INFRASTRUCTURE-AS-A-SERVICE (IAAS) -CLOUD COMPUTING -IN CHINA

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GLOBAL X

by **Mirae Asset**



TABLE OF CONTENTS

| 1 | Infrastructure-as-a-service (IAAS) in China | 2 |
|-----|---|---|
| (2) | Growth drivers of IAAS market | 4 |



1

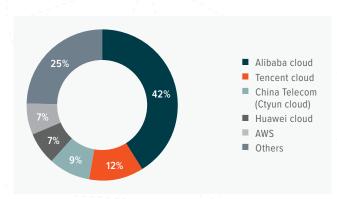
INFRASTRUCTURE-AS-A-SERVICE (IAAS) IN CHINA

According to Ministry of Industrial and Information Technology (MIIT), the cloud market is expected to grow at a 2018-2022E Compond Annual Growth Rate (CAGR) of +32%, reaching RMB 290bn (US\$41bn) in 2022 in China. Public cloud is estimated to reach a 60% share of the total cloud market by 2022 from 40% in 2018.

Within the cloud market ecosystem, infrastructure-as-a-service provides the most fundamental basic services, including server/storage, networking and Information Data Centre (IDC) / Content Delivery Networks (CDN) services for users. IAAS accounts for the majority share of the public cloud market at roughly 62% in 2018 or Rmb 27bn. This service' business model is pay-as-you-go which offers users/consumers the benefit to reduce capex and to operate more efficiently and with more flexibility. IAAS service providers can either build and self-operate data centers or lease from third party vendors.

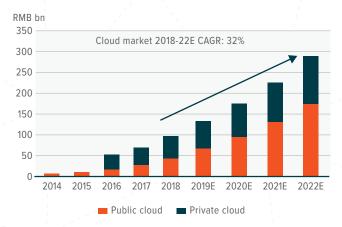
As of 2Q19, the public Infrastructure-as-a-service (IAAS) market was dominated by top Internet players such as Alibaba and Tencent, taking 42% and 12% market share, followed by China Telecom, and Huawei with 9% and 7% market share respectively. As of the 3Q19, AliCloud and Tencent cloud was still growing at 64% and 80% year over year respectively, showing no sign of slowdown. In the private cloud sector, traditional network providers such as Huawei, ZTE, H3C, Inspur, Sugon, China Telecom, China Unicom, Wangsu continue to dominate the market.

MARKET SHARE IAAS MARKET BY REVENUE IN CHINA



Source: Credit Suisse Report 2019

PUBLIC CLOUD VS PRIVATE CLOUD GROWTH



Source: Credit Suisse Report 2019



7

GROWTH DRIVERS OF IAAS MARKET

Shift from private cloud to public cloud and digitization of enterprises and government entities are key drivers supporting cloud computing market growth in China.

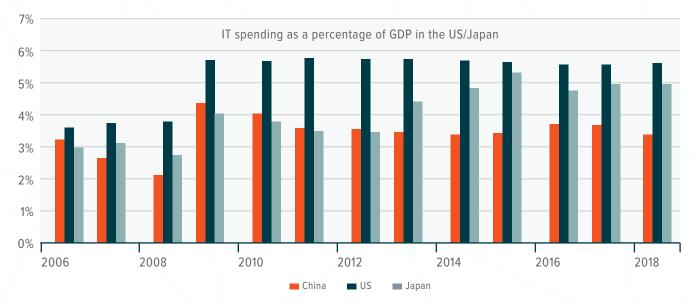
Since a decade ago, Chinese Internet companies have been expanding rapidly in the public cloud market by investing heavily in technology and building out the infrastructure. Trough economics of scale, service providers could cut price, which triggered price elasticity which calls for more users adoption and more consumption per user.

China's IT service spending is a mere 3.9% of global IT spending in 2018 while the country's GDP share in global GDP is as much as 15.7%. In fact, the pace of growth of IT service spending in China has experienced acceleration especially over the past three years thanks to the faster development of the infrastructure as a service industry coupled with rising enterprise users awareness and general acceptance for cloud computing services. Lastly, government policy supports also served as an invisible hand pushing the technology penetration to a higher level.

In the next few years, infrastructure-as-a-service market growth is expected to continue to deliver strong growth to eventually normalize to similar pace as data traffic growth. According to Cisco VNI report, data traffic is expected to grow +25% CAGR over 2016-2021 to over 20 ZB. Interestingly not captured in this estimate is the development of 5G which is expected to drive more data traffic. As such, it remains challenging to quantity the ceiling of the market potential.



IT SPENDING PER COUNTRY



Source: World bank, Nomura, December 2019

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