Alex Lieberman, Co-founder and Executive Chairman of Morning Brew  Hey, everyone. I'm Alex Lieberman, co-founder and executive chairman of Morning Brew. You're listening to season two of Fresh Invest, your favorite investing podcast from Fidelity Investments and powered by Morning Brew. I'm excited about this episode because we're going to take a bit of a step back. After delving into flashy, newsy topics like crypto and SPACs, we're going to spend some time on perhaps the most underappreciated workhorse of the finance world: compounding interest.

Alex I know, I know — you probably have a general idea of what compounding interest is, but just to sum it up, so we're all on the same page, here's the dictionary definition: the process whereby interest is credited to an existing principal amount, as well as the interest already paid. Translation: it means interest on interest.

Alex The growth of your wealth is growing wealth. Your earnings are earning their own earnings. However you want to put it, it's pretty freaking cool, and it's worth dwelling for a bit on some of the incredible things you can do with that growth squared. To do that, I'll talk to Fidelity professional Roberta King.

Alex Roberta, welcome to Fresh Invest.

Roberta King, VP, Branch Leader at Fidelity Investments Thank you. Happy to be here, Alex.

Alex So, just to start, could you please introduce yourself and explain what you do at Fidelity?

Roberta Of course. So, my name is Roberta King, and I'm a dream-maker. What I mean by that is my official title is VP, Branch Leader, and I get to spend my time leading and supporting one of our many local teams of investment professionals. We're here to help our clients realize their own dreams with their life savings.

Alex Love it. Sounds pretty awesome. Sounds like you are living the dream while making dreams. So, to get us started on compound interest, I want to begin with the distinction between linear and exponential growth. How do you explain that distinction and how powerful is it to someone who's new to investing and maybe didn't enjoy math class?

Roberta So I see linear growth as the characteristic of growing by the same amount over each unit of time, whereas exponential growth increases in speed over time. And so this really does remind me of grade school science. If you remember mitosis, so you have one single cell, and it can split from one into two. And then each of those two cells each split again, creating four. Four splits into eight, and so on. That's exponential growth. Whereas linear growth — that one cell just continues to add one and one and one at a time.

Alex Love it. That honestly, that's super-helpful. So, it's this idea of growth happening at an increasing speed over time. So, why is buying and holding basically finance-speak for investing, and then not selling for a long while — why is that so important in order to reap the benefits of compounding interest?
Roberta So I have a couple of thoughts here to share with you. So first, compounding can be really powerful, especially when you start saving early. You talked about this already. Compounding is the ability for your money to make money over time. When you put money into an investment or savings account, you'll start earning interest on it. And after a while, that interest will start to generate more interest, giving your money the potential to really amount to something bigger. The longer you invest that money, the better chance it has that potential to grow.

Roberta Now there's another message in your question, Alex, regarding investments beyond just an interest-bearing account like, for example, stocks or mutual fund holdings. In these types of investment accounts, the idea of buying and holding over time can create the outcome of exponential growth. And this is realized through reinvesting dividends, capital gains, and plus, that potential price appreciation of the security itself.

Roberta So the rationale for buy and hold really helps to avoid the trap of selling low and buying high, which, of course, we want to do the opposite, based on market swings. Also, short-term gains are generally taxed at higher rates and holding for the long term then allows you to retain a greater portion of your potential gains.

Alex Got it. So just to level-set, basically there's a number of benefits where investing and holding for a long period of time provides value to investors. One is, you're not necessarily in the game of timing markets, but instead just allowing investments to grow over a period of time. As current tax rates stand, the longer you hold an asset, generally the lower that you're taxed versus buying and selling an asset in a quick fashion. And then back to the point of compounding interest, you also have the ability to compound on the existing growth of the asset that you hold.

Roberta You've got it.

Alex Love it. So, I understand the concept of compounding interest now. I think you broke it down perfectly. I actually love the example from science class, the splitting of cells. But let's talk about what that actually looks like in practice. What kinds of investment tools most effectively capitalize on the power of compound interest?

Roberta Well, the tools you'll use are really going to be dependent on your goals and your risk tolerance, as well as your time horizon. Time horizon means when you'll need the money. It's important that you find an investment account that makes sense for you.

Roberta If you're thinking about retirement, for example, are you already maxing out your employer plan? Are you hitting the matching dollar amount that's available to you? And if you're investing outside of retirement, perhaps consider brokerage accounts. So the type of account that you're choose is really the first critical place to start.

Alex Got it. And so that's the account that you choose based on your risk tolerance and your time horizon. But then, like, let's talk about asset class. Let's say that I'm looking to invest in stocks. When I'm thinking about what specific, let's say, industries or risk profile of stocks that I'm thinking of investing in, whether they're growth or value, retail or tech, how does that choice have an impact on compound interest that I would experience with my investments?

Roberta So the economic, or otherwise known as the business, cycle really impacts what sectors or individual stocks win during a specific period of time. A diverse portfolio can
take advantage of all the asset classes over the long term. And really, it's your asset allocation, which in summary is the combination of stocks, bonds, and cash that you own, is the most important factor in determining the long-term risk and return characteristic of your diversified portfolio.

Roberta Another thing I think is important to mention for clarity is when we talk about stocks, the concept of compounding can be applied again when we're going back to buying and holding — how that value can grow over time. But I want to be really clear here that these are not true interest-bearing investments. These can experience losses.

Alex Yep, absolutely. So to your point, it's not the same as hypothetically buying a bond that has a coupon of 10% and pays $10 each year. In addition to the principal you've invested, you own a stock. It could go up 5% one year or could go down 15% one year. So compounding is not the same as something that bears interest and pays you like a coupon payment.

Roberta That's exactly right, Alex.

Alex Got it. So, you know, some people, as they're thinking about getting involved as investors or putting money to work in the markets, they worry that they can't benefit from compound interest because they don't have enough disposable income to reap the benefits of this concept that we've talked about. How would you talk through this concern that inevitably a lot of people have around the amount of income you have and the impact of that on compounding interest?

Roberta The first thing I would say is there's no better time than now to get started. There is one better time, and that was yesterday, but you can't do that now.

Alex Love it. [Roberta laughs]

Roberta And some is better than none. So even a little bit can have a major impact over the long term. The snowball effect of compounding makes early investing, particularly in a retirement account, really attractive, and it's very enticing the earlier you start investing. I've got an example to share with you because the more returns you'll see over time with the compounding you can expect to make, the more time you spend investing.

Roberta So to put this into context, I'm going to use an example. We're going to talk about Julie and Amy. They're friends. And Julie starts contributing a maximum of $6,000 into her IRA at 25 years old, and she keeps that all the way through what her retirement age will be at 70. And with annual compounding, she would have amassed $1,440,592. And so that's over the course of 45 years. So let's compare that to Julie's friend Amy, who didn't start contributing until 35 that same $6,000 max.

Alex So 10 years later.

Roberta Ten years later.

Alex Got it.

Roberta So she's gonna invest for 35 years. She's gonna amass just about half. So $757,609. So we're making a lot of assumptions here. There is a catch-up contribution that's available at 50. And we're also assuming that there's a steady rate of 6% return and
growth per year. And we're not taking into account taxes, fees, or inflation. So we've really simplified this example, but it does help demonstrate the point of how valuable time is when you're investing.

**Alex** Yeah, it's wild. So basically because Amy started 10 years later and instead of at 25, like Julie, she started at 35. And because of that 10-year difference, instead of having basically $1.4 million in her bank from the original $6,000 contribution, she has basically half of it — $757,000 — because of the 10 years she decided not to have her money invested like Julie.

**Roberta** Exactly.

**Alex** It's wild.

**Roberta** It's crazy.

**Alex** That is a perfect example of just, like, how powerful compounding interest is and how people may say that compounding is not a sexy concept in the world of NFTs and growth stocks. But at the end of the day, if you just put your money to work early, it is wild how much it can exponentially grow when you use time as your best friend.

**Alex** So I've got one last question for you that comes from a Fresh Invest listener. The listener asked, "How can I teach my kids about the value of investing versus spending?" The way I almost think about this question is basically, how do I save money early to put money to work and allowed to compound for as long as humanly possible?

**Roberta** So I've got three thoughts here. So first, make it real for your kids or kids in your life. So the world is your classroom. Explain why you're choosing to make the purchases you do. Why do you wait for something to go on sale. Or perhaps forgo something altogether in order to go ahead and make an investment toward a future goal of yours.

**Roberta** Second, I would say, don't forget to explain what you've learned along the way through your life, especially those mistakes that you may make. Those cautionary tales are valuable. It's really important to teach kids not just the fundamentals of saving and investing, but also have meaningful and open conversations about financial topics in general, which really can help them later on in life.

**Roberta** And the third one is a tool to help you help the young people in your life learn about spending, saving, and investing. And it's called the Fidelity Youth Account. It recently launched, and it's available to teens from 13 to 17 years old. Parents and guardians can provide ongoing oversight, which is really important, while their teen learns to manage their own money. There's also another resource on our website, Fidelity.com, Youth Learning Center, where you can get really simple, age-appropriate terminology to get basic understanding of complicated financial concepts. And candidly, it can really make for some really good dinner conversation.

**Alex** I love this. All three of them are great recommendations. I would say the one that resonated most with me is number two, about having open conversations around financial literacy and personal finance, in general. I think, while these things may be taboo for some, an open dialog about it is so important.
Alex And especially the caveat you made about especially talking about mistakes at the end of the day — these are not failures. It's education. It's the only way we're going to learn and improve how we allocate our money, how we think about our money. So I thought that was an especially poignant point.

Alex So with that, Roberta, thank you so much for joining me today on Fresh Invest. Really appreciate your time.

Roberta It's been a pleasure. Thank you for having me.

Alex Thanks so much for joining this episode of Fresh Invest, everyone. I hope you got a sense of the real power of compound interest — and not just for people like Roberta and me, who live and breathe finance.

Alex Thanks again for listening, and make sure to tune in next week. We're going to take some parts of this compound interest conversation and explore how they show up in what's called the FIRE movement. No, not the fiasco involving Ja Rule. It stands for “financial independence, retire early,” and it's pretty fascinating. I'll see you then.

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The hypothetical example provided in this episode assumes the following (1) $6,000 annual IRA contributions on January 1 of each year for the age ranges shown, (2) an annual rate of return of 6% and (3) no taxes on any earnings within the IRA. The ending values do not reflect taxes, fees or inflation. If they did, amounts would be lower. Earnings and pretax (deductible) contributions from Traditional IRAs are subject to taxes when withdrawn. Earnings distributed from Roth IRAs are income tax free provided certain requirements are met. IRA distributions before age 59 1/2 may also be subject to a 10% penalty. Systematic investing does not ensure a profit and does not protect against loss in a declining market. This example is for illustrative purposes only and does not represent the performance of any security. Consider your current and anticipated investment horizon when making an investment decision, as the illustration may not reflect this. The assumed rate of return used in this example is not guaranteed. Investments that have potential for a 6% annual rate of return also come with risk of loss.

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See you next time.