DATA CENTRES ARE THE PHYSICAL BACKBONE OF DIGITAL LIFE

Christopher Gannatti – Global Head of Research, WisdomTree.
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People, businesses and even governments have been shifting the relationship that they cultivate with data.

Now, with a mere internet connection, services like Spotify allow you to access almost entire discographies. The idea of trying to carry around all of one's data no longer makes sense.

Data centres, and smooth, efficient internet connectivity are responsible for this change.

Cloud providers vs. data centres

Cloud computing has received enormous attention as a megatrend in its own right. In 2022, global sales are forecast to surpass $495 billion, and it could get to more than $1 trillion by 2030. Roughly 30% of enterprise workloads have been shifted to the cloud[1].

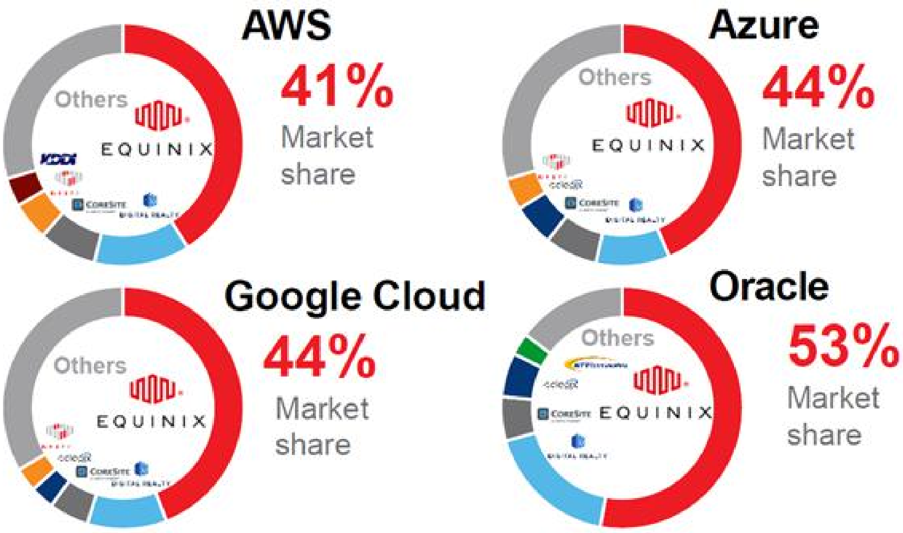
When we think of 'the cloud', some of the biggest companies in the world leap to mind. Amazon's Amazon Web Services (AWS) is the leader, and combined with Microsoft and Google, these three companies comprise 65% of the total share of global cloud-service spending[2].

But when we say 'the cloud', what does this look like in the physical world? We may even take for granted that the software is always there on our smartphones, tablets and computers, but this is all dependent on specific, purpose-built infrastructure.

Figure 1 comes from the Equinix Second Quarter 2022 Investor Presentation. Equinix is a leading provider of data centre infrastructure, operating on six continents in 31 countries with 248 data centres[3]. Here, they take the four large 'hyperscalers'–the companies running the cloud platforms that allow for much of the world's digital needs to be met.

While we may know the names of the hyperscalers–these do tend to be some of the largest companies, by market capitalisation, in the world–we might not immediately know the name 'Equinix.' Yet, it's very clear that Equinix is central to allowing today's digital world to function.

Figure 1: Equinix provides a physical foundation for the cloud hyperscalers



Source: Equinix Investor Presentation, Q2 2022.

Slicing the pie of economic profits

Now, Equinix gets about 35% of its overall rent from the biggest cloud providers[4]. Would you want to sit on the other side of the negotiating table from the biggest companies on earth? If one controls for the impact of energy costs, major tech companies pay roughly half the rental rate that a small business or government tenant does[5].

Asking whether data centre providers will ever supersede the largest companies in the world in terms of their ability to extract economic value from the cloud ecosystem is probably the wrong question. Instead, it may make sense to think of the relationship between current price relative to predicted future supply/demand balances. Data centre infrastructure, in a broad sense, is a commodity, assuming that the providers can bring the cloud computing companies basically the same suite of capabilities.

The world's increased focus on climate and the environment is making it trickier to build more data centres, which use a lot of water (cooling) and a lot of electricity. In the first six months of 2022, asking rents for data centres in major US locations increased 5.9% compared with the same period in 2021. If this trend continues, it's possible that 2022 will be the first year of positive rental growth for data centres since 2017[6].

Will the hyperscalers 'go their own way?'

The world's largest companies, due to their vast resources, are able to think strategically over long periods of time. People external to Apple, for instance, might have realised only too late that the perceived tie to Intel's chips was not permanently binding, and that Apple—with the appropriate commitment and investment—could design its own chips to make the experience of its customers better. When companies generate tens of billions of cash flows on an annual basis, those resources combined with long-term thinking could make perceived limitations melt away.

Hedge Fund manager Jim Chanos is actually betting against data centre infrastructure providers, like Equinix and Digital Realty Trust. The hyperscalers can and do build some of their own facilities—a Microsoft data centre in Chicago spans 700,000 square feet, the size of about 52 Olympic swimming pools[7]. Why wouldn't they start transitioning to build all of their own facilities, thereby taking away the cost of the data centre infrastructure providers?

While nothing is ever 'impossible', when one is thinking of real estate that has strategic value like this, location is important. If Equinix or Digital Realty Trust has their infrastructure in the more ideal locations, connected to the most important networks with the right infrastructure, it is not possible to come in and build something new in that same location. If the hyperscalers were starting from scratch today, they would probably build a lot themselves. Given that these companies are seeking to use existing infrastructure where they can serve their customers—assuming that companies like Equinix and Digital Realty Trust hold this real estate—they will likely continue to have their place in the ecosystem. The convenience of plugging into existing setups may supersede the cost savings of doing it themselves.

It is also the case that the customer base will likely evolve. Just as the hyperscalers might be thinking of ways to extract more economic value and takeaway the expense line item being paid to technological infrastructure providers, other companies are seeing big expenses being paid to the likes of Microsoft, Amazon, Google Cloud, etc. It is possible that the diverse array of businesses undergoing their specific 'cloud migrations' will explore direct relationships with the infrastructure providers in the future.

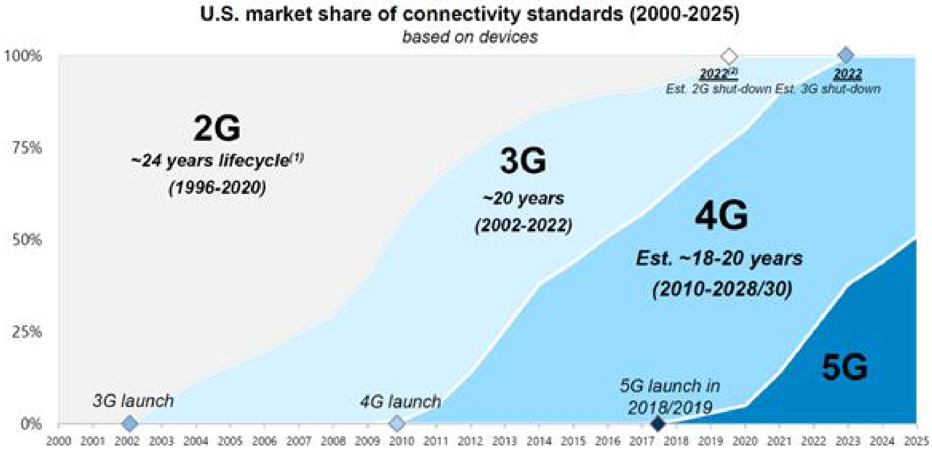
People have debated this idea for almost as long as the hyperscalers have been in the cloud computing business, and so far, the data centre infrastructure providers, like Equinix and Digital Realty Trust, are still there.

Conclusion: digital transformations need physical infrastructure

We spend a lot of time considering different megatrends, like cloud computing, artificial intelligence, 5G, the internet of things…the list goes on.

Figure 2 shows that data transmission standards—things we know of as 2G, 3G, 4G, 5G—tend to have lifespans of roughly 20 years[8]. The shift toward 5G tells us that more and more data is going to be generated and processed, and we will need data centre infrastructure to support it.

Figure 2: Evolutions of connectivity standards in the United States



Source: "Introduction to the Tower Industry and American Tower." American Tower. As of 31 December 2021.

If investors are thinking of a different way to gain exposure to megatrends—their underlying infrastructure rather than the more direct players—the concept of New Economy Real Estate may offer something unique that could have a risk and return profile different than the more growth-oriented tech equities.

Sources

[1] Source: "The cloud computing giants are vying to protect their fat profits." Economist. 29 August 2022.

[2] Source: Tilley, Aaron. "Cloud Companies' Outlook Cools as Customers Tighten Spending." Wall Street Journal. 25 August 2022.

[3] Source: Equinix Investor Presentation, Q2 2022.

[4] Source: Ryan, Carol. "Data Centres Are Unpopular. All the Better for Their Stocks." Wall Street Journal. 30 August 2022.

[5] Source: Ryan, 30 August 2022.

[6] Source: Ryan, 30 August 2022.

[7] Source: Gross, Anna. "Will the cloud kill the data centre? Jim Chanos thinks so." Financial Times. 29 August 2022.

[8] Source: "Introduction to the Tower Industry and American Tower." American Tower. As of 31 December 2021.

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