

## Taiwan Risk as Investment Risk

### Executive Summary

- National security experts increasingly agree China is likely to invade or blockade Taiwan by 2027, with blockade being more likely.
- Chinese use of force against Taiwan would severely disrupt supply chains of basic goods manufactured in China and advanced chips manufactured in Taiwan, as well as traditional and solar energy supply chains.
- Companies are already beginning costly efforts to shift manufacturing of basic goods away from China to emerging markets like India and Vietnam. Countries are beginning efforts to shift semiconductor production to their own shores.
- Investors must anticipate and accelerate these emerging trends.

## Background

National security experts are increasingly confident the CCP is likely to take military action against Taiwan within the next four years. As geopolitical tensions over Taiwan rise, China's status as a manufacturing hub in global supply chains makes it poised to endanger operations at virtually all large corporations; the question is only the degree of their exposure. And Taiwan's leadership in advanced semiconductor manufacturing means that a threat to it is a threat to all industries that rely on technology.

Strive believes that China risk is investment risk. The economic risks posed by Chinese action against Taiwan are substantial, sweeping, and likely to materialize in the near term. We believe few asset managers have adequately considered this scenario and the attendant consequences, often because of their own desire to do business in China. This paper remedies that gap by analyzing when and how China might use military force against Taiwan and assessing the main financial implications for investors.

## China's window for military action against Taiwan

"I hope I am wrong. My gut tells me we will fight in 2025," four-star Air Force General Mike Minihan began in a recent memo ordering his officers to prepare for war. "[Chinese President Xi Jinping] secured his third term and set his war council in October 2022. Taiwan's presidential elections are in 2024 and will offer Xi a reason. United States' presidential elections are in 2024 and will offer Xi a distracted America."<sup>1</sup>

General Minihan's warning is more dire than previous statements from top US officials. The most well-known forecast is former Indo-Pacific Command chief Admiral Phil Davidson's 2021 congressional testimony that China aspired to be able to take Taiwan by force within six years.<sup>2</sup> The director of the CIA also testified that President Xi has ordered his armed forces to be ready for an invasion by then.<sup>3</sup> The US national security community's popular belief that China will move against Taiwan by 2027 is known as "the Davidson window."

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<sup>1</sup> "Read for Yourself: The Full Memo from AMC Gen. Mike Minihan," *Air & Space Forces Magazine*, Jan. 30, 2023, <https://www.airandspaceforces.com/read-full-memo-from-amc-gen-mike-minihan/>.

<sup>2</sup> Mallory Shelbourne, "Davidson: China Could Try to Take Control of Taiwan In 'Next Six Years'," *USNI News*, Mar. 9, 2021, <https://news.usni.org/2021/03/09/davidson-china-could-try-to-take-control-of-taiwan-in-next-six-years>.

<sup>3</sup> Michael Martina and David Brunstromm, "CIA chief warns against underestimating Xi's ambitions toward Taiwan," *Reuters*, Feb. 2, 2023, <https://www.reuters.com/world/cia-chief-says-chinas-xi-little-sobered-by-ukraine-war-2023-02-02/>.

The timing of the Davidson window is influenced by shipbuilding and decommissioning trends. The US Navy is conducting a “divest to invest” program in response to budgetary constraints—to fund development in the 2030s, the Navy is retiring aging ships early now. It expects to shrink its battle force to 280 ships in 2027.<sup>4</sup> The Air Force’s own “divest to invest” plan will see it cut its fleet of fighters and bombers by almost half by 2027.<sup>5</sup>

Meanwhile, China is continuing a rapid expansion that could grow its fleet to 436 warships by then.<sup>6</sup> Its navy is modernizing swiftly,<sup>7</sup> bolstered by a growing rocket force that possesses thousands of land-based missiles.<sup>8</sup> China has begun deploying fast, maneuverable hypersonic missiles—a cutting-edge technology the US has not yet achieved and may have difficulty defending against.<sup>9</sup> Greater purchasing power parity enabled by stronger ties between civilian and defense industrial bases means that China acquires new high-end weaponry 5-6 times faster than the US.<sup>11</sup>

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<sup>4</sup> The Editorial Board, “The Shrinking U.S. Navy,” *The Wall Street Journal*, Apr. 4, 2022, <https://www.wsj.com/articles/the-shrinking-u-s-navy-pentagon-military-joe-biden-budget-ships-11648842070>.

<sup>5</sup> Eric Tegler, “Nothing Left To Fight With: A New Paper Calls Out America’s Shrinking Air Force And Likelihood It Can’t Win Against China,” *Forbes*, Sep. 18, 2022, <https://www.forbes.com/sites/erictegler/2022/09/18/nothing-left-to-fight-with-a-new-paper-calls-out-americas-shrinking-air-force-and-the-likelihood-it-cant-win-against-china/?sh=1da3f68f2c84>.

<sup>6</sup> “The Shrinking U.S. Navy,” *The Wall Street Journal*.

<sup>7</sup> “Report to Congress on Chinese Naval Modernization,” *USNI News*, Dec. 6, 2022, <https://news.usni.org/2022/12/06/report-to-congress-on-chinese-naval-modernization-16>

<sup>8</sup> <https://www.armyupress.army.mil/Journals/Military-Review/English-Edition-Archives/July-August-2021/Mihal-PLA-Rocket-Force/>.

<sup>9</sup> Oren Liebermann, “US is increasing pace of hypersonic weapons development to chase China and Russia, senior admiral says,” *CNN politics*, Nov. 20, 2022, <https://www.cnn.com/2022/11/20/politics/us-hypersonic-china-russia-competition/index.html>.

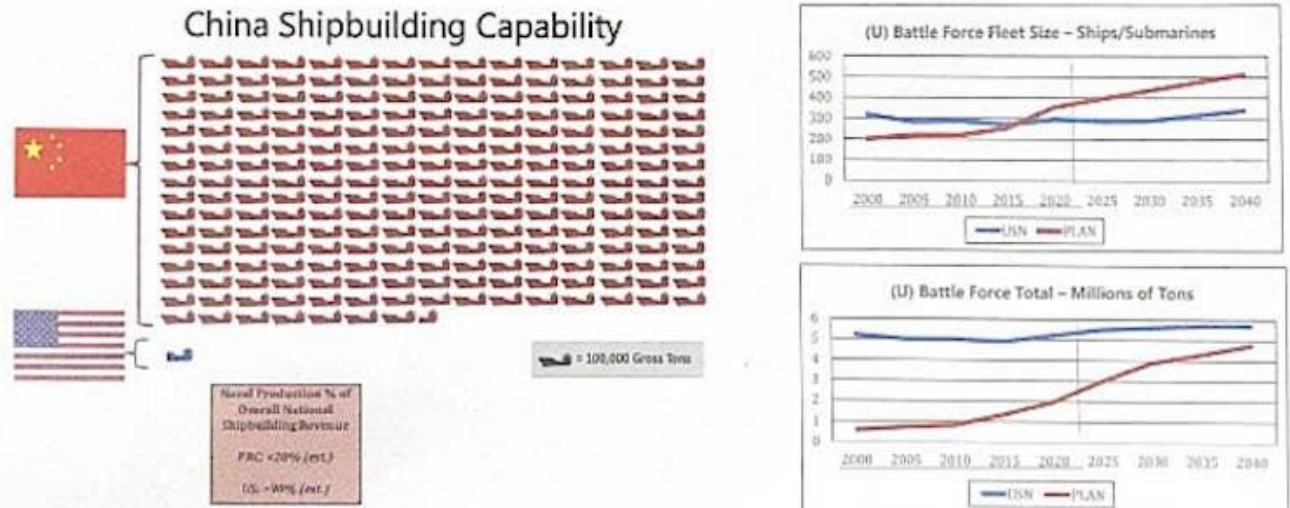
<sup>11</sup> Eric Lofgren, “China’s weapons acquisition cycle 5-6x faster than the United States — “We are going to lose” if we don’t change,” *Acquisition Talk*, July 6, 2022, <https://acquisitiontalk.com/2022/07/chinas-weapons-acquisition-cycle-5-6x-faster-than-the-united-states-we-are-going-to-lose-if-we-dont-change/>.

A leaked slide from the Office of Naval Intelligence emphasizes China's advantage in shipbuilding: 200 to 1.<sup>12</sup>

## PLAN vs. USN Naval Force Laydown

Battle Force Comparison				
	2020	2025	2030	2035
PLAN "Battle Force"	355	395	445	475
USN "Battle Force" *	295	287	290-291	305-317

Battle Force → Combatant ships, submarines, mine warfare ships, major amphibious ships, large combat support auxiliary ships.



**PLAN surface ship producers are mixed military/commercial**

- Most PLAN-associated construction completed in CSSC facilities
- Commercial profits/national investment in facilities → reduced overhead
- Modern design software, machinery, capital improvements
- Leverage commercial shipbuilding technology, licensed production

**China is the world's leading shipbuilder by a large margin**

- Controls ~40% of global commercial shipbuilding market (US: < 0.5%)
- 75+ "notable" commercial ship construction facilities
  - 20 of which support naval construction programs
- 50+ dry docks in China can physically accommodate an aircraft carrier

Source: US Navy

Recognizing China's accelerating military buildup, the US national security establishment has increased the urgency of its warnings. Secretary of State Anthony Blinken said "There has been a change in the approach from Beijing toward Taiwan in recent years..."

<sup>12</sup> Joseph Trevithick, "Alarming Navy Intel Slide Warns Of China's 200 Times Greater Shipbuilding Capacity," *The Warzone*, July 11, 2023, <https://www.thedrive.com/the-war-zone/alarming-navy-intel-slide-warns-of-chinas-200-times-greater-shipbuilding-capacity>.

Beijing [is] determined to pursue reunification on a much faster timeline.”<sup>13</sup> In October 2022, Chief of Naval Operations Admiral Mike Gilday said that China’s armed forces “have delivered on every promise they’ve made earlier than they said they were going to deliver on it. When we talk about the 2027 window, in my mind that has to be a 2022 window or a potentially a 2023 window.”<sup>14</sup>

In short, national security experts increasingly agree China is likely to attack Taiwan by 2027 but could do so at any time.

## Economic consequences

Investors are belatedly waking to the threat of imminent Chinese action against Taiwan. Prominent emerging markets investor Mark Mobius recently claimed that he cannot withdraw his money from his HSBC account in Shanghai: “The government is restricting flow of money out of the country.” He added that investors should be “very, very careful,” about putting new money into China and that he is shifting his focus to alternative markets like India and Brazil.<sup>15</sup> Fund managers are fielding an increasing number of questions from clients worried about a Chinese invasion of Taiwan; Russia’s invasion of Ukraine has made investors more conscious of war risk. However, few asset managers have significantly cut their China exposure.<sup>16</sup>

There are two possible uses of military force against Taiwan: invasion and blockade. Investors must account for both, but they tend to consider only the former at best. A Chinese amphibious assault against Taiwan would be a costly and difficult attempt to seize the island quickly before the world could muster a unified military or economic response. A recent set of war games conducted by the Center for Strategic & International Studies concluded that if the US fought alongside it, Taiwan could potentially fend off an invasion at great cost in

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<sup>13</sup> Mallory Shelbourne, “Accelerated Chinese Timeline to Seize Taiwan Raises Questions on Pentagon Priorities, Says Gallagher,” *USNI News*, Oct. 18, 2022, <https://news.usni.org/2022/10/18/accelerated-chinese-timeline-to-seize-taiwan-raises-questions-on-pentagon-priorities>.

<sup>14</sup> Mallory Shelbourne, “China’s Accelerated Timeline to Take Taiwan Pushing Navy in the Pacific, Says CNO Gilday,” *USNI News*, Oct. 19, 2022, <https://news.usni.org/2022/10/19/chinas-accelerated-timeline-to-take-taiwan-pushing-navy-in-the-pacific-says-cno-gilday>.

<sup>15</sup> “Billionaire investor Mark Mobius says he cannot take money out of China -FOX Business,” *Reuters*, Mar. 5, 2023, <https://www.reuters.com/markets/billionaire-investor-mark-mobius-says-he-cannot-take-money-out-china-fox-2023-03-05/>.

<sup>16</sup> Rae Wee and Tom Westbrook, “Analysis: Investors consider battle plans amid risk of China-Taiwan conflict,” Feb. 28, 2023, <https://www.reuters.com/markets/asia/investors-consider-battle-plans-amid-risk-china-taiwan-conflict-2023-02-28/>.

American and Taiwanese lives.<sup>17</sup> If China opts for an invasion, it will likely wait to gather more strength.

But a naval blockade of Taiwan is easier, likelier, and often overlooked by investors preoccupied by the possibility of invasion. With this strategy, which it simulated in response to then-Speaker Pelosi's visit to the island, China would attempt to starve Taiwan into submission, depriving it of the food and fuel imports it needs to survive.<sup>18</sup> This slower strategy would give the world time to respond with packages of heavy economic sanctions—a double-edged sword that could equally hurt Western economies, given their dependence on Chinese manufacturing. Additionally, the Taiwan Strait is one of the world's busiest shipping lanes: over 88% of the world's large container ships passed through it in 2022. Diverting to alternative routes through the Philippines to avoid Chinese warships and mines would add at minimum a few days and take cargo ships through the world's most typhoon-plagued region.<sup>19</sup>

In recognition of these risks, many companies are already attempting to rapidly shift their manufacturing to countries like India and Vietnam, who stand to gain substantially from China's lost business. According to Apple AirPods maker GoerTek, suppliers are likely to move capacity out of China far faster than observers anticipate.<sup>20</sup> Emerging markets investors would be well-served to prepare for this dramatic relocation.

The US could respond to a blockade of Taiwan with its own counter-blockade cutting China's shipping lanes importing oil from the Middle East, a much-discussed strategy among defense analysts because it would provide an alternative to war.<sup>21</sup> In this event, severe supply chain disruptions would likely cause the price of oil to surge for an extended time, much as it did in response to Russia's invasion of Ukraine, but on a larger scale. A recent report from

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<sup>17</sup> Mark F. Cancian, Matthew Cancian, and Eric Heginbotham, "The First Battle of the Next War: Wargaming a Chinese Invasion of Taiwan," *Center for Strategic and International Studies*, Jan. 9, 2023, <https://www.csis.org/analysis/first-battle-next-war-wargaming-chinese-invasion-taiwan>.

<sup>18</sup> Chris Buckley et. al, "How China Could Choke Taiwan," *The New York Times*, Aug. 25, 2022, <https://www.nytimes.com/interactive/2022/08/25/world/asia/china-taiwan-conflict-blockade.html>.

<sup>19</sup> Kevin Varley, "Taiwan Tensions Raise Risks in One of Busiest Shipping Lanes," *Bloomberg*, Aug. 2, 2022, <https://www.bloomberg.com/news/articles/2022-08-02/taiwan-tensions-raise-risks-in-one-of-busiest-shipping-lanes>.

<sup>20</sup> Nguyen Xuan Quynh and John Boudreau, "Apple Suppliers Are Racing to Exit China, AirPods Maker Says," *Yahoo Finance*, Feb. 28, 2023, <https://finance.yahoo.com/news/apple-suppliers-racing-exit-china-090000330.html>.

<sup>21</sup> Gabriel Collins, "A Maritime Oil Blockade Against China—Tactically Tempting but Strategically Flawed," *Naval War College Review*, Vol. 71 No. 2, 2018, <https://digitalcommons.usnwc.edu/cgi/viewcontent.cgi?article=1735&context=nwc-review>.

the US Naval War College concluded that a blockade and counter-blockade scenario could continue for years as each side tried to outlast the other.<sup>22</sup>

Crucially for investors, oil supply disruptions caused by the specter of military action against Taiwan could occur even without the action itself. In recognition of China's energy supply vulnerability, Chinese state-owned firms are investing heavily in facilities near the strategic Strait of Hormuz off Iran's coast; experts worry that doing so is a precursor to military bases. As one analysis puts it, "a heavy Chinese presence in the area could roil oil markets if concerns over possible military tensions with the United States or Europe over Taiwan spill into the area."<sup>23</sup> As China's presence in global energy supply chokepoints increases, the mere threat of action against Taiwan may shake oil markets. The recent peace deal China brokered between Saudi Arabia and Iran,<sup>24</sup> as well as its joint naval exercises with Russia and Iran at the entrance to the Persian Gulf,<sup>25</sup> suggest this danger is beginning to materialize.

The energy supply disruptions caused by military action would not be limited to fossil fuels, a critical difference from Russia's invasion of Ukraine. The International Energy Agency (IEA) claims global solar energy capacity is expected to nearly triple from 2022 to 2027, becoming the world's largest source of power capacity.<sup>26</sup> This growth is partly due to countries' desire to become less dependent on Russian energy; ironically, the shift to solar power makes the world dependent on Chinese supplies. China dominates every step of the solar panel supply chain.<sup>27</sup>

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<sup>22</sup> Lonnie D. Henley, "China Maritime Report No. 26: Beyond the First Battle: Overcoming a Protracted Blockade of Taiwan," *China Maritime Studies Institute*, Mar. 2023,

<https://digitalcommons.usnwc.edu/cgi/viewcontent.cgi?article=1025&context=cmsi-maritime-reports>.

<sup>23</sup> Ben Lefebvre and Phelim Kine, "China's Mideast buildup stirs security worries for U.S.," *Politico*, Feb. 4, 2023, <https://www.politico.com/news/2023/02/04/chinas-mideast-security-oil-00081136>.

<sup>24</sup> RFE/RL staff, "What's Behind China's Historic Iran-Saudi Arabia Peace Deal?," *OilPrice.com*, Mar. 15, 2023, <https://oilprice.com/Geopolitics/International/Whats-Behind-Chinas-Historic-Iran-Saudi-Arabia-Peace-Deal.html>.

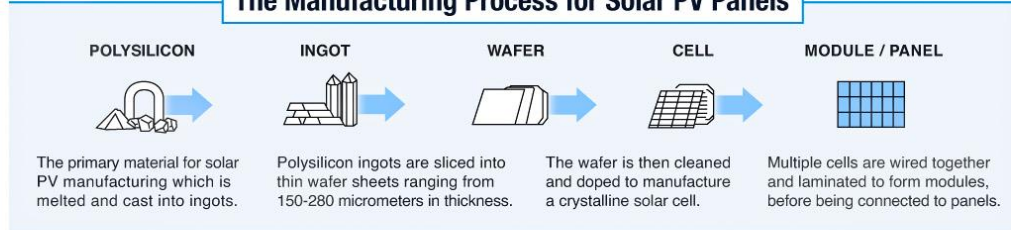
<sup>25</sup> "China, Russia and Iran hold joint naval drills in Gulf of Oman," *Al Jazeera*, Mar. 15, 2023, <https://www.aljazeera.com/news/2023/3/15/china-russia-iran-hold-joint-naval-drills-in-gulf-of-oman>.

<sup>26</sup> "Renewable power's growth is being turbocharged as countries seek to strengthen energy security," *IEA*, Dec. 6, 2022, <https://www.iea.org/news/renewable-power-s-growth-is-being-turbocharged-as-countries-seek-to-strengthen-energy-security>.

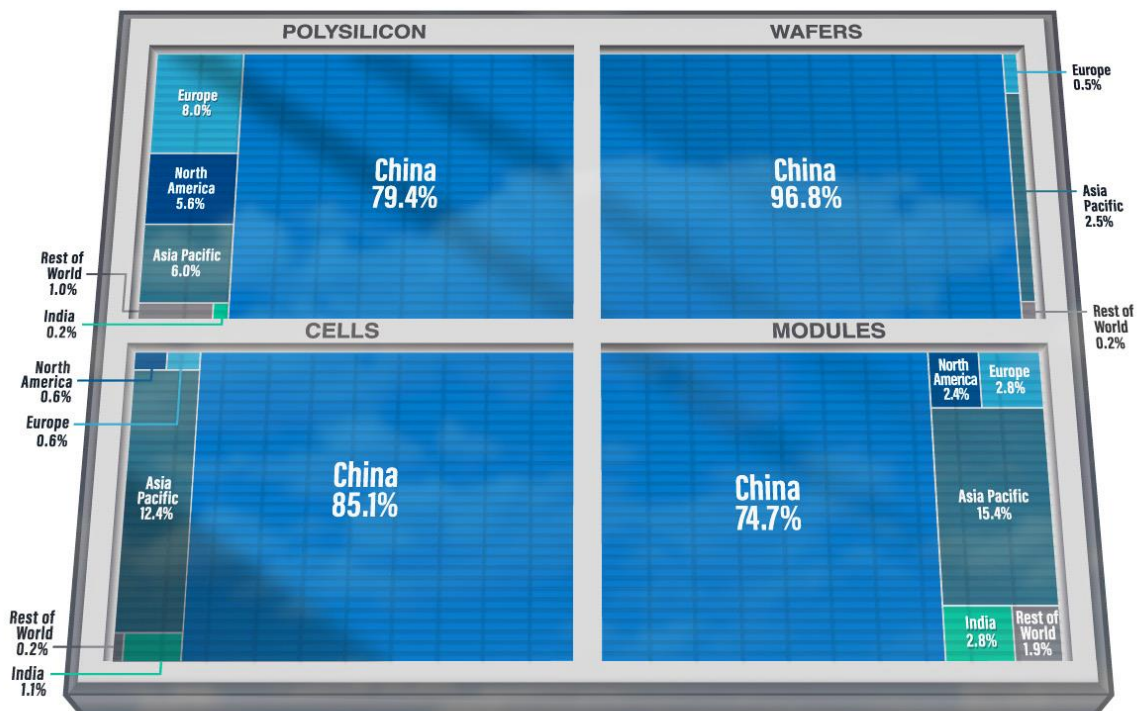
<sup>27</sup> Niccolo Conte, "Visualizing China's Dominance in the Solar Panel Supply Chain," *Visual Capitalist*, Aug. 30, 2022, <https://www.visualcapitalist.com/visualizing-chinas-dominance-in-the-solar-panel-supply-chain/>.

# Who Controls the Solar Panel Supply Chain?

## The Manufacturing Process for Solar PV Panels



## Share of Manufacturing Capacity by Country/Region in 2021



China made up 55% of global solar panel manufacturing capacity in 2010, with its share rising to 84% in 2021.



The total value of global solar PV related trade increased by more than 70% YoY to reach over \$40B in 2021.



Having the solar supply chain suddenly crippled by sanctions—from either the West or China—would amplify the disturbances in the traditional energy market, leading to an unprecedented global energy crisis. At minimum, energy investors should diversify by hedging solar energy holdings with traditional energy ones.

Technology supply chains would be affected just as much as energy ones, if not more. In the semiconductor sector, the mere possibility of Chinese action against Taiwan is already influencing markets.

Semiconductor manufacturing is at the center of US interest in protecting Taiwan. The chips used for phones, computers, cars, medical equipment, missiles, AI, and other advanced technologies require state-of-the-art manufacturing processes overwhelmingly located in Taiwan. Most semiconductor companies only design advanced chips; they rely on foundries like the Taiwan Semiconductor Manufacturing Company (TSMC) to produce them. Taiwanese companies possess about 2/3 of global foundry market share, with the vast majority coming from TSMC. The rest of the world is behind in both scale and quality of advanced semiconductor manufacturing. China and the US have both begun efforts to catch up to TSMC but are far from success.<sup>28</sup> Intel may close the gap in quality by 2025.<sup>29</sup>

There are many implications for investors. As with energy and emerging markets, the most pressing question is not what will happen to markets if China takes action against Taiwan; the immediate question is how they will change in *anticipation* of the possibility. Countries like the US, for instance, are launching a push to increase domestic semiconductor manufacturing.<sup>30</sup> Considering how far behind the US is, governmental actions like the CHIPS Act's \$52 billion investment are likely only the beginning of public and private attempts to increase the quality and quantity of US semiconductor manufacturing.<sup>31</sup> American foundries may benefit. Key early stages of the semiconductor value chain could well benefit from global attempts to shift manufacturing from Taiwan—equipment manufacturers stand to gain as they outfit the new foundries countries build.

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<sup>28</sup> Enrique Feás, "The US-China technology war and its effects on Europe," Real Instituto Elcano, Feb. 28, 2023, <https://www.realinstitutoelcano.org/en/analyses/the-us-china-technology-war-and-its-effects-on-europe/>.

<sup>29</sup> Scotten Jones, "Can Intel Catch TSMC in 2025?" *TechInsights*, Apr. 11, 2022, <https://semiwiki.com/semiconductor-services/ic-knowledge/310900-can-intel-catch-tsmc-in-2025/>.

<sup>30</sup> Vivek Ramaswamy and Mike Pompeo, "China's Threat to Taiwan Semiconductors," *The Wall Street Journal*, Oct. 10, 2022, <https://www.wsj.com/articles/investing-silicon-semiconductors-chips-taiwan-invasion-tsmc-china-intel-blackrock-asset-manager-11665408814>.

<sup>31</sup> Daniel Howley, "The U.S. needs more than the CHIPS Act to stay ahead of China: MIT report," *Yahoo Finance*, Feb. 28, 2023, <https://finance.yahoo.com/news/the-us-needs-more-than-the-chips-act-to-stay-ahead-of-china-mit-report-130047752.html>.

## **Conclusion**

Investors must prepare now for China to invade or blockade Taiwan within the next few years. The military action itself would be devastating for global markets because it would sever supply chains of basic goods manufactured in China and advanced chips made in Taiwan. One minimal first step is that investors should demand companies fully disclose their exposure to both these supply chains. They should also appropriately hedge against a severe energy crisis that would reach solar and traditional energy supply chains; upon any Chinese action, or even the credible threat of it, the price of oil will likely go up.

Countries and companies are already beginning to change their behavior to mitigate the damage of a Chinese move against Taiwan, and investors must keep up. Companies with manufacturing in China are beginning to shift it to emerging markets like India and Vietnam. Countries dependent on advanced chip manufacturing in Taiwan are beginning a long, costly attempt to build domestic production capacity. Strive believes that to appropriately manage their China risk, investors must anticipate and accelerate these emerging trends.