

# The Perch Pod Episode 25 Chris Seifel [Seifel Capital]

# Jacob Shapiro:

Hello listeners, and welcome to another episode of the Perch Pod. As usual, I'm your host, I'm Jacob Shapiro. I'm also the founder and chief strategist of Perch Perspectives, which is a human-centric business and political consulting firm. Joining us on the podcast today is Christopher Seifel of Seifel Capital. Christopher founded Seifel Capital after a career investing in private markets with the goal of bringing a private equity approach to public markets. He publishes a really excellent newsletter on investments at seifelcapital.com, if you are interested in reading more. We had a really great conversation, I let Chris get on his soapbox about what's been going on with GameStop and all the short selling volatility in the marketplace.

# Jacob Shapiro:

We also talk about the geopolitics of artificial intelligence and semiconductors before playing y'all's favorite game over/under at the end. We recorded this on Friday, February 5th. I believe it's coming out in about two weeks time. I don't think there was anything particularly time sensitive in this thing. But if you're thinking about, where markets are two weeks from now, and if anything seems outdated, that's the reason why. Listeners, a huge thank you for those of you who have left ratings for the Perch pod, we reached our goal at the end of January to hit, to get over 75. I'm not sure what the next goal is with. I need to talk to our producers to figure out what's next, but the more you can share the podcast with your network, with your friends, it's appreciated.

# Jacob Shapiro:

As always, you can write to us at info@perchperspectives.com. If you want to just say hello, that's fine. Maybe maximally though you want to reach out and talk to me or somebody in our team about the insights that Perch Perspectives provides and the ways that we can allow you to start taking control over the geopolitical risk environment that your business or your investments are facing rather than constantly having to play defense and being on your back foot. Okay. Without further ado, let's get onto Chris. Cheers. All right, Chris, welcome to the show. We met through cousin Marco, who was just on the show a couple episodes ago. So happy to have you on get some investment insights from you.

### Chris Seifel:

Yeah. Thanks Jacob. I'm excited to talk to you today and really glad that Marco connected us. Macro has always been an interest of mine, unfortunately haven't been



able to apply it too much. So really excited to learn from you and chat about some things that are going on in the world today.

# Jacob Shapiro:

I don't know if you're going to learn that much from me. Number one is coffee, so I'm expecting to get increasingly more energetic as we go here.

#### Chris Seifel:

There we go.

# Jacob Shapiro:

See how we go. Well, look, I really wanted to pick your brain, especially about artificial intelligence, because you just did a great primer on artificial intelligence on your website that maybe we can talk about in a little bit. I know that you have some strong feelings about what's been happening in the stock market the last week with the short squeeze at GameStop, all this other stuff that's going on. I wanted to let you get on the soapbox. Listeners, I don't know what he's about to say. Chris, here's your soapbox. How are you feeling about all this man?

#### Chris Seifel:

For any of the listeners who may have missed really what happened, there's a stock among others, the stock GameStop that had a very high, short interest, meaning that there were more investors that had short shares, meaning they expected the price to go down than there were actually buyers in the name. These people on WallStreetBet some Reddit sub thread, actually pretty smartly identified this and realize that, well, if there are inadequate number of people buying the stock, then there's not going to be an opportunity, one, for whoever is short, the name, to get out, but also it's going to force the stock higher through two different methods. One is, either shorts covering, meaning there's more buying pressure on the stock. And in the short term, stock movements are all just supply and demand.

## Chris Seifel:

That would be one side of it. The other side is what's called a gamma squeeze. I won't get into the technicals of it, but it essentially comes down to how options are priced. And so when the stock keeps going up, the value of the call options are going to be going up and you get this, I'll call it a negative feedback loop, of an ever increasing price. And so that's why you saw GameStop go from, man, maybe in the 20s up to a high of 480. That's the lay of the land. What happened was, you had people like Mark Cuban and Chamath Palihapitiya go on CNBC and talk about how great of an event this was, because there was one hedge fund in particular that was in the limelight, Melvin Capital, which is the fund started by Gabe Plotkin. Who's actually Steve Cohen protege.

# Chris Seifel:



People were really happy about it. The fact that this firm was down up to 50% on the year. So just in a months time, just because of this trade. They were happy about this. I think there was a lot of misperceptions out there because, one, there were many short sellers in the name, not just a Melvin. There was also Citron was short, which is a famous short research shop, which they're not going to be doing short research anymore, but there were many short sellers in the name and people thought that it was just as one firm that was short over 100% of the float, which just intuitively makes no sense. That was one side of it.

## Chris Seifel:

And then when you had Mark Cuban and Chamath going on CNBC and publicly saying, this is a good thing. This is showing how retail traders are going to be dominant now and et cetera, et cetera. What was very negligent I feel, was that there was no real focus on educating the public or these retail traders on really what was happening and how to value a stock. I am not the end all be all on valuation. The stocks price and value at a certain time is the balance of supply and demand. However, over time, it's the classic, I think it's a Buffet quote. In the short term, the market's a voting machine, longterm it's a weighing machine. Whatever retail buyer was buying it 480 and the stocks net down to 80, they lost their shirt, but they were encouraged by these very public figures that should be having their back.

# Chris Seifel:

I think it was very negligent on the part of Chamath and Mark Cuban, who Cuban even said on CNBC, I think it's zero. He was like, I think it's going to go bankrupt and he's encouraging people to hold it. It doesn't make any sense to me. So then the last part of it was, it came down to this uproar over Robinhood, preventing or restricting buying of GameStop. Now there are a few different facts that people ignored when it came to this situation. One is, that Robinhood was not the only broker that prevented buying or restricted buying or even restricted trading in some form or fashion of all like these e-brokers out there. There's a very popular broker in China called Webull. They did the same exact thing that Robinhood did.

# Chris Seifel:

And then you had the big shops, like Charles Schwab, Thinkorswim, TD Ameritrade, et cetera. They all had certain restrictions as well. And then the second point is, and I'll tell you why these restrictions were in place. The second thing is that GameStop wasn't the only stock that there were restrictions on. There were maybe a dozen or so. There were up to 50 at one time for Robinhood that were in fact restricted for this reason. I'm going to start with the conspiracy theory and then tell you why it's completely wrong and fallacious. The conspiracy theory was that Robinhood, they sell their order flow to Citadel, who's a market maker. What people knew, they should've known at least if they read their customer agreements, is that the reason why Robinhood and these other brokers can be commission free, is because they're selling the order flow.

#### Chris Seifel:



They have to make revenue somehow. Actually my thoughts on selling order flow can be summarized by this. I'm pretty sure Bernie Madoff, actually invented this business model of selling order flow. That's all I have to say on that topic. But when it came down to Robinhood, everyone was assuming some conspiracy theory, that they had told Citadel that they're going to restrict buying on the stock, so Citadel could get short again, which to really make the story even weirder, Citadel was one of the two firms along with Point72, which is run by Stephen Cohen that had to actually infuse capital \$3 billion into Melvin Capital, just so that they didn't go under. There was a conspiracy theory that, Robinhood warned Citadel, they were going to do this, so Citadel could get short again.

# Chris Seifel:

And as soon as they restricted buying, Robinhood did, the stock will go down and Citadel would make a bunch of money and it could flow through to Melvin somehow. It sounds great. Sounds exciting. It's a great headline grabber, but it's not only really a very small and minute probability of that happening. When you analyze the actual mechanics of the market plumbing, you'll realize that it's a nonsensical statement. What I mean by that is this, Robinhood is a broker, but they also self clear. They pass all of their clearing through to the DTCC, which is just the one of the biggest clearing houses, the biggest clearinghouse I believe in the market. And so the process of what happens here, is that when you put in an order to Robinhood or any broker, there is two days between when that order is received and when the trade is settled.

### Chris Seifel:

And what settlement means, is just that there is a finalization of the trade. Someone receives money or an asset in return for another asset. It takes two days for the clearing to happen. In order for the clearing house, which guarantees the trades to ensure that they can actually finalize or settle the trades. They require the brokerages to put in deposits as collateral. What happens is, is when either market volatility starts increasing, or there are situations like with GameStop, we had both of these situations for GameStop, where there is a very high potential of loss, meaning that, there's counterparty risk, one counterparty can't fulfill their side of the obligation. When one of those two or both of those events occur, the clearing house will raise their capital requirements or their deposit requirements to ensure they can fulfill their side of the obligation, which is making sure people get whatever their end of the trade is.

# Chris Seifel:

So you have this dynamic going on with Robinhood having to put up accesses of more capital to the clearing houses, to make sure that the system can remain solvent. Meanwhile, they don't have enough capital because they're very fast growing firm. They don't have enough deposits on hand. They had to go out and raise \$3 billion themselves or something along those lines, just so that they could stay liquid and solvent. People just seemed to brush this aside and not realize the gravity of the situation and kept going on with this conspiracy theory that Robinhood was some, they were in the bags of Citadel and Melvin and the hedge funds.



# Chris Seifel:

When you actually understand the true plumbing mechanics of what happened, which has happened many times in the past, you realize that the conspiracy theory is not only nonsense, but it's actually very disingenuous to markets, because there was, there may be still, I don't think so, but there was definitely somewhat of a small probability of some contagion if one of these brokers went under or if the clearing house couldn't settle the trades, there could have been panic in the markets, could have happened. I don't think it's going to, but just understanding these dynamics, I think is really important and doing the research, and I'll tell you this, I didn't understand any of this stuff until this event occurred.

### Chris Seifel:

I held my opinions until I figured all this stuff out by doing my own research. I still don't know everything. I could be wrong, but at least I've done the homework. I have a fundamental understanding of the mechanics of the market and why when you take a probabilistic approach to problem solving. When you think about the probabilities of what happened with Robinhood, is it a higher probability that they truly had a cash crunch and they had to raise capital and in order to do that, they had to stop trading on these names to ensure that their deposit requirements didn't keep going up or that there was some conspiracy with Citadel and Melvin Capital? I think that there's a much higher probability of the former than the latter.

# Jacob Shapiro:

There's a lot to unpack there. I would start by saying, you talked about the fundamentals and knowing your facts. We live in a country right now where a US Congressman thinks that the Jews have a giant space laser, that they create wildfires within the state of California.

#### Chris Seifel:

I thought that was true.

### Jacob Shapiro:

Oh, it is? Let me just call my co-conspirators and we'll zap something just to help you out there. No. We're in an environment where information is hard get a hands-on, it's actually, a lot of my businesses analysis, but it has gotten so bad that the first thing that I have to do anytime I'm analyzing something for a client, is I have to figure out what information is good and what information is bad, because there's just a lot of bad information out there. I think the other point that you're raising here, and this might resonate with some of the listeners, because a lot of our listeners are more, they're geopolitics nerds, politics nerds, I'm sure there are some investing nerds among them.

### Jacob Shapiro:

But I think in people's imagination of how markets work, they think that it's somehow rational, as you said, that there's a valuation and that you pay the proper price, and maybe you pay a little bit more, maybe you pay a little bit less. To me, the thing that



the GameStop phenomenon showed, was that this was all about momentum. It was all about emotion. Those folks who were buying games stop at \$480. I don't know anybody who bought GameStop at \$480, and I feel bad for anybody who was. But let's say you were somebody who, you were on Twitter and you saw this thing, they're going to take it to the moon. And you bought, a couple shares of game stop at \$120. You're stuck inside because of the pandemic. You have nothing to do with your life. It's going up, it's hitting \$140.

# Jacob Shapiro:

On your screen, you're watching yourself make money and you want to buy more. And then suddenly the app locks you out. And then suddenly, all these guys are going on Twitter, the guys who encourage you to buy it in the first place, they're telling you that you're being heard, they're telling you that it's all a rigged game. And in this part, I think Robinhood really, it made a real marketing mistake, because when they announced it, you could still sell stock, you just couldn't buy it. They were really flippy floppy about how they communicated it. Besides even if they had communicated it well, all that information was out there, moving people towards momentum.

# Jacob Shapiro:

I just want to get back to something you said about valuation. You quoted Warren Buffet. And for some reason I was thinking about Bill Parcels. Somebody asked him once about how good his football team was. And he said, "The football team it's your record, how good you are with your wins and losses. It doesn't matter if you won 14 games on the last minute on fluke plays. That means that you're a 14 game winner that season." It's the same thing with GameStop, for a hot moment there, GameStop was a \$480 stock because that's what the demand of it was. It's mind blowing.

### Chris Seifel:

It is. I completely agree with that too. One thing that I tell people when it comes to valuation and analysis and just investing in the market is, you can do all the homework, your analysis could be spot on, but if the market doesn't agree with you, you're wrong. Joel Greenblatt tells the students this at Columbia, what I just said, you can have all this great analysis and worked on, but if in your investment horizon, if it's 12, 15, 18 months, whatever, may be three years, if the market doesn't ever agree with you and the prices don't move to where you believe it should move to you're wrong. It's that simple. I do agree, GameStop was worth at one point in time, \$480 because of the supply and demand.

#### Chris Seifel:

This'll be an interesting, I think, way to talk about it for your audience. Because I'm very used to only investors and I do want to say hi to my fellow investor nerds out there. But the way to think about the market can be a complex adaptive system. I don't know if you're familiar with that term and I can just quickly explain it if it's easier.



Jacob Shapiro: Please define it. Let's do it.

#### Chris Seifel:

It's something that I learned about from Michael Mauboussin, who is just one of the best directors of research. However you want to put it out there, in my opinion. A complex adaptive system has three basic components or characteristics. One is that it consists of many heterogeneous agents. And each of them make their own decisions about how to behave. And then the most important thing to understand about that, is that those decisions change over time. It's not a static environment. It's dynamic. That is something we definitely have in the markets. People are making their own decisions, all the time, and that changes daily, monthly, et cetera, et cetera.

# Chris Seifel:

The second characteristic is that the agents interact with one another. We have in the market buyers and sellers, we're interacting with each other all the time. And that interaction then leads to a third and final component, which is what scientists call emergence, which basically is, if you think about it this way, the whole becomes greater than the sum of the parts. So the issue then with complex adaptive systems, is that you can't really understand the whole system just by looking at it's individual parts. For the market, you can't just understand what's happening in the market by looking at the underlying stocks or industries. It's not going to tell you anything substantial.

#### Chris Seifel:

And so what the market really is, and I think that at least in the short term, once again, I do believe in the long term, there is validity to the efficient market hypothesis, which is essentially that stocks will revert to their intrinsic value over time. But I do believe in the short term, it is much more of a voting machine. John Maynard Keynes, he wrote about the best analogy that I could think about when it comes to the market in his book, The General Theory, and it was basically this, The metaphor is that you have this competition. Through a newspaper. What you have to do in order to win, you have to pick the six prettiest faces from let's call it a hundred pictures.

#### Chris Seifel:

The winner is the person who can most nearly correspond to the average preference of all of the competitors. What does that mean? You're not trying to pick the prettiest face that you think is a prettiest face, you're trying to pick what you think on average people think the prettiest faces are. If you keep going and extrapolating that, well, if you're trying to figure out what the average person thinks are the prettiest faces, you would then think, well, those people are also trying to do the same thing. What is the average of the average prettiest face? You keep going down these second, third, fourth, fifth orders. So you reached these degrees of intelligence where you're just anticipating what the average opinion expects the average opinion, which expects the average opinion to think.



# Chris Seifel:

That's what you have in markets in the short term, it's becoming this game of, well, what do I think others are going to want to buy and what are others going to want to sell. You go through this process of just mental anguish, trying to figure it out. So that brings me to a really important point, I think, and that is, is that, time horizons, your investment time horizon can be your biggest advantage. Over the long term, there are a couple of dynamics that play in the market. One is, is that, on average the stock is going to go up between eight and 10% a year. And now, the market, one, is not an organic process. It is path dependent and it's a lot easier said than done to say, well, on average, we're going up eight or 10% and the market's down 30% and you have to hold.

# Chris Seifel:

It's a lot more difficult when you factor in psychology. Over time, the stock is going to go up 8 or 10%. And if you can just hold and put stocks away and not think about it, you'll realize that compounding effect over time. But if you are much more short term influenced. Then you're going to be susceptible to this type of game. The prettiest face game. And so that's why I think that, really depending on what you're trying to do having a longer term perspective really helps. The last comment that I'll put there, is that, if you think about it mathematically. There are really two ways that accompany can increase in value. One is the growth of the underlying fundamentals, earnings, cashflow, et cetera, or the multiple, or the way that the market values your stock. Over time, the longer you go actually, the larger proportion that the compounding of the fundamental growth will matter more than whatever the price multiple was that you bought and sold for.

#### Chris Seifel:

So having this longer-term perspective and buying great companies with durable, competitive advantages, that have pricing power and great management teams that you trust can compound your capital over time, that's really the trick, and over a long period of time, you'll do fine.

# Jacob Shapiro:

I want to push back a little bit on something you said earlier, actually, which was that, you felt not much had changed and that things were going to go back to the way they were. I think the analogy to votes is interesting, because I think one of the things that has changed, is that folks are getting their information from different places. This WallStreetBets phenomenon happened on Reddit. It used to be that for society in general, we were all consuming the same information. Even in our parents' lifetimes, there were three TV channels. There was a local newspaper and there were a couple of national papers. Everybody was consuming the same information. And when you look at what's happened politically in the United States in the last, five, 10, maybe even beyond that years, folks are starting to source their information from places that tell them what they want, not what is actually going on.

# Jacob Shapiro:



I say that, that's Fox news, that's CNN, that's MSNBC, it's all of them. I'm painting with a very broad brush there intentionally because they all do it. It's all about what do I want to hear, not what is actually going on in the world. Now, I think that because not a lot of people invest in the stock market. I forget what the number is, but is it like half of Americans don't actually invest in the market right now, or at least it didn't before this whole GameStop phenomenon, it's a smaller, more rarefied community. And so you could pick up the Wall Street Journal or read Bloomberg, and there were still some coherence to the information and the perspective that everybody was consuming. Wasn't a particularly good perspective in my opinion. It seems to me every time something happens in the markets, the Wall Street Journal, they just find whatever's going on in the world.

# Jacob Shapiro:

And they say, markets are down today because Xi Jinping gave a speech. If you read the front page of the Wall Street journal, it's maddening, because it doesn't matter what's going on in the world. I was thinking about this just yesterday, because Peloton had an earnings beat. The stock was down 10% after a few hours. Why is it down? They did well. It's because supply, they just make up a bunch of stuff, but at least everybody was reading the same made up stuff. The thing that worries me, I don't know if it worries me, maybe that's the wrong word, but these WallStreetBets folks, they were getting their information from somewhere else. They were looking to David Portnoy. They were looking to their friends that they met on Reddit to consume the information.

# Jacob Shapiro:

You could even go, I went down a rabbit hole on Reddit and these folks were publishing their own deep dives, trying to make cases about why you should buy Nokia, why you should buy Blackberry, all these stocks, which actually have some interesting theses behind them, but it wasn't just that there was this emotional panic thing. What underlaid it was, the system of conveying information and group perspective that really formed into a mini mob. You mentioned Citron. The reason Citron doesn't want short stocks anymore, is because the mob was threatening their lives, was trying to hack them, was trying to find their homes, all this other crazy stuff that was going on. I think when we're thinking in general about what happened in markets last week, I think maybe it had its 2016 moment, folks realized that information really does matter. And if you get a critical mass of enough humans consuming information, whether it's right or wrong, it can start moving markets.

# Jacob Shapiro:

And then the needle starts moving all over the place as the folks who thought they were on the inside, start having to react to this variable that they didn't see before. If we're moving to a place where investment ideas and reporting on these things, everybody has their own source, and more people are doing it because they want to be on the next GameStop. My sister isn't interested in the stock market at all, she called me out of the blue a week ago saying, what's GameStop? Should I buy some GameStop? That's happened, like a number of people in my life. I'm a geopolitics guy, not an investing guy, so whatever. But I'm just saying that there's a kernel of



something there and I think in that sense, the finance community is now experiencing what we've experienced in politics and society and a lot of other places.

# Jacob Shapiro:

I think that's why some of those crotchety old men who made billions of dollars went on CNBC and went on all these other channels and they did the "get off my lawn" speech, because the old system worked just fine for them. They don't want to see the old system blown up. I don't know.

## Chris Seifel:

Right. No. I actually really agree with your take. It also goes back to a lot of different things, actually. One is diversity of thought, does improve outcomes. I think that you are right, the broader availability of information as long as it's being consumed. I think that does actually add to market efficiency. What I did mean before in terms of things aren't going to change, it's simply that institutions will dominate the price action. But in terms of what is going to change, there are, I think a lot of good things that are going to come out of this. Now, let me preface what I'm going to say by also saying that, short selling improves market efficiency. For instance, right, back in 08, they actually, I think it was the SEC, one of the regulators restricted short selling and that just made matters even worse, because there was a no covering of the short selling, so there were no buyers.

#### Chris Seifel:

Short selling does serve a very important purpose when it comes to price discovery. However, what I think a huge benefit of the situation is, is that you're not going to be seeing irresponsible shorts like we saw with GameStop. Now, I don't even know how it's possible that a stock can be shorted more than 100% of its float. It must have something to do with transferring of options and offloading more risk, I don't know. But I think you're going to see a lot more instances now of if there is short interest, it's going to be a lot more manageable so that you can't get squeezed now. I've talked to a lot of my contacts on the buy side, hedge funds are scared out of their minds. They are getting out of their short positions. Some aren't even considering shorting for a long time.

#### Jacob Shapiro:

I bet they're also all getting Reddit accounts and following what's going on at Reddit religiously.

#### Chris Seifel:

How could anyone know on Reddit or WallStreetBets, if these people were truly your average college kid or someone that works at one of these funds and is trying to drive price action, you don't know. I think that there is a lot of interesting things that come out of this event. To bring it back, full circle, I want to make sure it's an applicable discussion for your audience. What I do think we're going to see, is a lot more volatility in markets, at least in the shorter term when it comes to especially these smaller cap names. I'll try to bring a more macro lens to this discussion now,



which is, we saw this instance happen with GameStop, but I think it was either earlier this week or was it Monday or Friday, they were trying to do the same thing with silver.

## Chris Seifel:

They were trying to put on a short squeeze of the silver, which didn't even work and it's actually an interesting story, because I'm not sure if you're familiar with how the Hunt brothers tried to corner the market in silver back in, God, the 60s or 70s, whenever it was. The issue then and they were successful with it until the government stepped in and they raised capital requirements and they could no longer fund the short. The very similar thing happened where I forget how exactly the trade popped, but these people were to trying to squeeze silver on the short side. I think it was the brokerages themselves increased margin requirements so that it couldn't occur anymore and silver came right back down'

### Chris Seifel:

The issue is this, it's not just in stocks that you could see the short squeezes, these instances play out, but it's also with commodities. And now the issue with commodities is a lot more important than any individual stock that may be squeezed, because you have companies around the world and supply chains really reliant on these commodity prices and how exactly the spot prices and future prices are behaving. Because you have to make these decisions. As an example I was doing a pretty in-depth dive for Rob actually on this company called GrafTech, which is a ticker EIF. They're a producer of graphite electrodes.

# Chris Seifel:

Graphite electrodes require a really like an oil by-product called a needle coke, and it's called petroleum needle coke, because it's a by-product of a petroleum. That is price really based off of only one company that produces it, which is Phillips66, but the impact for and the way to analyze EIF itself was really trying to understand what's happening in the steel market, because what graphite electrodes are mostly used for is the production of steel from what's called electric arc furnaces. And so that is really the main driver of the demand for EIF is what the demand for steel is. Now, the demand for steel, you can really intuit from steel prices. So steel prices are right now at all time highs. And so that would indicate then, high demand. These producers downstream in the supply chain are going to be making decisions off of what they're seeing in certain markets.

### Chris Seifel:

And so the steel producers with higher prices, they're going to be wanting to cranking out steel as much as possible. If you have manipulation or just certain price action in the market, that doesn't truly reflect a normalized, when I say normalize, within the business cycle, what supply and demand is, that can just cause really a lot of disruption throughout the entire supply chain. That would then increase the sensitivity of business cycles and economic cycles, which would then contribute to a more boom and bust and more frequent boom and bust type nature of the economy.



I think that, if it's limited to just the equities, it's probably not going to have as big of an impact as if they started going after certain commodities like they did with silver, or if they do a steel or copper, which copper to me is the biggest indicator of forward equity prices.

# Chris Seifel:

I think that there are a lot of interesting permutations and combinations of events off of this, that I think I would just caution people to take note of and be aware of, because if it does permeate into these much more tangible markets, it could have big impacts.

## Jacob Shapiro:

And now you're traipsing on areas where I do a lot of work too, but I think there was something in what you said about there is a structural advantage for institutional investors and at the kernel of any group think that happens, there's usually some truth. I think that's the truth that was at the core of the WallStreetBets, mob and phenomenon. They see the structural advantage that the institutions are getting. They see that individuals have less options when it comes to the marketplace and that pissed them off. That narrative is true. Institutions, large corporations, this game is easier, the bigger that you are, because you can have that long time horizon that you alluded to and just hold in times where things are bad. Whereas if somebody else has to pay the rent, it's much more of a thing.

# Jacob Shapiro:

But to your point about commodities, commodity speculation has been going on probably as long as human beings have been alive. I do some investment advising with folks, but equities, as you point out, are second order of things. I can describe a lot of the inputs. I can describe a lot of the risks, but there's also this emotion, momentum, all these components that have nothing to do with the fundamentals. My job as a geopolitical analyst is really give you the fundamentals. I help folks figure out investment strategies with equities, but I always tell them, I'm giving you the fundamentals, you're the investment person, which means you also have to have the psychology of the market and the valuation conversation. I'm just going to give you the best fundamentals that you can possibly have.

### Jacob Shapiro:

In commodities though, I'm a little closer to the source, because it's a physical thing, it has to go from point A to point B. You talked about steel, copper, all these other commodities, that's where China becomes such a big deal, because the price of things like steel, like coal, like copper, it really is defined by Chinese demand, by Chinese production. What's happening in China has affected these markets all over the world. You talked about steel prices being high. Just the fact that China was over producing steel so that they could build ghost cities, that nobody was going to live in to keep their economy going and then dumping the excess steel in the marketplace, is the reason all the steel workers wanted to vote for Donald Trump, because the price of steel got sent down because of this market condition in China, which the



fundamentals weren't supporting. It was a political imperative for the Chinese government to do that and it reverberated throughout markets.

# Jacob Shapiro:

This is where geopolitics and national imperatives and all these sorts of things start to play in. I agree with you that we like to think of efficient markets and over the long haul, maybe that efficiency is going to come in there, but you do have these moments where different political actors, whether they're companies, whether they're governments, whether they are both at the same time, are effecting market prices. All of those things, there's always politics behind them. I think for the WallStreetBets crew they pulled back the curtain and saw some politics they didn't like, they saw some structural things they didn't like, but if you actually delve into the plumbing, as you said, there are a lot more of these other bubbles, structural flaw, all these things are lurking all behind there.

# Jacob Shapiro:

I don't mean that as some doom and gloom thing, the system works for a reason. Those potholes are there and that's why you get these up and downs, boom and bust cycles, as you said. The last thing I would just say is, we're moving away from a globalized economy to a more regional based one, based on national powers and self-reliance rather than on efficient and lean supply chains. I do think that means that different great powers are going to be competing for access to different commodities that is only for their benefit. I think you could see these boom and bust cycles happening in places, in Latin America with lithium or places in Africa when it comes to cobalt, all of these minerals that are supposed to be a part of the next big economic revolution, but that they aren't actually in our countries and the globalization network is breaking down.

## Jacob Shapiro:

But I think that's a great segue to talking a little bit about artificial intelligence. We're 42 minutes in, I could talk to you all day, Chris, but I want to do a little bit of time on artificial intelligence before we wrap up here, because I thought your primers on artificial intelligence were great. I do have a bone to pick though, and this is why it's a good segue. You didn't mention geopolitics once in your artificial intelligence primer, and you didn't mention China once in your artificial intelligence primer. I don't think you can talk about artificial intelligence without talking about geopolitics anymore. How about you give a little very, very brief, give us the one paragraph take away from your artificial intelligence primer and then tell me why or why not you didn't include that geopolitical element.

#### Chris Seifel:

Your bone is just a perfect bone to pick with me, because one I completely agree with you. Two is, it's funny because when I released the first part of this primer. I have four parts so far. I made it very clear to people like I have no background in computer science. I have no background in artificial intelligence. This is my attempt to open kimono show people how I go about learning about a specific theme or



technology or industry, whatever it may be. I do not know everything about AI, but I do know a little bit and I think I'm a little bit more knowledgeable than your average consumer of products, your average investor. One thing that I haven't gotten to the China side of it or even really the geopolitical side of it, is because I'm wanting to tie the AI piece in with my next primer series, which is all about semiconductors, which we can definitely include in this conversation.

#### Chris Seifel:

I was going to bring it up when you were talking about the more localization of supply chains and how that ties in with what's happening in the semiconductor market, which to me is the most important industry in the world. To start, I didn't mention China in the AI piece, is because I'm going to loop them in. But two is, it's very much more of a basic, like this is what artificial intelligence is. In terms of the takeaways themselves the only piece I've done so far is how to analyze a company through an AI lens. Let me start with just the key takeaway of AI and what I was trying to get at and why I think it was so important for me to do at least part four, which is the final part, like I mentioned. Which is that, it seems now that artificial intelligence is the next buzz word.

### Chris Seifel:

We had dot com back in the 2000s, and you've had other type of buzzwords to indicate value for companies that have led to bubbles, et cetera, throughout market history. I'm seeing a lot of similar dynamics now with artificial intelligence. The key takeaway was, you need to truly understand really three main things when it comes to a company and their claim of usage of artificial intelligence. That is, the three broad categories are, one, what problem are they solving? Two, data, and there are some sub categories of data and then three it's the quality or the proprietary nature of the algorithm itself.

### Chris Seifel:

Right now, the most important thing when it comes to understanding artificial intelligence and the quality they're on of the programs or machines being built for Al, is the quantity of data and really the quality of data. When it comes to a company like L,emonade claiming they use Al when the entire industry does it, and they're a newer company, well, they can't have as much of a quantity of data as their competitors, so there are issues there. Taking just one big quick step back to finalize my really three paragraphs, instead of one, you can think about Al as I would say, three different categories. Al is the overarching umbrella, within that umbrella there's machine learning and within machine learning, there is deep learning.

#### Chris Seifel:

I wanted to come up with a term for anything that was artificial intelligence, but was not considered machine learning. Al as a whole is just simply when we're able to give a machine human like intelligence, so that the machine can predict, they can classify, learn, play, reason, et cetera. That's artificial intelligence as a whole. Machine learning is the subset of Al that utilizes math, statistics, et cetera, to learn from them data



itself. The really main in the more popular now segment of machine learning is deep learning, which is utilizing neural networks, which is essentially programs modeled after the human brain, model after the neurons in the human brain, and has multiple layers within this network that does a lot of different calculations. Really it's a black box.

## Chris Seifel:

But it's used now to, as an example for natural language processing. It's used for image recognition, audio and video classifications. The advancements in artificial intelligence have really been coming from deep learning. The term that I applied to anything that's not machine learning or deep learning is what I just call basic artificial intelligence. Basic artificial intelligence is that the program is just solving a problem. It's that simple. And so where you see AI in a lot of companies, are just basically solving a very basic problem. It's improving efficiency. But what it doesn't do, which is what a lot of people were claiming in their analysis that I was seeing, is that the use of artificial intelligence was creating some durable, sustainable, competitive advantage, when it was not. That was really the message I wanted to get across, is you need to do the work, to really understand how a company is utilizing artificial intelligence, the quantity of data, the quality of data, the algorithm that they're using, and the problem they're solving, to really understand the value AI can apply to a company.

# Jacob Shapiro:

I love that you were upfront about the fact that you're not an AI expert, that you had no background in this before you dived into it. I'm sure there are people out there who will hear that and be like, who are these two dudes who are talking of AI? They don't know shit about AI. I just want to respond to those people, because I'm sure there's a couple of them out there. And just say that look like Chris is doing this from an investment point of view, and I'm doing it from a geopolitics point of view and knowledge is not sovereign, knowledge is for everyone. Just because we are not artificial intelligence experts, does not mean we can't figure out enough about artificial intelligence to figure out how it's going to affect those things that we actually are experts in. I would invite anybody who is an artificial intelligence expert who wants to go deeper in this, please come on the show, drop us a line info@perchperspectives.com.

## Jacob Shapiro:

I'll do the same interview with you that I did with Chris, and you can drop some knowledge on all of us and I'll be happy to soak it up like a sponge. I'll get off my soapbox there and just say a couple of things, which is, Peter Thiel, I don't know if I agree with this or not. I've bad mouthed this comment from him a little bit on this podcast before. I think about 10 years ago now, he described crypto currencies and blockchain in general as a libertarian technological innovation and artificial intelligence as a communist technological innovation. I have a lot of problems with that construction. But I think part of the reason I have problems with it, because there is a pretty unique kernel of insight in there, which is that, AI, if you get to that general AI that you're talking about, the full realization of AI.



Chris Seifel: Right. AGI.

# Jacob Shapiro:

Not just talking to Siri and asking her what she thinks about what you had for breakfast, but actual things. This gets back to our conversation about information. Al would then start to make decisions. It would make decisions maybe in markets, maybe on battlefields, maybe in terms of identifying cyber threats and neutralizing them before the humans even knew that the cyber threat was there sort of thing. It starts to create reality. And as we've seen with the GameStop thing, once you create a reality, whether it's true or not, or based on fundamentals are not, human beings will go at it. I think there is this fear there, underlined that AI will do that. Whereas, crypto and blockchain, all these other things, it's about decentralized control. I don't know if that's true and I'd love to get your take on that, but I just throw that out there because I think it's an interesting point of view to wrestle with.

Chris Seifel:

It is.

# Jacob Shapiro:

The second thing I want to say is, you talked about, and I thought this was a great way to frame it. You talked about what AI is being used for. I think anytime you're thinking about technological advances, you do have to think about what that thing is used for. My two favorite examples of this are, in the United States, in the 19th century, somebody in invents the six shooter. The handgun, you can have six shots rather than just one shot on your rifle and you have to reload it sort of thing. Some guy comes up with a six shooter, I think it was Samuel Colt. I think that was who it was, probably because it's the colt 45, not sure. He comes up with this six shooter and the US army doesn't want it. They're happy with their rifles, but who does want it are these Texas Rangers who are dealing with the Comanche on the plains, because the Comanche are these cavalry archers, and they can fire more arrows per minute than they can reload their rifles at.

## Jacob Shapiro:

The six shooter becomes this technological innovation because the Texas Rangers go and buy them all because at the Texas Rangers hadn't been there, probably you have to wait decades if not longer for the six shooter to actually get adopted. Another example of this goes back to the semiconductor thing, microchips, the chips behind all the technology that we're using today were invented, it depends who you ask, a lot of different people lay claim to it. I know Jack Kilby at Texas instruments is obviously one of the most important guys. But this was all happening post 1945, late 1940s, early 1950s. And they have microchips, the concept is there. They're building them all, these other things. Microchips don't take off until the US government under the Kennedy administration decides that they want to use microchips to create precision guided munitions, so that their missiles can strike specific targets in the Soviet Union.



# Jacob Shapiro:

Once the United States decides it wants to buy all of those microchips, suddenly you have an industry and suddenly all these second order, third order developments in our phones, all these things happen in large part because the US government for a distinctly geopolitical reason decides to be the first investor sort of thing. That's why I think you can't disconnect AI from the geopolitics conversation at all, because it's that competition thing. It's that kind of technology. China says it wants to be a global AI power by 2030. Russia says, I forget the exact quote, but Putin was quoted just recently saying whoever controls AI is going to control the world, that sort of thing. I think it is, because there is this competition over the technology that multiple governments are not able to extricate it, and they are thinking about how to apply it.

# Jacob Shapiro:

If you are a company in that space, or if you're using artificial intelligence, the government's going to be involved. They're going to be watching, they're going to be using it for their own purposes. I just want to close on that by saying, one of the best lines I thought in your primer, was you talked about how maybe counterintuitively a company that has a data advantage is going to be better off than a company with an algorithm advantage. And talking about how data is really the raw material that the AI has to work with. And as AI gets better, in some sense, an AI is only as good as the data that it is getting fed to. If you're thinking about the United States and the future of the US tech industry, I think that should worry you because just look at the way the COVID-19 vaccine has rolled out, because we have really shitty data.

# Jacob Shapiro:

It's because we can't track human beings in our country for a lot of different reasons, and we can't figure out what goes where, we've got doses being wasted, this, that, and the other thing, that's a data problem. It's a data problem in terms of gathering, in terms of organizing, collecting, all these other things. The reason China might have a leg up here, is because they're good at that. They have figured out that this is a strategic priority and they'll gather the data no matter what. We're going to have this interesting moment I think, in the United States, where are we going to fall down on the side of national security? Is the government going to play that role again, where it steps in because it recognizes that to preserve the greater good it's going to have to do some things that maybe feel a little bit anti-liberal, anti-democratic and practice, in order to protect the overall ecosystem from somebody who wants to use those things from harm?

# Jacob Shapiro:

I don't know, I'm raising the questions that are at the core of this. That's why anything that is linked to artificial intelligence, whether it's the data, the semiconductors, even the not very complicated or sophisticated parts that go into creating the data centers and all these other things, they're all going to be at the center of global competition. They are all going to have the eyes of national governments on them in a very intense way.



# Chris Seifel:

Jacob, I'm sorry, because I could rant and talk to you all day about all of these topics. I just find it so extremely fascinating and it ties into really a lot of other interests, none really investment related that I have, for instance, recently I've been diving into quantum mechanics. As another precursor to that, I have no background in quantum mechanics either, but I'm trying to understand the basics. My point is, is that what that informs is, it allows you to understand really the nature of the heart of the matter. To your point, what is happening from a geopolitical perspective? For me, the reason why the AI is so applicable across borders, is once again, really focused on the semiconductor side, because the reason why AI was able to take off really came back to what happened in, I think it was 2012 or 2013. Whoever it was realized, wow, if we put GPU next to CPU's, which GPU's are really good at doing the same thing over and over again, doing a calculation over and over again. If we put GPUs next to CPU's, we can run some pretty heavy models.

### Chris Seifel:

That was really the big event that occurred that got us out of this AI winter, where, even though we had a lot of data from the internet and social media, we didn't have the computer processing power that would allow us to, for now GPT-3, which is a 175 billion parameter program. We didn't have the processing power before. One of the biggest drivers of semiconductors today, is really use advancements in AI, but AI is also reliant on the semiconductors, to be able to progress as well. And so that's why, if we want to really talk about, I think, a unique geopolitical topic, it really centers around Taiwan Semiconductor. We can tie it into the US too, when it comes to Intel.

### Chris Seifel:

In 2019, Intel lost its fabrication lead to Taiwan Semiconductor, because they fell behind a node. I can just quickly say, so a node is just really the next level in computing processing power. If you think about Moore's law, it's the next essentially doubling of the number of transistors on a chip. And so the way that you can think about it, is that, now that Taiwan Semi is really the leading manufacturer, they have greater than 50% market share of the actual core manufacturing capabilities. That's going to be an incredibly strategic company and the island's going to be strategically even more competitive now between the US and China, I think, you're the expert, not me. But I could see that playing out. And so it's really interesting that you see now that Taiwan Semi has plans to build a five nanometer factory, which is the currently the top technology in semiconductors.

## Chris Seifel:

They're going to spend \$12 billion over the next couple of years to build this in Arizona. Now, Samsung is going to be doing a very similar thing in Texas. Samsung's one of the other big fabrications or foundries. I do see that the geopolitical lens behind artificial intelligence and tying in semiconductors, I could see it really becoming really front and center. I think whatever the US does in terms of really stoking that fire, it'll be interesting to see it play out. I would love just get your thoughts on how you could see that playing out.



# Jacob Shapiro:

It's a good question. Listeners, if you haven't gone back and listened to our podcast with Rui Ma from Tech Buzz China, we talked specifically about this issue there. Obviously I deal with more of the political aspect. Rui is actually focused on the technology aspects and she's a great follow at Tech Buzz China and I thought that podcast was a really good primer for what we're talking about. Also just a shameless pitch here, Chris and I are having a good time talking, but this is the exact conversation where I think geopolitical consulting actually really shines and creates competitive advantage. I think there are too many consultants out there who think they're going to come in and just wave a magic wand and they're going to tell you exactly what to do. The way that actual good consulting works, is if you get a client who is an expert at what they do, and then recognizes that you are the expert in geopolitics or whatever it is, and then fuses that with their own expertise to create better outcomes, that's really what I'm all about.

# Jacob Shapiro:

In a sense, that's why I have these conversations on the podcast. It's to keep myself sharp, it's to keep myself having those conversations and give people a picture of the depth you can get, even if you walk into the conversation, not knowing a whole lot on semiconductors. Look, it's not just Taiwan, although, Taiwan is a big one. You mentioned the TSM talking about building that fabric or whatever in Arizona. I'll believe it when I see it. They're also not going to complete it until 2023, at which point is five nanometers really going to be the most cutting edge thing. I think that was pretty clearly they were trying to make nice with the Trump administration. We've got a new administration in the US right now. You mentioned Intel, Intel's fallen behind, but Intel from a geopolitical strategy point of view, they are the company that had it right.

## Jacob Shapiro:

The geopolitical strategy was 1000% right. They were producing here in the United States, they fell down on execution. If they can get their execution back online, or if the US government decides that it is in the US national interest for Intel to get its systems back together, which I think is, I can't say that for sure, but that's what I would bet on. I think that's the bullish case for Intel. That the US is going to see Intel as a national champion and it's going to treat it as such. On the flip side of this, you've got China, which because of the Trump administration really had its semiconductor supply chains break down because they still are not self-reliant on a lot of the technology that goes into creating the most advanced microchips. They are sprinting to self-reliance.

# Jacob Shapiro:

The sooner that they can start producing these things to themselves from their point of view, the better, and that will also make Taiwan a little bit less important for them, because once China decides it's going to get self-reliant on something, maybe it'll take five years, maybe they'll take 15 years, 20 years. We can argue about how long it's going to take, but that's also going to change all the dynamics. Just one other point I would throw in there, we think about the US, China, Taiwan, because they're



the biggest players, but I'm glad you mentioned Samsung, because obviously they're a big player on South Korea is a big player, but it's not just them. It's Japan too. This goes back to the point about globalization. We used to have globalized supply chains which it was more like a green light system, where things went, unless somebody came in and said, stop. We're moving to more of a red light system or a yellow light system where you have to show your credentials or show your political affiliation before you're going to be allowed to get through.

# Jacob Shapiro:

A couple of years ago, I guess now, what? A year and a half ago, two years ago, I've lost all sense of time during the pandemic. Japan launched a bunch of export restrictions and import restrictions on South Korea because of a political fight they've been having for over a century. That completely broke down the supply chain that South Korea needed to import, etching and all these other things that they needed to continue producing the things. Then China and the US needed to import to produce their things. It completely shut that down for a while. My point there is just that, it's about more than just the US and China, and Taiwan, although they are big components of it, but you're seeing these different areas where folks are trying to create self-reliance or trying to create politically reliable supply chain so that they can have the equipment that we're talking about to produce these technological advantages.

# Jacob Shapiro:

It's one of the reasons I keep saying, over and over at Perch Perspectives if you look on the website, there's going to be a geopolitical revolution before we get to the next economic revolution. It's happened to every single time. When you think about the industrial revolution, when you think about the digital revolution, there was always an intense geopolitical conflict before the promise of the technology could actually be realized, because before the technology could be realized everybody was fighting over it, that's the period we're in right now. Everybody's going to be fighting to be that next tech champion. And before you're going to get a lot of this potential coming to fruition, there's going to be a lot of geopolitical stuff happening in the interim. That's my take on that.

### Chris Seifel:

That's great. I want to add one thing. I don't know how much time you have. I don't want to take too much of it. Just one thing when it comes to semiconductors and it relates to your point, that China is trying to bring everything in-house. That's my same understanding as well. There's one really big issue there, and that is simply from a technology side, in order to make substantial progress and get to the best technology out there, right now it's five nanometer in process. They're going to three nanometers. To your point, with TSM building the five nanometre factory in Phoenix, I believe it's Phoenix, so in Arizona. By that time, you're right, they're going to have three nanometre up and running. It's not going to be the cutting edge.

### Chris Seifel:



But my point being that there's only one company in the entire world that has the technical acumen and the ability to create the machines needed to get us down past 10 nanometer actually, which is ASML. Really quickly for the listeners, ASML is a photo lithography company. What that does, is they use light to essentially etch the system design onto a chip. It's really remarkable. I'll try to be very quick and explaining what they do, but to me, I find it one fascinating too. I think they are the coolest and most important company in the world. Up until 10 nanometers ASML could use ultraviolet light to etch these carvings onto the silicon wafers. The really fascinating part there, is that, ultraviolet light is 193 nanometers wide. But they were able to, just through different methodologies narrow that down to 10 nanometers. But past 10 nanometers, they couldn't do it anymore.

## Chris Seifel:

They had used many different fabrication technologies, but they couldn't get past 10. Nokia, which was the other really big competitor. I think there's another one out there. They were all working, including ASML on developing extreme ultraviolet light or EUV lithography. Nokia gave up. It was too difficult for them to do. They couldn't figure it out. No matter how much money you want to throw at the problem, it came down to an engineering problem and ASML was the only company that could figure it out. So they have 100% market share of EUV technology and machines, which is remarkable. What the EUV technology does is, it drops 50,000 minuscule particles of molten tin down into a funnel and with a carbon dioxide laser, it shoots this molten tin 50,000 times a second to create plasma, which from the plasma is emitted EUV light, which then goes down to the chip and that's how you can carve out or etch, the transistor size is less than 10 nanometers.

# Chris Seifel:

The point being, is that, while China, I think will be able to get there, they have their own fabs inside the country, there is going to be this underlying issue of they can't get their hands on extreme ultraviolet light machines, so I don't know how they're going to be able to then get past 10 nanometers. Now, that could change, but that's the big issue I see.

## Jacob Shapiro:

It's a great point. China, they've done a lot of amazing things. They also have some key deficiencies, EUV equipment, and that was an amazing description of the molten tin thing.

### Chris Seifel:

It's wild.

# Jacob Shapiro:

I guess the cliff notes is, EUV is what makes the chips and the chips are important, but it's funny. That's the thing that actually makes the chips and then the chips, all that other second order stuff. EUV equipment and then actually design software, China's really behind too.



Chris Seifel: Really?

# Jacob Shapiro:

I spent a lot of time reading tech journals, the Chinese government has thrown a lot of resources at creating its own EUV technology. I've read everything from, they don't have a chance ever to maybe five years and everything in between. There's a lot of uncertainty about there. This gets back to the nature of technology, because you never know when you're going to have the breakthrough. If China has the breakthrough in two years and starts being able to do that sort of thing, we're talking about a very different universe. ASML of course, is a Dutch company. The Dutch always seem to corner interesting geopolitical corners of the world. Like they were a global empire there for a little bit before the British took over. They're always ahead of the game on that point of view. Shout out to the Dutch listeners. But this also gets to the issue of China, EU relations and why the United States was so nervous about that investment deal that the EU and China finally agreed to. China has been trying to put pressure on ASML to sell them EUV equipment.

# Jacob Shapiro:

The US government, at least under the Trump administration, was doing everything possible, including threatening sanctions to get ASML not to, and the US was winning that of battle outright before. I think you're right in the sense that, and this goes back to the globalization question again, the global economic trading system was built before towards more globalization and it's going backwards from that thing. You have these pockets, you have these wide moats, like an ASML that they're there right now, but technology and you alluded to this near AI primer, changes so quickly. And the Chinese are trying so hard to generate the self-reliance. It's not just the Chinese, they're probably just the best at it and the closest to it. But if you read tech policy coming out of India, coming out of Turkey, coming out of Russia, coming out of France, the EU, they're all talking about digital sovereignty, they're all talking about self-reliance. They are all talking about securing the supply chains for themselves.

# Jacob Shapiro:

So ASML has a very wide moat today. It's probably why their stock prices, I think it's gone up by a factor of four in the last two years or whatever. But it's a precarious position, especially because a lot of people, a lot of smart people, a lot of countries are throwing their weight behind developing that thing, because we're in a self-reliance world, we're in a geopolitical world. We're no longer in the globalization world. All right, Chris, this is a great episode. I want to get you out of here with a quick little game of over under, if that sounds good to you.

Chris Seifel:

Great. Let's do it.

Jacob Shapiro:



We've been doing this for the last couple of podcasts and people love it. People love a kitchen game thing. Here we go. It's very easy. You'll get it. I'll say, a number it's over under, and you have to say whether you think it'll be over or under. We'll start with, I actually posed this one to cousin Marco when he was on the podcast. Over under 35,000 for the Dow Jones industrial on January 1st, 2022?

Chris Seifel:

Under.

Jacob Shapiro:

Under. Tell me why? Marco was over by the way, and then said, I believe what he said was, "Crap, but everybody's over. That means I should probably shorten."

#### Chris Seifel:

Sure. This is really a simplistic way of thinking, but post crises or post 20% plus drawdowns in the market, three months following that for the following 24 months, small caps drastically outperformed large caps. As you know the Dow's is going to be mostly just large caps. I think that small will outperform large, one. And two, you saw a very similar dynamic play out with the cyclicals leading after the Trump election. You're seeing the same thing play out now with after the Biden election, but that cyclicals leading only persisted for a couple of weeks and then that just fell off. I think that you're going to have smalls outperforming large, and then your non cyclicals most likely outperforming cyclicals moving forward. But the biggest thing for why I think the Dow's knocked at 35,000, aside from those factors, is that we are going to have a retracement at some point most likely in the first half of the year. You're going to then have a bigger hill to climb, to get up to 35,000.

Jacob Shapiro:

Okay. Over, under, \$100 for the GameStop price point by the same date?

Chris Seifel:

Way under.

Jacob Shapiro:

Way under, are you sure? Tell me why?

Chris Seifel:

Oh my God. I'm beyond positive. Because right now you've seen it play out. One is, we're right now way below 100. I don't even know where it is right now. Maybe 60.

Jacob Shapiro:

It's February 5th at 10:19 AM, Central, GameStop is up 33% right now it's at 71.41.

Chris Seifel:



71.41. Okay. Forever in a day, I think two things. One is, people get distracted very easily, and so while, maybe GameStop's the flavor of the week or flavor of the month, they're going to move on to other stocks. That's one. Two, is that, when I say short term, maybe it's a month, two months, three months where these periods of irrational exuberance can go on for, but I would say over at least a nine month period, and then 12 months we're talking about, 10 months, whatever it is, there comes this realization that I need to earn a return on my capital. If I'm buying a stock at, let's say, I don't even know what the PE is on GameStop stock, which is how you should value that stock. There's no possible way that I'm going to earn even an 8% return on my capital, just based off of the turnaround nature of GameStop. I don't see it happening, not even close.

# Jacob Shapiro:

All right. Let's hope the Reddit mob doesn't come after you.

#### Chris Seifel:

They've already come after me way too much.

# Jacob Shapiro:

I'll leave them to you. Over, under, 30 years to general AI? I know it hurts. Doesn't it?

### Chris Seifel:

It does. It does. Let's say so 2050, I'm going to say right under, I think we get there on 2050.

### Jacob Shapiro:

Wow. Okay. That would be a big deal if that's true.

# Chris Seifel:

I know. I know.

#### Jacob Shapiro:

All right, that's good. We'll file that one away, and we'll have you back in the pod in 30 years.

#### Chris Seifel:

Looking forward-

## Jacob Shapiro:

Hopefully when we're both wildly successful in our endeavors.

### Chris Seifel:

That's right.



# Jacob Shapiro:

And then last one, over, under and this one hits a little closer to home probably for you, and I got this from a chart in one of your primer pieces. I think the survey data was from MIT or something like that. Over, under in the year 2030, 50% of financial services business processes handled by AI.

### Chris Seifel:

That's a good one. Over.

# Jacob Shapiro:

Over. All right. Tell me a little bit, so what processes and what's going to stay in the human realm?

## Chris Seifel:

The majority of credit applications, bank account sign ups, even trading, reporting, all of that can be automated and automation is a component of artificial intelligence. I think with the majority of what these companies are doing, artificial intelligence will be able to handle the majority of it. I'm thinking about the chart that you're referring to. I think it was something like only 12% now, are between 41 and 50, or 10%, something like that.

### Jacob Shapiro:

Yes. That's correct. 12%.

### Chris Seifel:

12%. Yeah. Because that one really stuck out to me. We're talking about 10 years from now. And so just the nature of growth in tech, at least from my experience when it comes to these S-curves, is you're going to have this exponential growth at some inflection point. I think the more that you see companies like nCino, which is essentially a software company for financial services companies, which are utilizing artificial intelligence to provide the services that they do. I think you're going to see just more of that pickup very quickly. We're increasingly becoming more and more digitized. We had more data created in the past two years than we had in the history of mankind. I think that continues and what that means is just more efficient and better artificial intelligence programs. I think you have this confluence of events that are going to really force these companies to use more AI than not.

# Jacob Shapiro:

All right. Chris, this was awesome. Thanks so much for coming on. We'll have to have you back on again soon. Okay, man?

#### Chris Seifel:

Thanks for having me. This was great.



# Jacob Shapiro:

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# Jacob Shapiro:

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