November 3, 2017

Highlights of This Month’s Edition

- **Bilateral trade**: In the third quarter of 2017, the U.S. goods trade deficit with China grew 6.7 percent due to increased imports; U.S. services exports to China reach a new record, driven by increases in tourism, financial services, and intellectual property payments.

- **Bilateral policy issues**: In a setback to China’s pursuit of market economy status, the EU adopts a new antidumping methodology and the United States implements new duties on imports of Chinese aluminum; U.S. experts and industry groups highlight several intellectual property and technology transfer challenges in China as part of the Administration’s Section 301 investigation.

- **Policy trends in China’s economy**: China delays a food safety certification program that would put $22 billion of U.S. exports at risk by two years; after lobbying by the EU, China ends a discriminatory ban on soft cheese imports; China’s government announces changes to China’s drug approval process that—if fully implemented—may reduce approval delays for U.S. drugs by several years.

- **Quarterly review of China’s economy**: Chinese government ensures high rate of growth for China’s economy in the run-up to the 19th Party Congress, but problems remain unaddressed.

- **Sector focus – Electric Vehicles**: China transforms into the global electric vehicle leader by leveraging state support and excluding foreign competitors.

Contents

Bilateral Trade

- U.S. Goods Trade with China
- Top U.S. Exports to China Rise
- Advanced Technology Products Deficit Increases
- U.S. Services Trade with China

Bilateral Policy Issues

- The EU and United States Announce New Actions Related to Duties on Chinese Goods, China’s Market Economy Status
- U.S. Industries Report on Intellectual Property Theft and Tech Transfer during Section 301 Hearing

Policy Trends in China’s Economy

- China Delays Restrictive Food Certification Rule, Lifts Ban on Soft Cheese Imports
- China Announces Improvements to Drug Approval Process

Quarterly Review of China’s Economy

- Old Levers Boost GDP Growth to 6.8 Percent in Q3 2017
- Real Estate Sector Continues to Grow
- State Sector Ascendant and Reforms Delayed

Sector Focus: Electric Vehicles

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Bilateral Trade

U.S. Goods Trade with China

In the third quarter of 2017, the U.S. trade deficit in goods with China reached $103.1 billion—a 6.7 percent increase over the same period in 2016—due to increased imports (see Figure 1), which grew 8.1 percent year-on-year to reach $134.9 billion.¹ U.S. exports to China grew robustly to $31.8 billion, up 13 percent year-on-year.²

Figure 1: Goods Trade with China, Q3 2012–Q3 2017


Top U.S. Exports to China Rise

U.S. exports of all top five product categories to China increased in the third quarter of 2017 (see Table 1).³ Notably, the United States’ largest export to China, transportation equipment, grew 19.3 percent year-on-year to $8.7 billion.⁴ U.S. agricultural exports, which make up 8.1 percent of U.S. exports to China, also experienced robust growth, increasing 16.8 percent compared to the third quarter of 2016.⁵ U.S. exports of chemicals and machinery rose 6.9 percent and 7.5 percent year-on-year, respectively.
Table 1: U.S. Trade with China: Top Five Exports and Imports
(US$ millions)

<table>
<thead>
<tr>
<th>U.S. Top-Five Exports to China</th>
<th>U.S. Top-Five Imports from China</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Exports</strong></td>
<td><strong>Imports</strong></td>
</tr>
<tr>
<td>Share of total (%)</td>
<td>Change over Q3'16 (%)</td>
</tr>
<tr>
<td>Transportation Equipment</td>
<td>8,690.4</td>
</tr>
<tr>
<td>Computer &amp; Electronic Products</td>
<td>4,369.9</td>
</tr>
<tr>
<td>Chemicals</td>
<td>3,420.2</td>
</tr>
<tr>
<td>Agricultural Products</td>
<td>2,578.2</td>
</tr>
<tr>
<td>Machinery, Except Electrical</td>
<td>2,170.7</td>
</tr>
<tr>
<td>Other</td>
<td>10,545.5</td>
</tr>
<tr>
<td>Total</td>
<td>31,774.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2017 Year-to-Date</th>
<th>2017 Year-to-Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation Equipment</td>
<td>21,337.9</td>
</tr>
<tr>
<td>Computer &amp; Electronic Products</td>
<td>12,526.7</td>
</tr>
<tr>
<td>Chemicals</td>
<td>10,926.2</td>
</tr>
<tr>
<td>Agricultural Products</td>
<td>8,448.6</td>
</tr>
<tr>
<td>Machinery, Except Electrical</td>
<td>6,800.5</td>
</tr>
<tr>
<td>Other</td>
<td>30,973.9</td>
</tr>
<tr>
<td>Total</td>
<td>91,013.8</td>
</tr>
</tbody>
</table>


In the third quarter of 2017, U.S. imports of four out the top five product categories from China saw moderate growth.\(^6\) Imports of Chinese computer and electronic products and machinery rose 13.2 percent and 17.7 percent year-on-year, respectively; the two product categories account for a combined 41.9 percent of U.S. imports from China.\(^7\) U.S. imports of apparel and accessories from China fell 4.1 percent year-on-year.\(^8\)

**Advanced Technology Products Deficit Increases**

The U.S. trade deficit with China in advanced technology products (ATP) reached almost $92 billion in the first three quarters of 2017, a 36 percent increase from the same period in 2016 (see Table 2).\(^9\) The main contributor to the deficit was imports of information and communications technology (ICT) products, which rose 15.4 percent year-on-year to $39.8 billion in the third quarter of 2017.\(^10\) Chinese ICT products remain the United States’ largest ATP import from China, accounting for about 90 percent of total ATP imports in the third quarter of 2017.\(^11\) The largest U.S. ATP export to China, aerospace products, grew 20.5 percent year-on-year to $5.5 billion.\(^12\)
Table 2: ATP Trade through September 2017

(US$ millions)

<table>
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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>TOTAL</td>
<td>10,117</td>
<td>44,229</td>
<td>-34,112</td>
<td>-29,193</td>
<td>16.8%</td>
<td>25,520</td>
<td>117,453</td>
<td>-91,933</td>
<td>-67,399</td>
</tr>
<tr>
<td>(01) Biotechnology</td>
<td>224</td>
<td>44</td>
<td>180</td>
<td>197</td>
<td>-8.6%</td>
<td>703</td>
<td>143</td>
<td>560</td>
<td>520</td>
</tr>
<tr>
<td>(02) Life Science</td>
<td>902</td>
<td>687</td>
<td>215</td>
<td>136</td>
<td>58.1%</td>
<td>2,670</td>
<td>1,946</td>
<td>724</td>
<td>571</td>
</tr>
<tr>
<td>(03) Opto-Electronics</td>
<td>151</td>
<td>1,625</td>
<td>-1,474</td>
<td>-1,380</td>
<td>6.8%</td>
<td>441</td>
<td>3,376</td>
<td>-2,935</td>
<td>-3,964</td>
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<tr>
<td>(04) Information &amp; Communications</td>
<td>1,162</td>
<td>39,839</td>
<td>-38,677</td>
<td>-33,284</td>
<td>16.2%</td>
<td>3,434</td>
<td>106,544</td>
<td>-103,110</td>
<td>-88,393</td>
</tr>
<tr>
<td>(05) Electronics</td>
<td>1,585</td>
<td>1,224</td>
<td>361</td>
<td>548</td>
<td>-34.1%</td>
<td>4,393</td>
<td>3,297</td>
<td>1,096</td>
<td>1,561</td>
</tr>
<tr>
<td>(06) Flexible Manufacturing</td>
<td>523</td>
<td>365</td>
<td>158</td>
<td>303</td>
<td>47.9%</td>
<td>2,131</td>
<td>977</td>
<td>1,154</td>
<td>1,459</td>
</tr>
<tr>
<td>(07) Advanced Materials</td>
<td>53</td>
<td>104</td>
<td>-51</td>
<td>-39</td>
<td>30.8%</td>
<td>206</td>
<td>304</td>
<td>-98</td>
<td>-89</td>
</tr>
<tr>
<td>(08) Aerospace</td>
<td>5,509</td>
<td>300</td>
<td>5,209</td>
<td>4,353</td>
<td>19.7%</td>
<td>11,325</td>
<td>766</td>
<td>10,559</td>
<td>10,420</td>
</tr>
<tr>
<td>(09) Weapons</td>
<td>0</td>
<td>37</td>
<td>-37</td>
<td>-41</td>
<td>-9.8%</td>
<td>0</td>
<td>94</td>
<td>-94</td>
<td>-99</td>
</tr>
<tr>
<td>(10) Nuclear Technology</td>
<td>10</td>
<td>3</td>
<td>7</td>
<td>13</td>
<td>-46.2%</td>
<td>213</td>
<td>8</td>
<td>205</td>
<td>213</td>
</tr>
</tbody>
</table>


U.S. Services Trade with China

In the first half of 2017, U.S. services hit a record high of $28 billion, up from $25.8 billion over the first half of 2016, an 8.6 percent increase. The second quarter of 2017, saw U.S. services exports to China hit a record high of $11.9 billion, up from $10.7 billion over the same period in 2016, a 10.4 percent increase (see Figure 2). This growth in exports drove the quarterly U.S. services trade surplus with China to its highest second quarter level yet, at $7.5 billion—up 12 percent year-on-year. In Q2 2017, Chinese services exports to the United States grew to $4.3 billion from $4 billion in Q2 2016 for 7.7 percent growth year-on-year.

Tourism remains the top U.S. services export to China, accounting for 54 percent of all U.S. services exports to China in Q2 2017. In Q2 2017, U.S. tourism exports reached $6.4 billion, up 11 percent year-on-year. U.S. exports of maintenance and repair services, financial services, and intellectual property charges increased significantly in the second quarter, growing 14 percent, 17 percent, and 23 percent year-on-year, respectively. U.S. insurance services exports dropped 22 percent year-on-year in the second quarter, from $183 million to $142 million.

Bilateral Policy Issues

The EU and United States Announce New Actions Related to Duties on Chinese Goods, China’s Market Economy Status

In October 2017, both the United States and the EU announced new antidumping (AD) measures aimed at addressing artificially cheap exports from China. The EU introduced a new methodology for calculating AD and countervailing duties (CVD) to increase dumping margins for AD and CVD cases. The United States, meanwhile, announced preliminary AD duties on Chinese aluminum imports.

On October 3, the European Parliament and European Council reached an agreement on a proposal, which the European Commission had adopted in November 2016, to change the EU’s AD and CVD legislation. The change modifies how EU dumping margins are calculated for imports from members of the World Trade Organization (WTO). Under the old methodology, the EU could impose AD duties on products from non-EU countries if the price of the export was lower than the normal value of the product in its domestic market and the export had a negative impact on an EU industry. However, the dumping margin was normally calculated without consideration of price and cost distortions created by state interference, and so did not necessarily reflect the true value of the exports in the domestic industry. With the new legislation, the EU would remove the nonmarket economy (NME) country list, and instead consider a variety of factors to determine whether there are “significant market distortions, or a pervasive state’s influence on the economy.” Among the factors to be considered are “state policies and influence, the widespread presence of state-owned enterprises, discrimination in favor of domestic companies and the lack of independence of the financial sector.”

The new EU AD methodology will allow for other benchmarks—including use of a third, representative country’s prices—to be used to determine the dumping margin. Although the agreement does not target any particular country, it is seen as an attempt to preempt an upcoming WTO ruling regarding the EU’s approach for applying AD duties against Chinese imports. The agreement also strengthens the EU’s CVD legislation to allow new subsidies discovered in the course of an investigation to be included in the final duties margin. In a statement following the agreement, European Commission President Jean-Claude Juncker said the legislation will ensure the EU has “the means to take action against unfair competition and the dumping of products in the EU market that leads to the destruction of jobs.”
On October 27, the U.S. Department of Commerce imposed preliminary AD duties of between 96.8 percent and 162.2 percent on imports of aluminum foil from China, which Commerce indicated are being sold at unfairly low prices. The decision increased duties on Chinese aluminum products after Commerce set CVD duties at between 16.6 percent and 81 percent in August 2017. According to Commerce, the decision to increase duties was made in connection with a review of China’s market economy status. The review found that “at its core, the framework of China’s economy is set by the Chinese government and the Chinese Communist Party, which exercise control directly and indirectly over the allocation of resources through instruments such as government ownership and control of key economic actors and government directives.” The move angered Beijing, in part because the duties were calculated based on China’s status as an NME, which Beijing argues expired in December 2016. In a statement released after the new duties were announced, Chinese Commerce Ministry official Wang Hejün asked that the United States “earnestly fulfill its international obligations, and take real action to correct its mistaken methods.”

In its 2001 WTO accession protocol, China agreed to provisions allowing its trade partners to automatically treat China as an NME for 15 years for the purposes of AD enforcement. As an NME, other countries could use values from a third country in a similarly situated economic position—not Chinese prices or costs—for AD calculations, unless China could demonstrate market economy conditions prevailed in the relevant industry. Since December 11, 2016, when section 15(a)(ii) of China’s WTO accession protocol expired, the Chinese government has argued it is entitled to automatic conferral of market economy status by all WTO members, including the United States. Although Commerce has said it would review China’s status as an NME to determine whether it met the requirements of a market economy, the high duty margin against imports of aluminum foil from China shows that Commerce continues to classify as an NME for the purposes of AD enforcement.

**U.S. Industries Report on Intellectual Property Theft and Tech Transfer during Section 301 Hearing**

A broad selection of U.S. companies, industry associations, and academics offered testimony on intellectual property (IP) protection conditions in China as part of the Office of the U.S. Trade Representative’s (USTR) section 301 investigation on Chinese technology transfer and innovation policies. In August, President Donald Trump signed a memo directing the USTR to examine China’s policies and practices regarding IP and technology transfer and to determine if China’s behavior is “unreasonable or discriminatory.” If the USTR finds the Chinese government’s acts, policies, and practices are “unreasonable or discriminatory,” the USTR has the statutory authority to suspend existing trade agreement concessions, impose duties or other import restrictions on foreign goods and services, withdraw or suspend preferential duty treatments, and enter into binding agreements to address the elimination of problematic acts, policies, or practices.

While many hearing participants such as the American Bar Association (ABA), the U.S.-China Business Council (USCBC), and the National Free Trade Council (NFTC) said IP conditions in China have improved, a broad array of concerns regarding China’s policies were raised. These concerns include:

- *China’s restrictions on investment*: Several industry associations—including the USCBC, National Association of Manufacturers (NAM), and Telecommunications Industry Association—noted Chinese equity caps on foreign investment require U.S. firms to partner with Chinese businesses to operate in China across a wide spectrum of high-tech sectors. As the USCBC and NAM noted, these equity caps provide...

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opportunities for government officials and partner companies to ask for technology transfers as concessions during the negotiation process to form a joint venture. According to the USCBC, mandatory joint ventures give Chinese companies “an inherently stronger position” in asking for technology transfers as their participation is required for U.S. firms to enter China’s many restricted sectors.

- **Chinese product approval practices:** Similarly, U.S. stakeholders said China’s product approval procedures may threaten their IP. The American Chamber of Commerce (AmCham) in Shanghai noted many of its members are not confident proprietary formulas or designs given to Chinese regulatory agencies are protected from distribution to their competitors. The USCBC noted the structure of China’s approval process (which differentiates between foreign and Chinese firms) and the market access leverage that comes with the approval process “creates opportunities for inappropriate—and potentially illegal—requests for technology transfers” by government regulators.

- **Cloud computing policies:** Witnesses identified cloud computing as a sector particularly prone to discriminatory Chinese policies. According to the USCBC, in addition to being forced to partner with Chinese firms for market access, U.S. cloud computing firms are unable to obtain licenses unless they share IP and proprietary business practices with their Chinese partners. The USCBC noted the structure of China’s approval process (which differentiates between foreign and Chinese firms) and the market access leverage that comes with the approval process “creates opportunities for inappropriate—and potentially illegal—requests for technology transfers” by government regulators.

- **Difficulties navigating China’s judicial system:** U.S. industry and professional groups identified several shortcomings in China’s legal system with respect to IP protection. According to the ABA, while Chinese damages for patent violation have increased, they are still lower than those in Western countries, decreasing deterrence against IP theft. The ABA also cited a lack of discovery in Chinese civil procedure, which prevents U.S. companies from compelling Chinese patent infringers to produce evidence. Michelman, a U.S. coating company, said the difficulty in obtaining evidence against a Chinese firm it suspects of copying its products has caused it to refrain from challenging the Chinese firm in Chinese court for fear an adverse ruling would award its IP to the suspected patent violator. The American Apparel and Footwear Association and the American Chemistry Council argued costs associated with IP theft investigations are typically borne by U.S. businesses, even though such investigations should be conducted through criminal prosecution by Chinese authorities.

- **China’s cybersecurity law:** Several U.S. stakeholders identified China’s cybersecurity law as a risk to U.S. IP and a source of disruption for their business in China. The BSA stated the cybersecurity law was part of China’s efforts to “establish a legal basis for requiring the disclosure of source code … associated with foreign software products.” According to the BSA, security reviews under the law that require certain networks to be “secure and controllable” may open the door to requirements for foreign firms to provide their source code (one of their most valuable and sensitive proprietary assets) to Chinese regulators, who may not adequately protect their information. The Consumer Technology Association and U.S. Information Technology Industry Council echoed these concerns. Additionally, the USCBC stated “secure and controllable” requirements in China’s cybersecurity law effectively demand U.S. firms comply with requests for source code or proprietary information to participate in procurement by the Chinese government and state-owned entities. The Telecommunications Industry Association noted China’s

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Chinese reprisals against U.S. companies: According to U.S. policy experts, fear of Chinese retaliation discourages U.S. businesses from cooperating with the U.S. government against harmful Chinese practices. Lee Branstetter, associate professor of economics at Carnegie Mellon University, noted U.S. firms are reluctant to cooperate with USTR investigations for fear of being blacklisted by the Chinese government. Dr. Branstetter proposed the USTR use subpoena powers to compel firms to provide information necessary to address Chinese forced technology transfers and IP theft. James Lewis, senior vice president at the Center for Strategic and International Studies (CSIS), agreed, adding that companies are worried the U.S. government will not adequately support them against Chinese retribution. Michelman noted that fear of retaliation by the Chinese government deterred it from pursuing a legal case against a suspected Chinese patent violator.

Cyber theft: A U.S. subsidiary of the German firm SolarWorld provided testimony detailing the role of Chinese military hackers in breaching SolarWorld’s servers to obtain sensitive information which they then provided to the firm’s Chinese competitors. However, Dr. Lewis and the USCBC argued that while cyber theft has played an important role historically in the acquisition of U.S. IP, China’s government appears to be living up to the terms of the 2015 agreement between President Xi Jinping and then President Barack Obama to cease government support of commercial cyber IP theft. The USCBC noted computer security firm FireEye reported a “notable decrease in reports by American companies of intrusions from suspected Chinese hackers” since 2015.

A few Chinese organizations submitted testimony defending conditions in China. The China General Chamber of Commerce, an organization representing Chinese enterprises in the United States, argued China is not the only country that imposes restrictions on foreign investment and noted the United States blocks some deals on national security grounds through the Committee on Foreign Investment in the United States (CFIUS). However, U.S. data show CFIUS reviews have not had a chilling effect on foreign investment, and do not come close in scale to the sector-wide restrictions enforced by the Chinese government. From 2014 to 2016, only ten foreign acquisitions were withdrawn due to an unfavorable CFIUS determination. The China Chamber of Commerce for Import and Export of Machinery and Electronic Products, a Chinese NGO representing Chinese exporting companies, claimed the Chinese government was not pressuring U.S. firms to transfer tech to Chinese partners and that “joint ventures and technology transfer are conducted in an independent manner by Chinese companies and U.S. companies.”

Witnesses provided a few proposals for improving IP protection in China and limiting forced technology transfers. A broad group of industry associations and policy experts—including the USCBC, ITI, Dr. Branstetter, Dr. Lewis, the Commission on the Theft of American Intellectual Property (IP Commission), and Scott Kennedy, an expert on China’s economy at CSIS—counseled against the United States acting unilaterally to improve China’s performance. Instead, they urged the USTR to work with a multilateral coalition of like-minded countries to improve conditions in China. Several industry groups also warned against applying broad tariffs on Chinese firms, arguing they would not affect underlying Chinese policies (according to the USCBC) or that they would invite a harmful tit-for-tat trade war (as AmCham Shanghai and the Consumer Technology Association argued). The USCBC advocated continuing ongoing U.S.-China dialogues to address harmful Chinese policies, such as completing a bilateral investment treaty with China to remove joint venture requirements.

However, some stakeholders argued for a new approach to address China’s environment. Dr. Branstetter suggested targeted sanctions against Chinese firms involved in forced technology transfers, and proposed new legislation empowering the federal government to investigate coercive transfers and suspend business deals that appear to include forced transfer of technology. The IP Commission proposed giving the U.S. government powers to quickly sequester imported goods at the border that utilize pirated IP, and similarly suggested sanctioning foreign companies that steal IP from the U.S. banking system. Both Dr. Branstetter and the IP Commission suggested utilizing the CFIUS review process to address technology transfers in a limited way; however, the USCBC argued expanding CFIUS to broadly address U.S. policy concerns would legitimize China’s current investment restrictions and encourage it to expand them. Finally, Dr. Kennedy urged the United States to adopt a consistent, comprehensive approach to addressing Chinese policy, proposing the United States impose unilateral penalties when warranted but...
also maintain the WTO’s dispute resolution system and continue to create multilateral rules that protect IP rights.\textsuperscript{76} Dr. Kennedy urged the United States to reinforce its prioritization of IP and tech transfer issues with effective consequences for China over time, noting that in 1993 the United States made human rights a condition for most-favored nation (MFN) status, but failed to tie human rights to MFN later on, effectively removing human rights as a central element of U.S.-China relations.\textsuperscript{77}

**Policy Trends in China’s Economy**

**China Delays Restrictive Food Certification Rule, Lifts Ban on Soft Cheese Imports**

In September 2017, China announced it would delay implementation of a food safety certification rule that the United States, the EU, and eight other countries claim would unnecessarily restrict food exports to China.\textsuperscript{78} The rule, which was scheduled to go into effect October 1, would require every food shipment to China be inspected and certified as safe by a foreign government in order to be allowed into China.\textsuperscript{79} As noted by the EU Chamber of Commerce in China, requiring certification for all food imports runs counter to internationally accepted safety practices, which adopt a risk-based approach, mandating inspections only for particularly risky foods.\textsuperscript{80} China announced it would delay implementation of its certification rule by two years but did not commit to adopting a risk-based approach to food certification in the future.\textsuperscript{81}

If implemented, China’s food certification rule would halt the export of several billion dollars’ worth of U.S. exports to China. U.S. food exports to China totaled $22 billion in 2016, an amount equal to 19 percent of the United States’ total goods exports to China and 16 percent of the United States’ food exports worldwide that year (see Figure 3).\textsuperscript{82} According to U.S. food industry associations, China’s certification requirement would effectively deny entry to most food imports.\textsuperscript{83} The United States currently lacks the administrative capacity to certify every food shipment to China. As of 2017, the U.S. Food and Drug Administration had 26 full-time export certification employees, meaning each of them would be responsible for certifying possibly hundreds of millions of dollars’ worth of food shipments to China, in addition to their current responsibilities.\textsuperscript{84}

**Figure 3: U.S. Food Exports to China, 2013–2016**

Note: Food exports are classified here as exports of agricultural products, livestock and livestock products, fish and other marine products, food and kindred products, and beverages.

Source: U.S. Census Bureau, USA Trade Online. https://usatrade.census.gov/.

In addition to China’s restrictive proposed certification rule, starting in July 2017 China applied a temporary ban on imports of all soft cheeses such as Brie, Camembert, and Roquefort on safety grounds.\textsuperscript{85} Soft cheeses were banned due to the presence of bacteria necessary for their production.\textsuperscript{86} The ban was based on a discriminatory
application of Chinese health standards. Under Chinese health regulations, only a few types of bacteria can be used in dairy products; however, bacteria cultures traditionally used for food production (such as penicillin in cheese) are exempted from these regulations. The exemption does not apply to imports, meaning that while domestic cheese suppliers can culture soft cheeses, foreign imports are technically banned from the Chinese market. William Fingleton, spokesman for the Delegation of the European Union to China, observed that the safety premise for the ban was spurious “because China considers the same cheese safe if produced in China.”

Following a meeting with the EU delegation in October, China lifted its ban on foreign soft cheeses. Although China has had these restrictions in place for some time, they have not been applied until this summer. In July, China’s Administration of Quality, Supervision, Inspection, and Quarantine (AQSIQ) disposed of five tons of imported cheese, and soft cheeses in general were blacklisted for import. In 2016, the United States exported almost $44 million worth of cheese to China, although U.S. trade data do not indicate how much of this was soft cheese subject to Chinese restrictions.

China Announces Improvements to Drug Approval Process

On October 8, 2017, the Central Committee of China’s Communist Party (CCP) revealed a new pharmaceutical approval process that is expected to speed up the ability of foreign firms to introduce new drugs in China. China has long used an asynchronous review process for foreign pharmaceuticals and biotechnology products, requiring trials of new products to reach an advanced stage in other countries before allowing Chinese trials and safety reviews to begin. With respect to pharmaceuticals, this process can delay the introduction of new drugs to the Chinese market by as much as seven years compared to approval processes in the United States or Europe. As China is the world’s second-largest pharmaceutical market after the United States, accounting for $117 billion in drug sales in 2016, this delay significantly pushes back the return pharmaceutical companies receive on research and development, decreasing incentives for innovation.

Under the new system, some foreign drugs will not require Chinese trials if data from outside of China can be provided demonstrating the drug is safe. However, these data must meet Chinese standards and must demonstrate the drug is an effective treatment for “Eastern” people, requiring foreign companies to run trials with an Asian population. This new process will significantly decrease the approval time for drugs that have already run clinical trials internationally—possibly allowing imminent approval in China if the pharmaceutical firms can provide appropriate ethnicity data. The new approval system also increases the number of organizations in China that can conduct clinical trials—providing speedier approval for drugs developed domestically in China—and establishes a fast-track approval process for new drugs, drugs and devices for rare diseases, and urgently needed medical devices.

Chinese regulators and foreign pharmaceutical firms have faced an ever-growing backlog of drug applications in China. The number of drugs awaiting approval for China’s market has steadily grown from almost 14,000 in 2013 to 21,000 in 2015, an increase of 51 percent (see Figure 4).
The United States has long pressed China to end its asynchronous review of pharmaceuticals in bilateral dialogues. For example, in 2014, at the 25th U.S.-China Joint Commission on Commerce and Trade, China committed to allowing foreign drugs to begin trials in China at the same time as abroad, although this promise does not appear to have been fulfilled.\textsuperscript{102} This new system, if fully implemented, may function as a “work-around” to China’s asynchronous review. The United States has also sought to address China’s asynchronous review of biotech products, but to date has enjoyed limited success. In May, as part of the U.S.-China 100-Day Action Plan, China pledged to consider approval of eight U.S. biotech crop strains that had been awaiting review, but it has only approved four strains so far.\textsuperscript{103} China’s delayed approval of U.S. biotech crops stalls their introduction worldwide as U.S. firms often wait to begin production until they receive approval from China, a large market for U.S. agriculture.\textsuperscript{103}

Foreign drug companies have experienced a drop in prices for many of their drugs in China recently, as the Chinese government has negotiated lower prices in exchange for including certain drugs in a government health insurance program.\textsuperscript{104} According to the Financial Times, in 2016 average cuts of 44 percent were applied to 36 drugs, most of which were developed by foreign companies.\textsuperscript{105} The overall effect on revenues from these drugs remains ambiguous, as their inclusion in insurance plans may drive up the volume of sales. Additionally, large foreign drug companies such as U.S.-based Eli Lilly, UK firm GlaxoSmiKline, and Swiss firm Novartis have closed or decreased research teams based in China over the past year.\textsuperscript{106} According to John Wong, chairman of greater China at Boston Consulting Group, these closures may reflect dissatisfaction with China’s research talent pool.\textsuperscript{107} From 2007 to 2015, Chinese research accounted for only 2.5 percent of new pharmaceutical molecules discovered.\textsuperscript{108}

### Quarterly Review of China’s Economy

#### Old Levers Boost GDP Growth to 6.8 Percent in Q3 2017

China’s economy grew at a robust 6.8 percent in the third quarter of 2017, slightly below the 6.9 percent expansion in the second quarter, but still above the government’s 6.5 percent target for the full year (see Figure 5).\textsuperscript{109} The

\[ \text{Figure 4: Drugs Waiting for Approval from Chinese Government, 2013–2015} \]


strong growth was expected as China’s top leadership met for the 19th Party Congress, a twice-a-decade summit where they anointed President Xi as China’s leader for another five-year term.

Figure 5: China’s Official GDP Growth Rate, Q1 2012–Q3 2017

Note: In 2016, the official target was a range of between 6.5 and 7 percent. 
Source: China’s National Bureau of Statistics via CEIC database.

In the months leading to the 19th Party Congress, the Chinese government took concerted steps to guard against any economic slowdown, which would have tarnished President Xi’s image. Expansion in traditional growth drivers, such as industrial activity and real estate, and a rebound in fixed-asset investment (FAI) helped keep China’s economy growing. In September 2017, overall FAI increased 6.2 percent year-on-year, while retail sales jumped 10.3 percent, and industrial production—an important indicator of manufacturing activity—increased 6.6 percent (see Figure 6). The fallback on old habits to stimulate the economy worries many analysts, who fear the short-term boost adds to long-term risks, including rising debt and a property bubble.

Figure 6: Growth in China’s Key Economic Indicators, March 2015–September 2017

Source: China’s National Bureau of Statistics via CEIC database.

Year-to-date, investment in infrastructure—where China experiences significant overcapacity—continues to dominate (see Figure 7). The recovery in real estate from its slump in 2015 continues apace, supporting the
manufacturing sector. Unofficial estimates of China’s manufacturing Purchasing Managers’ Index (PMI) by the financial media firm Caixin reached 51.0 in September. While this is down from 51.6 in August, the manufacturing PMI remains above the 50 mark, meaning it maintained expansion for the fourth month in a row.

**Figure 7: FAI Growth by Category, Year-to-Date, April 2015–September 2017**

![Chart showing FAI growth by category from April 2015 to September 2017.](chart)

*Source: China’s National Bureau of Statistics via CEIC database.*

**Real Estate Sector Continues to Grow**

Although Chinese regulators, fearing a bubble, have been trying to tamp down growth in the real estate sector, it continues to increase (see Figure 8). Because they lack other options due to limited financial reforms, Chinese households continue to favor real estate purchases as a form of investment. According to data from E-House China Research Institute, a Shanghai-based research firm, “38 percent of all bank loans issued in the 12 months to August were home mortgages.” In fact, the contribution of the real estate sector is so important to China’s economy, that in 2016, property investment directly contributed 10 percent to China’s GDP; this share expands to 20 percent when collateral industries like glass, steel, and home appliances are added to the calculation.

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* Among other measures, Chinese regulators have tried to crack down on the use of consumer loans for home purchases, and introduced restrictions on mortgages and purchases of second homes. Xinning Liu and Gabriel Wildau, “China Steps up Battle against Runaway Property Prices,” Financial Times, October 1, 2017. [https://www.ft.com/content/c309a7aa-a4cb-11e7-9e4f-7f5e6a7c98a2](https://www.ft.com/content/c309a7aa-a4cb-11e7-9e4f-7f5e6a7c98a2).
**State Sector Ascendant and Reforms Delayed**

Although in his speech delivered at the start of the 19th Party Congress President Xi spoke of allowing “the market to play a decisive role in the allocation of resources,” data point to the ascendance of the state in the country’s economic activity. In the first nine months of 2017, FAI by private companies grew only 6 percent year-on-year, while FAI by state-owned enterprises (SOEs) grew 11 percent. Over the same period, profits of large SOEs grew 18.4 percent year-on-year to $167 billion. This tracks closely with another pledge by President Xi—to ensure “stronger, better and bigger state assets.”

Meanwhile, long-standing problems like industrial overcapacity and local government debt remain unaddressed. Tackling them will entail significant economic disruption and political pain, which the government appears unwilling to tolerate for fear of social instability. In a move some analysts interpreted as a positive development, President Xi did not mention long-term growth or per capita gross domestic product (GDP) targets for China’s economy, which has been standard practice in previous Party Congress addresses. This may suggest the government will at last prioritize quality of growth over quantity, and will be more tolerant of an economic slowdown.

**Sector Focus: Electric Vehicles**

China is the world’s largest and fastest-growing automobile market, making it a critical market for foreign auto firms. Although the Chinese government spent decades trying to develop a robust domestic auto industry (including mandatory joint ventures for foreign companies), foreign automakers retain the majority of valuable technology. Now, China aims to leapfrog existing automakers and become the international leader in electric vehicles (EVs) by leveraging its massive market and the auto sector’s technological revolution. Capturing the global market share in this high-value-added sector will also help China reduce pollution, and gain international prestige. These efforts have turned China into the world’s largest producer and consumer of EVs by excluding foreign competitors and ensuring demand through government procurement.

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China Designates Electric Vehicles for Strong State Support

While the auto sector has long been a priority, the central government first designated EVs* as a strategic emerging industry in 2010.¹ In 2015, the central government reaffirmed its support for EVs in the Made in China 2025² initiative.¹²⁵ To realize these ambitious plans, central and local governments rolled out massive subsidies to develop domestic EV firms and necessary infrastructure and generate demand. According to China’s Ministry of Finance, the central government alone paid $4.9 billion (renminbi [RMB] 33.4 billion) in EV subsidies in 2009–2015.¹²⁶ From 2015 to the first half of 2017, the Chinese newspaper Economics Observer estimated central and local governments provided an additional $147.7 billion (RMB 1 trillion) in subsidies for 200 EV projects.¹²⁷

The Chinese government also subsidizes the expansion of charging stations, which are needed to increase the useful range of EVs. In October 2015, the National Energy Administration announced it will build 12,000 EV charging stations by 2020.¹²⁸ To meet this target, the Chinese government allocated $3.7 billion (RMB 25 billion) from 2017 to 2020, with local governments announcing their own subsidies for the number of charging stations installed.¹²⁹

Beyond state support for production and infrastructure, the government has sought to boost demand by subsidizing private consumption and mandating government procurement. EV buyers enjoy a number of tax benefits, including an exemption of $5,100 to $8,800 (RMB 35,000–60,000) in acquisition or excise taxes and a full or partial waiver of the vehicle registration fee.¹³⁰

Despite these incentives, the government is by far the largest customer. In July 2014, the central government mandated that EVs account for 30 percent of its new car and bus purchases by 2016.¹³¹ The central government reduced subsidies available for fuel and operating expenses for local governments that failed to meet this target.¹³² Industry consulting firm JSC Automotive noted that as a result, the government accounts for nearly all EV sales from local Chinese producers.¹³³ In May 2016, the National Government Office Administration mandated that EVs account for over half of China’s centrally owned vehicles by 2021, further boosting demand for domestic Chinese firms.¹³⁴ These enormous subsidies led more than 200 firms to enter this sector and contributed to an 18-fold increase in the volume of EV sales from 2013 to 2015.¹³⁵

The government has also set localization targets to ensure domestically produced products and components increase their market share at home and abroad.¹³⁶ The Chinese Academy of Engineering, an influential State Council think tank, released the Made in China 2025 Key Area Technology Roadmap in October 2015, outlining plans to localize production for 80 percent of EV and plug-in hybrid vehicle core components by 2025, and 50 percent of fuel-cell vehicle core components and key materials by 2025 (see Figure 9).¹³⁷ In addition, the roadmap aims for Chinese-branded EVs to account for 10 percent of the global market by 2025.¹³⁸ Reaching these localization targets would gradually close China’s growing market to U.S. and other foreign firms, a major loss of market and job opportunities.¹³⁹

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¹ Official Chinese government documents refer to “new energy vehicles.” In principle, this designation refers to plug-in hybrid EVs, battery EVs, and fuel-cell EVs. Other alternatives to gasoline-powered vehicles such as hydrogen fuel cell, solar, or biodiesel vehicles are not included.


In September 2017, the Ministry of Industry and Information Technology (MIIT) released new regulations as part of its cap-and-trade system to strengthen the demand for EVs over traditional automobiles. EVs must account for at least 10 percent of total 2019 sales for automakers that produce or import more than 30,000 automobiles. This target increases to 12 percent of total sales by 2020. Those firms that do not meet these targets will need to buy credit from other EV manufacturers to maintain market access. In response, General Motors (GM) announced in September 2017 that it would roll out at least ten EVs in China by 2020. Similarly, Volkswagen will provide electric or hybrid versions of its 300 models by 2030. By 2025, Volkswagen expects to invest $23 billion and more than $55 billion for EV batteries.

**High Market Access Barriers Harm Foreign Competitors**

Foreign automakers seeking to enter China’s auto market face high import duties, investment restrictions, and technology transfer requirements. All foreign-made automobiles face a 25 percent duty when they enter China’s market, encouraging firms to localize production. For example, Tesla’s Model S costs $69,500 in the United States, but due to the import duty, this price increases to $104,972 in China. Since 2009, the MIIT has required foreign firms to transfer at least one of the three key technologies (motor, inverter, or battery) to their Chinese joint venture partner. In January 2017, new regulations required domestic firms to “master” all three core technologies and control core EV research and development.

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**Figure 9: Electric Vehicle 2020 and 2025 Localization Targets**

development—in effect raising the bar for technology transfer and potentially placing IP at even greater risk. The European Chamber of Commerce criticized this regulation as a violation of China’s obligations under the WTO. In 2017, the Chinese government implemented a number of policies to encourage foreign investment and participation in its EV sector. Since June 2017, the Chinese government allowed foreign firms to form up to three joint ventures (previously two) to produce EVs in China. In July 2017, the National Development and Reform Commission and the Ministry of Commerce jointly released the Catalogue for the Guidance of Foreign Investment Industries that relaxed restrictions on foreign investment in EV power battery manufacturing and other components.

While China has lifted restrictions on investing in China’s electric batteries, according to MIIT only 57 electric battery manufacturers—all of them Chinese—qualify for EV subsidies. Leading foreign electric battery brands such as Samsung SDI or Panasonic Corporation built their battery factories in China to avoid the high import tariff. However, the MIIT did not grant them eligibility for EV subsidies, effectively cutting them out of the domestic market despite their power and cost advantages over Chinese competitors.

On November 2, U.S. automaker Tesla, one of the world’s leading EV manufacturers, reached an agreement with the Shanghai municipality to build an EV factory in Shanghai’s free trade zone (where it could maintain 100 percent ownership) beginning in 2019. While this plant would allow Tesla to increase its production and reduce distribution costs to a rapidly growing market, any production from this factory sold in the Chinese market would still face the 25 percent import duty, limiting the benefits.

State Support Transforms China into an EV Leader, but Overcapacity Looms

In just five years, China’s strong industrial policies successfully transformed China into the world’s largest EV manufacturer and EV market. In 2016, China accounted for 43 percent of the total EVs produced worldwide, compared with Germany at 23 percent and the United States at 17 percent. That same year, nine Chinese EV firms ranked in the top 20 global EV firms. Chinese automaker BYD, the global leader, overtook Tesla to become the market leader by volume in 2015. By 2016, BYD accounted for 13 percent of the global market, followed by Tesla at 9 percent and German automaker BMW at 7 percent.

In 2016, China overtook the United States for the largest number of EVs sold globally at 351,000 EVs, accounting for roughly 45 percent of the global market. By comparison, the United States accounted for 28.6 percent of the EV market with 221,000 EVs sold in 2016. This is a massive jump from 2015, when the United States and China were roughly equal in the number of EVs sold at 196,000 and 190,000, respectively. In the first nine months of 2017, EV sales in China reached around 400,000, a 37.7 percent year-on-year increase. The industrial group China Association of Automobile Manufacturers estimated 700,000 EVs will be sold in China in 2017, a new high.

This rapid ascent comes at the cost of significant fraud and emerging overcapacity. To qualify for subsidies, firms began illegally registering conventional vehicles as electric, substituting government-approved batteries with smaller, less powerful, and less expensive ones during production, and creating fake clients. A national investigation by MIIT, the Ministry of Finance, the Ministry of Science and Technology, and the National Development and Reform Commission revealed that at least 2 percent of EV sales between 2013 and 2015 were fraudulent. In September 2016, China’s Ministry of Finance fined BYD, King Long United Automotive Industry, Gemsea Bus Manufacturing Company, and two other Chinese firms for fraudulently collecting $147.7 million (RMB 1 billion) in subsidies.

Massive state subsidies also created vast overproduction and overcapacity in EVs and batteries. Song Qiuling, a senior official with China’s Ministry of Finance, warned in October 2017 that the sector has too much low-end product capacity with little high-end capacity to compete globally. Based on a review of 21 EV automakers’ plans in 2016, China expects to have an annual EV production capacity of around seven million by 2020—more than three times MIIT’s two million EV sales target for the same year. By 2016, China’s EV battery industry’s capacity reached 101 gigawatt-hours to supply only 27 gigawatt-hours’ worth of demand, a 74 gigawatt-hours surplus. To rein in this surge, the Ministry of Finance announced in May 2015 higher eligibility requirements and a scaling-down of the subsidy program to encourage greater competition and innovation. For example, only electric battery
firms that had at least 9 gigawatt-hours of annual production capacity would be eligible for subsidies. But rather than slow capacity expansion, these regulations prompted producers to raise production capacity to meet that requirement, repeating the same cycle that created China’s steel and solar* overcapacity. China Industrial Association of Power Sources predicts battery capacity to reach 180 gigawatt-hours in 2017.

In addition, the central government plans to reduce subsidies by 20 percent from 2016 levels between 2017 and 2018, and 40 percent between 2019 and 2020. However, since the government is propping up demand, it is unclear how attractive EVs will be to the average Chinese citizen without such subsidies, potentially creating a vast supply of unsold EVs that could be dumped on the international market.

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