



6th May 2017

2017 BERKSHIRE HATHAWAY ANNUAL SHAREHOLDERS' MEETING

"There is nothing like the pain of owning a lousy business to make you appreciate a good one."

- Warren E. Buffett, 6th May 2017

We made our annual pilgrimage to Omaha, Nebraska to attend the 2017 Berkshire Hathaway Annual Shareholders' Meeting. As usual the Q&A session with Warren Buffett (age 86) and Charlie Munger (age 93) lasted a marathon six hours and covered a range of topics from record low interest rates and business valuation to their recent investments in the U.S. airlines and Apple.

An estimated 40,000 people attended the meeting this year at the Omaha CenturyLink Center.

Questions were submitted by the public and asked by a panel of journalists including Carol Loomis (former Fortune magazine editor), Becky Quick (CNBC reporter) and Andrew Ross Sorkin (New York Times journalist). Warren and Charlie were also quizzed by insurance analysts Jay Gelb (Barclays), Gregory Warren (Morningstar Inc.) and Jonathan Brandt (Ruane Cunniff & Goldfarb).

We believe that the following notes present an accurate depiction of the key take-outs from the meeting, however we have omitted discussions on topics unrelated to investing and business.

We hope that you enjoy reading these notes as much as we enjoyed attending the meeting and putting them together!



The meeting began with the usual collection of Berkshire Hathaway-related ads and clips, including cameo appearances from many celebrities. Among the new material was a clip of Warren Buffett explaining his McDonald's breakfast choices based on the market's daily moves, taken from the recent HBO documentary *Becoming Warren Buffett*, and Charlie Munger recounting his romantic foibles in high school at this year's Daily Journal Meeting. Classics from past years included Buffett and Munger interacting with the casts of *Breaking Bad*, *The Office*, and *Desperate Housewives*, as well as clips featuring Arnold Schwarzenegger and Jamie Lee Curtis. Warren Buffett also got to sing his version of the classic "My Way" with Paul Anka, who wrote the original lyrics for Frank Sinatra.

As per usual, the introductory portion included a replay of Warren Buffett's 1991 testimony and apology to the U.S. Congress after Salomon Brother's Treasury auction scandal: "Lose money for the firm, and I will be understanding. Lose a shred of reputation for the firm, and I will be ruthless."

Q&A Session

Q: You have spoken about knowing where your "sweet spot" is when it comes to investing. What are the key characteristics that you are looking for in an investment to ensure that it is in your "sweet spot"?

Buffett: We sort of know it when we see it. It would be a business that we can look out five or ten or twenty years and decide that the competitive advantage that it has at present would last over that period. It would have a trusted manager that would not only fit into the Berkshire culture but who is also eager to join the Berkshire culture.

And then it would be a matter of price. When we buy a business we are laying out a lot of money now based on what we think that business will deliver back to us over time. The higher the certainty with which we make that prediction, the better we feel about it.

You can go back to See's Candies. The question when we looked at See's in 1972 was would people still want to be both eating and giving away that candy in preference to other candies in the future. We had a manager we liked very much and we bought a business that we paid \$25 million dollars for and it was earning \$4 million pre-tax back then. We must be getting close to \$2 billion pre-tax that we have taken out of it.



We made this investment because we felt comfortable that people would not be buying cheap, lower quality candy in the future. It doesn't work very well if you go to your wife or your girlfriend - I hope they're the same person - on Valentine's Day and give them a cheap box of candy.

[Laughter]

And you say "you know, here is a box of candy honey, I took the low bid." We made a judgement about See's Candies that it would be special in 1982 and 1992 and fortunately we were right on it. We're looking for more See's but only a lot bigger.

Charlie?

Munger: The truth of the matter is that it would have been very wise to buy See's at a slightly higher price and if they had asked we wouldn't have done it. We have gotten a lot of credit for being smarter than we were. We were young and ignorant back then.

Buffett: Now we are old and ignorant.

[Laughter]

Buffett: Yeah and to be more accurate, if it had been \$5 million more Charlie would have bought it, but I wouldn't have. Fortunately we didn't get to the point where we had to make that decision. He would have pushed forward when I would have probably faded.

It's a good thing the guy came around. The seller was actually the grandson of the founder. He was not interested in the business, he was more interested in girls and wine actually. He almost changed his mind, well he did change his mind about selling and I wasn't there but Charlie went in and gave a one hour talk on the merits of girls and wine over having a candy company.

[Laughter]

This is true folks and the fella sold to us. I pull Charlie out in emergencies like that.

[Laughter]



Munger: We were very lucky early on to buy a lot of businesses that were cheap because it gave us a lot of experience trying to fix unfixable businesses as they headed downward towards doom. That early experience was so horrible, fixing the unfixable, that we were good at avoiding it thereafter. So, I would argue that our early stupidity helped us. You have to fail and have your nose rubbed in it to really understand it.

Q: There has been a lot of negative news about Berkshire's core holdings, Wells Fargo's cross-selling scandal, slowing Coke consumption, increasing competition for American Express, customer service issues at United Airlines. How much time is spent reviewing these holdings? Does the thesis remain intact on each?

Buffett: Well, we spend a lot of time – those are very large holdings. If you add up American Express, Coca-Cola and Wells Fargo you're getting well into the high tens of billions of dollars. Those are businesses we like very much. They have different characteristics.

There is competition in all of these businesses. We did not buy American Express or Wells Fargo or United Airlines or Coca-Cola with the idea that they would never have problems or never have competition. Why we did buy them is that we thought we had strong hands, we liked their position. We bought a lot of businesses and we do look to see whether they have durable competitive advantages.

We recognize if you have a very good business you are going to have plenty of competitors over time who are going to try and take it away from you. And then you have to make a judgement as to the ability of your particular product, company and management to ward off competitors. They won't go away. I won't go into specific names but those companies you mentioned are generally very well positioned.

If you have a wonderful business you basically have an economic castle and in capitalism people are going to try and take that castle away from you. So you want a moat around it protecting it in various ways, and you want a knight in the castle who is pretty darn good at warning off marauders. But there are going to be marauders and they'll never go away.

If you look at Coca-Cola, it was founded in 1886, American Express was 1851 or 1852 starting out with an express business. Wells Fargo, I don't know what year, incidentally American Express was started by Wells before it was called Wells Fargo. So, these companies had lots of challenges and they'll have more challenges in the future.



How much time is spent reviewing the holdings? I do it every day and I'm sure Charlie does it every day.

Charlie?

Munger: Well I don't think I have anything to add to that either.

Buffett: We will cut his salary if he doesn't participate here.

[Laughter]

Q: Mr. Munger, can you describe your favourite or otherwise noteworthy business transaction over the last 50 years?

Munger: Well I don't have a favourite but the one that probably did us the most good as a learning experience was See's Candies. It's the power of the brand, the unending flow of ever increasing money with no work.

I'm not sure we would have bought Coca-Cola if we hadn't bought See's. I think that a life properly lived is to just learn, learn, learn all the time. And I think Berkshire has gained enormously from these investment decisions by learning through a long period. The decisions blend together, but the feature that comes through is the continuous learning. If we had not kept learning you wouldn't even be here. You'd be alive probably, but not here.

[Laughter]

Buffett: There is nothing like the pain of owning a lousy business to make you appreciate a good one.

Munger: Well the thing about getting into a really good business, that's a very pleasant experience and it's a learning experience.



Q: You seemed to have changed your view on investing in tech companies when you invested in IBM and then Apple, but on Friday you said IBM hadn't met your expectations. Do you view IBM and Apple differently? What have you learned about investing in technology companies?

Buffett: Well I do view IBM and Apple differently, obviously when I bought IBM six years ago I thought it would do better in the six years that have elapsed than it has. And Apple, I regard as much more of a consumer products business, in terms of analysing moats and consumer behaviour.

But in terms of laying out what their prospective customers will do compared to IBM, it's a very different kind of analysis. We will find out over time. They are two different decisions, I was wrong on the first one. We will find out whether I am right or wrong on the second.

Munger: Well we avoided the tech stocks because we felt we had no advantage there and other people did. I think that's a good idea not to play where the other people are better. But you know, if you asked me in retrospect what our worst mistake was in the tech field, I think we were smart enough to figure out Google. Those ads worked so much better in the early days than anything else. I would say we failed you there. We were smart enough to know but didn't do it. We do that all the time.

Buffett: We were their customer very early on with GEICO for example. These figures are way out of date but as I remember we were paying them \$10 or \$11 a click. When you are paying \$10 or \$11 anytime somebody just punches a little thing where you have no costs at all, that's a good business unless somebody is going to take it away from you. We were close up seeing the impact of that.

Incidentally, if any of you are sitting in your hotel room later tonight with nothing to do, just keep punching Progressive Car Insurance [a Berkshire competitor] into Google.

[Laughter]

Don't really do that. The thought just happened to cross my mind.

Munger: We blew Wal-Mart too. When it was a total cinch we were smart enough to figure it out and we didn't.



Buffett: Execution is what counts. I made a mistake with IBM by underestimating the impact Amazon would have on their business. It's harder to predict in my view the winners or how much price competition will enter something like cloud services.

I made a statement the other day, it's really remarkable when one person [Amazon CEO Jeff Bezos] has built an extraordinary economic machine in two pretty different industries almost simultaneously.

Munger: From a standing start at zero.

Buffett: And with competitors with lots of capital, to do it in retailing and then with the cloud. He has been in effect the CEO simultaneously of two businesses starting from scratch. Andy Grove used to say "if you had a silver bullet and could shoot it and kill one of your competitors, who would it be?"

I think that both in the cloud and in retail there are a lot of people that would aim that silver bullet at Jeff Bezos. It's a remarkable business achievement, he's been actually involved with the execution, not just bankrolling it. Two businesses that are probably as feared by their competitors as any you can find.

Q: What has convinced you this time around that it's different for the airline industry?

Buffett: You couldn't pick a tougher industry, ever since Orville Wright first went up. If they had been thinking of investors, Wilbur should have shot him down and saved everybody a lot of money over 100 years.

You can go to the internet and type in "airlines" and "bankrupt" and you'll see something like 100 airlines that have gone bankrupt in the last few decades.

There are a number of factors that make for terrible economics. It's a fiercely competitive industry, the question is if it's a suicidally competitive industry, which it used to be. When you get virtually every major carrier and dozens of minor carriers going bankrupt, it ought to get to a point where you realize you're in the wrong industry.



It has been operating for some time at 80% or better capacity of available seat miles. You can see what plane deliveries are going to be. I think it's fair to say they will operate at higher degrees of capacity over the next five to ten years than the lower historical rates which caused all of them to go broke.

The question is whether they will do suicidal things? It remains to be seen. They actually at present are earning quite high returns on invested capital, higher than FedEx or UPS if you check that out. It is no cinch that the industry will have some more pricing sensibility in the coming 10 years than they did in the last 100 years.

The conditions have improved, there is more labour stability. They have all been through bankruptcy and have an industry pattern for bargaining. There will be a shortage of pilots to some degree. It's not like buying See's.

Charlie?

Munger: No, but the investment world has gotten tougher. More competition, more affluence and more absolute obsession with finance throughout the country. We picked up a lot of low hanging fruit in the old days when it was very, very easy and we had huge margins of safety. Now we operate in a less advantageous general climate. Maybe we have a small statistical advantage where in the old days it was like shooting fish in a barrel. That's alright, it's okay if it gets a little harder after you get filthy rich.

Buffett: Charlie is more philosophical than I am on that point.

[Laughter]

Munger: I can't bring back the low hanging fruit Warren, you'll just have to keep reaching to the higher branches.

Buffett: I think the odds are very high that we'll have more revenue passenger miles five or ten years from now. If the airline companies are only worth what they are worth now in terms of equity we'll get a reasonable rate of return because they will buy a lot of their own stock at fairly low multiples. If the company is worth the same and there are fewer shares of stock, then over time we'll make decent money. All four major airlines are buying back their own stock.



Munger: You have to remember the railroads were a terrible business for decades and decades. And then they got good.

Q: Intrinsic value is neither a company's accounting value nor its stock market value but it is rather its estimated real value. At what rate has Berkshire compounded intrinsic value over the last 10 years and at what rate do you think intrinsic value can be compounded over the next 10 years?

Buffett: Intrinsic value can only be calculated in retrospect but the intrinsic value, pure definition, would be the cash generated between now and Judgement Day discounted at an interest rate that seems appropriate at the time. If you look at 10 years ago and you are back to May 2007, we had some unpleasant things coming up but we probably compounded at around 10%. That is going to be tough to achieve, in fact almost impossible to achieve, if we continue in this low interest rate environment.

If you ask me to answer the question and asked me to only pick one statistic to give you for the future, I would not ask you about GDP growth or who was going to be president, I would ask you what the interest rate is going to be on average over the next 10 years. If you assume our present low interest rate structure is likely to be the average over the next 10 years, I would say it would be very difficult to compound at 10% from here.

You might say, we can't continue at these low levels of interest rates for a long time. I would ask you to look at Japan where 25 years ago we could not see how those interest rates could be sustained, and we are still looking at the same thing in Japan today. I do not think it is easy to predict the course of interest rates at all and unfortunately predicting that is embedded in giving a good answer to your question. I would say the chances of getting a terrible return from Berkshire are probably as low as anything you can find.

The chances of getting a sensational result are also as low as anything you can find. My best guess would be in the 10% range, but that assumes somewhat higher interest rates in the next 10 to 20 years than we have experienced in the last 7 years.

Charlie?



Munger: Well there is no question that with our present size, the future in terms of percentage rates of return for Berkshire are going to be less glorious than our past and we keep saying that and now we are proving it.

I do think Warren is right about one thing. We have a collection of businesses that on average has better investment value than the S&P. So I don't think you share a terrible problem.

Buffett: And I would say that we do have more of a shareholder-friendly orientation than the S&P as a whole. This company has a culture where decisions are made as an owner would make them, and frankly that is a luxury we have that many companies don't have.

One of the questions I ask every CEO of public companies is "what would you be doing differently if you owned the business yourself?" If you would ask us, we would say we are doing exactly what we would be doing. And I think that is a small plus over time.

[Applause]

Munger: I think we have one other advantage. A lot of other people are trying to be brilliant and we are just trying to stay rational.

[Applause]

Q: Do you think that Berkshire's businesses as a whole will do better than the S&P 500? Why have you advised your wife to invest in an index fund after your death rather than in Berkshire Hathaway?

Buffett: She won't be selling any Berkshire to buy the index funds. Every single share will go to philanthropy. I don't even regard myself as owning Berkshire, it is committed.

[Applause]

My wife is going to have more than she needs. She will not have all the money in the index fund. If the exchange closes for some time she will still have plenty of money. The objective is not to maximise return, it does not make any difference if the amount she gets doubles or triples, the important thing is that she never worries about money for the rest of her life.



I had an Aunt Katy that Charlie knew well here in Omaha that worked for us and she worked very hard all her life. Because she was in Berkshire, she ended up with a few hundred million dollars and she would write me a letter every four or five months saying “Hey Warren I hate to bother you but am I going to run out of money?” and I would write her back and say “Dear Katy, it is a good question because if you live 986 years, you are going to run out of money.” And then four or five months later she would write me the same letter again.

[Laughter]

Q: The hardest thing in this world is to change people’s values or belief systems. We should encourage investors to change from speculating in markets to investing in markets which would require changing speculators’ belief systems. Can you kindly advise us what we should do to spread your value investing philosophy in my home market of China?

Buffett: Keynes wrote about this in 1936, he talked about speculation and the propensity of people to speculate and the dangers of it. There is always some speculation and there are always some value investors, but when speculation gets rampant and when you are getting social proof that it has worked recently, people can get very excited about speculating in markets and we will have it from time to time in this market.

There is nothing more agonising than to see your neighbour who has an IQ 30 points lower than you getting richer by buying stocks and people succumb to it.

And those who have not been through cycles before are probably a little more prone to speculate to people who have experienced the outcome of wild speculations. Ben Graham has always preached investment and that book continues to sell very well. If the market gets hot and people with leverage are doing well, a lot of people would be attracted to speculate or gamble and I am afraid that is true anywhere. China being a newer market in which there is widespread participation is likely to have some extreme experiences in that respect, but we will have some in this country too.



Q: You used to buy capital-light, cash-generative businesses but now buy lower-growth, capital-consumptive businesses. I realize Berkshire generates a lot of cash flow but would shareholders have been better off if you had continued to invest in capital-light businesses?

Buffett: Well we would love to find them, there's no question that a high-return on assets, very light-capital business is going to beat the hell out of something that requires a lot of capital to grow. This varies from day to day but I believe that probably the five largest American companies by market cap have a market value of over \$2.5 trillion dollars. That is probably getting close to 10% of the whole market cap of the United States.

And if you take those five companies essentially you could run them with no equity capital at all, none. That is a very different world than when Andrew Carnegie was building steel mills or Rockefeller building refineries and tank cars.

Generally speaking, for a very long time in capitalism, growing and earning large amounts of money required large amounts of capital and large amounts of equity capital, the railroads being a good example. That world has really changed and I don't think people quite appreciate that.

You literally don't need any money to run the five companies that are collectively worth \$2.5 trillion dollars. You will have outpaced any of the capital-intensive businesses, be it Exxon or General Motors, so there is no question that a business that takes no capital and generates an almost infinite return on equity is the ideal business.

We own a couple of businesses that earn extraordinary returns on capital but they don't grow. We still love them, but if they were in fields that grew, they would be number one on our list. We aren't seeing many that we can buy and that we understand well. But you are absolutely right that that's a far better way of laying out money than what we are able to do when we are buying capital-intensive businesses.

Charlie?



Munger: Yeah the chemical companies of America that were once wonderful to invest in, Dow and DuPont, sold at 20 times earnings and kept building more complicated plants and hiring more PhD chemists and looked like they owned the world. Now most chemical products are sort of commoditized and it is a tough business being a big chemical producer.

Here come all these people like Apple and Google and they are just on top of the world. I think the questioner is basically right that the world has changed a lot and that people have made the right decisions getting in these new businesses that are so different from the old ones.

Q: Where do you want to go fishing for the next three to five years? Which sectors are you most bullish on and which sectors are you most bearish on?

Buffett: Charlie and I do not really discuss sectors much. Nor do we let the macro environment or thoughts about it enter into our decision making. We are really opportunistic.

We are looking at all kinds of businesses all of the time, it's a hobby for us. We have a bunch of filters and we probably know within the first five minutes or less whether something has a reasonable chance of happening. First question is "can we really ever know enough about this to come to a decision?" That knocks out a whole bunch of things. If it makes it through that there is a reasonable chance we are going to do something, but it is not sector specific.

We do love the companies we buy, they have to have moats around their products which means consumer behaviour can be predicted further out. But I would say it is getting harder for us to predict consumer behaviour today than it was 20 or 30 years ago. That is just a tougher game now.

Charlie?

Munger: I would say the field of buying whole companies has gotten hugely competitive. There is a whole industry doing these leveraged buyouts, that's what I still call them, the people who do them think that's a bad marker so they call it private equity. That's like the janitor calling himself the Chief of Engineering.

[Laughter]



The people who do leveraged buyouts can finance anything within a week or so through shadow banking and they can pay very high prices and get very good terms. So it is very, very hard to buy whole businesses. We have done well because there is a certain small group of people that don't want to sell to private equity. They love the business so much they don't want it to be dressed up for resale.

Buffett: We had a guy some years ago who came to see me, he was 61 at the time and said "Look, I've got a fine business and all the money I could need but there is only one thing that bothers me when I drive to work – if something happens to me today, my wife is left having to decide what to do with the business. I don't want to leave her with that problem. I want to decide where it goes but I want to keep running it, I love it. I thought about selling to a competitor but all these people that helped build the business will get dumped. I'll walk away with a ton of money and they will lose their jobs, I don't want to do that. I can sell it to a leveraged buyout firm, they will leverage it to the hilt and resell it. I don't know where it will end up so I don't want that. So, it isn't that you're so special, it's just there isn't anybody else!" Incidentally, if you're ever proposing to a potential spouse don't use that line!

[Laughter]

That's what he told me, I took it well and we made a deal. Logically, we should lose in this market. If all you care about is getting the highest price for your business then we are not a good call. But we will get some calls anyway and we can offer something unusual.

Q: You have largely avoided capital allocation mistakes by bouncing decisions off one another. Will this continue into Berkshire's future? Both at headquarters and subsidiaries?

Munger: It can't continue very long.

[Laughter]

Buffett: Don't get all defeatist on me Charlie!

Any successor's capital allocation abilities will be upper most in the directors' minds. Capital allocation is incredibly important at Berkshire. Right now we have \$280 billion of shareholder's equity, over the next ten years the manager is going to have to allocate \$400 billion, maybe more.



Ten years from now Berkshire will be an aggregation of businesses where more money has been put in over the last decade than in the period before that. So you need a very sensible capital allocator in the job of CEO at Berkshire and we will have one. It would be a terrible mistake to have a CEO where capital allocation was not their main talent.

Berkshire would not do well if someone was put in who had skills in other areas but did not have the ability to allocate capital. I have talked about it as having a money mind. People can have very similar IQs but be good at different things. I know very bright people who do not have money minds and they can make very unintelligent decisions.

They can do many other things that most mortals can't do but it just isn't the way they're wired. Then I know other people who wouldn't do that brilliantly on an IQ test but they've never made a dumb money decision in their life. We certainly do not want somebody that lacks a money mind.

Q: Have Ted Weschler and Todd Combs been allocated capital proportionally to the growth of Berkshire?

Buffett: They have been. They would agree that it's tougher to run \$10 billion than it is to run \$1 billion or \$2 billion. Your expected returns go down as you get into larger sums. The decision to bring them on has been terrific. They've done a good job of managing marketable securities. They made more money than I would have made with that same \$20 billion. And they have been a terrific help in a variety of ways beyond just money management. That's been a very good decision.

They're smart, they have money minds, they are good specifically at investment but they're also absolutely first class human beings and they really fit Berkshire. Charlie gets credit for Todd, who met Charlie first, and I'll claim credit for Ted.

Charlie?

Munger: I think the shareholders are very lucky to have them because they both think like shareholders. It's a pretence that everybody takes on but the reality is different. And these people really deeply think like shareholders, and they're young and smart and constructive, so we're all very lucky to have them around.



Buffett: Their mindset is 100% “what can I do for Berkshire?” and not “what can Berkshire do for me?” And believe me, you can spot that over time with people. And on top of that, it’s hard to find people who are young, ambitious and very smart, that don’t put themselves first. Every experience we’ve had, they don’t put themselves first, they put Berkshire first. You couldn’t have two better people in those positions.

But I don’t think giving them another \$30 billion each would improve their lives or their performance. They may be handling more as they go along but the truth is that I’ve got more than I can handle, as proven by the fact that we have \$90 billion sitting around. I think there are reasonable prospects for using it, but if you told me I would have to put it all to work today, I would not like the prospect.

Q: How do we prevent 3G from harming our values as they buy companies and fire people?

Buffett: We fired 2,000 people over time at the textile operation, and we eventually closed up the department stores. Wal-Mart came along with something, and now Amazon is coming along with something that changes the way people buy things.

If you look at any industry, they’re trying to get more productive. Wal-Mart was more productive than department stores. And that will continue in America, and it better continue because otherwise our kids won’t live any better than we do. Our kids will live better than we do because America does get more productive as it goes along and people do come up with better ways of doing things.

If Kraft Heinz finds that they can do \$27 billion worth of business with fewer people, they are doing what American business has done for 200 years and why we live so well today, but they do it very fast. They are more than fair in terms of severance pay but they don’t want to have two people doing a job that one person can do.



I frankly don't like going through that, having faced that down at Dempster Mill in Beatrice, Nebraska. It really needed change, but that change was painful for a lot of people. And I'd rather spend my days not doing that sort of thing having had one or two experiences with it, but I think it's absolutely essential to America that we become more productive because the only way we have more consumption per capita is if we have more productivity per capita.

Charlie?

Munger: You're absolutely right, we don't want to go back to subsistence farming. I had a week of that when I was young on a Western Nebraska farm, and I hated it.

[Laughter]

I don't see any moral fault in 3G at all, but I do see that there's some political reaction that doesn't do anybody any good.

Buffett: Milton Friedman used to talk about this huge construction project in some Communist country. They had thousands of workers out there with shovels digging away on this major project, and idling behind were a few earth-moving machines that could have done the work in 1/20th of the time of the workers. So the economist suggested to the local worker to use the machines to get the job done in 1/20th of the time instead of having all these workers out there with shovels. And the official replied "why would I do that, it would put the workers out of work." To which Friedman said "then why don't you give them spoons to do it instead?"

[Laughter]

Q: Your partnership with Jorge Paulo Lemann and his associates at 3G has been very successful, such as the Kraft Heinz merger. Even though you and Jorge Paulo have different investment methods, would you and Charlie consider him to be a member of your board, or even your successor?

Buffett: I don't think that will happen and I think it would complicate things in terms of the board membership but we love the idea of being their partner and I think there's a good chance that we will do more and perhaps bigger things together.

Charlie?



Munger: All I can say is that my back hurts and I come to these functions because I want to indicate to my fellow shareholders that they've probably got seven more good years to get out of Warren.

[Applause]

Buffett: Charlie is inspiring me, I got to tell you that, but we've been very, very lucky in life and so far, our luck seems to be holding.

Q: What do you think are the implications of artificial intelligence on Berkshire's businesses? In your conversations with Bill Gates have you thought through which businesses will be most impacted and do you think Berkshire's current businesses will have significantly more or less employees 10 years from now, as a function of artificial intelligence?

Buffett: I certainly have no special insights on artificial intelligence, but I will bet a lot of things happen in that field in the next couple of decades and probably a shorter time frame. I don't bring much to this party but I would certainly think they would result in significantly less employment in certain areas, but that's good for society. It may not be good for a given business.

But let's take it to the extreme, let's assume one person could push a button and, essentially, through various machines, there's robotics, all kinds of things, turn out all of the output we have in this country. So there's just as much output as we have, it's all being done by, you know, instead of 150 million people being employed, one person.

Is the world better off or not? Well, certainly it would involve less hours of work per week. But it would require enormous transformation in how people relate to each other, what they expect of government, all kinds of things.

It's similar to the problem we have in trade, where trade is beneficial to society, but the people that see benefits of trade day by day, don't see a price at Walmart on socks that says "you're paying X but you would pay more if you bought this domestically". So you get small benefits and invisible benefits and the guy that gets hurt by it, who's the roadkill of free trade, feels it very specifically and that translates into politics.



It gets very uncertain as to how the world would adjust, in my view, to great increases in productivity and without knowing a thing about it, I would think that artificial intelligence would have that usually beneficial social effect but a very unpredictable political effect, if it came in fast, which I think it could.

Q: Amazon has been hugely disruptive, due to the brilliance of Jeff Bezos, whom Charlie called the business mind of our generation. What is your current outlook on Amazon and why hasn't Berkshire bought in?

Buffett: Well, I was too dumb to realize what was going to happen, even though I admired Jeff. I've admired him for a long, long time and watched what he was doing, but I did not think that he could succeed on the scale he has and I certainly didn't think about the possibility of doing anything with Amazon Web Services or the cloud.

If you'd asked me the chances that while he was building up the retail operation that he would also be doing something that was disrupting the tech industry, that would have been a very, very long shot for me and I've really underestimated the brilliance of the execution. It's one thing to dream of doing this stuff, but it takes a lot of ability to get it done.

You know, you can read his 1997 Annual Report and he laid out a roadmap of what he was going to do and he's done it, and done it in spades and if you haven't seen his interview on Charlie Rose three or four months ago, go and listen to it, because you'll learn a lot, at least I did.

[Interview link: <https://charlierose.com/videos/29412>]

It always looked expensive and I really never thought that he would be where he is today. I thought he was really brilliant, but I did not think he would be where he is today when I looked at it, three, five, eight, twelve years ago.

Charlie, how did you miss it?

[Laughter]

Munger: It was easy. What was done there was very difficult and it was not at all obvious that it was going to work as well as it did. I don't feel any regret about missing out on the achievements of Amazon. But other things were easier and I think we screwed up a little.



Buffett: We won't pursue that line Charlie.

Munger: I meant Google.

Buffett: We missed a lot of things.

Munger: And I promise you that we'll keep doing it.

[Laughter]

Munger: Luckily we don't miss everything, Warren. That's our secret: we don't miss them all.

Q: Are market cap to GDP and cyclically adjusted P/E still valid ways to consider market valuation and how do those influence Berkshire's investment decisions?

Buffett: I would say that both of the standards you mentioned are not paramount at all in our valuation of securities. People are always looking for a formula.

And both of the things you mentioned, it's not that they're unimportant but sometimes they can be very important, sometimes they can be almost totally unimportant. It's not quite as simple as having one or two formulas and then saying the market is undervalued or overvalued or a company is undervalued or overvalued.

The most important thing is future interest rates and people frequently plug in the current interest rate saying that's the best they can do, after all it does reflect the market's judgment and you know the 30-year bond should tell you what people are willing to put up money for 30 years and have no risk of dollar-gain or dollar-loss at the end of 30-year period, but what better figure can you come up with? I'm not sure I can come up with a better figure but that doesn't mean I want to use the current figure either.

I want to go back to one question that was mentioned earlier. I really think if you want to be a good evaluator of businesses, an investor ought to figure out a way, without too much personal damage, to run a lousy business for a while. I think you'd learn a whole lot more about business by actually struggling with a terrible business for a couple of years than you learn by getting into a very good one where the business itself is so good that you can't mess it up.



I don't know if Charlie has a view on that or not, but it was a big part of our learning experience and, I think a bigger part, in the sense that running, being involved with good business was actually being involved in some bad business and just how awful it is and how little you can do about it and how IQ does not solve the problem and a whole bunch of things. It's a useful experience, but I wouldn't advise too much of it.

What do you think Charlie?

Munger: It was very useful to us. There's nothing like personal painful experience, if you want to learn and we've certainly had our share of it.

Q: Munger says Buffett's greatest talent is that he is a learning machine, that you never stop updating your views. What are the most interesting things you have learned over the last few years?

Buffett: Well, it is fun to learn. Charlie is much more of a learning machine than I am. I'm a specialized one, and he does as well as I do in my speciality, and then he has much more of a general absorption rate than I have about what's going on in the world. But you know, it's a world that gets more fascinating all the time, and a lot of fun can occur when you learn you were wrong on something.

That's when you really learn that the old ideas really weren't so correct and you have to adapt to the new ones, and that of course is difficult. I think that what's actually going on in America is terribly interesting, politically and all kinds of things. But just the way the world is unfolding, it's moving fast. I do enjoy trying to figure out not only what's going to happen but what's happening now, but I don't think I've got any special insights that would be useful to you, but maybe Charlie does?

Munger: Well, I think buying the Apple stock is a good sign Warren.

Now he did run around Omaha, and he asked if he could take his grandchildren's tablets away. I mean, he did his market research. I do think we keep learning, and more important, we don't unlearn the old tricks, and that is really important. You look at people who try to solve their problems by printing money and lying and so forth. Take Puerto Rico – who would have guessed that a territory of the US would be in bankruptcy? Oh, I would have predicted it, because they behaved like idiots.



Buffett: We did not buy any Puerto Rican bonds!

[Laughter]

Munger: It helps to have a fair-sized repertoire. Warren and I have learned so damn much, that all kinds of things we've done in the last ten years we would not have done twenty years ago.

Buffett: Yeah that's true, although it's interesting, I've mentioned this before but one of the best books on investment was written I think in 1958, by Phil Fisher called Common Stocks and Uncommon Profits.

It talks about the usefulness of what he calls the scuttlebutt method. And that wasn't something that I learned from Graham, but every now and then it has turned out to be very useful.

Munger: I saw you do it with American Express and the salad oil scandal, and you're doing it with Apple decades later.

Buffett: In certain cases, you actually can learn a lot by asking a lot of questions and I give Phil Fisher credit, that book goes back a lot of years.

When I was much younger and more energetic, I would talk to the heads of ten coal companies and ask "if you had to go away for ten years on a desert island and put all of your family's money into one of your competitors, who would it be and why?" And then I'd ask if they had to sell short one of their competitors, "who and why?"

I mean everyone loves talking about their competitors, and if you do that with ten different companies you'll probably have a better fix on the economics of the coal industry than any one of those individuals has. There's ways of getting at things, and sometimes they're useful and sometimes they're not, but sometimes they can be very useful and the idea is just learning more all the time.

I'm more specialized by far than Charlie, I mean he wants to learn about everything and I just want to learn about something that'll help Berkshire, but it's a very useful attitude toward the world, and of course, I don't know who said it, but somebody said the problem isn't getting the new ideas but shedding the old ones and there's a lot of truth to that.



Munger: We would never have bought ISCAR if it had come along ten years earlier. We would never have bought Precision Castparts if it had come along ten years earlier. We are learning, and my God we are still learning.

Q: In 2012, you were quoted as saying “I think the healthcare problem is the number one problem of America and American business. We have not dealt with that yet.” Do you believe the current administrations’ plan to repeal and replace the Affordable Care Act will ultimately benefit the economy?

Buffett: Well, I'll give you two answers here. The first one being that if you go back to 1960, or thereabouts, corporate taxes were about 4% of GDP, having bounced around some, and now they are at 2% of GDP. And, at that time, healthcare was 5% of GDP and now it's 17% of GDP. So, when American businesses talk about taxes strangling our competitiveness, that sort of thing, they are talking about something that as a percent of GDP has gone down from 4% to 2% while medical costs, which are borne to a great extent by businesses, have gone from 5% to 17%.

So, medical costs are the tapeworm of American economic competitiveness, if you're really talking about it. And businesses know that. They don't feel that they can do much about it. It is not taxes, the tax system is not crippling Berkshire's competitiveness around the world or anything of the sort. Our health costs have gone up incredibly, and will go up a lot more, and if you look at the rest of the world, there were half a dozen countries around 5% if you go back to earlier years, and while we're at 17% now, they're at 10-11% so they have gained a 5-6% advantage.

Munger: And that's with socialized medicine.

Buffett: Yeah, so it's a huge problem. Whatever I said then, it goes and is accentuated now. That is a problem that society is having trouble with, and is going to have more trouble with, regardless of which party is in power or anything of the sort. It almost transcends that. In terms of the new Act, it was passed a couple of days ago versus the old Obama Administration Act, it's a very interesting thing.



All I can tell you is, the net effect of that Act on one person is that my federal income taxes would have gone down 17% last year, if the Act, if what was proposed went into effect. So, it is a huge tax cut for guys like me and they'll have to figure out the effects of the rest of the Act. But the one thing I can tell you, is if it goes through the way the House put it in, anybody with two hundred and fifty thousand dollars a year of adjusted gross income and a lot of investment income is going to have a huge tax cut.

And when there's a tax cut, either the deficit goes up or they get the taxes from somebody else. So, as it stands now, that is the one predictable effect if it should pass as it is. And the Senate will do something different and it'll go to Congress, and who knows what'll happen, but that is in the law that was passed a couple of days ago.

Charlie?

Munger: Well I certainly agree with you on medical care. What I don't like about medical care is that we're getting too much medicine. There is too much chemotherapy on people that are all but dead, and all kinds of crazy things going on in Medicare and other parts of the health system. There are so many vested interests that it's so hard to change.

We all love the new lifesaving stuff, the new chemotherapies and the new drugs and all that, but my God the system is crazy and the cost is just going wild. And it does put our manufacturers at a big disadvantage with other people, where the government is paying the medical costs and so, I agree with Warren totally.

Buffett: If you had to bet 10 years from now if it would be higher or lower than 17% of GDP?

Munger: Well if present trends continue, it'll be more and more. There are huge vested interests in having this thing continue in the way it is and they're very vocal and active and the rest of us are indifferent. So naturally, we get a terrible result and I would say on this issue, both parties hate each other so much that neither one of them can think rationally, and I don't think that helps either.

[Applause]

A lot of it is deeply immoral. If you have a group of hospital people, doctors that are feasting like jackals on the carcass of some dying person, it's not a pretty sight.



Q: Everyone has personal dreams and at different ages, dreams come differently. What's your dream now?

Munger: Sometimes when I'm especially wishful, sometimes I think "oh to be 90 again."

[Laughter & Applause]

I have some advice for the young. If you have anything that you really want to do, don't wait until you're 93.

[Laughter]

Buffett: That's the same thing I would tell students. You can't always find it the first time or the second time, but when you go out in the world, look for the job that you would take if you didn't need a job. I mean, don't postpone that sort of thing. I think it was Kierkegaard that said life must be evaluated backwards, but lived forwards. Charlie says, all he wants to know is where he'll die so he'll never go there.

[Laughter]

You do want a certain amount of reverse engineering in life. That doesn't mean you can do everything that way but you really want to think about what will make you feel good when you get older about your life. And you want to keep going in that direction. And you need some luck in life, and you have to accept that some bad things are going to happen as you go along. But life has been awfully good to me and Charlie, so we have no complaints.

Munger: What you don't want to be is like the man, when they have his funeral and the minister says "now it's the time for anybody to say something nice about the deceased" and nobody came forward. And the minister says "surely somebody can say something nice about the deceased." Finally, one man came up and said "well, his brother was worse."

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