The nuances of crypto indexing

Published 3 April 2023

Blake Heimann
Senior Associate, Quantitative Research

Pierre Debru
Head of Research, WisdomTree Europe.

The following is a summary of an episode of WisdomTree's Crypto Clarified podcast, focused on the topic of crypto. The discussion is between Benjamin Dean, Director of Digital Assets; Pierre Debru [PD], Head of Quantitative Research & Multi Asset Solutions, Europe; and Blake Heimann [BH], Senior Associate, Quantitative Research.

Summary: *Indexing is a way to track the performance of a group of assets in a very standardised way. It started in the late 19th century with the Dow Jones Industrial Index and has evolved over time into products like index funds and exchange-traded funds (ETFs). Crypto indexing has become possible recently due to the increase in investible assets, on chain data availability, and accessibility. People buy crypto indices for benchmarking purposes and diversification. When creating a crypto index, people need to consider both quantitative metrics, such as market capitalisation, and qualitative risks, such as use case and regulatory risk. In the near future, we may see more bespoke metrics being used to create indices that can potentially outperform the market.*

For the benefit of those who aren't into the more technical parts of finance could you explain indexing: What is it? When did it start? Why do people do it?

PD: In one sentence, indexing is a way to track the performance of a group of assets in a very standardised way. The idea is to use simple, transparent, systematic rules that can be applied consistently over time to create a portfolio.

Indexing is a very old thing. It started in the late 19th century in equities with the Dow Jones Industrial Index. It was created to benchmark the performance of equities and as a way for investors to be able to compare their own performance with the performance of the market. The 'index' is very often called 'the market' because it's meant to represent the performance of all the equities or all the bonds etc.

From that, it has evolved very quickly. Eventually some people began to say, "Oh, I would like to invest in that market." This led to products that allow people to invest in the market without taking active decisions around which stock or bond you like. In the 1970s, you could do it with an index fund that would track the S&P 500, for example. Then, in the 1990s, exchange-traded funds (ETFs) were created. Now, we see digital tokens that allow people to track an index.

Finally, the last evolution of indexing is not to track the market, but to try to beat the market. So, when we start talking about factor investing, we're talking about basically systematic quant investing where you

apply systematic rules to try to beat the market. This is still called an index but it's a different animal. It is more an investment strategy wrapped inside something which is systematic (that is, rule-based) and, therefore, is called an index, but it's not about representing the market, it is about beating the market.

What has changed in the last few years to make crypto indexing possible?

BH: I think one of the big things is that, historically, Bitcoin really dominated the crypto market. Then in 2017 you have ETH and some of the ICO (initial coin offering) craze taking place. So you expand the overall universe in terms of assets that could be invested in. Now there's actually multiple investible assets out there that are worth tracking.

You also have the accessibility of on-chain data. For example, if you're going to do a market cap-weighted type of index, very much like an S&P 500 of crypto, you need to have accurate pricing data and accurate supply data to make sure you can calculate a true market cap. Thinking about those questions, you want to make sure, especially in an unregulated type of space, that the pricing you're using is not coming from any type of wash trading or any other type of activity that wouldn't be deemed as true volume and not necessarily giving you a fair price.

PD: If I may add also, to give a numerical notion of what an index is supposed to cover: in the equity world, you would expect a large cap index to cover probably 95% of the total market cap of the country or the universe we're trying to cover. If you include small cap, you would probably want to include 99% of the total market cap of the space. And so Blake was saying 95% of the space 5-6 years ago, it's probably Bitcoin or Bitcoin Plus, but this is not the case anymore.

When you're looking at 95%, maybe 99% right now, you are looking at hundreds of coins or tokens. This is where the need for indexing comes in. You can't just say anymore, "Oh, I invested in coin A, and it beats Bitcoin, or it didn't beat Bitcoin." This is not the benchmark anymore. So the question is: what do I compare myself to? I bought this coin six months ago. Was it a good or bad investment decision? You don't know if you don't know what 99% of the space has done, and that's what an index does.

Given your explanation of why indexing exists, why would someone want to buy a crypto index in particular? Why not just buy Bitcoin alone?

PD: First, you need a benchmark. You need to know what the market is doing to really be able to compare. That's what the benchmark gives you, and that's why in crypto it's important to start having this S&P 500 equivalent.

The second thing that I think will come very soon is investing in the market. Investors are going to want to have diversification to multiple tokens, multiple use case, multiple sectors etc. They are going to want to start investing in a diversified way, not taking single coin risk, but rather taking basket risk. That's where the index is going to come in.

When you think about trying to do crypto indexing, what are some of the pitfalls that people can fall into?

BH: We've already talked a bit about data availability and quality assurance. There are issues with the market capitalisation metric. Firstly, with determining an accurate price; then, on the other end of that calculation, you need an accurate circulating supply. I specifically refer to circulating supply because a significant portion of many of these tokens are locked up in different founder wallets, other types of less liquid type of wallets. So in that sense, they're not circulating.

Another example, if we think about an index and you're trying to map 99% of the universe, the challenge with that is looking backwards and saying, "How do we actually have a mapping of all the dead coins from, say, 2017?"

A lot of the data providers, a lot of places where you'd go to try to pull this data, aren't even out there. So, in that sense, we could back test the market cap-weighted type of index for the last five years, but it's going to have this survivorship bias because certain dead coins that blew up during the ICO craze, now trading essentially at zero, are going to be excluded from your 99%. If you don't have that today because of data availability issues, you're essentially going to have an inaccurate back test. So there's a lot of small details that need to be thought about in this process on top of just the technical expertise that comes in with just getting all the data across the board, bringing it together, and making sure it's clean and ready to use.

We've talked about a few quantitative metrics. What are some of the qualitative risks that one might think about when putting together an index?

PD: Risk management exists in equity indices or bond indices. If you think about the S&P 500, it is mostly rule-based, but there is a risk management layer which is basically a committee of people.

This approach can also be applied to crypto indexing. You have to ask yourself, for example, if a token is currently under investigation by some leading regulators should it sit out of the benchmark for a while until this is resolved? If you have a token that has issues in terms of money laundering or these type of things, should it sit out of the index until this it resolved?

Here, there is a balance around representativeness. Of course, if you keep some coins out, you are slightly less representative of the market. But there is also a risk if you put some coins that appear more risky because they have issues, then there is more likelihood that you have more volatility in your index. There's a balance to find and there is no perfect answer.

BH: I think when you're thinking about things qualitatively, specifically looking at their use case and then being able to say, "Okay, these use cases are generally good to go." However, anything (for instance) that might be generally considered a 'privacy token' in terms of overall sector may be a red flag that says, "Hey, this automatically just shows up on a list that we have to review in detail to know that this is not something that's going to pose an additional risk, a regulatory risk, in the space."

Where do you see crypto indexing evolving in the near future?

PD: Say we get to the point sometime in the near future where, whether it's defined by market cap or not, there's that benchmark in place. Then, other metrics could be quite useful to lean away from that benchmark, and lead to, in a sense, alpha chasing.

If we're defining that original benchmark as beta then we could add something like TVL (total value locked), on a smart contract platform. The amount of assets that are locked into these different smart contracts could be indicative of the actual usage of that layer one. You could also look at the overall number of active wallets or the number of transactions taking place on a network.

You could pull some very bespoke metrics around a specific use case, call it a sub-sector. If it's a lending protocol, for example, you could actually look into some of the metrics around that specific activity to determine if this is something that has longevity, or is maybe potentially meeting critical mass. Take Uniswap, for example. The overall volume on Uniswap as a decentralised exchange surpassed Coinbase in this last year. Certain metrics could drive an investment process that could be quite interesting and lead to potential outperformance versus a more 'vanilla' benchmark that is just giving you that beta type of exposure in the market.

BH: Using a taxonomy, like WisdomTree's Digital Assets Taxonomy, you can segment the crypto space. That means, if you were thinking about decentralised finance (DeFi), you could say, "Oh, I'd really like a DeFi exposure because I really think that's a strong use case for crypto." Now you could actually have another sub-indice that tracks that and you could invest in that. Moving back to quant, to take it one more step further, you pull some of those interesting metrics to determine which DeFi protocols and DeFi tokens are actually included in that index or that portfolio and things could get really quite interesting, and you really start to see the space become very sophisticated very quickly in terms of figuring out how to allocate within that crypto allocation in a broader portfolio.

PD: That's interesting because that's exactly how most investors behave. There are always the single-stock pickers, but most people are going to take a benchmark and then they're going to tweak it towards what they like. They say, "I like US equities, so I'll buy US equities instead of world equities," for example. They might also say, "I really believe in energy for 2022, so I'll buy S&P 500 energy."

For crypto, you can say, "What I really believe in is the developers. It's about the strengths of the development team. So I'm going to buy my index, but inside the index I'm going to buy more of whichever coin has the most developers or whichever coins have the most human capital because they have the strongest developers that have worked on the best coin before."

But these kinds of ideas are a lot easier to implement if you can start from the base, and the base is a benchmark. If you have to start from, "Here are 10,000 coins," it is very, very difficult. If you start from, "Here is the S&P 500 of crypto," then you can start tweaking. And that's why I think there's potential value for this benchmark to exist.

Related blogs

+ The importance of transparency in digital asset products

Related products

+ WisdomTree Crypto Market (BLOC/WBLC)

+ WisdomTree Crypto Altcoins (WALT/ALTC)

Important Risks Related to this Article

Important Information

Marketing communications issued in the European Economic Area ("EEA"): This document has been issued and approved by WisdomTree Ireland Limited, which is authorised and regulated by the Central Bank of Ireland.

Marketing communications issued in jurisdictions outside of the EEA: This document has been issued and approved by WisdomTree UK Limited, which is authorised and regulated by the United Kingdom Financial Conduct Authority.

WisdomTree Ireland Limited and WisdomTree UK Limited are each referred to as "WisdomTree" (as applicable). Our Conflicts of Interest Policy and Inventory are available on request.

For professional clients only. The information contained in this document is for your general information only and is neither an oer for sale nor a solicitation of an oer to buy securities or shares. This document should not be used as the basis for any investment decision. Investments may go up or down in value and you may lose some or all of the amount invested. Past performance is not necessarily a guide to future performance. Any decision to invest should be based on the information contained in the appropriate prospectus and aer seeking independent investment, tax and legal advice.

The application of regulations and tax laws can oen lead to a number of dierent interpretations. Any views or opinions expressed in this communication represent the views of WisdomTree and should not be construed as regulatory, tax or legal advice. WisdomTree makes no warranty or representation as to the accuracy of any of the views or opinions expressed in this communication. Any decision to invest should be based on the information contained in the appropriate prospectus and aer seeking independent investment, tax and legal advice.

This document is not, and under no circumstances is to be construed as, an advertisement or any other step in furtherance of a public oering of shares or securities in the United States or any province or territory thereof. Neither this document nor any copy hereof should be taken, transmitted or distributed (directly or indirectly) into the United States.

Although WisdomTree endeavours to ensure the accuracy of the content in this document, WisdomTree does not warrant or guarantee its accuracy or correctness. Where WisdomTree has expressed its own opinions related to product or market activity, these views may change. Neither WisdomTree, nor any ailiate, nor any of their respective oicers, directors, partners, or employees accepts any liability whatsoever for any direct or consequential loss arising from any use of this document or its contents.