CARRHAE CAPITAL

30 June 2020

Cloud Services – A multi-year opportunity for digital platforms in Emerging Markets

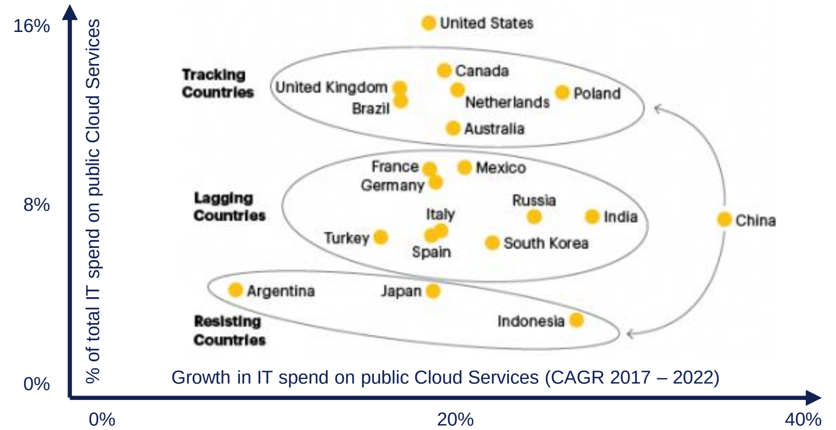
Carrhae Investment Thesis

In November 2019 an industry leading research and advisory firm, Gartner, forecast that the revenues of **public Cloud Services would reach US$ 230 billion globally in 2019 and grow by 17% in 2020**. In recent years, the key growth drivers were business adoption of, reliance on and comfort with, cloud-based work solutions for file storage, web-based interactions, real-time data-sharing and to aid in greater mobility of personnel. In January 2020, Oracle released its **"Top 10 Cloud Predictions for 2020"**. It said, "7 out of 10 organizations now keep business-critical data in the cloud. By 2025, there will be 600 times more sensitive data shared in the cloud".

The Coronavirus pandemic accelerated this multi-year trend in cloud adoption. With Zoom's usage increasing from **10 million to 300 million** daily meeting participants between December 2019 and April 2020, we can visualise the effect on societal behaviour and the shift of business continuity to online services.

Our investment thesis has been that **digital platforms in emerging markets were monetizing this trend prior to the pandemic, and now will, with even greater certainty and pace for years to come**. We see a further validation of our thesis in a research piece recently (May 2020) published by the IFC titled "What COVID-19 Means for Digital Infrastructure in Emerging Markets". Our industry analysis concluded that the **Cloud segment is severely underpenetrated in Emerging Markets and the process of adoption has only just begun, opening-up a multi-year business opportunity.**

Cloud Spending Rates and Growth Highlighting Tracking, Lagging and Resisting Countries, 2022. (Illustration by Gartner)



Cloud Services in Emerging Markets

In China, the Cloud Services market is expected to exceed US$ 75 Bn by 2024, but only account for less than 14% of the US$ 550 Bn market in the US by 2024 (Source: Frost & Sullivan). Demand for Cloud Services in China is primarily driven by data consumption as the roll-out for 5G is the new infrastructure priority. Faster connection speeds, less latency and greater adoption due to availability will allow the creation of many new application scenarios like autonomous driving, virtual reality and the internet-of-things (IOT). All these applications lead to more data requirements in the cloud and ever-increasing demand for data-center capacity. In our analysis 70% of Alibaba's cloud revenue came from cloud-native clients (i.e. internet companies), which are the early adopters of the service and expect to drive the sector for the next 5-years. Traditional businesses have yet to transition to the cloud, highlighting how early the country is in the adoption curve. On the other hand, the country is ahead of demand for Cloud Services. Its installed server base contributes 25% of global capacity and it will take a long-time to get businesses to adopt enterprise software before China's Cloud Services requirements can fully utilize the capacity of the installed server base. Another likely indicator of the maturity in the Cloud Services market in China can be seen comparing the IaaS and SaaS markets between the US and China. In 2019 the IaaS segment was 75% of China's Cloud Services, compared to over 60% in the US for SaaS. This illustrates how young China's Cloud Services market is; after all, you have to digitize a business before you "SaaS" it.

In Russia, Cloud Service penetration is at a very early stage, lagging the US by a factor of 11x. It is forecast to grow at twice the overall IT spend in the country, which will translate to accelerated growth for local platform companies like Yandex. In our analysis, the country's quest to maintain security and control over its data will lend strong support to the development of domestic players within the business segment. Technologically advanced platform companies will therefore be significant beneficiaries of this trend towards the use of Cloud Services. Our estimate is that Yandex may invest between US$ 500 to 750 M in the business segment in the next 4 to 5-years, which should further expand the company's addressable market and result in value creation of between US$ 4 and 6 Bn.

In India, large scale adoption of Cloud Services has been triggered. Last year Reliance Industries Limited announced a multi-year partnership with Microsoft to offer a detailed set of solutions essential for small and medium sized (SMBs) Indian businesses. The partnership will integrate Microsoft's Azure cloud platform into Jio's data-centers with an aim to be the first-to-market for cloud solutions to almost 15 M SMBs in the country.

Valuation Upside for the Incumbents

According to our analysis, online platform companies like **Alibaba and Tencent will experience strong growth in their cloud business-lines and become market leaders**, replicating the **“winners-take-most”** trajectory of Amazon Web Services and Microsoft Azure.

Over the years we have spent considerable analytical time conducting a multi-layered analysis of Alibaba and Tencent. Currently, these companies are correctly viewed by investors as leaders in the technology sector in China, but we conclude that their **cloud and data-centre business segments are still under-valued**.

Below is our rationale:

❑ Higher Return-on-Investment in Cloud Services

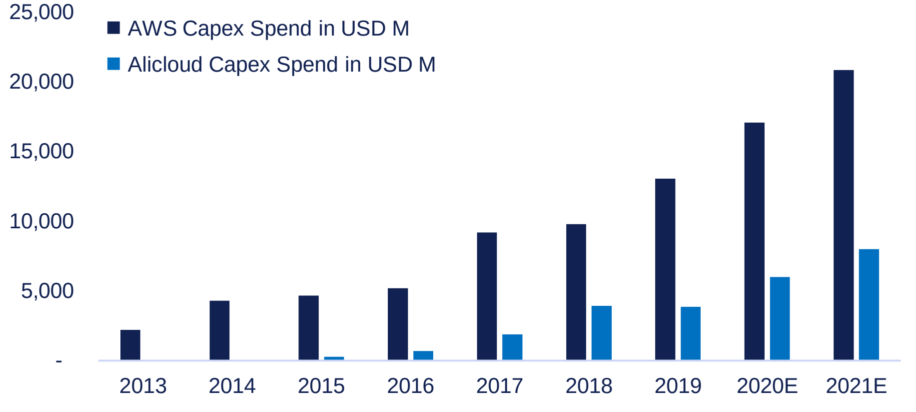
The main investment verticals in the sector are the construction of Internet Data Centers (IDC) and Cloud Services that use the IDC infrastructure and capacity to provide the service to end-users. Alibaba and Tencent are focussed on growing Cloud Services and have outsourced their IDC requirements to companies like GDS, VNET etc. Although data-centers are profitable businesses with expected net-profit-margins of 20% in the long-run, they are not as attractive as Cloud Services. The construction of IDCs requires suitable land, ideally close to tier-1 cities for lower latency, power quota from the government and daily business operations with high security measures in place.

Alibaba and Tencent’s skillsets are heavily weighted towards technology innovation and software solutions. Cloud Services also requires a substantial upfront investment, scale and technological know-how. However, in our analysis this segment is forecast to generate a relatively higher Return-on-Investment (at least 30%) in the long-run, depending on where profit-margins settle at maturity.

❑ Revenue Forecasts Unlock Equity Value

- Alibaba’s cloud business, Alicloud, has seen its quarterly revenue surpass CNY 10 Bn since 4QCY19 to FY20 (ending March 2020) where revenue was CNY 40 Bn. This represented a 3-year CAGR of 82%. We forecast revenue to grow 60% YoY to CNY 64 Bn in FY21;
- We estimate Tencent Cloud is approximately half the size of Alicloud, with a similar growth pace to Alicloud and forecast revenue to be CNY 29 Bn in 2020 and achieve a YoY growth of 62%;
- Both Alicloud and Tencent Cloud are currently loss making business segments of the group and we expect that to remain the case in the short to medium-term. We classify this as the accelerated expansion phase;
- A key component defining profitability is the level of incentives such as price-cuts or subsidies to cloud distribution agencies. For example, Tencent Cloud and Alicloud currently share 30% of their revenue with their resellers compared to just 7% for Amazon Web Services. In theory, if both companies could lower their revenue shares with partners to the same level as Amazon Web Services, the margin profile should be very similar at about 25% EBIT margin;
- We are optimistic that profitability will be realized in the long run as the business matures and establishes pricing power, diminishing the need to payout commissions and enabling the segments to exhibit strong operating leverage;
- Given the scale of investment required and the lead Alibaba and Tencent have, we don’t expect material competition to appear in the near term enabling these companies to achieve escape velocity;
- Assuming that China’s public Cloud Services could achieve similar level as seen in the US, i.e. 0.5% of GDP in 2019, and Alibaba could acquire 50% market share, then its revenue in long-run should be (0.5% X US$ 20,500 Bn X 50%) US$ 50 Bn per annum;
- If we assume this is a 10-year target from FY21, this works out to a 10-year CAGR of 20%;
- **Assuming a 25% margin in the long-term and a 25x PER, the valuation of Alicloud alone should be US$ 300 Bn in long-run.**

In terms of CAPEX deployment, Amazon Web Services is tracking 5-years ahead of Alicloud (Source: Company and Research Reports)



Conclusion

For each of the larger and established technology platform companies operating in Emerging Markets, Cloud Services as a business segment has opened-up a new revenue vertical and expanded the total addressable market. As we continue to analyse the leaders, our conviction that they have a natural advantage in terms of scale and technological capacity continues to grow. This business segment does require a substantial investment, which plays to the strength of the larger players that can generate greater than 30% ROI.

Our thesis is still not fully recognised by the equity markets and provides an additional valuation leg to an already very exciting story of the big technology winners in Emerging Markets.

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