figure out who this person is. I'm like, there's an unknown there and I can't tell.

It's a problem. It's not easy to get there, but if you can look at long history. I made an investment in 2012 in Fiat Chrysler. Sergio Marchionne was the leader at the time. There were some Harvard case studies on him. He had run some previous businesses. There were a lot of trademarks, even a book written about him and so on. I had a lot of history then, which gave me a lot of comfort. But yeah, that's a great question. Try to extract whatever you can about their past. Sometimes we can get that and sometimes we cannot.

- Arvind: Trevor.
- Trevor: Yeah. Thanks Mohnish. I was wondering, the notion of intrinsic value that factor into your decision making process. If you could contextualize that for me, really in the class, it within the context of like an emerging technology or a startup, it seems like from a long time horizon view, this becomes a more significant challenge. I'm just interested to understand that definition of intrinsic, or what are you really looking at there when you factor that in?
- Mohnish: Yeah, that's a great question. The definition of intrinsic value is really simple. It's the sum of cash that can be pulled out of a given business would be now in judgment, discounted by some reasonable interest rate. Now, calculating that is almost impossible for almost any business you can think of. There's a very small sliver of businesses where you could actually get some kind of handle around what that cash generation's going to be over that period of time. I was actually misled and I think Ben Graham because he came out of this shell shock of the great Depression and the huge collapsed in prices in the 1930s, he anchored very heavily on intrinsic value, and he didn't even anchor on intrinsic value. We anchored on kind of a subset of book value.
- Basically, his perspective was that a business should not be held beyond what you might get in a liquidation for that business. That's actually, in my opinion, the wrong way to think about it. If you look at a business like Amazon, Amazon, through its history, hardly generated any cash. Look at their annual earnings for a long period, they were almost non-existent. The reason they were non-existent is because they were investing so heavily into the future of the business, and they never really clearly disclosed what that reinvestment rate is. We cannot look at the financials of Amazon and come up with a number saying X amount has been spent on growth, or X amount has been spent, which could have been distributed or have other uses.
- They don't break that out. Even if Amazon broke that number out, even if Amazon told us, "Look, the business had a hundred billion in sales and 7 billion in net income, and we ploughed five of it or six of it back into the business", even if they gave us that number, that still wouldn't help us, because what matters is not the number that they're reinvesting, but what is the outcome of that reinvesting? With Amazon, we've got two problems. We don't know the number that they're reinvesting, and we don't know what the trajectory of that reinvestment is. The correct way to think about a business like Amazon is to not even think about intrinsic value, is to basically say, "okay I know that they keep throwing things against the wall. I know that a lot of things they throw against the wall don't work".

But the way Jeff Bezos used to do that is the bed sizes are small when they threw stuff against wall. If things didn't work, they could write it off and move on, but there was so much asymmetry when things worked than when things did work, they got a massive exponential return versus what they put in, and then they could keep investing more and more. AWS is an example of that, put a little bit in, they saw it's working, they put a little bit more in. We really cannot look at AWS from the point of view of how much capital went in to build AWS. That's really has nothing to do with the value of AWS. The value of AWS is what happened to them, right? What the multiply effect that they got. When we look at a business like Amazon, and if I were an investor in Amazon, the only question I would ask myself is, is the business getting better?

Is the business better today than it was a year ago, two years ago, or five years ago? Is the valuation within some reasonable range of possibly giving me a good outcome long term? When I look at a business like Amazon today, and I look at their market cap and whatever, I don't consider it egregious. I don't consider the evaluation egregious based on the different pieces that are there. The way I would look at Amazon is, it's kind of buy and hold for it, okay? The time to rethink Amazon is not based on valuation. Unless it goes really crazy, the Amazon value goes to 10 trillion or 20 trillion or something, and all that's off tomorrow, go there over time, that might be okay.

But the question one is if the valuation goes extreme, or the second is the business isn't in decline, so you reach a conclusion that the business is worse than it was yesterday or the day or the five years ago. If the business isn't decline or the valuation is very extreme, those would be the two conditions under which, if I was an owner of Amazon, I would look to sell it, but I would not try to waste a lot of brain cells trying to figure out what the intrinsic value of Amazon is.

Arvind: Michael

Michael: Kind of going back to Quinlan's question. Obviously prior to running Pabrai Investment funds, you founded and ran a successful business. I'm just curious on how much of that experience do you think has contributed to your success in investing? If so, what do you think were the most important traits or performance attributes that you gained from that experience that was vital to running your firm?

Mohnish: Yeah, so Buffett has a quote. He says, "I'm a better businessman because I'm an investor and I'm a better investor because I'm a businessman". There's a lot of cross pollination that takes place between running a business and running a portfolio. He also says that "you can talk to a fish for a thousand years about what it is like to walk on land, but half an hour of actually walking on land would teach the fish a

lot more than the thousand years of talking about it; if the fish could survive on land". What I'm saying is that, to some in some way, they can't really answer your question because, I ran a business, met payroll, did all these things, then I became an investor. I don't even know how people can be investors without ever having run a business.

I find that really difficult to fathom because, to some extent, it's not real for them. They're looking at things through spreadsheets and things. We just talked about Amazon, so let's continue with Amazon. Jassy, who's running it, or Bezos who was running it, probably had three or four variables in their head that drove 80% of the outcome, and they don't run the business through spreadsheets. I think at Amazon he doesn't even want to see PowerPoint. He makes people write these essays on what they want to get funded and so on. The three or four variables that they're looking at is, if they think you're entering some new business or making some experiment, they look at the economics of that if it works, and they'll see what the bed size should be.

If it doesn't work, it doesn't sync the company. They look at, what kind of people and team they can put behind it. It gives it the highest chance of success, and then they nurture it and see if they can make it work. They're continuously doing that in a wide range of endeavors and they're going even outside their industry classification, AWS has nothing to do with selling books, their kind of landscape that they're willing to look at is pretty wide. I think that as an investor, you would need to have the same variables you are looking at, that Bezos and his successor are looking. If you can get to the same variables that the CEO and his team are looking at when they're running the business, then you've nailed it. Then you've got the right framework. Getting to those same variables may not be that easy. If you haven't run a business before, it's still hard even if you run a business, because the business may be very different than the one you ran before, but you at least need to get into the mind-set that is aligned with the way they think, and then you can go from there.

Arvind: Gavin

Gavin: Hi Mohnish. I just want to go back to the topic of effective share purchasing strategies and smart capital allocation. I'm curious about what, in your opinion is typically the biggest factors that contribute to a CEO or capital allocator having ineffective or value destructive purchasing over the long term? Because something I'm struggling to reconcile is that, conceptually, the idea of buying shares when you believe that there are no organic investment opportunities that offer a higher return or the shares are way too undervalued, Conceptually, it's not rocket science, it's intuitive and it makes sense. Yet we see, as you've mentioned, that many very smart

people, very educated professionals, have not a very great track record of employing it. I think a popular characterization or factor that people like to label, to explain this is discipline.

It's a popular term, undisciplined repurchases or undisciplined capital allocation. Because they come into law money and they want to boost EPS in their short term or something of that sort, but I'm not exactly sure that encapsulates everything. I'm seeing this with several particular examples in mind, which is [inaudible] [1:28:36] and Liberty Global. According to their background one would think, given John Malone's legendary status as capital alligator, that these would be candidates that would be among the best at buying back shares. Yet we've seen arguably that both companies have engaged in value destructive share buybacks in the recent years. What are the biggest factors that make what seems like a rather simple concept actually so incredibly difficult to execute well over long term?

Mohnish: Yeah, that's a great question. Every single business on the planet, eventually, we'll cease to exist. It is in the nature of capitalism that we will see creative destruction, and we've seen that in the past. How many companies are 200 years old? How many companies are 500 years old? Of the companies around today will be around a hundred years from now, or 200 years from now, or 50 years from now, 20 years from now. The basic tenant of capitalism is that almost everything is going to be completed away once in a while in an unpredictable manner. For the most part, we end up with some moats, like we end up with a moat around Coca-Cola, or we end up with a moat around Visa or MasterCard, or we end up with some moats around Louis Vuitton and so on. The people who founded these businesses could not see these moves, okay? They did not start these businesses saying, I'm going to build the biggest soft drinks company in the world. I'm going to control payments in the world. Go and study the history of these businesses. They're all accidents. Kind of accidental set of circumstances that leads to great business. I mean, if you look at something like AmEx today and the trajectory it's been through, it'd be very unpredictable that this is where it would be.

Basically, I think the reason all of this is difficult, on one hand we have this situation where almost everything in capitalism is going to disappear. Most businesses will disappear. On the other hand, you have CEOs and managers who have to have a trait if they're going to lead. The comment trait they have is optimist. If they weren't optimists, they couldn't be leaders. They have to be seeing a half full glass as overflowing. If they didn't see the half full glass as overflowing, how are they going to lead their troops and people? I think it is par for the course that a typical CEO may not have a good view on what his or her business looks like 10 or 20 years from now. Because they're optimists, they think all their endeavors are going to work.

They don't see the disruptive innovations coming from left field. All these different things going on. They don't see that. There's a parking lot near LAX, which I used to like a lot when I used to travel in and out of LAX called Wally Park. Every time I parked at Wally Park, I really liked everything about it. Wally Park had these kind of hanging leather separators for each parking spot, so your car could never get dinged by another car. There was like this separate, and they put that in the whole parking lot. I said, Wow, this is really nice. I come to Wally Park, and then they ran their shuttles very frequently and all of these things, okay? I used to always think, I should go tell the owner of Wally Park that if he ever decides to sell the business or something, give me a call, kind of Berkshire style, write him a letter or something.

But I just love the business. It was very popular relative to the other parking spaces and other parking operators. No one else had copied that leather thing, even though they could all see it. Then suddenly Uber comes along. I'm not driving to the airport, okay? Suddenly, I look at Wally Park and they got too many spaces. I mean, that business suddenly changed. The thing is that, I was looking at that business. I loved that business. I couldn't see anything that would take away parking from being a great business for 50 years around LAX, but even that business got disrupted. I think that this creative destruction of capitalism is really a powerful force. It's not linear. It comes from left field, it comes suddenly. Clay Christensen wrote about it with in innovators dilemma and all of that.

I don't blame the managers always so much. I think the managers, maybe they have too much on their plate. They're trying to run the ship, they're trying to motivate their troops, they're trying to meet payroll, all these things. For them to have a view of what happens 20 years from now that's really hard. Even when in Berkshire Hathaway, so many of the businesses they bought have disappeared. Many of the businesses they bought were mistakes to buy. Probably half the businesses they bought are either mistakes or have disappeared. The forces are very powerful. I haven't followed Liberty and Malone in a long time. I mean, he's a smart guy. He always takes care of himself. I always found some of the ways things happened, not quite Buffett-esque in the sense that, Buffett doesn't want to play gin and rummy with his shareholders, but Malone doesn't seem to have too many issues with that.

Anyway, I don't have much of a view on what's been going on there. But I would just say that when I look at this whole area of the cannibals and all of that, I can't rely on the manager. What I have to really look at is I have to look at businesses which look like Union Pacific Railroad, I think 20 years from now, Union Pacific is around now. We'll see if it becomes like Wally Park and something comes along, who knows? But I think there's a good chance those rights or ways and all of that stuff that it's around. But there's very few businesses like that, especially when you

go long enough time horizon, and especially if you're looking at cannibals, we need to go really long time horizon to get, a 100X, 300X. The good news is that if you had a portfolio of 10, you could have seven that don't work, and it'll still be a great return. Some of this can be taken care of with bet sizing and so on.

Gavin: Thank you. That was very insightful.

Arvind: Sure. Teddy

Teddy: Mohnish, I believe you once said if you were spending a lot of time analyzing a business and excel, then something is seriously wrong. With that in mind, could you walk us through what mental models you find most useful today and how those have perhaps changed over the course of your career?

Mohnish: Yeah, actually, what I said is that if you open Excel, there's a problem not spend time on it, just even open Excel. If you're looking at a business and you can't do the math in your head then I think there's a problem. The mental models, I think the first thing that goes through is, you've got to really be honest about circle of competence. You got a business and you say, Okay, there's something I understand or I don't. I don't understand anything about biotech. I don't want to deal with defense sector because it deals with one customer or few customers. I don't like that. I don't like the healthcare industry in the US because it has non-market forces working on. There's entire areas that I just don't understand.

Anytime I encounter and if I encounter anything, block chain that's way above my pay grade, it's gone, right? A lot of things just go away. I think the important thing is, like Buffett says, the size of the circle is not important. Staying in the center is very important. The first question is circle of competence. Then when you feel that something is within your circle of competence, then, by definition we should be able to figure out kind of what its likely trajectory is going to be. Then you would also be able to figure out what kind of low return on equity, high return equity needs a lot of capital, doesn't need a lot of capital. What kind of persons running it, what kind of capital allocator do we have? All these different things are going on to figure out whether you want to spend time drilling.

Teddy: Yeah, thank you,

Mohnish: Tom.

Tom: Mohnish, thank you for speaking with us today. That Excel comment on, that's one of your commandments. A few others that I find interesting there are, that shall not short and now shall not introduce leverage. I find those too interesting because those are two techniques, or two strategies, investors, you'll see them more on the

institutional side instead of individual retail. But those are two strategies that people can use to hedge positions or reduce risk. Earlier in this discussion, you talked about how the lira in Turkey has plummeted over the past year. With all that in mind, how can an individual retail investor reduce risk with their investments? Is that something we should be thinking about, or should we really just be focusing on finding that intrinsic value with these companies?

Mohnish: Yeah, I think that I would stick by those commandments. Shorting is kind of a dumb exercise in my opinion. Basically, you make a double if you're right, and you go bankrupt if you're wrong. My friend Bill Ackman recently said he's done with charting. It's nice to see he finally grew up, which is great. Like I said, basically to finish first you have to first finish. Equity prices in an auction driven market can do anything. If you are levered, then you may not get to play out your, you're out of the game. We don't really want to go down those paths. I think that investors should think of themselves similar terms to kind of the way I would say that the Walton family thinks about.

Sam Walton had distributed the stock to his gene pool, and then he passed away, and then they were Waltons who were no longer running the place. All of them, for the most part, have kept their shares for several decades after that, and probably made up over 90% plus of their assets unhedged, I'm pretty sure none of them had any puts on Walmart. Sam Walton will be turning in his grave if someone, his son or daughter bought puts on Walmart or something. The thing is, if you carefully selected a dozen businesses or 10 businesses or something like that, and you've gone long and you have no leverage, even half of them may not work because of the nature of capitalism that can still be very good.

Arvind: Dan.

Dan: Hey Mohnish, thanks so much for taking the time to talk with our class. You are a complete legend to me later on in life when I have to make important decisions. You're one of the very few people that I'm going to refer back to help me make that decision. When I'm going to be making these decisions, thinking back to your advice I'm going to be trying not to make a mistake. That leads me to think about two things. How 90% of active managers can't beat the market, and also how Buffett says he knows within 1, 2, 3, five minutes looking at a company, whether he wants to spend another 20 minutes looking at it. What's the biggest mistake or the most common mistake that 90% of active managers are making that's preventing them from being able to beat the market? Also, what are the most important filters that you use, whether they're industry filters or like valuation financial filters, when you're looking at a company where you say, "Nope, I'm not looking at this anymore".

Mohnish: Well, I think the reason most managers cannot beat the index is really for two reasons. One is, the index doesn't have frictional costs, and the manager does. The manager might have 1, 2, 3% of frictional costs every year, including all the trading costs and all of that. They have to overcome that hurdle which is a significant hurdle to overcome. The second is that when we look at the stock market, something like 4% of stocks deliver almost all of the returns. There's some studies about, the S&P done like 9% a year for a hundred years, but if you took away the top 4% performers, you'd be left with nothing. Like more than half the stocks delivered negative returns long term. That again goes back to the creative destruction and all of that.

The thing is, the index is too dumb to know that it owns Amazon, owns Apple, owns Alphabet, and owns Microsoft and owns all these companies. It's also too dumb to ever sell these companies. It owns these companies. It never sells these companies. These companies keep becoming a larger and larger portion of the index. It doesn't really rebalance and such, it just sits there. Whereas the active manager, even when they're smart enough to buy Amazon, they're trying to figure out every day, should they sell it or keep it, they get in their own way. How many people figured out Amazon and then kept it for 10 years, right? There's a fund manager in Scotland, Baillie Gifford, and I like the Baillie Gifford people a lot, even though I think they're overdosed on Caravan right now.

But Baillie Gifford, when they go in, they'll just be there, right? They try to find these great businesses and they try to hang on for a long time. Berkshire does that and so on. I think the active manager, the deck is stack against them. You've got the friction costs, and you basically are going to be picking one out of 25 out of every 25 stocks. One is the winner, and 24 are not so great. Which is why you get even a 50% error rate. Figuring out what these companies are will do long term in the light of the creative destruction that capitalism imposes on you, it's a difficult thing to do.

Arvind: Troy.

Troy: Hey Mohnish, thanks for taking the time again this year to speak with the class. I had a question around your thoughts or your evolving thoughts on investing in China and companies in China. Obviously when we spoke last year as a class, you had some glowing thoughts on Tencent and Alibaba, and you've made investments there in the past. I think earlier you made a note of how things have changed over the past couple weeks. Obviously it's been an evolving change. I just wanted to get your perspective on investing in China and how that's evolved over time.

Mohnish: Yeah, I think probably for me China would always be difficult. I think in the past, like one time I invested in Moutai which were the stock Li Lu told me about Alibaba and Tencent, very well run companies, great governance and all of that, but we've got the unknown of the government and all their policies and all of that. Maybe they can transcend and maybe they cannot, I don't know. I think, given the leadership in China and given how they think about things, I would just not put a lot of energy behind China this time. I still like Tencent a lot in all of the business. I think Pony Ma is a once in a generation manager, and he may find a way to transcend all the headwinds and curve balls that keep throwing at him. We'd love to see.

Troy: Just one quick follow up on that. Are there any lessons outside of China and how you think about geopolitical risks? You mentioned Turkey, obviously you have investments in India. Is it really just in the context of China or are there other things, other areas that you've evolved your thinking on?

Mohnish: I think I should put all my energy behind a place like Turkey. I think I should spend a lot more time in the investors that I would be buying stock from in Turkey. The Turkish stock market is mostly held either by insiders or foreigners. 80% is held that way, and that doesn't trade. The other 20%, which is held by the locals turns over every nine days. For most locals, nine days is too much. They want to invest at 10 and be done at two. For our holding period, Buffett says that stock market is a mechanism to transfer wealth from the active to the inactive and couldn't be these gamblers, they're not investors. Speculators and gamblers sold me Reysas at two and a half percent of liquidation value because they couldn't be bothered what the companies were.

That's not part of the equation at all. When you're buying it 10 o'clock and selling it two o'clock, you are not running any intrinsic value calculations. You're just trying to have some kind of psychology that somebody will pay you something more than what you paid or whatever. I think that because of the nature of the investors and that the geopolitical and all of that, everyone exited. I still think like 95% or 97% of Turkey is not investible, but there's the three to 5% where their revenues are in euros or dollars. Inflation is a tailwind rather than a headwind. People aren't interested because the baby got thrown out of the bath water. Like we have a Coke bottler in Turkey, we've got a company that imports all the VW brands and controls most of those dealerships in Turkey. These are really good businesses, and the gamblers will give it to you at great prices. That's where I think I should put more time and energy.

Arvind: Mohnish the foreign ownership you just mentioned. Why doesn't that trade?

Mohnish: Well, I just think institutional investors are not going in and out they did go out, I think in 2018, 2019, 2017, there was a mass exodus, right? Templeton Funds sold me Reysas at two and a half percent of liquidation land. I don't know what John Templeton thinks of that in his grave. But they're supposed to kind of have the framework, but some guy in New York says, "exit Turkey, and then they exit Turkey". That sort of thing happens. I think that the institutions in a place like Turkey, I think they have a somewhat longer horizon, but I think they also get spooked out. I think at this point, everyone in their brother has left, right? But the thing is that, the stock market's kind of like a theater. Every seat has to be occupied, and so every share has to be held by someone. If you are exiting, it's kind of like a burning theater. You have to find somebody who will take your ticket and go back in and sit in the theater. If the theatre's on fire, that ticket is not going for a hundred dollars that you paid to get that seat, you'll take 10 cents

Arvind: You're enjoying the movie, so that's good.

Mohnish: Well, I think that I got to make sure I'm in the part of the theater, which is not going to get our friend, right? The theater is on fire. But there's a balcony where it's not going to get there or something.

Arvind: Right. Tim,

Tim: Yeah, thanks for being here, Mohnish. Your presentation and also the mention of Baillie Gifford kind of seemed like an offshoot of your search. You mentioned, I think, last year of positioning yourself as, or positioning your fund for much longer hold periods. I would just love to hear kind of how that transition is going. Like any update there and I remember you said that you were like pretty pregnant with positions, et cetera.

Mohnish: When I first started in 94, 95, I was, buy and hold forever, that's kind of how I thought about it and I did really well. I had 200 bagger in that period from 90 till 99, 2000. I probably saw the internet bubble maybe 12 weeks before anyone else. I was about 10, 12 weeks out of the crowd. Not a huge lead, but some lead. I got really concerned that this thing would blow up because those valuations were really crazy. It was a lot of crazy behavior at that time. I started Pabrai Investment funds, and I basically switched to a very heavy Ben Graham approach in 99, 2000, basically the day the NASDAQ peak, I think March 9th, 2000, 5,000 or something, was the day Berkshire hit a multi-year low.

People were selling Berkshire and buying pets.com, that's what was happening there. At that time, there were a lot of basic businesses, steel companies and funeral homes and things of that nature that were single digit multiples available, really cheap and very stable businesses. I switched to those businesses and I did really

well, basically completely sidestep the NASDAQ crash and everything else. Basically, what I should have done is probably in 2012 or thereabouts, I should have switched back. I should have switched back to the great growing businesses. What happened is that, I became so comfortable with these cigar butts, and I did so well with them. The first eight or nine years were like 36% a year before fees or something, and even in 2009 when the markets crashed, and I put the entire fund almost completely in commodities, commodities had crashed. Like you wouldn't believe we were up like 130% in one year and so on. Those things came back really fast. It worked, but what I should have done is, in around 2012 or so, I should have switched back again to the great businesses paid up for the businesses like I used to.

I think in 2020 when I read the manuscript that William Green had sent off; Nick and Zach-Richer, Wiser, happier, I realized that I'd screwed up, and I had to go back, that the Holy grail in investing is a small ownership of a great growing business over a very long period of time. I think that's really where you get to utopia. I have this friend in Turkey, and he's basically everything I bought in Turkey, I only visited businesses in Turkey where he already owned it in his fund.

I told him, I only want to visit businesses that you already invested in, because I needed cover, right? First layer is someone's already put money in, and he's a very smart investor and he's deeply overdosed on Ben Graham, and I'm trying to get him to overdose more or at least dose up a little bit on Charlie Munger. I actually sent him a cost of Charlie Munger and told him to worship it every morning. The thing with him is he takes me to Reysas, he owns it in his portfolio. He tells me it's at two and a half percent of liquidation value, and Reysas goes from a 20 million market cap to a 40 million market cap, and he completely exits. I ask him, I said, you told me it's worth 800 million. He said, Mohnish, I have a simple rule.

Everything at a hundred percent is sold once I make a hundred percent I sell. I told him to triple his Munger worship time every day. Take the incense sticks that Indians have and put it on Munger, and he's doing that. He actually told me he goes to the Charlie Munger bust, but he says it'll take a long time to reprogram. Anyway, what I'm saying is that I think that the Holy Grail is the great cooling business. That's where we want to be. I was snow white, and then I drifted, and then I'm trying to get to be back to Snow White again.

Arvind: Michael.

Michael: I'm just wondering, how do you distinguish between whether or not a stock has diminished in price due to risk or just uncertainty?

Mohnish: Well, we are not going to always get it right. I think the thing is that, like John Templeton said, "you want to be wrong at least one out of three times, and probably more like half the time". We use all the tools at our disposal to try to make sure that something is not in secular decline and something is a temporary hiccup. We may not always get it right. It's a difficult thing to get right on.

Arvind: Gavin.

Gavin: While we're still close to the topic about Chinese stocks, I had a question regarding Tencent. I've listened to one of your talks in which you said that you thought it was maybe more attractive to get Tencent exposure through Prosus than directly holding Tencent. Then in that conversation, the topics sort of just went on and you didn't really get a chance to elaborate that. I was curious, and I want to ask exactly why you thought it was better.

Mohnish: Well, there's a big gap between the look through value of Tencent through Prosus and the Prosus market cap. At times that gap was more than 40%, so it's kind of hard to ignore that. Also, Prosus is aware of that gap and willing to take action to try to close that gap. Of course, the danger there is that what they've said is they're going to sell down some Tencent and buy back Prosus, and they're also selling down some Tencent or taking some dividends and making other investments. The question is that how well does Prosus do on its non-Tencent investment? Is that kind of sell off of Tencent to buy back Prosus? I think that can work if you don't take the Tencent position down too much. They used to have like 29%. If they go to like mid-twenties or low, probably still okay if you're buying back at that huge discount. But yeah, I think a lot of investors prefer just owning Tencent directly, and that can be valid, but in my way of thinking, it's kind of difficult to ignore that big gap, and they're people who want to take action to close that gap.

Gavin: Can I have a quick follow up to that?

Mohnish: Sure.

Gavin: A lot of why investors might be, as you said, preferring to directly hold Tencent versus investing in a sort of holding company thesis that has underlying exposure is that there's some degree of frictional or managerial costs that you're going to have to be paying up in order to get that optionality of those managers and their decisions. How do you think about quantifying or weighing those sort of frictional costs and managerial costs in some cases, which may unseen because of during times where quick decision making is rewarded, there is generally a sort of lag between you directly controlling your assets versus having another manager in this case own the company that you like.

Mohnish: Yeah. Let's, let's look at it this way. If a person invested in Tencent directly, the reason they're investing is they believe that Tencent will be a lot more valuable in the future, right? I mean, that's the only reason you would buy Tencent. It's because you had a viewpoint that it's a business that's undervalued or likely to create a lot of value in the future. Let's say for example that over a five year holding period, or 10 year holding period, Tencent triples or quadruples in price, and now we have this ownership and Prosus, there's a discount, there's a holding company discount, there's some frictional costs, and they may or may not invest their own other money as well as Tencent does, and so on so forth. But also that gap may close, it may be half the gap, it was in 10 years, that's possible.

It's not apparent to me that in these two scenarios that holding Tencent directly would have the superior outcome. That's not apparent to me. In both cases, the more important thing that happens is that Tencent value has to be, and if the Tencent value goes up and the stock directly with Tencent is a 4X, and me holding it through Prosus is a 3X, for example, then in that case, that was not an optimal decision, but I still got to get that some of the upside from Tencent wasn't completely lost. The important thing I think in this equation is that, do you believe or not believe that Tencent will be a lot more valuable in the future or not? If it is a rising tide's going to lift all boats. If it is more valuable, both the stocks will define, I think it's possible Prosus could do better possible, but it's also possible it does the same or does worse.

Arvind: Got it. Josh.

Josh: I also wanted to ask you. What are signals? When do you decide it's time to sell a stock? In other words what are some signals that you take in when to know that it's time?

Mohnish: Well, Phil Fisher says that "if the job is done right, every cell decision is a mistake". When I grow up, that's where I want to be; I haven't grown up yet. But ideally if you find yourself in the happy position of owning a great business and it's continuing to increase in value and it's not extreme in its valuation, you would just keep holding it. It wouldn't matter if you perceived as being above intrinsic value or anything like that, you just hold it. The second reason you would sell something or the reason you've excelled something is you've realized you made a mistake. You've realized that the future prospects of a business are vastly inferior to what you'd originally thought. The third reason could be opportunity cost, and that's actually a difficult one because the mistress always looks better than the wife and in actuality, the wife might be prettier.

Arvind: Susan.

Susan: Yeah I'm basically an individual investor and I'm a big fan of BRK, of course. But I just learned in all the readings from this class about Markel Corporation, and I was wondering what your views are, if any, of Markel?

Mohnish: Yeah, Markel is a wonderful business. I think they've got some excellent insurance businesses because they used to be excessive plus lines and insurance, which is the odds and ends that most people didn't want to deal with. Generally, if you're good in those lines the profit margins can be better. But if I were to choose between Markel and Berkshire, I would choose Berkshire. I think that the capital allocation promise of Berkshire buffet and such is very proven over a very long period of time. Markel has started to make private investments in buying whole companies. I just don't have enough data there. I think that's a much more difficult area. Even Buffett had a lot of difficulty in the whole acquisitions. I would say probably a good one third of the companies they bought have ended up being mistakes, but I don't know what that error rate is in Markel. To me, between the two, I would go, even though it's larger and size is an anchor.

Susan: Thank you.

Mohnish: But do you attend the Berkshire annual meeting?

Susan: I haven't, and I'm thinking of it this year, especially given their ages.

Mohnish: Yeah. Every Sunday morning there's a Markel brunch in Omaha. You could attend that brunch. The food is good. Tom Gayner, who's a good friend, he's on stage, so you get buy one, get one free

Susan: Sounds good.

Mohnish: All right.

Susan: Thank you.

Arvind: Mohnish, you've been so generous with your time.

Mohnish: I thought we'd go, I thought we'd go for another two hours. Arvind, I think you're getting sleepy or something.

Arvind: No, I'm not. I mean, I don't have the time advantage that you do in Austin, but it's better. It's not as strong as you once had in Orange County, so that's good. It's weakening, but you've been so generous with your time. I'd love to ask you one final question which I ask you every year. I mean, in this room there are students that are graduating college to those graduating business school. Is there any advice that you would leave them with either personally or professionally as they launch into their journeys ahead?

Mohnish: Well, yeah, there's a couple of things. One is I would encourage all of you to get your owner's manual and I'll give Arvind the name of the guy who did it for me with his contact, if you want to pursue that, or you can contact someone else. I have no kickback coming to me if you do that, just for your information (FYI). But I think it's important to know who you are. I wish we came with our owner's manual, I didn't really know who I was till I was 35, and it would've been of some benefit to know at 20 or something earlier. I would say this, try to understand who you are and then the other thing that what Buffett says, which is "you go to work for people you like, admire and trust".

It's not about the name brands. I think a lot of times when you're getting out of a business schools, people focus on the brands. It's really about the people you work with or the person you work under and all of that. I think it's not about which place pays you the most or which sounds the most when you're at a dinner table, at Thanksgiving at your family or something. I think it's more along where the values align. Or like Buffett says, "you get better if you hang out with people better than you". You want to always make sure that you're in the company of very high-quality people. The criteria are go to work in places where you are moving up in the world from a quality point of view.

Arvind: What a wonderful note to end on. Mohnish. Thank you so much. We'll talk soon.

Mohnish: All right. Thank you. It's always a pleasure. Bye.