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Huawei: A Global Tech Giant in the Crossfire of a Digital Cold War

Ren Zhengfei, founder and Chief Executive Officer of Huawei Technologies, surveyed his company's magnificent new campus in Dongguan, China, as staff transported him to an interview with a prominent foreign journalist in early 2020. The 300-acre campus is home to 20,000 engineers who work and reside in beautifully detailed replicas of twelve European sites. A Metro connects Versailles with Verona, Bruges with Granada, Oxford with Budapest. The Oxhorn Research and Development Campus, as it is formally known, cost nearly $1.5 billion to build and embodied the stunning international success Ren, son of a rural schoolteacher, had achieved. His company had become the world's largest network equipment manufacturer and the second largest smartphone maker. As if to show Huawei could do anything, the new campus included the Heidelberger Schloß, the grand castle overlooking the Neckar in Germany and in ruins since the 17th century, now rebuilt in Dongguan (see **Exhibit 1**). But Ren's interview that day was no victory tour. Instead, it was part of a larger fight for the company's future.

Since his daughter and Huawei's Chief Financial Officer, Meng Wanzhou, was detained in Canada in 2018 at the request of the United States government, Ren's company had fought back against a campaign led by U.S. President Donald Trump's administration to restrict Huawei from doing business in foreign markets. Ren had received news of Meng's arrest two days after her detention and jumped on a plane to take her place at an important meeting in Argentina. "At that time, I never thought we would have such a serious conflict with the U.S.," he recalled. Since then, however, the Trump administration had waged a global diplomatic campaign to convince foreign governments to ban Huawei from their fifth-generation wireless networks (5G) on grounds that China's intelligence services could compromise the company's equipment, posing national security risks. The U.S. Commerce Department placed Huawei on the "Entity List," restricting the company's ability to buy from important U.S. suppliers.

Huawei's leadership team convinced Ren that only his public leadership could counter damaging narratives about the company. Famously reclusive, Ren now met with foreign journalists and business leaders daily to tell Huawei's story as he saw it. Ren had even offered to license his company's 5G platform to a competitor as evidence of its quality and security. While the Trump administration had been unable to persuade many countries to ban the company's products from their markets, Huawei's

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strategy had as of yet failed to convince the U.S. government to drop the campaign. The company predicted it would face a "difficult" 2020 if U.S. sanctions on Huawei were not lifted. A Chinese competitor, ZTE, nearly shuttered its operations under similar sanctions before President Trump intervened on its behalf.

Returning to Huawei's main campus in Shenzhen, a global center for technology and innovation, Ren walked into a hall styled after a temple from ancient Greece. As he prepared for his interview, he pondered Huawei's challenges. The leader at home and abroad in 5G technology, Huawei faced formidable headwinds in global politics. How could the firm improve its image and disarm its critics? What should such a political and public relations strategy look like? Or, could Huawei "decouple" from its U.S. supply chain without compromising its business? After all, Google had found success despite losing access to the enormous Chinese market. And Huawei had succeeded in many international markets outside of the United States. Yet Ren still hoped that Huawei could partner with U.S. technology firms during a moment of immense change in the industry. In a world at once interconnected and unstable, how would Huawei prepare for the future?

Company History

My parents had no idea about my decision to start a business. If they knew that I wasn't working in a state-owned enterprise, they would be terrified.

— Ren Zhengfei[1]

Legendary Founder

Ren's risk-oriented mindset was rooted in his childhood. He grew up with his parents and six siblings in a poor, rural area of Guizhou province in southwest China. During the Great Famine between 1959 and 1961, at the time when he was preparing for his high school entrance exams, his only food was often warmed bran mixed with vegetables.[2] His family faced increased scrutiny when the Cultural Revolution began in 1966. Intellectuals, including Ren's parents, who were both high school teachers with ties to the previous Nationalist government, became targets of attack. Ren nonetheless earned entrance into the Chongqing Institute of Construction Engineering (now Chongqing University) to study architecture.[3] Ren recalled: "I think that in the Chinese history, most intellectuals experienced ups and downs."[4]

After graduating from college, Ren was assigned to the second team of the Second Construction Company of the Third Construction Bureau of the State Construction Committee in 1968. During this placement, Huawei told *The Wall Street Journal* that Ren first worked as a cook and then as a plumber, before joining the technology division.[5] In 1974, he was transferred to a factory producing synthetic fiber for garment manufacturing in the northeast city of Liaoyang, where the temperature could drop to -18 degrees Fahrenheit.[6] "No one wanted to work in this place. Also, the Chinese were suffering the upheaval of the Cultural Revolution. As a result, the central government deployed the army to build the factory and assigned a batch of college graduates to install equipment there. It was at that time I joined the army."[7] However, living under the shadow of his family's "class status," Ren was never credited for his work. "I became used to the quiet life of not deserving any awards, and it helped foster my disinterest in chasing honor."[8] Not until 1978, two years after the end of the Cultural Revolution, was Ren able to restore his social status and become a member of the Communist Party.[9] Apart from membership, Ren has noted, he held no other position in the party.[10]

The Dawn of Huawei

Ren was determined to become an entrepreneur after becoming disenchanted with working at a state-owned enterprise (SOE) upon leaving the Engineering Corps of the People's Liberation Army (PLA) and moving to Shenzhen. As a Special Economic Zone, Shenzhen permitted individuals to start private high-tech companies. Ren founded Huawei in 1987 with US$5,000.[11] The company started out by reselling imported telecom equipment, including the public branch exchange switches from Hong Kong, in rural areas of China. However, Ren stated Huawei's Hong Kong supplier stopped selling to it upon seeing the company's success in the China market.[12] To save his company, Ren steered Huawei towards conducting in-house research and development (R&D), initially by reengineering simple telecom devices. Even in the early stage of the company's history, the R&D department already had about 500 people while the production division only had roughly 200.[13] Ren had said: "We had a very limited amount of strength, so we narrowed our focus to a tiny area, and that's where we chose to strike. Pushing forward little by little, we began to see success. It builds up over time. It's an effective approach, what I call our needle-point strategy."[14] In 1993, it debuted the first self-developed C&C08 switch[a] and won customer orders to replace equipment installed by Fujitsu and other Japanese companies in coastal provinces.[15] By 1995, Huawei's share in the Chinese switch market reached 20%. It pulled even with market leader Shanghai Bell, a joint venture with France's Alcatel, in 1998.[16]

Despite the success of the switch products, Huawei had to manage the financial pressure of maintaining its investments in R&D. As Eric Harwit noted in *The China Quarterly* in 2007, "unlike state-owned enterprises, which could rely on loans from the government-owned banking system, private companies in the early 1990s had few sources of funds. Huawei was forced to borrow from other large enterprises, at interest rates as high as 20-30%."[17] As Huawei grew, R&D remained a cornerstone of the company. In 2018, R&D investment amounted to RMB 101.5 billion (US$14.4 billion) or 14.1% of sales, bringing the sum for the past 10 years to RMB 480 billion (US$68 billion).[18] The Chinese firm was ranked fifth by the European Commission in terms of industrial R&D investments, ahead of Intel and Apple[19] (see **Exhibit 2**). Of Huawei's 188,000 employees, 45% participated in R&D.

Huawei's successes attracted increasing attention from the Chinese government in the 1990s. In 1996, Chinese state media reported that Liu Huaqing, vice-chairman of the Central Military Commission, had visited Huawei.[20] The Shenzhen local government also took note of Huawei's growth, labelling it a "backbone enterprise" for the city's the high-technology industry. As with other firms receiving such recognition (including Huawei's main domestic competitor, ZTE Corporation[b]), Huawei became eligible to apply for working capital loans through the local government's high-technology investment funds.[21]

As a private entity, Huawei was wholly owned by Ren and his employees through a structure known as the employee stock ownership program (ESOP), giving non-transferable virtual stocks to tens of thousands of employees without participation by outside investors (see **Exhibits 3 & 4**). ESOP provided Huawei with an internal source of financing and prevented external investors from meddling with Ren's wish to prioritize R&D in resource allocation. However, the opaque structure would later become a source of scrutiny as foreign governments sought more information about Huawei's governance.

[a] The C&C08 was a digital telephone switching system that allowed for calls to be established among 2,000 telephone lines in its first iteration in 1993. At the time, the C&C08 was the most powerful switching system available in China.

[b] ZTE Corporation was China's second-largest and the world's fourth-largest telecommunication equipment manufacturer. Publicly traded and partially state-owned, ZTE was Huawei's main domestic competitor in the telecommunications market.

Wolf Culture Huawei executives often credited the company's intense "wolf culture" for its rapid growth. In a 2018 interview with Chinese state media, Ren stated that Huawei "will always have wolf culture…. First, the wolf is sensitive and smells opportunities to rush forward; second, the wolf always fights with his pack and does not rely on individual heroism; third, the 'meat' may be difficult to eat, but the wolf is unyielding."[22] Observers often note how Huawei's corporate culture seems to be infused with military values.[23] The phrase "Sacrifice is a soldier's highest cause. Victory is a soldier's greatest contribution" was plastered on the walls of Huawei's research labs in Shenzhen.[24] According to the *Wall Street Journal*, after completing one year at Huawei, staff could renounce their paid vacation days and overtime by signing a "dedicated employee agreement."[25] Ren's past assertion that "there is no shame in seeking profit" may have contributed to excesses in employee behavior that a 2014 "confess for leniency" anti-fraud campaign sought to rectify.[26] As then rotating CEO Guo Ping noted in 2013: "Not long ago, high-speed growth was Huawei's priority…This helped Huawei mature quickly, but it also caused Huawei's management to become negligent."[27]

Expanding Overseas

We didn't take the initiative to enter the global market, we were forced to do so.

— Ren Zhengfei[28]

As Huawei's sales quadrupled in decade 2009-19, its overseas business became an increasingly vital source of revenue. Although overseas income reached a high of 68% of Huawei's total in 2011, it still accounted for 48% of total revenue in 2018, with the bulk of the business coming from Europe, the Middle East, and Africa (EMEA) (see **Exhibits 6A & 6B**). By comparison, only 36% of ZTE's total sales was generated from outside China.[29] By 2020, Huawei operated in more than 170 countries and regions.

For Ren, overseas expansion was essential to making Huawei a peer with its international competitors. As he commented in an internal speech in 1995: "We can only march forward and bring ourselves on par with international well-known companies; only by bridging that gap can we avoid the risk of going bankrupt."[30] In 1996, Huawei tested the water outside its home market by installing a switching system for the fixed-line network of Hutchison Telecommunications in Hong Kong.[31]

Step One: Developing Markets Following its success in China by starting in rural areas before urban cities, Huawei prioritized developing markets over developed markets, with the initial targets including Russia, Africa, and Latin America.[32] It was Russia, in particular, where Ren saw vast opportunities as other multinationals operating in the country were exiting over concerns of currency depreciation and the turmoil in its financial markets in 1998.[33] Unlike the developed countries, market threshold in Russia was also low enough for Huawei to enter by replicating its Chinese business model.[34] It began by assembling switches with a local partner domestically.[35] It was not easy, however. Ren said: "We got our first contract in Russia after changing four general managers. The first contract was only worth US$36."[36] After six years of operations, Huawei's sales in the former Soviet state exceeded US$100 million in 2003.[37]

Huawei's international expansion began during a period of growing political and commercial relations between China and much of the world. After the Asian Financial Crisis, the Chinese government encouraged domestic firms to enter foreign markets in the late 1990s.[38] Huawei, as with many Chinese companies, saw this opening as an opportunity. In Ren's words, "I believe Huawei's foreign sales will succeed by following in the footsteps of our nation's diplomatic policy."[39] Ren accompanied Vice Premier Wu Bangguo along with other Chinese business leaders on an official tour of Africa in 2000 and joined then Vice President Hu Jintao on a visit to the Middle East in 2001.[40]

Huawei did not shy away from challenging markets as it sought foreign customers. Its success in Africa was in part attributed to geopolitical unrest on the continent, which drove out Huawei's Western competitors. Ren said, "Many wars broke out in Africa in the 1990s. All the Western companies pulled out of the market, so we took that opportunity and sold some of our products."[41] Moreover, Huawei's products were, in general, priced 20-30% lower than Western brands.[42] By 2005, Huawei's international sales exceeded its contracts in China.[43]

Only after success abroad did Huawei receive state support at home. As Huawei made inroads in the African market, the company's financial ties to the Chinese government became more prominent. In 2004, China Development Bank opened a US$10 billion credit line to customers of Huawei's products, and the Export-Import Bank of China offered export credits to buyers as well.[44] In a 2016 paper, World Bank researchers wrote that, compared to Huawei, "other foreign firms with shorter time horizons and a higher profit requirement face a unique challenge when competing for contracts in Sub-Saharan Africa."[45]

Step Two: Developed Markets The year 2004 was a watershed for Huawei as it set foot in the European market. The new endeavour was largely the result of a setback in China, where Huawei failed to engage local carriers to build the 3G network, according to Vincent Peng, Senior Vice President.[46] A reason for the setback was Ren's decision to develop products around a 3G standard that was relatively unpopular in China. His determination to stick with WCDMA instead of TD-SCDMA[c] not only lost Huawei business opportunities to ZTE but also drove Ren to the brink of depression in 2003.[47] It was against this backdrop that Ren was desperate to seek a market breakthrough in either Europe or the U.S.

In Europe, Huawei offered competitive prices and "powerful incentives."[48] A former chief executive of France's Neuf Telecom told *The Financial Times* that, when vetting bids to build the broadband internet network, Huawei offered to construct part of the network for the French carrier and gave a free trial for three months.[49] In the end, Neuf Telecom awarded Huawei the contract and saved 10-20% of what it might have paid.[50] A milestone in its expansion came when Huawei signed on with Telfort, the smallest of the four mobile carriers in the Netherlands.[51] According to Huawei, the contract was valued at over US$25 million.[d]

But it was the 2005 debut in the U.K. that catapulted the Chinese firm to its global reputation. According to a report by the Intelligence and Security Committee of the British government, in as early as 2003, British Telecom (BT), the carrier that controlled nearly 40% of the local fixed-line market, put out to tender a £10 billion (US$13 billion) project to upgrade its communications network.[52] Peng described the process to bid for the contract:

> We got a lot of requirements from BT, not only just about the technical requirements on products. They wanted to check: Are you stable? Are your financials sustainable? How's your quality control? And they enquired about our corporate social responsibility policies. They even went to our sub-contractors and sub-suppliers to check if they hired child labor.[53]

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[c] WCDMA and TD-SCDMA were two of the four major 3G network standards. China Mobile, the country's biggest mobile carrier, adopted TD-SCDMA, while its smaller competitor China Unicom used WCDMA.

[d] The contract value listed on Huawei's official website was significantly different from the amount of 230 million euros reported by *The South China Morning Post* in 2019.

According to Peng, "the whole industry was in shock" when Huawei was awarded two out of the five parts of the BT contract. Other winning bidders included Fujitsu, Alcatel, Siemens, Ericsson, Ciena, Cisco, and Lucent.[54] Huawei continued its hot streak by signing a 3G contract with Vodafone Spain in 2006. With Huawei's technology, Vodafone Spain saved up to 30% of its average total cost of telecommunications network ownership within five years.[55] That same year also saw the Chinese company become a supplier of 3G handsets under the Vodafone brand across 21 countries.[56]

From that point on, Huawei grew into a global telecom equipment powerhouse, displacing Ericsson as the market sale leader in 2012.[57] Between 2013 and 2018, Huawei increased its market share to 28.6%. It was trailed by Nokia (17%), Ericsson (13.4%), Cisco (8.1%), and ZTE (8.1%)[58] (see **Exhibit 7**).

Setbacks in the U.S. When Huawei entered the U.S. by first setting up four R&D centers in Plano, Texas, in 2001, the firm's goal was to compete in the lucrative telecom equipment market. The gross margins for telecom gears around that time ranged between 45% and 50%. Taking note of a margin decline in Europe after Huawei made a foray, existing competitors in the U.S. had powerful incentives to seek to shut the Chinese maker out of the bidding of large contracts.[59]

In January 2003, Cisco filed a lawsuit against Huawei, saying the Chinese firm had copied its software and violated its patents. The two companies settled the case in July 2004,[60] with Huawei agreeing to stop the sales of some products and to change other designs.

Huawei continued to hit roadblocks within the United States. Huawei's Vincent Peng recalled that in late 2006 the Chinese company nearly reached an agreement with T-Mobile, when suddenly a senior executive of the U.S. mobile carrier was told by the U.S. government not to work with Huawei. The deal then collapsed.[61] In 2010, when Sprint Nextel was soliciting bids for a network upgrade, then U.S. Commerce Secretary Gary Locke called Dan Hesse, the company's then CEO, to convey "some very deep concerns from the defense sector and also even members of Congress" about Huawei.[62] Huawei only managed to court smaller U.S. operators.[63] For example, in August 2006, Leap Wireless, the operator of the seventh-biggest wireless network (Cricket), agreed to buy 3G products from Huawei.[64] Though Huawei struggled to gain footholds in the U.S. telecommunication market, the country became an important hub for R&D efforts. By 2019, the United States was home to seven Huawei R&D efforts and research partnerships with leading universities, such as Stanford, MIT, and UC Berkeley.[65]

In 2011, Huawei was forced to unwind an acquisition of a server technology company called 3Leaf Systems at the order of the Committee on Foreign Investment in the United States (CFIUS).[66] The rejection by the interagency panel prompted Huawei's Deputy Chairman Ken Hu to write an open letter, calling for a "thorough government investigation" into the Chinese company to prove that it was "a normal commercial institution and nothing more."[67] It was the first time Huawei resorted to an open letter to counter charges from the U.S. government.

Success in Smartphones As Huawei expanded internationally, it became more well-known outside of China, particularly once the company began selling smartphones under its own brand. The company's handset business began in 2003, but its devices were mostly low-end and sold under the brands of other telecom firms, such as Motorola and Vodaphone.[68] As the smartphone market exploded in the late 2000s, Huawei identified the business as an engine for its own growth.[69] The first Huawei-branded smartphone was launched in 2010.[70] Doubling down on this decision, Huawei established the Consumer Business Group in 2011 to coordinate its strategies for smartphones and other consumer electronics.[71] Huawei's share of the global smartphone market rose rapidly from 1.5% in 2010 to a second-place finish in 2019 with 17.6%, ahead of Apple and behind only Samsung.[72]

Huawei's gamble on smartphones seemed to have paid off. The Consumer Business Group grew from 21.9% of Huawei's revenue in its first year to 48.4% in 2018.[73] On the back of its success in smartphones, Huawei's revenue grew from $32.3 billion in 2011 to $122 billion in 2019.[74] However, while this success led to growing brand recognition for Huawei, it also brought with it with rising scrutiny of the company and its business practices.

Huawei and the Trump Administration

The unexpected election of Donald Trump, a real estate developer and television personality, to President of the United States in 2016 created unprecedented uncertainty in the U.S.-China relationship. During the presidential campaign, candidate Trump vowed to label China a currency manipulator and bring trade cases against the country.[75] Trump was particularly fixated with the U.S.'s bilateral trade deficit with China, calling it the "greatest theft in the history of the world."[76] Unlike previous presidential candidates who had engaged in "China bashing," Trump's rhetoric on China largely did not abate once in office, and members of his staff were eager to follow through on his hardline promises.

Trade War In August 2017, the Office of the U.S. Trade Representative (USTR) announced an investigation into the Chinese government's "acts, policies, and practices…related to technology transfer, intellectual property, and innovation." The announcement warned that USTR "has the authority to take all appropriate and feasible action to obtain the elimination" of behavior found to violate Section 301 of the U.S. Trade Act of 1974 (301 Investigation).[77] The USTR Section 301 Investigation's final report, released in March 2018, charged that China's economic "acts, policies, and practices are unreasonable or discriminatory, and burden or restrict U.S. commerce."[78] With this determination, the Trump administration asserted it had legal basis to place $250 billion in tariffs on Chinese imports by the end of 2018.

The Trump administration's harder line on China emboldened other branches of the U.S. government to take actions that would unsettle the U.S.-China relationship. These included the 2018 National Defense Authorization Act's ban on Federal agencies "procuring telecommunications equipment or services from Huawei Technologies Company or ZTE Corporation."[79] Although the "trade war" highlighted the U.S. government's concerns about China's economic practices, the administration also began to target the companies behind China's growing influence within the global economy.

Race to 5G Factions within the U.S. government also worried about Chinese firms' participation in the global rollout out of fifth-generation wireless networks ("5G"). The upgrade to 5G was estimated to create $13.2 trillion worth of global economic output by 2035, support 22 million jobs, and deliver lucrative contracts for network equipment vendors, of which Huawei was one of a handful.[80] Huawei had invested $4 billion in 5G R&D by 2020 and held 15% of "standard essential patents" for the technology.[81] Huawei's leadership in 5G troubled the U.S. government. In 2018, the Deputy Assistant Secretary for Investment Security stated that "a shift to Chinese dominance in 5G would have substantial negative national security consequences for the United States." China's 2017 National Intelligence Law had stirred concerns about the Chinese companies' independence from the state, stipulating that "state intelligence work organs…may demand that concerned organs, organizations, or citizens provide needed support." The U.S. government's pressure campaign against Chinese technology companies began against this backdrop of unease about providing national security in the digital age and a hawkish China policy.

ZTE Caught in the Crossfire The near collapse of ZTE following the Commerce Department's decision to ban U.S. suppliers from selling to it showed that U.S.-China tensions could pose an existential threat to Chinese firms. In March 2017, the U.S. government found that ZTE had violated sanctions banning sales to Iran, but ZTE settled the dispute by paying a $1.19 billion fine to the U.S. government in return for a guilty plea.[82] However, in April 2018, the Commerce Department determined that ZTE had broken the terms of the settlement and made false statements during the negotiation process. In turn, the Department announced it would impose a denial of export privileges on ZTE, banning U.S. companies from selling products to ZTE.[83] By circumscribing ZTE's access to the U.S. market, it severed the company from critical suppliers. Analysts estimated that ZTE had bought between $1.5 billion and $1.6 billion worth of goods from U.S. technology firms in 2017, including semiconductors, optical components, and software.[84] Soon after the export ban was imposed, ZTE announced that it had ceased "major operating activities," halted manufacturing at its factories, and suspended trade of the company's shares.[85] ZTE's abrupt decoupling from the U.S. had brought one of the world's largest telecommunication firms to its knees.

The Commerce Department's export ban on ZTE quickly became part of U.S.-China trade negotiations.[86] On May 13, 2018, President Trump tweeted, "President Xi [Jinping] of China, and I, are working together to give massive Chinese phone company, ZTE, a way to get back into business, fast. Too many jobs in China lost. Commerce Department has been instructed to get it done!"[87] The President's out of character concern for lost Chinese jobs may have stemmed from his hope that a reprieve for ZTE would come in exchange for China's removing tariffs on U.S. agricultural products from states that voted for Trump in the 2016 presidential election.[88] Although ZTE's coffers and confidence took a major hit during the incident, the Commerce Department lifted the export ban on ZTE in return for it paying a $1.4 billion penalty in July 2018.[89]

The Arrest of Meng Wanzhou The Trump administration launched its first major salvo against Huawei on December 1, 2018, with the arrest of Meng Wanzhou, Huawei Chief Financial Officer and founder Ren Zhengfei's daughter, in Vancouver, Canada, at the U.S. government's request. Meng's alleged crime was facilitating the sale of Huawei products to Iran in violation of U.S. sanctions.[90] Instead of taking legal action against the company Meng represented, as was the case with ZTE, the U.S. government pursued the executives allegedly at fault. Upon learning Meng would stop in Vancouver on her way to Mexico, the U.S. used provisions in its extradition treaty with Canada that provisional arrests may be made "in circumstances where urgency has been established" to request her detainment and transfer to the United States for prosecution.[91] The U.S. government reportedly learned she would travel to Vancouver on November 29 but waited until November 30 to notify Canadian officials, possibly to prevent Ottawa from weighing the political implications of such a high-profile arrest.[92]

As the U.S.'s still-pending extradition request worked its way through the Canadian court system, Meng remained on house arrest in Vancouver. Following the arrest, Trump made conflicting statements regarding whether he would intervene in Meng's case as part of a trade deal with China.[93] Meng's lawyers argued Canadian officials crossed legal boundaries by interrogating Meng before arresting her and allegedly handing over her personal data to the FBI.[94]

Department of Justice Indictment The Trump administration unveiled its full legal case against Huawei and Meng on January 29, 2019, when a federal court in New York released two indictments, on a total of 23 counts, against the company. As with ZTE, Huawei's headline crime was violating U.S. sanctions on Iran through an alleged subsidiary, Skycom. Huawei and Meng were charged with bank fraud, wire fraud, and conspiracies to commit bank and wire fraud due to a "long-running scheme" to deceive financial institutions about the company's business activities in Iran.[95] The second indictment regarded Huawei's alleged theft of T-Mobile USA's trade secrets between 2012 and 2014 and later attempts to obstruct justice.[96] As the Department of Justice laid out its legal case against Huawei, the rollout was again tinged by the politics of the trade war. Chinese Vice Premier, Liu He, arrived in Washington for the latest round of trade negotiations just hours after the indictments' release.[97] While officials denied linkage between these issues, it remained unclear as to whether the U.S. saw Huawei primarily as a rule-breaker or as a chip in trade war negotiations.

The emerging legal battle between Huawei and the U.S. government posed potentially significant challenges to the company. U.S. lawmakers called Huawei and ZTE "two sides of the same coin" for their alleged violations of U.S. laws and national security implications.[98] The case also threatened Huawei's access to financing as global banks cut exposure to the company.[99] In summer 2019, Huawei recorded its first round of financing that received no support from banks outside of China.[100]

U.S. Diplomatic Campaign Beyond restricting Huawei's business within the U.S., the Trump administration also led a diplomatic campaign to limit the company's access to foreign markets. As other countries began to prepare to build their 5G networks, top U.S. officials pressured foreign governments to exclude Huawei from equipment procurement contracts.[101] U.S. officials argued that Huawei maintained ties to the PLA, aided espionage efforts in foreign countries, stole intellectual property, and accepted bribery and corruption in its business practices.[102] U.S. officials also pointed to China's 2017 National Intelligence Law to contend that the Chinese Communist Party could force Huawei to allow state intelligence services "back door" access into data running through its 5G network equipment.[103]

The U.S. government's diplomatic campaign against Huawei achieved mixed results. By the start of 2019, only a handful of countries had signaled that they would also exclude Huawei from their 5G networks.[104] However, foreign officials privately remarked that, despite the U.S. lacking hard evidence for its claims, the Chinese government had used other Chinese companies as vehicles for espionage.[105] As its diplomatic efforts faltered, the Trump administration threatened to abridge or abrogate intelligence-sharing agreements and other partnerships with countries that refused to ban Huawei from their 5G networks.[106] Senator Tom Cotton introduced a bill to make the threat law.[107] This may have pushed some, such as the United Kingdom and Germany, to consider stronger network security rules without directly barring Huawei from 5G networks.[108]

Huawei claimed that, despite the diplomatic storm brewing around its business, it continued to succeed in markets being pressured by the U.S. government to ban it. In late 2019, Huawei announced that over half of its 5G contracts were with European partners, suggesting that the company had shrugged off the U.S.'s global efforts to restrict its access to foreign markets for the moment.[109]

Entity List Sanctions As U.S. legal actions against Huawei moved slowly and the diplomatic pressure campaign faltered, the Trump administration sought to sever Huawei from the U.S. market and its critical American suppliers. The Trump administration began considering an Executive Order (EO) that would restrict Huawei from doing business in the United States in late spring of 2018.[110] As the U.S.-China trade war negotiations continued, the administration chose to delay the EO so as not to jeopardize the prospects for the deal with Beijing. Yet after trade talks collapsed in May 2019, the Trump administration moved forward with the EO.

Published on May 15, 2019, the "Executive Order on Securing the Information and Communications Technology and Services Supply Chain" relied on the U.S. President's authorities vested in him by the International Emergency Economic Powers Act and National Emergencies Act to prohibit "any acquisition, importation, transfer, installation, dealing in, or use of any information and communications technology or service…designed, developed, manufactured, or supplied, by persons owned by, controlled by, or subject to the jurisdiction or direction of a foreign adversary."[111] The EO did not mention Huawei by name, but the Commerce Department moved swiftly to signal Huawei was its primary target. The day after the EO was signed, the Commerce Department added Huawei, and sixty-eight of its non-U.S. affiliates, to the "Entity List." Huawei's placement on the Entity List required that U.S. companies wishing to export, re-export, or transfer items to Huawei first receive a license. License applications, however, would be reviewed under a presumption of denial.[112]

Entity List sanctions were expected to deal a heavy blow to both Huawei and its U.S. suppliers and customers. Ren Zhengfei announced that Huawei's initial evaluation of sanctions' impact on its business predicted that revenue would flatline for two years and could fall $30 billion below forecasted estimates.[113] The abrupt severing of Huawei from the U.S. market also hurt American technology firms. In 2018, Huawei claimed to have spent $11 billion on equipment from U.S. suppliers.[114]

Following a meeting between Xi Jinping and Trump in June 2019, it seemed Huawei might avoid a total ban on doing business with U.S. companies. Trump announced that he would allow Huawei to buy U.S. "equipment where there is no great national emergency problem with it."[115] Despite criticism from the U.S. Congressional leadership, Commerce Secretary Wilbur Ross expanded on Trump's promise, stating that, though Huawei would remain on the Entity List, licenses to U.S. companies to do business with Huawei would be considered if the transactions would not harm U.S. national security.

Huawei's U.S. suppliers pressed for more flexibility to do business with Huawei. To address their concerns, the Trump administration renewed Huawei's "Temporary General License" for limited transactions with U.S. firms twice, extending the company's reprieve from the full force of Entity List sanctions until February 16, 2019. By November 2019, the Department of Commerce had received nearly 300 license applications to sell to Huawei. Secretary Ross said demand for licenses was far higher than the administration had expected. In November, the Commerce Department approved one-quarter of license requests for Entity List restriction exemptions.[116] They included semiconductor manufacturers and Microsoft, though Huawei's Google license remained in limbo. Other U.S. firms resumed sales to Huawei after determining that Entity List sanctions did not apply to goods with less than 25% U.S.-made content, though the U.S. government weighed changing this rule to further restrict Huawei.[117] Rumors swirled that U.S. officials were also pressuring critical non-U.S. suppliers, such as Taiwan Semiconductor Manufacturing Company (TSMC), to end business partnerships with Huawei.[118] TSMC recruited Intel Corps' lead lobbyist to protect it from the U.S. campaign against Huawei.[119]

Trump administration officials worked to remove restrictions on Huawei's market access from its trade negotiations with China. At the signing of a "phase one" U.S.-China trade deal in January 2020, Treasury Secretary Steven Mnuchin stated that "Huawei is not part of the economic dialogue. It is part of the national security dialogue, which is ongoing."[120] The same week, it was reported that the Commerce Department had sent the Office of Management and Budget regulations that would close loopholes U.S. suppliers employed to sell to Huawei.[121]

Other Restrictions The EO which justified Huawei's placement on the Entity List also spurred other U.S. government agencies to sanction the company's business activities. In November 2019, the Federal Communications Commission (FCC) voted to bar the use of Huawei and ZTE equipment by rural telecom carriers receiving subsidies from the Universal Service Fund and investigate the cost of removing existing Huawei and ZTE equipment in rural networks.[122] To undercut Huawei's appeal as a global low-cost equipment provider, the U.S. International Development Finance Corporation announced it would provide funding assistance only to developing countries building networks without Chinese participation. It was reported that U.S. officials considered offering Nokia and Ericsson generous credit lines to undercut Huawei's cost advantage in selling telecommunications equipment.[123]

Even as the U.S. federal government explored new administrative tools to pressure Huawei, members of the U.S. Congress, which had been a bastion of anti-Huawei sentiment, began to worry about sanctions' impact on exporters. Idaho Senator Mike Crapo, chairman of the Senate Banking Committee in charge of export controls, weakened a proposed amendment to the 2020 National Defense Authorization Act (NDAA) that would have prevented Huawei's removal from the Entity List for at least five years. Worried that further sanctions would damage U.S. semiconductor companies, including his home state's Micron Technology, Crapo made sure the five-year requirement for removal was dropped. However, the final NDAA included a provision that required the Secretary of Commerce to certify Huawei was no longer a national security threat before removing it from the Entity List.[124]

Tale of Two Cities: Huawei's Responses from Shenzhen and Washington

The Response from Shenzhen

If the U.S. reaches out to us in good faith and promises to change their irrational approach to Huawei, then we are open to dialogue. The U.S. shouldn't try to destroy Huawei over something trivial.

— Ren Zhengfei[125]

Ren Leads the Charge The first and most dramatic adjustment to Huawei's public relations strategy following the arrest of Meng Wanzhou was to put Ren Zhengfei, founder and father, at the center of the company's response. Prior to Meng's arrest and the start of the U.S.'s prior campaign against his company, Ren had held no more than ten interviews with the media (Chinese or foreign) since Huawei's founding in 1987.[126] This changed in January 2019 after his leadership team told him "no one speaks with the level of influence that you have."[127] Ren became the face of Huawei's public relations campaign to tell his story and that of his company, addressing directly questions about Huawei's business practices and relationship with the Chinese government.

Ren, a confident, charismatic, and plainspoken man, personally stepped into the media spotlight in mid-January 2019, hosting his first roundtable with international journalists since 2015. He engaged directly with sensitive questions. He told reporters that "we are probably selling a small amount of civilian products to the PLA, but…we don't have any R&D collaboration or partnerships with the PLA-affiliated institutions." Ren asserted Huawei's autonomy from the Chinese government, stating: "No law requires any company in China to install mandatory back doors." Ren also claimed that "me and my company would not answer to such requests."[128]

By the end of 2019, Ren had met with hundreds of foreign executives and journalists. During the year, his approach to interviews with foreign journalists evolved. In June, Huawei launched the "A Coffee with Ren" web streaming series, during which Ren discussed his company with "prominent thinkers." Certain reporters were invited to personally meet with Ren for long-form interviews. In these sessions, Ren continued to engage with sensitive questions posed about Huawei's history, its business challenges, and the security of its products. He also used them to announce overtures to the U.S. government, such as an offer to sell Huawei's 5G platform, including its patents, licenses, code, and manufacturing instructions to prove its security and quality.[129] However, Ren stated, "It should be that U.S. companies approach us, instead of us approaching those potential partners. It is possible that U.S.

companies will approach us as I announce the strategy." [130] As of early 2020, no company had expressed public interest in Ren's offer.[131]

Public Relations Strategy Behind Huawei's public relations strategy was Chen Lifang, Huawei's Senior Vice President in charge of global public and government affairs. She led a department of approximately 200 employees, which she noted was "below average" for a technology company of Huawei's size. Fifteen were focused on the U.S. market. Chen had made her career in Huawei working on marketing, and her plan was focused on shifting opinions about Huawei in the foreign media. It was Chen's, not Ren's, signature at the bottom of full-page advertisements published in several major U.S. newspapers presented as "an open letter to the U.S. media" inviting journalists to visit Huawei's Shenzhen headquarters. The letter ended with a word of caution: "Don't believe everything you hear." With the U.S. government's narrative of Huawei's business dominance in the court of foreign public opinion, Chen's goal was to spread Huawei's message. (See **Exhibit 8**).

Chen said that her attempts to "communicate with the U.S. government and think tanks were very difficult. It was impossible to get an appointment or any opportunity to share our message." To bypass direct communication with the U.S. government, Huawei experimented with new methods of sharing its message. In February 2019, the "Huawei Facts" page was launched on the company's website. The site was a one-stop shop for Huawei executives' public statements, Huawei's responses to the crisis, and its history and product lines. Additionally, "Huawei Facts" included a "Q&A" section explaining the company's positions on thirty controversies facing Huawei, including denials that it worked with Chinese intelligence, received special state support, and stole competitors' intellectual property.[132]

Huawei actively used social media platforms, especially Twitter, to tell its story. "Huawei Facts" received its own Twitter account, and its posts were retweeted by Huawei's other corporate accounts with thousands of followers. The company would also directly respond to criticism on Twitter. When U.S. Senator Mitt Romney tweeted in support of the U.S. government's allegations against the company, arguing that Huawei's behavior did not suggest "a sincere desire for dialogue with the U.S. government," the company's HuaweiUSA account tweeted back and denied any wrongdoing.[133] When *The Wall Street Journal* published evidence that Huawei received significant financial support from the Chinese government, the company posted a video on Twitter in which a spokesperson criticized the report.[134] At the end of 2019, Huawei's social media accounts began to promote a company-run video series called "Huawei News," which presented itself as a "breaking news"-style broadcast on the company's latest activities and positive media reports about Huawei.[135]

Apart from denying accusations against the company, Huawei argued that global restrictions on its market access would harm the interests of foreign governments and businesses by impeding and delaying rollout of 5G networks and development of other emerging technologies. When the U.S. announced sanctions on Huawei, the company stated that this would "only serve to limit the U.S. to inferior yet more expensive alternatives, leaving the U.S. lagging behind in 5G deployment."[136] If other countries followed the United States' example, they could face the same fate. To support this claim, Huawei pointed to an independent report that found deploying 5G in Europe would cost $62 billion more should the company be excluded from the continent's networks.[137] Huawei executives reminded the public that the company had played a vital role in contributing to the development of 5G's technical standards. [138] Would it take longer and become more expensive to develop next-generation technologies if Huawei were not allowed or were not able to contribute?

Suing the U.S. Government Huawei pursued a range of legal actions against the U.S. government in 2019, hoping these suits might lead to the lifting of restrictions on the company. In March, the company sued the U.S. government, arguing that the 2019 National Defense Authorization

Act (NDAA) unfairly and unconstitutionally labeled Huawei a national security threat to justify banning federal agencies from buying Huawei equipment. When the Federal Communications Commission (FCC) banned the use of Huawei equipment in U.S. telecommunications networks on similar grounds, Huawei sued the FCC for not offering the company due process protections before determining it posed a threat to national security. In January 2020, the FCC announced it would give Huawei 30 days to submit public comment on why it does not pose a risk.[139] Over the year, Huawei expanded its legal team in the U.S., hiring lawyers from prestigious firms such as Jones Day, Sidley Austin, and Jenner Block, including a former National Security Council director for cybersecurity policy. However, it was unclear whether these legal challenges would be successful. Observers noted that U.S. courts often gave the government wide berth on national security issues.[140]

Yet Huawei's legal strategy was not necessarily to win. The company's lawyers had convinced Chen that, by going through the U.S. legal system, Huawei could prove that it is honest. According to Chen, the objective was "to demonstrate transparency, instead of pursuing an end result."[141] To this end, Chen sought to align Huawei's legal department with its public relations efforts. Huawei's in-house lawyers in Shenzhen released media statements accusing the U.S. government of unfair treatment.

Finding Friends Beyond its messaging campaign and legal actions, Huawei also sought to carry out a long-term effort to build relationships with those the company believed to be "influential" in American society. Vincent Peng described his strategy to change U.S. public opinion towards Huawei:

> We need support from the most influential people in this country, starting outside of politics…Our priorities are finding support within the media, among business school academics, and from business leaders…We need easier and smarter ways to help them speak up on behalf of Huawei.[142]

Peng was unsure whether this was the right course of action, stating that "I do not know if what I am doing is right or wrong. Maybe in five years we will know the answer." However, he believed that, in order for Huawei to be successful, the U.S.-China trade relationship needed to stabilize: "If the U.S.-China trade relationship does not normalize, I will never have a chance."[143]

Business Strategy Changes As U.S. pressure on Huawei's business grew, the company attempted to adjust its supply chain so that it would be better insulated from the fallout of U.S. sanctions. Huawei's initial assessments of the Entity List's impact on its business were pessimistic about the company's prospects. Ren announced that he expected revenue would stagnate at around $100 billion for the next two years, falling $30 billion below forecasts.[144] However, the company had stockpiled U.S. parts before the export ban to avoid a ZTE-like collapse.[145] Following the sanctions' announcement, Huawei began to search for alternative suppliers in earnest. Employees were reportedly deployed to potential suppliers to assist with upgrading their facilities and capacity. Huawei promised that, if companies could meet Huawei's demand, they would be guaranteed up to an 80% utilization rate for the next two years.[146]

Huawei's search for non-U.S. suppliers proved relatively successful. By the end of summer 2019, Ren announced that the company had begun production of 5G base stations without U.S. components.[147] Analyses of Huawei's latest flagship phone found that it also was produced without U.S. parts. Although the company had not eliminated U.S. parts from all of its products, teardowns of Huawei's phones in fall 2019 found that other models' use of U.S. technology had been reduced since May.[148] However, Huawei's reliance on Google's Android operating system remained a vulnerability. As of December 2019, the U.S. Commerce Department had not yet approved Google's application to do business with Huawei. Ren believed that Huawei would eventually overcome this challenge, declaring that the company would "build up our own global ecosystem within the next two to three years."[149] Meanwhile, Huawei distributed $285.4 million in bonuses to employees who contributed to creating and implementing crisis contingency plans.[150] Chen invited Huawei's customers to Shenzhen to see for themselves that the company's supply chain was holding up amid the crisis.

Beyond finding alternatives to U.S. suppliers, Huawei also sought to reduce its reliance on foreign markets for income. As the U.S. continued its global diplomatic campaign against the company, Huawei doubled down on serving its domestic Chinese market. As Chinese state media framed the United States as unfairly targeting Huawei, the company bolstered its promotional campaigns within China, opening new stores and flooding the country with advertisements.[151] Chinese consumers seemed to rally around the company as social media users shared posts such as "Huawei's chip doesn't need to rely on U.S. supply chain," which received almost 50 million views.[152] This surge of domestic support for the company in the first half of 2019 lifted Huawei's smartphone sales in China by nearly one-third, giving Huawei 38% of the domestic market.[153] However, Chinese customers were not unquestioningly loyal. In late 2019, Chinese netizens turned against Huawei after news broke that Shenzhen police had detained an ex-employee for eight months after he requested his severance pay.[154] The incident showed that public relations mattered to Huawei at home as well as abroad.

Financial Performance Despite the U.S. pressure campaign, Huawei's revenue continued to rise throughout 2019. A privately held company, Huawei was not required to release regular updates on its financials, but the company chose to release unaudited quarterly results. In the first half of 2019, Huawei's revenue outpaced forecasts, rising 23%.[155] Ren cautioned that financial challenges were still on the horizon, stating that "our results looked good, but it is likely because our Chinese clients were sympathetic and made payments in time. The big volume made cash flow look good, but this doesn't represent the real situation."[156] By the end of 2019, the company estimated that sales had increased 18% to $121.8 billion for the year, just missing the company's forecasts from before the U.S. pressure campaign. However, executives warned that the company would likely not grow as rapidly in 2020.[157] Questions lingered about whether persistent restrictions on the company would also place a ceiling on its growth prospects in the long run. Huawei's management believed that "the U.S. government's campaign against Huawei is strategic and long-term."[158]

The Response from Washington

For now, we don't think we should put much effort into the United States. Instead, we should emphasize our legal cases. Public Relations' responsibility is to cooperate with our lawyers to facilitate the lawsuits.

— Chen Lifang, Senior Vice President and Director of Public Affairs and Communications

While Ren's team quarterbacked Huawei's response to the U.S. pressure campaign from their palatial offices in Shenzhen, the Washington, D.C., office was downsizing. The lease for Huawei's current office in the U.S. capital was up, and the company's D.C. staff would move into a smaller space in 2020. The outgoing office had about a dozen rooms, though few were still occupied by employees. Old copies of the *China Daily* were piled on the unstaffed front desk where an administrative assistant once sat. Meeting spaces doubled as storage rooms. The large and nearly empty office, close to the White House, embodied Huawei's once significant but unrealized ambitions in the United States. The company was waging an assertive global public relations campaign. However, Huawei's presence was shrinking in the U.S. government's backyard.

New Hopes and Hires Huawei once had high hopes for its Washington office. Between 2010 and 2012, Huawei hired multiple Americans with experience working in the U.S. government to revamp its Washington presence. These hires had worked in the U.S. Congress, the Commerce Department, and Homeland Security's National Cyber Security Division, all areas of government the company needed to win over. Huawei's U.S. leadership team gave them one task: tell Huawei's story to policymakers. The company faced a serious setback in Washington in 2009 after walking out on a deal negotiated by the Cohen Group, a business advisory firm headed by former U.S. Defense Secretary William Cohen, with the Director of National Intelligence to address security concerns about Huawei's equipment.[159] These new hires were an attempt to rebuild its relationships in Washington.

Initially, the staff felt they were making progress in dispelling misconceptions about the company. In his first few months at Huawei in 2011, Donald Morrissey, Director of Congressional Affairs, held over 400 meetings on Capitol Hill. Director of Federal and Regulatory Affairs Dennis Amari remembered that, when he joined, "we met with every relevant agency and department that related to Huawei." They also arranged for Ken Hu, Huawei's rotating CEO, to give a private presentation to the House Committee on Energy and Commerce, after which Huawei's portfolio was moved from the Subcommittee on Oversight & Investigations to the Subcommittee on Telecommunications, suggesting Congress was openly treating Huawei as a serious industry player.[160] However, The U.S. House Permanent Select Committee on Intelligence's (HPSCI) mid-2011 announcement of an investigation into Huawei and ZTE upended Huawei's government relations strategy in Washington.

The HPSCI Investigation The American staff in Huawei's Washington office knew the HPSCI investigation spelled trouble for their employer. Morrissey, a former Congressional staffer himself, warned Huawei's leadership that "Congressional hearings are setups…There is a narrative that HPSCI had already written in their press release for the investigation."[161] The government relations staff drafted the company's responses to the HPSCI investigation's inquiries. They also arranged a meeting between HPSCI members and Ren in Hong Kong. The government relations staff planned to have Ken Hu, who had experience presenting to U.S. officials, represent Huawei during an interview with HPSCI members and have Ren meet the members for lunch. However, Ren chose to personally answer HPSCI's questions. Huawei had also invited HPSCI staffers to visit Shenzhen for one week, but they decided to spend one day at the company's headquarters. HPSCI then requested Huawei submit and translate into English millions of company documents on its operations. Morrissey recalled that "we took the attitude that HPSCI investigators had given us just one day in February and two hours in May.

We get your game. We're done." The final HPSCI report stated Huawei "did not fully cooperate" with the investigation.[162]

Adopting a Lower Profile After the HPSCI investigation, Huawei reduced resources for its government relations practice in Washington. From 2012 to 2017, Huawei's lobbying expenditures in the United States fell precipitously, declining from $1.2 million to $60,000. Huawei's paid lobbyists also fell from 16 to 3 during this period.[163] Shenzhen chose to adopt a lower profile in Washington, which Morrissey characterized as "don't poke the bear," to avoid further scrutiny. The approach seemed to work. Questions about Huawei's relationship with the Chinese government stopped coming. However, this also meant government relations activities were essentially put on hold.

Even as storm clouds grew around Huawei following the election of Donald Trump, Huawei maintained its decision to keep a low profile in Washington. After the FCC proposed banning Huawei from selling to U.S. companies that received subsidies from the FCC in March 2018, the Washington office was told to cancel all meetings it had scheduled with FCC commissioners, cutting off lines of communication with that powerful body.

Government Relations Under Trump In the Trump administration's early days, there were hopes within Huawei's Washington office that an agreement could be struck with the self-proclaimed Dealmaker-in-Chief to allay security concerns about Huawei's equipment. However, executives in Shenzhen were cautious. Huawei's management in Shenzhen determined that "the best way to get its message out was through the media and the courts."

Only as the headwinds facing Huawei's business in the United States grew to hurricane force did Huawei finally reinvest in its government relations practice by hiring external advisers. In 2019, Huawei's spending on lobbying surpassed its previous all-time high in 2012, rising to nearly $1.9 million.[164] Huawei's leadership also told the few remaining fulltime staffers in Washington to bolster their efforts to share the company's public relations messaging with U.S. officials. At the beginning of 2019, D.C. staffers were told their key performance indicator was to have 100 U.S. government officials speak positively about Huawei. Those benchmarks would prove tough to meet, however. Washington staffers recalled: "In the past, we never had a problem getting meetings…Now, it is impossible to get a meeting."

To support Huawei's reinvigorated government relations push in Washington, the company signed a $1.6 million contract with lobbyist Michael Esposito, who claimed to have close ties to the President himself.[165] A *Washington Post* profile raised questions about the validity of Esposito's relationship to Trump. In response, President Trump tweeted, "I don't know... a man named Michael Esposito..."[166] However, it was rumored that Esposito visited Shenzhen with Huawei's D.C. staff carrying a message from President Trump for Ren, but he was not permitted to meet with Ren to deliver it.[167] An FBI raid in January 2020 of Esposito's home and office in search of evidence that he had defrauded clients suggested that this hire could further complicate Huawei's relationship with Washington.[168] Days later, the company announced that Esposito was no longer lobbying for Huawei.[169]

Cultural and Communication Dilemmas Huawei's efforts in Washington reflected challenges known to many multinational corporations. How much agency does headquarters give to local offices? Who is best positioned and empowered to manage local issues? In this case, the challenge was greater, for Washington was not simply a "local" office: what happened there could determine the fate of the company in multiple markets.

It could not be easy for the Chinese managers Shenzhen deployed to oversee the Washington office to understand how the American capital really worked (or didn't), with all its formal and informal channels. Yet all major decisions on strategy and tactics were now taken in Shenzhen.

Huawei's challenges looked set only to grow in 2020, yet the staff most experienced in Washington, the city creating the company's problems, were not positioned to play a significant role in shaping Huawei's global response to the ongoing crisis. The Washington office interacted with Chen Lifang herself but a few times a year over video conference calls. As the crisis deepened, and as leadership in Shenzhen took charge of the situation, it did not consult with the Washington office on how to proceed, nor was it clear how advice from D.C. would be considered.

Caught in the Crossfire

Even in 5 years or 10 years, I'm not sure if Huawei will survive because in the past few years, many Western companies have died in this industry. Why can't we be next?

— Ren Zhengfei[170]

Back in Shenzhen, Ren had wrapped up his interview. He fielded the same questions he had for the last year about his military background, his company's relationship to the Chinese government, and its prospects if the Trump administration did not drop this pressure campaign. Despite meeting hundreds of members of the foreign media and business community, it seemed few had been convinced by Ren's claims that Huawei operated without undue influence from the Chinese government. Certainly, the U.S. government had not been convinced. Publicly he declared that "we have completely given up on the U.S. market" and that "decoupling could only undermine the competitive edge of American companies." Ren's engineers told him that Huawei would be able to decouple its supply chain and software from the U.S. market within two years. However, what would severing its supply chain from the U.S. technology base mean for Huawei's long-term competitiveness? He had been in the technology business long enough to know that, if a company could not build the best products, it would soon find itself without a customer base. To keep up, Huawei needed access to the best ideas and technologies, regardless of national origin. The clock was ticking, and, with no signs from Washington that the U.S. would let up its pressure campaign, the ball was in Huawei's court. What more could the company do to convince the U.S. government its products were no national security threat? If this effort failed, what would be the costs for Huawei?

As Ren's aides whisked him off to his next meeting back on the vast Dongguan campus, he noticed placards of a World War II-era Soviet aircraft riddled with bullet holes he had ordered distributed across Huawei's offices (see **Exhibit 9**). In previous interviews, he had likened his company to the plane, declaring that Huawei was "working hard to fly back to our base while fixing the holes on its body."[171] Lore held that the plane on the placard landed safely. Would Huawei?

Exhibit 1 Heidelberger Schloß at Oxhorn Research and Development Campus (Dongguan, China)

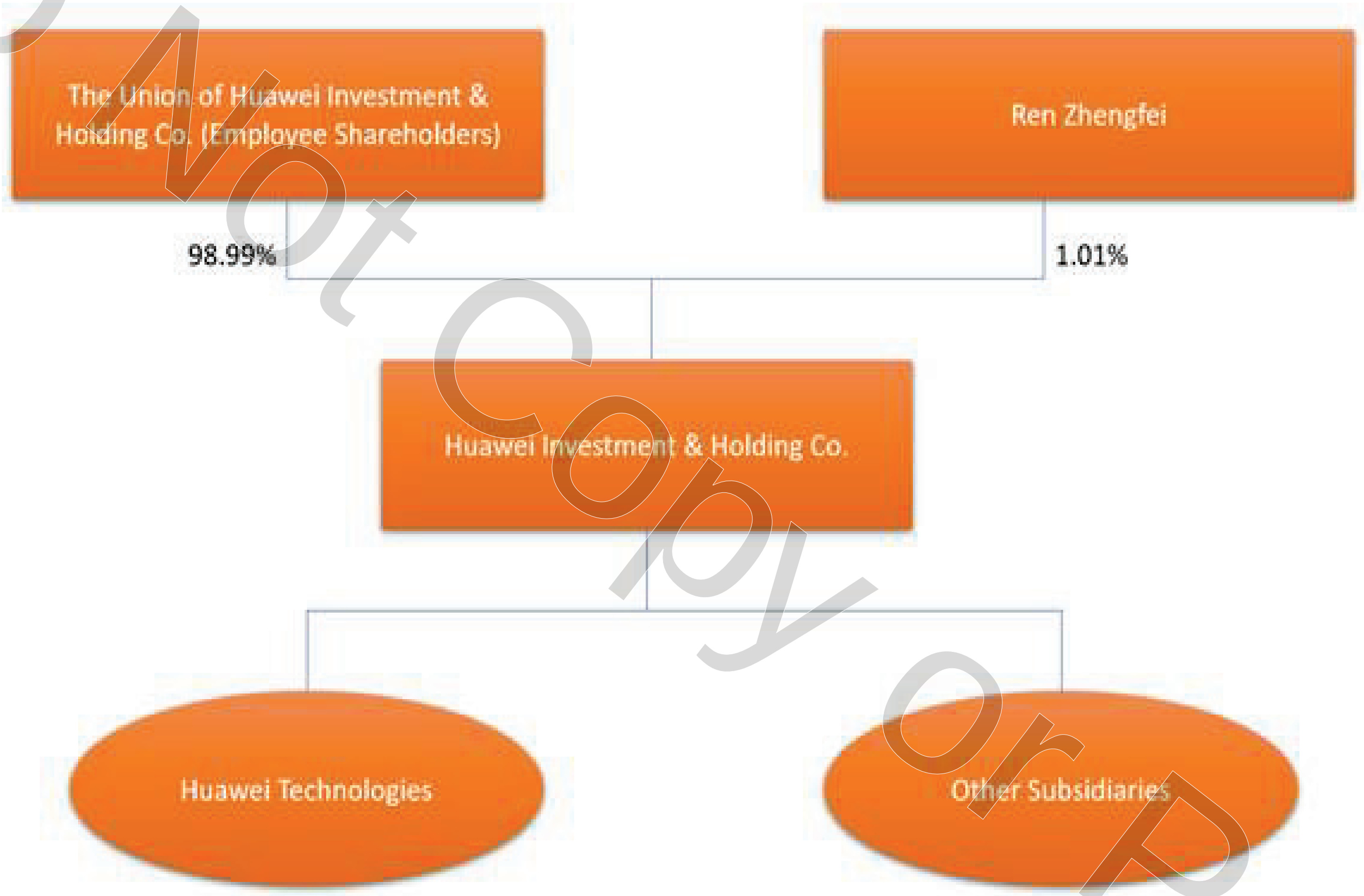
Source: Casewriter.

Exhibit 2 EU R&D Scoreboard 2018

Rank 2018	Company	Country	R&D in 2017/18 (€bn)	R&D intensity (%)	Rank change 2004-2018
1	SAMSUNG	South Korea	13.4	7.2	up 32
2	ALPHABET	US	13.4	14.5	up > 200
3	VOLKSWAGEN	Germany	13.1	5.7	up 5
4	MICROSOFT	US	12.3	13.3	up 9
5	HUAWEI	China	11.3	14.7	up > 200
6	INTEL	US	10.9	20.9	up 8
7	APPLE	US	9.7	5.1	up 97
8	ROCHE	Switzerland	8.9	19.5	up 10
9	JOHNSON & JOHNSON	US	8.8	13.8	up 3
10	DAIMLER	Germany	8.7	5.3	down 7

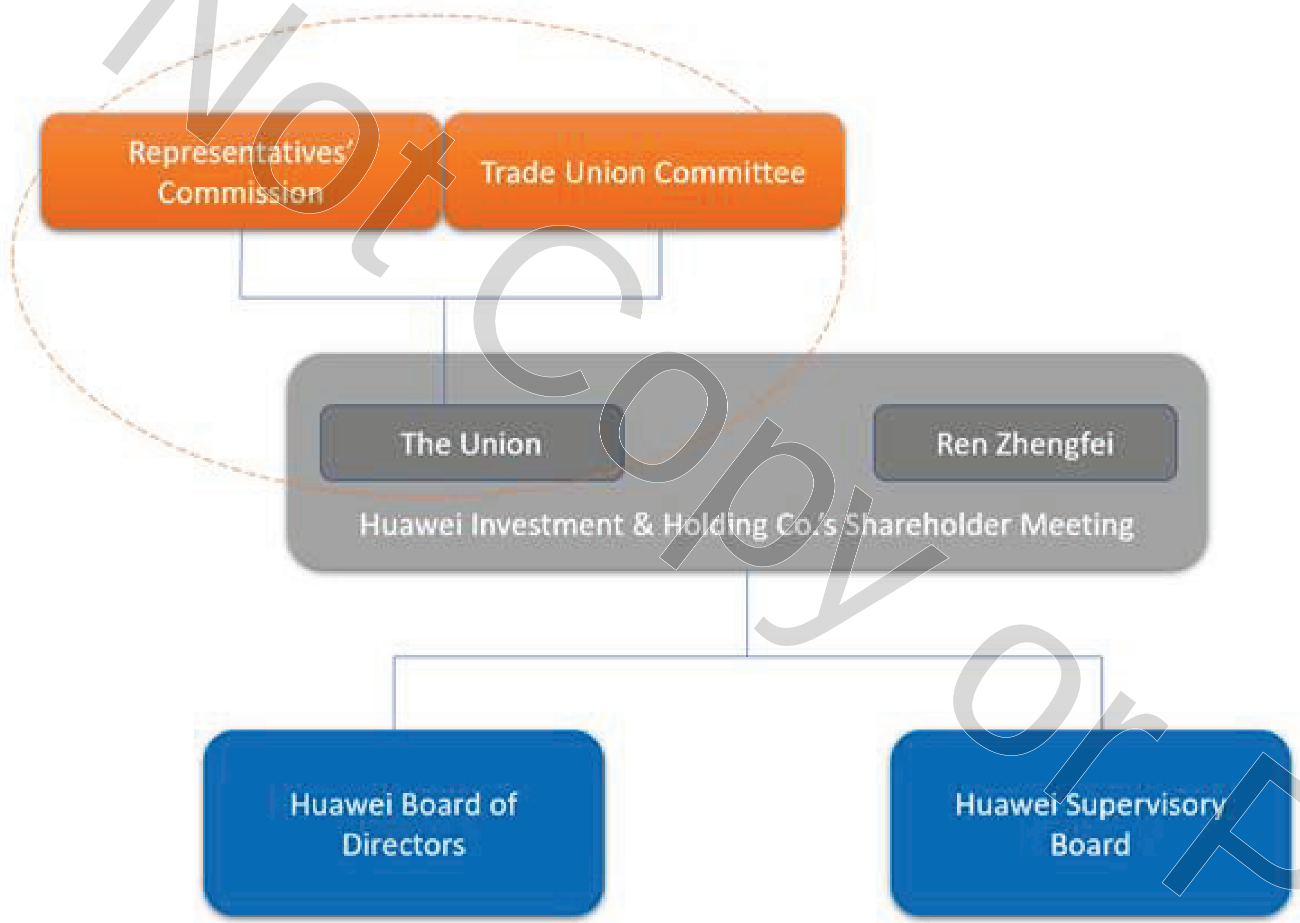
Source: Hernández, H., Grassano, N., Tübke, A., Potters, L., Gkotsis, P., and Vezzani, A.: The 2018 EU Industrial R&D Investment Scoreboard; EUR 29450 EN; Publications Office of the European Union, Luxembourg, 2018.

Exhibit 3 Huawei's Shareholding Structure



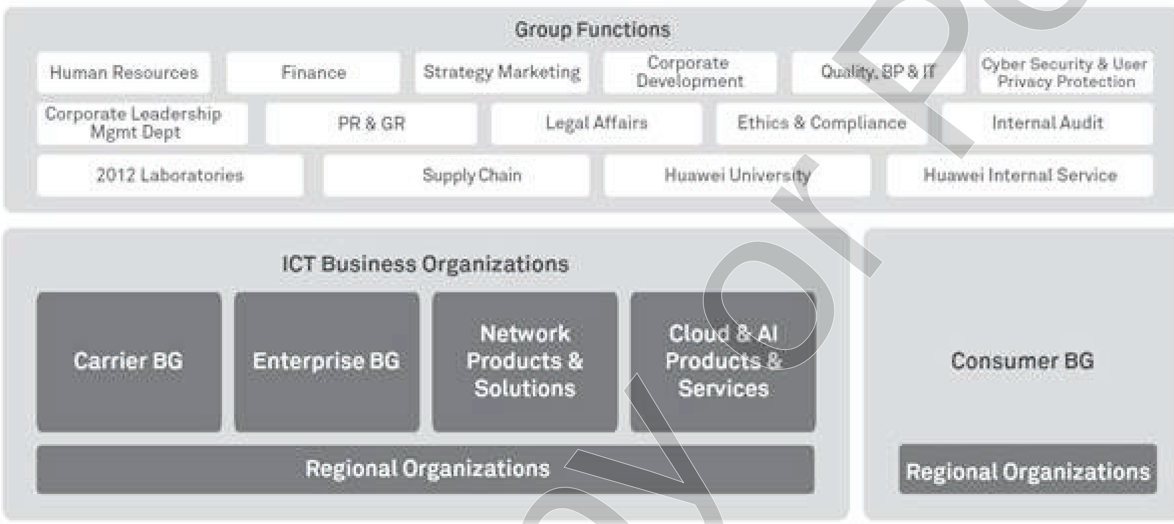
Source: Huawei.

Exhibit 4 Huawei's Governance Structure



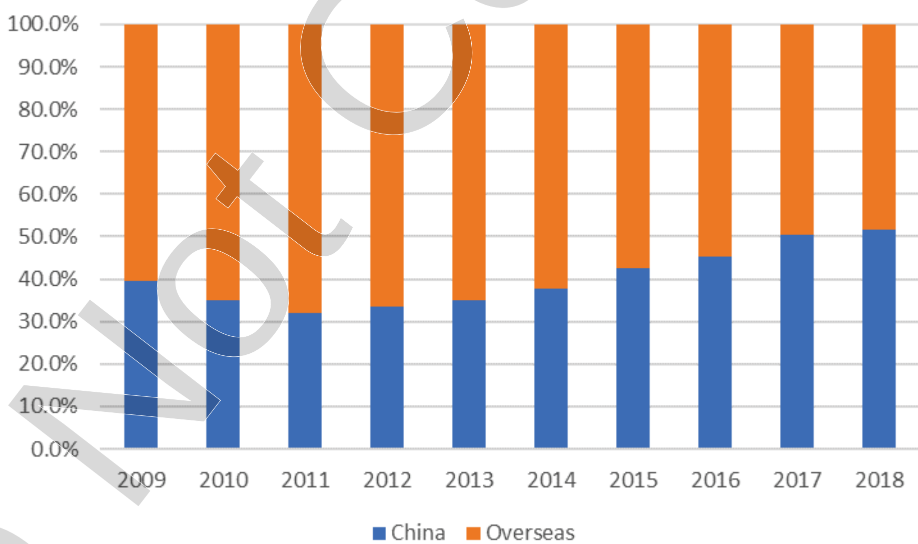
Source: Huawei.

Exhibit 5 Huawei's Business Structure



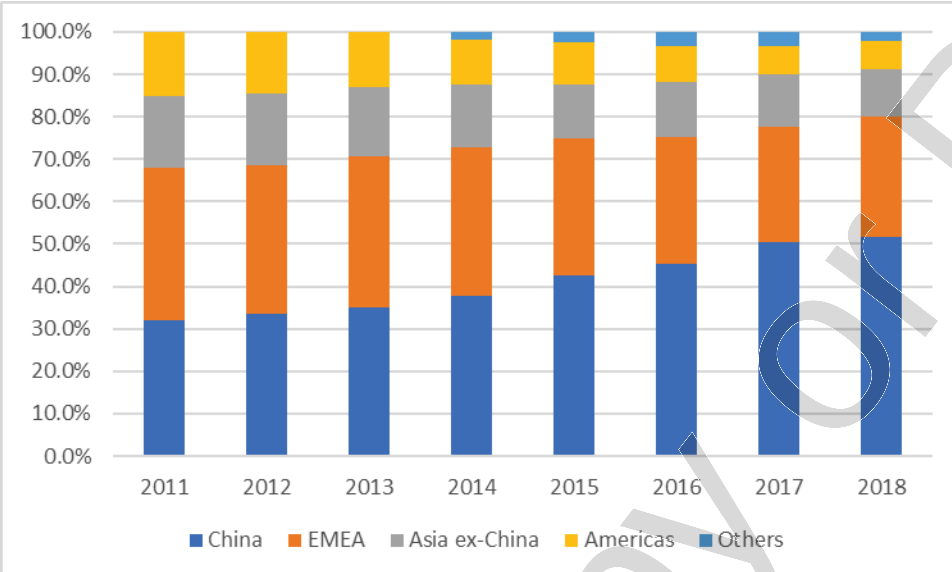
Source: Adapted from Huawei annual report 2018.

Exhibit 6a Huawei's Sales Percentages – China versus Overseas



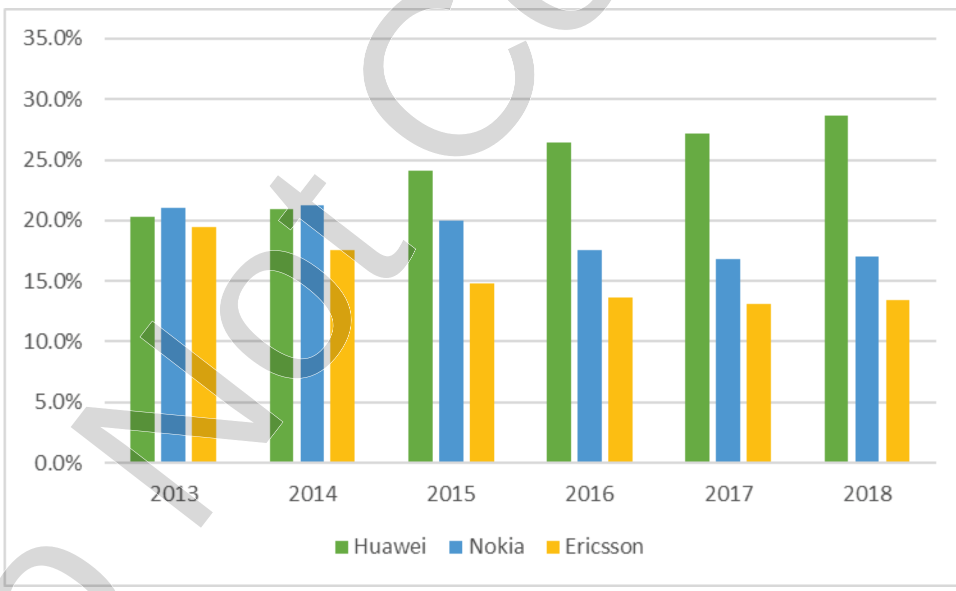
Source: Compiled by case writer from data published in Huawei annual reports.

Exhibit 6b Huawei's Sales Percentages by Geographical Regions



Source: Compiled by case writer from data published in Huawei annual reports.

Exhibit 7 Market Shares of Huawei, Nokia, and Ericsson in Telecom Equipment Market



Source: Dell'Oro Group (Adapted by case writer from data published by Reuters).

Exhibit 8 An Open Letter to the U.S. Media by Chen Lifang (Catherine Chen)

HUAWEI

Don't believe everything you hear. Come and see us.

An open letter to the US media

I am Catherine Chen, a Director of the Board at Huawei. I'm in charge of public and government affairs.

The US is a shining example of how to inspire passion for technological innovation and development. We too have been inspired by your history of creativity and hard work.

I am writing to you in the hopes that we can come to understand each other better. In recent years, the US government has developed some misunderstandings about us. We would like to draw your attention to the facts.

We operate in more than 170 countries and regions, including countries like the UK, Germany, and France. We provide innovative and secure telecoms network equipment and smartphones to more than three billion people around the world.

Huawei was founded over 30 years ago, and we are proud of our people's willingness to work in the world's most difficult and dangerous regions. We have put our hearts and souls into connecting the unconnected and bridging the digital divide in underserved locations around the world – places where many other companies aren't willing to go.

We build base stations in the harshest environments, like the Arctic Circle, the Sahara, rainforests in South America, and even on Mount Everest. In the wake of disasters like the tsunami in Indonesia, the nuclear disaster in Japan, and the massive earthquake in Chile, our employees were some of the first on the ground, working tirelessly to restore communications networks and support disaster relief.

We work with many leading US companies on technology development, business consulting, and procurement. In addition, we support university research programs in the US, helping them make significant progress in communications technologies, which we believe will benefit the whole world.

There are only so many people we can reach out to. On behalf of Huawei, I would like to invite members of the US media to visit our campuses and meet our employees. I hope that you can take what you see and hear back to your readers, viewers, and listeners, and share this message with them, to let them know that our doors are always open. We would like the US public to get to know us better, as we will you.

If you would like to visit us, please send an email to **corpcomm@huawei.com**

Don't believe everything you hear. Come and see us. We look forward to meeting you.

Sincerely,

Catherine Chen

Catherine Chen
Corporate Senior Vice President
Director of the Board
Huawei Technologies Co., Ltd.

facts.huawei.com

Source: Huawei.

Exhibit 9 An Image Featured in a Poster of Huawei's Internal Portal

Source: Huawei.

Note: Upper Caption Translation: Heroes are forged, not born.
Lower Caption Translation: A fighter jet Ilyushin Il-2 returning to the base safely after being fired at during the World War II.

Exhibit 10a Huawei Income Statements

For the Fiscal Period Ending	12 months Dec-31-2013	12 months Dec-31-2014	12 months Dec-31-2015	12 months Dec-31-2016	12 months Dec-31-2017	12 months Dec-31-2018
Currency	*CNY*	*CNY*	*CNY*	*CNY*	*CNY*	*CNY*
Units	**Millions**	**Millions**	**Millions**	**Millions**	**Millions**	**Millions**
Revenues						
Revenues	239,025.0	288,197.0	395,009.0	521,574.0	603,621.0	721,202.0
Expenses						
Cost of Sales	(141,005.0)	(160,746.0)	(230,312.0)	(311,445.0)	(365,479.0)	(443,031.0)
Selling, General and Administrative Expenses	(38,052.0)	(47,468.0)	(62,281.0)	(86,442.0)	(92,681.0)	(105,199.0)
Research and Development Expenses	(31,563.0)	(40,845.0)	(59,607.0)	(76,391.0)	(89,690.0)	(101,509.0)
Other Income/expense-net	723.0	(4,933.0)	2,977.0	219.0	613.0	1,824.0
Share of Associates' Result	4.0	-	-	-	-	-
Share of Joint Ventures' Results	(28.0)	-	-	-	-	-
Finance Income/expense	(3,942.0)	(1,455.0)	(3,715.0)	(3,737.0)	(573.0)	253.0
Earnings before Taxes	**25,162.0**	**32,750.0**	**42,071.0**	**43,778.0**	**55,811.0**	**73,540.0**
Taxes and Other Expenses						
Provision for Income Tax	(4,159.0)	(5,187.0)	(5,077.0)	(7,006.0)	(8,673.0)	(14,301.0)
Share of Associates' and Joint Ventures' Results (post Tax)	-	303.0	(84.0)	280.0	317.0	106.0
Minority Interest (After Tax)	(84.0)	(15.0)	(2.0)	14.0	(4.0)	(118.0)
Net Income (Loss)	**20,919.0**	**27,851.0**	**36,908.0**	**37,066.0**	**47,451.0**	**59,227.0**
Supplementary Info						
Gross Profit/loss	98,020.0	127,451.0	164,697.0	210,129.0	238,142.0	278,171.0
Operating Income (Loss)	29,128.0	34,205.0	45,786.0	47,515.0	56,384.0	73,287.0

Source: S&P Capital IQ.

Exhibit 10b Huawei Balance Sheets

Balance Sheet as of:	Dec-31-2013	Dec-31-2014	Dec-31-2015	Dec-31-2016	Dec-31-2017	Dec-31-2018
Currency	*CNY*	*CNY*	*CNY*	*CNY*	*CNY*	*CNY*
Units	**Millions**	**Millions**	**Millions**	**Millions**	**Millions**	**Millions**
Current Assets						
Cash and Cash Equivalents	73,399.0	78,048.0	110,561.0	123,047.0	175,347.0	184,106.0
Other Investments	-	-	14,647.0	22,606.0	24,596.0	81,751.0
Short-term Investments	8,545.0	27,988.0	-	-	-	-
Trade and Bill Receivables	78,005.0	79,580.0	93,260.0	107,957.0	107,595.0	91,995.0
Contract Asset	-	-	-	-	-	47,675.0
Inventories	24,929.0	46,576.0	61,363.0	73,976.0	-	-
Inventories and Other Contract Costs	-	-	-	-	72,352.0	96,545.0
Other Current Assets	14,525.0	24,913.0	21,815.0	27,916.0	25,371.0	28,042.0
Total Current Assets	**199,403.0**	**257,105.0**	**301,646.0**	**355,502.0**	**405,261.0**	**530,114.0**
Non Current Assets						
Property, Plant and Equipment	22,209.0	27,248.0	35,438.0	49,307.0	56,089.0	74,662.0
Interest in Associates	270.0	-	-	-	-	-
Investments in Associates/jointly Controlled Entities	-	655.0	528.0	484.0	750.0	562.0
Interests in Joint Venture	211.0	-	-	-	-	-
Other Investments	584.0	540.0	3,961.0	3,003.0	5,965.0	18,725.0
Deferred Income Tax Asset	11,577.0	14,916.0	16,900.0	16,933.0	18,565.0	17,257.0
Trade Receivables	335.0	446.0	2,098.0	3,776.0	-	-
Trade and Bill Receivables	-	-	-	-	2,451.0	3,588.0
Contract Asset	-	-	-	-	-	601.0
Goodwill	3,343.0	-	-	-	-	-
Intangible Assets	2,410.0	-	-	-	-	-
Goodwill and Intangible Assets	-	2,597.0	2,725.0	4,795.0	5,327.0	7,964.0
Other Assets	988.0	2,917.0	5,553.0	5,722.0	5,665.0	5,423.0
Long-term Leasehold Prepayments	2,761.0	3,349.0	3,306.0	4,112.0	5,152.0	6,896.0
Total Assets	**244,091.0**	**309,773.0**	**372,155.0**	**443,634.0**	**505,225.0**	**665,792.0**
Current Liabilities						
Trade and Bill Payables	31,980.0	45,899.0	61,017.0	71,134.0	72,866.0	96,919.0
Employee Benefits	-	-	-	-	91,857.0	98,164.0
Loans and Borrowings	3,043.0	10,530.0	2,485.0	3,932.0	1,587.0	3,771.0
Income Tax Payable	4,034.0	5,947.0	4,213.0	4,100.0	4,390.0	4,191.0
Contract Liabilities	-	-	-	-	-	58,278.0
Other Liabilities	-	-	133,779.0	145,448.0	95,825.0	87,683.0
Provisions	4,718.0	7,855.0	11,133.0	14,657.0	20,233.0	10,244.0
Other Payables	80,448.0	108,308.0	-	-	-	-
Total Current Liabilities	**124,223.0**	**178,539.0**	**212,627.0**	**239,271.0**	**286,758.0**	**359,250.0**
Non Current Liabilities						
Loans and Borrowings	19,990.0	17,578.0	26,501.0	40,867.0	38,338.0	66,170.0
Deferred Government Grant	2,746.0	2,656.0	1,965.0	1,534.0	1,340.0	1,209.0
Defined Benefit Obligations	9,608.0	9,731.0	11,533.0	19,652.0	-	-
Deferred Income Tax Liabilities	476.0	320.0	460.0	1,104.0	1,471.0	1,937.0
Minority Interest	59.0	45.0	48.0	39.0	31.0	407.0
Provisions	782.0	964.0	-	-	-	-
Other Non-current Liabilities	-	-	-	1,073.0	1,702.0	4,161.0
Shareholders' Equity						
Common Stock - Par Value	86,207.0	99,940.0	119,021.0	140,094.0	175,585.0	232,658.0
Total Shareholders Equity	**86,207.0**	**99,940.0**	**119,021.0**	**140,094.0**	**175,585.0**	**232,658.0**
Total Liabilities & Shareholders Equity	**244,091.0**	**309,773.0**	**372,155.0**	**443,634.0**	**505,225.0**	**665,792.0**

Source: S&P Capital IQ.

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