STATE AND PRIVATE CAPITAL ALLOCATIONS IN CHINA AS STRATEGIC INTELLIGENCE

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WRIGHT FLYER PAPERS

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Foreword

It is my great pleasure to present another issue of the Wright Flyer Papers. Through this series, Air Command and Staff College presents a sampling of exemplary research produced by our resident and distance-learning students. This series has long showcased the kind of visionary thinking that drove the aspirations and activities of the earliest aviation pioneers. This year's selection of essays admirably extends that tradition. As the series title indicates, these papers aim to present cutting-edge, actionable knowledge—research that addresses some of the most complex security and defense challenges facing us today.

Recently, the Wright Flyer Papers transitioned to an exclusively electronic publication format. It is our hope that our migration from print editions to an electronic-only format will foster even greater intellectual debate among Airmen and fellow members of the profession of arms as the series reaches a growing global audience. By publishing these papers via the Air University Press website, ACSC hopes not only to reach more readers, but also to support Air Force–wide efforts to conserve resources.

Thank you for supporting the Wright Flyer Papers and our efforts to disseminate outstanding ACSC student research for the benefit of our Air Force and warfighters everywhere. We trust that what follows will stimulate thinking, invite debate, and further encourage today's air, space, and cyber warfighters in their continuing search for innovative and improved ways to defend our nation and way of life.

LEE G. GENTILE, JR.
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Abstract

This paper examines the implications of twenty-first century global power competition, particularly from China, through the lens of information advantage. For the United States (US) to maintain its position as a world leader amidst renewed global competition, it must emphasize maintaining information advantage through forecasting adversary capabilities and intent. To heighten our awareness of China's capabilities and their ambitions of "intelligentized warfare," the United States intelligence community should prioritize monitoring state and private capital flows. State and private capital allocations work in concert with these information sets to show the priority and intensity of the pursuit of national interests. Allocation decisions demonstrate strategic decision-making and intent. More specifically, adversarial funding decisions relate directly to topics of concern in the National Intelligence Priority Framework. When combined with existing economic and financial intelligence, collection focused on capital spending should enhance forecasting ability and identify actionable opportunities to craft counter policy and work more efficiently with our private industry partners. Such research and policy craft may also provide limited operational solutions through cyber operations and public affairs.

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Introduction

> *"Great power politics are yielding to supra-national politics . . . problems will be resolved, and objectives achieved by using supra-national means on a stage larger than the size of a country . . . warfare that exceeds limits . . . easily bypassing territorial boundary markers."*
>
> –Unrestricted Warfare

Investments inherently are forecasts that indicate investors' perceptions of the future and corresponding potential sources of abnormal, or different than average, future returns. Financial analysts use the quantitative and qualitative information surrounding a potential investment to frame and justify these forecasts. Strategic, anticipatory, and current intelligence rely on a similar process to turn quantitative and qualitative data into an informative and actionable product. In today's Information Age, every piece of data holds the potential to affect current events. Still, especially in Western culture, data tends to be siloed into specific categories (functional, industrial, cultural, etc.) rather than viewed holistically and appreciated for its cross-categorical impacts. The United States is losing strategic positioning in the global power competition due to the nonurgent adoption of information applications toward national interests.

To heighten our awareness of China's capabilities and their ambitions of "intelligentized warfare," the United States intelligence community should prioritize monitoring state capital flows. It is challenging to draw operational relevance from a seemingly abstract concept like state and private capital allocation decisions from a military standpoint. However, within the traditional instruments of national power, none are as powerful as the economy. A healthy economy underpins a nation precisely because it is the ultimate financial enabler of all sovereign activity. Tracking national investment policy and the associated flows of sovereign wealth, combined with shifting private sector investment foreign ownership, control, or influence (FOCI), may increase the forecasting accuracy of adversary intent. Monitoring investment flows focuses analysis on a line of questioning that revolves around how capital allocations, inherently the use of scarce resources, may indicate or emphasize adversarial intent. Because investing is a forecasting mechanism, understanding capital flows tangibly demonstrates intent and presents likely future outcomes. Mark Lowenthal explicitly points out this forward-looking nature by using international competition over commodities as an indicator of national interest. Such competition, especially with authoritarian states, cannot be ignored because failing to recognize the aggressive pursuit of harmful national interests is a near guarantee that policymakers will miss related global impacts until it is too late to employ an offset or counter.

First, it is necessary to connect national interests and their value to national security to fully understand the second and third-order effects of a country's strategic investments. This proposal is structured as follows. The first section will briefly trace China's clever and highly effective use of Foreign Direct Investment (FDI) to free up state resources for other means such as military and industrial spending. China's historical capital spending will demonstrate calculated, disciplined intent, which laid the foundation for the country's growth while setting global precedents for questionable behavior and lopsided transactions. In the second section is a detailed case study with several brief examples to demonstrate the deeply embedded and nearly inextricable nature of the Chinese Communist Party (CCP) within private, semi-private, and State-Owned Enterprises (SOE). Beyond making clear the incestuous relationship between the CCP and private businesses, this study will reveal the critical dependence intentionally built into these businesses' technologies and the extraordinary level of control the CCP wields over its citizens. The final presentation is an analysis and describes the implications of remaining less than fully informed as the CCP continues an unimpeded campaign of aggression and repression against its citizens, neighbors, and anyone or anything threatening its interests.

Information Advantage—A Common Lexicon

One key challenge with discussing reforms and prioritization of intelligence and information policy is the tendency to move towards buzzwords and jargon. Establishing a common baseline and lexicon for practitioners is essential to advancing effective intelligence and information policy. This brief section will define the words used to discuss capital allocations.

When operating in the political or military realms, finance and investment concepts tend to be represented broadly in terms of the economic instrument of national power. It is tempting to use the terms investment, economics, and finance interchangeably, but they have distinct meanings. The word "investment" likely triggers ideas of stock and bond portfolios, business operations, or any financial outlay reasonably expected to generate some form of positive future monetary return. Economics is the study of incentives and how we use scarce resources, specifically money, also known as capital, to pursue those incentives. Finance manages those capital flows and includes many different activities, including public and private investments. Understanding these distinctions allows the logic of state and civil investment decisions to flow back up into the big national "E" of economic policy.

In addition to terminology, two possible critiques or counterarguments should be addressed:

Critique 1: Individual investors versus institutions make up the investing populace in China, and their "bets" are not equivalent to sovereign decision-making. Counter: Chinese investor bets on stocks related to Russia are an intuitive reaction to sovereign decision-making. China bifurcates its foreign and domestic policies, which means sovereign propaganda will support state initiatives. The CCP actively uses media and messaging alongside massive data collection to manipulate the populace toward state will.

Critique 2: Markets are independent and not directly subject to the government's will. This critique holds the many Western companies operating in China as evidence of independent markets. Most recently, the world's largest asset management and finance shops have clamored to do business with Chinese investors. This interaction, the critique states, would not happen if fear of sovereign seizure or general instability existed. Counter: Money almost always disregards instability in favor of profits, as evidenced throughout Niall Ferguson's *The Ascent of Money* and the example above of the Chinese public investing in Russian-facing, Chinese stocks.

Other People's Money—Trends in China's State and Private Investments

Questioning which industries, technology, or products any country is funding and understanding the implications helps address intent and draw conclusions about the why. Where is that capital flowing, and how is it being used?

The way the CCP structured its FDI regime reflected China's bitter past experiences with Western powers and their meticulous calculations to direct FDI flow. The same bitter historical view and caution also affect China's Outward Directed Investment (ODI). Specifically, industries deemed critical to national security are FDI restricted. Restricted investment areas include nuclear, aerospace, defense, vaccine research, and others. FDI is encouraged in industries contributing to domestic growth and simultaneously presenting opportunities to appropriate foreign technology. Under Deng Xiaoping and China's "opening up" and subsequent "going out" policies, the CCP created incentives to steer FDI into manufacturing, advanced technology, agriculture, and infrastructure. A focus on the historical development and context of FDI in China under close CCP scrutiny exposes the paranoia of the party while painting a clear historical picture of what national interests were and their changes as China began to benefit from the massive FDI inflows.

On the surface, this action is an entirely rational and benign approach to solving national priorities for food and energy security while promoting domestic growth. The reality is that using other people's money to accomplish a task underscores the task's importance and frees up scarce capital for use elsewhere (see the section on analysis). In 1999, a Brookings Institute article pointed out that China's energy dependence was rapidly increasing, and it was much cheaper for China to import energy to meet domestic consumption demands.

The report describes how limited foreign investment included exploration, technology development, and infrastructure improvements, particularly refining and transportation. It identified the Middle East as the most economical energy solution. The report also presciently stated that a primary goal would be to avoid strategic vulnerability to US regional logistical and maritime dominance. Over time FDI solutions enabled the CCP to empower SOEs to begin expanding energy ODI throughout the Middle East, Central Asia, Russia, Africa, and South America. Today the CCP's reach has extended beyond securing energy commodities to ownership and operation of strategically geolocated infrastructure like deep-water ports capable of transportation and naval operations.

Shortly after Xi Jinping came to power in 2012, he proposed a plan to continue China's economic liberalization with the assurance of a strong central role for the state. This position reflected the CCP's view that China deserved a leading role following the global financial crisis, which originated in the United States. China's subsequent attempt to internationalize its own currency, the Renminbi (RMB), failed in 2015 when a devaluation scare spooked investors and caused the CCP to cease currency trading, killing the RMB's credibility as a genuinely liquid currency. This government intervention is a forgotten but significant piece of history when considering whether or not the CCP may offer a legitimate challenge to the United States dollar as the reserve currency of choice. Before dismissing this notion, consider that the CCP is obtaining real-time observations on methods to transact outside of the global Society for Worldwide Interbank Financial Telecommunication (SWIFT) payment system. Readers are encouraged to skim the Hinrich Foundation's article and their short primer on the potential effects of a digital RMB. Most recently, Saudi Arabia began talks with China to accept RMB for oil. China's desire for and efforts to establish a globally accepted digital currency pose dramatic implications regarding international influence, not because it is a unique pursuit but because of China's influential global economic status. It would undoubtedly be detrimental to the current Western-led global financial system.

All these CCP calculations lead back to leveraging non-state investments for military spending. When China started opening its economy to FDI in the mid-90s, the energy industry was a logical place to start. It is an excellent example of alternative use for free capital. Starting with historical data on FDI in China, we can overlay World Bank data on Chinese military expenditures (see fig 1). The apparent correlation between increases in military expenditures versus FDI increases is striking. The takeaway is FDI serves as a tool to free government resources for other national interests.

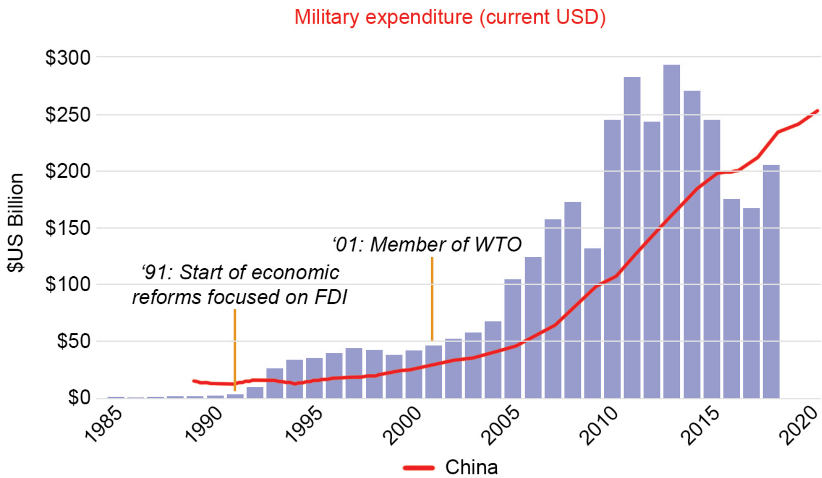

Figure 1. Annual Foreign Direct Investment, inflow

Military spending has grown faster than China's gross domestic product (GDP), and projections anticipate steady increases. This spending rate will make good on Xi's 2017 address to the CCP calling for military modernization and global leadership. It is notable because it tangibly underscores the CCP's goal to possess capable military means to influence global interactions. The importance of that shift will be addressed in the case study and analysis sections and relates directly to the proposal that foreign and domestic private capital flows indicate and reinforce CCP initiatives.

The information advantage of a tightly state-controlled, centrally planned economy is that public funds are not the only indicator of national interest. On the semi-private side, joint ventures have expanded to foreign-invested enterprises (FIE), including most other investment vehicles such as venture capital and investment funds. From FIEs, money has poured into shipbuilding, auto manufacturing, high-performance chips, communications, aerospace, and space. The CCP has also allowed the extreme success of specific individuals to invest, build, and operate some of the most impactful state tools of all; for example, Baidu, Alibaba (Ant Group), and Tencent.

Case Study—Baidu, Alibaba, and Tencent

The three largest companies dealing in China's digital information are Baidu, Alibaba, and Tencent, also known as BAT. All three are among the top ten largest companies in the *Financial Times Stock Exchange (FTSE) China 50 Index*. This constituency is noteworthy for two primary reasons. First, capital markets provide companies with access to external, non-governmental funding sources. Second, the ability of institutions and individuals to trade companies' stocks via public exchanges enhances liquidity and provides legitimacy. These are characteristics of healthy markets and give the trust necessary to support global trade and growth beneficial to all parties in a transaction. Ideally, these markets should also operate freely and with minimal to no government interference beyond regulations to protect participants and encourage transparency.

Alibaba and Ant Groups

Standard and Poor (S&P) Capital Intelligence Quotient's (IQ) descriptive tags for Alibaba Group and Amazon.com, Inc. include artificial intelligence (AI), machine learning (ML), Ad Network, Mapping Services, and Video Streaming, all under the primary industry of "Internet and Direct Marketing Retail." The difference between these two companies comes down to national interests and how, fundamentally, liberal democracies and autocracies interact with businesses under their purview.

The Alibaba Group exemplifies a largely independent corporation with powerful influence within the Chinese population through its technology platforms. Alibaba's areas of expertise happen to overlap with key areas of CCP interest, and that overlap has made the company and its owners both tools and targets of the CCP. Consequently, President Xi shut down the initial public offering (IPO) of Ant Group, a financial affiliate of Alibaba.

Alibaba, China's answer to Amazon.com, is an entrepreneurial story of epic success from humble beginnings. Jack Ma, an English teacher from Hangzhou, China, founded Alibaba in 1999 as an online directory for Chinese businesses. By 2014, when Alibaba IPO'd, it had a market capitalization of

$215 billion, ranking 4th among the world's largest tech firms. That market capitalization did not include the assets of Ma's Ant Group, which had separated into its own company following its massive success rooted in Alibaba's Alipay.

Alibaba and Ant operated relatively unhindered by Chinese regulators, and the latter was achieving Mr. Xi's goal of financial innovation. As Ant amassed the world's largest money-market fund by 2017, the primary concern of the CCP became Jack Ma's influence over Alibaba and Ant and the party's ability to maintain control over that influence and perceived risk to the stability of Chinese financial markets.

Shortly after, Ma learned the costs of CCP compliance. In the fall of 2020, Ma used that influence to criticize Beijing and its regulators, and Mr. Xi took that opportunity to remind the world who was in charge. Mr. Xi's actions sent a message that reached far beyond the reproach of Mr. Ma. Global investors had committed over $34 billion towards Ant's IPO. They and the business community received a shocking notice that anyone wishing to benefit from China's population and growing consumer economy should abandon notions of independence and adhere to CCP rules. Five months later, the CCP requested that Alibaba shed its media assets, including the South China Morning Post, Weibo, and Bilibili, a further acknowledgment that Ma wielded too much influence and presented a potential threat to official CCP propaganda.

The Alibaba and Ant Groups provide important platforms for enabling three of four CCP initiatives: political control and social stability, economic development, and science and technology. Through its media and entertainment holdings, Alibaba commands a pervasive presence and influence among the Chinese population. It is also the largest cloud provider in China and provides hosting services for other state surveillance tools like TikTok. Therefore, it is not surprising to observe that regulatory bodies of the CCP moved swiftly and aggressively to rein in these capabilities.

Ant further enables control and stability through its financial transaction platforms and lending services. Under the guise of combating antitrust behavior and "systemic risks," Chinese regulators cracked down on Ant Group following the cancellation of its IPO. According to the chief executive officer of China First Capital, "A concern would be that market power may potentially morph into political power." While this seems plausible, it belies the CCP's actual intent to prosecute its strategic initiatives. Ant's Alipay payments platform processed the equivalent of $18 trillion during their 2020 fiscal year in mainland China. Those transactions have valuable data attached to the businesses and individuals who use Alipay. In a tightly state-controlled economy, that information is exceptionally valuable. It enables a range of assessments from the degree to which spending habits indicate citizens' support of the CCP to the creation of detailed tracking profiles, including digital maps and timelines.

The influence of financial institutions leads directly to the CCP's initiative for economic development. The massive annual transaction volume of Alipay alone needs no further explanation regarding its contribution to the economy. It underscores why Alibaba and Ant originated together. The power of Alibaba's online commerce platform naturally benefits from a financing arm analogous to Amazon's branded credit cards and 2018 proposal to provide customers with accounts similar to traditional bank checking accounts. The angle both companies proposed is very altruistic, to provide services to unbanked or underbanked consumers. These terms refer to individuals who either fail to qualify for traditional credit and savings accounts or do not have access to traditional banking. Together, Alibaba and Ant massively extend the reach and ability of customers to consume the pool of collected data. The CCP cannot afford to have a single individual act as a party critic and wield economic and informational influence.

The strategic importance of Jack Ma's corporate crown jewels doesn't stop with control and influence. In its 2020 report, *China's Grand Strategy*, the RAND corporation states that the CCP's top focus within the advancement of science and technology ensures robust funding for artificial intelligence. A *Forbes* article on Alibaba's AI investments stated, "you realize quickly that the list of what it [AI/ML] doesn't impact is much shorter." Although these investments professedly aim to increase convenience for customers and efficiency for businesses, it is easy to see the connection with state interests. Alibaba's Sense Time and City Brain technologies enable facial recognition and detailed demographic information processing, respectively. Raymond Zhong of the *New York Times* exposed these technologies for their Orwellian nature in documenting how Alibaba provided its corporate clients with instruction on utilizing its facial recognition software to detect Uyghur and other Chinese minorities.

Baidu and Tencent reflect similar traits but are more deeply integrated with CCP goals. Like Alibaba, these are data platforms with AI as one of their core purposes. A 2018 report from University of California, Berkeley, noted that Chinese AI-related companies are receiving capital flows nearly on par with those in the United States. The most significant funding went to Toutiau, which ByteDance, a well-documented CCP collaborator, owns.

Tencent is best known as the parent company of WeChat. The Australian Strategic Policy Institute's (ASPI) International Cyber Policy Centre published a detailed report on WeChat and TikTok. These seemingly benign apps have an exceptionally invasive and coercive character under the hand of the CCP. Two BAT competitors, which are also in the *FTSE China 50 Index*'s top ten holdings, are Meituan and jd.com. They are less widely known but equally invasive and focus heavily on AI development. Researchers focus on competition among these companies and their global peers. Still, the investment committee (IC) should pause and consider that these companies linked directly and indirectly to the CCP have drawn such giant pools of capital. It is not easy to acknowledge that companies contributing to investors' wealth enable CCP goals.

Why Current Indicators Present an Incomplete Picture

Most financial agencies and regulators focus on illicit finance as enablers of terrorism, weapons of mass destruction (WMD) proliferation, and the drug trade. Policymakers, strategists, and the intelligence community require that information be actionable. The collection of financial data at the tactical, operational, and strategic levels focuses on different portions of the transactional process. Tactical finance data consists of tracing asset transactions at the individual or line-item level and is generally referred to as forensic accounting. Operational financial intelligence uses tactical information to build relationships between transacting parties. Strategic applications will further compile transactional and relationship data to identify patterns and trends that may indicate national interests. All three levels of analysis utilize financial records; however, none consider investment markets as a source despite their ability to indicate priority and intensity of investor preferences.

In a centrally controlled economy like China, companies doing business related to national interests likely have ties to the state even if they are not a SOE. While financial information is certainly knowable, industry and business-level financial data is not necessarily readily obtainable. Professional tools like Bloomberg terminals, S&P Capital IQ, and FactSet allow analysts to discern relationships between companies, including supply chains and indebtedness. Understanding the nature of relationships enables analysts to assess the degree of interdependence between and among companies.

Analysis and Implications

The CCP successfully uses its increased global economic status to influence, repress, coerce, and compel its citizens and businesses, domestic and foreign. Individuals feed masses of data to the government, voluntarily and involuntarily. Some of the most respected companies provide tools for data collection while also enabling dual-use technology. These are problematic concepts for liberally-minded individuals to grapple with because they are so foreign to the ideals foundational to the United States. For this reason, understanding how the CCP makes other people's money work for the party is essential to provide insight and mitigate the impacts.

The case study demonstrated how even independent businesses could be complicit in enforcing CCP policy. ByteDance, the parent of TikTok, must be discussed for its highly state-influenced impact on Chinese and global citizens. ByteDance is a private company that hosts CCP branches and a Chinese police cybersecurity team within its corporate structure, with the latter operating from ByteDance headquarters. Those associations have not stopped the investment community from pushing for an IPO valuing ByteDance at $180 billion in December 2020. Over twenty pages of an investigative report expose ByteDance's TikTok as a CCP means of political and social censorship. Content on figureheads like Xi, Putin, and Kim Jong-il was barred, as was content on Mahatma Gandhi and US presidents. TikTok's censorship and propaganda have affected the Uyghur population and extends beyond borders to anyone using the app. There is no reason to believe that TikTok, with its embedded CCP bodies, is less repressive than Tencent's WeChat. The intent is clear: censor negative information about specific leaders, do not allow foreign influence to run counter to CCP views, and actively silence voices discordant with the CCP.

TikTok *i*s their most well-known app, but it is only one of six specific ByteDance business units. These units range from familiar social media apps and games to AI. The IC should note that a company directly linked to the CCP as a tool for censorship and propaganda remains wildly popular among the global population. That rabid popularity among investors and users directly underscores the intelligence value of private capital. It is exceptionally difficult to mitigate such indirect threats when a business has broad public monetary or physical support. It is necessary to recognize the intelligence source as a double-edged sword in such a case. What is a valuable tool of the CCP is also a valuable source of information against the CCP. The value of that information is precisely why the CCP has begun to aggressively regulate public and private companies, like Alibaba, which control large swathes of data on its citizens. It is an accepted fact that autocracies fear dissent among their people as much or more than external threats.

Just as state and private capital priorities can impact individuals and act as indicators and warnings, analysts may draw similar conclusions by observing activity in the business community. Where and how the CCP guides investment flows gives the IC direct avenues to focus collection efforts. By law, any company doing business in the PRC is subject to demanding requirements that multiple policy and regulatory bodies acknowledge are discriminatory, invasive, and in some cases, appropriation of proprietary technology. Several US agencies, think tanks, and journals publish regular updates on the theft of intellectual property (IP) by China and the CCP. This research encompasses the full scope of CCP technology transfer starting with the body of law that provides a legalistic basis and ending with CCP investments in domestic and global initiatives to gather economic and military-boosting technology in legal and illegal manners. The evidence shows how some of the largest companies in China are complicit in appropriations. That foreign businesses comply with CCP requirements despite negative consequences underscores the lure of potentially significant revenues and the need to pay attention.

The aerospace industry is a prime example of the need for evidence-based caution. David Sanger and Ben Buchanan present pages of detail on private business networks acting as unofficial arms of the CCP and the multiple aerial platforms that had their technology stolen. The connection between active interstate espionage and commercial investments in support of national interests encompasses all the aspects of "Unrestricted Warfare's" concept of supranational means of waging warfare. It is an expansion of how most, if not all, democratic or liberally minded countries traditionally define war. If a nation's economy or measure of economic power is the ultimate enabler of global power, then actions linked between state and commercial interests carry the weight of war and deserve to be considered as sources of strategic, anticipatory, and current intelligence. At approximately the same time this corporate espionage was publicized, RAND published a research report shining a light on the difficulty of protecting IP while operating under CCP technology transfer regulations.

The extension to intelligence collection goes back to the instruction provided by the *FTSE China 50 Index*. Which publicly traded companies are associated with CCP priorities? China Aerospace International Holdings Ltd., is a Hong Kong-based investment company involved in "Hi-Tech Manufacturing" and the R&D of space technologies. The China Aerospace Studies Institute (CASI) cataloged over 100 Chinese companies tied to CCP priorities. CASI used three criteria to establish links between commercial companies and the CCP, for example, the company: 1) has an official (codified) relationship with a State-Owned Enterprise or state entity (nonmilitary) that may indicate unfair access to IP or research not typically available to a private commercial entity, 2) receives funding from an SOE or state entity (nonmilitary) that may be indicative of an unfair advantage in a competitive market, and 3) receives funding or research support from a military entity that is not tied to a procurement purchase (i.e., it is not a simple exchange of PLA money for a product). These are not "private" companies as Americans think of private companies. As discussed above with ByteDance, association with the CCP is mandatory. While these companies do not trade publicly, they are investable by other means. CASI lists three different reports that estimate over $125 billion of state and privately pooled funds exist to finance military-civil fusion technologies. Aerospace is a strategically important industry to every nation-state, so it is not surprising that these companies are "private." The point is that the CCP is actively funneling public and private capital to support defense-related business. Companies, institutions, and individual investors can trade the stock of Baidu, Alibaba, and Tencent. There are certainly publicly traded investment funds that directly hold or have exposure to such companies. The conclusion is that following the money will always lead to the source. The intensity of the connection will expose motive and intent.

The intensity of these connections was best expressed in 2020 by a former senior CIA official. "It's not that Tencent or [its founder] Pony Ma are dancing to the tune of what the MSS says, but if at any point China's security services need assistance, they are providing it." This is not an in-depth discussion on China's military-civil fusion (MCF) efforts. However, the relationships discussed should provide the reader with enough information to realize that understanding capital flows is a gauge of the success and progress of MCF and CCP interests.

In the 2021 hearing before the US-China Economic and Security Review Commission, Emily Weinstein testified that China focuses on military applications of civilian technologies using four examples. Three of those were investment-related. In MCF cases, Ms. Weinstein pointed out that mirror imaging of Western ideas of government and commercial/institutional relationships misses a fundamental difference in who is subservient to whom. The CCP's approach to integrating commercial technology contrasts dramatically with the United States' position, underscored by Google's 2018 decision not to renew its Project Maven contract with the Pentagon. CASI drives this point home by stating, "the military potential of many advanced civilian technologies goes unrecognized by commercial firms."

It would be wrong to say that all businesses are agents of the state, but the CCP's influence and the implications discussed thus far should give diplomats, the Department of Defense (DOD), the IC, and investors pause. GDP expenditures provide a strategic look at the economic impact of these industries. Still, the aggregate of state and private capital flows paints the complete, leveraged picture regarding the CCP's weight of effort. George Kennan deeply understood and appreciated the power of targeted investing inclusive of commercial interests. His plan advocated "the restoration of the economic health and vigor of European society" because distress and disorder "make communist inroads possible." There is a passage in *After Victory* that speaks to the United States' understanding, contrary to creating a liberal hegemon, an anti-communist world order would require broad leadership and mutually reinforcing efforts.

The mutually beneficial and leveraged effects which came out of the post-World War II world economic order look remarkably different than how the CCP levers investment sources toward its goals. Consider the Hinrich Foundation's research through 2016 on the outsized impact of foreign investments on China's economy. They credit one company, Maersk, with "connecting China to the world" regarding maritime shipping logistics. On the one hand, this increases the efficiency of the world's supply chain, reducing overall costs for everyone. On the other hand, it has direct applications to the CCP's efforts to develop the maritime portion of their Belt and Road Initiative. The research also credits 90 percent of Shanghai's high-tech output to foreign-invested enterprises. In terms of CASI's research, how much of that output may connect to companies like Jianzhen Defense Technology Co., Ltd?

There is a fundamental difference in how Americans calculate our adversaries' and competitors' possible strategic actions and responses. From a finance and investments perspective, it is unthinkable that any government attempting to assert itself as a responsible, global power would indirectly but intentionally impair its financial markets. Admittedly, the proposal sounds preposterous, but the hypotheses over what a China or Taiwan scenario looks like involves the possibility of nuclear weapons. It would be a planning failure to ignore that the CCP will almost certainly target space and cyberspace, even if it puts China's financial transaction architecture at risk. Rarely can communication systems be broadly targeted without affecting all communications, including financial transactions. From a Western perspective, if trust and stability are paramount in supporting credible capital markets, it would be ludicrous for any country to take actions that may damage that trust. However, authoritarian governments like China tend to violate these principles of independent operation, protection, and transparency. Their cost-benefit analysis does not mirror any democracy.

The takeaway from this thought exercise is that the CCP has watched for decades as foreign investors clamored to get crumbs of profits relative to China's economic growth. Greed and convenience may breed complacency and encourage willful ignorance, but that does not mean the impacts on individuals and businesses do not have national implications. Authoritarian states, like China, have accurately identified foreign corporations and investors as political vulnerabilities to their home countries and are effectively building soft alliances by seducing them with the siren's call of profits.

Conclusion

This research has demonstrated how policymakers, the IC, and the DOD can benefit from investment market analysis and should consider its applicability across the instruments of national power. To heighten our awareness of China's capabilities and their ambitions of "intelligentized warfare," the United States intelligence community should prioritize monitoring state and capital flows. Tangible asset flows are a finite national resource and serve as a direct indication of national policy implementation. Through MCF initiatives and embedded corporate CCP bodies, China provides explicit examples of how states interact and influence companies and institutions presented to the public as being independently operated. These CCP initiatives have the potential to produce direct and indirect effects against its adversaries.

Policymakers can and should use investment-related intelligence to strengthen existing policies or craft new policies to mitigate the efficacy of CCP efforts. Where FDI-type relationships support currently aggressive and coercive CCP actions, an opportunity may exist to work with regional and global partners to mitigate the effects. Operationally, the DOD has an opportunity to support mitigation efforts through physical demonstrations of regional partner support. The DOD may also increase interagency cooperation and effectiveness by collaborating with government and civilian agencies to discover, monitor, and expose relationships of concern to national interests.

Ultimately, non-state investments have unseen applications overlooked as purely commercial rather than military. When technology is a commodity of daily life, it is easy to forget that most things in life can be dual-use. That does not change the fact that critical enablers, whether communications mediums or money, should always be prime considerations for actionable intelligence collection.

Notes

(All notes appear in shortened form. For full details, see the appropriate entry in the bibliography.)

1. Lowenthal, *Intelligence*, 381.
2. Reuters, "Chinese Investors Bet on Shares."
3. Shambaugh, *China and The World*, 349.
4. Ryan, Fritz, and Impiombato, "TikTok and WeChat."
5. Tseng, "Foreign Direct Investment in China," 12–15.
6. Tseng, "Foreign Direct Investment in China."
7. Tseng, "Foreign Direct Investment in China."
8. Erickson, "Make China Great Again."
9. Shambaugh, *China and The World*, 121–124.
10. Paterson, "The Digital Yuan."
11. Said and Kalin, "Saudi Arabia."
12. Wong, "China's Global Investment Strategy."
13. Funaiole, "Understanding China's 2021 Defense Budget."
14. Shambaugh, *China and The World*, 347–348.
15. Erickson, "Make China Great Again."
16. Financial Times Stock Exchange (FTSE) Russell, *FTSE China 50 Index*.
17. S&P's Capital IQ, "Alibaba Group Holding, Ltd."
18. Yang and Wei, "China's President Xi Jinping."
19. Graphics, "What Is Alibaba?"
20. Yang, "China's President Personally Scuttled Ant IPO."
21. Yang, "Beijing Asks Alibaba to Shed Its Media Assets."
22. Scobell, *China's Grand Strategy*, 18.
23. Ryan, Fritz, and Impiombato, "TikTok and WeChat."
24. Lin, Wei, and Ping, "Alibaba, Ant Face Crackdowns."
25. Lin, Wei, and Ping, "Alibaba, Ant Face Crackdowns."
26. Glazer, Hoffman, and Stevens, "Next Up for Amazon."
27. Scobell, *China's Grand Strategy*, 118.
28. Marr, "The Amazing Ways Chinese Tech Giants."
29. Zhong, "Alibaba Showed Clients How to Identify China's Uighurs."
30. Jia, "The Application of Artificial Intelligence."
31. Ryan, "TikTok and WeChat."
32. Ryan, "TikTok and WeChat," (see note 30).
33. U.S. Department of the Treasury, "Terrorism and Illicit Finance."
34. American Institute of CPA, "Forensic Accounting."

35. Gottselig and Underwood, *Financial Intelligence Units*, 57–59.
36. Hull, " 'Private' Chinese Companies," 10.
37. Hull, " 'Private' Chinese Companies," 49–50.
38. Yu and Lin, "ByteDance."
39. Ryan, "TikTok and WeChat," 4–24.
40. Liao, "ByteDance."
41. Sanger, *The Perfect Weapon,* and Buchanan, *The Hacker*.
42. Financial Times Stock Exchange (FTSE) Russell, *FTSE China 50 Index*.
43. "China Aerospace International Holdings Ltd." Barron's.
44. Hull and Markov, " 'Private' Chinese Companies," 2, 12–95.
45. Hull and Markov, " 'Private' Chinese Companies," 5.
46. Dorfman, "Tech Giants Are Giving China a Vital Edge."
47. U.S.-China Economic and Security Review, *U.S. Investment,* 205.
48. U.S.-China Economic and Security Review, *U.S. Investment*, 205.
49. MacMillan, "Google Won't Seek to Renew."
50. Hull, " 'Private' Chinese Companies 8.
51. Ikenberry, *After Victory*, 181.
52. Enright, "FDI in China Infographic."
53. Enright, "FDI in China Fact Sheet."
54. Hull, " 'Private' Chinese Companies," 47.
55. Schuman, "China Now Understands."

Abbreviations

ACSC	Air Command and Staff College
AI	artificial intelligence
ASPI	Australian Strategic Policy Institute
BAT	Baidu, Alibaba, and Tencent
CASI	China Aerospace Studies Institute
CCP	Chinese Communist Party
DOD	Department of Defense
FDI	Foreign Direct Investment
FIE	foreign-invested enterprises
FOCI	foreign ownership, control, or influence
FTSE	Financial Times Stock Exchange
GDP	gross domestic product
IC	investment committee
IP	intellectual property
IPO	initial public offering
IQ	intelligence quotient
MCF	military-civil fusion
ML	machine learning
ODI	Outward Directed Investment
R&D	research and development
RMB	Renminbi
S&P	Standard and Poor
SOE	State-Owned Enterprises
SWIFT	Society for Worldwide Interbank Financial Telecommunication
USD	United States dollar
WMD	weapons of mass destruction

Bibliography

American Institute of CPAs. “Forensic Accounting.” *AICPA*. Accessed February 12, 2022. https://www.aicpa.org/.

Buchanan, Ben. *The Hacker and the State: Cyber Attacks and the New Normal of Geopolitics*. Cambridge, MA: Harvard University Press.

Canalys Newsroom. “China Cloud Infrastructure Market Q4 2020 and Full Year 2020.” *Canalys.* March 24, 2021. https://canalys.com/.

“China Aerospace International Holdings Ltd.” Stock Overview, 31 (Hong Kong), *Barron’s.* Accessed April 13, 2022. https://www.barrons.com/.

Dorfman, Zach. “Tech Giants Are Giving China a Vital Edge in Espionage.” *Australian Financial Review*, January 11, 2021. https://www.afr.com/.

Enright, Michael J. “FDI in China Infographic,” *Developing China: The Remarkable Impact of Foreign Direct Investment*. Routledge, Taylor & Francis Group, 2017. https://www.hinrichfoundation.com/

Erickson, Andrew. “Make China Great Again: Xi’s Truly Grand Strategy,” *War on the Rocks*, October 30, 2019, Commentary. https://warontherocks.com/.

Financial Times Stock Exchange (FTSE) (London Stock Exchange Group [LSEG] company) Russell. *FTSE China 50 Index*, FTSE Russell. Accessed November 26, 2021. https://www.ftserussell.com/.

Funaiole, Matthew P., et al. “Understanding China’s 2021 Defense Budget,” Center for Strategic and International Studies (CSIS) Research, Critical Questions (blog), March 5, 2021. https://www.csis.org/.

Glazer, Emily, Liz Hoffman, and Laura Stevens. “Next Up for Amazon: Checking Accounts,” *Wall Street Journal,* Markets. March 4, 2018. https://www.wsj.com/.

Gottselig, Glenn, and Sarah Underwood, *Financial Intelligence Units: An Overview*, ed. Paul Gleason (Washington, D.C: International Monetary Fund : World Bank Group, 2004). https://www.imf.org/.

Graphics—WSJ News. “What Is Alibaba?” *Wall Street Journal*. Accessed January 30, 2022. https://graphics.wsj.com/.

Hull, Andrew W., and David R. Markov. “ ‘Private’ Chinese Aerospace Defense Companies.” Air University: China Aerospace Studies Institute, 2021. https://www.airuniversity.af.edu/.

Ikenberry, G. John. *After Victory: Institutions, Strategic Restraint, and the Rebuilding of Order after Major Wars*. Princeton, NJ: Princeton University Press, 2001.

Jia, Kai, et al. “The Application of Artificial Intelligence at Chinese Digital Platform Giants: Baidu, Alibaba, and Tencent.” Berkeley, CA, November 2018. https://brie.berkeley.edu/.

Lin, Liza, Lingling Wei, and Chong Koh Ping. “Alibaba, Ant Face Crackdowns from Chinese Regulators.” *Wall Street Journal*, Tech. December 4, 2020. https://www.wsj.com/.

Liao, Rita. “ByteDance Reorganization Offers Glimpse into TikTok Parent’s Future.” *TechCrunch* (blog), November 2, 2021. https://social.techcrunch.com/.

Lowenthal, Mark M. *Intelligence: From Secrets to Policy*. Thousand Oaks, California: SAGE/CQ Press, 2020.

MacMillan, Douglas. “Google Won’t Seek to Renew Pentagon Contract After Internal Backlash.” *Wall Street Journal*, Tech, June 1, 2018. https://www.wsj.com/.

Marr, Bernard. “The Amazing Ways Chinese Tech Giant Alibaba Uses Artificial Intelligence and Machine Learning.” *Forbes*, July 23, 2018. https://www.forbes.com/.

Paterson, Stewart. “The Digital Yuan and CBDC in China.” Hinrich Foundation, July 15, 2020. https://www.hinrichfoundation.com/.

___. “The Digital Yuan and China’s Potential Financial Revolution: A Primer on Central Bank Digital Currencies (CBDCs).” Hinrich Foundation, July 2020. https://www.hinrichfoundation.com/.

Reuters, “Chinese Investors Bet on Shares in Companies Linked to China-Russia Trade,” Reuters, European Markets, March 4, 2022. https://www.reuters.com/.

Ryan, Fergus, Audrey Fritz, and Daria Impiombato. “TikTok and WeChat: Curating and Controlling Global Information Flows,” Australian Strategic Policy Institute *Policy Brief* 37, September 2020. https://www.aspi.org.au/.

Said, Summer, and Stephen Kalin. “Saudi Arabia Considers Accepting Yuan Instead of Dollars for Chinese Oil Sales.” *Wall Street Journal*, World, March 15, 2022. https://www.wsj.com/.

Sanger, David E. *The Perfect Weapon: War, Sabotage, and Fear in the Cyber Age*. New York: Broadway Books, 2019.

Schuman, Michael. “China Now Understands What a Nuclear Rivalry Looks Like,” *The Atlantic*, Global, February 16, 2022. https://www.theatlantic.com/.

Scobell, Andrew, et al. *China’s Grand Strategy: Trends, Trajectories, and Long-Term Competition*. Santa Monica, CA: RAND Corporation, 2020. https://www.rand.org/.

Shambaugh, David L., ed. *China and The World*. New York, N.Y: Oxford University Press, 2020.

Standard and Poor (S&P) Capital Intelligence Quotient (IQ), “Alibaba Group Holding, Ltd, Corporate Profile.” Accessed January 30, 2022. S&P Capital

IQ, "Amazon.com, Inc., Corporate Profile," S&P Capital IQ. Accessed January 30, 2022. https://www.capitaliq.spglobal.com/.

Tseng, Wanda. "Foreign Direct Investment in China: Some Lessons for Other Countries." International Monetary Fund (IMF) policy discussion paper, Asia and Pacific Department. International Monetary Fund, 2002. https://www.imf.org/.

U.S.-China Economic and Security Review Commission. *U.S. Investment in China's Capital Markets and Military-Industrial Complex* Hearing, 117th Cong., 2021, 205. https://www.uscc.gov/.

U.S. Department of the Treasury. "Terrorism and Illicit Finance," U.S. Department of the Treasury, Policy Issues. Accessed February 13, 2022. https://home.treasury.gov/.

Wong, Perry, et al. "China's Global Investment Strategy." Milken Institute, Report. Washington, DC, 2020. https://milkeninstitute.org/.

Yang, Jing. "Beijing Asks Alibaba to Shed Its Media Assets," *Wall Street Journal* Business, WSJ News Exclusive. March 16, 2021. https://www.wsj.com/.

Yang, Jing, and Lingling Wei. "China's President Xi Jinping Personally Scuttled Jack Ma's Ant IPO." *Wall Street Journal*, Markets. November 12, 2020. https://www.wsj.com/.

Yu, Xie, and Liza Lin. "ByteDance Shelved IPO Intentions After Chinese Regulators Warned About Data Security." *Wall Street Journal*, Tech, July 12, 2021. https://www.wsj.com/.

Zhong, Raymond. "Alibaba Showed Clients How to Identify China's Uighurs." *New York Times*, December 17, 2020, U.S. Newsstream. https://www.nytimes.com.

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