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The Next Digital Superpower:

Scenarios for the US-China conflict and implications for the global economy

Prepared by Eurasia Group and Vontobel

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Chief executive officer since May 2011, Zeno Staub joined Vontobel in 2001 and went on to serve as its chief financial officer until 2006. Prior to his current position, he was head of asset management and head of investment banking.

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Dr. Sven Schubert holds a Masters degree and PhD in Economics from the Free University of Berlin.

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Ian Bremmer is a political scientist who helps business leaders, policy makers, and the general public make sense of the world around them. He is president and founder of Eurasia Group, the world's leading political risk research and consulting firm, and GZERO Media, a company dedicated to providing intelligent and engaging coverage of international affairs. Ian is an independent voice on critical issues around the globe, offering clearheaded insights through speeches, written commentary, and even satirical puppets (really!).

He is the host of GZERO World with Ian Bremmer, which airs weekly on US national public television. Ian is also a frequent guest on CNN, Fox News, MSNBC, the BBC, Bloomberg, and many others globally.

A prolific writer, Ian is the author of ten books, including the New York Times bestseller "Us vs Them: The Failure of Globalism" which examines the rise of populism across the world. He also serves as the Foreign Affairs Columnist and Editor at Large for Time magazine. He currently teaches at Columbia University's School of International and Public Affairs and previously was a professor at New York University.

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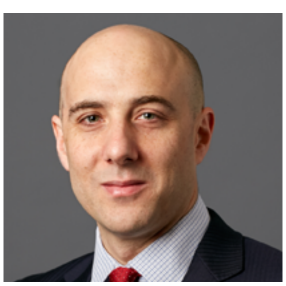
Mujtaba, who holds master's degrees from Columbia University and the London School of Economics and Political Science, speaks French and Urdu.



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Prior to joining the firm, Michael served three years as US Treasury's chief representative in Beijing. In that role, he engaged with China's government and the private sector on a broad set of macroeconomic, financial, and investment issues. He also worked closely with the US business community to address formal and informal barriers to accessing China's markets. In addition to his time in China, Michael worked on a range of international economic issues for the Treasury as well as the Federal Reserve Bank of New York over a ten-year period. A one-time financial journalist, he holds degrees from Johns Hopkins University's School of Advanced International Studies and Pomona College.

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Before joining Eurasia Group, Kevin was a correspondent for the Financial Times in London, New York, and San Francisco, where he covered Silicon Valley. He also worked as a columnist at Reuters and in global equity sales at UBS Investment Bank. Kevin holds a bachelor's degree in biochemistry from the University of Missouri and a master's degree in public policy from the Harvard Kennedy School, where he focused on science and technology policy. He was a Fulbright Scholar in Vienna, Austria, and a 2015 Journalism Fellow in Complex Systems Science at the Santa Fe Institute.

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In his previous role as director and senior policy analyst at Renaissance Macro Research, Todd analyzed geopolitics and energy policy for institutional investors and helped manage the Policy Research practice. Prior to joining RenMac, Todd was a principal with The Scowcroft Group in Washington. He also analyzed European and Russian domestic politics and economic strategy for the Executive Committee of Lehman Brothers and held positions in equity research and investment banking at Deutsche Bank, CIBC World Markets, and FBR. Todd, who speaks German and French, earned a bachelor's degree in economics from Messiah College and a master's degree in international politics from American University.

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Doug Bove is focused on delivering client solutions and managing corporate partnerships, leading complex, multidisciplinary consulting-style projects on behalf of clients. The work includes developing analyses, coordinating content development across functions, and presenting final insights to clients. Doug also plays an integral role in the process of business model innovation taking place at egx, leveraging partnerships to bring innovative new products to market to serve client needs better.

Prior to joining Eurasia Group, Doug was a consultant in Germany for Siemens AG, managing complex turnarounds, restructurings, and mergers & acquisitions. Before moving to the private sector, Doug worked in international development in Washington, with projects in Kenya, Uganda, Iraq, and Haiti, and he did internships at the Millennium Challenge Corporation and Overseas Private Investment Corporation. Doug holds a master's degree in international relations from the Johns Hopkins University School of Advanced International Studies and a master of business administration from INSEAD with a focus on renewable energy and global sustainability.

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Kelsey Broderick supports the Asia practice's work on a wide variety of issues and countries, with a particular emphasis on China.

Prior to joining Eurasia Group, she researched macroeconomic developments and trends in China at the World Bank. She has also held internships at the Albright Stonebridge Group, the US State Department, and the Project 2049 Institute, where she focused on cross-strait relations. She previously worked in education and philanthropy for three years in China. Kelsey earned her bachelor's degree from Stanford University and her master's degree in foreign service with distinction from Georgetown University. She speaks Mandarin Chinese.

Foreword

The coming decade will be a turning point for the global economy. The US is debating how and whether to try to maintain its global leadership role, a trend both illustrated and exacerbated by President Donald Trump's administration. China, under the leadership of Xi Jinping, is leveraging its economic strength to reshape and in some cases compete with existing international institutions, as well as to extend its influence in ways that shift the global balance of political and economic power. The EU is struggling to hold itself, and its place in the international system, together. How these three powerful entities interact with the world and one another will define the trajectory of the rest of the century, with far-reaching repercussions for business, technology, trade, finance, and every other aspect of our globalized world as we know it today.

How did we reach this pivotal moment? In a strict sense, escalation occurred on 22 March 2018, as Donald Trump followed up an earlier move slapping tariffs on solar panels and washing machines by announcing he would use his national security powers to impose $60 billion in additional tariffs on a variety of Chinese products including steel, aluminum, and consumer electronics. In voicing his displeasure with China over ever widening trade deficits and mistreatment of US companies, Trump fired a very public shot across the bow in what would eventually blossom into a full-blown trade conflict and now threatens to expand into all-out economic warfare.

Though the US-China relationship dominates headlines, one must look beyond trade and Trump to understand the drivers of these very public rising tensions. The present conflict is in actuality the culmination of a long-building undercurrent of dissatisfaction in the US, among those left behind by globalization and an anemic recovery, as well as within foreign policy and defense communities, where China is perceived as a revisionist power bent on eroding the norms of the international system to the disadvantage of the US and its Western allies. This cross-cutting, bipartisan antipathy towards China will not disappear when Trump leaves office.

For China's part, it wants the world to view its rise as peaceful and its actions on the international stage as the natural progression of a great civilization returning to prominence, one that intends to deliver a high standard of living to its 1.4 billion-strong population. If its more assertive role in international affairs is interpreted as intended to supplant the West, it is because China sees a chaotic world in need of leadership as the US retreats from its 75 year-run as the primary provider of global public goods. Moreover, China asserts the legitimacy of its values and an economic model that has lifted hundreds of millions from poverty.

Neither the US nor China has much incentive to back down. The US is spurred by a sense that this is its last best chance to influence China's trajectory before it becomes too strong. China remains committed to a path it believes has produced positive results for itself and the world. Europe, caught between a US it increasingly considers unreliable and a China it does not trust, will try to assert its interests, with material consequences for the direction of this unfolding drama.

This paper is intended to help readers better understand the drivers behind these critical relationships and their potential implications for the global economy over the next five years. Understanding these complex dynamics requires collaboration between our two organizations. Eurasia Group is here to unpack the geopolitical issues and Vontobel to interpret the macroeconomic and investment implications. We hope you find this a useful exercise, and we welcome an ongoing dialogue.

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Geopolitics of US-China competition

Introduction

If US-China competition has become the key geopolitical issue of the day, it is not simply the result of a clash of personalities between presidents, or even a trade war. Today's confrontation is the outcome of a series of developments over several decades, set in motion by fundamental disagreements over the state of the world that have gradually eroded the case for cooperation and empowered foreign policy hawks on both sides. This phenomenon is not just playing out in the US and China: Europe is also emerging as a battleground where US alliances and Chinese interests are coming into conflict.

The US-China relationship, since the normalization of relations with Beijing and then the beginning of China's "reform and opening up" in the 1970s, was characterized by optimism on both sides regarding the mutual benefits of engagement. For China, entry into the global economic order would help drive unprecedented economic growth; for the US and Europe, China's opening presented alluring new opportunities for Western firms, as well as the prospect of the world's most populous country becoming a "normal" state. Such was the logic of engagement from the Western perspective: bringing China into the global economic system would inculcate it in the norms of the US-led global political order.

The events at Tiananmen Square in 1989 tested Western willingness to engage with Beijing, but the belief that economic reform in China would eventually lead to political reform held. Moreover, the Internet, it was believed, would act as a further pressure for democratization. Thus, engagement continued, culminating in China joining the WTO in 2001.

But by the mid-2000s, it had become clear that China was not adapting to Western norms as hoped. A speech in 2005 by then deputy secretary of State Robert Zoellick reflected the shift in attitudes in the US. Zoellick predicated continued engagement on China becoming a "responsible stakeholder"—doing more to reduce trade distortions and open its markets while contributing more resources to tackle global security issues. US skepticism toward engagement has grown as China has resisted making changes to what the West views as an unfair economic model, while increasingly challenging the status quo outside its borders. In China, meanwhile, economic growth has not produced a desire to adopt Western values, but has rather promoted confidence in its own political and economic system and a will to assert its interests abroad. Caught in the middle, divisions in Europe have taken hold, with a hardening of attitudes on Chinese trade and investment in EU institutions and "core" member states, but also a growing presence of Chinese interests, especially in southern and eastern Europe.

This report presents the historical context and structural drivers that have precipitated this re-emergence of great power competition. It includes three outcomes for the future: In the most likely scenario, a lengthy struggle between Washington and Beijing leads to the emergence of an increasingly bifurcated world as countries are forced to align with one side or another, particularly when it comes to trade and technology. In a less probable scenario, the US works successfully with its allies to mitigate the challenge presented by China and maintain the status quo. In the least likely scenario, the US and China reach an accommodation, with both mapping out their new roles and agreeing boundaries to avoid friction.

Having outlined the future scenarios, the report finishes by examining their macroeconomic and investment implications. The goal is to help readers interpret what these big picture geopolitics mean for business and the global economy.

Return of great power competition

In order to adequately appreciate what directions the US-China conflict could take over the next several years, it is useful to understand how the world arrived at this inflection point. While it is tempting to look at recent events and blame President Donald Trump, in reality, strategies had been evolving in the US, China, and Europe since the mid-2000s. A combination of conflicting values and growing mutual suspicions set the world on a path that probably made a confrontation of some kind inevitable. This section explores the evolution of these drivers.

China

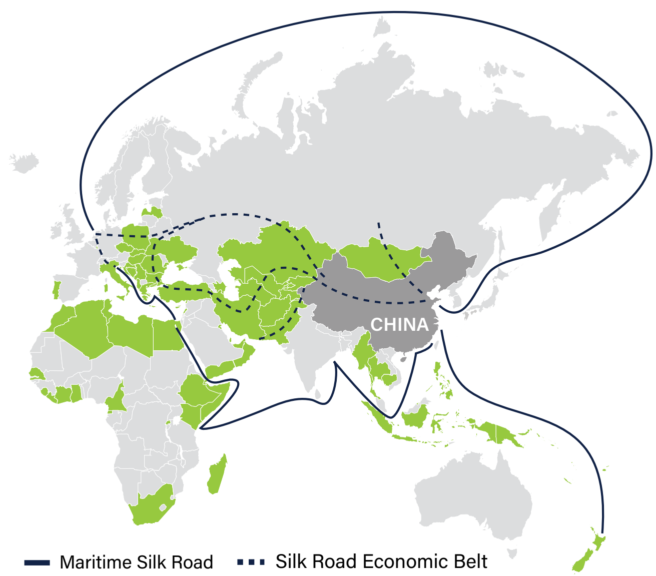
Strategic shifts under Xi and the 19th Party Congress

China's 19th Party Congress in October 2017 heralded a turning point, both in terms of China's approach to the rest of the world and in terms of how the West—and especially the US—views Chinese actions. At the congress, which reaffirmed President Xi Jinping's position for a second term, the Chinese president outlined his vision for a "new era for socialist thought with Chinese characteristics." The integration of "Xi Jinping thought" into the Chinese Communist Party-written constitution puts Xi front and center in China's domestic and foreign policy for the next decade, if not longer.

In the years preceding the congress, during his first mandate, Xi consolidated his power through a massive anticorruption campaign that served a dual purpose: rooting out politically and economically detrimental corruption and removing from power potential dissenters and political opponents. This approach paid off for Xi during the event, which is held every five years to select China's new political leaders. Four of Xi's allies were put on the seven-member Politburo Standing Committee, 15 of Xi's allies were given positions in the Politburo, and most importantly, presidential term limits were abolished soon after the congress. Xi thus opened a path to chart China's global course nearly unopposed.

Anxieties about China's growing influence on the world stage mean Western commentators are prone to evaluating Xi primarily on the basis of his foreign policy.

Land and sea corridors of the Belt and Road Initiative



Sources: Council on Foreign Relations, Eurasia Group

However, domestic priorities remain the center of Xi's platform. Having consolidated his power, Xi has given himself the space to pursue the long-term reforms he believes are necessary to accomplish China's two "centenary goals" in the new era: becoming a "moderately well-off society" by 2021 and building a "modern socialist country that is strong, prosperous, democratic, culturally advanced, and harmonious" by 2049. Many of these reforms will focus on the domestic economy, which under Xi can be classified as "Party Capitalism". Party Capitalism, a mix of deliberate and measured economic liberalization and tighter political control, requires a strong role for the Chinese Communist Party and promises a continued commitment to state-owned enterprises and industrial policy.

Internationally, Xi hopes to extend China's reach further than any other Chinese leader. Xi sees a greater role for China not just in the international economy, but also as a global leader that shapes the laws, norms and institutions that govern the international system.

At the June 2018 meeting of the Central Foreign Relations Work Conference—an important conclave for foreign affairs decision-making in China—Xi said for the first time that China will "take an active part in leading the reform of the global governance system." This decision was shaped by two main ideas: first, that China's status as a leading power had been earned by decades of economic growth and, second, that a shift in the global balance of power was occurring, reflected by the 2008 global financial crisis and Trump's "America First" foreign policy.

Long-term goals for reforming the international system

Over the past decade, China has viewed the international system as increasingly incapable of addressing new global challenges. First, the rules of the international system are still largely inspired by Western (or US) norms and values. They do not, in Beijing's view, accommodate the values of non-Western developing countries—and especially growing powers like China, which, as the world's leading developing country, therefore has a responsibility to reform them. Second, existing international institutions like the UN, the IMF, and the WTO have failed to deal with emerging issues like climate change, terrorism, and trade protectionism. For China, this latter point is even more pressing, as its companies and people increasingly venture abroad.

To resolve some of these problems, Xi advocates a "community of shared future for mankind," which is a conception of how the international community should interact. It pulls ideas from China's past experiences with diplomacy. In particular, it builds on former premier Zhou Enlai's "Five Principles of Peaceful Coexistence," which include: mutual respect for territorial integrity and sovereignty; mutual non-aggression; mutual non-interference in internal affairs; equality and cooperation; and peaceful coexistence. These principles are now further supported by the concepts of "fairness" and "justice." Fairness means giving a greater voice and role to developing countries and justice means following international law and UN directives—the latter point striking directly at the concept of unilateral action or toleration of military intervention in areas outside of a state's borders. As part of this new global order, China promotes replacing security alliances with "partnerships." China's partnerships do not lock either party into a firm commitment to protect the other; rather they are built on the ideas of mutual trust and win-win benefit.

> "Over the past decade, China has viewed the international system as increasingly incapable of addressing new global challenges

Xi hopes to see these ideas taken up by other foreign countries and integrated into existing institutions. In some cases, they have been. In 2016, the IMF expanded China's voting power and announced the inclusion of the renminbi in the special drawing rights basket; that same year, the UN Human Rights Council adopted a resolution that included the phrase "community of shared future" and "win-win." China has also convinced other countries to block Taiwan's participation in several international organizations—a key example of "respect for territorial integrity." Moreover, beyond influencing existing institutions, China has also set up alternative ones imbued with its values. In 2015, China launched its own multilateral investment bank, the Asian Infrastructure Investment

Bank (AIIB). Despite criticism from the US that it would lack high-quality standards, AIIB now has 97 members, including many US allies.

Tactical approaches to global governance

China's push for global influence, however, is not without considerable challenges. Rallying other nations behind its proposals has not been straightforward, especially as many countries, even if not aligned with the West, have their own reasons to be wary of a rising China. Meanwhile, China has had to balance its own ambitions for increased influence with the need to alleviate Western concerns that it poses a revisionist threat to the current global order. The two biggest tests are the Asia-Pacific, where China seeks to become the preeminent regional power, and the Belt and Road Initiative (BRI), Xi's signature overseas investment policy.

China is embroiled in several territorial disputes in the Asia-Pacific region that put it at loggerheads with its neighbors as well as with developed economies in the West. Its "nine-dash line" in the South China Sea, which overlaps with the exclusive economic zones of several Southeast Asian countries, is a key case. The issue feeds skepticism that China is prepared to practice what it preaches in terms of international equality and mutual respect for territorial integrity. In the dispute with the Philippines, Beijing's refusal to acknowledge an arbitral tribunal under the UN Convention on Law of the Sea—which China has ratified—is a case in point.

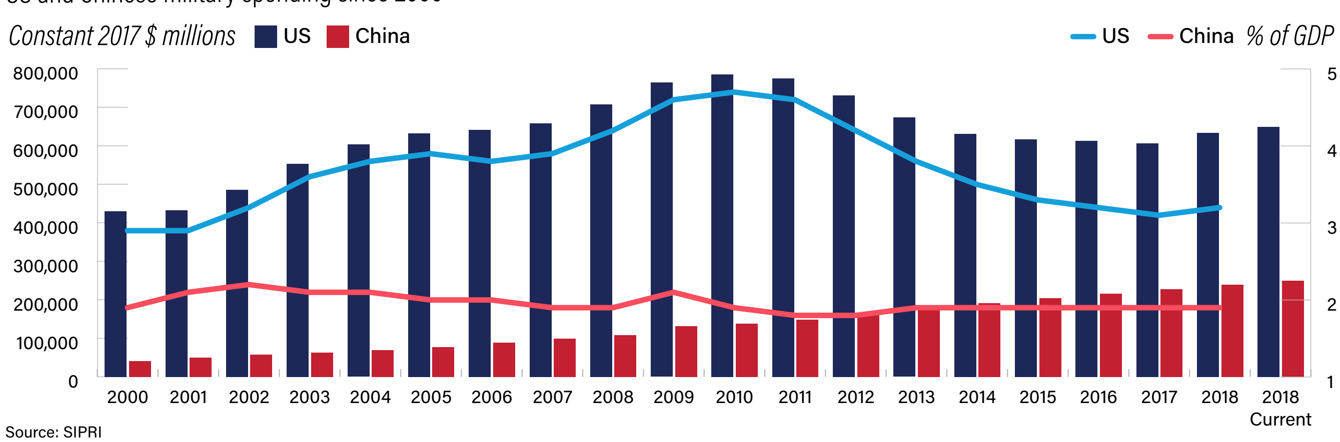
Many Western countries are also uneasy with China's approaches to Taiwan, Hong Kong, and the Uighur population in the province of Xinjiang, with the US and others expressing deep concerns about China's record on human rights and civil liberties. In the case of Taiwan, the US has not ruled out the possibility of coming to Taiwan's aid in the case of a military action by China. For China, which regards all of these areas as integral parts of its territory, Western interventions violate its national sovereignty.

China's military ambitions have also been a source of growing concern abroad. Despite a commitment to a "peaceful rise," China now spends more on its military than any country but the US. Xi reorganized China's armed forces in 2017 to create a world-class military by 2049, focusing on developing a blue water navy and investing in new areas including cyber warfare. China also opened its first overseas military base in Djibouti in 2017.

> "Barring a major unforeseen economic downturn, China will continue to assert its influence—and the right to have influence—in the years to come

Western entities with the largest stake in the existing international order, including the US and EU, have also been warily watching the rollout of China's BRI. China's senior diplomat Yang Jiechi has called the BRI an "important practical platform" for creating the community of shared future and Xi has promoted it as an addition to the international system. But complaints from the West have centered

US and Chinese military spending since 2000



Source: SIPRI

on China's outsized gains from the initiative. Overseas projects have relied heavily on the use of Chinese construction companies, laborers, and inputs, while the infrastructure built links the rest of the world to the Chinese market. In addition, trade and customs agreements signed between BRI countries and Beijing have the potential to create a de facto multilateral trade initiative that embraces Chinese economic, political, and digital norms.

The benefits of Chinese overseas investment to many countries are immense. Yet China has had to defend its underlying motives at public forums. During the May Belt and Road Forum, Xi and other officials insisted that Beijing's intention was not to trap other countries in debt or force them to give up key assets. But growing trade, investment, and diplomatic ties with China through the BRI have generally exposed countries to a new source of political risk, that is, the need to accommodate Chinese priorities in domestic decision-making. For example, South Korea and New Zealand suffered from a drop in Chinese tourists after China opposed domestic political decisions that threatened its interests. China often cites a breakdown in "mutual trust" as a reason for economic coercion. Mutual trust is a key foundation of China's "no-strings attached" partnerships, built by respecting China's core interests and broken by taking action against them.

While wariness of China has resulted in some setbacks for the country, it is unlikely to deter it from pursuing its global goals. Without term limits, Xi can further adjust and refine his vision based on success and the international community's response to his ideas. Barring a major unforeseen economic downturn, China will continue to assert its influence—and the right to have influence—in the years to come.

United States

The engagement era

In 2000, late in the tenure of former president Bill Clinton, the US Congress granted China "Permanent Normal Trade Relations" (PNTR). This move was a prerequisite for China's accession to the WTO, which followed in 2001 and was a landmark event in China's economic development. The move elevated and codified a multi-decade trend of US policy toward engagement with Beijing. However, support within the US was far from unanimous. The congressional vote over PNTR was marked by debate and acrimony. Many interest groups ranging from trade hawks to anti-communists had lobbied for years to keep the US economic relationship with China contained. At the time, proponents of engagement gained the upper hand—but the argument was not over. A constituency for opposing China had solidified, and it included some of the figures who would come to guide the US's increasingly adversarial posture toward China later on.

"Washington, meanwhile, generally sought to support China's rise while steering its development toward international norms to ensure it would uphold rather than disrupt the post-World War II order

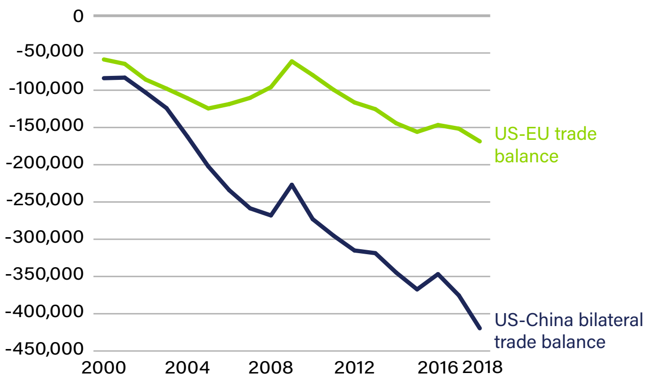
China's WTO accession was the culmination of two decades of successful economic reforms that began in 1978 when Deng Xiaoping set out to reorient the country after years of stagnation and internal strife. It touched off a further era of spectacular growth in the early 2000s. Washington, meanwhile, generally sought to support China's rise while steering its development toward international norms to ensure it would uphold rather than disrupt the post-World War II order. For instance, as a condition for joining the WTO, China had to undertake further substantial reforms to liberalize its economy.

After engagement

Since then, from the US perspective, China's record on implementing economic reforms has been uneven. China has become a major economic actor that does not trade on an even footing with open economies.

The problem is not just economic: Many who had hoped that China would follow up economic reforms with political reforms were disappointed. And as China has acquired the ability to project its economic and military power beyond its borders, the US has grown increasingly distrustful of Chinese objectives and tactics. China's extraordinary rise, measured against the historic US dominance of global affairs, means that their relationship sets the tone in multiple arenas: geopolitics, geostrategy, economics, finance, and technology. The steadily increasing levels of mistrust and hostility between the two sides in the 21st century contrast markedly with the latter portion of the 20th century, and is having global repercussions.

US-China, and US-EU trade deficits since 2012 *(in millions)*



Source: US Census Bureau

As US businesses gained more experience operating in China, complaints about forced technology transfer, intellectual property infringement, and asymmetric treatment grew louder. China's rapid progress in manufacturing was a supply-side shock that deflated markets and sectors around the world. At the same time, its growing demand for industrial inputs and finished goods also skewed the other side of the economic equation. As the maxim went, "China inflates what it buys and deflates what it sells."

The groundswell of China's economic rise allowed Beijing to invest in restructuring its economy and achieving a vision of the international system that more closely reflected its values, while launching a commensurate drive to modernize and expand Chinese military capabilities. Some in the US viewed this as a nakedly revanchist vision of restoring China to its historical level of cultural, commercial, and political dominance. US defense and intelligence bodies began documenting Beijing's steady military build-up and analyzing signs that the country could soon challenge the US for regional and even global superiority. A growing strategic competition started to spread geographically, from the Indian and Pacific Oceans to the Eurasian heartland and even the Western Hemisphere. China's blend of soft and hard power leveraged economics to change geopolitics.

Even before Trump won election in 2016, US policy had begun to respond. US cases against China at the WTO ramped up significantly. A previously little-known body called the Committee on Foreign Investment in the US (CFIUS) began to obstruct Chinese capital from acquiring certain assets of national significance. New international fora were created to address Chinese overcapacity. Bilateral diplomacy sought to cooperatively iron out problems. But previous governments were, broadly speaking, able to resolve prob-

Country of foreign investor and industry reviewed by CFIUS *(2013–2015)*

Country	Manufacturing	Finance, Information, and Services	Mining, Utilities, and Construction	Wholesale Trade and Retail Trade	Total
China	39	15	13	7	**74**
Canada	9	9	19	12	**49**
UK	25	15	3	4	**47**
Japan	20	12	5	4	**41**
France	8	9	1	3	**21**
Germany	9	5	0	0	**14**
Netherlands	4	8	2	0	**14**
Switzerland	10	2	0	0	**12**
Singapore	3	5	3	1	**12**
Hong Kong	6	3	0	0	**9**
Israel	7	2	0	0	**9**
Australia	1	2	4	1	**8**
South Korea	2	3	2	1	**8**
Total	**172**	**112**	**66**	**37**	**387**

Source: Annual Report to Congress, Committee on Foreign Investment in the United States, September 2017.

> With China, however, the US sees a more powerful, less constrained adversary

lems under the assumption that the two countries' interests were ultimately aligned—one example was the peaceful resolution of an international incident in 2001 caused by the collision of a US spy plane and a Chinese fighter jet. Yet as the tonnage of external pressure has accumulated, military and political contacts have degraded.

Deja vu?

The US has confronted rising mercantile powers before. To some degree, the US reaction to China's economic rise has mirrored the era of Japan's economic upswing and outward surge. Japan was the US's foremost trade adversary in the 1980s and early 1990s. And the Japanese development model was so successful at raising living standards that it has been applied throughout developing Asia—including, in many ways, China.

Yet the dispute with Japan was far more limited. Japan has been a mutual defense treaty ally of the United States since the end of World War II and was thus not seen as a potential challenger to the geopolitical order. In their commitment to democracy and free markets—albeit with unique characteristics—Japan and the US were much closer ideologically then than either is to a centrally organized and operated China under Xi is today. Back then, there was fearmongering that Japan would harness its newfound economic might to reconstitute its empire, but this was neither widely believed nor a serious driver of decision-making in Washington. With China, however, the US sees a more powerful, less constrained adversary. This is the lens through which Washington perceives the fundamental strategic threat presented by China's economic actions and diplomatic maneuvers.

The deep state turns

The US "position" on China has never been monolithic; however, now is the closest it has ever been. With the voluminous amount of data gathered since WTO accession, elected officials and the bureaucracy have both turned steadily toward confronting China; Xi's presidency has further galvanized their fears. The degree of unanimity at the Pentagon, intelligence agencies, and Capitol Hill is bipartisan, robust, and historic. The 2017 National Security Strategy, produced under former national security advisor H.R. McMaster, encapsulates this new consensus:

> *For decades, U.S. policy was rooted in the belief that support for China's rise and for its integration into the post-war international order would liberalize China. Contrary to our hopes, China expanded its power at the expense of the sovereignty of others. China gathers and exploits data on an unrivaled scale and spreads features of its authoritarian system, including corruption and the use of surveillance. It is building the most capable and well-funded military in the world, after our own. Its nuclear arsenal is growing and diversifying. Part of China's military modernization and economic expansion is due to its access to the US innovation economy, including America's world-class universities.*

This document was produced by the Trump administration; however it is not primarily the work of the China hawks in the White House, but is rather a whole of government policy document. McMaster was a more traditional choice for the role of national security advisor, as was James Mattis, who as defense secretary oversaw the drafting of the similarly China-focused National Defense Strategy. Their worldview is now common in Washington. But the president they served has taken confrontation to new levels.

Trump in the driver's seat

Trump, who was the first president to successfully run on a platform of directly challenging Chinese mercantilist practices, is a product of 21st century US-China tensions as well as a contributor to them. After all, had the relationship been on sure footing before his presidency, his China stance would have been a campaign-killing outlier. That it proved to be a highly successful message is an indication that there was already a widely held view that the threat to US supremacy outweighed the economic benefits of China's rise—not just to Washington officials but also to voters.

Yet alongside Xi, Trump is also a driving force of the new era of overt conflict. His primary focus has been China's trade surplus with the US, and in a 21st century version of Commodore Perry's gunboats in Tokyo Bay, the president has attempted to use tariffs on Chinese exports to force new trading rules on better terms. At the same time, Trump's "America First" approach scorns multilateral policy options such as the Trans-Pacific Partnership.

Trump has not stopped there. Congress has given new legislative heft to CFIUS (granting it an expanded role and toolkit that it had already assumed in practice), strengthened the export control regime, and targeted Chinese technology giants such as ZTE and Huawei. Executive orders have further broadened the issues in focus and bolstered the US government's arsenal for engaging them.

Congress and the White House have largely been in concert on these moves. In fact, Trump and his point man on China, US Trade Representative Robert Lighthizer, discovered that a pre-existing hawkish evolution in Washington gave them far more ammunition and leeway than they would otherwise have had. It is notable that during the recent US-China rift over technology, Congress has been pushing Trump toward a more hawkish position.

The current negotiations launched by Trump are not the endpoint but the start of a process that will unfold over the long term, the final outcomes of which are not yet certain. However, it is clear that the complexity and high stakes of the issues facing US-China relations mean they are unlikely to be durably resolved. The two countries not only have competing national interests but also have the power to keep pursuing them. Even Japan, without the geopolitical intrigue, required two separate agreements in the 1980s to defuse tension (a subsequent financial crisis helped too).

The question, then, is not whether future US presidents will have to confront this set of issues, but how. Future occupants of the Oval Office may wish to avoid economically disruptive means of taking on China. But Trump has proven that meaningful negotiations require leverage, so if Trump's successors wish to distinguish themselves from him tactically, they will have to find other ways to exert pressure. Washington is now highly attuned to the idea that inaction benefits China far more than the US. This will push successive presidents to get tough.

Europe

A key architect of the international system alongside the US, Europe is home to the US's major security allies. It has the world's second largest economy and is the largest trading partner of both the US and China. As a result, Europe has a crucial role in the US-China drama.

Europe's engagement with China

Bilateral relations between the EU and China started to warm in the mid-1990s, following a historic trough caused by the 1989 Tiananmen Square massacre and subsequent wave of internal repression, which had resulted in an EU arms embargo and severing of all military ties.

This shift was mainly in response to accelerating economic growth in China, which saw European business take a growing interest in the Chinese market. The fear of falling behind other developed countries, some with historically closer economic (and often political) ties to China, such as Japan and the US, also increased political pressure on European leaders to lower barriers to trade and investment in China. Moreover, a growing awareness that China would play a significant global role in the near future motivated European leaders to try to encourage China to integrate fully into the international rules-based economic system. As in the US, many Europeans believed that trade and investment would lead China to converge with Western trade and investment standards and, ultimately, accept political reforms.

" As in the US, many Europeans believed that trade and investment would lead China to converge with Western trade and investment standards and, ultimately, accept political reforms

Relations between Europe and China deepened following the introduction of the euro, which China supported, seeing it as an important alternative reserve currency to the dollar. Bilateral trade and investment grew steadily through the early 2000s, when both the European and Chinese economies reaped the dividends of WTO accession, further cementing ties.

Shifting attitudes

While a change in attitudes was initially slow in coming owing to the influence of European, especially German, commercial interests, it accelerated markedly in the second half of the present decade. Imbalances between Europe and China became increasingly apparent, particularly as China moved rapidly up the value chain and economic growth slowed. European concerns grew over the lack of reciprocity for market access, poor enforcement of intellectual property rights, the large role of the state in the economy, and large-scale direct and indirect state subsidies to state-owned and private firms. The EU has attempted to address these complaints, with limited success, via the WTO's dispute settlement mechanism. The failure to win concessions culminated in 2016 with Europe's decision, backed by the US, not to grant China "Market Economy Status," prompting a major dispute in the WTO.

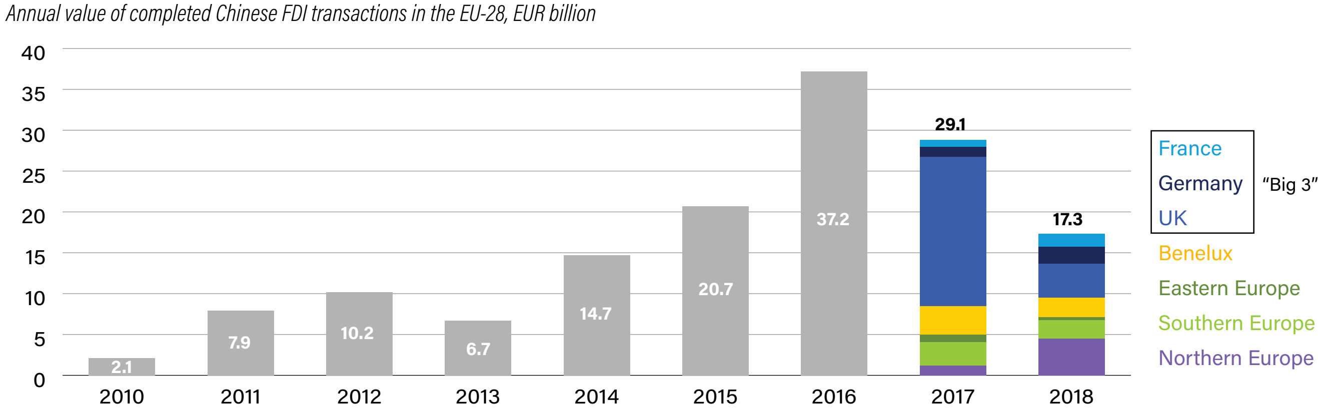
It is important to note that while many European states are not in lock-step on how best address the China question, which will limit its ability to implement a very aggressive strategy, the EU is taking an increasingly assertive posture toward China. Efforts to address imbalances in market access and trade practices—spearheaded by France and increasingly Germany—have begun to take shape. One significant measure was the introduction of an investment screening framework at the EU level in order to strengthen scrutiny of Chinese FDI in the EU, especially in strategic sectors of security and public interest. This has resulted in the first-ever instance of a Chinese takeover of a firm being blocked on security grounds—the firm in question being Germany's Leifeld Metal, which supplies components for nuclear energy. The European Commission has also taken a multitude of trade defense measures against China—as of the end of 2018, out of a total 105 trade defense instruments (TDI) in place, more than two-thirds are directed at imports from China. This is likely to continue as rules regarding TDIs have been reformed to lower the threshold for instituting and raising the maximum countervailing duty allowable against an offending exporter. On public procurement, an area where the EU market is very open but where China allows very limited foreign access, a proposal to restrict access for non-EU companies from states that do not grant reciprocity has been gaining momentum. China is also fueling a growing debate on EU competition policy: The decision to block a merger between French and German train manufacturers Alstom and Siemens, which had been promoted as a means of better competing with Chinese giant CRRC, has led some to call for rethinking the EU's stringent competition and state aid rules to better account for the challenges posed by large foreign multinationals. Lastly, the EU has been actively pursuing trade agreements with markets in China's immediate neighborhood. The EU has already finalized an agreement with Japan, which went into force earlier this year, and with South Korea. It has also signed similar agreements with Vietnam and Singapore and is in the process of negotiating deals with Australia and New Zealand.

This strategy serves three purposes. First, it is intended to signal Europe's continued commitment to global trade liberalization in the face of US protectionism. Second, it is designed to strengthen commercial and investment ties in a region most immediately exposed to Chinese influence, the same rationale that originally inspired the Trans-Pacific Partnership (TPP).

Third, while China's sheer economic size means it will remain a critical and irreplaceable trade partner for the EU

Chinese FDI in the EU concentrated in EU's largest economies

Annual value of completed Chinese FDI transactions in the EU-28, EUR billion



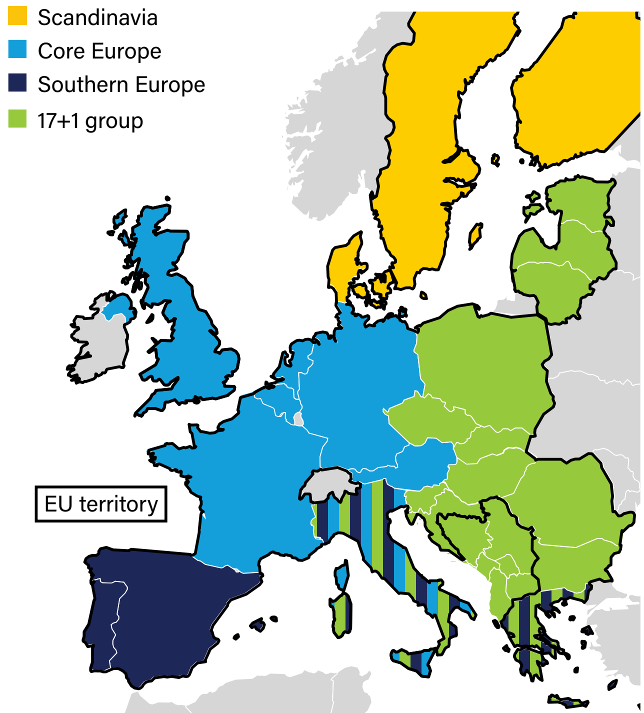
Source: Rhodium Group

for the foreseeable future, the European strategy is meant to help diversify EU trade and gradually reduce inter-dependence with China.

Limits to success

The above measures notwithstanding, several factors will hamper the EU's leverage over China. The biggest obstacle is coordination. Significant rifts persist over member states' approaches to China. Whereas France, Germany and the Commission itself are increasingly aligned, divisions between larger "core" member states and smaller, less well-off members in both eastern and southern Europe are becoming more visible, partly reflecting Beijing's success in targeting individual member states on a bilateral basis.

Italy increasingly a tipping point between internal EU factions



Source: Eurasia Group

This was recently demonstrated by Italy's decision to join the BRI—a big political win for Beijing and a blow to the EU's efforts to introduce more transparency and reciprocity in BRI-related projects and win concessions in other areas. Coordination is also a problem between the EU and the US. Although the EU could stand to benefit from any concessions made by China in ongoing trade talks with the US, tense relations between Brussels and Washington will deprive both of the leverage that would stem from exerting pressure on China in a more concerted fashion. A good example is European efforts to spur a comprehensive reform of WTO rules, which have been undermined by the Trump administration's refusal to engage.

Lastly, the EU's deep commitment to open markets and free trade, although increasingly tested in the current environment, will deter it from employing more aggressive mercantilist measures to try to extract concessions from China, along the lines of what the Trump administration has done. Furthermore, Europe's heavy dependence on international trade, in contrast to the US, would in any case discourage more aggressive tactics that could further undermine economic conditions in Europe, as shown by the sharp economic slowdown in key European economies such as Germany because of global trade tensions.

Geotechnology: The new battlefield

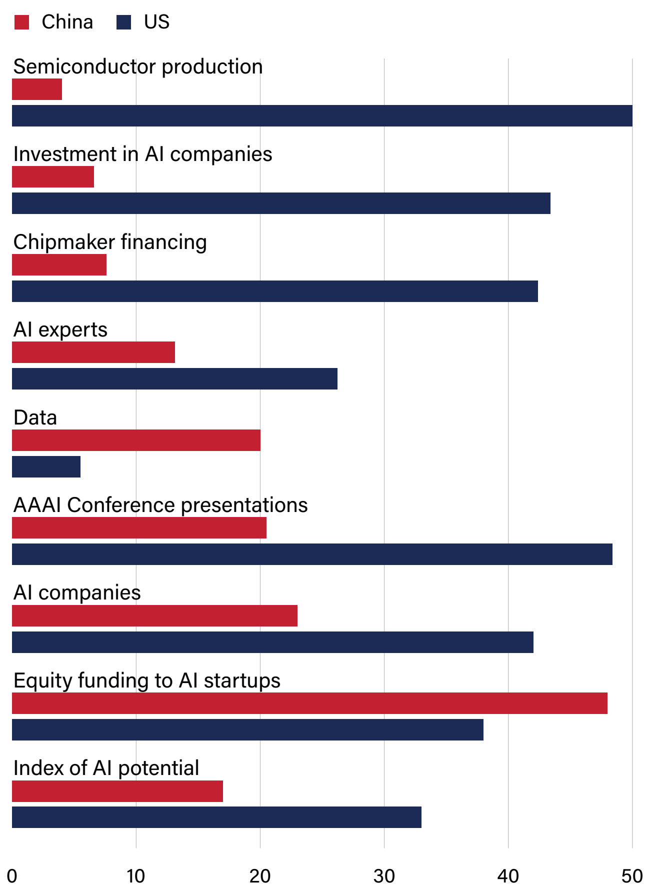
The seeds of conflict

If the above dynamics have been building for years, they erupted in 2017 when the Trump administration launched a trade war with Beijing. But tariffs were only the beginning. Nowhere has the impact of US-China competition been greater than in the $5 trillion global information and communication technology (ICT) sector, which has seen the US engage in a whole-of-government push against China, including with new restrictions and enhanced scrutiny of Chinese investment into sensitive US tech sectors and tighter export controls on US technologies. These actions are the result of accumulating pressures that pre-date the current administration by at least a decade, reflecting longstanding concerns both within the US business community and among the defense and national security establishment that China is marshaling its economy to develop advanced technologies that will give it advantages in the sectors key to growth in the 21st century while reshaping the global balance of power to the detriment of US security. In short, the tech war is the outcome—and the front line—of economic and security competition between the two powers.

Security and economy

From an economic perspective, US wariness of China as a technology rival had been growing since as early as the 2000s, when China's ability to acquire new technology hinged on intellectual property theft, industrial espionage, and aggressive technology transfer and joint venture requirements. These concerns ramped up in 2014 when Xi introduced several tech-focused initiatives (such as Made in China 2025, or MIC2025, the Internet Plus plan, and the National Integrated Circuit Investment Fund) by which China would channel massive amounts of state investment into developing an indigenous technology complex with the aim of becoming a leader in emerging technologies such as advanced semiconductors, artificial intelligence (AI), quantum computing, and the Internet of Things. Tech giant Huawei was already beginning to lead in the development of next-generation mobile telecommunications technology.

China's bid to dominate AI



Sources: Deciphering China's AI Dream, Oxford University
Notes: Percentages are of global total, per input. Data drawn from 2017, except: Semiconductor Production (2015);
Investment in AI companies (2012-2016); Data (2016); Association for the Advancement of Artificial Intelligence conference presentations (2015).

This also coincided with the emergence of Chinese technology "champions," in the form of both large digital platform companies such as Tencent, Baidu, and Alibaba as well as hardware OEMs that had been around for some time, such as Huawei and ZTE, which had emerged as leaders after years of heavy investment in R&D. These companies have built unique business models and product offerings as a result of serving China's massive internal market—at 800 million people, China's population of internet users is nearly as big as the entire population of the US and Europe combined. And they are increasingly capable of competing with the best of Silicon Valley.

The prime example of China's growing dominance of a burgeoning technology field is the race to build 5G networks, whose high data speeds, ultra-low latency, and massive bandwidth will support the next generation of emerging digital technologies. Huawei—which last year sold more smartphones than Apple—has emerged over the past decade as the world leader in 5G mobile networking equipment, offering, according to numerous carriers, superior equipment at lower prices. It is spending more than double what its two nearest competitors in the networking equipment market spend globally on R&D each year. The US has no comparable company.

> "In short, the tech war is the outcome—and the front line—of economic and security competition between the US and China

Economic concerns are a big part of the US calculus behind confronting China in the technology domain. In the US view, Chinese firms are succeeding on the back of unfair competitive practices and direct state support. But the primary rationale is national security: Defense and intelligence officials are worried that if China gains an edge in technologies with dual military and civilian applications, such as AI or quantum computing, it could erode US military advantages in important areas such as air and naval superiority. The aggressive campaign by the US to convince European allies to block Huawei from supplying equipment for their upcoming 5G rollouts is motivated by a fear that should Chinese companies (believed to be susceptible to Beijing's influence) be allowed to lead the introduction of next-generation mobile networks globally, it could leave the US and its allies vulnerable to espionage or sabotage. So far, most US allies in Europe have been reluctant to ban Huawei outright; however, many EU members have tightened rules on 5G supply chain security and increased scrutiny of Huawei. Whether this trend continues—or plateaus—is a function of each individual country's exposure to Chinese or US pressure tactics.

The Trump factor

While these concerns are not new, the Trump administration has gone further than its predecessors in pursuing an aggressive and confrontational strategy—a shift that has been partly informed by an expanded definition of national security. Under previous administrations, national security in a technology context tended to refer narrowly to restricting access to a small number of specific technologies that had clear-cut military applications. The Trump administration's broader conception was reflected in the 2017 National Security Strategy. It introduced the concept of the "National Security Innovation Base," which was defined in the document and subsequently adopted as policy as "the American network of knowledge, capabilities, and people—including academia, National Laboratories, and the private sector—that turns ideas into innovations, transforms discoveries into successful commercial products and companies, and protects and enhances the American way of life."

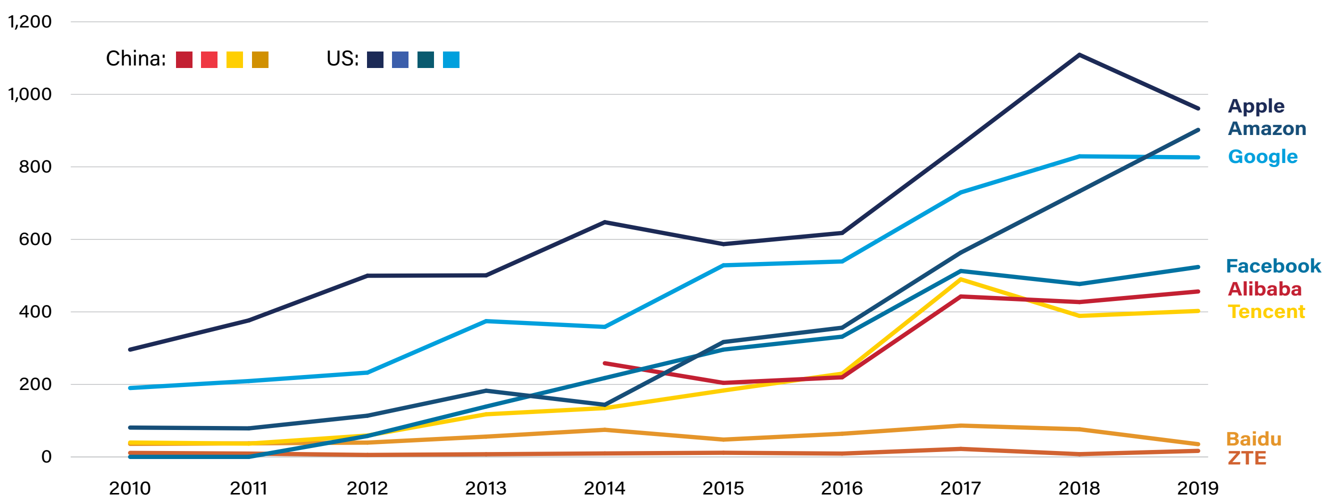
By broadening the definition of national security-related innovation to include private sector innovations, commercial products, and companies, the US administration in effect drew a bright red line around Silicon Valley and the broader US innovation ecosystem and declared that protecting it from foreign competition was a top US national security priority. Its actions in the US-China trade conflict reflect this new view, with national security concerns increasingly overriding commercial considerations in the formulation of US policy.

China's response

The dramatic increase in US pressure on Chinese tech companies has not seen China yield to US demands; rather, there has been a hardening of attitudes in Beijing. The ban on US companies providing technology to Huawei, like the earlier 2018 move to restrict smaller Huawei rival ZTE's access to US technology, has been taken as evidence that China must redouble efforts to reduce dependence and, in some areas, move to self-sufficiency in critical technologies in order to avoid US-controlled software and semiconductor choke points. Xi went so far as to tell a crowd in Jiangxi province, where China's Red Army began its famous "Long March," that China was "now embarking on a new Long March"—suggesting that it is prepared for a long struggle in the tech-and-trade conflict with the US. These impulses will only be further reinforced by additional US moves such as the decision in June to add five Chinese organizations involved in supercomputing to the Commerce Department's technology blacklist.

However, reducing dependence and achieving self-sufficiency in core technologies will be easier in some areas

Growth of Chinese technology leadership *(Market cap, $ billions)*



Source: Koyfin

than in others. Despite China's domestic investment initiatives, advanced semiconductors and the underlying software and technology required to design and produce the cutting-edge chips that will power the next generation of mobile and big data applications is likely to remain a significant hurdle for companies like Huawei and Chinese supercomputing powerhouse Sugon, which are targeted by US technology export restrictions. Huawei is China's leading semiconductor design company, and it has successfully integrated Sugon's chips into the firm's consumer and infrastructure products. But the company continues to rely on Western technology for chip design software and architecture. Self-sufficiency in key semiconductor segments is likely at least three to five years away, and perhaps even longer in some market segments.

> The US administration in effect drew a bright red line around Silicon Valley and the broader US innovation ecosystem and declared that protecting it from foreign competition was a top US national security priority

A decoupling of global ICT?

As political pressures mount, they risk overturning the paradigm that has governed the development of the global technology sector over the past 30 years. The modern ICT industry was built on the assumption that data, high-tech talent, technology products and knowhow were relatively free to move across national borders. Globalization of high-tech ICT supply chains has enabled major reductions in the cost of digital equipment—this is the reason a smartphone costs $1,000 instead of a multiple of that figure.

Numerous industry surveys have shown that supply chains are already starting to shift as a result of the US-China trade and technology conflict. This will be costly, involving both an upfront capital cost of creating backup capacity outside of China, and a loss of efficiency as manufacturing processes and logistical arrangements that have been perfected in China are transplanted to new geographies.

Moreover, the US-China rift and the consequent severing of the ties binding US and Chinese technology supply chains is contributing to a larger global trend of technology fragmentation resulting from an absence of global leadership or consensus on tech and data policy, including between the US and its European allies. The Internet is being transformed into an increasingly balkanized patchwork of competing systems governed by sometimes contradictory data regimes, creating significant new operational challenges for companies.

Some of these data protection regimes aim to reinforce citizens' privacy rights with respect to large Silicon Valley-type firms that profit from the collection, analysis, and sale of personal information. The key example here is the EU's General Data Protection Regulation (GDPR), which has required some companies that handle personal data to make major changes to their business models in order to comply. The US is resistant to efforts to promote the GDPR as a global standard, instead using a rival but voluntary system, the APEC Cross-Border Privacy Rules, as its preferred framework when negotiating multilateral trade pacts—setting up a potential clash with Europe as global leaders try to hammer out a universal framework to safeguard data flows through international forums such as the G20 and the WTO.

Other data protection regimes are intended to maintain government control over access to sensitive information and address a perceived threat posed by the US-dominated open Internet. China's Great Firewall is an example, as well as the 2016 Cybersecurity Law, which, unlike the GDPR, has a much broader national security and data sovereignty remit. One of its key requirements is the "localization" within China's borders of various types of information deemed "important" as defined by Chinese regulators. The extent of its impact on cross-border information flows will depend on the law's implementing regulations—which themselves may depend on progress in resolving the US-China trade dispute. Albeit to a lesser extent than the GDPR, China's cybersecurity law may also serve as a model for certain countries: India, for example, is following China and Russia in enshrining data localization into its national rules, partly as a way of protecting its domestic tech firms from foreign competition.

Scenarios for the future

The current challenges in the relationship between China and the West, although hastened by a resolute Trump, are in reality a function of divergent values, political systems, and incongruent economic philosophies along with ever present national security concerns. But the world now sits at a crossroads.

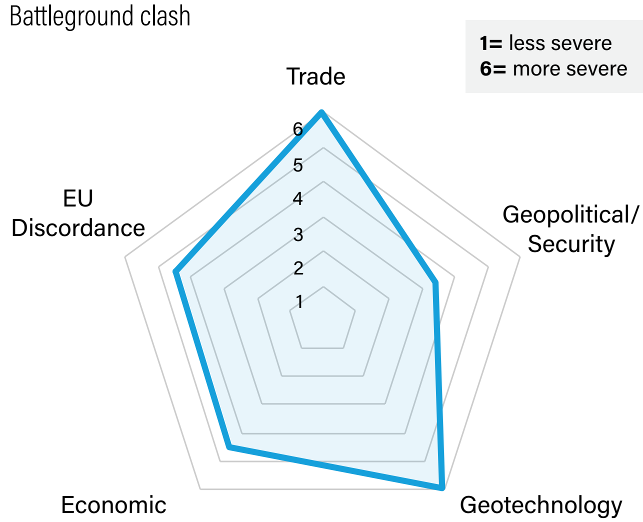
If the US and Europe can overcome their own differences and develop a coordinated response to China, an ascendant West could take the upper hand and gain some concessions from China. If they cannot, or will not, the US will be left to face down a China that is increasingly determined to close remaining gaps and compete head-to-head with the US in key economic, military, and technology domains. In this scenario, which is the base case in this analysis, the world is likely to experience an economically disruptive great power competition not seen since the Cold War. De-escalation is another possibility, but that would run counter to the structural forces described above, thus requiring tremendous political capital. In this scenario, China and the West might agree to a new status quo that involves compromises on both sides and the setting of mutually accepted rules of engagement for the foreseeable future.

Basecase scenario: Battleground clash

The most likely scenario for the next five years of US-China relations is a protracted, wide-ranging, and disruptive recalibration of international relations affecting nearly all facets of global affairs.

In such circumstances, the US and China are unable or unwilling to find a lasting compromise on the fundamental differences in their respective worldviews. Furthermore, rifts between the US and Europe, and within the EU itself, prevent the rise of a unified Western counterweight to China. This sets up a situation in which baseline US-China tension continues to intensify as both sides vie for control in a zero-sum fashion. While each will win limited victories, neither will be able to gain a clear advantage. This will yield a general stalemate accompanied by economic uncertainty, lost potential, and a reduced capacity for global collaboration on myriad issues.

Battleground clash



Trade	Severe
Geotechnology	Severe
Economic	High
EU Discordance	High
Geopolitical/ Security	Medium

Source: Eurasia Group

In the near-to-medium term, we expect the US and China to muddle along in trade negotiations for the rest of 2019, the end result being either a prolonged stalemate (with current tariffs remaining in place but no immediate escalation) or a limited truce (though likely not before 2020), perhaps coming on the back of a noticeable economic slowdown. Any such deal, however, is likely to be mainly cosmetic and limited in scope, and will fail to address most of the underlying issues and structural points of tension. Tariffs may be partially rolled back but are unlikely to be fully removed, and any agreement will suffer from what both sides regard as deep flaws: limited liberalization of technology and innovation policies in China (a key concern of the US), and lack of major easing of US measures against Huawei (a critical priority for Beijing). While this a muddle-through approach would prevent major tariff escalation perhaps through 2020, trade and technology tensions will continue to play out through non-tariff measures (such as investment restrictions) and any agreement will remain tenuous, leading to periodic flare ups of escalation and the potential for re-imposition of tariffs. Pressure for "decoupling" will expand to more areas, including financial market access (such as listing of Chinese firms on US equity exchanges).

In the US, the 2020 presidential election results in either a second mandate for Trump or a Democratic administration with comparably hawkish views toward China (less likely). An emboldened Trump feels vindicated in his aggressive approach to China and bilateral trade relations, while structural shifts in US public and elite opinion and the institutional bias in Washington further enable and encourage this policy course.

In China, the pressure exerted by the US begins to take a toll on the economy, but given the historical resilience of the Chinese economy, in this scenario we project that it remains manageable thanks to state-led efforts that succeed in preventing growth from dipping below 5%. Under Xi's now firmly established leadership, the Chinese government is unlikely to go beyond the limited concessions made in the context of the ongoing trade negotiations, and will continue to resist measures that would fundamentally alter China's economic model or hamper its future development.

The US will seek to rally allies to this cause, but rifts will continue to hamper its ability to bring the full economic power of the advanced economies to bear on China. The failure to build a broad, effective, and sustainable coalition results in the US contesting China primarily on a bilateral basis. A prime target continues to be Chinese technology firms. In the immediate term, the US is likely to continue its campaign to cut Huawei out of the global 5G rollout, using hard and soft power pressure to leverage countries into opting for alternative suppliers in their 5G infrastructure. It also increasingly pressures third countries to adopt its own technology and privacy standards.

China, for its part, will probe the weaknesses of any eventual trade deal and test the next President and Congress resolve. This likely involves the designation of some US corporations as "unreliable entities," further restricting access to the China market or China-based supply chains. Furthermore, China will continue to pare back its purchases of US agricultural products, putting pressure on a key political constituency.

As both China and the US find it difficult to dominate in direct confrontations, they will seek to counter each other at the margins or in "uncontested" areas. Other countries and regions become increasingly disputed as the two superpowers vie for influence and economic reach. China intensifies its charm offensive overseas via bilateral and multilateral channels, and it endeavors to expand participation in the BRI by committing greater financial resources, addressing concerns of over-leveraging, and committing to boost imports from member countries. In an effort to stay in Europe's good graces, China also likely makes additional concessions to the EU. In addition to approving large ad-hoc opportunities for individual European firms investing in the domestic market, China may offer concessions to promote access to previously closed sectors as part of ongoing negotiations over an EU-China investment treaty. It may likewise reduce tariffs and market access restrictions to non-US companies across the board.

In the short-term, EU countries could reap some limited benefits from the ongoing and worsening US-China "trade war". These will primarily stem from import substitution opportunities as the EU is a key trade partner of both countries: European firms could replace US and Chinese products made less competitive due to price pressures, thus gaining market share in both markets. This would mainly benefit those sectors where European exports already overlap with those of the US to China and vice-versa, and where the EU already has enough capacity for production to be scaled up relatively quickly without significant CAPEX investment such as aircraft & aerospace, medical devices, chemicals, and general machinery.

In the long-term, however, escalating US-China tensions will likely prove detrimental to the European economy.

Any near-term gains will be more than offset by the negative macroeconomic effects of rising trade barriers between the US and China on the global economy and financial markets; these negative effects will increase as relations between the two worsen. The EU is particularly vulnerable to such spillovers given its own heavy reliance on trade, as shown by the slowdown that has affected the eurozone in the 2018-19 period. For structural and political reasons, the EU is also the least-well equipped of the three major economic areas to respond to the effects of a trade-related economic shock. While so far, the European Central Bank has done much of the heavy-lifting in sustaining the fragile economic recovery, it has relatively limited scope for additional stimulus compared to other major central banks. Fiscal policy, by contrast, has been relatively unsupportive, as a result of an EU fiscal governance framework that prioritizes fiscal responsibility over growth. This is most notable in countries that have ample fiscal space to actively support the economy, while taking advantage of record-low rates (above all, Germany).

> "While each side will win limited victories, in a battleground clash neither will be able to gain a clear advantage

Secondly, it is unlikely the EU can effectively "play both sides" or simply maintain a neutral or ambivalent stance for long. To date, the Trump administration has stopped short of opening two parallel fronts in its effort to address what it seen as unfair trade practices. However, a worsening standoff may see the US increase pressure on Europe to side more unambiguously with Washington. This could take the form of economic pressure (such as acting on the threat to impose punishing 232 tariffs on automobiles, or imposing additional duties targeted at EU trade with the potential to replace affected imports from China). In parallel, the US could also employ political and diplomatic means (for instance, calling into question US security guarantees to Europe via NATO).

The impact on the EU's economy has the potential to be significant. Core member states (and the EU as a whole) are likely to seek to appease Washington to a degree by taking stronger action against China, such as by moving closer to the US position on Huawei and 5G, in an effort to protect the European economy and salvage relations with the US, still by far Europe's foremost security and economic partner.

However, there are structural limits that will prevent the EU from fully aligning with the US in more aggressively confronting China. A more erratic and hostile US likely further alienates the EU, hampering rather than facilitating efforts at working constructively to roll back Chinese influence at a multilateral level, the EU's preferred course of action. Worsening transatlantic relations would inevitably feed anti-US sentiment in the public and at the leadership level. In addition, the EU's ideological and institutional commitment to free trade and open markets, as well as its own significant interdependence with China, means there is a limit to the EU's ability to aggressively deploy unilateral trade barriers. China's size and position in global supply chains makes it exceedingly unlikely that Chinese suppliers can be rapidly replaced with alternative sources of imports without significantly affecting the European economy in the process.

On the other hand, it is hard to envision how the EU could reposition itself by aligning more explicitly with China in political and economic terms. Despite China's growing importance in the global economy, the US still represents a more important export market, and access to deep American capital markets remains crucial for Europe, whose economy is otherwise very dependent on bank funding, traditional payments systems, and the dollar as global reserve currency. Moreover, despite the noticeable deterioration in US-EU relations that started in the early 2000s (and has accelerated greatly under Trump), deep cultural, political and security linkages between the two long pre-date the sitting US president. EU leaders do not want to jeopardize these links entirely, given the EU's significant dependence on the US for its own conventional defense and nuclear deterrence. Finally, rifts within the EU itself will be exacerbated: different member states, particularly in the "17+1" group, which is a collection of central and eastern European countries with direct political and economic relations with China, will be exposed to retaliation from the US and China to differing degree. As a result, the ability of the EU to develop ambitious Union-wide positions on China will be increasingly stymied.

Given its close economic ties to both the US and China, the EU is more likely to be caught in the crossfire of the trade war than to effectively play both sides to its own gain, or to actively and unambiguously side with either contender.

With the world increasingly split into two separate spheres, firms will begin to accept the new status quo. Investments are already beginning to flow into countries such as Vietnam, Mexico and Taiwan with the goal of re-establishing global supply chains. Supply-chain bifurcation and China's own reaffirmed commitment to fostering indigenous innovation (along with the eventual export of the technological fruits of these labors) accelerate US-China decoupling. The development of two separate supply chains serving two increasingly distinct business and technological ecosystems eventually spurs the emergence of two sets of norms and standards, raising the costs for investors and corporations looking to do business in both.

17+1 group in Europe

Source: Eurasia Group

This trend will be particularly clear in technology, where national security concerns are already causing the fragmentation of data protection regimes and supply chains. Competing and potentially contradictory regulations will increase the cost of compliance and companies on both sides of the divide will lose access to revenues and investment capital that helps fuel global operations and new ventures. Barriers to information sharing and collaboration, including exchanges of students, researchers and subject matter experts, will slow the flow of ideas and R&D that produce future generations of innovative technologies and applications, as well as hindering progress in areas of tech policy that require broad global cooperation, such as AI safety.

In a context where basic technology governance is politicized, third countries may find themselves forced to "choose a side" in terms of whose tech and software "stacks" to adopt, with potentially serious long-term security and economic ramifications. Moreover, there would be a question of interoperability: in such a bifurcated world, it could no longer be taken for granted that technology products developed in the US or allied markets would be able to interact with those developed to work on a rival China-dominated ecosystem that was built to different standards, assembled from different hardware, powered by different software and communicated on different frequencies. An inability to move data globally to where it can be most efficiently stored or processed, along with complete or even partial non-interoperability between rival US and Chinese technology "stacks", would make it much harder to operate as a global company—in technology or any other industry.

In terms of global governance, the inability of the global powers to cooperate will result in stagnation of much needed reform efforts in international institutions such as the UN, IMF, World Bank and WTO. While these institutions will continue to exist, it's possible more regional or bloc-based institutions will arise, in the same vein as the AIIB and the Shanghai Cooperation Organization, with the goal of addressing development finance, climate change, migration and others.

China will also continue its efforts to globalize the renminbi and deepen its capital markets to offer an alternative to the US and dollar dominated system. A long-term goal is for the renminbi to increasingly form a counterbalance to the dollar reserve currency system, either on its own or through the uptake of a basket of currencies, though this is admittedly still far off.

While the military dimension is relevant, it is unlikely to be a frontline driver of the conflict in the same way as it was between the US and Soviet Union in the Cold War, as both sides have strong incentives to avoid war. That said, China and the US will continue to build up their military capabilities in East Asia, via closer regional security partnerships on the part of the US, and further militarization of artificial islands in the South China Sea by China. This raises the risk of inadvertent escalation, for example if China-Taiwan tensions flare or if a freedom of navigation exercise is followed too closely.

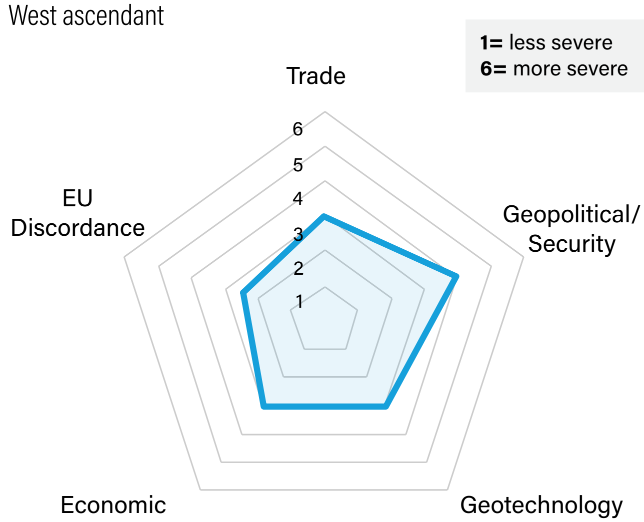
A battleground clash is the most likely outcome in view of structural issues at play both in the US-China bilateral relationship (in which China is increasingly an evenly-matched peer) and in the wider geopolitical environment. Structural factors include fundamental divergences between Chinese and Western values, the fact of competition between two distinct economic models (rather than, for instance, between two countries at different stages of development but which ultimately share a single philosophy), and the apparent fact that populism, nativism, and deglobalization are here to stay. Taken together, these elements favor a prolonged confrontation.

The main caveat to this scenario is therefore: "how bad can it get?" On the one hand, it is possible that an extended global confrontation between two rivals with such evenly matched strengths could spiral out of control and bleed beyond the economic dimension into security competition and a Cold War dynamic similar to that which followed the Second World War. On the other hand, cooler heads might prevail, leaving the conflict centered on the structural economic issues discussed previously (especially relevant here is the outcome of the 2020 US elections). In this case, China and the US might manage an uneasy stalemate but fall short of de-escalation or a grand bargain, with the bifurcation of the international system continuing issue by issue. In either case, as one country after another selects a preferred ideological alignment, path dependence will set in as the costs of reversing course back towards a fully integrated global economy and international system become too high to undo short of a major conflict.

Less likely scenario: West ascendant

An alternative scenario envisions China's influence and power significantly rolled back by a coordinated global response led by the US and its allies. This campaign leverages the combined economic heft of its members to drive Beijing to the bargaining table and force a compromise tilted heavily in favor of Western values and systems.

West ascendant



Trade	Medium
Geotechnology	Medium
Economic	Medium
EU Discordance	Low
Geopolitical/ Security	Medium/High

Source: Eurasia Group

This scenario would require political shifts on both sides of the Atlantic. Assembling and maintaining this new coalition also requires a new occupant in the White House in favor of multilateral, systems-based approaches. European acceptance of US leadership and willingness to expend the capital necessary to accomplish the mission would require diminished intra-EU disputes to allow for region-wide policy. Overall, transatlantic conflict, whether over trade or foreign policy, would have to be minimized or de-prioritized so that an alliance could be formed to confront China.

The new Western alliance will seek to reinvigorate and reform key institutions, leaving the international system overall intact but revamping it to enshrine and protect gains made at China's expense. China's global influence is likely diminished, or at least significantly attenuated, and its economy harmed or at least materially derailed from its pre-conflict trajectory.

to Chinese inbound FDI, starting with strategic sectors but potentially broadening to other areas; progressive harmonization of Europe's position towards US policy on Huawei and 5G, with some potential outliers like Germany and the Netherlands—depending of course on Huawei's viability to compete for 5G networks in advanced country markets; precluding access to the EU's lucrative public procurement market; reforming EU competition rules beyond a narrow focus on the EU to also take into account global markets and competition from foreign firms; and greater and more aggressive recourse to trade defense mechanisms within

> "In a context where basic technology governance is politicized, third countries may find themselves forced to "choose a side" in terms of whose tech and software "stacks" to adopt, with potentially serious long-term security and economic ramifications

the WTO framework (and even exceeding WTO channels in select industries or sectors where unfair competition is most obvious or politically sensitive).

The first and perhaps most important sign of a shift in this direction is an abandonment by the US of the unilateral approach it has thus far taken in addressing the China challenge in favor of building a coalition of allies in Europe and perhaps other OECD countries like Canada, Australia, Japan and South Korea. For this to succeed, the US must close, or at least table for the foreseeable future, the other fronts in its global trade campaign, namely those with the EU, Canada and Mexico (perhaps also Turkey and India). These countries share many of the same grievances about China and have a strong interest in having a seat at the table, but have had their national pride and economic security jeopardized by Trump's aggressive trade imbroglios.

The US and China do not reach a broad trade deal under Trump in this scenario. But rather than escalatory tariffs forcing a change in Chinese practices and laws, entrenchment is the main result. This scenario emphasizes multilateralism not as an abandonment of US policy goals, but rather as a reaction to the failure of prior unilateral tactics for achieving them.

The US does not fully discontinue its tariff policies, but emphasizes non-tariff barriers as export-dependent Western allies, the EU in particular, are less willing and able to enact such measures. More decisive and assertive action by the EU towards China likely involves further restricting access

This scenario would also likely include a transatlantic compromise on issues relating to technology and data privacy. The coalition increases pressure on China's technology sector with the goal of restricting China's access to Western technologies deemed to be vital to the West's economic competitiveness, military, and national security. Sanctions on Huawei are maximized, effectively killing its international business. Chinese 5G equipment suppliers retreat to the home market as domestic telecom firms and the West begins to take the lead on 5G globally—albeit at a much higher cost and longer timeframe than would have occurred had Huawei been included. But Huawei's technology lead means China gets to full 5G faster and innovates on top, providing a compelling model for emerging markets. In other areas, China's ability to fully realize its aims to become a leader in the next generation of core technologies via Made in China 2025 is constrained through the international agreements put in place to limit China's access to strategic technology, and it fails to close the technology gap. And finally, data privacy and protection concerns mean that Western countries cut off data transfers to Chinese firms, further balkanizing the development of data driven technologies such as intelligence.

In the face of a Western pressure campaign, China strengthens domestic political control, moving toward a "heavy-touch party capitalism" model. Tensions along faultlines such as Hong Kong, Xinjiang, and Taiwan will increase, possibly with Western reprisals. China will also become more antagonistic internationally, obstructing international bodies (such as via a China-Russia bloc in the UN) or restricting exports of rare earth metals in an effort to starve the high-tech economies of the West. Furthermore, in addition to traditional saber-rattling in the South China Sea, China is likely to be more active in cyberspace, including pursuing cyber operations targeting Western firms and government agencies, and surveilling and implanting malware in critical infrastructure. Overall, the risk of some form of military conflict goes up in US-China geopolitical hotspots, not because China is highly likely to lash out militarily in response to economic weakness, but rather owing to an overreaction to coordinated foreign action by external powers.

Eventually, the US explores resurrecting the Transatlantic Trade and Investment Partnership (TTIP) and rejoining the TPP to shore up the transatlantic alliance and contain China with trade rules. The US ramps up investment in deeper defense relationships across the Indo-Pacific region (along with European arms exports) with the aim of reducing China's gains from bilateral trade and inducing it to commit more resources to defense to counter the US and its allies in the Pacific.

> "This scenario emphasizes multilateralism not as an abandonment of US policy goals, but rather as a reaction to the failure of prior unilateral tactics for achieving them

These moves collectively seek to put pressure on China's economy, and over time it begins to feel some measure of strain. China's currency may be a target for the Western alliance seeking to coerce Beijing into an agreement to maintain a stable exchange rate that does not unduly advantage Chinese exports (like the Plaza or Louvre Accord). These combined efforts use pressure to limit China's policy options by creating tougher conditions that require a re-allocation of resources to shoring up the economy. At worst, this could cause a financial crisis that forces new countercyclical policy from Beijing.

China will seek to weaken the Western coalition with economic countermeasures and bilateral diplomacy focused particularly on creating wedges within the EU. It could potentially reduce the flow of Chinese inbound FDI to EU states that side more closely with the US and scale back purchases of European goods and services to put pressure on the EU economy into recession. China also leverages its BRI relationship with the "17+1" group to reduce the EU's ability to act cohesively. The EU-China relationship will deteriorate significantly, but the US helps buttress Europe to avoid an economic crisis. China will also try to diversify is economic relations, although it will be limited to non-US allies.

However, if given the political space to save face, rather than permit persistent economic weakness to undermine the Communist Party's social contract, it is likely China eventually concedes to negotiations. The first outcome of this would be a strong trade and investment deal heavily tilted in favor of Western countries. Other concessions would likely force liberal economic reforms on China (involving wider market access), reducing the potential for renminbi manipulation, and a gradual reduction of state support for domestic firms. That said, China will never abandon its aims of moving up the manufacturing value chain and thus continues its efforts to develop indigenous, cutting-edge technologies.

The most important implication is that China's eventual deference to Western demands will be a major boon to the old global economic order. There will likely be a global pull-back in economic output in the short-term as China's economy slows and its countermeasures inflict pain on Europe, but the long-term dividends are sizeable as China begins to open its markets to Western companies, which are also subsequently faced with less competition from Chinese firms as large-scale state support and subsidies abate.

International trade achieves a new status quo, having decisively broken with post-Chinese WTO accession patterns. The US, having ended its wholesale assault on global free trade and cemented its global economic primacy, now has a tailwind as the TTIP and the TPP are reinvigorated. Reforms at the WTO will have put restrictions on China's economic model; and as its cost competitiveness erodes, the next wave of developing states will see increased investment. Despite China's efforts to save its flagship foreign policy project, the BRI, the coordinated global pressure campaign means it results in disappointment, both strategically and financially.

The rollout of 5G globally will be negatively affected in the short to medium term as government restrictions on Chinese vendors' participation in 5G networks force alternative suppliers to invest in new manufacturing capacity and human capital, leading to delays in 5G rollouts and increased costs for carriers due to reduced competition in the global 5G networking equipment market following Huawei's weakening or demise and, very likely, the need to "rip and replace" Huawei gear in existing mobile networks. As China doubles down on indigenous innovation, the West's greater innovative capacity means it maintains its lead in semiconductors and other technologies such as quantum computing and AI, while stepping into the void left by Huawei in global 5G equipment. The overall pace of innovation would still slow globally, however, as bifurcated supply chains raise costs and Western companies lose access to revenue earned in China that helps fund the R&D that drives new technology breakthroughs, and they lose access to the pipeline of qualified STEM researchers and professionals, many of whom now opt to stay in China and aid its technology development.

Why is this scenario less likely? Generally, the success of a US-led coalition in countering China will be a direct function of how broad the coalition is in terms of enlisting states—and how effective China is at preventing or undoing this coalition, mainly through bilateral engagement. This outcome would mark a new multilateral moment for the US akin to the creation of the Bretton Woods institutions and other international bodies after World War II. But it also likely requires Trump's successor to markedly change tack after 2020 and for Europe to accept a bandwagoning campaign. Even if transatlantic friction points are reduced, teaming up for a major operation is hardly automatic.

The requisite political stability in Europe may also be hard to come by, as the EU grapples with Brexit, domestic politics in France and Germany, and recalcitrant members from Italy to Poland. On both sides of the Atlantic, deep collaboration would require populism to be on the wane to enable economic sacrifices in the short and medium term. This is a particular risk for Europe, which has significant internal fissures ripe for exploitation, such as via the "17+1" group of countries with which China has invested significant resources in order to cultivate deeper ties.

Furthermore, China will attempt many of the same maneuvers in this scenario as one could expect it to deploy in a "battleground clash." The only difference in this scenario is that China fails in its efforts to build a counterweight to the US by leveraging the BRI, fostering closer economic relations with states outside the coalition, and closing the technology gap while avoiding an economic crisis. However deft the US is in building a coalition to confront China, the chances that China fails in each attempt to respond are low. In other words, a lot would have to go wrong for China, and go right for the West, for a capitulation by China and clear advantage for the US and its allies to emerge. If China is able to resist US efforts or the coalition breaks down, the world will revert to a "battleground clash" in which the US is again countering China in a unilateral fashion, with the rest of the world left to choose sides, to the detriment of the global economy and overall stability.

Least likely scenario: De-escalation

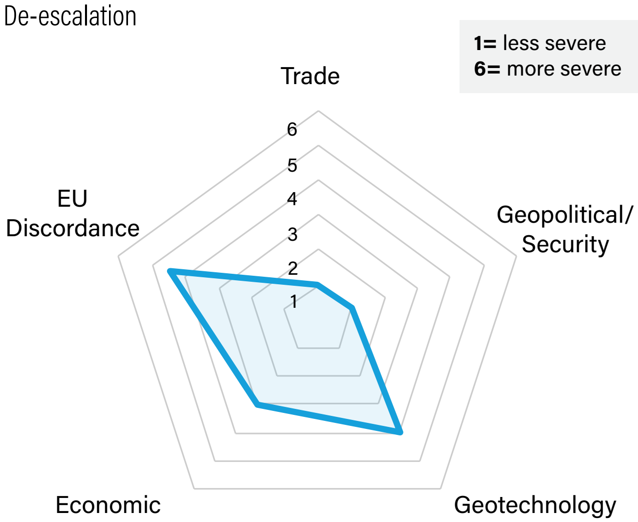
In this scenario, the US and China step down from trade escalation and find a way to compromise on key issues related to China's economy. Both countries are willing to accommodate the other in a way that is sub-optimal for both but avoids a head-to-head conflict. Over the next decade, the US, China, and Europe are then able to work together in international organizations on some issues related to global standards, rules, and norms.

In the period before the US 2020 presidential election, a key signpost would be Trump and Xi reaching a comprehensive trade deal that eliminates tariffs and addresses western complaints in a meaningful way. The deal includes commitments from China to buy more US goods (thus narrowing the trade deficit) and is accompanied by some form of monitoring and enforcement of intellectual property infringement. China gets its own concessions, including dropping the export controls aimed at Huawei and a complete or phased removal of the tariffs once the agreement comes into force. The US would also likely not pressure China to codify any changes into law—a sticking point in previous rounds of talks.

Such a deal is preceded by a gradual cooling of nationalist rhetoric from both sides. The US side is driven by Trump's desire to see a deal made before the end of his first term and/or concern over the economic and market impact on the US. China's tone is both a response to Trump's efforts at de-escalation and a reaction to the worse-than-expected impact of the trade war on China's economy in 2019.

With a stable deal in place, the two countries begin a process of rebuilding mutual trust. This process lasts through the last months of Trump's first term and into either his second term or the first term of a new president. As part of the agreement on Huawei, the US relaxes its opposition to the use of Huawei equipment in other countries but keeps its own ban on the domestic use of Huawei telecommunications equipment.

De-escalation



Trade	Low
Geotechnology	Medium/High
Economic	Medium
EU Discordance	Medium/High
Geopolitical/ Security	Low

Source: Eurasia Group

The global technology sector benefits in this scenario and the economic effects are significant. 5G rollouts proceed according to expected timelines and at lower cost. Over the long term, this hastens the deployment of next generation applications that leverage 5G networks, such as advanced factory automation, smart cities, autonomous driving, tele-medicine and other applications requiring low latency, high data speeds, and massive throughput.

A deeper decoupling of global supply chains, in both technology and manufacturing broadly, would slow as Chinese exporters and western firms, which had begun shifting operations from China to other low-cost markets, recommit. Some firms choose to continue diversifying their supply chains, but this is driven more by rising labor costs in China than by trade action. Markets that stood to benefit from the decoupling, including Vietnam, Mexico, and Bangladesh, lose out on some opportunities. Other countries deeply invested in East Asian technology supply chains, including Japan, South Korea, and Taiwan, breathe a sigh of relief. Efforts at import substitution in China cool somewhat.

The agreement on trade is a major windfall to global growth as outlooks improve on the back of a trade deal and subsequent reduction in tensions. With respect to global governance, both countries show greater willingness to cooperate on issues of international importance, including (under a Democratic president in the US) climate change. As China adapts to the new trade deal regulations and continues along the path of opening parts of its domestic market further, it finds more common ground with the US on issues like basic global security standards and WTO reform.

Europe also stands to gain from this scenario, as it will benefit indirectly from the changes to the Chinese market. The uncertainty that has weighed on export-oriented European economies since 2018 will lift. In some cases; however, Europe may lose out to opportunities provided to US firms under the deal. In general, the "soft deal" is unlikely to fully resolve the issue of state subsidies and preferences for local firms in China. The EU will try to leverage the deal to hasten the pace of its own negotiations with China on the comprehensive investment treaty, steel overcapacity, and China's accession to the WTO government procurement agreement.

Over the medium to long term, the domestic changes to China's economy—and the economic boost from the resolution of the trade war—could trickle down to the BRI. Western countries and companies will be encouraged by China's commitments to IP protection and (potentially) government procurement reform, and will increasingly

> "The complex supply chains that power today's global economy have been developed, refined and fine-tuned over decades. As companies build new production in other countries, they will initially suffer from lower efficiency and output

take part in joint projects or joint financing agreements. To further encourage this participation, China will strengthen environmental and labor standards somewhat.

In this scenario, tension over foreign policy hotspots is likewise reduced. While China does not, in this or any scenario, walk away from its core territorial interests (including Taiwan, Hong Kong, and the South China Sea), a reduction of nationalist rhetoric leads to less risky action on the part of China's military. In response, the US and some European countries limit freedom of navigation operations. The status quo reigns, with mild flare-ups here and there.

The main impediment to this overall outcome, and hence the reason for its low probability, is that while the two sides may in principle agree to a comprehensive agreement on trade, including liberalization of market access by China and a relaxation of the US position on Huawei, the fundamental differences in values and economic philosophies means a high probability that China does not go far enough in implementing such reforms to satisfy the US. The chances are significant that a trade bargain, were it to happen at all, would crumble over time as the pressures from fundamental differences over economic model, ideology, and global leadership accumulate.

Second, reaching a deal that is acceptable to Trump, Xi, and potentially a future Democratic president is increasingly unlikely. Any deal that is reached could fall apart fairly quickly if either side does not live up to its obligations, pushing all three countries back to the "battleground clash scenario." In that case, the battleground clash could be even more severe as the US and China feel further betrayed or that the last best avenue for avoiding conflict has been exhausted.

Economics of US-China competition

Macroeconomic implications

The "battleground clash" and "West ascendant" scenarios outlined previously suggest we are heading toward a more bipolar world, split between the US and its allies on one side and China and its allies on the other. Such a shift will have serious consequences for global markets and decisive implications for investors.

Global growth is likely to slow in both scenarios. Equities and bonds are also likely to see lower returns. Only in the "de-escalation" scenario are there positive consequences for bonds and equities.

Below is an examination of the macroeconomic and financial market implications of this political shift. Also highlighted are the countries and sectors that may benefit most from the transition to a more bipolar world. Lastly, there is discussion of the policy responses that will be required to limit the damage, using the example of Silicon Valley.

Signs of a shift toward a bipolar world

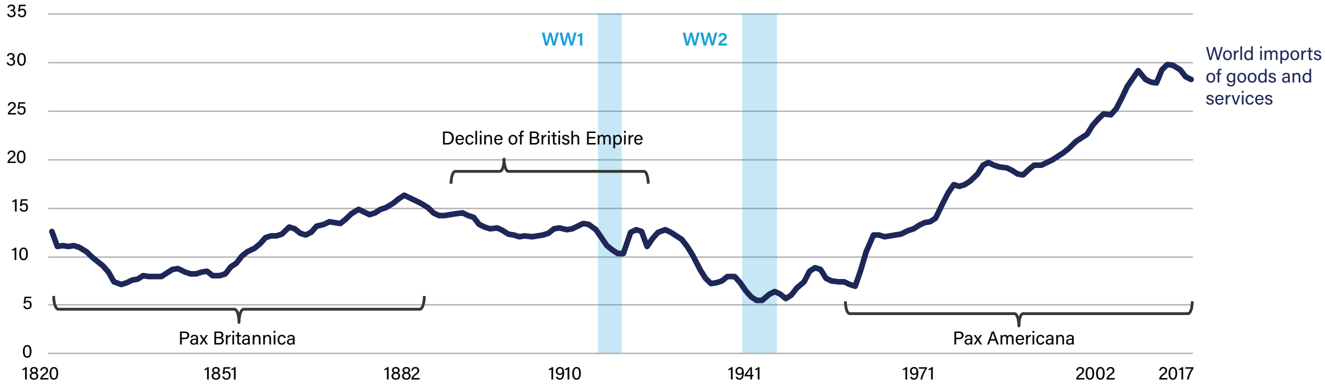
Protectionism and de-globalization have been major concerns for investors since Trump's election in November 2016. However, the stagnation of globalization is hardly a new development. Indeed, there is a compelling argument that the long-running trend towards deeper integration in global trade and capital markets began to retreat around the time of the global financial market crisis in 2007-2008. This begs the question of whether this is a sign that the US is losing its position of global pre-eminence, much in the same manner experienced by the British Empire in the aftermath of World War I. In that example, the phase of de-globalization that followed lasted several decades.

While it may be tempting to draw this comparison, there are other, unrelated economic reasons for why the most recent globalization trend has topped out. A detailed look at the corporate sector shows that supply chain reorganizations have been silently taking place for many years.[1] There are several reasons for this trend to persist independent of the scenario we end up with:

- Geography of global demand is changing: China and other developing countries are increasingly consuming their own products
- Shorter supply chains: Speed to market and improving coordination and visibility across the entire value chain is becoming more important
- New technologies: Innovation, such as robotics, automation, and 3D printing, is reducing production costs and, with them, the need to outsource manufacturing

1 See McKinsey (2019) "Asia's future now"

As the British Empire lost power, the world entered a phase of de-globalization *(% of world GDP)*



*Pax = Peace order
Sources: Chase-Dunn, Kawano, Brewer "Trade Globalization since 1798" Database, World bank, Vontobel Asset Management AG

These ongoing trends notwithstanding, the "battleground clash" and "West ascendant" scenarios will probably have negative implications for growth, inflation, and therefore asset classes above and beyond what was already underway. Import tariff hikes by the US and China in 2018 and 2019, for instance, have already hurt export-dependent sectors, with some manufacturing-dependent countries already showing signs of having slipped into recession.

Harmful implications for growth

In the "battleground clash" and "West ascendant" scenarios, the process of global manufacturing and supply chain reorganization is likely to accelerate in the coming years, and companies with long supply chains will face greater pressure—particularly where those supply chains are seen as presenting risks to US national security.

From a macroeconomic perspective, this shakeup will create both winners and losers. Countries that lose production will suffer negative demand shock, which hurts employment, income, and therefore consumer demand. On the other side of the equation, countries to which the production facilities are moved will benefit reciprocally from a positive shock. That said, this will not be zero-sum, at least in the short term, as considerable time and capex will be needed to train workers, build new productive assets, and integrate them into global markets.

There are other consequences as well that will have negative ramifications for the world economy. It is difficult to see how manufacturers will benefit from a smaller universe of possible suppliers. Supply chains may become less efficient as companies face lower quality and/or higher prices of the intermediate goods purchased from new suppliers. This could have far-reaching consequences for national economies at the micro level if lower product quality affects productivity—for example, via poorer quality machine tools and goods—and for the global economy in aggregate if this yields lower total productive capacity and overall output.

There is an additional risk to productivity: protectionism reduces competition between countries and companies and dampens the process of "creative destruction," which is seen by economists as a self-directed feature for the revitalizing of an economy. The result is that weaker business models survive longer than they would if they were subject to stricter market discipline. This means fewer resources are freed up by defaulting businesses for new, more innovative capital deployment.

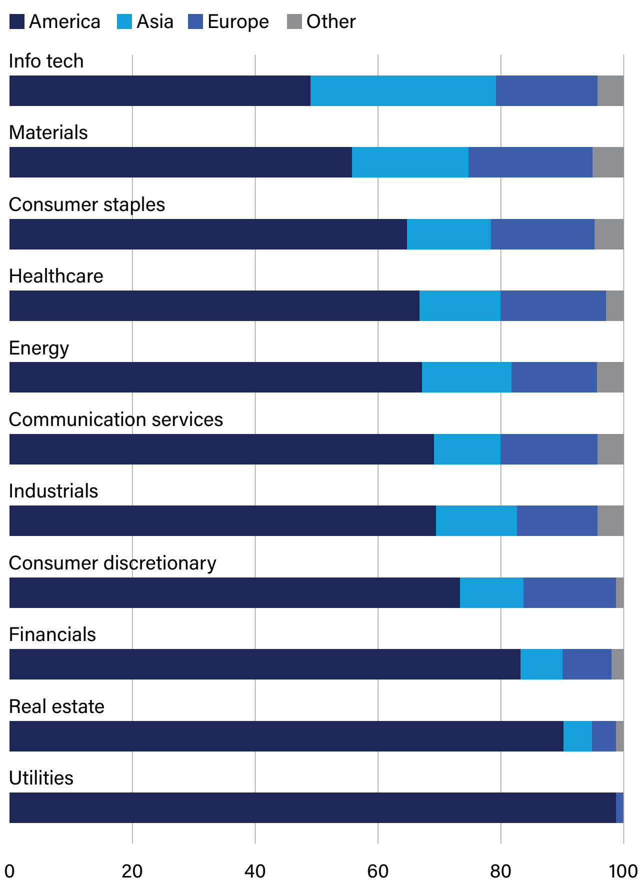
Moreover, the more interaction that takes place on a global scale, the higher the technology transfer, which results in productivity gains for all. Companies that trade with each other learn from competitors faster and adopt new technologies sooner. The IMF has offered compelling evidence that international trade spurs useful exchanges of innovation.[2] Among other things, they show that global value chain participation and patent sharing correlate.

2 World Economic Outlook (April 2018) "Is productivity growth shared in a globalized economy?", IMF

Moreover, the level of foreign direct investments in a country, which usually also brings with it foreign know-how, is highly correlated with global value chain participation.

There is merit to the theoretical and empirical research on this topic: More protectionism will hurt the global economy by lowering the curve of potential growth. As the US and other countries raise political and national security barriers to these kinds of exchanges, the beneficial spillovers will generally diminish.

Higher share of revenues in Asia makes IT and materials more vulnerable



Sources: FactSet Research Systems, Inc., Vontobel Asset Management AG

Higher inflationary pressure

Another consequence for the global economy in the "battleground clash" and "West ascendant" scenarios is that supply chain shuffling will lead to less efficient use of economic resources (for example, natural, capital, or human), which will ultimately create to upward price pressures, especially in the short run. For instance, a company or industry that is compelled to move manufacturing to a country with higher labor costs is effectively faced with the dilemma of accepting lower profitability or passing those higher input costs on to the consumer of the end product. The magnitude of this effect will depend on several factors: companies with narrow margins will likely be forced to pass on more costs to consumers in the form of higher prices; those with greater profit margins may decide not to hike prices on the consumer.

Lower productivity and therefore lower productive capacity are another potential source of inflation pressure. The complex supply chains that power today's global economy have been developed, refined and fine-tuned over decades. As companies build new production in other countries, they will suffer from lower efficiency and output—and therefore lower productivity—as workers and suppliers in the new location move up the learning curve. Assuming demand remains steady, companies will hit capacity limits before this new production reaches full potential, leading to higher product prices and therefore inflation. Monetary authorities will respond to rising prices by moving to a more restrictive policy stance. But we doubt that they will be able to fully offset this type of inflationary pressure, which stems more from physical capacity constraints—i.e. too much demand chasing too few goods—than from excessive credit or other financial factors. Furthermore, their maneuverability with respect to implementing more restrictive monetary policy would actually be limited if the world finds itself in a low growth/ high inflation scenario.

Losers of the supply chain reorganization

It is no exaggeration to say that China will be the biggest loser in the process of supply chain reorganizations. The recent case of washing machine supply chains illustrates how quickly supply chains for basic goods can shift between countries and how disruptive it can be.

In 2013, in response to complaints from domestic manufacturers, the US levied anti-dumping tariffs on Mexican and Korean washing machine producers. Washing machine exports from both countries to the US collapsed immediately. The Korean manufacturer subsequently moved a vast share of its production capacity to China, which quickly came to dominate the washing machine market in the US. In 2017, US-based washing machine manufacturers again convinced US officials to levy tariffs on imports, this time on China. The result: Chinese washing machine market share collapsed; supply chains shifted to Vietnam, Thailand, and a few other Asian countries; and these countries' products soon came to dominate the US market. Predictably, the US ultimately levied tariffs on all foreign producers.

The example shows how supply chains are moving and how China could lose US market share in the "battleground clash" and "West ascendant" scenarios. Washing machines are not a unique case. Over the past two years, China has lost 10% or more of its market share in several other export categories, including bicycles, computer parts, and printed circuit assemblies, among others.

the risk of financial collapse will vary based on the degree of success the US has in doing so.

As mentioned above, the consumer will pay the price to some extent. In our washing machine example, prices for washing machines in the US rose more than 10% in 2013 and 15% in 2018. Moreover, US companies are not the clear winners of protectionist measures. While they may benefit from competitors losing access to the US market, tariffs are clearly harmful for some US corporates. Steel tariffs, for example, led to a significant increase in input prices in sectors such as automotive and construction, as well as washers, so US industries relying on raw material imports like steel should be seen as potential losers as well. Lastly, it should be noted that high-tech firms in the US are also not immune, especially as a result of export restrictions imposed by the government. Some US chip manufacturers, for example, earn upward of 60% or more of their revenue from sales to China.

> "The complex supply chains that power today's global economy have been developed, refined and fine-tuned over decades

While we believe, under the right circumstances, that China could weather the storm of lost US market share, they would face substantial pain and economic destabilization if other key markets were to join in a blockade of Chinese exports—a defining feature of the "West ascendant" scenario. The reasoning behind this is that only 5% of Chinese industrial output is destined for the US. Of the remaining 95%, 70% of Chinese industrial output is consumed domestically, leaving 25% for other overseas markets. In many cases, therefore, it would not make sense for companies producing in China to reallocate their entire production capabilities just because the US levied tariffs on Chinese imports. The Chinese economy could remain resilient to US pressure as long as key export markets, in Europe, Japan, South Korea, and others, for instance, remain open to them.

On the other hand, if the US is able to rally allies behind its maximum pressure strategy, China's economy would risk falling into recession. So far, during the current trade war, China's market share in other countries has held steady. This will steadily erode, however, if the US is able to convince allies to stop importing goods from China;

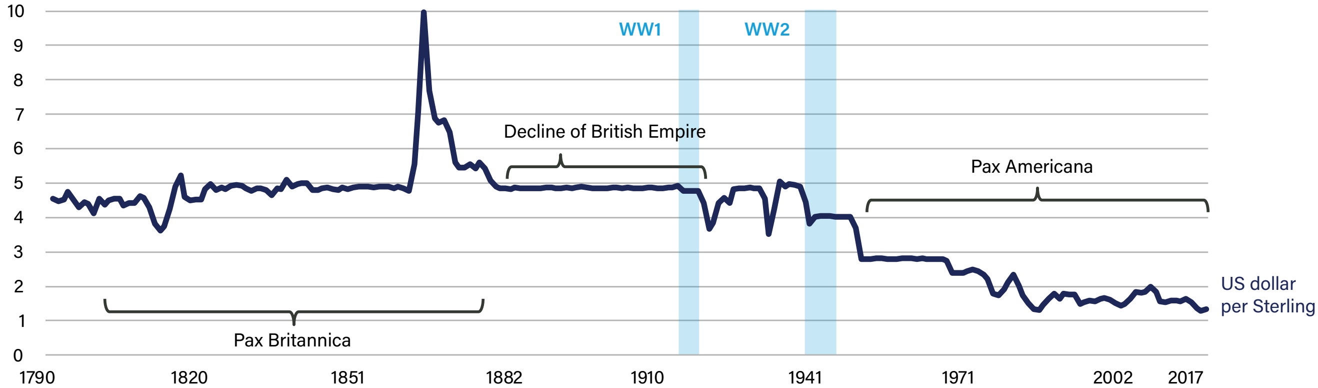
Another risk for China in these scenarios is that FDI will slow, steadily depriving it of access to cutting-edge technology and know-how. As discussed previously, despite China's technology ambitions in areas such as AI and high-performance computing, it remains highly dependent on the US in key semiconductor segments, a legacy of the era of US-Russia competition. Much will depend on how fast China can catch up in this area. If it falls behind or is unable to catch up in certain key technologies, a major drop-off in FDI would likely have ripple effects for almost all industrials sectors and productivity in general.

Financial market implications

Lower bond and equity returns

While there are many commonly-accepted approaches for estimating the long-term return potential of different asset classes, very few if any show much upside for bond and equity returns in the event of continued or escalated US-China tensions. This can easily be demonstrated by examining the most-commonly used methods, which is done by estimating the potential output or trend growth

Sterling lost ground during decline of British hegemony in the early 20th Century *(GBP/USD)*



*Pax = Peace order
Sources: Lawrence H. Officer, "Dollar-Pound Exchange Rate From 1791," MeasuringWorth, Vontobel Asset Management AG

of an economy. Investors who deploy capital in a country that is experiencing high growth should enjoy higher returns on growth sensitive assets like equities than if they had invested in a lower growth economy. The reason for this is because a country's growth (real GDP) is nothing other than the accumulated product output of its goods and service producing entities. As greater output is highly correlated with corporate earnings, and therefore equity price, this relationship is very robust. Within this framework, the implication of the main takeaway from the "battleground clash" scenario is that lower productivity and therefore lower future growth will negatively affect estimated equity returns.

Even though in the "battleground clash" and "West ascendant" scenarios the US would have the upper hand, the US equity market is likely to suffer in both scenarios. One reason for concern is that more than a third of sales of the companies listed in the S&P 500 come from foreign markets. These companies would clearly suffer by losing market access abroad. In the de-escalation scenario, US firms may gain better access to Chinese markets, which would raise their profit base.

The outlook for higher inflation in the "battleground clash" and "West ascendant" scenarios will also have negative consequences for bonds. Investors will demand higher yields to offset returns that are eaten away by higher inflation. This will depress prices for both government and corporate bonds.

Erosion of US dollar reserve currency status

The figure above shows that previous shifts away from a hegemonic world order have been accompanied by protectionist measures. These developments do not happen without leaving a mark on currency markets. The example of the British Empire shows how radically a currency can lose importance after a shakeup of the world order. The pound sterling denominated share of global public debt dropped from 90% before World War I to below 40% in the 1940s. In fact, by the 1920s, the US dollar had already exceeded the share of sterling on a permanent basis.[3] From then onward, the British pound entered a multi-decade depreciation pathway.

While we are not arguing that the renminbi is likely to become the world's leading currency, it is important to point out the likely effect that a shift from a hegemonic to a more bipolar order would have on currency markets. At the very least, there is likely to be some deterioration of US dollar market share of the denomination of trade contracts and debt markets.

Data already shows that the renminbi is gaining importance regionally, and further internationalization of the renminbi is on the agenda of the Chinese authorities. In the last Triennial survey for foreign exchange turnover, the

3 See Chitu, Eichengreen and Mehl (2012): "When did the Dollar Overtake Sterling as the leading International Currency", ECB

Bank of International Settlement showed that the renminbi doubled its share of global foreign exchange turnover and became the world's eighth-most actively traded currency. However, its share is still low with only 4% of all transactions compared to the dollar (88%) and the euro (31%).[4]

Although political risks within the Eurozone are a clear headwind for the euro to gain additional importance at the expense of the dollar, the influence of the renminbi will also probably not rise significantly on the global stage, with its ceiling likely to be as a dominant currency in the Asia-Pacific region. Instead, the dollar's lost market share is likely to be supplanted by baskets of currency similar to the IMF's special drawing rights (SDR). We only see a clear tailwind for the yuan in the "De-Escalation" scenario, as the economic integration of China in the world economy would probably speed up, raising the global demand for renminbi.

Winners in a new world order

It is argued above that the "battleground clash" and "West ascendant" scenarios would lead to adverse economic conditions, such as higher inflation rates, lower productivity rates, lower equity returns, and higher hurdle rates for borrowers. However, a new world order where two dominant economic superpowers compete for supremacy may also have some positive externalities.

From a geopolitical point of view, a world in which two superpowers compete creates a certain equilibrium, that, while not an overall improvement for the globe, can be positive for certain countries with specific contexts. During the Cold War, for instance, alliances were formed, after which the US and the Soviet Union competed to bring third countries into their zones of influence. Against this backdrop, smaller countries, such as Switzerland, flourished by smartly leveraging their principle of Neutrality.

However, the end of the Cold War created a power vacuum that the US was happy to fill. With the America remaining as the world's only superpower, the geopolitical landscape arguably became less balanced. This was exemplified by the US's increased propensity to take actions with major geopolitical consequences without referring to the UN or building a broad coalition of consensus among affected countries. The US invasion of Iraq in 2003 and its consequences for the Middle East and Europe (which is still dealing with the repercussions of the massive influx of migrants resulting from the destabilization of the region) are a prime example of this tendency and its implications for the world.

Moving to a world where we again have two geopolitical and economic superpowers could help restore a measure of stability by serving as a check on unilateral US foreign policy. In a limited sense, this would be beneficial for smaller, politically stable and neutral countries such as Switzerland, which managed to thrive in periods of geopolitical tensions between much larger rivals. On a wider scale, and while they would assuredly face explicitly negative economic consequences, Europe could also benefit in some respect from the return to a more bipolar world, since the US and China will undoubtedly compete for closer economic and political ties with what would remain a significant trading partner of both.

That said, due to the massive opportunity costs of an open, full-scale economic conflict between the US and China, we project this outcome to be, in aggregate, a globally destabilizing paradigm with negative implications for the prospect of tackling international challenges like climate change, at a time when it has never been more urgent.

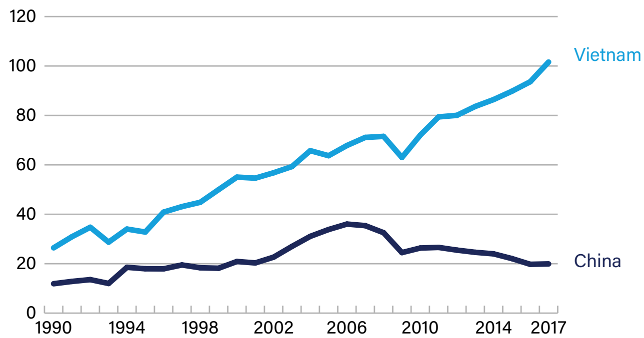
Winners of the supply chain reorganization

This report has highlighted that the shuffling of supply chains not only produces losers, but also winners as well. Spurred on by an economic conflict characterized by a long-term US import tariff regime on Chinese goods, Vietnam, Indonesia, Thailand, Bangladesh, Taiwan, Malaysia, and Mexico are the main beneficiaries—at least in the early phases. This is because low labor cost and proximity to key markets are vital to the competitive advantage of international companies. This can be seen empirically already: Since the beginning of the Sino-US trade tensions, the level of FDI into Vietnam, Indonesia, and Thailand has set new records.

This holds true not only for the manufacturing sector, but also applies for commodity producers as well. When tariffs by the US prompted China to respond, one of its moves was to begin redirecting commodity imports originating in the US towards other countries. Chile, Argentina and Brazil are the key commodity exporting countries standing to benefit from a gradual increase in Chinese demand.

4 BIS (2016) "Triennial Central Bank Survey—Foreign Exchange Turnover"

Vietnam transforming into export-driven economy as result of supply chain shift *(Exports of goods and services in % of GDP)*



Sources: IMF, Vontobel Asset Management AG

One thing to note is that a global trade adjustment will not favor alone the development of new regional (but still offshore) supply chains. It is also likely that localized supply chains, developed adjacent to and (where possible) within key markets, will become increasingly prevalent. One reason for this is that the US has already shown itself prepared to confront countries' unbalanced trade directly with tariffs and trade wars. With this precedent set, firms would be right to be concerned about a potential repeat in the future and should therefore build that into their calculus when investing overseas instead of at home. The seriousness of this risk was illustrated by recent comments by US Secretary of Commerce Wilbur Ross, who criticized Vietnam over its widening trade surplus with the US.

Furthermore, rising environmental awareness may result in greater regulation (for example, international shipping), weighing on the logic behind long supply chains.

Lastly, modern technology will provide strong incentives, economic and political, to bring manufacturing home. Advanced robotics with increasing levels of sophistication as well as the maturation of 3D printing technology will make short, domestically-located production lines more attractive to investors. The increased uptake of these technologies will fuel what has already shown to be impressive growth for these industries over the past decade.

In the trend towards shorter, regionalized supply chains, Latin America will be a beneficiary of investments in manufacturing capacity for production destined for the US, while China and other countries could shift production to South and Southeast Asia (again headlined by Bangladesh, Vietnam, and Taiwan). Asset price inflation in these emerging market locations would likely result as a second order consequence of these events.

Prospects for avoiding a negative equilibrium

Possible countermeasures

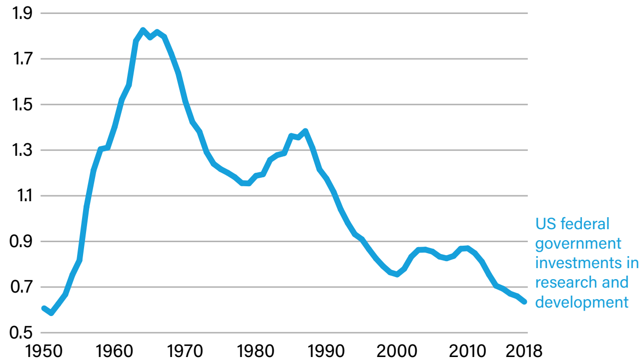
This report shows that the "battleground clash" and "West ascendant" scenarios will most likely lead to lower equity and bond returns. However, countries have options at hand to counteract the negative implications outlined earlier.

Governments have direct and indirect policy options available to stimulate productivity. Direct interventionist measures like higher government spending are often quite favorable to stimulating indigenous growth. Infrastructure investment, such as in transportation and communication, is a clear example of this. Given the longer payoff, investing in education is a less obvious, but important measure for strengthening a country's economy. More than just direct, spending-oriented policy, governments can strengthen their economies by taking indirect action such as deregulating markets, privatizing state-owned assets, and reducing taxes will stimulate economic activity and improve productivity. This is particularly pronounced when governments manage to increase the incentive for corporates to invest in R&D. To understand how this would look in practice, one need only look as far back as the 1950s and the birth of the movement that would eventually become Silicon Valley.

The Californian miracle

After the "Sputnik shock" in September 1957—in which Russia managed to send a satellite to orbit—the US realized it was far behind the Soviet Union in the technology race and knew the only way to compete was to implement a whole-of-government policy to close the gap. This compelled President Dwight Eisenhower to launch the space program and implement a new educational initiative designed to increase the number of scientists and engineers and become the leading research powerhouse in the world.

Investments in R&D surged during the "Cold War" *(% of GDP)*



Sources: BEA, Vontobel

Congress played a key role by making for a smooth legislative and budget approval process, made possible by the widespread belief among the US public that the Russians must be countered (a sentiment shared by Americans today with respect to China). To this end, in 1958, Congress passed the National Defense Education Act, under which federal investment in US colleges and universities was bolstered to an unprecedented scale. It also created the National Aeronautics and Space Administration and the Defense Advanced Research Project, and it increased funding for the National Science Foundation by tenfold.

Much of this funding found its way to California, where Stanford University, which, following efforts to attract employers to the region by leasing land to companies—incidentally resulting in the birth of the "industrial park" concept—had transformed itself from a regionally known university into an internationally renowned institution by co-locating fundamental university research with the applied research of the private sector. The blossoming of Silicon Valley had been set in motion.

Conclusion

The Cold War era heralded a phase in which the scientific community was able to easily lobby for research funding, and a broad consensus between industry and government regarding the importance of basis research and high education predominated.

These programs and initiatives were not only crucial for creating the ecosystem necessary for rapid technological advance, but were also a clear tailwind for the economy, boosting productivity and growth via large government outlays. What is most important is that those investments were patient, long-term, and forward-looking, the fruits of which the US is still harvesting to this day. In Silicon Valley, many rightly see the blueprint for innovation. However, most forget that the competition between the US and Russia during the Cold War played a decisive role in the development of Silicon Valley.[5]

The example of Silicon Valley raises the hope that if the competition between the US and China for digital supremacy is channeled in the right direction, a "bad" economic equilibrium—with its corresponding downstream effect on growth and asset class returns—can be avoided or at least mitigated. In the extreme case of Silicon Valley, a "superior equilibrium" is even a possibility.

5 See Margaret Pugh O'Mara (2002) "Cold War Science and the Search for the Next Silicon Valley" for further details

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