U.S.-China Economic and Security Review Commission

Economics and Trade Bulletin

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Highlights of This Month's Edition

- **U.S.-China Trade:** In January 2021, U.S. goods exports to China increased 78.2 percent year-on-year to $12.9 billion, marking the largest year-on-year increase since November 1991; U.S. imports of Chinese goods grew 17.5 percent year-on-year to $39.1 billion; China continues to lag behind purchase commitments under the Phase One trade deal.
- **Biden Administration Undertakes Supply Chain Review:** Biden Administration aims to reduce dependence on China as it begins comprehensive study of U.S. supply chain vulnerabilities in strategic products and sectors.
- **China's Role in African Debt Bailouts:** Recent debt renegotiations by Chad, Ethiopia, and Zimbabwe under a new G20 program have highlighted concerns over China's opaque lending practices in the region and prompted fears of rising defaults across Africa amid COVID-related economic strain.
- **Chinese Bond Market:** Despite $15 billion in defaults in 2020, China's bond market continues to attract foreign investors in search of high yields, with over $2.6 billion going to new purchases of Chinese government bonds in February 2021.
- **Jiangxi Province Removes Residency Restrictions:** This step to reform the restrictive *hukou*—or household registration—system in Jiangxi would allow rural migrants in major cities to access social services; draft 14th Five-Year Plan hints at broader hukou reform.
- **In Focus – Food Security:** The Chinese government released a new plan for rural revitalization in February 2021, reflecting its growing concerns about food security and inequality. The new policy suggests a move toward the commercialization of genetically modified crops and import diversification to buffer China against foreign supply shocks.

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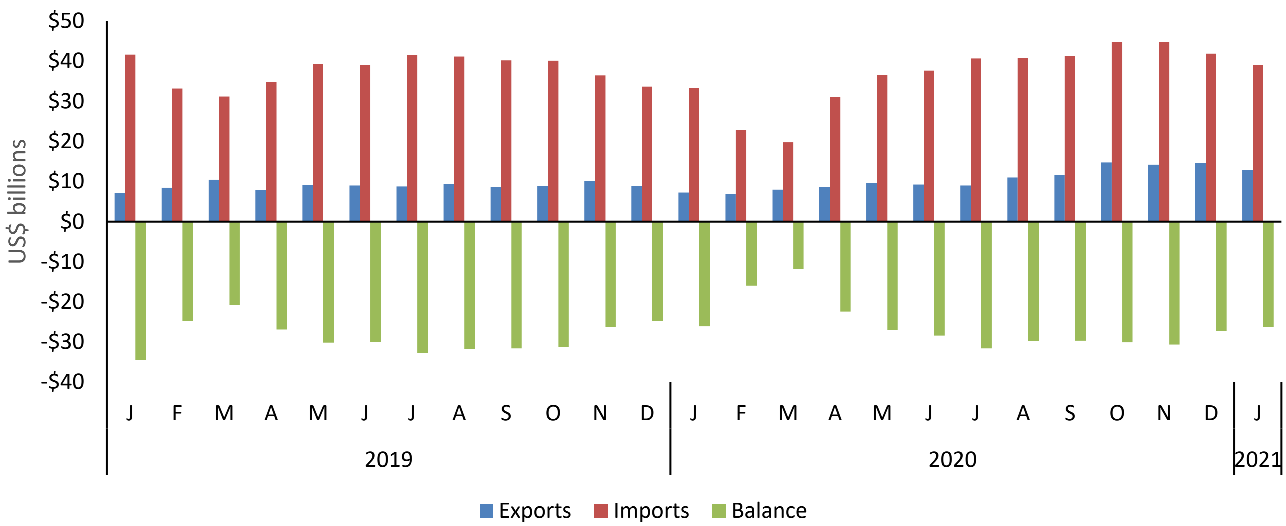
This issue of the Economics and Trade Bulletin *was prepared by Nargiza Salidjanova, Kendra Brock, Charles Horne, Kaj Malden, Leyton Nelson, Emma Rafaelof, and Taylore Roth. You may reach us at* contact@uscc.gov.

Increase in U.S. Exports to China Marks 30-Year High

In January 2021, U.S. goods exports to China increased 78.2 percent year-on-year to $12.9 billion (see Figure 1), marking the largest year-on-year increase since November 1991.[1] U.S. imports of Chinese goods grew 17.5 percent year-on-year to $39.1 billion, though month-to-month imports are down since November 2020.[2] The U.S. trade deficit in goods with China increased by only 0.71 percent year-on-year in January 2021, rising to $26.2 billion, but remaining below the two-year monthly average deficit of $27.3 billion.[3]

Figure 1: U.S. Exports, Imports, and Trade Balance with China 2019-2021



Source: U.S. Census Bureau, *Trade in Goods with China*, March 5, 2021. *https://www.census.gov/foreign-trade/balance/c5700.html*.

According to Chad Bown, senior fellow at the Peterson Institute for International Economics, under the Phase One trade agreement, China is expected to purchase $193.3 billion in covered goods from the United States by the end of 2021. The January 2021 year-to-date target for these purchases was $14.4 billion; however, China only purchased $9.8 billion in covered goods, or just 68 percent of the monthly target.[4] While Chinese purchases have picked up with China's economic recovery, for China to fulfill purchase targets set across the two years of the agreement, it would need to purchase an additional $248.8 billion in U.S. covered goods by December 31, 2021, or increase monthly purchases by 57 percent over January 2021 levels.[5] Chinese purchases of agricultural goods came closest to hitting their monthly target, as China ramps up imports of U.S. corn and soybeans to feed its recovering pig population, which was previously devastated by successive outbreaks of African Swine Fever (see "In Focus: China's New Agriculture Policy Reflects Growing Food Security Concerns").[6] China's tech purchases also boomed. In 2020 U.S. exports to China registered a 10-year high in the U.S. trade surplus with China in semiconductor equipment, with China stockpiling $10.9 billion of U.S. semiconductor equipment ahead of U.S. export restrictions on Chinese technology giants like Huawei and Semiconductor Manufacturing International Corporation.[7]

Biden Administration Prioritizes Supply Chain Security in Economic Competition with China

The Biden Administration is evaluating supply chain security and risks associated with reliance on China for strategic products and resources in critical industries and sectors. This review occurs alongside a broader assessment of policies it inherited from the Trump Administration. Preliminary actions suggest the Biden Administration will continue to deepen engagement with Taiwan as a strategic economic partner.

Executive Order Targets Reliance on China

On February 24, President Joseph R. Biden signed an executive order launching a comprehensive review of products and sectors on which the U.S. economy depends for imports and faces risks of supply chain disruptions.[8] The order prioritizes the protection of U.S. industries from pandemics, cyberattacks, climate change, terrorism, and "geopolitical and economic competition."[9] Though the order does not make explicit reference to China, Biden Administration officials note "strategic competitor nations will be among the risks evaluated."[10]

The order directs federal agencies to conduct two parallel examinations of supply chain vulnerabilities.[11] First, in an initial 100-day review, federal agencies are directed to assess classes of products for which the United States relies heavily on imports, including semiconductors, large-capacity batteries used in electric vehicles, active pharmaceutical ingredients (APIs), and critical minerals and rare earth elements.[12] China occupies an outsized presence in production of these products, and U.S. dependence on imports from China has come into stark relief in recent years. Second, in a longer-term, one-year review, federal agencies are directed to evaluate the overall resilience of the defense, healthcare, technology, energy, transport, and agricultural sectors.[13] Reports to be issued following these reviews are to assess, among other things, supply chain risks and vulnerabilities, opportunities to strengthen resilience, domestic industrial capacities, and the potential to work with allies and partners to bolster supply chain security.[14]

The issuance of the order follows a year of cascading supply chain disruptions wrought by the novel coronavirus (COVID-19) pandemic.[*] The public health crisis elevated attention to U.S. dependence on Chinese medical supplies and pharmaceuticals,[†] products specifically targeted for review by the order. More recently, a global shortage of computer chips and other electronic components, another class of products targeted by the order, has shuttered automobile factories in the United States and slowed shipments of consumer electronics.[‡] [15] A rebound in consumer activity as the threat of the pandemic begins to recede in the United States is further exacerbating the impact of supply shortages across a range of sectors as U.S. manufacturers struggle to keep up with demand.[16] Meanwhile, China's dominance in the production of rare earth elements,[§] a strategic resource with dual-use applications, further heightens the relevance of the order to safeguarding U.S. national security.

Order Eyes Coordination with Industry and Allies, but Challenges Ahead

The comprehensive supply chain reviews mandated by the order could precipitate changes to U.S. trade policy and procurement practices as well as education and workforce reforms.[17] However, any subsequent realignment of U.S.

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[*] For a review of the pandemic's impact on U.S. supply chains in early 2020, see Kaj Malden and Suzanna Stephens, "Cascading Economic Impacts of the COVID-19 Outbreak in China," *U.S.-China Economic and Security Review Commission*, April 12, 2020. *https://www.uscc.gov/sites/default/files/2020-04/Cascading_Economic_Impacts_of_the_Novel_Coronavirus_April_21_2020.pdf*.

[†] Research by the Congressional Research Service found China accounted for over 15 percent of imports of medical ventilators and over 70 percent of imports of protective articles like masks in 2019. Beyond medical equipment, the United States also relies on China for imports of both finished medicines and APIs—inputs for medicines—though the exact quantity of these direct and indirect imports is unknown. Karen M. Sutter, Andres B. Schwarzenberg, and Michael D. Sutherland, "COVID-19: China Medical Supply Chains and Broader Trade Issues," *Congressional Research Service* R46304, April 6, 2020, 39. *https://crsreports.congress.gov/product/pdf/R/R46304*.

[‡] The shortage is exacerbated by a steady decline in U.S. semiconductor manufacturing activity. According to the Semiconductor Industry Association, the U.S. share of global semiconductor manufacturing capacity has declined from 37 percent in 1990 to 12 percent in 2020. 77 percent of global chipmaking is now spread across China, Taiwan, South Korea, and Japan. Antonio Varas et al., "Government Incentives and U.S. Competitiveness in Semiconductor Manufacturing," *Semiconductor Industry Association*, September 2020, 5, 7. *https://www.semiconductors.org/wp-content/uploads/2020/09/Government-Incentives-and-US-Competitiveness-in-Semiconductor-Manufacturing-Sep-2020.pdf*.

[§] China, which produced more than 80 percent of rare earth elements globally, has leveraged this dominance to put pressure on trading partners, imposing an embargo on rare earth exports to Japan in 2010 over territorial disputes regarding the Senkaku Islands. The United States imports about 80 percent of its rare earths from China. Taisei Hoyama and Yu Nakamura, "U.S. and Allies to Build 'China-Free' Tech Supply Chain," *Nikkei Asia*, February 24, 2021. *https://asia.nikkei.com/Politics/International-relations/Biden-s-Asia-policy/US-and-allies-to-build-China-free-tech-supply-chain*; Jamie Smyth, "Industry Needs a Rare Earths Supply Chain Outside China," *Financial Times*, July 27, 2020. *https://www.ft.com/content/fc368da6-1c86-454b-91ed-cb2727507661*.

supply chains will require a significant investment of time and resources,* making quick change unlikely.[18] The order directs federal agencies to consult with industry stakeholders, even as preliminary survey data suggests U.S. businesses remain drawn to the Chinese market. For example, a recent American Chamber of Commerce in South China survey found that 55 percent of U.S. firms operating in southern China—a nexus of Chinese manufacturing activity—identify China as a top investment priority, up from 45 percent in 2020.[19] Japanese firms report a similar commitment to the Chinese market. For example, a Japan External Trade Organization survey conducted in September 2020 found the percentage of Japanese manufacturers planning to move production out of China is in decline, with just 7.2 percent of them planning to do so, down from 9.2 percent in 2019.[20]

The Biden Administration order's stated focus on cooperating with allies and partners may also encounter challenges in its bid to strengthen supply chain security. Buffeted by the fallout from U.S.-China trade and technology frictions and the pandemic's supply chain disruptions, EU countries are similarly vying for "strategic autonomy" and aim to reshore production across sectors like those targeted in the Biden Administration's order, including medical equipment, vaccines, and lithium-ion batteries.[21] Preliminary indications suggest the Biden Administration sees Taiwan as a more critical supply chain partner. Within hours of the order's signing, Director of the American Institute in Taiwan (AIT) Brent Christensen encouraged Taiwan firms to consider expanded investment in the United States in remarks delivered at a meeting of Taiwan semiconductor industry executives.[22] An AIT Facebook post noting Mr. Christensen's attendance highlighted the Biden Administration's supply chain order and called Taiwan a "key partner" in its implementation.[23]

Order Reflects Broader Biden Administration Review of China Policy

Language in the order underscores that the Biden Administration is in the process of reviewing the complex mix of China policies it inherited from the Trump Administration.† For example, the U.S. Department of Defense is instructed to provide an update to a report on the supply chain risks of the defense industrial base first mandated by the Trump Administration's 2017 executive order on "Assessing and Strengthening the Manufacturing and Defense Industrial Base and Supply Chain Resiliency of the United States."[24] In other cases, the Biden Administration is temporarily suspending or extending deadlines for compliance with other Trump-era directives. For example, President Trump's Executive Order 13920 "Securing the United States Bulk Power System," issued in May 2020, prohibited federal agencies and U.S. entities from acquiring, transferring, or installing bulk power system equipment supplied by foreign adversaries .[25] In his first day in office, President Biden suspended the order for 90 days (until April 20) while the secretary of energy and director of the Office of Management and Budget review and recommend whether a replacement order should be issued.[26]

Separately, the U.S. Department of the Treasury issued a general license on January 27, 2021, extending the deadline by which U.S. asset managers must stop new transactions in securities issued by Chinese military companies from January 28, 2021, to May 27, 2021.‡ [27] In his confirmation hearing, now Deputy Treasury Secretary Wally Adeyemo indicated the Treasury Department will review the relevant Trump-era investment ban, stating in his confirmation hearing that he would meet with Treasury officials "to understand how it's being implemented" and "look at the tools that exist today to hold China accountable."[28]

* For a review of preliminary trends in supply chain realignment and challenges associated with shifting production out of China, see "In Focus: Trends in Supply Chain Realignment" in November 2020 Trade Bulletin, *U.S.-China Economic and Security Review Commission*, November 9, 2020, 15–17. *https://www.uscc.gov/sites/default/files/2020-11/November_2020_Trade_Bulletin.pdf*.

† Center for Strategic and International Studies expert Scott Kennedy has proposed a matrix in which the Trump-era policies inherited by the Biden Administration could be sorted. For Dr. Kennedy, some policies should be removed and others strengthened, and policies between these extremes should be pursued through negotiations with China or in concert with U.S. allies and partners. For more on Dr. Kennedy's framework, see Scott Kennedy, "A Complex Inheritance: Transitioning to a New Approach on China," *Center for Strategic and International Studies*, January 19, 2021. *https://www.csis.org/analysis/complex-inheritance-transitioning-new-approach-china*.

‡ For more on the Trump Administration's investment restrictions, see "Chinese Companies' Access to U.S. Capital Narrows as Investment Restrictions Evolve" in January 2021 Trade Bulletin, *U.S.-China Economic and Security Review Commission*, January 13, 2021, 7–9. *https://www.uscc.gov/sites/default/files/2021-01/January_2021_Trade_Bulletin.pdf*.

African Debt Renegotiations Prompt Concerns over Chinese Lending and Possibility of Contagion

On January 28, the International Monetary Fund (IMF) announced Chad had requested debt restructuring, the first country to do so under a G20 debt-relief initiative launched last November known as the common framework.[29] Soon after the IMF's announcement on negotiations with Chad, Ethiopia and Zambia also announced they were seeking debt relief under the G20 structure.[30] The UN Economic Commission for Africa estimates the fallout from the COVID-19 pandemic will likely prompt other African countries to seek relief under the G20 initiative.[31] While the common framework could provide heavily indebted countries important relief from economic pressures caused by the COVID-19 pandemic, economists have voiced concerns over the transparency of China's participation in the initiative as well as the possibility of rising defaults across Africa. While the extent of African debt owed to China is unknown due to China's opaque lending practices, a 2020 study by the National Bureau of Economic Research found that 13 African countries owe the equivalent of at least 10 percent of their gross domestic product (GDP) to China and estimates that half of Chinese lending to developing countries is not reported to the IMF or World Bank.[32]

Since the beginning of the COVID-19 pandemic last year, China's government renegotiated certain debt obligations with African borrowers.[*] [33] The common framework marks the first time China has coordinated with other lenders on debt reduction measures.[34] China was a participant in the G20's Debt Service Suspension Initiative (DSSI), announced last April, under which official bilateral creditors agreed to suspend debt payments for eligible lower- and middle-income countries through June 2021. The DSSI did not provide for debt reduction, however, and instead only provided a temporary delay of payment. By contrast, the G20 common framework allows DSSI-eligible countries to reduce or reschedule certain debt payments.[35] Economists praised the common framework as an important step in acknowledging the need for debt reduction for lower-income countries, particularly after Zambia defaulted on a payment to bondholders in November 2020, becoming the first country to default since the beginning of the COVID-19 pandemic.[36]

As the largest bilateral creditor to Africa, China's participation in the common framework is an important component of the debt relief initiative.[37] The opaque nature of China's lending practices considerably complicates attempts to successfully restructure debt, however, and has increased concerns that other bilateral lenders will end up bailing out China's risky and undisclosed lending.[†] [38] Compounding these concerns is the decision by China's government not to include lending from the China Development Bank, one of China's two main policy banks, in the G20 debt relief initiatives.[39] Economists and politicians raised similar objections regarding China's participation in the DSSI last year.[‡]

Additionally, many debtor countries have been reluctant to participate in the common framework due to concerns that doing so could harm their credit ratings and hamper their ability to obtain capital through the international debt market. Already, the participation of Ethiopia, Chad, and Zambia have led to some concerns among observers about a potential contagion effect, leading to fallout in African debt markets. Ethiopia's announcement that it was participating in the debt relief program led to a selloff in the country's Eurobonds that sent yields soaring.[40] Soon after the announcement, rating agency Fitch downgraded Ethiopia's rating from B to CCC, followed shortly by a

[*] According to research by Johns Hopkins University School of Advanced International Studies China Africa Research Initiative, state-backed lenders in China have provided $7.6 billion in debt relief to eight nations between 2020 and 2021, with more than $6 billion going to Angola. Other African nations receiving debt relief included Botswana, the Democratic Republic of the Congo, Rwanda, Kenya, and Zambia. Steven Overly, "A Tight Timeline to Sort Out Boeing-Airbus," *Politico*, March 8, 2021. *https://www.politico.com/newsletters/weekly-trade/2021/03/08/a-tight-timeline-to-sort-out-boeing-airbus-793847*.

[†] Official statistics on African debt often do not provide country-by-country breakdowns of debt obligations, but instead categorize debt as owed to Paris Club members (a group of 22 major lending countries that includes the United States but not China) and non-Paris Club members. According to IMF figures, as of June 2019 Ethiopia owed $9.8 billion to non-Paris Club bilateral lenders. According to a report by its central bank, Zambia owes $224 million to non-Paris Club members as of 2019, though it is likely that much of Zambia's debt to China falls under a separate "suppliers/exports/bank" category that totaled $9 billion. International Monetary Fund, "Ethiopia – Debt Sustainability Report," May 2020; Bank of Zambia, "Annual Report 2019," December 2019.

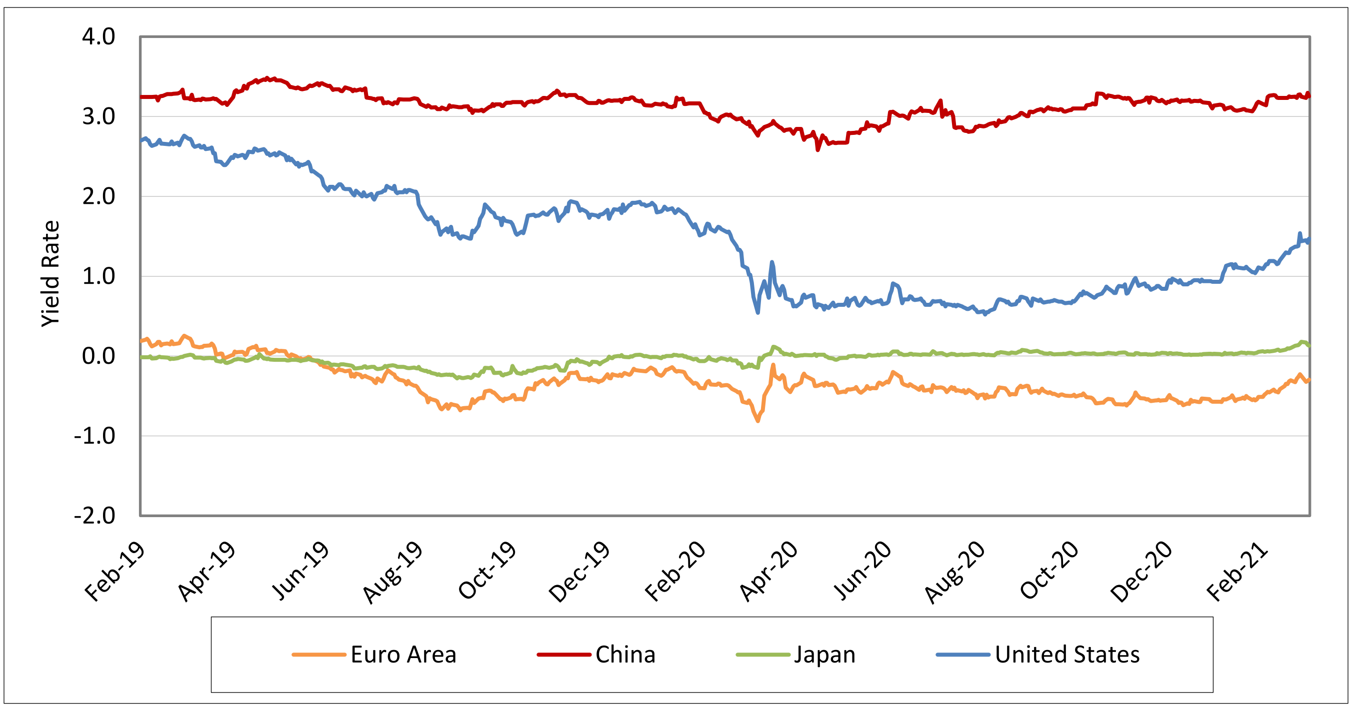
[‡] For more on the opaque nature of China's lending and the challenges it creates for debt relief, see U.S.-China Economic and Security Review Commission, *2020 Annual Report to Congress*, 163–165.

downgrade by S&P.[41] Jan Friedrich, Fitch's head of Middle East and Africa sovereign ratings, later said that the company would likely downgrade any other country that participated in the G20 debt relief program unless any private debt would not be affected by the restructuring.[42]

Foreign Investors Flock to Chinese Bonds in 2021 despite Late 2020 Defaults and Shaky Predictions

Promise of high returns in China's bond markets have investors coming back for more in 2021 despite a number of high-profile defaults near the end of 2020. Investors are abandoning stagnant bond markets in Europe and Japan in favor of Chinese bonds, which investors view as both relatively stable and likely to return high yields.[43] Another appeal of China's bonds is the limited volatility of the renminbi (RMB) compared with currencies of both developed and emerging markets.[*] [44] Continued enthusiasm for Chinese government and corporate bonds in 2021 reflects similar trends in foreign acquisitions of Chinese government bonds the previous year. In 2020, onshore Chinese debt inflows from foreign investors reached a record of $186.1 billion as yields from Chinese government bonds are nearly triple those of U.S. government bonds.[45] This has been particularly appealing to central banks and pension fund managers in Europe and the United States as other established markets see a decline in yields, with some rates turning negative (see Figure 2).[46]

Figure 2: Ten-Year Government Bond Yields Comparison: China, EU, Japan, and United States



Source: S&P Capital IQ database.

Foreign investment to onshore Chinese government bonds was approximately $2.6 billion in February 2021.[47] In the same period, the Chinese government issued 108 new bond offerings. Chinese corporations, mostly in the financial or industrial sectors, issued 349 bonds that largely support real estate and construction financing.[48] Among all February bond issuances in China, 81 percent were short-term, 17 percent medium-term, and the remaining 2

[*] The exchange rate has historically remained stable due to close Chinese government management of the RMB, which has ensured investors of stable returns. Yi Hu, "Chinese Onshore Bonds: A Market Too Important to Ignore?" *Invesco*, June 13, 2019. *https://www.invesco.com/apac/en/institutional/insights/china/chinese-onshore-bonds-a-market-too-important-to-ignore.html*.

percent a mix of perpetual and long-term bonds.* [49] The past month's makeup of bond issuances reflects a reduced local government bond quota in comparison to 2020 and use of bonds primarily for refinancing.[50] In contrast, the large quantity of Chinese local government bond issuances and special purpose bonds in 2020 were primarily intended for to fuel economic stimulus in the face of the COVID-19 pandemic and support ongoing infrastructure projects.[51] China's policymakers are likely to lower the quota from $531 billion in 2020 to $496 billion in 2021 to reflect recovery and control budget deficits for long-term financial sustainability.[52]

Chinese corporate and state-owned enterprise (SOE) bond defaults, which peaked at just over $31 billion in 2020, are a particular challenge to assessments of future financial sustainability. While having more inefficient companies default is better for China's economy in the long run, short-term stability may be negatively impacted .[53] Analysts predict a continuation of the trend for more bond defaults in 2021, particularly in the real estate sector, though foreign investors appear confident in being able to mitigate the risk.[54] Chinese SOEs accounted for $15 billion, or nearly half, of the $31 billion in China's total bond defaults in 2020, mostly concentrated among provincial or local-level SOEs.[55] This was an unusually high number of SOE defaults for China, presenting a key risk to 2021 bond markets and increased confusion over how to calculate credit risk.[56] Because the Chinese government has historically bailed out floundering SOEs, investors have considered credit risk for Chinese SOEs as generally similar to that of Chinese government bonds. Although recent SOE defaults are challenging conventional assumptions about risk in the Chinese bond market, analysts have also indicated that the defaults are an encouraging sign for healthier markets in the long term, should China's government avoid interfering and allow the market to determine SOE failure. Chinese policymakers have echoed this view, signaling that "unfit entities" will face market-based consequences without government interference while central SOEs can continue to be profitable.[57]

In late February 2021, the China Securities and Regulatory Commission (CSRC) introduced new rules removing the requirement for Chinese company issuers to be graded by a qualified credit company.[58] The previous requirement impeded bond issuance while also inherently privileging only domestic credit ratings companies, which often inflated ratings to the detriment of investors.[59] The new rules also strengthen disclosure requirements designed to boost investor confidence and allow for more market-based pricing.[60] Controlling debt, limiting defaults, and streamlining regulations for financing are clear priorities as the Chinese government prepares for two important annual policy and legislative planning meetings, otherwise called the "Two Sessions." Scheduled for March 4 to 11, the Two Sessions refers to the annual meetings of China's legislative body, the National People's Congress, and its top advisory body, the Chinese People's Consultative Congress. Each meeting is critical to annual agenda-setting on policy and legislation, covering every aspect of Chinese governance from the economy to foreign relations and the environment.[61] These themes are also expected to appear in the upcoming release of the 14th Five-Year Plan (2021–2025), which will establish the near-term goals and direction of the economy along with crystallizing new or continued government initiatives.[62]

Jiangxi Province Removes Residency Restrictions

On February 23, 2021, landlocked southeastern Jiangxi Province announced plans to remove restrictions on transferring *hukou*, or household registration, within the province.[63] Under China's hukou system, citizens may only access public services and other benefits in the city or village where their hukou is registered.[64] Jiangxi's policy would allow anyone living in Jiangxi to apply for a local hukou without having spent a minimum amount of time living in the province and other requirements that are common barriers to obtaining a new hukou.[65] Applicants for urban hukou must have stable employment but are not required to own property.[66] The new policy also allows new hukou holders in Jiangxi to receive access to basic public services such as education, unemployment insurance, and healthcare; they will also be able to transfer pension benefits between rural areas and cities.[67] The draft 14th Five-Year Plan promises nation-wide hukou reform, with the residency permits abolished in cities with up to 3 million people; liberalized requirements for cities with 3 to 5 million people; and a points system for megacities with a population of more than 5 million.[68]

* Short-term bonds mature in less than three years, while medium or intermediate bonds mature within four to ten years. Long-term bonds mature in over ten years. Debbie Carlson, "The Ultimate Guide to Bonds," *U.S. News*, May 7, 2020. *https://money.usnews.com/investing/investing-101/articles/the-ultimate-guide-to-bonds*.

Dating to 1958, the hukou system effectively constrains internal mobility of citizens between localities within China. A person's hukou essentially functions as an internal passport mechanism, creating by default two classes of citizens—those with urban hukou who enjoy access to far better public services, particularly in more developed cities, and those with rural hukou who can only access the limited public services of China's poorer localities.[*] [69]

While hukou has allowed China's government to effectively control the movement of the population inside the country, it has also contributed to widening inequality and perpetuated a semipermanent underclass of rural hukou holders working in urban centers.[70] Jiangxi lifted the restrictions following an announcement from China's State Council at the end of January that China will implement a series of pilot programs allowing mutual recognition of hukou between cities, provided residents have lived in participating cities for a minimum duration.[†] [71] Urbanization remains a key priority for China's government heading into the 14th Five-Year Plan period—part of a broader initiative to promote rural development and poverty alleviation (see "In Focus: China's New Agriculture Policy Reflects Growing Food Security Concerns").[72]

While the lifted restrictions in Jiangxi mark a step toward repealing the dual-track citizenship created by the hukou system, this limited trial is far simpler to implement than lifting restrictions across all of China, especially it's wealthier provinces or cities.[73] Jiangxi's GDP per capita in 2019 was $7,530 (RMB 53,164) compared to an average of $10,041 (RMB 70,892) across China, making it China's 11th-poorest province.[‡] [74] Its capital and largest city, Nanchang, had a population of 5.6 million at the end of 2019, compared to 24.3 million for Shanghai, China's largest city.[75] Larger, wealthier cities with more job opportunities have substantial migrant populations, and local authorities fear granting hukou to new residents would severely strain the public service infrastructure. For Shanghai, 9.8 million recorded residents in 2019 did not have a local hukou.[76] Nationally, 60.6 percent of China's population lived in cities in 2020, but only 44.4 percent held urban hukou.[77]

Since the State Council released an overarching hukou reform plan in 2014, numerous Chinese cities have created pathways to obtain a local hukou and are relaxing restrictions, but those with the highest standards of living have steep requirements, for instance mandating residence in the city for several years and having consistently paid into the local social security fund.[78] Shanghai and Beijing have "points" systems in which applicants are scored based on additional criteria like educational qualifications and professional accomplishments, and only a small portion of top applicants are granted local hukou.[§] In 2018, Beijing received over 124,000 applications but granted only 6,019 new hukou, making it more selective than undergraduate admissions to Harvard the same year.[**] [79]

Extending China's social safety net is vital to the government's plan to transition the economy to consumption-driven growth. Currently, rural hukou holders' limited access to education, medical care, and the pension system incentivizes households to save a substantial portion of income to meet these expenses out of pocket, dampening

[*] Rural hukou holders are also prevented from selling land, as land that is zoned rural (versus urban or industrial) is still legally owned by a collective of households, a holdover from farming communes in Mao-era China. A 2014 policy established transferrable rights to use land, for instance for agricultural production. Alex Smith, China's Poorly Planned Cities: Urban Sprawl and the Rural Underclass Left Behind," SupChina, March 11, 2020. *https://signal.supchina.com/chinas-poorly-planned-cities-urban-sprawl-and-the-rural-underclass-left-behind/*; Barry Naughton, "Is There a 'Xi Model' of Economic Reform? Acceleration of Economic Reform since Fall 2014," *China Leadership Monitor* 46 (Winter 2015), 5-6. *https://www.hoover.org/sites/default/files/research/docs/clm46bn.pdf*.

[†] The State Council's plan excludes more than a dozen of China's largest cities with populations over five million, including Shanghai, Beijing, Chongqing, and Guangzhou. Lu Zhenhua, "China to Further Relax Residency Restrictions, but Not in the Biggest Cities," *Caixin*, February 1, 2020. *https://www.caixinglobal.com/2021-02-01/china-to-further-relax-residency-restrictions-but-not-in-the-biggest-cities-101658781.html*.

[‡] Mainland China has 31 provincial-level jurisdictions, including autonomous regions such as Xinjiang, and municipalities Beijing, Tianjin, Shanghai, and Chongqing.

[§] In fall 2020, Shanghai revised its policy so that an undergraduate degree from several prestigious local universities or an advanced degree from other locations, coupled with employment and employer assistance in the application process, would allow applicants to bypass the points-based rating system. Cao Chen, "Shanghai Relaxes Residency Permits," *China Daily*, October 5, 2020. *https://webcache.googleusercontent.com/search?q=cache:UXq-9whzjsUJ:https://www.chinadaily.com.cn/a/202010/05/WS5f7a5cc0a31024ad0ba7d31b.html+&cd=5&hl=en&ct=clnk&gl=us&client=safari*.

[**] Harvard received 34,295 applications in 2018 and admitted 2023 students, or 5.9 percent, compared to less than 4.9 percent for successful hukou applicants in Beijing the same year. Ivy Coach, "2018 Ivy League Admissions Statistics." *https://www.ivycoach.com/2018-ivy-league-admissions-statistics/*.

consumption.[80] Increased ease of access to public services will also facilitate internal migration, a key goal of China's leadership as the country faces a looming labor shortage and growing wages already driving production chains to other countries.[81] Chinese policymakers have also viewed spurring urban population growth through lowered hukou requirements as a means to sell off excess housing stock in lower-tier cities, a gambit that has proven ineffective without employment opportunities to draw rural hukou holders to the city.[82]

In Focus: China's New Agriculture Policy Reflects Growing Food Security Concerns

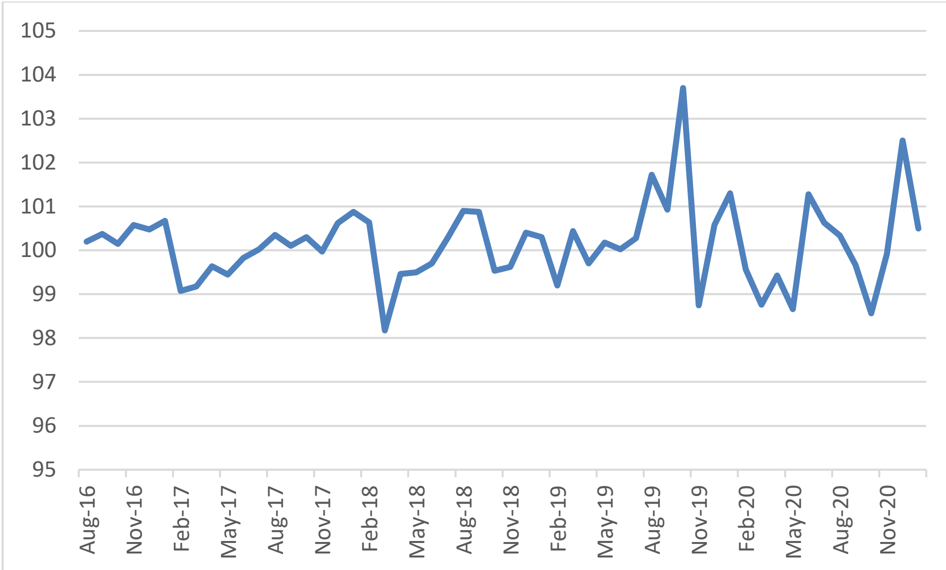
Food security has risen to the top of Beijing's agenda as the Chinese Communist Party (CCP) approaches its July 2021 centennial, a critical moment for both the Party and General Secretary of the CCP Xi Jinping to showcase the CCP's success in transforming China into a "moderately prosperous" society. While General Secretary Xi has already declared "total victory" in his signature antipoverty campaign, public memory of historical catastrophes such as the 1958 famine and rising inequality mean that food security remains a pillar of the Party's legitimacy, especially in rural China.[83] Beijing has signaled a shift from its poverty alleviation campaign to a long-term rural revitalization strategy with the release of its first policy document of the year, known as the *No. 1 Policy Document*, which traditionally covers topics related to rural development. This year's *No. 1 Policy Document* prioritizes the achievement of rural revitalization through agricultural modernization. Published only a few weeks before the release of the 14th Five-Year Plan, the paper provides a glimpse into China's evolving agricultural policy, which echoes familiar themes of securing supply chains through import diversification and substitution while amplifying domestic capabilities through innovation.

China Faces a Growing Food Supply Gap

Despite the political importance Beijing places on self-sufficiency, its dependence on agricultural imports is rising, making it increasingly vulnerable to global price and supply volatility.[84] In 2019, China became the world's largest importer of food, with purchases totaling $133.1 billion worth of food products, primarily consisting of land-intensive crops like soybeans and corn.[85] The majority of China's grain commodity imports such as soybeans are used as animal feed for China's domestic meat industry.[86] China's major agricultural suppliers are the United States and Brazil, the latter of which became China's largest soybean supplier at the height of the U.S.-China trade war.[87] Although Beijing claims to have achieved its priority goal of becoming self-sufficient in labor-intensive agricultural products like rice and wheat, a study by the China Academy of Social Sciences found that by the end of 2025 China's domestic grain supply is expected to fall short of demand by 130 million tons.[88]

In the past year alone, an outbreak of African Swine Fever, extensive flooding across rural southern China, and the COVID-19 pandemic constrained both domestic food supplies and the availability of agricultural imports, causing volatility in domestic prices (see Figure 3). For example, current prices for staple vegetables like cabbage, celery, daikon, and eggplant doubled over the last year, while the African Swine Fever caused the price of pork to rise 101.3 percent year-on-year in 2019.[89] The World Bank estimates that global food prices increased almost 20 percent in 2020, mirroring reports that Chinese food prices increased by 21.9 percent year-on-year in February 2020.[90] Chinese consumers have complained that the price of the typical Lunar New Year dinner nearly doubled in the last year alone, costing approximately 1,000 RMB ($155), which is roughly equivalent to the minimum monthly wage for workers in rural Chinese provinces like Liaoning, Hunan, and Anhui.[91]

Figure 3: China's Agricultural Price Index Volatility, 2016–2020



Source: China Ministry of Commerce via CIEC Database.

Structural imbalances concerning the allocation of land, labor, and capital within China's domestic economy have long exerted pressure on the country's food supply. China is responsible for feeding approximately 20 percent of the world's population but has only about 9 percent of the world's arable land, according to China's National Bureau of Statistics.[92] Rapid urbanization fueled by local governments' sale of land to real estate developers has slowly eaten away at much of China's farmland. China's large-scale industrialization has also reportedly polluted about one-fifth of the country's arable land, raising concerns about the safety of China's food and water.[93] Furthermore, existing farmland is regulated by the household responsibility system—China's system for dividing rural land use rights among farmers—which has been an important poverty alleviation tool in rural areas. With Chinese farm sizes averaging just 2.5 acres in comparison to the U.S. average of 444 acres, the system has sustained small-holder farms as China's engine of rural productivity while preventing more efficient forms of industrial cultivation that would leverage economies of scale to increase output.[94] China's agriculture sector also faces a declining workforce and sluggish investment as the Chinese rural labor force decreased by almost 20 percent between 2009 and 2019, and fixed asset investment into the agriculture sector has stagnated between 2 and 4 percent since the early 2000s, which represents less than half the sector's share in GDP.[95]

With the *No. 1 Policy Document*, CCP Pledges "Agricultural Modernization"

The *No. 1 Policy Document*—a key directive issued by China's central government on February 21, 2021—identifies policy priorities to accelerate rural revitalization and poverty alleviation, emphasizing the role of agricultural modernization in driving the process. The document also tied rural revitalization to China's environmental ambitions with reference to "green agriculture," antipollution efforts, protection for fisheries, and desertification prevention.[96] The paper mentioned the following key food security priorities:

- **Develop the national seed industry.** Policymakers emphasized that "seeds are the foundation for agricultural modernization" and outlined a comprehensive strategy to improve the domestic seed industry. The strategy calls for cultivation and development of genetic seed information, support for research and development in agricultural biotechnology, strengthening intellectual property protection in the seed industry, and accelerating the commercialization and industrial application of agricultural biotechnology.[97] This strategy reflects Beijing's overall desire to achieve both self-sufficiency and long-term market power by controlling the technologies at the core of food production.[98]

- **Optimize engagement with international markets.** The document calls for China to diversify agricultural imports and increase domestic production of products like soybeans and corn. This is likely intended to reduce China's vulnerability in the event that it is the target of agricultural trade restrictions arising from a trade dispute, such as that with the United States. The document also called for integrating Chinese companies within global supply chains, reflecting China's evolving dual circulation strategy of strengthening domestic capabilities while pursuing opportunities in global markets.[99]
- **Protect arable land and increase yields.** Policymakers reiterated the arable land quota of 1.8 billion mu (27 billion hectares) established at the 2020 Central Economic Work Conference[*] while calling for an additional 100 million mu (6.67 billion hectares) of "high quality" arable land to be available at all times to buffer food production against natural disasters and supply shocks. The document also announced this year's grain output target of 650 million tons, which reflects a broader trend of increasing targets.[100] China has traditionally relied on policy measures such as farmland quotas and grain stockpiling to address food security concerns and will likely continue to strengthen these measures in conjunction with new strategies to boost domestic agricultural productivity.
- **Leverage party incentives and government oversight.** Highlighting the importance of increased food security to the CCP, cadres and local government officials will now be evaluated based on their track record for agricultural modernization and rural revitalization, with promotions (and demotions) tied to performance. Signaling the shifting priority from poverty alleviation to rural revitalization, the central government also replaced a former antipoverty agency with the National Administration of Rural Revitalization (NARR), which will work to expand rural industry and provide vocational training in rural areas.[101]

"Seed Security" Policy Suggests a Move toward the Commercialization of GMOs

Chinese government's emphasis on boosting internal production through technology may lead to broader commercialization of genetically modified crops (GMOs), which would mark a significant change in government policy. The Chinese government has historically used concerns about GMOs to limit foreign agriculture imports while engaging in strategies to boost the domestic agriculture technology industry.[†] China's Minister of Agriculture and Rural Affairs Tang Renjian recently drew a parallel between seeds and microchips—a national security priority for China—suggesting that the Chinese government views control of agricultural innovations, potentially including GMOs, as a critical part of food security.[102]

Government approval for the planting and import of GMOs is currently severely restricted. Only genetically modified cotton and papaya are cleared for commercial planting in China.[103] Genetically modified agricultural imports must receive a biosafety certificate; currently only 56 genetically modified agricultural goods are cleared for import, including 21 strains of corn and 18 strains of soybeans that can only be used for animal feed.[‡] [104] The Chinese government's use of GMO licensing requirements to limit imports of agricultural goods has contributed to friction in the U.S.-China relationship. The Chinese government delayed approval for import of the Syngenta corn variant from 2010 to 2013 despite its approval in several other countries, and it rejected more than one million tons of corn from 2013 to 2014 for containing the variant. Reflecting the issue's priority for the United States, trade barriers to GMOs were included in the Phase One trade deal with China, promising to "establish and make public a simplified, predictable, science- and risk-based, and efficient safety-assessment procedure for approval of food ingredients derived from [GMOs]."[105] The Chinese government has approved ten varieties of genetically modified soybeans and corn since the deal went into effect in February 2020.[106] The U.S. Department of Agriculture (USDA)

[*] For more on the 2020 Central Economic Work Conference, see U.S.-China Economic and Security Review Commission, *Economics and Trade Bulletin*, January 13, 2021. *https://www.uscc.gov/sites/default/files/2021-01/January_2021_Trade_Bulletin.pdf*.

[†] For a more on China's agricultural policy, see U.S.-China Economic and Security Review Commission, Chapter 1, Section 3, "China's Agricultural Policies, Trade, Investment, Safety, and Innovation," in *2018 Annual Report to Congress*, November 2018, 125–155.

[‡] These genetically modified agricultural goods were certified in four rounds from 2018 to 2020. The 31 certificates issued in 2018 and 12 certificates issued in 2019 are valid for three years. The 13 certificates issued in 2020 (including seven varieties of corn, three varieties of soybeans, and three varieties of cotton) are valid for five years.

forecasts that growing Chinese demand will drive record sales of U.S. corn and record export values of soybean in FY 2021.[107]

The Chinese government's emphasis on domestic agricultural production and seed self-sufficiency indicate that, if approved, commercial planting of GMOs within China would prioritize the use of Chinese agricultural technology. The per-unit yield of Chinese soybeans and corn is currently less than 60 percent of U.S. per-unit yields, according to Vice-Minister of Agriculture and Rural Affairs Zhang Taolin.[108] Vice-Minister Zhang argued that China must address this gap with "leapfrog development in the seed industry," suggesting the Chinese government's long-term goal is surpassing—rather than opening market access to—foreign players.[109] In an interview with *Xinhua*, China's Minister Tang emphasized "Chinese bowls must be filled with Chinese grains, and Chinese grains must be grown from Chinese seeds."[110] The December 2020 Central Economic Work Conference's ranked "seeds and arable land" as fifth among the nation's top eight priorities for 2021, the highest priority given to seeds since 2012.[111]

The focus on Chinese-owned seeds and "leapfrogging development" builds on moves by both the Chinese government and Chinese companies to boost indigenous agricultural technology. From 2006 to 2020, the central government-initiated National Major Science and Technology Projects of China for Breeding New Biotech Varieties invested about $3.5 billion in crop and animal research involving genetic engineering and novel technology development.[112] The same period saw a rapid increase in agricultural research and development by both private and public actors in China, with combined expenditures by Chinese public and private actors surpassing U.S. expenditures by 2010.[113] By 2013, combined research and development expenditures by Chinese public and private actors were roughly $18 billion and U.S. expenditures were roughly $13 billion.[114]As in other technology sectors, the Chinese government and Chinese companies have acquired existing intellectual property through both licit and illicit measures. In 2014, employees of Chinese agricultural Dabeinong Technology Group (DBN), which currently holds some of the first biosafety certificates issued to domestic companies, were implicated in an attempt to smuggle patented corn from DuPont Pioneer, Monsanto, and LG seeds from the United States to China.[115] State-owned chemical company ChemChina acquired Swiss seeds and pesticides company Syngenta in 2017.*

Increased investment in GMOs is paralleled by a trend toward more permissive policies on the use of GMOs. China's 13th Five-Year Plan (2016–2020) included the goal of a 50 percent increase in grain yield growth and the commercialization of new strains of resistant cotton, corn, and soybeans by 2020.[116] China seems to have made some progress toward this goal: the Ministry of Agriculture and Rural Affairs issued five biosafety certificates to domestically designed GMO crops in 2020 and 2021, the first domestically designed GMO crops to be certified by the ministry in a decade.[117] Receiving a biosafety certificate is only the first step toward approval for planting for a GMO strain; it also needs to receive a production certificate from the Ministry of Agriculture and Rural Affairs.[118] The issuance of this production certificate is not guaranteed; domestically designed GMO corn and rice received biosafety certificates in 2009 but never received approval for commercial production.[119]

Domestic concerns about the safety of GMOs may continue to slow domestic adoption. The five domestically produced GMOs approved in 2020 and 2021 were only part of a larger list of 192 genetically modified plant specifies seeking biosafety certification released by the Ministry of Agriculture and Rural Affairs in 2020.[120] When released, the list met with widespread public concern regarding the safety of genetically modified food.[121] Surveys of Chinese consumers indicated broad public support for GMO restrictions, suggesting that greater opening may meet with public backlash: in a 2018 survey of 2,000 Chinese consumers in 193 cities across 31 provinces, 47.1 percent believed it was best to "totally ban the GM foods," while 43.3 percent believed the government's "supervision force is appropriate" and only 9.6 percent believed supervision was too tight.[122]

China's Import Diversification Strategy for Food Security

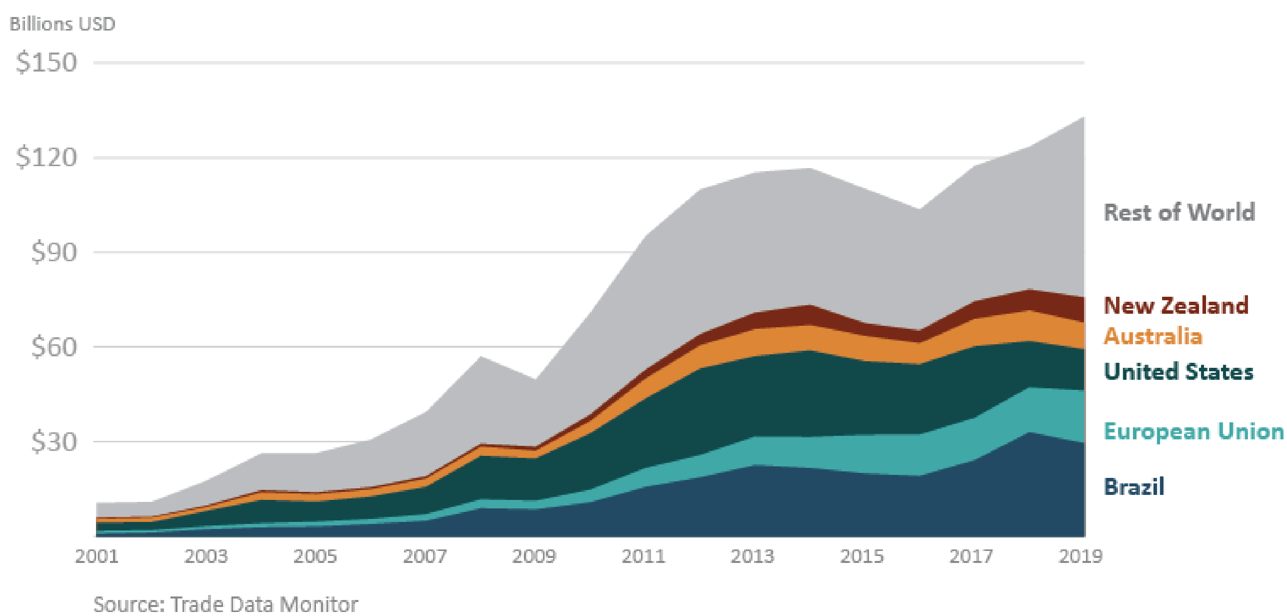
In addition to boosting domestic agricultural production through GMOs, the Chinese government is also seeking to enhance the resilience of its food supply chains by diversifying import sources for agricultural food goods. At the

* The purchase of Syngenta, which at the time was one of the world's largest biotech firms, allowed acquisition of at least 96 different GMO crops approved for commercialization worldwide. International Service for the Acquisition of Agri-Biotech Applications, "GM Approval Database," June 11, 2018.

same time, the Chinese government is seeking to secure markets abroad for Chinese agricultural technology and access for Chinese direct investment into agriculture, allowing it to shape patterns of trade and gain support for its technonationalist model.

China's push for import diversification is driven by its growing reliance on foreign agricultural food goods. China became the world's largest agricultural importer in 2019, followed by the United States and the EU.[123] China has remained reliant on a few countries, including the United States, for critical agricultural goods such as soybeans and corn used primarily for animal feed, leading China to pursue a strategy of import diversification that will increase its resilience to supply-side shocks.[124] The top five sources of China's $113.1 billion in agricultural imports in 2019 were Brazil, the EU, the United States, Australia, and New Zealand (see Figure 4).[125] The United States exported $14 billion in both consumer and bulk agricultural products to China in 2019 ($8 billion in soybeans alone), accounting for 10.5 percent of China's $133.1 billion in total agricultural imports.[126]

Figure 4: China's Top Five Agricultural Suppliers, 2001–2019



Source: U.S. Department of Agriculture, "China: Evolving Demand in the World's Largest Agricultural Import Market," September 29, 2020. *https://www.fas.usda.gov/data/china-evolving-demand-world-s-largest-agricultural-import-market*.

The Chinese government's efforts to diversify imports are reflected in increased approvals for market access requests. China's General Administration of Customs "appears to have approved market access requests at a quicker pace than years past," according the USDA, with at least 100 new agriculture products approved from 2019 to 2020.[127] Many of these approvals seem to have coincided with the signing of bilateral trade agreements that also increase access for Chinese technology and investment.[128] For example, Dirk van der Kley, research fellow at Australian National University, notes that phytosanitary agreements with Central Asian countries allowing their agricultural goods access to the Chinese market are accompanied by Chinese investment in export-oriented businesses and training on the use of Chinese e-commerce platforms.[129]

Regional fora and the Belt and Road Initiative (BRI) also serve as mechanisms for both diversification of agricultural imports and the promotion of Chinese agriculture technology and investment. Chinese companies invested $43 billion in agricultural production abroad from 2009 to 2019.[130] While none of China's top five agricultural suppliers are BRI member countries, the $33.4 billion in imports from 57 BRI countries in 2019 accounted for 25.1 percent of all agricultural imports, defraying the risk that a loss of access to any single country could threaten China's agricultural imports.[131] However, the Chinese government may be moving away from relying on the BRI as a primary tool for import diversification. According to the USDA, in a shift from previous years, the 2020 *No. 1 Policy Document* does not explicitly mention the BRI as a vehicle for import diversification.[132]

One example of the Chinese government's efforts to pursue import diversification and promote its own model of digitally oriented agricultural development through regional fora is the China-Community of Latin American and Caribbean States (CELAC). The Chinese government has used the forum to highlight the importance of CELAC agricultural exports with a goal of $100 billion in agricultural food trade in 2030, promote its own digital solutions[*] in CELAC, and expand investment.[133] At the second China-CELAC Forum on Agriculture held in February 2021, Minister Tang pledged $5 billion in Chinese agriculture investment to CELAC nations.[134]

China's promotion of its digital solutions to rural revitalization, a model implemented domestically through partnership with Chinese tech giants like Alibaba, has received support from the Food and Agricultural Association (FAO), a UN organization currently headed by China's former vice minister of Agriculture and Rural Affairs.[135] During the second China-CELAC Forum on Agriculture, FAO Director-General Qu Dongyu announced the creation of the CELAC-China-FAO Digital Agriculture and Rural Development Facility in the FAO's Regional Office for Latin America and the Caribbean.[136] While agricultural exports from the region to China were up 2.5 percent year-on-year in May 2020, with the increase driven primarily by imports from Brazil and Argentina, observers have also raised concerns about deforestation associated with the China-related increase in agricultural production.[137]

Despite prioritizing diversification, China's reliance on the United States and a few other countries for certain bulk goods seems unlikely to shift in the short term. In February 2021, the USDA predicted that U.S. farm exports to China would reach a record $31.5 billion in the fiscal year ending September 2021.[138] The recently signed Regional Comprehensive Economic Partnership will have a "minor impact" on U.S. agricultural exports, according to the USDA, as parties to the agreement do not compete with the United States on products that received preferential treatment under the agreement, including soybeans.[139] Short-term efforts by the Chinese government to use certain agricultural imports as leverage have also proven unsuccessful. Notably, despite a three-month pause on imports of wheat from Australia and threats by the Chinese government to further restrict trade, Australia's wheat exports to China in 2020 reached $111.9 billion, a near-record high.[140] Other efforts to restrict imports in retaliation have had detrimental effects domestically despite efforts toward diversification. For example, limits on imports on Australian coal beginning September 2020 have driven power shortages in China.[141]

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