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Looking Beyond the Abyss

Eight Scenarios on the Post-COVID-19 Business Landscape

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"(The virus) casts a harsh light on the competence and decency of superpowers. It has done the same on EU solidarity (or its absence), the effectiveness of states, the vulnerability of finance and the capacity for global co-operation."

*Martin Wolf, "The tragedy of two failing superpowers,"
Financial Times, March 30, 2020.*

"China's chief asset in its pursuit of global leadership – in the face of the coronavirus and more broadly – is the perceived inadequacy and inward focus of US policy."

Kurt Campbell and Rushi Doshi, "The coronavirus could reshape global order," Foreign Affairs, March 18, 2020.

"There are important qualitative changes under way in how policymakers manage the economy – the responsibilities they have seized for themselves, what is seen as a legitimate action and what is not, and the criteria used to judge policy success or failure. On these measures, the world is in the early stages of a revolution in economic policymaking."

"Building up the pillars of state," The Economist, March 28, 2020.

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Executive Summary

The coronavirus disease 2019 (COVID-19) pandemic has created a global health crisis. The distribution of the respiratory disease coincided with an unexpected oil price shock. Together and in tandem with the lockdown that governments have ordered to contain the spread of the coronavirus, the two incidents have produced an unprecedented global demobilization of the world economy. The demobilization occurred almost simultaneously around the globe, thus effectively limiting options to shift tasks from one region to another region in order to keep supply chains online.

Given the vehemence of this crisis, there is no way that governments or companies can continue implementing strategies and initiatives adopted prior to this shock bonanza. Everything will need to be adjusted in light of a crisis that the international community is still struggling to fully understand. Therefore, the goal of this paper is to provide corporate decision makers with guidance on a range of developments that could occur and their likely consequences. To this purpose, the paper presents a total of eight geo-economic and corporate scenarios.

Constructed along the two axes of international cooperation vs. international confrontation and strong vs. weak national ability to act, the geo-economic scenarios (Table 1) describe the broader geo-economic environment for future business activities:

- *Withdrawal to Isolation* results from a confrontative global environment and weak national abilities to act and describes a future in which most nations retreat from international activity as Sino-American antagonism grows exponentially and markets evolve tumultuously.
- *Hollow Victory* combines an international environment receptive for cooperation with nations that do not want to act. International

politics becomes largely symbolic without producing tangible outcomes. Corporate activities almost come to a standstill due to the lack of market-based incentives.

- In *Vibrant Cocooning*, nations are willing to act – sometimes assertively – but the overall mood is combative. Industrialized and emerging and developing nations increasingly diverge as BRICS nations set up an independent financial infrastructure and commodity suppliers join forces to offer preferential treatment to emerging nations only.
- *Unified Resolve* combines a strong willingness to act with a cooperative environment. *Unified Resolve* therefore thrives on a new-found global consensus to care and share critical health data. Global initiatives advance collaborative technology development, and some industries are temporarily run as cartels to stabilize prices.

The corporate scenarios (Table 2) look at the business environment. These scenarios are built along the two axes of resilient vs. imploding supply chains and strong vs. weak corporate financial power:

- In *Game Over*, weak financial power and imploding supply chains meet to produce a toxic mix in which corporate life falters. Substantial parts of the existing techno-industrial base would be lost. Low-tech companies could emerge as the ultimate winners, as simplicity is considered a new corporate strength.
- The combination of resilient supply chains and weak financial power could produce two different outcomes. *Potemkin* assumes that supply chains would remain intact, but corporate savviness would erode due to financial impotence. In contrast, *Baywatch* builds on the idea that resilient supply chains would cushion the negative consequences of the crises. These supply chains would throw a lifeline to the weaker supply chain partners and keep them alive.

		International Cooperation	
Weak (National) Ability to Act	Hollow Victory	Unified Resolve	Strong (National) Ability to Act
	Withdrawal to Isolation	Vibrant Cocooning	
		International Confrontation	

Hollow Victory

- International politics is on Prozac: Governments are tranquilized and lack any ambition for substantial international cooperation. National recovery programs absorb a lot of attention. Due to a lack of international coordination, recoveries diverge remarkably among nations, thus further undermining incentives to cooperate. Symbolic agreements prevail; the international atmosphere turns icy
- Everybody hopes the Chinese economic engine would lift up the world economy, but China's recovery falters, thus throwing the Asia-Pacific in a long and sustained recession. Initial activities to reorganize supply chains fail, thus increasing public debts, because governments financed much needed infrastructure development that could not be put to best use
- Markets lack incentives; innovation comes to a halt. Very low demand tumbles commodity-dependent countries into sustained crisis

Unified Resolve

- The political climate turns toward unified action and policy intervention based on communitarian ideas that put the provision of public goods center stage. Companies must lower prices for essential goods and advance workers' security
- In cooperation with the UN a new "Covid-19-Free-Certificate" is launched to expedite the return of people to work and to use virus-free workers to advance international economic cooperation
- What Bretton Woods was to the post-WWII economic order, the new Tuebingen Consensus is to the post-COVID19 world. A new global responsibility to care and share (critical health data) emerges
- To tackle human mankind's common challenges, global initiatives advance collaborative technology development. To stabilize prices, some industries are temporarily run as cartels. Financial technology companies in industrialized and emerging countries create a new digital currency

Withdrawal to Isolation

- Sino-American antagonism grows exponentially. The delivery of faulty Chinese medical products to the United States is considered an attack on U.S. national security, igniting a flurry of new sanctions against China. Overall, health care becomes a key national security concern and triggers a new wave of protectionism
- Domestic political problems in China grow stronger, as a second Covid-19 wave is underway and domestic recovery is choppy
- The EU sits uncomfortably between the two main antagonists; some EU members and admission candidates turn their back on the EU and forge new trade agreements with China, thereby violating EU trade law. Chinese investors also help fend off unfriendly M&A from U.S. companies in Europe
- Markets largely end up in turmoil; nationally critical companies are required to delist from stock markets

Vibrant Cocooning

- Industrialized nations cut back extended supply chains to advance security of supply. This aggravates the economic situation in many emerging markets. China steps in. Given its leading role in providing medical suppliers worldwide, Beijing launches the "Global Health Responsibility" initiative that makes the provision of aid contingent on vaccination. Western nations frown at the initiative, but countries in trouble bandwagon which China, which also uses the Belt and Road Initiative as a lifeline to provide health and economic aid
- BRICS nations launch a financial initiative to set up new financial infrastructure and digital payment systems decoupled from SWIFT
- With Commodity30 a new commodity producer cartel emerges that prioritizes preferential treatment of other emerging countries; industrialized countries need to pay higher market prices

Table 1: Geo-Economic Scenarios – Main Features

Resilient Supply Chains

Potemkin or Baywatch

- This scenario space is fuzzy and could lead to two different options.
- Although supply chains remain intact, corporate savviness will steadily atrophy due to financial impotence, thus leading to POTESKIN. In contrast, BAYWATCH assumes that resilient supply chains will cushion negative consequences of the crises by reorganizing tasks among supply chain partners. Resilient supply chains thus provide a lifeline for the weaker supply chain partners as corporate solidarity grows
- BAYWATCH could put increasing pressure on commodity markets, as commodity dependent companies could set up purchasing cartels that might be politically palatable in order to stabilize steady production output. POTESKIN, in contrast, could lower market transparency, as fragile companies will try their best not to reveal commodity purchase intentions so as not to reveal vulnerabilities originating from a lack of financial clout

Champion

- CHAMPION rewards corporate agility and accelerates collaborative initiatives among partners along and across supply chains
- There is a high level of flexibility that enables companies to instantly respond to crisis-related supply and demand volatility
- CHAMPION also benefits from the fact that corporate decision makers tame their appetite for unfriendly takeovers and mergers to the benefit of sustainable, long-term collaboration
- Because of the crisis, which highlighted the costs of dependence, more and more companies invest in new business models and products that advance self-sufficiency. This, in turn, reduces dependence on key commodities and reduces commodity costs

Game Over

- As corporate supply chains falter and companies do not have the financial means to reorganize them, more and more companies go out of business; big companies cannot stabilize supply chains
- GAME OVER implies that substantial parts of the existing techno-industrial supply base will be lost, perhaps forever. This comes with serious costs for nations that have so far enjoyed technology advantages over competitors
- As demand is imploding, so will commodity markets and prices. The level of technological sophistication and maturity will decrease
- Low-tech companies that control large parts of the supply chain could turn out to be the winners in GAME OVER, as simplicity is considered a new corporate advantage

Strategic Opportunity

- STRATEGIC OPPORTUNITY is not really about innovation but about defending the status quo and crowding out competitors by those that can afford to buy their way out of the crisis thus igniting a flurry of corporate takeovers
- Corporate behemoths reinforce their dominant market position along the supply chain and increase market concentration
- Export controls could create incentives for technology substitution
- Commodity producers and technology-intensive companies are likely to advance their market position, which will drive prices up and strengthen existing cartels and monopolies

Weak Financial Power

Strong Financial Power

Imploding Supply Chains

Table 2: Corporate Scenarios – Main Features

- Strong financial power in combination with imploding supply chains creates *Strategic Opportunity*. Corporate takeovers by the behemoths would flourish, and commodity producers and technology-intensive companies would likely expand their footprint.
- Finally, *Champion* would prevail in an environment where resilient supply chains meet strong financial power. This scenario would reward corporate agility and accelerate cooperation among supply chain partners. The COVID-19 crisis would lead companies to acknowledge the vulnerability of current approaches to supply chain management, which could be replaced by more robust business models and increased levels of self-sufficiency.

Geo-economically speaking, one of the most feasible outcomes out of the COVID-19 crisis is *Vibrant Cocooning*. The odds seem to be in favor of this outcome, in particular given the strategic antagonism between the United States and China, which has not abated during the crisis. Although few decision makers would probably like it, *Friendly Disinterest* is in a way the stepsister or stepbrother of *Vibrant Cocooning* and could even accelerate the trajectory towards this scenario. *Friendly Disinterest* could emanate from growing problems inside the EU, as COVID-19 has laid bare the fundamental differences between some of its members. Disagreements among members of the transatlantic community further complicate things. Thus, it is most likely that COVID-19 will serve as a catalyst of many trends that were already in full swing prior to the pandemic. Although *Champion* would be the corporate best-case scenario, *Strategic Opportunity* seems closer to current corporate realities, in particular as the world grows smaller¹ due to developments towards gradual deglobalization, decoupling, and global supply chains. Corporate leaders operating at lower levels of strategic ambition might find *Baywatch* attractive. But it might be easier to transition from

Strategic Opportunity to *Baywatch* than the other way around, given that the former assumes a significant amount of financial fire power.

Overall, the scenarios discussed in this paper suggest that the COVID-19 pandemic should be expected to significantly alter the future corporate landscape and thus also strategic priorities. As the Conclusions will discuss, corporate decision makers should pay increasing attention to the ongoing debate about economic security, a concept that emphasizes the interplay between national security, economic policy, technology, and innovation. Whereas the economic security debate has so far focused on competitiveness amid a growing geo-economic antagonism between the United States, Europe, and China, the post-COVID-19 debate could be dominated by security of supply. In this regard, four trends should be closely followed:

- Politicians will ask companies to become more resilient, but there is a risk that resilience will turn into a scapegoat for increased protectionism, undermining corporate innovation.
- Resilience is also likely to reinforce the debate about strategic industries and strategic technologies. Both concepts provide immense discretionary leeway, as accepted definitions are lacking. In addition, governments are likely to wield a robust regulatory hand when it comes to strategic industries and strategic technologies. Corporate leaders should look into the defense sector – where governments set the regulatory regime, are the main clients, set product requirements, provide key sources of funding, and decide what technology is accepted – as a harbinger of things to come.
- The rhetoric on Big Tech could move from a more critical standpoint emphasizing privacy and anti-trust issues to a more supportive attitude, as Big Tech companies are important to overcoming economic demobilization by digitization and because the

1 Menon, "This pandemic can serve a useful purpose."

financial power of some Big Tech companies could be interpreted as a systemic stabilizer.

- Finally, supply chain management will become even more challenging, as it will trigger heated debates on *Ordnungspolitik*, the basic tenants of economic and fiscal policy. The discussion on reorganizing supply chains in light of COVID-19 thus needs to be embedded in a broad policy debate about what kind of dependence nations are willing to accept in order to ensure economic security. This will require a new kind of public-private policy dialogue for which most countries lack the concepts and the required institutions.

Shock Bonanza Triggers Instant Demobilization

Future history books are likely to describe the first quarter of 2020 as an exceptional period. Although world history has seen many crises, the concurrent emergence of two major unexpected events in combination with existing systemic vulnerabilities of the international system has created a unique shock bonanza that is hard to contain. Unlike the global financial crisis of 2008-2009, this time the shock emerged in the real economy and quickly infected financial markets.²

The major catalyst for this dramatic situation is COVID-19, a new respiratory disease caused by a novel coronavirus that originated in China and led to a global pandemic. COVID-19 has triggered a global health crisis and has prompted governments to take recourse to draconic measures that cut into everyday life. At the time of writing this paper, close to 1.5 million people have been infected and over 80,000 people have died due to COVID-19.³ Despite the vehemence of COVID-19 and its consequences, forward-looking national security documents like the 2003 European Security Strategy or the Global Trends 2025 study published by the chairman of the U.S. National Intelligence Council in 2008,⁴ have been warning of the strategic impact of global pandemics and diseases for years. Nonetheless, the outbreak of

COVID-19 made it amply clear that only few countries were really prepared to deal this challenge, and most national health systems are underfunded, underequipped, and understaffed.

The second catalyst is the oil price shock caused by the breakup of the OPEC+ agreement on production rates and oil prices. Speculations are abounding on why the breakup between Russia and Saudi Arabia emerged in early March 2020, with analysts pointing to domestic motives, the willingness to exploit global market uncertainties, a desire to change the dynamics of oil markets and drive U.S. shale competitors out of business, and attempts to prevent each other's striving for dominance.⁵

As a result, both catalysts and the global lockdown, which governments have ordered to contain the spread of the pandemic, have provoked an instate global demobilization of historic dimensions:

- 45% of scheduled Asia-Europe containership sailings were cancelled in the 4 weeks following the onset of the Lunar New Year holiday. 60% of the weekly containership sailings from Asia-Europe/US were cancelled in the first three weeks of February⁶
- Iron ore spot cargoes fixed for China plummeted to 38 cargoes in February 2020, down from 62 in the same period in 2019. Concurrently, earnings for Very Large Crude Carriers transporting oil from the Gulf countries to China dropped from \$103,052 per day in early January 2020 to \$18,326 on February 18, 2020.⁷

2 Trivedi/Pandli, "Conditions for a market through," 14.

3 <https://gisanddata.maps.arcgis.com/apps/opsdashboard/index.html#/bda7594740fd40299423467b48e9ecf6>.

4 "A secure Europe in a better world," 325; *Global Trends 2025*, 75.

5 Fattouh/Economou, *Oil supply shock in the time of the coronavirus*; Jaffe/Hasaj, "Oil price war: is US shale the first to blink?"; Rakov/Guzansky/Fadlon, *The economic-political struggle behind the energy market crash*; Sim, "The oil price war of 2020;" Suchkov, "Russia hoping to outdo Saudis over time in coronavirus-hit oil market."

6 Currie, "The physical realities of disruption", 13. On April 12, 2020, a new deal was announced. As of May 1, 2020, OPEC+ will cut oil production by 9.7m barrels a day. After June 2020 the cut will lowered to 7.6 million a day until the end of 2020 and then to 5.6 million from January 2021 to April 2022. See: Blas/El Wardany/Smith, "Oil price war ends with historic OPEC+ deal to cut output."

7 Sand, "Global shipping holds its breath as the coronavirus continues to spread." Very Large Crude Carrier transport from the Gulf to China also suffered because of U.S. sanctions against China COSCO Shipping Energy. For more on this, see Isirovic/Meidan, *Sanctions, Shipping, and Oil Markets*.

- By the end of March 2020, international passenger arrivals at the five biggest American airports were down by at least 30%. At the same time, the global airline seat capacity has been slashed from around 106 million to 49 million, more or less halving global seat capacity. In total, the COVID-19 pandemic could cut the air transport industry's 2020 revenues by \$252bn, or around 44% compared to 2019.⁸
- According to the International Energy Agency, COVID-19 has cut global oil demand by around 1.1m barrel/day, which suggests that global year-on-year oil demand is falling for the first time since 2009.⁹

Demobilization has an immediate impact on consumption and production, thus producing concurrent demand and supply shocks. Initial estimates that have become available by early April 2020 suggest that the fallout will be stunning:

- From mid-February 2020 to approximately mid-March 2020 the virus destroyed \$23trn in global market value.¹⁰
- The pandemic could "rob the global economy of more than \$5trn of growth over the next two years," and global trade could fall between 13% and 32% in 2020.¹¹
- *The Economist* suggests that 40% of consumer spending in advanced economies is vulnerable to people avoiding social situations. In the United States alone, domestic consumption makes up 70% of GDP.¹²

- Morgan Stanley estimated that GDP in the euro area will fall by an astonishing 12% year-on-year in the second quarter of 2020.¹³
- In early April 2020 the shutdown in the United States led to a daily loss of output of \$2.8bn in California. Fifteen states that account for 70% of the US daily GDP lost \$12.5bn on a daily basis.¹⁴
- The automotive industry, which depends on tightly knit and extended supply chains, has been hit hard. Germany's Volkswagen is reportedly losing €2bn a week, and the global industry could lose around \$100bn in revenues should factories in Europe and North America "remain closed until the end of April."¹⁵

In response to these dire economic prospects, governments around the world have launched major fiscal and monetary responses (see Table 3). But these responses need to be seen in context with the underlying systemic vulnerabilities of the international system exposed by COVID-19 and the oil price shocks. Two aspects are most important and will be reflected in the following scenarios.

First, **China's role will be fundamentally different** from that in the global financial crisis 2008-2009. Then, China played a major role in the global recovery, because at the time the country was in full swing to advance its integration into the global economy. Today, China accounts for around 20% of global GDP¹⁶ and has achieved a much deeper economic integration, which explains why the fall in China's domestic demand has global repercussions and why faltering economic demand in other countries will likely cushion the effect that a swift Chinese recovery might have. In addition, China's current fiscal leeway is narrower

8 "Experimental treatment," 18; Grant, "Coronavirus update week eleven: 30% of global capacity wiped out in one week;" "Great white night," 51.

9 The International Energy Agency assumes that oil demand could rebound to normal levels in the second half of 2020. See: *Oil Market Report: March 2020*.

10 "COVID carnage," 53.

11 Goodman, "World economy faces \$5 trillion hit that is like losing Japan;" "Trade set to plunge as Covid-19 pandemic upends global economy."

12 "Experimental treatment," 19; "Reassessing the global economic fallout from Covid-19."

13 "Experimental treatment," 18.

14 Mitchel, "State coronavirus shutdowns have taken 29% of US economy offline."

15 "Great white night," 51; Campbell, "Carmakers face more than \$100bn hit to revenues."

16 Based on purchasing power parity. See: https://www.imf.org/external/datamapper/PPPSH@WEO/OEMDC/ADVEC/WEO_WORLD/CHN.

Western companies used the low interest rate environment to balloon corporate debts. In Russia, companies paid down debts since international sanction started in 2014

structure projects to build" than in the past, which prompts the interesting question as to what extent China will continue to keep up the momentum on the Belt and Road Initiative. This question is all the more pertinent as China's outbound investment activities have been gradually decreasing since 2016 as a result of tougher national restrictions limiting capital outflows and stepped up efforts in recipient countries to scrutinize Chinese investments.¹⁸

China is also illustrative of the second major systemic vulnerability, which is the **growing indebtedness of governments and companies**. According to the latest IMF statistics, the level of debt has achieved close to 104% of the Gross Domestic Product (GDP) in advance economies and 85% in emerging markets and developing economies. Whereas Russia (17.7%) and Saudi Arabia (28.4%) enjoy low levels of debt, the situation is fundamentally different for Singapore (108%), Italy (133.7%), or Japan (237.6%). Overall, the emergency packages adopted by countries affected by COVID-19 suggests that "a new era of sovereign-debt management could be about to begin."¹⁹

than a decade ago when it "unleashed a 4 trillion yuan (\$563 billion) to shore up what was then a much smaller economy."¹⁷ Given the development that has taken place since then, there are also "fewer infra-

- **Australia:** \$65bn payments to small businesses, subsidies to businesses, loans, and cash payments
- **Canada:** \$7.1 in loans to businesses
- **China:** Fiscal stimulus program pending
- **European Union:** €100bn support program of the European Commission to mitigate unemployment risks; €20bn investment program for small and medium-sized business by the European Investment Bank; €750bn Pandemic Emergency Purchase Program by the European Central Bank; European Commission has triggered the "escape clause" to allow exceptional fiscal support
- **Germany:** €750bn for cheap loans to companies, protection against insolvency, and help for self-employed workers
- **France:** €450bn to help small businesses and workers, state aid and support for companies
- **Japan:** Roughly \$20bn of small business loans
- **UK:** £350bn state-backed loans for companies; tax relief measures
- **Russia:** \$4bn fund to help the national economy
- **United States:** \$2trn Phase Three stimulus bill with direct cash payments, lending program to companies, federally guaranteed small business loans, expanded unemployment insurance, business tax cuts

Table 3: Overview of Selected Fiscal Emergency Measures in Response to COVID-19

Source: Alpert, "Government stimulus efforts to fight the COVID-19 crisis;" Bosoni, "In Europe, COVID-19 extends the tenure of fragile governments;" "COVID-19: EU coronavirus response."

Raising levels of debt have geo-economic repercussions. On the one hand, "emerging markets borrowed \$122.6bn through sovereign dollar-denominated bonds last year (...) up from \$63.3bn in 2009. Nearly \$24bn of sovereign emerging market dollar-denominated bonds are set

17 Meidan, "Geopolitical shifts and China's energy policy priorities," 3.

18 Hanemann/Rosen, "Buying the dip? China's outbound investment in 2020."

19 "How to pay for the pandemic," 67.

to mature this year. The dollar's recent rally has compounded worries about the sustainability of that debt."²⁰ On the other hand, corporate debt is raising, too, but there are significant differences: Western companies used the low interest rate environment to balloon corporate debts. U.S. firms, for example, account for roughly \$75trn of global corporate debt.²¹ Non-financial firms in the United States will also see "\$394bn in investment-grade debt and 87bn in junk debt fall due this year; the figures for next year are \$461bn and \$195bn."²² As a result, in mid-2019 total U.S. corporate debt was \$15.5trn, or 74% of U.S. GDP.²³ Among others, many U.S. companies have spent the past years funding share buybacks, which have reportedly reached a volume of \$4.6trn since 2012. This inflow of money was abruptly cut off by the crisis, as governments asked companies to suspend share buybacks if they received government support.²⁴ In Russia, in contrast, companies have paid down debts since international sanctions started in 2014, thus reducing combined government and foreign debt from \$713bn to \$445bn in early 2020.²⁵

20 Chilkoti/Ostroff, "Coronavirus pushes some emerging markets to brink of default."

21 The figure is for non-financial corporate debt. See: Gayed, "No longer a melt-up."

22 "COVID carnage," 53.

23 Rodriguez Valladares, "US Corporate debt continues to rise as do problem leveraged loans."

24 Richter, "Estimates about the collapse of share buybacks emerge."

25 Kramer, "Thanks to sanctions, Russia is cushioned from virus's economic shocks."

Constructing Scenarios

Constructing scenarios is one way to deal with uncertainty. The shock bonanza described in the preceding section produces a quintessential disruption. There is no way that governments or companies can keep up pre-COVID-19 strategies and initiatives. Everything will need to be adjusted in light of a crisis that the international community is still grappling with.

Therefore, the purpose of the scenarios presented in this paper is to provide guidance to corporate decision makers in view of alternative outcomes of the COVID-19 crisis. These scenarios are not forecasts. Rather, they emphasize different developments that could materialize.

It is important for business leaders to understand that the international politico-economic system was already on a path to significantly alter the business landscape prior to the COVID-19 outbreak. COVID-19 should be seen as a catalyst to this change process, as "pandemics are geopolitical chameleons, and their effects are masked by environments in which the arise."²⁶ That is why this paper provides two different sets of scenarios – one set looking at the geo-economic environment, the other set looking at the corporate level. These scenarios have been constructed along four different trajectories leading to eight²⁷ scenario spaces.

The **geo-economic scenarios** (Figure 1) describe the broader politico-economic environment in which companies could operate in the future. These scenarios have been constructed along two dimensions:

- The first dimension looks at the degree of international cooperation or confrontation. In a way, this is the default criterion from an international relations theory perspective, as most theories have been developed along this axis and are based on different worldviews.
- Building on the two-level game theory of international relations, the second dimension looks at the ability of national governments to act, which can be either strong or weak. This reflects the fact that the outcome of international negotiations very much depends on domestic factors, which in turn can be influenced by international developments.²⁸

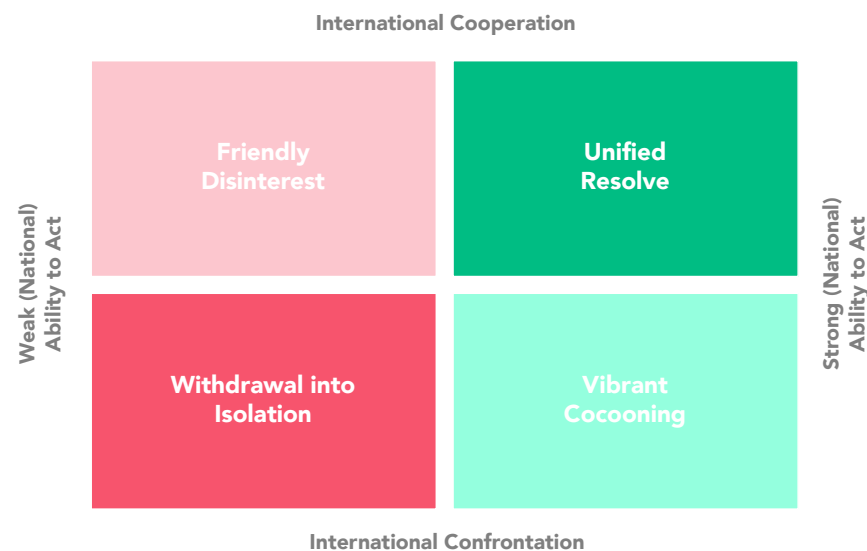


Figure 1: Four Geo-Economic Scenarios

26 Lyon, "Geopolitics in the time of corona."

27 In one case this paper presents two equally plausible development paths for one specific scenario.

28 See Putnam, "Diplomacy and domestic politics," 427-460.



Figure 2: Four Corporate Scenarios

The **corporate scenarios** (Figure 2) look at the immediate business environment. It is assumed that corporate readiness in dealing with the immediate and long-term challenges of COVID-19 is characterized by two aspects:

- The first dimension looks at the viability of corporate supply chains, which can be strong/vibrant or weak/imploding. This dimension is important, as it looks at the (global) embeddedness of individual companies. Corporate supply chains also constitute the center of gravity of the strategic competition that is currently unfolding at the politico-economic level.²⁹
- The second dimension looks at corporate financial power, ranging from strength to impotence. Financial power is an important

benchmark to assess the capability of companies to cushion immediate consequences and withstand medium to long-term fall-outs related to the COVID-19 shock. As *The Economist* recently pointed out, Microsoft, Apple, Facebook, Cisco Systems, and Alphabet are the five most resilient U.S. companies in terms of cost of insuring their debt against default, operating margins, cash buffers, and leverage.³⁰

In sum, these four trajectories combine systemic and actor-related aspects in order to capture the international dynamic at play:

- The vertical axis describing the international degree of cooperation or confrontation and the robustness of supply chains captures the systemic dimension along which the politico-economic and the corporate environment evolves.
- The horizontal axis describing the willingness to act, and the corporate financial power emphasizes key characteristics of the respective actors, i.e., governments at the geo-economic level and companies at the corporate level.

Based on these four trajectories, the scenarios are composed of different key factors. The selection of these key factors very much depends on the purpose for which the scenarios are used. This paper's primary motive is to shed light on the future business landscape and its interplay with the broader global politico-economic environment. That is why

- the geo-economic scenarios are based on great power relations, domestic stability, economic and trade policies, commodities and currencies, and national approaches towards technology, and

29 Borchert, *Flow control rewrites globalization*, 29-31.

30 "Best in show," 57.

- the corporate scenarios primarily look at the global macro environment, spending and investment, and the five forces of competition according to Michael Porter.³¹

In addition to these core elements, scenario building should also consider **wild cards**, i.e., unexpected events that could disrupt the scenario and the planning assumptions built on the basis of the scenario. Given the focus of this paper, domestic instability, supplier cartels, and the role of technology are three aspects worth mentioning.

Concerns about **domestic stability** are at the heart of the geo-economic scenarios, as domestic stability has an immediate influence on the willingness to act and the readiness to cooperate internationally. Growing instability could come to haunt several nations: The United States, for example, is entering a phase of uncertainty, given the economic fallout of the COVID-19 pandemic and the prospect of a national election producing a contested outcome, thus opening the possibility of sustained domestic paralysis.³² Whether China's Communist Party will be able to extend domestic control is not sure either, in particular as the party's economic leeway is much more limited these days than in 2008. Most importantly, "as the Chinese economic model falters, the party will find it harder to provide the privileges officials have come to expect."³³ India could plunge into a massive national health crisis³⁴ that could spill over into Pakistan, Bangladesh, and the Arab Gulf economies and might knock India out as a major player in the Indo-Pacific region. Sustained low oil prices could significantly reduce the market valuation of Saudi Aramco. This could create domestic challenges, as around 20% of the Saudi population has invested in the company.³⁵ In

addition, should Saudi Arabia postpone the 2020 Hajj, competitors might utilize that decision to question the country's legitimacy as the custodian of the two holy mosques.³⁶ Subdued commodity prices would also pose a major challenge for Nigeria; 60% of the country's 2018 natural gas exports were destined for China, India, Japan, South Korea, France, Spain, and Turkey, which could all experience protracted economic recovery.³⁷ Finally, domestic stability is a major issue for the European Union, where the crisis aggravates historical differences over debt mutualization and the lack of solidarity among member states.³⁸

How **suppliers organize themselves** in order to maximize their market position – or any other strategic goal as discussed in the scenario *Unified Resolve*, for example – is of tremendous importance for the geo-economic and corporate scenarios. Cartels have been a long-time feature of economic activities. Antitrust law is critical of cartels, because they tend to increase prices, cement the dominating role of a limited number of companies, and can thus undercut innovation. A pandemic like COVID-19, however, could give rise to a different narrative. Cartels provide stability, and stability is what societies might want after long and sustained period of crisis. A scenario like *Unified Resolve* implicitly alludes to the possibility that societies might be willing to accept higher prices in return for uninterrupted security of supply. However, once you accept the logic of this argument, say, in the pharmaceutical industry, how could politicians refute the same argument in the energy industry or in logistics? The way in which the parameters are set for the frame about (supplier) cartels very much determines the thinking about risks and benefits and thus influences their geo-economic and corporate significance.

31 Porter's five forces of competition include industry rivalry, threat of new entrants, threat of substitutes, bargaining power of suppliers, and bargaining power of Buyers. See: Porter, "How competitive forces shape strategy."

32 Bremmer/Kupchan, *Top Risks 2020*, 3-5.

33 Pei, "China's coming upheaval."

34 Clarke, "The geopolitical effects of the Covid-19 crisis;" Krishnan, "Coronavirus threatens catastrophe in India."

35 Sim, "The oil price war of 2020."

36 It is therefore more than telling that press reports already highlight the fact that "annual Islamic pilgrimage has a history of disruptions and cancellations going back centuries." See: Al-Kinani, "If Saudi Arabia is forced to put the Hajj on hold, it will not be without precedent."

37 *World Gas and Renewables Review 2019*, 40-41.

38 Johnson/Fleming/Chazan, "Coronavirus: Is Europe losing Italy?"

Finally, uncertainty related to the **technology domain** originates mainly from two factors.³⁹ The first factor is the question of societal technology acceptance, which plays a role in all four geo-economic scenarios and would be most prominent for *Vibrant Cocooning* and *Unified Resolve*. It is not too difficult to imagine that citizens might agree on a

The irony is that a push for more digitization could lead into a full-scale digital trap as the current geo-economic environment no longer provides the basis for deeply integrated cross-regional digital corporate ecosystems

certain level of technology surveillance in times like the COVID-19 pandemic if this provided them with incentives such as the opportunity to go back to work, to travel more freely, or to benefit from special medical treatment. China, which is a big player in

producing pharmaceuticals and telecommunications, could feel tempted to start offering "integrated solutions" that combine these aspects. If China pushed international standards for such a "unified approach," it could change market incentives and influence societal attitudes. *Vibrant Cocooning* provides the blueprint for this outcome. As to the second factor, companies and nations are discussing the added value of deepening levels of digitization to overcome economic and societal demobilization. The irony is that this push for more digitization could lead into a full-scale digital trap: Today's geo-economic environment no longer provides the basis for deeply integrated cross-regional digital corporate ecosystems, as countries/regions want to set up individual data standards and emphasize national digital solutions in order to gain and defend competitive advantages. Thus, the big question is how to digitize without further increasing the dependence on partners that follow diverging strategic ambitions.

39 Regulatory aspects constitute a potential third trajectory, but this paper assumes that technology is likely to be a major priority for regulation, given the geoeconomic antagonism that predates the COVID-19 pandemic.

Geo-Economic Scenarios

Withdrawal to Isolation

The COVID-19 pandemic had drastically intensified the strategic competition between the United States and China. Mutual accusations about doctoring the figures of COVID-19 victims and disinformation about the true origin of the pandemic led to a "war of words" between Washington and Beijing.⁴⁰ As the situation in the United States grew worse, the president's reelection was in danger. He felt tempted to improve his domestic approval ratings by showing resolute force vis-à-vis China. He declared that China had violated the Phase 1 deal and did not live up to its promises of purchasing more U.S. goods. As a consequence, the U.S. administration stepped up sanctions against Chinese banks playing a key role in the Belt and Road Initiative.

Europe's "soft power" brand was also significantly tarnished, as its lack of preparedness contributed greatly to the global spread of the pandemic. As an early report indicated, "travel from and within Europe preceded the first coronavirus cases in at least 93 countries." Frequent interaction with leaders in Africa proved especially problematic for the continent, as a "single event in London attended by Prince Charles and Prince Albert II of Monaco created possible clusters in at least two African countries."⁴¹ Social distancing turned into diplomatic distancing,

as more and more countries were worried about interlocking with Europe, thus accelerating trends toward national self-isolation.

Problems with medical equipment deliveries from China were considered an assault on U.S. national security. Therefore, major Chinese manufacturers of medical equipment and logistics companies became the subject of primary and secondary sanctions by the United States, effectively blocking them from being able to serve foreign clients.

Raising doubts about the reliability of COVID-19 data undermined global trust in governments.⁴² Trust was further undermined by the fact that a 2019 plan by the World Health Organization on how to respond to a pandemic had been totally ignored by nations, as "not a single major country followed the guidance."⁴³ In this situation the attempt by the United States to seize medical assets in other countries served to catalyze mutual suspicion.⁴⁴ More and more nations came to consider health technologies as the next frontline in global geotechnology competition, thus mutually shutting off critical health care research projects and labeling health tech a national critical technology to be regulated by strict export control.

Social distancing turned into diplomatic distancing thus accelerating trends toward national self-isolation

The withdrawal of large private donors toppled the global health care system into a sustained crisis. Health care became a key national security concern and triggered further waves of protectionism. The global health situation deteriorated drastically, as countries increasingly developed a hostile attitude towards supporting each other and

40 Washams/Jacobs, "China concealed extent of virus outbreak, US intelligence says; Boxwell, "The blame game: the origins of Covid-19 and the anatomy of a fake news story."

41 Penney, "Coronavirus started in China, but Europe became the hub for its global spread."

42 Benvenuti, "The coronavirus tests the limits of international law," 3, "Herszenhorn/Wheaton, "How Europe failed the coronavirus test."

43 Wright, "Stretching the international order to its breaking point."

44 In March 2020, reports about attempts of the U.S. administration to take over CureVac, a German biopharmaceutical company, with the goal to develop COVID-19 vaccine only for the United States caused uproar. See for example: "Coronavirus: anger in Germany at report Trump seeking exclusive vaccine deal."

declined to treat foreign patients. As some of the nations in trouble harbored international refugee camps, regional stability deteriorated further. Refugees tried to flee to safety, "leading local populations or authorities to react forcefully to contain them," thus increasing levels of violence.⁴⁵

The Chinese government also came under massive domestic pressure. The situation grew almost out of control when over summer 2020 evidence was growing that a second wave of COVID-19 outbreaks was underway. Local public authorities were accused of a large-scale cover-

Leading Chinese investment funds stepped in to fend off U.S. investors in Europe

up that shook the Chinese Communist Party and called into question the authority of President Xi Jinping.⁴⁶ Developments were on the verge of boiling, because the Chinese government's financial and economic leeway was very limited. The promise of a fast economic recovery that the government sold to the population did not materialize, because the international economic climate deteriorated significantly and kept Chinese exports at bay.

As the Sino-American antagonism grew stronger, members of the European Union were in an increasingly uncomfortable position. Not able to stabilize the Union after the COVID-19 outbreak, some EU members and several admission candidates turned their back on the Union and reached out to China not only for immediate emergency support but also for long-term economic cooperation. This triggered several legal claims for violations of EU trade policy, but the states in question argued that the lack of solidarity among EU members could be considered a threat to national security and public order, justifying exceptional measures under exceptional circumstances.

Overall, economic and trade policies became significantly more assertive, also because the World Trade Organization (WTO) was rendered ineffective due to the stalemate between leading member states.

45 *COVID-19 and conflict*, 5.

46 Pei, "China's coming upheaval".

However, most countries did not have the financial fire power to support companies coming under pressure due to the increasing levels of protectionism. A significant number of important companies went out of business, but others became much sought-after objects of unfriendly takeovers by corporate foreign raiders. The spat between the United States and China also turned into a US-EU spat, as unfriendly takeover approaches by U.S. companies in Europe significantly increased. As some EU countries turned to China for help, leading Chinese investment funds stepped in to fend off U.S. investors in Europe, thus triggering retaliatory measures by the U.S. administration.

Markets largely ended up in turmoil. The sustained up and down in the real economy took its toll on corporate valuations, because it became close to impossible to provide investors with steady earnings outlooks. Corporate ratings were downgraded significantly, and some governments required nationally critical companies to delist from stock exchanges in order to stabilize national economies. Things got even worse as leading sovereign wealth funds pulled hundreds of billions from international markets in order to support national economies.⁴⁷ Several attempts to challenge the dollar's leading role were launched but did not materialize because of the lack of political coherence among the status quo challengers and the lack of alternative growth perspectives that could have provided an incentive to prop of different currencies. Traditional safe haven currencies like the Swiss franc and Japan's yen grew stronger, thus putting additional strain on the respective economies. Commodity markets evolved unevenly, thus hampering in particular the financial leeway of commodity-dependent governments.

Friendly Disinterest

Fighting the COVID-19 outbreak was more difficult than expected. The problem was that many governments gave in too quickly to demands

47 See, for example: Martin/Parasie, "Gulf sovereign funds seen shedding \$300 billion in market mayhem."

to ease the economic lockdown when infection rates started to stabilize. Shortly thereafter global traffic gradually reemerged, but this contributed to two additional COVID-19 waves in 2020. As everybody had believed the worst was over, the fallback had a massive negative psychological effect.

As of this point, "international politics was on Prozac," as one analyst put it because most governments were tranquilized. The international political climate did not fall back on antagonism, but there was a general lack of appetite to launch joint international initiatives. Everybody was preoccupied with getting national recovery programs back on their feet, but recovery was extremely weak, because fiscal and monetary action was withdrawn too quickly.⁴⁸ This further deepened choppy growth paths, with severe negative effects for industries most affected by the global economic lockdown. As a consequence, recovery diverged remarkably from country to country and between industry sectors. Whereas manufacturing came back online relatively quickly, the service sector, which played a key role in many industrialized countries, struggled for a much longer period of time.⁴⁹

The fact that videoconferences among world leaders became common practice during the crises also led leaders to continue this practice as the pandemic came under control. However, more frequent online gatherings among state leaders did not advance common understanding. Instead, the lack of direct personal interaction seemed to make things more difficult over time, as social distancing took a toll on personal bonds. More and more often reports leaked to the press suggested that meetings took place in an icy atmosphere,⁵⁰ with several leaders going offline whenever they thought the discussion would take a direction they could not support or did not like. This started to erode

consensus and evoked the impression that international cooperation was hollowed out.

State leaders managed to stick to the lowest common denominators in their statements, and these agreements lacked tangible outcomes that mattered most to citizens and company leaders. As a result, domestic impatience grew stronger. This also advanced political instability, in particular in Europe. There was sustained disagreement among key EU member states on how to best provide financial aid for members that suffered the most from the COVID-19 outbreak. Many of the most embattled nations did not have enough financial leeway, and structural reforms that predated the COVID-19 crises were delayed.⁵¹ Regarding Italy, for example, European leaders barely agreed on solutions to keep the country solvent, "but not enough to generate a substantial economic recovery or change its current political trajectory."⁵²

At the international level the situation was no different. Emerging nations suffered a major setback. Although the International Monetary Fund and World Bank provided \$1trn "in lending capacity to nations hamstrung by the pandemic,"⁵³ this was not enough. The problem was that developing nations' position on global financial markets worsened, thus limiting their options to get fresh money. Several analysts believed the situation was worse than in 2008, in particular as there was no

While state leaders managed to stick to the lowest common denominator in their statements, these agreements lacked tangible outcomes that mattered most to citizens and company leaders. Domestic impatience grew stronger

48 Odendahl/Springford, "The two economic stages of coronavirus," 1.

49 Odendahl/Springford, "Bold policies needed to counter the coronavirus recession," 3.

50 De Miguel/Cue, "'Do we have a deal, Pedro?': an inside look at the clash at EU coronavirus summit."

51 Bosoni, "In Europe, Covid-19 extends the tenure of fragile governments."

52 Scazzieri, "Trouble for the EU is brewing in coronavirus-hit Italy," 2.

53 Bartenstein/Maki/Gokoluk, "Wall Street veterans shun emerging markets after record rout."

sustainable solution in sight. Desperate attempts to print fresh money further deteriorated their financial position.

Sluggish economic growth became the new norm, because economic engines ran out of steam. This was most noteworthy for China, which faced the dual setback of limited financial flexibility due to a very high debt ratio and sluggish global demand, which limited China's exports. This worsened China's trade balance while imports rose, albeit not at the tempo witnessed in the past.⁵⁴ As China's economy grew flat, much of the Asia-Pacific region was following. Some nations initially benefited from companies moving to new locations in order to reshuffle supply chains, but given the global recession, these impulses were not strong enough to revive the region's economic growth. Even worse, some governments added additional debt to the pile because they provided upfront funding for infrastructure development projects meant to serve as a means to facilitate their companies' integration into global supply chains, which did not materialize as expected.

The Asia-Pacific region's accelerated downward trend was impacting industrialized countries and leading commodity exporters. Overall, energy prices remained bottomed, thus testing the financial stability of leading oil and gas exporters. Oil and gas demand by countries like China, South Korea, or Japan evaporated, thus putting leading exporters like the Arab Gulf nations, Australia, and Nigeria under increasing strain. Nigeria's weakness, in turn, aggravated the situation in Western Africa and increased the risk of further regional instability, which was likely to grow unchecked due to the lack of international commitment to find common solutions.

Against this background, global innovation almost came to a halt. Markets were lacking incentives for new products due to extremely low demand, and governments had a hard time providing funding for the state's core functions, thus cutting back on research spending. Companies likewise were on a global trend towards cost-cutting in order to produce simply what was needed.

54 Cheng, "Workers return to China's factories, but coronavirus hurts global demand."

Vibrant Cocooning

Global antagonism that was at play prior to the COVID-19 outbreak aggravated under *Vibrant Cocooning*, as the rift among transatlantic partners grew deeper. Unlike after the global financial crisis of 2008-2009, when the United States took the lead in organizing international help, this time global leadership was lacking. Coordinating economic emergency programs grew much more difficult this time, because priorities diverged and uncoordinated decisions on economic lockdown brought national economies out of sync.⁵⁵

European governments were largely absorbed with managing the consequences of the economic and financial aid packages that brought the Eurozone on the verge of collapsing. Europe's freedoms that constituted the bedrock of the Common Market for decades were in danger, as nationalist sentiments were on the rise. Several European governments recognized that dependence on outside partners to guarantee security of supply backfired badly. Many asked key national players in the medical, automotive, and information and communication sectors to relocate research and development as well as production back to Europe. Some nations even joined forces to set up a common fund to reduce industrial dependence on China by subsidizing supply chain reorganization.⁵⁶

Domestic populist forces grew stronger, blaming China for the outbreak and the fallout of the crisis. Hawkish non-government organizations pushed back, holding China legally responsible for China's failure to "provide open and transparent information" to the World Health Organization. The "Bring China to Justice" alliance garnered effective

China made it amply clear that aid and future economic cooperation are contingent upon embracing China's health prevention and vaccination program

55 Clarke, "The geopolitical effects of the Covid-19 crisis."

56 Gehrke, "Beyond Corona: Getting EU Economic Security Right," 4.

lobby support in Washington, DC and several European capitals. In particular, the alliance wanted to bring the leaders of China's Communist Party before the International Court of Justice. They also claimed reparation for economic damage incurred on Western states due to the emergency measures that needed to be more drastic than required, because China was late in providing full transparency about the COVID-19 outbreak. In addition, the alliance also demanded economic containment of China, in particular by suspending air travel and excluding China from the WTO.⁵⁷ The U.S. and European governments did not embrace the "Bring China to Justice" alliance and sought distance from its key leaders, but Beijing argued that governments were nonetheless colluding with the alliance. The activities of the alliance effectively broke down any existing channels of communication between China and the West and accelerated an assertive Chinese response.

China used its "edge in material assistance" – for example, its share of the U.S. antibiotics market was more than 95% – to respond vigorously.⁵⁸ In response to the "Bring China to Justice" alliance, Beijing pushed for the duty to vaccinate⁵⁹ as the key element of a new "Global Health Responsibility" initiative. This move, however, triggered major

The Commodity30, a group of leading commodity exporters, agreed on a new pricing model that gave priority to long-term contracts with preferential conditions for other emerging countries belonging to the Sino-Russian-led "economic bloc"

international controversy over the methods of determining who should be vaccinated and how vaccination should occur at all. This controversy had a divisive effect on international cooperation. China was the most vocal supporter of vaccination. The country

made it amply clear that aid and future economic cooperation were contingent upon embracing China's health prevention and vaccination program. Countries largely dependent on China prior to COVID-19 were supportive, whereas the United States and several European nations blocked this program, which was viewed as a new kind of "health imperialism."

In addition, China used the Belt and Road Initiative (BRI) as a lifeline in the true sense of the word.⁶⁰ Although air-cargo traffic was still operating, albeit at much lower frequency, Beijing used the train network to speed up health support to partner countries in Europe, Central Asia, and the Greater Middle East. As a result, China was more and more able to shield bilateral relations from outside interference and deepen mutual ties. This also resulted from the fact that BRI had increased the dependence of the partner countries on the Chinese economy, which recovered more strongly than Western markets. While China's growing influence via BRI was putting relations with peers under strain, Beijing was able to instrumentalize increasing pressure on the communications front.

Moscow supported China's new health initiative in order to get Beijing's agreement for a more fundamental financial challenge to the West. Russia managed to navigate the COVID-19 crisis and the economic fallout relatively well. In particular, Moscow benefited from changes in its financial policy that the Western sanctions since 2014 had brought about. In particular, Russia built new financial reserves "throughout the sanctions period by writing into its budget an artificially low estimate for the global price of oil. All tax profits above that level went into the national piggy bank."⁶¹

Seizing the trend towards growing "securitization of economic relations,"⁶² a consequence of the strategic competition between the United

57 For more on this, see: Kraska, "China is legally responsible for Covid-19 damage and claims could be in the trillions."

58 Campbell/Doshi, "The coronavirus could reshape global order."

59 I borrow this reference to the potentially controversial effect of vaccination from Michael Clarke, who argued that "it is possible that refusing a vaccine would be

regarded as socially irresponsible or even potentially criminal." See: Clarke, "The geopolitical effects of the Covid-19 crisis."

60 Shepard, "China's 'Health Silk Road' gets a boost from Covid-19."

61 Kramer, "Thanks to sanctions, Russia is cushioned from virus's economic shock."

62 Meidan, "Geopolitical shifts and China's energy policy priorities," 5.

States and China, Moscow tabled plans for a BRICS financial agenda. The agenda included the setup of new financial infrastructure to decouple the five nations from SWIFT. They also issued the BRICS Digital Credit Card that used technology developed in Russia as a result of the 2014 financial sanctions banning Russian banks from international credit card networks.⁶³ In addition, the BRICS nations were mulling plans for a digital currency backed by their central banks.

As a consequence of these developments, the United States, Europe, Russia, and China gradually decoupled. However, as the Sino-Russian-led "economic bloc" was perceived as more stable and vibrant, other regions shifted their strategic and economic priorities. Commodity-dependent nations in particular further deepened economic cooperation with this new center of economic gravity. Sustained economic difficulties of the transatlantic community accelerated additional change. Brazil was instrumental in forming the Commodity30, a group of the leading commodity exporters. The Commodity30 agreed on a new pricing model for different commodities. This new pricing model gave priority to long-term contracts with preferential conditions for other emerging countries belonging to the Sino-Russian-led "economic bloc." Whereas emerging countries benefited from price stability, Western nations were subject to market prices. Although Western commodity demand remained muted due to choppy economic recovery, commodity price volatility posed a serious challenge for Western companies

Unified Resolve

The COVID-19 outbreak was considered one of the darkest hours in recent human history. The global economic fallout was much worse than after the global financial crises of 2008-2009, in particular as several

63 Ogurtsova, "McDonald's first US business to accept Russia's new Mir payment card."

64 Steven/Evans, "Planning for the world after the coronavirus pandemic".

emerging countries were defaulting. In this extreme situation, moderate political voices prevailed and helped strike a new global consensus.

Under *Unified Resolve* the politico-economic environment changed drastically in favor of holding companies accountable to comply with socially accepted standards of behavior. The political climate drove forward communitarian ideas that heavily criticized economic and financial excesses of the past. As a consequence, the shared belief in collective action provided cover for drastic action to tame corporate activities.⁶⁴ A

new kind of political interventionism was less about ideological differences between authoritarian and capitalist ideas and more about focusing on a new social contract built on the idea of responsible action. As one leading economic magazine put it in the early

A new kind of political interventionism was less about ideological differences between authoritarian and capitalist ideas, but rather focused on a new social contract built around the idea of responsible action

days of the crisis, the new social contract pressed companies to "offer vital products for lower prices and to give workers more security."⁶⁵ As a consequence, competition based on efficiency and effectiveness gave rise to sustainability, long-term thinking, and responsible action.

Against this background, new ideas emerged. The countries hit hardest in the early days of the COVID-19 outbreak joined forces. They realized that people recovering from COVID-19 or people immune to the virus constituted a most valuable asset. With the support of the United Nations Development Program a global "COVID-19-Free Certificate"⁶⁶ was launched. The certificate functioned like a passport. People with the certificate were cleared to get back to work and to travel abroad. The new certificate was used to establish a global pool of certified workers that supported global development programs to help

65 "Best in show," 58.

66 This builds on the idea: Eichenberger/Hegselmann/Stadelmann, "Corona-Immunität als entscheidende Ressource."

emerging countries, cushioning the effects of the global crisis. Inside the European Union, the program provided special incentives for high technology companies to engage in mutual training programs to provide each other with critical manpower to overcome capacity bottlenecks.

The new "COVID-19-Free Certificate" was hailed as major success for innovative policy making at the intersection of health and economic policies. The successful new scheme also illustrated that national governments were willing to share sovereignty in health politics, which had previously been dominated by national decision-making. In this context, the European Commission grew into a more active role in coordinating international economic help to deal with the financial consequences of COVID-19.

Largely pushed aside by the EU member states in the first stage of the crisis, the Commission leadership increasingly emancipated itself from EU governments. A vivid supporter of the idea of "corona bonds" to advance financial solidarity among EU member states, the Commission pushed the international community to go for global bonds to orchestrate a global financial rescue package of unprecedented dimensions. Initially, this move caused rifts inside the EU, but the overwhelming support of the Southern EU members and leading emerging nations pushed this idea further. What Bretton Woods was to the post WWII economic order, Covid-19 became to the world after the global health crisis. The Tuebingen Consensus, named after the city that was home to Curevac, the German biotech company that the U.S. administration allegedly tried to take over in March 2020, defined a new global responsibility to share and care regarding health information exchange and taking care of societies. Private celebrity donors played an instrumental role in bringing the global health and NGO community behind the Tuebingen Consensus. The Bill and Melinda Gates Foundation also pushed for new ways to concurrently work on different vaccines in

order to fight COVID-19 and pave the way for a new spirit of collaborative health research.⁶⁷

Newly found consensus among the world's leading nations and non-state actors spilled over into other policy areas. Whereas technology remained a major element of national innovation, the zero-sum view on technology access and technology ownership that dominated prior to the COVID-19 outbreak was tamed. Collective acknowledgment of the mutual dependence on key technologies to advance global health, fight climate change, and feed a growing world population paved the way for more collaborative technology development. International financial institutions provided funds to beef up the science and technology base in emerging countries in Latin America and Africa to improve the respective nations' prospects to play a more important role in science and technology-dependent supply chains.

Some industries were temporarily run as cartels to advance common goods in order to stabilize prices and production as well as curbing financial excesses

Some industries were temporarily run as cartels⁶⁸ to advance common goods in order to stabilize prices and production as well as curb financial excesses. As a result, commodity markets came under closer public scrutiny in order to control prices. This, for example, pushed back oil prices and stabilized food prices.

The most far reaching consequences of *Unified Resolve* were witnessed in global financial policy, where interventions became the new norm. Taking up an idea from Mark Carney, former Governor of the Bank of England, several developed countries and emerging nations advanced a Synthetic Hegemonic Currency to provide a new digital currency through their network of central banks.⁶⁹ China, whose

67 Asher Hamilton, "Bill Gates is funding new factories for seven potential coronavirus vaccines, even though it will waste billions of dollars."

68 "Best in show," 58.

69 Carney, "The growing challenges for monetary policy in the current international monetary and financial system," p. 15.

national digital currency⁷⁰ provided much needed stability in the aftermath of the COVID-19 crisis, reached out to leading financial technology (Fin Tech) hubs like San Francisco, London, Sao Paolo, and Mumbai⁷¹ to push the idea forward. From the start, however, this new initiative was not promoted as a plan to dethrone the U.S. dollar but as a solution to advance the resilience of the global currency system. Washington remained skeptical of this approach but did not oppose it, as several U.S. Fin Tech companies had been involved, thus giving Washington a seat at the table.

70 For more on China's plans to introduce a digital currency backed by the Bank of China, see: *Digital yuan patent strategy*.

71 *The Global Fintech Index 2020*, 22.

Corporate Scenarios

Game Over

Game Over is fueled by the economic meltdown following COVID-19 and is thus all about corporate survival. As a result of COVID-19 and the oil price shock, for example, up to "70% of the (US) 6,000 oil explorers" could go out of business and "as many as 40% of US oil and gas companies could crater into bankruptcy or distress over the next two years."⁷² *Game Over* would change the global corporate pecking order and thus also relations among nations. In particular, nations that have benefited from strong technology-dependent companies could see their position atrophy if supply chains falter and companies run out of money. This could strengthen strategic competitors. In *Game Over*, technological modesty and limited reliance on commodities could turn out to become core strengths of any company and/or nation.

Spending and investment would be drastically cut in *Game Over* in order to reduce capital expenditure and provide companies with capital that is in short supply. These drastic cuts would likely impact corporate innovation in the medium-term, in particular if companies started cutting back on research and development and production capacities.

Game Over will not see supply chains being reorganized as part of a forward-looking corporate strategy, but supply chains could be adjusted in order to reduce dependence on vulnerable destinations and/or supply chain partners and to save money. This would come with the added risk of a dynamic downward spiral, as reductions would cut across supply chain partners and could bring cross-national

supply chains to their knees – a development currently underway in the automotive business, for example.⁷³

Industry rivalry under *Game Over* should be considered as elevating to high, as every company would strive to survive. If traditional supply chains are disrupted, individual companies – that can afford it – might look for alternative partners, thereby even considering teaming efforts with rivals or partners in other industry sectors, if expertise and/or technologies could be leveraged. In general, however, the lack of financial power would limit corporate leeway, thus aggravating existing competition.

As companies falter, the bargaining power of buyers could grow. To ensure minimum market shares, companies might be ready to compromise, which would cut further into their already limited financial reserves.

The situation for suppliers would be fuzzier. In principle, most suppliers could be expected to come under enormous pressure, as upstream partners would try everything to offload parts of the burden, whereas downstream partners would resist demands for concessions in order to save margins. Suppliers with strategically relevant niche products that matter even in a sustained economic downturn, however, could benefit, as their products continue to remain indispensable. But the current combination of the COVID-19 outbreak and the oil price shock implies that suppliers across all industries would have been hit by the same downturn, thereby providing only very limited freedom of maneuver to sidestep the negative consequences of *Game Over*.

In *Game Over* technological modesty and limited reliance on commodities could turn out to become core strengths of any company and/or nation

72 Carroll/Hill, "Oil's crash tips former titan of US shale into bankruptcy."

73 According to a recent HIS Markit study, automotive suppliers in Europe emerged as the region most impacted by the COVID-19 pandemic. Thus, more

than 50% of the respondents in Europe (Asia roughly 30%, Americas about 35%) are very much concerned about supply chain disruptions. See: *COVID-19 pandemic impact on automotive suppliers*, 2-3.

The downward spiral ignited by *Game Over* could cushion the threats emanating from new entrants due to the lack of corporate appetite to enter new markets or reorganize supply chains in ways characteristic of *Strategic Opportunity* or *Champion*. The threat of substitutes, in contrast, would be different. Replacing existing products with similar alternatives might still be easier than entering new markets. In addition, companies offering low-tech products that do not depend on sophisticated supply chains could turn out to be the winners in *Game Over*, as simplicity could be considered a new corporate advantage. Therefore, the threat of substitutes should be considered as elevated to high.

Potemkin or Baywatch

Assuming that corporate supply chains remain resilient, but companies operate on a weak financial basis leads to a fuzzy scenario space. That's why we discuss two scenarios here. Similar to the geo-economic scenario *Hollow Victory*, the corporate scenario *Potemkin* suggests that supply chains would remain intact. However, given financial impotence, corporate savviness would gradually atrophy and hollow out markets. In contrast, *Baywatch* assumes that supply chains serve as essential corporate lifelines and would be able to cushion negative consequences of the crisis. Depending on the robustness of supply chain partners, they could try to leverage their position, for example vis-à-vis suppliers to form new purchasing cartels or downstream vis-à-vis consumers by strengthening existing supply cartels. In a scenario like *Hollow Victory*, either type of cartel could help stabilize demand/supply and prices, thus inviting political support.

Spending and investment would be different in these two scenarios. *Potemkin* might only see limited amounts of investments to keep supply chains up and running. *Baywatch*, in contrast, might benefit from the fact that few critical supply chain partners would still have enough financial power to support others and stabilize supply chain

partnerships. This would provide limited opportunities to reorganize supply chains so as to best address the fallout from the economic crisis following COVID-19. Shrinking supply chains, which also requires money, would be a feasible option.⁷⁴ Depending on the overall geo-economic scenario, one could even imagine a situation where leading primes step in to take over stabilizing functions from government, thus contributing to the rewriting of the social contract as discussed under *Unified Resolve*.

Industry rivalry under *Potemkin* would likely be low to elevated, depending on the overall industry dynamic in the respective sectors. This situation would be most challenging, as companies might feel tempted to conceal the true state of financial affairs in order to evoke the impression of being able to operate as usual. This could be particularly true for companies originating from ambitious emerging markets, where corporate success is tightly coupled to the political success of ruling leaders. *Baywatch*, in contrast, would likely see elevated levels of industry rivalry. Although the focus would be on stabilizing supply chains, the support provided by financially strong partners would be contingent upon fulfilling specific requirements. Meeting these requirements would constitute the competitive element of *Baywatch*, as companies that do not meet the respective levels of performance could be excluded from the respective supply chains.

As both scenarios deal with a downward macro environment, the bargaining power of buyers would remain intact. In both cases buyers could be expected to levy elevated bargaining power, but in *Baywatch* companies might be better suited to deal with the respective demands.

The role of suppliers differs in the two scenarios. As *Potemkin* assumes a more dire financial situation for all companies, the bargaining

In Baywatch leading primes could step in to take over stabilizing functions from government

74 O'Neil, "Lower profits, but more stability".

power of single suppliers would be low to elevated, as they struggle as well. Companies in *Baywatch*, however, would have to deal with suppliers that could be financially more powerful. This would enable them to push back on the demands of primes or other supply chain partners. Overall, however, all companies would still share a joint interest in keeping supply chains alive, because cooperation would be considered the best option to recover from the COVID-19 crisis. Competition would thus be cautioned and not meant to ruin partners.

The threat of new market entrants would be limited for *Potemkin*, given the prevailing lack of financial power to fund and sustain new market entry strategies. *Baywatch* may be different, as some companies could consider the situation most favorable for launching (unfriendly) takeovers. Despite the limited appetite for expansion, that might be possible under *Baywatch*; potential buyers would be cautious enough not to ignite a negative market dynamic that could threaten the survival of the overall supply chain.

We expect to see a similar outcome regarding the threat of substitutes. *Potemkin* would likely be somewhat more challenging than *Game Over*, given the fact that supply chains remain intact. The situation would be slightly more challenging under *Baywatch*, in particular as competitors could feel tempted to enlarge market shares by rivaling each other's products.

Strategic Opportunity

The global macro environment for *Strategic Opportunity* is challenging, as most companies will have realized how vulnerable global supply chains have become. If and to what extent companies will have the appetite to continue the current just-in-time supply chain model⁷⁵ very much depends on the overall geo-economic environment, regulatory requirements, and corporate financial latitude. The latter suggests that *Strategic Opportunity* is likely to lead to "further concentration of

corporate power in the hand of a few superstar firms."⁷⁶ Commodity producers and tech-intensive companies could benefit by strengthening existing monopolies and cartels, which would suggest that the price level was unlikely to rise.

Spending and investment could be subdued for quite some time, as cost cutting programs are likely to dominate the corporate agenda. This would open the door for those companies that have the necessary financial fire power. *Strategic Opportunity* could thus see a number of selected takeovers by major companies willing to bolster their market position.

Rivalry within industry sectors can be considered elevated to high as soon as the immediate shock is over. The repositioning would be all about regaining competitive advantages. This could lead to supply chain reorganization, but the main purpose would be to bolster existing market positions rather than to advance new ideas for products and services. *Strategic Opportunity* is not really about innovation but about defending the status quo and crowding out competitors by those that can afford to buy their way out of the crisis. If the relocation of significant portions of corporate supply chains was to mature, industry rivalry could be intensified. However, this very much depends on the medium to long-term calculus of the costs and benefits of large-scale relocation. The immediate economic downturn following the COVID-19 breakout can be expected to strengthen the bargaining power of buyers.

The bargaining power of suppliers is likely to be mixed. In capital-intensive industries *Strategic Opportunity* could lead to increased upstream competition from suppliers that leverage their position vis-à-vis primes. This trend would be all the more visible the more the respective

State-owned enterprises or companies with sovereign wealth funds as their main investors could embark on a more assertive drive to broaden their footprint within and across supply chains

75 Garrett, "A dramatic new stage in global capitalism."

76 "COVID carnage," 55.

primes tumble, given the financial fallout of COVID-19. Companies operating at lower tiers of the supply chain empowered with financial agility could also be tempted to enter new industries by leveraging their expertise amid globally weakened supply chains. State-owned enterprises or companies with sovereign wealth funds as their main investors could embark on a more assertive drive to broaden their footprint within and across supply chains.

This could increase the threat of new market entrants. However, expanding corporate footprints across different industries might be risky amid the threat of a global recession, because this could lead to financial overstretch. One industry segment that should be followed closely is automation, as this is likely to become more important in view of relocating supply chains and making them more resilient. As automation is closely related to digital business processes, the benefits and risks in this market very much depend on the overall geo-economic attitude towards technology. The more that digital technologies become subject to export control restrictions, the more that digital automation is likely to come under pressure.

Export controls, in turn, could create incentives for technology substitution. Financially well-endowed companies could fend off this challenge, whereas their poorer cousins could become subjects of (unfriendly) takeovers. The threat of substitutes could also grow because of new demands for supply chain resilience and the need to expand local sourcing to the detriment of global outsourcing.

Champion

Champion is the toughest of all corporate scenarios. It assumes fully functioning supply chains as well as financially powerful companies. Right now, however, both assumptions are unlikely. That's why a direct transition from the current COVID-19 crisis into *Champion* is unlikely.

What makes *Champion* important as a scenario option is the fact that corporate recovery will be uneven across regions for the next couple of months, if not longer. In this regard *Champion* is similar to *Strategic*

Opportunity, as agile and financially well-endowed companies could go on a spending spree to broaden their footprint. In the medium term, however, this strategy could collide with resurgent supply chains of incumbent competitors, which suggests that industry rivalry under *Champion* would be high. Intense rivalry could challenge market leaders, in particular when companies know how to play the regulatory game.

As resilience is likely to be in high demand by politicians in the aftermath of the COVID-19 crisis, some companies could reach out to political decision makers to deter outside competitors. In so doing, they could argue that their approach to resilience is superior to others, which in turn means that their contribution to national security is more important or substantial. This would reinforce the national security argument and could put competitors that are being considered less agile and financially less powerful on the defensive. At the same time, this could also strengthen national cooperation among companies in order to be better prepared for supply interruptions. In addition to realigned supply chains, *Champion* could see companies investing in new business models and technology to reduce dependence on critical components such as raw materials. This could reduce commodity costs.

Should resilience become the overriding paradigm for *Champion*, long-term thinking rather than short-term profiteering as well as corporate collaboration to the benefit of public and private goods rather than narrowly defined corporate interests could become the norm. A "whole of companies" approach of this kind might be detrimental to the ambitions of foreign companies, in particular those originating from different cultural backgrounds.

As resilience is likely to be in high demand by politicians in the aftermath of the COVID-19 crisis, some companies could reach out to political decision makers to deter outside competitors

Under *Champion*, the bargaining power of buyers is likely to be elevated. Well-established companies would be in the driver's seat, and it is difficult to see how buyers could advance their position against them. If, as speculated, corporate social responsibility was redefined in view of resilience and national supply security, consumer organizations could play a role, but corporate agility would suggest that companies would be very quick in responding to their demands.

The same is likely to hold true for the bargaining power of suppliers. Agile supply chains imply that leading incumbent companies have enough alternatives to go for multi-sourcing, thereby reducing their dependence on single suppliers. Big financial pockets also suggest that companies could quickly offset price hikes resulting from a shortage of

Substitutes matching the resilience narrative should be interpreted as a serious threat

critical components. However, everything would depend on the nature of the industry sector. Long lead times for research and development or production can limit supply chain flexibility in the sense that commitments with existing partners would need to be terminated – perhaps in combination with financial penalties – if immediate switches to alternative sources were needed. In addition, regulatory requirements for testing and certification prior to market entry would further extend the lead time that companies need to take into account. In markets where these criteria prevail, single suppliers of very critical components could leverage their position vis-à-vis big market players even under *Champion*.

In this scenario companies are likely to face an elevated to high threat from new market entrants. In general, companies would have the flexibility to respond quickly. New market entries are related to prior investments by future competitors. Given the challenges that COVID-19 presents even to some of the most potent companies, incumbent rivals would most likely take note of early warning signals and could thus respond to the threat posed by new market entrants.

In contrast, the threat of substitutes might be higher. Although *Champion* would be a scenario that gives preference to innovation over imitation, imitation would be easier to achieve during and in the immediate aftermath of the COVID-19-related economic downturn. Substitutes could also match the resilience narrative developed above and should therefore be interpreted as a serious threat that even leading incumbents need to take into account.

Scenario Combinations

As argued in the opening section, this study presents different geo-economic and corporate scenarios in order to better understand what corporate leaders should prepare for in the post-COVID-19 business environment. Therefore, this section looks into the combined outcome of both scenarios sets (Table 4) and gives a brief comparative overview of the key characteristics of the competitive forces to be expected in each corporate scenario (Table 5).

Withdrawal to Isolation is the toughest geo-economic scenario, in the sense that it constitutes the most fundamental departure from today's geo-economic environment. *Game Over* and *Potemkin* would be very likely fits for this geo-economic scenario, because the overall lack of international political cooperation would go hand in hand with corporate fatigue. *Baywatch* is an unlikely candidate for *Withdrawal to Isolation*, because the reorganization of global supply chains that could occur in this corporate scenario would involve discussions with political stakeholders, in particular regarding relocation of substantial portions of supply chains. This would likely fall on deaf ears at the political level, however, given the introspection of domestic politics. *Strategic Opportunity* and *Champion* are the two corporate scenarios that provide the most unlikely fit with *Withdrawal to Isolation*, because the core assumptions are incompatible.

At first glance, *Friendly Disinterest* could provide the widest options space for corporate decision makers, but the main problem here is that decision makers will never know if politicians want to get seriously involved, as their ability to act is weakened. *Game Over* and *Potemkin* are logical fits for *Friendly Disinterest*, because in both cases political stakeholders will not have the power (or the will) to invest in substantial aid packages for business. Business would thus be mainly on its own. The corporate *Baywatch* scenario could be a viable option for

Friendly Disinterest, as powerful companies could step in and take over core functions from government. Unlike *Unified Resolve*, *Baywatch* in combination with *Friendly Disinterest* would focus on pure corporate survival rather than push a new corporate agenda to advance corporate social responsibility. *Friendly Disinterest* and *Strategic Opportunity* would be a likely fit, as the lack of coherent political action could create takeover opportunities for companies willing to broaden market share and/or entering new market segments. *Friendly Disinterest* and *Champion*, in contrast, are not compatible, as resilient supply chains require a functioning regulatory environment to deal with cross-national corporate interaction that does not exist under *Friendly Disinterest*.

Vibrant Cocooning provides a very challenging geo-economic environment, because it would overcome the idea of a global level playing field. Rather, *Vibrant Cocooning* describes a dynamic currently at play in international politics that would give precedence to regionalism over globalism. Political and economic decoupling is in the cards, as protectionism is rising. Neither *Game Over* nor *Potemkin* are good corporate fits for *Vibrant Cocooning*, because in both of these corporate scenarios, companies would underperform and would not be able to meet the challenging geo-economic and regulatory requirements. *Baywatch* would provide limited incentives in particular for the strongest primes to successfully operate under *Vibrant Cocooning*. But the problem is that their financial power would

Vibrant Cocooning provides a very challenging geo-economic environment, because it would overcome the idea of a global level playing field

most likely be insufficient for the large-scale reorganization of supply chains that would be required under *Vibrant Cocooning*. *Vibrant Cocooning* would also strengthen the role of key local companies that ruling regimes would strategically position as key partners and competitors for foreign companies. This would further increase supply chain demands unlikely to be met under *Baywatch*. *Strategic Opportunity*, in contrast, would perfectly live up to this requirement. *Strategic Opportunity* assumes

faltering corporate supply chains, which mirrors the assumption of *Vibrant Cocooning* that governments increasingly view each other's supply chains as the center of economic gravity that needs to be disrupted, so that they can prevail over strategic peers. Companies that have the necessary financial fire power – and could master the challenging geopolitical landscape – would be best prepared to weather the storm that *Vibrant Cocooning* brings to corporate supply chains. In principle,

Champion is the one corporate scenario that would provide the best framework to handle *Vibrant Cocooning*, but there is a shade of 'destructive disruption' entailed in this geo-economic scenario that could run counter to the assumptions of *Champion*, in particular with regard to the corporate drive towards resilience.

		Geo-Economic Scenarios			
		Withdrawal to Isolation	Friendly Disinterest	Vibrant Cocooning	Unified Resolve
Corporate Scenarios	Game Over	Very likely	Very likely	Very unlikely	Very unlikely
	Potemkin	Very likely	Very likely	Unlikely	Very unlikely
	Baywatch	Unlikely	Likely	Somewhat Likely	Somewhat likely
	Strategic Opportunity	Very unlikely	Likely	Very likely	Likely
	Champion	Very unlikely	Very unlikely	Likely	Very likely

Table 4: How Geo-Economic and Corporate Scenarios Match

Unified Resolve would provide a geo-economic environment broadly modeled along the lines of the post-1990 economic order, while taming the most recent protectionist and nationalist drive. *Game Over* and *Potemkin* would not fit with *Unified Resolve*, because both of these corporate scenarios would produce companies unfit for this geo-economic scenario. *Baywatch* would be a somewhat likelier fit, as financially well-endowed companies could play a role. But they would most likely also underperform, given *Unified Resolve's* emphasis on

collaboration to advance private and public goods. *Strategic Opportunity* is a more likely fit for *Unified Resolve*. However, the opportunistic momentum enshrined in this corporate scenario is hardly compatible with the strong political agenda underpinning *Unified Resolve*, thus causing problems for corporate decision makers at the normative level. This leaves *Champion* as the most appropriate corporate scenario for the challenges posed by *Unified Resolve*. In both cases, decision makers would share a commitment to advance public goods. The agility of companies

operating under *Champion* and their financial flexibility would also provide a good basis to deal with an increasingly interventionist political agenda.

The scenario comparison sheds light on the interaction between geo-economic and corporate assumptions, and a comparison of the key characteristics of the competitive forces across all corporate scenarios sheds additional light on the market dynamic to be expected.

Industry rivalry will likely be the most prominent under *Champion*, but the geo-economic scenarios will play a key role in defining the characteristic of that rivalry. *Unified Resolve* will require companies to work

towards resilience, thus igniting a race for the most innovative, long-term and socially responsible solutions. Under *Vibrant Cocooning*, narrower corporate self-interests would prevail, for example. Industry rivalry could be expected to reach elevated to high levels in *Game Over* and *Strategic Opportunity*. But the fight for corporate survival would dominate in *Game Over*, and the striving to enlarge corporate footprints would dominate the *Strategic Opportunity* scenario.

		Corporate Scenarios				
		Game Over	Potemkin	Baywatch	Strategic Opportunity	Champion
Competitive Forces	Industry Rivalry	Elevated to high	Low to elevated	Elevated	Elevated to high	High
	Bargaining Power of Buyers	Elevated to high	Elevated	Elevated	Elevated	Elevated
	Bargaining Power of Suppliers	Low to elevated	Low to elevated	Elevated to high	Elevated	Elevated to high
	Threat of New Entrants	Low	Low	Elevated	Elevated to high	High
	Threat of Substitutes	Elevated to high	Elevated	Elevated to high	High	High

Table 5: Corporate Scenarios and Competitive Forces

We assume that the **bargaining power of buyers** would be elevated across all five corporate scenarios and could be considered particularly high under *Game Over*, when buyers would try to get the most out of

companies fighting for survival. It should be noted that a geo-economic scenario like *Vibrant Cocooning* could see a political instrumentalization of the power of consumers vis-à-vis brands from foreign countries.⁷⁷

77 Borchert, *Flow control rewrites globalization*, 19-20.

This would be of particular relevance for *Strategic Opportunity* and would require companies to invest in early warning mechanisms that provide timely information on changing consumer sentiment.

Under *Baywatch* and *Champion*, **suppliers** might play the strongest role. In *Baywatch*, this might be limited to strong niche players only, given the overall lack of adequate levels of funding, but for *Champion*, primes would need to expect strong power wielding by suppliers, given the fact that supply chains would be very agile and all supply chain partners would levy significant financial power.

Threats emanating from new market entrants and product/service substitutes would be the most pronounced under *Strategic Opportunity* and *Champion*, with *Champion* providing the most challenging business environment. But again, the geo-economic set up matters. Under *Vibrant Cocooning*, the striving for zero-sum policies would persist. For

While *Champion* would be the corporate best case scenario, *Strategic Opportunity* seems closer to current corporate realities

example, ambitious emerging countries that up to now have used localization programs to reduce dependence on foreign suppliers could use COVID-19 as an argument to beef up self-re-

liance, thus further advancing demands for transfer of technology and local production. This would increase the **threat of substitutes** once the respective products/services become available and would thus also strengthen competition, as new national champions would likely enter export markets. This assumption is a very likely outcome for the medical industry, given the strong interest of developing nations like India to develop their own pharmaceutical industry.

So where do we go from here? Geo-economically speaking, one of the most feasible outcomes out of the current COVID-19 crisis is *Vibrant Cocooning* at the global level. The odds seem to be in favor of this outcome, in particular given the strategic antagonism between the United States and China, which has not abated during the crisis. Although probably few decision makers would like it, *Friendly Disinterest* is the

stepsister or stepbrother of *Vibrant Cocooning* and could even accelerate the trajectory to this scenario. *Friendly Disinterest* could emanate from growing problems inside the EU, in particular as COVID-19 has laid bare fundamental differences between some of its members. Disagreements among members of the transatlantic community further complicate things. Thus, it is most likely that COVID-19 will serve as a catalyst of many trends that were already in full swing prior to the pandemic, as argued at the beginning of this paper. Whereas *Champion* would be the corporate best case scenario, *Strategic Opportunity* seems closer to current corporate realities, in particular in view of the trend towards gradual deglobalization and decoupling as well as shrinking global supply chains. Corporate leaders operating at lower levels of ambition might find *Baywatch* attractive. But it might be easier to transit from *Strategic Opportunity* to *Baywatch* than the other way around, given that *Strategic Opportunity* assumes a significant amount of financial fire power.

Conclusions

The global COVID-19 pandemic is set to change the corporate landscape. Most recently, economic security – a concept that emphasized the interplay between national security, economic policy, technology, and innovation – has gained prominence.⁷⁸ The current debate on economic security mostly focuses on aspects of competitiveness amid growing geo-economic antagonism between the United States, Europe, and China. Although this overall perspective is likely to remain valid – and could be enforced as some of the geo-economic scenarios highlight – security of supply can be expected to emerge as a central theme for the post-COVID-19 recovery.

Security of supply is directly linked to competitiveness, as it refers to access to key raw materials, technology, and markets. The striving for flow control and weaponized interdependence has put security of supply under pressure.⁷⁹ COVID-19 will emphasize the relevance of security of supply for national security, thus taking up elements of the debate in the late 1990s and early 2000s on how to protect critical infrastructure. Against this background, corporate decision makers should prepare for the following four trends:

First, resilience is important, but the concept could become Janus-faced. Resilience is a dazzling buzzword that has come to influence the national security debate. At its core, resilience puts major emphasis on the agility and robustness of social systems, thus underlining the importance of "slack."⁸⁰ The core idea of resilience is attractive but

transferring it into meaningful concepts that can be implemented and enforced, if needed, is much more challenging.

COVID-19 can be expected to focus public attention on the robustness of supply chains and supply chain partners, the uninterrupted supply of critical components, and access to production capacities for these critical components.⁸¹ The relative vagueness of resilience explains the concept's popularity, as it leaves room for interpretation. This is also the biggest concern for corporate decision makers, as resilience could become the new scapegoat for protectionism. Reference to public health and public order, in particular, from the basis of most exemption clauses that provide governments the opportunity to deviate from existing regulations. Corporate officers in charge of regulatory affairs will need to follow closely the emerging debate on corporate preparedness in light of the lessons of COVID-19. Italy, for example, has already toughened powers

Resilience could become a new scapegoat for protectionism, thus requiring regulatory affairs officers to follow closely the emerging debate about corporate preparedness

to block foreign takeovers that will henceforth also be "applicable to European Union companies looking to take stakes just over 10%."⁸² In a similar way, export control regulations relevant for cutting-edge technologies could become more restrictive in an attempt to prevent the proliferation of know-how deemed important to guarantee national security of supply. This will be particularly relevant for industries like pharmaceuticals, medical technology, biotechnology, and agriculture. The most important challenge stems from the fact that nations are likely

78 See also: Gehrke, "Beyond corona: Getting EU economic security right."

79 Borchert, *Flow control rewrites globalization*; Farrell/Newman, "Weaponized interdependence."

80 For example, Zolli/Mealy, *Resilience*, 7, define resilience by combining elements from sociology and ecology to describe the "capacity of a system, enterprise, or

a person to maintain its score purpose and integrity in the face of dramatically changed circumstances."

81 The temporary export ban on personal protective equipment among EU nations serves as a perfect example.

82 Speciale/Follain, "Italy boosts business liquidity, expands anti-takeover powers."

to interpret resilience differently;⁸³ this will lead to diverging regulatory regimes, which could accelerate the trend towards deglobalization and decoupling as illustrated in *Vibrant Cocooning*.

Second, take a page from the defense sector to prepare for the advent of strategic industries.⁸⁴ The idea that Europe needs big and powerful national champions is on the rise.⁸⁵ National champions are considered indispensable for remaining competitive vis-à-vis U.S. Big Tech companies and state-owned or state-sponsored behemoths originating from China. COVID-19 is likely to reinforce this belief in view of the concept of security of supply.⁸⁶ As argued elsewhere, the problem is that the definition of strategic industries and strategic technologies remains very fuzzy, which provides authorities with a "high degree of discretion in establishing the respective definitions."⁸⁷ *Unified Resolve* would interpret strategic industries and strategic technologies in light of the ambition to advance global public goods. This could open up new avenues to look jointly into the establishment and funding of the relevant companies that would play key roles in multinational ecosystems. *Vibrant Cocooning*, in contrast, would adopt a much narrower definition meant to further national competitive advantages over peers. In that case, definitions would emphasize national self-sufficiency that would also limit access to strategic industries and technologies for actors considered as strategic competitors.

Corporate decision makers operating in tech-dependent industry sectors should thus look to the defense sector to understand what it

means to become a strategic industry. Everybody talks about a global defense market, but the 'market forces' are extremely limited: Governments are the ultimate force in the defense sector, as they set the regulatory regime, constitute the main clients, and thus define product requirements according to national political needs and ambition, provide major sources of funding for research and development, and ultimately decide which technology will be accepted⁸⁸ and can be exported.⁸⁹

Non-defense companies flirting with the idea of becoming national strategic players should take note of these market features, because governments drive product and thus also market development and ultimately decide about profit and loss-making initiatives. Being considered a national strategic player could come with new benefits if governments were ready to provide support. But this support comes at a price, because the corporate strategic leeway will be limited, as governments might force "strategic industries to have domestic backup plans and reserves. While profitability will fall, stability could increase."⁹⁰ In addition, regulatory affairs will become more challenging, because companies dubbed national strategic players in one country could fall out of

Non-defense companies flirting with the idea of becoming national strategic players should be aware that governments – not markets – would ultimately decide about profit and loss-making products

83 See also: Clarke, "The geopolitical effects of the COVID-19 crisis."

84 I am grateful to Joseph Verbovszky for early discussions on this issue.

85 See, for example, the letter that the German, Italian, French, and Polish Ministers of Economic Affairs sent to Margrethe Vestager, the European Commissioner for Competition, in early February 2020: <https://g8fip1kplyr33r3krz5b97d1-wpengine.netdna-ssl.com/wp-content/uploads/2020/02/Letter-to-Vestager.pdf>.

86 It will be interesting to see how advocates of the national champion concept will defend this concept in light of the fact that resilience would emphasize diversity rather than (power) concentration.

87 Borchert, *Flow control rewrites globalization*, 44.

88 The current discussion about 'lethal autonomous weapon systems' using unmanned systems and artificial intelligence perfectly illustrates how normative expectations shape defense products.

89 The regulatory approach of the current U.S. administration is on a trajectory that is likely to transform many non-defense technology sectors into defense-like entities via export control regulations.

90 O'Neil, "Lower profits, but more stability."

grace in another country, as definitions diverge and can be instrumentalized to fend off competitors.

Third, the regulatory rhetoric on Big Tech could change. Prior to the COVID-19 pandemic, the pressure on Big Tech was heating up because of rising privacy concerns and antitrust issues. Big Tech companies cooperating with countries like China also prompted some analysts to advance national security arguments in favor of breaking them up, as this collaboration "supports the rise and export of digital authoritarianism."⁹¹ Although these arguments remain valid, a two-pronged counter-narrative could emerge.

First, Big Tech plays a key role in digitizing the economy, which plays an essential role in times of demobilizing public life and business processes. Recent news reports suggest that COVID-19 could see the EU members pushing for more digitization and speeding up the establishment of European data sharing spaces.⁹² This will reinforce the key role of Big Tech as strategic industries. However, the fact Big Techs are at the core of the grand geo-economic competition between the United States, Europe, and China also means that corporate rivalry will be more and more influenced by heavy government interventions.

Second, Big Tech companies are amongst the financially most resilient companies in the United States, as argued in the section on building

Politically motivated demands to shrink global supply chains in order to advance national self-sufficiency will put corporate strategy-making on its head because normally form (supply chains) follows function (strategic goals)

scenarios above. Financial resilience constitutes an important systemic advantage for withstanding crises like COVID-19. In a scenario like *Unified Resolve*, this feature could become an important component of a newly defined corporate social responsibility, as companies with

deep pockets could come to play a crucial role in stabilizing supply chains. As financially deep pockets could stem from a dominating market position, regulatory authorities will need to make up their minds on how to balance systemic resilience vs corporate financial power, as measures meant to curb the latter could negatively influence the former.

Finally, supply chain management will become even more challenging. Supply chain management has always been one of the most demanding management disciplines, because companies need to strike a fine balance among the diverging interest of a very heterogenous set of partners needed to deliver their products and services. Rising geo-economic antagonism between leading nations has put supply chains under stress, as they have become the new center of economic gravity. COVID-19 reinforces this trend, as the above discussion on resilience suggests. Prevailing ideas of lean management and just in time delivery sit increasingly uncomfortably in a global business landscape where disruption seems to be the new norm.

The challenges will be most profound for globally integrated enterprises, because the rules, norms, and principles that have underpinned global strategic flows that have enabled these enterprises to flourish will be increasingly contested and could – as *Vibrant Cocooning* suggests – be cut off.⁹³ Politically motivated demands to shrink global supply chains in order to advance national self-sufficiency will turn corporate strategy-making on its head, because normally form (supply chains) follows function (strategic goals).

From a corporate perspective, reorganizing supply chains is ultimately a question of economies of scale, and this is one reason why China will most likely remain a key supply chain actor.⁹⁴ If politicians were serious about relocating supply chains, they would also need to engage in a substantial discussion on *Ordnungspolitik*, the basic tenants of economic and fiscal policy. Cost advantages are a main reason for globally distributed supply chains, and some of these cost advantages

91 Sitaraman, *The national security case for breaking up big tech*, 6.

92 Stolton, "Leak: EU in push for digital transformation aver Covid-19 crisis."

93 Borchert, *Flow control rewrites globalization*, 17-19; Weber, *Bloc by bloc*, 5-6.

94 Meidan, "Geopolitical shifts and China's energy priorities," 4.

are impossible to be realized in industrialized countries. The discussion about reorganizing supply chains in light of COVID-19 thus needs to be embedded in a broader policy debate about what kind of dependence nations are willing to accept in order to ensure economic security. This will require a new kind of public-private policy dialogue for which most countries lack the concepts and the relevant institutions. Establishing this kind of dialogue, however, could become one of the most effective means to address the challenges raised throughout this paper.

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