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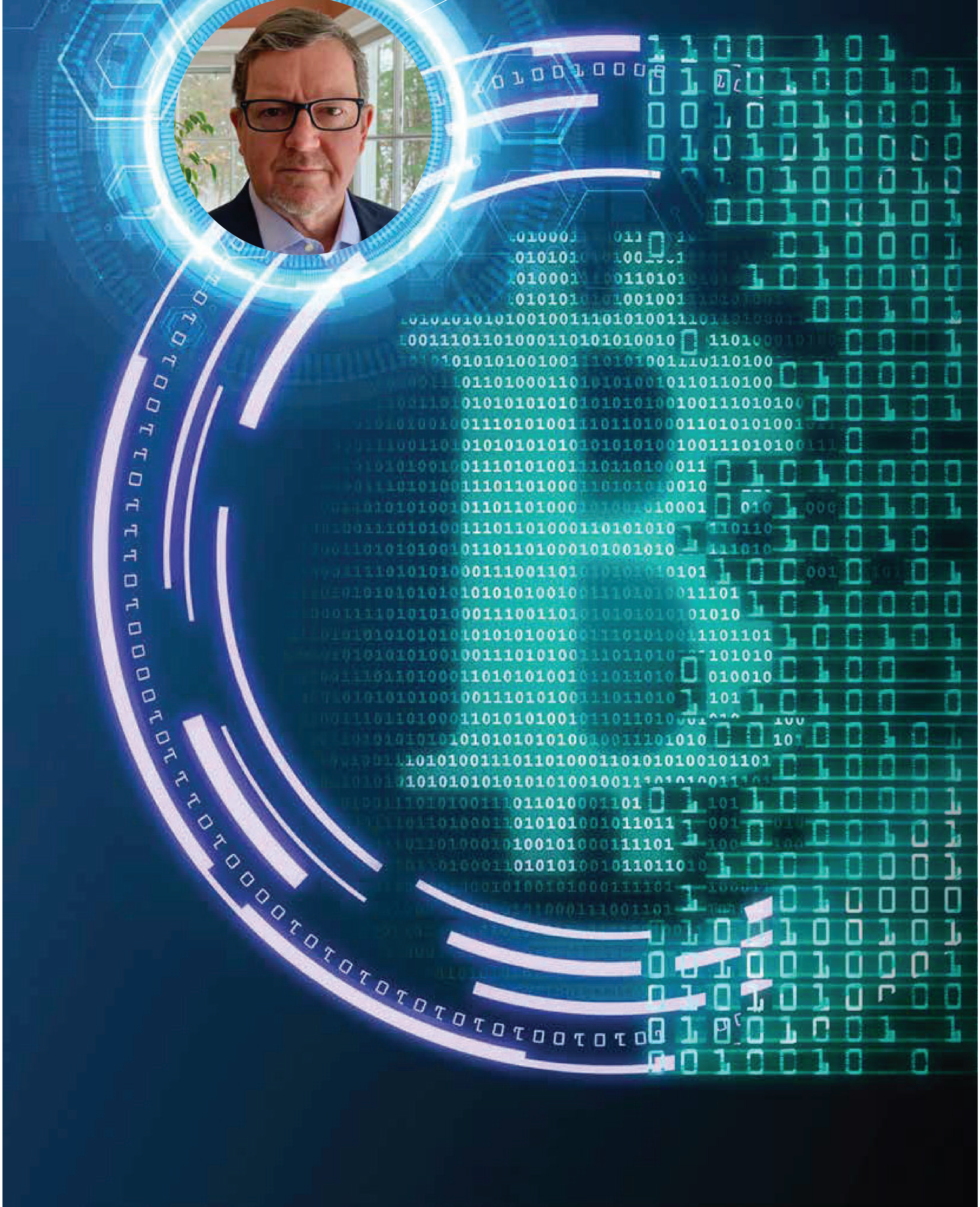

Evolution of Digital Assets, Bitcoin, and Mainstream Investments

A CONVERSATION WITH FIDELITY DIGITAL FUNDS' PETER JUBBER

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In the research leading up to Deloitte's 2020 Global Blockchain Survey, we found that 83 percent of executive respondents believed that digital assets will serve as an alternative to, or a replacement for, fiat currency in the next five to 10 years. This is consistent with Deloitte's premise that blockchain—and the commercial activities it enables—are moving from potential to reality, and is particularly evident as we look at the evolution of investment strategies, where digital assets like Bitcoin are increasingly mainstream.

Fidelity has been into Bitcoin since the early days of digital assets. Following the vision of Chairman and CEO Abby Johnson, Fidelity began a small mining operation that kicked off the firm's long experiment with Bitcoin. As the firm's knowledge and understanding of all things Bitcoin evolves, Fidelity has broadened its ability to engage clients in this space—including institutional funds.

Peter Jubber, Managing Director of Fidelity Digital Funds, shares his latest thinking on emerging global trends in digital assets with Deloitte partners Rob Massey and Paul Kraft.

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EVOLUTION OF DIGITAL ASSETS

Q. FIDELITY HAS BEEN FRONT AND CENTER IN BLOCKCHAIN AND DIGITAL ASSETS FOR YEARS. HOW DO YOU VIEW THE ECOSYSTEM TODAY, AND HOW HAS IT EVOLVED?

A. Today, we have futures and other non-spot-based products as probably the most popular part of the crypto ecosystem. Exchanges and payments make up another important segment. Custodians play a key role, some of whom offer lending, prime brokerage, and investment management. The other core aspect is mining.

If you went back five years, you would see that the predominant activity in exchanges and payments was mostly retail driven. I would also say that five years ago the discussion was a lot more about how Bitcoin (the protocol and payment network) would reinvent financial services by reducing the need for intermediaries who would not be necessary if you had a blockchain. That's not to say that Bitcoin (the currency) was not important, there was just more of a balance then.

We had a little joke at Fidelity when we had use cases come into pitch. I'd have a little wooden ruler with a stop sign on it. Whenever people came up with great ideas, we'd say "Stop! Tell me why you need a blockchain for that?" This was because, in most cases, a distributed database could handle that use case perfectly well.

We moved on from there to the emergence of tokens as a store of value today. I think what we've been seeing recently is the rise of a different kind of—mostly institutional—investor that is a product of this macroeconomic environment, which has contributed to the development of **Bitcoin's role as an alternative investment.**

According to our **Institutional Investors Digital Asset Survey** from June 2020, more than 80 percent of investors indicated they would be interested in institutional investment products that hold digital assets. Of this group, nearly half indicated they would prefer to hold an investment product that provides them with exposure to multiple digital assets.

TODAY'S ECOSYSTEM

Q: IT'S INTERESTING HOW WE'VE GONE ON FROM ALL THESE ENTERPRISE USE CASES, WHICH STILL EXIST, BUT IT'S REALLY FINANCIAL SERVICES THAT HAVE CARRIED THE DAY. YOU REFERENCE AN INCREASE IN INSTITUTIONAL INVESTORS. WE'VE HAD A HANDFUL OF INSTITUTIONAL INVESTORS FOR A LONG TIME, BUT THEY WERE DOING THEIR OWN THING WITH PROPRIETARY SOLUTIONS AND CUSTODY. THE WAVE OF INSTITUTIONAL INVESTORS COMING IN TODAY IS EXTRAORDINARY. HOW IS THAT NOW INFLUENCING OTHER TRADITIONAL CUSTODIANS AND BROADER TRADITIONAL FINANCIAL SERVICES?

A. Traditional players have fundamental decisions to make: When and how do you engage in blockchain, and do you then engage in the store of value represented in the tokens? Then, if you decide to play in that game, how do you play? Luckily for us (at Fidelity), those decisions were made early on.

For a startup, it's a unique calculus because they're already all in. For the incumbent, it's an entirely different conversation driven around the question, "How do we think about digital assets as a firm?" Does their vision for the customers they're serving—whether by offering or not offering digital assets—alter their fundamental proposition with their customers? That's

one set of questions.
Another set of questions might focus on an overall risk calculus. A firm has a persona, and it might view Bitcoin or blockchain as just too risky. In the end, the tide will move toward larger players recognizing that they need to move into this space, driven by demand from their customers and by their infrastructure needs, as spelled out in our **Institutional Digital Asset Survey**.

We found that more than 60 percent of investors believe that digital assets have a place in their portfolios. As I noted, when it comes to digital asset investment products, more than 80 percent said they would be interested in institutional investment products that hold digital assets. However, only 36 percent of institutional investors surveyed currently invest in digital assets. Mind you, this survey was conducted early in 2019 and we've seen the market evolve since then. We see greater maturity of trading venues, greater transparency of pricing and tighter spreads, the emergence of futures and other instruments, and more and bigger players coming into the space with their attendant processes and protections. No one is going to enter the space lightly, so they're bringing the normal processes they use for doing business in traditional assets. That will help accelerate maturation and innovation.

BITCOIN MINING

Q. IS FIDELITY STILL ENGAGED IN BITCOIN MINING? CAN YOU DISCUSS WHY YOU GOT INTO THAT, AND WHY IT'S AN IMPORTANT TOPIC RIGHT NOW GIVEN THE CURRENT ECONOMICS AND PRICING OF BITCOIN?

A. At the beginning of our journey at the firm, we fanned out and looked at all the tendrils of what was emerging with Bitcoin. And mining was obviously one thing we could look at and touch, and feel, and try. And we did. We started out with a tiny operation in one of our regional sites and learned a lot. Mining consumes a ton of electricity, and for all of that electricity, you can maybe mine a Bitcoin every now and again. And when you do, there was no clear set of predictors as to how, when, or why.

We've kept that operation going and have now scaled it beyond the experimental. We want to look at it on more of a commercial scale to better understand all of the ins and outs: How do you source hardware? What types of energy make sense and what types of energy don't? How do the economics behave as volatility hits? And what happens at a halving?

We're able to inspect a lot with mining, but we're still thinking about it in terms of a learning phase. We learn a lot all the time, and with such an unpredictable market, we don't know how it's all going to turn out. But it does present opportunities for us to explore further. We use each lesson to more fully explore a path than we would have been able to had we not run a mining operation.

Mining is the foundation of Bitcoin. Having a deep knowledge of that, we think, is critical for us as a company.

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Q. CAN YOU PROVIDE FURTHER DETAILS ON SOME OF THE LESSONS YOU'VE LEARNED AS THEY RELATE TO MINING? CAN YOU PROVIDE AN EXAMPLE OF HOW IT'S ACTUALLY INFORMED A DECISION YOU'VE MADE OR A DIRECTION YOU HAVE TAKEN?

A. We've learned many interesting lessons.

For example, there are many questions you need to ask and answer regarding energy and expenses. What energy source and what price? At what cost do you need to buy energy to mine profitably? Can you secure a fixed-price contract? Or are prices variable? What kind of operating expense do you need to run? These are the most basic arithmetic parts of the economics. One obvious advantage would be securing the lowest possible cost for energy for the longest possible contract.

The next question is, are those sources scalable, are they available long-term? And, when you look at sources of renewable energy that would be different from non-renewable sources—those have different economics. You need to spend time with each of these latitudinally to learn enough about how they behave over time. So, the experiments we've conducted have been more in the renewable energy space as a source. We are still continuing to expand our thinking in this space.

NEW INVESTOR PERSONA

Q. SWITCHING GEARS A BIT, LET'S TALK ABOUT CORPORATES. IT SEEMS LIKE DIGITAL ASSETS HAVE INSPIRED A DIFFERENT CONVERSATION AMONG CORPORATES, ON THE LINES OF, "SHOULD THERE BE SOME AMOUNT OF OUR TREASURIES HELD IN DIGITAL ASSETS?"—WHETHER OR NOT IT CORRELATES TO THE BUSINESS SIDE. CAN YOU DESCRIBE WHAT YOU'RE SEEING IN RELATION TO CORPORATES, AND HOW THIS INFLUENCES THE ECOSYSTEM?

A. If you believe that corporate treasurers are, in essence, portfolio managers for that treasury asset then, in this environment, they should continue, as a fiduciary, to deliver value to the corporation. Bitcoin, just like gold or other types of alternative investments, might offer sources of return. We would have the conversation around what kinds of goals they are targeting in their portfolio, and then work through the analytics to understand the potential return by having a timed allocation to something like Bitcoin.

Q. DO YOU SEE THIS AS A TREND WHERE MORE CORPORATE TREASURY FUNCTIONS WILL ENGAGE WITH DIGITAL ASSETS?

A. Yes. I would anticipate that we would have more of these conversations with corporations. Fundamentally, in the current macroeconomic environment it makes perfect sense. But in two or three years, things can change. I think we all must keep our eyes open—both in general and as investors.

Any asset considered for inclusion in a portfolio must include diversification through low correlations and also enhance returns. With Bitcoin, the ways these come about is slightly different. So, yes, there's low correlation—we compute an average .11 correlation across a broad range of traditional assets in the last five years. We note four key factors as to why this is the case:

1. There are different risk/return factors that Bitcoin exhibits. It is an asset that is more reflexive to sentiment and momentum effects than you might observe with traditional assets.
2. There are also evolving narratives. So, for every investor in Bitcoin, I would argue that there is separate story of why they are investing in Bitcoin. We think that in time, these stories will reduce in number and as they do, we will probably see the correlation track a little more tightly to traditional asset classes.
3. We are seeing an increasing overlap of market participants—it's a young asset, which until recently was untethered to traditional markets. As it is integrated into traditional portfolios, we are seeing other players available for you to get this exposure.
4. This is a retail-drivem phenomenon. So, unlike just about every other asset that we could observe, retail has driven adoption of this today.

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Q. IN THE FIDELITY DIGITAL ASSETS BITCOIN INVESTMENT THESIS RELEASED IN OCTOBER 2020, YOU ALSO TALK ABOUT ENDOWMENTS, PENSION PLANS, AND OTHER TOPICS. COULD YOU DESCRIBE THEM IN A BIT MORE DETAIL?

A. Endowments, defined benefits, and pension plans all have the same problem: they're large portfolios that are mostly invested in traditional assets. The question investors might be asking revolves around, "Is there an opportunity for more opportunistic investments that could move the needle?" In this environment, it's a perfect storm for them to answer such questions.

There is significant upside potential for market appreciation as Bitcoin and other digital assets are adopted by more investors. Today, it's a tiny fraction of the size of the alternative assets markets as well as the size of other competing store-of-value investments. Were the digital assets market to grow its share to a higher proportion of these kinds of assets, billions of dollars more of value would be available to investors.

There are three incremental benefits that we think are present with Bitcoin when you compare it with traditional alternative assets:

1. Liquidity—you can trade 24/7 without the presence of intermediaries, and there are very few restrictions on entering or exiting the market.
2. Accessibility—Bitcoin de-marketizes access, and it does not discriminate based on what kind of investor you are or where you are in the world.
3. Low fees—if you're buying Bitcoin, you don't pay management fees, you don't pay performance fees, you just pay the cost to trade in and out, and what it costs for custody your holdings.

GENERATIONAL WEALTH TRANSFER

Q. I KNOW YOU HAVE THEORIES ABOUT A GENERATIONAL WEALTH TRANSFER. SINCE WE HAVE A GENERATION THAT'S MATURING, WHERE DO YOU SEE AN IMPACT FROM DIGITAL ASSETS AND BITCOIN SPECIFICALLY? CLEARLY, WE'VE SEEN IMPACTS FROM THE INSTITUTIONS AND CORPORATES, BUT WHAT ABOUT FROM PEOPLE GROWING UP WITH BITCOIN?

A. There is a coming avalanche of nearly $70 trillion of wealth that will be transferred to millennials in the next decade. These investors consume investment information and advice in a very different way. They pay a lot more attention to social media and influencers. Among younger investors there is a greater propensity to hold Bitcoin. Why? They're digitally native; they've grown up with the Internet, and, in many cases, they are open to new ideas that are not intermediated by traditional financial institutions. They might have longer timelines and investment horizons, or they've grown up in a digital world. Digital tokens as investments are normal to them. Given the run up in crypto prices in late 2017, and perhaps what's happening today, if you have a little discretionary income, you might start to invest in something like this.

So, I have two perspectives:

- The mindset for the younger investor is perhaps more attuned to considering these kinds of investments to include in a portfolio—especially as they become more practiced in the art of investing.
- The other thinking is within existing customer segments—let's say a family office—we're seeing some evidence that there's a greater interest in having the conversation around Bitcoin with younger investors versus the family patriarch or matriarch.

Q. WE'D IMAGINE THERE ARE SOME PARALLELS WHEN TALKING ABOUT THE REASONS TO INVEST OR NOT INVEST, BUT ALSO CONTROLS AND RISK WHEN YOU'RE TALKING TO AN INSTITUTION VERSUS A FAMILY THAT'S GOT A 20-SOMETHING-YEAR-OLD WHO'S SITTING AT THE TABLE TO MAKE THIS INVESTMENT.

A. Exactly. So as a provider you must be able to have both conversations. I think you need to look at the portfolio and find the client's risk-reward framework, and what returns they are seeking. And then we can examine how Bitcoin fits—or doesn't fit—into the investment strategy. We should be able to respond to our family office clients with a thought-out answer and treat them as sophisticated investors.

RISK AND TRANSPARENCY

Q. WHEN YOU THINK ABOUT SOME OF THE RISKS YOU DESCRIBED AND THE INSTITUTIONS COMING IN, WHAT DO YOU TELL PEOPLE TO BRING DOWN THE ANXIETY LEVEL AND ADDRESS THE RISKS IN AN AREA THAT'S STILL A LITTLE NEW AND UNTESTED?

A. I think in the first instance we would be quite transparent about the risks that are present. The risks around Bitcoin or any of these digital assets that were around three to five years ago are still around today. They are still more volatile than traditional assets, and investors should understand this before committing to any investment.

Using Bitcoin as an example, if you've not done your research around how it is mined, how it was created, where it's deposited, and how its value is exchanged—if you've not done that homework, I would caution an investor about a possible investment.

Fidelity believes that an investment in Bitcoin must be the subject of good research and good forethought. So, we're comfortable preparing an offering that is targeted toward our most sophisticated investor clients. This also gives us the opportunity to have a deep conversation with them about what this represents and what it doesn't represent.

We would not rush into markets that are less sophisticated, such as the retail segment, and that's in keeping with how we think about investing in general. We would have that conversation about what Bitcoin can and cannot do for a traditional portfolio. We need to balance customer needs and demands—which we would represent in any conversation with a regulator. It would also be our duty to behave in a way that meets the requirements of that regulator. I don't believe that customer needs and regulatory requirements are in balance today. I think that comes with time and multiple conversations.

GLOBAL LONGER-TERM VIEWS

Q. EXPANDING THE CONVERSATION GLOBALLY, CAN YOU SHARE SOME OBSERVATIONS? WHERE DO YOU SEE LONGER-TERM VIEWS EMERGING?

A. In my unit we have aspirations to offer investors access to these types of investments globally. It's a global market that operates 24/7, and we would be remiss if we weren't able to at least mirror the way it operates. To do that, we need to think globally and understand investor sentiment globally. Especially in Europe, we see a greater level of acceptance and willingness to invest in Bitcoin.

Our **Institutional Investors Digital Asset Survey** found that investors in Europe and Asia generally have a more progressive view of investing in digital assets. Looking specifically at the European context, there are certain jurisdictions that are a little further along from a regulatory perspective than their counterparts in Europe and the US.

It gets really interesting in Zurich, for example, because they have a really nice symbiotic relationship: there is demand for digital assets from sophisticated investors, there are innovative providers, and there are progressive regulators. And they just make it happen. I think of Germany, Switzerland, and maybe the Scandinavian countries as specific examples of where we're seeing a lot of innovation. This is especially happening on the listed front, which, to my mind, is the expression of an efficient investment for investors.

So, looking at those clues, how do we now make progress on offerings that would need investment? I would say our scope is global, and we're focused on specific areas that may be of interest, especially in areas that have a kind regulatory environment.

ASIA NOW AND LOOKING TO THE LONGER-TERM

Q. CAN YOU COMMENT ON ASIA—WHERE IT'S AT NOW AND HOW IT PLAYS OUT LONG-TERM? PARTICULARLY WITH RECENT NEWS OF CENTRAL BANK DIGITAL CURRENCIES (CBDCS) COMING INTO PLAY AND EXPRESSIONS OF MONETARY POLICY THROUGH DIGITAL ASSETS, THERE ARE SOME INTERESTING NEW INFLUENCES.

A. First, Asia is not monolithic. It is made up of many different places with many different regimes. You have China with a very complex set of activities. It's the center of mining for Bitcoin, so that creates opportunities and risks. When regulators want to fix or change something, it's instantaneous. But then there are other locales like Singapore, which are more open and much more progressive in the way they approach financial products.

Of course, Singapore is not the same as China or India. These are all very different places with enormous markets. We need a specific strategy for each.

At this point, we're fairly focused on our core practice in the US. We think the US institutional opportunity is enormous. So, we must start to serve the US and think about Europe as a next phase for, perhaps, a different offering.

FINAL THOUGHTS

The one thing that I've observed in my journey at Fidelity on this topic is that it's a lot more difficult for incumbents to make this stuff happen. Just as it's massively difficult for a startup to just get traction, it's equally difficult for us to get traction in our core business, where the priority is serving the needs of our customers.

And as I said at the top of this discussion, we've had the benefit of the tailwinds of the owner of our firm being very inquisitive about Bitcoin and wanting to deeply understand it. Now we have a broad ecosystem in the firm of passionate people who think about this day in and day out. And it's terrific seeing that growing up now.

It's been a fantastic little journey so far, but we're hoping to make it a lot bigger.

TO THE POINT

- The adoption of digital assets as a mainstream investment is advancing quickly, hitting a trillion USD market capitalization.
- When it comes to digital asset investment products, more than 80 percent of investors indicated that they would be interested in institutional investment products that hold digital assets.
- Traditional players have a fundamental decision to make as to when and how you engage in blockchain and when do you engage in the store of value represented by tokens.
- There is coming an avalanche of nearly $70 trillion of wealth that will be transferred to millennials in the next decade who consume investment information differently and among these younger investors there is greater propensity to hold Bitcoin.