

## CHAPTER 13

# US-CHINA RELATIONS AND WARS

**I**n this chapter I will be looking at the positions that the US and China now find themselves in and what being in these positions means for US-China relations. Because the US and China are now rival powers in a number of domains, they are in “conflicts” or “wars” in these domains, so I will be looking at where these stand. Because for the most part these are just new versions of old and classic conflicts (e.g., new technologies in a classic technology war, new weapons in a classic military war, etc.), I will be putting them in the context of what has happened repeatedly in history and with the timeless and universal principles we have learned from studying these cases. While I will explore the range of possibilities that one might consider, I will be doing that without getting into what the future might look like. I will do that in the concluding chapter of this book. In this chapter I will also be moving a bit more from just conveying facts to sharing opinions (i.e., sharing my uncertain conjectures).

I am primarily focusing on US-China relations in this chapter, but in truth the game macro investors and global policy makers are playing is like multidimensional chess that requires each player to consider the many positions and possible moves of a number of key players (i.e., countries) that are also playing the game, with each of these players having a wide range of considerations (economic, political, military, etc.) that they have to weigh to make their moves well. The relevant other players that are now in this multidimensional game include Russia, Japan, India, other Asian countries, Australia, and European countries, and all of them have many considerations and constituents that will determine their moves. From playing the game I play

—global macro investing—I know how complicated it is to simultaneously consider all that is relevant in order to make winning decisions. I also know that what I do is not as complicated as what those in the seats of power do and I know that I don't have access to information that is as good as what they have, so it would be arrogant for me to think I know better than they do about what's going on and how to best handle it. For those reasons I am offering my views with humility. With that equivocation I will tell you how I see the US-China relationship and the world setting in light of these wars, and I will be brutally honest.

## **THE POSITIONS THE AMERICANS AND CHINESE ARE IN**

**As I see it, destiny and the Big Cycle manifestations of it have put these two countries and their leaders in the positions they are now in. They led the United States to go through its mutually reinforcing Big Cycle successes, which led to excesses that led to weakening in a number of areas. Similarly they led China to go through its Big Cycle declines, which led to intolerably bad conditions that led to revolutionary changes and to the mutually reinforcing upswings that China is now in. So, the United States appears to be in decline and China appears to be on the rise for the all the classic reasons.**

Destiny and the big debt cycle led the US to find itself now in the late-cycle phase of the long-term debt cycle in which it has too much debt and needs to rapidly produce much more debt, which it can't service with hard currency. So it has to monetize its debt in the classic late-cycle way of printing money to fund the government's deficits. Ironically, and classically, being in this bad position is the consequence of the United States' successes leading to these excesses. For example, **it is because of the United States' great global successes that the US dollar became the world's dominant reserve currency, which allowed Americans to borrow excessively from the rest of the world (including from China), which put the US in the tenuous position of owing other countries (including China) a lot of money which has put those other**

**countries in the tenuous position of holding the debt of an overly indebted country that is rapidly increasing and monetizing its debt and that pays significantly negative real interest rates to those holding its debt.** In other words, it is because of the classic reserve currency cycle that China wanted to save a lot in the world's reserve currency, which led it to lend so much to Americans who wanted to borrow so much, which has put the Chinese and the Americans in this awkward big debtor-creditor relationship when these wars are going on between them.

Destiny and the way the wealth cycle works, especially under capitalism, led to incentives and resources being put into place that allowed Americans to make great advances and produce great wealth—and eventually created the large wealth gaps that are now causing conflicts and threatening the domestic order and productivity that is required for the US to stay strong. **In China it was the classic collapse of its finances due to debt and money weaknesses, internal conflicts, and conflicts with foreign powers that led to its Big Cycle financial declines at the same time that the US was ascending,** and it was the extremity of these terrible conditions that produced the revolutionary changes that eventually led to the creation of incentives and market/capitalist approaches that produced China's great advances, great wealth, and the large wealth gaps that it is understandably increasingly concerned about.

Similarly, destiny and the way the global power cycle works have now put the United States in the unfortunate position of having to choose between fighting to defend its position and its existing world order or retreating. For example, it is because the United States won the war in the Pacific in World War II that it, rather than any other country, will have to choose between defending Taiwan—most Americans don't know where in the world it is or how to spell it—or retreating. It is because of that destiny and that global power cycle that the United States now has military bases in more than 70 countries in order to defend its world order even though it is uneconomical to do so.

● ***History has shown that all countries' success depends on sustaining the strengthening forces without producing the excesses that lead to countries' declines. The really successful countries have been able to do that in a big way for 200–300 years. No country has been able to do it forever.***

Thus far we've looked at the history of the last 500 years focusing especially on the rise and decline cycles of the Dutch, British, and American reserve currency empires and briefly at the last 1,400 years of China's dynasties, which has brought us up to the present. The goal has been to put where we are in the context of the big-picture stories that got us here and to see the cause/effect patterns of how things work so that we can put where we are into better perspective. Now we need to drop down and look at where we are in more detail, hopefully without losing sight of that big picture. As we drop down, things that seem imperceptibly small in retrospect—Huawei, Hong Kong sanctions, closing consulates, moving battleships, unprecedented monetary policies, political fights, social conflicts, and many others—will at the time appear much larger, and we will find ourselves in the blizzard of them that comes at us every day. Each warrants more than a chapter-long examination, which I don't intend to do here, but I will touch on the major issues.

**History has taught us that there are five major types of wars: 1) trade/economic wars, 2) technology wars, 3) geopolitical wars, 4) capital wars, and 5) military wars. To these I would add 6) culture wars and 7) the war with ourselves.** While all sensible people wish that these “wars” weren't occurring and instead that cooperation was happening, we must be practical in recognizing that they exist. We should use past cases in history and our understandings of actual developments as they are taking place to think about what is most likely to happen next and how to deal with it well.

**We see these wars transpiring in varying degrees now. They should not be mistaken for individual conflicts but rather recognized as interrelated conflicts that are extensions of one bigger evolving conflict. In watching them transpire we need to observe and try to understand each side's strategic goals—e.g., are they trying to hasten a conflict (which some Americans think is best for the US because time is on China's side because China is growing its strengths at a faster pace) or are they trying to ease the conflicts (because they believe that they would be better off if there is no war)?** In order to prevent these conflicts from escalating out of control, it will be important for leaders of both countries to be clear about what the “red lines” and “trip wires” are that signal changes in the seriousness of the conflict.

Let's now take a look at these wars with the lessons from history and the principles they provide in mind.

## **THE TRADE/ECONOMIC WAR**

**Like all wars, the trade war can go from being a polite dispute to being life-threatening, depending on how far the combatants want to take it.**

**Thus far we haven't seen the US-China trade war taken very far.** It features classic tariffs and import restrictions that are reminiscent of those we have repeatedly seen in other similar periods of conflict (e.g., the Smoot-Hawley Tariff Act of 1930). We have seen the trade negotiations and what they achieved reflected in a very limited "phase one" trade agreement from 2019 that was tentatively implemented. As we have seen, this "negotiation" was about testing each other's powers rather than looking to global laws and judges (like the World Trade Organization) to achieve fair resolution. Tests of power are how all these wars will be fought. The big question is how far these tests of power will go and what form will they take.

**Beyond the trade dispute there are three major economic criticisms the US has about China's handling of its economy:**

- 1. The Chinese government pursues a wide range of evolving interventionist policies and practices** aimed at limiting market access for imported goods, services, and businesses, thus protecting its domestic industries by creating unfair practices.
- 2. The Chinese offer significant government guidance, resources, and regulatory support to Chinese industries,** most notably including policies designed to extract advanced technologies from foreign companies, particularly in sensitive sectors.
- 3. The Chinese are stealing intellectual property,** with some of this stealing believed to be state-sponsored and some of it believed to be outside the government's direct control.

Generally speaking, the United States has responded both by trying to alter what the Chinese are doing (e.g., to get them to open their markets to Americans) and by doing its own versions of these things (closing American markets to the Chinese). Americans won't admit to doing some of the things they are doing (e.g., taking intellectual property) any more than the Chinese will admit to doing them because the public relations costs of admitting to doing them are too great. When they are looking for supporters of their causes, all leaders want to appear to be the leaders of the army that is fighting for good against the evil army that is doing bad things. That is why we hear accusations from both sides that the other is doing evil things and no disclosures of the similar things that they are doing.

● ***When things are going well it is easy to keep the moral high ground. However, when the fighting gets tough, it becomes easier to justify doing that which was previously considered immoral (though rather than calling it immoral it is called moral).*** As the fighting becomes tougher a dichotomy emerges between the idealistic descriptions of what is being done (which is good for public relations within the country) and the practical things that are being done to win. That is because in wars leaders want to convince their constituents that “we are good and they are evil” because that is the most effective way to rally people’s support, in some cases to the point that they are willing to kill or die for the cause. Though true, it is not easy to inspire people if a practical leader explains that “there are no laws in war” other than the ethical laws people impose on themselves and “we have to play by the same rules they play by or we will stupidly fight by self-imposing that we do it with one hand behind our backs.”

**I believe that we have pretty much seen the best trade agreement that we are going to see and that the risks of this war worsening are greater than the likelihood that they will lessen, and that we won't see any treaty or tariff changes anytime soon from the Biden administration.** Whatever approach they eventually take will be a big influence on how Americans and the Chinese approach the Big Cycle destinies that are in the process of unfolding. As it now stands, the one thing—maybe the only thing—that both US political parties agree on is being hawkish on China. How hawkish and how exactly that hawkishness is expressed and reacted to by the Chinese are now unknown.

How could this war worsen?

**Classically, the most dangerous part of the trade/economic war comes when countries cut others off from essential imports.** The case study of the US and Japan leading up to World War II (found in Chapter 6) is a useful analogue to US-China circumstances because the geographies and the issues are analogous. For example, the US cutting off China's imports of oil, other needed commodities, technologies, and/or other essential imports from the US or other countries would be clear and obvious signs of the war escalating. Likewise, China could escalate by cutting off companies like General Motors (which sells more cars in China than in the US) and Apple, or cutting off US imports of rare earth elements that are needed for the production of lots of high-tech items, automobile engines, and defense systems. I'm not saying such moves are likely, but I do want to be clear that **moves to cut off essential imports from either side would signal a major escalation that could lead to a much worse conflict.** If that doesn't happen, evolution will take its normal course so international balances of payments will evolve primarily based on each country's evolving competitiveness.

For these reasons **both countries, especially China, are shifting to more domestic production and "decoupling."**<sup>1</sup> As President Xi has said, the world is "undergoing changes not seen in a century" and "[i]n the face of an external environment characterized by rising protectionism, global economic downturn, and a shrinking international market... [China must] give full play to the advantage of a huge domestic market." Over the last 40 years it has acquired the abilities to do this. Over the next five years we should see both countries become more independent from each other. The rate of reducing one's dependencies that can be cut off will be much greater for China over the next five to 10 years than for the United States.

## **THE TECHNOLOGY WAR**

**The technology war is much more serious than the trade/economic war because whoever wins the technology war will probably also win the**

## **military wars and all the other wars.**

The US and China are now the dominant players in the world's big tech sectors and these big tech sectors are the industries of the future. **The Chinese tech sector has rapidly developed domestically to serve the Chinese in China and to become a competitor in world markets. At the same time China remains highly dependent on technologies from the United States and other countries.** That makes the United States vulnerable to the increased development and competition of Chinese technologies and makes the Chinese vulnerable to being cut off from essential technologies.

**The United States appears now to have greater technology abilities overall, though it varies by type of technology and the US is losing its lead.** For example, while the US is ahead in advanced AI chip development, it is behind in 5G. As an imperfect reflection of the present stage of the US's advantage, the market capitalizations of US tech companies in total are about four times the size of China's. This calculation understates China's relative strength because it doesn't include some of the big private companies (like Huawei and Ant Group) and the non-company (i.e., government) technology developments, which are larger in China than they are in the United States. The largest public Chinese tech companies (Tencent and Alibaba) are already the seventh and eighth largest technology companies in the world, right behind some of the largest US "FAAMG" stocks. Some of the most important technology areas are being led by the Chinese. Consider that 40 percent of the world's largest civilian supercomputers are now in China, and it is leading in some dimensions of the AI/big data race and some dimensions of the quantum computing/encryption/communications race. Similar leads in other technologies exist, such as in fintech where the volume of e-commerce transactions and mobile-based payments in China is the highest in the world and well ahead of that in the US. There are likely technologies that even the US's most informed intelligence services don't know about that are being developed in secret.

**China will probably advance its technologies, and the quality of decision making that is enabled by them, faster than the US will because big data + big AI + big computing = superior decision making.** The



Chinese are collecting vastly more data per person than is collected in the US (and they have more than four times as many people), and they are investing heavily in AI and big computing to make the most of it. The amount of resources that are being poured into these and other technology areas is far greater than those in the US. As for providing money, both venture capitalists and the government are providing virtually unlimited amounts to Chinese developers. As for providing people, the number of science, technology, engineering, and math (STEM) graduates that are coming out of college and pursuing tech careers in China is about eight times that in the US. The United States has an overall technology lead (though it is behind in some areas) and of course has some big hubs for new innovations, especially in its top universities and its big tech companies. While the US isn't out of the game, its relative position is declining because China's technological innovation abilities are improving at a faster pace. Remember that China is a country whose leaders 37 years ago marveled at the handheld calculators I gave them. Imagine where they might be 37 years from now.

**To fight the technology threats, the United States has responded at times by preventing Chinese companies (like Huawei) from operating in the United States, trying to undermine their usage internationally, and possibly hurting their viability through sanctions that prevent them from getting items needed for production.** Is the United States doing that because China is using these companies to spy in the United States and elsewhere, because the United States is worried about them and other Chinese technology companies being more competitive, and/or because they are retaliating for the Chinese not allowing American tech companies to have free access to the Chinese market? While that is debatable, there is no doubt that these and other Chinese companies are becoming more competitive at a fast pace. In response to this competitive threat the United States is moving to contain or kill threatening tech companies. Interestingly, while the United States is cutting off access to intellectual property now, it would have had a much greater power to do so not long ago because the United States had so much more intellectual property relative to others. China has started to do the same to the

United States, which will increasingly hurt because Chinese IP is becoming better in many ways.

**Regarding the stealing of technologies, while it is generally agreed to be a big threat,<sup>2</sup> it does not fully explain actions taken against Chinese tech companies.** If a company is breaking a law within a country (e.g., Huawei in the US) one would expect to see that crime prosecuted legally so one could see the evidence that shows the spying devices embedded within the technologies. We aren't seeing this. Fear of growing competitiveness is as large, or larger, a motivator of the attacks on Chinese technology companies, but one can't expect policy makers to say that. American leaders can't admit that the competitiveness of US technology is slipping and can't argue against allowing free competition to the American people, who for ages have been taught to believe that competition is both fair and the best process for producing the best results.

Stealing intellectual property has been going on for as long as there has been recorded history and has always been difficult to prevent. As we saw in earlier chapters, the British did it to the Dutch and the Americans did it to the British. "Stealing" implies breaking a law. When the war is between countries there are no laws, judges, or juries to resolve disputes and the real reasons decisions are made aren't always disclosed by those who are making them. I don't mean to imply that the reasons behind the United States' aggressive actions are not good ones; I don't know if they are. I'm just saying that they might not be exactly as stated. Protectionist policies have long existed to insulate companies from foreign competition. Huawei's technology is certainly threatening because it's better in some ways than American technology. Look at Alibaba and Tencent and compare them with American equivalents. Americans might ask why these companies are not competing in the US. It is mostly for the same reasons that Amazon and a number of other American tech companies aren't freely competing in China. In any case, **there is a tech decoupling going on that is part of the greater decoupling of China and the US, which will have a huge impact on what the world will look like in five years.**

What would a worsening of the tech war look like?

**The United States has a technology lead (though it's shrinking fast). As a result, the Chinese currently have great dependencies on imported**

**technologies from both US and non-US sources that the US can influence. This creates a great vulnerability for China, which in turn creates a great weapon for the United States.** It most obviously exists in advanced semiconductors, though it exists in other technologies as well. The dynamic with the world's leading chip maker—Taiwan Semiconductor Manufacturing Company, which provides the Chinese and the world with needed chips, and which can be influenced by the United States—is one of many interesting dynamics to watch, especially since it is located in Taiwan. There are many such Chinese technology imports that are essential to China's well-being and many fewer American imports from China that are essential to the United States' well-being. **If the United States shuts off Chinese access to essential technologies, that would signal a major step up in the risk of a shooting war.** On the other hand, if events continue to transpire as they have been transpiring, China is poised to be much more independent and in a much stronger position than the United States technologically in five to 10 years, at which time we will likely see these technologies much more decoupled. This picture changes by the day, and it is important to stay on top of it.

## **THE GEOPOLITICAL WAR**

**Sovereignty, especially as it relates to the Chinese mainland, Taiwan, Hong Kong, and the East and South China Seas, is probably China's biggest issue. Beyond these are several other areas of strategic economic importance, such as those countries involved in China's Belt and Road Initiative.**

As you might imagine, the Century of Humiliation in the 19th century and the invasions by foreign “barbarians” during it gave Mao and the Chinese leaders to this day compelling motivations to have complete sovereignty within their borders, get back the parts of China that were taken away from them (e.g., Taiwan and Hong Kong), and never again be so weak that they can be pushed around by foreign powers. China's desire for sovereignty and for maintaining its distinct ways of doing things (i.e., its culture) are why the Chinese reject

American demands for them to change Chinese internal policies (e.g., to be more democratic, to handle the Tibetans and Uighurs differently, to change its approach to Hong Kong and Taiwan, etc.). In private some Chinese point out that they don't dictate how the United States should treat people within its borders. They also believe that the United States and European countries are culturally prone to proselytizing—i.e., to imposing on others their values, Judeo-Christian beliefs, morals, and ways of operating—and that this inclination has developed through the millennia, since before the Crusades.

To the Chinese the sovereignty risk and the proselytizing risk make a dangerous combination that could threaten China's ability to be all it can be by following the approaches that it believes are best. The Chinese believe that their having sovereignty and the ability to approach things the way that they believe is best as determined by their hierarchical governance structure is sacrosanct. Regarding the sovereignty issue, they also point out that there are reasons for them to believe that the United States would topple their government—the Chinese Communist Party—if it could, which is also intolerable.<sup>3</sup> These are the biggest existential threats that I believe the Chinese would fight to the death to defend and the United States must be careful in dealing with China if it wants to prevent a hot war. For issues not involving sovereignty, I believe the Chinese expect to look to influence them nonviolently and avoid a hot war.

**Probably the most dangerous sovereignty issue is Taiwan.** Many Chinese people believe that the United States will never follow through with its implied promise to allow Taiwan and China to unite, unless the US is forced to do so. They point out that when the US sells the Taiwanese F-16 fighter jets and other weapons systems it sure doesn't look like the United States is facilitating the peaceful reunification of China. As a result, they believe that the only way to ensure that China is safe and united is to have the power to oppose the US in the hope that the US will sensibly acquiesce when faced with a greater Chinese power. My understanding is that China is now stronger militarily in that region of the world. Also, the Chinese military is likely to get stronger at a faster pace, though deterrence through mutually assured destruction is most likely the case. So, as I mentioned earlier, **I would worry a lot if we were to see an emerging fight over sovereignty, especially if we were to see a "Fourth Taiwan**

**Strait Crisis.”** Would the US fight to defend Taiwan? Uncertain. The US not fighting would be a great geopolitical win for China and a great humiliation for the US. It would signal the decline of the US Empire in the Pacific and beyond in much the same way as the British loss of the Suez Canal signaled the end of the British Empire in the Middle East and beyond. The implications of that would extend well beyond that loss. For example, in the British case it signaled the end of the pound as a reserve currency. The more of a show the US makes of defending Taiwan the greater the humiliation of a lost war or a retreat would be. That is concerning because the United States has been making quite a show of defending Taiwan while destiny appears to be bringing a direct conflict to a head before long. If the US does fight, I believe that a war with China over Taiwan that costs American lives would be very unpopular in the US and the US would probably lose that fight, so the big question is whether that would lead to a broader war. That scares everyone. Hopefully the fear of that great war and the destruction it would produce, like the fear of mutually assured destruction, will prevent it.

At the same time, from my discussions **it is my belief that China has a strong desire not to have a hot war with the US or to forcibly control other countries (as distinct from having the desire to be all it can be and to influence countries within its region)**. I know that the Chinese leadership understands how terrible a hot war would be and worries about unintentionally slipping into one, à la World War I. They would much prefer a cooperative relationship if such a relationship is possible, and, I suspect, they would happily divide the world into different spheres of influence. Still they have their “red lines” (i.e., limits to what can be compromised on that if crossed would lead to a hot war) and they expect more challenging times ahead. For example, as President Xi said in his 2019 New Year’s address, “Looking at the world at large, we are facing a period of major change never seen in a century. No matter what these changes bring, China will remain resolute and confident in its defense of national sovereignty and security.”<sup>4</sup>

**Regarding influence around the world, for both the United States and China there are certain areas that each finds most important, primarily on the bases of proximity (they care most about countries and areas**

**closest to them) and/or of obtaining essentials (they care most about not being cut off from essential minerals and technologies), and to a lesser extent of their export markets.** The areas that are most important to the Chinese are first those that they consider to be part of China, second those on their borders (in the China seas) and those in key supply lanes (Belt and Road countries) or those that are suppliers of key imports, and third other countries of economic or strategic importance for partnerships.

Over the past few years China has significantly expanded its activities in these strategically important countries, especially Belt and Road countries, resource-rich developing countries, and some developed countries. This is greatly affecting geopolitical relations. These activities are economic and are occurring via increasing investments in targeted countries (e.g., loans, purchases of assets, building infrastructure facilities such as roads and stadiums, and providing military and other support to countries' leaders) while the US is receding from providing aid to these places. This economic globalization has been so extensive that most countries have had to think hard about their policies regarding allowing the Chinese to buy assets within their borders.

**Generally speaking, the Chinese appear to want tributary-like relationships with most non-rival countries, though the closer their proximity to China, the greater the influence China wants over them. In reaction to these changing circumstances most countries, in varying degrees, are wrestling with the question of whether it is better to be aligned with the United States or with China, with those in closest proximity needing to give the most consideration to this question.** In discussions with leaders from different parts of the world I have repeatedly heard it said that there are two overriding considerations—economic and military. They almost all say that if they were to choose on the basis of economics, they would choose China because China is more important to them economically (in trade and capital flows), while if they were to choose on the basis of military support, the United States has the edge but the big question is whether the United States will be there to protect them militarily when they need it. Most doubt that the US will fight for them, and some in the Asia-Pacific region question whether the US has the power to win.

The economic benefits that China is providing these countries is significant and is working in a way that is broadly similar to the way the United States provided economic benefits to key countries after World War II to help secure the desired relationships. It was not many years ago that there were no significant rivals to the United States, so it was quite easy for the United States to simply express its wishes and find that most countries would comply; the only rival powers were the Soviet Union (which in hindsight wasn't much of a rival) and its allies and a few of the developing countries that were not economic rivals. **Over the last few years Chinese influence over other countries has been expanding while US influence has been receding.** That is also true in multilateral organizations—e.g., the United Nations, the IMF, the World Bank, the World Trade Organization, the World Health Organization, and the International Court of Justice—most of which were set up by the United States at the beginning of the American world order. As the United States has been pulling back from them, these organizations are weakening and China is playing a greater role in them.

**Over the next five to 10 years, in addition to there being decoupling in other areas, we will be seeing which countries align themselves with each of these leading powers.** Beyond money and military power, how China and the US interact with other countries (how they use their soft powers) will influence how these alliances will be made. Style and values will matter. For example, during the Trump years I heard leaders around the world describe both countries' leaders as "brutal." While you don't hear that as much with President Biden, other countries broadly fear that they will be punished if they don't do exactly what these two countries' leaders want, and they don't like it to the point of being driven into the other's arms. **It will be important to see what these alliances will look like because throughout history, as we've seen, the most powerful country is typically taken down by alliances of countries that are less powerful but collectively stronger.**

Perhaps the most interesting relationship to watch is between China and Russia. Since the new world order began in 1945, among China, Russia, and the United States, two out of the three have become allied to attempt to neutralize or overpower the third. Russia and China each has a lot of what the other needs

(natural resources and military equipment for China from Russia and financing for Russia from China). Also, because Russia is militarily strong it would be a good military ally. We can start to see this happening by watching where the countries line up on the issues; for example, whether to allow Huawei in, with the United States or China.

**In addition to the international political risks and opportunities, there are of course big domestic political risks and opportunities in both countries. That is because there are different factions who are fighting for control of both governments and there will inevitably be changes in leadership that will produce changes in policies.** While nearly impossible to anticipate, whoever is in charge will be faced with the challenges that now exist and that are unfolding in the Big Cycle ways we have been discussing. Since all leaders (and all other participants in these evolutionary cycles, including all of us) step on and get off at different parts of these cycles, they (and we) face a certain set of likely situations to be encountered. Since other people in history have stepped on and off at the same parts of past cycles, by studying what these others encountered and how they handled their encounters at the analogous stages, and by using some logic, we can imperfectly imagine the range of possibilities.

## **THE CAPITAL WAR**

**As history has shown, one of the biggest risks in a conflict is that access to one's money/capital can be shut off. This can happen by a) the moves of one's opponents and/or b) self-inflicted harmful actions (e.g., getting into too much debt and devaluing one's money) that lead those who provide capital to not want to provide it.** In Chapter 6, I reviewed classic capital war moves. Some of these are now being used and could be used in a more forceful way, so they have to be watched closely.

**The goal in a capital war is to cut the enemy off from capital because no money = no power.**



The degrees to which these things occur correspond to the severity of the conflict. “Sanctions” as they are now called and employed come in many forms, with the broad categories being financial, economic, diplomatic, and military. Within each of these categories there are many versions and applications. I’m not going to delve into the various versions and targets because that would be too much of a digression.

The main things to know are:

- **The United States’ greatest power comes from having the world’s leading reserve currency, which gives the US enormous buying power because it gives it the ability a) to print the world’s money and have it widely accepted abroad and b) to control who gets it.**
- **The United States is at risk of losing its reserve currency status.**

The US dollar remains the dominant world reserve currency because it is used for trade, global capital transactions, and reserves much more than any other currency. History and logic show that the leading reserve currency is slow to be replaced for the same reasons that the leading world language is slow to be replaced—because so many people have adopted it and because it is entwined within the system. The existing positions of reserve currencies as reflected by the amounts held by central banks are shown here:

### **SHARE OF CENTRAL BANK RESERVES BY CURRENCY**

<b>USD</b>	<b>51%</b>
<b>EUR</b>	<b>20%</b>
<b>Gold</b>	<b>12%</b>
<b>JPY</b>	<b>6%</b>
<b>GBP</b>	<b>5%</b>
<b>CNY</b>	<b>2%</b>

**Based on data through 2019**

**Because the dollar is the dominant currency in world trade, capital flows, and reserves, it is the world's leading reserve currency, which puts the US in the enviable position of being able to print the world's money and to inflict sanctions on its enemies. The US now has an arsenal of sanctions, which is its most used arsenal of weapons.** As of 2019, there were approximately 8,000 US sanctions in place targeted at individuals, companies, and governments. Through these powers the US can get the money it needs and it can cut off opposing countries from getting money and credit by preventing financial institutions and others from dealing with them. These sanctions are by no means perfect or all-encompassing, but they are generally effective.

The United States is at risk of losing its dominant position as a reserve currency because:

- **The amounts of dollar-denominated debt in foreigners' portfolios, such as central bank reserves and sovereign wealth funds, are disproportionately large based on a number of measures of what the size of reserve currency holdings should be.<sup>5</sup>**
- **The US government and the US central bank are increasing the amounts of dollar-denominated debt and money at an extraordinarily fast pace, so it will likely be hard to find adequate demand for US debt without the Federal Reserve having to monetize a lot of it, while at the same time the financial incentives to hold this debt are unattractive because the US government is paying a negligible nominal yield and a negative real yield on it.**
- **Holding debt as a medium of exchange or as a storehold of wealth during wartime is less desirable than during peacetime, so if there were movements toward war, the value of debt (which is a promise to receive fiat currency) and fiat currency would likely go down relative to other things.** This is not currently an issue but would become one if wars intensify.
- **The roughly \$1 trillion of US debt that China holds is a risk but not an unmanageable one as that equals only around 4 percent of the roughly \$28 trillion outstanding (as of May 2021). However,**

**because other countries realize that actions taken against China could be taken against them, any actions taken against Chinese holdings of dollar assets would likely increase the perceived risks of holding dollar-debt assets by other holders of these assets, which would reduce the demand for such assets.** This is not currently an issue though it appears to be close to becoming an issue.

- **The dollar's role as a reserve currency largely depends on its being freely exchanged between countries, so to the extent that the US might in the future put controls on its flows and/or run monetary policy in ways that are contrary to the world's interests in pursuit of its own interests, that would make the dollar less desirable as the world's leading reserve currency.** This is not currently an issue but will become one if foreign exchange controls are raised as a possibility, which is typical at the next stage of the cycle.
- **Countries being hurt by US sanctions are developing ways to get around them or undermining the United States' power to impose them.** For example, Russia and China, which both are encountering these sanctions and are at great risk of encountering more of them in the future, are each now developing and cooperating with the other to develop an alternative payment system. China's central bank has created a digital currency, which will make China less exposed to US sanctions.

**There are no good currency alternatives because:**

- **The dollar (51 percent of central bank reserves)** has weakening fundamentals in the way described in Chapter 11, which I won't repeat here.
- **The euro (20 percent)** is a weakly structured fiat currency made by smaller, uncoordinated countries with weak finances that are tenuously held together by a highly fragmented currency union. Because the European Union is financially, economically, and militarily at best a secondary power, buying its currency and debt denominated in its

currency, which its central bank is free to print, is not an enticing thing to do.

- **Gold (12 percent)** is a hard currency that is held because it has worked the best over the ages and because it is an effective diversifier to other assets held, particularly fiat currencies. While before 1971 gold was at the foundation of the world's currency system, at this time it is a relatively dead asset since there are no significant international trade and capital transactions in it and it isn't used to balance external accounts. It is also a market that is too small to become a high share of wealth at current prices. A move to gold from fiat-currency-based assets (i.e., credit assets), which would only come in the event of an abandonment of that system (which history shows could come), would lead to an explosion in gold's price.
- **The yen (6 percent)** is a fiat currency that is also not widely used internationally by non-Japanese people and suffers from a lot of the same problems that the dollar has including having too much debt that is increasing quickly and being monetized so that it is paying unattractive interest rates. Also Japan is only a moderate global economic power and is a weak military power.
- **The pound (5 percent)** is an anachronistically held fiat currency that has relatively weak fundamentals, and the UK is relatively weak in almost all of our measures of a country's economic/geopolitical power.
- **The renminbi (2 percent)** is the only fiat currency to be chosen as a reserve currency because of its fundamentals. China's potential is sizable. Its shares of world trade, world capital flows, and world GDP are roughly equal to the United States'.<sup>6</sup> China has managed its currency to be relatively stable against other currencies and against goods and services prices, it has large foreign exchange reserves, it doesn't have a 0 percent interest rate and a negative real interest rate, and it isn't printing and monetizing a lot of debt. Increasing investments in China strengthens the currency because those purchases have to be made in its currency. Those are the positives. The negatives are that China has a relatively large amount of domestic debt that has to be restructured, the renminbi is not a currency that is widely used for global trade and financial transactions,

China's clearing system is undeveloped, and money is not allowed to freely flow in and out of the currency.

**So there are no attractive world reserve currencies to compete with the dollar.**

● *History has shown that whenever a) currencies are not desired and b) there are no other currencies that are attractive to go into, the currencies are still devalued and the capital finds its way into other investments (e.g., gold, commodities, stocks, property, etc.). As a result, there is no need to have a strong alternative currency for a devaluation of a currency to take place.*

**Things will change. To the extent that the United States and China are in a capital war, the development of Chinese currency and capital markets would be detrimental for the United States and beneficial for China. Without the US attacking China's currency and capital markets in an attempt to weaken them, and/or the Chinese hurting their own currency and capital markets (by making policy shifts that make these markets less attractive), China's currency and capital markets will probably develop quickly to increasingly compete with US markets. It is up to American policy makers to decide whether or not they will try to disrupt this evolutionary path by becoming more aggressive or accept that evolution, which will likely lead to China becoming relatively stronger, more self-sufficient, and less vulnerable to being squeezed by the US. Though the Chinese have less power to hurt the US dollar and its capital markets, and its best moves would be to strengthen its own currency, there are some possibilities that it will attempt to harm the dollar.**

As explained in my study of past cycles, the war typically intensifies as the cycle progresses. Comparing historical cases with their modern-day equivalents—e.g., moves by the US and Japan prior to World War II with moves by the US and China now—should be helpful as the cycle progresses.

## **THE MILITARY WAR**

I am not a military expert but I get to speak with military experts and I do research on the subject, so I will pass along what has been shared with me. Take it or leave it as you wish.

● ***It is impossible to visualize what the next major military war will be like, though it probably will be much worse than most people imagine.*** That is because a lot of weaponry has been developed in secret and because the creativity and capabilities to inflict pain have grown enormously in all forms of warfare since the last time the most powerful weapons were used and seen in action. There are now more types of warfare than one can imagine and, within each, more weapons systems than anyone knows. While of course nuclear warfare is a scary prospect, I have heard equally scary prospects of biological, cyber, chemical, space, and other types of warfare. Many of these are untested so there is a lot of uncertainty about how they would go.

Based on what we do know **the headline is that the United States and China's geopolitical war in the East and South China Seas is escalating militarily because both sides are testing the other's limits. China is now militarily stronger than the United States in the East and South China Seas so the US would probably lose a war in that region, while the United States is stronger around the world and overall and would probably "win" a bigger war.** But a bigger war is too complicated to imagine well because of the large number of unknowns, including how other countries would behave in it and what technologies secretly exist. The only thing that most informed people agree on is that such a war would be unimaginably horrible.

Also notable, China's rate of improvement in its military power, like its other rates of improvement, has been extremely fast, especially over the last 10 years, and the future rate is expected to be even faster, even more so if China's economic and technological improvements continue to outpace those of the United States. **Some people imagine that China could achieve broad military superiority in five to 10 years. I don't know if that is true.**

**As for potential locations of military conflict, Taiwan, the East and South China Seas, and North Korea are the hottest spots, and India and Vietnam are the next** (for reasons I won't digress into).

As far as a big hot war between the United States and China is concerned, it would include all the previously mentioned types of wars plus more pursued at their maximums because, in a fight for survival, each would throw all it has at the other, the way other countries throughout history have. It would be World War III, and World War III would likely be much deadlier than World War II, which was much deadlier than World War I because of the technological advances in the ways we can hurt each other.

Proxy wars are also part of the picture and should be watched as they are very effective in chipping away at a leading world power's strength and global influence.

In thinking about the timing of a war, I keep in mind the principles that: ● ***when countries have big internal disorder, it is an opportune moment for opposing countries to aggressively exploit their vulnerabilities.*** For example, the Japanese made their moves to invade China in the 1930s when China was divided and exhausted by its ongoing civil war.

● ***History has taught us that when there are leadership transitions and/or weak leadership at the same time that there is big internal conflict, the risk of the enemy making an offensive move should be considered elevated.*** Because time is on China's side, if there is to be a war, it is in the interest of the Chinese to have it later (e.g., five to 10 years from now when it will likely be stronger and more self-sufficient) and in the interest of the US to have it sooner.

I'm now going to add two other types of war—the culture war, which will drive how each side will approach these circumstances, including what they would rather die for than give up, and the war with ourselves, which will determine how effective we are and which will lead us to be strong or weak in the critical ways we explored in Chapter 1.

## THE CULTURE WAR

● ***How people are with each other is of paramount importance in determining how they will handle the circumstances that they jointly face, and the cultures that they have will be the biggest determinants of how they are with each other.*** What Americans and the

Chinese value most and how they think people should be with each other determine how they will deal with each other in addressing the conflicts that we just explored. Because Americans and the Chinese have different values and cultural norms that they will fight and die for, if we are going to get through our differences peacefully it is important that both sides understand what these are and how to deal with them well.

As described earlier, **Chinese culture compels its leaders and society to make most decisions from the top down, demanding high standards of civility, putting the collective interest ahead of individual interests, requiring each person to know their role and how to play it well, and having filial respect for those superior in the hierarchy. They also seek “rule by the proletariat,” which in common parlance means that opportunities and rewards are broadly distributed. In contrast, American culture compels its leaders to run the country from the bottom up, demanding high levels of personal freedom, favoring individualism over collectivism, admiring revolutionary thinking and behavior, and not respecting people for their positions as much as for the quality of their thinking. These core cultural values drove the types of economic and political systems each country chose.**

To be clear, most of these differences aren't obvious in day-to-day life; they generally aren't very important relative to the shared beliefs that Americans and the Chinese have, which are numerous, and they aren't held by all Chinese or all Americans, which is why many Americans are comfortable living in China and vice versa. Also, they are not pervasive. For example, the Chinese in other domains, such as Singapore, Taiwan, and Hong Kong, have had governance systems that are similar to Western democratic systems. Still these cultural differences subtly affect most everything, and in times of great conflict, they are the defining differences that determine whether the parties fight or peacefully resolve their disputes. **The main challenge the Chinese and Americans have with each other arises from some of them failing to understand and empathize with the other's values and ways of doing things, and not allowing each other to do what they think is best.**



While the opening up of both countries has increased their interactions and their increasingly shared practices (e.g., their similar economic freedoms that produce similar desires, products, and outcomes) have made both environments and their people much more similar than they ever were before, the differences in approaches are still notable. They are reflected in how each country's government and its people interact with each other and how Americans and the Chinese interact especially at the leader-to-policy-maker level. **Some of these cultural differences are minor and some of them are so major that many people would fight to the death over them**—e.g., most Americans believe in “give me liberty or give me death” while to the Chinese individual liberty isn't nearly as important as collective stability is.

These differences are also reflected in everyday life. For example, the Chinese government, being more paternal, regulates what types of video games children play and how many hours a day they can play them, whereas in the United States video games aren't government-regulated because such things are considered an individual parent's decision to make. One could argue the merits of either approach.

The Chinese hierarchical culture makes it natural for the Chinese to simply accept the government's direction, while the American nonhierarchical culture makes it acceptable for Americans to fight with their government over what to do. Similarly, different cultural inclinations influenced how Americans and the Chinese reacted to being told that they had to wear masks in response to COVID-19, which led to second-order consequences because the Chinese followed the instructions and Americans often didn't, affecting the numbers of cases and deaths and the economic impact. These culturally determined differences in how things are handled affect how the Chinese and Americans react differently to many things— information privacy, free speech, free media, etc.—which add up to lots of ways that the countries operate differently.

While there are pros and cons to these different cultural approaches, and I'm not going to explore them here, I do want to get across that **the cultural differences that make Americans American and the Chinese Chinese are deeply embedded**. Given China's impressive track record and how deeply imbued the culture behind it is, there is no more chance of the Chinese giving

up their values and their system than there is of Americans giving up theirs. Trying to force the Chinese and their systems to be more American would, to them, mean subjugation of their most fundamental beliefs, which they would fight to the death to protect. To have peaceful coexistence Americans must understand that the Chinese believe that their values and their approaches to living out these values are best, as much as Americans believe their American values and their ways of living them out are best.

For example, one should accept the fact that when choosing leaders most Chinese believe that having capable, wise leaders make the choices is preferable to having the general population make the choice on a “one person, one vote” basis because they believe that the general population is less informed and less capable. Most believe that the general population will choose the leaders on whims and based on what those seeking to be elected will give them in order to buy their support rather than what’s best for them. Also, they believe—like Plato believed and as has happened in a number of countries—that democracies are prone to slip into dysfunctional anarchies during very bad times when people fight over what should be done rather than support a strong, capable leader.

They also believe that their system of choosing leaders lends itself to better multigenerational strategic decision making because any one leader’s term is only a small percentage of the time that is required to progress along its long-term developmental arc.<sup>7</sup> They believe that what is best for the collective is most important and best for the country and is best determined by those at the top. Their system of governance is more like what is typical in big companies, especially multigenerational companies, so they wonder why it is hard for Americans and other Westerners to understand the rationale for the Chinese system following this approach and to see the challenges of the democratic decision-making process as the Chinese see them.

To be clear, I’m not seeking to explore the relative merits of these decision-making systems. **I am simply trying to make clear that there are arguments on both sides and to help Americans and the Chinese see things through each other’s eyes and, most importantly, to understand that the choice is between accepting, tolerating, and even respecting each other’s right to**

**do what each thinks is best or having the Chinese and Americans fight to the death over what they believe is uncompromisable.**

The American and Chinese economic and political systems are different because of the differences in their histories and the differences in their cultures that have resulted from these histories. As far as economics is concerned the two different viewpoints—the classic left (favoring government ownership of the means of production, the poor, the redistribution of wealth, etc., which the Chinese call communism) and the classic right (favoring private ownership of the means of production, whoever succeeds in the system, and much more limited redistributions of wealth)—exist in China as in the rest of the world, and there have been swings from one to the other in all societies, especially in China, so it would not be correct to say that the Chinese are culturally left or right. Similar swings in American preferences have existed throughout its much more limited history. I suspect that if the United States had a longer history we would have seen wider swings, as we have in Europe through its longer history.

For these reasons these “left” versus “right” inclinations appear to be more big cycle swings around revolutionary trends than evolving core values. In fact, we are seeing these swings now taking place in both countries, so it’s not a big stretch to say that policies of the “right,” such as capitalism, are close to being more favored in China than in the United States and vice versa. In any case, when it comes to economic systems, there don’t appear to be a lot of clear distinctions rooted in deep cultural preferences. In contrast to economic systems, the inclination of the Chinese to be top-down/hierarchical versus bottom-up/nonhierarchical appears to be deeply embedded in their culture and in their political systems while Americans are strongly inclined to be bottom-up/nonhierarchical. As for which approach will work best and win out in the end, I will leave that for others to debate, hopefully without bias, though I will note that most knowledgeable observers of history have concluded that neither of these systems is always good or bad. ● ***What works best varies according to a) the circumstances and b) how people using these systems are with each other. No system will sustainably work well—in fact all will break down—if the individuals in it don’t respect it more than what they individually want and if the system is not flexible enough to bend with the times without breaking.***

**As we imagine how Americans and the Chinese will handle their shared challenge to evolve in the best possible way on this shared planet, I try to imagine where their strong cultural inclinations, most importantly where the irreconcilable differences that they would rather die for than give up, will lead them.** For example, most Americans and most Westerners would fight to the death for the ability to have and express their opinions, including their political opinions. In contrast, the Chinese value the respect for authority more, which is reflected in and demonstrated by the relative powers of individuals and the organizations they belong to and the responsibility to hold the collective organization responsible for the actions of individuals in the collective.

Such a culture clash took place in October 2019 when the then-general manager of the Houston Rockets (Daryl Morey) tweeted an image expressing support for Hong Kong's pro-democracy protest movement. He quickly pulled down his tweet and explained that his views weren't representative of his team's views or the NBA's views. Morey was then attacked by the American side (i.e., the press, politicians, and the public) for not standing up for free speech, and the Chinese side held the whole league responsible and punished it by dropping all NBA games from China's state television, pulling NBA merchandise from online stores, and reportedly demanding that the league fire Morey.

This clash arose because of how important free speech is to Americans and because Americans believe that the organization should not be punished for the actions of the individual. The Chinese, on the other hand, believe that the harmful attack needed to be punished and that the group should be held accountable for the actions of the individuals in it. One can imagine much bigger cases in which much bigger conflicts arise due to such differences in deep-seated beliefs about how people should be with each other.

**When they are in a superior position, the Chinese tend to want a) the relative positions to be clear (i.e., the party in a subordinate position knows that it is in a subordinate position), b) the subordinate party to obey, and c) the subordinate party to know that, if it doesn't do so, it will be punished.** That is the cultural inclination/style of Chinese leadership. They can also be wonderful friends who will provide support when needed. For

example, when the governor of Connecticut was desperate to get personal protective equipment in the first big wave of COVID-19 illnesses and deaths and couldn't get it from the US government or other American sources, I turned to my Chinese friends for help and they provided what was needed, which was a lot. As China goes global a number of countries' leaders (and their populations) have been both grateful for and put off by China's acts of generosity and strict punishments. Some of these cultural differences can be negotiated to the parties' mutual satisfaction, but some of the most important ones will be very difficult to negotiate away.

**I think the main thing to realize and accept is that the Chinese and Americans have different values and will make different choices for themselves than the other would like.** For example, Americans might not like how the Chinese handle their human rights issues and the Chinese might not like how Americans handle their human rights issues. The question is: what should be done about that—should Americans fight with the Chinese to impose what they think the Chinese should do on them and vice versa, or should they agree not to intervene into what each other does? In my opinion it is too difficult, inappropriate, and probably impossible to force others in other countries to do what they strongly believe is not good for them. **The United States' ability to impose things on the Chinese and China's ability to impose things on the United States will be a function of their relative powers.**

While I just explored the US-China war issues conveying the little that I know about them relative to what I need to know, I want to remind you that these wars are far more complex than one-to-one conflicts. They are like multidimensional chess games because many countries are involved with many other countries in many dimensions. For example, when I think of US-China relations I have to think way beyond their bilateral relations to think about their multilateral relationships in all important dimensions—e.g., with all notable Asian, European, and Middle Eastern governments and private sectors, and with all of those countries' important relationships with the other countries, etc. In other words, in order to think about the US-China relationship I have to think about the Saudi Arabia-US and the Saudi Arabia-China relationship and to that

I have to think about the Saudi Arabia-Iran relationship, the Saudi Arabia-Israel, the Saudi Arabia-Egypt, and many other relationships in all of their important dimensions, plus the other analogous relationships. Without the aid of a good computer and a whole lot of data, it is impossible to follow, let alone understand, what's going on. It is way beyond me, and frankly when I speak with world leaders I find it shocking how little they really understand what the others in this multidimensional chess game are really thinking.

## **THE RISK OF UNNECESSARY WAR**

**As I explained in Chapter 6, stupid wars often happen as a result of a tit-for-tat escalation process in which responding to even small actions of an adversary is more important than being perceived as weak, especially when those on both sides don't really understand the motivations of those on the other side.** History shows us that this is especially a problem for declining empires, which tend to fight more than is logical because any retreat is seen as a defeat.

Take the issue of Taiwan. Even though the US fighting to defend Taiwan would seem to be illogical, not fighting a Chinese attack on Taiwan might be perceived as being a big loss of stature and power over other countries that won't support the US if it doesn't fight and win for its allies. Additionally, such defeats can make leaders look weak to their own people, which can cost them the political support they need to remain in power. And, of course, miscalculations due to misunderstandings when conflicts are transpiring quickly are dangerous. All these dynamics create strong pulls toward wars accelerating even though such mutually destructive wars are so much worse than cooperating and competing in more peaceful ways.

**There is also risk of untruthful, emotional rhetoric taking hold in both the US and China, creating an atmosphere for escalation.** For example, in a recent Pew survey a record 73 percent of Americans had an unfavorable opinion of China, 73 percent believed the United States should promote human rights in China, and 50 percent believed the US should "hold

China responsible” for the role it played in COVID-19. Though I don’t have surveys of Chinese public opinion of the United States, I am told by many people that it has deteriorated. It wouldn’t take much to have these people demand accelerations of the conflicts.

**Ultimately, it would be wise for leaders and citizens of both countries to recognize that the US and China are in a competition of systems and abilities.** Each will inevitably follow the system that they believe works best for them, Americans have a slight lead in power but it is shrinking and they’re outnumbered, and history has shown that while numbers of people can matter a lot, other factors (e.g., the 18 determinants listed in Chapter 2) matter more, so even small-population empires become leading world powers if they manage themselves well. That all implies that what’s most important to being strong is how we act with ourselves.

## **THE WAR WITH OURSELVES: THE ENEMY IS US**

Our greatest war is with ourselves because we have the most control over how strong or weak we are. Because it is pretty clear what makes countries strong and weak, and because these strengths and weaknesses are measurable, it is easy to see how each country is doing. These factors were laid out in the first and second chapters and measured by 18 determinants. I will briefly review them here, and in the next and final part, I will show these determinants for most countries and will explore the leading indicators of them so that we can make projections of what’s to come.

**Before we do that, let’s review the specific items that help make a great empire. They are...**

**... leadership that is strong enough and capable enough to provide the essential ingredients for success, which include...**

**... strong education.** By strong education I don’t just mean teaching knowledge and skills; I also mean teaching...

... **strong character, civility, and a strong work ethic**, which are typically taught in the family as well as in school. These lead to improved civility that is reflected in factors such as...

... **low corruption and high respect for rules, such as the rule of law.**

... **People being able to work well together, united behind a common view of how they should be together**, is also important. When people have knowledge, skills, good character, and the civility to behave and work well together, and there is...

... **a good system for allocating resources**, which is significantly improved by...

... **being open to the best global thinking**, the country has the most important ingredients in order to succeed. That leads to it gaining...

... **greater competitiveness in global markets**, which brings in revenues that are greater than expenses, which leads the country to have...

... **strong income growth**, which allows it to make...

... **increased investments to improve infrastructure, education, and research and development**, which lead it to have...

... **rapidly increasing productivity** (more valuable output per hour worked). Increasing productivity is what increases wealth and productive capabilities. When the country achieves higher productivity levels, it can become productive inventors in...



... **new technologies.** These new technologies are valuable for both commerce and the military. As the country becomes more competitive in these ways, naturally it gains...

... **a rising and significant share of world trade,** which requires it to have...

... **a strong military** to protect its trade routes and to influence those who are important to them outside their borders. In becoming economically preeminent the country develops...

... **strong and widely used currency, equity, and credit markets.** Naturally those dominant in trade and capital flows have their currency used much more as the preferred global medium of exchange and the preferred storehold of wealth, which leads to **their currency becoming a reserve currency** and the building of...

... **at least one of the world's leading financial centers** for attracting and distributing capital and expanding their trade globally.

**Whatever makes these measures go up is good and whatever makes them go down is bad. For this reason it is wise for citizens of all countries to ask themselves how well they collectively and their leaders are doing at making the lines in these measures go up. I also hope that they will remember the cause/effect relationships, avoiding the excesses and divisions that lead to declines.**

**As for the case at hand, the internal wars and challenges in both China and the US are more important and bigger than external wars and challenges.** These include political wars within the leadership of the country and at all levels of government, wars between different factions (e.g., the rich and the poor, the rural and the urban, conservatives and progressives, ethnic groups, etc.), demographic changes, climate change, etc. Fortunately, the most

important of these forces are within our control and are measurable, which allows us to see how we are doing and, if we're not doing well, to make changes so these things move in the right directions. **By and large we will get what we deserve. As Churchill said to the British people, "Deserve Victory!"**

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<sup>1</sup> Decoupling, while required given the circumstances, will be difficult and will lead to significantly reduced efficiency. China's main program for building self-sufficiency goes under the name of "dual circulation." One knowledgeable party described it as a compartmented rather than a broad-based decoupling, which makes sense to me.

<sup>2</sup> One in five North America-based companies in a 2019 CNBC Global CFO Council survey claimed to have had intellectual property stolen by Chinese companies.

<sup>3</sup> It is widely recognized that "regime change" has been commonly employed by the United States for managing its world order.

<sup>4</sup> This statement was made in connection with the Taiwan reunification issue.

<sup>5</sup> The shares of dollar-denominated debt are large in relation to a) the percentage of asset allocations that international investors would hold to balance their portfolios well, b) the sizes of reserve currency holdings that are appropriate to meet trade and capital flow funding needs, and c) the size and importance of the US economy relative to other economies. Dollar-denominated debt is now disproportionately large because the dollar is the world's leading reserve currency, which means it is perceived as a safer asset than it really is, and because dollar borrowings have been disproportionately large. Now most of those who are responsible for determining what the shares of their holdings should be in different markets are not inclined to increase the shares in line with the greater amounts of US bonds to be sold and are in fact considering reducing their shares held in US debt, which, if it happens, will require larger purchases by the Federal Reserve.

<sup>6</sup> This data is adjusted for purchasing power parity.

<sup>7</sup> In fact, it is a challenge for the Chinese to deal with the lack of continuity of policies and directions in the US arising from seemingly whimsical shifts in what matters to the American public as expressed in whom they choose to represent them.

# **PART III**

# **THE FUTURE**

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## CHAPTER 14

# THE FUTURE

**“He who lives by the crystal ball is destined to eat ground glass” is a market adage I learned when I was about 14. Since I’ve personally experienced it to be true, it has affected how I look at both the future and the past. I have learned to look at the past 1) to determine what’s likely to happen and 2) to protect myself and others I am responsible for against the possibility I am wrong or missing something important. While you and I and others can argue about the patterns and cause/effect relationships described in this book, if you are reading this for practical purposes rather than just casual interest, then you, like me, need to do those two things well.**

**The purpose of this chapter is to share my thoughts about how I approach the future. While what I don’t know about the future is probably much more than what I do know, what I do know is also a lot. Dealing with the future is all about 1) perceiving and adapting to what is happening, even if it can’t be anticipated; 2) coming up with probabilities for what might happen; and 3) knowing enough about what might happen to protect oneself against the unacceptable, even if one can’t do that perfectly.**

Knowing how things have changed in the past leads me to consider the possibility that something similar might happen in the future. That is a big advantage relative to being unaware. For example, there are numerous examples in history of revolutions, wars, and acts of nature leading to violent events in which virtually all wealth is wiped out or confiscated. Knowing this, I am constantly looking for leading indicators of the same things happening again,

and having leading indicators of these things, even if they aren't perfect, puts me in a better position to protect myself than remaining blissfully unaware and unprepared for what might happen.

While that example is of a worst-case scenario, being unaware of best-case scenarios can be equally bad. I remember very well how my dad and his friends failed to take advantage of the boom that followed the Great Depression and World War II, as their mindsets had been formed by those awful eras. In playing the game of life it pays to do one's best to understand how the world works, imagine the full range of possibilities (including their risks and rewards), and know how to spread one's bets around well.

While I will pass along my thinking, please remember that everything I say is debatable; the purpose of this whole project is to improve my assessed probabilities of being right. As such, it is a work in progress, and I hope you will join me in evolving it. To that end, I plan to continually update my understandings of these patterns and lessons at [economicprinciples.org](http://economicprinciples.org), where we can interact to refine the picture.

## MY APPROACH

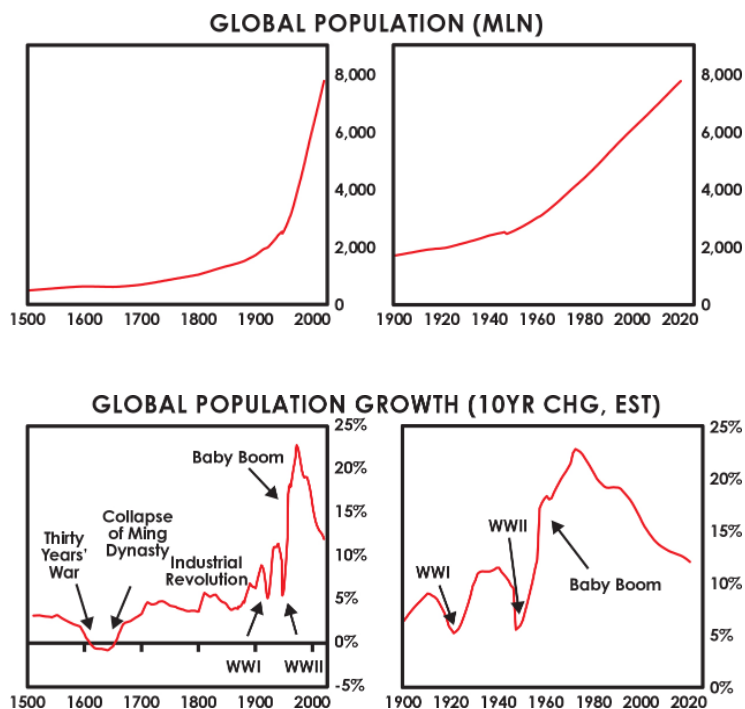
To quickly review, **my approach is based on my ideas about a) evolution, which causes changes over time, generally toward improvement, such as increasing productivity, b) cycles, which cause rhythmic ups and downs in the economy (like debt bubbles and busts) and bumps along the way (non-rhythmic ups and downs, like acts of nature), and c) indicators that can help us see where we are in the cycles and what might come next.** I will briefly recap my thoughts on each.

## EVOLUTION

**The most important things evolve in ways that are easy to see and extrapolate forward,** so it's not difficult to get a pretty good sense of roughly

where they are likely to be in the future, so long as a once-in-500-years-type game changer doesn't come along. The following charts tell the story about population, life expectancy, and prosperity.

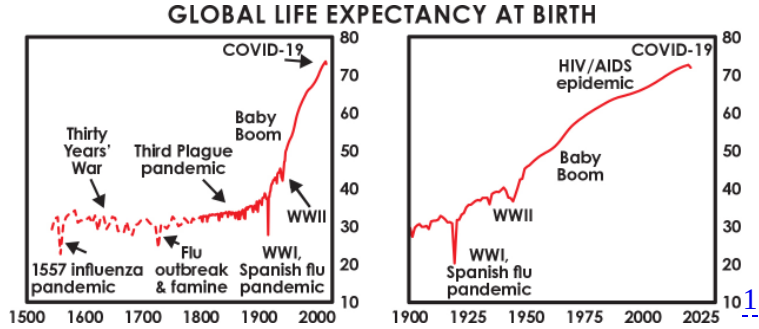
Let's start with world population. The chart on the left starts at 1500 and the one on the right starts at 1900. I show them both because I want you to see how different one's perspective would be if one were looking back 100 years from 1900 versus 100 years from today. Note how dramatically the population grew in the 20th century. Also note that the major historical events mentioned in this book—including the Great Depression, the two World Wars, and any number of natural catastrophes—had no visible effect on the larger evolutionary trend.



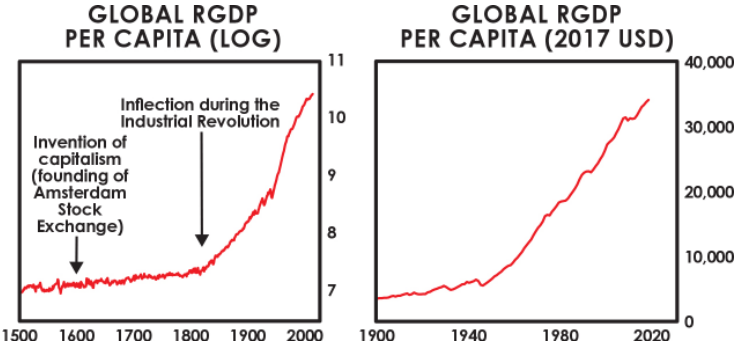
The next two charts show the population growth rate. Notice the big ups and downs that don't show up in the prior charts because they are so minor in comparison to the long-term trend. If we had personally experienced any of this volatility, it would have felt like a life or death experience (which it very much was).

The next two charts show a similar picture for life expectancy. There are a lot more wiggles in these charts than in the previous ones because average life

expectancy changes more when there are big events like wars and pandemics (I will show you what those big killers were and where they occurred at [economicprinciples.org](http://economicprinciples.org)). Note how life expectancy stayed roughly the same (about 25–30 years) for about 350 years and then accelerated starting around 1900, when there were big improvements in infant mortality rates and several medical advances, like antibiotics.



Now let's look at economic prosperity as measured by real (i.e., inflation-adjusted) GDP. The first chart shows a similarly, sweeping picture: the real value of what was produced per person grew slowly until the 19th century and then accelerated, with that broad evolutionary trend dominant relative to the wobbles within it.



The next chart shows real wealth per capita since 1900. From 1900 until 1945, there was no increase to speak of as that was the late-cycle transition phase from the 19th century boom to the new world order in 1945. Peace and prosperity followed the creation of the new world order, and the uptrend was

strong and pretty steady (averaging 4 percent per year), even though the movements around it felt big when we went through them.



**With these evolutions in mind, let's start looking toward the future.**

If we look back carefully to see how the present was created, we can see that these evolutionary advances didn't just happen on their own: every day, there were events that affected the present while people's actions shaped them. At the same time, we know that we never could have anticipated them individually—if we had tried to predict each of the specific wars, droughts, pandemics, inventions, prosperous periods, declines, etc., we would have failed. But even without knowing about any of those specific developments, we could have pretty confidently said that advances would occur that would enable significantly larger populations to live significantly longer while enjoying significantly higher standards of living because of the evolution that has already occurred, and that we have every reason to expect to continue to occur, from humanity's inventiveness. We could have also confidently asserted that there would be booms and busts, feasts and famines, and periods of great health and disease along the way.

Based just on what happened in the past 100 years, one might conclude that one can get pretty good estimates just by extrapolating the past forward. As an example, by simply extrapolating the past 100 years, it would be reasonable to expect that in the next 10 years the world's population will be around 10–15 percent higher than it is today, the output per person will be about 20 percent higher, the wealth per person will be 30 percent higher, and the average life expectancy will be 7.5 percent higher, give or take a bit. It would be reasonable



to expect that in the next 20 years they will be up 25–30 percent, 45 percent, 70 percent, and around 15 percent, respectively, without knowing specifically how that will happen.

That simple, not-especially-thoughtful analysis paints a picture that probably won't be far off—but it could be. It is easy to paint this picture in much greater detail by looking at the same stats for each country and each sub-group within a country in this way. Processing all of this information is pretty complicated for the human mind alone, but not for a good human mind working with a computer.

But we can see that a picture drawn from pure extrapolation is not good enough. For example, standing in 1750, it would have been reasonable to believe that it was a timeless and universal truth that monarchies and landowning nobles overseeing peasants with the help of soldiers would be the governance system in the future, that agricultural land would continue to be the most important money-earning asset, that per capita incomes would grow at only around half a percent per year, and that life expectancy would remain steady at about 30 years. That was how it had always been. You would not have imagined capitalism and democracy as we now know it, let alone that there would be a United States and that it would be the leading world power.

The big curveballs come when a few really big things cause a paradigm shift that alters the evolutionary rates of change. The paradigm shifts that came in the early 19th century arose from the confluence of the invention of modern tools of finance, machines that could do the work of people, the development of more inclusive societies that broadened opportunities to be inventive and productive, the increased use of books and libraries so knowledge could be more broadly shared, and the application of the scientific method. While these things couldn't be anticipated, they could have been perceived, understood, and adapted to. That's why **• while extrapolating the past is generally a reasonable thing to do, also be prepared to be surprised because the future will be much different than you expect it to be.**

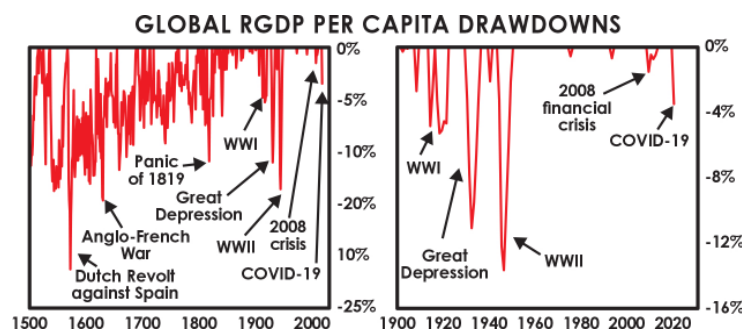
Throughout my roughly 50 years of investing, I have seen a number of well-established beliefs based on both what happened before and what seemed logical at the time be proven wrong (to choose a recent example, the belief that bond yields can't go negative). The greatest recent disruptor of well-established beliefs

was the Digital Revolution. Through these experiences and observations I learned that **identifying, understanding, and adapting to paradigm shifts is essential, even if one can't anticipate them—though trying to anticipate them with good indicators that help is important too.** Having good indicators can also help you tell when what looks like a paradigm shift is only a passing fad, which is just as important.

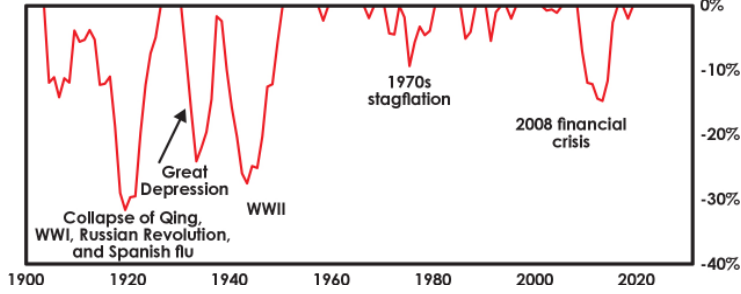
## CYCLES AND BUMPS ALONG THE WAY

Cycles and bumps were covered comprehensively in prior chapters, but they warrant reflection now that we are shifting our attention from the past to the future.

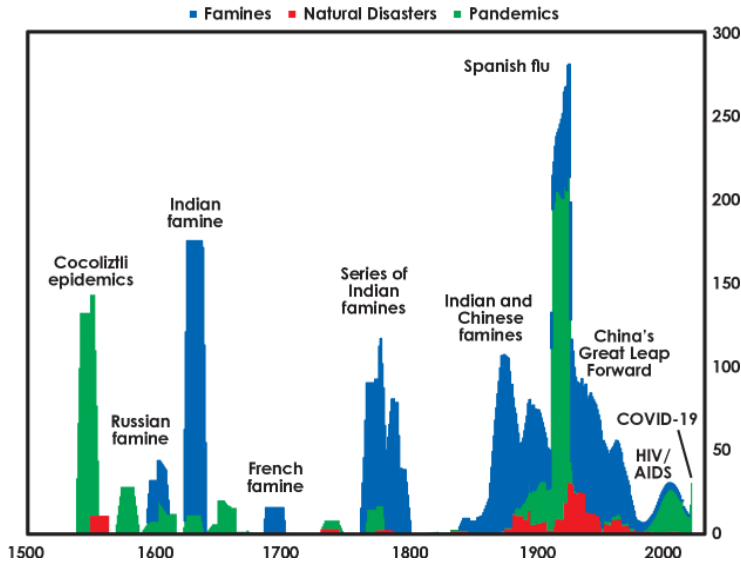
Though they barely register when compared to the mega-macro picture, they can damage and kill large numbers of people. Just look at the following charts that show depressions, declines in wealth, deaths in wars, and deaths via pandemics over the past 500 years to gain some perspective about them. Those bad times were even worse than they look because the charts capture them in terms of averages; as such they understate the severity of the experience for the people who were most directly affected. Most people don't think about this darker picture. They look at the positive post-1945 trends and extrapolate them forward. It's up to you to decide if you're in that camp too. As for me, seeing that these big, deadly things have happened in the past leads me to distrust the belief that they won't happen again. Unless and until someone shows me better evidence that they won't happen again than the simple fact that they haven't happened yet, I am going to assume they will and try to protect myself from their consequences.



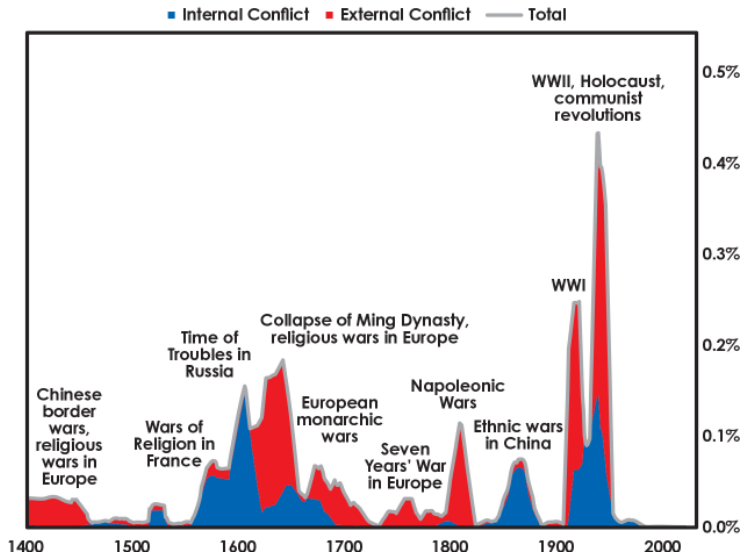
### GLOBAL REAL WEALTH PER CAPITA DRAWDOWNS



### GLOBAL DEATHS BY CATEGORY (RATE PER 100K PEOPLE, 15YMA)



### ESTIMATED DEATHS FROM CONFLICT (MAJOR POWERS, %POP, 15YMA)



One of the overarching principles I derived from my research and my 50-plus years of investing experience is **in the markets and in life, to be successful one should bet on the upside that comes from a) evolution that leads to productivity improvements, but not so aggressively that b) cycles and bumps along the way knock you out of the game.** In other words, betting on things being better—e.g., real earnings being greater—is pretty much a sure bet. But betting too much on that so that a bump along the way can ruin you is bad. That’s why having quality indicators helps a lot.

## QUALITY INDICATORS

**Because everything that happens is the result of events that have happened before, I have some pretty good and logical, though imperfect, leading and coincident indicators of important changes. Some can be quantified, while others can’t be.**

As previously explained, I found 18 determinants that explain most of the conditions and changes in wealth and power both within and between nations. I will soon show you the readout of all of these 18 determinants for each of the 11 major powers I’m following in this book (more detail on the top 20 countries is shown at [economicprinciples.org](http://economicprinciples.org)). But first I want to share some big-picture thoughts about the five determinants that have had the biggest impacts in the past and that I believe will have the biggest impacts on what happens in the years ahead: **innovation, the debt/money/capital market cycle, the internal order and disorder cycle, the external order and disorder cycle, and acts of nature.** When looking at the charts, remember that in some cases the determinants rise and fall together because they are mutually reinforcing, while in others one country’s gains are at the expense of another’s. For example, inventing new technologies raises all of humanity’s living standards, but it puts the countries that are better at inventing in a superior position. Rising levels of military strength are clearly less beneficial for humanity, as they benefit some countries at the expense of others.

## HUMANITY'S INVENTIVENESS

**As previously discussed, innovation and inventiveness are clearly the most powerful determinant of a country's conditions.**

Think about all the things that we can't imagine not having that were invented or discovered in just the last 150 years. Before we had them, nobody could have imagined them—e.g., the telephone (1876), the electric light bulb (1879), the internal combustion powered vehicle (1885), the radio (1895), movies (1895), the airplane (1903), television (1926), antibiotics (1928), the computer (1939), nuclear weapons (1945), nuclear power plants (1951), GPS (1973), digital cameras (1975), online shopping (1979), the internet (1983), online search (1990), online banking (1995), social media (1997), Wi-Fi (1998), the iPhone (2007), CRISPR gene editing (2012), etc., etc., etc. Progress unfolds in big and steady ways to shape the future but does so through specific breakthroughs that we can't imagine. That is what evolution in technologies and techniques looks like. Evolution in most everything else—approaches to life, domestic and international politics, etc.—happens in a similar way.

**I believe that humanity's evolution through its inventiveness is accelerating and that most people will benefit from it.** That is because the most significant inventions we are now seeing, and that we know we will see many more of, improve the quality and quantity of all thinking. These inventions are coming in the forms of advances in computers, AI, and other thinking-related technologies. Because they can be applied to many domains of human activity and decision making, it seems obvious to me that the rate of invention and improvement in most areas will accelerate at an even faster pace, rapidly raising productivity and living standards.

Humans now have computers to help them think in ways in which they are comparatively handicapped (e.g., computers have far more memory than the human brain and it is readily accessible, they can process more data at a fantastically faster rate, and they do not make emotional mistakes); at the same time, humans can help computers get past their inherent limitations (e.g., their complete absence of imagination, intuition, common sense, value judgements, and emotional intelligence). This collaboration between humans and computers

will increase both the quantity and quality of thinking,<sup>2</sup> portending radical improvements in almost every area of life. I know this because I have experienced it, and I can already see some of these improvements on the horizon.

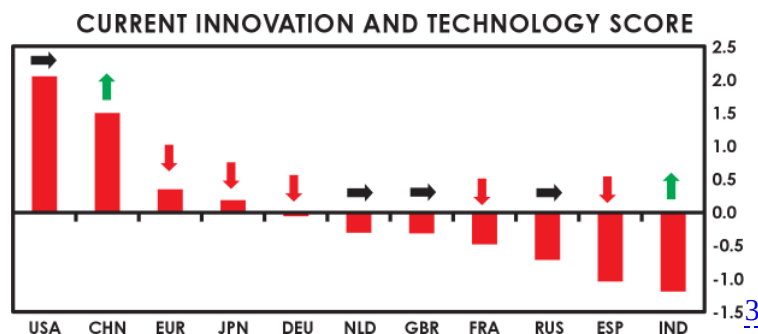
In other words, **the abilities of both computers and humans will improve at an increasing pace. Perhaps most importantly, advances in and the wider use of quantum computing with AI will lead to unimaginable advances in rates of learning and improvement and changes in global wealth and power. These changes will occur in varying degrees in the next five to 20 years, but I believe they will add up to the greatest shift in wealth and power that the world has ever seen. Quantum computing with AI will be to traditional computing what the computer was to the abacus, providing humanity with vastly more power to see, understand, and shape things. That makes me long-term very optimistic and eager to bet on great new discoveries.**

Even without the boosts from quantum computing, I'd expect the human lifespan to increase by a lot over the next two decades (by 20–25 percent or more), for reasons we can see and for many more reasons that we can't yet see. A few inventions that are already on the horizon are AI and robotics in healthcare, health monitoring, and advice-providing wearables; advances in and the practical use of genome sequencing and gene editing; mRNA improvements in vaccines; and breakthroughs in nutrition and drugs. And if the past is any guide (and it is) there will be many more inventions that we can't yet fathom.

Naturally I can't help but imagine the implications for investing. All else being equal, equities in the companies making new inventions and the companies that benefit from them are the right ones to own if you want to bet on evolution happening, but whether the returns to investors match the performance of the innovations depends on how governments decide to divide the profits of productivity. If the world is financially overextended and has large wealth gaps, this creates headwinds. Also, price matters. It's possible to invest in great companies and lose money because they are so expensive and invest in bad companies and make money because they are so cheap. Finally, and as with everything else, there are downsides. Humanity's inventiveness and the new technologies it produces can have bad as well as good effects. Advances in

technologies for inflicting harm will certainly occur alongside advances in medical care. So my view is that **inventiveness and increases in living standards will probably get a lot better a lot faster—if humanity doesn't kill itself first.**

The next chart shows our latest reading on the inventiveness, technological advancement, and entrepreneurship we see in major countries. The arrows on the top of the bars show whether the trend in each country's standing has been up, sideways, or down. This gauge gives about half its weight to 1) a combination of external rankings and measures of innovation per capita (to help capture how widespread innovation is in the economy) and half to 2) the country's absolute share of key innovation metrics (e.g., researchers, R&D spending, patents, Nobel Prizes, and venture capital funding). Like all my gauges, it is approximately right but not perfectly right, so it's meant to be broadly indicative. **As shown, the US is at the top of these measures with a marginal lead over China, which ranks second (primarily due to the US's share of global research spending, researchers, and its lead in other areas such as venture capital funding). But the US's position is steady, while China's position in the standings is rising fast. Remember that whoever wins the technology war usually wins the economic and military wars.** For more detail on all the gauges shown in this chapter, please refer to the end of this chapter, where you can read a short description of each.



## THE DEBT/MONEY/CAPITAL MARKET/ECONOMIC CYCLE

As I explained earlier, this cycle is the biggest driver of the ups and downs in economies that have big implications for internal and external politics and wars, so knowing where countries are in this cycle is essential to anticipating what's likely to come next.

**Based on my readings of history, my readings of existing conditions, and my understanding of how the economic machine works, the promises that are denominated in the world's reserve currencies, most importantly the dollar, are too large and growing too fast to be paid in hard money. In other words, the debt that is denominated in these currencies is an overhang, so money will probably be printed to service debts and debt growth<sup>4</sup> and interest rates will probably be held below inflation and economic/income growth rates. This reflects the fact that the major reserve currency countries are late in their debt/money/capital market/economic cycles and that wealth will probably be increasingly redistributed from those who have a lot of it to those who don't have enough of it in one way or another. The extent to which these things will be true will vary from country to country, though it will likely be worldwide.**

For that reason, **the biggest risk in the long run is the “currency value of money” risk, which most people don't pay enough attention to. I hope Chapter 4 helps people understand and deal with it better.**

To be clear, because the reserve currency countries that are running big deficits have their deficits and debts denominated in their own currencies, their ability to print the money to service the debts transfers the risks from them as debtors to those who are holding the debt as creditors. **So, the big risk is not that those big debtors will default; it is that creditors will hold assets that will be devalued—i.e., that the returns from holding debt assets will be less than the inflation rate.** I believe a great transfer of wealth from creditors to debtors (as happened in the biblical years of Jubilee, as explained in Chapter 3) is coming for the same reasons it has always come in the past.

**What does that mean for the dollar (most importantly) and the other more minor reserve currencies? Will they decline and others replace them? Most probably they will decline analogously to past reserve currency**



**declines: slowly for a long time and then very quickly.** As we saw in those cases, the pace of reserve currency decline significantly lags the pace of the declines in other measures of strength. Reserve currencies tend to live on long after their fundamentals cease to justify their prominence because they become deeply entrenched in the ways things are done and there is a strong inclination to keep them. Then they abruptly plunge when it becomes clear that the fundamentals behind the currency make holding debt in it a bad deal.

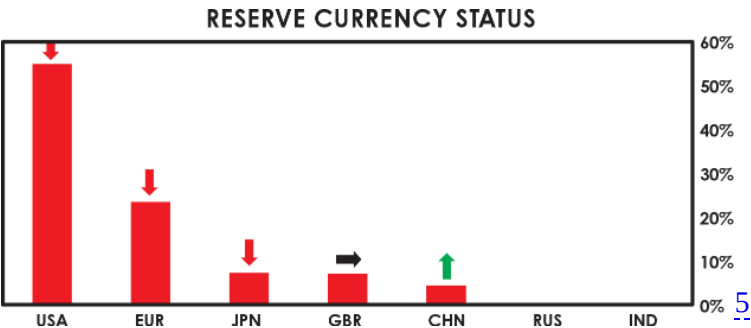
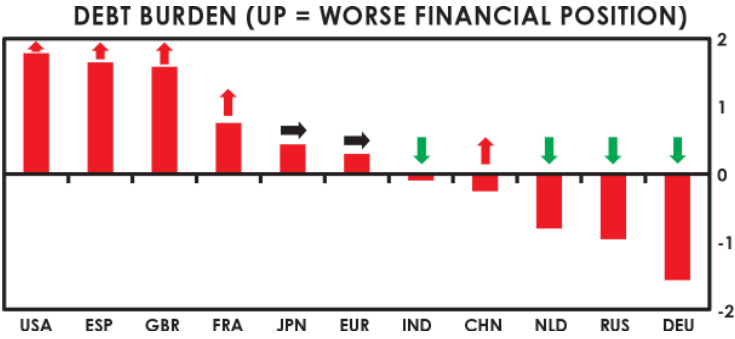
The fall happens fast because the currency's rate of decline outpaces the interest rate paid to the holders of the debt; the net losses lead to selling, which causes more losses, so the spiral becomes self-reinforcing. The Dutch guilder and the British pound both plunged in this way due to geopolitical crises/defeats happening when they had large debts. Those events made it clear to creditors that their fundamentals were weaker than they had assumed and the interest rate couldn't compensate for the decline.

While I have very good indicators to identify this kind of decline happening as it happens, and some pretty good leading indicators that indicate when it will happen in the short term, my long-term leading indicators are only so-so for timing purposes. That is because they are financial and based on supply and demand. It is pretty easy to assess the financial conditions of countries in the same ways that one assesses the financial conditions of people and companies (by checking whether they are running surpluses or deficits and have more assets than liabilities, and finding out if their debts are in their own or foreign currencies and who is funding them and why). Because these are all long-term drivers, it is also pretty easy to see which countries and currencies are vulnerable. But anticipating exactly when the big fall will happen is difficult.

**The debt burden gauge shown next is based on a combination of a) debt levels relative to asset levels, b) the sizes of external and internal surpluses and deficits, c) the sizes of debt service costs relative to GDP, d) the amount of debt in a country's own currency versus foreign currency, e) the amount of debt held by its own citizens versus foreigners, and f) its credit rating.** I composed it this way because this way has proven to be the most reliable way we have of foreshadowing declines in the real value of money and the debt assets that are promises to receive money, whether they come in the

form of debt defaults that result from not creating enough money and credit to satisfy excessive debt needs or devaluations that come from creating more than enough money and credit to satisfy excessive debt needs. I constructed this index to exclude reserve currency status so that I can see the exposure a country would have if it lost its reserve currency status. Reserve currency status is shown in the chart that follows.

Together these charts paint a pretty clear picture. For example, while the **US's debt burdens are high, its debt is denominated in dollars, the world's leading reserve currency, so it has the ability to print money to service its debts. This reduces its risk of default but increases its devaluation risk. As you can see, if the US lost its reserve currency status, it would be in serious financial trouble.** Russia and Germany rank strongest on the debt burden gauge because they are the least indebted. Russia has no reserve currency status, and Germany has a fair amount because it uses the euro, now the second most important reserve currency. China is in the middle of the rankings on the debt burden gauge because its debts are moderately high, mostly in its own currency, and mostly held by the Chinese. Its reserve currency status is emerging.

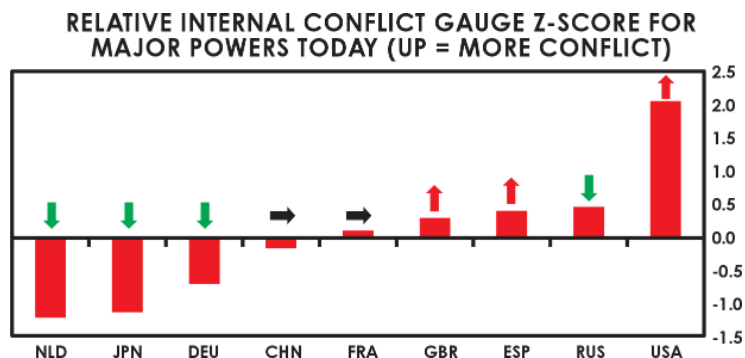


## THE INTERNAL ORDER AND DISORDER CYCLE

Luo Guanzhong's classic book *Romance of the Three Kingdoms* begins: ***“The empire long divided must unite and long united must divide. Thus it has ever been.”*** That has been true of China and most other places, and it is likely to continue, so it's a good principle. I explained the big cycle of internal order and disorder in Chapter 5, so I won't reiterate it here other than to remind you of a key principle: ● **peace is profitable and war is costly.**

That holds both within countries and between them. When parties cooperate and compete well, and don't waste resources on fighting, productivity and living standards rise. When they fight, they waste resources (sometimes including lives), they destroy more than they produce, and living standards fall. It is for this reason that the degree of conflict within a country is such an important indicator.

**As of this writing there are varying amounts of conflict going on within different countries, as shown in the next chart. Internal conflict is especially high in the United States, which appears to be in Stage 5 of the cycle (when there are bad financial conditions and intense conflict), while China appears to be in Stage 3 (when there is peace and prosperity). Changes to this measure can happen quickly—e.g., the changes that produced the Arab Spring, the conflicts in Hong Kong, internal wars in Syria and Afghanistan, recent big protests in Peru and Chile, etc.—leading to revolutionary changes in their internal orders. Because I expect that these readings will be out of date by the time this book is in your hands, I will update them regularly at [economicprinciples.org](http://economicprinciples.org).**



At the end of the day, ● **power rules and tests of power are the ways one learns who rules.** Sometimes that happens within a framework of rules that are respected. In those cases, fights for power occur in a mutually agreed-upon and productive way that supports the internal order. But they can also happen in unproductive, no-holds-barred ways that can lead to the violent disruption of both the leadership and the internal order. **While I think that the odds of the US devolving into a Stage 6 (civil-war-type) dynamic within the next 10 years are only around 30 percent, that is a dangerously high risk that must be protected against and watched closely via my coincident and leading indicators.**

All internal orders, even those that are not democratic, have rules about how decisions are made and how power is gained and shared. Because one can usually see how well these governance rules are respected or ignored, it is pretty easy to see when an internal order is being threatened by an emerging civil war. For example, when close elections are adjudicated and the losers respect the decisions, it is clear that the order is respected. When power is fought over and grabbed, that clearly signals the significant risk of a revolutionary change with all its attendant disorder.

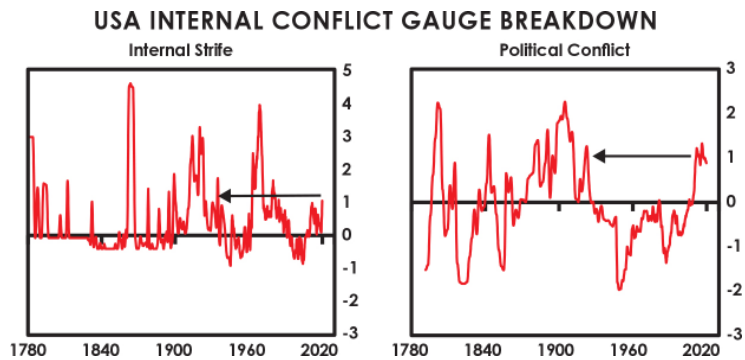
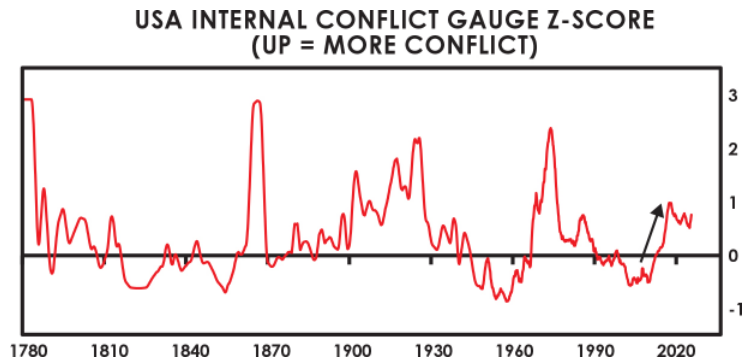
There have been signs of that happening in the US, with some people contesting the validity of elections and expressing a willingness to fight for their aims. This bears watching.

**There is also an exceptional amount of polarization in the US right now, as reflected in the stats.** Survey data about the sentiments of the voters paints a picture of polarization and intransigence. For example, in a 2019 Pew survey 55 percent of Republicans and 47 percent of Democrats viewed the other as more immoral than other Americans, and 61 percent of Republicans and 54 percent of Democrats said that those of the other party don't share their values. When asked whether they had warm or cold feelings to those of the other party, 79 percent of Democrats and 83 percent of Republicans said they had "cold" or "very cold" feelings for members of the other party (of that, 57 percent of Democrats and 60 percent of Republicans selected "very cold"). Another study reported that 80 percent of Democrats think that the Republican Party has been taken over by racists and 82 percent of Republicans think that the Democratic

Party has been taken over by socialists. A 2010 study showed that nearly half of Republican parents and a third of Democratic parents would be displeased if their child married someone from the other political party. That compares with about 5 percent for both parties in 1960. One recent survey showed that 15 percent of Republicans and 20 percent of Democrats thought the country would be better off if large numbers of the other side “just died.”

Very important and very telling political conflicts and changes lie ahead in the next few years. They will be indicative of what the next stage in the increasingly disorderly internal orders will be like in the major countries, especially in the US. **While the United States looks like it is in the precarious Stage 5 of the cycle, it also has the longest-lasting and most widely admired internal order (its constitutional system).** As explained in Chapter 5, this makes it less likely that it will be abandoned, but more traumatic if it is. The most reliable signs of an escalation to civil war are 1) the rules being disregarded, 2) both sides emotionally attacking each other, and 3) blood being spilled. While Stage 6 is the most dysfunctional and harmful stage, increasing amounts of dysfunction happen in the stages leading up to it. These sorts of conflicts can exist throughout society, not just in government.

Shown next is how the conflict gauge has changed for the US since the late 1700s, including the breakdowns between the two sub-gauges. What these charts reflect is that the **overall level of conflict within the United States is now as high as it's been since the civil rights and Vietnam War protests of the late 1960s, but meaningfully less than it was then. The “internal strife” index (which mostly reflects demonstrations in the streets) is moderately high, and the “political conflict” index is the highest it's been since the early 1920s,** when a deep post-war recession and massive labor unrest<sup>6</sup> contributed to big electoral losses for the Democrats.



Note that the comparable periods before then were the 1900s–1910s (which saw a backlash against the “robber barons,” the rise of the Progressive movement, and eventually World War I), and the 1860s, when economic and values conflicts led to civil war. **The risks are high, but not unprecedentedly so.** Still, the picture should be scary for Americans and scary for the world because the world’s leading power is on the brink and could tip one way or the other. Fractured conditions within the US are now contributing to instability in other parts of the world. Any worsening would be at least as disruptive as those past periods.

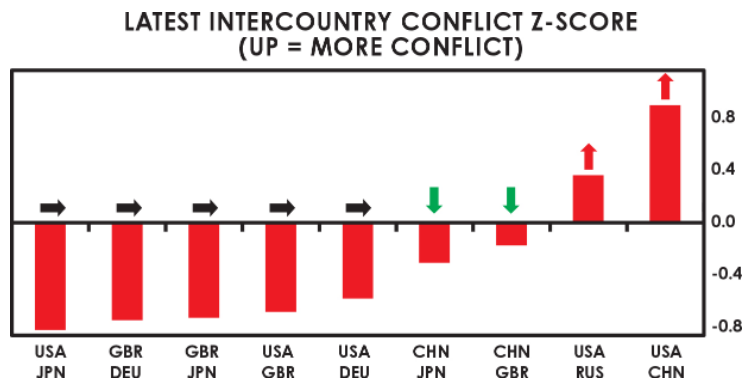
So what does this all mean for the US? As I explained in Chapter 11, our measures suggest that it is very roughly 70 percent through its big cycle. Can it slow or reverse its relative decline? **History shows us that reversing a decline is very difficult because it requires undoing so many things that have already been done. For example, if one’s spending is greater than one’s earnings and one’s liabilities are greater than one’s assets, those circumstances can only be reversed by working harder or consuming less. The question is whether we Americans can face our challenges honestly**

**and adapt and change to meet them.** For example, while the capitalist profit-making system allocates resources relatively efficiently, Americans now need to ask themselves: “Who is it optimizing these efficiencies for?” “What should be done if the benefits are not broad-based?” “Will we modify capitalism so that it both increases the size of the pie (by increasing productivity) and divides it well?” These questions are especially important to answer in an era when, thanks to new technologies, employing people will increasingly become unprofitable, inefficient, and uncompetitive. “Should we, or should we not, invest in people to make them productive, even when it’s uneconomic to do so?” “What if our international competitors choose robots over people?” These and so many more important, difficult questions come to mind. **But while we can’t know for certain whether the splits and conflicts in the US will increase or reverse, we do know that the long-term momentum is toward increasing division and this is a serious risk. The fact that the US is simultaneously deeply indebted, its international standing is weakening, and it is experiencing serious conflict should be concerning both to Americans and to non-Americans who depend on them.** At the same time, in its 245-year history the US has shown a great capacity to bend without breaking. The greatest challenges it faces are internal ones: **can it remain strong and united, or will it continue to allow division and internal struggles to lead to decline?**

## **THE EXTERNAL ORDER AND DISORDER CYCLE**

● ***All empires decline and new ones rise to replace them.*** Understanding when that change might happen requires watching all of the indicators and tracking the relative conditions of countries. Remember from earlier in the book that there are five major types of wars that have existed throughout history: 1) trade/economic wars, 2) technology wars, 3) capital wars, 4) geopolitical wars, and 5) military wars. The external conflict gauge shown here measures the levels of economic, political/cultural, and military conflict between pairs of major countries. As shown, the greatest conflict is between the US and China, the two

greatest powers in the world that have comparable amounts of power—more than enough to make a war between them the most devastating in history.



**The amount of this conflict is 1 standard deviation above normal, which is pretty severe in relation to past conflicts between countries.**

**This next chart shows my index of conflict just between the US and China since 1970.**



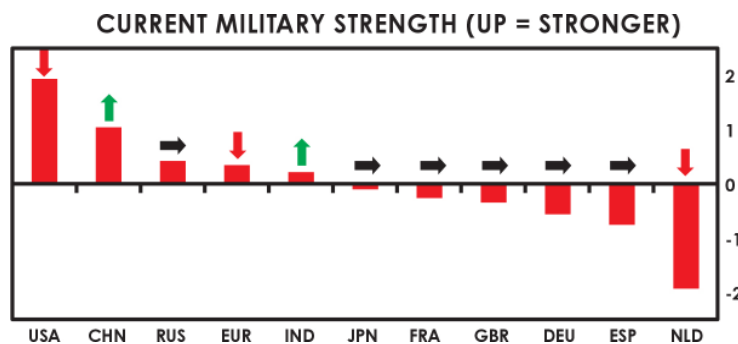
Based on what we have been seeing, the United States and China are clearly in four types of war (trade/economic war, technology war, capital war, and geopolitical war), though not intensely but they are intensifying. They are not yet in the fifth type of war (military war). As shown in the previous cases, in particular the 1930–1945 case, these four types of wars precede military wars by about five to 10 years. Though the risks of military war seem relatively low, they are increasing.

Looking back over the last 500 years, one can see that military wars between major empires started on average about once every 10 years, give or take a couple



of years, and it has been about 75 years since the last really big one (World War II). Since 1500, major powers have been at war a little bit more than half the time.<sup>7</sup> From that perspective, the odds of a big military war in the next 10 years are about 50/50, but of course that's simple minded. Let's look at the picture a bit more carefully.

The following chart shows the current individual readings of my military strength gauge. While overall these readings make sense—the US is the most powerful by most measures, China is the next most powerful, Russia comes next, etc.—they don't capture the important realities beneath these summary numbers. For example, they don't show that some countries are as powerful as or more powerful than the United States in specific geographic areas (e.g., right around China) and in some types of warfare (e.g., space, cyber, etc.) Also, they don't consider the effects of military cooperation and alliances (e.g., China and Russia), and they can't account for what unknown military abilities countries may have. For me, the big headline is that there are lots of ways these countries can hurt or destroy each other in the most contested geographic areas.



History shows that wars are terribly costly in lives and money, and the capacity to inflict harm has advanced exponentially since nuclear weapons were developed and used in World War II. I am unable to imagine what the next military war would look like. I have also seen that those who are most informed on both sides are not fully informed because a lot is unknown and because military wars always transpire in unexpected ways. For those reasons, **it is**

**impossible to confidently say who the winners and losers in the next big war would be.** We also know from logic and from studying history that the losers of really big wars are completely wiped out and the winners lose too, as they suffer severe consequences and end up with big debts. What that means for economies and markets was explained earlier in the book, but in a word, it is devastating.

Students of history know that the doctrine of mutually assured destruction prevented the US and the USSR from entering a hot war before the Soviet Empire fell, mostly due to the failure to grow its other strengths in the face of big military spending. China is roughly comparable in power to the United States in the most important ways, and it is on its way to becoming more powerful in many ways. China won't be as easy to defeat in any of the five types of war as the USSR was, and the USSR wasn't easy to defeat. That means the wars are likely to intensify and increasingly favor China, especially if the US doesn't turn around the other fundamental underpinnings of strength that are highlighted in this chapter. However, it seems like it will be a long time before China can win a war without having the war lead to its own destruction as well.

So, in summary, my computer and I working together now believe that **because for the foreseeable future China and the US will be powerful enough to inflict unacceptable harm on each other the prospect of mutually assured destruction should prevent military war, though there almost certainly will be dangerous skirmishes. I expect this to be true unless some unexpected technological breakthrough, like dramatic advances in quantum computing, gives one of these powers such an asymmetrical advantage that mutually assured destruction would cease to exist.** Also, though of less importance, an impediment to fighting is the interlinked well-being of Americans and the Chinese in this highly interconnected world.

**However, as time passes the risks increase. If the US continues to decline and China continues to rise, what matters most is whether or not each can do so gracefully. The big risk is that when existential irreconcilable differences exist and there is no mutually agreed-upon party or process to adjudicate the conflict, there is a good chance that**

**there will be a fight.** As explained in the last chapter, **the main seemingly irreconcilable difference between the US and China is over Taiwan, so I am watching developments there very closely.** Taiwan is a one-of-a-kind interest that China would fight for because of its belief that “there is but one China and Taiwan is part of China.” It is doubtful that the US would consider it worth a major fight to defend, though it might. This seems to me to be the only possible trigger for a military war between the two greatest powers in the next 10 years.

The next locations to pay attention to are the areas immediately around China, like those countries surrounding the East and South China Seas, and other neighbors such as India, Russia, South Korea, North Korea, Japan, Afghanistan, Pakistan, etc. Considering what China’s culture is like and what’s most beneficial for China, I believe it will work to influence those countries through an exchange of benefits but won’t fight to control them outright.

**While the most important conflicts are between the United States and China, there are other important players operating in this classic drama of the balance of power and the prisoner’s dilemma.** It is important to watch the actions of China’s and the United States’ allies and friends. As previously discussed, the alignments are gradually changing, with China gaining allies and the United States losing them. Overextended and less willing to lose lives fighting for others, the US is now in the position of trying to cat herd its allies without catnip. In the past, the US merely needed to hint at what it wanted other countries to do for them to do it. Now they go their own ways.

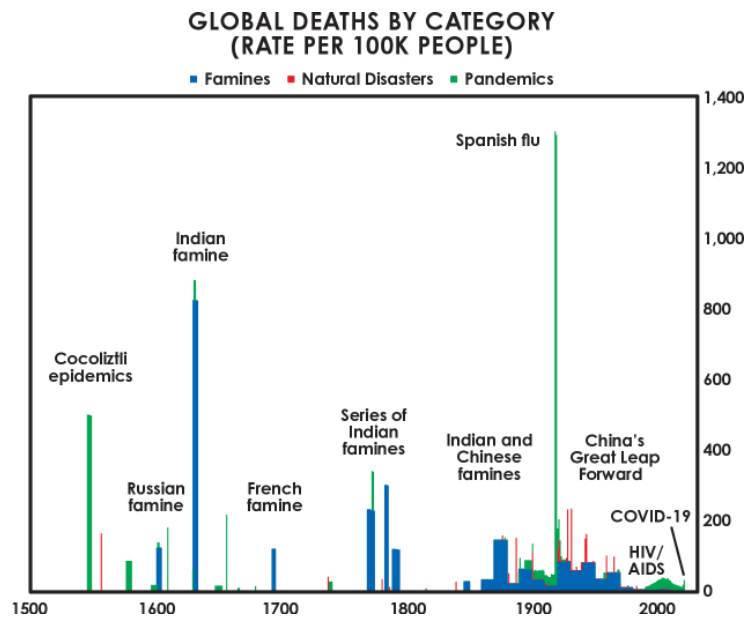
In the end, which country wins the game of obtaining the most wealth and power depends most on their internal capacities, which is why I monitor those factors in my indices as I do for military strength. As the Chinese know very well (and it would be good for others to keep in mind), ● **the best way to fight a war is to get strong and show one’s opponent one’s strength so they don’t want to fight violently.** This will most likely be the dynamic that we see in the years ahead.

All of this is to say that **I think the odds favor intensifying trade/economic wars, technology wars, capital wars, and geopolitical wars as China becomes even more competitive and increasingly goes global in these areas.** As Graham Allison explained in his excellent book, *Destined for*

*War*, in the past 500 years, when two nearly equal powers experienced irreconcilable differences, there were military wars in 12 out of 16 cases, and big military buildups were associated with major wars in 80–90 percent of cases.<sup>8</sup> I balance those historical insights with the logic of mutually assured destruction, which lowers the odds of war. On net, I would conclude that the probability of a big war in the next 10 years is 35 percent, give or take, which is essentially a wild guess. In any case, it's a dangerously high risk.

## ACTS OF NATURE

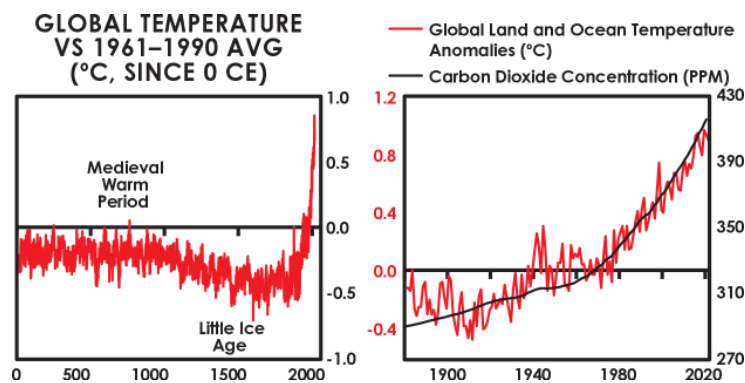
Throughout history, droughts, floods, pandemics, and other severe natural and biological disasters have inflicted more harm on people than people have inflicted on themselves, killing millions, disrupting economies, and contributing to the falls of many empires and dynasties. This chart shows some of the major events.



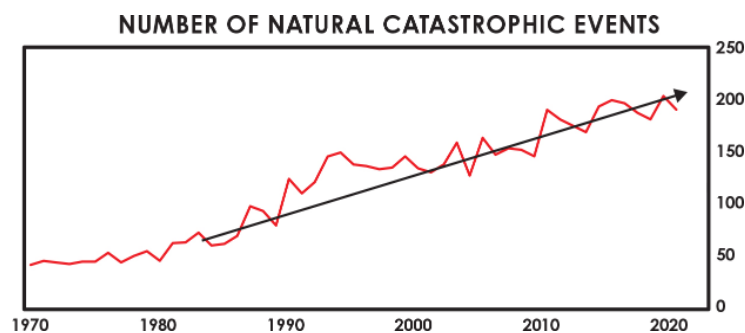
While we all know about climate change, no one knows precisely how much damage and how many deaths it will ultimately cause. But based on expert projections, there is reason to believe that all of these kinds of disasters will be

bigger in the years ahead than they were before. While I'm no expert on the subject myself, I can show you some interesting stats and pass along what I've learned.

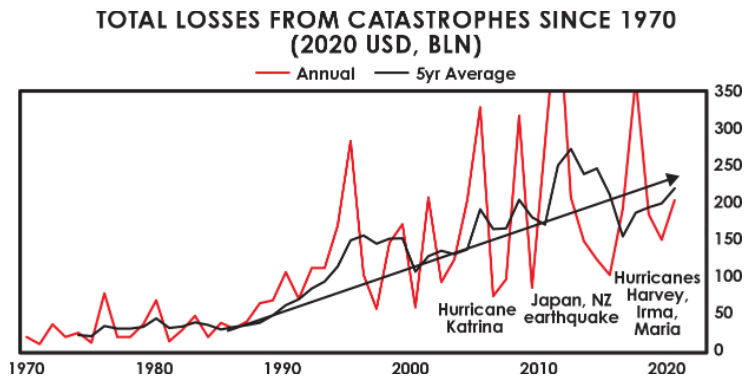
**The next chart on the right shows the world's average temperature and the amount of CO2, indicating global warming. There is little doubt this is happening, will pick up, and will have big and costly effects. What is notable is this is increasing at a faster rate. The chart on the left shows the very long-term perspective on temperature (since 0 CE).**



**This chart captures extreme environmental events. The headline is that from 1970 to 2020 they increased from fewer than 50 per year to nearly 200 per year and are trending higher.**

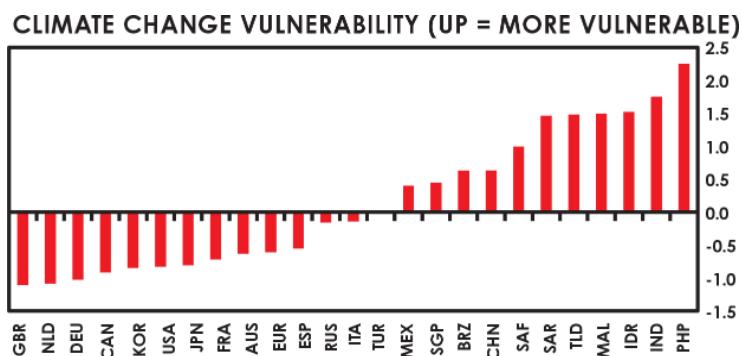


The next chart shows the estimated dollar cost of these events (adjusted for inflation). As shown, this is also trending higher, with extreme spikes.



**It is pretty clear to me that humanity and natural evolution together are doing great damage to the environment that will be very costly in both money and quality of life.** This will affect countries very differently, in ways that we can broadly anticipate based on their locations, climates, and—most importantly—industries. At the same time, this is a slow, steady, and well-telegraphed change, which lends itself to the kind of adaptation and innovation humanity is uniquely able to do, though often too slowly and only in response to pain. I am inclined to believe that slowly and reactively is how it will happen. Having said that, I don't know enough about the subject to know what it means for every country and locality.

**The next chart shows an index of climate change vulnerability across major countries based on an equal average of the Notre Dame-Global Adaptation Index (ND-GAIN) Country Index, which quantifies a country's vulnerability to climate change, and academic estimates of the future impact of climate change on GDP by country.**



## IN SUMMARY

Based on just these five indicators, it appears to me that:

- **Humanity's inventiveness will probably lead to great advances while the debt/economic cycle, the internal order cycle, the external order cycle, and worsening acts of nature will almost certainly pose problems. In other words, *there will be a battle between humanity's inventiveness and these other challenges.***
- **Very different conditions exist within and between countries, which will determine which countries will rise and decline and in what ways.**

All of this reflects my thinking about the future of the world's 11 major countries based on just five of the 18 determinants. Now let's look at all 18 indicators to see what they tell us.

## ALL THE MAJOR DETERMINANTS ACROSS THE WORLD

The following table paints a much richer picture of what's happening and what is likely to happen across the 11 major countries. While I have many of these readings for the top 20 countries, I don't have the space to show them here; you can find the complete set at [economicprinciples.org](http://economicprinciples.org). While this table might look like a bunch of numbers and arrows at first glance, when you get into it a clearer picture will emerge.

But first, **here's how to read the table and how these gauges work. The first column shows the determinant being measured. The second rates the quality of the gauge.** It is provided because for some of these important determinants we have good, clear measurements (e.g., for education, innovation and technology, cost competitiveness, productivity and output growth) and for some we don't (e.g., acts of nature), and I want to show which is which. Additionally, there are other determinants that aren't shown because they are

either too subjective or too difficult to quantify (e.g., leadership). The quality of leadership can't be measured as objectively as the amount of economic output (e.g., how can you measure whether Donald Trump was a good leader or a bad one?). Each is an aggregate of many indicators that I combined in the way that I felt best captured that particular determinant, giving consideration to both quantity and quality. For example, a country with a large population like China, India, and the United States when compared to a country with a small population like Singapore, the Netherlands, and Switzerland might have more of something but of lesser quality. I tried to structure these weightings so that I could imagine who would win if they had a competition like the Olympics or a war.

### CURRENT READINGS ACROSS MAJOR POWERS (Z-Score and 20-Year Change Denoted by Arrows)

	Gauge Quality	USA	CHN	EUR	DEU
EMPIRE SCORE (0–1)		0.87	0.75	0.55	0.37
Debt Burden (Big Economic Cycle)	Good	-1.8	0.3	-0.3	1.6
Expected Growth (Big Economic Cycle)	Good	-0.7	0.4	-1.0	-1.0
Internal Conflict (Internal Order; low is bad)	Good	-2.0	0.2	0.4	0.7
Education	Good	2.0	1.6	0.3	-0.2
Innovation & Technology	Good	2.0	1.5	0.4	-0.1
Cost Competitiveness	Good	-0.4	1.2	-0.6	-0.6
Military Strength	Good	1.9	1.0	0.3	-0.6
Trade	Good	1.1	1.8	1.3	0.6
Economic Output	Good	1.7	1.8	0.6	-0.1
Markets & Financial Center	Good	2.6	0.5	0.4	-0.2
Reserve Currency Status (0–1)	Good	0.55	0.04	0.23	
Geology	Good	1.4	0.9	-0.4	-0.7
Resource-Allocation Efficiency	OK	1.3	0.0	-0.8	0.6



Acts of Nature	OK	-0.2		-0.1		0.0		1.1	
Infrastructure & Investment	Good	0.7	▲	2.7	▲	0.2	▲	-0.3	▶
Character/Civility/Determination	OK	1.1	▶	1.5	▶	-1.0	▶	-0.5	▶
Governance/Rule of Law	Good	0.7	▼	-0.7	▼	-0.4		0.7	▶
Gaps in Wealth, Opportunity & Values	OK	-1.6	▲	-0.4	▶	0.3	▲	0.7	▶

Scanning the table, you can quickly get a picture of each country's circumstances and the overall state of the world. For example, by looking at the empire scores and the arrows next to them you can see that the United States is the most powerful country but declining and China is close behind and rising quickly. You can see in what ways the United States is exceptionally strong—i.e., its reserve currency status, military strength, economic output, innovation and technology, and education—and you can see in what ways it is weak—i.e., its internal conflicts, wealth gaps, indebtedness, and expected economic growth.

You can also see that China is close behind the US in most other key areas and that it is relatively strong in its infrastructure and investment, innovation and technology, education, cost competitiveness, economic output, trade, military strength, and trade/capital flows, and relatively weak because of its reserve currency status, rule of law/corruption, and wealth gaps. I find this data invaluable. It's crucial to watch for changes in it when thinking about what's happening and what is likely to happen.

	Gauge Quality	JPN		IND		GBR		FRA	
EMPIRE SCORE (0–1)		0.30	▼	0.27	▼	0.27	▶	0.25	▶
Debt Burden (Big Economic Cycle)	Good	-0.4	▶	0.1	▼	-1.6	▼	-0.8	▼
Expected Growth (Big Economic Cycle)	Good	-1.1	▶	1.1	▼	-0.8	▲	-0.9	▶
Internal Conflict (Internal Order; low is bad)	Good	1.1	▲			-0.3	▼	-0.1	▶
Education	Good	0.2	▶	-1.2	▶	-0.2	▲	-0.5	▶

Innovation & Technology	Good	0.2	▲	-1.2	▼	-0.3	▶	-0.5	▲
Cost Competitiveness	Good	-0.3	▶	2.4	▼	-0.3	▶	-0.6	▶
Military Strength	Good	-0.1	▶	0.2	▲	-0.3	▶	-0.3	▶
Trade	Good	-0.5	▼	-0.8	▼	-0.6	▶	-0.5	▶
Economic Output	Good	-0.3	▼	-0.2	▶	-0.3	▶	-0.5	▼
Markets & Financial Center	Good	0.1	▲	-0.8	▶	0.0	▲	-0.3	▶
Reserve Currency Status (0–1)	Good	0.07	▲	0.0		0.07	▶		
Geology	Good	-1.1	▶	0.3	▶	-0.9	▶	-0.5	▶
Resource-Allocation Efficiency	OK	0.1	▲	0.2		0.3	▶	-1.3	▼
Acts of Nature	OK	1.5		-2.4		0.4		0.0	
Infrastructure & Investment	Good	-0.2	▼	-0.3	▲	-0.6	▲	-0.2	▼
Character/Civility/Determination	OK	0.5	▲	1.3	▶	-0.4	▲	-1.5	▶
Governance/Rule of Law	Good	0.8	▶	-1.1	▼	1.2	▶	0.3	▶
Gaps in Wealth, Opportunity & Values	OK	0.9	▲	-1.8	▶	-0.2	▼	1.1	▼

	Gauge Quality	NLD		RUS		ESP	
EMPIRE SCORE (0–1)		0.25	▶	0.23	▶	0.20	▶
Debt Burden (Big Economic Cycle)	Good	0.8	▲	1.0	▲	-1.7	▼
Expected Growth (Big Economic Cycle)	Good	-0.8		-0.2		-1.1	▲
Internal Conflict (Internal Order; low is bad)	Good	1.2	▼	-0.5	▲	-0.4	▲
Education	Good	-0.7	▶	-0.5	▶	-0.9	▶
Innovation & Technology	Good	-0.3	▶	-0.7	▶	-1.0	▼
Cost Competitiveness	Good	-0.8	▶	0.7		-0.6	▶
Military Strength	Good	-1.9	▲	0.4	▶	-0.8	▶
Trade	Good	-0.6	▶	-0.9	▶	-0.9	▶
Economic Output	Good	-0.3	▶	-1.4	▶	-0.9	▼
Markets & Financial Center	Good	-0.5	▶	-1.1	▶	-0.6	▶
Reserve Currency Status (0–1)	Good			0.0			

Geology	Good	-0.5	▶	1.9	▶	-0.6	▶
Resource-Allocation Efficiency	OK	-0.1	▼	1.3		-1.6	▲
Acts of Nature	OK	0.5		-0.1		-0.7	
Infrastructure & Investment	Good	-0.4	▶	-1.0	▼	-0.6	▼
Character/Civility/Determination	OK	-0.3	▼	0.1		-1.0	▶
Governance/Rule of Law	Good	1.0	▶	-1.9	▶	-0.7	▲
Gaps in Wealth, Opportunity & Values	OK	0.6	▲			0.4	▼

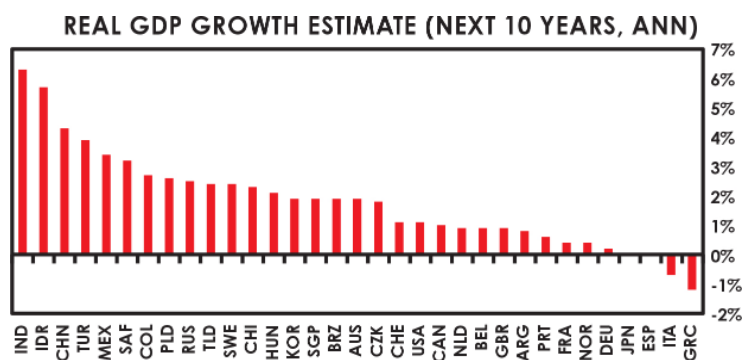
For example, as shown before, **when 1) a country's finances are deteriorating at the same time as 2) the level of internal conflict is high (e.g., over wealth and/or values differences), while 3) the country is being challenged by one or more strong foreign rivals, that typically produces 4) a mutually and self-reinforcing decline. That's because the country's deteriorating finances make it impossible for it to satisfy domestic spending needs and finance the war, which causes worse outcomes.**

Now that these things are quantified, we can see them happening in the table and make projections. The greater the number of important determinants that are worsening and the more severely they are worsening, the surer and more severe the decline will be. For example, if a few other determinants are weak and weakening at the same time that others are faltering, the expected severity of the decline increases. Because I, with the help of my computer, can monitor such things, I can assess a country's relative health, vulnerabilities, and future prospects. For example, many of the most worrying conditions now exist in the United States, even though the United States is still the most powerful country in the world. That merits close attention.

As conveyed in some earlier charts, we saw that **1) these determinants tend to reinforce each other, whether in strength (e.g., stronger education tends to create stronger incomes) or weakness (e.g., weakening trade leads to higher indebtedness), so they tend to transpire in cycles that come together to create the Big Cycle, and 2) when the determinants are weak and weakening, the empires are weak and weakening.<sup>9</sup> Big swings**

up occur when lots of determinants are strengthening and big swings down occur when lots of determinants are weakening.

Our computers use this data to generate written reports, which are available to read at [economicprinciples.org](http://economicprinciples.org). They project real GDP growth rates for the next 10 years, along with the gauge readings for each factor that leads to those estimates. The data, and hence the projections, is more reliable for some countries than others, which is conveyed in the readouts. Still, they do a good job of reflecting the current health of a country and serve as leading indicators of their future health. Based on backtesting, these estimates would have predicted a country's average growth rate over the next decade within 1 percent of the actual growth 59 percent of the time, and within 2 percent about 90 percent of the time, with a correlation to subsequent growth of 81 percent. I have found them to be invaluable.



While these are good and useful indicators, they have to work hand in hand with my thinking. Consider the question, “What is the mix of powers that makes a country powerful?” While the total power index at the top of the current readings tables is intended to indicate that and is arrived at via a weighted average of the indices below it, the truth is that the type of power that is most important to have at any one time varies according to circumstances. For example, military power is expensive and it typically sits around doing nothing until it is the most important power to have. How do I properly weight that against economic output that consists of mostly nonessentials? The answer is not well. I don't have it modeled well, but I think about it a lot and apply my experience and intuition to it. In time I will have it modeled better, but I know

that I will always need to have what is in my head work with what's in the computer, as the computer and I need each other to be at our best.

## THE NEXT 10 YEARS

**While this book is about the really big cycles, I'd like to focus now on the dynamics within these cycles that will be most important over the next 10 years.** As I've explained, there are cycles within cycles within cycles, with the little ones adding up to the bigger ones, plus there are non-cyclical bumps that all together determine what happens. **Over the next 10 years, the most important dynamics are the short-term debt/money/economy cycle (also called the business cycle), the internal political cycle, and the escalating conflicts/reducing interdependencies between the US and China.** I find that keeping these cycles in mind, thinking about how they affect each other, and assessing where things stand within them are helpful for timing my decisions.

As discussed in Chapter 4, the short-term debt/money/economic cycle consists of alternating periods of central banks stimulating the economy by creating money and credit and then attempting to slowing it down by reducing the flow of them. They never get this precisely right, which is what produces the excesses that lead to bubbles, busts, and the cycle beginning again. Sometimes other negative events happen around the same time as a downturn—September 11, 2001 was such a case.

This cycle typically takes about eight years, give or take a few, though the timing is less the result of how long it's been since the last one and more the result of the underlying economic drivers themselves. Most importantly, the amount of slack in the economy, the amounts and types of financial bubbles, the amount of central bank tightening, and the markets' and economies' sensitivity to tightening all matter. The last cycle began in April 2020 with largest dose of fiscal and monetary stimulation ever. The one before that began in 2008, which was also a giant dose though much less big. The ones before that began in 2001, 1990, 1982, 1980, 1974, 1970, 1960, etc. With the amounts of stimulation

injected into this recent downturn being so enormous (especially in the US), with the slack in the major economies being relatively limited (especially in the US), with the signs of bubbles now being moderate to strong, and with the interest rate sensitivity of markets and the economy being high, my guess is that the next downturn will come sooner than is typical. I'd estimate in about four years from the publication of this book, give or take a couple of years (which is about five-and-a-half years from the bottom).

Don't bet on what I just said happening because that configuration is not precise. I will need to monitor the factors I just mentioned, especially the rate of rebound in inflation and how quick and strong central bank tightening will be in order to home in on the precise timing. Also, I would expect any downturn to be promptly followed by a quick reversal of central bank policies toward the next big round of stimulation. That makes me less worried about the impact of the downturn and more worried about the excess money printing and the loss of value of money (particularly cash and debt in dollars, euros, and yen). Of course what happens in this economic cycle will be affected by what happens with the other cycles and the bumps along the way, just as this cycle will affect the other cycles.

As far as the internal order/disorder cycle is concerned, it typically lags the debt/economic cycle because people are less confrontational in good times than in bad ones. When these cycles interact strongly, it can lead to major changes. In the US the short-term political cycles of change come every two years with congressional elections and every four years with presidential elections, with an eight-year limit on the total presidential term. In China the changes come every five and 10 years with the next big one happening around the time of this book's publication (November 2021). There is no limit on the presidential term. While we can look at the calendars and know something about what's ahead, there will be lots of uncertainties, some of which can be really impactful. Based on my estimates, there is a significant chance the next downturn will come around the time of the next presidential election in the US.

The external order/disorder cycle has traditionally followed the path of accelerating conflicts that lead to wars. As mentioned earlier, the United States and China are now preparing themselves for increasing intensity in the five types

of war. They are operating with roughly five-year plans to gain greater amounts of self-sufficiency and preparedness for each of these wars, which will give them greater ability to wage them, though it's doubtful that either will become dominant enough to ignore the deterrent of mutually assured destruction. Since China's strength is gaining relative to that of the US, it would seem to imply that important changes will come neither too soon nor too far ahead. As mentioned earlier, there is significant risk that we are approaching a conflict between an unstoppable force and an immovable object regarding Taiwan and the East and South China Seas—i.e., China is an unstoppable force for change to Taiwan's current status and the United States is an immovable object against it. Beyond the US and China, other nations—most notably Russia, India, Japan, Korea, and the key European and Middle Eastern powers—will play important roles in this global drama. Over the next five years or so, alliances are likely to harden.

**These things point toward the next big risk point being around five years from this writing, give or take a couple of years.**

**To reiterate, there is nothing precise about the timing of these cycles.** They're like hurricane/typhoon seasons; we know they are likely to happen at roughly certain times so we prepare for them, and when those times come, we watch for storms emerging, follow them closely, and do our best to get out of harm's way. While we can't say exactly when they will come and exactly how strong they will be, we do know that the trend and the fundamentals have been for them to get stronger, so we should be prepared for that possibility.

Despite all the analytical work I do, I know that the unknown is still much greater than the known. While history can be told pretty precisely, the future is exactly the opposite. I am not aware of a single case of the future being foretold accurately in any detail. For an investor, understanding history accurately is of no use relative to being a bit more right than wrong about the future. Since non-investors place bets in the form of their life decisions, that's true for them too. That brings me to the final point of this chapter, which is about knowing how to place one's bets based on the assumption that one is likely to be wrong a lot.

## DEALING WITH WHAT YOU KNOW AND WHAT YOU DON'T KNOW

Whatever success I've had has been more due to my knowing how to deal with what I don't know than anything I know. Betting on the future is betting on probabilities and nothing is certain, not even the probabilities. That's just the way it is. While what I've given you up until this point is what I believe I know about the future based on my reasoning about the past, what I want to pass along that is probably more important is how I make decisions in life and in the markets based on what I don't know. In a nutshell, here's what I try to do:

- **Know all the possibilities, think about the worst-case scenarios, and then find ways to eliminate the intolerable ones.** Identifying and eliminating the intolerable worst-case scenarios comes first. That's because the most important thing in playing the game (of life or the markets) is to not get knocked out of it. I learned that from a big mistake I made in 1982, which nearly broke me. After that painful loss I calculated what my basic needs would cost and worked toward having enough money stashed away so my worst-case scenario would be tolerable. As I built up from nothing, I remember regularly calculating how many weeks, then months, and then years my family and I would be fine if not another dime came in. I now have an "end of the world" portfolio that I know will keep us fine in the worst-case scenarios, and I build from there. From reading this book, you can probably see that I imagine a lot of worst-case scenarios, including depressions, devaluations, revolutions, wars, pandemics, my big mistakes, health problems, and death from different causes. I start by trying to protect myself against all of them and more. While you might think that my paying so much attention to eliminating worst-case scenarios is depressing and prevents me from making the most of opportunities, the opposite is true. It's liberating and exciting to operate this way because knowing that the worst-case scenarios are covered gives me the safety, freedom, and ability to go for great results.

- **Diversify.** In addition to making sure I've covered all the worst-case scenarios I can think of, I try to cover those I can't think of by diversifying well. I learned the math of it and I'm drawn to it instinctively. Essentially, if I have a bunch of bets that are attractive but unrelated, I can reduce my risks by up to 80 percent



without reducing my upside at all. While this sounds like an investment strategy it's actually an old and well-established good life strategy that I apply to investments as well. There is a Chinese saying that "a smart rabbit has three burrows," meaning three places to go to in case any one of them becomes dangerous. This principle has saved many people's lives when things got bad, and it's one of my most important principles.

- ***Put deferred gratification ahead of immediate gratification so you will be better off in the future.***

- ***Triangulate among the smartest people possible.*** I tag along with the smartest people I can find, so I can stress test my thinking and learn from them.

It is through these principles that I got so much upside with relatively little downside and a steadily improving future, albeit with bumps along the way. That's why I recommend these principles to you, though as always, you should feel free to take them or leave them as you like.

One more thing for policy makers, those they report to, and others who are interested:

Use the gauges I gave you, or take the stats and make your own, to 1) measure the health of your country and other countries you're interested in, 2) see if it is improving or worsening and in what ways, and 3) make changes in the determinants of the future to get a better future.

That's it.

I now feel that doing all this has given me an adequate understanding of the possibilities, both worst-case scenarios and opportunities, and a time-tested plan for dealing with them well. I also believe that I have adequately conveyed to you in this book and on [economicprinciples.org](http://economicprinciples.org) the most important things I know about how the lessons of the past can help you deal with the future. I hope you find them to be of some use. I plan to evolve all of this to make it better, which I hope we can do together.

May the Force of Evolution be with you,

Ray

## MORE DETAIL ON EACH OF THE GAUGES

- **Education:** This gauge measures basic and higher education, split about evenly between the two. Half of the measure captures the absolute quantity of educated people at various levels and about half is placed on quality such as higher education rankings, test scores, and average years of education. The US ranks highest in this gauge (driven by strong absolute and relative measures of higher education), with China close behind (due to its large number of educated people).
- **Innovation & Technology:** This gauge measures inventiveness, technological advancement, and entrepreneurship. It gives about half its weight to the country's absolute share of key innovation metrics (e.g., patents, researchers, R&D spending, and venture capital funding) and half to a combination of external rankings and measures of innovation per capita (to help capture how widespread innovation is in the economy). The US is at the top of this measure due to its strength across a variety of metrics, while China ranks second due to its large share of global research spending, researchers, and patents. China is rising quickly in this area.
- **Cost Competitiveness:** This gauge measures what one gets for what one pays. We want to see this because countries that produce the best at costs that are too expensive aren't in good shape, even though they rank high in quality. We look at quality-adjusted and productivity-adjusted labor costs, along with other productivity measures. Major developing economies (particularly India) rank highest in this gauge, while the US ranks around the middle of the pack and European countries rank lowest (due to high labor costs).
- **Infrastructure & Investment:** This gauge measures the quantity of infrastructure and investment spending and the quality of it. It captures a country's absolute share of global investment, as well as the extent to which a country prioritizes quality of infrastructure and productivity-

enhancing investments. The gauge weighs measures of investment as a share of world investment, overall infrastructure quality, investment and savings as a share of GDP, and logistics performance. China is currently the strongest according to this gauge (having risen sharply over the past 20 years) because of its high rates of productive investment relative to both the world and the size of its own past investment; the US is second, due largely to its high share of global productive investment, though it is worsening.

- **Economic Output:** This gauge measures the strength of a country's economic resources. We measure output primarily through GDP levels as a share of world total (adjusted for price differences across countries). We allocate some weight to GDP per capita rather than total GDP to capture quality. China ranks first in this gauge, insignificantly ahead of the US but also rising fastest, due its large PPP-adjusted GDP share. Europe ranks third.
- **Expected Growth (Big Economic Cycle):** This gauge measures how well a country is positioned to grow its economy over the next 10 years. We look at a variety of metrics to estimate forward-looking 10-year economic growth, placing two-thirds weight on metrics that predict productivity and one-third on metrics that predict the impact of indebtedness on growth. Currently India is predicted to grow the fastest, followed by China, with the US predicted to grow a bit slower than average, and with Japan and a number of European countries predicted to grow least.
- **Trade:** This gauge measures how strong of an exporter a country is. It looks at the absolute level of a country's exports as a share of the world. China scores highest (being the largest exporter in the world), followed by Europe and the US.
- **Military Strength:** This gauge is driven mostly by the absolute share of military spending and strength measured by the number of personnel, the number of nuclear weapons, and external indices of military capabilities. It does not look at military powers in varying regions or of various types, failing to capture some military superiorities Russia and China have in

certain geographic areas, certain types of military technologies, or the role of alliances. The US is still the strongest overall military power based on these measures, with a strong lead in spending and a nuclear weapons program that is only rivaled by Russia. China is now ranked second and is rising quickly.

- **Financial Center:** This gauge measures the level of development and sizes of a country's financial markets and financial center. We look at absolute measures of transaction shares and market capitalizations, as well as external indices of financial center cities. The US remains the top-ranked power in this metric by a significant margin (driven primarily by its very large share of world equity and debt markets), with China and Europe ranking second and third, respectively.
- **Reserve Currency Status:** This gauge measures the extent to which a country's currency operates as a global reserve currency. We measure reserve currency status by the share of transactions, debts, and central bank reserves that are denominated or held in a country's currency. Similar to financial center status, the US remains the top-ranked power in this metric by a significant margin, with Europe and Japan ranking second and third, respectively.
- **Debt Burden (Big Economic Cycle):** This gauge is based on a combination of a) debt levels relative to asset levels, b) the sizes of external and internal surpluses and deficits, c) the sizes of debt service costs relative to GDP, d) the amount of debt in a country's own currency versus foreign currency, e) the amount of debt held by its own citizens versus foreigners, and f) its credit rating. We composed it this way because it has proven itself to be the most reliable way we have of foreshadowing declines in the value of real wealth, whether they come in the form of debt defaults that result from not creating enough money and credit to satisfy excessive debt needs or devaluations that come from creating more than enough money and credit to satisfy excessive debt needs. I constructed this index to exclude reserve currency status so that I could see the exposure a country would have if it lost its reserve currency status.

- **Internal Conflict (Internal Order):** This gauge looks at how much domestic conflict and discontent there is. It measures actual conflict events (e.g., protests), political conflict (e.g., partisanship), and general discontent (based on surveys). The US ranks highest in this gauge among the major countries, driven by measures of partisanship and higher incidence of internal conflict events, and it has been rising fast.
- **Governance/Rule of Law:** This gauge measures the extent to which a country's legal system is consistent, predictable, and conducive to growth and advancement. It combines rule of law measures (based primarily on business surveys of doing business in the country) and corruption measures (via a combination of external corruption indices and surveys of businesses). Russia and India score lowest (worst) on the gauge, while the UK, the Netherlands, and Japan score highest (best), with Germany and the US close behind.
- **Geology:** This gauge measures each country's geographic endowment, including land size and the value of its natural resources. It includes the total production of energy, agriculture, and industrial metals in order to capture the absolute production capacity of each nation, as well as net exports to capture relative self-reliance for each of the categories (in addition to measuring some other natural resources like freshwater supply). Russia and the US score highest (followed by China, which relies more on the rest of the world to cover its natural resource needs), while Japan and the UK score lowest.
- **Gaps in Wealth, Opportunity & Values:** This gauge measures how big the gaps in wealth/income, opportunities, and values are. It combines measures of both a) wealth and income inequality (e.g., how much does the top 1 percent have versus the rest) and b) political conflict (e.g., how split is the legislature on ideology). India, the US, and China score worst because of very large wealth and income gaps (and in the case of the US also significant political gaps). At the other end of the spectrum are the European nations and Japan, which generally speaking have lower income and wealth inequality.

- **Character/Civility/Determination:** This gauge attempts to measure to what extent the attitudes of each country's people create an environment that's supportive to civility and hard work, which supports growth and advancement. It uses a) surveys around attitudes toward working hard and success and b) other measures that proxy how much a society values self-sufficiency and work (e.g., government transfer payments size, effective retirement age) to quantify this. China and India score highest (the US is third), and the European countries (notably Spain and France) score lowest.
- **Resource-Allocation Efficiency:** This gauge attempts to measure how efficiently each country is using its labor and capital. It looks at whether the country has chronically high unemployment (i.e., not finding efficient ways to employ its people), if debt growth generates commensurate income growth over time, and external indices and surveys about the rigidity of the labor market and ease of getting loans. Much of Europe (particularly France and Spain) score lowest on these measures, while the US and Germany score near the top. Developing countries (particularly Russia, but also China and India) also score fairly well in this measure—as generally speaking they produce more income growth per unit of debt growth.
- **Acts of Nature:** This gauge measures how vulnerable to and impacted by acts of nature each country is. While it is difficult to quantify all the various acts of nature that might affect a country, we used expert assessments of future climate change impact on each country's GDP, external assessments of each country's preparedness for natural disasters, and the outcomes from the COVID pandemic (as that was a real-time test against an act of nature). I consider this rating so-so and find that there is still a lot more we want to capture to make this gauge better, hence its low quality.
- **External Conflict:** While not a part of the model for individual countries, the external conflict gauge measures the levels of economic, political/cultural, and military conflict between pairs of major countries. Within each category, we tried to come up with a mix of structural

indicators (to establish a baseline level of conflict between countries) and timely indicators (to flag major escalations above that baseline). For example, for economic conflict we track bilateral trade between countries, tariff rates, and timely news around sanctions, trade wars, etc.

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<sup>1</sup> Importantly, a number of the charts shown on these pages rely on the record from fewer countries further in the past, due to limited reliable data history. Life expectancy prior to the 1800s is solely based on Great Britain (marked by the dotted line). Global RGDP is primarily a mix of European countries before 1870. And there are not good records of total wealth prior to the 1900s, so I can't show you the picture before then.

<sup>2</sup> Soon not being able to read and write computer code will be like not being able to read and write words.

<sup>3</sup> Arrows denote the 20-year change in the gauge.

<sup>4</sup> As a result, debt assets (especially cash) will probably perform poorly and debt liabilities will probably be good to have, especially if invested in profitable, disruptive technologies and solid investments that have higher returns than the cost of funding them.

<sup>5</sup> Individual European countries are not shown on the reserve currency status gauge due to the European Monetary Union (all these countries use the euro)—so only the Europe aggregate is shown. The measure shows an average of what share of global transactions, debts, and official central bank reserve holdings are denominated in each country's currency.

<sup>6</sup> In 1919, over 20 percent of the US labor force went on strike.

<sup>7</sup> There have been just over 50 wars between great powers since 1500, per Steven Pinker's *The Better Angels of Our Nature* (2011). Eighty percent of the years before 1800 had wars; it's been 20 percent since.

<sup>8</sup> We *may* be seeing such a buildup now. China's military spending has risen sharply in dollar terms over the past decade, though as a share of GDP it remains relatively steady (at around 2 percent). At around 3 percent of GDP, military spending has fallen a bit for the US.

<sup>9</sup> Determinants like geology (i.e., minerals in the ground) are relatively easy to measure, though the implications of having them might change. Determinants that evolve like humanity's innovations and technologies can typically be seen emerging by watching the trends. Those that transpire in cycles (like debt and capital markets) can be understood by understanding the cycles. The fact that acts of nature like pandemics, droughts, and floods come along shouldn't be a surprise, though their timing often is.



## APPENDIX

# COMPUTER ANALYSIS OF THE CONDITIONS OF, AND PROSPECTS FOR, THE WORLD'S LEADING COUNTRIES

**A**s I described earlier, I feed data into a computer that can create an output summarizing the conditions of, and long-term prospects for, the world's leading countries. These computer-generated summaries follow on the next few pages. I use these outputs to supplement my own thinking and other computer models I run to help me understand the world. This system is a never-ending work in progress. I will update these summaries on [economicprinciples.org](http://economicprinciples.org) at least annually or more frequently if any big changes take place.

The text for each country highlights a few of the major gauges and a few of the stats within each gauge that reflect the broad trends we are seeing. The aggregate gauges and final country power score I am showing include hundreds of individual stats that we aggregate based on relevance, quality, and consistency across countries and time. To best capture the overall strength of a country, I gave considerations to both quantity and quality, but structured things to best capture who would win in a competition or war.

## THE POWERS AND PROSPECTS OF THE UNITED STATES

**This is our computer-generated reading for the United States as of August 2021.**

Based on the latest readings of key indicators, **the United States appears to be a strong power (No. 1 among major countries today) in gradual decline. As shown in the table, the key strengths of the United States that put it in this position are its strong capital markets and financial center, its innovation/technology, its high level of education, its strong military, its reserve currency status, and its high economic output. Its weaknesses are its unfavorable economic/financial position and its large domestic conflicts.** The eight major measures of power are very strong today but are, in aggregate, trending downward. In particular, the United States' relative position in education, its importance to global trade, and its relative military strength are declining.

The table shows our aggregate country power gauge and the major drivers, as well as the rank of each measure of power across 11 major countries today and the trajectory over the past 20 years.

To understand a country, we start by looking at **the big cycles**, as well as **measures of power** that both reflect and drive the rise and fall of a country. While we refer to these factors individually, they are not separate; they interact with and reinforce one another to move a country along its cycle.

For the United States, **the big cycles look unfavorable.**

**The United States is in an unfavorable position in its economic and financial cycles**, with a high debt burden and relatively low expected real growth over the next 10 years (1.1 percent per year). The United States has significantly more foreign debts than foreign assets (net IIP is -64 percent of GDP). Non-financial debt levels are high (277 percent of GDP), and government debt levels are high (128 percent of GDP). The bulk of these debts (99 percent) are in its own currency, which mitigates its debt risks. The ability to use interest rate cuts to stimulate the economy is low (short rates at 0.1 percent), and the country is already printing money to monetize debt. That said, being the world’s leading reserve currency is extremely beneficial to the US. If this were to change, it would significantly weaken the US position.

### UNITED STATES—KEY DRIVERS OF OUR COUNTRY POWER SCORE

Overall Empire Score (0–1)	Level: 0.87		Rank: 1	✘
<b>The Big Cycles</b>	<b>Level</b>	<b>Z-Score</b>	<b>Rank</b>	<b>Trajectory</b>
Economic/Financial Position	Unfavorable	-1.7	10	✘
Debt Burden	High Debt	-1.8	11	✘
Expected Growth	1.1%	-0.7	4	✘
Internal Order	High Risk	-1.8	11	✘
Wealth/Opportunity/Values Gap	Large	-1.6	9	✘
Internal Conflict	Very High	-2.0	10	✘
External Order	At Risk			✘
<b>Eight Key Measures of Power</b>				
Markets & Financial Center	Very Strong	2.6	1	→
Innovation & Technology	Very Strong	2.0	1	→
Education	Very Strong	2.0	1	✘
Military Strength	Very Strong	1.9	1	✘
Reserve Currency Status	Very Strong	1.7	1	✘
Economic Output	Very Strong	1.7	2	✘
Trade	Strong	1.1	3	✘
Cost Competitiveness	Average	-0.4	6	→
<b>Additional Measures of Power</b>				

Overall Empire Score (0–1)	Level: 0.87	Rank: 1	✘	
The Big Cycles	Level	Z-Score	Rank	Trajectory
Geology	Strong	1.4	2	→
Resource-Allocation Efficiency	Strong	1.3	2	✘
Infrastructure & Investment	Strong	0.7	2	✘
Character/Determination/Civility	Strong	1.1	3	→
Governance/Rule of Law	Strong	0.7	5	↗
Acts of Nature	Average	-0.2	9	

↗ Getting better   ✘ Getting worse   → Flat

**Internal disorder is a high risk.** Wealth, income, and values gaps are large. Regarding inequality, the top 1 percent and top 10 percent in the United States capture 19 percent and 45 percent of income (both the second highest shares across major countries). Our internal conflict gauge is very high. This gauge measures actual conflict events (e.g., protests), political conflict (e.g., partisanship), and general discontent (based on surveys).

**External disorder is a risk.** Most importantly, the United States and China, which is fast-rising and the No. 2 power (all things considered), are having significant conflict.

**Looking in more detail at the eight key measures of power, the United States has the largest capital markets and the strongest financial center among major countries.** Its equity markets are a majority of the world total (55 percent of total market cap and 64 percent of volume), and a majority of global transactions happen in dollars (55 percent). **In addition, the United States has the strongest reading on our measures of technology and innovation among major countries.** A large share of global patent applications (17 percent), global R&D spending (26 percent), and global researchers (26 percent) are in the United States. **The United States also has the strongest position in education among major countries.** The United States has a large share of the world’s bachelor’s degrees (20 percent). On years of education, the United

States is good—students have on average 13.7 years of education versus 11.5 in the average major country. PISA scores, which measure the proficiency of 15-year-old students across countries, are around average—495 versus 483 in the average major country. The United States also has a mix of other strengths, as detailed in the table.

## THE POWERS AND PROSPECTS OF CHINA

**This is our computer-generated reading for China as of August 2021.**

Based on the latest readings of key indicators, **China appears to be a strong power (No. 2 among major countries today) in rapid ascent. As shown in the table, the key strengths of China that put it in this position are its strong economic and financial position, its infrastructure and investment, its importance to global trade, its high economic output, its people's self-sufficiency and strong work ethic, its high level of education, and its strong military.** The eight major measures of power are somewhat strong today and are, in aggregate, trending sharply upward. In particular, China's importance to global trade, its innovation and technology, and its importance as a financial center are increasing.

The table shows our aggregate country power gauge and the major drivers, as well as the rank of each measure of power across 11 major countries today and the trajectory over the past 20 years.

To understand a country, we start by looking at the **big cycles**, as well as **measures of power** that both reflect and drive the rise and fall of a country. While we refer to these factors individually, they are not separate; they interact with and reinforce one another to move a country along its cycle.

For China, **the big cycles look somewhat favorable.**

**China is in a somewhat favorable position in its economic and financial cycles**, with a low debt burden and relatively high expected real growth over the next 10 years (4.3 percent per year). China has slightly more foreign assets than

foreign debts (net IIP is 12 percent of GDP). Non-financial debt levels are high (263 percent of GDP), though government debt levels are low (48 percent of GDP). The bulk of these debts (96 percent) are in its own currency, which mitigates its debt risks. The ability to use interest rate cuts to stimulate the economy is modest (short rates at 1.9 percent).

## CHINA—KEY DRIVERS OF OUR COUNTRY POWER SCORE

Overall Empire Score (0–1)	Level: 0.75		Rank: 2	↑
The Big Cycles	Level	Z-Score	Rank	Trajectory
Economic/Financial Position	Somewhat Favorable	0.4	3	↘
Debt Burden	Low Debt	0.3	4	↘
Expected Growth	4.3%	0.4	2	↘
Internal Order	Moderate Risk	-0.1	7	→
Wealth/Opportunity/Values Gap	Relatively Large	-0.4	8	→
Internal Conflict	Average	0.2	5	→
External Order	At Risk			↘
Eight Key Measures of Power				
Trade	Very Strong	1.8	1	↗
Economic Output	Very Strong	1.8	1	↗
Education	Strong	1.6	2	↗
Innovation & Technology	Strong	1.5	2	↗
Cost Competitiveness	Strong	1.2	2	↘
Military Strength	Strong	1.0	2	↗
Markets & Financial Center	Average	0.4	2	↗
Reserve Currency Status	Weak	-0.7	5	↗
Additional Measures of Power				
Infrastructure & Investment	Very Strong	2.7	1	↗
Character/Determination/Civility	Strong	1.5	1	→
Geology	Strong	0.9	3	↗

<b>Overall Empire Score (0–1)</b>	<b>Level: 0.75</b>	<b>Rank: 2</b>	<b>↑</b>
<b>The Big Cycles</b>	<b>Level</b>	<b>Z-Score</b>	<b>Rank Trajectory</b>
Resource-Allocation Efficiency	Average	0.0	7 →
Governance/Rule of Law	Weak	-0.7	8 ↗
Acts of Nature	Average	-0.1	8

↗ Getting better   ↘ Getting worse   → Flat

**Internal disorder is a moderate risk.** Wealth, income, and values gaps are relatively large. Regarding inequality, the top 1 percent and top 10 percent in China capture 14 percent and 41 percent of income (respectively the third and fourth highest shares across major countries). Our internal conflict gauge is average. This gauge measures actual conflict events (e.g., protests), political conflict (e.g., partisanship), and general discontent (based on surveys).

**External disorder is a risk.** Most importantly, China and the United States, which is declining but remains the No. 1 power (all things considered), are having significant conflict.

**Looking in more detail at the eight key measures of power, China is the largest exporter among major countries.** It exports 14 percent of global exports. **In addition, China has the largest economy among major countries.** A large share of global economic activity (22 percent; adjusted for differences in prices across countries) is in China. **China also has the second strongest position in education among major countries.** China has a large share of the world’s bachelor’s degrees (22 percent). China also has a mix of other strengths, as detailed in the table.



## THE POWERS AND PROSPECTS OF THE EUROZONE

This is our computer-generated reading for the Eurozone as of August 2021.

Based on the latest readings of key indicators, **the Eurozone appears to be a strong power (No. 3 among major countries today) on a flat trajectory. As shown in the table, the key strengths of the Eurozone are its importance to global trade and its reserve currency status. Its weaknesses are its people's lower-than-average work ethic and low self-sufficiency and its relatively poor allocation of labor and capital.** The eight major measures of power are somewhat strong today but are, in aggregate, moving sideways.

The table shows our aggregate country power gauge and the major drivers, as well as the rank of each measure of power across 11 major countries today and the trajectory over the past 20 years.

To understand a country, we start by looking at **the big cycles**, as well as **measures of power** that both reflect and drive the rise and fall of a country. While we refer to these factors individually, they are not separate; they interact with and reinforce one another to move a country along its cycle.

For the Eurozone, **the big cycles look mixed.**

**The Eurozone is in a moderately unfavorable position in its economic and financial cycles**, with a moderately high debt burden and relatively low expected real growth over the next 10 years (0.3 percent per year). The Eurozone has similar levels of foreign debts and foreign assets (net IIP is 0 percent of GDP). Non-financial debt levels are high (241 percent of GDP), though

government debt levels are typical for major countries today (104 percent of GDP). The ability to use interest rate cuts to stimulate the economy is very low (short rates at -0.5 percent), and Europe is already printing money to monetize debt.

## EUROZONE—KEY DRIVERS OF OUR COUNTRY POWER SCORE

Overall Empire Score (0–1)	Level: 0.55		Rank: 3	→
<b>The Big Cycles</b>	<b>Level</b>	<b>Z-Score</b>	<b>Rank</b>	<b>Trajectory</b>
Economic/Financial Position	Moderately Unfavorable	-0.9	6	↘
Debt Burden	Moderately High Debt	-0.3	6	→
Expected Growth	0.3%	-1.0	8	→
Internal Order	Low Risk	0.3	5	↗
Wealth/Opportunity/Values Gap	Typical	0.3	6	↗
Internal Conflict	Average	0.4	4	→
External Order				
<b>Eight Key Measures of Power</b>				
Trade	Strong	1.3	2	→
Reserve Currency Status	Average	0.1	2	↘
Economic Output	Strong	0.6	3	↘
Markets & Financial Center	Average	0.4	3	→
Innovation & Technology	Average	0.4	3	↘
Education	Average	0.3	3	→
Military Strength	Average	0.3	4	↘
Cost Competitiveness	Weak	-0.6	8	→
<b>Additional Measures of Power</b>				
Infrastructure & Investment	Average	0.2	3	↘
Geology	Average	-0.4	5	→
Governance/Rule of Law	Average	-0.4	7	
Resource-Allocation Efficiency	Weak	-0.8	9	
Character/Determination/Civility	Weak	-1.0	10	→

<b>Overall Empire Score (0–1)</b>	<b>Level: 0.55</b>	<b>Rank: 3</b>	<b>→</b>
<b>The Big Cycles</b>	<b>Level</b>	<b>Z-Score</b>	<b>Rank Trajectory</b>
Acts of Nature	Average	0.0	5

▶ Getting better
 ▶ Getting worse
 → Flat

**Internal disorder is a low risk.** Wealth, income, and values gaps are typical. Regarding inequality, the top 1 percent and top 10 percent in the Eurozone capture 11 percent and 35 percent of income (respectively the eighth and seventh highest shares across major countries). Our internal conflict gauge is average. This gauge measures actual conflict events (e.g., protests), political conflict (e.g., partisanship), and general discontent (based on surveys).

**Looking in more detail at the eight key measures of power, the Eurozone is the second largest exporter among major countries.** It exports 12 percent of global exports. **In addition, the Eurozone has the second strongest reserve currency among major countries.** A large share of global currency reserves are in euros (21 percent), and a large share of global debt is denominated in euros (22 percent).

*This summary reflects our estimate of the power of the Eurozone in aggregate. For most stats, we're using an aggregate across the eight major countries in the Eurozone.*

## THE POWERS AND PROSPECTS OF GERMANY

**This is our computer-generated reading for Germany as of August 2021.**

Based on the latest readings of key indicators, **Germany appears to be a middle-of-the-pack power (No. 4 among major countries today) on a flat trajectory. As shown in the table, the key strengths of Germany are its strong economic and financial position and its high internal order.** The eight major measures of power are somewhat strong today but are, in aggregate, moving sideways.

The table shows our aggregate country power gauge and the major drivers, as well as the rank of each measure of power across 11 major countries today and the trajectory over the past 20 years.

To understand a country, we start by looking at **the big cycles**, as well as **measures of power** that both reflect and drive the rise and fall of a country. While we refer to these factors individually, they are not separate; they interact with and reinforce one another to move a country along its cycle.

For Germany, **the big cycles look mostly favorable.**

**Germany is in a somewhat favorable position in its economic and financial cycles**, with a low debt burden but very low expected real growth over the next 10 years (0.3 percent per year). Germany has significantly more foreign assets than foreign debts (net IIP is 71 percent of GDP). Non-financial debt levels are typical for major countries today (183 percent of GDP), as are government debt levels for major countries today (69 percent of GDP). Germany's debts are largely in euros, which increases Germany's debt risks, since

this is not a currency that Germany directly controls. The ability to use interest rate cuts to stimulate the economy is low for the Eurozone (short rates are at -0.5 percent), and Europe is already printing money to monetize debt.

## GERMANY—KEY DRIVERS OF OUR COUNTRY POWER SCORE

Overall Empire Score (0–1)	Level: 0.37		Rank: 4	→
<b>The Big Cycles</b>	<b>Level</b>	<b>Z-Score</b>	<b>Rank</b>	<b>Trajectory</b>
Economic/Financial Position	Somewhat Favorable	0.4	4	↗
Debt Burden	Low Debt	1.6	1	↗
Expected Growth	0.3%	-1.0	9	→
Internal Order	Low Risk	0.7	3	↗
Wealth/Opportunity/Values Gap	Narrow	0.7	3	→
Internal Conflict	Low	0.7	3	↗
External Order				
<b>Eight Key Measures of Power</b>				
Trade	Strong	0.6	4	→
Economic Output	Average	-0.1	4	↘
Innovation & Technology	Average	-0.1	5	↘
Education	Average	-0.2	5	→
Markets & Financial Center	Average	-0.2	6	↘
Military Strength	Weak	-0.6	9	→
Cost Competitiveness	Weak	-0.6	10	→
Reserve Currency Status				
<b>Additional Measures of Power</b>				
Resource-Allocation Efficiency	Strong	0.6	3	↗
Governance/Rule of Law	Strong	0.7	4	→
Infrastructure & Investment	Average	-0.3	7	→
Character/Determination/Civility	Average	-0.5	8	→
Geology	Weak	-0.7	9	→
Acts of Nature	Strong	1.1	2	

➤ Getting better   ➤ Getting worse   → Flat

**Internal disorder is a low risk.** Wealth, income, and values gaps are narrow. Regarding inequality, the top 1 percent and top 10 percent in Germany capture 13 percent and 38 percent of income (respectively the fourth and fifth highest shares across major countries). Our internal conflict gauge is low. This gauge measures actual conflict events (e.g., protests), political conflict (e.g., partisanship), and general discontent (based on surveys).

**On the eight key measures of power, Germany looks somewhat strong in aggregate. It has no particularly prominent strengths or weaknesses that I will call out.**

## THE POWERS AND PROSPECTS OF JAPAN

**This is our computer-generated reading for Japan as of August 2021.**

Based on the latest readings of key indicators, **Japan appears to be a modest power (No. 5 among major countries today) in gradual decline. As shown in the table, the key strength of Japan is its high internal order. Its weaknesses are its unfavorable economic/financial position and its relative lack of natural resources.** The eight major measures of power are somewhat strong today but are, in aggregate, trending downward. In particular, Japan's share of global output, its importance to global trade, and its innovation and technology are declining.

The table shows our aggregate country power gauge and the major drivers, as well as the rank of each measure of power across 11 major countries today and the trajectory over the past 20 years.

To understand a country, we start by looking at **the big cycles**, as well as **measures of power** that both reflect and drive the rise and fall of a country. While we refer to these factors individually, they are not separate; they interact with and reinforce one another to move a country along its cycle.

For Japan, **the big cycles look mixed.**

**Japan is in an unfavorable position in its economic and financial cycles**, with a moderately high debt burden and very low expected real growth over the next 10 years (0 percent per year). Japan has significantly more foreign assets than foreign debts (net IIP is 68 percent of GDP). Non-financial debt levels are very high (400 percent of GDP), as are government debt levels (241 percent of

GDP). The bulk of these debts (99 percent) are in its own currency, which mitigates its debt risks. The ability to use interest rate cuts to stimulate the economy is very low (short rates at -0.1 percent), and the country is already printing money to monetize debt.

## JAPAN—KEY DRIVERS OF OUR COUNTRY POWER SCORE

Overall Empire Score (0–1)	Level: 0.30		Rank: 5	▼
<b>The Big Cycles</b>	<b>Level</b>	<b>Z-Score</b>	<b>Rank</b>	<b>Trajectory</b>
Economic/Financial Position	Unfavorable	-1.1	7	→
Debt Burden	Moderately High Debt	-0.4	7	→
Expected Growth	0.0%	-1.1	11	→
Internal Order	Low Risk	1.0	1	▲
Wealth/Opportunity/Values Gap	Narrow	0.9	2	▲
Internal Conflict	Low	1.1	2	▲
External Order				
<b>Eight Key Measures of Power</b>				
Reserve Currency Status	Weak	-0.5	3	▼
Education	Average	0.2	4	→
Innovation & Technology	Average	0.2	4	▼
Markets & Financial Center	Average	0.1	4	▼
Cost Competitiveness	Average	-0.3	4	→
Trade	Average	-0.5	5	▼
Military Strength	Average	-0.1	6	→
Economic Output	Average	-0.3	7	▼
<b>Additional Measures of Power</b>				
Governance/Rule of Law	Strong	0.8	3	→
Character/Determination/Civility	Average	0.5	4	▼
Infrastructure & Investment	Average	-0.2	4	▼
Resource-Allocation Efficiency	Average	0.1	6	▼
Geology	Weak	-1.1	11	→
Acts of Nature	Strong	1.5	1	



▶ Getting better   ▶ Getting worse   → Flat

**Internal disorder is a low risk.** Wealth, income, and values gaps are narrow. Regarding inequality, the top 1 percent and top 10 percent in Japan capture 12 percent and 43 percent of income (respectively the sixth and third highest shares across major countries). Our internal conflict gauge is low. This gauge measures actual conflict events (e.g., protests), political conflict (e.g., partisanship), and general discontent (based on surveys).

**On the eight key measures of power, Japan looks somewhat strong in aggregate. It has no particularly prominent strengths or weaknesses that I will call out.**

## THE POWERS AND PROSPECTS OF INDIA

**This is our computer-generated reading for India as of August 2021.**

Based on the latest readings of key indicators, **India appears to be a modest power (No. 6 among major countries today) in gradual ascent. As shown in the table, the key strengths of India are its strong economic and financial position and its cost-competitive labor (on a quality-adjusted basis). Its weaknesses are its large domestic conflicts, its weak relative position in education, its bad reading on innovation and technology, its corruption and inconsistent rule of law, and its lack of reserve currency status.** The eight major measures of power are somewhat strong today and are, in aggregate, trending upward. In particular, India's relative military strength, its innovation and technology, and its importance to global trade are increasing.

The table shows our aggregate country power gauge and the major drivers, as well as the rank of each measure of power across 11 major countries today and the trajectory over the past 20 years.

To understand a country, we start by looking at **the big cycles**, as well as **measures of power** that both reflect and drive the rise and fall of a country. While we refer to these factors individually, they are not separate; they interact with and reinforce one another to move a country along its cycle.



For India, **the big cycles look mixed.**

**India is in a highly favorable position in its economic and financial cycles**, with a moderately low debt burden and high expected real growth over the next 10 years (6.3 percent per year). India has slightly more foreign debts than foreign

assets (net IIP is -12 percent of GDP). Non-financial debt levels are low (125 percent of GDP), though government debt levels are typical for major countries today (75 percent of GDP). The bulk of these debts (91 percent) are in its own currency, which mitigates its debt risks. The ability to use interest rate cuts to stimulate the economy is modest (short rates at 3.4 percent).

## INDIA—KEY DRIVERS OF OUR COUNTRY POWER SCORE

Overall Empire Score (0–1)	Level: 0.27		Rank: 6	↗
<b>The Big Cycles</b>	<b>Level</b>	<b>Z-Score</b>	<b>Rank</b>	<b>Trajectory</b>
Economic/Financial Position	Highly Favorable	0.8	1	↘
Debt Burden	Moderately Low Debt	0.1	5	↗
Expected Growth	6.3%	1.1	1	↘
Internal Order	High Risk	-1.8	10	→
Wealth/Opportunity/Values Gap	Large	-1.8	10	→
Internal Conflict	Very Low			
External Order				
<b>Eight Key Measures of Power</b>				
Cost Competitiveness	Very Strong	2.4	1	↗
Military Strength	Average	0.2	5	↗
Economic Output	Average	-0.2	5	→
Reserve Currency Status	Weak	-0.8	6	
Trade	Weak	-0.8	9	↗
Markets & Financial Center	Weak	-0.8	10	→
Innovation & Technology	Weak	-1.2	11	↗
Education	Weak	-1.2	11	→
<b>Additional Measures of Power</b>				
Character/Determination/Civility	Strong	1.3	2	→
Geology	Average	0.3	4	→
Resource-Allocation Efficiency	Average	0.2	5	
Infrastructure & Investment	Average	-0.3	6	↗

<b>Overall Empire Score (0–1)</b>	<b>Level: 0.27</b>	<b>Rank: 6</b>		
<b>The Big Cycles</b>	<b>Level</b>	<b>Z-Score</b>	<b>Rank</b>	<b>Trajectory</b>
Governance/Rule of Law	Weak	-1.1	10	
Acts of Nature	Very Weak	-2.4	11	

 Getting better  Getting worse → Flat

**Internal disorder is a high risk.** Wealth, income, and values gaps are large. Regarding inequality, the top 1 percent and top 10 percent in India capture 21 percent and 56 percent of income (both the highest shares across major countries). However, a wide wealth gap is less concerning in a fast growing country like India because the fast growth can create rising prosperity for all.

**Looking in more detail at the eight key measures of power, India has the cheapest labor among major countries.** Adjusted for worker quality, labor is significantly cheaper than the global average.

**We net this against its weak relative position in education, its bad reading on innovation and technology, and its lack of reserve currency status.** On years of education, India is bad—students have on average 5.8 years of education versus 11.5 in the average major country. PISA scores, which measure the proficiency of 15-year-old students across countries, are bad—336 versus 483 in the average major country. With innovation and technology, a small share (less than 1 percent) of global patent applications, a small share (3 percent) of global R&D spending, and a moderate share (3 percent) of global researchers are in India.

## THE POWERS AND PROSPECTS OF THE UNITED KINGDOM

**This is our computer-generated reading for the United Kingdom as of August 2021.**

Based on the latest readings of key indicators, **the United Kingdom appears to be a modest power (in the bottom half of major countries today) on a flat trajectory. As shown in the table, the key strength of the United Kingdom is its strong rule of law/low corruption. Its weaknesses are its unfavorable economic/financial position and its relative lack of natural resources.** The eight major measures of power are somewhat weak today and are, in aggregate, moving sideways.

The table shows our aggregate country power gauge and the major drivers, as well as the rank of each measure of power across 11 major countries today and the trajectory over the past 20 years.

To understand a country, we start by looking at **the big cycles**, as well as **measures of power** that both reflect and drive the rise and fall of a country. While we refer to these factors individually, they are not separate; they interact with and reinforce one another to move a country along its cycle.

For the United Kingdom, **the big cycles look mostly unfavorable.**

**The UK is in an unfavorable position in its economic and financial cycles,** with a high debt burden and relatively low expected real growth over the next 10 years (0.9 percent per year). The UK has modestly more foreign debts than foreign assets (net IIP is -28 percent of GDP). Non-financial debt levels are high (260 percent of GDP), though government debt levels are typical for major

countries today (106 percent of GDP). The bulk of these debts (90 percent) are in its own currency, which mitigates its debt risks. The ability to use interest rate cuts to stimulate the economy is low (short rates at 0.1 percent), and the country is already printing money to monetize debt.

## UNITED KINGDOM—KEY DRIVERS OF OUR COUNTRY POWER SCORE

Overall Empire Score (0–1)		Level: 0.27	Rank: 7	→	
<b>The Big Cycles</b>		<b>Level</b>	<b>Z-Score</b>	<b>Rank</b>	<b>Trajectory</b>
Economic/Financial Position		Unfavorable	-1.7	9	↘
Debt Burden		High Debt	-1.6	9	↘
Expected Growth		0.9%	-0.8	6	↘
Internal Order		Moderate Risk	-0.2	8	↘
Wealth/Opportunity/Values Gap		Relatively Large	-0.2	7	↘
Internal Conflict		Average	-0.3	7	↘
External Order					
<b>Eight Key Measures of Power</b>					
Reserve Currency Status		Weak	-0.6	4	→
Markets & Financial Center		Average	0.0	5	↘
Cost Competitiveness		Average	-0.3	5	→
Education		Average	-0.2	6	↘
Economic Output		Average	-0.3	6	→
Innovation & Technology		Average	-0.3	7	→
Trade		Weak	-0.6	7	→
Military Strength		Average	-0.3	8	→
<b>Additional Measures of Power</b>					
Governance/Rule of Law		Strong	1.2	1	→
Resource-Allocation Efficiency		Average	0.3	4	→
Character/Determination/Civility		Average	-0.4	7	↘
Infrastructure & Investment		Weak	-0.6	10	↘

<b>Overall Empire Score (0–1)</b>	<b>Level: 0.27</b>	<b>Rank: 7</b>	<b>→</b>
<b>The Big Cycles</b>	<b>Level</b>	<b>Z-Score</b>	<b>Rank Trajectory</b>
Geology	Weak	-0.9	10 →
Acts of Nature	Average	0.4	4

➤ Getting better 
 ➤ Getting worse 
 ➔ Flat

**Internal disorder is a moderate risk.** Wealth, income, and values gaps are relatively large. Regarding inequality, the top 1 percent and top 10 percent in the United Kingdom capture 13 percent and 36 percent of income (respectively the fifth and sixth highest shares across major countries). Our internal conflict gauge is average. This gauge measures actual conflict events (e.g., protests), political conflict (e.g., partisanship), and general discontent (based on surveys).

**On the eight key measures of power, the United Kingdom looks somewhat weak in aggregate. It has no particularly prominent strengths or weaknesses that I will call out.**

## THE POWERS AND PROSPECTS OF FRANCE

**This is our computer-generated reading for France as of August 2021.**

Based on the latest readings of key indicators, **France appears to be a modest power (in the bottom half of major countries today) on a flat trajectory. As shown in the table, the key weaknesses of France that put it in this position are its unfavorable economic/financial position, its people's lower-than-average work ethic and low self-sufficiency, and its relatively poor allocation of labor and capital.** The eight major measures of power are somewhat weak today and are, in aggregate, moving sideways.

The table shows our aggregate country power gauge and the major drivers, as well as the rank of each measure of power across 11 major countries today and the trajectory over the past 20 years.

To understand a country, we start by looking at **the big cycles**, as well as **measures of power** that both reflect and drive the rise and fall of a country. While we refer to these factors individually, they are not separate; they interact with and reinforce one another to move a country along its cycle.

For France, **the big cycles look mostly unfavorable.**

**France is in an unfavorable position in its economic and financial cycles**, with a moderately high debt burden and relatively low expected real growth over the next 10 years (0.4 percent per year). France has slightly more foreign debts than foreign assets (net IIP is -25 percent of GDP). Non-financial debt levels are high (268 percent of GDP), though government debt levels are typical for major countries today (105 percent of GDP). France's debts are largely in euros, which



increases France’s debt risks, since this is not a currency that France directly controls. The ability to use interest rate cuts to stimulate the economy is low for the Eurozone (short rates are at -0.5 percent), and Europe is already printing money to monetize debt.

## FRANCE—KEY DRIVERS OF OUR COUNTRY POWER SCORE

Overall Empire Score (0–1)	Level: 0.25		Rank: 8	→
<b>The Big Cycles</b>				
	Level	Z-Score	Rank	Trajectory
Economic/Financial Position	Unfavorable	-1.2	8	↘
Debt Burden	Moderately High Debt	-0.8	8	↘
Expected Growth	0.4%	-0.9	7	→
Internal Order	Low Risk	0.5	4	→
Wealth/Opportunity/Values Gap	Narrow	1.1	1	↗
Internal Conflict	Average	-0.1	6	→
External Order				
<b>Eight Key Measures of Power</b>				
Trade	Average	-0.5	6	→
Military Strength	Average	-0.3	7	→
Markets & Financial Center	Average	-0.3	7	→
Education	Average	-0.5	7	→
Innovation & Technology	Average	-0.5	8	↘
Economic Output	Weak	-0.5	9	↘
Cost Competitiveness	Weak	-0.6	9	→
Reserve Currency Status				
<b>Additional Measures of Power</b>				
Infrastructure & Investment	Average	-0.2	5	↗
Governance/Rule of Law	Average	0.3	6	→
Geology	Average	-0.5	7	→
Resource-Allocation Efficiency	Weak	-1.3	10	↘
Character/Determination/Civility	Weak	-1.5	11	→
Acts of Nature	Average	0.0	6	

➤ Getting better   ➤ Getting worse   → Flat

**Internal disorder is a low risk.** Wealth, income, and values gaps are narrow. Regarding inequality, the top 1 percent and top 10 percent in France capture 10 percent and 32 percent of income (both the ninth highest shares across major countries). Our internal conflict gauge is average. This gauge measures actual conflict events (e.g., protests), political conflict (e.g., partisanship), and general discontent (based on surveys).

**On the eight key measures of power, France looks somewhat weak in aggregate. It has no particularly prominent strengths or weaknesses that I will call out.**

## THE POWERS AND PROSPECTS OF THE NETHERLANDS

**This is our computer-generated reading for the Netherlands as of August 2021.**

Based on the latest readings of key indicators, **the Netherlands appears to be a modest power (in the bottom half of major countries today) on a flat trajectory. As shown in the table, the key strengths of the Netherlands are its high internal order and its strong rule of law/low corruption. Its weaknesses are its relatively weak military and its relatively expensive labor (on a quality-adjusted basis).** The eight major measures of power are somewhat weak today and are, in aggregate, moving sideways.

The table shows our aggregate country power gauge and the major drivers, as well as the rank of each measure of power across 11 major countries today and the trajectory over the past 20 years.

To understand a country, we start by looking at **the big cycles**, as well as **measures of power** that both reflect and drive the rise and fall of a country. While we refer to these factors individually, they are not separate; they interact with and reinforce one another to move a country along its cycle.

For the Netherlands, **the big cycles look somewhat favorable.**

**The Netherlands is in a somewhat favorable position in its economic and financial cycles**, with a low debt burden but relatively low expected real growth over the next 10 years (1 percent per year). The Netherlands has significantly more foreign assets than foreign debts (net IIP is 90 percent of GDP). Non-financial debt levels are high (286 percent of GDP), though government debt

levels are low (53 percent of GDP). The Netherlands' debts are largely in euros, which increases the Netherlands' debt risks, since this is not a currency that the Netherlands directly controls. The ability to use interest rate cuts to stimulate the economy is low for the Eurozone (short rates are at -0.5 percent), and Europe is already printing money to monetize debt.

## NETHERLANDS—KEY DRIVERS OF OUR COUNTRY POWER SCORE

Overall Empire Score (0–1)	Level: 0.25		Rank: 9	→
The Big Cycles	Level	Z-Score	Rank	Trajectory
Economic/Financial Position	Somewhat Favorable	0.0	5	
Debt Burden	Low Debt	0.8	3	↗
Expected Growth	1.0%	-0.8	5	
Internal Order	Low Risk	0.9	2	→
Wealth/Opportunity/Values Gap	Narrow	0.6	4	↘
Internal Conflict	Low	1.2	1	↗
External Order				
<b>Eight Key Measures of Power</b>				
Innovation & Technology	Average	-0.3	6	→
Economic Output	Average	-0.3	8	→
Markets & Financial Center	Weak	-0.5	8	→
Trade	Weak	-0.6	8	→
Education	Weak	-0.7	9	→
Cost Competitiveness	Weak	-0.8	11	→
Military Strength	Very Weak	-1.9	11	↘
Reserve Currency Status				
<b>Additional Measures of Power</b>				
Governance/Rule of Law	Strong	1.0	2	→
Character/Determination/Civility	Average	-0.3	6	↗
Geology	Average	-0.5	6	→
Resource-Allocation Efficiency	Average	-0.1	8	↗
Infrastructure & Investment	Average	-0.4	8	→

<b>Overall Empire Score (0–1)</b>	<b>Level: 0.25</b>	<b>Rank: 9</b>	<b>→</b>
<b>The Big Cycles</b>	<b>Level</b>	<b>Z-Score</b>	<b>Rank Trajectory</b>
Acts of Nature	Average	0.5	3

▶ Getting better
 ▶ Getting worse
 → Flat

**Internal disorder is a low risk.** Wealth, income, and values gaps are narrow. Regarding inequality, the top 1 percent and top 10 percent in the Netherlands capture 7 percent and 29 percent of income (both the 10th highest shares across major countries). Our internal conflict gauge is low. This gauge measures actual conflict events (e.g., protests), political conflict (e.g., partisanship), and general discontent (based on surveys).

**Looking in more detail at the eight key measures of power, we would call out its relatively weak military and its relatively expensive labor (on a quality-adjusted basis).** A small share of global military spending (less than 1 percent) is by the Netherlands, and it has a small share of the world’s military personnel (less than 1 percent). With labor cost, once we adjust for worker quality, labor is somewhat more expensive than the global average.

## THE POWERS AND PROSPECTS OF RUSSIA

**This is our computer-generated reading for Russia as of August 2021.**

Based on the latest readings of key indicators, **Russia appears to be a modest power (in the bottom half of major countries today) on a flat trajectory. As shown in the table, the key strengths of Russia are its strong economic and financial position, its wealth of natural resources, and its relatively strong military. Its weaknesses are its relatively small economy, its corruption and inconsistent rule of law, and its relative unimportance as a global financial center.** The eight major measures of power are somewhat weak today and are, in aggregate, moving sideways.

The table shows our aggregate country power gauge and the major drivers, as well as the rank of each measure of power across 11 major countries today and the trajectory over the past 20 years.

To understand a country, we start by looking at **the big cycles**, as well as **measures of power** that both reflect and drive the rise and fall of a country. While we refer to these factors individually, they are not separate; they interact with and reinforce one another to move a country along its cycle.

For Russia, **the big cycles look somewhat favorable.**

**Russia is in a somewhat favorable position in its economic and financial cycles**, with a low debt burden and modest expected real growth over the next 10 years (2.5 percent per year). Russia has modestly more foreign assets than foreign debts (net IIP is 33 percent of GDP). Non-financial debt levels are low (99 percent of GDP), as are government debt levels (14 percent of GDP). A

significant share of Russia’s debt (25 percent) is denominated in foreign currencies, which increases its debt risks. The ability to use interest rate cuts to stimulate the economy is high (short rates at 6.6 percent).

## RUSSIA—KEY DRIVERS OF OUR COUNTRY POWER SCORE

Overall Empire Score (0–1)	Level: 0.23		Rank: 10	→
<b>The Big Cycles</b>	<b>Level</b>	<b>Z-Score</b>	<b>Rank</b>	<b>Trajectory</b>
Economic/Financial Position	Somewhat Favorable	0.5	2	
Debt Burden	Low Debt	1.0	2	↗
Expected Growth	2.5%	-0.2	3	
Internal Order	Moderate Risk	-0.5	9	↗
Wealth/Opportunity/Values Gap				
Internal Conflict	Average	-0.5	9	↗
External Order				
<b>Eight Key Measures of Power</b>				
Cost Competitiveness	Strong	0.7	3	
Military Strength	Average	0.4	3	→
Reserve Currency Status	Weak	-0.8	6	
Education	Weak	-0.5	8	→
Innovation & Technology	Weak	-0.7	9	→
Trade	Weak	-0.9	10	→
Markets & Financial Center	Weak	-1.1	11	→
Economic Output	Weak	-1.4	11	→
<b>Additional Measures of Power</b>				
Geology	Very Strong	1.9	1	→
Resource-Allocation Efficiency	Strong	1.3	1	
Character/Determination/Civility	Average	0.1	5	
Infrastructure & Investment	Weak	-1.0	11	↘
Governance/Rule of Law	Very Weak	-1.9	11	→
Acts of Nature	Average	-0.1	7	

➤ Getting better   ➤ Getting worse   → Flat

**Internal disorder is a moderate risk.** Our internal conflict gauge is average. This gauge measures actual conflict events (e.g., protests), political conflict (e.g., partisanship), and general discontent (based on surveys).

**Looking in more detail at the eight key measures of power, Russia has a relatively strong military.** A moderate share of global military spending (7 percent) is by Russia, and it has a moderately large share of the world's military personnel (13 percent).

**We net this against its relatively small economy and its relative unimportance as a global financial center.** Russia's equity markets are a small share of the world total (less than 1 percent of total market cap and less than 1 percent of volume).



## THE POWERS AND PROSPECTS OF SPAIN

**This is our computer-generated reading for Spain as of August 2021.**

Based on the latest readings of key indicators, **Spain appears to be a modest power (in the bottom half of major countries today) on a flat trajectory. As shown in the table, the key weaknesses of Spain that put it in this position are its unfavorable economic/financial position, its relatively poor allocation of labor and capital, its relative unimportance to global trade, and its bad reading on innovation and technology.** The eight major measures of power are somewhat weak today and are, in aggregate, moving sideways.

The table shows our aggregate country power gauge and the major drivers, as well as the rank of each measure of power across 11 major countries today and the trajectory over the past 20 years.

To understand a country, we start by looking at **the big cycles**, as well as **measures of power** that both reflect and drive the rise and fall of a country. While we refer to these factors individually, they are not separate; they interact with and reinforce one another to move a country along its cycle.

For Spain, **the big cycles look mostly unfavorable.**

**Spain is in an unfavorable position in its economic and financial cycles**, with a high debt burden and very low expected real growth over the next 10 years (0 percent per year). Spain has significantly more foreign debts than foreign assets (net IIP is -73 percent of GDP). Non-financial debt levels are high (249 percent of GDP), as are government debt levels (114 percent of GDP). Spain's

debts are largely in euros, which increases Spain's debt risks, since this is not a currency that Spain directly controls. The ability to use interest rate cuts to stimulate the economy is low for the Eurozone (short rates are at -0.5 percent), and Europe is already printing money to monetize debt.

## SPAIN—KEY DRIVERS OF OUR COUNTRY POWER SCORE

Overall Empire Score (0–1)	Level: 0.20		Rank: 11	→
<b>The Big Cycles</b>				
	Level	Z-Score	Rank	Trajectory
Economic/Financial Position	Unfavorable	-1.9	11	↘
Debt Burden	High Debt	-1.7	10	↘
Expected Growth	0.0%	-1.1	10	↘
Internal Order	Moderate Risk	0.0	6	→
Wealth/Opportunity/Values Gap	Typical	0.4	5	↗
Internal Conflict	Average	-0.4	8	↘
External Order				
<b>Eight Key Measures of Power</b>				
Cost Competitiveness	Weak	-0.6	7	→
Markets & Financial Center	Weak	-0.6	9	→
Military Strength	Weak	-0.8	10	→
Economic Output	Weak	-0.9	10	↘
Education	Weak	-0.9	10	→
Innovation & Technology	Weak	-1.0	10	↘
Trade	Weak	-0.9	11	→
Reserve Currency Status				
<b>Additional Measures of Power</b>				
Geology	Weak	-0.6	8	→
Infrastructure & Investment	Weak	-0.6	9	↘
Governance/Rule of Law	Weak	-0.7	9	↘
Character/Determination/Civility	Weak	-1.0	9	→
Resource-Allocation Efficiency	Weak	-1.6	11	↘
Acts of Nature	Weak	-0.7	10	

➤ Getting better   ➤ Getting worse   ➔ Flat

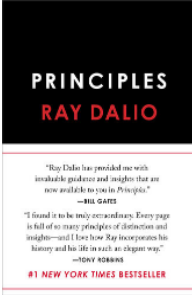
**Internal disorder is a moderate risk.** Wealth, income, and values gaps are typical. Regarding inequality, the top 1 percent and top 10 percent in Spain capture 12 percent and 34 percent of income (respectively the seventh and eighth highest shares across major countries). Our internal conflict gauge is average. This gauge measures actual conflict events (e.g., protests), political conflict (e.g., partisanship), and general discontent (based on surveys).

**Looking in more detail at the eight key measures of power, we would call out its relative unimportance to global trade and its bad reading on innovation and technology.** Spain accounts for just 2 percent of global exports. With innovation and technology, small shares of global patent applications (less than 1 percent), global R&D spending (1 percent), and global researchers (1 percent) are in Spain.

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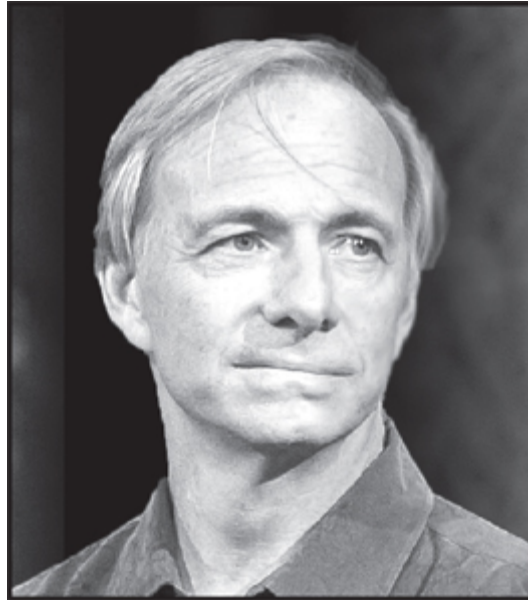
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## ABOUT THE AUTHOR



Ray Dalio has been a global macro investor for nearly 50 years. He is the founder and co-CIO of Bridgewater Associates, an industry-leading institutional investment firm that is the largest hedge fund in the world.

Dalio grew up a very ordinary middle-class kid on Long Island, started investing when he was 12 years old, created Bridgewater out of his two-bedroom apartment when he was 26, and grew it into what *Fortune* assessed to be the fifth most important private company in the US. In the process, he became an advisor to top policy makers, which led *TIME* to name him one of the “100 Most Influential People in the World.” *CIO* and *Wired* have called him “the Steve Jobs of investing” for his uniquely inventive and industry-changing way of thinking. He has also been named by *Forbes* as one of the 50 most generous philanthropists in the US.

In 2017, he decided to pass along the principles behind his success in a series of books and animated videos. His book *Principles: Life and Work* was a No. 1 *New York Times* Best Seller and No. 1 Amazon business book of the year, has sold more than 3 million copies worldwide, and has been translated into over 30

languages. His 30-minute animated YouTube videos “How the Economic Machine Works” and “Principles for Success” have together been watched more than 100 million times, and his book *Principles for Navigating Big Debt Crises* was well-received by economists, policy makers, and investors.

In this new book, *Principles for Dealing with the Changing World Order*, Dalio applies his unique way of seeing the world to studying the rises and falls of great reserve currency empires. His hope is that the model shared in these pages will help readers prepare for the changing times ahead.

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# GLOSSARY OF TERMS

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## Countries

ARG	Argentina
BEL	Belgium
BRZ	Brazil
CAN	Canada
CHE	Switzerland
CHI	Chile
CHN	China
COL	Colombia
CZK	Czech Republic
DEU	Germany
ESP	Spain
EUR	Euroland
FRA	France
GBR (or UK)	United Kingdom
GRC	Greece
HUN	Hungary
IDR	

	Indonesia
IND	India
ITA	Italy
JPN	Japan
MEX	Mexico
NLD	Netherlands
NOR	Norway
PLD	Poland
PRT	Portugal
RUS	Russia
SAF	South Africa
SGP	Singapore
SWE	Sweden
TLD	Thailand
TUR	Turkey
USA (or US)	United States
WLD	World

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**Terms**

Adj	Adjusted
Ann	Annualized
Avg	Average
Bln	

	Billion
CB	Central bank
Chg	Change
Corp	Corporate
CPI	Consumer price index
Dutch EIC	Dutch East India Company
Est	Estimate
FX (or Spot FX)	Currency exchange rate
GDP	Gross domestic product
Govt	Government
Intl	International
Inv	Inverted
Log	Natural log
MA	Moving average
Mln	Million
Oz	Ounces
Pop	Population
PPM	Parts per million
PPP	Purchasing power parity
RGDP	Real (inflation-adjusted) gross domestic product
TWI	Trade-weighted index
Y (or Yr)	

Year	
Y/Y	Year-over-year change
\$	US dollars
£	British pounds
12mma	12-month moving average
60/40	Refers to a portfolio of 60 percent equities and 40 percent bonds
6mma	6-month moving average

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### **Currencies**

CNY	Chinese yuan
GBP	British pound sterling
Guilder	Dutch currency
Maravedi Coin	Spanish coin of 12th–19th centuries
USD	US dollar

**For definitions of commonly used economic terms, please see [economicprinciples.org](http://economicprinciples.org)**

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