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Christopher R. O'Dea

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SHIPS OF STATE?

Christopher R. O'Dea

Our Ship of State, which recent storms have threatened to destroy, has come safely to harbor at last.

CREON, IN SOPHOCLES'S *ANTIGONE*

Backed by substantial financing and political support, China COSCO Shipping Corporation Limited (COSCO) emerged from the container shipping industry's recent turmoil with one of the largest fleets of commercial vessels in the world and control of a rapidly expanding network of ports and terminals. This article argues that this expansion is a new and distinctly Chinese approach to maritime development and asks whether the state-owned shipping company has become the flagship of China's ambition to become a global maritime power.

Chinese maritime and logistics firms, supported by state-subsidized capital deployed overseas, quickly are becoming a leading edge of China's global

influence. In recent years, Chinese state-owned companies have built a global network of shipping and port assets that suggests the country is using maritime commercial investments to advance its geostrategic priorities by establishing economic influence over countries in which Chinese-controlled port facilities are located.

These Chinese state-owned enterprises (SOEs) are creating one of the most extensive maritime networks in the world by acquiring strategically located port assets in the European Union (EU), Latin America, the Middle East, and the Indian Ocean. They provide the capital to build or upgrade commercial terminals; then they direct container traffic to those ports through shipping lines

A former international investment management executive, Christopher R. O'Dea is an authority on global capital market trends and the security implications of infrastructure finance. Mr. O'Dea's work appears regularly in Investments & Pensions Europe and IPE Real Assets, London-based publications specializing in institutional investment management. He is a contributor to National Review Online and a contributing editor of Korn Ferry Institute's Briefings on Talent & Leadership. A native of Long Island, New York, Mr. O'Dea graduated from Brown University with a degree in American history, concentrating on colonial maritime trade. A life member of the Naval War College Foundation, he is a member of Business Executives for National Security and the Pritzker Military Museum & Library.

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that are controlled directly by the port's parent company or indirectly through companies associated with China's strategic port owners through formal shipping alliances.

This commercial drive complements a well-documented naval expansion by the People's Liberation Army Navy (PLAN) since at least the 1980s.¹ The framework for Chinese naval policy in what China calls the "far seas"—the waters beyond the "first island chain"—has been examined comprehensively.² Models of China's potential basing requirements to support overseas naval operations also have been assessed, as have the use and organization of Chinese maritime law-enforcement resources.³

This article argues that the port and shipping transactions of the People's Republic of China are a major vector of a government policy to achieve global maritime power and commensurate political influence without resorting to, or at least while mitigating the risk of, a direct confrontation with the United States or other nations with global maritime interests. The commercial-strategic linkages and state support for Chinese port and shipping ventures resemble a twenty-first-century version of the *Vereenigde Oost-Indische Compagnie* (VOC) (Dutch East India Company). Chinese SOEs are today, as the VOC was in its time, notionally commercial enterprises that operate globally with the full financial and military backing of their home state. In this view, the vessels that connect these ports into an integrated network of commercial power are "ships of state," functioning as instruments of Chinese national strategy while they sail as commercial carriers of manufactured goods and commodities.

China's unique and assertive approach to maritime development has been described as the construction of military-relevant facilities rather than overtly military bases. As implemented in the "near seas," the rapid construction of airfields and harbors on reefs in the South China Sea has enabled China to assert effective control over contested areas, in accordance with its idiosyncratic maritime-rights doctrine. As Chinese strategists turn their attention to the far seas, Chinese state-owned companies are developing ports around the world that can accommodate the very large containerships designed to create economies of scale in seaborne transportation. These facilities offer China a larger, more reliable logistics network with potential military applications related to the protection of overseas Chinese citizens and economic interests.⁴

The first part of this article examines the recent rapid increase in Chinese port and shipping investments, focusing on transactions that COSCO has undertaken, in particular its acquisition of a controlling stake in a privatized port entity in Piraeus, Greece. Achieved through a series of investments and privatization transactions carried out over nearly a decade, this has resulted in a Chinese state-owned company—one that is viewed as the primary logistical supporter of

the Chinese navy—having the ability to exercise maritime-development powers granted by the national government of an EU member state. This section also includes a review of how China exercises state control or influence through the agency of state-owned companies carrying out transactions and forming commercial alliances, as well as an assessment of the strategic implications of China's approach to building a maritime commercial network that appears to be aligned with Chinese national security aims.

The second section of the article discusses key trends in the global shipping and logistics business and how stresses in those sectors have given rise to conditions conducive to China's acquisition campaign. The primary focus is on the consolidation of global container shipping lines into the COSCO-dominated Ocean Alliance and two competing container shipping alliances; this encompasses an examination of how Chinese regulators used the country's antitrust law to block a proposed alliance of Western shipping lines that could have challenged China's efforts to acquire and consolidate maritime power. This section continues with a look at how Chinese state financial entities fund the development of China's maritime network through strategic investments in non-Chinese companies and how Chinese state regulatory support of key transactions helps expand the network and formalize links between Chinese state companies engaged in the expansion campaign. A detailed analysis of the port, terminal, and shipping activities of CMA CGM, a French shipping and terminal company based in Marseille, illustrates how Chinese state regulatory action and state financial support played a role in CMA CGM becoming a member of the Ocean Alliance.

The global logistics industry is moving toward an integrated system in which land-based terminals hold increased importance as exchange points between ships and rail and road networks. In the emerging commercial shipping regime, marked by excess capacity in container shipping and increasing competition among ports for business from ever-larger containerships, it is essential for survival that companies control both shipping lines and well-equipped land terminals at suitably located port sites. This shift toward an integrated system favors concentration of maritime commerce at certain large hub ports; automation at every stage of the global supply chain; and, most importantly, control of the port territory and port authorities that decide how to develop ports. Ports themselves are potentially valuable, but the sector has become increasingly competitive since the financial crisis, largely owing to the high cost of modernizing facilities or building new terminals, and both institutional investors that own port assets and port operators have sold numerous assets to Chinese entities, with a notable acceleration of Chinese purchases around the world during 2017.

The third section raises several considerations arising from China's progress so far and offers a perspective on the emerging risks to the open maritime

domain posed by China's state-backed investments in ports and shipping assets. While there are clear signs of unease about Chinese expansion—magnified by recent overt military action near one port—most resistance so far has been expressed through civil administrative channels; examples include allegations of tax law violations and the raising of diplomatic concerns about the transparency of Chinese purchases. The limited nature of these protests—focused as they are on narrow, if important, topics—has left China able to pursue its maritime expansion without sustained opposition on a global basis.

CHINESE PORT AND SHIPPING INVESTMENTS

COSCO Spearheads Chinese Port-Investment Activity

While several Chinese SOEs are involved with overseas port and shipping development, COSCO has developed the most extensive involvement across the industrial sectors that make up the modern supply chain, and thus it commands all the building blocks of commercial maritime power. COSCO's economic and technological capabilities are commercial, but as an SOE it acts under the supervision and, to some degree, the direction of the Communist Party of China (CPC). COSCO has been at the forefront of state-led efforts to expand the geographic range of China's outbound investments in overseas ports and related infrastructure, first under the Go Out policy, beginning early in the twenty-first century, then continuing as China adopted economic policies that have become more strategic and assertive in terms of implementation and more expansive in terms of geographic scope. The One Belt One Road (OBOR) initiative was announced in a series of speeches in September and October 2013 in which Chinese president Xi Jinping described the initiative's Silk Road Economic Belt across Central Asia and the Maritime Silk Road across the Indian Ocean. The Belt and Road Initiative (BRI) superseded OBOR during 2016 as China steered away from using the word "one" to describe an international economic policy that it claimed was intended to generate benefits not only for China but also for the countries that received funding from Chinese state entities or the lending institutions and investment funds that were established to finance BRI projects.⁵ There is no agreed-upon definition of what qualifies as a BRI project.⁶ While this article will use the BRI moniker to refer to China's approach to international economic, regulatory, and financial matters, its primary focus is to describe the pattern of Chinese investment in commercial seaports and related logistics, transportation, and electric-power assets, and to assess the practical diplomatic and security implications of China's development of a global port network.

While COSCO has received increasing Western media coverage since it gained formal control of the Greek port of Piraeus in 2016, one of the predecessor companies that was merged to form COSCO began to operate a terminal in Piraeus in

2009, far predating China's adoption of the BRI. The company enjoys significant direct financial support from Chinese state financial institutions, including the China Development Bank.

COSCO's current competitive strength in the global shipping and port business stems in part from Chinese antitrust regulators' actions that prevented competing shipping lines from forming an alliance during the depths of the container shipping crisis of the past several years, a prohibition that underscored the unique nature of merger review in China and the importance of national industrial policy in decisions pertaining to the competitive position of Chinese SOEs.⁷ That intervention into the structure of the global container-shipping industry—ostensibly justified by the desire to maintain competition on the ocean trade routes between Southeast Asia and Europe—contributed significantly to creating the conditions in which COSCO has been able to emerge as the leading company in a commercial shipping alliance that now controls the majority of those routes.

Excess capacity and long-term declining revenue in the container-shipping and terminal industries have created market conditions in which Chinese firms or Chinese-backed entities, supported by centrally allocated credit from China's state financial institutions, can acquire assets from owners unwilling or unable to make the substantial capital investments required to modernize port facilities. During the last ten years, capacity growth in container shipping has outstripped demand growth except for 2010–11 and 2016, when low net-capacity growth resulted from the scrapping of older ships and delayed deliveries; in addition, the proportion of the global container fleet that was idle was high, at 7 percent at the end of 2016. The resulting shift toward larger vessels to gain economies of scale has created financial pressure on ports to upgrade facilities to accommodate megaships so as to remain viable as stops on primary shipping routes. While container transport volume is forecast to grow in line with global gross domestic product (GDP) growth rates in the short to medium term, container volume grew at twice the rate of GDP from 2007 to 2016, so excess capacity is likely to remain a negative factor for port and shipping revenue.⁸ This has presented Chinese SOEs with an opportunity to create one of the most extensive maritime networks in the world, by acquiring strategically located port assets, providing the capital to build or upgrade commercial terminals, and then directing container traffic to those ports through shipping lines that are controlled directly by the port's parent company or indirectly through companies associated with Chinese port owners through formal shipping alliances.

During the past three years, Chinese firms and Chinese-financed entities have increased dramatically the amount of capital deployed to acquire or invest in port assets. One investment bank that tracks Chinese state investments found that during the year that ended in June 2017 Chinese companies announced plans to

expend \$20.1 billion buying or investing in nine overseas ports, representing a steep increase from the estimated \$9.97 billion that Chinese entities invested in foreign port projects during the year that ended in June 2016. These assets have included port-operating concessions, actual seaports, and container and other cargo terminals. The importance of the maritime route from China across the Indian Ocean and on to the Mediterranean shows clearly in the newly announced investments.⁹ Among several Chinese SOEs involved in this activity, the primary actor is COSCO, which has undertaken some of the most strategically important acquisitions of port authorities, shipping lines, and related assets along the Asia–EU route, including transactions that have transformed the port of Piraeus in Greece from a struggling cruise port into a major containerport now serving as the western terminus of China’s Maritime Silk Road.

The purpose of each of these transactions is couched in the optimistic nomenclature of win-win economic development and bilateral friendship typically employed to describe projects under the BRI. However, the speed and scope of the acquisition campaign, combined with the centralization of control in a handful of SOEs and allied non-Chinese companies, raise fundamental questions about the nature and purpose of the network China is building.

It is important to note at the outset that the commercial maritime campaign that COSCO and other Chinese SOEs are undertaking is distinguishable from the BRI. While announcements of Chinese overseas investments now routinely recite how any given project will advance the aims of the BRI, the funding of SOEs involved in the establishment of the global port and shipping network increasingly is coming from China’s main long-term development banks rather than the institutions that have been set up to evaluate and finance infrastructure projects under the BRI. While pricing information about most transactions is opaque, in some cases shipping consultants have questioned the high valuations at which COSCO has acquired certain assets, suggesting that obtaining those assets is a matter of achieving strategic national security goals rather than a financial investment that will be required to deliver market-based returns. The sustained nature of the port-buying campaign, coupled with extensive cooperation agreements between COSCO and other Chinese SOEs in port and rail construction, auto manufacturing, and port operation, suggests that the initial objective of building a global port network under Chinese control is to secure commercial sites that will afford China a reliable system for transporting Chinese imports and exports. However, the simultaneous investment in power-generation and -transmission assets, inland transportation routes, and telecommunications infrastructure in port host countries—the financing of which creates economic influence for China—suggests that the expanding Chinese commercial maritime network is the foundation for future deployment of the country’s naval forces.

Since the National Development and Reform Commission formalized the BRI in an action plan in March 2015, the policy has evolved. It has been stretched to accommodate new geographic regions beyond the original Indo-Pacific and Central Asian areas, as well as projects that were initiated under other development programs.¹⁰ Most importantly, the Nineteenth National Congress of the CPC in October 2017 amended the party's constitution to make the BRI a national objective, a move that constitutes a "Chinese state strategy" in the making, in which top-down directives of the CPC would exert more pressure on Chinese banks, state-owned companies, private companies, and business operators to make investments abroad in a manner that reflects Beijing's strategic objectives.¹¹ Official Chinese policy documents and analyses of China's maritime infrastructure investments in the Indo-Pacific region from state- and CPC-affiliated publications indicate that Chinese analysts routinely prioritize China's national security interests over the objective of mutually beneficial economic development—contradicting ostensible Chinese policy. Chinese analysts argue that the BRI's Maritime Silk Road component can help ensure Beijing's access to vital sea lines of communication (SLOCs), and they view port investments as vehicles by which China can cultivate political influence to constrain recipient countries and build dual-use infrastructure to facilitate Beijing's long-range naval operations. Similarly, the behavior of Chinese companies involved in port projects indicates that these investments are not driven principally by the concept of win-win development—as Beijing claims—but rather that the investments appear to be calibrated to generate political influence, stealthily expand China's capability to project and sustain military presence, and create advantageous strategic environments for China in the various regions where port and logistics investments are undertaken.¹²

This article does not attempt to evaluate whether any given project meets the elastic criteria of the BRI, but instead will look at the actual pattern of transactions globally that Chinese SOEs have undertaken to acquire assets in the port, shipping, terminal, and related businesses and the current available evidence of how those assets are being managed, then pose the following practical strategic question: What kind of network do these assets constitute?

Strategic Considerations with Respect to Chinese Shipping and Port Investments

Available evidence suggests that the network China is building could form the basis for a pattern of commercial maritime influence—and potentially a global trading system—very different from the one that has prevailed since the end of World War II, and from which China benefited as it industrialized over that time. These transactions, collectively, reflect a distinct Chinese model of acquiring power

through maritime commercial investment centered on ports—a model that seeks to mitigate China's historic strategic transportation vulnerabilities, project Chinese influence into economic and maritime realms now almost exclusively under U.S. control, and influence host countries to support Chinese interests. Already, one port host country has blocked EU criticism of China's human rights record at a United Nations body, suggesting that China can influence the position of a nation in which COSCO, China's primary state-owned shipping company, has made major investments.¹³ COSCO also has taken steps to move to China some board meetings and decision-making for recently acquired assets domiciled in the EU.

These developments illustrate the strategic nature of China's campaign of investment in ports and shipping. As detailed below, this has included gaining meaningful quasi-governmental power over port development in other nations. This campaign seems designed not only to help Chinese state-owned companies survive the ongoing stress in the global shipping and construction industries by managing excess shipping capacity but also to disadvantage competitors. In critical cases, China has increased pressure on companies that compete with its state-owned shipping and port entities by using Chinese regulatory power to prevent competitors from taking actions to rationalize their cargo-carrying capacity. Chinese government lenders also have provided capital to certain competitors to finance major purchases from Chinese shipyards. In effect, China is extending commercial influence from its factory regions, where products are made, outward through the global supply chain that delivers those products. In terms of building influence in a world highly dependent on global trade, having control or significant influence over the facilities required for the distribution of goods produced in China affords Chinese companies more leverage than they would obtain if they controlled only ocean transport and shipping costs.

The use of alliances as a method of achieving influence in the shipping industry is notable. Since being formed from two predecessor state-owned shipping companies, COSCO has become the dominant line in one of the three container-shipping alliances that have formed to cope with the decline in container volume since the financial crisis of 2008. Alliances are a hallmark of a maritime approach to grand strategy, typically being one part of a multilateral approach in which trade is conducted among voluntary members under a uniform set of rules that apply to relations among all members.¹⁴ While most of China's agreements to acquire or develop ports are concluded on a bilateral basis rather than under general rule sets, China has adopted an alliance approach in the port sector—for example, with the organization in 2016 of the China-Malaysia Port Alliance, an effort to consolidate Malaysian logistics capabilities into a regional hub. The alliance, which encompasses twenty-one ports, includes Malacca, where China is

investing ten billion dollars to build a deep-sea port that is expected to surpass Singapore and become the largest in the region when it is completed in 2025.¹⁵

For China, the SOE-led port-expansion campaign provides strategic capabilities that help mitigate the dependence of the country's economy on global shipping that transports manufactured export goods and raw-material and energy imports through a few narrow maritime passages such as the Strait of Malacca, the Strait of Hormuz, the Bab el Mandeb, and the Suez Canal. Given that most sea-lanes ultimately remain largely under U.S. control, the sea has become an important realm of global competition between the United States and China, yet China lacks the capacity to ensure the security of its essential interests, such as oil-shipping routes across the Indian Ocean. This means that China's overseas supply chain long has been exposed to security threats, in particular strategic threats from Western countries, a situation that poses a threat to the Chinese national economy and constitutes a strategic weakness that cannot be ignored.¹⁶ China's navy is expected to defend major SLOCs against disruption at critical choke points, but SLOC protection requires the ability to sustain maritime presence in strategic locations in hostile conditions for extended periods. China's concern about SLOC protection has expanded in step with the expansion of the country's economic connections, generating increased discussion of the potential for overseas naval bases.¹⁷ The need for a port network under Chinese control to mitigate these risks has been recognized. It recently was linked to the concept of a Maritime Silk Road by Liu Cigui, former director of the State Oceanic Administration. Liu has written that port facilities are the foundation of sea-lane security, requiring China to establish sea posts to support and resupply ships traveling and securing ocean routes, by either building or leasing facilities.¹⁸

An Emerging Chinese Model of Twenty-First-Century Port Development and Control

The pattern of investments constitutes a new and distinctly Chinese approach to maritime development. The emerging Chinese model encompasses developing dock and terminal facilities, securing control of port-investment and -development decisions, integrating terminals with shipping assets under direct or allied Chinese control, enhancing or constructing land-based transportation routes, and achieving economic and political influence within host countries. The decision to pursue this model never was declared or announced; instead, awareness of it emerged after a series of transactions occurred. While each transaction attracted routine coverage by shipping and financial media, the progression of COSCO's involvement with Piraeus Port—from terminal operator to controlling shareholder of the publicly traded port-operating company—only recently has engendered detailed academic and policy analysis. A recent analysis of COSCO's

situation in Piraeus concludes that it constitutes a new “Greek prototype” of port governance that “implies the losing of any public sector power to intervene in what is the institution responsible for the oversight of strategy and the development of modern ports”—that is, a port authority.¹⁹

COSCO itself was formed by the \$8.7 billion merger of two state-owned Chinese shipping conglomerates, China Ocean Shipping (Group) Company (COSCO), and China Shipping (Group) Company. Chinese regulators approved the merger in December 2015 and it became effective in February 2016. The deal spanned almost every aspect of the shipping and maritime industries, including containerships, dry-bulk ships, tankers, liquefied natural gas (LNG) ships, and other specialized vessels; shipyards and ports; and leasing, finance, insurance, and other shipping services. Requiring seventy-four transactions to combine subsidiaries of the two companies, the merger was one of the most complex in the recent history of China’s capital markets.²⁰ Postmerger, the overall group is known as China COSCO Shipping Corporation Ltd. It is headed by Xu Lirong, chairman of the board and party secretary of China COSCO Shipping, who previously was chairman of the board and party secretary of China Shipping (Group) Company. Wan Min, previously managing director of COSCO Container Lines Ltd. and president of COSCO Americas Inc., led the merger transaction and then served as a director of the board, president, and deputy party secretary of the combined company, referred to herein as COSCO.²¹

In summary, the principal direct transactions of COSCO or its predecessor companies since 2008 include the following:

- Establishment of the Piraeus container terminal at Piraeus Port in 2009
- Acquisition of a controlling stake in Piraeus Port Authority SA in 2016
- Acquisition of a 40 percent stake in a joint venture with AMT Terminals to build and manage a new terminal at Vado Port in Vado, Italy, in 2016
- Acquisition of a 35 percent stake in the Port of Rotterdam’s Euromax terminal, an automated container terminal that began operating in 2010, for \$143 million
- Acquisition of a 15 percent stake in Shanghai International Port Group (SIPG), which is controlled by its majority owner, the State-Owned Assets Supervision and Administration Commission of the State Council (SASAC), in 2017
- Acquisition of a 51 percent stake in Noatum Port Holdings SLU (NPH) in Valencia, Spain, from a fund managed by JP Morgan Asset Management in 2017

- Acquisition of the entire equity capital stock of Orient Overseas International Ltd. (OOIL) of Hong Kong, in a joint purchase undertaken with SIPG in 2017
- Acquisition in September 2017, for \$42 million, of the 76 percent it did not own already of the APM Terminals Zeebrugge container terminal, with a capacity of one million twenty-foot-equivalent units (TEUs), in Belgium's second-busiest port; it previously was owned by a unit of Maersk Group, a COSCO competitor

While these are not the only transactions COSCO has undertaken recently, they are the investments that, taken together, embody COSCO's expansion strategy in the Mediterranean region, which is the most advanced in terms of the scope of assets acquired and the control of decision-making achieved. Chinese SOEs or allied entities have made similar investments elsewhere, including the following: in Brazil, a hydroelectric plant, and elsewhere in Latin America, a key terminal and a shipping line; in Singapore, a major shipping line and container terminal operator; in Sri Lanka, a major port; and in the United Arab Emirates, terminal facilities.

This type of expansion has progressed furthest in Greece. In 2014, Chinese premier Li Keqiang visited Piraeus, home of the country's largest port. He stated that China would be a "long term" investor to build the port into "a gateway of China to Europe." By June 2016, COSCO had gained control of the Piraeus Port Authority SA (PPA), the publicly listed company that the Greek state created to oversee the Port of Piraeus. Although Greece is an Organisation for Economic Co-operation and Development country, COSCO achieved this objective through the use of techniques typically employed in port transactions in developing countries. The success of this approach reflects the weak state of the Greek economy and the disarray and lack of clarity in the governance of Greek port assets, despite the Greek government's twenty-year effort to improve the efficiency of the country's ports.²²

In 2016, COSCO was the only one of six parties to submit a bid in the final stage to acquire 67 percent of the shares of PPA; the Greek parliament approved the purchase in July 2016. This gave COSCO control of a public company listed on the Athens stock exchange in 2003 as part of Greece's decades-long effort to revitalize its seaports. (The Greek state retained 74.14 percent of the shares of PPA at the time of the stock exchange listing.) The most valuable asset from PPA is a contract from the Greek state to operate Piraeus Port for forty years in exchange for an annual concession fee of 2 percent of the port's gross revenue. Greece granted the contract to PPA in 2001 when it created corporatized, state-owned port companies to develop Piraeus and Thessaloníki.²³

The 2016 sale constituted a “master concession” form of privatization of the state-owned port company; it enabled the private investor, COSCO, to act as owner, regulator, manager, and operator of the entire port. Although in this model ownership of the land is not transferred and the state retains the right to terminate the concession (under certain conditions), the private concessionaire’s discretion effectively supplants public control over the port. Master-concession privatizations usually are found only in developing countries, and thus are rare for European ports.²⁴ Greece opted to grant a master concession because of the severity of the economic problems facing the country in the aftermath of the 2008 financial crisis. COSCO offered €368.5 million, with €280.5 million payable immediately for a controlling 51 percent stake in PPA, and another €88 million for the remaining 16 percent of the shares, to be deposited in an escrow account. The additional shares are to be transferred when COSCO completes the €350 million in investments it has committed to make within a decade, with the majority to be spent on improving infrastructure for cruise ships and passengers and €55 million on upgrading ship-repair facilities at the port.²⁵ On completion of the transaction, the Greek state will retain approximately 8 percent of the equity in PPA, with private investors composing the remaining shareholders.²⁶

The acquisition of the stake in PPA consolidated COSCO’s control over a port in which it had been investing since 2009. In 2009, Piraeus Container Terminal SA (PCT), a subsidiary of a COSCO predecessor company, won a contract to operate PCT Pier II and to build and operate a new section of the port, Pier III. Volume at the Piraeus container terminals under COSCO’s management has increased significantly. Even as Greek GDP fell by 25 percent from 2010 to 2015, Piraeus Port overall became the eighth-largest containerport in the EU, whereas previously it had not been among the EU’s fifteen largest. The increase stemmed almost entirely from COSCO’s PCT operations. In 2010, PCT held a market share of 45.3 percent of Greek container volume; PPA, the remaining publicly operated terminal pier at Piraeus, held a 34 percent share; and Thessaloníki Port held an 18.1 percent share. Five years later, in 2015, the PCT market share had nearly doubled, to 81.5 percent, while the PPA and Thessaloníki shares decreased to single digits (7.9 and 9.4 percent, respectively). The increase was attributable mainly to transshipment traffic—that is, movement of goods through the port terminals on the way to destinations in the EU via state-owned rail systems that were completed subsequent to COSCO’s assumption of operating the PCT assets. This transshipment traffic represented business from multinationals such as Hewlett-Packard that signed contracts with PCT to transfer containerized intermediate products to distribution and assembly centers in the EU.²⁷

Subsequent to the approval of its acquisition of the PPA stake, COSCO has continued to assert control over Piraeus Port, leading in one instance to a conflict

between COSCO and the Greek state over governance of the port company. At the annual meeting of PPA in July 2017, the Greek state fund holding a 23.14 percent stake in the company opposed COSCO's proposal to amend an article of the company's charter so as to include continental China and Hong Kong among permitted locations for PPA board meetings. According to Greek business media reports, the Greek state requested the meeting be extended to allow Greek state legal counsel to examine concerns that holding board meetings in China might constitute a de facto change of the company's domicile. The Greek state ultimately voted against the amendment, but the change was made; COSCO controls a majority of the company, and major Greek and foreign institutional investors with stakes in PPA voted in favor of the change. A total of 82.8 percent of shares were represented at the meeting, and of those represented, 62 percent—including those held by shareholders such as Lansdowne Partners and Black-Rock, and Greek fund-management companies Delos and Alpha Trust—voted to include China and Hong Kong among possible board meeting locations. Greek media reports indicate that the state is continuing to study the matter to clarify which country's legal system would prevail over decisions made in China or Hong Kong.²⁸

The conflict over governance of Piraeus Port came shortly after other actions suggesting that COSCO plans to exert strong control over key assets in its expanding maritime network. Shortly after acquiring a shareholding stake in SIPG, COSCO in June 2017 announced two agreements involving COSCO, PPA, and the Port of Shanghai, intended to increase the volume of container traffic from China to the EU. COSCO chairman Xu and SIPG chairman Chen Xuyuan traveled to Piraeus to execute the agreements. The shipping and port executives were accompanied by a CPC delegation led by Han Zheng, a member of the Political Bureau of the CPC Central Committee and secretary of the CPC Shanghai Municipal Committee. Politically, the framework agreement and memorandum of understanding (MOU) between COSCO and SIPG underscore the significance of Piraeus in China's strategic maritime network and the willingness of China's top leadership to develop the Greek location. In COSCO's announcement of the new arrangements, Han said the pact was responsive to the instructions of President Xi Jinping to make Piraeus a key component of the BRI by building the port into the largest site in the Mediterranean for the integrated shipping of containers through land and sea transport routes. The announcement pledged that the CPC Shanghai Municipal Committee and the Shanghai municipal government would support the development of COSCO "so that this SOE can make full use of its advantages and better serve and implement national strategies."²⁹ Illustrating the importance of the commercial maritime network to China's national strategy, Han was named one of the seven members of the Politburo Standing Committee

of the CPC at the Nineteenth National Congress of the CPC in October 2017, and in March 2018 was appointed executive vice-premier of the State Council, a role that is likely to include oversight of the National Development and Reform Commission, the agency responsible for China's long-term economic-development strategy and industrial policy.³⁰ The economic aspects of the agreement between PPA and SIPG concentrate on cooperation on funding, port building, training, and technical assistance; this agreement also contemplates consolidation of joint planning for promotion campaigns aimed at increasing the use of the two ports to raise use of their cargo-handling facilities, including by jointly negotiating with shipping companies to increase traffic on regular routes between Piraeus and Shanghai.³¹ Also in June, COSCO signed separate agreements with the Shanghai municipal government aimed at increasing COSCO's involvement in building out Shanghai's shipping and logistics capabilities, expanding construction of ports and logistics terminals in foreign countries targeted for connection to the Yangtze River Economic Belt, and continuing the reform of SOEs and assets by encouraging linkages among port and shipping companies. Demonstrating one aspect of the connectivity for which the BRI calls, the PLAN's Naval Task Group 150, consisting of the missile destroyer *Changchun*, missile frigate *Jingzhou*, and supply vessel *Chaohu*, made a four-day visit to Piraeus in July, just weeks before the deployment of PLAN sailors to China's port in Djibouti removed any doubt about whether China intended to use the African facility as a military base.³²

TRENDS IN GLOBAL SHIPPING

Foundations of Global Container-Shipping Alliances

COSCO's announcements have made increasingly clear the company's intent to exercise control over its investments in port properties by using the economic leverage that the company's alliances provide. In announcing its controlling investment in the Spanish port company NPH, COSCO cited the now-standard claim that the acquisition was partly a measure to implement the BRI, but added that the transaction marked significant progress toward the group's further improving its overseas port network; strengthening the control and management of its ports and terminals; and, more importantly, bringing into full play the synergies between the group's port assets and the container fleet of China COSCO Shipping Corporation, which it identified as "the ultimate controlling" entity of COSCO Shipping Ports Limited, and the Ocean Alliance.³³ As COSCO Shipping Ports became the controlling shareholder of NPH, the company announced that it would "further optimize its presence in Europe and rest of the world," and after completion of the transaction, COSCO stated, Noatum's ports in Valencia and Bilbao would "enjoy business support from the Ocean Alliance, including COSCO Shipping Lines."³⁴

The Ocean Alliance is one of three consortia that major shipping lines formed in 2016 in response to the decline in container traffic and shipping rates following the 2008 financial crisis. The alliances became operational in April 2017.³⁵ The Ocean Alliance is made up of COSCO; CMA CGM SA of France; Evergreen Line of Taiwan; and Orient Overseas Container Line, based in Hong Kong. The other two alliances are the 2M Alliance, made up of the Danish Maersk Line and Switzerland-based MSC Mediterranean Shipping Co. SA; and THE Alliance, made up of the German line Hapag-Lloyd, the Taiwanese line Yang Ming, and three Japanese companies—Mitsui O.S.K. Lines, Nippon Yusen Kaisha Line, and the K Line. THE Alliance was to have included Hanjin Shipping before the bankruptcy and demise of that South Korean carrier.

An analysis of the new alliances by shipping industry consultancy Drewry shows that the Ocean Alliance emerged as the winner of the industry reshuffling, with its members having a total of forty loops spread across seven east–west trade routes; THE Alliance has thirty-two services and 2M has twenty-five. Each alliance also has a standing lineup of port calls, voyage frequency, and speed. The primary basis of the Ocean Alliance's commanding position is its seven services offered from Asia to the Middle East and the Red Sea; THE Alliance offers only one and 2M offers none on that route. A similar situation holds for service from Asia to the west coast of North America: the Ocean Alliance offers thirteen, THE Alliance eleven, and 2M just five. In the eastern Mediterranean, the three alliances make forty-two port calls across nineteen ports, with most receiving just one or two; Piraeus is the busiest, with seven calls. Valencia, in Spain, where COSCO recently acquired control of the port authority, is served most frequently of the thirteen ports receiving alliance ships in the western Mediterranean, receiving ten weekly calls from alliance ships. In total, the Ocean Alliance plans to deploy about 350 container vessels, with an estimated total capacity of 3.5 million TEUs.³⁶

The business and maritime media portray the process that gave rise to these three configurations of the world's largest shipping companies as an organic one, but this elides the significant part that Chinese antitrust regulators played in determining which shipping lines could cooperate with each other, and thereby the memberships of the shipping alliances that went into effect in 2017. The Chinese Ministry of Commerce (MOFCOM) in 2014 applied the Anti-Monopoly Law (AML) adopted in 2008 to block the proposed formation of an alliance (known as P3) of Maersk Line, MSC Mediterranean Shipping, and CMA CGM, on the grounds that by going beyond the scope of vessel-sharing arrangements common in the industry the proposed alliance would enhance significantly the market power of the members and have an anticompetitive effect on shipping routes from Asia to Europe.³⁷ The MOFCOM action spawned intensive analysis

of Chinese competition law and the allocation of powers among MOFCOM, the National Development and Reform Commission (NDRC), and the State Administration for Industry and Commerce. The Chinese AML requires MOFCOM to take industrial policy concerns into account when exercising supervision of mergers and business combinations, and, although industrial policy alone was not the motivation for MOFCOM's decision, legal experts view MOFCOM's prohibition as a striking example of China's application of the law, meriting a place on the top-ten list of major events in the global shipping industry; it was one of only two proposed transactions that the agency had blocked as of September 2016, underscoring that national economic concerns played an important role in the decision.³⁸ China's attention to the potential competitive impact of the proposed shipping alliance on Chinese entities reflects the country's policy of "industrial capacity cooperation." The NDRC has held press briefings to promote the export of Chinese industrial capacity, equipment, technology, and standards as an element of BRI agreements, extending a diplomatic concept that Premier Li introduced in 2015 as an element of SOE reforms.³⁹

A French Connection Bolsters COSCO's Shipping Alliance

China's prohibition of the P3 alliance surprised the participants and the shipping industry.⁴⁰ But the decision only delayed the consolidation of the container-shipping industry; the latest major step in that process came with the formation late in 2016 of three shipping alliances aimed at better managing excess container capacity, a problem exacerbated by the bankruptcy of the South Korean line Hanjin. China COSCO Shipping became the dominant company in the Ocean Alliance, which notably includes France's CMA CGM, previously a proposed member of the scuttled P3 group.

The current CMA CGM was formed from Compagnie Maritime d'Affrètement (CMA), founded in 1978 by French shipping entrepreneur Jacques Saadé, and Compagnie Générale Maritime (CGM), a French state-owned company that the French state privatized in 1996 by awarding operation of CGM to CMA. The two companies formally merged in 1999.

CMA CGM has operated in China since it opened an office in Shanghai in 1992.⁴¹ The company's ties to China have broadened and deepened over the past several years. In 2013, as part of an effort to restructure its debt, CMA CGM sold 49 percent of its container terminal subsidiary Terminal Link to China Merchants Holdings International for €400 million.⁴² Competitive pressures on global shippers increased, as reflected in the unsuccessful attempt to form the P3 alliance in 2014. The linkage between China and CMA CGM deepened in 2015 when the Export-Import Bank of China (CEXIM) agreed to provide CMA CGM with up to a billion dollars in loans or export credit insurance to finance the company's

future purchases of vessels and containers from Chinese suppliers. Historically, CMA CGM had ordered most of its containers from the Chinese group CIMC, and in 2015 it began to take delivery from Chinese shipyards of some of the world's largest containerships, starting with three 18,000-TEU vessels, which at the time were the largest ever built by Chinese shipyards. Simultaneously with receiving the CEXIM financing, CMA CGM entered into a strategic partnership agreement with China Merchants Holdings to evaluate infrastructure and port-related logistics projects jointly. A public event to mark the agreements, held at CMA CGM's headquarters in the French port city of Marseille, included the attendance of Chinese premier Li Keqiang in an official capacity to meet with France's then-foreign minister Laurent Fabius. At the time, CMA CGM claimed to be the first company to sign an agreement with a Chinese company to pursue investments under the BRI.⁴³

The collaboration between CMA CGM and Chinese companies has increased and broadened since 2015, in shipbuilding, terminal operations, and port investment. In the third quarter of 2017, CMA CGM signed a letter of intent with two Chinese shipyards (Hudong-Zhonghua Shipyard and Shanghai Waigaoqiao Shipbuilding) to build nine 22,000-TEU containerships, the largest vessels to date. South Korea's three large shipbuilders—Hyundai Heavy Industries, Samsung Heavy Industries, and Daewoo Shipbuilding & Marine Engineering—also bid for the \$1.44 billion contract. The decision evoked considerable surprise in the shipbuilding industry because South Korean companies previously had built most large containerships, and CMA CGM's awarding of the order indicated that China was making substantial progress at building ultralarge container vessels with the latest navigation, communication, and environmental- and energy-management capabilities. Shipbuilders are suffering a prolonged decline in new orders, leading to the closure of many yards. Shipping analysts consider the new ships that CMA CGM has ordered to be high value-added vessels. They will have dual-propulsion systems that can operate on either LNG or fuel oil and will meet stricter international regulations on emissions, indicating to sources in the shipbuilding industry that Chinese shipyards' technology and price competitiveness have caught up to or surpassed those of South Korean shipyards.⁴⁴

In January 2017, CMA CGM's terminal unit, CMA Terminals Holdings, signed an MOU with COSCO Shipping Ports in which each company committed to increase businesses and services at ports and terminals where Ocean Alliance vessels make port calls. The French company issued a statement that both entities wished to create more opportunities in global port investment and operations, but did not provide further details on the agreement. Nonetheless, the agreement builds on CMA CGM's international expansion of its terminal operations, an effort that is supportive of COSCO's strategy. In 2016, CMA CGM paid \$2.4

billion to acquire Neptune Orient Lines (NOL), a Singapore-based shipping and terminal operator that was the largest shipping company listed on the Singapore Exchange. Acquiring NOL gave CMA CGM market leadership on transpacific routes to the west coast of North America, a competitive advantage now enjoyed by the Ocean Alliance, in which it is a member.⁴⁵ With the NOL transaction, CMA CGM relocated its Asian headquarters from Hong Kong to Singapore, where the PSA Singapore Terminal is the world's second-largest containerport (after Shanghai), handling nearly thirty-one million TEUs in 2016. PSA Singapore is the largest terminal operation of PSA International Pte. Ltd., a subsidiary of Temasek Holdings, the Singapore state sovereign wealth fund. The relocation highlighted the increasing strategic importance of Singapore as the commercial shipping industry consolidates into a few large groups seeking to maximize efficiency by running ever-larger vessels between a declining number of ports with automated terminals and logistics connections. In early 2017, five major shipping lines relocated their operations to Singapore from Port Kelang in Malaysia; with large container vessels already berthed in Singapore, customers could eliminate the added time and cost of shipping goods for ocean transit the additional six hundred kilometers to Port Kelang.⁴⁶ Subsequently, CMA CGM declared its intent to make Singapore its primary Asian hub, and it initiated a joint venture with PSA that uses container yard automation technology to serve the megavessels of CMA CGM with some of the fastest container-moving rates in the industry.⁴⁷

COSCO is closely involved in the development and deployment of port- and terminal-automation technologies. Qingdao New Qianwan Container Terminal at Qingdao International Port (QIP) in northern China became Asia's first fully automated container terminal—using automation for both crane-ship operations and the movement of containers from dock to yard—with its servicing of the 13,386-TEU *COSCO France* on May 11, 2017. COSCO in January had increased its shareholding in QIP to 18.4 percent by acquiring a 16.8 percent stake as part of a strategic accord to develop the port into a major hub in northeastern China. According to shipping publications, QIP officials have claimed in broadcasts for the China Global Television Network that the automated terminal reduces labor costs by 70 percent and increases efficiency by 30 percent, because automated cranes and driverless trucks operate day and night.⁴⁸ Shanghai International Port in December 2017 began operation of what would be the world's largest automated terminal, the Yangshan Deep-Water Port, designed ultimately to handle 6.5 million standard containers per year.⁴⁹

Perhaps the most significant role of CMA CGM in China's maritime expansion is the company's position as a member of the consortium that won the bid to acquire a 67 percent controlling stake in the publicly listed port company that holds the concession from the Greek state to operate the port of Thessaloniki. The

CMA CGM subsidiary Terminal Link has a 33 percent stake in the consortium, with 47 percent being held by German investment firms Deutsche Invest Equity Partners GmbH and the remaining 20 percent by Belterra Investments Ltd.⁵⁰ Although Greek media reported concerns over Belterra's possible Russian ties, the consortium completed the purchase in March 2018 and has garnered local support, with the Foundation for Economic & Industrial Research, a nonprofit research organization established in 1975, reporting that business from Piraeus and Thessaloníki could increase Greek GDP by up to €5.6 billion annually.⁵¹

CHINA'S PROGRESS—SO FAR

China's Maritime Expansion: Unprecedented Aggressiveness

Chinese expansion in the shipping and port sectors not only is accelerating in pace; it also is occurring with an unprecedented aggressiveness. The primary entities engaging in the expansion operate under a radically different set of assumptions from their non-Chinese competitors, and are able to act more decisively and take on greater financial risks than can firms operating without the full credit and political support of their home state. In the view of Neil Davidson, the senior analyst for ports and terminals at Drewry, "Chinese players are more comfortable with risk than the established international operators right now, and have a geopolitical strategy rather than a purely financial one. They are snapping up assets and opportunities and have the appetite and financial clout to take many more in the coming years." COSCO, which already has enhanced its competitive position significantly, is projected to add more port terminal-operating capacity than any other global terminal operator over the next five years, in large part because of its acquisitions of Noatum and the container terminals owned by recently acquired Orient Overseas.⁵²

While its activities are the most extensive—covering shipping, ports, terminals, and transport network development—COSCO is not the only Chinese state-owned company actively acquiring ports and related assets. Chinese entities made more than half of all acquisitions by global/international terminal operators in the year ending in mid-2017.⁵³ While COSCO was the primary actor, other transactions were undertaken by China Overseas Port Holdings and China Merchants Port Holdings (CMPH); the latter added "Port" to its name in 2016 to reflect the company's reorientation toward acquiring and developing ports around the world.⁵⁴ CMPH is the largest publicly listed port operator in China in terms of container throughput, with a market share of roughly 33 percent in 2016; like COSCO, CMPH owns part of Shanghai International Port Group, with a 25.15 percent stake as of June 2017.⁵⁵ Last September, CMPH agreed to buy 90 percent of TCP Participações SA, which operates the container terminal concession in Paranaguá, Brazil's second-largest containerport, for approximately \$924

million. Financial news media reported that the purchase price valued TCP at 14.3 times the company's annual earnings before accounting for interest, tax, depreciation, and amortization (EBITDA), higher than the estimated value of thirteen times EBITDA that had been expected.⁵⁶

In instances such as the TCP case, Chinese port and shipping SOEs have acquired assets from Western institutional investors that typically do not own shipping lines that can be rerouted to improve the economic prospects of the port assets. For example, as noted previously, COSCO Shipping Ports acquired 51 percent of Noatum Port Holdings, a Spanish-incorporated company, from Truria Port Investment Holdings, a Spanish-incorporated holding company for assets principally engaged in terminal operations and owned by institutional investors; a 67 percent share is advised by JP Morgan Global Alternatives, and 33 percent by APG Asset Management NV. COSCO Shipping appears to have made a direct investment of equity capital in Noatum and to have provided the company with additional funding to strengthen its balance sheet, leaving the pension fund investors with an undisclosed share of the company's equity.⁵⁷ APG is an asset-management entity headquartered in the Netherlands that primarily advises one of the largest pension funds in the world, Stichting Pensioenfond ABP, which invests the pension assets of Dutch public-sector employees. The two investors acquired the Spanish port assets in 2010 as part of their infrastructure-investment programs, but financial results were constrained by labor and cost issues with Spanish stevedores. The assets of NPH include container terminals in Valencia and Bilbao, Spain, and two associated rail lines that required substantial investment to change the gauge of their tracks to correspond to EU standards so they could connect the port terminals to the EU distribution network. One of the top three containerports in the Mediterranean region, the Port of Valencia serves a hinterland with a 350-kilometer radius that accounts for nearly 50 percent of Spanish GDP and acts as the main gateway for the Iberian Peninsula; owing to that location, COSCO Shipping Ports believes Valencia is well situated to serve as a transshipment hub for western Mediterranean markets, and in April 2017 Ocean Alliance ships began to switch from other terminals in the area to Noatum's Valencia terminal.⁵⁸

Financial Considerations of Chinese State-Backed Acquisitions

Some analysts have questioned whether Chinese port and shipping players paid so much for some of the assets they acquired that those ports or terminals will not generate market-rate returns. But traditional investment concerns may not carry as much weight with Chinese state-backed companies when they acquire assets with capital supplied by China as they do for non-Chinese, non-state-owned companies, which must deliver competitive financial returns on assets if they are to obtain capital from private investors.

Drewry has suggested that COSCO Shipping Ports, COSCO's port entity, may have to write down the value of NPH, the Spanish port operator acquired in June 2017. The consultancy's concern stems from the difference between the cost of equity capital and the cost of debt. While the acquisition of the 51 percent stake in Noatum appears to have taken place at a favorable valuation in comparison with COSCO Shipping's terminal acquisitions over the past two years, Drewry notes, the value of Noatum includes a significant amount of goodwill—the difference between the value the buyer assigns to the acquired assets and the price paid to acquire those assets. As a result of COSCO Shipping's purchase, the amount of equity in Noatum's capital structure will increase, resulting in a lower value for the goodwill portion of Noatum's total value. In effect, the modest valuation of the port would appear to provide a cushion against adverse business conditions, but that cushion could be eaten up if the total value of the port must be written down. According to Drewry, COSCO Shipping Ports targeted a return of 10 percent for its investment in Noatum, assuming the concession for the key terminal that NPH owns in Valencia is renewed beyond 2031.⁵⁹

China's allocations of capital to its port and shipping SOEs illustrate a material difference in scale between funding for an SOE engaged in a country's geostrategic expansion and the investment capital for purely financial purposes that is available to shipping lines and port operators with a purely commercial foundation. In January 2017, the Chinese state provided major financial support to COSCO to aid the development of its shipping and port network when the China Development Bank, the country's main provider of long-term loans, pledged to extend twenty-six billion dollars in funding through various unspecified financial products for OBOR projects that COSCO has undertaken through 2021, the period of China's Thirteenth Five-Year Plan.⁶⁰ COSCO previously received other funding from Chinese state financial institutions, including an eighteen-billion-dollar strategic-cooperation agreement announced in 2016 with CEXIM to support Chinese shipbuilding yards and accelerate optimization of the fleet structure to international standards. The agreement encompassed a commitment to finance construction of fifty ships, as well as to provide financing for mergers, acquisitions, and equity investments in other companies.⁶¹

To put the China Development Bank funding commitment in perspective, twenty-six billion dollars is nearly two-thirds the amount of money China allotted from its national foreign exchange reserves to fund the Silk Road Fund, and more than one-quarter of the entire capital of the Asian Infrastructure Investment Bank. For additional perspective on the difference between geostrategic national funding and the funding available to financial investors in ports or shipping assets, consider that the largest infrastructure funds available to institutional investors such as pension funds raise between eighteen and forty billion dollars,

which must be deployed across many different sectors to comply with the diversification requirements of such investors—and therefore cannot be concentrated in one or two sectors that constitute a strategic national priority.

The 2016 merger of two Chinese shipping companies to create COSCO amounted to the commissioning of an SOE to carry out China's ambition to become a maritime power. The announcement of the equity transfers required among the several entities to form COSCO affirmed that the sole owner and controlling entity of the new China COSCO Shipping Corporation Limited was SASAC, an entity created in 2003 to supervise directly China's largest industrial concerns. CMPH, which holds the concession to operate Chinese port facilities in Djibouti, is 62 percent controlled by China Merchants Group, which, like COSCO, is wholly owned by SASAC.⁶² State control was reinforced further during 2017, with the chairman of SASAC emphasizing the importance of SOEs as a mechanism for the government to direct the economy and achieve political objectives.⁶³

Implications of China's Emerging Maritime Network

There is little doubt from the observable transaction record that a top priority for Chinese SOEs operating in the port, terminal, and shipping sectors is to acquire these assets aggressively and consolidate them into an integrated network that not only benefits Chinese commercial interests but advances Chinese maritime influence, in accordance with CPC priorities. The presentation of the 2016 results of CMPH confirmed three primary goals: to consolidate Asia, consummate Africa, break through Europe, and acquire new exposure in America; to capitalize on state-directed credit and political cover provided under OBOR to expand the ports network further; and, finally, to develop the Djibouti free-trade zone and enhance the company's "Port-Zone-City" integrated development model.⁶⁴ The aggressive expansion since 2016 reflects the objective stated in the official announcement of the creation of China COSCO Shipping, which declared that the merger was a "measure to materialize the Belt and Road Initiative and China's commitment to building a maritime power."⁶⁵

Chinese investment in Greece's Port of Piraeus since 2009 has transformed the port into one of the most active in the Mediterranean, and has served as the leading edge of a sustained campaign to acquire port assets in southern EU countries. Shipping industry analysts warn that, given the importance of ports to host-country economies, the transactions are not only transport investments but sources of political leverage and influence that mark the emergence of China as a global maritime power, and that from this vantage point Chinese port investments must be viewed in the context of geopolitics.⁶⁶ COSCO's operations in the Mediterranean, for example, create the possibility of serving the U.S. East Coast via the Indian Ocean and Suez Canal instead of the Panama Canal or West Coast ports that must ship goods east by rail or road.⁶⁷

China is supporting its overseas port network with additional investments in critical infrastructure, as well as communications efforts targeted at promoting favorable opinions of Chinese involvement. In Brazil, China is contributing fifteen billion dollars of a twenty-billion-dollar fund for infrastructure investment in the country, which is expected to help finance construction of railroads linking soy- and corn-producing areas in Brazil's interior to its ports; although Brazil has noted that companies receiving financing from the fund will not be required to buy materials from China, China will maintain a 3 : 1 share of the fund's capital.⁶⁸ In Greece, the China Development Bank agreed to an MOU with the Greek Public Power Corporation, the largest power producer and electricity-supply company in Greece, which is seeking to modernize the sector and build geothermal power plants; the agreement was reached shortly after State Grid Corporation, China's largest utility, acquired 24 percent of Greece's power grid operator for \$356 million, bringing total Chinese investment in Greek port, telecommunications, and photovoltaic assets to \$1.3 billion, according to MOFCOM.⁶⁹ In summer 2017, Athens News Agency, the Greek state's media arm, organized a New Silk Road Forum that characterized Chinese investment in Europe as an opportunity instead of a threat; the event was attended by twenty-five state news agencies from countries mostly in southern and central Europe, including Spain, Italy, Bulgaria, and Greece, where Chinese entities have invested in maritime assets and supporting infrastructure.⁷⁰

This article has attempted to document that China has made significant progress in establishing and supporting the development of a maritime network consisting of ports, terminals, and commercial-shipping capabilities under the control of a handful of Chinese SOEs. At a time of stress in the container shipping industry, COSCO and CMA CGM—key companies in China's maritime network—display some of the best financial metrics in the sector, with both having reported positive earnings in the first half of 2017 and unit costs below average freight rates, and COSCO having the most cash on its balance sheet and the lowest share of debt among its competitors.⁷¹ Perhaps the article's most significant contribution is to propose that the collective transactions of Chinese port and shipping SOEs now constitute an integrated network for Chinese maritime power expansion through commercial channels. In addition to fulfilling its explicit commercial purposes, certain key nodes of this network offer capabilities that could support noncommercial maritime operations, such as ship repair, specialized terminals to handle vehicles, deepwater berths, and terminals designed for distribution and refrigeration. COSCO in January 2017 announced a \$620 million development plan for Piraeus that prioritizes the creation of the largest ship-repair yard in the eastern Mediterranean and construction of hotels and cruise ship berths to cater to Chinese tourists.⁷² Such Chinese-controlled facilities

increasingly are being reinforced by electrical, rail, and road infrastructure that is being built with Chinese funding, in both developing and developed countries.

This combination of ambitious investment in maritime logistics, generous financial support from state development banks, and powerful political cover from Beijing has secured China extraordinary public support from port host countries. Of particular importance is that Chinese entities have shown the ability to gain control of port assets that include quasi-governmental grants of power by Western countries over investment decisions in and around strategic port facilities in those countries. Using techniques more often employed with developing countries, China has taken advantage of lingering economic stress in developed countries and overcapacity in container shipping to gain control of privatized state agencies originally set up to bolster local economic development. The capabilities of the assets China has acquired, and their relationships to one another and other Chinese initiatives, afford decision makers in Beijing an unusual amount of control over a fundamental sector of the global economy and raise questions about the implications for all countries and firms that rely on the maritime domain. This conclusion suggests that further research into how China might use this power would be productive.

Any doubt about China's intent to use the military capabilities of its maritime network dissolved with the report that the United States had lodged a formal protest with China after an incident in which the Pentagon said Chinese personnel at the country's new military base in Djibouti had directed a military-grade laser beam at U.S. military aircraft flying near the American base in Djibouti.⁷³ Earlier in 2018, reports emerged that China plans to convert the port it is building in Gwadar, Pakistan, into a second naval base.⁷⁴

The military aspect of Chinese maritime expansion now overshadows the development of Djibouti's commercial port. Concerns about continued access to the U.S. base increased in early 2018 after Djibouti's president terminated the contract of DP World to manage a container terminal that the United Arab Emirates-based company had built at Djibouti Port in 2006. The abrupt move sparked reports that Djibouti intended to grant a contract for a new terminal to CMA CGM, while buying DP World's 33 percent share of the terminal and turning operation of the older facility over to a struggling midsize Singaporean shipping line that entered a capacity-management alliance with COSCO late in 2017; DP World claimed it had not received an offer from Djibouti.⁷⁵

New Headwinds

The tensions in Djibouti demonstrate that China's commercial maritime ambitions are starting to encounter headwinds as the expansion drive encroaches on the commercial—and military—interests of other nations. China faces several

potential challenges, not least whether it will be able to continue to finance the enormous cost of acquiring, building, and operating a global port network. While ports in Europe and Latin America have viable commercial operations that help fund development being undertaken by Chinese companies, few of China's new-build ports in the Indian Ocean appear economically viable in light of low port traffic at sites that are not on existing sea-trade routes, and even in cases such as the port of Hambantota in Sri Lanka, where a Chinese SOE took a ninety-nine-year port lease in exchange for canceling loans Sri Lanka had taken from China, China faces the prospect of funding a major maritime installation for decades to come.⁷⁶

Other signs of resistance to China's port expansion are emerging. In January 2018, a Swedish town rejected a Chinese SOE's proposal to build a deepwater harbor owing to concerns about the environmental and security implications. In April, the EU and Italy alleged that Chinese criminal gangs are committing tax fraud by not reporting imports through Piraeus. Also in April, a German business newspaper reported that EU diplomats in Beijing had prepared a briefing for an EU-China summit that sharply criticized China's investments in ports and other strategic assets as a program intended to further Chinese interests, aid Chinese companies, and divide political consensus in the EU by investing in politically unstable countries. The EU had first raised such concerns at the BRI summit China staged in Beijing in May 2017; China rejected proposed EU amendments to a draft Sino-EU agreement on Silk Road cooperation, which reportedly was presented to EU delegates without advance consultation.⁷⁷

Perhaps the single largest hurdle to China's port expansion is the linked questions of whether host countries—most of which are emerging market economies—will be able to repay Chinese loans and whether Chinese firms, which are mainly SOEs, can handle the high levels of debt they incurred to acquire port assets.⁷⁸ Pakistan—the single largest recipient of BRI funding, with \$62 billion invested in projects, including a deepwater port at Gwadar—said in September 2018 that its new government, which faced a balance-of-payments crisis on taking office in July, plans to review or renegotiate agreements with China. Governments in other countries, including Malaysia, Sri Lanka, and Myanmar, also have expressed reservations about the terms of Chinese financing for ports and other projects that China is undertaking in their countries.⁷⁹ These challenges to Chinese infrastructure investment, while high profile, mainly have occurred in countries where elections have resulted in a change of government. While analysts expect such challenges to continue, China's role in infrastructure such as ports, roads, and power plants is unlikely to diminish in countries such as Pakistan, which has close diplomatic ties with China. Chinese state-backed lenders are likely to remain a primary source of funding for other emerging-market nations that may be unable to attract enough private-sector capital to undertake

such projects or to meet the stipulations for transparency and project viability that the World Bank and International Monetary Fund require.⁸⁰

Despite concerns about debt burdens, the leaders of most African countries attended the Forum on China-Africa Cooperation in early September in Beijing, where President Xi pledged an additional \$60 billion in financing for African countries and promoted China's efforts to build ports and related infrastructure in Africa to enhance "common prosperity."⁸¹ The meeting with these leaders produced numerous new investment agreements, but—perhaps more importantly—a Chinese state media campaign in the run-up to the event featured Chinese Africa experts extolling the benefit of economic ties with Africa, helping Xi counter blunt criticism of BRI spending by Chinese scholars who last summer questioned the cost of the global program.⁸²

Even as some emerging-market countries are raising concerns about how they will shoulder their share of the cost of Chinese projects, developed countries are building investment ties with China. The EU's concerns about transparency appear to have been more formal than substantive, and despite the absence of an MOU meeting its stated conditions, the EU has deepened the cooperation of its official financial agencies with Chinese counterparts since the 2017 BRI Summit. At the twentieth EU-China Summit in Beijing, in July 2018, the European Investment Fund (EIF), part of the European Investment Bank Group, signed an MOU with China's Silk Road Fund—one of the financing vehicles established to advance the BRI—to facilitate joint investments through a program called the China-EU Co-investment Fund. According to the EIF, the coinvestment fund aims to develop "synergies between the Belt and Road Initiative and the Investment Plan for Europe," an EU economic-growth program commonly known as the Juncker Plan.⁸³ The EIF announced the first coinvestment in August: an undisclosed stake in a new fund managed by Cathay Capital, a private equity investment firm that counts as "cornerstone investors" the China Development Bank, which is directed by China's State Council, and Bpifrance, the French public investment bank.⁸⁴ Cathay invests in a wide range of health-care and technology companies, including JD Logistics, which provides logistics and e-commerce services to its parent company, JD.com Inc.—China's largest retailer.

There also are signs that the United States is beginning to recognize that China's commercial maritime expansion carries strategic implications that warrant a serious response. In late April, the Committee on Foreign Investment in the United States (CFIUS) raised national security concerns about COSCO's planned acquisition of shipping line Orient Overseas International. In addition to making COSCO the world's third-largest shipping company and increasing its influence within the Ocean Alliance—OOIL is also a member of the group—the acquisition would result in COSCO taking control of a highly automated

container terminal that OOIL operates under a forty-year lease from Long Beach, California—the largest port in the United States, in combination with the nearby port of Los Angeles.⁸⁵ I argued in 2018 that the transaction presents CFIUS with an opportunity to slow COSCO's expansion by requiring COSCO to sell the Long Beach terminal to a company that neither is financed by Chinese sources nor is allied with any Chinese shipping or port SOEs, nor to any entity, such as CMA CGM, that is allied with COSCO through the opaque network of holding-company structures and strategic alliances that China is using to build its commercial maritime network.⁸⁶ In July 2018 it was reported that COSCO had signed a national security agreement with the U.S. Departments of Homeland Security and Justice that calls for ownership of the terminal to be placed in a trust whose principal trustee must be a U.S. citizen and not a shareholder of OOIL, and must be independent of COSCO.⁸⁷ The ultimate resolution of the situation could turn on how the United States determines whether a prospective buyer of the terminal is “independent” of COSCO.

Presuming that the terminal is sold to an entity independent from Chinese influence, COSCO's agreement to sell the Long Beach terminal prevents—for now—the Chinese SOE that is leading the development of China's commercial maritime network from establishing a beachhead on the U.S. mainland. But the situation illustrates that China's commercial maritime expansion poses new security challenges. In both developed and emerging nations, China has established a physical presence in strategically meaningful locations—ports—that provide a platform for establishing influence over host countries in the economic and political domains, as well as the capability to support Chinese far-seas operations in the security domain. Chinese companies, mainly SOEs, have moved inland from these coastal nodes, gaining control of ground-transportation networks, power-generation assets, and information-technology systems. In their capacity of serving commercial as well as military purposes, SOEs play a distinctive role in ensuring the security of China's expanding economic and strategic interests, developing port and basing infrastructure, and providing logistics and maintenance support to military forces deployed abroad; and, potentially, in carrying out peacetime naval missions, such as intelligence gathering and the replenishment of PLAN warships. In terms of logistics support abroad, COSCO has been the PLAN's leading supplier, providing Beijing with built-in shore-based support for the PLAN through a commercial enterprise structured to align with Chinese naval strategy, to an extent that leads some naval analysts to refer to COSCO as the fifth arm of the PLAN.⁸⁸

China's commercial maritime expansion already is posing practical risks to the naval operations of the United States and its allies. At a recent conference in Haifa, Israel, on the future of maritime warfare in the Mediterranean, former

USN Chief of Naval Operations Admiral Gary Roughead said that U.S. naval vessels might not be able to call regularly at ports under Chinese management because of the risk that commercial port information-technology (IT) systems could be used to monitor or interfere with military systems and jeopardize U.S. information and cybersecurity.⁸⁹

Such concerns have substantial foundation: the Piraeus Port Authority, which COSCO controls, in early 2018 assigned Huawei Technologies SA to redesign and replace the port's IT network and communications infrastructure.⁹⁰ A new port at Haifa is expected to open in 2021 under the management of Shanghai International Port Group, which has a strategic alliance with COSCO and PPA.⁹¹ Under a 2017 agreement, Huawei is providing SIPG with hardware and software services, including storage, network hardware and integration servers, and cloud operating systems, for a global IT platform designed by Accenture.⁹² Huawei, along with ZTE, was singled out as a U.S. national security threat in a congressional report in 2012, and the 2018 Defense Authorization Act bars U.S. government agencies and contractors to the U.S. government from using certain Huawei components and systems, and provided funding to U.S. agencies that need to replace IT equipment as a result of the restrictions.⁹³

Concerns that port-management technology poses a cybersecurity threat illustrate how the maritime commercial realm—where the world's two largest economies and their naval forces increasingly are coming into close contact—is becoming a theater for protracted economic conflict. Both the United States and China are taking steps to organize their state regulatory, financial, and cyber resources to pursue their respective interests. In one of the most significant changes to the Chinese regulatory structure in the past decade, China elevated the power of its antitrust and market-competition regulators in March 2018 when it consolidated review and enforcement responsibilities that had been dispersed across three agencies and consigned them to a single new entity, the State Administration for Market Regulation (SAMR). Under the new structure, SAMR will be supervised directly by the State Council, placing the power to direct market structure and competition through antitrust matters at the same level as the MOFCOM and the NDRC. With its newly consolidated powers and a reported track record of intervening on China's behalf to "tip the scales in an economic dogfight," according to one major Western law firm, SAMR could prove a formidable asset for protecting China's national economic development going forward.⁹⁴

The elevation of antitrust enforcement power to the ministerial level reflects China's view that counting on free markets to provide sufficient access to required resources is not a reliable strategy for ensuring the country's economic or national security.⁹⁵ To reduce exposure to market forces, Chinese leaders are

aligning military and commercial resources—along the lines that led to creation of the Dutch East India Company, when sixteenth- and seventeenth-century European monarchies began to pursue overseas trade and territorial conquest as a more rapid path to building the economic strength required to ensure national security than relying on domestic economic growth alone.⁹⁶

The latest expansionary move by China's version of the VOC, COSCO, triggered a national security response from U.S. competition regulators. Whether China's commercial maritime expansion triggers other responses by U.S. civil or security agencies remains to be seen. But in the long term, most of China's port and shipping acquisitions will continue to occur outside the United States, and thus will not be subject to CFIUS review. By creating a global port network for ostensibly commercial purposes, China has gained the ability to project power through the increased physical presence of its naval vessels—turning the oceans that historically have protected the United States from foreign threats into a venue in which China can challenge U.S. interests. Domestic economic challenges and resistance from disgruntled host countries could slow China's port-buying spree and diminish the political influence that comes with economic power. But, for the moment, China's maritime expansion is continuing despite headwinds. With China's ships of state, both commercial and military, calling at Chinese-controlled ports around the world, the United States no longer can assume that its maritime supremacy will remain unquestioned forever.

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