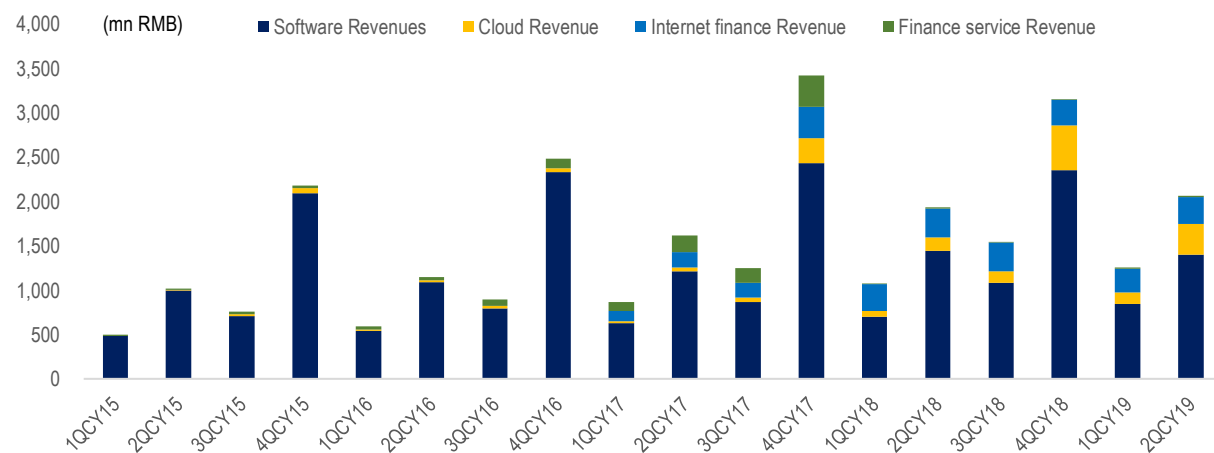




Yonyou Network – when cloud transition began

Figure 1: Yonyou’s revenue breakdown



Source: Company data, AMTD Research

In this issue, we will look into Yonyou’s cloud business development. AMTD views: Yonyou, the leading enterprise management software company in China, has begun to focus on cloud since 2016 with the launch of Yonyou 3.0 Strategy. Along with the expanding cloud customers base, Yonyou’s cloud business revenue grew rapidly over past five years and accounted for nearly 17% of its total revenue in 2Q19. Given the decelerating growth of its traditional software business, cloud business is becoming a crucial growth driver of the company. However, different from matured US SaaS companies, Yonyou’s cloud business revenue still has an obvious cyclical pattern like that of traditional perpetual licensing software business. On the other hand, when cloud transition began, operating leverage was becoming visible. S&M as percentage of revenue was trending down and operating margin was improving. With the prudent capital expenditure, FCF margin was rising as well.

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Cloud/SaaS

Yonyou Network

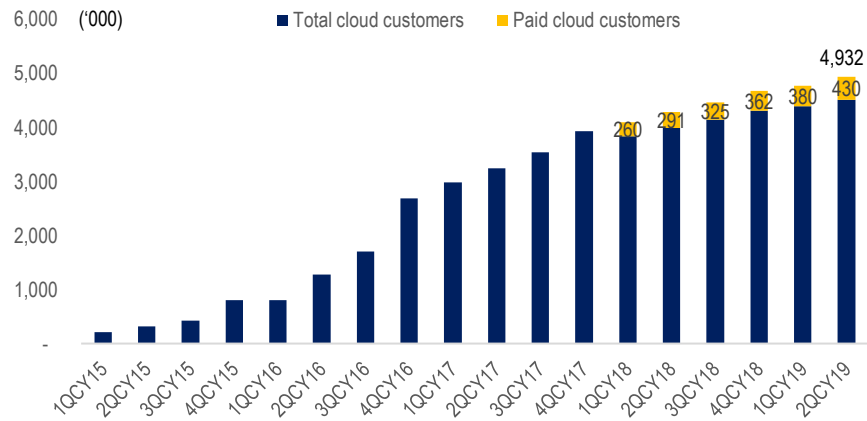
Yonyou Network – when cloud transition began

Founded in 1988, Yonyou Network Co., Ltd. is the leading enterprise management software company in China. It is engaged in the design and development software of Enterprise Resource Planning (ERP), Supply Chain Management (SCM), Financial Accounting Management (FIN), etc., and provides related solutions for companies in different industries. Yonyou serves 60% of top 500 enterprises in China, and accounts for over 40% market share in China’s ERP market.

Cloud business grew rapidly but still saw an obvious cyclical pattern

Yonyou announced cloud strategy for the first time in 2011 and launched its PaaS platform in 2012. In 2016, it released Yonyou 3.0 Strategy with focus on the integration of cloud services, software and financial services, indicating a strategic shift toward enterprise software services based on cloud. Over the past five years, Yonyou cloud customer base expanded rapidly. As of 2Q19, Yonyou’s total number of cloud corporate customers reached 4.9mn, up 3.4% QoQ/15.3% YoY, among which 430,000 were paid customers.

Figure 2: No. of corporate customers of Yonyou’s cloud business

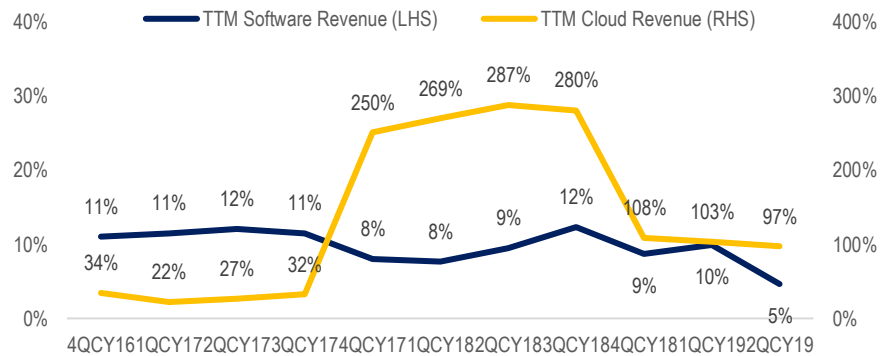


Source: Company data, AMTD Research

*Note: Yonyou has released paid cloud customers base since 2018

The fast-growing customer base has driven the growth of cloud business. TTM revenue YoY growth rate of cloud business was more than 250% in 2018 and still maintained at around 100% in the first three quarters of 2019. While traditional software business has a much lower growth rate and its TTM revenue YoY growth rate dropped to 5% in 2Q19.

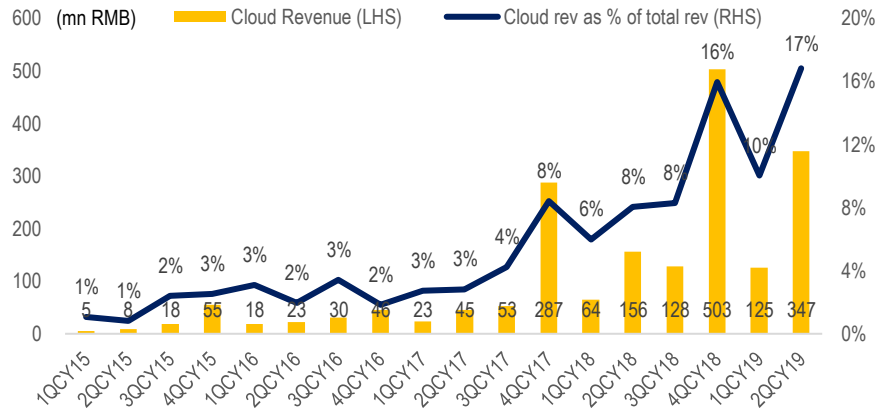
Figure 3: Yonyou’s TTM software revenue growth and TTM cloud revenue growth, YoY



Source: Company data, AMTD Research

Yonyou's cloud business (excl. internet finance) revenue reached RMB347mn in 2Q19, up 123% YoY. Correspondingly, the proportion of cloud business revenue in the total revenue continued to increase, reaching record high of 17% in 2Q19 and now becoming a crucial driver of Yonyou's revenue growth. However, different from matured US SaaS companies, such as Salesforce and Adobe, Yonyou's cloud business revenue has an obvious cyclical pattern like that of the traditional perpetual licensing software business, most of whose revenue comes in the fourth quarter each year. We believe this might be mainly due to the relatively smaller paid customer base and lower renewal rate.

Figure 4: Yonyou's cloud revenue and its cloud revenue as % of total revenue

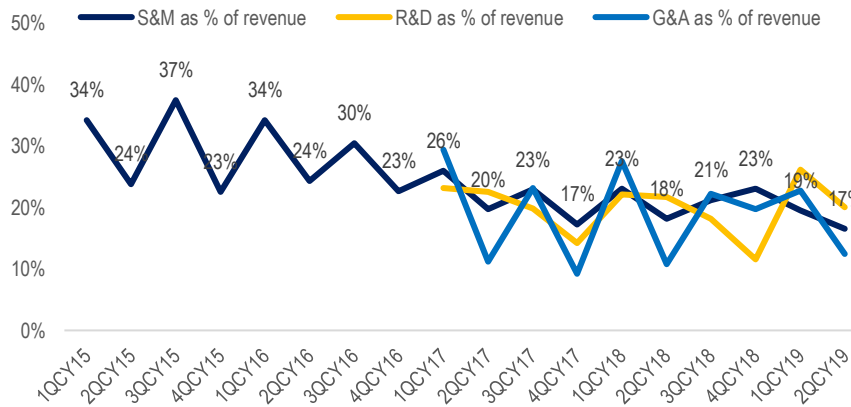


Source: Company data, AMTD Research

Operating leverage becoming visible and FCF being improved

For SaaS companies, the operating leverage comes primarily from sales & marketing because those costs and expenses are recognized up front while revenue is deferred over multiple periods. For Yonyou, given its large existing ERP customer base, it can easily move them onto the cloud and leverage current sales team to cross sell more cloud products without hiring new salespeople. Its operating leverage has been becoming more visible since 2016 when its announced new cloud strategy. We can see its S&M as % of revenue declined substantially from 24% in 2Q16 to 17% in 2Q19. On the other hand, G&A and R&D as percentage of total revenue stayed stable, indicating its continuous investment in cloud related technology and operating improvement.

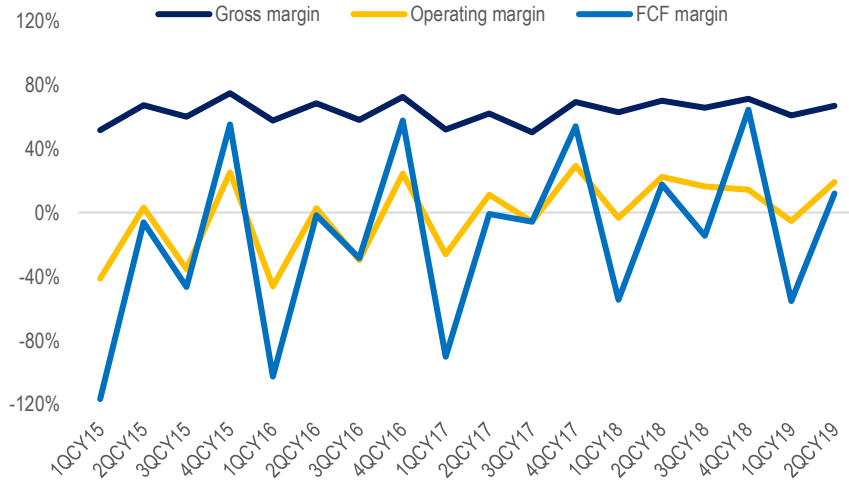
Figure 5: Trends of S&M, R&D, and G&A as % of revenue



Source: Company data, AMTD Research

Yonyou's gross margin remained largely stable over the past five years while operating margin continued to rise thanks to the improving operating leverage. In the meanwhile, free cash flow (FCF) strengthened along with the growing operating income by deducting cyclical effect.

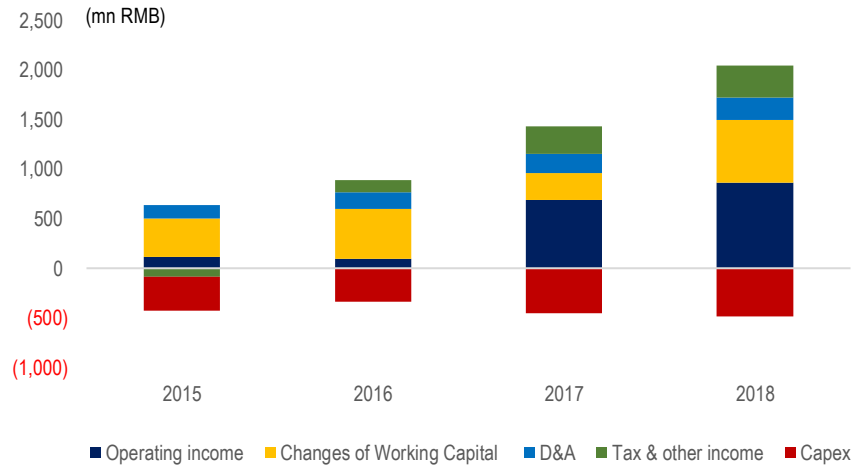
Figure 6: Trends of gross margin, operating margin and FCF margin



Source: Company data, AMTD Research

More specifically, improving operating income and relatively conservative capital expenditure helped boost FCF of the company.

Figure 7: FCF breakdown



Source: Company data, AMTD Research

News updates

16 Oct 2019

Devices

Huawei

Huawei reported 9M19 revenue of RMB610.8bn, up 24% YoY

Huawei reported 9M19 revenue of RMB610.8bn, up 24% YoY. Net profit margin came in at 8.7%, flat with 1H19. Based on 1Q and 1H revenue of RMB179.7bn and RMB401.3bn, 3Q revenue was derived at RMB209.5bn, down 5% QoQ from RMB221.6bn in 2Q. In terms of business sector, for smartphone business, Huawei reported shipment of 185mn units in 9M19, up 26% YoY, implying a shipment of 67mn in 3Q19 (+14% QoQ/+30% YoY); for carrier business, Huawei has signed more than 60 commercial contracts and has shipped more than 400K 5G Massive MIMO active antenna unit (AAU) in 9M19; for cloud business, Huawei announced computing strategy and released the world's fastest AI training cluster – Atlas 900 last quarter. (Source: [Huawei](#))

AMTD views: As the US ban on Huawei has not been removed, we expect Huawei will continue to face challenges. On the other hand, for smartphone business, without Google Apps, Huawei will refocus on domestic market to offset impact from overseas, which will intensify competition in China market, in our view.

14 Oct 2019

Module/CCM

O-film

O-film reported 3Q19 revenue of RMB14.3bn, up 11% QoQ /11% YoY

O-film reported 3Q19 revenue of RMB14.3bn, up 11% QoQ/11% YoY. Gross margin declined to 9.4% in 3Q19 from 11.8% in 2Q19, mainly due to the increasing competition in CCM and touch module business. Opex was 5.7% to sales in 3Q19, compared to 4.7% in 2Q19 and 6.5% in 3Q18. In particular, R&D as percentage of sales declined to 3.4% in 9M19 from 4.3% in 9M18. Net profit came in at RMB160mn, down 43% QoQ/75% YoY, close to the upper end of guidance range. (Source: [cninfo](#))

AMTD views: RMB232mn inventory write-down in 1Q did surprise the market, which raised the big concern about the cash flow risks. Now, the company has mitigated the cash flow pressure by actively introducing external equity investors, including Nanchang Industry Holdings Group and other state-owned background investors. Net gearing decreased to 90% the third quarter from 146% in the first quarter this year. However, we think the company still faces challenges in near term given its concentrated customer base and intense competition.

11 Oct 2019

Module/CCM

Sunny Optical

Sunny Optical reported strong lenses but weak CCM shipments in Sept

In Sept, Sunny Optical's CCM shipments came in at 48.4mn units, up 1% YoY but down 14% MoM. Handset lens shipment reached 145mn units in Sept, up 44% YoY/9% MoM, and vehicle lens shipment was 4.8mn units, up 32% YoY/4% MoM. For 9M19, CCM shipment growth was 23% YoY, within its full year guidance range of 20-25% YoY; handset lens shipment grew strongly by 38% YoY, far ahead of its full year guidance of 30% YoY; and vehicle lens shipment rose by 26% YoY, slightly ahead of its full year guidance of 25% YoY. (Source: [HKEX](#))

AMTD views: we believe strong growth momentum in handset lens came from the increasing penetration of triple CCM into the mass market. On the other hand, weaker growth of CCM in September might be due to the lower than expected sales of Huawei's new Mate30 in overseas market because Huawei is a major customer of the company CCM business and accounts for 25-30% of the company's total revenue.

9 Oct 2019

Component/Lens

Largan

Largan reported 3Q19 revenue of NT\$18.5bn, up 31% QoQ/13% YoY

Largan reported 3Q19 revenue of NT\$18.5bn, up 31% QoQ/13% YoY. Gross margin was 69.1% in 3Q19, compared to 69.6% in 2Q19 and 71.3% in 3Q18. Weaker gross margin was largely due to low yield of new high-end products. 3Q19 net income came in at NT\$8.6bn, up 31% QoQ/2% YoY, but missing consensus by 10%. It was mainly due to the NT\$785mn in F/X loss. (Source: [Largan](#))

AMTD views: Largan's topline will continue to benefit from strong demand from iPhone as Apple reportedly raised production target of iPhone 11 to 75mn units in 2019. However, growth could be capped because its production capacity has been fully utilized due to its floor space limitation. Looking ahead, on one hand, management will try to improve yield rates and operating efficiency; on the other hand, Largan will give priority to high-price, high-end orders in 2020. Regarding the spec migration, Largan has seen increasing orders of 7P models and is developing 8P models. For periscope lens modules, Largan is likely to adopt G+P (glass + plastic) structure and procure glass lens from outside companies.

10 Oct 2019

5G

China

The number of 5G pre-registrations exceeded 10 million

Despite the small pool of handsets currently available, Chinese mobile users are showing keen demand for next-generation 5G network technology. As of 10 Oct, China Mobile, the world's largest mobile phone operator, said more than 5.72 million users had registered for its 5G package, while smaller players China Unicom and China Telecom reported 2 million and 2.1 million registrations respectively. In total, more than 10 million users have pre-registered for the 5G services. (Source: [SCMP](#))

8 Oct 2019

Devices

Apple

Apple's patent hints at a screen-based keyboard for future MacBooks

Apple has invented a remarkable touchscreen virtual keyboard which uses clever technological wizardry to make it feel as if you're pressing on real keys. This new invention is called 'Static Pattern Electrostatic Haptic Electrodes' and was revealed in a patent application that's just published. If virtual keyboard is introduced, Macbooks could remove the keyboard and have a screen in its place. Considering that this is a patent application, the timing of such a product to market is unknown at this time. (Source: [9to5mac](#))

6 Oct 2019

Smartphone

Samsung

Samsung to test periscopic camera for Galaxy S11

Samsung is reportedly going to test a periscopic camera for the next folded Galaxy S11. Korean test socket manufacturer MecaTech Systems will supply for the module checks. Galaxy S11 is expected to feature 108MP ISOCELL Bright HMX main camera with 5x optical zoom capabilities. It will be embedded with Qualcomm Snapdragon 865 chip for the Europe and US market and Samsung Exynos 9830 chip for other markets. The phone would probably be unveiled in February 18, 2020. (Source: [Thelec](#))

4 Oct 2019

Amazon to build US\$800mn data center in Argentina

Cloud

Amazon

Amazon cloud computing department plans to build a regional data center in Argentina. The company is going to invest US\$800mn in the 10-year project. Amazon would receive export tax exemptions and a reduction in income tax from 35% to 15%. In addition, the center will be located in the free-trade zone, thus the company would not pay national or provincial taxes on energy consumption. However, the Argentina project isn't final and could still be changed. (Source: [Bloomberg](#))

4 Oct 2019

Apple raised iPhone 11 output by up to 10%

Smartphone

Apple

According to Nikkei Asian Review, Apple has told its suppliers to increase production of the latest iPhone 11 by up to 8mn units, or about 10%. The iPhone 11 and iPhone 11 Pro have experienced a stronger-than-expected demand with their lower prices. Apple was quite conservative about placing orders at launch, since it has suffered a 25% decline in iPhone shipments in 1H19. After the increase, the prepared production volume for the series will be higher than the volume last year. (Source: [NikkeiAsianReview](#))

3 Oct 2019

Adesto Technologies collaborated with Microsoft in IoT solutions

IoT

Adesto/Microsoft

Adesto Technologies announced that it has joined Microsoft Azure Certified for IoT. Customers could get solutions based on Adesto's SmartServer IoT to save time, since the hardware and software are pre-tested and verified to work with Microsoft Azure IoT services. SmartServer IoT allows customers to seamlessly connect their industrial data to Azure IoT to perform powerful analysis. (Source: [Adesto](#))

3 Oct 2019

Huawei to support Malaysia's 5G network rollout

5G/Infrastructure

Huawei

Huawei has signed an official agreement with Maxis, one of Malaysian major telecom companies, to launch full-fledged 5G trials. Huawei will supply 4G LTE and 5G radio equipment, as well as offering services and knowledge for the country's 5G network rollout. Maxis will also modernize its existing LTE network to fit in 5G standards. Huawei has been a long-term partner of Maxis and participated in building its 4G network. (Source: [NikkeiAsianReview](#))

3 Oct 2019

Samsung closed the last factory and shut mobile phone production in China

Smartphone

Samsung

As a result of intensifying competition from domestic rivals in China, Samsung has closed the last factory in Huizhou and ended mobile telephone production in China. Another two factories in Tianjin and Shenzhen has been shut last year. Huizhou factory was built in 1992 with a total investment of US\$190.7mn and was the major manufacturing site of Samsung in China. According to South Korean media, this factory had 6,000 workers in 2017. (Source: [NikkeiAsianReview](#))

3 Oct 2019

Murata and Resonant has signed a commercial agreement of XBAR technology

Component

Murata/Resonant

Murata and Resonant have entered a multi-year commercial agreement that allows Murata to develop its components using Resonant's XBAR technology. The XBAR technology is a ground-breaking resonator technology that holds the potential for a new class of high-performance RF filters for 5G devices. Thus, the XBAR technology is expected to achieve higher frequency and superior performance to other filter technologies, in particular for new 5G filter requirements. (Source: [Murata](#))

2 Oct 2019

Semiconductor producer GlobalFoundries to go public by 2020

Semiconductor

GlobalFoundries

Semiconductor manufacturer GlobalFoundries plans to go IPO by 2020. GlobalFoundries quitted cutting-edge processes like 7nm in 2018 and focused on delivering differentiated solutions. It is now the world's third largest contract maker of chips, next to TSMC and Samsung Foundry. The IPO plan indicates that the company expects itself to turn profitable in two years. The management expected a revenue of US\$6bn and an FCF of US\$550mn this year. (Source: [Anandtech](#))

1 Oct 2019

Baidu Maps voice assistant has over 300 million users

AI

Baidu

The number of users of the voice assistant features in Baidu Maps has surpassed 300 million by end of 1st Oct. The voice assistant features of Baidu Maps were launched in 2017 and can precisely recognize user's request in driving. The voice assistant can satisfy the need of weather checking and destination changes during navigation. The number of POI (Point of Interest) of Baidu Maps is over 150 million all over the world, covering more than 9.4 million kilometers. The coverage rate of POI has reached 98% and the market penetration rate in traveling overseas is 50%. (Source: [Sina](#))

1 Oct 2019

Microsoft will use AI to supercharge Novartis' giant drug-development engine

AI

Microsoft/Novartis

Microsoft and Novartis signed a 5-year contract to bring the artificial intelligence to drug discovery. The five-year deal will establish an "AI innovation lab" at Novartis and create co-working centers at Novartis' offices in Switzerland and Dublin, and at the Microsoft Research Lab in Cambridge, England. The idea is to help Novartis' employees discover next-generation medicines with the power of the AI and cloud computing. Novartis plans to deploy Microsoft's AI tools across the entire drug development process, including research, clinical trials, manufacturing, operations and finance. (Source: [Microsoft](#))

30 Sept 2019

New high-end iPad and MacBook to come with mini-LED display

Module

Apple

Apple is said to be working on high-end iPad and MacBook models with mini-LED displays. There will be approximately 10,000 LEDs, with each LED smaller than 0.2mm. Compared to OLED, mini-LED is less susceptible to image burn in, and has more suppliers – it will help reduce reliance on Samsung, which still dominates the medium-sized OLED market. New iPad with mini-LED display is expected to come by 1Q21, and a mini-LED MacBook in the quarter after that. (Source: [9to5mac](#))

30 Sept 2019

Component

MLCC

A new round of MLCC shortage may arise

There may be a new round of MLCC shortage in China, reportedly. Major MLCC producers have stopped shipping or taking orders, or extended the delivery period, including Eyang, Walsin Technology, Yageo, Fenghua Advanced Technology, Samsung Electro-Mechanics, etc. It was due to: 1) a lack of labor force, 2) new phones launches, 3) manufacturers' concerns towards the economy – they tried to maintain a low capacity utilization to reduce inventory. The shortage mainly arose in large-sized MLCCs; in addition, 0402, 0201 and other small-sized MLCCs that are widely used by both smartphone and consumer goods also experienced a great shortage – they have the largest sales volume among all kinds of MLCCs. (Source: [iChunt](#))

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We, Brian Li, Michelle Li and Roy Wu, hereby certify that (i) all of the views expressed in this research report reflect accurately our personal views about the subject companies and their securities; and (ii) no part of our compensation was, is or will be, directly or indirectly, related to the specific recommendations or views expressed by us in this research report, nor is it tied to any specific investment banking transactions performed by AMTD Global Markets Limited.

As of the date the report is published, Brian Li holds financial interest in the securities of Amazon mentioned in the report.

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