

ALTERNATIVE THINKING ABOUT INVESTMENTS

New China Perspectives



Welcome to the weekly issue of Morgan Creek's New China Perspectives. It is comprised of research from Morgan Creek's China-based investment team together with curated articles of interest. In addition to timely political and economic news covering greater China, Morgan Creek's China team seeks to provide in-depth perspectives on investing in the technology, consumer and healthcare sectors in the region. Our research leverages the "on the ground"

insights of our team together with Morgan Creek's decades-long experience in covering the region. Our team are focused, thematic investors primarily covering the technology, consumer, and healthcare sectors and investing in private companies and early-stage managers with deep local expertise. To learn more about our team and investment offerings, please email chinateam@morgancreekcap.com.

Best Regards,

Markow. Yusko

Mark W. Yusko CEO & CIO

NOTES FROM THE BUND

This is the second installment of a two part series exploring the resilience of Chinese entrepreneurs in the face of internal and external adversity. Our prior newsletter discussed New Oriental and how the company reorganized itself after China's regulatory change on education; the focus of this newsletter is Huawei and it's restructuring after shifting geopolitical winds. Despite significant pressure which some thought might have proved fatal to the companies, both firms have managed so far to endure well.

"If there is no path for retreat, then victory is the only way forward"



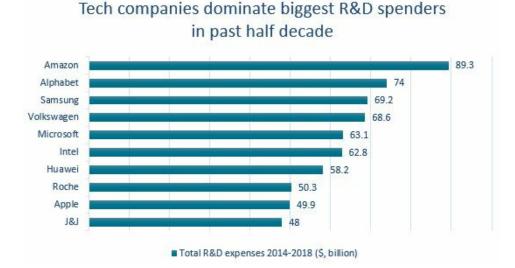
For almost a decade before the trade war began with the Trump administration, Chinese technology companies and their US counterparts avoided direct competition. This was as Chinese companies focused almost exclusively on domestic markets (and competitors), and their technologies remained less advanced than their foreign peers did. This relationship changed in 2018, when it became clear that Huawei had become *the* undisputed leader in 5G capable of setting global technology standards.

Number of 5G standard technical contributions by company²



Huawei's emergence in hindsight was not surprising, given its persistence in <u>dedicating tremendous</u> resources towards R&D historically. In 2021 alone, Huawei <u>sank more than \$22 billion</u>, or 22.4% of its revenues into R&D. This is nearly double Amazon and Alphabet's revenue to R&D ratio, and more than triple Apple.

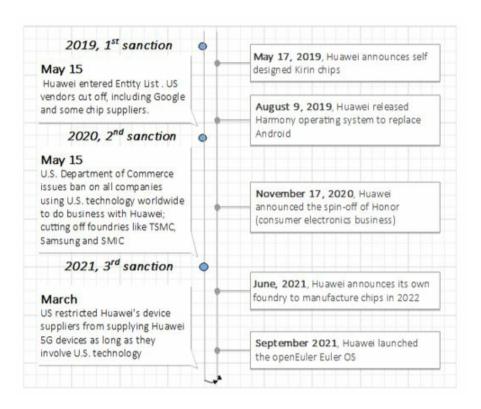
Top 10 R&D spenders globally (2014-2018)³



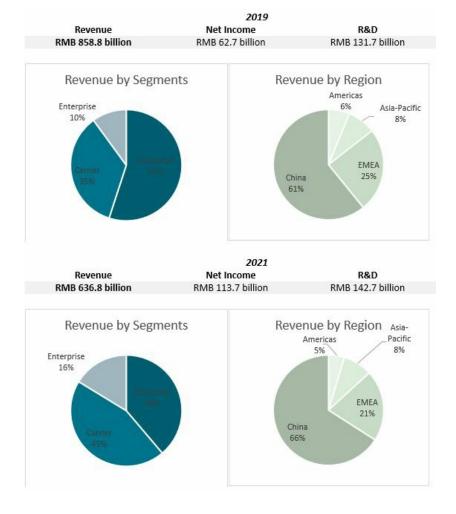
As illustrated in the chart above, none of its telecom peers, with the exception of Samsung, which runs a conglomerate including capital-intensive biologics, semiconductor and electronics manufacturing facilities, has invested amounts anywhere close to what Huawei invested.

With its emergence at the top of the global ranks at a sensitive juncture of US-China relations, Huawei became a target of varied allegations. Heavy sanctions, and arguably among the most targeted, were applied on the company as a result.

Timeline of Huawei sanctions (left) and Huawei's responses (right)



Through May 2022, Huawei has found itself under sanctions for three years, and we can analyze the impact of these restrictions on its businesses⁴ to illustrate the company's inventiveness and resilience. Huawei was capable of innovating around some of the restrictions, for example with its self-designed Kirin chipset (at one point the world's first 7nm mobile processor) and HarmonyOS. However, the regulation cutting off its chip suppliers has dealt a blow to the company in the midterm, as this ecosystem is not easily replicable. Huawei has announced its own manufacturing facility to come online in 2022, but it has had to ration its chip supplies, which became a severe bottleneck for its hardware business.



As illustrated in the charts, one will note:

- Revenue declined almost 26% from 2019
- Net income declined almost 12%, excluding the \$9 billion sale of its smartphone and purchase of an x86 enterprise server unit
- Despite this, Huawei has continued to increase R&D spend by ~8%

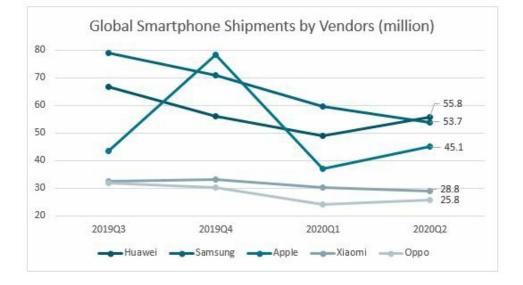
In terms of business segments:

- Huawei's consumer business shrank from 55% of its revenue pool to 38%
- Huawei's share of enterprise and carrier business grew to 9% and 6% of its revenue pool respectively

In terms of geography:

- The share of business in China grew ~6%
- The share of business in Asia Pac remained flat
- The share of business elsewhere declined by the balance

Huawei's consumer business faced significant issues due to the sanctions, as it chose to allocate its limited chips to its carriers business at the expense of its consumer electronics division. Prior to the sanctions, Huawei's cellphone division had reached its zenith, with the company overtaking Samsung globally as the largest smartphone maker by sales in mid-2020 before chip shortages hit.



By 2021, Huawei was no longer a major player in the sales rankings. This ultimately ended in management deciding to divest portions of its consumer business, including its lower range subbrand Honor in <u>a \$15.2 billion spinout</u> in 2021.

Huawei shifted its resources toward the telecoms/carriers business, as China continued its robust nationwide 5G rollout. By the end of 2022, Chinas' network expected to roll out over 1 million 5G base stations with over 330 million subscribers using the network. As a point of comparison, the US today has 100,000 base stations. Though H1'21, Huawei had 35.2% 5 market share of 5G equipment, ranking first in the world. Further growth in this segment will undoubtedly be challenging for Huawei especially among developed countries because its 5G business has become a hot political button. However, Huawei's large IP portfolio and cost proposition make it difficult for the company to be circumvented or ignored – especially when there are currently few alternatives available.

Another area where Huawei has begun to pivot is in the enterprise space. The company's cloud business, as an example, launched in 2017 and has since seen 67% growth annually, becoming today the second largest player in China's market. As of September 2021, Huawei Cloud has launched over 220 cloud services covering more than 170 countries and regions and ranked in the Global Top 5 by Gartner. Huawei has a smart car and digital healthcare initiative in this vertical as well, and has formed a new cross-unit group to offer AI and 5G solutions to clients in various industrial sub segments. To date, more than 700 cities and 267 Fortune 500 companies worldwide work with Huawei on their digital transformation.

Throughout this period, Huawei has continued to build up its cash war chest – through 2022, it has RMB 128.4 billion on its balance sheet, and remains a profitable business. Huawei has survived the difficult geopolitical headwinds and managed to restructure and reconfigure itself for the future.

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CHINA NEWS SPOTLIGHT

China Steps up Loan-Support Efforts to Developers Amid Mortgage Boycott: Chinese regulators stepped up efforts to encourage lenders to extend loans to qualified real estate projects as the beleaguered property sector faced fresh risks from a widening mortgage-payment boycott on unfinished houses. The China Banking and Insurance Regulatory Commission (CBIRC) told the official industry newspaper on Sunday that banks should meet developers' financing needs where reasonable. *Read More*.

China's Bond Market sees Nearly 6.6 Trillion Yuan Issued in June: The total bond issuance in

China reached nearly 6.6 trillion yuan (about 977 billion U.S. dollars) in June, central bank data showed. Specifically, the issuance of treasury bonds came in at 504.06 billion yuan last month, while that of local government bonds topped 1.93 trillion yuan, according to the People's Bank of China. In June, financial bond issuance reached 967.46 billion yuan and corporate bond issuance stood at 1.17 trillion yuan. The issuance of asset-backed securities amounted to 44.68 billion yuan, while that of interbank deposit certificates hit 1.9 trillion yuan. As of the end of June, outstanding bonds held in custody stood at 141.7 trillion yuan, the data showed. *Read More*.

Despite Didi's \$1.2 Billion Fine, China Tech's Regulatory Woes May Not be Over:

China's \$1.2 billion fine on Didi Global draws a line under the ride hailing company's regulatory woes, but the retroactive application of laws and a lack of clarity on the firm's business revival show the worst for its tech sector may not be over. Beijing's launch of a cybersecurity probe just over a year ago into Didi was part of a wider and unprecedented crackdown on violations of antitrust and data rules, among other issues, that targeted some of China's best-known corporate names such as Alibaba Group (9988.HK) and Tencent Holdings (0700.HK). *Read More*.

SMIC's Breakthrough Shows US Efforts to Contain Chinese Tech are Failing: On July 21, it was reported in Bloomberg that China's leading chipmaker, Shanghai-based Semiconductor Manufacturing International Corp (SMIC) had successfully established 7nm node chips available for export. Their conclusions? That China had successfully mastered this technology despite US sanctions intended to stop it from doing so, with the Biden administration aiming to keep SMIC from surpassing 14nm technology as part of its "technology war" containment effort against China. *Read More.*

Apple Expands Suppliers, SG Micro Might Supply Power Management Components for High-End iPhone 14: In a series of tweets, Kuo said that the SG Micro components would be used for the high-end iPhone 14 models. Since the company apparently received the quality certification, it means that it could supply components for the iPhone 14 Pro and iPhone 14 Pro Max. A quick look at the company's overview on its website revealed that SG Micro specializes in integrated circuitry. Therefore, it is most likely that the company will supply the power management integrated circuitry of the high-end iPhone 14 models. *Read More*.

Innovent and Ascentage Pharma Announce the China NMPA Accepted and Granted Priority Review Designation to a New Drug Application for Olverembatinib for the Treatment of Drug-Resistant CML: Innovent Biologics, Inc. ("Innovent") (HKEX: 01801), a world-class biopharmaceutical company that develops, manufactures and commercializes high quality medicines for the treatment of oncology, metabolic, autoimmune, ophthalmology and other major diseases, and Ascentage Pharma (6855.HK), a global biopharmaceutical company engaged in developing novel therapies for cancers, chronic hepatitis B (CHB), and age-related diseases, today announce that the Center for Drug Evaluation (CDE) of China National Medical Products Administration (NMPA) has accepted and granted Priority Review designation[1] (in a CDE's public notice ended on July 18, 2022) to a New Drug Application (NDA) that will support the full approval of olverembatinib in patients with chronic-phase chronic myeloid leukemia (CML-CP) who are resistant and/or intolerant of first- and second-generation tyrosine kinase inhibitors (TKIs). Following the conditional NDA approval in November 2021, the acceptance for the latest application marks another milestone and will potentially bring olverembatinib to benefit a broader population of patients with CML. Read More.

Novartis/BeiGene Opt for PD-1/TIGIT Combo for NSCLC In US: The two companies have ceased to seek US approval for tislelizumab as a monotherapy for second-line non-small cell lung cancer and are instead seeming to pin their hopes on a combination with BeiGene's anti-TIGIT antibody ociperlimab in the first-line setting. *Read More.*

Source: Chart: Huawei is Leading the Race to Develop 5G | Statista

⁵China Academy of Information and Communications Technology

Important Disclosures

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¹ The Bund is a historic waterfront area in central Shanghai, where Morgan Creek's office is located. From the 1860s to the 1930s, it was the rich and powerful center of the foreign establishment in Shanghai, operating as a legally protected treaty port. The picture above is part of the historical waterfront.

³ Source: No Pay, No Gain: Huawei Outspends Apple on R&D for a 5G Edge - BNN Bloomberg

⁴Huawei has three key business segments: 1) carrier business provides global telecom carriers with end-to-end commercial network products, services, and solutions; 2) enterprise business builds ICT infrastructure to help industries go digital; 3) consumer business provides smartphones, tablets, personal computers, wearable devices, converged home devices and services that run on these devices for consumers and businesses.

⁶Market Share: IT Services, Worldwide 2020 report by Gartner