INTUITION
7 JULY 2023

Cloud Cuckoo Land – is there something?

Over the past couple of months tech stocks, specifically in the US, have rallied hard. Just a handful of shares were responsible for more than 90% of the rally. Not all stocks with a cloud offering were pulled along. Did we end up in cloud cuckoo land? Or are these clouds offering some mythical paradise? Fortunately, they are real and companies such as Microsoft have seen both revenue growth and margin expansion through their Azure offering.

Willie Pelser

Over the past couple of weeks, Michael has been on a roadshow to give an update on markets and our measured outlook. Highlighted in the presentation was the performance of the US market where only a handful of tech-related shares are responsible more than 90% of the year-to-date performance. The fear of missing out has driven a surge in market inflows, leading to extreme overbought conditions in tech stocks. Some analysts refer to the fact that some Cloud stocks have faced a challenging year, struggling to keep up with the Nasdaq's dominance driven by the AI-everywhere trend. (AI is the acronym for Artificial Intelligence). Tech stocks appear overbought and may face a potential reversal in trend – opportunities, therefore, await those who are patient.

Nonetheless, the cloud is not new, whether you are on Cloud 9 or whether you experienced the opening of the clouds (rain) in the Western Cape a few weeks ago; there is most definitely something in the clouds. The expression "cloud cuckoo land" refers to a realm of fantasy or of whimsical or a fool's paradise. Investors sometimes find themselves here when they chase share prices without a deeper analysis of the company. Cloud Cuckoo Land is also a novel by the author Anthony Doerr. It tells the story of the shepherd Aethon and his journey to seek a "golden city in the clouds." Along the way, he is transformed successively into a donkey, a fish and a crow before reaching the mythical land.

Understanding what companies like Microsoft, Amazon, Alibaba, IBM, Adobe, Cisco, Tencent, Salesforce, and other competitors with smaller exposure such as Datatec and Apple provide in their cloud offering might sound like a mythical land for many of our clients.

SPEED READ

- **Technology-related stocks have run hard so far this year but not all companies that offer cloud computing services enjoyed the same experience.**
- **Some readers might think we are in cloud cuckoo land when they read about cloud computing or a friend saying they store their family photos in the cloud.**
- **Amazon, Microsoft, and others have seen a dramatic increase in revenue from their respective cloud offerings. The cloud market is expected to continue to grow by at least 10% per annum for the foreseeable future.**

Cloud computing or the cloud offering is not that complicated. Rather than owning the computing infrastructure or data centers themselves, companies can rent access to anything from applications to storage from the cloud service providers. The offering comprises the delivery of computing services - including servers, storage, databases, networking, software, analytics, and intelligence - over the Internet ("the cloud") to offer faster innovation, flexible resources, and economies of scale. One benefit of using cloud-computing services is that firms can avoid the upfront cost and complexity of owning and maintaining their own IT infrastructure, and instead simply pay for what they use, when they use it. In turn, providers of cloud-computing services can benefit from significant economies of scale by delivering the same services to a wide range of customers. The range of services can be divided into the following 5 business segments:

1. Infrastructure as a Service (IaaS): This service provides virtualized computing resources such as virtual machines, storage, and networking. Customers can provision and manage these resources to build and run

their own applications and services.

2. Platform as a Service (PaaS): PaaS offers a higher level of abstraction compared to IaaS. It provides a platform and environment for developing, testing, and deploying applications without worrying about the underlying infrastructure. PaaS often includes tools and frameworks for application development and integration.
3. Software as a Service (SaaS): SaaS delivers software applications over the internet on a subscription basis. Users can access and use these applications through web browsers without the need for installation or local infrastructure. Examples of SaaS include email services, customer relationship management (CRM) systems, and productivity tools like document collaboration and project management software.
4. Database as a Service (DBaaS): DBaaS offers managed database services, allowing users to create, manage, and scale databases without worrying about operational aspects such as hardware provisioning, software installation, or database management tasks. This frees users to focus on data modeling, querying, and application development.
5. Function as a Service (FaaS)/Serverless Computing: FaaS allows developers to deploy individual functions or blocks of code that run in response to specific events or triggers. It eliminates the need for managing servers or infrastructure, as the cloud provider takes care of resource allocation and scaling based on demand.

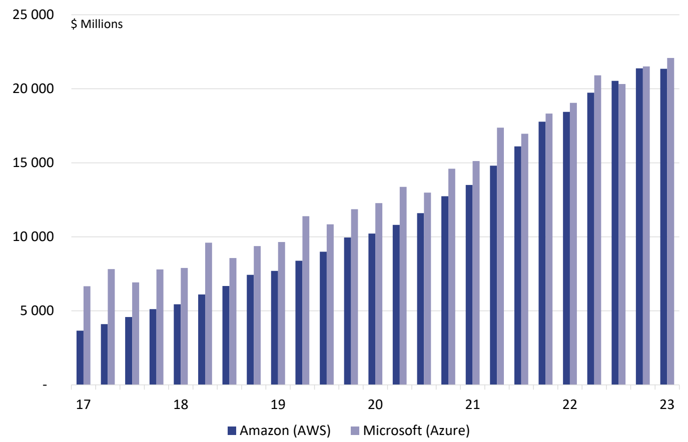
> "The three-largest cloud competitors, Amazon (AWS with 32%), Microsoft (Azure, 23%), and Google Cloud (10%) account for 65% of the estimated $63 billion of revenue generated from cloud infrastructure in Q1 of 2023."

Do you still feel part of cloud cuckoo land? Perhaps the following example will put you at ease? This cloud thing includes consumer services like Gmail or the cloud backup of the photos on your smartphone, or services that allow large enterprises to host all their data and run all of their applications in the cloud - such as Netflix which relies on cloud-computing services to run its video-streaming service onto your Smart TV.

The three-largest cloud competitors, Amazon (AWS with 32%), Microsoft (Azure, 23%), and Google Cloud (10%) account for 65% of the estimated $63 billion of revenue generated from cloud infrastructure in Q1 of 2023. Although formal cloud offerings date back to the early 2000s, they gained momentum in 2020 and 2021 as businesses accelerated their digital transformation plans during the Pandemic. The lockdowns throughout the Pandemic showed companies how important it was to be able to access their computing infrastructure, applications, and data from wherever their staff were working – and not just from an office.

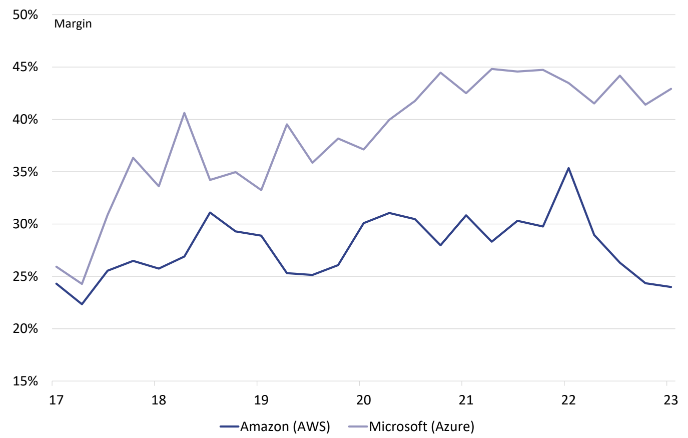
With the increasing adoption of cloud services by businesses and consumers alike, cloud computing companies are forecast to experience robust growth in the coming years. Long-term expectations are for spending on computing and storage cloud infrastructure to record a compound annual growth rate of 12.4% over the 2020-2025 period, reaching $119 billion in 2025. It is forecast that this will account for 67% of total computing and storage infrastructure

REVENUE FROM CLOUD OFFERINGS



Amazon and Microsoft earn almost the same revenue from their respective cloud services, but Amazon's Amazon Web Services (AWS) has achieved a more impressive growth trajectory.

OPERATING MARGINS



You can't always be nice to the client. Margin sacrifice might keep them happy but investors will ask all the hard questions. Margins at AWS are significantly behind those of Microsoft because of their more flexible billing structure.

spend. Spending on non-cloud infrastructure will be relatively flat in comparison and reach $59 billion in 2025.

I'll end this article with a graphical comparison of cloud revenue from Amazon's Web Services (AWS) and Microsoft's Azure. From an absolute US dollar amount, they generated almost the same revenue over the past few quarters from their respective cloud offerings. However, AWS average revenue growth of 31.4% p.a. over the last 5 years has outpaced that of Microsoft at 22.8%. However, what is equally noticeable is Microsoft's margin advantage in Azure. AWS operates with a flexible "pay as you use" model for its computing, storage, and other services. Therefore, in a "recessionary" environment with lower demand, margins were sacrificed. AWS use this as a unique selling point of their cloud offering – "Amazon is actively helping its customers to execute cost savings." Sounds crazy but it helped to lock in customers and buy goodwill. Growth should thus be stronger in the years ahead.

"AWS average revenue growth of 31.4% p.a. over the last 5 years has outpaced that of Microsoft at 22.8%."

We have often quoted Microsoft as a company we favour from a dividend philosophy perspective and will continue to look at opportunities to add to clients' portfolios. However, we are also hesitant to be dragged along with the latest AI-frenzy and would stay on the sidelines for now scanning through the other cloud-offering companies for the next opportunities.

The cloud has become a massive source of revenue for the major internet players.

Our next Insight seminar will take place in September in Howick and Johannesburg. The topic will be announced in due course.

[Harvard House is on Facebook]

[Harvard House is on YouTube]

Topic:	TBC
Natal Midlands	
Date:	21st of September 2023
Venue:	Oasis Conference Centre, 72 Main Road, Howick
Morning Time:	10am for 10.30am
Evening Time:	5.30pm for 6pm
Johannesburg	
Date:	19th of September
Venue:	Rosebank Union Church, Cnr William Nichol and St Andrews Road, Hurlingham
Time:	7am for 7.30am
Cape Town	
Date:	n/a
Venue:	ABRU Motor Studio, Lourensford Wine Estate, Somerset West
Time:	5.30pm for 6pm

CONTACT DETAILS:

For more information on the range of products and services offered by Harvard House Investment Management and its associated companies (including Harvard House, Chartered Accountants), or for any financial advice, please contact the Company at:

HARVARD HOUSE GROUP

3 Harvard Street, Howick, 3290, South Africa

P.O. Box 235, Howick, 3290, South Africa

+27 (0) 33 330 2164

+27 (0) 33 330 2617

@ admin@hhgroup.co.za

W www.hhgroup.co.za