U.S.-China Economic and Security Review Commission

Economics and Trade Bulletin

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Highlights of This Month's Edition

- **Bilateral trade:** In February 2018, U.S. goods deficit with China hit $29.3 billion, a 27.4 percent jump year-on-year; U.S. exports stall at their 2017 level.
- **Bilateral policy issues:** The USTR's Section 301 report details unfair Chinese government technology transfer and IP practices; the USTR subsequently launched a WTO complaint regarding China's licensing regulations and is working to identify imports to target with tariffs; a GAO report recommends Treasury review staffing and resource levels for CFIUS to determine whether they are sufficient for handling an increasingly difficult workload; President Trump blocks Qualcomm acquisition by Singapore-based Broadcom amid concerns it could weaken Qualcomm's long-term ability to compete with Chinese firms.
- **Policy trends in China's economy:** China's National People's Congress passes measures tightening the CCP's control, including eliminating presidential term limits and approving a sweeping government reorganization plan; sweeping reforms to China's government bureaucracy highlight government priorities and seek to reduce regulatory confusion, increasing efficiency and Party control over policy.
- **Sector focus – 5G:** China's drive for global leadership in 5G creates new economic and national security concerns for the United States.

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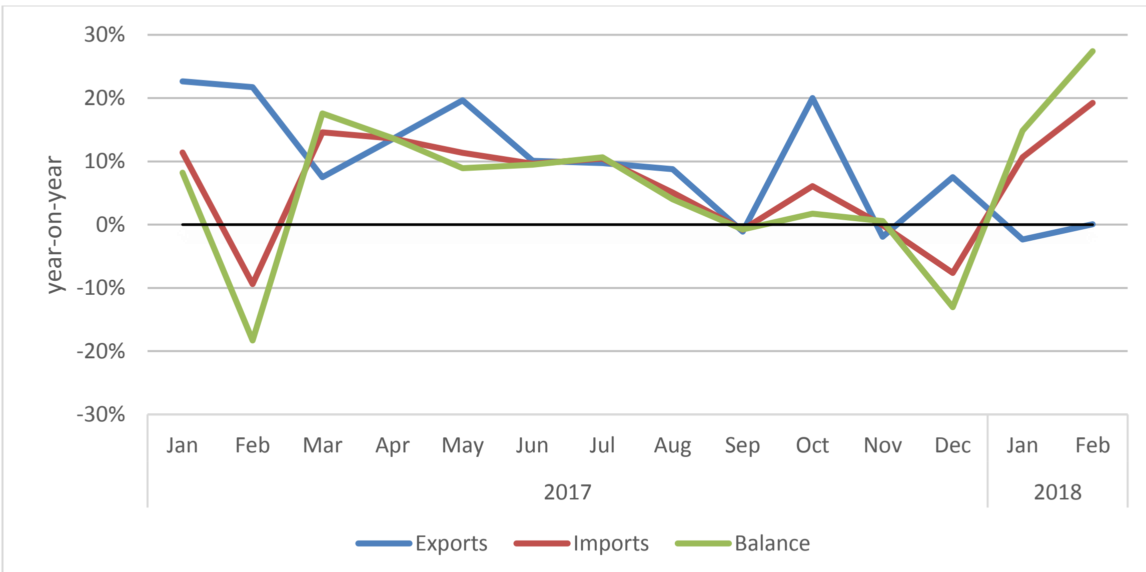
Bilateral Trade

U.S. Goods Deficit with China Increases as Imports Rise and Exports Stall

In February 2018, the U.S. goods deficit with China rose 27.4 percent year-on-year to $29.3 billion, the largest year-on-year increase since March 2015 (see Figure 1).[1] This increase was driven a jump in imports from China, which grew 19 percent year-on-year.[2] In particular, imports of computer and electronic products expanded by more than $2 billion year-on-year, a 20 percent increase.[3] By contrast, U.S. exports (which had registered steady growth in 2017[*]) stalled, increasing just 0.1 percent year-on-year and decreasing 0.3 percent month-on-month.[4] U.S. exports of fabricated metal,[†] computer and electronic products, and agricultural products registered the largest year-on-year decreases in February, falling 52 percent, 14 percent, and 12 percent respectively.[5]

Figure 1: U.S. Goods Trade with China, January 2017–February 2018



Source: U.S. Census Bureau, "Trade in Goods with China," April 5, 2018. *https://www.census.gov/foreign-trade/balance/c5700.html*.

Bilateral Policy Issues

Section 301 Report on Chinese Technology Transfer and Intellectual Property Practices Released

On March 22, the Office of the United States Trade Representative (USTR) released the results of a Section 301 investigation into the Chinese government's practices regarding technology transfer and intellectual property (IP). The report detailed four methods the Chinese government uses to unfairly advance its industrial policy aims: (1) forced transfer of IP or technology; (2) discriminatory licensing restrictions; (3) state-coordinated or -supported acquisition of technology and assets; and (4) use of cyber intrusions to gain unauthorized access to confidential corporate information.[6] Upon receipt, President Donald Trump directed the USTR to propose a list of imports for targeted tariffs and initiate a case at the World Trade Organization (WTO) to address China's discriminatory

[*] In 2017, U.S. exports to China increased 12.6 percent year-on-year. U.S. Census Bureau, "Trade in Goods with China," April 5, 2018. *https://www.census.gov/foreign-trade/balance/c5700.html*.

[†] U.S. exports of fabricated metal not elsewhere specified or indicated (a catch-all export category) fell from $336 million in February 2017 to $161 million in February 2016.

licensing practices. He also directed the U.S. Department of the Treasury, in consultation with other agencies, to review Chinese investment in key U.S. technologies.[7]

The Section 301 report finds the Chinese government sees China's continued economic growth as predicated on substituting imported technologies with "indigenous innovation."[8] Chinese companies can then achieve domestic dominance and global leadership.[9] The Chinese government pursues this aim through state-directed industrial policies, notably the "Made in China 2025" strategy.[10] Made in China 2025 mandates "40 percent self-sufficiency" in designated priority industries by 2020 and "70 percent self-sufficiency" by 2025, with specific domestic and export market share targets by industry.[11] The Chinese government puts state financial and policy support behind these targets, cementing its role in economic planning.[12]

In the USTR's assessment, the Chinese government's commitment to technological advancement has been accompanied by actions that unfairly exploit or disadvantage foreign corporations.[*] The USTR report found evidence of four methods the Chinese government employs to achieve its industrial policy aims:

(1) *Technology and IP requirements for market access:* Foreign investors in many industries may not establish operations in China without engaging in a joint venture (JV) with a Chinese corporate partner, often a partner with a controlling stake.[13] In establishing the JV, Chinese government officials or corporate partners may request or give verbal instructions that the foreign company transfer its technology.[14] Such requests may also come during various licensing and approvals processes.[15]

(2) *Licensing requirements benefiting Chinese partners in negotiations:* Foreign companies are subject to two regulations that may compel them to "grant ownership or usage rights" to domestic counterparties.[16] These regulations do not apply to domestic Chinese firms.[17]

- *Regulations of the People's Republic of China on the Administration of the Import and Export of Technologies (TIER):* As specified in TIER, the technology transferor (typically the foreign licensor) is liable for any third-party claim of infringement made against the licensee.[18] In addition, all improvements to the imported technology belong to the party making the improvement, and nothing can legally prevent the licensee from making improvements.[19]
- *Regulations for the Implementation of the Law of the People's Republic of China on Chinese-Foreign Equity Joint Ventures (JV Regulations):* JV Regulations allow JVs to use transferred technology "in perpetuity" after technology contracts expire, ten years or less after the transfer.[20] JV Regulations also require technology transfers to meet product improvement standards in performance, quality, or efficiency, pressuring the transferor to provide the latest models or versions.[21]

(3) *Unfair state support for investments and acquisitions of U.S. technology:* The USTR cites numerous studies documenting the Chinese government's direction of or support for certain types of outbound investment. Control over outbound investment could be asserted through a range of mechanisms, including foreign exchange, state-backed financing, and outbound investment approvals.[22] The USTR identified instances of state-supported investment in seven industries: aviation, integrated circuits, information technology, biotechnology, industrial machinery, renewable energy, and automotive.[23] It concluded Chinese state-sponsored investment practices burden U.S. commerce in three ways: they (1) "threaten the competitiveness of U.S. industry"; (2) "undermine the ability of U.S. firms to sustain innovation"; and (3) "distort pricing with respect to investments in the critical market for IP-intensive sectors."[24]

(4) *Unauthorized cyber intrusions to access confidential corporate information:* U.S. law enforcement and private parties contend the Chinese government has engaged in unauthorized cyber intrusions with the intent to conduct commercial espionage.[25] In September 2015, then President Barack Obama and Chinese

[*] For a primer on various policy actions the Chinese government employs in pursuit of technological upgrading, see Katherine Koleski and Nargiza Salidjanova, "China's Technonationalism Toolbox: A Primer," *U.S.-China Economic and Security Review Commission*, March 28, 2018. *https://www.uscc.gov/sites/default/files/Research/China%27s%20Technonationalism.pdf*.

President and General Secretary of the Chinese Communist Party (CCP) Xi Jinping reached an agreement to refrain from cyber theft of IP and other commercial assets; however, the USTR's investigation concluded the Chinese government continues to engage in this practice.[26] In its submission to the USTR, the U.S. Chamber of Commerce agreed that "U.S. industry does not believe there has been a full cessation of cyber enabled IP theft."[27]

(5) *Other Chinese policies or practices related to IP and technology transfer:* The USTR also accepted testimony outside of the four areas above if related to IP and technology transfer. Stakeholders brought up an array of policy concerns: fears about data misappropriation and data localization requirements in the Cybersecurity Law, IP protection challenges like counterfeiting, trade secret theft, and "bad faith trademarking," concerns about the potential misuse of the Anti-Monopoly Law to obtain IP, and IP transfer as a requirement for participation in standards-setting bodies.[28]

In light of the investigation's findings, President Trump issued a memorandum detailing a three-pronged response:[29]

- The USTR to release a proposed list of products subject to tariffs: On April 3, the USTR released a list of around 1,300 products to be targeted with 25 percent tariff increases, to go into effect after a consultation period.[30] These tariffs are set to be applied to $50 billion of U.S. imports from China, with a public comment period open until May 22 and a hearing scheduled for May 15.[31] Following the public comment period, the USTR has significant leeway in its final determination.[32]
- The USTR to launch a WTO case to address China's licensing practices: On March 23, the USTR made a consultation request of China regarding China's licensing practices, the initiation of a WTO dispute.[33] The USTR will update President Trump on progress after 60 days.[34] Japan and the EU have since filed to join the United States in consultations, citing a "substantial trade interest" in the case.[35]
- The Secretary of the Treasury to propose executive action regarding Chinese investment in U.S. technologies, also updating President Trump after 60 days.[36]

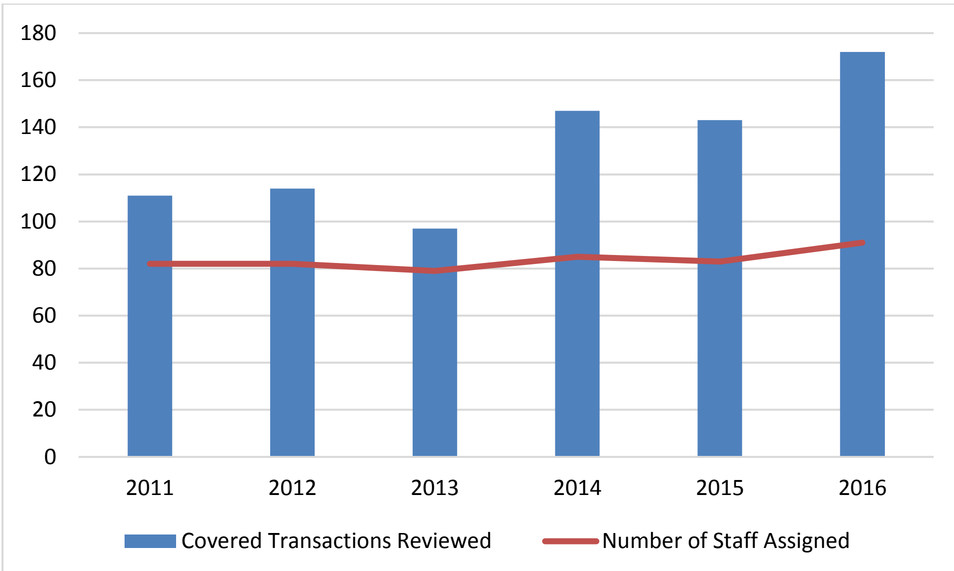
The Section 301 report's findings and President Trump's actions have prompted a vigorous debate. Senate Minority Leader Chuck Schumer supported the proposals, stating, "[President Trump] is doing the right thing when it comes to China," while Senator Ron Wyden opposed the move, stating U.S. businesses would not regain lost ground with "tariffs slapped on imports indiscriminately."[37] Information Technology Industry Council President Dean Garfield said tariffs are "counterproductive," raising prices on U.S. consumers with no effect on China's behavior.[38] By contrast, American Federation of Labor and Congress of Industrial Organizations (AFL-CIO) President Richard Trumka felt the package of tariffs, investment restrictions, and a WTO case might stop IP theft and unfair tactics where "discussions and strongly worded letters" had not.[39]

The Chinese government quickly criticized the USTR's conclusions and President Trump's policy guidance. A China Ministry of Foreign Affairs representative stated it was "irresponsible" to refer to Chinese trade practices as "economic aggression."[40] The China Ministry of Commerce issued a statement saying that China would not "sit back and allow its legitimate rights and interests to be harmed."[41] Chinese officials tried to diffuse tensions ahead of the report's release. A delegation led by President Xi's top economic adviser, Liu He, arrived in Washington, DC, on February 27 and met with senior members of the Trump Administration.[42] Though news reports describe possible negotiations between Chinese and U.S. counterparts, few details have yet to emerge.[43] After the USTR released its proposed tariff list on April 3, Chinese officials quickly proposed tariffs on $50 billion of U.S. exports, targeting a vast array of U.S. goods, including agricultural products, autos, and chemicals.[44] Many proposed tariffs hit agricultural exports from Republican-led states, including soybeans, corn, cotton, beef, frozen orange juice, and tobacco.[45] In addition, on April 4, China initiated a dispute at the WTO, claiming U.S. Section 301 actions represented a "gross violation" of the agreement's fundamental principles.[46]

GAO Report on CFIUS Highlights Concern over Insufficient Staff Levels

In February 2018, the U.S. Government Accountability Office (GAO) released a report on the operations of the Committee on Foreign Investment in the United States (CFIUS). The report recommends Treasury examine whether CFIUS staffing levels are sufficient to address the committee's current and projected future workload.[47] The GAO found CFIUS' workload has "increased substantially" over time, with 172 transactions reviewed in 2016, up from 143 in 2015 and an increase of 55 percent since 2011.[48] In 2017, Treasury staff reported the committee reviewed 238 transactions.[49] Increases in the number of assigned CFIUS staff, meanwhile, have remained limited; CFIUS had an assigned staff of 91 people in 2016, an increase of just 11 percent since 2011 (see Figure 2).[50]

Figure 2: CFIUS Workload vs. Assigned Staff, 2011–2016



Source: U.S. Government Accountability Office, *Committee on Foreign Investment in the United States: Treasury Should Coordinate Assessments of Resources Needed to Address Increased Workload*, March 16, 2018, i.

CFIUS is the primary government body responsible for reviewing any merger, acquisition, or takeover that would result in "foreign control of any person engaged in interstate commerce in the United States."[51] CFIUS comprises nine executive agencies—including Treasury, which chairs the committee—and two ex officio members[*] as well as other secretaries or heads of relevant U.S. agencies appointed by the president for a given investigation.[52]

According to the GAO report, the growing complexity of cross-border transactions in the United States has made it difficult for CFIUS to proactively identify all transactions that may pose national security concerns. Deals involving new and emerging technologies, such as artificial intelligence and robotics, can slow down review times and require additional staffing assistance. For example, subject matter experts may need to be consulted to determine whether the underlying technologies could prompt national security concerns. According to one agency official, the average transaction review requires six assigned staff, but up to 15 staff may be needed to review transactions involving technology products.[53]

Moreover, the structure of cross-border transactions has become more complex, necessitating additional time and staff to conduct a given review. Business arrangements like joint ventures, loan arrangements, and memoranda of

[*] The nine permanent members are the Secretaries of State, Treasury, Defense, Homeland Security, Commerce, and Energy; the Attorney General; the USTR; and the Director of the Office of Science and Technology Policy. The nonvoting, ex officio members are the Director of National Intelligence and the Secretary of Labor. Defense Production Act of 1950 § 721 (Amended by the Foreign Investment and National Security Act of 2007), Public Law No. 110-49, 2007; James K. Jackson, "The Committee on Foreign Investment in the United States (CFIUS)," *Congressional Research Service*, June 13, 2017, 14.

understanding are more time consuming than typical mergers and acquisitions, and raise additional questions about whether the transaction falls under CFIUS's jurisdiction. These arrangements can also make it difficult for CFIUS to assess the ultimate beneficial owners of an acquiring entity, requiring additional information from the parties to a transaction before the official review process can begin.[54]

CFIUS is able to review all submitted transactions, but, because of these staffing and resource constraints, is limited in its ability to review transactions that were not voluntarily submitted to the committee.[55] The majority of CFIUS agencies does not have dedicated CFIUS staff, but instead have staff handle CFIUS reviews as a secondary duty within their agency (see Table 1).[56] If CFIUS's workload continues to increase, as Treasury officials have indicated they expect, several member agencies fear they will lack the staffing capabilities to handle the additional workload.[57]

Table 1: CFIUS Staffing Level by Agency

Agency	Reported No. of Staff Assigned to CFIUS Activities
Department of Justice	23
Department of Treasury (Chair)	18
Department of Defense	15
Department of Homeland Security	11
Department of Commerce	11
Department of Energy	4
Department of State	4
Office of Science and Technology Policy	4
Office of the United States Trade Representative	1

Source: U.S. Government Accountability Office, *Committee on Foreign Investment in the United States: Treasury Should Coordinate Assessments of Resources Needed to Address Increased Workload*, March 16, 2018, 42.

The investment review process is voluntary, so many companies choose not to file a transaction with CFIUS even if the deal involves potential national security concerns. CFIUS can initiate an investigation on its own, and can demand that the deal be unwound or restructured on security grounds if a deal is considered a security risk, even after the deal has been completed.[*] [58] However, without adequate resources to proactively investigate deals, few of these transactions are brought under review. Instead, CFIUS member agencies maintain a list of "non-notified transactions"—deals that have not been voluntarily notified to CFIUS but may present national security concerns.[59] These non-notified transactions are monitored by CFIUS to assess whether a full review and investigation is necessary.[60] In 2016, one CFIUS agency reported examining 2,683 non-notified transactions, an increase of roughly 38 percent from 2014.[61]

President Trump Blocks Broadcom's Bid for Qualcomm

In March 2018, President Trump blocked Broadcom's $117 billion bid for U.S. chip maker Qualcomm, citing national security concerns. The deal would have created the world's third-largest semiconductor company with the largest global market share in smartphones, car electronics, and industrial internet devices.[62] The President's executive order blocking the deal indicated there was "credible evidence" that Broadcom, through its control of Qualcomm, "might take action that threatens to impair the national security of the United States."[63]

In an unusual step, the deal was rejected before Qualcomm's shareholders had voted on whether to approve Broadcom's bid, signaling the U.S. government's increasingly proactive approach toward addressing potential risks posed by foreign investment in the United States.[64] Before the deal was rejected, Broadcom had accelerated plans

[*] For more on the CFIUS review process, see U.S.-China Economic and Security Review Commission, Chapter 1, Section 2, "Chinese Investment in the United States," in *2017 Annual Report to Congress*, November 2017, 81–82.

to redomicile to the United States from Singapore by April 2018, which could have placed the Qualcomm bid outside CFIUS's jurisdiction. Although Broadcom will still move its headquarters to Delaware, President Trump's executive order has effectively ensured the proposed acquisition cannot be taken up again.[65] The order also disqualified 15 individuals listed by Broadcom as potential candidates for director of Qualcomm from serving in that position.[66]

Although Broadcom is a Singapore-based company, China was a primary factor in the decision due to ongoing competition between U.S. and Chinese semiconductor companies seeking to dominate the development of next-generation technologies. The President's decision to reject Broadcom's bid was made following CFIUS's recommendation, which concluded that the deal could pose a threat to U.S. national security. A letter CFIUS agencies sent to the parties of the transaction specifically identified Huawei Technologies Co. as a central consideration in its decision, highlighting that a reduction in Qualcomm's competitiveness and outsized influence in standards-setting for telecommunication products would allow for competitors like Huawei to fill the void.[67] The Chinese government is investing billions of dollars into developing its high-tech industries—including semiconductors, wireless networks, and artificial intelligence—in the hopes firms like Huawei can compete with U.S. and European technology firms (for more on China's pursuit of 5G, see this issue's Sector Focus). CFIUS officials reportedly feared that the deal could allow Huawei to become a dominant player in technology products, leaving U.S. firms and consumers with no choice but to use Huawei equipment.[68]

CFIUS's concerns centered on fears the deal could diminish Qualcomm's long-term competitiveness, opening the door for Huawei and other Chinese competitors. CFIUS's letter stated that "Qualcomm has become well-known to, and trusted by, the U.S. government. Having a well-known and trusted company hold the dominant role that Qualcomm does in the U.S. telecommunications infrastructure provides significant confidence in the integrity of such infrastructure as it relates to national security."[69] Coming under Broadcom's management—the committee argued—could weaken Qualcomm's position as an industry leader in cutting-edge technologies, therefore presenting a risk to U.S. national security.[70]

President Trump has relied on investment reviews as one of several tools—including the announcement of tariffs and national security reviews of steel and aluminum trade—to defend U.S. economic and national security interests, particularly in technology-reliant industries.[71] In the last 30 years, U.S. presidents have rejected only four foreign investment deals.[72] The Broadcom deal is the second President Trump has rejected amid security concerns. In September 2017, President Trump blocked the Chinese government-backed Canyon Bridge Capital Partners' $1.3 billion bid to acquire U.S. microchip firm Lattice Semiconductor.[*] Another deal was scrapped by the bidder not because of an order from the President, but rather due to fears the deal would be rejected: In January 2018, the Chinese firm Ant Financial nixed its plan to acquire U.S. money transfer firm MoneyGram International after CFIUS raised national security issues associated with the deal.[73]

Policy Trends in China's Economy

At the National People's Congress, the Party's Grip Tightens

At the annual meeting of China's National People's Congress (NPC), which ran from March 5 to March 20, the country's legislature approved changes further entrenching the CCP's power as well as President Xi's dominance within the CCP.[74] The Chinese constitution was amended for the first time since 2004, and key changes included the inclusion of "Xi Jinping Thought" into the preamble and the removal of presidential term limits.[75] The elimination of presidential term limits allows President Xi—who was previously limited to two five-year terms—to serve as president indefinitely, along with his positions as General Secretary of the CCP and Chairman of the

[*] For more on the Lattice deal, see U.S.-China Economic and Security Review Commission, *Economics and Trade Bulletin*, October 5, 2017, 2–3. *https://www.uscc.gov/sites/default/files/Research/October%202017%20Trade%20Bulletin_0.pdf*.

Central Military Commission (neither of which have term limits), upending the norms of collective leadership and succession that have been put in place by Deng Xiaoping over the last two decades.[76]

The NPC approved a sweeping government reorganization plan (details of which are discussed in the following section), aimed at centralizing CCP control.[77] Top personnel decisions were also announced at the NPC. Liu He, President Xi's trusted economic adviser, was appointed vice-premier, responsible for economic and financial affairs. He will also head the recently created Financial Stability and Development Commission, overseeing policy coordination between financial regulators.[78] Mr. Liu has been critical of the debt-driven model of growth China adopted following the global financial crisis and has championed supply-side structural reform and curbing financial risk.[79] Yi Gang, the long-serving deputy governor of the People's Bank of China (PBOC), was promoted to PBOC governor, while Guo Shuqing, the current chairman of the China Banking Regulatory Commission, will lead the newly merged banking and insurance commission.[80]

The outcomes reflect President Xi's priorities of strengthening CCP control over the economy and of controlling financial risks, which he has described as "an important part of national security."[81] According to Chinese commentators, the widespread belief that President Xi will lead China for at least another decade enables him to push through economic reforms.[82] The prospects for greater economic liberalization, however, look dim as all signs point to more visible government involvement in the economy.[83] The plight of Anbang Insurance Group is a case in point.

On February 23, the Chinese government seized control of Anbang and charged its founder and former chairman with fundraising fraud and embezzlement.[84] According to a statement from CIRC, Anbang had "illegal business operations which may seriously endanger the company's solvency."[85] Anbang was one of several private conglomerates that had come under Chinese regulators' scrutiny over the past year amid concern that risky financing was being used to finance overseas acquisitions.[86] In recent years, Anbang had gained international prominence through a series of high-profile deals, including its $2 billion purchase of the Waldorf Astoria in New York and a $5.5 billion portfolio of hotels purchased from the private equity group Blackstone.[87]

CIRC said regulators would "actively introduce high-quality social capital to Anbang, restructure its shareholding, and keep Anbang as a private company."[88] A working group led by CIRC will oversee all of Anbang's transactions outside its traditional insurance business for a year.[89] Under China's Insurance Law, the government can seize insurers that break the law, harm the public interest, or experience serious solvency issues, or for any other issues that may affect the company's ability to service its debts.[90] Anbang primarily funded its acquisitions through the sale of short-term, high-yielding wealth management products (WMPs), a key target of the government's deleveraging efforts.[91] Redemptions on Anbang's WMPs are expected to rise later this year as the products come due.[92] Regulators were concerned about the possibility of Anbang defaulting on its financial obligations, which could trigger public doubts about the security of WMPs.[93] In stepping in, Chinese regulators have deemed Anbang too big to fail.

NPC Approves Government Reshuffle

Since becoming General Secretary in 2012, President Xi has worked to centralize Party control over key policy areas at the expense of government institutions.[94] This year's NPC meeting delivered a sweeping overhaul of China's bureaucracy, designed to streamline tasks, clarify responsibilities, and improve management (see Figure 3). The reforms highlight China's challenges and the CCP's policy priorities, such as President Xi Jinping's "Three Tough Challenges": addressing pollution, financial risks, and poverty.[95] The reforms are projected to be implemented by mid-April.[96]

The agency reshuffle has created the new Ministry of Natural Resources and Ministry of Ecological Environment, which aim to concentrate efforts to address China's severe environmental degradation.[97] Other reforms, such as the creation of new agencies for international development aid, immigration services, and the new Ministry of Culture and Tourism, reflect China's increasingly assertive global posture.[98] The big loser in the reorganization is the

National Development and Reform Commission (NDRC)—formerly the premier economic policy-setting body—which had several of its powers devolved to other agencies.[99]

Figure 3: Breakdown of the Institutional Reforms

Source: Caixin, "Approval of Sweeping Government Overhaul to Address Nation's Issues." *https://www.caixinglobal.com/2018-03-16/approval-of-sweeping-government-overhaul-to-address-nations-issues-101222457.html.*

State Market Supervision Administration

The newly created State Market Supervision Administration centralizes the antitrust functions of the NDRC, the Ministry of Commerce, and the State Administration for Industry and Commerce, and takes the lead role on quality control and food and drug regulation.[100] The reform follows the template provided by provincial reforms spearheaded in Shenzhen, and aims to improve food and drug quality, a politically sensitive issue after years of quality scandals, and will also likely improve efficiency for both consumers and companies.[101] A State Intellectual Property Office is set up under the administration, a potentially significant development in light of U.S. challenges to China's IP regime under Section 301 actions.[102]

China Banking and Insurance Regulatory Commission

The China Banking Regulatory Commission (CBRC) and the China Insurance Regulatory Commission (CIRC) will merge into the new China Banking and Insurance Regulatory Commission, with objectives to clarify regulatory responsibilities, resolve overlapping regulation and regulatory gaps, and strengthen comprehensive supervision of the financial sector.[103] The move was expected by many observers, with the financial sector looming as a serious policy challenge to China's leadership.[104] The new commission will oversee $41.43 trillion (RMB 262 trillion) in assets, and is headed by Guo Shuqing, who also serves as the Party Secretary at the PBOC, a move that observers say puts him above the new PBOC governor Yi Gang in the political hierarchy.[105] Meanwhile, the PBOC is taking on the role of making the laws and regulations that govern the new commission.[106]

National Supervisory Commission

The NPC also ratified the Supervision Law, which establishes a powerful new anticorruption agency—the National Supervision Commission—charged with investigating misconduct by government workers.[107] The new commission replaces the Ministry of Supervision and the State Anti-Corruption Bureau, two agencies under the State Council.[108]

Along with the CCP's powerful anticorruption agency, the Central Commission for Discipline Inspection (CCDI), the National Supervisory Commission will be the lead anticorruption entity in China. Unlike the CCDI, the new body covers China's entire public sector—roughly 62 million people, approximately 20 percent of whom are not members of the CCP—and encompasses state-owned enterprises, schools, universities, hospitals, and cultural institutions.[109] Chinese legal experts have raised concerns about the potential impact on rule of law, particularly protections against arbitrary arrest.[110] An article from Xinhua, a state-run news agency, described the commission as "a political organ, rather than an administrative or judicial organ. When carrying out its duties of supervision, investigation and disposition, it should always give top priority to politics."[111] The article added that "internal party supervision and state supervision are two sides of the same coin."[112]

The National Supervisory Commission is ranked above the judiciary, and is empowered to freeze assets and interrogate and detain suspects in secret.[113] The commission is headed by CCDI Deputy Secretary Yang Xiaodu, seen as an ally to President Xi.[114] He was the only candidate on the ballot for the position, and the CCDI's official news app announced his appointment before the NPC delegates finished casting their votes.[115]

State Administration of Radio and Television

The State Administration of Press, Publications, Radio, Film and Television (SAPPRFT) is replaced by the State Administration of Radio and Television, a body directly under the State Council.[116] SAPPRFT was established in 2013, with the merging of the State Administration of Radio, Film and Television and the General Administration of Press Publications.[117] Stated goals of the reform are to "strengthen the Party's centralized and unified leadership of news and public opinion work, strengthen the management of important propaganda positions ... [and] adequately develop the role of radio and television as the mouthpiece of the Party."[118] This move coincides with the Party's Publicity Department (also known as the Central Propaganda Department of the Communist Party of China) taking direct control over film, news, and publishing, putting all domestic and foreign media in China under CCP oversight.[119] The CCP now oversees the newly consolidated Central Radio and Television Network, externally known as Voice of China. The new platform is the result of a merger of China's three major national media platforms: China Central Television (CCTV, also known as China Global Television Network or CGTN), China National Radio, and China Radio International.[120] Observers expect the move will significantly strengthen China's ability to project propaganda outside its borders, targeting in particular overseas Chinese communities.[121]

Sector Focus: United States Faces 5G Competition from China

Huawei and ZTE's emergence as global leaders in network equipment manufacturing is creating new challenges for the secure deployment of critical next-generation telecommunications infrastructure—5G—in the United States and setting off fierce economic rivalry with U.S. competitors.* On March 26, 2018, Federal Communications Commission (FCC) Chairman Ajit Pai proposed barring the use of funds from the FCC's $8.5 billion Universal Service Fund† to "purchase equipment or services from any company that poses a national security threat to the integrity of communications networks or their supply chains."[122] This measure seeks to address longstanding U.S. concerns about the incorporation of Huawei and ZTE equipment into the U.S. telecommunications supply chain, particularly by larger carriers such as AT&T and Verizon.[123] In addition, AT&T, Verizon, and Best Buy reportedly will stop selling Huawei smartphones and other products in the United States.[124]

* For expert testimony on the economic and security challenges of China's 5G and Internet of Things development for the United States, see U.S.-China Economic and Security Review Commission, *Hearing on China, the United States, and Next Generation Connectivity*, March 8, 2018. *https://uscc.gov/Hearings/china-united-states-and-next-generation-connectivity*.

† U.S. telecommunications firms contribute a percentage of their end-user interstate and international end-user revenues to the Universal Service Fund, which subsidizes telecommunications service to low-income households and high-cost areas. United Service Administration Co., "Universal Service." *https://www.usac.org/about/about/universal-service/default.aspx*; Federal Communications Commission, *Universal Service Fund*. *https://www.fcc.gov/general/universal-service-fund*.

The rapid increase in the number and data intensity of interconnected devices and technologies—the Internet of Things—is driving demand for time-critical, data-intensive connections for large numbers of devices.[125] While the technology and standards for 5G are still being developed, 5G networks are expected to quicken data speeds, support up to 100 times more connected devices, and provide near-instant universal coverage and availability (see Table 2 for a comparison of 4G and 5G capabilities).[126] These real-time, concurrent, and ultrareliable connections will enable self-driving vehicles, smart cities, and augmented reality and virtual reality entertainment.[127] The consulting firm IHS estimates 5G networks will enable $12.3 trillion in global economic output and support 22 million jobs by 2035.[128]

Table 2: Comparison of 4G and Future 5G Technology Capabilities

	4G	**5G (Expected 2020)**
Latency*	25 milliseconds	1 millisecond
Peak Data Rates	100 megabits per second	10,000 megabytes per second
Number of Devices†	10,000 devices per square kilometer	1,000,000 devices per square kilometer
Mobility‡	350 kilometers per hour	500 kilometers per hour

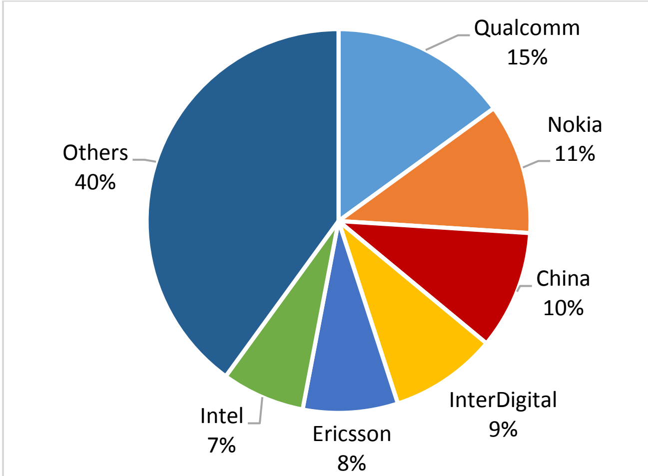
Source: Brice Murara, "5G." *https://www.itu.int/en/ITU-T/Workshops-and-Seminars/standardization/20170402/Documents/S2_4.%20Presentation_IMT%202020%20Requirements-how%20developing%20countries%20can%20cope.pdf*; International Telecommunication Union, "Minimum Requirements Related to Technical Performance for IMT-2020 Radio Interface(s)," Report ITU-R M.2410-0, November 2017. *https://www.itu.int/dms_pub/itu-r/opb/rep/R-REP-M.2410-2017-PDF-E.pdf*; Kathy Pretz, "5G: The Future of Communications Networks," *The Institute*, March 1, 2017. *http://theinstitute.ieee.org/technology-topics/communications/5g-the-future-of-communications-networks.*

U.S. and Chinese Firms Compete for 5G Leadership

While the United States remains at the forefront, Chinese firms Huawei and ZTE are increasing their share of 5G IP and expanding their global market share of network equipment providers.[129] Currently, U.S. firms such as Qualcomm, Microsoft, and InterDigital are global leaders in wireless technology, together owning roughly 31 percent of essential 5G IP patents based on estimates from the IP law firm LexInnova Technology.[130] U.S. firms are facing greater competition particularly from China in the development of 5G.[131] Chinese firms, led by Huawei and ZTE, already own around 10 percent of the essential 5G IP patents—nearly a ten-fold increase from the number of patents they registered for 4G LTE (see Figure 4).[132]

* Latency is the amount of time it takes data to travel from one point to another.
† Connection density is the total number of devices that can be supported while maintaining quality of service.
‡ Mobility is the maximum speed at which a user or device can be moving while maintaining quality of service.

Figure 4: Share of 5G-Essential Patent Holders



Source: Edison Lee, "The Geopolitics of 5G and IoT," *Jeffries*, September 14, 2017. *https://m.jefferies.com/CMSFiles/Jefferies.com/files/Insights/TelecomServ.pdf*.

Chinese State Support for Huawei and ZTE

Huawei and ZTE have been able to advance so rapidly in part due to the Chinese government's significant financial and regulatory support for the information and communication technology (ICT) ecosystem over the past three decades.* China has long held ambitions to build ICT firms that are globally competitive, with a goal of gradually substituting foreign technology and products with local technology and production first at home, and then abroad. China's 13th Five-Year Plan (2016–2020)† reaffirmed state support for 5G development, stating: "[China] will drive forward research in key technologies for 5G mobile networks and ultra-wideband applications, and develop commercial applications of 5G technology," "promote the development of cloud computing and the Internet of Things," and "strengthen China's say in the formulation of international standards."[133] In March 2018, Premier Li Keqiang reiterated Chinese government's support for 5G at the NPC: "We will promote the development of ... 5G mobile communications ..., launch an initiative to shore up weaknesses in major equipment manufacturing, develop industrial Internet of Things platforms, and create Made in China 2025 demonstration zones."[134]

In support of this sector, the Chinese government has provided:

- *State funding for domestic firms:* The Chinese government is channeling more than $33 billion in state funding to support 5G and other designated strategic sectors.‡ [135]

* For an overview of China's efforts to develop its 5G technologies, see Tai Ming Cheung et al., "Planning for Innovation: Understanding China's Plans for Technological, Energy, Industrial, and Defense Development," *University of California Institute on Global Conflict and Cooperation* (prepared for the U.S.-China Economic and Security Review Commission), July 28, 2016, 177–184. *https://www.uscc.gov/sites/default/files/Research/Planning%20for%20Innovation-Understanding%20China%27s%20Plans%20for%20Tech%20Energy%20Industrial%20and%20Defense%20Development072816.pdf*.

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‡ Designated strategic sectors include: (1) new energy vehicles, (2) next-generation information technology, (3) biotechnology, (4) new materials, (5) aerospace, (6) ocean engineering and high-tech ships, (7) railway, (8) robotics, (9) power equipment, and (10) agricultural machinery. State Council of the People's Republic of China, *Made in China 2025*, May 8, 2015. Translation. *http://www.gov.cn/zhengce/content/2015-05/19/content_9784.htm*.

- *Financial support for 5G network deployment:* The government-run Chinese Academy of Information and Communications Technology estimated that China—led by China Mobile, China Unicom, China Telecom, Huawei, and ZTE—will invest $445 billion (RMB 2.8 trillion) on 5G networks from 2020 to 2030.[136]
- *Limited market access for foreign competitors:* China's 5G market is the world's largest, but the Chinese government has guaranteed Huawei and ZTE each a third of China's 5G network contracts, limiting the opportunities for U.S. and other foreign competitors.[137]
- *Localization targets:* The Chinese Academy of Engineering's *Made in China 2025 Key Area Technology Roadmap* seeks to increase the domestic market share of Chinese-branded communication network equipment and mobile terminals to 80 percent by 2025.[138]
- *Participation in global standards bodies:* Since its failed attempt to impose domestic 3G standards internationally, China has been increasing its influence at international standards-setting bodies such as 3rd Generation Partnership Project (3GPP)[*] and International Telecommunications Union (ITU).[†] [139] At the ITU, Chinese delegate Houlin Zhao was elected in January 2015 as the secretary general for a four-year term, and Huawei and China Mobile served as the chair and vice chair, respectively, of the 2015 ITU 5G Focus Group.[140] At 3GPP, the number of Chinese representatives serving in the 57 available chair or vice chair leadership positions rose from eight in 2015 to ten[‡] in 2017.[141]

Huawei and ZTE have leveraged this state support to rapidly gain global market share. Huawei supplies more than half of the 537 global 4G networks and roughly two-thirds of the 90 global 4G LTE networks.[142] Huawei is positioning itself as a major global 5G network supplier, signing Memorandums of Understanding with 45 telecommunications operators around the world to trial Huawei's 5G networks equipment, including Germany's Deutsche Telekom, Britain's BT, and Bell Canada.[143] By comparison, Swedish firm Ericcson has signed 38 Memorandums of Understanding and Finnish firm Nokia has signed 31.[144]

Chinese Government's Strong Role Raises U.S. National Security Concerns

The critical importance of 5G networks to every facet of future business and society raises serious procurement and cybersecurity concerns for the secure deployment of U.S. 5G networks.[145] The Chinese government maintains strong influence over its telecommunication firms through the National Security Law, the Counter-Espionage Law, the Counterterrorism Law, and the new Cybersecurity Law.[146] According to James Mulvenon, general manager at SOS International, "Chinese telecom operators and Chinese equipment companies must provide unfettered access to their networks and equipment to the state security services without prior notification for intercept."[147] He noted that these requirements raise serious concerns about the ability of Chinese ICT firms to refuse requests for access to their global operations from the Chinese government, intelligence, or military services.[148]

In addition, Huawei and ZTE's outsized role in global network equipment manufacturing and the current lack of U.S. network equipment manufacturing capability create serious supply chain risks. In February 2018, Federal Bureau of Investigation Director Christopher Wray highlighted these concerns:

[*] 3GPP leads international efforts to set technical standards for cellular telecommunications network technologies such as 3G and 4G. 3GPP, "About 3GPP Home." *http://www.3gpp.org/about-3gpp/about-3gpp*.

[†] The International Telecommunications Union (ITU) is an intergovernmental public-private partnership under the UN and is composed of 193 governments, approximately 800 companies, and various academic and other international and regional bodies. It allocates global radio spectrum and satellite orbits and establishes international technical standards for information and communication technologies. International Telecommunication Union, "About International Telecommunication Union (ITU)." *https://www.itu.int/en/about/Pages/default.aspx*.

[‡] Huawei (five), China Mobile (three), ZTE (one), and the China Academy of Telecommunications Technology (one) compose China's ten representatives. Edison Lee and Timothy Chau, "Telecom Services: The Geopolitics of 5G and IoT," *Jefferies Franchise Note*, September 14, 2017, 6.

We're deeply concerned about the risks of allowing any company or entity that is beholden to foreign governments that don't share our values to gain positions of power inside our telecommunications networks. That provides the capacity to exert pressure or control over our telecommunications infrastructure. It provides the capacity to maliciously modify or steal information. And it provides the capacity to conduct undetected espionage.[149]

In March 2018, FCC Chairman Pai reiterated these concerns, noting that "hidden 'back doors' to our networks in routers, switches—and virtually any other type of telecommunications equipment—can provide an avenue for hostile governments to inject viruses, launch denial-of-service attacks, steal data, and more."[150] To address these concerns, FCC Chairman Pai proposed barring the use of funds from the FCC's $8.5 billion Universal Service Fund to "purchase equipment or services from any company that poses a national security threat to the integrity of communications networks or their supply chains."[151] The FCC will vote on the proposal at its April 17 meeting.[152]

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