



Euan Munro Chief Executive Officer Newton Investment Management



Euan Munro is Newton's new CEO having joined in June 2021. Euan is a seasoned investment management executive with a background in macro investing. He arrives from Aviva Investors where he was chief executive officer and a member of the Aviva plc group executive team for seven years. Prior to this, Euan spent nearly 20 years at Standard Life Investments (SLI) where he was head of multi-asset and fixed-interest investing and was latterly a member of that company's board.

Euan has a first class honours degree in Physics from the University of Edinburgh and is a Fellow of the Faculty and Institute of Actuaries. He is also a graduate of the Advanced Management Program at Wharton Business School, Philadelphia.

The Newton Investment Management Group has a strong reputation as a sustainable and thematic fund manager. Newton provides investment advisory services and is a subsidiary of BNY Mellon and manages \$150 billion of assets (as of June 30th 2021) with offices in London, New York, Boston and San Francisco.

Presentation: "Five key Investment Themes that will Continue to Deliver when the QE Tide Goes Out"



FIVE KEY IMPLICATIONS OF GREAT POWER COMPETITION

Euan G Munro,
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8 July 2022

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DATA CLASSIFICATION: CONFIDENTIAL

Great Power Competition sub-themes

GPC plays out across 5 dimensions

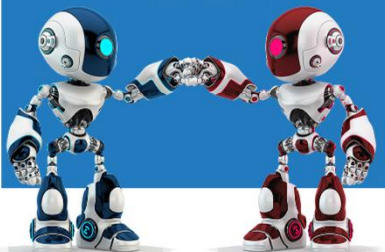
TRADE WAR

Adapting supply
chains



TECH WAR

The battle for
technological
supremacy



FINANCE WAR

Financial and
monetary dominance
and control



RESOURCE COMPETITION

Control of strategic
resources to boost
national advantage



SECURITY COMPETITION

Military and diplomatic
influence of territories
and values



Geopolitics and lessons from history

THUCYDIDES TRAP

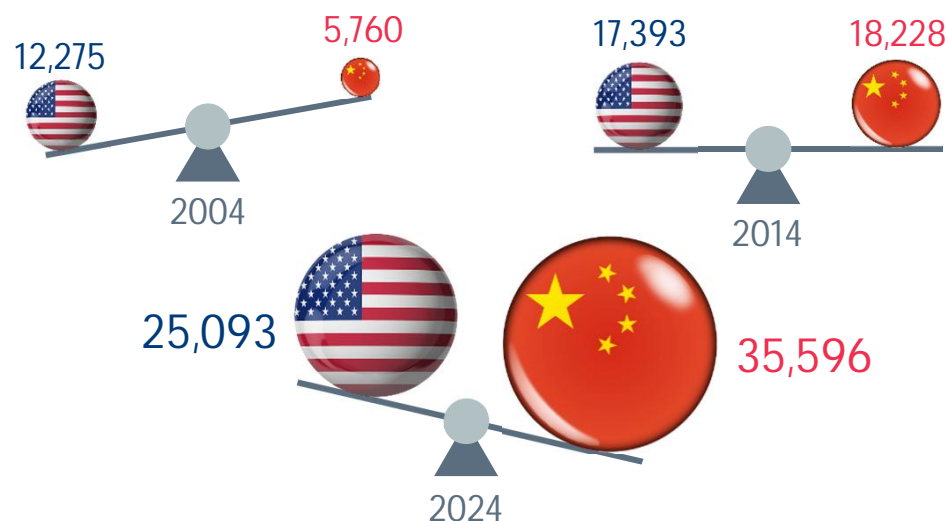
“it was the rise of Athens and the fear that this instilled in Sparta that made war inevitable”

Thucydides, c.400 BC

- § The Peloponnesian war (431-404 BC) is one of the earliest examples in history of war between a revisionist power (Athens) and a status quo power (Sparta).
- § Harvard academic Dr. Graham Allison found that 12 out of 16 cases of such dynamics in the last 500 years led to war.
- § Equilibrium balance of power has been transitory throughout history.

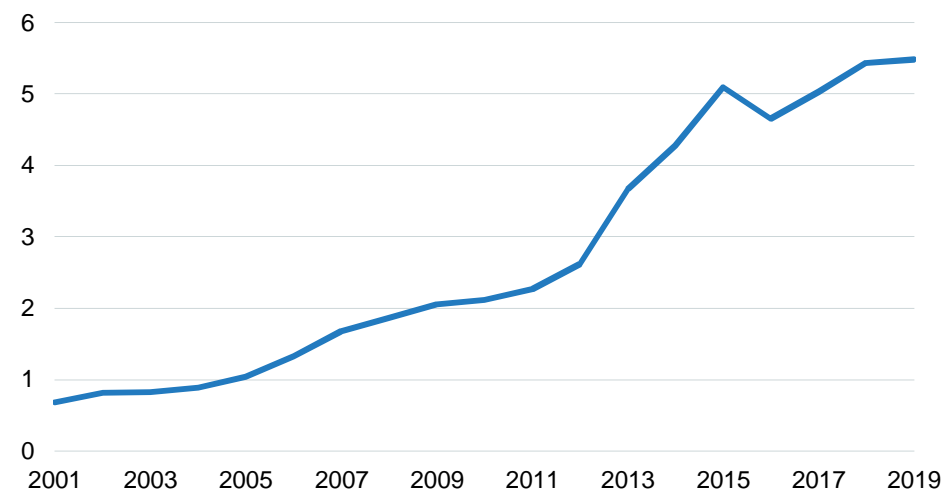
- § American hegemony is being tested.
- § China's rise has disrupted balance of power in the Indo-Pacific.
- § Russia's financial ascent over last 20 years emboldened its political and security ambitions.

GDP (PPP) in billions of dollars



Source: IMF, Economist Intelligence Unit

China/Japan Defense Spending Ratio (\$ nominal)



Source: SIPRI, Newton IM

Russian revisionism

- § Two significant waves of NATO expansion in 1999 and 2004 has taken the security organization to 30 members, pushing against Russia's historical line of sensitivity.
- § Putin: *"The breakup of the Soviet Union was the greatest geopolitical tragedy of the 20th century"*.
- § Missed opportunity: In the 1990s there was a window to build lasting democracy and market economy in Russia but Western reluctance to provide financial support led to Russian debt default and Putin leadership.
- § Russia recovered from 2000s due to commodity boom. Petrodollars enabled foreign reserves to reach c.\$600bn on the eve of 2022 Ukraine invasion.
- § Despite small economy and population relative to other great powers, Russia maintained the world's largest nuclear arsenal (c.6000 warheads). Asymmetric focus on cyber and information campaigns. Use of contract mercenaries.
- § Emboldened foreign policy post GFC included Crimea annexation, Syria, Libya, Venezuela and many African countries. "No limits" friendship with China.

NATO pre-1989



NATO today



Source: Base Map Copyright@FreeVictoriaMaps.com. December 2021.

Xi and Putin: "no limits" friendship

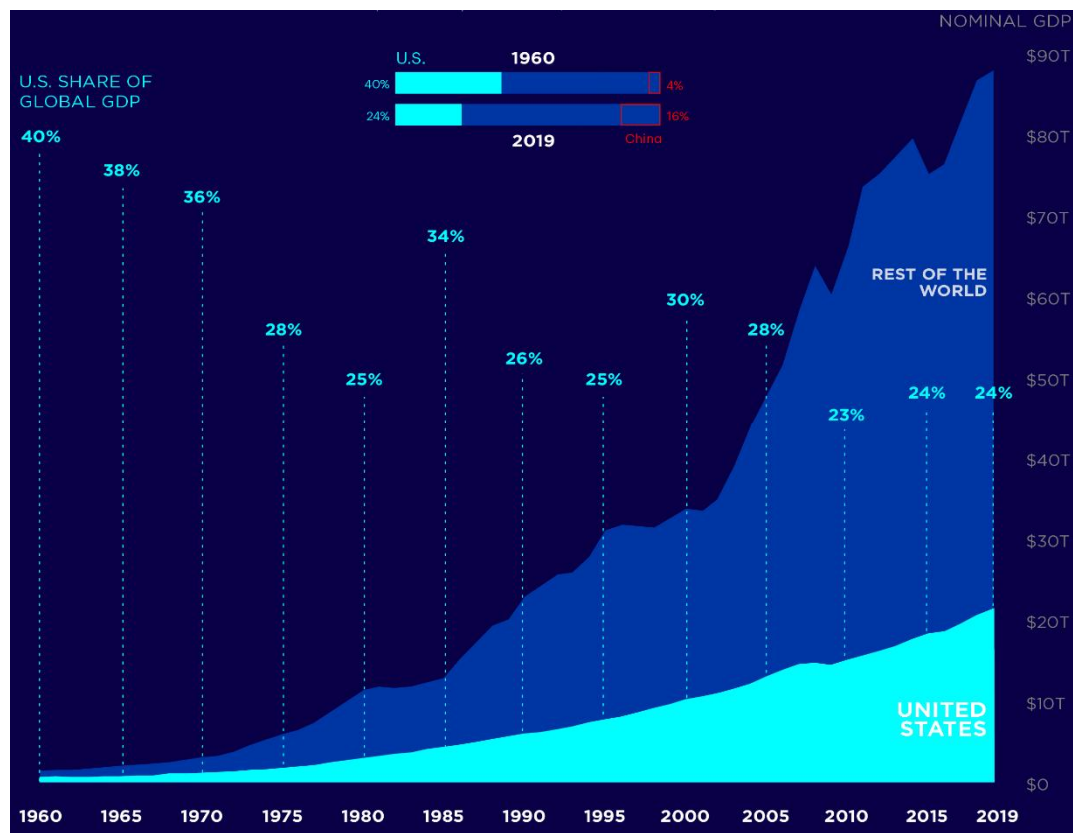
America's unipolar fatigue

- § "America should go not abroad, in search of monsters to destroy." - John Quincy Adams (1821).
- § America provided 70 years of global security public good.
- § Declining share of global GDP (40% to 24%).

- § Debt hangover from GFC, Trump populism, homeland priority for budget dollars, accelerated post pandemic.
- § Bipartisan support for 'America First' calls for less military engagement (2021 Afghanistan withdrawal).

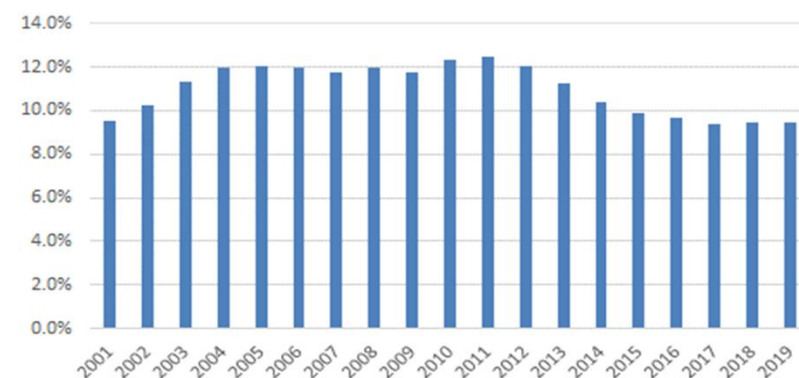
The US share of the world economy

The American share of the pie was at its peak after WWII, and has been on a slow, uneven decline ever since



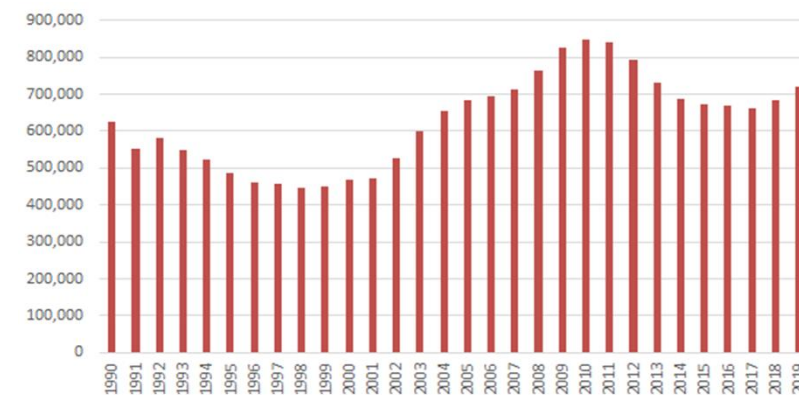
Source: World Bank, nominal GDP figures are in current US\$

Defence as % US government spending



Source: SIPRI, Newton IM

US defence spend in constant 2018 prices (\$m)



Source: SIPRI, Newton IM

History often rhymes – great powers make the same mistakes

BRITISH EMPIRE

- § First Anglo-Afghan War 1839-42.
- § Part of Geopolitical Great Game for influence in Central Asia between Britain and Russia.
- § Britain sought to defend its interests in India against Russia and potential invasion from an Islamic emir based in Kabul by sponsoring regime change.
- § After initially capturing Kabul, British forces retreated in 1842 and suffered heavy defeat (c.16,000 casualties).



SOVIET UNION

- § Soviet-Afghan war 1979-1989.
- § USSR backed the socialist Republic of Afghanistan government against Islamic mujahideen insurgents in a Cold War proxy conflict.
- § Heavy death toll for Afghans (c.10% of population) but ultimate withdrawal of Soviets (c.14,500 casualties).
- § The conflict is often cited as a major factor leading to the collapse of the Soviet Union and end of the Cold War.



UNITED STATES

- § War in Afghanistan 2001-2021.
- § George W Bush led invasion after 9/11 as Taliban harboring Al Qaeda and refused to extradite Bin Laden.
- § US (with 40 country coalition) and Northern Alliance war against Taliban insurgents. (c.2500 US casualties, 20,000 wounded).
- § Feb 2020, US-Taliban conditional peace agreement signed in Doha (already reneged on).
- § Biden withdrawal announced April 2021.



Initial military victory > stalemate > economic liability > face saving withdrawal

Source: British Empire: Historic UK – Britain's retreat from Kabul 1842, **Soviet Union:** The Atlantic – The Soviet Union War in Afghanistan 1979-1989, **United States:** History.com – Afghanistan War (Published August 2021)

GREAT POWER COMPETITION: FIVE DIMENSIONS

Trade war



- § US-China trade war initiated under the Trump administration had its origins in the scale of US trade deficits and the impact on American jobs.
- § Biden administration has added a “values” dimension to the trade war, given concerns around human rights abuses in Xinjiang province.
- § The current US-China trade relationship was ‘locked in’ under the trade agreement negotiated in early 2020 between Beijing and the Trump administration.
- § US Trade Representative Katherine Tai is studying options for China tariffs including possible reduction and/or enhanced specific targeting with new S301 investigations. For now, US import tariffs averaging 21% remain in place on two-thirds of China imports worth around \$335bn p.a.¹

US trade balance with foreign countries

US census bureau



Source: Bloomberg, 2022

Note: ¹ Peterson Institute for International Economics, June 2022.

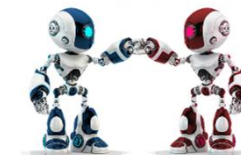
- § America's trade deficit with China remains more than 10% above the long-term average, despite the high tariffs in place.
- § Supply Chains:
 - Prior to covid, surveys revealed a large majority of US corporations doing business in China were content with their investments and supply chains.
 - Recent American Chamber of Commerce survey (May 2022) finds that 53% of American companies would reduce investment in China if covid controls persist.
 - Beneficiaries of China supply chain de-coupling in Asia would be India, Vietnam and Malaysia. Globally, Mexico and Poland would also stand to benefit.

US-China trade war tariffs: an up-to-date chart

US-China tariff rates toward each other and rest of world (ROW)



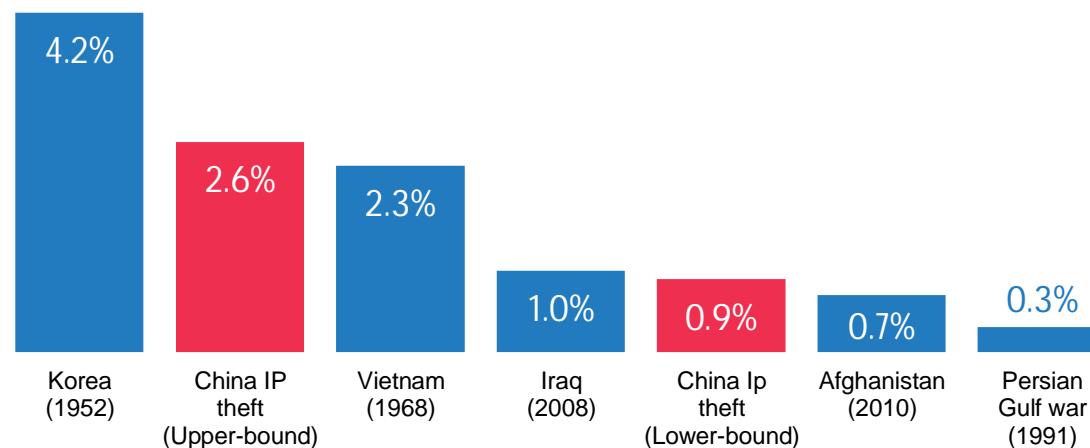
Source: Peterson Institute for International Economics, June 2022



- § Technology has become the primary channel for the US to exert strategic pushback on China: China still relies on western technology for productivity growth and to escape the middle-income trap.
- § Made in China 2025 is the country's strategic blueprint to dominate future global technology industries but served as a wake-up call to US policy makers.
- § Other concerns: 1) China's civil-military fusion means that US technology can end up in the hands of the PLA. 2) China's theft of US IP is estimated at more than \$200bn p.a.¹
- § **Huawei:** Initially placed on the US Entity List to target the company's 5G position amid national security concerns. Tougher Entity List restrictions now pose an existential threat to Huawei's entire business.
- § **SMIC:** China's semiconductor national champion prevented from accessing US semiconductor equipment. SMIC remains several generations behind US and international peers in circuit board capability. China relies on imports for 65% of its chips today.²
- § **Hikvision:** reports that US Treasury Department may add China's surveillance champion (150 countries, \$2.5bn profits 2021) to the SDN sanctions list, which would be a major escalation of the tech war.
- § China's leadership is proactively taking measures to prepare for full technology decoupling from the US. This includes the establishment of two technology boards on the country's main stock exchanges.

Chinese IP theft vs. America's wars at their peaks

Annual costs – % of US GDP in year



Source: US Congressional Research Service, Costs of Major US Wars (June 2010), update to the IP Commission Report (2017).

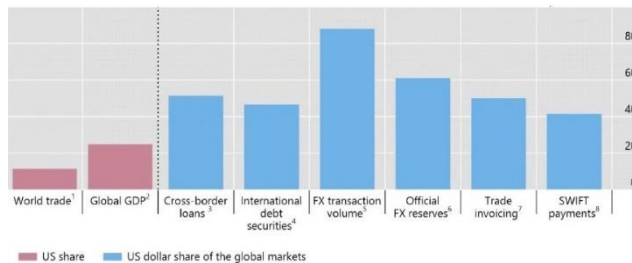


Notes: ¹ Source: National Bureau of Asian Research – Update to the IP Commission – The theft of American Intellectual property 2017; ² Source: The Economist Intelligence Unit - Tracking China's semiconductor investments 2018



- § The United States has a significant advantage over other great powers in global finance because of the power of the Dollar as the world's hegemonic reserve currency and the power of US banks in dominating the international finance system.
- § In the wake of Russia's Ukraine invasion, the US and EU sanctioned Russia's central bank, cutting it out of the international system and freezing c.50% of Russia's foreign reserves that were held internationally.

International role of the US dollar (%)

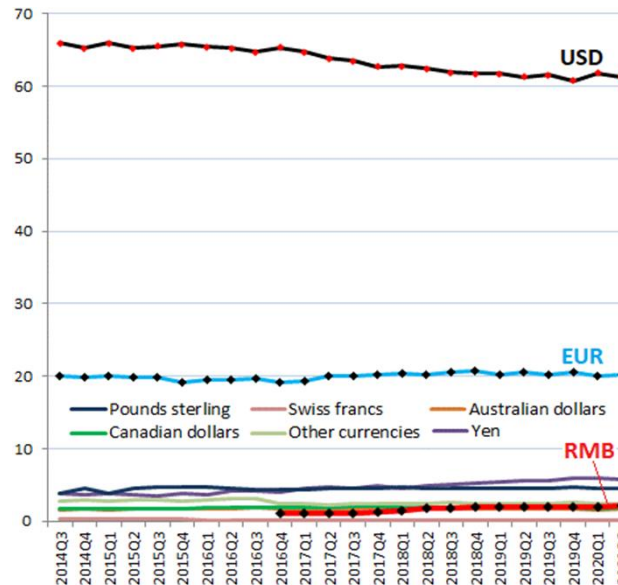


Source: Radian Partners, CLSA.

- § China, Russia and other middle powers are sensitive to the financial leverage that the United States has over them. Reducing dependency on the Dollar and developing alternative international payment systems is expected to be an urgent priority in the year ahead.
- § China must reform its financial services industry, open its capital account and allow a greater role for the Yuan in international trade and settlements. This is a multi-year process but one that has started.

US Dollar's declining hegemony

% of allocated reserves



Source: IMF, Wolfstreet.com, 2020.

- § Development of its Digital Yuan is also a major strategic move. Potential benefits of digital Yuan: 1) monetary sovereignty 2) security 3) surveillance and big data 4) grey economy and tax collection 5) capital controls 6) acceleration of Yuan internationalization.

Implications to USD

- § Bypassing SWIFT
- § Increased international acceptance to Yuan
- § In particular, the possibility of China using Yuan to import oil
- § Monetary intelligence – programmable monetary policies + implementations

OIL – USD - SWIFT DATA – YUAN – DE/EP



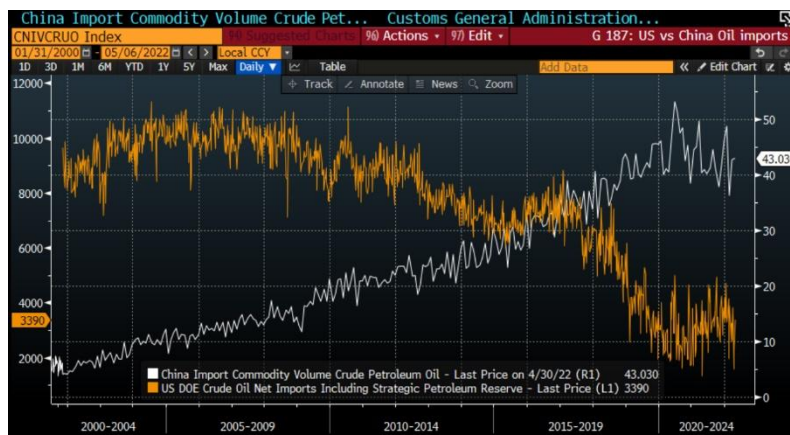
Resource competition



Outlook

- § In a world of intense national and economic rivalry, competition for natural resources would become more acute.
- § Population growth and energy transition will likely be major drivers of resource demand. Access to the right commodity at the lowest cost could determine economic competitiveness.
- § The emergence of distinct commodity blocs between democratic and autocratic nations is a possible outcome of great power competition.
- § Commodity trade also has close linkages with the finance war and currency hegemony: A significant pillar of the dollar's reserve status was built on America's role as a substantial crude oil importer and therefore commodity pricing in dollars; dollarization of petro-economies led to recycling of dollar surpluses back into US economy through investments.
- § US crude purchases from Saudi et al have fallen sharply. China established Shanghai RMB oil futures exchange in March 2018. International involvement has been growing, monthly trading now exceeds 5bn barrels.

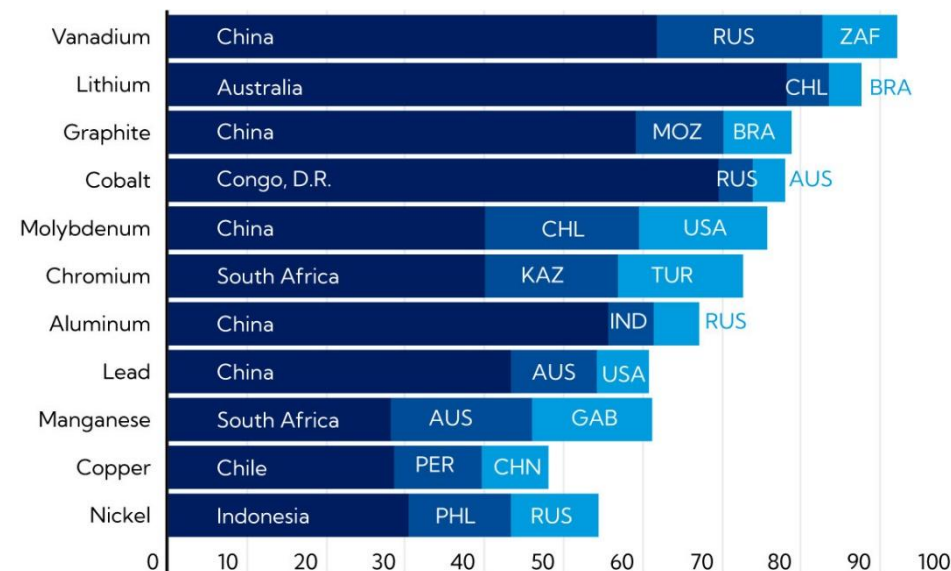
China vs US Crude Oil Imports



Source: Bloomberg, 2022.

Biggest producers

Supplies of several metals that are crucial to the green energy transition are heavily concentrated in just a handful of nations. (% of market)



Note: AUS=Australia, BRA=Brazil, CHL=Chile, CHN=China, COD=Congo, D.R., GAB=Gabon, IND=Indonesia, KAZ=Kazakhstan, MOZ=Mozambique, PER=Peru, PHL=Philippines, RUS=Russia, TUR=Turkey, USA=United States, ZAF=South Africa.

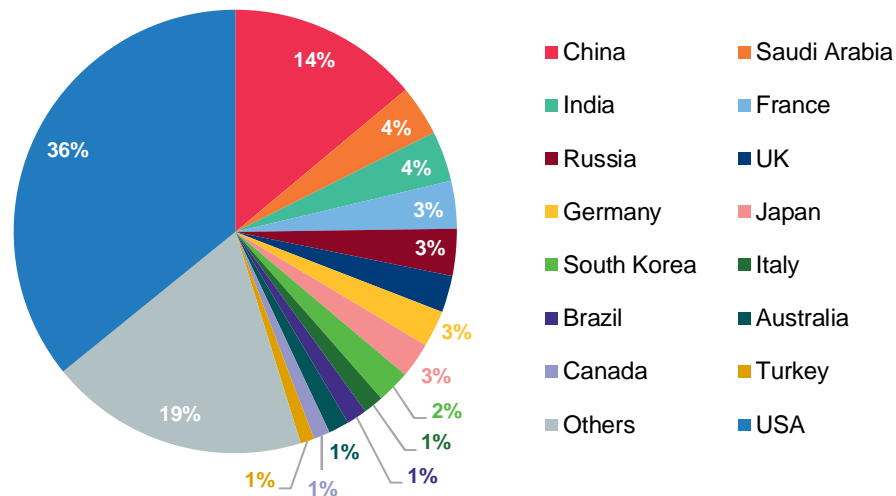
Source: IMF – International Monetary Fund, US Geological Survey – Mineral Commodity Summaries 2021; IMF staff calculations.

Security competition



- § Indo-Pacific has become the main theatre of US security focus.... until Russia invaded Ukraine on February 24th 2022.
- § Security frictions in more places than at anytime since Cold War. In addition to potential kinetic threats, the US is occupied with other security threats: Terrorism, cyberattacks, nuclear proliferation, information warfare.
- § US security spending is 36% of world total and more than rest of G7 combined. How sustainable is this? Post Ukraine, other countries seeing sharp increases in defense spending.
- § Recalling the Century of Humiliation (1839-1939), China's leadership is determined to restore its past greatness including its military modernization. China now takes a much more aggressive stance on sovereignty issues.

Global military spending in 2018



Source: Stockholm International Peace Research Institute, Andrea Villari/Stars and Stripes

- § South China Sea – China has competing territorial claims with six other countries in the South China Sea based on its “Nine Dash Line” interpretation. Land reclamation in the SCS was officially deemed unlawful by US in July 2020.
- § Taiwan – Beijing considers the mainland's reunification with Taiwan as destiny and has not ruled out the use of force. Under the Taiwan Relations Act (1979) the US exercises ‘strategic ambiguity’ towards Taiwan's defense.



Source: Forbes, Making Sense of the South China Sea Dispute, August 2017.

GREAT POWER COMPETITION: IMPLICATIONS FOR INVESTING

Bloc building: autocrats vs democrats

- § Russia's actions towards Ukraine highlight a widening chasm between regime systems.
- § Defense versus subversion of established rules-based order.
- § Russia's actions have consolidated western cooperation, autocratic regimes remain indifferent.
- § Western financial sanctions and (arbitrary confiscations) have uneased autocrats.
- § A new global world order looks likely to be built around political regime types.
- § China-Taiwan is drawing strong analogues with Russia-Ukraine.
- § The economic costs of invading Taiwan remain prohibitive based on rational analysis.
- § International investors are likely to demand a higher geopolitical risk premium for investing in autocratic markets such as China going forward.

Nasdaq Golden Dragon China Index

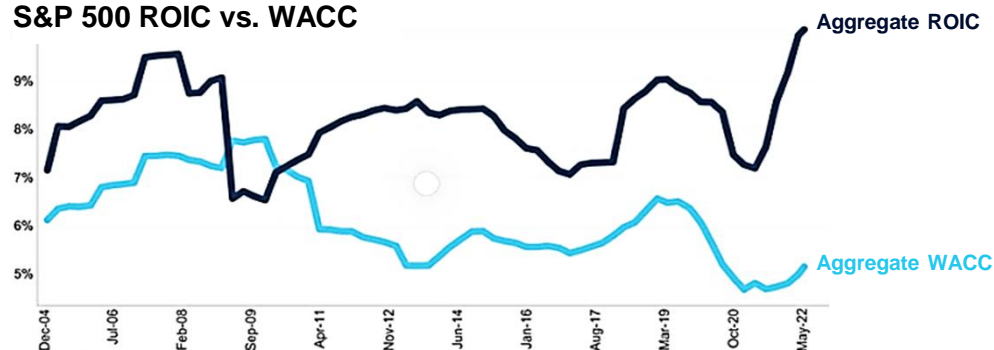


Source: Bloomberg, 2022

Supply chain de-globalization

- § Regime distrust (national security) is contributing to supply chain de-globalization.
- § Gradual decoupling of trade, investment, tech and finance is a process that has been in motion for several years already but one that is being accelerated by the Ukraine conflict and distrust of alternative regimes.
- § Supply chains are gradually adapting and building in more resilience. Onshoring and “friend-shoring” are increasing trends as corporations seek to establish supply chains in trustworthy jurisdictions.
- § Just-in-case is beginning to supersede just-in-time in the way that companies think about their supply chain procurement.
- § De-globalization of supply chains could lead to a more fragmented and inefficient global trade system which would result in higher costs and lower returns for many corporations.
- § Potential winners might include companies exposed to onshoring and automation trends.

S&P 500 ROIC vs. WACC



Source: Seeking Alpha, S&P500 ROIC vs WACC Through 1Q21. June 2021.

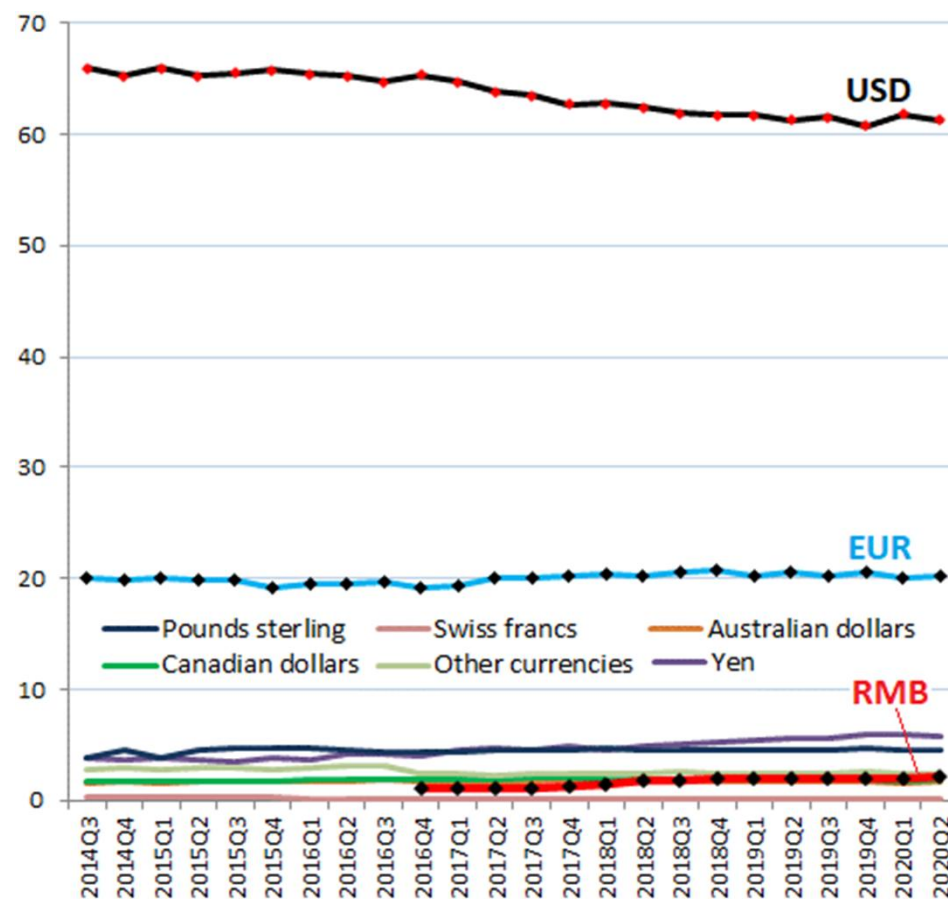


Macro volatility and shocks

- § A system of global trade that is fragmented, restricts its supply chains, is protectionist (both imports and exports) and commonly deploys sanctions, is likely to experience more frequent and more profound supply-driven inflation shocks and shortages.
- § This will create a policy headache for central bankers who will need to navigate inflationary supply shocks without inducing hard economic landings.
- § A more fragmented system of trade with trade discrimination measures will also test the dominance of the dollar over the medium term.
- § While no alternative currency comes close to challenging the dollar's supremacy today, there are many countries keen to move away from overreliance on the dollar for trade clearing and reserve holdings.

US Dollar's declining hegemony

% of allocated reserves



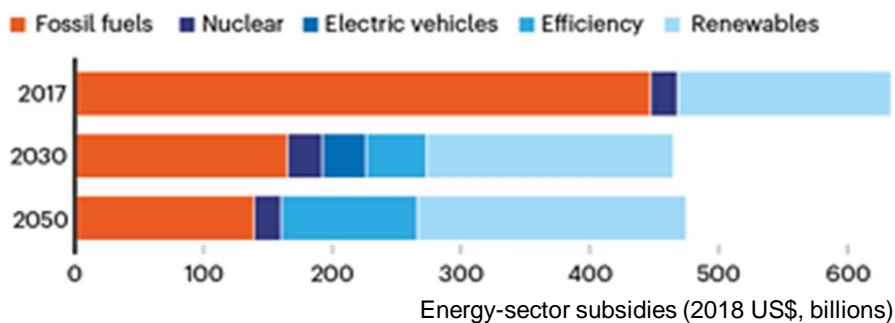
Source: IMF, Wolfstreet.com, 2020.

Big government

- § An increasing regularity of macro shocks requires the helping hand of big government.
- § As monetary policy serves as a blunt tool for dealing with macro supply shocks, governments may increasingly resort to fiscal policy in specific targeted areas.
- § This is a trend we are seeing with the current energy shock.
- § As geopolitics continue to intensify security concerns, many governments will also play a greater role in enhancing national security and domestic resilience.
- § As governments begin to play a greater role in capital allocation, we are likely to see the emergence of 'national champions' in areas such as energy, defence, industrials and tech hardware.
- § Such companies may enjoy a favourable competitive environment but will be required to deliver on national objectives.

Changing future

In one scenario for ramping up clean energy, energy subsidies fall and move from fossil fuels to renewables and energy efficiency.



Source: Nature, 2019.

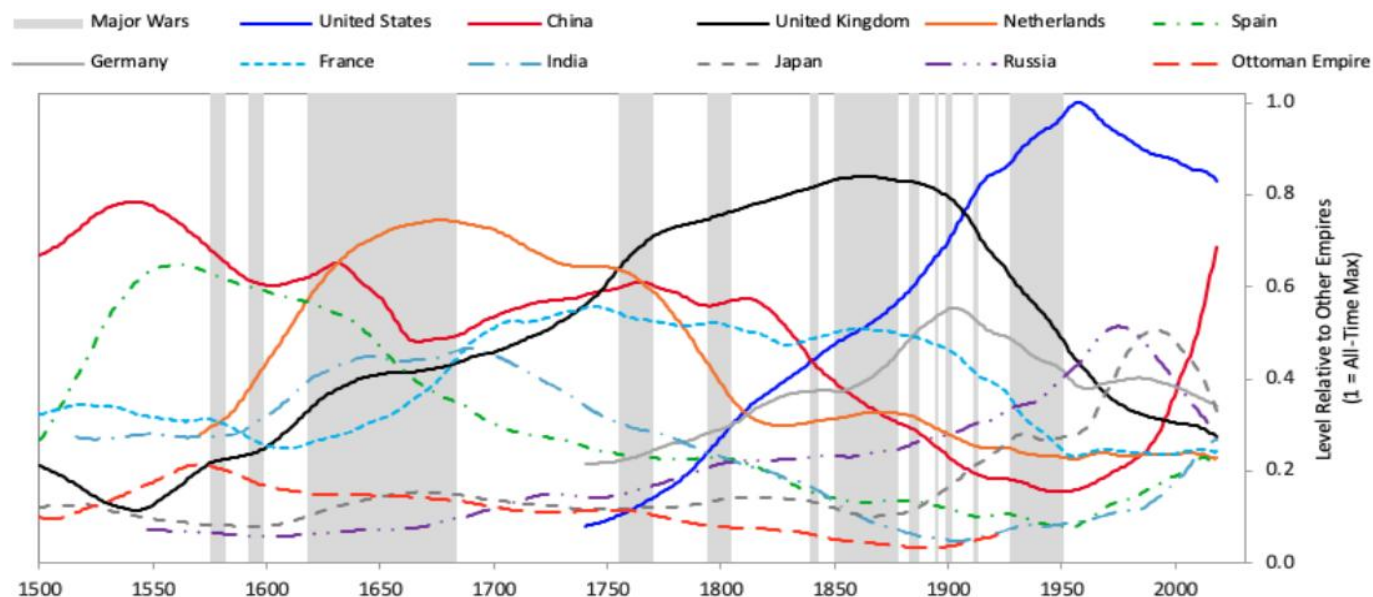
I'M FROM THE
GOVERNMENT

and I'm
here to
help



General investment conclusions

Rough estimates of relative standing of great empires



Source: Ray Dalio, Principles for Dealing with the Changing World Order

- § History shows that geopolitical regime change is a multi-year process.
- § As we expect geopolitical disruption to persist, investors must build resilience into portfolios.
- § Navigating geopolitical disruption does not require prediction of the next specific geopolitical shock but rather a broader interpretation of how systems are changing.
- § Market volatility is expected to remain high, making diversification crucial across asset class, region, currency.
- § Portfolios should maintain inflation protection wherever possible.
- § Thematic: Invest in securities exposed to themes that benefit from supply chain realignment, big government and national champions.
- § The nature of geopolitics is often zero-sum: dislocations can create both winners and losers.



Global macro impacts of Ukraine conflict



ENERGY

- § Existing European energy policy built on cheap Russian gas, 150bcm p.a.¹
- § EU plans to phase out most Russian oil by end 2022; 25% of EU's total purchases.²
- § EU intends to phase out Russian gas by 2027.²
- § Sanctions and infrastructure should prevent full Russian energy diversion to other markets, keeping global energy markets tight for the next 5-10 years.
- § European economy sensitive to high energy prices from terms of trade and bop perspective.



FOOD

- § Russia and Ukraine both significant grain and cooking oil exporters.
- § 30% of global wheat exports.³
- § 47% global sunflower exports from Ukraine.⁴
- § Russian blockade of Ukraine grains exports (20mt wheat) for political leverage.
- § High fuel and fertilizer prices raise costs for farmers.
- § C.300m people globally expected to be pushed into food poverty exacerbating social unrest, conflict and mass migration, particularly in Middle East and Africa.⁵



SECURITY

- § Putin seems to have miscalculated the West's security response.
- § US Congress passed c.\$50bn in support for Ukraine.⁶
- § Germany increased defense spending 30% to 2% GDP and set up separate Eur 100bn defense fund.⁷
 - NATO membership applications from Sweden and Finland.
 - West committed to back Ukraine for long war of attrition – remains base case.
 - Russia's Lesson From History: Reagan, Afghanistan and USSR.



Notes: ¹ **Source:** Reuters - Factbox: How can Europe get gas if Russia's supply is disrupted? May 2022; ² **Source:** South Asian Times - EU unveils \$220bn plan to ditch Russian energy; ³ **Source:** U.S. Department of Agriculture (USDA), May 2022; ⁴ **Source:** Time – How the Ukraine-Russia conflict will raise the price of Food snacks March 2022; ⁵ **Source:** Gov.uk - PM pledges new support for countries on the food security frontline; ⁶ **Source:** BBC News - Ukraine war: US fully backs Sweden and Finland Nato bids, Biden says. May 2022; ⁷ **Source:** Deutsche Welle - Germany commits €100 billion to defense spending – Feb 2022.

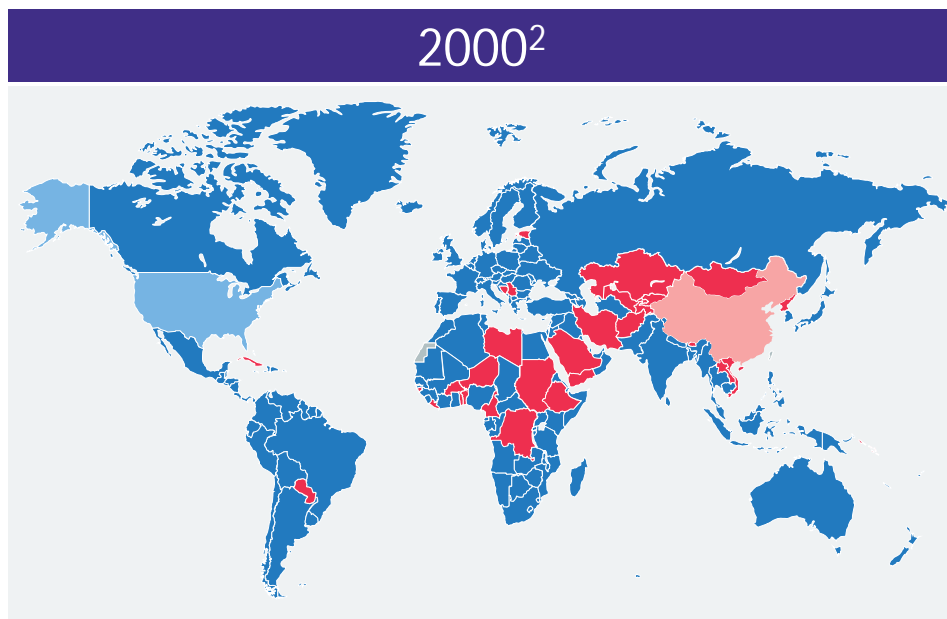
GREAT POWER COMPETITION: FROM MACRO TO MICRO

Case study 1 – trade war and supply chain realignment

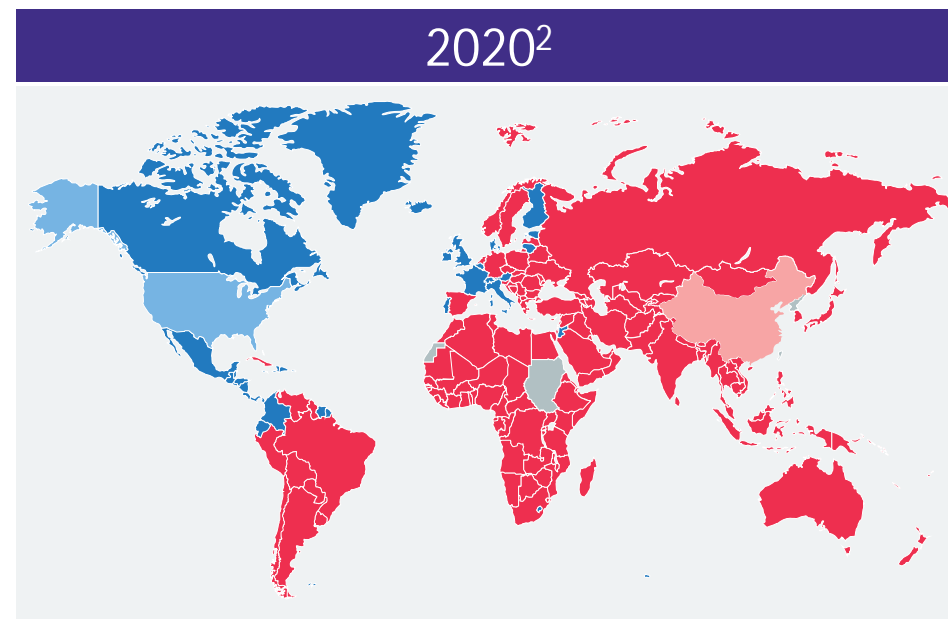
- § The US-China trade war in combination with other factors, including China's covid handling and relative wage costs, can lead to supply chain realignments in years ahead.
- § ASEAN (Vietnam, Malaysia, Indonesia), India, Mexico and Poland are some countries that could benefit from enhanced FDI, supporting industries, jobs and the balance of payments.
- § Nominal GDP per capita in ASEAN is only \$5,000; half of China's level. US is already slipping behind China's economic influence in ASEAN: US-ASEAN trade is \$362bn p.a. vs China-ASEAN trade \$878bn.

- § Despite US pledges for more economic engagement with Southeast Asia, US withdrawal from the TPP is a major setback to ambitions. Meanwhile, China joined the recent RCEP trade deal and has applied to join the CPTPP (successor to TPP).
- § The US-China trade war could also lead to onshoring opportunities in higher end manufacturing. This should benefit industrial automation and robotics plays.

Countries which share greater trade¹ with: ■ United States



■ China ■ No data



Notes: ¹ Gross merchandise trade, exports plus imports; ² Or nearest available.

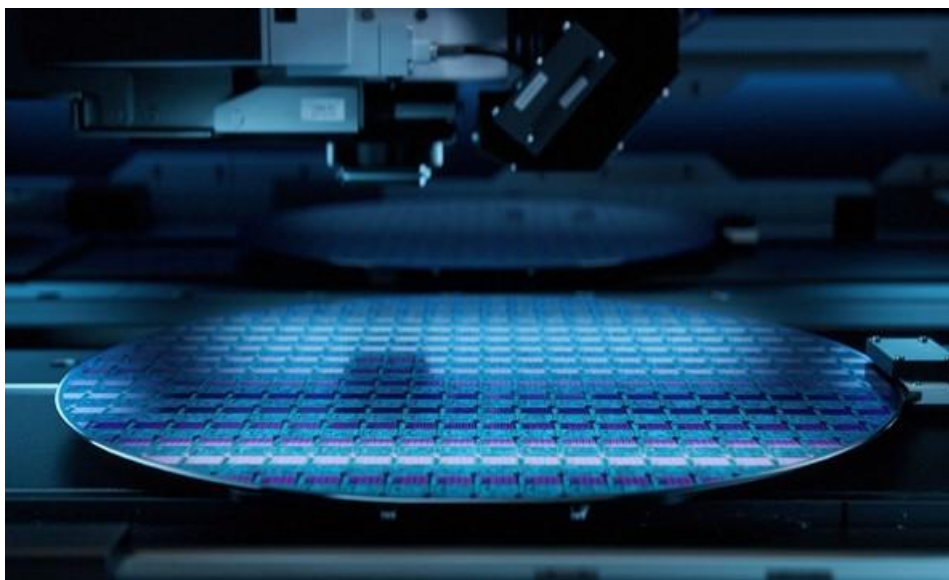
Source: The Economist, IMF Direction of Trade Statistics, 17 July 2021.

<https://www.economist.com/briefing/2021/07/17/joe-biden-is-determined-that-china-should-not-displace-america>

Case study 2 – tech war and technology decoupling

- § Technology is the key driver of economic productivity and is closely tied to military capability and global influence. The US and other democracies will increasingly deny China access to leading-edge semiconductors (<10 nanometers).
- § China will pour billions of renminbi into its domestic semiconductor industry as this lies at the nexus of global competition. \$200bn of R&D and capex has been targeted by the Chinese government in years to come.
- § China has also established technology boards for both of its stock exchanges in Shanghai and Shenzhen to ease listings and equity capital funding to the sector.

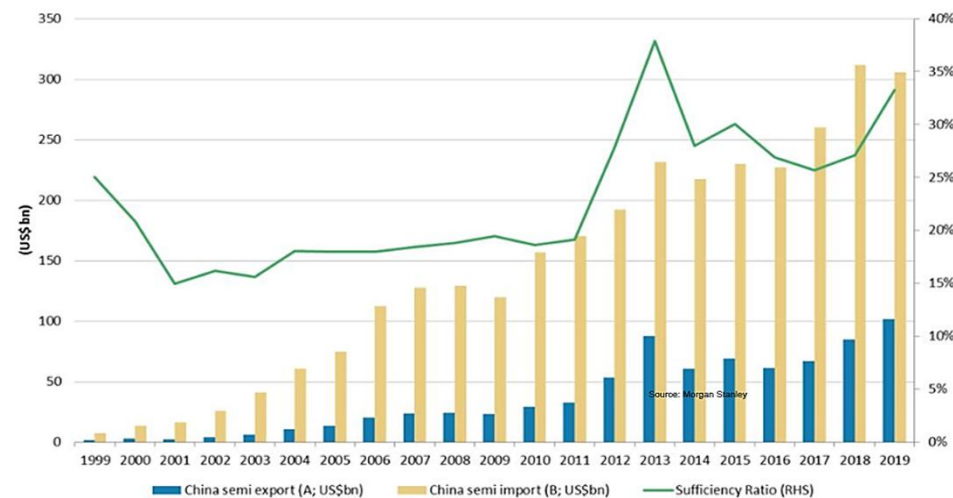
ASML's EUV lithography machines – the weak link for China's semiconductor aspirations



- § “Silicon Everywhere”: The US, Europe, Japan and South Korea all have domestic semiconductor aspirations as they seek to reduce reliance on Taiwan and have or will pass large subsidy programs.
- § Decoupling: Avoid high-profile China tech hardware companies that could come into the line of fire and end up on the US entity list or, more seriously, on the Treasury Department's SDN list.

China aims to close the gap in its semiconductor self-sufficiency ratio in the years to come

China's semiconductor imports and exports



Source: Morgan Stanley

Case study 3 – security competition and NATO enlargement

- § Russia's invasion of Ukraine in February 2022 is re-shaping the global security architecture. Sweden and Finland have both applied to join NATO.
- § Global implications: NATO, which is comprised of 30 North Atlantic members, will also work increasingly closely with Asia-Pacific partners in years ahead and complement security arrangements such as the Quad and AUKUS.
- § Defense Spending: NATO members are expected to target 2% of GDP defense spending as a base line rather than upper limit. This points to +20-30% spending on defense for many European countries.
- § Defense industry re-evaluated: In the wake of Russia-Ukraine, defense companies could be viewed as defenders of peace and freedom, rather than ESG transgressors and enjoy sustainable re-ratings.
- § Battlefield technology: warfare in the twenty-first century will probably be increasingly fought along unconventional, technological lines. The impactful use of drones in Ukraine is already evidence of this.

Defense industry multiples expanding: Germany's Rheinmetall enjoyed a 100% P/E re-rating post Russia's invasion of Ukraine



Source: Bloomberg, 2022

Important information

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