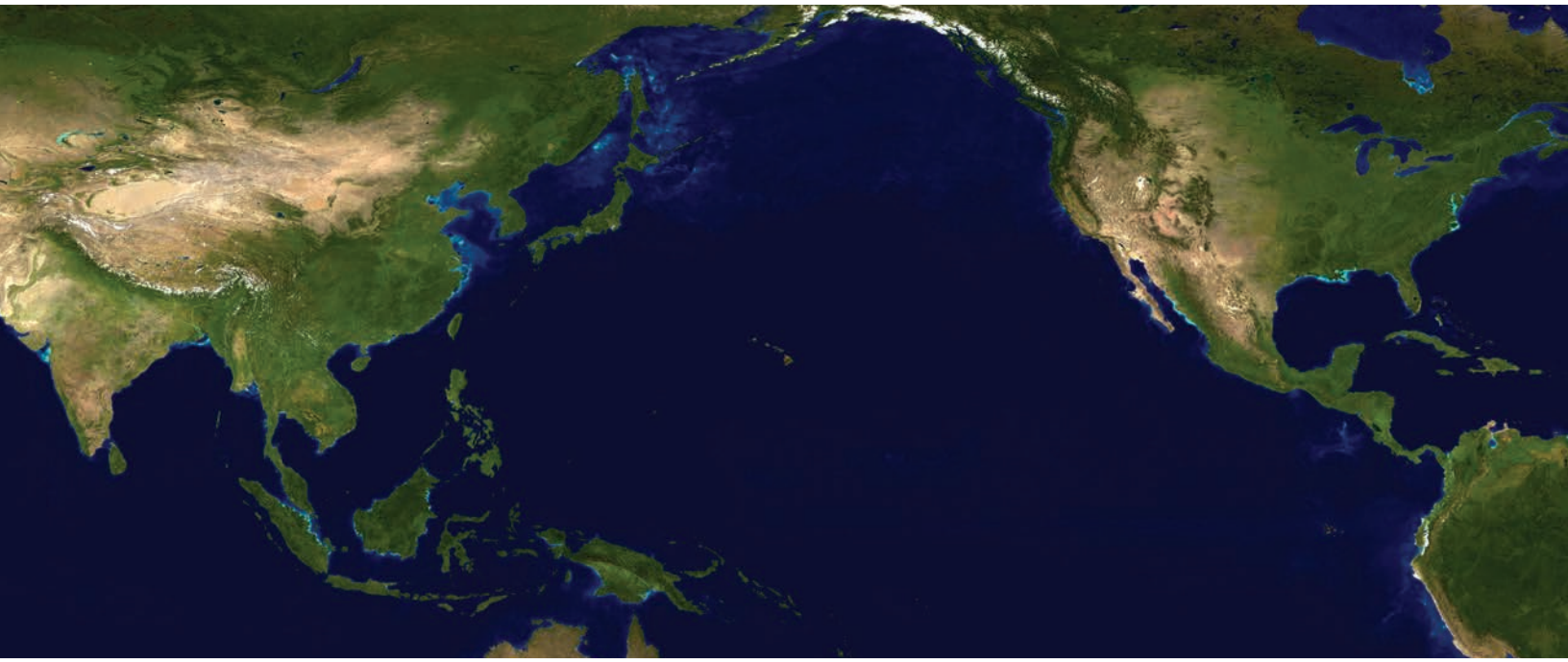
2017 Report to Congress of the U.S.-China Economic and Security Review Commission



Executive Summary and Recommendations

One Hundred Fifteenth Congress
First Session
November 2017

Printed for the use of the
U.S.-China Economic and Security Review Commission
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The Commission was created on October 30, 2000 by the Floyd D. Spence National Defense Authorization Act of 2001, Pub. L. No. 106–398 (codified at 22 U.S.C. § 7002), as amended by: The Treasury and General Government Appropriations Act, 2002, Pub. L. No. 107–67 (Nov. 12, 2001) (regarding employment status of staff and changing annual report due date from March to June); The Consolidated Appropriations Resolution, 2003, Pub. L. No. 108–7 (Feb. 20, 2003) (regarding Commission name change, terms of Commissioners, and responsibilities of the Commission); The Science, State, Justice, Commerce, and Related Agencies Appropriations Act, 2006, Pub. L. No. 109–108 (Nov. 22, 2005) (regarding responsibilities of the Commission and applicability of FACA); The Consolidated Appropriations Act, 2008, Pub. L. No. 110–161 (Dec. 26, 2007) (regarding submission of accounting reports; printing and bindings; compensation for the executive director; changing annual report due date from June to December; and travel by members of the Commission and its staff); The Carl Levin and Howard P. ''Buck'' McKeon National Defense Authorization Act for Fiscal Year 2015, Pub. L. No. 113–291 (Dec. 19, 2014) (regarding responsibilities of the Commission).

The Commission's full charter http://www.uscc.gov/about/uscc-charter and Statutory Mandate http://www.uscc.gov/about/fact_sheet are available via the World Wide Web.

U.S.-China Economic and Security Review Commission

November 15, 2017

The Honorable Orrin G. Hatch
President Pro Tempore of the U.S. Senate, Washington, DC 20510

The Honorable Paul D. Ryan
Speaker of the U.S. House of Representatives, Washington, DC 20510

Dear Senator Hatch and Speaker Ryan:

On behalf of the U.S.-China Economic and Security Review Commission, we are pleased to transmit the Commission's 2017 Annual Report to the Congress—the fifteenth major Report presented to Congress by the Commission—pursuant to Public Law 106–398 (October 30, 2000), as amended by Public Law No. 109–108 (November 22, 2005); as amended by Public Law No. 110–161 (December 26, 2007); as amended by Public Law No. 113–291 (December 19, 2014). This Report responds to the mandate for the Commission "to monitor, investigate, and report to Congress on the national security implications of the bilateral trade and economic relationship between the United States and the People's Republic of China." The Commission reached a broad and bipartisan consensus on the contents of this Report, with all 12 members voting to approve and submit it to Congress.

In accordance with our mandate, this Report, which is current as of October 6, includes detailed treatment of our investigations of the areas identified by Congress for our examination and recommendation. These areas are:

- The role of the People's Republic of China in the proliferation of weapons of mass destruction and other weapon systems (including systems and technologies of a dual use nature), including actions the United States might take to encourage the People's Republic of China to cease such practices;
- The qualitative and quantitative nature of the transfer of United States production activities to the People's Republic of China, including the relocation of manufacturing, advanced technology and intellectual property, and research and development facilities, the impact of such transfers on the national security of the United States (including the dependence of the national security industrial base of the United States on imports from China), the economic security of the United States, and employment in the United States, and the adequacy of United States export control laws in relation to the People's Republic of China;
- The effects of the need for energy and natural resources in the People's Republic of China on the foreign and military policies of the People's Republic of China, the impact of the large and growing economy of the People's Republic of China on world energy and natural resource supplies, prices, and the environment, and the role the United States can play (including through joint research and development efforts and technological assistance) in influencing the energy and natural resource policies of the People's Republic of China;
- Foreign investment by the United States in the People's Republic of China and by the People's Republic of China in the United States, including an assessment of its economic and security implications, the challenges to market access confronting potential United States investment in the People's Republic of China, and foreign activities by financial institutions in the People's Republic of China;
- The military plans, strategy and doctrine of the People's Republic of China, the structure and organization of the People's Republic of China military, the decision-making process of the People's Republic of China military, the interaction between the civilian and military leadership in the People's Republic of China, the development and promotion process for leaders in the People's Republic of China military, deployments of the People's Republic of China military, resources available to the People's Republic of China military (including the development and execution of budgets and the allocation of funds), force modernization objectives and trends for the People's Republic of China military, and the implications of such objectives and trends for the national security of the United States;
- The strategic economic and security implications of the cyber capabilities and operations of the People's Republic of China;

- The national budget, fiscal policy, monetary policy, capital controls, and currency management practices of the People's Republic of China, their impact on internal stability in the People's Republic of China, and their implications for the United States;
- The drivers, nature, and implications of the growing economic, technological, political, cultural, people-to-people, and security relations of the People's Republic of China's with other countries, regions, and international and regional entities (including multilateral organizations), including the relationship among the United States, Taiwan, and the People's Republic of China;
- The compliance of the People's Republic of China with its commitments to the World Trade Organization, other multilateral commitments, bilateral agreements signed with the United States, commitments made to bilateral science and technology programs, and any other commitments and agreements strategic to the United States (including agreements on intellectual property rights and prison labor imports), and United States enforcement policies with respect to such agreements;
- The implications of restrictions on speech and access to information in the People's Republic of China for its relations with the United States in economic and security policy, as well as any potential impact of media control by the People's Republic of China on United States economic interests; and
- The safety of food, drug, and other products imported from China, the measures used by the People's Republic of China Government and the United States Government to monitor and enforce product safety, and the role the United States can play (including through technical assistance) to improve product safety in the People's Republic of China.

The Commission conducted seven public hearings and one public roundtable, taking testimony from 60 expert witnesses from commercial industries, academia, think tanks, research institutions, and other backgrounds. For each of these hearings, the Commission produced a transcript (posted on its website at www.uscc.gov). The Commission received a number of briefings by executive branch agencies and the Intelligence Community, including classified briefings on China's military modernization, China's defense and security activities in the Asia Pacific, China's advanced weapons, China's relations with Continental Southeast Asia, Northeast Asia, and Hong Kong, China's aviation industry, and China's cyber activities. The Commission is preparing a classified report to Congress on these and other topics. The Commission also received briefs by foreign diplomatic and military officials as well as U.S. and foreign nongovernmental experts.

Commissioners made official delegation visits to Taiwan, Hong Kong, South Korea, Japan, Thailand, and Burma to hear and discuss perspectives on China and its global and regional activities. In these visits, the Commission delegation met with U.S. diplomats, host government officials, business representatives, academics, journalists, and other experts.

The Commission also relied substantially on the work of our excellent professional staff and supported outside research in accordance with our mandate.

The Report includes 26 recommendations for Congressional action, which appear on page 25 at the conclusion of the Executive Summary.

We offer this Report to Congress in the hope that it will be useful as an updated baseline for assessing progress and challenges in U.S.-China relations.

Thank you for the opportunity to serve. We look forward to continuing to work with you in the upcoming year to address issues of concern in the U.S.-China relationship.

Yours truly,

Carolyn Bartholomew
Chairman

Dennis C. Shea
Vice Chairman

Contents

Introduction

As the Commission's Annual Report was going to print in October 2017, the Chinese Communist Party (CCP) was preparing to hold its 19th Party Congress, where it would appoint China's new leadership team and set the agenda for the next five years of economic, political, and strategic development. Chinese President and CCP General Secretary Xi Jinping, who has been methodically consolidating his political power since ascending to China's highest office, is poised to emerge as the most powerful Chinese leader since Deng Xiaoping.

What will China's leaders prioritize over the next five years? How will they go about implementing these goals? And what will these priorities mean for the United States, economically, geopolitically, and militarily? In following Chinese government actions over the past decade, the Commission has observed several trends that we expect will continue.

In the economic realm, despite early promises of free-market reforms, the Xi government has ushered in a period of increased state control as the government takes a firmer lead in driving China's development agenda. Over the course of several five-year plans—Chinese government blueprints for guiding the country's economic and technological evolution—Chinese leaders have articulated a vision of China as an economically dynamic technological powerhouse. The government has exploited a full range of tools at its disposal to implement this vision, from providing subsidies to help Chinese companies expand at home and abroad to setting standards that favor domestic technology. As new laws come into effect choking off the ability of foreign companies to access and transfer vital business intelligence across China's borders, malicious Chinese actors engage in cyber-enabled theft of foreign intellectual property.

U.S. companies wishing to participate in China's market have had to pay an increasingly steep price for admission, surrendering technology and meeting regulatory requirements that favor Chinese firms. Large and lucrative portions of China's economy, including many high-tech sectors and financial services, are closed to foreign firms. Meanwhile, over the last couple of years, government largesse has enabled Chinese companies to go around the world acquiring valuable assets in cutting-edge industries like semiconductors, robotics, and artificial intelligence. Foreign companies cannot do the same in China.

President Xi has done more than any other modern Chinese leader to expand China's presence on the world stage. Part coercion, part charm offensive, his ambitious global agenda is creating pockets of influence, leverage, and control from the East and South China seas to Africa to Europe.

The charm offensive is typified by "One Belt, One Road," the hallmark initiative of President Xi's administration, which seeks to bring more than 60 countries into China's economic and strategic orbit. China's engagement with continental Southeast Asia, which is profiled in this Report, is also characterized by this kind of engagement. In Thailand, for example, Beijing has taken advantage of the rift between Washington and the Thai military junta to grow its influence there, primarily through economic engagement. China's push for global influence has recently expanded to the media realm—including the U.S. entertainment industry—with Beijing using various tactics to encourage foreign media to portray China in a positive light. Meanwhile, in its effort to develop a truly global military, China reached a major milestone this year when it established its first-ever overseas military base in Djibouti.

In addition to its charm offensive, China increasingly relies on coercion as a means to control its neighbors and its claimed territory. The Commission has long monitored China's use of coercion in the South and East China seas. This pattern continued in 2017 despite the fact that in 2016 a UN arbitral tribunal ruled that major elements of China's claims in the South China Sea—including its nine-dash line, land reclamation activities, and other activities in Philippine waters—were unlawful. China's use of economic coercion reached new heights this year when Beijing expressed its displeasure with South Korea's decision to deploy a U.S. missile defense battery against the growing North Korean threat, which China has been unwilling to sufficiently counter. Over the course of several months, China systematically harassed South Korean businesses in China, banning the sale of some South Korean products, and apparently slashing Chinese tourism to South Korea, causing millions of dollars in losses and forcing one company to cut back on operations in China. Meanwhile, Beijing has stubbornly refused to leverage the full weight of its influence to rein in the region's most dangerous threat, North Korea. Closer to home, China has been encroaching on Taiwan and Hong Kong's freedoms and increasing its pressure on Taiwan and Hong Kong leaders, activists, and citizens.

Domestically, China's information controls and censorship have tightened significantly under President Xi. The death of the imprisoned Chinese activist and Nobel peace prize winner Liu Xiaobo—which was heavily censored in China—is a reminder of the tragic consequences of China's longstanding commitment to controlling its citizens by sacrificing their human and civil rights.

President Xi's willingness to employ coercion to advance China's global goals is all the more disconcerting against the backdrop of China's impressive military modernization. He is undertaking ambitious reforms to cement control over the military apparatus and transform China's armed forces into a more powerful joint force capable of undertaking sophisticated operations, particularly in "hotspots" like the East and South China seas and against Taiwan. China's military modernization is being augmented by a centrally-directed effort to develop advanced military technologies at the global frontier—weapons just now being developed or not yet developed by any country. These advanced systems, such as maneuverable reentry vehicles, hypersonic weapons, directed energy weapons, electromagnetic railguns, counterspace weapons, and unmanned and artificial intelligence-equipped weapons, will enable China to compete militarily with the United States.

Taken together, these developments paint a clear picture of China's goals and ambitions. As China expands its role on the world stage, it seeks to diminish the role and influence of the United States in Asia and beyond. It is incumbent on U.S. policymakers to advance a coordinated and comprehensive economic, geostrategic, and military strategy that ensures these goals and ambitions do not disrupt U.S. interests at home or abroad.

Executive Summary

Chapter 1: U.S.-China Economic and Trade Relations

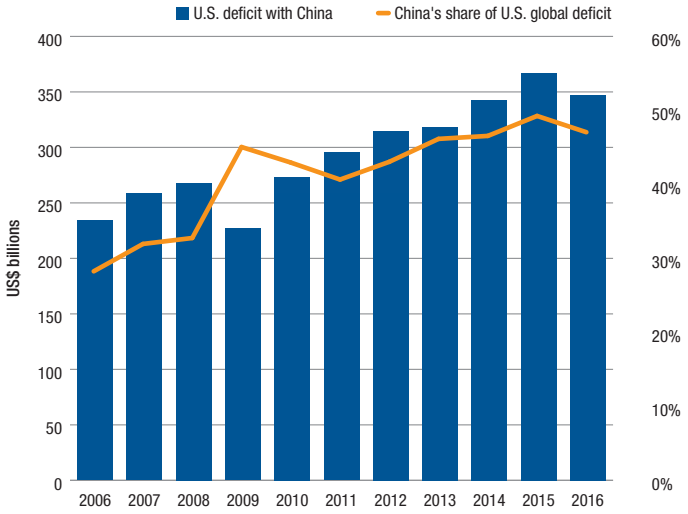
SECTION 1: YEAR IN REVIEW: ECONOMICS AND TRADE

In 2017, main priorities for the Chinese government appear to be increased Party control and consolidation of political power. Indeed, the administration of the Chinese President and General Secretary of the Chinese Communist Party (CCP) Xi Jinping has begun implementing policies in pursuit of these goals to prepare for the leadership transition due to take place at 19th Party Congress in October 2017. Despite President Xi's stated commitment in 2013 to allow market forces to play "a decisive role" in the economy, genuine liberalization has not only stalled, but has also been backsliding.

To stimulate the economy, China's government continues to rely on old standbys, such as investment in infrastructure and real estate, and funding the state sector to the detriment of private enterprise and market orientation. The amount of credit the government is pumping into the economy has swelled to levels not seen since the global financial crisis, and corporate debt has continued to climb to new heights. The Chinese government is dramatically expanding investment in new technology and industries.

The hand of the state is also evident in how Beijing treats foreign companies operating in China and in the impact its trade-distorting policies have on its trade partners. Beijing's discriminatory treatment of U.S. companies and ongoing failure to uphold its World Trade Organization (WTO) obligations continue to damage the bilateral relationship. The U.S. trade deficit in goods with China totaled $347 billion in 2016, the second-highest deficit on record. In the first eight months of 2017, the goods deficit reached $239.1 billion, and is on track to surpass last year's deficit. U.S. companies are feeling increasingly pressured by Chinese policies that demand technology transfers as a price of admission and favor domestic competitors. According to a survey by the American Chamber of Commerce in China, 81 percent of U.S. firms doing business in China reported feeling less welcome in 2016 than they did in 2015.

FIGURE 1: U.S. GOODS TRADE DEFICIT WITH CHINA, 2006–2016



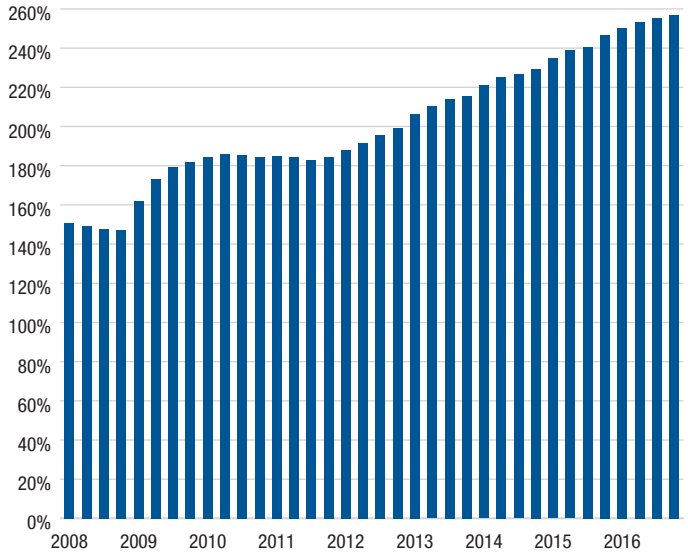
Source: U.S. Census Bureau, *Trade in Goods with China*. https://www.census.gov/foreign-trade/balance/c5700.html.

Key Findings

- In 2016 and the first half of 2017, the Chinese government has reported it met or exceeded the targets it set for gross domestic product (GDP) growth—an important deliverable in advance of the political leadership transitions at the Chinese Communist Party's 19th Party Congress scheduled for October 2017. The Chinese government has achieved this high growth through reliance on old drivers: credit and real estate. However, the government's unwillingness to allow the market to play a bigger role has resulted in deteriorating investment efficiency, meaning higher levels of debt are necessary to generate growth. Household consumption—an essential element of China's economic rebalancing—is growing but at a sluggish pace due to the slow rate of reform.
- China's high and rising debt levels pose a growing threat to the country's financial stability. China's total debt reached $27.5 trillion, or 257 percent of GDP, at the end of 2016. The dramatic rise in China's debt burden can be attributed to the relentless expansion of credit the government has relied on to generate growth since the global financial crisis.
- The U.S. trade deficit in goods with China totaled $347 billion in 2016, the second-highest deficit on record. In the first eight months of 2017, the goods deficit increased 6.2 percent year-on-year to $239.1 billion, with U.S. exports to China reaching $80.2 billion, an increase of 15 percent year-on-year, while imports from China grew 8.3 percent year-on-year to $319.3 billion. In 2016, the U.S. services trade surplus with China reached a record high of $37 billion, driven almost entirely by an increase in Chinese tourism to the United States.

- China's foreign investment climate continues to deteriorate as government policy contributes to rising protectionism and unfair regulatory restrictions on U.S. companies operating in China. The newly implemented cybersecurity law illustrates this trend. The law contains data localization requirements and a security review process U.S. and foreign firms claim can be used to discriminatorily advantage Chinese businesses or access proprietary information from foreign firms.
- U.S. government efforts to tackle China's trade-distorting practices continue to yield limited results. The inaugural Comprehensive Economic Dialogue, created following a meeting between President Trump and President Xi in April 2017, concluded with no concrete agreements or future agenda.
- At the World Trade Organization (WTO), the United States continues to challenge China's non-compliance with key provisions of its accession agreement, including failure to notify subsidies. In the past year, the United States requested WTO consultations over China's management of tariff rate quotas for rice, wheat, and corn, and subsidies to select producers of primary aluminum.

FIGURE 2: CHINA'S TOTAL DEBT-TO-GDP RATIO, 2008–2016



Source: Bank for International Settlements, "Long Series on Total Credit to the Non-Financial Sectors," June 6, 2017.

SECTION 2: CHINESE INVESTMENT IN THE UNITED STATES

Flows of Chinese foreign direct investment (FDI) to the United States have increased dramatically in recent years, fueled by Chinese government policies encouraging FDI in pursuit of gaining market access, new technologies, and higher returns abroad. As a result, reviews of Chinese investments by the Committee on Foreign Investment in the United States (CFIUS) are growing in number and complexity. Three important trends have emerged that may impact CFIUS's ability to review Chinese investments in the United States:

First, Chinese FDI is targeting industries deemed strategic by the Chinese government, including information communications technology, agriculture, and biotechnology. These investments lead to the transfer of valuable U.S. assets, intellectual property, and technology to China, presenting potential risks to critical U.S. economic and national security interests. In many of these sectors, U.S. firms also lack reciprocal treatment in China and are forced to disclose valuable technologies and source code to gain access to the Chinese market.

Second, some private Chinese companies operating in strategic sectors are private only in name, with the Chinese government using an array of measures, including financial support and other incentives, as well as coercion, to influence private business decisions and achieve state goals. This complicates the job of regulators and puts U.S. companies in these sectors at a distinct disadvantage, with their Chinese counterparts making business decisions based on political interests and with the financial backing of the state.

Third, some Chinese companies are attempting to invest in sensitive U.S. industries without obeying normal U.S. regulatory procedures. Their methods may include facilitating investments through shell companies based outside of China and conducting cyber espionage campaigns to financially weaken and then acquire U.S. firms. These methods not only injure U.S. businesses, but also hinder CFIUS's ability to review investments for potential threats to U.S. national security.

TABLE 1: CHINESE FDI FLOWS TO THE UNITED STATES BY SECTOR, 2010 AND 2016 (US$ BILLIONS)

Sector	2010	2016
Real Estate & Hospitality	0.22	17.33
Transportation	0.04	6.04
Consumer Products & Services	0.05	5.65
Entertainment	0	4.78
Electronics	0.01	4.24
Information and Communication Technology	0.22	3.30
Other	3.87	2.94
Finance	0.18	1.93
Total	**4.6**	**46.2**

Source: Rhodium Group, "China Investment Monitor." *http://rhg.com/interactive/china-investment-monitor*.

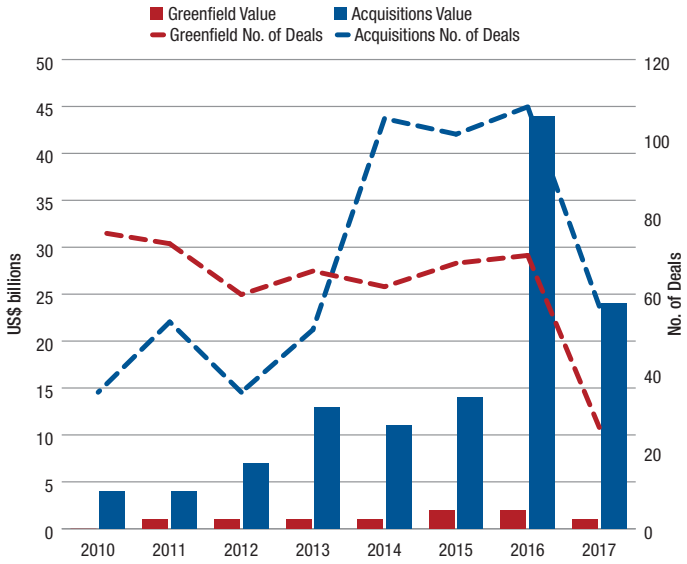
Chinese firms' activities on U.S. capital markets also present challenges for U.S. financial regulators and investors. Chinese laws governing the protection of state secrets and national security prohibit Chinese firms from sharing their audit work reports with foreign regulators, preventing the Public Company Accounting Oversight Board (PCAOB) from inspecting certified public accounting firms in China and Hong Kong. This leaves U.S. investors exposed to potentially exploitative and fraudulent activities by Chinese firms listed in the United States. To date, the Securities and Exchange Commission and PCAOB have been unable to reach an agreement with Chinese regulators to address the inadequacies of China's disclosure practices. After a decade of

negotiations with Chinese regulators, it is apparent that, absent a dramatic policy shift, Beijing is unlikely to cooperate with efforts to make Chinese firms more accountable to their U.S. investors.

Key Findings

- Chinese government policies, coupled with increased investor uncertainty in China, have contributed to increased investment flows to the United States in recent years. In 2017, Chinese investment flows to the United States are expected to decline relative to 2016 as the Chinese government seeks to limit capital outflows and fend off risks from mounting corporate debt.
- Sectors of the U.S. economy deemed strategic by the Chinese government are more likely to be targeted by Chinese firms for investment, while Chinese investments in nonstrategic sectors like entertainment, real estate, and hospitality are declining amid Chinese Communist Party efforts to limit capital outflows and reduce corporate debt.
- Some Chinese firms seek to obscure their dealings in the United States through U.S.-based shell companies or attempt to drive down the value of U.S. assets through sophisticated cyber espionage campaigns. These firms are becoming more sophisticated in their attempts to circumvent Committee on Foreign Investment in the United States (CFIUS) reviews and other U.S. investment regulations.

FIGURE 3: CHINESE INVESTMENT IN THE UNITED STATES, 2010–H1 2017



Source: Rhodium Group, "China Investment Monitor." http://rhg.com/interactive/china-investment-monitor.

- Greenfield investments in the United States are not subject to the CFIUS review process, which may raise national security risks. Although the number of Chinese greenfield investments in the United States remains limited compared to acquisitions of U.S. assets, federal laws and screening mechanisms do not sufficiently require federal authorities to evaluate whether a greenfield investment may pose a national security threat.
- The application of the sovereign immunity defense to commercial cases presents a potential risk for U.S. businesses and individuals, allowing Chinese state-owned enterprises (SOEs) to conduct unlawful activity in the United States without legal consequences. Some Chinese SOEs are evading legal action in the United States by invoking their status as a foreign government entity under the Foreign Sovereign Immunities Act.
- The opaque nature of China's financial system makes it impossible to verify the accuracy of Chinese companies' financial disclosures and auditing reports. Chinese businesses continue to list on U.S. stock exchanges to raise capital, despite operating outside the laws and regulations governing U.S. firms.
- U.S. regulators have struggled to deter Chinese fraud schemes on U.S. exchanges, with Chinese issuers stealing billions of dollars from U.S. investors. Efforts to prosecute the issuers of the fraudulent securities have been unsuccessful, with Chinese regulators choosing not to pursue firms or individuals for crimes committed by Chinese companies listed overseas.
- Some Chinese companies operate with little oversight under China's opaque financial system, leaving U.S. investors exposed to exploitative and fraudulent schemes perpetrated by China-based issuers. Negotiations between the Public Company Accounting Oversight Board and its counterparts in China have resulted in little progress toward securing increased cross-border transparency and accountability.

TABLE 2: CHINESE FIRMS LISTED IN THE UNITED STATES, 2012 AND 2017

	2012	2017
Number of Listings	188	130
Total Market Capitalization (US$ billions)	$119	$536

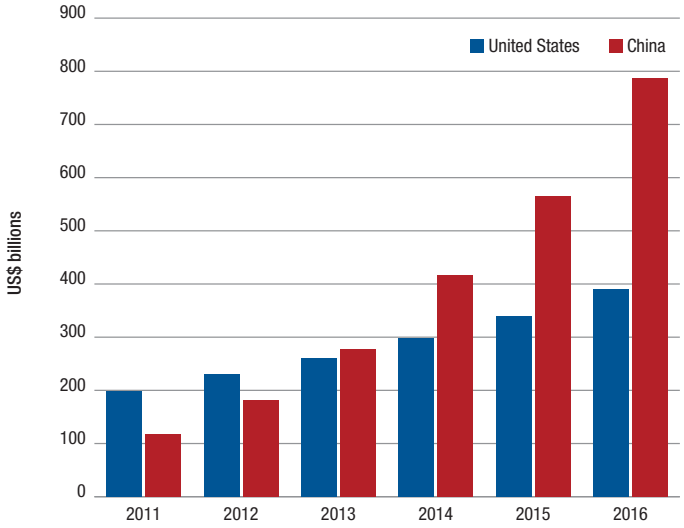
Note: These figures represent only Chinese firms listed as American depository receipts on the New York Stock Exchange, NASDAQ, and American Stock Exchange. 2017 figures are from February 1, 2017.
Source: Heng Ren Partners, email with Commission staff, February 7, 2017.

SECTION 3: U.S. ACCESS TO CHINA'S CONSUMER MARKET

China's strong income growth, expanding middle class, and stated plans to rebalance to a more consumption-driven economy should further boost U.S. services trade with China. In particular, the rapid growth in China's e-commerce, logistics, and financial services sectors presents opportunities for U.S. companies. Services are the mainstay of the U.S. economy, accounting for 80 percent of private sector jobs. The United States maintains a sizable services trade surplus with China, which reached $38 billion in 2016, up from $438 million in 2006.

Despite the potential for U.S. companies, the playing field in China's consumer market remains uneven and highlights a lack of reciprocity in market access. China maintains market access barriers that restrict U.S. services companies, including caps on foreign equity, discriminatory licensing requirements, and data localization policies. Although China has gradually opened up its services sector to foreign participation, the pace has been slow and it may be increasingly difficult for U.S. companies to become significant players. For example, while China's regulatory framework for foreign investment in the e-commerce sector has undergone significant liberalization over the last two years, China's e-commerce market already is highly saturated, with Alibaba and JD.com holding more than 80 percent market share combined. Still, China's e-commerce boom could offer opportunities for U.S. retailers and brands due to growing Chinese demand for foreign products, particularly in areas where the United States excels, such as high-quality foods and supplements, beauty products, and healthcare-related goods.

FIGURE 4: ONLINE RETAIL SALES, CHINA VS. UNITED STATES, 2011–2016



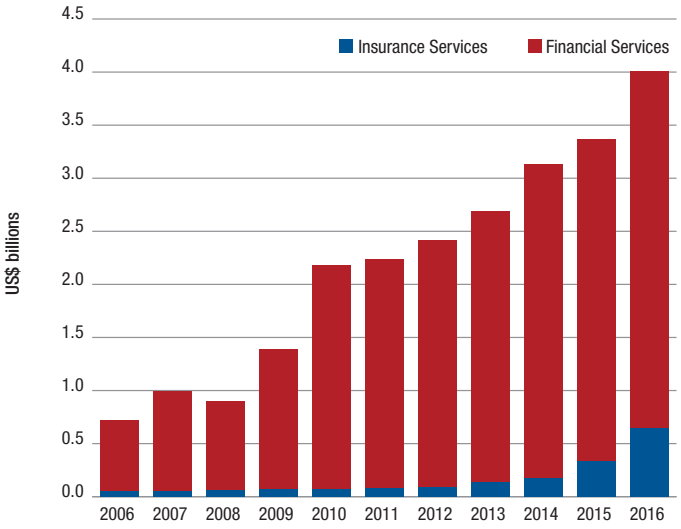
Source: China E-Business Research Center via CEIC database; U.S. Census Bureau, *Quarterly Retail E-Commerce Sales*, May 16, 2017.

China's consumer market is being reshaped by the country's major technology companies. Armed with government support, capital reserves, and troves of consumer data, these companies came to dominate China's market by integrating social media, e-commerce, and financial services to capture increasing swaths of the consumer experience. China's restrictions on foreign participation in the country's digital ecosystem limit the ability of U.S. companies to similarly leverage Chinese consumer data. In addition, state-owned enterprises remain major players in the services sector, particularly in banking, transportation, and telecommunications. U.S. firms cannot go toe-to-toe with China's technology giants and state-owned enterprises, and in most consumer segments, are largely relegated to partnering with domestic firms. U.S. services trade with China cannot reach its full potential as long as these barriers remain.

Key Findings

- China's rebalancing to a more consumption-driven growth model should present opportunities for U.S. companies in the e-commerce, logistics, and financial services sectors. However, U.S. companies operating in China do not have a level playing field and continue to face significant market access challenges, including informal bans on entry, caps on foreign equity, licensing delays, and data localization policies.
- China is the largest e-commerce market in the world, with e-commerce sales reaching $787 billion in 2016. According to the U.S. Department of Commerce, by 2019 an estimated one out of every three retail dollars in China will be spent online, the highest percentage in the world. Although China has traditionally provided the world with its manufactured goods, its e-commerce boom should offer increased opportunities for U.S. retailers and brands, with more and more Chinese consumers purchasing foreign goods. Demand is strong in areas where the United States excels, such as high-quality foods and supplements, beauty products, and healthcare-related goods.

FIGURE 5: U.S. FINANCIAL SERVICES EXPORTS TO CHINA, 2006–2016



Source: U.S. Department of Commerce, Bureau of Economic Analysis.

- Although China's e-commerce market offers opportunities for U.S. retailers and brands, it is not without its challenges and risks. While the Chinese government has made some improvements in enforcing intellectual property rights, intellectual property issues remain a key challenge for U.S. companies operating in China. In particular, the prevalence of counterfeit goods on Chinese e-commerce platforms continues to hurt U.S. retailers and brands.

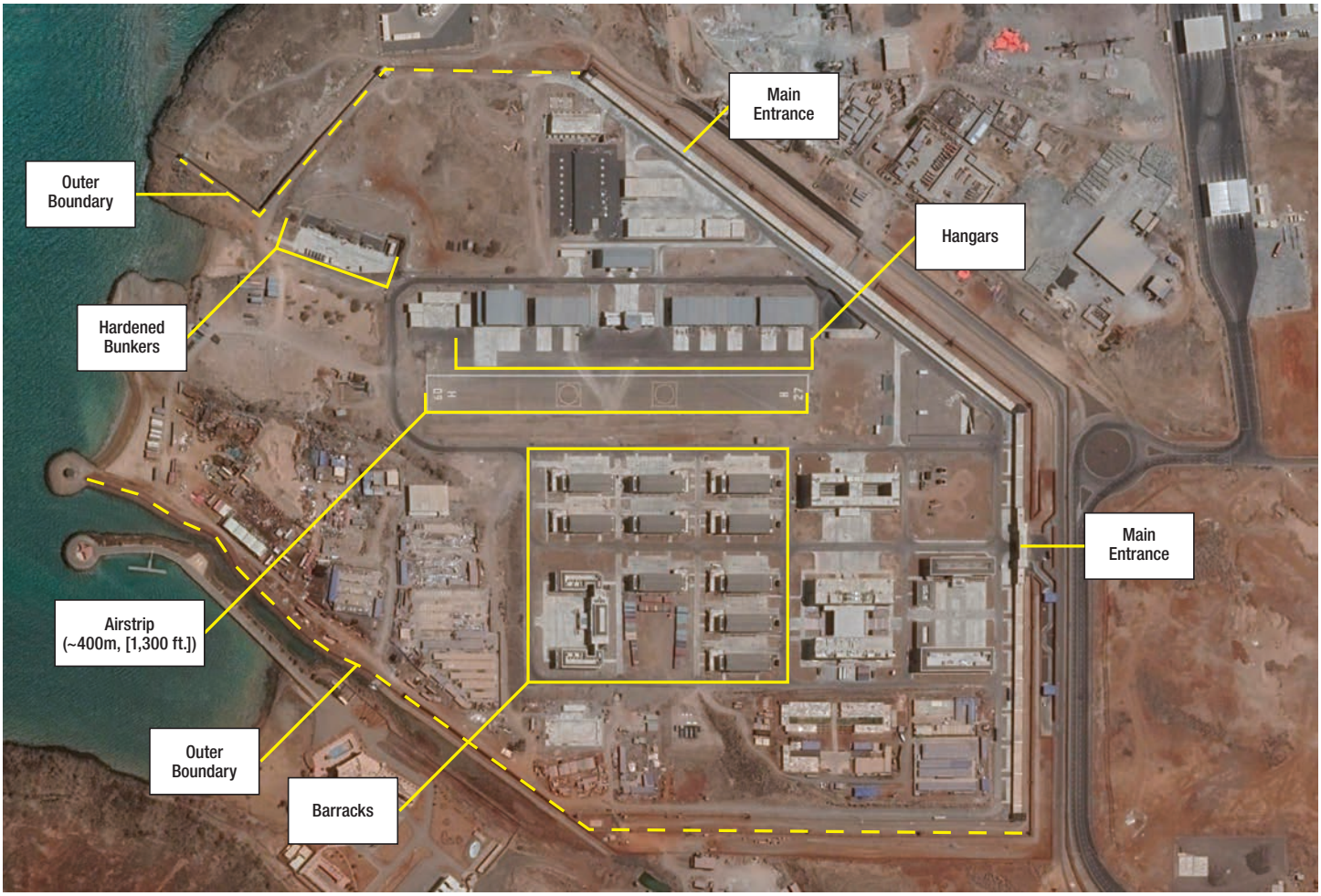
- E-commerce has been a key driver of improvements to China's $2.2-trillion-dollar logistics sector. Yet, China's domestic logistics industry remains underdeveloped, due to the country's historical focus on improving export logistics at the expense of domestic logistics infrastructure. This has caused logistics to become a major bottleneck for China's e-commerce sector. China's efforts to develop and modernize its express delivery industry could offer U.S. logistics firms like FedEx and UPS opportunities to expand their China operations.
- Financial services have been a major driver of growth within China's services sector, increasing 11 percent annually from 2012 to 2016. However, Chinese consumers' access to financial services remains inadequate, and most Chinese consumers lack formal credit histories. Improving their access to financial services will be critical for raising domestic consumption levels. In addition, China has made limited progress in implementing reforms to improve the market orientation and efficiency of its financial sector.
- Financial services are a mainstay of the U.S. economy and a major services export to China. While China has taken some steps to expand foreign firms' access to its financial markets since joining the World Trade Organization, U.S. financial services companies continue to face significant market access barriers in China. These include informal and formal bans on entry, equity caps, licensing restrictions, and data localization requirements. China's new cybersecurity law poses additional challenges for U.S. financial institutions operating in China. As a result, U.S. firms' market share in China's financial sector has been stagnant or declining in recent years.
- China has become a global leader in financial technology. China's Internet giants have emerged as significant players not only in e-commerce and logistics, but also in China's financial services sector, particularly in payments and lending.

TABLE 3: CHINA'S DIGITAL ECOSYSTEM IS HIGHLY INTEGRATED

	E-Commerce	Payments	Social Media	Search
Alibaba or Alibaba-invested service	**Taobao** China's largest mobile commerce platform, with integrated entertainment and social features **Tmall** China's largest third-party platform for brands and retailers **80% market share** Gross merchandise value (GMV), 2016: $556 billion (RMB 3,767 billion)	**Alipay** China's largest online third-party payment system, with more than 450 million active users, compared with about 12 million for Apple Pay **55% market share** Total payment volume, 2016: $1.7 trillion (RMB 11.5 trillion)	**Sina Weibo** China's biggest social media platform (Twitter-like microblog) **310 million monthly users**	**Shenma** **Mobile search engine** **6% market share**
Tencent or Tencent-invested service	**JD.com** Direct sales e-commerce platform (similar to Amazon) **15% market share** GMV, 2016: $97.2 billion (RMB 658.2 billion)	**TenPay** Payments integrated into popular messaging app **37% market share** Total payment volume, 2016: $1.2 trillion (RMB 8.5 trillion)	**WeChat** Messaging app with integrated shopping features **890 million monthly users** **QQ** Popular messaging app with a focus on integrated games and blogging **870 million monthly users**	**Sogou** Search engine **3% market shar**
Baidu		**Baidu Wallet** Payment system from largest search engine **<1% market share**		**Baidu** China's largest search engine **80% market share**
Services independent of Alibaba, Tencent, and Baidu	**Suning, Vipshop, Gome** **~5% market share**	**1qianbao, Union Mobile Financial, LianLian Pay, UnionPay, Yeepay, 99Bill** **7% market share**		

Source: Various. See the full Annual Report for complete list of sources.

FIGURE 6: CHINA'S MILITARY BASE IN DJIBOUTI (SEPTEMBER 4, 2017)



Source: Adapted from Google Earth; Jeremy Binnie (@JeremyBinnie), "Our annotated satellite imagery of the Chinese base in Djibouti," August 4, 2017. Tweet; Stratfor, "Looking over China's Latest Great Wall," July 26, 2017. https://worldview.stratfor.com/article/looking-over-chinas-latest-great-wall.

Chapter 2: U.S.-China Security Relations

SECTION 1: YEAR IN REVIEW: SECURITY AND FOREIGN AFFAIRS

The year 2017 saw the continued expansion of China's military and other security activities in pursuit of national interests close to home and far afield. Beijing employed a mix of coercion and engagement to further these interests.

Throughout 2017, Beijing tightened its effective control over the South China Sea by continuing to militarize the artificial islands it occupies there and by pressuring other claimants and regional countries to accept its dominance. It has not been deterred by, and in fact has rejected, the 2016 ruling by the Permanent Court of Arbitration in The Hague, which found much of China's claims and activities in the South China Sea to be unlawful. China increased tensions in other ways, including by illegally seizing a U.S. Navy underwater unmanned vehicle. China also sought to advance its territorial claims in South Asia by building a road into a disputed portion of the China-Bhutan-India border. This led to a two-month standoff between Chinese and Indian border forces, which ultimately ended peacefully.

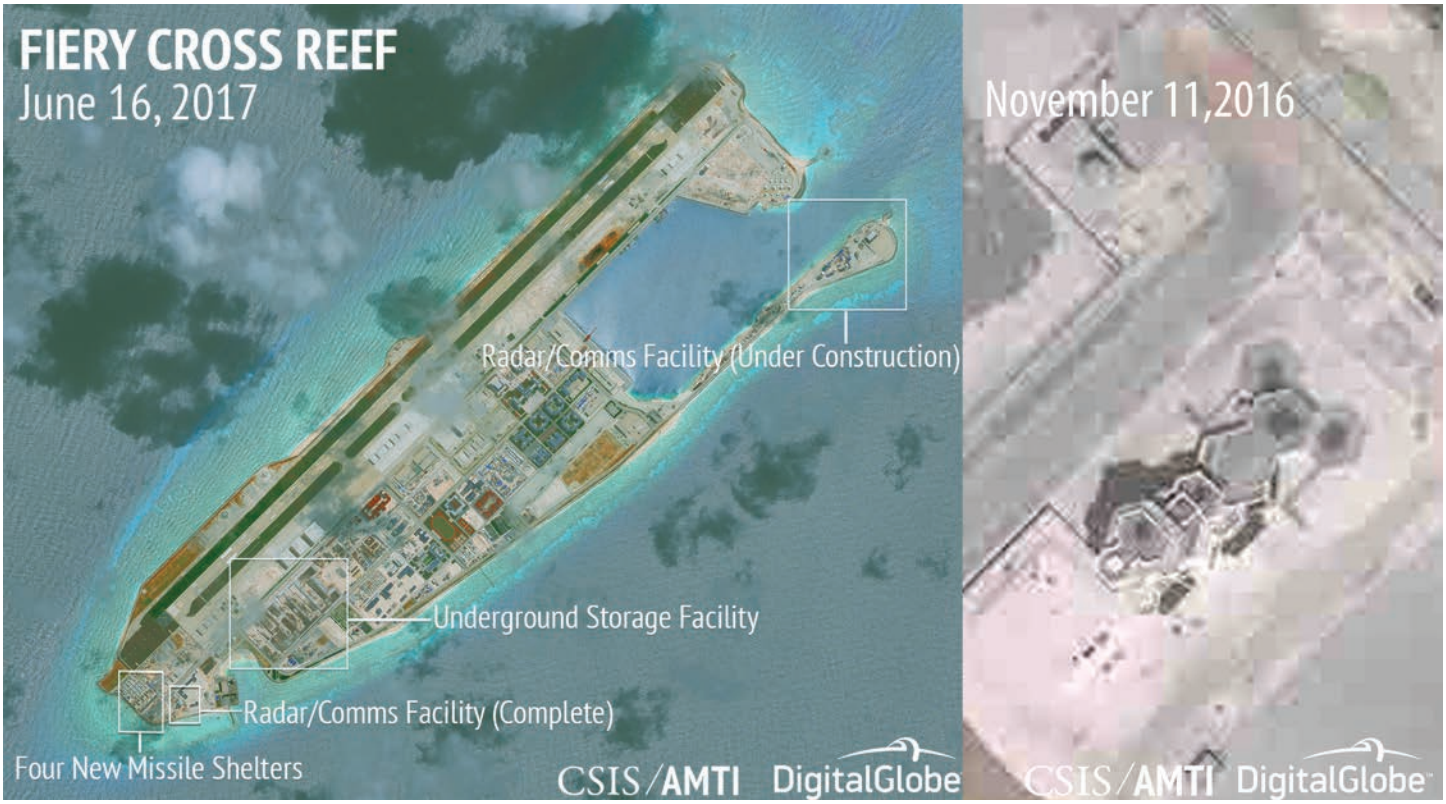
China also advanced its interests through its ongoing One Belt, One Road initiative, and enhanced security cooperation with countries around the world. Currently, One Belt, One Road incorporates around 60 countries and reportedly includes $900 billion worth of current or planned projects. Championed by President Xi, the initiative is ostensibly an economic endeavor intended to bring infrastructure projects, connectivity, and economic growth to Eurasia and beyond. It also has several unspoken strategic objectives: establishing strategic access points for China around the world, primarily via port infrastructure; augmenting China's energy security with a network of pipelines and energy projects; expanding domestic and regional security and stability by countering fundamentalism and terrorism; and gaining influence and leverage (and countering U.S. influence) over other countries.

As China's economic and strategic interests expand outward, China's security engagement has followed. China was the third-largest arms exporter worldwide in aggregate terms in the time period 2012–2016, and has sold arms to 44 countries. Meanwhile, the People's Liberation Army (PLA) has increased military-to-military engagement with other militaries. In 2017, China deployed its 27th

naval task group for antipiracy patrols in the Gulf of Aden, where it has conducted more than 1,000 escort missions since 2008. Further, China expanded its involvement in UN peacekeeping activities, deploying a 140-soldier helicopter unit for peacekeeping purposes for the first time (to the Darfur region of Sudan). China also opened its first overseas military base, in Djibouti, in 2017. According to Beijing, the base will mainly be used to provide assistance to Chinese forces conducting antipiracy, peacekeeping, and humanitarian missions in the region. Its strategic location—several miles from Camp Lemonnier, one of the largest and most critical U.S. military installations abroad—may enable the PLA to surveil U.S. military activities.

Despite efforts by the Xi and Trump governments to set a positive tone for U.S.-China ties, tensions over security issues remain at the forefront of the relationship, with the South China Sea, Taiwan, and especially North Korea as the primary flashpoints.

FIGURE 7: CHINA'S NEW DEFENSES ON FIERY CROSS REEF IN THE SOUTH CHINA SEA



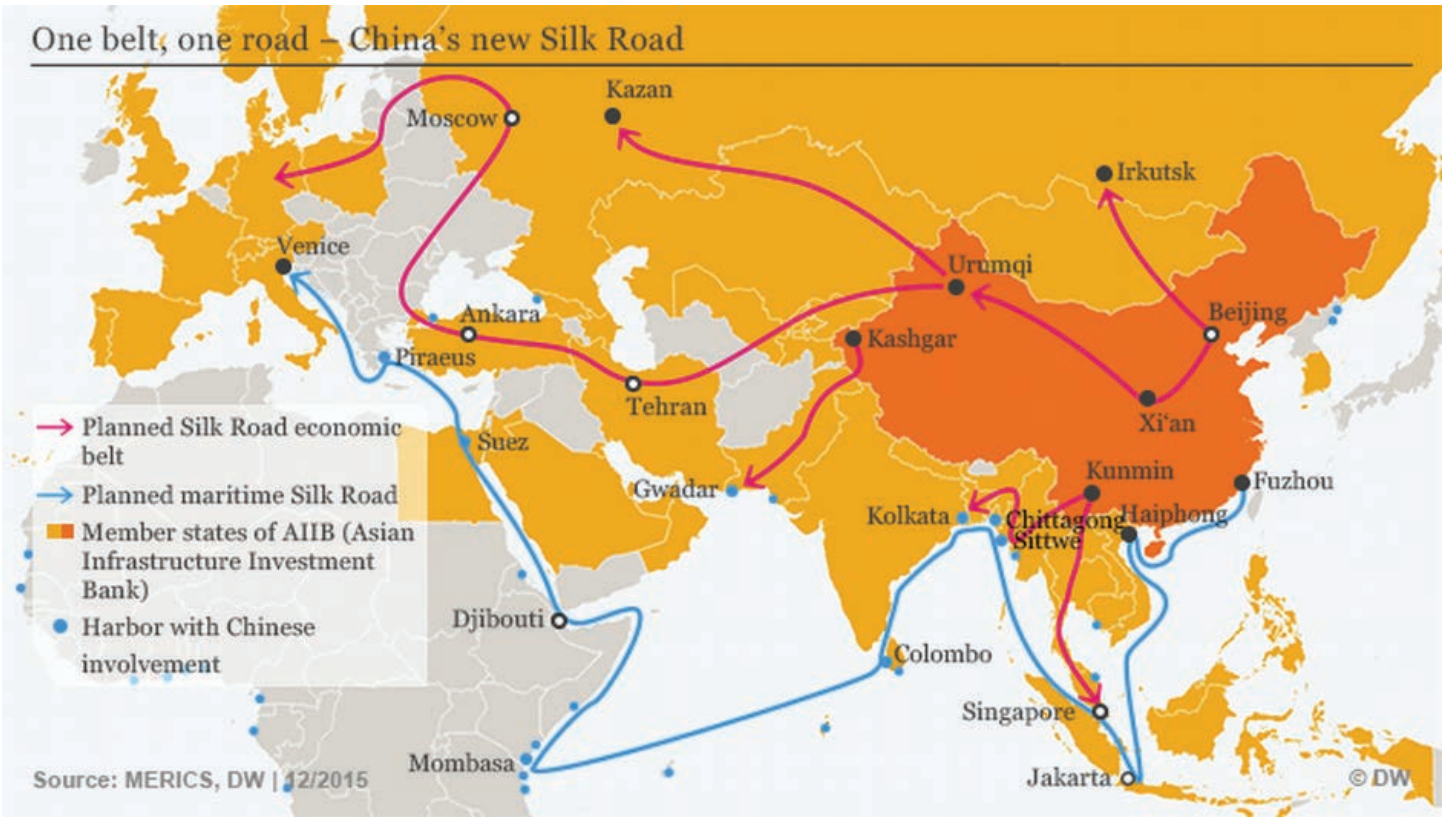
Note: The image on the left depicts the reef's new missile shelters, storage facilities, and radar facilities, and the one on the right depicts its new point-defense systems.

Source: Center for Strategic and International Studies Asia Maritime Transparency Initiative, "Updated: China's Big Three near Completion," June 29, 2017. *https://amti.csis.org/chinas-big-three-near-completion/*; Center for Strategic and International Studies Asia Maritime Transparency Initiative, "China's New Spratly Island Defenses," December 13, 2016. *https://amti.csis.org/chinas-new-spratly-island-defenses/*.

Key Findings

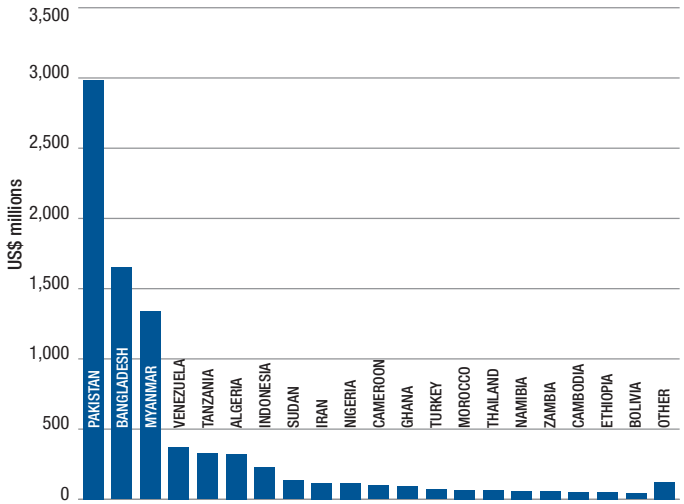
- China's territorial disputes in the South China Sea and in South Asia flared in 2017. China continued to rely primarily on nonmilitary and semiofficial actors (such as the China Coast Guard and maritime militia) to advance its interests in the disputed South China Sea, straining already-unsettled relations with the Philippines and Vietnam. The 2016 ruling by the Permanent Court of Arbitration in The Hague, which overwhelmingly sided against China's position, has not deterred Beijing. China's territorial assertiveness was also on display when Chinese armed forces attempted to consolidate control over territory disputed by Bhutan and India. Ultimately, India was more successful than the Philippines and Vietnam in countering Chinese coercion.
- China's One Belt, One Road initiative continued to expand in 2017. Although China claims the mega-project is primarily economic in nature, strategic imperatives are at the heart of the initiative. China aims to use One Belt, One Road projects to expand its access to strategically important places, particularly in the Indian Ocean; to enhance its energy security; and to increase its leverage and influence over other countries.
- The People's Liberation Army continues to extend its presence outside of China's immediate periphery by opening its first overseas military base in Djibouti, increasing its contributions to UN peacekeeping operations, and conducting more bilateral and multilateral exercises. China's arms exports continued to grow in volume and sophistication in 2017, although they remain limited to low- and middle-income countries and are dwarfed by U.S. and Russian sales in value. The People's Liberation Army's expanded exercise portfolio includes new partners, such as Burma and Nepal, as well as long-time partners Pakistan and Russia. China's defense ties with Russia continued an upward trend in 2017.
- U.S.-China security relations saw new dialogue formats emerge following the U.S. presidential transition, but were marked by growing tension due to disagreements over issues such as North Korean denuclearization and China's continued coercive actions in regional territorial disputes.

FIGURE 8: CHINA'S ONE BELT, ONE ROAD INITIATIVE



Source: Galina Petrovskaya, "'Silk Road' in EU: Trans-Caspian Transit Bypassing Russia," *Deutsche Welle*, September 3, 2016. Staff translation.

FIGURE 9: CHINA'S ARMS SALES BY RECIPIENT, 2012–2016 (CONSTANT 1990 DOLLARS)



Source: Stockholm International Peace Research Institute, "SIPRI Arms Transfers Database." https://www.sipri.org/databases/armstransfers.

SECTION 2: CHINA'S MILITARY MODERNIZATION IN 2017

China is pursuing military modernization efforts to improve its antiaccess/area denial, warfighting, force projection, and nuclear deterrence capabilities, in addition to developing capabilities to conduct operations in space and cyberspace. The forces under development, supported by a still-growing military budget (announced to be $151.1 billion for 2017, but likely to be much higher), provide China the capability to conduct military operations beyond its land borders and into disputed waters along its maritime periphery in the East and South China seas. China's ongoing military modernization disrupts stability in East and Southeast Asia and creates challenges for U.S. freedom of action in the region.

The ground forces remain relevant to many PLA missions, such as defending China's land borders and responding to a Taiwan crisis. PLA Army modernization efforts are focused on developing a smaller and more mobile force that is well-suited for offensive operations and overseas missions. This ground force modernization into a "new-type Army" is focused on the development of special operations, helicopter, electronic warfare, light mechanized, and long-range artillery units. This expanding capability could result in U.S. and Chinese forces conducting missions within the same operational space.

To extend the PLA Navy's operational presence in line with Beijing's new strategic assessment that "the traditional mentality that land outweighs sea must be abandoned," China is developing aircraft carriers and carrier aviation, large amphibious ships suited for expeditionary operations, and multi-mission surface combatants and corvette class ships, and is modernizing the submarine force. This is resulting in Chinese ships conducting missions further from China and in proximity to U.S. forces operating in the Indo-Pacific. The U.S. Navy should anticipate a larger forward operational presence by the PLA Navy in the Indo-Pacific at the outset of conflict should a crisis escalate to hostilities.

The PLA Air Force's efforts are focused on developing long-range strike, fifth-generation fighter, airborne early warning and control, aerial refueling, strategic lift, air defense, and intelligence, surveillance, and reconnaissance aircraft. These types of developments are enhancing the ability of the PLA Air Force to conduct air operations farther from China's coast. These air operations have included simulated strike training and patrols over waters between Japan and Taiwan (the Miyako Strait) and between Taiwan and the Philippines (the Bashi Channel), which are sensitive and strategic waters for U.S. allies, friends, and partners in the region.

The PLA Rocket Force continues to improve both its conventional and nuclear forces to enhance long-range strike and deterrence capabilities and is modernizing its forces to increase the reliability and effectiveness of both conventional and nuclear missile systems. One objective of missile force modernization is for China to maintain nuclear forces capable of inflicting enough damage to deter a nuclear attack. China likewise seeks to extend the range of its conventional precision strike capabilities to hold adversary assets at risk at greater distances from China's coastline in the event of a regional conflict, eroding the United States' ability to operate freely in the Western Pacific.

The Strategic Support Force—with responsibility for cyber, electronic, information, and space operations—was established in December 2015 as part of China's military reform and reorganization. This force has incorporated signals intelligence capabilities, electronic warfare and electronic countermeasures, as well as aerospace reconnaissance capabilities. Considering the type of support the Strategic Support Force is expected to provide China's ground, naval, air, and missile forces, the United States must assume it will contribute to antiaccess/area denial operations against forward-deployed U.S. troops should a conflict occur in the region.

Key Findings

- China's military modernization program seeks to advance Beijing's security interests, prevent other countries from challenging those interests, and defend China's sovereignty claims to disputed areas along its border and maritime periphery. The weapons and systems under development and those that are being fielded by China's military—such as intermediate-range ballistic missiles, bombers with long-range precision strike capabilities, and guided missile nuclear attack submarines—are intended to provide China the capability to strike targets further from shore, such as Guam, and potentially complicate U.S. responses to crises involving China in the Indo-Pacific.
- China will continue to modernize strategic air and sea lift capabilities, which will enable China's military to conduct expeditionary operations. The continued production of the Chinese navy's amphibious lift ships and the air force's heavy lift transport aircraft will increase China's ability to deliver troops abroad and to conduct expeditionary operations beyond the first island chain, humanitarian assistance operations, and noncombatant evacuation operations.
- China's increasingly accurate and advanced missile forces are intended to erode the ability of the United States to operate freely in the region in the event of a conflict and are capable of holding U.S. forces in the region at risk.
- China's continued focus on developing counterspace capabilities indicates Beijing seeks to hold U.S. intelligence, surveillance, and reconnaissance satellites at risk in the event of conflict.
- The consolidation of space, cyber, electronic warfare, signals, and potentially human intelligence capabilities under the Strategic Support Force provides China a centralized all-source intelligence apparatus to support national-level decision makers. Furthermore, this development could strengthen the Chinese military's ability to conduct integrated joint operations by providing a wide range of collection capabilities including intelligence, surveillance, and reconnaissance support to commanders responsible for operational forces under the military's five theater commands.

FIGURE 10: PLA ORDER OF BATTLE

PLA GROUND FORCES
- 850,000 Troops
- 13 Group Armies
- 78 Combined Arms Brigades
- 2 Infantry Brigades
- 4 Infantry Divisions
- 1 Mechanized Infantry Brigade
- 15 Air Defense Brigades
- 14 Army Aviation Brigades
- 15 Artillery Brigades
- 1 Airborne Corps
- 15 Special Operations Brigades
- 7,000 Tanks
- 8,000 Artillery Pieces

PLA AIR FORCE AND NAVAL AVIATION
- 1,700 Fighter Aircraft
- 400 Bombers/Attack Aircraft
- 475 Transport Aircraft
- 115 Special Mission Aircraft

PLA NAVY
- 1 Aircraft Carrier
- 26 Destroyers
- 55 Frigates
- 34 Corvettes
- 86 Coastal Patrol (Missile) Boats
- 27 Tank Landing Ships
- 4 Amphibious Transport Docks
- 21 Medium Landing Ships
- 57 Diesel Attack Submarines
- 5 Nuclear Attack Submarines
- 4 Nuclear Ballistic Missile Submarines

PLA ROCKET FORCE
- 75-100 Intercontinental Ballistic Missiles
- 200-300 Medium-Range Ballistic Missiles
- 1,200 Short-Range Ballistic Missiles
- 200-300 Ground-Launched Cruise Missiles
- 200-300 Land-Attack Cruise Missiles

Note: The order of battle and theater command structure presented in this and the following figure reflect Commission assessments based on available open-source information. It is necessarily partial, due to several factors, including: incomplete reporting on China's military modernization developments; uncertainties surrounding China's military reform and reorganization, which is only partially complete; and the general opacity surrounding China's military modernization and reforms. The Commission will continue to track these developments and provide periodic updates.

Source: Various. See full Annual Report for complete list of sources.

FIGURE 11: PLA THEATER COMMANDS

Source: Various. See full Annual Report for complete list of sources.

SECTION 3: HOTSPOTS ALONG CHINA'S MARITIME PERIPHERY

Taiwan, the South China Sea (particularly the Spratly Islands), and the East China Sea (particularly the Senkaku Islands) are major national security interests for China. They also are major sources of tension between China and its neighbors. Complex challenges related to sovereignty and control, access to strategic waterways and resources, nationalism, and alliance and competition dynamics make these areas "hotspots" that could result in armed conflict between China and its neighbors. China's expanding territorial ambitions and its desire to exploit the current so-called "period of strategic opportunity" could invite the risk of conflict, and so the PLA is preparing contingency plans accordingly.

Chinese strategic writings insist unification with Taiwan is "inevitable," and unification by force remains the primary mission for which the PLA trains. Although the risk of large-scale war is remote, brinksmanship or a crisis compounded by miscommunication or miscalculation could spiral into conflict. Cross-Strait instability, which has been exacerbated by Beijing's recent pressure campaign against Taiwan's current government, is increasing the risk of hostilities between China and Taiwan. The PLA is planning for a range of Taiwan contingency operations that likely scale from punitive missile strikes to coerce Taiwan's political leadership to a full-scale invasion of the island. However, a Taiwan landing operation is the most difficult option for the PLA and would require China taking and holding ports and airfields, in addition to conducting amphibious landings, in an effort to seize the island.

Disputes over islands and other land features in the South China Sea could easily escalate into crises, and in fact already have (notably with China's seizure and effective blockade of Philippines-claimed Scarborough Reef in 2012 and the destructive skirmish between Chinese and Vietnamese non-naval forces over a Chinese oil rig in 2014). Should China perceive an intolerable challenge to its claimed sovereignty over one of these disputed areas, it could employ a range of options—including island landing operations, blockades, or missile strikes—to seize control of disputed features. Such operations likely would involve (perhaps even exclusively) its non-naval maritime forces, such as the China Coast Guard and maritime militia, creating operational uncertainty and "grey zone" challenges for adversaries. A conflict involving the Philippines would raise the prospect of the United States—a treaty ally of the Philippines—becoming involved.

The risk of conflict in the East China Sea shifts as overall tensions in the region ebb and flow, but the nature of the China-Japan rivalry is such that any confrontation over the disputed Senkaku Islands could quickly escalate into an armed conflict. As with a South China Sea contingency, non-naval forces likely would play a leading role with naval assets waiting over the horizon. Other potential avenues for seizing the islands could involve China feigning a naval exercise near the islands that quickly turns into an island seizure campaign, or executing a joint amphibious assault to capture and occupy the islands. A Chinese attack on the Senkakus, which are covered by the U.S.-Japan Defense Treaty, would prompt U.S. involvement.

FIGURE 12: MAP OF HOTSPOTS ALONG CHINA'S MARITIME PERIPHERY

Source: Adapted from D-maps.com.
http://www.d-maps.com/carte.php?num_car=13354&lang=en.

Key Findings

- U.S. presence and alliance commitments have helped maintain regional stability in Asia. China's aggressive actions in the East China Sea, South China Sea, and Taiwan Strait threaten principles such as freedom of navigation, the use of international law to settle disputes, and free trade. If Beijing continues to increase its control over the East and South China seas, the United States could receive requests for additional assistance by allies, friends, and partners to improve their capabilities to defend themselves, along with calls for the United States to remain engaged in the region to maintain security and stability.
- With China actively preparing contingency plans for operations against U.S. allies, friends, and partners along China's maritime periphery, the United States and China could quickly become involved in a conflict if Beijing escalates. This risk becomes greater depending on the level of tensions associated with any of the following flashpoints: the Korean Peninsula, the South China Sea, the East China Sea, and cross-Strait relations.
- Chinese leaders are cautious about letting a crisis escalate into conflict, and Chinese military thinkers study "war control" as a method for limiting the scope of a conflict to minimize negative consequences and achieve a victory at minimal cost. However, if Beijing believes the risk of a response to Chinese action is low, China may be tempted to risk brinksmanship to achieve its national objectives. Furthermore, if Beijing is unable to avoid escalation, any crises involving the use of the People's Liberation Army (PLA) create opportunities to widen a crisis into a conflict that results in the use of force.
- China has emphasized building a military capable of responding to situations in multiple regions and has developed theater commands capable of planning and executing missions in their respective areas of responsibility. A key element of success in achieving operational objectives, however, will be managing resources across multiple theaters should China find itself challenged in multiple directions simultaneously. This could create an opportunity to dissuade Chinese aggression or potentially result in Beijing escalating or accelerating a conflict.
- The PLA presently lacks the amphibious lift to directly assault Taiwan, and would instead have to successfully seize ports and airfields for the flow of follow-on forces to conduct on-island operations. Likewise, sustaining a prolonged air and maritime blockade against Taiwan is likely to strain PLA logistical capabilities, potentially disrupt trade routes through East Asia, and inhibit freedom of navigation in the region. These are high-risk operations for China, and may be conducted only after other coercive options are exhausted.
- Military facilities currently under construction in the Spratly Islands are intended to improve the PLA's operational reach by strengthening logistical support, extending operational reach, and bolstering the military's capability to monitor potential adversaries. Once these outposts are completed, they will improve the PLA's ability to take action against Vietnamese or Filipino forces on adjacent features if so ordered. China's militarization of these features is therefore inherently destabilizing for its neighbors who have overlapping sovereignty claims.
- There are several U.S. alliances and other commitments that could be activated by a maritime hotspot conflict with Japan, the Philippines, or Taiwan. Depending on the scenario, the United States could be expected to become involved in a conflict, although China will seek to discourage this by many means, possibly to include ensuring conflict remains in the "grey zone" where U.S. defense commitments are uncertain and the onus of escalation is shifted to China's adversary.
- The forward presence of U.S. forces in East Asia, coupled with the treaty alliances and partnerships of the United States in the region, constitute the most important factor in deterring Chinese adventurism. Nevertheless, they also increase the likelihood, should deterrence fail, that the United States becomes involved in armed conflict. The Commission has documented in previous reports how the balance of military power in the region has shifted in China's direction. Should that shift continue without a change in U.S. policy, there is a danger that Chinese leaders will consider the United States an obstacle to their ambitions that must be removed. In that event, Beijing may decide to escalate a crisis when the circumstances seem favorable to the achievement of China's larger ambitions.

Chapter 3: China and the World

SECTION 1: CHINA AND CONTINENTAL SOUTHEAST ASIA

China's relations with Burma (Myanmar), Cambodia, Laos, and Thailand are driven by two broad goals: taking advantage of Southeast Asia's economic potential and balancing the region's geopolitical opportunities against its security vulnerabilities. In pursuit of these goals, China has leveraged its economic importance to Southeast Asia and capitalized on regional countries' infrastructure needs. China has also forged ties with key regional political groups, particularly in Burma where China has supported different sides of Burma's ethnic conflict.

Economically, the region boasts some of the highest growth rates in the world as well as valuable mineral and agricultural resources, such as Burma's $31 billion jade trade. China uses a number of tactics to exploit the region—including trade links, infrastructure projects, and assistance packages—in a way that benefits China's economic interests. For example, Chinese infrastructure projects in the region will help give Chinese exporters a competitive edge in regional markets and ameliorate excess capacity in China's construction sector. Chinese firms have also invested in plantations and mineral extraction projects that have harmed host countries, including jade smuggling in Burma and pesticide-heavy plantations in Laos that have left thousands of workers sick.

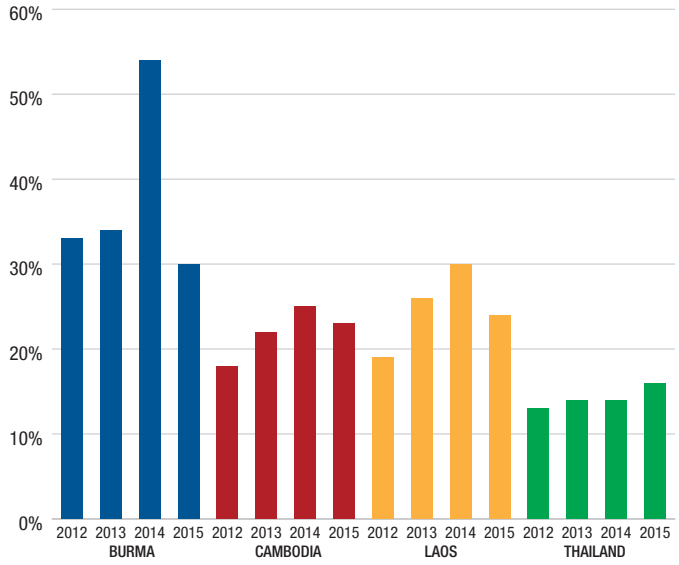
FIGURE 13: CHINA AND CONTINENTAL SOUTHEAST ASIA

Source: Google Maps, edited by Commission staff. *http://maps.google.com*.

Geopolitically, China desires stability and leverage along its 1,370 mile border with Burma where fighting between ethnic armed groups and Burma's army has claimed the lives of Chinese citizens. China sees an opportunity to bypass its energy supply vulnerabilities in the Strait of Malacca by establishing transportation corridors through Burma and has built oil and natural gas pipelines connecting China to Burma's Indian Ocean coast, where China seeks to control a key port. China has used regional countries' membership in the Association of Southeast Nations (ASEAN) to its advantage—China's financial support and close relationship with Cambodia has been pivotal to preventing joint ASEAN opposition to China's land reclamation in the South China Sea. Finally, following the coup in Thailand, China has sought to move closer to the U.S. treaty ally, and has exceeded the United States in arms sales to Thailand, although the degree to which Thai-China ties have improved is uncertain.

China's engagement with the region has challenged U.S. commercial interests and political values. China's business and development model often runs counter to U.S. priorities, such as fostering transparent, accountable government in a region where democracy is challenged. Chinese firms exploit corruption, particularly in Cambodia where quid-pro-quo relationships between Chinese businesses and Cambodian officials thrive. These corrupt environments put U.S. firms at a disadvantage. Chinese projects also exacerbate social instability through environmental damage and community displacement. In particular, Chinese dams on the Mekong River threaten the food security of 60 million people, creating significant stability risks. Despite the region's importance to U.S. interests, U.S. assistance appears to lag significantly behind China's commitments, creating a risk that U.S. priorities will continue to be undermined by China's engagement.

FIGURE 14: CHINA'S SHARE OF TOTAL GOODS TRADE WITH BURMA, CAMBODIA, LAOS, AND THAILAND, 2012 - 2015

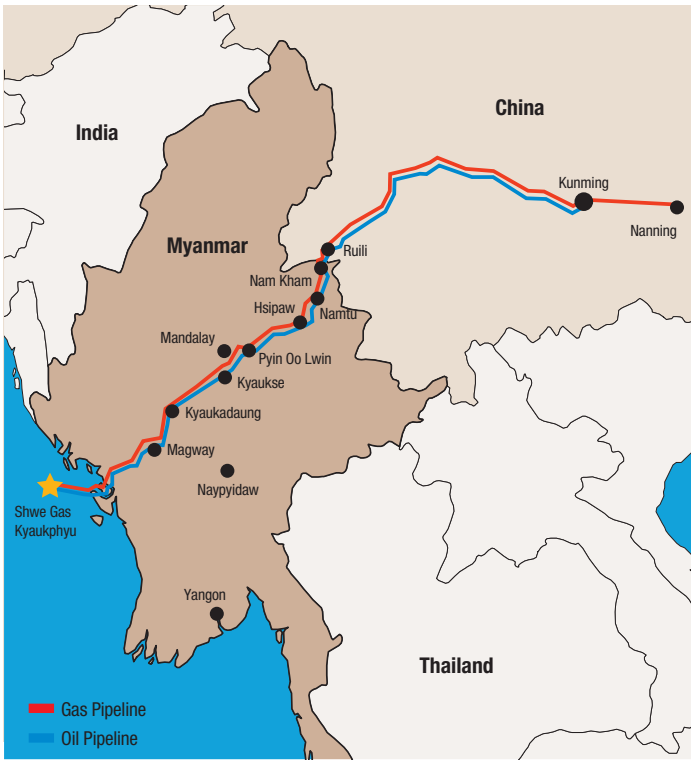


Source: United Nations Comtrade, "International Trade Statistics Database."

Key Findings

- China's pursuit of strategic and economic interests in Burma (Myanmar), Thailand, Cambodia, and Laos often jeopardizes regional environmental conditions, threatens government accountability, and undermines commercial opportunities for U.S. firms.
- China has promoted a model of development in continental Southeast Asia that focuses on economic growth, to the exclusion of political liberalization and social capacity building. This model runs counter to U.S. geopolitical and business interests as Chinese business practices place U.S. firms at a disadvantage in some of Southeast Asia's fastest-growing economies, particularly through behavior that facilitates corruption.
- China pursues several complementary goals in continental Southeast Asia, including bypassing the Strait of Malacca via an overland route in Burma, constructing north-south infrastructure networks linking Kunming to Singapore through Laos, Thailand, Burma, and Vietnam, and increasing export opportunities in the region. The Chinese government also desires to increase control and leverage over Burma along its 1,370-mile-long border, which is both porous and the setting for conflict between ethnic armed groups (EAGs) and the Burmese military. Chinese firms have invested in exploiting natural resources, particularly jade in Burma, agricultural land in Laos, and hydropower resources in Burma and along the Mekong River. China also seeks closer relations with Thailand, a U.S. treaty ally, particularly through military cooperation.
- As much as 82 percent of Chinese imported oil is shipped through the Strait of Malacca making it vulnerable to disruption. To reduce this vulnerability, China has been investing in oil and natural gas pipelines across Burma, which will partially alleviate this problem, supplying China with up to 5 percent of its oil imports and 6 percent of its natural gas imports based on 2016 data.

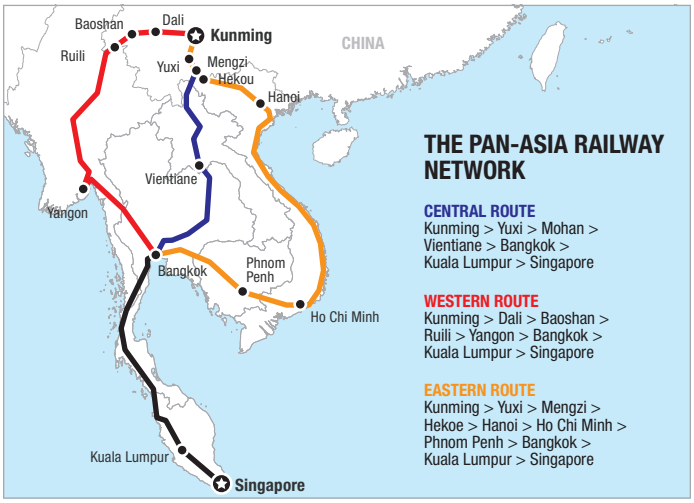
FIGURE 15: CHINA-BURMA PIPELINES



Source: Winnie Tsui, "Myanmar Rising: Opportunities in Asia's Final Production Frontier," *HKTDC Research*, June 8, 2016.

- Chinese dams on the Mekong River threaten Laos, Cambodia, and Vietnam's food security by blocking sediment necessary for agriculture and restricting fish migration. Chinese dams are poised to block half of the sediment in the river system and the dam network on the Lower Mekong is estimated to reduce the fish stock of the entire river system by 42 percent.
- Local resistance to Chinese development has stalled or closed several important Chinese projects, including the $3.6 billion Myitsone Dam in Burma and a railway linking Kunming to the Indian Ocean. Protests against Chinese projects have emerged over environmental concerns, use of Chinese laborers, and contract terms that primarily benefit Chinese firms. Chinese business practices have created friction in Laos and Thailand where Chinese businesses have been closed by the government.
- Japan remains a competitor in continental Southeast Asia for infrastructure development. In 2016, Japan pledged to provide $6.8 billion in infrastructure finance for Mekong River countries. Japan typically supports infrastructure projects that run east-west across the region while China constructs projects that run north-south.

FIGURE 16: PROPOSED KUNMING TO SINGAPORE RAILWAY NETWORK



Source: Terry Frederickson, "Bangkok at the Center of Huge Future Rail Network," *Bangkok Post*, December 28, 2015.

- Cambodia has advocated for China's interests in the Association of Southeast Asian Nations (ASEAN), particularly regarding Chinese land reclamation in the South China Sea. In 2012 and 2016 Cambodia vetoed joint ASEAN resolutions containing language regarding the South China Sea objectionable to the Chinese government, reportedly in concert with Beijing. Beijing has contributed significantly more aid to Cambodia than the United States and other Western countries. Cambodia's government has also granted Chinese businesses special privileges in violation of its own regulations. These privileges appear linked to favors paid to Cambodian officials by Chinese firms.
- Laos has sought good relations with China and turned to China for infrastructure development and investment, but has grown uneasy over the influence China has gained through investment. This unease has caused Laos to rethink its relations with China. In 2016 the Lao People's Revolutionary Party removed Choummaly Sayasone, who was associated with granting economic concessions to Chinese firms as chief of the party.
- China faces a more complicated political landscape in Burma, including the National League for Democracy (NLD) government; the military, which retains considerable political power; and EAGs that control large segments of Burma and conduct military actions against the Burmese government and military. In response, China has leveraged its connections with all three groups to maximize its influence, establishing better relations with the NLD, maintaining contact with military leaders, and using its ties to EAGs to demonstrate its ability to influence Burma's peace process. In leveraging its ties with EAGs, China faces tension between securing stability in its borders and using EAGs and Burma's peace process to obtain influence over the NLD government.
- After U.S.-Thailand relations deteriorated following the 2014 coup, China and Thailand have signed a series of arms deals, including a $393 million submarine purchase. Thailand may be following its historical tradition of balancing multiple powers in its closer military relationship with Beijing.

SECTION 2: CHINA AND NORTHEAST ASIA

Northeast Asia—encompassing China, Japan, North Korea, and South Korea—is the locus of some of the most pressing security challenges in Asia. Two of these countries—Japan and South Korea—are U.S. treaty allies. North Korea, on the other hand, is highly antagonistic to the United States and a threat to global peace and security.

Although Beijing increasingly is frustrated and concerned by Pyongyang's missile and nuclear testing and escalatory rhetoric, China is North Korea's top trading partner, most reliable supporter, and treaty ally. China is necessarily a key player in any significant international effort to manage the North Korean threat, and took some steps to strengthen international sanctions against North Korea in 2017. It is too soon to measure China's compliance with the latest rounds of sanctions, which, if implemented fully, would significantly constrain the North Korean regime's ability to fund its nuclear and conventional weapons programs. Given China's lackluster record of previous sanctions enforcement and continued sanctions violations by Chinese companies exporting dual-use items to North Korea, however, the United States and the international community should keep their expectations low. China's reluctance to assist with the U.S.-led effort to neutralize the North Korean threat is also driven by Beijing's belief that Washington's North Korea policy is designed to strengthen U.S. regional alliances and military posture to contain China.

China-South Korea relations are evidence of this belief. After years of generally positive bilateral relations buoyed by robust trade and cooperative efforts by the countries' top leaders, the China-South Korea relationship took a negative turn starting in 2016 over the planned deployment of a U.S. Terminal High Altitude Area Defense (THAAD) missile defense system to South Korea. China indicated its displeasure with this development by mounting a massive economic retaliation campaign against South Korea, causing millions of dollars in losses and forcing one South Korean company to cut back on operations in China. Comparing China's harsh rhetorical response to THAAD and its lukewarm response to North Korea's provocations, it appears Beijing finds U.S.-South Korea missile defense cooperation to be a greater threat to Chinese interests than a nuclear-armed North Korea. China has clearly signaled to South Korea that cooperation with the United States will be met with punishment from Beijing. This puts Seoul, which already struggles to balance its relations with Washington and Beijing, in a strategically difficult position, and will necessarily complicate U.S. efforts to enhance cooperation with South Korea going forward.

China-Japan relations continue to be strained as well, with the East China Sea dispute remaining the central flashpoint. Although tensions there have declined since their peak in 2012–2013, the dispute continued to simmer in 2017 with persistent Chinese maritime operations near the Senkaku Islands and sharply increasing Chinese air operations in the East China Sea.

In the near term, Chinese aggression toward Japan and economic coercion against South Korea seem to be driving both countries toward closer security cooperation with the United States. Prospects for enhanced South Korea-Japan security cooperation are less certain, however, and longstanding tensions between the two countries complicate U.S. efforts to evolve Northeast Asia's security architecture from a "hub and spokes" model to a more integrated trilateral cooperative structure.

Key Findings

- China's and the United States' divergent approaches to North Korea reflect their fundamentally different priorities in Northeast Asia. The United States has made denuclearization its priority in its North Korea policy, whereas China appears willing to accept a nuclear North Korea rather than upset the status quo. Efforts by Washington to compromise in other areas of the U.S.-China relationship in the hopes of winning Beijing's support in pressuring North Korea risk disappointing results.
- Chinese actors appear to have complied with some provisions of UN sanctions against North Korea and violated others. Despite restrictions on the trade in coal and other goods, China-North Korea trade is robust, with Chinese exports to North Korea increasing significantly in 2017.
- China's objections to the deployment of a U.S. Terminal High Altitude Area Defense (THAAD) missile defense battery in South Korea most likely reflect a deep-seated desire to counter perceived encirclement by the United States by limiting the expansion of the U.S.-allied missile defense system in the region, rather than substantive objections to the practical effect of THAAD's presence in South Korea on China's security environment.
- China's efforts to punish South Korea for hosting THAAD marked a turning point in South Korean attitudes toward China, which until 2016 had been fairly positive. This trend likely will lead to warming U.S.-South Korea defense relations. At the same time, however, Seoul will continue to seek positive relations with Beijing, in part because South Korea is economically dependent on China and relies on China's support to manage the North Korean situation.
- China's continued regional assertiveness and military modernization is contributing to deteriorating Japan-China relations. Japan is likely to continue pursuing military capabilities that would enable it to counter China's expanding military might, as well as North Korea's growing nuclear and missile arsenal.
- Despite North Korea's advancing nuclear and missile programs and China's growing military capabilities, South Korea and Japan have not substantially increased their bilateral defense cooperation and have taken only small steps toward greater trilateral cooperation with the United States. Poor South Korea-Japan relations could hinder the United States' ability to harness its alliances with each country to pursue U.S. interests in the region.
- Most Korean Peninsula conflict or crisis scenarios would require large-scale evacuations of U.S. and other citizens from South Korea. Planning and coordination for noncombatant evacuation operations remain a challenge for the United States, South Korea, and Japan.

SECTION 3: CHINA AND TAIWAN

Cross-Strait relations entered a period of increased tension after President Tsai Ing-wen was elected in January 2016, as Beijing steadily increased pressure on Taiwan. Despite President Tsai's cross-Strait policy of "maintaining the status quo," Beijing has been displeased with her unwillingness to endorse the "one China" framework for cross-Strait relations (a 1992 framework Taipei and Beijing endorsed during the previous administration in Taiwan that acknowledges there is "one China," but that allows each side to maintain its own interpretation of the meaning of "one China"). The measures Beijing is employing to pressure Taiwan include suspending official and semiofficial cross-Strait communication and meetings; establishing diplomatic relations with three of Taiwan's former diplomatic partners (The Gambia, Sao Tome and Principe, and Panama); reducing the number of Chinese group tours to Taiwan and Chinese students who can attend Taiwan universities; refusing to facilitate repatriation to Taiwan of citizens accused of telecommunications fraud in countries with which Taiwan does not have diplomatic relations; and blocking Taiwan's participation in certain international fora, such as the International Civil Aviation Organization and the UN World Health Assembly. A complicating factor in cross-Strait relations is Taiwan's dependence on China-bound exports. China remains Taiwan's largest trading partner, biggest export market, and top source of imports, giving Beijing significant economic leverage over Taipei. President Tsai has sought to reduce Taiwan's reliance on China by diversifying Taiwan's economic ties. Central to this effort is President Tsai's New Southbound Policy, which seeks to strengthen trade, investment, people-to-people, and other links with countries in Southeast Asia, South Asia, and Oceania. The policy already has led to increased tourism to Taiwan, with the number of visitors from New Southbound Policy target countries increasing 28.6 percent in the first six months after the policy was enacted.

TABLE 4: TAIWAN'S TRADE WITH SELECT PARTNERS, JAN. – JUL. 2016 AND JAN. – JUL. 2017

		US$ billions Jan. – Jul.		Share of Taiwan's Total Trade (%) Jan. – Jul.	
Trade Partner		2016	2017	2016	2017
ASEAN	Exports	26.7	30.9	18.7	19.2
	Imports	14.8	18.0	11.6	12.3
	Balance	11.9	12.9		
Australia	Exports	1.6	1.5	1.1	1
	Imports	3.2	4.9	2.5	3.4
	Balance	(1.6)	(3.4)		
China	Exports	35.3	42.9	24.7	26.7
	Imports	24.7	27.4	19.5	18.7
	Balance	10.6	15.5		
India	Exports	1.6	1.7	1.1	1.1
	Imports	1	1.9	0.8	1.3
	Balance	0.6	(0.2)		
New Zealand	Exports	0.2	0.2	0.1	0.1
	Imports	0.5	0.5	0.4	0.3
	Balance	(0.3)	(0.3)		
United States	Exports	17.9	19.7	12.5	12.3
	Imports	16.4	17.1	12.9	11.7
	Balance	1.5	2.6		

Source: Taiwan's Bureau of Foreign Trade, Trade Statistics. *http://cus93.trade.gov.tw/ENGLISH/FSCE/*.

China's military modernization program remains focused on deterring Taiwan from moving toward formal independence and preparing the Chinese military for a cross-Strait conflict. Faced with a growing threat from China's military modernization, Taiwan has sought to enhance its own military capabilities in part by indigenously developing combat ships, aircraft, and weapons systems. Advanced antiship cruise missiles, air defense missiles, and fast attack and stealthy catamaran-style patrol ships are among the newest platforms and weapons systems Taiwan has produced. In 2017, Taiwan launched programs to build submarines and advanced jet trainers. Taiwan also seeks to enhance its military capabilities through the procurement of military equipment from the United States. In June 2017, the U.S. Department of State announced its approval of seven foreign military sales and one direct commercial sale to Taiwan valued at $1.4 billion, including AGM-154C joint stand-off weapon air-to-ground missiles and AGM-88B high-speed antiradiation missiles, among other items.

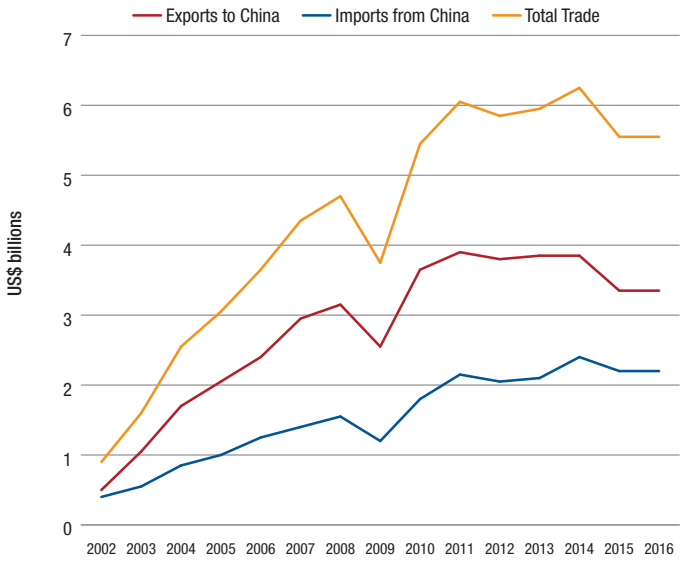
President Tsai has emphasized enhancing Taiwan's economic relations with the United States as a top priority for her administration. Although there remain obstacles for U.S.-Taiwan trade (particularly the decade-long dispute over Taiwan's ban on U.S. pork products), both Washington and Taipei remain committed to furthering their economic relationship. Beyond commercial and security ties, U.S.-Taiwan cooperation spans many other areas, including environmental protection, cybersecurity, education, public health, and science and technology. Taiwan's robust democracy, civil society, and technology sector, and its vast expertise and experience in areas such as humanitarian assistance and disaster relief, make it a strong partner for the United States.

Key Findings

- Taiwan President Tsai Ing-wen has pursued a cross-Strait policy of "maintaining the status quo," demonstrating goodwill toward Beijing, and reassuring her counterparts across the Taiwan Strait. However, Beijing insists she endorse the "1992 Consensus" and continues to increase its pressure on Taipei in response to her refusal to do so. At the same time, Beijing is bypassing the government of Taiwan in its pursuit of "deepening economic and social integrated development" across the Taiwan Strait. It is doing so through efforts to enhance its economic leverage over Taiwan and increase the number of young people from Taiwan traveling, studying, and working in China.
- China remains Taiwan's largest trading partner and largest source of foreign direct investment. Taiwan's continued economic reliance on China makes it vulnerable to political pressure from Beijing and susceptible to fluctuations in China's economy. To help reduce this dependence, President Tsai is pursuing an agenda, referred to as the New Southbound Policy, to diversify Taiwan's economic ties, particularly with Southeast Asia, Australia, India, New Zealand, and other South Asian countries.
- The threat to Taiwan posed by Chinese military modernization continues to grow as the cross-Strait military balance has shifted toward China. Taiwan is engaged in a robust program to enhance its defensive capabilities through its domestic defense industrial production, the procurement of U.S. weapons systems, and its transition to an all-volunteer force. However, these efforts face a major challenge from the scope and speed of the modernization of the People's Liberation Army.
- In an attempt to delegitimize Taiwan on the global stage, Beijing's pressure on Taipei over its participation in the international community has become more pronounced over the past year. Since December 2016, two countries have severed diplomatic relations with Taiwan and established official ties with China, and Beijing has blocked Taiwan's participation in multiple international fora in which it has participated in recent years. Beijing has also pressured countries to downgrade unofficial ties with Taipei.

- Beijing seeks to undermine Taiwan's democracy through collaboration with various individuals and groups in Taiwan and spreading disinformation through social media and other online tools. In July, Taiwan media reported, based on Taiwan government information, that "Chinese influence" was involved in protests and the spread of disinformation against the Tsai Administration.
- Despite uncertainties conferred by a change in administration in the United States, the trend in U.S.-Taiwan relations remains positive. President Tsai has made enhancing Taiwan's economic relations with the United States a top priority for her Administration. Nonetheless, the two sides have not made progress resolving a long-standing dispute over imports of U.S. pork. In U.S.-Taiwan security cooperation, the Trump Administration's approval of arms sales to Taiwan was a sign of continued support for Taiwan.

FIGURE 18: TAIWAN'S TRADE WITH CHINA, 2002–2016



Source: Taiwan's Bureau of Foreign Trade, Trade Statistics.
http://cus93.trade.gov.tw/FSCE000F/FSCE000F.

SECTION 4: CHINA AND HONG KONG

In 2017, 20 years after Hong Kong's handover from the United Kingdom to China, Beijing continued to erode the spirit of the "one country, two systems" policy that has guided its relationship with Hong Kong since 1997. (This policy grants Hong Kong and Macau the right to self-govern their economy and political system to a certain extent, excluding foreign affairs and defense.) The Chinese government increased its interference in the territory's political affairs, becoming more pervasive in Hong Kong's government and civil society. Several notable examples include Beijing's use of legal measures to vacate the seats of six democratically-elected legislators for altering their oaths of office before taking office; its reported involvement in the apparent extralegal abduction of a Chinese billionaire from Hong Kong; and its active efforts to ensure Carrie Lam Cheng Yuet-ngor was selected as the territory's new chief executive. Hong Kong's rule of law, widely viewed as central to its unique status and a key distinguishing characteristic from the Mainland, is being challenged on many fronts. Freedom of expression in the territory—as guaranteed by China's handover agreement with the UK and the Basic Law, Hong Kong's mini constitution—also faces mounting challenges; these range from a crackdown on prodemocracy activists to pressure on the media, universities, and others to self-censor and conform to Beijing's views.

As it has done in other aspects of Hong Kong's politics and society, Beijing has become more active in asserting its presence in Hong Kong's economy. For example, in 2017, Hong Kong-listed Chinese state-owned enterprises were ordered to include a formal role for the CCP in their articles of association, raising concerns among investors who feel the Chinese government is interfering in business operations. Integration of the mainland and Hong Kong economies continues to deepen, with the launch of the Shenzhen-Hong Kong Stock Connect and the China-Hong Kong Bond Connect serving as the latest in a series of measures aimed at attracting global investors to China's domestic markets. Hong Kong's strong rule of law and economic openness have long made it an important destination for international trade and investment. However, some observers are beginning to question Hong Kong's ability to maintain its status as Asia's premier financial center if companies and individuals lose confidence in the territory's rule of law, political autonomy, and other freedoms as they are eroded by Beijing.

Mainland China's increasing encroachment on Hong Kong's promised "high degree of autonomy" poses obstacles for the United States in carrying out its policy objectives in the territory. Hong Kong is a major destination and partner for U.S. trade and investment and plays a valuable role as a participant in important international economic organizations. In light of China's recent intrusions into Hong Kong's democratic institutions, some observers argue the territory is losing its unique characteristics that make it a close U.S. partner in the Asia Pacific. U.S. allies and partners in the region, particularly Taiwan, also are closely watching these developments with unease. The Mainland's adherence to its commitments regarding Hong Kong is necessary to ensure continued strong ties between the United States and the territory.

Key Findings

- Beijing's increasing pressure on Hong Kong has called into question the "one country, two systems" framework. Mainland China's interpretation of the Basic Law (Hong Kong's mini constitution) on Hong Kong lawmakers' oaths of office—while a legal case on the matter was ongoing—has raised widespread concerns about the level of autonomy in Hong Kong's judiciary. It has also caused apprehension in Hong Kong about the implications for political life and freedom of speech in the territory. Six prodemocracy legislators-elect were barred from office following the decision and two additional lawmakers face criminal charges, which could result in their seats being vacated in Hong Kong's legislature. This poses a significant threat to the representation of prodemocracy voices in the legislature.
- Mainland China continues to either disregard or ignore Hong Kong's rule of law and its related commitments to the international community. In addition to the disappearance of five Hong Kong book sellers in late 2015 (a case that remains unresolved as this Report went to print), mainland agents in January 2017 apparently abducted a Chinese-born billionaire with Canadian citizenship and close ties to senior Chinese government officials, taking him from a hotel in Hong Kong. These incidents have raised concerns about Hong Kong's legal protections.
- The 2017 chief executive election, which used the existing voting system by an election committee comprising mostly pro-Beijing electors, resulted in the Mainland's preferred candidate Carrie Lam taking the most votes. Having served as the second-most senior official under the previous administration, which was deeply unpopular, and being seen as loyal to Beijing, Chief Executive Lam is unlikely to advance prodemocracy advocates' goal of universal suffrage in chief executive elections.
- Consistent with its downward trajectory in recent years, press freedom in Hong Kong continues to decline, according to journalists in Hong Kong and leading international nongovernmental watchdogs. These observers point to mainland China's rising interference in local Hong Kong media, erosion of media autonomy, and increasing difficulty in covering sensitive stories.
- As Beijing's fears regarding Hong Kong's political dynamics appear to be rising with the increase in prodemocracy advocates pushing for greater autonomy from mainland China, pressure on prodemocracy activists is on the upswing. In the lead up to Chief Executive Lam's formal inauguration on July 1, 2017, Hong Kong authorities arrested numerous prodemocracy legislators and activists. This was followed by the August 2017 jailing of Joshua Wong and two other student leaders from the 2014 Occupy protests—escalating a wide-scale crackdown that has further eroded freedom of expression in Hong Kong.
- Concerns persist among prodemocracy advocates in Hong Kong and among international observers that the territory is sliding away from "one country, two systems" and moving ever closer to the Mainland. In the process, they argue, Hong Kong is losing the unique characteristics and legal protections that make the territory a key U.S. partner in the Asia Pacific. As Beijing moves to tighten its control over Hong Kong, the territory also faces economic pressure from mainland China.
- Hong Kong continues on the path of greater economic integration with the Mainland. Initiatives like the Shenzhen-Hong Kong Stock Connect and the China-Hong Kong Bond Connect allow Beijing to deepen economic integration with the world, attract foreign investment, and enhance the international use of the renminbi. At the same time, signs are emerging that Hong Kong's importance as a gateway to China may be reduced in the future as China's own markets gain sufficient international standing.

SECTION 5: CHINA'S DOMESTIC INFORMATION CONTROLS, GLOBAL MEDIA INFLUENCE, AND CYBER DIPLOMACY

In 2017, the CCP tightened its control over media and online content. Authorities shut down independent media, penalized companies for disseminating news content without authorization, and eroded the privacy of Internet users in China by forcing them to connect their online profiles to their real names. As a result of a crackdown on "unauthorized" virtual private networks (VPNs), many popular VPN apps have been removed from online stores, and some VPN distributors based in China have been prosecuted and harassed by the state. VPNs have historically been one of the only reliable methods of circumventing China's censorship of the Internet; this censorship functions as a "tax" by forcing users to spend more time and money to access blocked content. The Chinese government's nascent "social credit" program, which relies on accumulated user data to build comprehensive profiles of Chinese citizens, is set to usher in a period of pervasive personal surveillance and social engineering. Multinational corporations with operations in China also have become unsettled by the tightening information controls, which many said negatively impact their business.

Amid the crackdown on independent media, and as journalists increasingly fear the repercussions of pursuing sensitive stories, investigative reporting in China has gradually diminished. Foreign journalists and their local assistants in China now face more restrictions and harassment than at any other time in recent history. The Chinese government also delays or denies visas from foreign journalists; in at least one case in 2016, Chinese authorities held up a visa for a foreign journalist until they were satisfied that another recent hire by the same press agency would not be covering human rights. Foreign correspondents also are increasingly being summoned by local authorities for informal interrogations.

Meanwhile, Beijing has rapidly expanded its overseas media influence by growing its overseas press corps and by exerting pressure on foreign publications both indirectly and directly. In April, the Chinese government also launched a major international media campaign to discredit a Chinese whistleblower living in the United States. In August, the Turkish foreign minister vowed to eliminate anti-China media reports in that country. Chinese authorities also (ultimately unsuccessfully) pressured Cambridge University Press to censor several of its academic publications. At the same time, China's influence over Hollywood and the U.S. entertainment industry has grown.

The Chinese government has been promoting its views of "Internet sovereignty," including in international fora, to legitimize its monitoring and control the Internet in China. This concept entails that a government has the right to monitor and control the networks in its territory and the content that Internet users there access and transmit. Beijing also advocates for a "multilateral" system of Internet governance in which national governments are the main actors. These views sharply contrast with longstanding U.S. support for the "multistakeholder" model, in which governmental, industry, academic, and other nonstate organizations have an equal role in the management of the Internet.

Key Findings

- China's current information controls, including the government's new social credit initiative, represent a significant escalation in censorship, surveillance, and invasion of privacy by the authorities.
- The Chinese state's repression of journalists has expanded to target foreign reporters and their local Chinese staff. It is now much more difficult for all journalists to investigate politically sensitive stories.
- The investment activities of large, Chinese Communist Party-linked corporations in the U.S. media industry risk undermining the independence of film studios by forcing them to consider self-censorship in order to gain access to the Chinese market.
- China's overseas influence operations to pressure foreign media have become much more assertive. In some cases, even without direct pressure by Chinese entities, Western media companies now self-censor out of deference to Chinese sensitivity.
- Beijing is promoting its concept of "Internet sovereignty" to justify restrictions on freedom of expression in China. These policies act as trade barriers to U.S. companies through both censorship and restrictions on cross-border data transfers, and they are fundamental points of disagreement between Washington and Beijing.
- In its participation in international negotiations on global Internet governance, norms in cyberspace, and cybersecurity, Beijing seeks to ensure continued control of networks and information in China and to reduce the risk of actions by other countries that are not in its interest. Fearing that international law will be used by other countries against China, Beijing is unwilling to agree on specific applications of international law to cyberspace.

Chapter 4: China's High Tech Development

SECTION 1: CHINA'S PURSUIT OF DOMINANCE IN COMPUTING, ROBOTICS, AND BIOTECHNOLOGY

The Chinese government is implementing a comprehensive, long-term industrial strategy to ensure its global dominance in computing, robotics, artificial intelligence (AI), nanotechnology, and biotechnology. This strategy is laid out in the 13th Five-Year Plan, and the Made in China 2025 and Internet Plus initiatives and continues China's state-directed approach over the last six decades to build internationally competitive domestic firms. Beijing's ultimate goal is for domestic companies to replace foreign companies as designers and manufacturers of key technology and products first at home, then abroad. It utilizes state funding, regulations, China-specific standards, localization targets, government procurement, foreign investment restrictions, recruitment of foreign talent, close integration of civilian and military technology development, and, in some cases, industrial espionage.

China is also leveraging the openness of the United States and other market-based economies to gain access to advanced research and data, recruit a globally talented workforce, acquire and invest in leading edge firms, and freely sell their products and services abroad. The scale and volume of government resources directed toward these sectors undermines the ability of foreign firms to fairly compete in China's market and creates distorted global and domestic market conditions and rampant overproduction and overcapacity. In addition, China's high market access barriers for foreign firms, localization targets, and China-specific standards further restrict foreign competition's access to China's rapidly growing market, a major loss of market and job opportunities.

TABLE 5: CURRENT STATE OF U.S. TECHNOLOGICAL COMPETITION WITH CHINA IN NINE SECTORS

U.S. Leads	Close Competition	China Leads
• Biotechnology • Nanotechnology • Cloud computing • Collaborative robots	• Artificial intelligence • Quantum information science • High performance computing	• Exascale computing • Commercial drones

Note: Factors that determine the state of technological leadership include: the number of firms, global market share, amount of R&D funding provided, the number of patent applications, the number of articles published in high-ranking journals, and the number of citations per publication. The status of technological leadership may shift due to changes in government policies or breakthroughs in R&D.

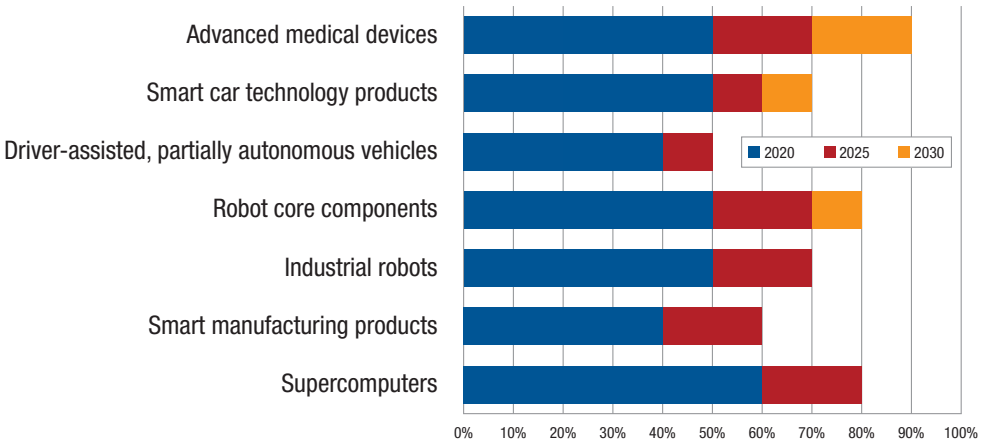
Source: This assessment is based on testimony received at the Commission's March 2017 hearing on China's pursuit of next-generation, dual-use technologies; contracted research; consultations with government officials, academics, and industry experts; and open source research and analysis.

The United States remains a global technological and innovation leader in many cutting-edge, dual-use technologies due to its world-renowned universities, innovation ecosystem, federal funding of basic research and development (R&D), and recruitment of the world's brightest minds. But falling and inconsistent federal R&D spending, reduced openness to global talent, and lack of interagency coordination are undermining these drivers of U.S. innovation to China's advantage. Loss of global leadership in these key high-value-added, dual-use sectors is detrimental to U.S. long-term economic growth, weakening U.S. firms' competitive edge, and reducing the capabilities, capacity, and resilience of the U.S. defense industrial base.

Key Findings

- China has laid out an ambitious whole-of-government plan to achieve dominance in advanced technology. This state-led approach utilizes government financing and regulations, high market access and investment barriers for foreign firms, overseas acquisitions and talent recruitment, and, in some cases, industrial espionage to create globally competitive firms.
- China's close integration of civilian and military technology development raises concerns that technology, expertise, and intellectual property shared by U.S. firms with Chinese commercial partners could be transferred to China's military.
- **Artificial intelligence:** China—led by Baidu—is now on par with the United States in artificial intelligence due in part to robust Chinese government support, establishment of research institutes in the United States, recruitment of U.S.-based talent, investment in U.S. artificial intelligence-related startups and firms, and commercial and academic partnerships.
- **Quantum information science:** China has closed the technological gap with the United States in quantum information science—a sector the United States has long dominated—due to a concerted strategy by the Chinese government and inconsistent and unstable levels of R&D funding and limited government coordination by the United States.
- **High performance computing:** Through multilevel government support, China now has the world's two fastest supercomputers and is on track to surpass the United States in the next generation of supercomputers—exascale computers—with an expected rollout by 2020 compared to the accelerated U.S. timeline of 2021.
- **Biotechnology:** The United States' robust biotechnology ecosystem continues to drive U.S. leadership in this sector, but China's state-directed policies have subsidized the establishment of the world's largest genomic sequencing firms and supported China's rapid rise in genomics and biotechnology-related publications.
- **Robotics:** China is developing its industrial and military robotics sector through subsidization of domestic robotics firms, acquisition of foreign knowledge and technology, and recruitment of overseas expertise. This is strengthening the quality and competitiveness of China's manufacturing and its military capabilities.
- **Nanotechnology:** While consistent federal government funding to the National Nanotechnology Initiative has kept the United States at the forefront of nanotechnology, China has become the fastest-growing country for nanotechnology publications and industrialization due to massive government funding, recruitment of overseas talent, and creation of nanotechnology science parks.
- **Cloud computing:** China has largely closed off its cloud computing market to U.S. cloud computing firms—the global leaders—with unfair market access restrictions and onerous regulations. In addition, Chinese cloud computing firms' close ties to the Chinese government raise security concerns over the protection of U.S. customers' sensitive data, including intellectual property and personal information.

FIGURE 19: SELECT MADE IN CHINA 2025 KEY AREA TECHNOLOGY ROADMAPS 2020, 2025, AND 2030 LOCALIZATION TARGETS



Source: Chinese Academy of Engineering, Expert Commission for the Construction of a Manufacturing Superpower, Made in China 2025 Key Area Technology Roadmap, October 29, 2015. Translation.

TABLE 6: CHINA'S INDUSTRIAL POLICY TOOLBOX

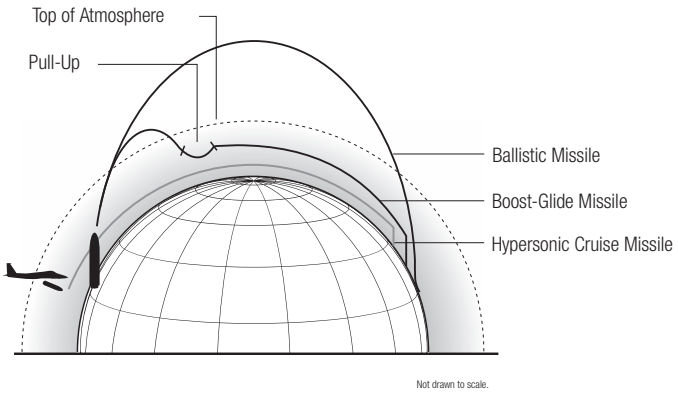
Policy Tool	Description
Localization Targets	Within its industrial plans, the Chinese government sets targets for domestic and international market share that should be held by local technology and production. For example, the Made in China 2025 Key Area Technology Roadmap set a target to increase the state-owned aerospace manufacturer Commercial Aircraft Corporation of China's share of the domestic wide-bodied aircraft market (a strategic industry since 2006) from 5 percent in 2020 to 10 percent in 2025.
State Funding for Industry Development	The central government lays out national investment funds, subsidies, tax breaks, preferential loans, export subsidies and guarantees, and other forms of financial support to develop national champions in strategic sectors. For example, in the solar sector (a strategic emerging industry), China's Ministry of Finance subsidized 50 to 60 percent of production costs of select solar companies and 50 to 70 percent of installation costs for solar generation and distribution systems. Local governments, which account for the largest share of financial aid, provide additional support to local champions. At least 21 cities and 5 provinces have pledged a combined $6 billion (renminbi [RMB] 40 billion) in subsidies for robotics (a Made in China 2025 strategic industry). These subsidies account for an estimated 10 percent of total operation revenue for Chinese robotics firms Siasun and Estun. Local governments are also subsidizing between 15 and 30 percent of the purchase price of robotics to encourage greater usage. Designated national champions also received advantageous capital terms from state-owned banks and investment funds (e.g., wind turbine manufacturer Goldwind received a $5.5 billion loan from the China Development Bank).
Government R&D Funding	The Chinese government provides significant R&D funding to strategic sectors. From 2005 to 2015, total government R&D spending grew nearly five-fold to reach $44.5 billion (RMB 301.3 billion). China's R&D expenditures are rapidly catching up to the United States with China's total R&D spending (public and private) increasing from 26.5 percent of total U.S. R&D expenditures in 2005 to 75.1 percent in 2015.
Government Procurement	The Chinese government leverages its large central and local government procurement market to benefit domestic firms in strategic sectors. For example, in 2012, the central government mandated its agencies to purchase only Chinese auto brands, leading several municipal and provincial governments to follow suit.
Technology Standards	The Chinese government has repeatedly created China-specific standards to raise the costs of market entry for foreign firms. For example, the People's Bank of China announced a new technical encryption standard for bank cards—incompatible with existing international standards and only used by the state-owned China UnionPay—effectively forcing foreign electronic payment firms such as Visa and MasterCard to spend additional money to redesign their cards to meet the standard.
Regulations	The Chinese government advantages domestic firms by setting high regulatory thresholds for market entry and creating vague regulations that allow for discretionary enforcement and interpretation. In the automobile sector, for instance, the government requires foreign firms to form joint ventures with state-owned firms as the price of market entry.
Foreign Investment Restrictions and Import Guidance	Through its Catalogue on Guiding Foreign Investment and Catalogue on Encouraged Imported Technology and Products, the Chinese government directs foreign investment and technology imports toward strategic sectors by designating industries as either "encouraged," "permitted," or "restricted" to foreign investment. Foreign investment in targeted sectors is first welcomed to build domestic capacity, but after domestic firms become competitive, the government gradually restricts this investment to provide a protected market for domestic firms. For example, the automobile industry—a strategic emerging industry under the 12th Five-Year Plan—shifted from "encouraged" in 1994–2010 to "permitted" in 2011–2014 to "restricted" in 2015.
Foreign Talent	The Chinese government is recruiting overseas Chinese and foreign experts and entrepreneurs in strategic sectors to teach and work in China, most notably through its Thousand Talents Program and Project 111. The Thousand Talents Program was launched in December 2008 and has brought more than 4,000 foreigners to China's scientific laboratories, companies, and research centers. The Chinese government also uses research and start-up funding to incentivize foreign experts and entrepreneurs to split time between their positions overseas and in China. Project 111 was launched in 2006 to recruit 1,000 foreign experts in strategic sectors from the world's top 100 universities and research institutes.
Industrial Espionage	The Chinese government continues to conduct pervasive industrial espionage against U.S. companies, universities, and the government and direct efforts to circumvent U.S. export controls to gain access to cutting-edge technologies and intellectual property in strategic sectors.

Source: Various. See full Annual Report for complete list of sources.

SECTION 2: CHINA'S PURSUIT OF ADVANCED WEAPONS

China is pursuing a wide range of military technologies at the global frontier—weapons just now being developed or not yet developed by any country. Advanced systems such as maneuverable reentry vehicles, hypersonic weapons, directed energy weapons, electromagnetic railguns, counterspace weapons, and unmanned and AI-equipped weapons contribute to China's longstanding goal of military modernization and its efforts to compete militarily with the United States. They also go hand in hand with Beijing's desire for the country to become a leading high technology power across commercial and dual-use areas. China's government has taken a comprehensive approach to the development of key dual-use technologies, leveraging state funding, licit and illicit technological exchange, foreign investment, and talent recruitment opportunities to build national champions and advance its military capabilities.

FIGURE 20: SCHEMATIC DIAGRAM OF GENERIC TRAJECTORIES FOR BOOST-GLIDE MISSILES, TERMINALLY GUIDED BALLISTIC MISSILES, AND HYPERSONIC CRUISE MISSILES



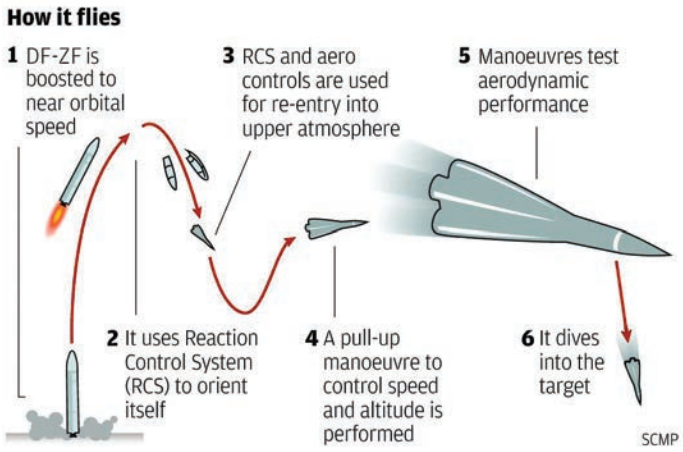
Source: James M. Acton, "Silver Bullet?: Asking the Right Questions About Conventional Prompt Global Strike," *Carnegie Endowment for International Peace*, 2013, 7.

Although information regarding China's advanced weapons programs is not always publicly available, numerous open source writings, government statements, and testing and deployment activities indicate Beijing has undertaken vigorous efforts in these areas. China revealed two antiship ballistic missile systems with reported maneuverable reentry vehicle capabilities in 2010 and 2015, respectively, and has taken steps toward developing the reconnaissance-strike complex necessary to successfully strike a moving target at sea, still unproven. China's hypersonic weapons program appears to be in developmental stages but progressing rapidly, featuring seven likely hypersonic glide vehicle tests since 2014 and a reported scramjet engine flight test in 2015. Following a deep history of research into directed energy weapons, China's progress includes reported advancements in developing a high-power microwave antimissile system in 2017, at least one chemical high energy laser designed to damage or blind imaging satellites as of 2006 (with likely further developments), and recent marketing of low-power solid state laser weapons. China has reportedly built experimental electromagnetic railguns, and numerous research institutes in China are studying aspects of electromagnetic launch technology. China's technology tests applicable to counterspace weapons include direct-ascent antisatellite missiles, ground-based directed energy weapons, and rendezvous and proximity operations; and its writings and capabilities indicate the potential for directed energy weapons based on co-orbital platforms. Finally, in addition to developing and marketing a wide range of unmanned systems, China has conducted research into autonomous systems such as AI-equipped cruise missiles, autonomous vehicles, and drone swarms, alongside its rapid rise in the global commercial AI sector.

While the United States appears to retain a lead in developing most of these systems according to public reports, China likely possesses the key factors (scientific knowledge, critical components, and skills and techniques) necessary to successfully develop advanced weapons. China is able to access scientific knowledge through publicly available information, academic exchanges, and strong efforts to cultivate human talent. Its advances in computing and robotics provide critical components for next frontier weapons: semiconductors are key to intelligent weapons systems; supercomputing is crucial for weapons design and testing; industrial robotics enhances the quality and efficiency of manufacturing; and national champions in the commercial robotics and AI sectors are well positioned to provide next frontier military applications. Finally, while China currently trails the United States in developing relevant skills and techniques, the only fundamental barriers to achieving these will be effort: time, will, and financial support. China appears to have the long-term plans, consistent funding, and human talent in place to eventually overcome these barriers. China may in fact be moving toward a phase of higher-end innovation, given cutting-edge advances in emerging technologies such as artificial intelligence, high-performance computing, and quantum information science. Should the United States falter in its own efforts, China is well prepared to close the gap further than it already has.

China's advanced weapons programs present both direct implications for U.S. security interests and broader implications for long-term U.S.-China defense technological competition. Breakthroughs in any of the aforementioned advanced weapons categories would contribute to China's antiaccess/area denial capabilities and directly challenge U.S. advantages. Notable examples include the potential for antiship ballistic missiles to hold U.S. surface ships at risk; for hypersonic weapons to defeat kinetic missile defenses, if capable of sufficient speed and maneuverability; for directed energy weapons and railguns to undermine future U.S. military concepts such as using distributed low-cost platforms to assure access to contested environments; for counterspace weapons to deny key space-based systems to the U.S. military in a contingency; and for unmanned and AI-equipped weapons in large numbers to saturate U.S. air defenses, particularly by using swarm technology. China is poised to challenge U.S. technological leadership in an environment in which dual-use commercial technology increasingly contributes to military technological strength. As the United States seeks to ensure it is prepared to deter aggression and defend key interests in the Asia Pacific, such as the security of allies and partners, the peaceful resolution of disputes, and freedom of navigation, recognizing these critical challenges will be crucial.

FIGURE 21: CHINA'S DF-ZF HYPERSONIC GLIDE VEHICLE



Source: Minnie Chan, "China, Russia Ramping Up Tests of Hypersonic Gliders to Counter New U.S. Strategy: Analysts," *South China Morning Post*, April 28, 2016.

Key Findings

- China is pursuing a range of advanced weapons with disruptive military potential. Six types that China's leaders have prioritized are maneuverable reentry vehicles, hypersonic weapons, directed energy weapons, electromagnetic railguns, counterspace weapons, and unmanned and artificial intelligence-equipped weapons.
- China's advanced weapons programs align with the People's Liberation Army's overall modernization drive over the past several decades, but appear to reflect a more careful degree of planning as to the U.S. weaknesses they are designed to exploit.
- Current technological trends increase the difficulty of preserving an advantage in developing advanced weapons. The United States for the first time faces a peer technological competitor—a country that is also one of its largest trading partners and that trades extensively with other high-tech powers—in an era in which private sector research and development with dual-use implications increasingly outpaces and contributes to military developments.
- The requirements for developing advanced weapons are fundamental scientific knowledge, unique materials, and abstract skill-based enablers (i.e., abilities, tools, and techniques). China has clear policies to exploit government funding, commercial technological exchange, foreign investment and acquisitions, and talent recruitment to bolster its dual-use technological advances. For China, the only ultimate barrier to such advances is likely to be effort—time, will, and money—and it will be difficult for the United States and its allies and partners to deter this.
- While China has only achieved incremental innovation in military technologies in the past, its research efforts at the technological frontier indicate it may be moving from a phase of "catching-up" to pursuing "leap-ahead" technologies. China's limited returns on science and technology investments indicate shortcomings that may render its development of innovative advanced weapons more costly or protracted, but do not rule out successful innovation.
- China's achievement of a surprise breakthrough in one of these technologies is possible, due to the secrecy surrounding these programs and the uncertain nature of advanced weapons development in general. Such a breakthrough could have significant strategic implications for the United States, particularly in its potential to further existing access challenges and hold forward deployed U.S. forces at risk.
- Given Beijing's commitment to its current trajectory, and the lack of fundamental barriers to advanced weapons development apart from time and funding, the United States cannot assume it will have an enduring advantage in developing weapons at the technological frontier.

Comprehensive List of the Commission's Recommendations

The Commission considers 10 of its 26 recommendations to Congress to be of particular significance. These recommendations are denoted in bold blue text.

Chapter 1: U.S.-China Economic and Trade Relations

SECTION 2: CHINESE INVESTMENT IN THE UNITED STATES

The Commission recommends:

1. **Congress consider legislation updating the Committee on Foreign Investment in the United States (CFIUS) statute to address current and evolving security risks. Among the issues Congress should consider are:**
   - **Prohibiting the acquisition of U.S. assets by Chinese state-owned or state-controlled entities, including sovereign wealth funds.**
   - **Requiring a mandatory review of any transaction involving the acquisition of a controlling interest in U.S. assets by Chinese entities not falling under the above class of acquiring entities.**
   - **Requiring reviews of investments in U.S.-based greenfield assets by Chinese-controlled entities to assess any potential harm to U.S. national and economic security.**
   - **Expanding the definition of "control" to include joint ventures, venture capital funds, licensing agreements, and other arrangements or agreements that enable Chinese entities to access and/or determine the disposition of any asset.**
   - **Prohibiting any acquisition or investment that would confer "control" with regard to critical technologies or infrastructure. The U.S. Departments of Homeland Security, Commerce, and Defense shall prepare and regularly update a list of critical technologies or infrastructure that would not be eligible for acquisition or investment by any Chinese entities to ensure U.S. economic and national security interests are protected.**
   - **Including a net economic benefit test to assess the impact of acquisitions by Chinese entities in the United States to ensure they advance U.S. national economic interests.**
   - **Requiring that any proposed acquisition of a media property by a Chinese entity be assessed in terms of the acquiring entity's history of adhering to Chinese Communist Party propaganda objectives and its potential to influence public opinion in the United States.**
   - **Authorizing an independent review panel, appointed by Congress, to review the actions and activities of CFIUS on a continuing basis.**
   - **Allowing any CFIUS member agency to bring a transaction up for review and investigation.**
2. **Congress consider legislation conditioning the provision of market access to Chinese investors in the United States on a reciprocal, sector-by-sector basis to provide a level playing field for U.S. investors in China.**
3. **Congress amend the Foreign Sovereign Immunities Act (FSIA) of 1976 to:**
   - **Allow U.S. courts to hear cases against a foreign state's corporate affiliates under the commercial activity exception.**
   - **Require Chinese firms to waive any potential claim of sovereign immunity if they do business in the United States.**
4. **Congress consider legislation to ban and delist companies seeking to list on U.S. stock exchanges that are based in countries that have not signed a reciprocity agreement with the Public Company Accounting Oversight Board (PCAOB).**

SECTION 3: U.S. ACCESS TO CHINA'S CONSUMER MARKET

The Commission recommends:

5. **Congress direct the Office of the U.S. Trade Representative to develop criteria for the Notorious Markets List to ensure listed companies can be held accountable for engaging in or facilitating copyright piracy and trademark counterfeiting.**
6. Congress require the Office of the U.S. Trade Representative to expand the National Trade Estimate's coverage of China's digital trade barriers to include an assessment of their impact on U.S. industries and whether they comply with China's World Trade Organization commitments.

Chapter 2: U.S.-China Security Relations

SECTION 2: CHINA'S MILITARY MODERNIZATION IN 2017

The Commission recommends:

7. **Congress authorize U.S. defense spending at levels sufficient to address the growing challenge to U.S. interests posed by China's ongoing military modernization program and to ensure the United States will have the capacity to maintain readiness and presence in the Asia Pacific.**

SECTION 3: HOTSPOTS ALONG CHINA'S MARITIME PERIPHERY

The Commission recommends:

8. Congress require the executive branch to develop a whole-of-government strategy for countering Chinese coercion activities in the Indo-Pacific coordinated through the National Security Council that utilizes diplomatic, informational, military, economic, financial, intelligence, and legal instruments of national power.

Chapter 3: China and the World

SECTION 1: CHINA AND CONTINENTAL SOUTHEAST ASIA

The Commission recommends:

9. Congress increase economic and development assistance and public diplomacy resources to Southeast Asia commensurate with its importance to U.S. strategic, economic, and political interests. A significant portion of additional funding should be directed to democracy, civil society, and governance capacity programs.

10. Congress direct the U.S. Department of State and the U.S. Agency for International Development to allocate sufficient funding for the Lower Mekong Initiative and maintain funding at a level consistent with its role as a platform for water policy coordination and as a provider of U.S. expertise for environmentally safe dam construction.

11. Congress direct the administration to increase cooperation on infrastructure projects supported by U.S. partners and allies, such as Asian Development Bank programs and bilateral projects administered by the Japan International Cooperation Agency. U.S. cooperation should leverage U.S. technical expertise regarding engineering, management, and social and environmental safeguards.

SECTION 2: CHINA AND NORTHEAST ASIA

The Commission recommends:

12. Congress support initiatives that enable cooperation between the U.S. Coast Guard and maritime Asian coast guards (possibly to include joint patrols, shiprider agreements, and the expansion of the Code for Unplanned Encounters at Sea [CUES] to include coast guard and other maritime law enforcement agencies), given the prominent role of the China Coast Guard in aggressively advancing China's territorial ambitions in the East and South China seas.

13. Congress examine the state of the U.S.-Japan alliance in light of China's military modernization, paying particular attention to efforts to achieve a joint command structure for planning and executing complex combined operations.

SECTION 3: CHINA AND TAIWAN

The Commission recommends:

14. **Congress urge the Administration to invite Taiwan to participate, at least as an observer, in U.S.-led bilateral and multilateral military and security-related exercises, including the Rim of the Pacific (RIMPAC) maritime exercise, Red Flag air-to-air combat training exercises, and Cyber Storm cybersecurity exercise, in order to support Taiwan's efforts to enhance its defense capabilities, expand opportunities for Taiwan to contribute to regional and international security, and counter China's efforts to limit Taiwan's international space.**

15. Congress highlight the accomplishments and otherwise elevate the visibility of the Global Cooperation and Training Framework, which facilitates U.S.-Taiwan cooperation in areas such as public health and disaster relief. Such efforts possibly could include examining whether the program would benefit from additional staffing and funding.

16. Congress urge the executive branch to reexamine its practice regarding reciprocal visits by senior U.S. and Taiwan military officers and civilian officials with the aim of increasing high-level exchanges, including Cabinet-level officials and senior National Security Council officials, as part of an effort to enhance U.S.-Taiwan relations.

17. Congress ensure relevant U.S. military personnel are sufficiently familiar with Taiwan's defense situation by allocating funds for U.S. military personnel to take courses at Taiwan's defense educational institutions (such as Taiwan's war college, service command and staff schools, and airborne school) and other courses in Taiwan in an unofficial capacity through the American Institute in Taiwan, in order to ensure the U.S. military is prepared to act in support of Taiwan's defense if called on to do so.

SECTION 4: CHINA AND HONG KONG

The Commission recommends:

18. **Congress reauthorize annual reporting requirements of the United States-Hong Kong Policy Act of 1992, in an effort to ensure policymakers have the most up-to-date and authoritative information about developments in Hong Kong. The report should include an assessment of whether Hong Kong has maintained a "sufficient degree of autonomy" under the "one country, two systems" policy, among other developments of interest to the United States.**

19. Congressional committees of jurisdiction examine and analyze potential U.S. policy options toward Hong Kong, including those to impose costs on Beijing for not abiding by its commitments to the territory, given mainland China's increased intrusions into Hong Kong's autonomy.

20. Members of Congress participate in congressional delegations to Hong Kong and meet with Hong Kong officials, legislators, and business representatives in the territory and while they visit the United States. In these meetings, they should raise concerns about Beijing's adherence to the "one country, two systems" policy and the recent crackdown on prodemocracy activists, including the imprisonment of Joshua Wong and others. They should also continue to express support for freedom of expression and rule of law in Hong Kong.

SECTION 5: CHINA'S DOMESTIC INFORMATION CONTROLS, GLOBAL MEDIA INFLUENCE, AND CYBER DIPLOMACY

The Commission recommends:

21. Congress strengthen the Foreign Agents Registration Act to require the registration of all staff of Chinese state-run media entities, given that Chinese intelligence gathering and information warfare efforts are known to involve staff of Chinese state-run media organizations and in light of the present uneven enforcement of the Act.

22. Congress require the U.S. Department of Commerce to collect information from U.S. companies that do business in China concerning requests from the Chinese government regarding censorship, surveillance, and data transfers, and report its findings to Congress.

23. Congress modify U.S. Federal Communications Commission regulations to require greater transparency regarding Chinese government ownership of media outlets and the clear labeling of media content sponsored by the Chinese government.

24. Congress urge the Office of the U.S. Trade Representative, when renegotiating the existing Bilateral Film Agreement between the United States and China, to increase the number of films that have access to Chinese theaters and increase the revenue sharing arrangement to a level reflecting the median arrangement existing around the globe. In addition, the arrangement should reserve a minimum of 50 percent of the quota to films from studios and independent distributors that are not owned or controlled by Chinese interests.

Chapter 4: China's High Tech Development

SECTION 1: CHINA'S PURSUIT OF DOMINANCE IN COMPUTING, ROBOTICS, AND BIOTECHNOLOGY

The Commission recommends:

25. Congress direct the National Science and Technology Council, in coordination with the National Economic Council and relevant agencies, to identify gaps in U.S. technological development vis-à-vis China, including funding, science, technology, engineering, and mathematics workforce development, interagency coordination, and utilization of existing innovation and manufacturing institutes, and, following this assessment, develop and update biennially a comprehensive strategic plan to enhance U.S. competitiveness in advanced science and technology.

26. Congress direct the Federal Bureau of Investigation in concert with the U.S. Department of Commerce's International Trade Administration to expand outreach to and develop educational materials and tools for U.S. academics, businesses, venture capitalists, and startups in dual-use sectors on potential risks associated with Chinese investors and partners, the Chinese government's role in acquiring technology through programs such as the Thousand Talents Program and Project 111, and steps to prevent industrial and cyber espionage.

Notes

Notes

2017 Report to Congress

of the

U.S.-China Economic and Security Review Commission

Executive Summary and Recommendations