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Zen on Tech Newsletter

9th Aug 2023

Summary

China's Global Ambition Creates American Insecurity: China is pivoting from a manufacturing-centric role to a leader in invention, aiming to ascend the global economic hierarchy. However, this strategic transition has prompted global leaders, primarily the U.S., to protect their technological edge. While the U.S. has escalated restrictions, especially concerning high-end semiconductor technology, the race for innovation supremacy continues. As China progresses towards the 7nm technological threshold, we assert that its progress is more dependent on imitation than genuine innovation. The resilience and depth of China's financial backing for this transition remain pivotal. Strategically, underestimating China's capabilities to develop independent technology poses a higher risk than overestimating them.

Critical Minerals tit-for-tat: China recently restricted access to a small corner of the rare earth (REE) market. China’s leverage on key minerals could absolutely disrupt global manufacturing. However this would backfire like their previous restriction of REE’s, China's production share plunged from 97% to 60% within a decade.

Western Businesses Have Important Decisions to make on Supply Chains: The tug-of-war between the U.S. and China on technology access and intellectual property continues. U.S. firms grapple with the decision to operate in China, balancing economic interests with geopolitical risks. Additionally, with China's economy slowing down, alliances are shifting, and there's potential for a period of stability. Yet, businesses must remain vigilant to early warning signs of a potential conflict.

Economic ‘De-Risking’: A shift in U.S. trade is underway, with more imports from Canada and Mexico than China for the first time in a decade, excluding the pandemic lockdowns. We believe this is a cyclical downturn that offers a possible glimpse into future trade patterns, and that a recovery in the electronics market will likely boost US imports from China. However, we expect the long-term trend of migrating supply chains to LATAM and ASEAN countries to continue.

Pacific Tensions Rise: The Pacific region is brimming with geopolitical tension. China's actions in the Pacific serve both military and strategic economic interests. While economic challenges might hinder China's long-term influence, the immediate risk of conflict is palpable. A series of aggressive moves and preparations by China indicate its preparing its military and economy for war. While China has the military capability to put Taiwanese sovereignty at risk, the real determinant is the economic fortitude to withstand potential backlash. As tensions rise, investors must ponder China's true preparedness, the realistic support the U.S. can offer Taiwan, the feasibility and duration of a potential U.S. blockade against China, and the global stance towards such a blockade.

For a comprehensive understanding of these intricate dynamics, delve further into the main report.

CONTENTS

1. Chinese Ambitions = American Insecurity

China is actively pursuing global leadership in economic and technological sectors, facilitated by a range of state-led policies. These policies involve a strong governmental role in guiding and funding Chinese firms to secure foreign technology and competencies, including fundamental and applied research. This is particularly concerning for investors as these fields are where the U.S. currently maintains global leadership and comparative advantage.

The ambitious Made in China 2025 (MIC2025) plan is a focal point in China's strategy. It seeks technological breakthroughs across a range of sectors, with the aim of not just improving China's manufacturing capabilities but also transitioning from merely assembling products to inventing them. This transition aims to enhance China's position on the global economic stage and could affect global market dynamics significantly. Specific goals include the following:

- 2025 - Boost manufacturing quality, innovation, and labour productivity.
- 2035 - Reach a level of development that is on par with global industry, improve innovation, make major technology breakthroughs, lead innovation in specific industries, and set global standards.
- 2049 - Lead global manufacturing and innovation advanced technology and industrial systems.

While some suggest that China may follow the development model of Germany or Japan, the reality of this outcome is complicated. The manufacturing sector largely leans on an export model, which may be unsustainable for China as the world may not be willing to accept such huge Chinese merchandise trade surpluses with the saturation of global demand.

Developed countries are unlikely to allow China to outcompete their industries, and developing countries are already grappling with the problem of "premature deindustrialization" due to inexpensive Chinese goods. The ambitious 'Made in China 2025' plan, which aimed to replace foreign companies domestically and then outcompete them internationally, seemed ill-conceived, as it invited protective measures against China.

Chinese futuristic tech ambitions

U.S. countermeasures against MIC2025 and related practices will impact the trajectory of China's growth and development. The Trump administration imposed tariffs on many Chinese imports and bolstered law enforcement efforts to combat intellectual property theft from China. Despite a bilateral economic and trade agreement in 2020, most U.S. concerns remained unresolved. Moreover, the U.S. government's scrutiny of China's role in federally funded research and increased restrictions on certain Chinese firms could impact the PRC's business environment and investment climate.

In a significant policy shift in October 2022, the U.S. increased restrictions on China's access to U.S. technology. These new sanctions specifically limit China from leveraging U.S. technology in manufacturing advanced semiconductors for logic chips that are 16 nm or below, basic DRAM memory chips at 18nm or below or 128 layers or more for NAND, and prohibit accessing any of the most advanced AI processing chips. These restrictions, at the current level, primarily deal a blow to China's ambitions to emerge as an AI superpower and stifle its industry leading memory manufacturer, YMTC.

Under the current sanctions, China's Semiconductor Manufacturing International Corporation (SMIC) may continue to mass-produce chips at a moderately advanced level of 28nm or even a low yield 7nm. However, if the U.S. opts to expand its chip ban, China would be limited to 90nm chip production capability. This scenario would mark a significant setback to China, taking it back to the technology levels of 2003.

Biden dances with the dragons

US Roadblocks for Chinese Tech Progress

[‘An Act of War’: Inside America’s Silicon Blockade Against China - The New York Times]
[Chip CEOs to Meet Brainard, Sullivan Over China Restrictions - Bloomberg]

The United States' strategy to prohibit the export of various critical technologies to China is, to put it succinctly, a strategic manoeuvre aimed at preserving its own competitive advantage. At the heart of this tactic lies the intention to slow down China's technological progress and keep the West in the lead, particularly in areas where the U.S. and its allies currently have an upper hand. As Assistant Secretary for Export Enforcement Matt Axelrod notes, “*The controls will not stop China permanently. Even in the best case, they’re a delay tactic, meant to offer the U.S. and its allies space to expand their lead in key technologies... Our goal is to stop as much as possible.*”

Moreover, it's worth noting the potential implications of these export controls on China's burgeoning AI industry. While 14nm chips might suffice for conventional military applications – even to the extent of overwhelming Taiwan's defences – the stagnation in advanced chip technologies could hamper the growth and effectiveness of China's AI ambitions. The U.S. is currently capitalising on the economic and military benefits of AI, with large language models (LLMs) and other complex AI models requiring enormous computational power. If China is limited in its access to such computational capabilities due to lack of advanced chip technology, it may struggle to keep pace in the AI arms race. There are big caveats to this as China may be able use efficient algorithms and custom silicon to sustain its AI development.

A broad based war with AI and hypersonics will move inconceivably fast

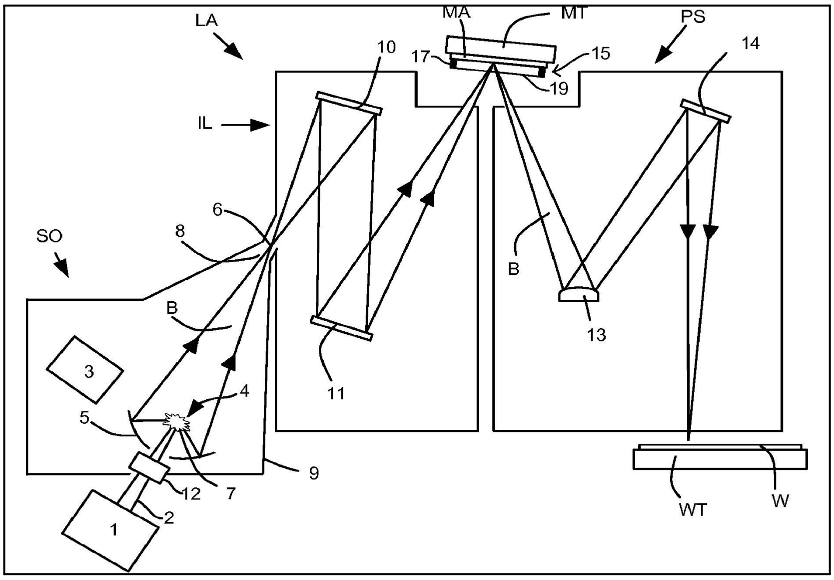
Positioning for China's Domestic Chip Supply Chain

[The Chip War might just be what China needs right now]
[China Chip Firms Soar on Report of Advance in Fabrication Tech - Bloomberg]
[China's ASML is Years and Years Behind]

The current status of semiconductor supply chains reveals a divergence between China's domestic capabilities and those enabled through collaboration with the US. Specifically, the China-only supply chain reaches up to 90nm, while the supply chain involving the US allows progress to 14nm, and even further to 7nm, albeit at a 50% yield rate. Anything below 7nm is currently hindered by restrictions.

The major hurdle in China's semiconductor progression is lithographic machines. SMEE, China's primary semiconductor equipment company, is only capable of producing lithography systems for 90nm chips. The chip-making equipment sector is dominated by a few key players, with ASML's newest machines crafting structures as small as 2nm - to give some perspective, a human red blood cell measures about 7,000 nanometers across. The intricacy and precision of these machines are so unparalleled that no other company has been able to replicate their achievement. SMEE has a history of over hyping their achievements and then consistently pushing out the 28nm goal year after year. While this is not a good look, their eventual progress cannot be discounted.

"Patents are just Chinese instruction manuals"
Palmer Luckey, Founder of Oculus, Anduril Industries



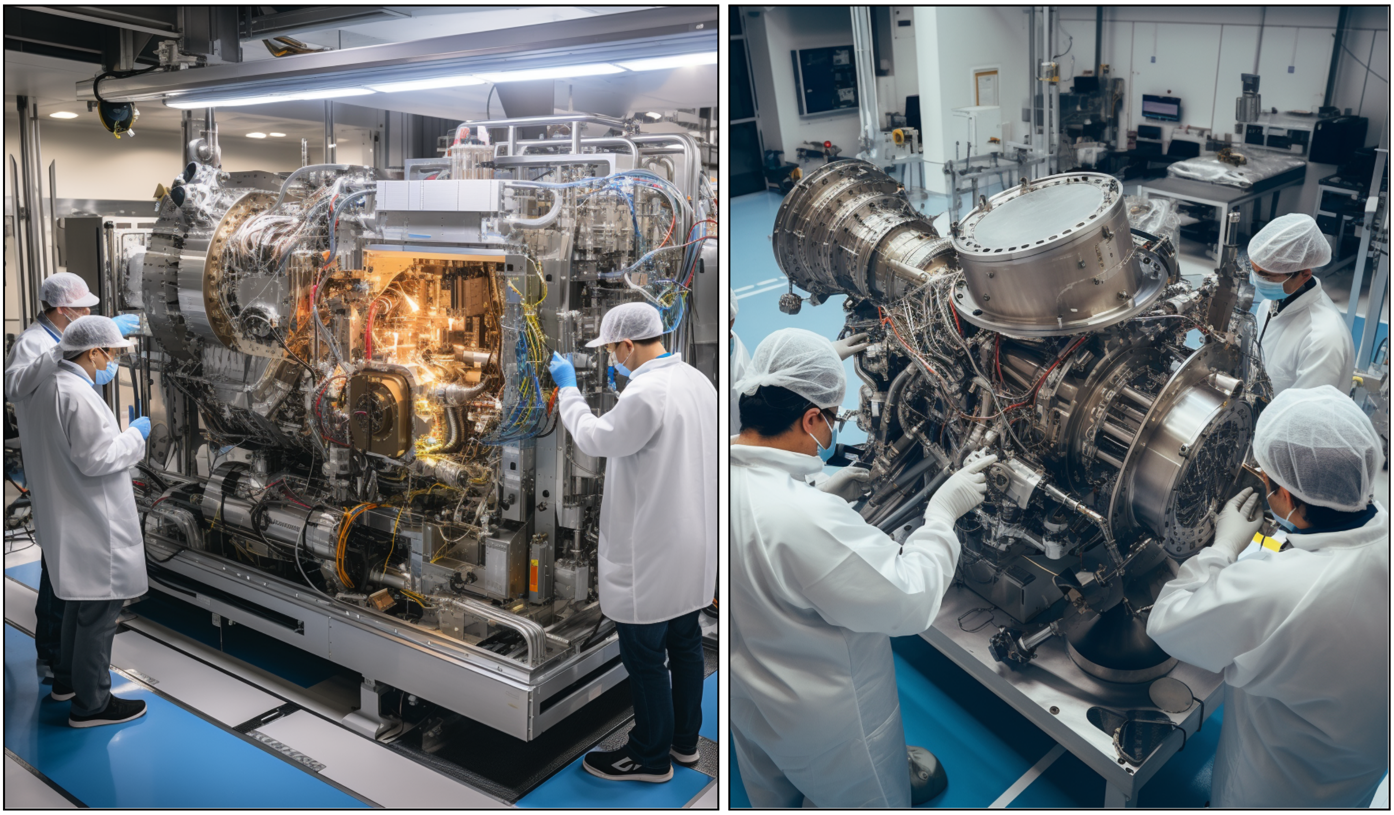
Source: ASML patent JP2023080212A

"Chinese organizations, including units within the People's Liberation Army (PLA), are involved in a cyber campaign against U.S. and other international corporations, universities, government agencies, media, think tanks, NGOs, and other targets. These efforts are designed to help China leapfrog ahead of the West by skipping the extensive and time-consuming research and development phases for new technologies. China's cyber operations are also intended to influence foreign and domestic audiences, assist with offensive military campaigns, and improve the country's artificial intelligence and big data analytics capabilities." Competing Without Fighting China's Strategy of Political Warfare

The path for China's supply chain to transition from 90nm to 7nm involves industrial espionage and imitation rather than genuine scientific advancement. They possess lithography machines capable of reaching 7nm, and they can dismantle these for reverse engineering. As for the sub-7nm realm, Chinese companies are unable to bring the machinery into the country but are compensating through soliciting information from employees at TSMC or ASML and cyber espionage to obtain photos, drawings and know-how to do reverse engineering. Obtaining sub-components and building out the supply chain around optics will be some of the more challenging aspects to this development.

China's existing technological capabilities, demonstrated in other complex fields like rocket building, suggest that the creation of an EUV machine is feasible. The Saturn V rocket comprised over 3 million parts, whereas ASML's EUV machine has more than 100,000. While technical challenges abound, the real question is whether China has the financial resources to back this level of R&D.

In assessing the future landscape, barring further economic or political deterioration, it seems possible that China has the capabilities to reach the 7nm threshold by the close of this decade. Recognizing China as a competitive threat to US hegemony, the downside risks of overestimating China's capabilities are less problematic than underestimating them. This viewpoint is not rooted in a lack of faith in America but stems from a prudent hedge against the unknown variables present in this scenario. Adopting this stance may provide the most balanced risk-adjusted positioning.



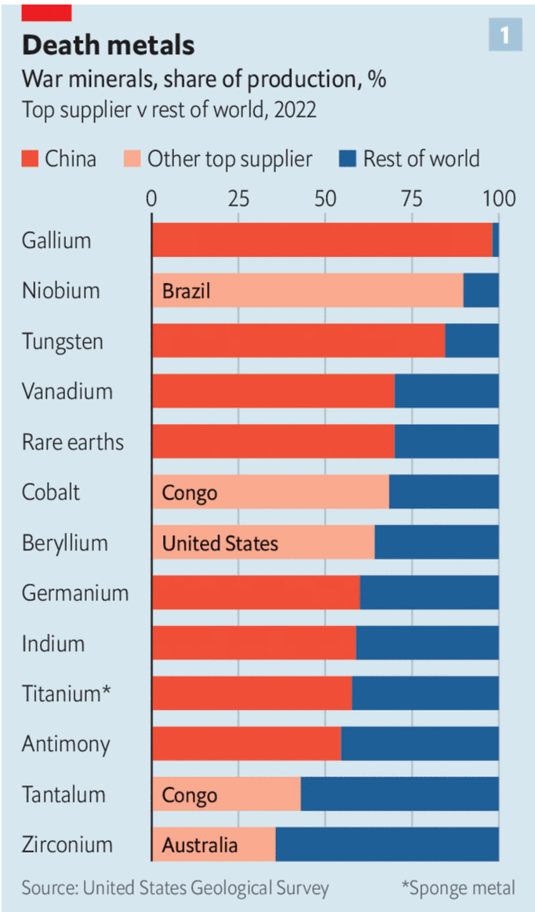
Reverse engineering EUV lithography machine (left), rocket engine (right).
Or is it the other way around?

China Can't Inflict Asymmetric Pain on US Chips

The semiconductor and critical raw material ecosystem
China controls the supply of crucial war minerals
China's limits on chip metals self-defeating
EU asks producers to explore making chip inputs

As of August 1, China imposed export controls on gallium and germanium and their chemical compounds, citing the preservation of Chinese national security. This move comes as a countermeasure to US-imposed restrictions on technology exports to China. National Security Adviser Jake Sullivan views China's decision as counterproductive, believing it will bolster the resolve of nations to reduce dependencies and fortify their supply chains. Contrary to advanced semiconductor manufacturing equipment, gallium and germanium, are fungible and a relatively small market.

The prevailing speculation is that China might resort to restricting access to other rare earths or polysilicon, akin to measures taken during past geopolitical disputes. China absolutely can disrupt global manufacturing through critical minerals. However, such steps would poison China's diplomatic relationships. In fact, China's attempt to sever ties between the U.S. and its allies is becoming increasingly challenging, with nations forming a united front.



China's previous ban of rare earths exports to Japan in 2011 backfired dramatically, with China's production share of the world's rare earths plunging from 97% to 60% within a decade (**Chart 2**). While China threatened to repeat such a ban during the peak of the Trump-initiated trade war, it never actually executed this threat. An expansion of the bans by Beijing would be a precarious move, likely inflicting more harm than good.

Global free-market capitalism, inherently antifragile, is responding. The imposition of export controls led to a surge in gallium prices and the start of a redistribution of supplies. Both Japan and Saudi Arabia are exploring joint rare-earth investments in a bid to diversify supply chains in light of the escalating demand spurred by electric vehicles (EV). Private companies are preparing to capitalize on supply chain disruptions. For instance, Nyrstar, is building a $150 million germanium and gallium recovery and processing facility at its Tennessee-based zinc smelter. The proposed facility could meet up to 80% of US demand, although it would take two years to construct. Belgian advanced materials group, Umicore, is concurrently developing thin-film germanium technologies to minimise the material's use.

Furthermore, the US is encouraging Australia and Canada, the only two Western countries with substantial reserves, to boost production and exportation of rare metals. Simultaneously, the US is strengthening ties with emerging markets in the Indo-Pacific, where untapped deposits lie (**Chart 1**). Until new production comes online, the US will have to rely on alternative suppliers and strategic stockpiles.

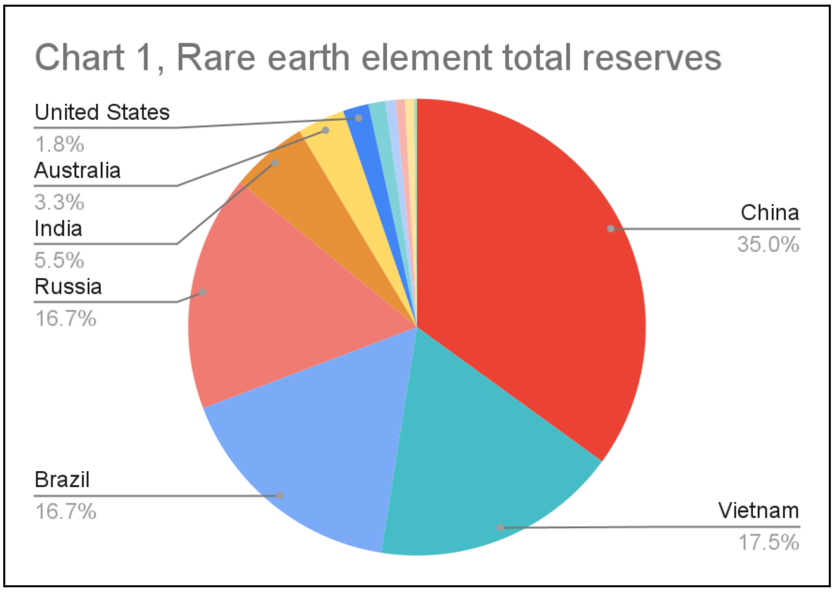


Chart 1, Rare earth element total reserves
United States
1.8%
Australia
3.3%
India
5.5%
Russia
16.7%
Brazil
16.7%
China
35.0%
Vietnam
17.5%

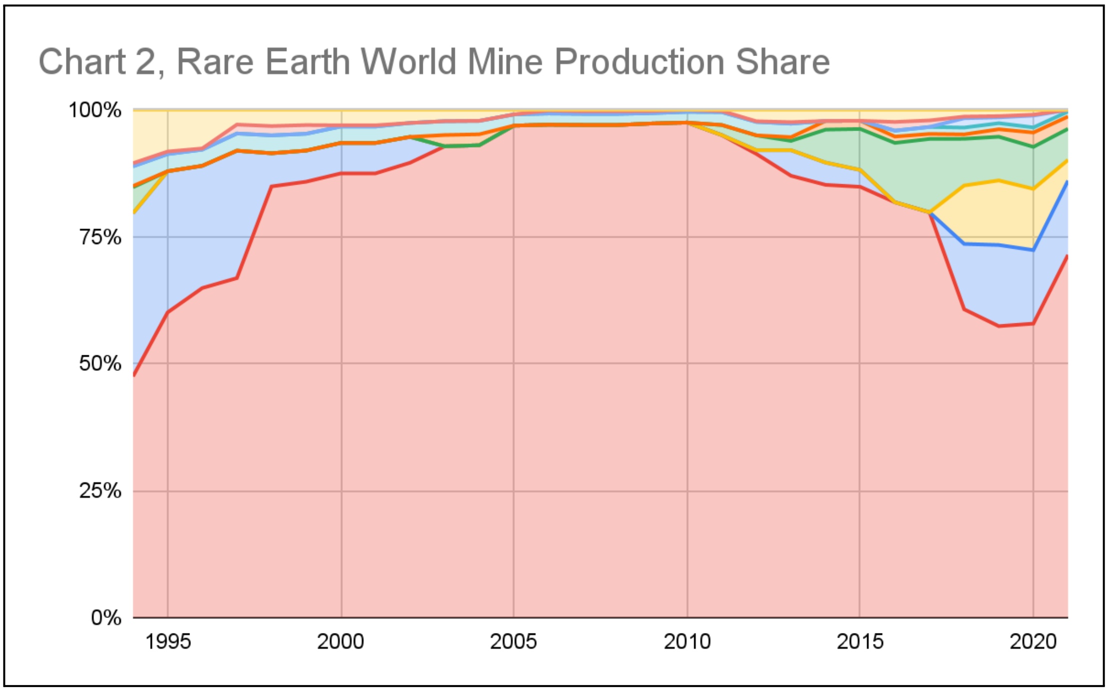


Chart 2, Rare Earth World Mine Production Share
100%
75%
50%
25%
0%
1995
2000
2005
2010
2015
2020

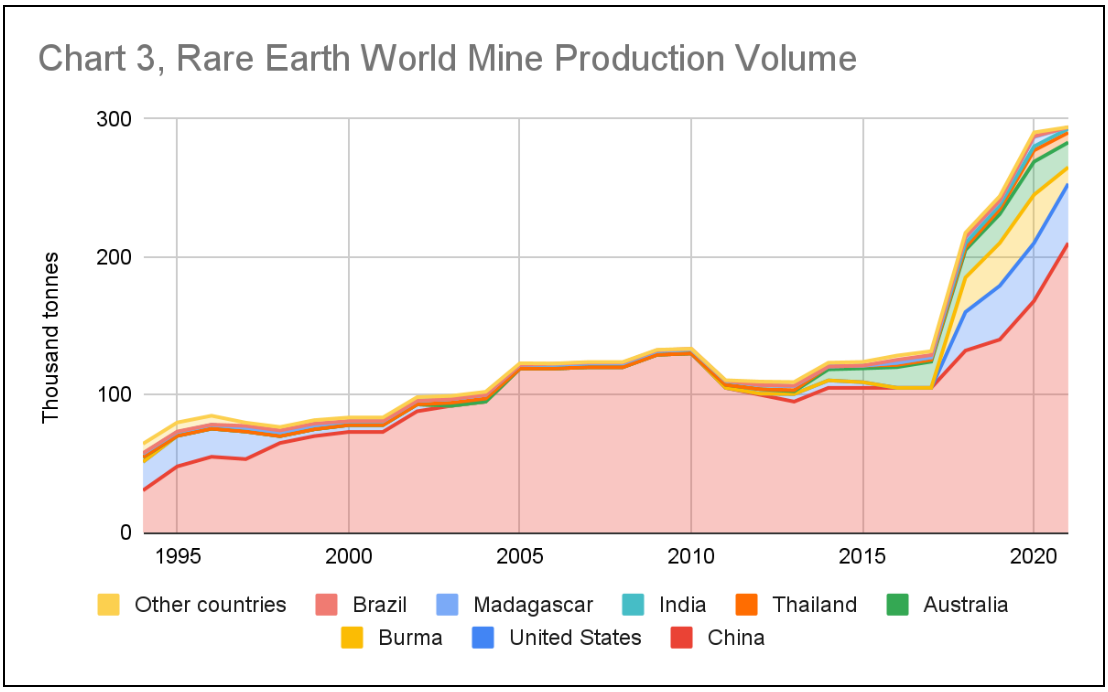


Chart 3, Rare Earth World Mine Production Volume
Thousand tonnes
300
200
100
0
1995
2000
2005
2010
2015
2020
Other countries
Brazil
Madagascar
India
Thailand
Australia
Burma
United States
China

2. From Slow Separation to Rapid Rupture

[The West's de-risking strategy towards China will fail, says Chris Miller]

Amidst escalating U.S.-China tensions, top American tech executives are seeking pre-pandemic business dialogues with China, displaying their dependence on this significant market. Bill Gates, Elon Musk, and Tim Cook recently visited China to assess the business landscape and the future of their companies' operations in the country. Despite U.S. endeavours to decouple from China and limit its access to advanced technology, U.S. tech companies still rely heavily on the Chinese market for a considerable proportion of their sales. Many top U.S. tech brands, such as Apple and Tesla, have increased or maintained their dependence on China since 2018. Greater China remains Apple's second-largest source of revenue after its home market. China's rapid adoption of electric vehicle technology has significantly boosted Tesla's sales in the country.

China is a very important source of revenue for tech companies, but the median company in the S&P 500 derives 0% of revenue from China. Morgan Stanley estimates that companies in their North America database derive 29% of their revenue from foreign sources. The biggest source is Europe at 12%, followed by Asia ex-Japan & ex-China at 5%, China at 4%, and Latin America at 4%. The sectors with the highest foreign revenue exposure are Tech (56%), Materials (50%), and Industrials (33%).

China's economy, once renowned for its rapid expansion, has now significantly slowed down. As a result, the nation is strategically bolstering ties with geopolitical allies like Russia. However, this has caused distrust with the U.S. and Europe. To resuscitate its economy, China is in dire need of robust international business relations and fiscal stimulus. Concurrently, the U.S. President, aiming for re-election, seeks to maintain economic stability. This could hint at a potential period of stability in the U.S.-China relations until the 2024 elections. Businesses should interpret this period as an opportunity to strategically overhaul their supply chains in preparation for possible future volatility.

The sunset on US-China relations

Commercial: Market, Labour, Data and Competition

U.S. big tech won't shake its China addiction - Nikkei Asia
Multinationals in China accelerate push to decouple data
Nike chief executive says brand is 'of China and for China' (Geopolitical roadkill)

Practical decisions by U.S. firms to maintain their Chinese operations hinge on several factors including market size and labour pool, data regulation laws, local competition, and international politics. The large and growing Chinese market, together with its abundant skilled labour, continues to entice U.S. tech firms, even amid increasing U.S. restrictions on China's access to high-tech sectors. However, the gradual disengagement could leave U.S. businesses susceptible to possible bans or sales restrictions in China.

Sunk cost and time. As some U.S. tech firms attempt to shift parts of their supply chains away from China, they encounter a slow, years-long process. Consequently, companies continue to face the risks associated with doing business in China, such as outright bans or sales limitations.

Production costs: Owing to China's large pool of labour and favourable manufacturing and export subsidies, production costs are low, supply chain is broad and scale is immense. However, manufacturing wages in China have been increasing dramatically over the years and the export environment has become more uncertain. Last week I was quoting a low volume 3D printing job and the Chinese supplier came in at 65% higher (ex shipping) than a local Sydney based supplier.

Data control. Due to China's strict data and anti-espionage laws, global companies are hastening their data decoupling efforts. Consulting giants like McKinsey, Boston Consulting Group, and Oliver Wyman are segregating their IT systems because of potential criminal sanctions for sensitive information sharing. As Beijing tightens data control, data localization pressure mounts. This trend is also noticeable among European firms in China. An EU Chamber of Commerce in China survey reveals nearly 10% of surveyed European companies are fully isolating their China IT systems, while 75% have at least partially localised their IT systems and data storage. Adherence to China's data laws could mean significant compliance costs for financial institutions and mutual fund managers.

Copy Cat Competition: Shenzhen's EV company, BYD, surpassed Tesla by delivering 547,917 passenger EVs, including hybrids, in Q1 2023. Chinese consumers favour BYD's affordability, a stark contrast to Tesla's luxury status. BYD, backed by Warren Buffet, has expanded steadily into overseas markets due to its robust domestic presence. In 2022, it exported around 56,000 vehicles, with overseas vehicle sales accelerating. However, escalating U.S.-China trade tensions have led BYD to exclude America from its global expansion plans. Instead, they focus on other markets like Singapore, Thailand, the UAE, Japan, Australia, Norway, the UK, Germany, Brazil, Costa Rica, and Mexico. Remarkably, it's become the best-selling EV brand in Singapore this year.

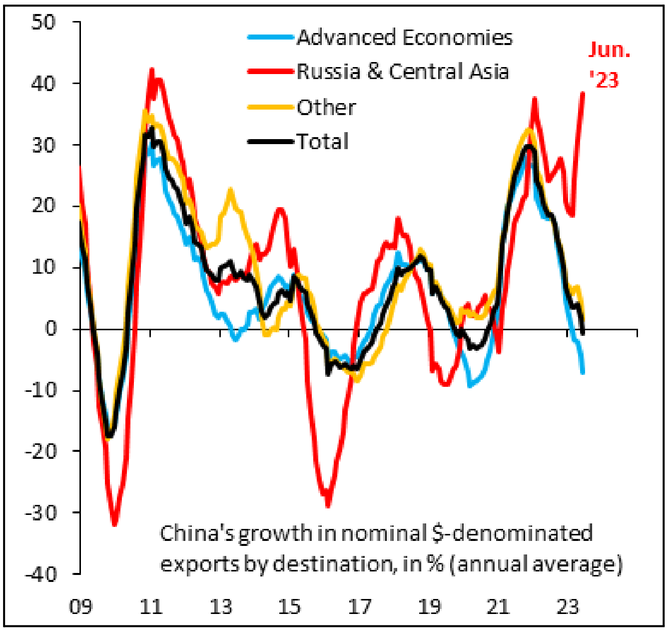
Economic: Trade Down, Weak Recovery for China

[The End of China's Economic Miracle | Foreign Affairs](#)
[Chinese exports suffer worst fall since start of pandemic | Financial Times](#)

China on economic damage control

China's economic growth rates have dwindled to just above 3% annually, a figure beneath government expectations. Real estate values in China have plummeted, impacting spending willingness. Youth unemployment has reached 21.3% in June, adding to financial caution. In response to this downturn following an initial post-pandemic recovery, China is recalibrating its diplomatic strategies. It's actively increasing diplomatic engagements and advocating for more liberal domestic economic policies. Notably, its efforts to mend fences with the U.S. have become visible, with high-level officials engaging in discussions on trade and climate change in Beijing.

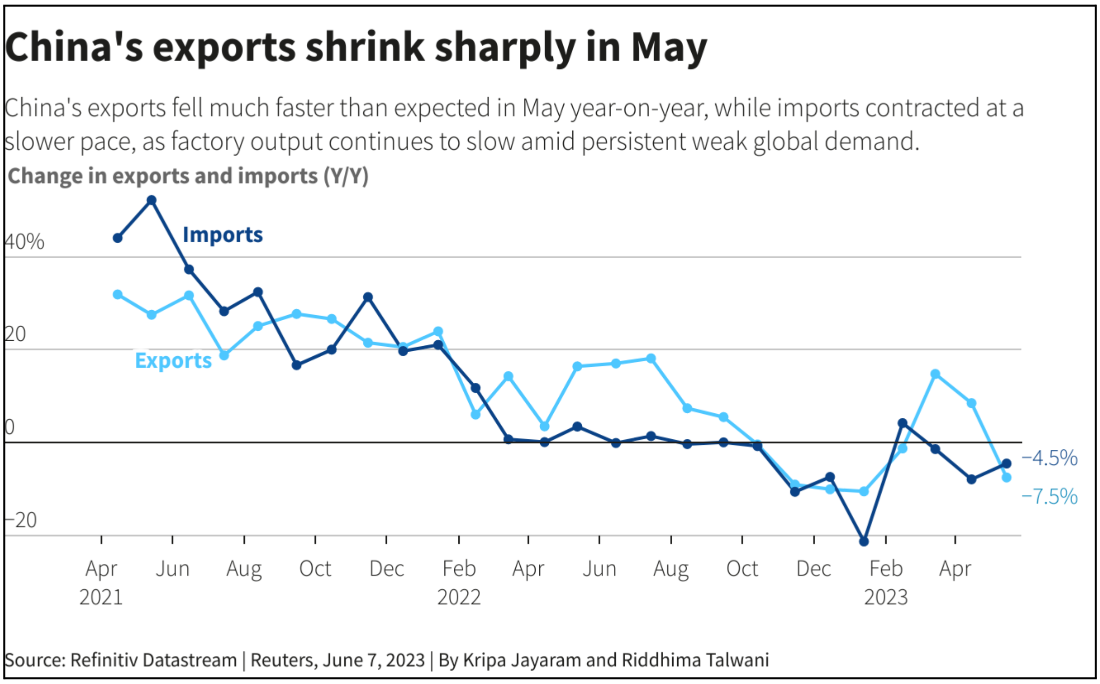
Yet, the primary focus of this pivot remains economic and commercial policies, with national security still holding its place as a high priority for China. In spite of its economic might, China's strained relations with the U.S. and Europe have limited its global influence. These tensions have resulted in US investment restrictions on Chinese tech firms, and China's affinity for Russia has negatively impacted its relationship with Europe.



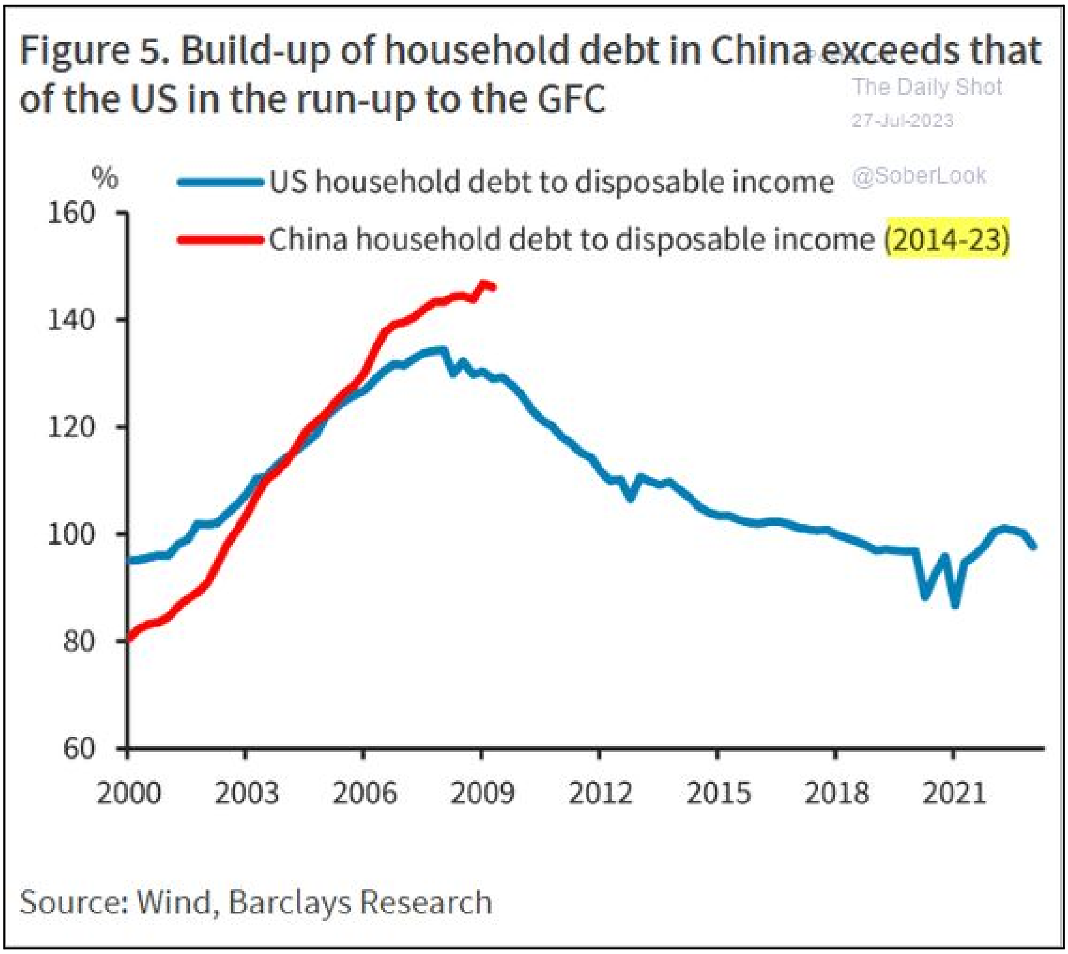
"***China's negative export growth to advanced economies (blue) isn't about de-risking or de-globalization. This is just the normal up and down of the global cycle. China's explosive export growth to Russia and central Asia (red) is different. That's a new trade axis forming…***" - Robin Brooks IIF
We believe that the negative export growth from China to the US is more than just cyclical, there is a degree of decoupling at play (explained in the following pages).

The possibility of a declining Russia could potentially open opportunities for China in Eurasia. China's economic domination in the Global South is increasingly apparent, especially with initiatives like the Belt and Road, which aims to solidify continental relationships while sidestepping conflict with maritime powers. However, the economic potential of these regions, compared to markets like the EU, U.S., and Japan, is relatively limited. Despite impressive growth figures, Russia and Central Asia's markets are relatively small. Apart from the G7, China, and India, no single nation contributes more than 1-2% of world GDP.

China's economic deceleration would logically refocus the administration to shift its geopolitical objectives, leading to an urgent need to address economic issues to maintain global trade relationships. China's strategy of applying trade pressure on other nations has faced pushback from Europe and Australia. China's diplomatic efforts currently show a clear bias for economic interests while they quietly prepare their economy for war.



[China's exports tumble in May as global demand falters | Reuters]



[Iron ore hit as Chinese stimulus a "Western narrative" – MacroBusiness]

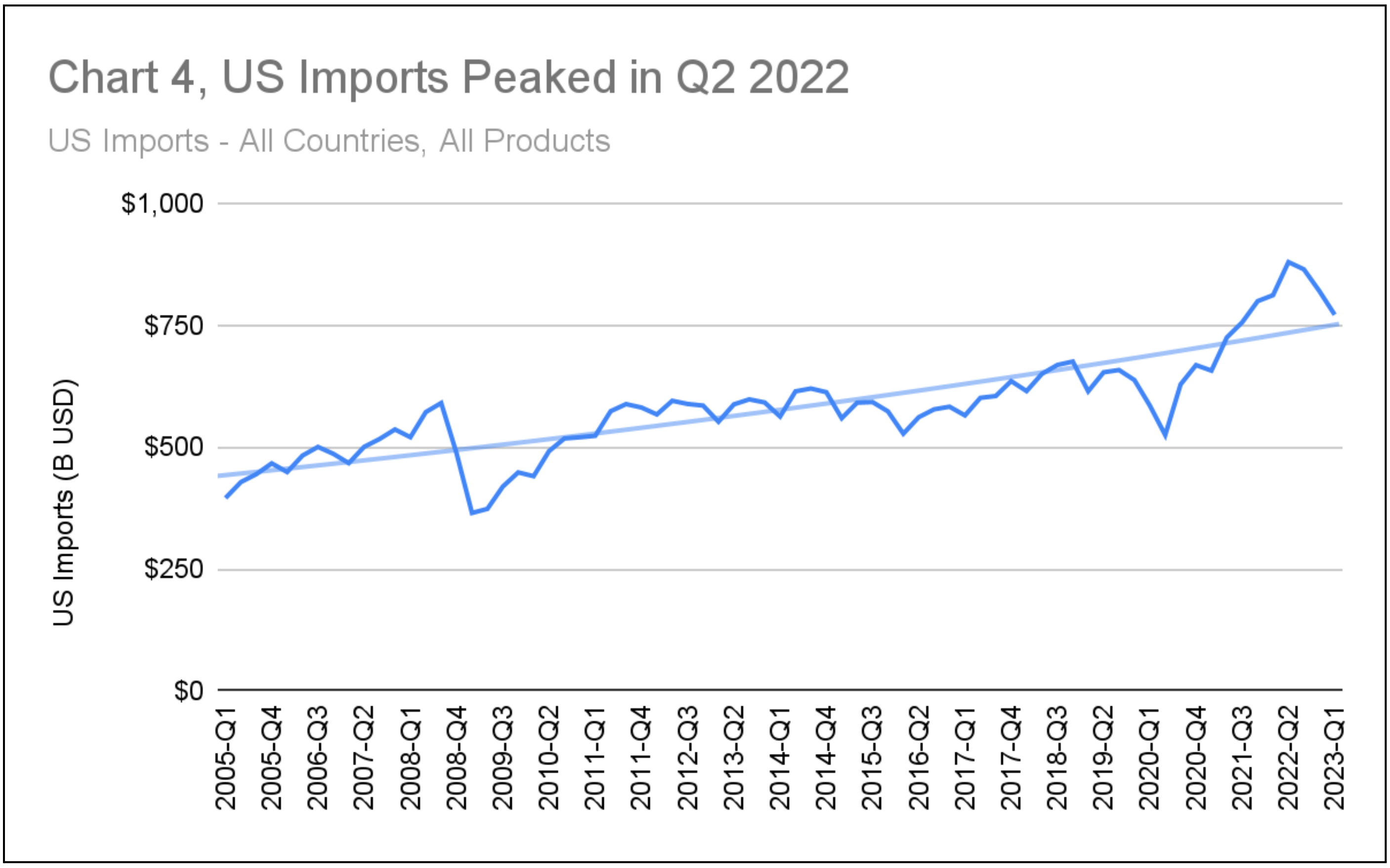
US economy in good shape amid shifting trade dynamics

The US economy is navigating a challenging landscape characterised by higher-than-anticipated inflation. Despite this inflationary pressure, the economy has demonstrated resilience, with Q2 2023 growth accelerating to 2.4%, surpassing forecasts even amidst the Federal Reserve's ongoing rate-raising campaign.

A profound shift is occurring within US trade dynamics. Total imports, after peaking at $879B in Q2 2022, fell to $771B in Q2 2023 (**Chart 4**). For only the second time in a decade, in Q1 2022, US imports from Canada and Mexico outpaced those from China, the first being Q1 2020 during global pandemic lockdowns (**Chart 5**). The decline in imports from China is widespread across most products, with the electrical devices sector, the largest import category, being particularly impacted (**Chart 6**).

During this cyclical downturn, other trading partners such as Canada, Mexico, and Vietnam are capturing market share from China (**Chart 7**). Steel imports have seen a more steep decline, with the 24% Trump tax leading to a $2B decrease (**Chart 8**). Certain dependencies on China remain, with batteries standing out. Even amidst the broader trade decline, battery imports from China have been on an exponential growth trajectory, emphasising China's role in the global supply chain for key technology components (**Chart 11**) (however this is not to say the world isn't innovating through the current technology).

We interpret these trade shifts as a transition in consumer spending from goods to services, dovetailing with a cyclical downturn in the devices sector and a strategic move towards onshoring or friend-shoring. China, with its export economy focused on electrical devices and in geopolitical competition with the US, stands vulnerable to these potential slowdowns. Though this cyclical downturn offers a possible glimpse into future trade patterns, a recovery in the electronics market may likely boost US imports from China. However, we expect the long-term trend of migrating supply chains to LATAM and ASEAN countries to continue.



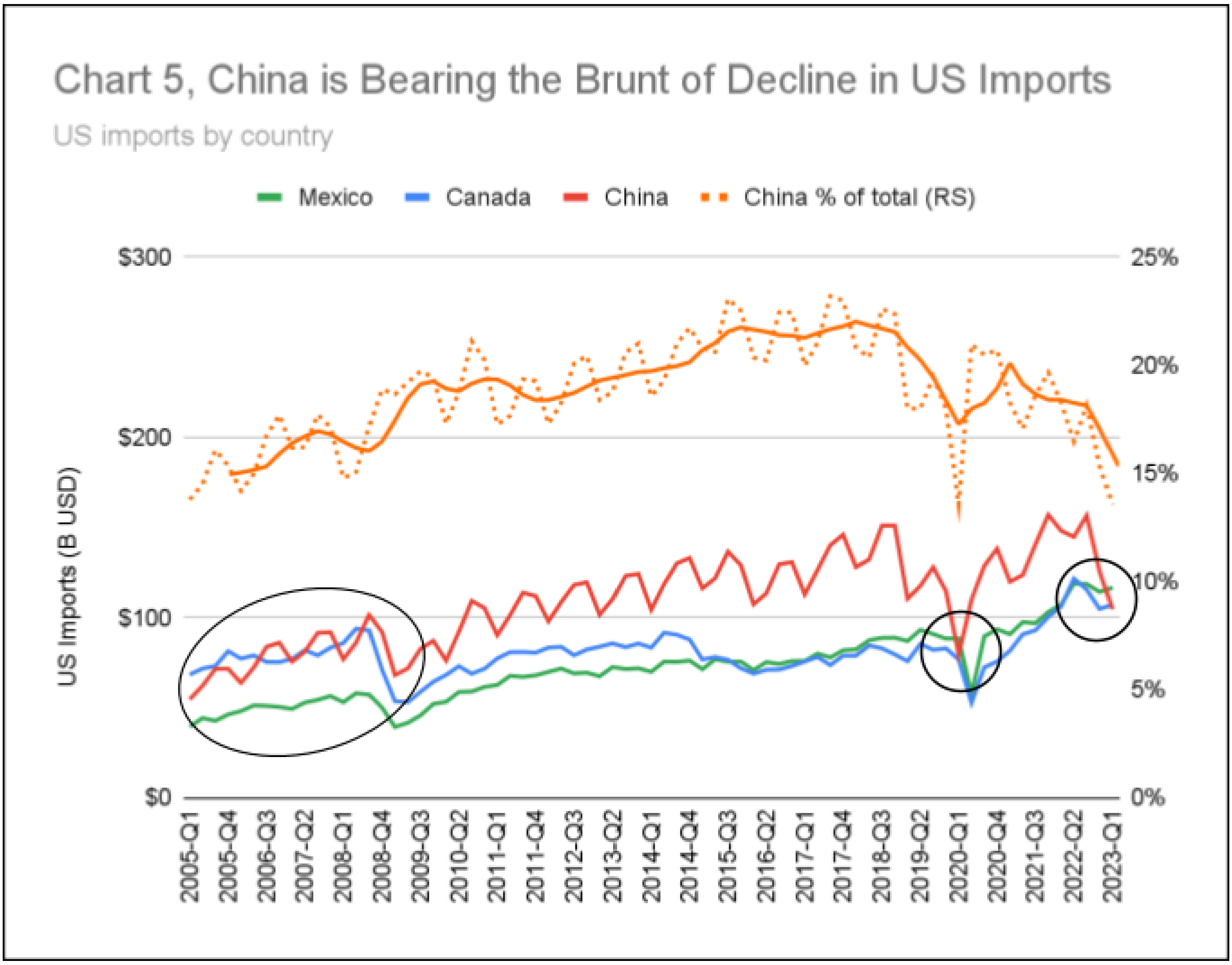


Chart 5, China is Bearing the Brunt of Decline in US Imports
US imports by country
Mexico
Canada
China
China % of total (RS)
US Imports (B USD)
$300
$200
$100
$0
25%
20%
15%
10%
5%
0%
2005-Q1
2005-Q4
2006-Q3
2007-Q2
2008-Q1
2008-Q4
2009-Q3
2010-Q2
2011-Q1
2011-Q4
2012-Q3
2013-Q2
2014-Q1
2014-Q4
2015-Q3
2016-Q2
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2018-Q3
2019-Q2
2020-Q1
2020-Q4
2021-Q3
2022-Q2
2023-Q1

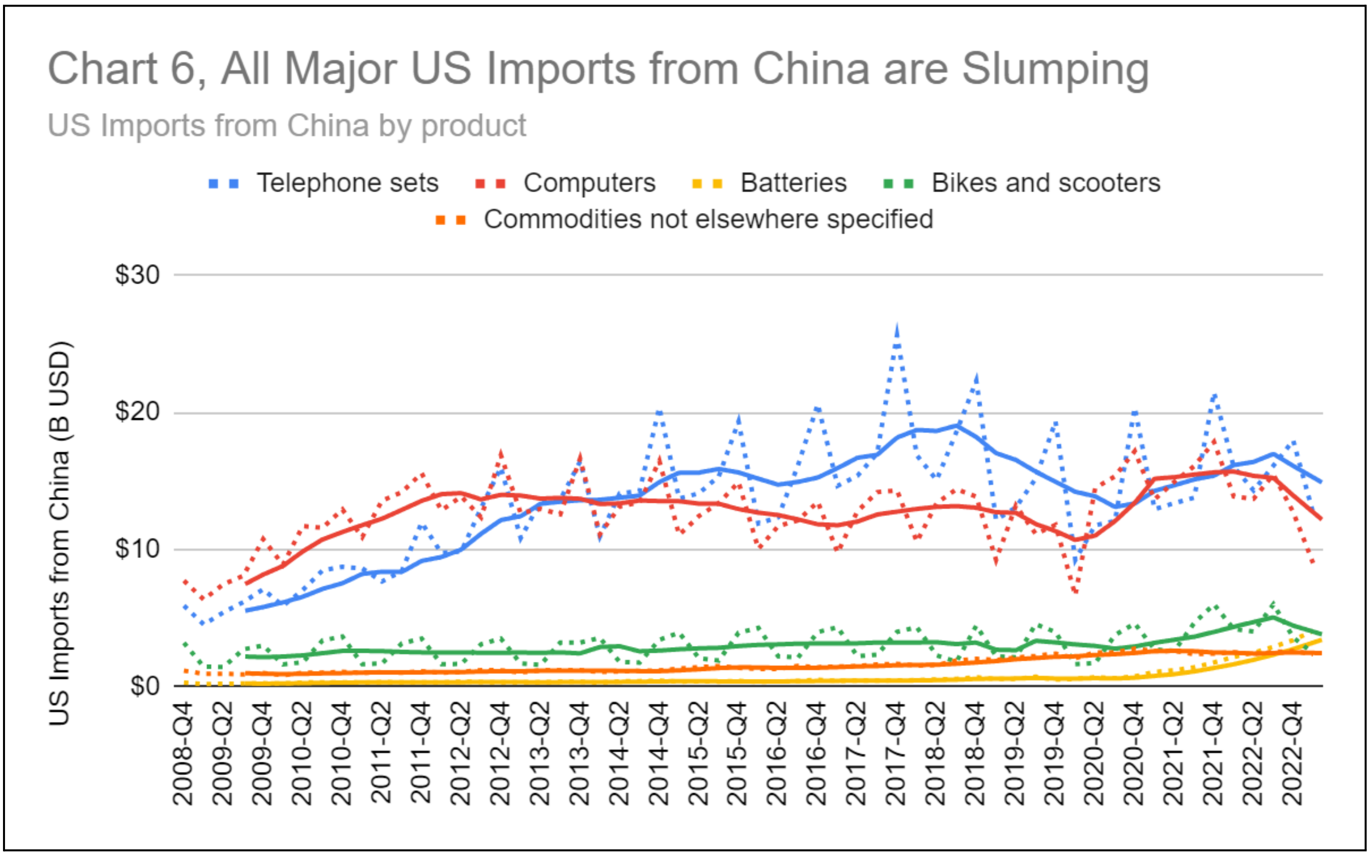
Chart 6, All Major US Imports from China are Slumping
US Imports from China by product
Telephone sets
Computers
Batteries
Bikes and scooters
Commodities not elsewhere specified
US Imports from China (B USD)
$30
$20
$10
$0
2008-Q4
2009-Q2
2009-Q4
2010-Q2
2010-Q4
2011-Q2
2011-Q4
2012-Q2
2012-Q4
2013-Q2
2013-Q4
2014-Q2
2014-Q4
2015-Q2
2015-Q4
2016-Q2
2016-Q4
2017-Q2
2017-Q4
2018-Q2
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2022-Q2
2022-Q4

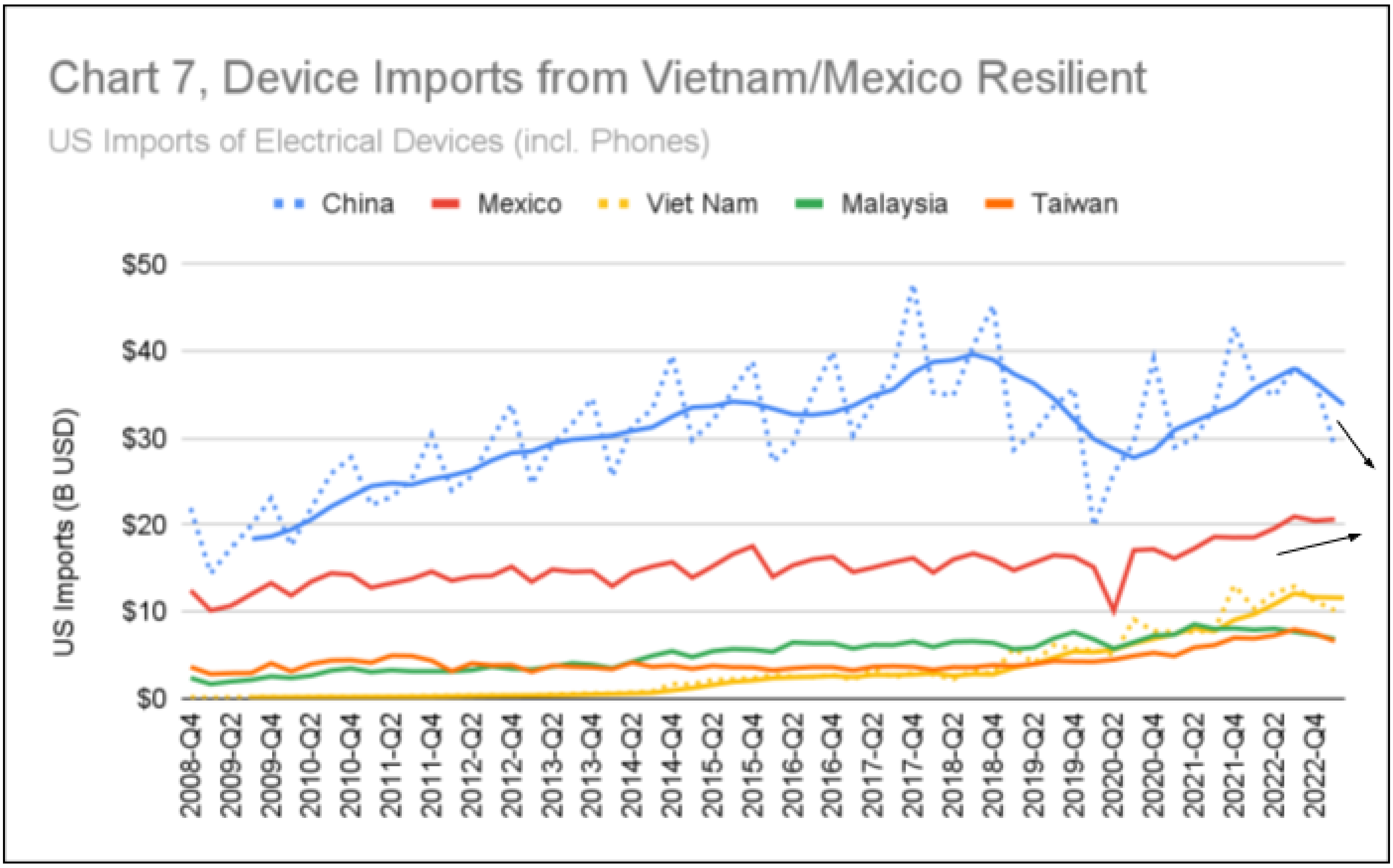
Chart 7, Device Imports from Vietnam/Mexico Resilient
US Imports of Electrical Devices (incl. Phones)
China
Mexico
Viet Nam
Malaysia
Taiwan
US Imports (B USD)
$50
$40
$30
$20
$10
$0
2008-Q4
2009-Q2
2009-Q4
2010-Q2
2010-Q4
2011-Q2
2011-Q4
2012-Q2
2012-Q4
2013-Q2
2013-Q4
2014-Q2
2014-Q4
2015-Q2
2015-Q4
2016-Q2
2016-Q4
2017-Q2
2017-Q4
2018-Q2
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2021-Q4
2022-Q2
2022-Q4

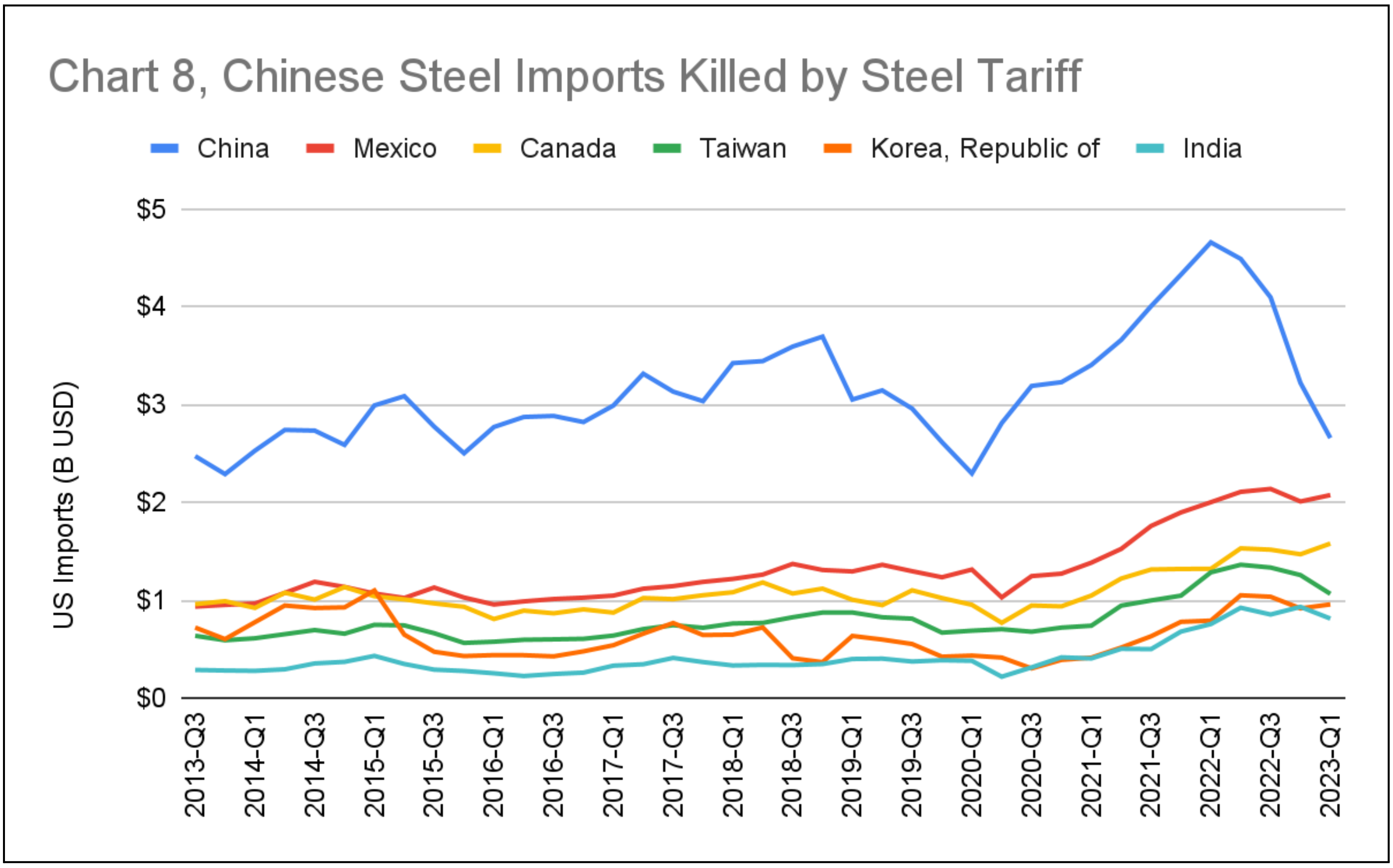
Chart 8, Chinese Steel Imports Killed by Steel Tariff
China
Mexico
Canada
Taiwan
Korea, Republic of
India
US Imports (B USD)
$5
$4
$3
$2
$1
$0
2013-Q3
2014-Q1
2014-Q3
2015-Q1
2015-Q3
2016-Q1
2016-Q3
2017-Q1
2017-Q3
2018-Q1
2018-Q3
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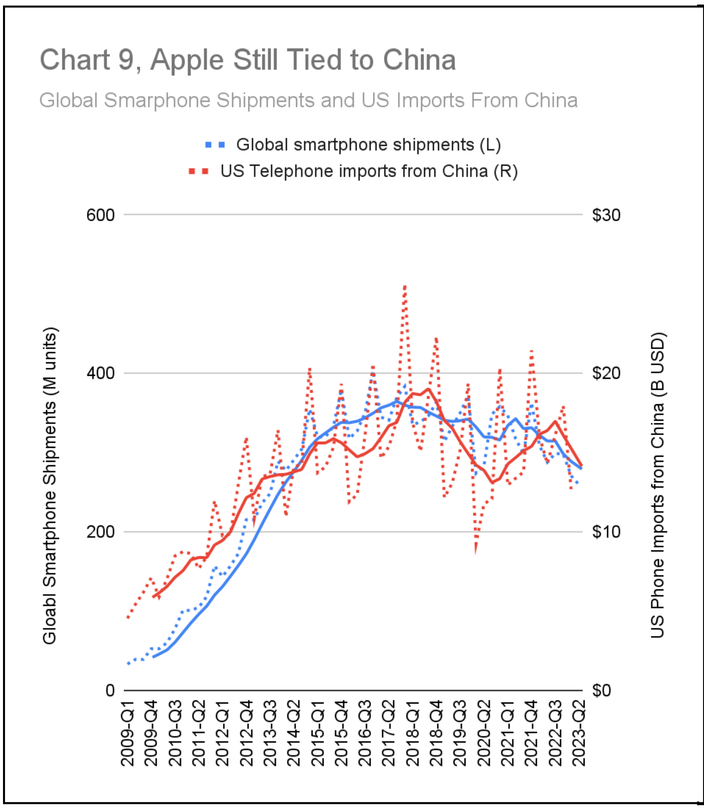
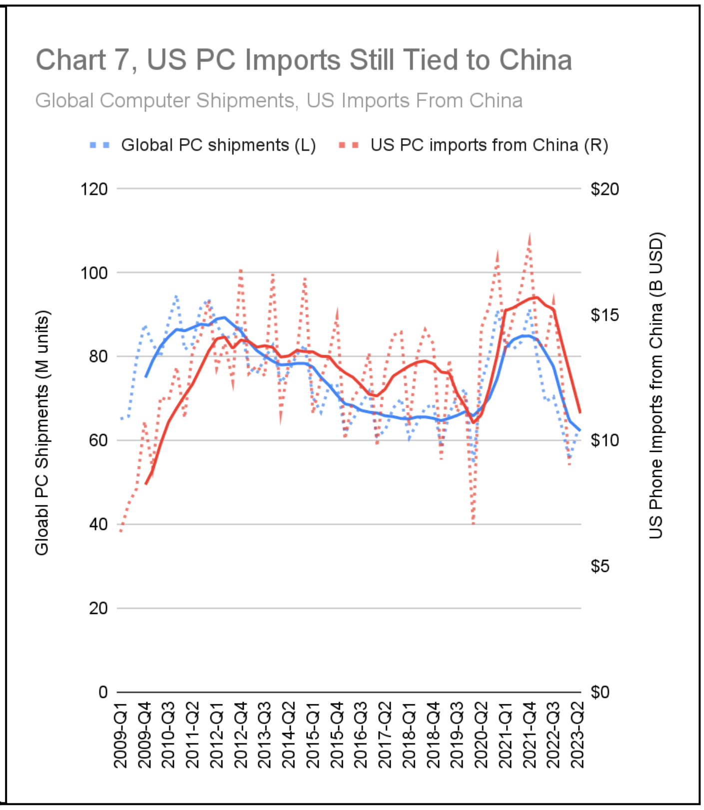
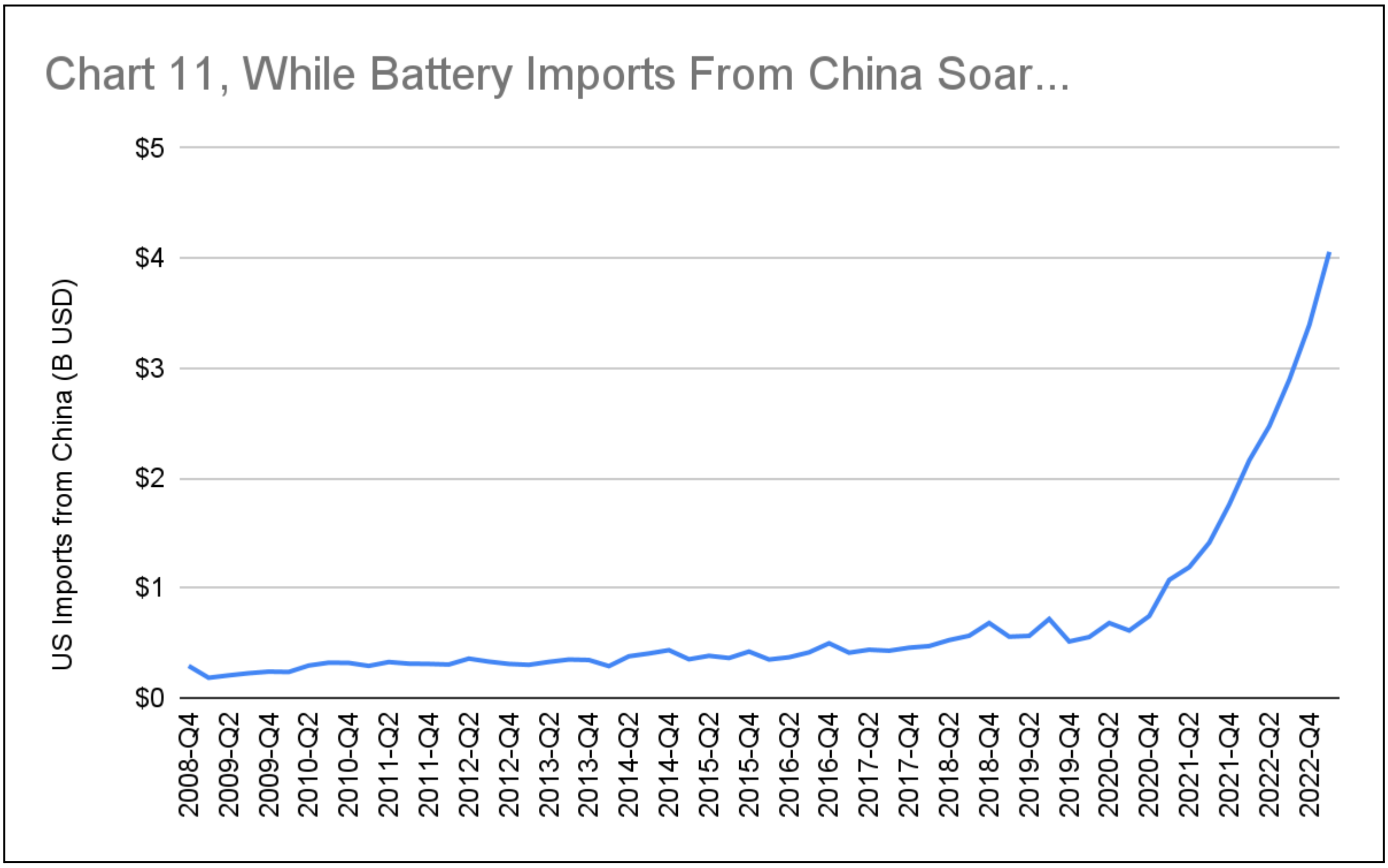
2022-Q1
2022-Q3
2023-Q1





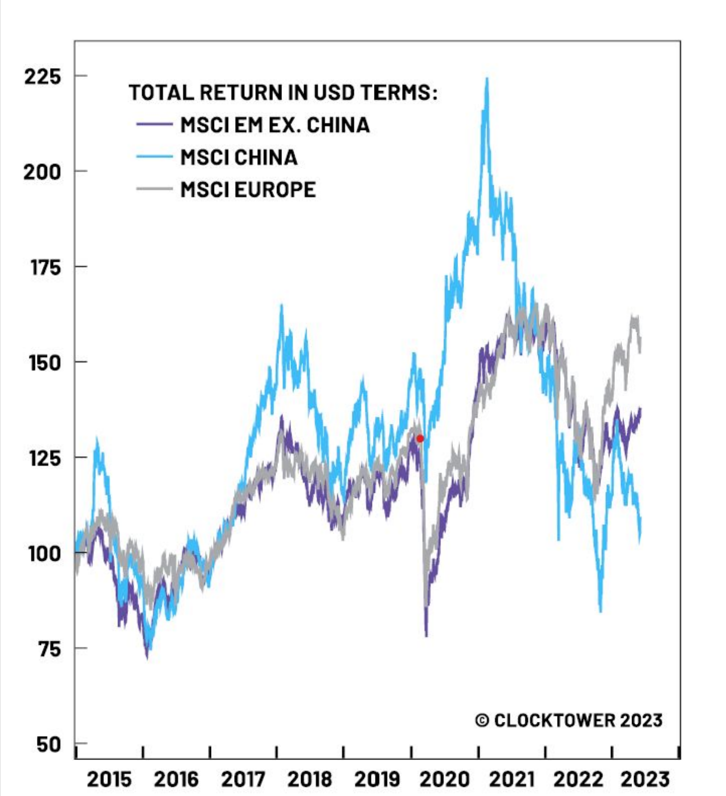


[Between hope and hype for Toyota's 'solid-state' EV batteries | Financial Times]
[Toyota says solid-state battery breakthrough can halve cost and size | Financial Times]

Political: Seeking Stability, Reaching for Power

One Reason China Is Willing to Engage Again: Its Troubled Economy - The New York Times
Beijing Launches Policies to Boost Consumption—But Not Major Stimulus - WSJ
Mundell–Fleming model - Wikipedia

Possible Chinese Stimulus: In an unusual trend, Chinese assets have underperformed dramatically against European and emerging market (EM) assets. This underperformance is primarily due to delayed stimulus from Chinese policymakers and embedded geopolitical risk impacting China's investability. Currently, China is battling a balance sheet recession and outright deflation, pushing policy makers towards familiar monetary easing strategies such as interest rate cuts, quantitative easing, and fiscal stimulus. Depending on when Beijing implements these fiscal strategies, China may become an imminent catalyst for global markets. Thus far the stimulus response from Beijing has been muted.



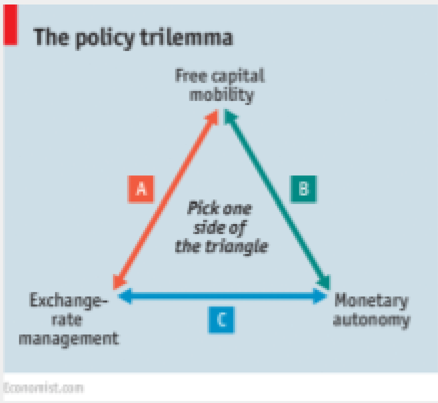
NOTE: ALL SERIES REBASED TO JANUARY 1, 2015 = 100.
SOURCE: BLOOMBERG FINANCE L.P., MACROBOND.

Seeking Stability for US Elections: As we approach the 2024 U.S. Presidential elections, with the Biden administration aiming to secure another term, economic stability becomes paramount. History shows that an incumbent party is often challenged in reelection efforts during a recession. Hence, the Federal Reserve's pursuit of a soft economic landing is crucial.

Simultaneously, foreign policy plays a significant role, and it is critical that it aligns with these economic goals. It is therefore understandable that the Biden administration is striving to mitigate risks, particularly with geopolitical hotspots like China and Iran. However, these diplomatic efforts do not guarantee the desired geopolitical equilibrium or the anticipated soft landing for financial markets. In such volatile times, uncertainty remains a constant, potentially disrupting the current administration's re-election strategy.

How long can Chinese Monetary Policy be Made in America?

The Yuan-USD peg, a fundamental aspect of the monetary landscape for the last thirty years, is facing mounting pressures. As the U.S. Federal Reserve adopts strategies to curb inflation with rising rates, it exerts a constricting monetary influence on China through the peg. U.S. policy rates could soar to between 6-7% coupled with a declining money supply, while China is grappling with economic challenges and needs to implement measures like QE, ZIRP and MMT. These stimulative measures would put downward pressure on the RMB/USD, which is why Beijing is trying to push domestic consumption and de-dollarisation (with limited success). They are forced between a rock and a hard place. If the peg were to break, this would have a seismic effect on the global economy reminiscent of Nixon's 1971 move to unchain the USD from gold.



Reassuring private business in China: After more than two years of crackdowns on private enterprise the CCP is courting capitalists again. The Party's Central Committee and the State Council released a 31-point action plan that outlines the general requirements and guiding principles for promoting the development of the private economy in China. It emphasizes the importance of implementing Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era and the guiding principles from the 20th National Congress of the CPC. The key points include:

1. **Improving market-oriented restructuring**: Supporting private enterprises facing financial difficulties but with development prospects through bankruptcy reorganization and settlement procedures. Removing barriers to market access: Eliminating bureaucratic hurdles and access barriers that hinder private enterprises from starting or expanding their businesses.
2. **Increasing policy support for the private economy**: Implementing various support policies such as financing support, prevention of overdue payments, and workforce supply and employment demands.
3. **Strengthening the rule-of-law guarantee**: Protecting property rights, combating corruption, and improving intellectual property protection for private enterprises.
4. **Promoting high-quality development**: Encouraging private enterprises to enhance governance structures, invest in technological innovation, and participate in major national strategies.
5. **Strengthening social credit mechanisms**: Enhancing credit information recording and sharing systems, encouraging good credit behavior while imposing penalties for dishonesty.
6. **Fostering a positive social atmosphere**: Guiding public opinion to recognize and respect the private economy's contributions, supporting entrepreneurs in fulfilling social responsibilities.
7. **Strengthening organization and implementation**: Centralizing leadership by the Communist Party of China (CPC), improving incentive and restraint mechanisms, and conducting assessments and evaluations.

"After defying temptation for decades, China's political economy under Xi has finally succumbed to a familiar pattern among autocratic regimes. They tend to start out on a "no politics, no problem" compact that promises business as usual for those who keep their heads down. But by their second or, more commonly, third term in office, rulers increasingly disregard commercial concerns and pursue interventionist policies whenever it suits their short-term goals. They make examples of a few political rivals and large multinational businesses. Over time, the threat of state control in day-to-day commerce extends across wider and wider swaths of the population. Over varying periods, Hugo Chávez and Nicolás Maduro in Venezuela, Recep Tayyip Erdogan in Turkey, Viktor Orban in Hungary, and Vladimir Putin in Russia have all turned down this well-worn road.

…Xi might take economic measures to paper over the cracks for some time, as Orban and Putin have done successfully, using EU funds and energy revenues, respectively. With targeted government spending and sector-specific measures, such as public-housing subsidies and public assurances that the government's crackdown on tech firms is over, Xi might still temporarily boost growth…But those dynamics will not last forever. As many observers have rightly pointed out, youth unemployment in China is troublingly high, especially among higher-educated workers. If CCP policies continue to diminish people's long-term economic opportunities and stability, discontent with the party will grow. Among those of means, some are already self-insuring. In the face of insecurity, they are moving savings abroad, offshoring business production and investment, and even emigrating to less uncertain markets. Over time, such exits will look more and more appealing to wider slices of Chinese society." *The End of China's Economic Miracle | Foreign Affairs*

Geopolitical: Risk-adjusted return tied to Asian Supply Chain

In the wake of current geopolitical realities, companies are presented with a unique window of opportunity for a period of detente to strategically reorganise their supply chains to less conflict-prone areas. As the Indo-Pacific strategy unfolds, the stakes are high for countries along the first and second island chains, and thus, considerations around the reorganisation of supply chains have become more crucial than ever.

On one hand, the risk decreases the further the supply chain is located from the Taiwan Strait, the fulcrum of the first island chain and a potential hotspot for geopolitical tensions. On the other hand, the cost of relocating supply chains farther away from China's manufacturing prowess could be significant. In essence, a risk-adjusted return is tied to the geographical location of the supply chain. Companies must consider an optimal balance between risk and cost when contemplating such a strategic shift. This involves weighing the decreasing geopolitical risk against the increasing operational costs as one moves farther from the Taiwan Strait, an essential navigation route in the Indo-Pacific region.

Malaysia-Australia supply chain would have the advantage of sea access through the Malacca Strait, a critical sea lane. While this region remains within China's perceived sphere of influence, it also lies within the patrol capabilities of India and Australia. The joint strategic vision of India and Australia for a free, open, inclusive, and rules-based Indo-Pacific region could offer some assurance of security and stability for supply chains along this route. Vietnam is gathering interest amongst Australian manufacturers. While Ho Chi Minh City is close to the southern sea lanes of SE Asia, Hanoi is just about encircled by Hainan island.

While this detente period provides some respite, it's crucial to remember that geopolitical landscapes can shift quickly. Companies should view this as an opportune time to examine, adjust, and strengthen their supply chains in the Indo-Pacific region. It's a balancing act that requires thoughtful consideration of risk, cost, and strategic alliances. The ultimate goal for companies should be to secure the most resilient, efficient, and risk-adjusted supply chains that will withstand the uncertainties of the future geopolitical environment.

[The U.S.-China competition in the Pacific Islands]

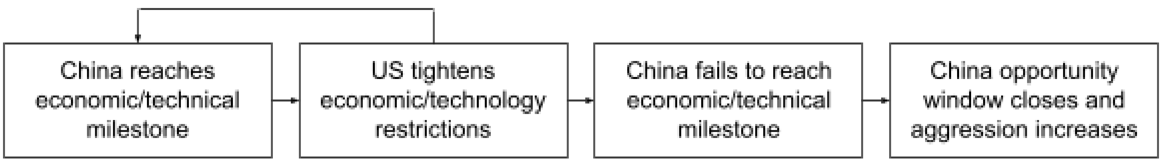
3. Equilibrium is a Far-Off Prospect

[A War With China Would Be Unlike Anything Americans Faced Before]

U.S. Tech Restrictions on China's Has Wide Ranging Impact
A core question in the current geopolitical landscape centres on whether global blocs can secure access to essential resources and technologies that support their security systems. Specifically, U.S. technology restrictions on China, raise questions regarding their impact on China's military, economic, and technological trajectory. While these restrictions may not pose an immediate threat, their long-term implications on productivity growth, AI development, and Chinese software competitiveness merit closer examination which we will delve into in the next newsletter.

A future ready force that can engage in total war will be absolutely [hamstrung by these restrictions] in command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR), logistics, dogfighting, strategy, and planning. However, in a limited conflict over Taiwan, their effect can be mitigated - cruise missiles, javelins, rockets, tanks, ships, and even jets tend to run on older chip technology that China can currently produce domestically (on US software running US machinery). In a hypothetical invasion, China could launch a bombardment of Taiwan, targeting critical infrastructure such as air bases, naval bases, ports and bunkers, effectively isolating the island.

China's Success in Countering Technology Restrictions
China's success in overcoming the U.S.-imposed technical challenges may lead Beijing to a critical juncture where continued economic development is in jeopardy thereby increasing its stress level. China's success in overcoming the technical challenges imposed by U.S. tech restrictions could influence their choice to adopt aggressive measures. However, the more successful China is, the higher the likelihood of the U.S. ramping up its technology restrictions, potentially giving rise to a self-reinforcing feedback loop. Understanding the impact of these restrictions is critical for awareness of how the future could evolve so tune in to the next newsletter.



Both the US and China are driven by their respective goals; the US to secure its leadership position, and China to realise its potential. Escalation seems inevitable until both of those goals are satisfied.

Danger Zone: The Coming Conflict with China
"Danger Zone" by Hal Brands and Michael Beckley posits that China, a peaking power, might make drastic moves against rivals as it attempts to capitalize on fleeting geopolitical opportunities before its window of influence closes. Drawing from historical instances, the authors propose that rising powers often resort to aggression when their fortunes dwindle, obstacles accumulate, and they face the stark reality of accomplishing their objectives now or forfeiting them indefinitely. Brands and Beckley describe the strategy of American policymakers to contain but not provoke the Chinese Communist Party (CCP) while China is at its peak strength. They point out the long-term challenges China grapples with, including demographic collapse, institutional decay, strategic encirclement, and economic inefficiency. The tech restrictions, while not fatal to China's economy—a cornerstone of the CCP's legitimacy—do mitigate its economic and military potency. As China strategizes to establish a domestic chip supply chain, the U.S. aims to uphold its lead to endure into the long term, leveraging its advantages.

Ukraine Security Equilibrium Depends on Support

How to ensure a strong, independent Ukraine

Russia-Ukraine Conflict Dynamics

Numerous experts hold a grim view of the ongoing conflict, that, failing to subjugate Ukraine, Russia may opt for perpetuating a 'frozen conflict' instead of accepting a peaceful resolution. Consequently, Ukraine's only viable strategy — backed by Western support — is to whittle down Russia's power. The First Korean War (1950-53) provides a fitting historical parallel. Europe will be charged with Ukraine's economic restoration, while the US will offer explicit security assurance, or possibly endorse Ukraine's own nuclear development — a feat well within its reach.

"*Should Ukraine manage to repel Russian military forces back to their pre-1991 boundaries, the conflict will not be definitively resolved. Ukrainian intelligence estimates that even if hostilities were to cease this year, Russia could restore adequate capabilities to reignite the war by 2027-2028 — assuming that economic sanctions persist.*" The conflict cannot end until Ukraine is part of the West

Trump consoles the other tough guy

Importance of Direct Security Support

Some US media outlets have rebranded the strategy of refusing a truce and exhausting Russia as a form of distracting neo-conservative interventionism that syphons American resources away from domestic issues. If such a narrative gains traction, popular opinion could prompt a new administration to pursue a peace agreement. An armistice may be achieved, and hostilities might temporarily cease. But, unless the US provides direct security support, Russia will bide its time, choosing a future moment to strike. Just as South Korea hosts 50,000 US troops and unconfirmed but widely believed USAF nukes, and Israel boasts a substantial US-funded military including an unacknowledged nuclear arsenal, Ukraine requires similar backing for ensured safety. While this is understood in Washington, the decision to commit fully is yet to be made. The counterexample is Iraq where the power vacuum created by Obama's withdrawal allowed extremist ideologies to converge into a formidable threat. The US must stay committed to achieving a stable security situation in Ukraine.

Taiwan presents a parallel. The island nation lives under the constant shadow of a powerful and assertive China, much like Ukraine with Russia. The ongoing tensions in the Taiwan Strait, mirror the tactics Russia employs around Ukraine's borders. Just as Russia uses power plays to assert dominance over Ukraine, China leverages its military might to keep Taiwan in check. The point to underline here is that while the geopolitical dynamics of Ukraine-Russia and Taiwan-China have distinctive contexts, they both illustrate the challenges smaller nations face when juxtaposed against regional giants. Both scenarios emphasize the crucial role of US backing, whether through direct military support or as a deterrent, in maintaining the status quo. The lessons from one can provide strategic insights for the other, and thus, a cohesive approach towards such global hotspots is indispensable for preserving international peace and order.

China Security Equilibrium is in Flux

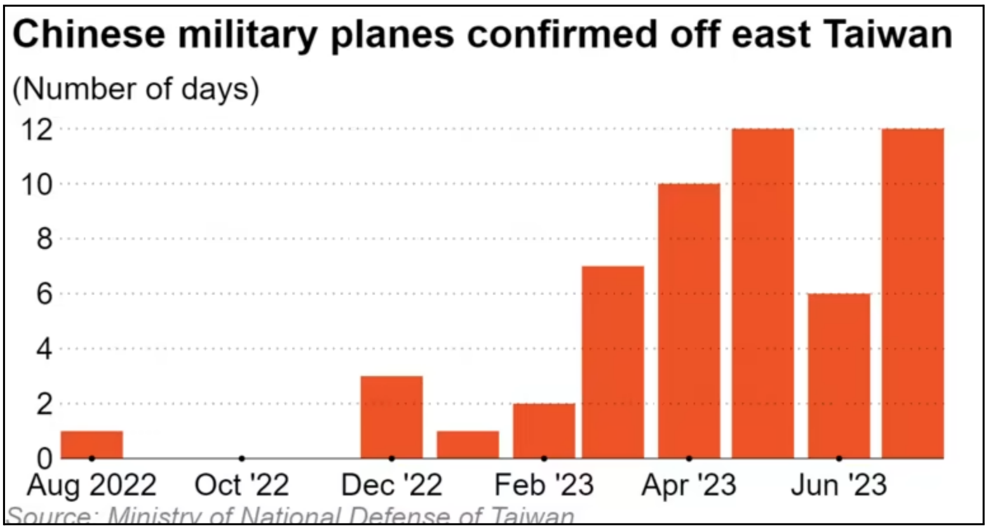
Could economic indicators give an early warning of a war over Taiwan?
The Next Major War: Can the US and its allies win against China, by Ross Babbage

Escalating Tensions in the Pacific Rim
Recent developments in the Pacific have created a more complex and potentially volatile environment, with China announcing joint naval and air force exercises with Russia in the Sea of Japan. President Xi Jinping's speech on July 6th, warning of increased instability and uncertainty in China's security situation, has further added to the concern. Security expert Ross Babbage's alarming assessment of a 50% probability of conflict in the Pacific within five years necessitates a comprehensive evaluation of the strategic implications.

China's assertiveness in the Pacific Rim is not merely a matter of military posturing. It is a strategic attempt to safeguard its maritime trade and enhance regional influence. Decoupling, which offers China increased autonomy, also heightens its capacity to disrupt regional dynamics. An equilibrium appears distant, with diplomatic engagements proving ineffective thus far. Alternatives such as destruction/reconstruction (akin to Japan/Germany) is a grim prospect. 'Empire fatigue' like that used on the Soviet Union (vis a vis Danger Zone, Zen on Tech V13) may limit China's influence in the long term, but conflict remains a disconcerting possibility.

Russia's recent actions reinforce a pattern observed in declining great powers, where aggression often increases. Despite the logical need for consolidation and defence of existing land claims, Putin's pursuit of conflict demonstrates how insecurity often drives decisions. As Beijing faces potential decline, this pattern could extend to China as well, increasing the risk of conflict initiation. A path of least resistance leading to equilibrium in the Pacific is challenging to foresee, making vigilance and adaptability vital for investors navigating this uncertain landscape.

Decoupling provides China with more autonomy, and capacity to disrupt the regional dynamics in the Pacific.

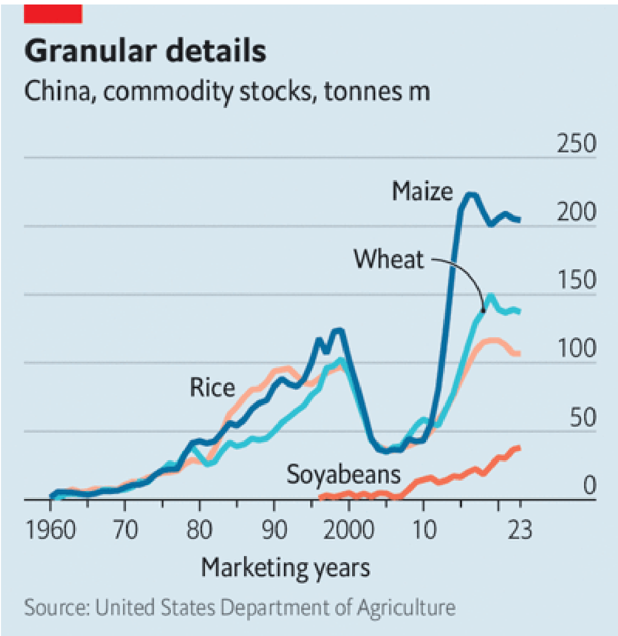


CHINA IS PREPARING FOR WAR

[China's military speeds preparations to blockade Taiwan]
[Island Blitz: A Campaign Analysis of a Taiwan Takeover by the PLA | Center for International Maritime Security]
[War-Gaming Taiwan: When Losing to China Is Winning]
[China Prepares for War: A Timeline]

Hypothetical Cross-Strait Invasion Scenario
The U.S. Intelligence Community would be on alert for various signs of potential Chinese aggression towards Taiwan, according to insights from John Culver of the Carnegie Endowment for International Peace. These warning signals may include:

- An increase in munitions production.
- Efforts to protect the Chinese economy from sanctions.
- Freezing and retrieving Chinese assets from abroad.
- Accumulating supplies and materials needed for warfare.
- Psychological preparation of the Chinese public for possible conflict.
- Large-scale deployment of military assets such as ships, planes, and vehicles.
- Introduction of general mobilization measures, like “stop-loss” strategies for conscripts.



The Economist

These indicators would enable the U.S. and Taiwan to detect signs of a likely invasion, similar to the five-month lead-up to the Russian invasion of Ukraine. Things are evolving quickly and China's readiness for conflict can be seen in the following developments:

Population Psychological Preparations:

- The publication of Xi Jinping's secret speech calling for resistance against "hostile forces."
- Instructions to Chinese nationals to repatriate foreign capital, a step towards sanction-proofing.
- Restriction of access to specific data series like Wind, controlling the economic narrative.

Mainland Preparations for War:

- Construction of air raid shelters and combat hospitals in Fujian pointing to readiness for military action.
- Xi Jinping's increasingly aggressive stance towards Taiwan.
- A reclassification of potential military actions against Taiwan, mirroring Putin's approach in Ukraine.

Efforts to Insulate from Severe Financial Sanctions:

- An order in May 2022 to insulate China's banking system from potential U.S. sanctions.
- Unusual selling off of treasury balances, possibly aimed at protecting reserves.
- Defaults on dollar-based bonds by Chinese property developers.
- A shift in state-owned banks towards issuing renminbi-denominated debt, affecting capital markets.

These actions and preparations reflect a complex and deliberate strategy that combines military readiness with economic maneuvers. The integration of these elements paints a comprehensive picture of China's potential path towards conflict and the measures taken to mitigate financial and geopolitical risks.

The Third War in the South China Sea

Economic Insulation and Geopolitical Strategy in the Taiwan Strait

The situation in the Taiwan Strait presents a complex and volatile scenario, with potential ramifications for international markets. The key to China's potential military strategy in Taiwan rests on Beijing's ability to protect its economy from international embargoes. This economic insulation would allow China to pursue aggressive military actions without immediate financial repercussions.

Potential Countermeasures and Complications

An invasion would likely open with a rapid attack on Taiwan's military infrastructure including air bases, naval bases, ports, bunkers, and other critical assets. The hypothetical success of this maneuver could diminish Taiwan's will to resist, leading to a swift resolution of the conflict in China's favor. Countermeasures by the U.S. and Japan could slow China's progress. By engaging Chinese forces as they approach Taiwan, these nations might enable Taiwan to establish defences. However, such a strategy could lead to a chaotic and entangled situation, reminiscent of the complexities and uncertainties witnessed during the Opium Wars.

Critical Questions for Investors to Consider:

- **China's Preparedness**: As of today, China possesses the military capability to invade Taiwan. The question is not about capability but about economic readiness to withstand the fallout.
- **Potential U.S. Assistance**: The current assessment suggests that the U.S. might be unable to offer meaningful direct assistance to Taiwan during an immediate attack.
- **Counter Blockade Strategies**: A point of debate is whether the U.S. and its allies would impose a broader counter blockade against China. Could China endure such a cutoff, and if so, for how long?
- **Global Reaction to Maritime Blockade**: The broader international community's willingness to accept a U.S. blockade of maritime trade with China is another crucial factor. The strategic and economic interconnectedness of global powers may influence this decision, and it's essential to evaluate whether this factor matters in the context of immediate geopolitical imperatives.

An absolute disaster