

TRANSCRIPT

Invesco: What do we really know about index funds?

John Feyerer: On behalf of Invesco, I want to have a big thank you, obviously, to you all at Fidelity for the opportunity to participate in today's program, as well as certainly a big thank you to all that's taken the time to dial in. I'm excited to explore the world of index funds and indexes with you today, you know, and share some of the things that we've learned. So, you know, you can't turn on the TV or read any financial news without hearing about index. And this has certainly even been more true during the COVID-19 pandemic, as indexes have experienced dramatic swings, the likes of which we haven't seen since the Great Depression. Historically, indexes were a way for index-- or, excuse me, for investors and portfolio managers to kind of keep score, as their returns were compared with that of index benchmarks. But today, indexes have evolved into serving as a basis for investments strategies, which begs the question, how are they constructed and what potential biases do they present? I'm looking forward to this session, as we explore these topics and answer your index questions-- but one thing we're going to revisit repeatedly during today's session is that, with any investment strategy, it is critically important to know what you own. So many times, we see investors that don't dig in to understand, when it comes to really what is an index and how is it run. Why? Well, because it's the index. And actually, nothing could be further

from the truth. And we're going to explain that, over the next 50 minutes or so.

So, before we delve into the topic at hand today, I want to provide a little bit of background on Invesco. Invesco is a leading global asset management firm, that has helped fundamentally change the very definition of index investing. The ETF Division at Invesco was started in 2003 and has actually grown to be the fourth largest provider of exchange-traded funds, which are commonly referred to using the acronym ETF. And ETFs, you can think of them as being similar to mutual funds -- but trade like individual stocks and provide investors with very cost-effective exposure to index-based strategies. And with nearly a quarter of a trillion dollars invested in assets in ETFs and strategies that actually date back to 1999, Invesco has significant expertise and a long history of offering investors around the world the opportunity to invest in index-based strategies. So, I'm really happy to have the opportunity to share some of the things that we've learned along the way, with everybody, here today.

So, our roadmap for today's discussion is going to take us through a couple of different areas. First of all, we're going to focus on a short history of indexing and the drivers behind the rise of index investing. From there, we're going to explore truly how passive is passive investing? We're going to examine the

underpinnings and the biases of traditional indexes, when they're used to serve as a basis for an investment strategy. One of the monitors every investor should have, as we've said already, is know what you own and how that impacts your ability to achieve your investment objectives. Understanding the underpinnings of how these indexes are typically constructed and how that can impact an investment is absolutely critical. At that point, we're going to transition to discussing innovations in index investing and how that is expanding the toolkit available to investors. And lastly, Eric, as you said, I'm going to transition the discussion back over to you, to help put some of this learning into action, as we look at some of the tools on fidelity.com.

So, the first... Let's go ahead and get started. First things first. Let's take a look at, at its most basic level, what is an index. Well, according the Merriam-Webster, an index is very simply "a number derived from a series of observations used as an indicator or" a "measure." Indexes, within the context -- investing, are actually only one of many types of indexes. Other examples include weather indexes. Obviously, a very useful index these days is the heat index, to understand how warm it's really going to be. A more recent example here is the newly created -- and I found this interesting -- the COVID-19 Government Response Stringency Index, which is a composite measure used to understand how strict a given country has been in its response to the

pandemic. And lastly, just to share another personal favorite of mine -- is the College Football Power Index, which measures the relative strength of college football teams across the country. The point here, of course, is that indexes are used in all areas of our lives, probably more than many of us may realize. And they provide that all-important measuring stick that helps give us context and helps us with our understanding.

One of the areas, of course, that is first to mind when it comes to indexes are financial ones, given that they are, as we said, so often believed in news stories, that in many cases can have a very direct impact on our personal wealth. So, they tend to catch our attention. The original intention of financial market indexes was to provide, as we've said, that simple gauge of how markets perform -- and, as we've discussed, later evolving into a measuring stick against which stock pickers can compare their investment results. All this to say... I want to ask where within the definition does it go on to say, quote, unquote, "and serve as the basis for an investment strategy"? Well, I've checked everything from Merriam-Webster to Oxford dictionary and have yet to find anything within the definition of an index that, it indicates that it is intended to serve as the basis for a strategy, investment or otherwise. I'm, obviously, being a little facetious here. But that's exactly what's happened over the last few decades, as indexes have rapidly emerged as the basis for

investment strategies. In today's discussion, we're going to dig into why that is and how you might think about it, going forward.

So, often, when investors ask the question, "How'd the market do today?" The first two indexes that immediately come to mind are the Dow Jones Industrial Average and the S&P 500. These are easily two of the most referenced equity indexes in the US and, really, around the world. They both have a rich history, that, when they were introduced, they were based upon the best knowledge and the best technology of their day. The Dow Jones Industrial Average or -- is commonly known as the Dow -- actually originated back in the late 1800s, initially consisting of just 12 companies that Charles Dow, who's the founder of Dow Jones and the *Wall Street Journal*, considered to be the backbone of the industrial economy. And over the next two decades, additional stocks were added, until the total reached 30, which, of course, is where it stands today. I often get the question as to how these companies were decided upon. And Dow Jones actually has a panel of experts to add and delete companies, on an ad hoc basis. So, despite that air of objectivity associated, there is considerable subjectivity in terms of which companies are actually included in this iconic index. The S&P 500 history can actually be traced back to 1923, originally consisting of 233 companies. And it really wasn't until 1957 that the index grew to the 500 constituents that it has today. As with the Dow, the 500

companies that comprise the S&P are decided by an index committee on an ad hoc basis. As an example, that's been in the news recently -- that Tesla may be on the verge of being added to the S&P 500. The key element to keep in mind, with both of these legendary indexes -- that they were built based upon the best knowledge and technology of their day and they're both run by an index committee.

So, it's interesting when you plot the developments in indexing on a timeline. It always amazes me when I see the decades that passed with next to no innovation. The S&P 500 index was originally, as we said, introduced in the early 1920s, later expanded in the late '50s. But in the intervening decades, there was virtually no new development or no innovation. Across the bottom here, I included some of the global innovations that we've seen over these years. And it's pretty amazing to see the consistent drumbeat of innovation in our world, where there's the Wright brothers, with the first flight, first microwave oven, first personal computer, or even availability of the internet and, of course, the ubiquitous smartphone. The bottom line is that countless aspects of our lives have seen continuous and significant innovation, yet the world of index has largely stood still across many of these decades. It wasn't really until the late 1990s when we started to see innovations in index investing pick up the pace, as technology and our knowledge of financial

markets increased. Since that time, we've started to see indexes development that tracked various segments of the market-- including sectors, such as healthcare or energy. We've also seen innovations that attempt to measure the performance of smaller stocks or stocks that can be categorized as growth and value. And since 2000, we've even seen further innovation, and enhancements that target stocks with certain characteristics-- such as low volatility. It's during this time also that we see the growth of index investing really start to accelerate. So, despite the index investing -- excuse me -- index innovation that really moved at a snail's pace for a number of decades, the pace of change in indexing has actually increased rapidly in recent years.

We've already said the original intent of indexes was to provide that gauge of the market. But it was in the 1970s that we truly saw a watershed moment for investors-- the first investment product that was provided to investors that provided investors the opportunity to invest in an index-based strategy. This spawned a debate and discussion that has only grown since, and that is active versus passive. And while the naysayers at the time said that index investing was, quote, unquote, "a sure path to mediocrity," it opened up options, for investors to be on actively managed strategies, and raised the bar for investment managers. Now they had to demonstrate the ability to add value relative to an index that could be invested upon, based on the availability of that

product. This development was furthered in the 1990s, when the first exchange-traded fund was introduced. And as I mentioned earlier, investors should think about exchange-traded funds or ETFs as mutual funds that can be traded throughout the day like stocks and are generally lower-cost and more tax-efficient. This development has really served to accelerate the growth of index investing. Since the beginning of the 2000-- innovations has surged, as indexing has moved beyond traditional benchmarks such as the S&P 500 or Dow Jones, to include a wide array of what have become known as smart-beta indexes. And we're going to explore that in more detail here, in just a few minutes.

But before we delve into those innovations, I want to spend a few minutes drilling down into virtually how all benchmark indexes are constructed and, more importantly, what that means for index investors. We can use the S&P 500 here as an example. But this is going to apply to virtually any number of other indexes. Once index constituents are identified, which in the case of the S&P 500, as we've already said, is decided based upon an index committee, the question comes up as how they should be weighted. There are a number of approaches. They could be equally weighted. They could be weighted based upon some measure of size. As I said earlier, the earliest indexes were developed based upon the latest technology of their day. Things today that

we take for granted, like spreadsheets or even calculators, didn't exist. So, to make things easy, indexes were constructed based upon what is called market capitalization. When market cap is used, it enables us to identify the size of the company relative to others within an index. How does the market cap determine a company's size? It's a very simple formula. Its current share price multiplied by the number of tradable shares for the company. So, very simple, very transparent, and, most importantly, very easy to maintain, since the weight of the companies actually adjust automatically, based upon movements in share price. Should the price of Amazon, for instance, go up relative to the other stocks in the index, it will result in a higher weight. When you look at this in practice and understand what it means for the index, however, you realize that this creates a situation in which the biggest companies dominate the index. And the graph on this slide is intended to show how the weight is distributed across the 500 stocks of the S&P. And as you can see, the largest 50 stocks make up nearly half the weight of the index. As a matter of fact, the top 5 stocks make up nearly 20 percent of the weight. Very simply, that means that the performance of those 5 largest stocks has a huge impact on the performance of what on the surface is a 500-stock index. And the other end of the spectrum, you'll see the weight in the smallest 50 stocks is virtually zero. To put some names to it, in the table in the upper right you can see the top 5 stocks and their weight, using market capitalization,

where, as I said, the top 5 average 4 percent weight, as we said nearly 20 percent in total. The 500 is 0.0007 percent of the weight. And as you can see, while an index like the S&P 500 may appear to be broadly diversified, based upon its inclusion of 500 companies, when they're weighted using market capitalization or, once again, current share price multiplied by number of shares, we see that the largest stocks really drive the risk and return of the index. This very important point gets back to what we said at the outset of our discussion today. It is so important for investors to know what they own.

I've often found that the next question that investors often have, after reaching an understanding of the impact that market-capitalization weighting has on their investment, is how concentrated are benchmark indexes today in these largest companies versus other times in history, such as the technology bubble of the late 1990s or the global financial crisis in 2007-2009 timeframe. And this slide will help answer that question. As of the end of March of this year, the S&P 500 had nearly 20 percent of its weight, as we said, in those top 5 names, more than at the height of the tech bubble in December of 1999 and considerably more than anytime in the last few decades. As a matter of fact, you have to go back to December of 1978 to find a time in which the index was more top-heavy than it is today. Now to be clear, I'm not saying that we're in a bubble. But what I am saying is that the S&P 500 is more top-heavy today

than it has been in over 40 years. Once again, I cannot emphasize how important it is to know what you own.

So as we've already discussed, if you take a look at the key input and the weighting in the constituents within these traditional benchmark indexes is price, price dictates the weight the company has today and how that company's stock price performs, going forward, will dictate its weight, going forward. But ask the question, "What happens if investor emotion takes over and certain prices get bid up beyond their fundamental or their intrinsic value, such as we saw with technology stocks during the technology bubble?" For those that may be old enough to remember, Fed chairman Alan Greenspan actually coined a term to describe investor emotion and, specifically, the love affair investors had with tech stocks in the late 1990s. It was "irrational exuberance." Well, what happens if a stock or a group of stock that is currently very popular ultimately prove to be over value? By definition, a market-cap-weighted index will have had too much weight allocated to those stocks and will suffer a subsequent drag on performance as those stocks revert to their intrinsic value. Similarly, what happens to those stocks that investors shun, because they're unpopular, in some cases even feared, and as a result may become undervalued-- we saw this in the global financial crisis, with financial stocks. In this case, the cap-weighted index will prove to have had too little

weight in these stocks and, once again, consequently will lag as these beaten down shares revert to intrinsic value over time. Due to the key input into traditional indexes being price, if the market gets it wrong, whether it's about an irrational exuberance or about a paralyzing fear, the index will, by definition, have overweighted any stock that ultimately proves to be overvalued and will have underweighted any stock that ultimately proves to be under value. And this may serve to negatively impact performance. I've always appreciated the perspective of Benjamin Graham, who's widely regarded as one of the all-time great investors and actually has served as a mentor for the likes of Warren Buffett, when he reminds us that "In the short term the market is like a voting machine," which is tallying up firms that "are popular and unpopular but in the long run" it's "like a weighing machine -- assessing the" true "substance of a company." What he's saying here is that, in the short term, the market is emotional and sometime gets it wrong but, over long time horizons, stocks tend to mean-revert for their intrinsic value. Understanding this within the context of index investing is critical. Why? Because the very thing that reflects investor emotion, current share price, is the key input into calculating the index.

Now that we've covered how investors should think about indexes when they're used as the basis for an investment strategy, I want to spend just a

minute to cover how popular index investing has become and where it's projected to go from here. This chart shows the US mutual fund industry assets in terms of how they are split between actively managed strategy and passive index investments. And in 2011, nearly four out of every five dollars that was invested in mutual funds was invested in an active strategy. Since that time, total assets, in aggregate, have increased over 80 percent, to 18 trillion. But look at the mix. The mix has also changed, to the point that now only about two out of every three dollars is invested in active strategies. And as you move to the far right, total assets is expected to continue to grow. But look at the shift towards the more passive strategies. According to the study, active and passive strategies are actually expected to be evenly split, by the year 2025. This represents a seismic shift, in just 14 years, and really helps us to quantify just how rapidly the popularity of index investing is increasing.

So, some of you may be asking, really, what's behind this rapid growth? Well, the performance analysis demonstrates the difficulty that active managers have in consistently outperforming their benchmark. S&P Dow Jones Indices publishes a report that measures the percent of actively managed funds that outperform their benchmark index. And the chart on this slide shows the percent versus the S&P 1500, which is a broad benchmark index that includes the S&P 500, the

400, as well as the SmallCap 600, to capture the broad market capitalization. The light-blue bar on the right shows the results in 2019, where 70 percent of the actively managed mutual funds underperformed the index. On the flipside, only 30 percent outperformed. Over the past 19 years, you can see the percent of managers -- underperform the index has ranged between 41 and 87 percent, the average being just over 60. The win rate for indexes, coupled with those lower fees, has made index investing a very popular go-to solution for investors, as it really helps us understand the rapid growth.

So one of the words that seems like it's inextricably linked to the word *index* is the word *passive*, whether it's in the contents of active versus passive or whether it's passive referring to index-based strategy or used simply as a simple descriptor, "passive index." Well, let's take a look at how truly passive is passive, through a few case studies. The first is what we saw during the buildup and bursting of the technology bubble. The chart here shows the weight in the S&P 500 that was allocated to technology shares between March of 1999 and March of 2001. And as you can see, the percent allocation to technology in March of 1999 was about 19 percent. But that number changes very rapidly in the ensuing 12 months, going from 19 percent to 33 percent of the index -- in just one year -- as investors bid up the prices of technology shares. This represents an increase of 73 percent in just 12 months. Did

investors intend to increase their allocation to technology that dramatically? Somewhat of a rhetorical question, I guess. But regardless, it would be hard to associate that dramatic of an increase or that short of a timeframe with something that is described as passive. Over the 12 months between March of 2000 and 2001 -- were equally as dramatic, as the allocation to technology dropped over 40 percent and actually returned basically to where it started in March of '99 -- a 70 percent increase, immediately followed by a 40 percent drop. Is this type of swing passive? I'll leave that for you to decide. But it's hard to argue that those swings are anything less than very dramatic.

Lest you think that this type of dramatic move is limited to indexes focused on US stocks, I've included another example, that in my opinion is no less dramatic. The chart here shows the weight allocated to Japan within the MSCI World Index, in the late 1980s. This index tracks companies from developed countries around the world, including the United States, Canada, Germany, France, the United Kingdom, Japan, Australia, Netherlands, and a number of others. And for those of us who are old enough to remember, investors to Japanese equities in the late 1980s, as the world marveled at Japanese production techniques and quality manage-- as investor interest in Japan soared, so did its weight within the S&P -- excuse me -- within the MCSI World Index. Japan, within the index, grew from 22 percent to 44 percent of the

index, in just three years. That means that, for every dollar invested in a fund that provided exposure to this index, almost half of it was allocated to Japan. Similar to what we saw in the tech bubble, the allocation to Japan came down close to where it started, just a few years later. Once again, the key takeaway here is the dramatic swings that these, quote, unquote-- passive indexes takes. It really is based upon investor emotion and may have some very unintended consequences.

So, the last example that I want to share with you is to bring this forward. And that is to take a look at some stocks that are in the news quite a bit here today. It seems like you can't have a conversation about investing without the likes of Facebook, Apple, Netflix, Microsoft, Amazon, and Google coming up. These stocks have become so popular, they even have their own set of acronyms, whether it's FANG or FANMAG. The acronym has almost become as ubiquitous as the stocks themselves. When you look at the impact that this group of six has on the stock market, it's pretty staggering. The chart here compares the aggregate market capitalization or the total value of the stock market, of the largest countries in the world, with one small caveat. It actually carves out the six FANMAG stocks-- once again, Facebook, Apple, Netflix, Microsoft, Amazon, and Google, as if they were their own stock market. If these six stocks were their own stock market, they would place third in the world, behind the US and

Japan but ahead of China, the UK, France, and a number of others. I included this in our discussion here today, in terms of how passive is passive, because it helps to illustrate the outsize impact that a handful of companies can have on a market-capitalization-weighted index. And to be clear, I'm not saying anything about these stocks, their valuations, or their prospects for continued growth. But what I am saying is that, index investors that believe they're getting broad passive exposure, they want to look again, as the size of these companies dictates the weight that index investors may own, as they are a significant portion of the investment portfolio. Once again, this whole discussion goes back to the key theme today. It is imperative to know what you own.

So, as we discussed at the outset of our discussion today, innovations in indexing have been a long time in coming. Since the mid-1970s, investors' opportunity set has either been to utilize an active-manager-based -- on the belief that he or she can consistently outperform the market, or to utilize a traditional index. Until recently, this was strictly an either/or decision.

Innovations in indexing have blurred what investors have viewed historically as very clear lines. And this has ultimately served to expand the investment toolkit for constructing your investment portfolios. These innovations have combined elements of traditional index investment, such as being objective,

simple, transparent, and rules-based in their construction, with those of active-manage, where there's a potential to outperform or to manage risk. So, these developments are really transcending this traditional investment paradigm of the either/or active and passive. And this development has been coined -- the term is -- been coined, "smart beta," to kind of express this middle ground.

But I want to emphasize, as we talk about smart beta -- or sometimes it's called strategic beta and others -- is just a broad catchphrase, if you will, to help broadly refer to index-based investment strategies that have moved away from traditional market capitalization, for reasons that we've been discussing here today.

The characteristics of these strategies are, first of all, that they're based upon a formulaic, and very transparent rules-based methodology, secondly, that they are not market-capitalization-weighted, third, that they provide exposure to certain investment factors -- we'll talk about that in a little bit -- and then, lastly, that they're systematically rebalance-- and this last characteristic cannot be overlooked. And it is one of the key differentiators versus traditional indexes.

The imposition of a strict rebalancing discipline can be a critical element in successful long-term investment strategy. A rules-based index methodology is one way to impose this type of discipline.

Sometimes the best way to explain these types of strategy is to take a look at a few examples. So, taking a look, these are just three examples. What we're going to do is go through these and then tie these back to what we mean by these innovations in indexed or smart-beta type strategies. First one we're going to talk about is the Invesco S&P 500 Equal Weight index. And as we talked about here quite a bit, with traditional indexes, that obviously have considerable concentration in those large stocks, in this case it's simply equally weighting each of the constituents within the index. This can address some of the concerns around diversification, relative -- traditional index. But as we said, it also imposes a quarterly rebalancing discipline, which of course, as we just mentioned, does not exist with traditional benchmark and, once again, may be a discipline that is difficult to replicate by active manage-- so we look at this strategy. It was actually launched back in 2003. So, it has a 17-year track record, and in many discussions is pointed to as the first smart-beta ETF -- once again, very simple, very transparent, very easy to understand. But when you look at it, with a 17-year track record, it enables us to compare this strategy within a universe that includes actively managed mutual funds. And I would say it is a point worth making that it is actually a top-decile -- meaning it's top 10 percent -- performer within its relevant peer groups since its April of 2003 inception. So, we believe it's compelling strategy -- once again, index-based and, in this case, offering 20 basis points. So, when we tie this

discussion back to what we talked about with those key ingredients or those characteristics with smart-beta strategies... Let's talk about it. This is based upon a rules-based, formulaic approach. It does not use market capitalization to weight constituents. And it has that disciplined rebalancing process. And those are, once again, the three key characteristics that make it kind of this middle ground or what is broadly considered or broadly referred to as smart beta.

The second strategy I want to talk about is the S&P 500 Low Volatility index. And this is a ETF here, SPLV, provides exposure to this index, which is essentially the 100 least volatile companies from within the S&P 500, was launched back in May of 2011. And this enables investors to participate in equity markets while potentially mitigating risk and employs a quarterly rebalance process, that really enables the ongoing exposure to low-volatility companies within the S&P 500. And when you look at its risk-return profile, relative to the S&P 500, since its launch it's been very, very strong. As a matter of fact, as I mentioned with the Equal Weight, in this case, since its launch in May of 2011, we see SPLV actually launching within the top two percent of its relevant peer group. So obviously, volatility management is on investors' minds, certainly since the start of the pandemic and really much of the last several years. This is a strategy that really meets those criteria of smart beta, in

terms of being, you know, rules-based and formulaic, not being based upon market cap, and, once again, having a strict rebalancing discipline that takes it back to those stocks within the S&P 500 that have exhibited the least volatile -- and, once again, selecting the 100 least volatile in one portfolio. So, we think, once again, a good example of what we mean by a smart-beta strategy and one that can be useful in investor portfolios.

And the last one I want to recap here is the S&P 500 High-- excuse me -- S&P 500 Quality ETF, ticker SPHQ. And similar to SPLV, what we're simply doing is here starting with the 500 index and then, based upon a rules-based scoring mechanism, identifying those companies within the S&P 500 that scored the strongest based upon their profitability, earnings quality, and overall financial health -- and profitability being measured by return on equity and financial health being measured simply by balance sheet, which is debt to equity. So really, this provides the opportunity for investors to get access to those higher-quality stocks, and consistently through time. In this case, there's a semiannual rebalancing discipline, that, once again, enables that continued exposure to the quality companies in the S&P 500 -- and in this case, offered, once again, in this case, at 15 basis points. So really, once again, I think you can see, when you're constructing an index that is really built around criteria such as profitability, earnings quality, and financial health, that obviously varies

pretty considerably from a traditional, market-capitalization-weighted construct and, once again, I think really demonstrates some of those characteristics that we've talked about with this middle ground of smart beta. So.

Before I turn the discussion back over to Eric, I wanted to quickly summarize just a couple of key points from our discussion today. And while indexes were originally designed to serve as a gauge or a measure of the market, they have, as we've talked about, increasingly become the basis for an investment strategy. And they've grown very rapidly, and, frankly, for good reason. They're simple, transparent, and low-cost. And that, coupled with the difficulty that some active managers may have -- and consistently outperform... All of these point to the potential merits of index investing. But that said, like any investment strategy, as we've said time and again, it is important to know what you own. And the traditional index benchmarks may leave investors with a heavy concentration of the weight in the largest companies within the industry and little to no weight-- in the smaller ones, thus potentially partially defeating the original purpose of using an index in the first place, and that is diversification. Also, as we talked about, because share price is really the critical driver of traditional index, it may leave investors susceptible to investor emotion, both positive and negative. Recent innovations in indexing really

have served to blend the positive attributes of both traditional active, as well as index-based strategy -- ultimately has served to significantly expand the investor toolkit for constructing investment portfolios. And as we talked about, examples including the S&P 500 Equal Weight ETF, the S&P 500 Low Volatility, and, of course, S&P 500 Quality, these are strategies that are really good examples of what we mean by smart-beta investment solutions, that could play a critical role in building robust and cost-effective investment strategies, that really can help clients achieve their investment objective. So, with that, once again, thank you for your time today. And I'm going to pass it back over to Eric, for the next segment of our discussion today.

Eric Olson: Hey. Thank you, John. Great insights. I appreciate the history and the evolution of indexing, where it's brought us today. At this point in time in the presentation, I'm going to do a live demonstration of the Fidelity website. We're going to keep the same momentum going that John shared with us today. And we're going to take some of these ideas that we got from John's presentation and do some live demonstration with Fidelity's tools. I'm going to go a little bit at a cadence that's relatively quick. And when I conclude, I'm also going to take you to some resources online regarding the topics that we discussed today.

So, we're going to go about using the Fidelity website in two ways. We're going to research an ETF. The ETFs we use, they're not a recommendation. We're just using them for educational purposes, on how to use the website to research them. We're going to use the analysis tool to analyze an ETF. We're also going to use our ETF Screener, how to find ETFs that relate to an idea that we've come across.

So, let's say we have an investor that wants large-cap exposure, yet they feel, for whatever reason -- it could be COVID, it could be the upcoming elections -- we're coming into the summer months -- they expect choppy markets ahead. As John mentioned, these investors often gravitate towards smart-beta strategies, like minimal volatility. So, we're just going to go ahead and dive right into it. In the upper -- up right-hand corner... If you are given a ticker, like you're in a webinar today or you're reading a *Barron's* piece or a *Wall Street Journal* piece... Many of these articles will come with a ticker symbol or an investment idea, the use case. By the way, just a little housekeeping in the website. If you see this "Upgrade now," button on your login, when you're looking at a ETF or a stock, I highly suggest that you upgrade now. That's our old, classic version to research an ETF. This is our enhanced dashboard. We've done a lot of enhancements to our website. If you're familiar with our stock dashboard, it looks the same. It's a lot cleaner look and a lot easier to

use. So, let me walk you through the dashboard. Obviously, I have key information, like the name and ticker, key quote information, highest bid, lowest ask. I also get a 30-day yield and a 12-month trailing yield -- that's what TTM stands for -- the expense of the fund, and price performance over the past 52 weeks. News & Commentary, that might seem a little trivial for a lot of folks. But I want to make sure you understand the powerful impact we have, on the News & Commentary. We use over 30 independent news providers. So anytime Invesco S&P 500 Low Volatility or this ticker is mentioned in a commentary, whether it's an analyst upgrade or downgrade, it's going to feed into this newsfeed. It also applies to stocks that you're looking at on the dashboard page. It's a great way to keep your finger on the pulse of a security. In the middle here, I have third-party analyst ratings and their reports, a profile of the fund, which we'll come back to in just a moment, total returns of the fund. And if you're ever in question of, you know, a term or you need a refresher on it, Fidelity provides these pop-up windows, that give you a brief description of what that terminology means. Obviously, total return is assuming we reinvest capital-gain distributions and income from the fund. Below the profile, I have a chart. It defaults to a one-year daily chart. But I can customize this to, you know, reflect more of my holding period. I can even add in moving averages, and save my setting, so that I can instantaneously preload those settings, so I don't have to go through the process of adding

them each time. To my right here, I have Similar ETFs. We're going to use another ETF that John was talking about, to dive deep in how to use this tool. In my opinion of the dashboard page, this is one of the most important tools to get comfortable with. If you're given a ticker symbol and you just look at the performance in, you know, just that fund alone and you're not comparing it to some of the competition or some of the funds out there that are doing the same thing, you're really doing yourself a disservice. And like John said, do your due diligence. Know what you own. Below the chart, I have my top 10 holdings and how that reflects in the percent of the total holdings and then the portfolio composition, from a sector and industry, market cap, and region. When I look under the hood, I like to come back up to this Profile page. Actually, before we get to that, I do want to make sure I address a lot of the questions around how do I know what the strategy or the objective of an index is? If I just click on the Stated Objectives, it's going to tell me exactly what the index is trying to do. In this case, it's looking for the hundred securities in the S&P 500 index "that have the lowest realized volatility over the past 12 months..." And John already kind of got into the details of how they rebalance.

But if I come down to "See more," under the profile, I get everything in one view. I get all the top 10 holdings -- in this view here, I can even look at all the

holdings in the portfolio -- obviously, the market capitalization. I find this interesting. This is a low-volatility fund. We have healthcare and consumer staples -- represent over 50 percent of this fund. Why is that interesting to me? Well, if I pulled up an S&P 500 market-weighted ETF, like SPY or IVZ, which are very popular, well, you're going to see, information technology and consumer discretionary, they're going to be at the top. So, it kind of speaks to, you know, defensive sectors like these two tend to consistently overperform the overall market and some of the sectors in economic downturns. And we've, obviously, experienced some volatility in the economy, unemployment, you know, some uncertainty, moving forward.

We're going to shift gears a little bit. And let's say you're given an idea about an investment objective or a concept which used equal weighting, for example, equal-weighted portfolio of domestic stocks, large-cap, that's passive. John talked a lot about passive strategies. So how do we go about taking 2,100 ETFs that you can trade on our platform and winding that down into manageable list of ETFs to look at? So, what we're going to do is we're going to go to News & Research, ETFs. And it brings me to this ETF Research Center. I'm going to go ahead and Launch ETF Screener. Again, 2,100 ETFs. We have over 80 different criteria, on the left-hand side, that you can choose from. If I select View All, I can see a view, a menu of choices of all 80, 80-plus.

Now, I already know a lot about what I want to look for. And you'll see how easy it is to shrink down your list of ETFs into a manageable group to look at. So, I know my asset class is going to be equities. I know I'm looking for a passive approach, not an active approach. And by the way, they're adding more and more active ETFs, it seems like every week. But primarily, they're mostly passive. My index composition, I want equal-weighted. And I want domestic stocks. I simply hit Apply Criteria. And then it's up to me to check the boxes that I want to include in my search and leave the boxes unchecked that I don't want to include. Notice we're starting to filter down our choices already. If I select a passive strategy, we're now down to 600 ETFs. If I select Equal-Weighted, we're down to 70. And I come to domestic, we're at 45 ETFs. So maybe 30 seconds it took us to go from 2,100 ETFs down to manageable list of 45. I could save this screen to my screens, and access those up here in the upper right-hand corner, under My Screen-- so I can instantaneously have a list again. So, you know, we're quibbling over 30 seconds of loading that in there but, hey, listen, every second, every minute counts.

Let me introduce you to the search results. All the search results come and feed over to the right-hand side. Okay? I can actually look at performance up to five years of total return. I can actually look at Basic Facts, to get an understanding of which benchmark index they're following, as well as the

sponsor of the fund. I want to point out something that I notice, when I'm doing workshops or consultations, is we tend to see investors get right to performance. They want to get to the meat. They want to see how well does this fund do. Nothing wrong with that. But on its own, maybe it doesn't relate t-- like John talked about, the more important factor is knowing what you own. Because past performance -- no guarantee of future results. So, knowing what you own and knowing that a fund is matching -- and being efficient with what it's investing in is probably some factors that you want to know more about, before just going right at performance. But one thing I notice, when I'm looking at these search results, is, as I peruse these titles or the names of these ETFs, I'm starting to notice a theme here. I'm seeing that most of these ETFs, if not all of them, outside of this equal-weighted Invesco fund, are industry bias or sector bias. The reason this fund filtered to the very top is because of its net assets. It's a big fund. So, the biggest fund in your search result's going to filter up to the very top.

But that aside, I didn't necessarily classify or define that I wanted a certain sector or industry. I wanted overall US market exposure. So really, the choice comes down to this equal-weighted portfolio, RSP, that was talked about. Again, "Upgrade now," at home, to get to the dashboard page you want. But this fund really is a fund that my intent is getting to. With that said, if I come

down to "Compare other ETFs," I could go in and look at other ETFs that have the same goal and compare long-term performance. I can also look at tax efficiency, side-by-side. I can even save to one of my 15 different watch lists that I want to create. Each watch list, I can hold up to 50 different securities.

So, I know I went through the tools rather quickly. I hope that this gives everyone a better sense of the tools that are available to find and compare some of these funds. I do just want to hit on one additional topic, which is our Learning Center. Under News & Research, Learning Center. I can actually come into ETFs and ETPs. And you're going to see a series of articles, videos, and webinars, that may answer many of the questions that you have after today's session.

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