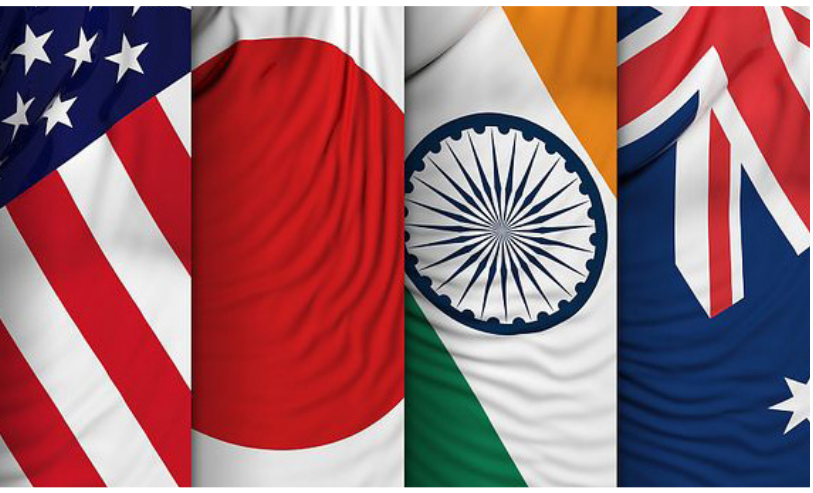
2021 Report to Congress of the U.S.-China Economic and Security Review Commission



Executive Summary and Recommendations

One Hundred Seventeenth Congress
First Session
November 2021

Printed for the use of the
U.S.-China Economic and Security Review Commission
Available online at: *www.uscc.gov*

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

The Commission's full charter and statutory mandate are available online at: *www.uscc.gov/charter.*

Cover photo credit: U.S. Capitol, Architect of the Capitol; protest march, Getty Images; flags, illustration by The Diplomat; Chinese PLA Air Force bomber near Scarborough Shoal, Getty Images.

U.S.-China Economic and Security Review Commission

November 17, 2021

The Honorable Patrick Leahy
President Pro Tempore of the U.S. Senate, Washington, DC 20510

The Honorable Nancy Pelosi
Speaker of the U.S. House of Representatives, Washington, DC 20510

Dear Senator Leahy and Speaker Pelosi:

On behalf of the U.S.-China Economic and Security Review Commission, we are pleased to transmit the Commission's 2021 Annual Report to Congress. This Report responds to our mandate "to monitor, investigate, and report to Congress on the national security implications of the bilateral trade and economic relationship between the United States and the People's Republic of China." The Commission reached a broad and bipartisan consensus on the contents of this Report, with all 11 members (one appointment remains vacant) voting unanimously to approve and submit it to Congress.

In accordance with our mandate, this Report, which is current as of October 8, includes the results and recommendations of our hearings, research, and review of the areas identified by Congress in our mandate, as defined in Public Law No. 106–398 (October 30, 2000) and amended by Public Laws No. 107–67 (November 12, 2001), No. 108–7 (February 20, 2003), 109–108 (November 22, 2005), No. 110–161 (December 26, 2007), and No. 113–291 (December 19, 2014). The Commission's charter, which includes the 11 directed research areas of our mandate, is included as Appendix I of the Report.

The Commission conducted seven public hearings, taking testimony from 75 expert witnesses from government, the private sector, academia, think tanks, research institutions, and other backgrounds. For each of these hearings, the Commission produced a transcript (posted on our website at *www.uscc.gov*). This year's hearings included:

- U.S.-China Relations at the Chinese Communist Party's Centennial;
- Deterring PRC Aggression toward Taiwan;
- U.S. Investment in China's Capital Markets and Military-Industrial Complex;
- An Assessment of the CCP's Economic Ambitions, Plans, and Metrics of Success;
- China in Latin America and the Caribbean;
- China's Nuclear Forces; and
- U.S.-China Relations in 2021: Emerging Risks.

The Commission received a number of briefings by executive branch agencies and the intelligence community, including both unclassified and classified briefings on net assessments of U.S. and Chinese military capabilities, the cross-Strait military balance, China's nuclear forces, the effects of China's termination of Hong Kong's autonomous status, U.S. responses to the growth of China's military power, and developments in China's biotechnology sector. The Commission also received briefings by foreign diplomatic officials as well as U.S. and foreign nongovernmental experts. The Commission includes key insights gained through these briefings either in its unclassified Annual Report or, as appropriate, in a classified annex to that Report.

The Commission was unable to conduct official travel this year due to the COVID-19 pandemic. We adapted and increased our virtual discussions with interlocutors to ensure the continued diversity of perspectives heard by the Commission. The Commission also relied substantially on the work of our excellent professional staff and supported outside research (see Appendix IV) in accordance with our mandate (see Appendix I).

The Report includes 32 recommendations for congressional consideration. The Commissioners agreed that ten of these recommendations, which appear on page 3, are the most important for congressional action. The complete list of recommendations appears on page 27 at the conclusion of the Executive Summary.

We offer this Report to Congress in the hope that it will be useful for assessing progress and challenges in U.S.-China relations. Thank you for the opportunity to serve. We look forward to continuing to work with Members of Congress in the upcoming year to address issues of concern in the U.S.-China relationship.

Yours truly,

Carolyn Bartholomew
Chairman

Robin Cleveland
Vice Chairman

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Introduction

In 2021, the Chinese Communist Party (CCP) marked the centennial of its founding with boastful confidence, declaring the superiority of its system over a supposedly declining United States and liberal international order. The CCP not only celebrated its successes in overseeing China's transformation into a formidable power on the world stage but also presented its political and economic model to the world as superior to democracy and capitalism. General Secretary of the CCP Xi Jinping reflected this outlook in a July speech in Tiananmen Square marking the Party's centennial celebration, claiming the CCP had used Marxism to "seize the initiative in history" and create a "new model for human advancement."[1]

Behind the CCP's outward confidence, however, top leaders increased their warnings to guard against threats to the regime. In late 2020, citing General Secretary Xi's collection of speeches, *The Governance of China*, a new Party study guide warned that the economic, social, and technological challenges facing China were long-term and would only become more severe. To overcome these challenges, the study guide concluded that the CCP must act forcefully to defuse risks and neutralize potential threats. Channeling this guidance, in 2021 Chinese leaders grew increasingly willing to wield all tools of national power.

The application of these tools had clear patterns:

1. Increased internal repression in Hong Kong, Xinjiang, and Tibet coupled with greater willingness to respond to ensuing foreign criticism using economic coercion. In the past, China tended to avoid such economic conflict with the United States. Over the past year, the United States may have been the main target.
2. Broadened state intervention in the economy to achieve the CCP's economic, social, and political goals. This was unsurprising after the novel coronavirus (COVID-19) outbreak but evolved in mid-2021 into a crackdown on nonstate sector capital raising. Along with the financial weakness demonstrated by Evergrande, the CCP's crackdown poses risks that passive U.S. investors may not understand. At the same time, Chinese policymakers are courting foreign capital and fund managers as they work to make China's capital markets serve as a vehicle to fund the CCP's technology development objectives and other policy goals.
3. Expanded capabilities of the People's Liberation Army emphasizing a buildup in nuclear forces. This expansion backed confrontational behavior with India and Taiwan, among others. In Taiwan in particular, the United States faces doubts about U.S. deterrence, a sentiment that can only intensify in the short term without decisive steps to address it.

China's strengths and the threats it presents to U.S. interests are considerable. At the same time, the CCP's own challenges are numerous. Increasing rigidity within the CCP's decision-making process has allowed little course correction from existing policy direction, even when those policies appear to be ineffective. In consolidating power and ideological authority, General Secretary Xi has contributed to CCP leaders' unwillingness to tolerate criticism or admit policy failure. Doing so would negate the Party's narrative of superiority and call into question its prediction of eventual triumph over the United States and other democratic countries. As General Secretary Xi attempts to further consolidate power ahead of the CCP's 20th National Congress next year, the Party's decision-making process is likely to become even more inflexible and brittle.

The CCP was and is aggressively advancing its economic interests to control global resources and markets and influence decision-makers. Its path through Africa and Latin America offers a clear example of its new way of colonizing. Combined with the escalation in projection of power across land, sea, space, and the cyber domain, China is engaged in a systematic effort to attack, oppress, erase, and marginalize the people whose opinions, sociocultural and educational values, religion, and ethnicity it sees as threats to its goals and approach. Whether spreading fake information designed to interfere in elections in Australia; gutting the education system and judiciary in Hong Kong; or carrying out belligerent military incursions across the borders or into the airspace of India, Japan, and Taiwan, China has transitioned from shaping global institutions from within to using punishing sanctions and economic, political, and military power in a campaign to bend the will and destroy the identities of individuals and nations to serve a narrative of a rising China.

As Beijing attempts to curb the aspirations of a rising generation of entrepreneurs, leaders, and advocates of democracy, the message is clear. National sovereignty along with constitutional rights, civil and human liberties, and free market economic values are impediments to the CCP goals of a "community of common human destiny," which in simplest terms is the Party's ever-expanding control over its own people and other nations' citizens as well.

[1] *Xinhua*, "Xi Jinping: Speech at the Celebration of the Centenary of the Founding of the Chinese Communist Party" (习近平：在庆祝中国共产党成立一百周年大会上的讲话), July 1, 2021. Translation.

At stake in this clash of identities and sovereignty is the safety and security of the United States and its partners, friends, and allies. The CCP is a long-term, consequential, menacing adversary determined to end the economic and political freedoms that have served as the foundation for security and prosperity for billions of people. Each decision the United States makes over the coming months and years must be taken in consultation with concerned partners and be purposefully directed at upholding an international system that has largely served us well. Otherwise, we will continue to see the slow but certain erosion of the security, sovereignty, and identity of democratic nations.

The Commission's Key Recommendations

The Commission considers 10 of its 32 recommendations to Congress to be of particular significance. The complete list of recommendations appears on page 27.

The Commission recommends:

1. Congress consider comprehensive legislation to address risks to U.S. investors and U.S. interests from investments in Chinese equity, debt, and derivative instruments by:
   - Prospectively prohibiting investment in Variable Interest Entities (VIEs) linked to Chinese entities.
   - Absent prohibition, ensuring that the risks of investments in VIEs linked to Chinese entities are more prominently identified for investors, including that the VIE structure is illegal under Chinese law, and that taxpayer subsidies do not support investments in such entities. Provisions that should be considered in support of this goal include:
     - Requiring prominent identification of the potential high risk for investments in VIEs linked to Chinese companies by:
       - Identifying VIEs linked to Chinese companies as such in their stock trading symbols on U.S. exchanges.
       - Requiring that broker-dealers provide risk warning labels on the potential lack of legal recourse for investors for their investments in VIEs linked to Chinese entities.
     - Prohibiting preferential federal tax treatment on losses and gains on investments in VIEs linked to Chinese entities made after the passage of appropriate statutory provisions.
   - Directing the U.S. Securities and Exchange Commission (SEC) as part of its evaluation of potential guidance on reporting on environmental, social, and governance matters by publicly traded companies to require reporting of:
     - Sourcing and due diligence activities of such companies involving supply chains that are directly or indirectly linked to products and services utilizing forced labor from Xinjiang.
     - Transactions with companies that have been placed on the U.S. Department of Commerce's Entity List or those designated by the U.S. Department of the Treasury as Chinese Military-Industrial Complex Companies.
   - Requiring index providers that include within their indices securities issued on mainland Chinese exchanges or the Hong Kong Stock Exchange, securities of China-headquartered companies listed on U.S. exchanges through a VIE, or derivative instruments of either of the preceding types of securities, be subject to regulation by the SEC.
2. Congress take urgent measures to strengthen the credibility of U.S. military deterrence in the near term and to maintain the ability of the United States to uphold its obligations established in the Taiwan Relations Act to resist any resort to force that would jeopardize the security of Taiwan, including:
   - Authorizing and funding the deployment of large numbers of antiship cruise and ballistic missiles in the Indo-Pacific;
   - Authorizing and funding the requests of U.S. Indo-Pacific Command (INDOPACOM) for better and more survivable intelligence, surveillance, and reconnaissance in the East and South China Seas;
   - Authorizing and funding the requests of INDOPACOM for hardening U.S. bases in the region, including robust missile defense;
   - Authorizing and funding the stockpiling of large numbers of precision munitions in the Indo-Pacific; and
   - Authorizing and funding programs that enable U.S. forces to continue operations in the event central command and control is disrupted.
3. Congress ensure the effective implementation of the Export Control Reform Act of 2018 and the Foreign Investment Risk Review Modernization Act of 2018 by enacting legislation that:
   - Creates a Technology Transfer Review Group (TTRG) within the Executive Office of the President responsible for identifying emerging and foundational technologies. The TTRG should be chaired by the secretary of defense and include the director of the Office of Science and Technology Policy along with Cabinet-level secretaries or their designees from the U.S. Departments of Commerce, Energy, and Homeland Security.

- Authorizes the TTRG to direct the Department of Commerce's Bureau of Industry and Security to implement export controls following the identification of these technologies.
- Authorizes and requires the TTRG to oversee multilateral engagement related to export controls, foreign investment screening, and regulations over technology transfer by relevant agencies to ensure that such engagement does not undermine U.S. national and economic security interests.
- Require that additional resources be provided to improve and expand end-user verification of export controls. Export licenses to the following entities should receive strict scrutiny: end-users identified as Chinese Communist Military Companies per section 1237 of the National Defense Authorization Act for Fiscal Year 1999, those identified as contributors to China's military-civilian fusion activities per section 1260H of the National Defense Authorization Act for Fiscal Year 2021, entities with direct and formal ties to the Chinese Communist Party (CCP) or Chinese government, and entities identified by the U.S. Trade Representative, U.S. Department of Justice, and Federal Bureau of Investigation as being linked to efforts to steal or coerce the transfer of U.S. intellectual property. The inability to identify end-user facilities and, if identified, the lack of adequate and timely access to these facilities should strongly inform investigating officials and licensing officials.
- Require that the TTRG engage with the Department of Justice, the Department of Commerce's Bureau of Industry and Security, and other relevant agencies to align "deemed export" controls with engagement on knowledge transfer and expert recruitment strategies such as the 1,000 Talent Programs as well as investigations of the CCP's United Front Work Department and other entities and programs of the CCP designed to acquire U.S. technology and capabilities.

4. Congress consider legislation to create the authority to screen the offshoring of critical supply chains and production capabilities to the People's Republic of China (PRC) to protect U.S. national and economic security interests and to define the scope of such supply chains and production capabilities. This would include screening related outbound investment by U.S. entities. Such legislation would direct the secretaries of defense and commerce, along with the U.S. Trade Representative, to develop procedures to evaluate existing and proposed supply relationships with the PRC and identify whether critical U.S. interests are being adversely affected, including the loss of domestic production capacity and capabilities. The legislation would authorize the president to take appropriate action, including prohibiting supply relationships or certain transactions to protect U.S. national security.
5. Congress enact legislation expanding the jurisdiction of existing U.S. investment restrictions targeting Chinese entities placed on the Non-Specially Designated Nationals (SDN) Chinese Military- Industrial Complex (NS-CMIC) Companies List as well as the scope of entities to be targeted by such restrictions. Such provisions should include:
   - Expanding the prohibitions relating to transactions and supporting work by U.S. persons in NS-CMIC securities covered by Executive Order 14032 to include the execution, support, or servicing of transactions by U.S. persons in any market or for any other person, including both U.S. and non-U.S. persons; and
   - Providing additional resources to ensure that a more comprehensive list of entities engaged in supporting the Chinese military-industrial complex be published and that subsidiaries supporting such entities be included on the list. In identifying entities that should be evaluated for inclusion in such designations, authorities should include companies designated by Chinese securities issuing and trading entities as supporting the military-industrial complex.
6. Congress prevent the erosion of U.S. strategic nuclear superiority and respond to China's qualitative and quantitative theater nuclear advantages by directing the Administration to continue implementation of the Obama-Trump Program of Record for nuclear modernization.

7. Congress direct the SEC to require that publicly traded U.S. companies with facilities in China report on an annual basis whether there is a CCP committee in their operations and summarize the actions and corporate decisions in which such committees may have participated.

8. Congress consider comprehensive legislation to ensure Chinese entities sanctioned under one U.S. authority be automatically sanctioned under other authorities unless a waiver is granted by the president or the authority applying the initial sanction. This legislation should rationalize existing U.S. sanctions targeting adversarial Chinese entities to ensure, for example, Chinese firms placed on the Entity List and/or Military End User List of the Department of Commerce are also placed on the NS-CMIC List and vice versa.

9. Congress mandate from Treasury an annual update of the accurate U.S. portfolio investment position in China since 2008, including money routed through offshore centers, such as the Cayman Islands. This should include exposure for:

   - Individual Chinese sectors;
   - U.S. institution types, such as state pension funds;
   - Sanctioned Chinese entities (Entity List, NS-CMIC List, and others);
   - Individual Chinese recipients who receive more than a minimum amount, such as $100 million; and
   - Individual U.S. investors with more than a minimum share of the total, such as 2 percent.

10. Congress direct U.S. Customs and Border Protection to initiate action to impose a region-wide Withhold Release Order on products originating from Xinjiang, China. In addition, Congress should require the Department of Homeland Security to provide a comprehensive list of technologies needed and an outline of the resources required to enforce the Withhold Release Order and address other instances of China's use of forced labor.

Executive Summary

Chapter 1: U.S.-China Global Competition

SECTION 1: THE CHINESE COMMUNIST PARTY'S AMBITIONS AND CHALLENGES AT ITS CENTENNIAL

For the Chinese Communist Party (CCP), 2021 has been a momentous year. As it celebrated the hundredth anniversary of its founding, the CCP aimed to show the world that it has transformed China into a prosperous and powerful country that is prepared to assume and is deserving of a greater leadership role in international affairs. Undeniable successes, such as the fact that hundreds of millions of people rose out of poverty over the past several decades, have emboldened CCP leaders and contributed to their belief in China's supposedly inexorable rise. The CCP's triumphalism likely derives both from a genuine belief in its own superiority and from the need to legitimize and sustain its one-party rule. This triumphalist propaganda, however, hides the CCP's rising concerns that failing to demonstrate the superiority of its model and address longer-term challenges could jeopardize the Party's domestic control and international influence.

While China's leaders may have envisioned 2021 as a showcase for China's rejuvenation under the CCP, the year also made clear the profound internal and external challenges facing the Party. The ongoing economic shocks and international scrutiny of the CCP's handling of the novel coronavirus (COVID-19) pandemic, along with growing international pushback against the CCP's repressive policies in Xinjiang, violation of its commitment to maintain Hong Kong's autonomy, and increasingly aggressive posture regarding Taiwan, provide a stark contrast to the optimistic image promoted by Beijing. China's economy is also confronted with a range of structural challenges, including rising debt, an imbalanced growth model, demographic decline, and environmental degradation. Politically, the CCP faces internal disunity manifested not only among CCP members but also in the highest levels of the policymaking apparatus. The CCP's insistence on its superiority and inability to admit failure limit its ability to effectively address these challenges.

Regardless of whether future developments cause the Chinese government to feel more or less secure, it will likely react by becoming even more assertive. China's leadership is increasingly uninterested in compromise and willing to engage in destabilizing and aggressive actions in its efforts to insulate itself from perceived threats or to press perceived advantages. As Beijing views itself facing a more adversarial international environment, its attempts to impede political and economic coordination between the United States and other democracies will likely intensify. China's increased emphasis on self-sufficiency will also lead to continued difficulties such as discriminatory treatment of U.S. firms hoping to participate in China's market.

Key Findings

- The CCP views the 2021 centennial of its founding as a time for both great confidence and great caution as it seeks to consolidate domestic and international support ahead of key political goals in 2035 and 2049. Through a widespread propaganda campaign, it has promoted a triumphalist narrative while omitting any mention of the CCP's serious shortcomings and heavily censoring dissenting opinions. The CCP's triumphalism derives both from a genuine belief in its own superiority and from the need to sustain its authoritarian system.
- CCP leaders publicly express confidence that China will prevail in an ideological and civilizational clash with the United States and other democracies they refer to as "the West." Chinese leaders portray the United States as a waning superpower on a path toward inevitable decline and believe China will be able to continue expanding its power and influence globally.
- China confronts a range of challenges that undermine the CCP's triumphalist narrative. Economically, China faces a set of structural problems, including growing debt, income inequality, demographic decline, and technological dependence on the United States and other advanced democracies that policymakers have been only partly willing or able to address. Politically, the CCP is concerned about internal disunity, corruption, and a lack of ideological conviction within its ranks.
- The CCP also perceives the international environment as becoming increasingly hostile to the Party's aims. This view has sharpened as the United States and other countries have more firmly pushed back against China's actions, including its policies in Xinjiang and Hong Kong, its handling of the COVID-19 pandemic, economic coercion, and Chinese diplomats' aggressive approach to foreign policy. External pressure has increased CCP paranoia about the potential for external forces to amplify internal dissent and threaten its regime.

- Both the CCP's confidence and its insecurity have contributed to an uncompromising approach domestically and to the outside world. Regardless of how China's internal and external environments develop, the CCP's aggressive posture will likely harden further as Chinese leaders confront the tensions between their rhetoric and their challenges. The CCP is now likely to react in an aggressive manner either in order to defend itself against perceived threats or to press perceived advantages.

SECTION 2: CHINA'S INFLUENCE IN LATIN AMERICA AND THE CARIBBEAN

China's role in Latin America and the Caribbean has become less constrained and increasingly visible over the past decade. Economic interests drive China's engagement in the region as it seeks commodities and raw materials to fuel its economy while building foreign markets for its companies and technologies. China has become a critical trading partner, investor, and bilateral financier for many Latin American and Caribbean countries. As it has become more economically embedded within the region, China has also devoted increasing attention to promoting its political interests, such as isolating Taiwan, expanding the Belt and Road Initiative, and defending itself from criticism of its human rights abuses.

In pursuit of its goals in the region, China has cultivated relationships in Latin American and Caribbean countries at all levels of government, across the political spectrum, and with nongovernmental actors (see Figure 1). China leverages centralized control over its own economy and political apparatus to enhance its negotiating power across seemingly unrelated issue areas, such as by attempting to use provision of vaccines to pressure countries to terminate diplomatic relations with Taiwan. China has previously leveraged its economic and political influence to establish a space tracking station in Argentina under the control of the People's Liberation Army (PLA), and it continues to deepen its involvement both in the financing and development of potential dual-use infrastructure and in the region's emerging space sector.

While China's economic engagement in the region has supported growth, its trade and investment relations risk stunting Latin American and Caribbean countries' development by increasing their economic dependence on commodity exports to China. To solidify its access to regional commodities like lithium, China couples trade with strategic investments and financing that increase its control over entire supply chains. Cementing its central position in some countries' economies, China plays a major role in providing financing for the region's much-needed infrastructure (see Figure 2). This economic engagement often contributes to worsening environmental, social, and governance conditions in the region, as many governments compromise their own laws and regulatory regimes to attract Chinese investment.

China's deepening engagement with Latin American and Caribbean countries reinforces trends that run counter to U.S. values and interests. Through trade, loans, and political backing, China has provided an economic lifeline to authoritarians like the Maduro regime in Venezuela while supporting democratic backsliding elsewhere in the region. China's expanding control over entire supply chains in the region may also harm U.S. competitiveness and threaten U.S. access to critical inputs for emerging technologies. Finally, by expanding its economic, political, and security relationships in the region and building dependencies in select countries, China is laying the groundwork for deepening influence and presence in a region of particular strategic significance for the United States.

FIGURE 1: CHINA'S MAIN DIPLOMATIC PARTNERS IN LATIN AMERICA AND THE CARIBBEAN

Note: China refers to Suriname as a "Strategic Cooperative Partner," to Trinidad and Tobago as a "Comprehensive Cooperative Partner," and to Cuba as "Good Brother, Good Comrade, Good Friend." Data for "Known Party-to-Party Meetings" are collected for the years 2019–2021.
Source: See the full Annual Report for complete list of sources.

FIGURE 2: SELECT CHINESE INVESTMENTS AND FINANCING IN LATIN AMERICA AND THE CARIBBEAN (2005-2020)

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

Key Findings

- China has expanded and diversified its relationships with Latin American and Caribbean countries over the past decade. Although economic interests are the main driver for its activities in the region, China is devoting increasing attention to pursuing political and to some degree security objectives, including gaining international support for its diplomatic initiatives, pressuring countries to sever relations with Taiwan, and deepening military relationships.
- China employs a whole-of-government approach in its relationships with Latin American and Caribbean countries, often bypassing national governments to advance its interests at the local level. Beijing's strategy coordinates efforts by China's official government representatives, such as embassies and political influence entities, state and nonstate companies, and quasi-governmental entities, to influence decisions across unrelated issue areas. China adapts its approach to individual countries' political and social structures, cultivating relationships with national governments, subnational governments, and nongovernmental organizations.
- China's economic importance and targeted political influence encourage Latin American and Caribbean governments to make domestic and foreign policy decisions that favor China while undermining democracies and free and open markets. China's position as a top trading partner and bilateral lender for many countries gives it economic and political leverage. Substantial foreign direct investment from China is a tool of influence, as accumulation of assets affords Chinese companies the power to impact local and domestic prices in key sectors, such as minerals and energy.
- China has closely collaborated with authoritarian regimes in the region, such as the Maduro regime in Venezuela, and enabled democratic backsliding in other countries, such as Ecuador and Bolivia. By selling digital and surveillance technologies to regimes in the region, China has enabled them to surveil and repress their populations, critics, and opponents. China has also provided significant financial support to these governments, thereby extending them an economic lifeline when they were cut off from international financial markets.
- Although China's demand for commodities has boosted regional economic growth, it has also encouraged its trading partners' overreliance on natural resource extraction at the expense of higher-value-added activities. Many countries voluntarily compromise their own environmental, social, and governance regulations to attract Chinese investment. Due to the region's weak institutions, China's expanding influence may also facilitate corruption and increase risks to countries' resource security and national interests.
- China aspires to deepen its military engagement in Latin America and the Caribbean, although its current security activities in the region are limited in scope. Beijing has previously leveraged its economic and political influence in Argentina to establish a space tracking station operated by the PLA. Influence gained by financing and constructing potential dual-use infrastructure such as ports and supporting space programs throughout the region positions China to further increase its military presence in the future.

Chapter 2: U.S.-China Economic and Trade Relations

SECTION 1: YEAR IN REVIEW: ECONOMICS AND TRADE

In 2021, China's economy continued to confront immediate disruption caused by the COVID-19 pandemic as well as long-term challenges to economic dynamism and financial stability predating the outbreak. Consumed with shoring up short-term growth and projecting an image of strength on the eve of the CCP's centennial, China's leadership resorted to a familiar playbook of government support for industry. The resulting rebound deepened already acute financial risks, and China's significant debt buildup became a renewed focus for Chinese policymakers. In particular, the Chinese government's attempts to rein in debt-fueled expansion of the property sector led to a sharp contraction in one of the country's main economic drivers and prompted a series of corporate defaults.

China's government initiated numerous regulatory actions against data-intensive industries throughout 2021, particularly in fintech, e-commerce, and online education. The unprecedented regulatory tightening reflected the CCP's desire to reassert control over nonstate tech behemoths, such as Alibaba. The effects were felt in international financial markets, underscoring the distinct political risks to U.S. investors posed by U.S.-listed Chinese companies. Chinese regulators' scrutiny of Chinese companies, including ride-sharing app Didi Chuxing immediately following its July 2021 initial public offering on the New York Stock Exchange, led to hundreds of billions in lost market capitalization on U.S. exchanges.

Despite continued tense rhetoric between Washington and Beijing during 2021, bilateral trade is returning to pre-tariff levels and U.S. capital flows to China are on the rise. As commercial and financial flows weave the economies closer together, the Biden Administration is consolidating a complex mix of the Trump Administration's policy initiatives with its own to defend against China's unfair economic policies and threats to U.S. national security. The Biden Administration has signaled that its priorities are to secure U.S. supply chains, boost U.S. competitiveness, and coordinate with U.S. allies and partners. Many U.S. multinational corporations, meanwhile, continue to view China as a priority market despite rising concerns about China's protectionist business environment.

In 2021, China focused on using its economic heft for both economic gain and geopolitical leverage. The Chinese government significantly expanded its use of economic coercion to punish critics and compel behavior it desires from foreign countries and firms. In late 2020 and 2021, the Chinese government also moved quickly in developing a legal and regulatory framework to counter foreign restrictions on Chinese companies and individuals. A central objective in China's expanding legal arsenal is to impose costs on foreign companies complying with U.S. laws that limit technology transfer to China.

Key Findings

- Though China was the first among major economies to recover following the fallout from the COVID-19 pandemic, topline growth figures mask an unbalanced and potentially unsustainable recovery. China's short-term rebound relied on government transfers to boost local spending and support firms, exacerbating the country's substantial debt load. The government's approach failed to revive household consumption.
- China's economic rebound in 2020 into 2021 does not represent a fundamental departure from a decade-long slowdown trend. The 14th Five-Year Plan (FYP) acknowledges underlying structural problems, such as declining investment returns, that prevent the economy from transitioning to a more sustainable model. China's leaders believe they can address these challenges through more state-led technology development and by strengthening, rather than loosening, the government's control over the economy.
- Escalating defaults by Chinese property developers show the challenge regulators face in reining in the highly indebted sector. Cash-strapped developer Evergrande's debt troubles have the potential to trigger broader financial instability given Evergrande's significant footprint within China's economy, including its connections to Chinese households, contractors, and suppliers in the property sector, banks, and local government finance vehicles.
- Chinese policymakers seek a self-sufficient technology sector that not only is under the CCP's control but also plays a critical international role. In 2021, the Chinese government expanded the breadth of its efforts to foster local technology champions, but it also initiated a range of enforcement actions against major nonstate Chinese tech firms. This crackdown is partly motivated by a desire for greater control of nonstate firms' collection and storage of data, which the government views as a strategic resource and national security priority.

- U.S.-China economic integration is strengthening in some areas but weakening in others. Bilateral trade flows and U.S. portfolio investment into China are increasing. Bilateral foreign direct investment flows are down, but there is an increase in venture capital, private equity, and other investments, and the types of acquisition targets are changing. Despite ongoing political frictions and concerns about discriminatory treatment, many U.S. companies remain committed to the Chinese market.
- The Biden Administration is building on the Trump Administration's assertive approach to addressing China's unfair economic practices, threats to U.S. national security, and denial of human rights by engaging U.S. allies and international institutions in confronting Beijing. Despite tense rhetoric, China's government seeks to prevent commercial tensions with the United States from escalating in order to maintain economic stability, even as both countries seek to strengthen supply chain security.
- China's government is formalizing a legal and regulatory framework to counter foreign trade restrictions and sanctions, aimed especially at U.S. export controls on Chinese companies and financial sanctions on Chinese individuals. The most sweeping of these new measures is the June 2021 Anti-Foreign Sanctions Law, which prohibits companies operating in China from complying with foreign sanctions the Chinese government determines are "discriminatory.

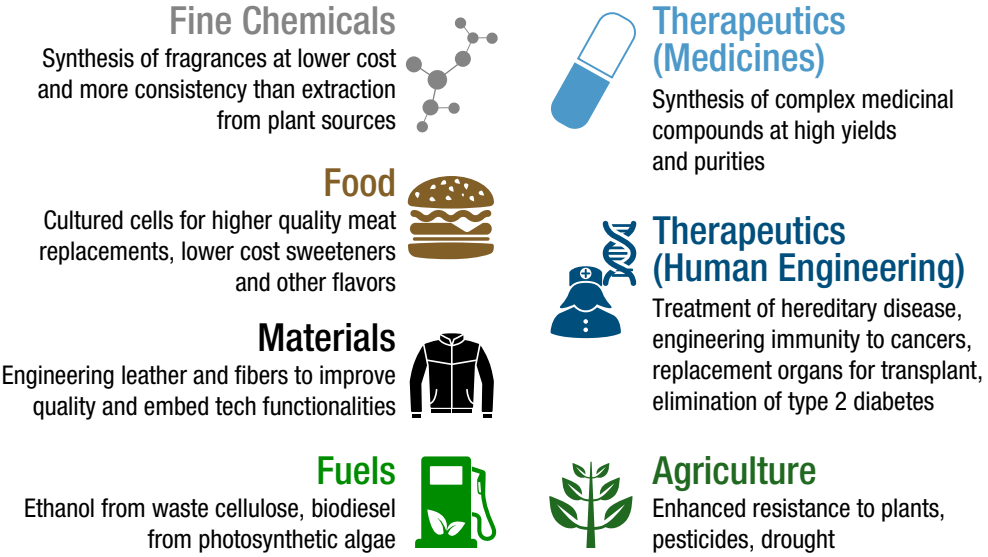
SECTION 2: THE CHINESE COMMUNIST PARTY'S ECONOMIC AND TECHNOLOGICAL AMBITIONS: SYNTHETIC BIOLOGY, NEW MOBILITY, CLOUD COMPUTING, AND DIGITAL CURRENCY

The Chinese government sees itself as competing directly with the United States for global economic leadership, a rivalry in which technological prowess will play a central role. The 14th FYP, China's economic policy blueprint issued in March 2021, emphasizes innovation and development not only for economic growth but more importantly for technological self-sufficiency, national security, and international influence. Chinese policymakers have diminished the potential role of the market and have strengthened the hand of the state to direct innovation in emerging technologies. Even where China is not able to succeed in its ambitious goals, its implementation of a grand strategy can still have significant consequences for U.S. national security, competitiveness, and jobs.

The 14th FYP builds on a strategy seen in the CCP's Made in China 2025 plan, augmenting state support for emerging technologies. Not only does innovation in these fields have great commercial potential, but Chinese policymakers also see it as instrumental in resolving key issues currently facing China's economy and society, from an aging population to environmental degradation. Such technologies include the following:

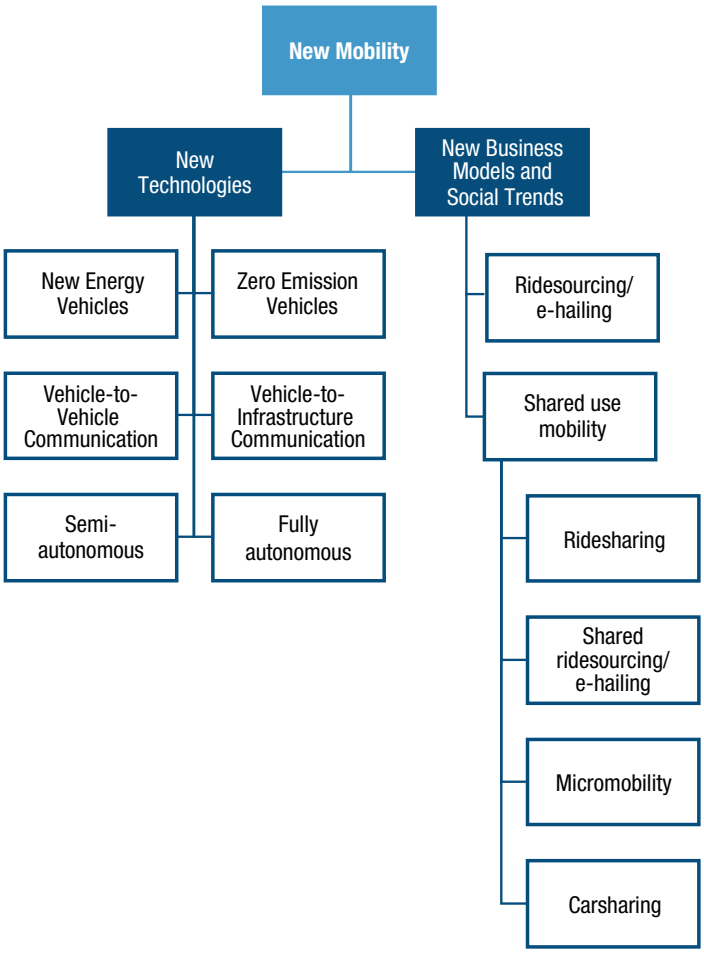
- *Synthetic biology* has the potential to transform nearly every sector of China's economy while addressing important quality-of-life issues the CCP views as underpinning its own legitimacy. The CCP has prioritized the collection of genomic data both domestically and internationally to gain global leadership and commercial advantages (see Figure 3).

FIGURE 3: APPLICATIONS OF SYNTHETIC BIOLOGY



Source: Adapted from Tara O'Toole, "Synthetic Biology and National Security: Risks and Opportunities," *Center for Strategic and International Studies*, April 14, 2020.

FIGURE 4: NEW MOBILITY SUBSECTORS



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

- *New mobility,* which captures everything from ride-hailing services to autonomous vehicles, is a strategic imperative for the CCP as it seeks both to lower China's carbon emissions and to improve domestic transportation. Heavy subsidization of new energy vehicle production and autonomous vehicle development challenges U.S. leadership in these sectors and undercuts global competition (see Figure 4).
- *Cloud computing* is both a critical channel of information flows and an essential component of advancing all other digital services in the economy as it facilitates data collection, transfer, and storage. Chinese cloud companies have succeeded in a protected domestic market and are encroaching on U.S. leadership in developing economies (see Figure 5).

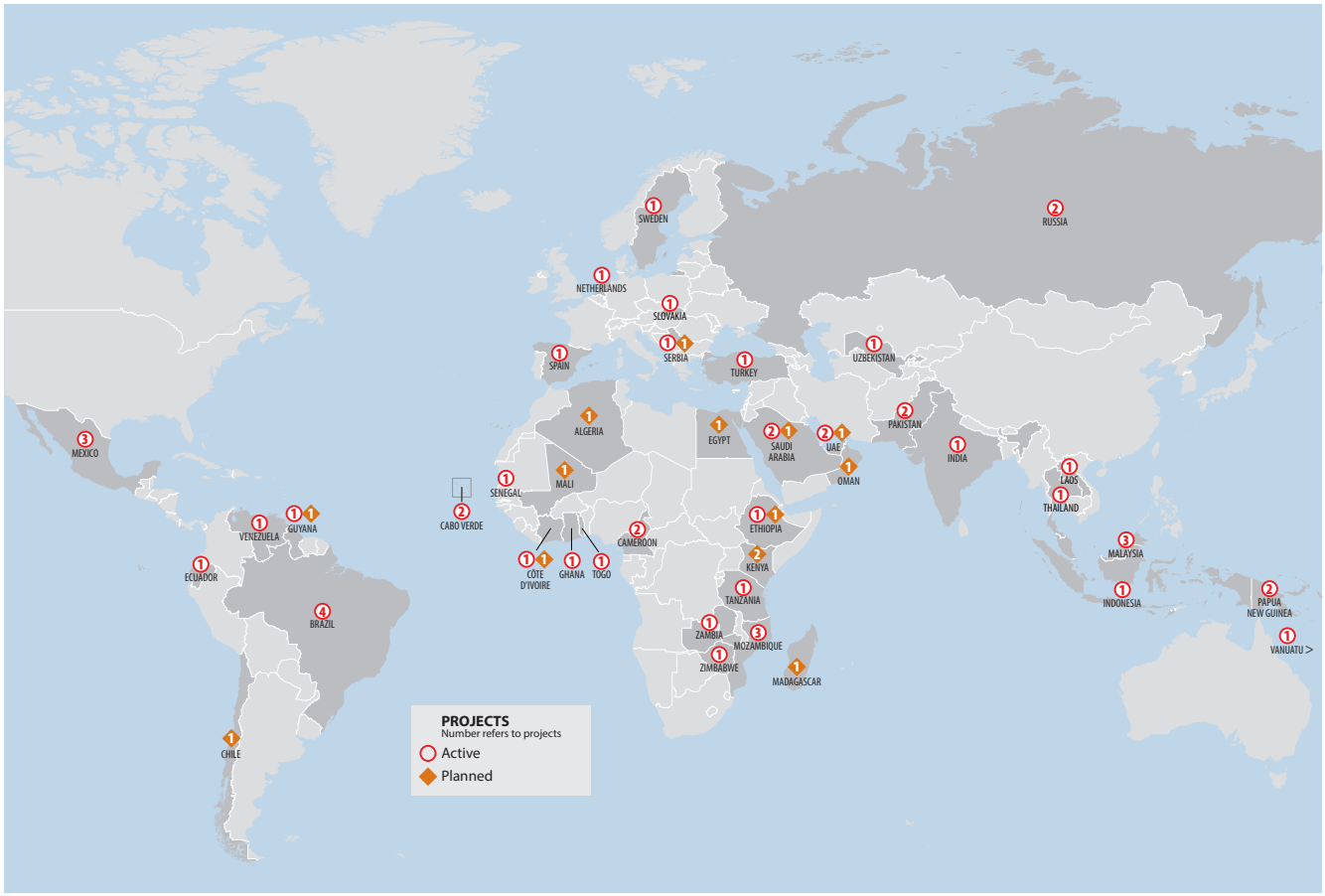
The CCP has also prioritized the development of a central bank digital currency to increase its control over and improve transaction efficiency within China's financial system. Through the introduction of a digital renminbi (RMB), the CCP hopes to reassert the government's role in digital payments and reduce the influence of nonstate payment platforms Alipay and WeChat Pay while preempting potential challenges from cryptocurrencies, such as Bitcoin. A digital RMB will also increase the CCP's ability to monitor financial transactions, including any transactions involving non-Chinese users of the digital RMB. While the CCP's immediate motivations are primarily domestic, it views the digital RMB as a potential geopolitical tool that can help China reduce reliance on current international financial systems, evade U.S. financial sanctions, and increase its influence over international standards-setting for digital technologies.

Key Findings

- The CCP views achieving technological self-sufficiency as essential for both economic growth and political survival. China's leaders believe they can rely on the domestic development of emerging technologies not only to address long-term structural challenges, such as falling productivity growth, demographic decline, and environmental degradation, but also to strengthen Party control and stability while reducing dependency on foreign technology and products.
- Under General Secretary of the CCP Xi Jinping, the Party has increased its control over China's economy in ways that have further enhanced the links between China's state and nonstate sectors. The CCP believes state control rather than economic liberalization is essential to achieving economic growth while maintaining political stability.
- To achieve dominance in emerging technologies like cloud computing, synthetic biology, and new mobility, Chinese policymakers are relying on extensive subsidization and other tactics similar to those previously used for industries such as shipping, telecommunications, and conventional vehicles. With few internationally accepted standards or rules, Chinese companies and other entities are actively shaping standards in collecting, protecting, and governing data. Chinese efforts to build technological capacity could have lasting negative consequences for the future of U.S. technological leadership.
- The CCP is working to establish China as a global leader in synthetic biology, motivated by the prospective economic benefits and also the potential for synthetic biology to mitigate structural problems such as deficiencies in China's healthcare system and scarce natural resources. The United States leads in most applications of synthetic biology, but Chinese synthetic biology firms receive generous state subsidies and have begun supplementing domestic genomic data collection with international collection efforts.

- With its advancements in new mobility, China is positioned to contest U.S. leadership in various technologies. The Chinese government has prioritized development of new energy vehicle technology through extensive subsidies and protectionist policies while capturing every stage of the supply chain for new energy vehicle batteries. In autonomous and connected vehicles, global competition is increasing as Chinese companies are engaged in pursuit of international markets.
- U.S. global dominance in cloud computing may be challenged by Chinese competitors in developing markets. Chinese cloud computing companies have thrived in a protected home market and with few exceptions can operate freely in the United States, while U.S., companies face barriers in China. Protecting its cloud computing sector to control information and data flows is a national security priority for China as well as a strategic imperative to support other key emerging technologies, such as new mobility, artificial intelligence, biotechnology, smart cities, and big data applications.
- China leads among major economies in the development of a central bank digital currency. The CCP's promotion of a digital RMB is motivated by several factors, including a desire to increase control and surveillance of financial transactions by state and nonstate companies, foreign firms operating in China, and individuals. China's digital RMB does not present an immediate challenge to the U.S.-led global financial system, but in the long term it could undermine the status of the U.S. dollar and efficacy of U.S. financial sanctions.

FIGURE 5: HUAWEI'S OVERSEAS CLOUD COMPUTING PROJECTS



Note: "Planned" indicates projects that have been signed through a contract or memorandum of understanding.
Source: Reconnecting Asia Project, "Reconnecting Asia Huawei Cloud & e-Government Data," *Center for Strategic and International Studies*, April 2021.

SECTION 3: THE CHINESE GOVERNMENT'S EVOLVING CONTROL OF THE NONSTATE SECTOR

Maintaining strict control over commercial activity is an increasingly urgent priority for the CCP. While the Chinese government has long managed the allocation of resources and shaped market outcomes in the Chinese economy, this capability is under growing strain. In 2021, CCP leaders grappled with the market power of the country's nonstate technology sector and credit events that threatened financial stability and renewed concerns about China's debt sustainability. As the CCP comes to grips with the scale of these problems, it seeks to assert unassailable authority over all manner of companies and fortify supervision of an increasingly complex Chinese economy.

The Chinese government exercises control through various channels to guide corporate decision-making in service of policy priorities. Chinese law already affords the state privileged status in the governance of any corporation for which it is a shareholder. This makes any state-invested enterprise subject to Beijing's influence and control, no matter how small its investment. The Chinese government's recent acquisition of a 1 percent stake in social media giant and TikTok parent company ByteDance, for example, affords it a board seat in one of the firm's subsidiaries. Under General Secretary Xi, the Chinese government has expanded such investment in the nonstate sector to bring broader swathes of commercial activity under the state's control. China's government also deploys policy incentives, including subsidies, grants, and tax breaks, to ensure corporate activity aligns with the CCP's policy interests.

In contrast to the Chinese government's de jure mechanisms for intervention and influence, the CCP is not bound by legal constraints. Within state-owned, nonstate, and foreign enterprises alike, CCP committees exert growing influence over corporate governance by overseeing personnel appointments and monitoring employee behavior. Within capital markets, the CCP is also superseding the role of regulators in enforcement.

The Chinese government's evolving control over China's corporate sector blurs the relationship between commercial actors and the state, ultimately making distinctions between "state" and "nonstate" companies less meaningful. Instead, China's economy today is one in which the government maintains a ready and rapidly expanding ability to intervene in any company's operations. This ability is fundamentally reshaping government-corporate relations in China and underscores that the state-directed operation of the Chinese economy is wholly distinct from what is observed in market-oriented economies elsewhere. As the CCP further cultivates and bolsters this ability, U.S. businesses and investors must recognize that their participation in the Chinese economy is conditioned by the CCP's policy priorities and subject to its control.

Key Findings

- China's government has developed numerous avenues through which to monitor corporate affairs and direct nonstate firms and resources toward advancing CCP priorities. Within this expanded framework of government control, traditional definitions of state control in an entity no longer apply because any entity may be compelled to act on behalf of the Chinese government's interest, regardless of the state's formal ownership.
- Control of Chinese firms is blurred, contrary to the precise division between state and nonstate firms implied in corporate ownership registration. Historically, nonstate firms have sought state investment to overcome political and regulatory barriers. China's government is also now increasing investments in nonstate firms to advance its technology development goals and policy objectives, further obscuring the distinction between state and nonstate.
- Under General Secretary Xi, the Party has systematically expanded its representation in corporate governance. Whereas traditional regulatory intervention in corporate affairs occurs through Chinese bureaucratic mechanisms prescribed by law, there are no such constraints on the CCP. Consequently, it can be impossible to identify the extent of the exercise of CCP influence.
- The CCP is also supplanting the role of Chinese government agencies in market monitoring and regulatory enforcement. While this may create the appearance of better regulated markets, replacing routine bureaucratic functions with CCP intervention both acknowledges the inherent weakness of Chinese state institutions and further undermines their effectiveness.
- Chinese corporate law affords the state unique and substantial governance rights as an investor and imposes a legal obligation to serve state development goals on all firms. By contrast, nonstate minority shareholders of publicly traded companies, including U.S. investors in China's domestic equities market, are afforded minimal protections.

SECTION 4: U.S.-CHINA FINANCIAL CONNECTIVITY AND RISKS TO U.S. NATIONAL SECURITY

The Chinese government is engineering capital markets to buttress state-led efforts to advance national development objectives. China's strategic use of capital markets seeks to facilitate a more diversified funding of state priorities, leveraging nonstate and foreign capital to bolster technology development and contribute to military modernization. This reflects a shift in how Chinese leaders see financial markets. Whereas stock markets were first developed largely as a means to bail out China's heavily indebted state sector, Chinese policymakers today see the Shanghai and Shenzhen Stock Exchanges as pivotal vehicles to ensure capital flows to where the state needs capital most.

Since 2014, the Chinese government has taken an array of steps to gradually expand foreign access to China's financial markets, and since 2018 it has encouraged foreign financial services firms to establish a presence in the Chinese market. The Chinese government's strategic financial opening has resulted in increased U.S. and foreign investor participation in China's financial markets, with major investment indices adding Chinese securities to their benchmarks. These inclusions are automating U.S. asset allocations toward the Chinese market and redefining Chinese securities as standard features of a well-diversified investment portfolio. The expanded presence of prominent U.S. asset managers in the Chinese market further facilitates perceptions of China's financial markets as sophisticated and stable, amplifying U.S. investor interest in Chinese securities.

China's tightened integration with global financial markets poses distinct economic risks to U.S. investors and national security risks to the United States. Increased U.S. and foreign investor participation in China's capital markets coincides with Beijing's tightened control over China's corporate sector. Beijing also uses a host of investment vehicles, such as government guidance funds and military-themed investment products, to steer capital toward companies contributing to China's military-industrial complex. These various investment vehicles contribute to a capital market whose basic function prioritizes development objectives that may run counter to U.S. interests.

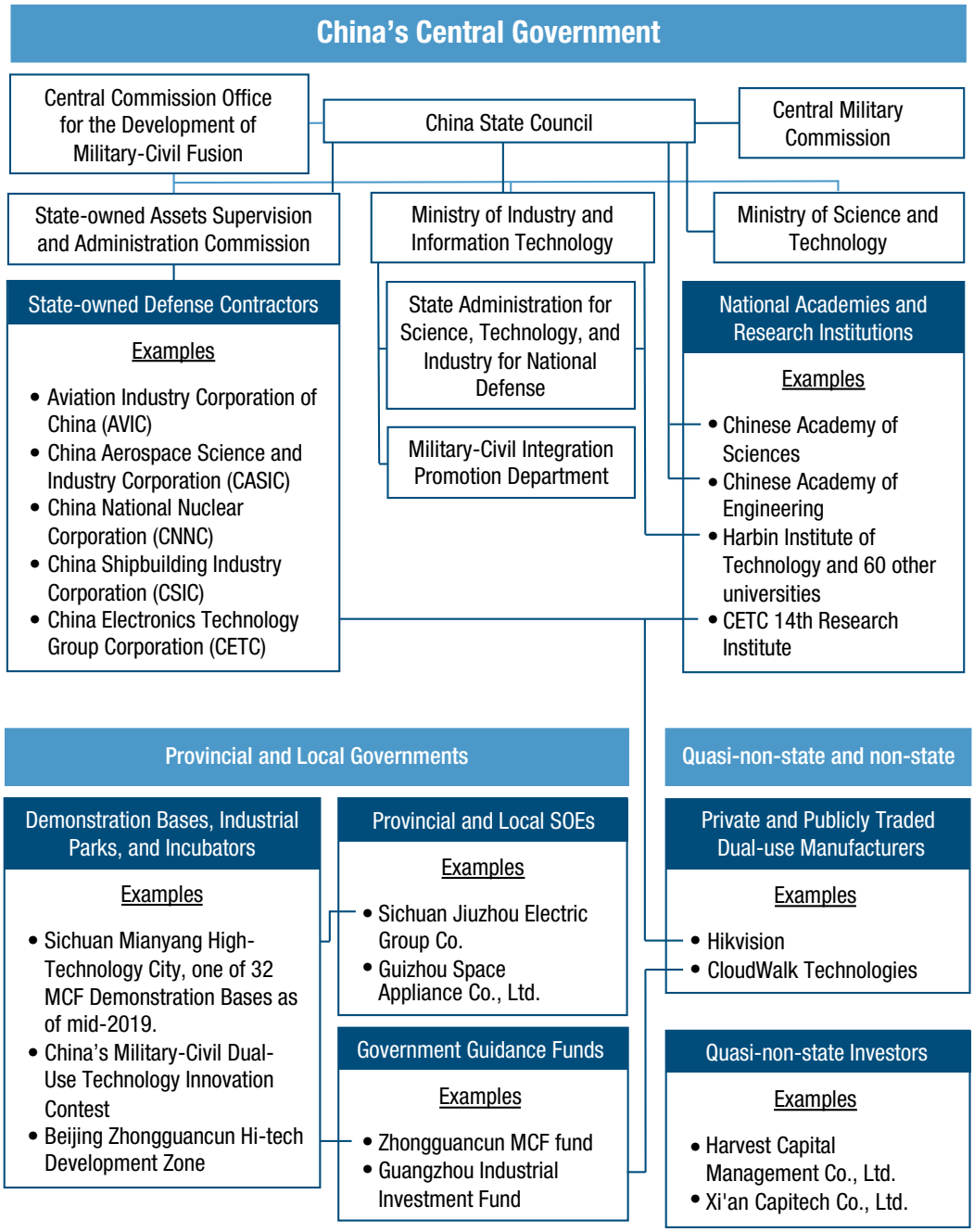
The convergence of tightened U.S.-China financial connectivity with the Chinese government's strategic use of financial markets presents novel challenges to U.S. policymakers. U.S. capital and expertise may unwittingly contribute to improvements in China's military capabilities or support a Chinese startup whose underdeveloped technology today may be used to abuse human rights tomorrow. This risk becomes more acute as Beijing's control over China's commercial ecosystem blurs the lines between civilian and defense activities of Chinese companies. Chinese firms' potential government and military ties challenge traditional U.S. policy approaches to restricting trade and investment with problematic partners. This is because U.S. trade and investment screening focuses on individual entities or transactions, an approach that cannot keep pace with the Chinese government's military-civil fusion strategy. Policy solutions targeting only the most overtly threatening Chinese companies may miss the diversity of actors in China's military-industrial ecosystem (see Figure 6).

Key Findings

- A surge of U.S. investor participation in China's markets is outpacing the U.S. government's defense against the diverse threats to U.S. national and economic security posed by U.S. investment in some problematic Chinese companies. This inflow of U.S. capital into China's economy is occurring as the Chinese government strengthens its ability to direct nonstate firms and resources toward advancing strategic priorities that may harm U.S. interests and as Beijing further fuses military and civilian corporate operations.
- The Chinese government permits the participation of foreign firms and investors in the Chinese market only when it suits its national interest. As a result, nominal financial "opening" in China in reality is a carefully managed process designed to reinforce state control over capital markets and channel foreign funding toward fulfilling the Chinese government's national development objectives.
- China's military-industrial ecosystem encompasses state and nonstate firms, research institutes, and investment funds, all acting in concert in service of China's military modernization objectives. These coordinated efforts may advance an agenda that threatens U.S. national security but is not always evident at the level of individual entities or transactions. Traditional legal remedies, such as trade and investment restrictions, are limited in their ability to fully address these threats, and current tools may be inadequate.

- The U.S. government's defense against these challenges is further constrained by strong U.S. investor interest in Chinese markets and the outsized influence of unregulated investment indices in steering global capital flows. The substantial increase in the inclusion of Chinese securities in investment indices automates U.S. investor allocation toward Chinese companies. Because passively managed index funds replicate these indices and actively managed funds seek to at least outperform them, index providers have played a pivotal yet unregulated role in guiding foreign portfolio investment toward Chinese companies.
- Compared to portfolio investment, private equity and venture capital investment present a unique set of challenges. Critical technical knowledge, managerial expertise, and business connections often flow to the investment target in addition to funding. Lack of transparency in private transactions compounds both oversight challenges for U.S. regulators and potential risks to U.S. economic and national security interests.

FIGURE 6: CHINA'S MILITARY-INDUSTRIAL ECOSYSTEM



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

Chapter 3: U.S.-China Security, Politics, and Foreign Affairs

SECTION 1: YEAR IN REVIEW: SECURITY, POLITICS, AND FOREIGN AFFAIRS

In 2021, China's leaders made plain their ambition to present the CCP's one-party rule to the world as a superior political, economic, and moral model to democracy and capitalism. Amid the triumphant celebrations surrounding the centennial of the Party's founding, however, the message of senior leaders was sober. Rather than evince satisfaction that China's economic development had ushered in a new era of peace and prosperity, CCP leaders assessed that internal and external threats from "enemy forces" were intensifying and could grow into systemic risks affecting regime security. Today, the regime is both confident and paranoid, insistent on its superiority but increasingly fearful of subversion and failure.

In its campaign to eradicate perceived harmful influences, over the past year the CCP expanded efforts to control all aspects of Chinese society and culture it viewed as threatening. It issued new counterespionage rules for organizations and enterprises in China responding to intensified "infiltration" by hostile forces. Meanwhile, the Chinese government continued its repression of ethnic minorities in the frontier regions of Xinjiang, Tibet, and Inner Mongolia. Based on reports of authorities' forced sterilizations, coerced abortions, and other human rights abuses against Uyghurs and other ethnic and religious minorities in Xinjiang, the United States formally determined the Chinese government to be committing genocide and ongoing crimes against humanity.

Meanwhile, Beijing stepped up its use of military coercion in the East and South China Seas, the Taiwan Strait, and along the Indian border while encouraging the PLA to establish itself as a global force able to defend China's overseas interests. Chinese diplomats matched the uncompromising tone set by CCP leadership, abandoning much of their remaining decorum as they deepened an embrace of confrontational "wolf warrior" behavior. Claiming that its aggressive approach was morally justified, Beijing refused to countenance criticism of its actions. Instead, it demanded that the United States and other countries alter their own policies, abandoning actions Beijing viewed as competitive and remaining silent on the Chinese government's destabilizing behavior toward Taiwan and human rights violations in Hong Kong, Tibet, and Xinjiang. U.S. policy toward China remained remarkably consistent across the outgoing Trump Administration and new Biden Administration, with senior officials in both administrations describing China as the United States' foremost geopolitical challenge of the 21st century.

Key Findings

- In 2021, the CCP marked the centennial of its founding by instructing Party members and the Chinese people to prepare for a decades-long confrontation with the United States and other democracies over the future of the global order. Chinese leaders grew more uncompromising in pursuing their interests as they insisted historical trends proved the inferiority of democracy to the political, economic, and normative model of their one-party rule.
- In an apparent paradox, the CCP assessed that internal and external threats facing the regime were intensifying and that its rule was becoming less secure despite the growth of Chinese power. CCP leaders vowed forceful measures against officials and Party members wavering in the face of international pressure and continued their repressive campaigns in Hong Kong and against the Uyghur people, Tibetans, and other ethnic minority groups.
- Beijing reaffirmed its intent to maintain high levels of defense spending to transform the PLA into a powerful force able to operate in and beyond the Indo-Pacific region. Chinese leaders showed new levels of frustration with the PLA's lagging efforts to improve its training and personnel quality amid perennial concerns about the force's lack of warfighting experience. The PLA continued to commission advanced warships and field new aircraft capable of projecting force beyond China's borders. Beijing also signaled its interest in establishing additional overseas military bases, reportedly including locations on Africa's west coast.
- China's diplomats deepened their embrace of a belligerent and uncompromising approach to foreign relations. The foreign ministry's disregard for the reputational cost of its strident rhetoric reflected domestic incentives that reward efforts to raise China's global standing while discrediting the United States and other democracies. As it grew more confrontational toward democratic countries, Beijing expanded its partnerships with Russia and Iran and attempted to cast itself as a leader of developing countries across Africa, the Middle East, and Central Asia.
- China's aggressive tone and military coercion of its neighbors prompted deepening cooperation between Indo-Pacific countries and new efforts by the EU and others to increase their diplomatic and military presence in the region. China continued its military tensions with India, building illegal military outposts in neighboring Bhutan and launching cyberattacks that may have caused blackouts across India.

- U.S. concerns over the growing national security threat from China continue. Beijing's refusal to cooperate in investigating the origins of the COVID-19 pandemic and demands that the Biden Administration cease all criticism of China's human rights abuses and abandon other policies opposed by the CCP undermined Beijing's initial hopes for a reset in bilateral ties.

SECTION 2: CHINA'S NUCLEAR FORCES: MOVING BEYOND A MINIMAL DETERRENT

China is engaged in an unprecedented buildup of its nuclear forces. The PLA is constructing hundreds of new silos for its intercontinental ballistic missiles (see Figure 7), growing its stockpile of warheads, developing a nuclear triad, and improving the accuracy of its delivery systems. At the same time, the PLA is enhancing the intelligence, surveillance, and reconnaissance (ISR) capabilities essential for strategic early warning, ballistic missile defense, and rapid retaliation. These qualitative and quantitative changes to China's nuclear forces signal a clear departure from the country's historically minimalist nuclear posture.

The modernization, expansion, and diversification of China's nuclear forces raise concerning questions about Chinese leaders' intentions. A larger, enhanced nuclear arsenal could reinforce the country's longstanding nuclear strategy, which achieves deterrence by maintaining the means to survive and retaliate against an enemy's nuclear first strike. Yet recent improvements in China's nuclear forces clearly allow Chinese leaders to pursue a more ambitious nuclear strategy of limited first use if they wish to do so. Moreover, the growing technological sophistication of China's nuclear forces could enable it to adopt more destabilizing nuclear postures, such as launch-on-warning, which heightens the risk of an accidental nuclear exchange.

China's nuclear buildup creates new risks and planning dilemmas for the United States. Most importantly, China's growing nuclear capabilities raise the risks of unintentional nuclear escalation or a deliberate nuclear exchange during a conventional conflict in the Indo-Pacific. An offensive nuclear strategy could strain U.S. extended deterrence by emboldening Chinese leaders to pursue conventional aggression or nuclear coercion against U.S. allies and partners. Moreover, improvements in China's nuclear forces could complicate U.S. nuclear deterrence planning if the United States is forced for the first time to account for contingencies involving two peer nuclear-armed adversaries. Beijing's longstanding refusal to participate in arms control also inhibits deeper arms reductions by the United States, exacerbates the anxiety of U.S. allies, and threatens to ignite a global arms race.

Finally, the proliferation of dual-use items with nuclear and missile applications by China-based entities challenges regional security and the global nonproliferation regime. The nuclear and ballistic missile technologies provided to Iran, North Korea, and Pakistan in violation of various international agreements restricting the transfer of nuclear and missile technologies over the years continue to threaten the security of U.S. allies and partners, such as Israel, Saudi Arabia, South Korea, Japan, and India. Combined with the direct threat posed by the PLA's growing nuclear arsenal, the indirect threat posed by such proliferation will increase the pressures on U.S. allies and partners to develop missile defenses and credible second-strike capabilities of their own.

Key Findings

- The People's Republic of China is carrying out its most substantial effort to expand, modernize, and diversify its nuclear forces since first acquiring nuclear weapons in the 1960s. The PLA is developing a nuclear triad; fielding new, more mobile, and more accurate nuclear weapons systems; and significantly expanding its stockpile of nuclear warheads. The PLA has also enhanced its ISR systems.
- China's nuclear buildup puts it on a trajectory to become a nuclear peer of the United States in qualitative terms. Qualitative nuclear parity could entail diversified, reliable, and survivable delivery systems; highly precise missiles; warheads of various yields; robust command and control processes; and sophisticated ISR, all of which enable a truly secure second-strike capability and options for calibrated, offensive nuclear use. Current public projections suggest China could also become a quantitative peer in the number of land-based strategic missiles it deploys by 2030.
- Strategic and political forces are driving China's departure from a minimalist nuclear posture. For most of its modern history, China maintained a small nuclear stockpile mainly suitable for minimal retaliation against an adversary's nuclear attack. General Secretary Xi's ambitions for great power status, combined with military objectives beyond minimal retaliation, have likely motivated the recent buildup of China's nuclear arsenal.
- At minimum, China's nuclear buildup enhances its current retaliatory strategy by better enabling its nuclear forces to deter or respond in kind to a nuclear attack. Chinese leaders may worry that innovations in other nuclear weapon states have undermined their nuclear deterrent, requiring them to make changes in order to keep up.

- The scale of China's nuclear buildup, however, suggests it could also be intended to support a new strategy of limited nuclear first use. Such a strategy would enable Chinese leaders to leverage their nuclear forces to accomplish Chinese political objectives beyond survival, such as coercing another state or deterring U.S. intervention in a war over Taiwan.
- Uncertainties created by China's nuclear buildup heighten the risk of an accidental nuclear exchange or unforeseen nuclear escalation during a regional conflict. Specific risks of nuclear escalation stem from entanglement between China's nuclear and conventional capabilities, its desperation to avoid losing a conventional war in the region, and false alarms that could result from its possible shift to a launch-on-warning posture.
- The PLA's growing arsenal also casts "nuclear shadows" over China's disputes with its neighbors, many of whom are U.S. allies and partners. Improved nuclear capabilities could encourage Chinese leaders to coerce or initiate a conventional conflict against U.S. allies or partners in the region if they believe their nuclear capability would deter the United States from intervening.
- China has continued to play a concerning role in the global proliferation of missile and nuclear technologies, though the manner in which this proliferation occurs has evolved over time. Whereas two decades ago the Chinese government and state-owned enterprises were the main source of missile and nuclear technologies, Chinese companies and private individuals now play a dominant role in the proliferation of such goods to countries of concern. The Chinese government turns a blind eye to, and in some cases tacitly supports, these illicit activities.

FIGURE 7: CHINA'S SILO-BASED INTERCONTINENTAL BALLISTIC MISSILES

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

Chapter 4: A Dangerous Period for Cross-Strait Deterrence: Chinese Military Capabilities and Decision-Making for a War over Taiwan

Decades of concerted modernization by the PLA have shifted the military balance in the Taiwan Strait and dangerously weakened cross-Strait deterrence. Today, the PLA either has or is close to achieving an initial capability to invade Taiwan—one that remains under development but that China's leaders may employ at high risk—while deterring, delaying, or defeating U.S. military intervention. The PLA's development of this capability has involved years of campaign planning and advancements in anti-access and area denial capabilities. China has also demonstrated significant improvements in its shipbuilding capacity to bolster amphibious and civilian sealift, both of which the PLA has used in amphibious landing exercises. The PLA will continue to develop all of these capabilities to enhance Chinese leaders' confidence that it can successfully execute an invasion campaign.

Cross-Strait deterrence still holds today because Chinese leaders remain deeply concerned about the uncertain successof an attempted invasion as well as its risks and consequences. Failed attempts by the PLA to invade Taiwan or to counter U.S. intervention risk undermining the CCP's legitimacy. The PLA still suffers from significant weaknesses in joint operations and personnel quality, contributing to uncertainty among China's top leaders. A decision to invade Taiwan also risks destabilizing regional trade flows and supply chains, damaging the most productive segments of the Chinese economy and threatening other economic and political objectives associated with China's national rejuvenation. Lastly, Chinese leaders must consider the difficulty of controlling Taiwan's population after an invasion and responding to the international fallout from a conflict. U.S. measures that deepen Chinese leaders' anxieties about these risks are likely to enhance deterrence.

Taiwan is an important U.S. partner and a beacon for democracy in the region. Taiwan President Tsai Ing-wen has taken important initial steps to address the cross-Strait military imbalance by increasing Taiwan's defense budget and fostering Taiwan's indigenous defense industry. Nevertheless, the deterrence challenge facing U.S. and Taiwan leaders will continue to grow more acute as the PLA improves its capabilities. The United States has historically leaned on its conventional military advantages to deter China. The question is whether and to what extent those tools will be effective if the PLA continues to consolidate its military advantages within the first island chain.

Key Findings

- Cross-Strait deterrence is in a period of dangerous uncertainty. Improvements in China's military capabilities have fundamentally transformed the strategic environment and weakened the military dimension of cross-Strait deterrence. China's increasingly coercive approach to Taiwan puts almost daily pressure on the cross-Strait status quo and increases the potential for a military crisis.
- Chinese leaders likely set 2020 as a key milestone for the PLA to develop the capabilities needed to invade Taiwan. To achieve this goal, for nearly two decades the PLA has systematically planned, trained, and built the forces it believes are required to invade the island. The PLA has already achieved the capabilities needed to conduct an air and naval blockade, cyberattacks, and missile strikes against Taiwan. PLA leaders now likely assess they have, or will soon have, the initial capability needed to conduct a high-risk invasion of Taiwan if ordered to do so by CCP leaders. They will continue enhancing this capability in the coming years.
- Any near-term PLA invasion would remain a high-risk option. Such an operation would rely on the success of the PLA's more developed cyberattack, missile strike, and blockade capabilities to sufficiently degrade, isolate, or defeat Taiwan's defending forces as well as its anti-access and area denial capabilities to prevent decisive U.S. intervention. The PLA's current military sea and air lift capacity could carry an initial landing force of 25,000 or more troops. China has developed substantial capabilities to use civilian ships in military operations, providing capacity for the PLA to land additional troops on Taiwan after securing a beachhead.
- Given these developments, it has become less certain that U.S. conventional military forces alone will continue to deter China's leaders from initiating an attack on Taiwan. A deterrence failure is most likely to occur if Chinese leaders believe the United States is not militarily capable of or politically willing to intervene, or if they interpret ambiguities in U.S. policy to mean that opportunistic Chinese aggression against Taiwan will not provoke a decisive U.S. response. General Secretary Xi's higher tolerance for risk and desire to establish a lasting legacy could also contribute to a decision by China's leadership to attack Taiwan despite U.S. warnings.

- Still, whether and when to invade Taiwan is a political rather than a military question for CCP leaders, who continue to face substantial constraints on any decision to use force. These include the inherent uncertainty of a military confrontation with the United States, the extensive damage that would likely result to the Chinese economy, and the risk that an attack on Taiwan could prompt the formation of a coalition of countries determined to constrain any further growth in China's power and influence.
- Taiwan has taken important steps toward asymmetrically defending against a PLA attack, achieving successes in developing indigenous missiles threatening a PLA invasion or blockade. Nevertheless, Taiwan faces significant challenges from decades of underinvestment in defense, leaving it with low stockpiles of critical resources for enduring a PLA blockade. Some military leaders are also resisting steps to adopt a more asymmetric posture.

Chapter 5: Hong Kong's Government Embraces Authoritarianism

Hong Kong has long been recognized as a center for global business and a vibrant multinational culture, but these advantages are at risk as the government rapidly dissolves freedoms in the city. The 1,283 U.S. companies and estimated 85,000 U.S. citizens residing in Hong Kong, as well as any who transit the territory, must now contend with the possibility of arrest. Although the Hong Kong government continues to emphasize its openness to business and promote new investment mechanisms, it is increasingly difficult to determine which business activities will remain safe from political intervention. This blurred line, along with the fear of being charged under the National Security Law, presents growing risks not only to Hong Kongers but also to the future of U.S. businesses, nonprofits, and employees in Hong Kong.

A year since the Chinese government directly implemented the National Security Law in the territory, the Beijing-controlled Hong Kong government has transformed the city into a police state. Despite the Hong Kong government's assurances that the law would not be enforced retroactively, prosecutors have frequently cited once-legal activities as evidence to charge defendants with what are now considered to be national security crimes. The introduction of the National Security Law destroyed the legal system that had prevailed in Hong Kong since 1997, rendering meaningless the rights enshrined in the Basic Law, Hong Kong's mini constitution. Hand-picked judges now oversee all national security cases, and even if defendants are ultimately acquitted, their inability to obtain bail means they may still face years in prison simply for being charged with a crime.

Authorities have gone to great lengths to intimidate prodemocracy advocates, eliminate any potential sources of dissent, and effectively erase Hong Kong's civil society. In January 2021, Hong Kong police arrested dozens of would-be opposition candidates en masse, setting the tone for a year of systemic repression across all institutions in the city. In March, the central Chinese government approved new rules designed to guarantee that only pro-Beijing candidates would be able to run for office in Hong Kong, setting the conditions for deepening authoritarianism in the territory. The Hong Kong government and pro-Beijing entities stripped Hong Kong media organizations of their independence, resembling censorship observed in the Mainland's heavily constrained media environment. Changes to educational curricula force Hong Kong's educators to parrot CCP-approved propaganda, while civil servants must swear a new loyalty oath to the Hong Kong and central Chinese governments.

Key Findings

- In the past year, the CCP-controlled Hong Kong government's implementation of the National Security Law upended the city's social and political environment. The government now views peaceful political participation as inherently subversive, and the authorities are targeting many across a broad cross-section of the population under the new law.
- Changes to Hong Kong's elections and the composition of its legislature now ensure pro-Beijing lawmakers will always have a majority, turning the once-competitive Legislative Council into a rubber-stamp parliament.
- In the year since the imposition of the National Security Law, Hong Kong experienced a net outflow of 87,100 permanent and nonpermanent residents. A new immigration bill that entered into force in August 2021 gives the Hong Kong government the power to block travel. The government now has the legal authority to enact "exit bans" or to prevent critics of the Hong Kong government or China's central government from entering the territory.
- Changes to Hong Kong's educational curricula under the National Security Law now require teachers to promote the CCP's interpretation of history, and authorities are using these new powers to fire them for unapproved speech. Educators are forced to distort reality and history to portray the Party in a positive light.
- Judges overseeing national security cases in Hong Kong are now chosen from a list compiled under the supervision of the territory's new national security apparatus, effectively stripping the Hong Kong judiciary of its former independence. The changes enable the Hong Kong government to ensure all national security cases are assigned to progovernment preferred judges, guaranteeing outcomes favorable to the government and the CCP.
- The National Security Law allows the Hong Kong government to curtail the city's freedoms with little notice or process. Authorities introduced strict film censorship rules overnight in June 2021, and independent and prodemocracy media organizations have been systematically dismantled. Prodemocracy Chinese-language newspaper Apple Daily was shut down after the government froze its assets and arrested senior personnel, having previously arrested its owner. Remaining media organizations have lost key staff and resources, and in other cases mainland investors are acquiring control of publishers. The city can introduce comprehensive internet censorship similar to the Mainland's Great Firewall at any time.

- Strict implementation of the National Security Law is stripping Hong Kong of long-held advantages that made it a global financial center. While Beijing relies on Hong Kong to boost capital flows and innovation in the Guangdong-Hong Kong-Macau Greater Bay Area, foreign companies are now more likely to find it advantageous to operate elsewhere in Asia, including in mainland China. Changes diminishing corporate transparency and weakening rule of law endanger U.S. businesses in Hong Kong.
- Hong Kong's business environment is increasingly "Mainlandized," which is likely to increase as the city is integrated further into the Greater Bay Area. Chinese companies are growing their presence in Hong Kong as both the Chinese and Hong Kong governments build greater incentives for Mainland immigration into the territory.

Comprehensive List of the Commission's Recommendations

Chapter 1: U.S.-China Global Competition

SECTION 1: THE CHINESE COMMUNIST PARTY'S AMBITIONS AND CHALLENGES AT ITS CENTENNIAL

The Commission recommends:

1. Congress hold hearings including Administration witnesses to explore the advisability of forming an economic defense coalition with allies and partners. The object of such a coalition would be to provide mutual support in the event of economic coercion by the People's Republic of China (PRC) against a coalition member. Such support could include:
   - Commitments not to seek, at the expense of the coerced party, market share created by China's action;
   - Formal complaints to the World Trade Organization (WTO);
   - Assistance to the coerced party to reduce its incentive to comply with Chinese demands; and
   - Imposition of retaliatory measures against China in support of the coerced party.
2. Congress direct U.S. Customs and Border Protection to initiate action to impose a region-wide Withhold Release Order on products originating from Xinjiang, China. In addition, Congress should require the U.S. Department of Homeland Security to provide a comprehensive list of technologies needed and an outline of the resources required to enforce the Withhold Release Order and address other instances of China's use of forced labor.

SECTION 2: CHINA'S INFLUENCE IN LATIN AMERICA AND THE CARIBBEAN

The Commission recommends:

3. Congress recognize that Chinese economic, diplomatic, and security initiatives in Latin America and the Caribbean are robust and growing and demand a comprehensive response. Steps Congress should consider include:
   - Strengthening U.S. competitiveness in building out Latin American and Caribbean infrastructure through the expansion of funding mechanisms, including but not limited to low-interest loans from U.S. lending institutions to U.S. companies willing to invest in targeted critical infrastructure projects in high-priority Latin American and Caribbean countries;
   - Supporting the deployment of novel coronavirus (COVID-19) vaccines in Latin American and Caribbean countries, including by requiring a public report issued by the U.S. Department of State every six months outlining vaccine deployment to countries in the region; and
   - Expanding educational exchanges between the United States and Latin America and the Caribbean, including by expanding partnership agreements between U.S. universities and higher education institutions in Latin American and Caribbean countries.
4. Congress support Latin American and Caribbean countries in the establishment of inbound foreign investment review processes for sectors critical to national security and economic security by doing the following:
   - Expanding the support given by the U.S. government to governments of U.S. allied and partner countries to establish inbound foreign investment review processes similar to those of the Committee on Foreign Investment in the United States (CFIUS) established in the Foreign Investment Risk Review Modernization Act within Title XVII of the National Defense Authorization Act for Fiscal Year 2019. Support for these governments will expand upon existing information exchange processes to include provision of technical assistance and personnel training.
   - Requiring the U.S. Department of State, in conjunction with CFIUS, to provide an annual report to Congress for three consecutive years after enactment of this provision. The report shall outline the progress and outcomes of its engagement with Latin American and Caribbean countries to establish their own inbound foreign investment review processes.

5. Congress require the director of national intelligence, in conjunction with the U.S. Department of State and U.S. Department of Defense, to produce an unclassified report, including a classified annex, documenting Chinese investment in port infrastructure in the Western Hemisphere and detailing any known Chinese interest in establishing a military presence at or near these ports. The report should include an assessment of China's current and potential future ability to leverage commercial ports for military purposes and the implications for the United States.

6. Congress enact legislation directing the U.S. Development Finance Corporation, U.S. Agency for International Development, U.S. Trade and Development Agency, Millennium Challenge Corporation, and other executive agencies responsible for disbursing foreign aid and development assistance to require within all aid-related applications mandatory disclosures on debt the applicant may owe to Chinese entities, including loan amounts, duration, rates, and contractual provisions.

7. Congress enact legislation requiring the U.S. government authorities identified in the Maritime Security and Fisheries Enforcement (SAFE) Act within section 3544 of the National Defense Authorization Act for Fiscal Year 2020 to create a partnership with coastal Latin American states, similar to the Oceania Maritime Security Initiative and the Africa Maritime Law Enforcement Partnership. This partnership would assist coastal Latin American states in maritime domain awareness, with a particular focus on increasing partner countries' capacity to combat illegal, unreported, and unregulated fishing by Chinese vessels in the region.

Chapter 2: U.S.-China Economic and Trade Relations

SECTION 2: THE CHINESE COMMUNIST PARTY'S ECONOMIC AND TECHNOLOGICAL AMBITIONS: SYNTHETIC BIOLOGY, NEW MOBILITY, CLOUD COMPUTING, AND DIGITAL CURRENCY

The Commission recommends:

8. Congress direct the U.S. Department of Energy, in coordination with the National Institute of Standards and Technology and other relevant agencies, to produce a report and research plan outlining a project for the collection and sequencing of nonhuman genomic data, analogous to the Human Genome Project. Such a plan shall include:
   - A description of the types of nonhuman genomic data to be collected and sequenced;
   - An explanation of research value and commercial applications from collecting and sequencing such data;
   - The designation of an existing Department of Energy National Laboratory to coordinate the project and award grants to U.S. universities and private companies in furtherance of the project's goals;
   - A description of ethical considerations and processes for stakeholder engagement; and
   - Articulation of the National Institute of Standards and Technology's role to:
     - Codify technical standards related to the project;
     - Share and protect data collected during the project; and
     - Engage with the public and international partners on the project's findings.

9. Congress direct the National Institute of Standards and Technology, in coordination with the National Institutes of Health, the U.S. Patent and Trade Office, the Department of Energy, and the Department of State, to establish a model framework for the protection, collection, and commercialization of nonhuman genomic data. The framework should seek to establish principles on intellectual property rights for the countries of origin of the genomic data. This framework should also be used in international outreach regarding protection of national biotechnology assets and Chinese predatory collection of data.

10. Congress request a report from the Administration regarding data servicing operations owned by Chinese firms. Such a report shall include:
    - Whether such firms are operating in the United States, what laws and regulations may apply to such operations and services, and what cloud computing services are offered or provided to U.S. persons;
    - Whether Chinese cloud computing providers are engaged in any joint ventures or servicing arrangements with U.S. firms and the nature of such operations;
    - Whether consumers of these services have access to prominently identified information regarding the ownership of such cloud computing services;

- Whether U.S. firms can operate freely in the People's Republic of China (PRC) and what, if any, restrictions might apply to their services and operations;
- Where Chinese-owned firms may be providing equipment or services for the provision of cloud computing support in third-country markets and whether the market share of Chinese-owned firms in those markets may limit, in any way, the ability of U.S.-owned firms to operate independently of such operations; and
- What support the Chinese government may be providing to cloud computing firms in terms of equipment and services that may act as a subsidy for such operations.

11. Congress consider legislation requiring that the U.S. Department of Transportation, in consultation with the U.S. Departments of Commerce, Energy, and Defense, and law enforcement authorities, develop regulations limiting access for Chinese-owned firms developing autonomous vehicle capabilities to protect U.S. national and economic security interests. In preparing such regulations, the authorities should consider the extent to which the Chinese government limits access of U.S. firms for similar uses. Specific attention should be given to data collection activities that may advance the interests of the Chinese military or intelligence agencies. In addition, such legislation shall address any need to protect the data utilized and collected by autonomous vehicles produced and/or serviced by Chinese-owned firms.

12. The committees of relevant jurisdiction in the House and Senate investigate and hold hearings with a view toward considering legislation on the operations of China's Blockchain-Based Service Network, with particular attention to its operations in the United States and participation of U.S. companies in building out the network. Such investigation should look at the goals of the network in developing blockchain infrastructure and whether the involvement of the Chinese government and Chinese state-owned entities may put at risk any U.S. economic and national security interests.

13. Congress consider legislation to create the authority to screen the offshoring of critical supply chains and production capabilities to the PRC to protect U.S. national and economic security interests and to define the scope of such supply chains and production capabilities. This would include screening related outbound investment by U.S. entities. Such legislation would direct the secretaries of defense and commerce, along with the U.S. Trade Representative, to develop procedures to evaluate existing and proposed supply relationships with the PRC and identify whether critical U.S. interests are being adversely affected, including the loss of domestic production capacity and capabilities. The legislation would authorize the president to take appropriate action, including prohibiting supply relationships or certain transactions to protect U.S. national security.

SECTION 3: THE CHINESE GOVERNMENT'S EVOLVING CONTROL OF THE NONSTATE SECTOR

The Commission recommends:

14. Congress direct the U.S. Securities and Exchange Commission to require that publicly traded U.S. companies with facilities in China report on an annual basis whether there is a Chinese Communist Party (CCP) committee in their operations and summarize the actions and corporate decisions in which such committees may have participated.

15. Congress direct the Bureau of Economic Analysis at the U.S. Department of Commerce to amend its surveys of U.S. multinational enterprise activity in China to report on the presence and actions of CCP committees in the foreign affiliates of U.S. firms operating in China.

SECTION 4: U.S.-CHINA FINANCIAL CONNECTIVITY AND RISKS TO U.S. NATIONAL SECURITY

The Commission recommends:

16. Congress consider comprehensive legislation to ensure Chinese entities sanctioned under one U.S. authority be automatically sanctioned under other authorities unless a waiver is granted by the president or the authority applying the initial sanction. This legislation should rationalize existing U.S. sanctions targeting adversarial Chinese entities to ensure, for example, Chinese firms placed on the Entity List and/or Military End User List of the U.S. Department of Commerce are also placed on the Non-Specially Designated Nationals (SDN) Chinese Military-Industrial Complex (NS-CMIC) Companies List and vice versa.

17. Congress enact legislation expanding the jurisdiction of existing U.S. investment restrictions targeting Chinese entities placed on the NS-CMIC Companies List as well as the scope of entities to be targeted by such restrictions. Such provisions should include:

- Expanding the prohibitions relating to transactions and supporting work by U.S. persons in NS-CMIC securities covered by Executive Order 14032 to include the execution, support, or servicing of transactions by U.S. persons in any market or for any other person, including both U.S. and non-U.S. persons; and
- Providing additional resources to ensure that a more comprehensive list of entities engaged in supporting the Chinese military-industrial complex be published and that subsidiaries supporting such entities be included on the list. In identifying entities that should be evaluated for inclusion in such designations, authorities should include companies designated by Chinese securities issuing and trading entities as supporting the military-industrial complex.

18. Congress pass legislation that defines categories of Chinese persons, Chinese entities, and Chinese Communist Party (CCP)-related persons and entities subject to full blocking sanctions and inclusion on the U.S. Department of the Treasury's SDN list due to actions that harm the vital national interest or the national security of the United States or that constitute gross human rights violations.

19. Congress consider comprehensive legislation to address risks to U.S. investors and U.S. interests from investments in Chinese equity, debt, and derivative instruments by:

- Prospectively prohibiting investment in Variable Interest Entities (VIEs) linked to Chinese entities.
- Absent prohibition, ensuring that the risks of investments in VIEs linked to Chinese entities are more prominently identified for investors, including that the VIE structure is illegal under Chinese law, and that taxpayer subsidies do not support investments in such entities. Provisions that should be considered in support of this goal include:
  - Requiring prominent identification of the potential high risk for investments in VIEs linked to Chinese companies by:
    - Identifying VIEs linked to Chinese companies as such in their stock trading symbols on U.S. exchanges.
    - Requiring that broker-dealers provide risk warning labels on the potential lack of legal recourse for investors for their investments in VIEs linked to Chinese entities.
  - Prohibiting preferential federal tax treatment on losses and gains on investments in VIEs linked to Chinese entities made after the passage of appropriate statutory provisions.
- Directing the U.S. Securities and Exchange Commission (SEC) as part of its evaluation of potential guidance on reporting on environmental, social, and governance matters by publicly traded companies to require reporting of:
  - Sourcing and due diligence activities of such companies involving supply chains that are directly or indirectly linked to products and services utilizing forced labor from Xinjiang.
  - Transactions with companies that have been placed on the Department of Commerce's Entity List or those designated by Treasury as Chinese Military-Industrial Complex Companies.
- Requiring index providers that include within their indices securities issued on mainland Chinese exchanges or the Hong Kong Stock Exchange, securities of China-headquartered companies listed on U.S. exchanges through a VIE, or derivative instruments of either of the preceding types of securities, be subject to regulation by the SEC.

20. Congress ensure the effective implementation of the Export Control Reform Act of 2018 and the Foreign Investment Risk Review Modernization Act of 2018 by enacting legislation that:

- Creates a Technology Transfer Review Group (TTRG) within the Executive Office of the President responsible for identifying emerging and foundational technologies. The TTRG should be chaired by the secretary of defense and include the director of the Office of Science and Technology Policy along with Cabinet-level secretaries or their designees from the U.S. Departments of Commerce, Energy, and Homeland Security.
- Authorizes the TTRG to direct the Department of Commerce's Bureau of Industry and Security to implement export controls following the identification of these technologies.
- Authorizes and requires the TTRG to oversee multilateral engagement related to export controls, foreign investment screening, and regulations over technology transfer by relevant agencies to ensure that such engagement does not undermine U.S. national and economic security interests.
- Require that additional resources be provided to improve and expand end-user verification of export controls. Export licenses to the following entities should receive strict scrutiny: end-users identified as Chinese Communist Military Companies per section 1237 of the National Defense Authorization Act for Fiscal Year 1999, those identified as contributors to China's military-civilian fusion activities per section 1260H of the National Defense Authorization Act for Fiscal Year 2021, entities with direct and formal ties to the CCP or Chinese government, and entities identified by the U.S. Trade Representative, U.S. Department of Justice, and Federal Bureau of Investigation as being linked to efforts to steal or coerce the transfer of U.S. intellectual property. The inability to identify end-user facilities and, if identified, the lack of adequate and timely access to these facilities should strongly inform investigating officials and licensing officials.
- Require that the TTRG engage with the Department of Justice, the Department of Commerce's Bureau of Industry and Security, and other relevant agencies to align "deemed export" controls with engagement on knowledge transfer and expert recruitment strategies such as the 1,000 Talent Programs as well as investigations of the CCP's United Front Work Department and other entities and programs of the CCP designed to acquire U.S. technology and capabilities.

21. Congress mandate from Treasury an annual update of the accurate U.S. portfolio investment position in China since 2008, including money routed through offshore centers, such as the Cayman Islands. This should include exposure for:

- Individual Chinese sectors;
- U.S. institution types, such as state pension funds;
- Sanctioned Chinese entities (Entity List, NS-CMIC List, and others);
- Individual Chinese recipients who receive more than a minimum amount, such as $100 million; and
- Individual U.S. investors with more than a minimum share of the total, such as 2 percent.

Chapter 3: U.S.-China Security, Politics, and Foreign Affairs

SECTION 2: CHINA'S NUCLEAR FORCES: MOVING BEYOND A MINIMAL DETERRENT

The Commission recommends:

22. Congress direct the Administration to conduct an interagency review of any Chinese universities that maintain research or training arrangements with China's nuclear weapons research institutes, such as the Chinese Academy of Engineering Physics and the Northwest Institute of Nuclear Technology. The review should be led by the U.S. Department of Energy and include the U.S. Departments of Commerce, Treasury, and Defense; the Intelligence Community; and other federal departments and agencies as appropriate. The review would:

- Assess the impact of such cooperation on China's nuclear weapons programs and capabilities;

- Assess whether current U.S. export controls adequately address risks from the transfer and exchange of information and technologies with applications to nuclear research, particularly by researchers and departments in relevant academic disciplines at U.S. universities to these Chinese universities;
- Identify Chinese universities and research institutes that should be added to the Entity List, based on the risks posed by their cooperation with the Chinese Academy of Engineering Physics, Northwest Institute of Nuclear Technology, and other Chinese institutions involved in nuclear weapons development, as appropriate;
- Identify Chinese universities and research institutes that merit a presumption of denial for all export licenses involving items covered by the Export Administration Regulations; and
- Develop and maintain a list of all academic partnerships in fields with applications to nuclear weapons development entered into between Chinese universities and U.S. universities that receive federal funding for the purpose of determining whether these activities are subject to export controls.

23. Congress prevent the erosion of U.S. strategic nuclear superiority and respond to China's qualitative and quantitative theater nuclear advantages by directing the Administration to continue implementation of the Obama-Trump Program of Record for nuclear modernization.

24. Congress enact legislation creating an independent bipartisan commission, similar to the Quadrennial Defense Review commissions authorized in the past, to assess the Nuclear Posture Review and advise Congress about whether the current U.S. nuclear posture is sufficient to maintain deterrence against the expanding Chinese and Russian nuclear forces. The Commission should:

- Determine how Russian and Chinese nuclear capabilities have changed between 2010 and 2022;
- Evaluate whether the current number of U.S.-deployed strategic weapons is sufficient to deter both Russia and China over the next 20 years; and
- Identify any further changes required to U.S. force posture, doctrine, and missile defense.

25. Congress authorize funding for a comprehensive diplomatic strategy on nuclear deterrence and arms control. This comprehensive program would include:

- Intelligence diplomacy with key allies and partners in the Indo-Pacific and in Europe to inform them of developments in China's nuclear forces;
- Dialogue to convince these allies and partners to pressure Beijing diplomatically to enter into arms control talks and to explore these partners' willingness to host U.S. intermediate-range forces and other U.S. assets; and
- Continued efforts to engage both Russia and China in trilateral arms control talks, including by continuing efforts with Russia to persuade China to enter into arms control discussions.

Chapter 4: A Dangerous Period for Cross-Strait Deterrence: Chinese Military Capabilities and Decision-Making for a War over Taiwan

The Commission recommends:

26. Congress enhance Taiwan's ability to purchase U.S. defense articles and accelerate the process for their sale and delivery to Taiwan by:

- Authorizing and appropriating on a multiyear basis Foreign Military Financing Program funds for Taiwan to purchase defense articles from the United States and allowing Taiwan to use Foreign Military Financing funds to purchase arms through direct commercial contracts;
- Amending the Foreign Assistance Act to make Taiwan eligible to receive priority delivery of U.S. excess defense articles; and
- Directing the Administration to use the Special Defense Acquisition Fund to reduce defense procurement lead times for arms sales to Taiwan by pre-stocking defense articles needed to maintain cross-Strait deterrence.

27. Congress take urgent measures to strengthen the credibility of U.S. military deterrence in the near term and to maintain the ability of the United States to uphold its obligations established in the Taiwan Relations Act to resist any resort to force that would jeopardize the security of Taiwan, including:

- Authorizing and funding the deployment of large numbers of antiship cruise and ballistic missiles in the Indo-Pacific;

- Authorizing and funding the requests of U.S. Indo-Pacific Command (INDOPACOM) for better and more survivable intelligence, surveillance, and reconnaissance in the East and South China Seas;
- Authorizing and funding the requests of INDOPACOM for hardening U.S. bases in the region, including robust missile defense;
- Authorizing and funding the stockpiling of large numbers of precision munitions in the Indo-Pacific; and
- Authorizing and funding programs that enable U.S. forces to continue operations in the event central command and control is disrupted.

Chapter 5: Hong Kong's Government Embraces Authoritarianism

The Commission recommends:

28. Congress amend the Hong Kong Autonomy Act to add to the contents of the annual report required by the act a determination of whether the Beijing-controlled Government of Hong Kong has violated freedom of emigration from Hong Kong. The report should assess whether the Government of Hong Kong has:

- Denied Hong Kong residents' right or opportunity to emigrate;
- Imposed more than a nominal tax on emigration or on the visas or other documents required for emigration, for any purpose or cause whatsoever; or
- Made emigration contingent on receiving official approval that is not practicably possible to obtain or is otherwise obstructed by authorities.

29. Congress amend section 421 of the U.S.-China Relations Act of 2000 to require the U.S. Trade Representative to include an assessment of Hong Kong's treatment as a separate customs territory in its annual report on China's compliance with commitments made in connection with its accession to the World Trade Organization (WTO). This additional section of the report should consider:

- Hong Kong's compliance to its commitments under the WTO;
- Whether mainland Chinese entities operating in Hong Kong are using the Special Administrative Region's status as a transshipment hub to circumvent U.S. duties on China;
- Whether Hong Kong "possesses full autonomy in the conduct of its external commercial relations" and if the United States should continue to recognize Hong Kong's rights as a separate customs territory under the WTO pursuant to section 201 of the U.S.-Hong Kong Policy Act of 1992; and
- Whether the United States should apply tariffs and all other trade treatment to Hong Kong equivalent to that of the People's Republic of China (PRC). The U.S. Trade Representative should consult the secretary of state's determination of Hong Kong's autonomy when making this recommendation to the president.

30. Congress, in consideration of the plight of prodemocracy activists from the Hong Kong Special Administrative Region, should encourage the secretary of homeland security to exercise their authority under the Immigration and Nationality Act on the basis of both a "compelling emergency" and "urgent humanitarian reason[s]" to parole into the United States aliens who are residents of Hong Kong and who are applying for admission to the United States.

31. Congress require the U.S. Department of Justice and the U.S. Department of Commerce to collect information from U.S. companies operating in Hong Kong concerning requests from the Government of Hong Kong for content takedowns, access to data, and law enforcement assistance. The departments shall report their findings to Congress every 180 days specifying:

- The number of requests fulfilled and by which companies;
- Where such requests involved user data; and
- Which local laws the requests invoked.

32. Congress direct the Department of Justice to require media outlets operating in the United States that are majority owned by the Government of the PRC or the Government of Hong Kong to register under the Foreign Agents Registration Act. Congress should also direct the Department of State to determine whether such outlets qualify as a foreign mission of the PRC.

Notes

2021 Report to Congress

of the

U.S.-China Economic and Security Review Commission

Executive Summary and Recommendations