

Hidden Harbors

China's State-backed Shipping Industry

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THE ISSUE

- Chinese companies are increasingly dominant across the maritime supply chain, aided by a complicated and opaque system of formal and informal state support that is unrivaled in size and scope.
- Combined state support to Chinese firms in the shipping and shipbuilding industry totaled roughly \$132 billion between 2010 and 2018, according to CSIS analysis. This includes financing from state banks (\$127 billion) and direct subsidies (\$5 billion). Owing to data limitations and the opacity of China's political system, this conservative estimate does not include direct subsidies to unlisted firms, indirect subsidies, state-backed fundraising, preferential borrowing rates, and other nonmarket advantages from China's state capitalist system.
- While most analysis focuses on more traditional types of state backing, most notably direct subsidies, we find that China has evolved increasingly sophisticated financial tools to select and support winners that render our traditional understanding of China's state capitalist system largely outdated. Future research will be needed to understand Beijing's evolving playbook for supporting the global rise of strategically significant industries.

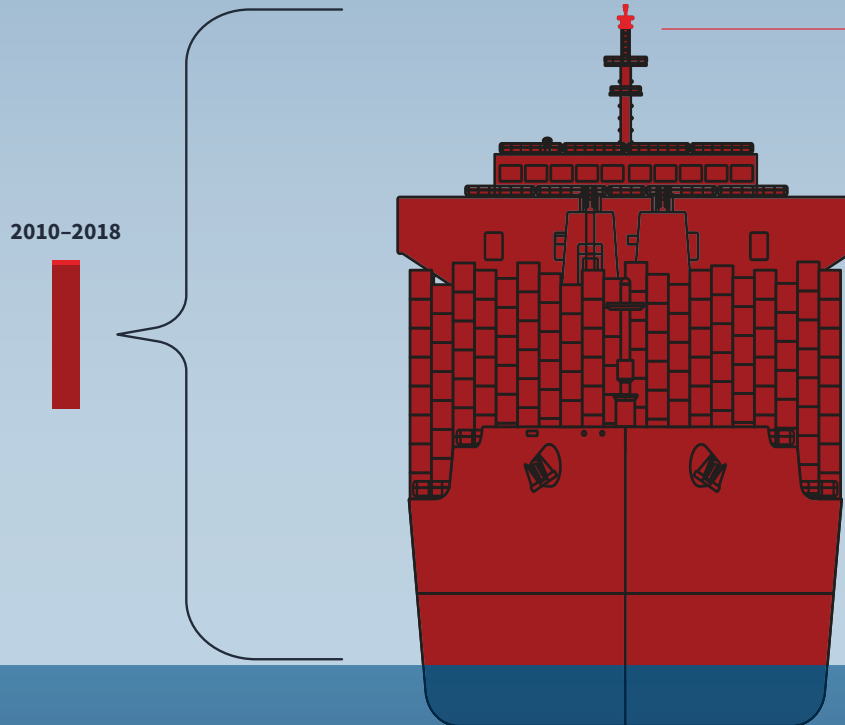
THE RISE OF CHINA'S SHIPPING INDUSTRY

Chinese companies are increasingly dominant across the entire global maritime supply chain, controlling the world's second-largest shipping fleet by gross tons and constructing over a third of the world's vessels in 2019.¹ They also produce 96 percent of the world's shipping containers, more than 80 percent of the world's ship-to-shore cranes, and own seven of the ten busiest ports in the world (including Hong Kong).² Although still a nascent naval power, China has already become a dominant player in the commercial maritime space.

China's maritime rise has been driven by focused state support beginning in the early 2000s after China's accession

to the World Trade Organization (WTO). The size and focus of Beijing's efforts accelerated after the 2008 financial crisis when the global maritime industry suffered a collapse in demand. Such support has provided Chinese firms with a strategic buffer from volatile market forces, helping Chinese companies to expand their global market share in shipbuilding and shipping finance by 10 percent and 15 percent, respectively, from 2008 to 2018.³ China encouraged its already massive state-owned enterprises (SOEs) to consolidate, including support for a 2015 merger that made state-owned China Merchant Group the largest port and logistics company in the world and the 2016 merger of COSCO Group and China Shipping Group to create the world's third largest shipping firm.⁴ China also pumped

China's Shipping Industry Rises with Ocean of State Support



Direct Subsidies \$5B

China provides a wide variety of cash payments and rebates to its enterprises to offset costs, boost revenue, encourage the adoption of new technology, and aid ailing firms. Examples include subsidies for exports, insurance, research and development, employment, and loan interest, as well as value-added tax rebates, income tax exemptions, and reduced port fees.

State Financing \$127B

China's state banks have taken a dominant role in the shipping sector through lending and leasing to both domestic and international firms. This funnels new orders to Chinese shipbuilders and expands China's ownership of the world's merchant fleet.

OTHER STATE SUPPORT

State Fundraising

The Chinese government directs SOEs to support each other through a variety of means, including low-interest loans with preferential terms, debt forgiveness, government-mandated equity infusions, and low-interest bond issuance.

Indirect Subsidies

China provides subsidies and non-monetary support to adjacent industries (e.g., steel, oil, electricity, and real estate) that translate into reduced costs for shipping and shipbuilding companies.

Barriers for Foreign Firms

China deters foreign firms from competing with or supplying Chinese shipping and shipbuilding companies through domestic input requirements, import substitution, and export restrictions.

Consolidation Policies

China consolidates its SOEs to promote global dominance in strategic industries. In 2015, for example, the government approved a merger to give it the largest shipping and logistics company in the world.

Forced Tech Transfer & IP Theft

Foreign firms are required to transfer technology in order to secure market access, while state-sponsored hacking and commercial espionage have targeted foreign intellectual property (IP), including maritime technology.

Source: Authors' original research.

financial support into the sector and set ambitious domestic and global targets. The “Made in China 2025” strategic plan designates maritime equipment and high-tech vessel manufacturing as one of ten priority sectors. China’s Belt and Road Initiative, announced in 2013, has deepened preexisting market access and secured new beachheads for Chinese shipping companies abroad. Led by state-owned shipping operators China COSCO Shipping Corporation (COSCO SHIPPING) and China Merchant Group, Chinese companies have invested an estimated \$11 billion into overseas ports between 2010 and 2019, including 25 projects across 18 countries.⁵

China’s growing maritime power has far-reaching implications for the United States. With 90 percent of global trade traveling by sea, the United States has both commercial and strategic interests in maintaining robust maritime capabilities. The stakes are highest in the event of a military contingency. Current and former U.S. officials have warned that the United States could face maritime logistics challenges during a major conflict given the shrinking size of the U.S. merchant marine fleet.⁶ China, in contrast, could draw upon superior numbers of state-owned vessels and the world’s largest maritime workforce. COSCO SHIPPING is widely recognized as the maritime supply arm of the People’s Liberation Army (PLA) and has provided logistical support to the PLA Navy’s escort operations in the Gulf of Aden since 2008. As the U.S. naval strategist Alfred Thayer Mahan famously observed, “Commercial value cannot be separated from military in sea strategy, for the greatest interest of the sea is commerce.”⁷

In order for the United States to fashion a strategic response, it must first have an accurate assessment of the forces driving China’s shipping sector. Previous studies have attempted to quantify the direct subsidies that Chinese shipping companies receive, but they have provided a partial picture at best, owing to the significant gaps in available and reliable data.⁸ The Chinese state provides support in numerous direct and indirect ways, including subsidies in cash payments, cheap financing and fundraising, tax incentives and concessions, barriers for foreign firms, state-directed industrial consolidation, forced technology transfer, and intellectual property theft, among others.⁹ Some of these measures can be quantified from open sources, while others remain hidden behind China’s opaque lending and corporate reporting practices.

Acknowledging these limitations, this brief explores the scale and scope of China’s state support for its shipping and shipbuilding industry.

SUBSIDIES

The most direct way Beijing supports its shipping and shipbuilding industry is through traditional subsidies, which listed firms disclose on their annual reports. For the 35 listed Chinese shipping and port management firms between 2007 and 2019 (the earliest time period for which complete data was available), Beijing provided \$3.4 billion in total subsidies while the 12 listed Chinese shipbuilding companies received a total of \$2.1 billion.

Subsidies directly given from the Chinese government typically come in two forms: (1) cash payments that can offset business costs and boost revenue and (2) rebates for taxes and levies. Firms utilize these subsidies in a number of ways, including purchasing technology that is not yet commercially profitable, covering production costs during down markets, boosting research and development (R&D), and promoting the use of domestic components.

Subsidies come from different levels of the government. At the central level, the Ministry of Transportation plays the largest role in directing subsidies, given its responsibility for setting the broad policy direction of the industry and developing and regulating China’s maritime transportation sector. At the local level, subsidy policies are used as tools to compete against other cities for investment, trade, and employment.

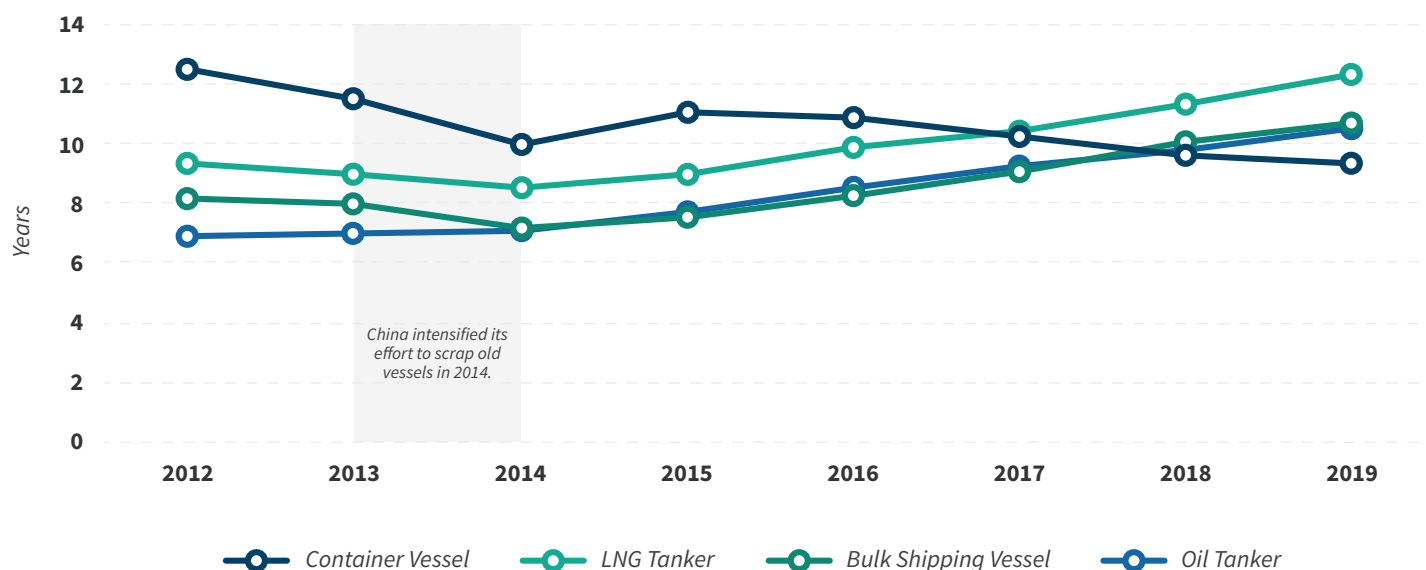
Interestingly, while the vast majority of China’s shipping industry is state-owned, direct subsidies appear evenly spread between public and private firms as a percentage of overall revenue. From 2007 to 2019, for example, direct subsidies represented 1.2 percent of total revenue generated by state-owned shipping lines, while the two listed private firms enjoyed direct subsidies accounting for 1.4 percent of their total revenue. Yangzijiang Shipbuilding Holdings, a former SOE that is now privately-owned and Singapore-listed, received direct subsidies that amounted to 1.8 percent of its revenue, a ratio that was even higher than the state-owned shipbuilders.

CHINA’S “SCRAP AND BUILD” SUBSIDY

Following the 2008 financial crisis, the global shipbuilding industry struggled in the face of collapsing global demand. In China, many shipyards found their foreign customers unable to pay for completed vessels and overall inventories increased as Chinese shipyards continued to build vessels in excess of demand.¹⁰

To further stimulate demand, Beijing introduced a

Average Age of Chinese-owned Ships



Source: China's Ministry of Transport via the WIND Financial Terminal

“scrap and build” subsidy in 2010, which allowed Chinese firms to upgrade their fleet at a significantly discounted cost.¹¹ Under the original terms of the subsidy, shipping companies received all of the subsidy only after they demolished their aging ships and built replacement vessels. Beginning in 2014, however, companies could receive subsidies before they commissioned a new ship, which provided an even greater incentive to scrap their older vessels, essentially allowing companies to front-load the subsidy.¹²

The subsidy helped significantly boost company revenues. In 2014, COSCO Holding (a subsidiary of COSCO Group) received \$194 million from the scrap and build subsidy when its year-end profit totaled only \$51 million. That same year, China Shipping Development received \$66 million from the scrap and build subsidy while its year-end profit stood at \$44 million.¹³

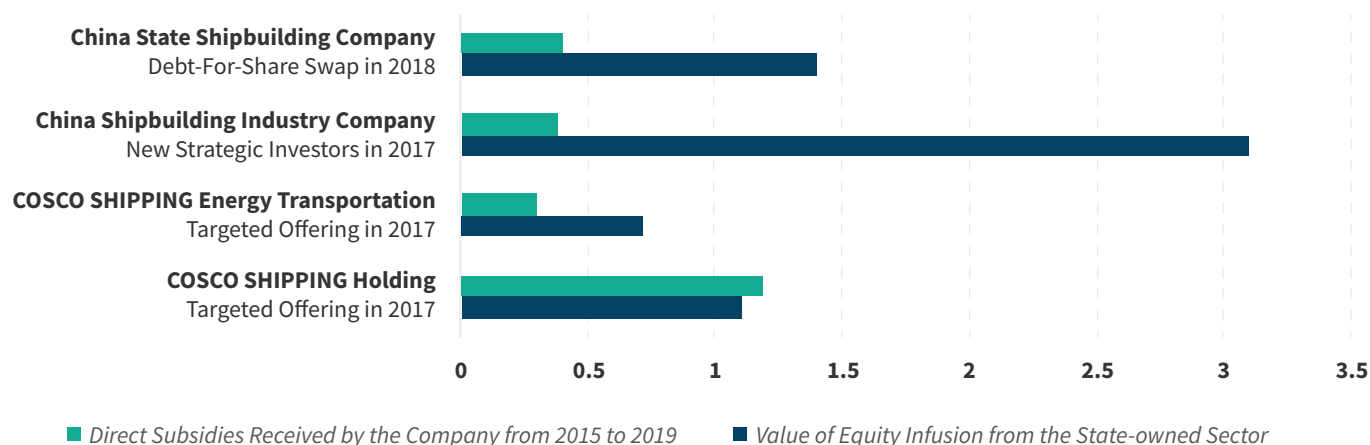
Although the Chinese government eventually phased out the subsidy program, while it was in operation, it helped boost not only China's fleet modernization but also domestic shipbuilding and shipbreaking yards, which were the downstream recipients of government support. While the Chinese government never published numbers on the total amount spent on the subsidy, one estimate holds that between 2010 and 2015 it cost the Chinese government \$1.2 billion.¹⁴ We

believe this is a significant underestimation. Indeed, according to annual reports, COSCO Group and China Shipping Group (now merged with COSCO Group to form COSCO SHIPPING) alone received \$1 billion from 2014-2015, which indicates that the actual amount spent was far higher.¹⁵

COST OF BORROWING

While there is no precise calculation of the “implicit guarantee” advantage Chinese shipping and shipbuilding firms enjoy when they borrow in domestic financial markets, there is ample evidence that such advantages exist. Utilizing existing research on the borrowing advantage SOEs receive in general, we can make some initial calculations. Using data from the WIND Financial Terminal, we find that there is currently \$20.9 billion in outstanding bonds issued by Chinese shipping and shipbuilding SOEs (\$15.1 billion for shipping and \$5.8 billion for shipbuilding). A study from the research firm Gavekal Dragonomics estimates that, in comparison to their privately-owned counterparts, Chinese SOEs pay on average 0.5 percent lower interest rates for their outstanding bonds.¹⁶ For the Chinese shipping and shipbuilding SOEs, this would translate into more than \$100 million in lower repayment costs each year, an amount equal to 27 percent of the overall direct subsidies that China's listed SOEs in the shipping and shipbuilding industry received in 2019.

Equity Infusion: Subsidy by Another Name? (\$B)



Source: Based on companies' public disclosures and authors' calculations

EQUITY INFUSIONS

The sale of company equity to outside investors is common in all developed capitalist economies. Indeed, China's shipping and shipbuilding SOEs have been active in capital markets, engaging in transactions that appear identical in form and substance to other major listed corporations. Yet these SOEs can sell equity under the guidance of their ultimate owner and regulator, the State-owned Assets Supervision and Administration Commission (SASAC), who not only supports such moves, but more importantly, often initiates the investment or orchestrates the investors.

Consider the example of China's largest shipping conglomerate, COSCO SHIPPING. In 2017, one of its listed subsidiaries, COSCO SHIPPING Holding, announced its intention to offer around 2 billion shares to fund the purchase of 20 ships that were then under construction by the state-owned shipyards with an expected 2018-19

delivery date. Under the direction of SASAC, eight SOEs purchased equity in the company totaling \$1.09 billion. Again, while the sale of equity is a central feature of global capital markets, private companies do not enjoy a partner such as SASAC who can facilitate such a transaction, thereby directing individual SOEs to invest in other SOEs. By doing so, SASAC can essentially shift funds to companies or industries that are deemed strategically important or would otherwise struggle under prevailing market conditions.

LENDING AND LEASING

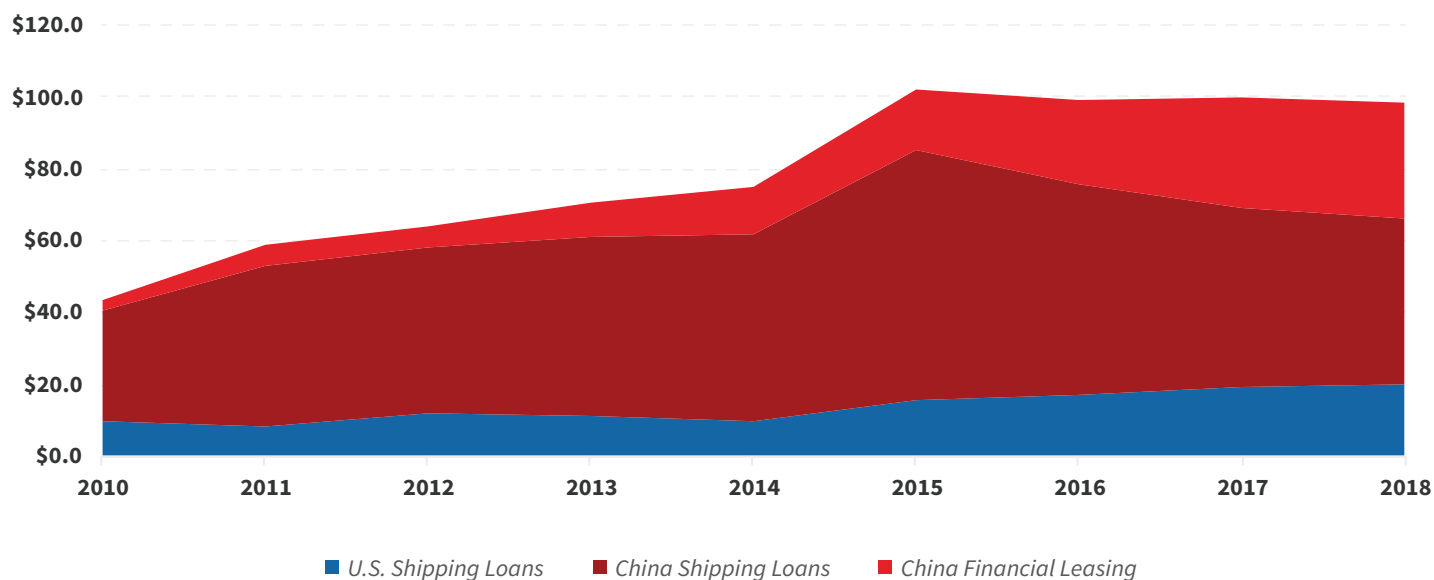
In just over a decade, China has become the preeminent financial power in the shipping industry. Following the 2008 global financial crisis, European banks withdrew from the shipping sector. Some folded altogether, and those that remained scaled back their loan portfolios, raised rates, and made qualifying criteria more stringent. Chinese banks rapidly assumed a greater role. In 2008, there was not a

The Rise of Chinese Shipping Finance 2008–2018

No.	Top Companies (2008)	Portfolio (\$B)	Country	Top Companies (2018)	Portfolio (\$B)	Country
1	HSH Nordbank	\$ 58.0	Germany	China Exim	\$ 17.5	China
2	Commerzbank	\$ 38.8	Germany	BNP Paribas	\$ 17.1	France
3	DNB (NOR)	\$ 36.0	Norway	KfW	\$ 16.5	Germany
4	RBS	\$ 30.0	United Kingdom	Bank of China	\$ 16.0	China
5	KfW	\$ 20.7	Germany	SuMi Trust	\$ 14.0	Japan

Source: Petrofin's Global Bank Research Annual Publications

Chinese versus U.S. Shipping Finance (Total Portfolios \$B)



Source: Data compiled by authors from Petrofin Global Bank Research and Marine Money Annual League Tables.

single Chinese bank among the top 15 global shipping financiers.¹⁷ By 2018, 3 of the top 15 shipping portfolios, including 2 of the top 5, were held by Chinese banks.¹⁸

China's biggest shipping lenders are state-owned banks. China Export-Import Bank (China Exim) and Bank of China were the first and fourth largest shipping lenders globally in 2018—the most recent year for which data was available—with portfolios totaling \$33.5 billion. Among the banks' stated goals are supporting China's foreign trade and investment and helping to “realize the Chinese dream of national rejuvenation,” a signature slogan of Chinese leader Xi Jinping, underscoring their state-directed rather than purely commercially oriented approach.¹⁹ They provide financing for foreign-owned shipping companies as well, but those borrowers are required to purchase Chinese-built ships. This is a major benefit for companies, international and domestic, looking to expand their fleets, but it also serves as an important pillar of support for China's largely state-owned domestic shipbuilding sector.

To be sure, China is not the only country to finance its exports. Indeed, the role of export credit agencies in shipping has expanded considerably since the global financial crisis even outside of China. However, the scale of China's support is unmatched. In 2018, China Exim—the world's largest shipping financier—provided \$39 billion in official export credits (across all industries), a total that exceeds the world's

next three largest export credit agencies combined.²⁰

Chinese banks also provide significant support through leasing programs. In 2007, the China Banking Regulatory Commission (since restructured to become the China Banking and Insurance Regulatory Commission) allowed the first batch of companies to begin leasing. Among the early adopters were the Industrial and Commercial Bank of China (ICBC), China Merchants Bank, Bank of Communications, and China Minsheng Bank. Now China's top four financial leasing companies, their combined shipping portfolios have grown from around \$6 billion in 2011 to \$32 billion in 2018.

Leasing can be an attractive option for companies that lack access to direct financing. Rates are higher, but the terms are longer, and leases can also provide tax and accounting advantages, particularly to Chinese firms.²¹ Leasing also provides much-needed cash, through sale-and-lease-back schemes, to shippers who suffer from shortages in liquidity and have risk maintaining their operations.²²

Between 2010 and 2018, the new business volume of China's state-owned banks and leasing companies totaled an estimated \$127 billion.²³ This is a conservative estimate, and sparse data make it difficult to make direct comparisons relative to Western counterparts. However, the growth of China's total lending portfolios combined with a dramatic contraction in European lending makes China's

growth clear. In 2010, Germany, the United Kingdom, and Scandinavia were out-lending China by a considerable margin, and Germany topped the list with \$154 billion in cumulative portfolios. By 2018, China was leading all three countries to take the top position while Germany's portfolios had shrunk to only \$38 billion. The change underscores how China has stepped up new lending to fill the financing gap as foreign banks have retreated.

While some foreign companies certainly benefit from China's rising financial largesse in the shipping sector, Beijing's encouragement of domestic financial institutions to support its shipping sector through loans and financing channels new orders to Chinese shipbuilders and expands China's ownership of the world's merchant fleet.²⁴ Between 2010 and 2019, China's shipping capacity expanded four-fold, overtaking Japan in 2018 to become the world's second-largest ship-owning country (in gross tons).²⁵

FAVORABLE REGULATORY AND LEGAL TREATMENT

While outside scrutiny remains focused on China's more overt support for domestic companies (state-owned and non-state-owned alike), Beijing is increasingly turning to more sophisticated tools to boost the competitive and strategic position of its firms, including making regulatory adjustments that tilt the playing field in favor of preferred firms. Consider a recent announcement issued jointly by the Ministry of Transportation and the Ministry of Commerce, among other government bodies, calling for Chinese companies to utilize "cost, insurance, freight" (CIF) for export and "free on board" (FOB) for imports. Put simply, if a company exports on CIF terms, it means it arranges the transport, whereas if it exports on FOB terms, it is the importer who maintains cargo control. By making this announcement, Beijing is seeking to empower Chinese firms both in how export and import decisions are made, whereas most other advanced economies leave such decisions to the market.

Similarly, Beijing is helping domestic firms bulk-up via mergers and acquisitions (M&A) in ways that would be all but impossible for foreign firms both in China and in their home countries where more restrictive antimonopoly laws limit anticompetitive behavior. Consider the example of COSCO Group and China Shipping Group, China's two largest shipping conglomerates, which were merged in 2016. In 2018, this newly formed entity then acquired the Hong Kong-listed Orient Overseas Container Line, creating

a domestic and regional behemoth. While the Committee on Foreign Investment in the United States (CFIUS) ultimately signed-off on the deal, it's unlikely that any U.S. or European firm could have engaged in a similar scaling-up without running afoul of competition regulators. In China, however, SOEs are urged to scale in terms of operations and balance sheets with little apparent concern for possible anticompetitive outcomes.

OBSERVATIONS AND FURTHER RESEARCH

China's rise in the wake of the 2008 financial crisis underscores the need to closely monitor strategic sectors in today's uncertain economic environment. The financial stress from the Covid-19 pandemic is making companies vulnerable to foreign M&A and investment. The shipping sector's experience after 2008 is a cautionary tale of what happens when Western governments become distracted by domestic concerns while China doubles down on its global expansion.

To be sure, not all of these activities are harmful. Some Western firms benefit from access to finance from Chinese banks. Others benefit from low-cost containers, cranes, and other supporting maritime equipment. More generally, consumers benefit from the cheap transport of goods. In the long run, however, massive Chinese government support dissuades global innovation in strategic sectors by distorting markets and price structures, allowing Chinese firms to capture more business even with inferior technology and service.

Additional research on Chinese government financing and methods for coordinating Chinese firms would help clarify the scope and scale of this challenge and formulate policies to respond to it. In strategic areas such as shipping, the United States needs to strike a balance and maintain sufficient capabilities of its own.

METHODOLOGY

Direct subsidies were calculated based on data reported by 47 listed companies. As of 2019, there are 11 Chinese shipping companies, 24 Chinese port management companies, and 12 Chinese shipbuilding companies listed in the stock markets in China and overseas. They disclose direct subsidies in their annual reports. 2007 is the earliest year for which data was available in annual reports via the WIND Financial Terminal.

The new business volume of China's state-backed banks and leasing companies was estimated by summing their total portfolios based on data from sources including Marine Money, Smarine, Petrofin, other industry presentations,

and outlets such as The Wall Street Journal. This includes financial institutions that are known to be wholly or partly state-owned or owned by Chinese SOEs. When conflicting numbers were reported across sources, decisions about accuracy were made based on the best judgment of the research team. To calculate new lending, the sum of their total portfolios was assumed to have an annual runoff of 20 percent for loans and 10 percent for leasing based on an estimated average of 5-year and 10-year loan and lease periods respectively. New lending was then calculated by taking the difference between a given year's total portfolio after runoff and the next year's total portfolio.

For years in which the total portfolio was not known, it was calculated where possible based on known new lending data for that year, the next year's portfolio, and an estimated runoff of either 20 or 10 percent for lending and leasing respectively. For years in which neither new lending nor total portfolio data was available for a given bank, new lending was assumed to be zero. This was accomplished by entering that year's total portfolio as the sum of the next year's portfolio plus runoff. In this way, CSIS estimates are likely conservative relative to actual lending. ■

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