

## TRANSCRIPT

# Investing in big ideas with ETFs

*Presenters: Steven Travali and Jay Jacobs*

STEVEN TRAVALI: All righty, ladies and gentlemen, thank you for joining us again. We appreciate it. We're going to go ahead and get started here today. We're now live online again. Thank you again for your time and attention today.

My name is Steven Travali. I'm the regional brokerage consultant here in Southern California. I work with clients, helping them understand the tools and resources available to them through the Fidelity website, mobile app, as well as the Active Trader Pro, et cetera.

And we do have local representatives across the country. For those of you joining us online, if you want the ability to sit with one of them, please contact your local branch. We'd be more than happy to set something up there.

But without further ado, I'm going to turn this over to Jay. And he's going to introduce himself, talk about our presentation. And we'll get moving into the next topic. Thank you.

JAY JACOBS: Perfect. Well hello, everyone. It's a pleasure to be here both in person with all of you and online with several thousand people watching in today. I'm really excited to talk with all of you about the concept of thematic investing, which is really the process of identifying powerful macro-level trends and the investment opportunities associated with those trends.

So, I'll talk about the process of thematic investing, how we think about this growth-oriented investment approach. I'll also chat about some of the most powerful themes that we see in the world today, especially in light of this post-pandemic environment that we are entering. And then finally, I'll talk about thematic ETFs and how they can be great tools for accessing some of these powerful ideas that we see disrupting many parts of the global economy today.

So, when we think about thematic investing and identifying these powerful disruptive trends, one thing immediately becomes clear, which is that the world is changing at an accelerating pace. One of the ways that we measure this is by looking at what we call the adoption curve, which is really looking at

new technologies and understanding, how quickly are people buying these technologies? Every technology basically starts at zero.

It's a new technology that might be expensive. It might not work well. Maybe nobody knows about it. But as the technology improves, it tends to get cheaper, tends to get more ubiquitous. And suddenly, many people across the world start buying that technology.

If we look at the 1900s, we saw this with the introduction of the washer machine. But it took about 80 years for that technology to go from one in 10 people owning it to eight in 10 people in the United States owning a washer machine, 80 years. In the 1990s to the early 2000s, it took about 20 years for the smartphone or the cell phone for people to be adopting that from about one in 10 to eight in 10 people. Now with streaming video services, it's taken less than 10 years.

So, the pace of innovation, the technology is improving much faster than ever before. And also, people are learning about this technology faster than ever before. Because of the internet and the way that we communicate, these ideas are spreading very quickly. So, the pace of change is happening very quickly.

And at the same time, we see a lot of breadth of change. There's change happening because technology itself is getting better with breakthrough technologies. We're seeing changes in people and demographics, how society is evolving to things like aging populations or the rising consumer.

We're seeing a change with climate and how we interact with carbonization and how we deal with resource scarcity. We see changes in urbanization, not only in the United States, but in emerging markets. And we also see changes in rising global wealth, how people have more money in places in emerging markets that they can invest and they can spend. So, there's an incredible breadth of change that's happening around the world today, and it's happening faster than ever before.

Now, with thematic investing, one of the keys is, how do we separate these long-term structural trends from cyclical themes? How do we separate the themes from the fads? Because some fads will come and go. Those are the cyclical curve, the black cyclical curve you see on that screen.

That could be rising oil prices, right? Oil prices rise. Oil prices fall. It could be interest rates and inflation. We've seen inflation rise before. We've seen inflation fall before. Those are cyclical themes. They can be powerful. They can be important to your portfolio.

But it's not the same as a structural theme, which is a one-off shift, a change that will permanently change the world and society around it. We are focused primarily on the structural themes. I'm a little less focused on are oil prices going to rise and fall? I'm more focused on, what's going to change oil? What's the next oil that we're going to be focused on for the next 100 years?

Now, at BlackRock, we've done a lot of work to think about, how is the world changing today? What are those powerful themes that we are most excited about and have some of the most opportunity in the world today? So, we brought together the active managers of BlackRock as well as our indexing business to look at the world and understand we've just kind of exited the peak of this pandemic. And the pandemic has caused massive change in the economy and society that has been very painful.

But what are some of the opportunities that that's created as well? Because as the world changes at this accelerating rate and with this incredible breadth, we believe that creates many opportunities for long-term structural themes to thrive. And we've largely bucketed them in three different buckets.

The first being an industrial renaissance. So, we all were familiar with the pandemic, how we were locked inside. And it was really a story about digitalization. We were on our computers doing work remotely. We were streaming video. We were playing video games. We were ordering things online. Everything was happening digitally.

But now as we exit the pandemic, the pendulum is swinging to the physical world. We have supply-chain issues. We have transportation issues with crumbling infrastructure. We have labor shortages. So, it's not so much about the digital world right now. It's really, what are the opportunities in the physical world that have been underinvested in for the last several years?

Secondly, with health care and, frankly, probably relevant to many people in San Diego, given the biotech industry here, how has the changes in the health care industry over the last few years impacted the trajectory of new medicines and new techniques like mRNA-based vaccines or genomics that could suddenly have much wider applications beyond just treating COVID-19 and treat many ailments and diseases going forward?

And the third category is the power of the purse. Consumers have changed too. We may think of millennials as kids. Millennials are 40 years old now. They have kids. They have homes. What are millennials doing that are different from baby boomers and how they spend their money and how they spend their time?

Similarly, as powerful as the millennial generation might be in the United States, actually, it's just a small part of the global-consumption story, where now emerging-market consumers are responsible for more than 50% of total consumption. So, if you're a consumer-packaged goods company and you're creating the next big product, the question is not only how do you appeal to the US consumer? How do you appeal to emerging-market consumers in places like China, India, LATAM, Africa? They have this rising global wealth. And they're spending that money in unique ways.

So, I'll dive into these themes in a little bit more detail, starting with the industrial renaissance. A couple of interesting charts here. So, the New York Fed puts out a supply-chain pressure index. You can see it surging just in the last year, showing that supply chains are having issues.

You probably have experienced this in one way or another. If you tried to buy a new car in the last few years, it was either very expensive or very difficult. Maybe you tried to buy baby formula in the last few months. That's been surprisingly difficult. Or maybe just during the pandemic, you were trying to buy PPE. You were trying to buy masks or other protective equipment. And we saw the difficulty in doing that.

The supply-chain issues have not been resolved. And further complicating it is that we have labor shortages. Because there's so many people trying to be hired all at once to alleviate these supply-chain issues, it's hard to find quality labor. And we have structural issues with bringing people back to the workforce after we saw an acceleration in retirements. And we saw an acceleration of people leaving the workforce and no longer looking for jobs.

So, what are the thematic opportunities in this industrial renaissance? We look at three different areas that we see incredible opportunity over the next several years. The first is don't wait. Automate.

It's the growth of robotics. Because supply chains have been so disrupted, a lot of companies in the United States and in Europe and in other developed markets no longer trust globally integrated supply chains. They don't want to have to worry about whether the next shipment of their computers or cars or laptops or what have you is going to make it over to the United States.

They want to build it here domestically. But the problem is it costs more to build stuff in the United States rather than outsourcing it or offshoring it. So, as we bring more of that manufacturing back here, how do we use robots in a way to reduce some of those costs and improve efficiencies?

Last year was a record year for robot sales in the United States. It's the most robots that have ever been sold. Because many companies are trying to rapidly automate everything from manufacturing to supply chains and logistics. Even in hospitals, we're seeing robots being used for nursing and security and monitoring of patients around the hospital, so many new applications of robots.

In fact, actually, the biggest problem with implementing robots today is not that people aren't buying enough of them. It's that we don't have enough engineers in the United States that know how to use robots. So, there's a shortage in the talent in the United States as people are rapidly trying to automate.

The second piece, though, is as we manufacture more in the US, we have to move more of those goods around the country very effectively. We really haven't seen a lot of investment in infrastructure in the United States except for two distinct periods, which was in the 1930s during the Great Depression and in the 1950s and '60s following World War II, as we sought to really rebuild the country and connect cities.

We are now experiencing the third wave of infrastructure investment. We just saw last year the infrastructure investments and Jobs Act invest \$1.2 trillion into US infrastructure to rebuild roads, to rebuild ports, to expand airports, to really grease the wheels of the economy to move goods and services around more effectively.

This will take time. This is not digital, so it's not going to happen overnight. It's going to take years to put this money into action. But we see many big beneficiaries of infrastructure, including materials companies that simply supply steel and copper and asphalt to infrastructure projects, construction engineering companies that actually build these major infrastructure projects, and the infrastructure owners themselves, the people that operate the ports, that operate the pipelines, the electrical utilities that will have this major investment from the federal government for the next several years.

And then finally, the labor shortages, how do we address that? And who are the winners? Well, very simply, more ways of automating things beyond robots but using artificial intelligence. We had an 80,000-person shortage in truckers last year in an industry that has 90% turnover each year. So, it's very hard to replace truckers when you have such a supply shortage, and you're constantly rehiring almost the entire workforce every single year in that industry.

How can we leverage things like autonomous vehicle technology to help automate trucking and make it less expensive and have less supply chain disruption on the labor side of things? So, we see autonomous vehicle technology as one of the major beneficiaries of the labor shortages that we're seeing today.

Now, the second major category, I mentioned this earlier, is the upshot of post COVID medicine. So, all of us got a little bit of a Cliff's Notes version of what mRNA-based vaccines are after the last several years and going through the process of dealing with COVID-19 and trying to protect ourselves. But really, what this vaccine is, besides a way to combat COVID-19 and the spread of it, is the introduction of a new technology.

mRNA-based vaccines had been studied for several decades before the COVID-19 pandemic but didn't have enough funding. And it didn't have enough regulatory approvals to really get into the hands of patients to be utilized. We've now had billions of doses ordered and executed around the world.

And now the question is this worked pretty well. We were able to get COVID-19 vaccines out very quickly. How do we look at mRNA-based vaccines and start to apply it to other parts of the medical field?

We're now seeing trials being introduced for mRNA-based vaccines for the common flu. So, the common flu is only about 40% to 60% effective in a given year. Can we achieve 90% effectiveness like we did with the COVID-19 vaccine using mRNA-based technology?

Can we apply it to other diseases like HIV where there's really no cure? But now if, suddenly, if we have an effective vaccine, it could be a game changer for the hundreds of thousands of people that are afflicted by this ailment.

And more broadly than just looking at mRNA-based vaccines, this is just kind of a subclass of what we're calling genomics and the study of people at the genetic level that can really open up even more opportunities from a medical perspective. So, if you go to the doctor and you have an ailment or a disease, they ask you really basic questions. How old are you? What's your gender? What's your family history?

These are painting with really large brushstrokes of trying to understand who are you and how do we treat you. But instead, we can now use genetics technology to understand at a much more fundamental level what makes you you, what makes you unique, and how can we custom create a treatment for

you that will have a much higher effectiveness than just trying to paint with a broad-brush stroke.

There are 10,000 diseases that we can address by using genetic technology just by changing one gene, completely eliminating the disease, or eliminating the elements of the disease by editing one gene in your genome. And we're seeing an acceleration of this innovation because we're collecting more and more genetic data than ever before. In the early 2000s when the Human Genome Project was originally constructed, it took over a decade. And it took \$3 billion to complete. Now we can get our genes sequenced in a couple of hours for a couple hundred dollars.

So, the more genetic information we collect, the more information we have that we can start to test and start to learn from and start to understand, what are some of the new medicines that can be used to treat these diseases? So, we see an incredible acceleration in many parts of the medical field from what we've learned during the pandemic, from some of the new technologies that were introduced, and how we expand those technologies to treat other ailments beyond just COVID-19.

And then finally, we're looking at the power of the purse, how consumers have changed over the last few years. So, this might surprise people. But millennials and Gen Z now basically run the world. They're over 54% of the global population<sup>1</sup>.

And we might often think of them as being young or just being students and finding their way around the world. But what happens when you're young is you tend to take on a lot of new jobs. You tend to be kind of promoters of culture. A lot of new ideas are coming from younger generations. And you tend to spend a lot of your money.

So, the way that millennials and the Gen Z generation are spending their money and time, in many ways, is actually more important than other generations. And the question is, how are they unique? And how are they spending their money differently than other generations like the baby boomers or the Gen Xers?

So, a couple of interesting stats. Millennials and Gen Z are much more sustainable and food conscious than other generations. They're three to five times more likely to be vegetarian than the baby boomer generation<sup>2</sup>. So that points us in the direction of, what are some companies that are building plant-based meats that might be appealing to this generation as they start spending more money and having kids of their own that might follow their practices?

Also, millennials could be up to six times more likely than baby boomers to be investing in cryptocurrency<sup>3</sup>. So, what are some of the companies that are making cryptocurrency available to the end investor, promoting it to millennials who have a unique-- who are going to have very unique portfolios as well?

So again, we see these trends happening around the world today. What are the themes that we like based off of this information that we think could benefit over the next 12 months, three years, five years, and beyond? Well, the first is thinking about decentralization.

What are some of the decentralized finance products that are making finance available to the billions of people around the world today that have access to a cell phone but don't have access to traditional banking? Decentralized finance can, in many ways, lower the costs and lower the barriers of entry to getting financial inclusion. So, we are very much looking at this theme as a way of extending finance to people across emerging markets, across the world who haven't had that access previously.

Secondly, we're looking at things like agtech and emerging food. There are 800 people in the world today that don't receive the nutrition that they need. And in many ways, that is only going to get worse. We're probably going to reach about 10 billion people by global population by 2050.

And we're also going to see hundreds of millions of new people enter the middle class. And as you enter the middle class, it's wonderful for consumption. But that means there's more and more calories that are being demanded by those middle-class consumers, especially as they want more complex calories like foods like meats and dairies, which is going to put more and more pressure on our food systems. How do we think about things like indoor farming, vertical farming, precision farming? How do we use robots and drones and other technologies to make farming more efficient and more sustainable as we see more and more demand coming down the pipeline?

And then the third thing we're looking at is that reaching that EM consumer. As I mentioned, EM consumers are now over 50% of global spending. Who are the companies that are appealing to the EM consumer, not just thinking with a US lens, but thinking with a global lens about what these consumers are looking for and how their preferences are unique?

So, I've presented many themes that we're very excited about and that we think have a lot of potential going forward. But of course, these are only ideas

until we turn them into investments. So, the question is, how do we access these investments efficiently? And how can we leverage these in our portfolio?

So primarily the way that people are thinking about thematic investing is either looking at individual stocks or looking at ETFs. Of which, there's two flavors. Now, I'm sure many of you, if I talk about electric vehicles, can probably name a couple of stocks in the electric vehicle space that are very clearly involved in electric vehicles.

You might think there's a great opportunity there. You might think there's a bad opportunity. But investing in an individual stock can give you a lot of idiosyncratic risk.

The theme could actually do very well. You could see electric vehicles take over the world in the next 10 years. But maybe it wasn't the stock that you originally invested in. And we'll look at a case study for that shortly.

Another approach is to look at a diversified ETF. And my colleague Kristy earlier did a great job explaining what an ETF is and how it provides exposure to a basket of different securities. So, you're not just betting on one company doing well. But you can bet across the entire ecosystem.

Some ETFs are actively managed. Meaning, there's a portfolio manager that is making decisions on your behalf of what stocks they like or don't like in a particular theme. And others are index-based. Meaning, there's an index designed to capture the entire ecosystem of a theme. It's not just picking a winner or just trying to pick a couple of winners in the space, but it's trying to look at all the electric vehicle manufacturers and all the different parts of the ecosystem that might benefit from the growth of electric vehicles or the growth of blockchain or the growth of emerging food or any of these themes that we've discussed.

So, I mentioned we'd talk about a case study. In the 1990s, everybody wanted exposure to the internet. And a lot of people believed that e-commerce was going to be the future.

So, if you look at two different stocks from the 1990s, you might conclude that these are two major players in the e-commerce space, company A in white and company B in black. And in early 1999, you might think, well, clearly, there's a winner here. There's one stock that is breaking away from the rest, much higher returns. This is clearly going to be the winner in the e-commerce space. I'm going to put all my eggs in that basket.

But if you zoom out a little bit further, that isn't quite what happened, that company A had one great year and ultimately went bankrupt, resulting in zero returns over the next decade. Company B, which was a little bit more moderate in 1999, suddenly became a company that almost all of us in this room and online probably use on a regular basis.

This shows how difficult it is to pick a winner and a loser. You can't just look at recent performance. You can't just look at a name. These are complex themes that are evolving very quickly. And there are winners and losers. And we believe the best way to access them is not by picking individual stocks but getting exposure to a basket of several stocks across the ecosystem.

Now, relating it back to our electric vehicle theme, sometimes it's not always obvious who the winners will be. Maybe you know that electric vehicle manufacturer. But who's supplying that electric vehicle manufacturer with the batteries that go into that electric vehicle?

Who's the material supplier that's supplying the critical minerals and metals like lithium and nickel to that battery producer that is going to be so critical for the electric vehicle revolution? Who's developing AV software that makes it autonomous? Who's building the charging networks? There's an entire ecosystem around this theme that we believe can really benefit from the rise of electric vehicles, as we see more and more adoption across that adoption curve.

Now, this goes back to one of the benefits of ETFs. You don't need to do that research yourself if you use an ETF. You can use an iShares ETF, where we've done the research to identify whether the segments of the economy that we like in the rise of this given theme, whether it's electric vehicles, emerging food, blockchain, robotics, infrastructure. There's many different themes where we're doing the research trying to identify who will be the winners across that entire ecosystem and putting all those winners in an ETF that you can easily access.

So, a couple of the ETFs that are really relevant to the conversation today, I've mentioned electric and autonomous vehicles with some of those labor shortages we're seeing in the physical world with trucking around the country. We have the iShares self-driving, EV, and tech ETF, which provides an exposure to the entire ecosystem of companies developing electric vehicles through battery manufacturing and materials and autonomous vehicle technology.

Similarly, with the upshot of post-COVID medicine, we talked about mRNA-based vaccines and some of the other applications that are really revolutionary. We have IDNA, the iShares genomics and immunology and health care ETF, another index-based ETF, which is providing exposure to that genomics ecosystem. And finally, we talked about the next-gen consumer and how millennials are more likely to be investing in cryptocurrency and how decentralized finance could bring potentially billions of people into financial inclusion.

We recently launched-- and it's not even on the sheet in front of you because we're constantly innovating new ETFs. But we recently launched, in April, IBLC, the iShares blockchain and tech ETF providing exposure to leaders in the blockchain and crypto mining and crypto exchanges space. And if you don't want to pick an individual ETF, we have an ETF of several themes, in fact, wrapping nine themes together, the iShares exponential technologies ETF, which is really investing across many of these different themes and more to give broad exposure to disruption in the economy today.

So, I'll leave you with this slide up here just to recap the several different things we talked about today, the industrial renaissance, the innovative health care, and the next-gen consumer, how you can capture these ideas with ETFs rather than taking single-stock risk, and some of the ETFs that we highlighted that we think are great ways to get exposure to this. With that, Steve, I'll turn it over to you for some examples.

STEVEN TRAVALI: Yeah, absolutely. So, thank you. Thank you, Jay. So, like before, we're going to dive into the Fidelity website. We'll tie this back and take a look under the hood of a few of these ETFs that we've just seen an example of. Let's see here.

I can see the iShares suite. Let's go ahead and just go to IDNA to start out with. All right, so as we pull this page up, we can see we're going to dive into composition, portfolio composition specifically. We already know that it's in health care. We heard some of Jay's comments of the genome area that it's focusing on.

We can see a great benefit of geography exposure, holdings, market cap. And what I'd really like to highlight here is you'll notice that there's some funky symbols sitting here. Those are international stocks, right?

So, with some of the traditional ETFs we were looking at before like IVV, all domestic stocks, pretty easy to implement on your own. Where here, I don't know about you, but I'm not excited about trading on the French exchange or

the Japanese exchange. I don't really want to deal with-- those are still going to have fees. There's currency conversion. There's a little bit more complexity there. This is really adding value here for that simplifying that complexity and bringing it all home for me to implement with one trade basically. We can see our industry exposure again. Obviously, very high in the biotech and health care, has a nice blend in the midcap range.

So, let's dig into our next component here. We'll go to self-driving EV. And again, just diving into composition, we can see kind of what Jay was talking about. Again, on the companies themselves, a couple of international companies, sector exposure, and industry exposure.

So, as we're looking at the supply chain and not just the automobile manufacturer again, the semiconductors. Who's making the chips for those cars? The automobile components all the way down to somehow household durables is factored in here at under 1%. But still, you can see that it goes into many other sectors and industries that we may not think of off the top of our heads.

So, let's go to IBLC for blockchain. And top holdings, here we go. Composition. And again, we have market capitalization. We can see, obviously, some strong players in the blockchain technology area. Sector exposure is going to be very heavily weighted in information technology but also in financials and even industrials, right? So again, just taking a look down the entire chain of what's available.

And then just the last high-end component right here, we'll go to XT, where it's going to be a little bit more convoluted. We're going to have a bunch of different stuff in the composition here as we tie everything together in composition. As I go down here, the first thing I can notice is, if I look at total holdings, right now, I'm up to 225 holdings.

And even my biggest holding is only 1.17%. That gives you a pretty good idea of how diversified this really is if 1.17% represents my very largest holding in itself. Still very heavily in information technology and innovation and software.

But then all these, I can always view full listings. There's not going to be enough screen space for me to see everything at once. But as we can see, this goes pretty far down the rabbit hole in terms of all the exposures all the way down to health care technology at a 0.06%.

So, we're going to have some good time for questions here that I'm going to pull up. And thank you for the stack. So, we'll try to switch back and forth.

Again, as a beginner of ETFs, should I start with an ETF of what type? And where can I find more education?

JAY JACOBS: Yeah. That's a great question. So, I'm sure there's plenty of ETF education on [fidelity.com](https://www.fidelity.com). Also, at [iShares.com](https://www.ishares.com), we have plenty of education, tools, insights about ETFs. Highly encourage people to visit that website.

Also specifically, if you're interested in thematic investing, we have [iShares.com/megatrends](https://www.ishares.com/megatrends). So, megatrends is what we call our thematic investing suite. And we are posting a lot of insights on there.

Just this past week, we wrote a primer on electric and autonomous vehicles going into, what is the theme? What do we like about it? Which segments of the theme are we interested in? So highly encourage everyone to do their homework and look at these different insights that we make available to show, what is the thinking behind these funds?

It's not just the list of stocks. It's not just sector and geographic breakdowns. But there's a lot of thought that goes behind these themes that we're trying to share with this insights and education online. I'm sorry?  
[iShares.com/megatrends](https://www.ishares.com/megatrends).

STEVEN TRAVALLI: And then in terms of the Fidelity site, we have a Learning Center under News and Research right here. And then this Learning Center is designed to be pretty easy. I can just type in ETF, hit Enter. I'm going to get all the topics here available and see what it is. ETFs 101. What is an ETF regulation?

Now, one of the things I like to point out to people as well is difficulty level and content type, right? So, if I want to see a video, if I want to see a webinar, or if I want a course, an article, I can choose that. And then I can also sort by my difficulty level too. So, if you're a beginner, you can find something suitable there. If you're more advanced, you can find something that may be more challenging and innovative.

All right, next one, how can I ensure my thematic investments are long-term trends, not short-term fads?

JAY JACOBS: That's a great question. So, a lot of what we do at iShares is the research to identify what those long-term themes are. So, if it's on our megatrends platform, if you're seeing it at [iShares.com/megatrends](https://www.ishares.com/megatrends), it has already crossed our research. And we've confirmed that it is a long-term theme. We're doing that curation for you.

But there's a lot that goes behind that. And I encourage all of you to do your own research as well. When we look at a long-term theme, we're really looking at three different things.

We're looking at conviction. So, what is the case for this theme? How much do we believe that this theme is going to disrupt huge parts of the global economy?

We look at things like, what's the total addressable market? How many possible people could buy an electric vehicle? Or how many possible dollars could go into US infrastructure?

We look at, how much of that has already been addressed? How many electric vehicles are already being sold? So how much of the market has already been penetrated? How much is already left?

We might look at the state of the technology and try to understand, is this a relatively new, really moonshot technology? Or has it already been proven and it's economically viable? We look at other themes that might be interrelated. So, if we're looking at a theme like cybersecurity, how is that related to work from home? Or how is that related to the proliferation of internet of things devices that are being connected to the internet? So, we really try to understand the relationships between these different themes.

The second thing behind after conviction is, is this theme investible? So, there's incredible technologies around the world being developed and incredible themes that we're talking about. But for an ETF, we need to invest in dozens of publicly traded companies.

Many themes just aren't public yet. Maybe they're more in venture capital. Or maybe they're more in universities. That's OK. That just means we won't launch an ETF on that theme until it's ready. And maybe we have to wait a couple of years until the capital markets evolve and we see more IPOs and we can create an ETF on that idea.

And then the third thing we look at is time horizon. So, this is really, I think, a key area when we think about a structural theme versus a cyclical one, which is cyclical themes are going to be shorter term in nature. You know, I can't tell you exactly when rates will fall again. But at some point, rates will fall again. And it could be in two years, three years, five years, 10 years. But that is a cyclical theme, the rise and fall of interest rates.

What I can say, though, is robots are probably going to continue to see growth over the next 10 to 20 years. Right now, the number of robots in the world today relative to manufacturing workers is less than 2%. So, it's a very low penetration of robots just used in the area of manufacturing, which is where robots are most utilized today.

So, if we think about all the different applications of robots and the state of the technology and how far it's gone, it's just a drop in the bucket of how many people are using robots. That gives me a lot of confidence that, 10 years from now, there's going to be more robots than there are today. And 20 years from now, I think that's going to be the case as well. So, we have a very long-term time horizon when we think about robotics compared to something like interest rates. That's how we separate some of these long-term structural themes from the shorter-term cyclical ones.

STEVEN TRAVALI: And all right, so next question I have here is, how do we identify when an ETF is actually actively managed versus passively? So, we can take a look at the ETF search here. And if I just go into market cap, I'll use large again just to be consistent.

And then right here on my criteria, I can just type in actively managed if it'll do that for me. All right, another solution is right on the ETF page right here, we do have active equity ETFs right here, where we have the ability to see which ones are actively managed as well.

And then any time you're looking at any ETF on our page on the research side, whenever we look at comparisons right here, which Mike and I are going to go more into this as well, but you'll see this as always labeled passively versus actively managed right here in the investment philosophy theme.

JAY JACOBS: We also we have a little trick at iShares that I'll let you in on. We have 22 megatrend ETFs. The ones that start with the ticker I are Index-based. And the ones that start with a B for BlackRock are actively managed. So subtle little trick for people out there.

STEVEN TRAVALI: So, the next question is how have thematic ETFs done in 2022 compared to broad-based ETFs? Are they more volatile?

JAY JACOBS: Yeah. It's a great question. So, as we've talked about, thematic ETFs access all different parts of the economy. They have different sector exposures, different geographic exposures. So, you can't lump all thematic ETFs together.

Something that invests in cybersecurity stocks is going to perform very differently than a theme that invests in infrastructure stocks, for example. So, in 2022, we've certainly seen in the markets tech stocks come down more than the broader market. A lot of that has to do with rising interest rates. You could say it has to do with some of the higher valuations that tech stocks have had for the last several years, particularly amid the pandemic. So, tech has underperformed.

But infrastructure stocks have actually outperformed in this environment, as we've seen that \$1.2 trillion infrastructure package pass, those dollars starting to be implemented. And also, just thinking about the exposures in an infrastructure fund, these tend to be more utilities companies, more materials companies that have done well amid inflation. So, it's just behaving very differently than something that's more software companies like a cybersecurity theme.

So, every theme is different. Thematic investing is not just tech stocks. It's not just growth stocks. If you look under the hood and you use some of the tools that we're seeing online to look at those sector exposures, you can see how they're very different. So, I don't want to lump them all into a bucket and say they're doing good or bad. There's an enormous range, just like you'd expect in sector ETFs that there'd be an enormous range based off of what sector you're investing in.

STEVEN TRAVALLI: What are the newest thematic ETFs? As you already mentioned, there's one that wasn't even on the materials printed here. So, I think this is pretty timely. How quickly are thematic ETFs created? And are they closed if they don't become viable?

JAY JACOBS: Yeah. That's a great question. So, two ETFs that are not on the page in front of you that we launched just this April are the blockchain and tech ETF, IBLC, and IVEG, our emerging food and agtech multisector ETF, which is investing in different agricultural technologies that are helping to alleviate some of the pressures we might see in the grocery store. Inflation has been 10% in food over the last year. And in areas like meat and coffee, we've seen inflation as high as 15%.

So those are two different ETFs that we've launched very recently, two themes that we're very excited about. They are available on iShares.com. You can see more research there. But they're just not in the printed sheet in front of you.

What was the-- oh, sorry, the lifecycle of a theme. So, when we research a theme, it can take six months to a year to fully develop that theme. It might

start with just reading research, creating our own research, looking into the data, trying to understand, what is the theme? And what's our conviction behind it?

But it takes a lot of time to then go from being kind of introduced to the theme to developing our position on it and deciding, is this really a long-term structural theme? And if it is, how do we develop a product that gives targeted exposure to that theme in the areas that we think will really benefit? So, it's a long research process to develop these new themes.

Do they close? Ideally not. Ideally, we've done our research. And the themes are very durable that we've identified and brought out into our megatrends suite.

I have a little thing I say about thematic investing, which talks about the phases, though. Because ideally, the best thing that happens to a theme is it becomes an industry, that it becomes so well-accepted that, suddenly, there's just an industry called the genomics industry. It's no longer really this thematic investment. It's just a part of the economy now.

So, the thing I say is you go from dream to theme to mainstream. The dream is when it's in the venture capital world. Nobody really knows that this technology is going to go anywhere. But we're excited about it. And maybe something comes of it. Maybe not.

But as it starts to mature and we see companies IPO and we build an ETF to give exposure to that theme, then it becomes a theme. And that's where we see really that exponential growth as more and more people adopt the technology or product. And then finally the theme becomes mainstream. If every car on the road is an electric vehicle, we're going to stop calling them electric vehicles. And we'll just call them vehicles, right? So that's when the theme has fully matured and becomes that industry. We think that sweet spot is really in that middle section between venture capital and industry where you see the acceleration of that technology over the economy.

STEVEN TRAVALI: That was very well put. On the ETF screener, iShares and Fidelity are separated. Is there a way to search for both for a given type of fund? The answer is yes.

And actually, pretty simplistically, when you go to the ETFs itself, right, as they're saying, we've got Fidelity. We got iShares. But when I go to market cap, sector, or fixed income, those are all areas that are going to lump everything together.

So, if I go to market cap, and again I'll go to US large cap. We'll see we've got-- that's going to show up in this screener is not just iShares. But there are going to be some Fidelity funds if they're applicable. And then I'm going to see the suite of all funds, right? So, there's no bias in terms of Fidelity versus iShares. We just sort of included everybody in there. Because again, you can buy an ETF anywhere really, right? That's one of the pros of it.

Next question, what is the average turnover for an ETF? Is it more or less than a mutual fund for thematic?

JAY JACOBS: That's a good question. Every fund is going to be different. So, on a relative basis, I would say the turnover for something like an S&P 500 fund is going to be very low. Because how many companies are coming in and out of the S&P 500 each year? It's index based. It's market-cap weighted. So, there's not a lot of turnover.

Sometimes there's a new company that cracks the top 500. Sometimes a company might get acquired. And so, it has to be replaced. But overall, turnover is pretty low in an index like that.

At the other end of the spectrum, you might have an actively managed ETF where the active manager is constantly deciding changes in terms of what companies they like or what segments they like. And turnover would be pretty high. I would say in that scale, thematic ETFs are kind of to the middle leaning more towards that active-manager side.

These themes are evolving. There's new companies IPOing. There's acquisitions and mergers. The themes might themselves change where robots may be more of a manufacturing story. And now they're more of a health care story going forward. So turnover, you know, directionally, is certainly going to be higher than an S&P 500 fund. I would say, in normal times, maybe 20% to 30% turnover in a theme or even higher if the theme is really evolving quickly.

STEVEN TRAVALLI: Here's a good question. So how do you balance specializing with thematics versus the need to diversify? What should I consider when choosing thematics versus broader-based ETFs?

So, I would say there's not a one versus the other. I think they're very complementary, right? So, you have the ability to develop like a core strategy through a broad-based indices-type ETF, either an IVP or an all-encompass. Then thematics gives you the ability to enhance the exposure into that area without having to choose an individual or specific stock to do so.

So, you're getting greater diversification. But you're also sort of leaning your portfolio towards that theme that you think is going to be more viable towards the future. So, I would sort of think of it as satellites around your core strategy in itself.

Let's see. Next question. Is there a thematic ETF to help me take advantage of opportunity for metaverse companies?

JAY JACOBS: There are. I would say, more broadly, there are funds that have a lot of exposure to digitalization and the internet as well. Again, I encourage all of you to do your research. If you have an idea for a theme, there might be a product out there. There might not.

At iShares, we don't have a product right now. But we have digitalization products that have some similarity in terms of accessing things like social media stocks and gaming stocks. I think a component of the metaverse that's very interesting is the blockchain applications, how people buy and sell things on the metaverse. We have a blockchain ETF that participates in that. So, I would say, yeah, certainly, do your research on the space and look at different themes that might intersect with the metaverse.

STEVEN TRAVALI: When looking at a specific ETF in Fidelity, is the percentage representative how much of that ETF is invested in that company? Yes. So, the answer is as we look at-- and I'll pull back up IDRV as an example here.

Again, as we go into composition and we try to dive a little bit deeper into that, we can see Apple does represent 4.84% of that ETF. So, it is a representation of how much out of 100%. If I want to do a full itemization, I can look at all holdings by weight. And I can look at the entire thing if I want to see like, well, is somebody that I want in there in there? I can have a full view of every holding that's in the entire ETF here, a full suite.

And again, we're looking at some of these are currencies, right? Here's euro currency. There's other exchanges. So, we can kind of get a real quick look at the complexity of what's going on behind the scenes under the hood.

JAY JACOBS: Maybe I'll add to that. When you look at the holdings of a thematic ETF, you do see a lot of those international tickers. We really see that as a key benefit of thematic investing that we don't really care that much about geography for a lot of these themes.

If you think about it, if you're excited about the electric vehicle theme-- and I'm just sticking with it for simplicity-- a lot of electric vehicle manufacturers are not

in the United States. In fact, most of the battery manufacturers are in Asia. A lot of the AV component manufacturers are in Europe.

So simply limiting yourself to just the US geography is really limiting yourself from the leaders in this theme that are selling a lot of the products that go into electric vehicles that you might buy in the United States. So, a lot of the opportunity is not really restricted by borders or sectors. We want to find that opportunity no matter where it exists, no matter how it's classified. We want to buy the leaders around the world that are leading in certain technologies related to our themes.

And as Steve said, normally, that would be difficult to do, either to identify those companies on your own, to do the research, or to even trade those companies, which can be difficult or at unique trading hours. So, buying the ETF wraps that all together. So, you just have to buy one ticker to get that international exposure.

STEVEN TRAVALLI: Here's a good question that sort of just ties right into that. Can I use advance order types for trading ETFs or just market orders? So, you can use limit orders, stop orders. It's open. It trades just like an equity.

You have the ability to dictate your exit and entry points there, right? So, you can put in a limited order today to buy a certain stock as it drops to a certain level. And then I can put a sell order when it rises to another level to get out of it. Something that's also not available for a mutual fund. So, it's another advantage that ties back to that.

All right, last question for Jay. What role do index providers play in thematic ETF ecosystem?

JAY JACOBS: So, when we develop an index-based thematic ETF, we're working with an index provider. So, you may think of S&P 500. The index provider is S&P in that case. But if we're doing a thematic ETF, we might work with a more custom index provider to really give us that refined exposure to a specific electric vehicle ecosystem.

So, they play a big role. It's really partly an iShares/BlackRock effort. It's partly the index providers we work with to develop that custom index to get exposure to the theme. So, it's really iterative and collaborative between two different businesses to make sure that we're getting that refined exposure.

What I would suggest is when you're doing research on these themes, you might search blockchain ETF or electric vehicle ETF. You'll see a lot of different

ETFs from different providers. But there's a lot under the hood that is different between those products even if they sound exactly the same.

So, in the robotics space today, there's six different robotics ETFs in the United States. But the average overlap between those funds is less than 20%. So, six different funds all say they're investing in the robotics ecosystem. But how that ecosystem is defined, how those companies are accessed, the weightings of those companies can be very, very different.

So don't just look at the name of a fund. Really look at those holdings and understand how the approach is different. Because you can see very different approaches across different providers. A lot of that is the role of what is the research that we're doing in developing the theme? And how are we working with that index provider to implement that theme?

STEVEN TRAVALI: All right, well, that's all the time we have for questions right now today. I want to thank everybody online and in person for joining us for this session. Thank you very much, Jay, for your time as well.

END OF AUDIO FILE

**Footnotes:**

<sup>1</sup> Bank of America, United Nations. 2020.

<sup>2</sup> Statista, Data based on UK survey. 2021.

<sup>3</sup> Investopedia Financial Literacy Study.

See the top 10 holdings for the [iShares Self-Driving EV and Tech ETF \(IDRV\)](#)

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