### 1

#### Advantage 1---Supply:

#### Shipping is more volatile than other drivers

TME 3/29 [The Maritime Executive, "IMF: Higher Shipping Costs Will Drive Inflation Throughout 2022", https://www.maritime-executive.com/article/imf-higher-shipping-costs-will-drive-inflation-throughout-2022]

After a year in which shipping costs worldwide skyrocketed in part due to massive volume increases and the impact of the pandemic, researchers from the International Monetary Fund set out to explore how soaring shipping costs are contributing to rising costs and inflation. They concluded that dramatic increases in shipping costs are having a slow but consistent impact contributing to inflation with the impact likely to continue to build through the end of this year.

“We find that shipping costs are an important driver of inflation around the world,” the IMF writes in its weekly blog post prepared by the staff and officials on pressing economic and policy issues. “When freight rates double, inflation picks up by about 0.7 percentage point. Most importantly, the effects are quite persistent, peaking after a year and lasting up to 18 months. This implies that the increase in shipping costs observed in 2021 could increase inflation by about 1.5 percentage points in 2022.”

The IMF research predated the war in Ukraine with their analysis adding that the conflict will likely exacerbate global inflation. They looked at data from 143 countries over the past 30 years, reporting that the inflationary impact of higher shipping costs builds over time. After the pandemic was declared in March 2020, they noted that it resulted in a shortage of workers at ports to move containers which account for more than 80 percent of the world’s traded goods as well as the travel restrictions that impacted crew movement and trucking. Other factors included the creation of pent-up demand from huge stimulus programs during extended lockdowns that overwhelmed the capacity of supply chains.

The result of those challenges was that the cost of shipping a container on the world’s transoceanic trade routes increased seven-fold in the 18 months following March 2020. They also highlight that the cost of shipping bulk commodities spiked even more.

“While the pass-through to inflation is less than that associated with fuel or food prices—which account for a larger share of consumer purchases—shipping costs are much more volatile. As a result, the contribution in the variation of inflation due to global shipping price changes is quantitatively similar to the variation generated by shocks to global oil and food prices.”

#### Russia’s a blip

Spencer Bokat-Lindell 3-30 2022 [Staff editor for the New York Times “Will the Ukraine War Spell the End of Globalization?” https://www.nytimes.com/2022/03/30/opinion/ukrainne-russia-globalization-end.html]

If proponents of globalization too often characterized it as a historical inevitability, those warning of its imminent unraveling may be guilty of the same error. Just as the forward march of globalization has been impeded by unforeseen consequences and contingencies, so, too, could its reversal.

For a potential glimpse at this fitful dynamic, one need look no further than the economic contraction that Russia is now experiencing, which “shows just how difficult it is for states to thrive without economic interdependence, even when they try to minimize their perceived vulnerability,” Posen notes. “Russia’s attempts to make itself economically independent actually made it more likely to be subject to sanctions, because the West did not have to risk as much to impose them.”

Posen, for his part, doubts that the economic and political risks of deglobalization will stop many governments from at least trying to achieve more self-sufficiency. But the result, in the view of the historian Stephen Wertheim, may not be so much a global turn toward national autarky as toward international economic blocs.

Countries that fear being on the wrong side of Western sanctions “may want to make plans to align economically with certain states, and abandon others, when the chips are down,” he told Jewish Currents. “And preparing for such an eventuality may actually help to bring that eventuality into being, as states become less reliant on certain trading partners and make strategic partnerships with others.”

But as Wertheim notes, the global economy is still a long way from such factionalization. It’s possible that Russia’s exile will be the exception that proves the rule of globalization’s durability.

“You are removing this big chunk of the global economy and going back to the situation we had in the Cold War when the Soviet bloc was pretty much closed off,” Maury Obstfeld, an economics professor at the University of California, Berkeley, told The Washington Post. “But that doesn’t mean the rest of the world can’t be tightly integrated in terms of trade and finance.”

In the years to come, the editors of The Guardian write, “Deglobalization does not mean we will see a new age of autarky — the kind of drastic reversal seen in the 1920s and ’30s, when protectionism surged and global trade collapsed.” They add, though, “The high tide of globalization has passed for now; the question is how far the water will drop.”

#### Rates will double and collapse the econ

Miller 3/30 [Greg Miller covers maritime for FreightWaves and American Shipper, "Retail boss warns on supply chain, likens demand risk to ‘Big Short’", 3/30/22, https://www.freightwaves.com/news/retail-boss-warns-on-supply-chain-compares-demand-risk-to-big-short]

And then there was Tuesday afternoon’s call hosted by Gary Friedman, CEO of luxury home furnishings brand RH (NYSE: RH), formerly known as Restoration Hardware.

Friedman — with what one analyst called “brutal honesty” — expounded upon supply chain woes, surging ocean freight rates, soaring inflation and a sudden plunge in consumer demand coinciding with Russia’s invasion of Ukraine.

“I’m just going to tell the truth,” he said. “Maybe our stock is going to take a big hit because of this.” He was right. His company’s market value fell by $1.1 billion on Wednesday.

Supply chain still ‘chaotic’

“Everybody thinks supply chains are getting better. I don’t think they’ve gotten better at all,” Friedman said.

“Product is on the water for a long time, getting ships into port. We’ve got about five extra weeks in our supply chain right now. That’s a lot of time, a lot of money. And that’s the average. Some stuff’s coming on time and some is 10-12 weeks behind.

“Many of us thought we’d have been caught up by now. We’ll be lucky to be caught up by the end of the year,” he said, pointing to heavy omicron impacts on supply chains in China, Vietnam and other sourcing countries.

“It’s hitting everybody from all angles. You just have this compounding supply chain kind of puzzle happening.

“I’ve never seen it so chaotic, honestly, from a [project] execution point of view, whether it’s construction, sourcing, manufacturing, shifting supply chains or freight. Everything is a little out of sync in the world right now.”

On freight pricing, Friedman pointed out that most U.S. importers have already signed annual trans-Pacific contracts for 2022. “I wonder if anybody at the Fed has picked up the phone and called a businessperson and said, ‘Hey, what do you think is happening with inflation? How are ocean rates?”

He disclosed that after the initial supply chain disruption in 2020, RH’s average freight rate doubled from $2,400 to $4,800 per forty-foot equivalent unit. “I’m not going to tell you what it just went to. But let’s just say that [earlier doubling] looks like a nice increase [in comparison]. And it’s not just us. It’s everybody.”

Demand sank when war broke out

The biggest revelation on the RH call was Friedman’s disclosure on demand. He revealed that the company saw a 10-12% drop in demand “overnight” coinciding with Russia’s invasion of Ukraine — and no recovery since then.

“Other people might be banging a brighter, happier drum than me. Do they have better numbers than we do? I don’t think so.”

He noted that most other U.S. retailers reported earlier than RH and had focused disclosures on Q1 sales, not current demand. RH’s Q1 sales will be strong too, he pointed out, courtesy of the backlog built up before the drop. “I think we’re the first ones talking about demand,” he said.

“The invasion of Ukraine by Russia just became kind of a reckoning point. People had to stop and pay attention to everything. And I don’t think it’s all about Ukraine and Russia. I think it triggered a greater awareness. It was like: Ring the bell, everybody pay attention” — not just to the war itself, but to the prewar surge in inflation, the Fed’s decision to hike interest rates, overheating in real estate and other concerns.

The scene cited by Friedman in ‘The Big Short’

“I don’t want to scare everybody,” he said.

He proceeded to say something scary, likening the recent shift in conditions to the scene in the financial-crisis movie “The Big Short” when a conference panelist was told, “From the time you guys started talking, Bear Stearns’ stock has fallen by more than 38%,” and attendees frantically checked their Blackberrys and scrambled from the room even though Alan Greenspan was the next scheduled speaker.

Supply chain fallout on timing

“Everything is kind of happening at once,” said Friedman, who cited consequences for both retail sales timing and product pricing.

Asked by an analyst whether supply chain issues would affect the launch of RH’s Contemporary-branded collection, Friedman laughed and responded: “What do you think? Of course.”

That catalog was supposed to go out in March. It will go out in May instead because “we want to have some goods in stock,” he said. The catalog will be cut from 450-500 pages to 300-350 pages because “stuff is late and my sense is it might even be later.”

Fallout for pricing

He also confirmed that RH will be passing along its higher costs to consumers.

“When you have this kind of impact from freight and raw materials and price increases from suppliers and so on, you can say, ‘Oh, we’re big. We can absorb it.’ But that’s kind of BS. What’s happening in the world today is prices are going up everywhere. If they’re not, earnings are going to go down.

“The question people have to ask is: ‘Do I want to be a bigger, lower-margin business and chase sales? Or do I want to be a smaller, higher-margin business and come out of this really positioned for the long term?’ And that [higher-margin option] is the view we’ve taken.”

The “Big Short”-esque risk ahead is that higher costs (including container shipping freight) are passed along to consumers, the war stokes even higher inflation as it simultaneously curbs sentiment, the Fed proceeds with an extended run of rate hikes, and goods buying suffers for an extended period.

According to Friedman, “I don’t think anybody really understands what’s coming from an inflation point of view, because either businesses are going to make a lot less money or they’re going to raise their prices. I don’t think anybody really understands how high prices are going to go. I think it’s going to outrun the consumer.”

#### \*\*\*It’s growing and driven by consolidation. Removing immunity solves, but regs can’t

Bloomberg 22 [Bloomberg, "Supply Chain Crisis Helped Shipping Companies Reap $150 Billion in 2021", 1/19/22, https://www.supplychainbrain.com/articles/34405-supply-chain-crisis-helped-shipping-companies-reap-150-billion-in-2021]

Ocean shipping rates are expected to stay elevated well into 2022, setting up another year of booming profits for global cargo carriers — and leaving smaller companies and their customers from Spain to Sri Lanka paying more for just about everything.

The spot rate for a 40-foot container to the U.S. from Asia topped $20,000 last year, including surcharges and premiums, up from less than $2,000 a few years ago, and was recently hovering near $14,000. What’s more, tight container capacity and port congestion mean that longer-term rates set in contracts between carriers and shippers are running an estimated 200% higher than a year ago, signaling elevated prices for the foreseeable future.

Large customers of sea-borne cargo like Walmart Inc. or Ikea have the heft to negotiate better terms in those deals, or absorb the added expense. Smaller importers and exporters — especially those in poor countries — that rely on carriers to haul everything from electronics and apparel to grains and chemicals, can’t easily pass those costs along or weather long periods of stretched cash flows. The situation is throwing a spotlight on the market concentration of shipping lines, and their legal immunity from antitrust laws.

“Small- and medium-sized enterprises are being badly affected,” said Amruth Raj, managing director of Green Gardens, a vegetable processor based in rural India. After container rates shot up in the past year, more than 50% of his company’s capital was wiped out when European buyers balked at the higher costs. “They exploit our desperation.”

In the developing world, it’s not just business survival that’s at stake. Achil Yamen of the Cameroon National Shippers’ Council, raised concerns about inequities in Africa on a recent conference call hosted by the United Nations trade body.

“If nothing is done to reverse the trend, the risk in terms of inflation and food security can grow very, very high,” Yamen said.

Meanwhile, the backbone of the postwar march toward globalization is coming through the pandemic in the strongest position in its history — a stark reversal of years losing money in the capital-intensive business. Ocean-freight carriers pulled in estimated profits of $150 billion in 2021 — a nine-fold annual jump after a decade of difficulty eking out any gains.

Denmark’s A.P. Moller-Maersk A/S, the world’s second-largest container carrier, was on track for an annual profit last year that would match or surpass its combined results from the past nine years. Its shares hit a record high this month, as did stock in Hamburg, Germany-based Hapag-Lloyd AG, the No. 5 player. The largest, Mediterranean Shipping Co., is a closely held company based in Switzerland that is controlled by Italy’s powerful Aponte family.

Surging Shipping Costs and the Dangers of Inflation

The extended windfall has touched a raw nerve across the political spectrum as economists warn that persistently high transportation prices are stoking inflation and clouding the recovery. High costs for freight that used to fan only temporary spells of inflation upticks are becoming longer-term features of economies in the U.S. and elsewhere.

Nicholas Sly, an economist with the Kansas City Fed, has done research that found, in the past, a 15% increase in shipping costs led to a 0.10 percentage point increase in core inflation after one year. Shipping rates, he said, currently are a persistent — rather than temporary or transitory — challenge.

“Those types of shocks tend to have lasting effects 12 to 18 months out,” Sly said.

Faced with forces that are upending traditional business models, shippers around the world are pleading with regulators to rein in ocean-freight carriers. The latest salvo came Jan. 5 from the British International Freight Association, which called on the U.K. government to investigate “distorted market conditions” within the global container-shipping market.

The British freight lobby has pointed to concentration in recent years. Just 10 container lines based in Asia and Europe, led by Maersk, MSC, France’s CMA CGM SA, and China’s Cosco Shipping Holdings Co., control nearly 85% of the capacity for shipping goods by sea. Twenty-five years ago, the top 20 companies controlled about half of the global capacity.

While officially competitors, nine of them operate under vessel-sharing agreements called “alliances” that coordinate schedules and share space on ships. Meanwhile, carriers have long enjoyed leeway from anti-competition laws in most major economies, including in the European Union and in the U.S.

The Pandemic’s Impact on the Shipping Industry

For the first time, the pandemic demonstrated just how adept the carriers have become at managing the market's supply of cargo capacity, by curtailing it when COVID-19 first shook the world's economy and then ramping it up when demand rebounded strongly, driving prices higher than ever. Shippers have chafed at how the alliances’ lock on capacity — the ships, their schedules and speeds, and the millions of steel boxes in circulation — has translated into asymmetric pricing power.

Over the summer, a Pennsylvania-based home decor importer, MCS Industries Inc., filed a complaint against carriers MSC and Cosco before the Federal Maritime Commission, the agency tasked with overseeing carriers in the U.S. The company complained that they “have been operating in tandem to exploit the COVID-19 disruption to profiteer at the expense of U.S. consumers.” MCS reached a confidential settlement with Cosco, while proceedings against MSC are ongoing.

“This market is not working to the benefit of everybody,” said James Hookham, director of the Global Shippers Forum, which represents importers, exporters and cargo owners. “We believe this market needs some investigation to make sure those customers are not being abused.”

Carriers insist the high prices are an anomalous spike born of pandemic-sparked imbalances in supply and demand that will naturally resolve. John Butler, chief executive officer of the World Shipping Council, a group representing the container lines, defended the alliances as arrangements that make the whole system work more efficiently. The council points to stronger-than-normal consumer demand in the U.S., and Butler blames many of today’s disruptions on problems with land transportation.

“Pre-pandemic, the situation that we’ve had for the better part of 20 years is plenty of capacity, really low rates and plenty of service,” Butler said. “There’s nothing in the industry as a structural matter that has changed since then.”

Mario Cordero, former chairman of the FMC and executive director at the Port of Long Beach, which is part of the U.S.’s largest port complex, said it's a “confluence of factors” that have led to the tangling of the global supply chain in the wake of the pandemic. While he expects port congestion and shipping prices to move closer to normalcy in the second half of 2022, he’s still cautious. “I’m not suggesting we're over this.”

Modern American shipping laws date to 1916, an era when bulk goods were loaded on ships by net and crane. At the time, the U.S. government was concerned that foreign carriers and pricing monopolies threatened to disadvantage American businesses and undermine a nascent domestic commercial fleet. In response, Congress exempted carriers from antitrust laws, but required them to report any pricing agreements to regulators.

While shipping laws have been reformed over the years, the last major update was in 1998, a time before China was admitted to the World Trade Organization. The statutory antitrust exemption for the industry has endured, even as the FMC has lost some of its watchdog authority.

For decades, the U.S. Department of Justice has been pushing Congress to get rid of the antitrust immunity, arguing that it was no longer justified and undermined a free-market economy. At the same time, the shipping industry was undergoing a wave of consolidation that saw American carriers snapped up by foreign entities.

As carriers commissioned larger ships to obtain cost advantages, they struggled to fill the massive boats to capacity, losing money. Some stayed afloat with government-backed financing or outright state control like China’s ownership of Cosco. In 2013 carriers began forming alliances to collectively allocate cargo space and organize sailing schedules, much like airlines use them to book passengers on each other's flights, allowing travel on multiple carriers with one itinerary. By 2018, the UN agency that monitors maritime trade described it as “a market structure that is more representative of a loose oligopoly.”

When the first lockdowns hit in March 2020, most observers expected the shipping industry would be decimated. But an unexpectedly sharp rebound in demand followed the initial worries of a lasting plunge. The Chinese and American economies began reopening and government stimulus payments began flowing, juicing consumer demand for goods such as exercise bikes and home-office desks. By the third quarter of 2021, world trade in goods hit a record $5.6 trillion and was on pace for an equally solid number in the final three months of the year.

Port Problems and Supply Chain Woes

The roaring demand severely disrupted supply chains. Major ports in the U.S. couldn’t process imports fast enough, trucking companies fell short on drivers, and warehouses ran out of space. Fully loaded ships idled off California beaches for weeks because of port congestion. Suddenly, an industry that had plied the seas largely unnoticed by the general public had become a highly conspicuous target.

Regulators from the U.S., the EU and China met in September and determined there was so far no evidence of anti-competitive behavior in container shipping. Still, governments are on high alert as global supply chains are being pushed to the breaking point.

In November, the White House took aim at the industry’s consolidation, saying “this lack of competition leaves American businesses at the mercy of just three alliances” and calling on the FMC to “use all of the tools at its disposal to ensure free and fair competition.”

The FMC says it has increased monitoring of carrier alliances, to better track trends and spot potential illegal behavior, such as artificially limiting supply or not competing on prices. In late December, the agency opened an investigation into the Taiwanese carrier Wan Hai Lines Ltd. alleging relatively narrow violations of fee rules governing container returns. Beyond such steps, even the agency’s chairman, Daniel Maffei, said that under current U.S. law there is little regulators can do to rein in more widespread potential abuse.

“The fact is that it is very, very difficult, if not impossible for the FMC to ever challenge these alliances for violating competition requirements,” said Maffei, noting that he has no evidence that they currently are. “We don't really have the practical tools necessary to challenge it.”

In the U.S., a bipartisan bill that passed in the House last year takes aim at reforming U.S. shipping laws. It would give the FMC greater authority, prohibit carriers from discriminating against American cargo, and give businesses more power to challenge carrier fees. But even that bill — a potentially once-in-a-generation shot at reform — stops short of targeting carriers’ antitrust immunity. In Europe, the shipping companies’ exemption from anti-competitive rules is set to be reviewed again in 2024. The European Commission is “closely monitoring the container shipping industry and is aware that there have been large price increases,” the commission said in a statement.

Regardless of who’s to blame, customers are anguishing over the situation. Smaller importers and exporters have seen their cargo getting “rolled” — bumped like passengers from an oversold flight — and sometimes canceled outright despite contractual obligations with carriers.

Lori Fellmer, vice president of logistics and carrier management at New Jersey-based raw chemicals importer BassTech International, says she’s had shipments rejected multiple times, with seemingly no recourse. “In some cases, there was no getting space on a ship,” she said.

In the heart of Sri Lanka’s apparel manufacturing belt, exporters are struggling to meet orders as carriers shift more vessels to lucrative routes connecting China to the U.S. and Europe, said Sean Van Dort, with the Joint Apparel Association Forum Sri Lanka.

“Yes, they have to make money, don’t get me wrong — but when you have a 10 times, 12 times, 16 times higher freight rates — there’s something radically wrong,” he said.

#### Fuels inflation and crashes the global econ.

Rao 21 [Sujata Rao and Jonathan Saul, "Analysis: Shipping costs - another danger for inflation-watchers to navigate", 12/20/21, https://www.reuters.com/markets/commodities/shipping-costs-another-danger-inflation-watchers-navigate-2021-12-10/]

Much like the coronavirus pandemic, and the economic disruption that it has caused, a global shipping crisis looks set to go on delaying goods traffic and fuelling inflation well into 2023.

Shipping rarely figures in economists' inflation and GDP calculations, and companies tend to fret more about raw materials and labour costs than transportation. But that might be changing.

The cost of shipping a 40-foot container (FEU) unit has eased some 15% from record highs above $11,000 touched in September, according to the Freightos FBX index. But before the pandemic, the same container cost just $1,300.

With 90% of the world's merchandise shipped by sea, it risks exacerbating global inflation that is already proving more troublesome than anticipated.

Peter Sand, chief analyst at the freight rate benchmarking platform Xeneta, does not expect container shipping costs to normalise before 2023.

"This means the higher cost of logistics is not a transitory phenomenon," Sand said. "For inflation, that means trouble ... The element of shipping, in overall prices, small as it may be, is much bigger than ever before, and it could be a permanent lift to prices going forward."

Ocean transport costs initially leapt after a six-day blockage of the Suez Canal in March caused backlogs worldwide. That tightened an already strained vessel-hiring market as uncertainty about future fuel and emissions regulation had driven orders for new ships to record lows.

Then came a surge in demand for goods from consumers in coronavirus lockdowns, while dockyards were struggling with COVID-related labour shortages.

In early November, 11% of the world's loaded container volume was being held up in logjams, down from August peaks but well above the pre-pandemic 7%, Berenberg analysts estimate.

BACKLOG UNTIL 2023

In late October at Los Angeles/Long Beach, one of the world's biggest container ports, ships were taking twice as long to turn around as before the pandemic, RBC Capital Markets estimates.

Although the worst may be past, RBC analyst Michael Tran does not see freight prices returning to pre-pandemic levels for another couple of years.

Even if plans to unload an extra 3,500 containers each week are implemented, the Los Angeles/Long Beach backlog is unlikely to clear before 2023, he said.

"The softening in prices we saw at the end of September is a false dawn. What we see from a big-data perspective is that things are not getting materially better."

A United Nations report said last month that high freight rates were threatening the global recovery, suggesting they could boost global import prices by 11% and consumer prices by 1.5% between now and 2023. read more

The impact also ripples out; a 10% rise in container freight rates cuts U.S. and European industrial production by more than 1%.

#### Old buffers are spent. Inflation causes collapse.

Rowley 21 [Anthony Rowley is a veteran journalist specialising in Asian economic and financial affairs. He was formerly Business Editor and International Finance Editor of the Hong Kong-based Far Eastern Economic Review and worked earlier on The Times newspaper in London, "Why the global inflation surge could signal an economic collapse", 11/22/21, https://www.scmp.com/comment/opinion/article/3156716/why-global-inflation-surge-could-signal-economic-collapse]

But that is not the point. This time is different. As noted, the inflation surge comes at a time when financial and real estate asset values have been boosted to record and clearly unsustainable levels. That was not the case during previous great inflations.

As measured by the consumer price index, the annual rate of inflation in the US to October 2021 was 6.2 per cent. Annual inflation was running at 4.4 per cent in October in the European Union, and the UK’s Consumer Prices Index rose by 4.2 per cent in the 12 months to October.

Dramatically accelerated though these rates have become, they still do not approach the inflation levels seen in some previous episodes and certainly do not suggest hyperinflation. They are, to a large extent, caused by supply chain bottlenecks which continue to worsen as the Covid-19 pandemic reasserts its grip.

But again, it is not the absolute levels of inflation that are most important at this time – it is the very fact of inflation. The phenomenon had, in many people’s view, been banished by supposedly perpetual monetary easing and Modern Monetary Theory.

Inflation has returned from the dead, as the rising gold prices attest, while its persistence is likely to consign cryptocurrencies such as bitcoin to the crypt. Inflation’s resurrection threatens to undermine markets in a way that resembles or even surpasses an earthquake.

#### Accelerating growth is key to outrun technological black balls---caps numerous existential hazards.

Aschenbrenner ’20 [Leopold; September 6; Research Fellow in Economics at the Forethought Foundation and Global Priorities Institute at the University of Oxford, B.A. from Columbia University; Global Priorities Institute, “Existential risk and growth,” no. 6]

Secondly, note that this existential risk Kuznets curve appears in the transition dynamics of the optimal allocation. Considering that existential risk mitigation is a global public good, it is unlikely resources are allocated to safety optimally in the real world. As such, this should not be taken to be a prediction of what a particular country with a particular set of institutions will do with regard to existential risk.

Nevertheless, there are a number of reasons why we might still be interested in the transition dynamics under the (impatient) optimal allocation. For one, since there are very long timescales involved here, it is very hard to know (and thus model) what government and societal institutions will evolve to deal with existential risk. However, the ideal these institutions will likely aim at is the optimal allocation. The optimal allocation might thus be a rough proxy for the real-world allocation.

Moreover, the (impatient) optimal allocation represents what I would call the “democratic possibilities frontier” or the “impatient public possibilities frontier.” Those who are principally concerned about the long-run future of humanity and advocate for a zero rate of pure time preference might want us to spend as much as possible on safety in order to avoid existential catastrophe and enable human flourishing millions of years into the future. Indeed, even in the Hamiltonian of the optimal allocation, the relative value of life ˜vt is a discounted term; the lower your discount rate ρ, the more you would want to spend on safety. However, the broader public is not so patient. As the empirical evidence cited earlier shows, people tend to have a (relatively large) positive rate of pure time preference; the public is impatient. Even perfectly designed institutions that take into account existential risk externalities will ultimately be constrained by the degree to which society actually cares about the future—they will be constrained by an impatient public. The existential risk Kuznets curve illustrates the implications of this impatience. On the one hand, this impatience results in a period of initially rising levels of risk. For example, this might mean that the arguably rising level of existential risk of the past century is not necessarily a market failure, but may well be part of the optimal path given positive pure time preference. On the other hand, rising standards of living lead even the most impatient public to start caring more about safety and averting an existential catastrophe. This leads workers and scientists to be shifted to the safety sector, eventually causing the hazard rate δ to exponentially decline. Even if people are impatient, if you make them well off enough, they will start caring about existential risk.

Seeing the arguably rising levels of existential risk in the past century, some might call for an end to economic growth. Yet this existential risk Kuznets curve indicates that stopping economic growth would be deleterious: it would simply freeze the hazard rate at a high level, leading to a fatal catastrophe sooner or later. Economic growth enables even an impatient public with a high rate of pure time preference to start caring about life, thus ultimately reducing risk and even leading to positive M ∞.

Some prominent thinkers have previously posited that humanity is passing through a unique period with an elevated risk of technological catastrophe. Sagan (1994) calls this the “time of perils.” Parfit (2011, p. 616), concurs:

We live during the hinge of history. Given the scientific and technological discoveries of the last two centuries, the world has never changed as fast. We shall soon have even greater powers to transform, not only our surroundings, but ourselves and our successors. If we act wisely in the next few centuries, humanity will survive its most dangerous and decisive period. Our descendants could, if necessary, go elsewhere, spreading through this galaxy.

This existential risk Kuznets curve provides theoretical evidence that grounds the intuition that we are living in a “time of perils.” We may be economically advanced enough to have created the means for our permanent destruction, but not economically advanced enough to care enough about decreasing this existential risk.

This “time of perils” has profound implications. For instance, those alive today who care about preserving the long-term future of humanity may have extraordinary altruistic leverage. By working to reduce existential risk now (increasing the resources dedicated to safety), they can reduce the area under the “hump” of the hazard rate δ. This in turn increases M∞, unlocking tremendous value. Moreover, since so few resources are dedicated to safety at the moment, there are likely very high marginal value opportunities available to work on safety. This is a unique situation. Suppose existential risk did not decline to zero exponentially: then M∞ = 0 regardless—the existential risk curve would never bend—so reducing risk now would not change the probability of a long and flourishing future of humanity. And if existential risk did not initially increase, it would never be such a substantial challenge and there wouldn’t be such high marginal value opportunities to work on reducing it.

#### Consolidation means cyber attacks crash global trade

Merk 18 [Olaf Merk, leads the ports and shipping work at the International Transport Forum (ITF) of the Organisation for Economic Co-operation and Development (OECD), Lucie Kirstein and Filip Salamitov, "The Impact of Alliances in Container Shipping", 11/2/18, https://www.itf-oecd.org/sites/default/files/docs/impact-alliances-container-shipping.pdf]

In addition to alliances, vertical integration risks also reduce system resilience. Integration of shipping, terminal handling and hinterland transport could mean that whole transport chains are in the hand of just a few players, creating huge leverage for cyber-attacks, especially if parts of the chain are digitally connected. This became painfully evident during the NotPetya attack that hit Maersk ships and terminals (Box 7). Vertical integration could be considered to be related to the emergence of alliances. As service differentiation for the sea-leg is difficult in alliances – as the product is basically the same – one of the few remaining possibilities for individual carriers to differentiate is via vertical integration.

Box 7. Cyber security and risks associated to vertical integration

On 27 June 2017, a major cyber-attack began hitting firms mainly in France, Germany, Italy, Poland, Russia, Ukraine, the United Kingdom, and the United States. The attack is suspected to have started when hackers compromised the update server of Ukrainian tax accounting software company M.E.Doc so that it would distribute a malware referred to as “NotPetya” throughout its network. The malware further propagated itself notably via an exploit using a vulnerable Microsoft Windows network protocol. After analysis of the encryption routine of the malware, experts from Kaspersky came to the conclusion that the attack, although appearing as a ransomware attack, did not allow victims to recover their data even after paying the ransom, and the aim was therefore suspected to be directed at major disruption instead of financial gain for hackers (Ivanov and Mamedov, 2017). The carrier Maersk was presumably contaminated by this malware via software used by one of its offices in Ukraine. Maersk was forced to shut down many of its operating systems to stop the attack from spreading. The company was unable to process new orders and cranes were operated manually at some of its 76 container ports. The disruption caused major delays and led to rerouting of several vessels to ports not, or less, affected (Odell et al./FT, 2017). At least 17 terminals operated by APMT got infected by Maersk’s central IT infrastructure (Reuters, 2017). A number of terminals were unable to identify which shipment belonged to whom and therefore needed to clear cargo manually. The largest Indian port JNPT operated by Maersk’s APMT was forced to shut down and the terminal Maasvlakte II in Rotterdam stopped operations completely for a full week, which led to a highly congested service level.

According to Maersk’s annual report for 2017, the attack mainly impacted Maersk Line, APM Terminals and Damco. The effect on profitability was estimated to be around USD 250-300 million, with the vast majority of the impact related to Maersk Line in the third quarter (Maersk, 2018). Maersk estimated a 20% drop in volume and lost out on carrying 70 000 40-foot containers within the two weeks of the attack. Besides lost revenue, the attack also involved high costs of rebuilding its IT infrastructure. At the moment of the cyber-attack, Maersk did not own any cyber risk insurance. The company reported that 4 000 new servers, 45 000 new PCs, and 2 500 applications had to be reinstalled (Chirgwin/The Register, 2018). Actual impacts on Maersk’s performance could be higher than reported and probably stretch beyond the second half of 2017 (Porter/Lloyd’s List, 2017a). In April 2018, analysts speculated that the attack could have cost Maersk group over USD 500 million in expenses and lost profit. Others situate the cost between USD 400-500 million because the effect from the attack continued in the fourth quarter of 2017 and led Maersk to make investments in new infrastructure and insurances. Furthermore, the cyber-attack could have had an extended impact on market shares until the first quarter of 2018 (Beck/ShippingWatch, 2018). Although for most affected terminals it took a few days before they could resume operations completely, shippers were affected by delays of up to two months, because Maersk reportedly had difficulties in allocating new slots and tracking and assigning correct data to containers. The impact was widely felt by interviewed shippers and Lloyd’s List reported a similar observation that nearly two months after the attack, Maersk was still dealing with containers in transit at the time of the attack (Porter/Lloyd’s List, 2017b). One of the interviewed shippers reports having received additional demurrage invoices due to complications and delays caused by the cyber-attack, which suggests the carrier might have tried to shift part of the costs of the attack to their consumers.

Maersk’s global coverage, as well as strong horizontal and vertical integration in the sector further facilitated the knock-on effect of the cyber-attack. Companies who are reliant upon common IT infrastructure will logically suffer business interruption simultaneously when that infrastructure is compromised. Since supply chains are highly interconnected and even more so with increasing automation and digitalisation, this can result in an insecure operating environment even for those firms that make cyber security a priority. However, there is not only interdependence in IT infrastructure, but also in the utilisation of common assets. According to SeaIntel analysis, 20 other carriers transported containers on-board Maersk vessels around the time of the cyber-attack (SeaIntel, 2017; 319). MSC was the most affected with 23 vessel sharing agreements and four slot-charters, followed by Safmarine and Hamburg Süd. The most affected outside the 2M alliance and Maersk ownership was CMA CGM, with six vessel sharing agreements and four slot charter agreements with Maersk. The shipping sector is the backbone of international trade and ports are a vital part of every country’s infrastructure. Any major disruptions in supply chains can therefore have impacts on the overall economy. The scale of the cyber-attack and the many interconnections that exist vertically and horizontally in this industry could transform the collateral and rather accidental damage on a firm that was presumably not directly targeted, into a systemic risk for global trade.

#### Ships are vulnerable

Grady 20 [John Grady, "Experts: Maritime Industry Remains Vulnerable to Cyber Attacks", 9/28/20, https://news.usni.org/2020/09/28/experts-maritime-industry-remains-vulnerable-to-cyber-attacks]

While handling 90 percent of the global economy daily, maritime industry ashore and afloat remains increasingly vulnerable to cyber disruptions and attacks from “neerdowells and bad actors” that threaten financial markets and the country’s national security, the head of the Maritime Administration said last week.

Lacking a coordinated code affecting all modes of transportation and ports and terminals, the “movement of our armed forces” can be disrupted “by a few key strokes of bad actors” that can affect ship operations, cargo handling and on-shore facilities, retired Rear Adm. Mark Buzby said during a Sept. 24 virtual event hosted by The Atlantic Council.

Cyber disruptions in San Diego and Barcelona port operations in 2018 and continuing ransomware attacks on European transport companies underscore the vulnerability of these interlocked modes of economic movement, Coast Guard Capt. Jason Tama, commander of Sector New York, and Heli Tiirmaa-Klaar, Estonia’s ambassador-at-large for cyber diplomacy, added.

Speaking as part of the online forum, Kathy Metcalf, president and chief executive officer of the Chamber of Shipping of America, said all too often cyber security is thought of as the takeover of a ship and ramming it into the Verrazano-Narrows Bridge, which connects Brooklyn and Staten Island at the entrance to New York’s harbor.

The real need is for “collaboration” on all the details affecting small links in a supply chain or parts used in maintenance. “The system will only be as good as its weakest link,” Metcalf said.

The maritime industry includes many links — some more than 30 years old that remain extremely vulnerable, while others are brand new and hardened, Xavier Bellekens, lecturer at the Institute for Signals, Sensors and Communications, University of Strathclyde, said at the forum.

Looking only at ships, using open source information, Bellekens said anyone “can relatively easily … learn very fast about,” a ship at sea. Using slides, Bellekens selected one ship operating from a Southeast Asian port and in less than a day followed its course outbound, obtained biographical data on its captain, information on the makeup of the crew, current cargo, destinations and the ship’s current position.

The data are potentially useful to hackers, pirates, criminals, terrorists or hostile nation-states.

As he was speaking, Bellekens presented a news photo of the aftermath of a collision at sea between a Russian frigate and merchant ship in Danish waters that occurred the day prior. He used the photo, which was available within a few hours of the mishap, to emphasize the point that “there are many ways to gather open source information.

Master Mariner Capt. Alex Soukhanov, managing director at Moran Cyber, said that while designers and builders have understood for decades the need for safety, segmentation or compartmentalization in ship work, “cyber and networks” were “not priorities” for years. Those legacy systems are still operating today.

“It really doesn’t matter who the bad guy is” in hacking the vessel itself, from propulsion to navigation systems, port management, terminal capacity of cargo, to a maintenance facility’s work schedule because “all of these systems are connected together.”

#### Kills billions and causes LNG city attacks on par with nukes

Sincai 21, [Avital co-founded and heads as the COO in Cydome, Maritime Cyber Attacks Are Among the Greatest Unknown Threats to the Global Economy, June 28, https://www.cpomagazine.com/cyber-security/maritime-cyber-attacks-are-among-the-greatest-unknown-threats-to-the-global-economy/]

The fact is, if the maritime industry suddenly disappeared without a trace, the economic, social, and political impacts would be devastating. Billions of tons of vital products like food, medicine and oil are shipped around the world every year, and if these goods stopped flowing, billions of people would suffer the consequences. We saw a taste of this devastation early this year, when a ship lodged itself in the Suez Canal, blocking other ships from getting through. The incident cost the world nearly $10 billion in trade each day it was stuck.

This is only a fraction of the damage that could be caused by cyber attacks in the maritime industry.

There are various vectors for hackers to attack which could result in taking full control over a vessel or fleet, creating damage to critical systems on board or it could just be ransomware or a malicious virus attempting to take control. In one of the cases, we have seen that hackers took control of the pipeline and essentially held it hostage until they were transferred a certain amount of money they requested. In the end, faced with no other option, the pipeline company paid $4.4 million in ransom to the foreign hackers, according to the Colonial Pipeline CEO.

The hackers then reopened the pipeline, but the damage had already been done. The Colonial pipeline transferred huge amounts of oil across the country, and the shutdown caused massive shortages and panic buying. Gas prices went up across the country as a result of just a few hackers managing to exploit a vulnerability in the pipeline’s system. It’s easy to see from this one incident, how cyber attacks can affect much more than your personal computer.

Now, it is evident that the greatest cyber threat lies in the maritime industry. The COVID-19 pandemic sped up the already occurring digitization of the world, as a result of guidelines that required people to work from home over the internet. As such, the maritime industry also had to rely more heavily on the internet than ever before. You may not think of vessels and fleets as deeply connected with technology, but vessels are constantly connected to the internet.

Here’s where the real problem lies: some of the systems and computers on these vessels often use incredibly complicated and old systems. This makes it much harder to protect them from cyber attacks. The systems that these ships use are so complexly intertwined that there are many blind spots that are virtually unknowable.

Since the maritime industry is shifting into the digital age, and since the pandemic has forced it to rely even more heavily on the internet, there have verifiably been more cyber attacks on vessels recently. In only the first few months of the pandemic alone, attempted cyber attacks on maritime vessels shot up by 400%. This dramatic increase has truly sent a shockwave through the maritime community. The industry is one of the oldest industries in the world, and so it was surprising to some, how much they could be affected by just a few hackers.

Imagine if a hacker took control of a ship that was carrying something truly vital, like COVID vaccines. At this point, the internet is so deeply integrated with maritime systems, it would be impossible to switch to a manual system, so hackers would have full control.The hacker could shut down the ship for as long they wanted to, and as in the case of the Colonial pipeline, there is nothing the owner of the vessel could do but give them whatever it is they were asking for. Significant delays could cause millions, even billion dollars in economic damage, and have even more social and political effects.

Imagine if a hacker with malevolent intent took control of an oil tanker, containing millions of gallons of flammable liquid, and decided to do something terrible with it? We’ve seen oil spills before, but LNG tankers are so dangerous that even a small amount of damage could cause an explosion on the scale of a nuclear bomb. So what can we do?

#### Removing the exemption solves. Immunity structurally ensures price hikes.

Monios 3/14 [Jason Monios Kedge Business School, Gordon Wilmsmeier Facultad de Administración, Universidad de los Andes, "Maritime governance after COVID-19: how responses to market developments and environmental challenges lead towards degrowth", Maritime Economics and Logistics, 3/14/22, https://link.springer.com/article/10.1057/s41278-022-00226-w]

The container shipping market has for some time been oligopolistic and exhibiting tacit collusion (Sys 2009; Wilmsmeier and Sánchez 2011; ITF 2018; Brooks et al. 2019). Now 91.5% of the sector is controlled by the top 10 players, with 9 out of the top 10 also joined in just three alliances. Alliances are exempt from anti-trust regulation on the premise that they reduce overcapacity via economies of scope, with the requirement that (part) of these efficiency gains be shared with the customer through lower prices (Benacchio et al. 2007). Have alliances reduced overcapacity? No. This arrangement allowed carriers to build up capacity, disadvantaging smaller competitors (ITF 2018) and leaving them vulnerable to acquisition. Carriers then withdrew that capacity during the COVID-19 crisis in order to protect and indeed increase profits. Have economies of scope (alliances) and economies of scale (ship size increases) resulted in lower, market-driven, freight rates? No. Freight rates fell in 2009 as a result of overcapacity triggered by the global financial crisis. They remained low in recent years, not due to alliances, but due to continued overcapacity as carriers continued to order more tonnage than was required by levels of demand (Wilmsmeier and Monios 2020). Carriers argue that they need alliances in order to manage overcapacity, that overcapacity is an unavoidable aspect of shipping cycles, but it would be more efficient if incentives were changed such that overcapacity, at least at these levels, did not exist. In fact it is the alliances that allow, even require, carriers to pursue such a strategy, a dilemma summarised succinctly by Haralambides (2019): “The industry has fallen into some sort of vicious circle where the need to cut costs leads to the construction of larger ships, creating overcapacity that depresses rates, thus leading to a stronger need to cut costs.” The backwards logic that carriers need anti-trust exemptions in order to fill large vessels shows how unhealthy the market has become. Alliances incentivise uneconomic behaviour, supply leading demand, and, in the case of the container shipping industry, seem to facilitate collusive behaviour, such as the coordination of overcapacity which disadvantages smaller competitors, or the coordinated timing of ship scrapping (ITF 2018). Low rates are therefore the reason for alliances, not the result of them. Breaking up alliances would make it more difficult for individual carriers to fill large vessels, leading to a reduction in average vessel size and more direct services. Such a model would facilitate more direct competition rather than a focus on economies of scale to reduce prices (Haralambides 2019).

The other issue of allowing alliances is the danger that the shipper ends up with fewer direct services, lower frequency and less choice of port calls. Has this happened? The evidence presented above (cf. Hoffmann and Hoffmann 2021) suggests that this has indeed occurred, as does the evidence from shippers (ITF 2018). However, it is not clear whether shippers are against concentration or only alliances. The Global Shippers Forum (2016) is in favour of mergers but not alliances, so there would be less choice of company but at least they would compete directly and shippers would know which carrier they were dealing with. Reducing transhipment and bringing the container as close to the customer as possible are highly prized by shippers (Haralambides 2019), who regularly complain about not knowing which carrier in fact has their container and how many times it has been handled.

OECD (2015) and UNCTAD (2018) pointed out that alliances lead to less port choice, fewer services and general quality issues, but stopped short of making recommendations for change. ITF (2015) had recommended that port costs and public investments should be better aligned to public interests so as not to incentivise use of mega-ships, and to ensure that any associated costs incurred by ports (e.g. dredging) would be recovered through appropriate port dues. ITF (2018) highlighted several downsides of alliances, including monopsony power over ports, lower service quality for shippers, market power that prevents new entrants in the market and overcapacity by allowing carriers to purchase mega-ships. The report proposed “a presumption toward” ending the EU block exemption from anti-trust regulations for shipping lines. This very reasonable proposal that shipping lines should compete like any other business caused a predictable industry outcry (Knowler 2018).

Brooks et al. (2019) summarised the key issues in the debate such as the role of different jurisdictions across the globe and the divergent views between shippers, carriers and other stakeholders such as ports, as well as challenges of data collection on trade lane market shares and freight rate indices. The report focuses on providing certainty for carriers, and ensuring none is forced to exit the market: “Carriers have been unable to get the freight rates they need but seek renewal of the CBER [Consortia Block Exemption Regulation], while shippers are unable to get the certainty they desire on non-monetary aspects of carrier service and so seek abolition, but without providing the supporting evidence that it will resolve their concerns.” However, one could argue that it is not the task of the regulator to ensure that badly run businesses stay in the market. If they are inefficient then the role of the market is to remove them. In any case, more and smaller carriers would reduce this “too big to fail” bankruptcy risk of huge carriers. The current state of the market contains high barriers to both entry and exit, precluding its smooth functioning (Wilmsmeier and Monios 2020). Brooks et al. (2019) provide evidence of the problem of the current market which incentivises the wrong decisions: “the size of vessels in service today raises serious doubts about the future of the industry under the expiry pathway as most carriers are unable to mount a viable service with only their own vessels.”

While the analysis of Brooks et al. (2019) focuses on carrier cost, it is not necessarily the goal of regulation to achieve lowest cost for carriers (either as a whole or individually). A more important goal is to create a level playing field with open competition thus providing the best service for users. As long as freight rate increases, for example due to smaller ships or environmental regulations, are the same for all carriers, then there is no reason to intervene in the market. Maritime transport is vastly under-priced because it does not internalise external costs; in the low freight rate period before COVID-19, rates could represent around 1% of the final product price for high-value goods or low-value low-bulk goods. In this period, rates could amount to around 10% for more bulky goods such as large appliances or assembled furniture (Rodrigue 2020), and these products are among the worst hit by recent rate increases, with the new freight rates accounting for 40–60% of the cargo value (Sea-Intelligence 2021). A quote from a shipper during the recent COVID-19 rate hike is instructive: “It is only worth paying that rate if you have a container full of iPhones—not a container full of plastic toys or household goods” (Landon 2021). In order to get anywhere near meeting environmental targets, it will be necessary to reduce transport of such low-cost goods that are only feasible for export due to under-priced maritime transport.

Studies that recommend retaining the block exemption focus on keeping costs low for inefficient carriers, arguing that removing the exemption would lead to increased rates hence a drop in demand. Demand was booming in 2008 when rates were three times higher than after the crash, according to the basic economics that demand exceeded supply hence rates were higher. Even if a future rate increase due to the internalisation of external costs does lead to a drop in demand, this would in any case primarily affect demand for shipping of low-cost goods, which should in fact be the goal of policy-makers seeking to reduce shipping emissions.

This dilemma goes back to the rise of Chicago school economics at the expense of previous approaches to issues of anti-trust, market concentration and barriers to entry. Davies (2017) writes that “Bain (1956) viewed high profit and industrial concentration as the consequences of anti-competitive behaviour” but the later Chicago school “saw them as positive side-effects of efficiency”. Given that the container shipping market has enjoyed exemptions from anti-trust regulation for almost 40 years, it is impossible to prove by an ex ante study that banning alliances would drive up prices, but even if so, this would almost certainly improve quality. The whole point of the market mechanism according to the early neoliberals like Hayek (1944) is that the market outcome is unpredictable so it cannot be steered either by governments or powerful corporations. Before the rise of Chicago school neoliberalism, such market power would be broken up as a matter of principle, in order to prevent dominance of any one actor or group of actors, regardless of the potential benefits it may bring. The high fixed costs characteristic of liner shipping are not unique to this sector and have been shown to lead to dominant or oligopolistic market structures when the industry is protected from competition (Benacchio et al. 2007).

#### DOJ enforcement now and coming BUT it fails because of immunity.

Stoller 3/1 [Matt Stoller is Research Director for the American Economic Liberties Project, "Ukraine War Profiteering and the Shipping Cartel", 3/1/22, https://mattstoller.substack.com/p/ukraine-war-profiteering-and-the?s=r]

The White House has put out that Biden will be announcing several initiatives. The first is that the Department of Justice Antitrust Division is now going to help the Federal Maritime Commission (FMC) enforce the Shipping Act, which is competition law for ships. The Antitrust Division is normally tasked with the Sherman Antitrust Act and the Clayton Act, which prevent anti-competitive actions and mergers by businesses. But ocean carriers have some immunity from antitrust laws because untrammeled competition tends to lead towards industry-wide ruin. Instead, the Shipping Act organizes ocean carriers and terminals, and it has rules for what these common carriers are allowed to do and what is prohibited.

The FMC enforces the Shipping act, but the FMC is a tiny agency, with just 118 employees and less than a $30 million budget. It is so feeble that the Agriculture Department has better information on shipping on its website than the FMC. The FMC does have expertise, but it has very little capacity in litigation or enforcement. Meanwhile, the Antitrust Division is very good at litigation and enforcement, but doesn’t know shipping. So this arrangement makes sense. It creates the ‘Voltron of Maritime Enforcement’, as shipping expert Sal Mercogliano put it.

So we can expect a lot more government scrutiny on the industry, particularly with regards to fees that truckers and customers of carriers have to pay due to the traffic jams they can’t control. Additionally, as Dave Dayen notes, it’s likely that the Department of Justice Antitrust Division is going to use the Shipping Act to go directly at the three cartels that control the industry, and perhaps split them up. The goal in the short-term is likely to get the carriers to think twice before raising prices and fees if they don’t have to, and to treat importers and exporters a bit better in terms of handling cargo. In the medium-term, the goal is probably to bring prices back down to some reasonable level, instead of letting ocean carriers collude to maintain high prices.

It’s not the first time the DOJ Antitrust Division has tried to get involved in shipping. In 2017, the FBI served subpoenas on shipping line top executives at what is known as the “Box Club,” an industry gathering. Presumably this investigation was for price fixing, but the DOJ dropped the investigation a few years later. The likely reason they dropped the case is because the industry has antitrust immunity if they work together to manage shared routes in terms of capacity and service, and DOJ couldn’t get around that immunity. Now, ocean carriers aren’t supposed to coordinate on price, but most people in the industry assume they do.

#### FMC is culturally timid. Shippers won’t seek help because they perceive ineptitude.

Brown 22 [Hannah Story Brown (she/her) is a Researcher with the Revolving Door Project. She holds a BA in English from Columbia University, and her writing spans a variety of critical and creative mediums. Her past work experience includes environmental writing and legal, political, and historical research. "Amidst a Record Supply Chain Crisis, What is the Federal Maritime Commission’s Capacity?", 1/4/22, Revolving Door Project, https://therevolvingdoorproject.org/amidst-a-record-supply-chain-crisis-what-is-the-federal-maritime-commissions-capacity/Hannah Story Brown (she/her) is a Researcher with the Revolving Door Project. She holds a BA in English from Columbia University, and her writing spans a variety of critical and creative mediums. Her past work experience includes environmental writing and legal, political, and historical research. "Amidst a Record Supply Chain Crisis, What is the Federal Maritime Commission’s Capacity?", 1/4/22, Revolving Door Project, https://therevolvingdoorproject.org/amidst-a-record-supply-chain-crisis-what-is-the-federal-maritime-commissions-capacity/]

By the 2010s, the ocean supply chain’s vulnerability and inefficiencies were already visible. The Commission’s response, spearheaded by Commissioner Rebecca Dye, was to bring together various industry stakeholders in conversation. The 2017 Report of this “Supply Chain Innovation Teams initiative” offers further insight into the Commission’s view of its responsibilities and, perhaps, capacity. Dye reports that industry participants “indicated that they had little appetite for governmental prescriptions or requirements,” and adds that “from the outset, the Commission recognized that additional government regulations were not the answer.” It is alarming to see a regulatory agency renege its chief function. The Commission decided to serve instead as “a *catalyst* for stakeholder-identified commercial solutions” (emphasis in original). Is this decision evidence of corporate capture, or the result of an agency whose resources are dwarfed by its mandate, still striving to make an impact?

Whatever the cause of the Commission’s reluctance to advance regulation, it appears that both the White House and a bipartisan coalition of lawmakers see regulation as the best path out of our current quagmire. While the Commission’s response to the supply chain crisis continues to emphasize “commercial solutions,” and includes the creation of a new National Shipper Advisory Committee, convening major shippers like Walmart, Tyson Foods, Amazon and DuPont to advise the Commission on ocean shipping policy, Congress is looking to the proposed Ocean Shipping Reform Act of 2021 for answers. The House of Representatives agreed to suspend the usual rules (which they do for noncontroversial bills) and passed the Ocean Shipping Reform Act of 2021 in a bipartisan 364-60 vote on December 8. The bill has already been sent to the Senate, read twice, and referred to committee.

The 2021 Act would give the Federal Maritime Commission more authority to crack down on bad practices by carriers and terminal operators, including discriminating and retailiating against shippers, making false certifications, and imposing unreasonable demurrage and detention fees. It would leave to the Commission’s discretion whether and when it is reasonable for carriers to refuse US agricultural exports when it is more profitable to send empty containers back to China.

The White House, meanwhile, has directed the Federal Maritime Commission to “​​use all of the tools at its disposal to ensure free and fair competition.” This includes the Commission’s unique ability to intervene on antitrust issues: “while the alliances between the carriers receive statutory immunity from antitrust laws, the FMC can challenge those agreements if they ‘produce an unreasonable reduction in transportation service or an unreasonable increase in transportation cost or … substantially lessen competition.’”

In reality, though the Commission has labored to avoid stepping on industry toes, it has substantial authority to enforce antitrust laws when shipping agreements—the confidential agreements that only the Commission gets to read—reduce competition and damage supply chain resilience. An encouraging sign that the Commission recognizes its antitrust capacity comes in the form of a Memorandum of Understanding with the Department of Justice’s Antitrust Division this summer, committing the two agencies to cooperate on “the enforcement of antitrust and other laws related to the Industry.”

While the Federal Maritime Commission’s singular discretion when it comes to challenging shipping agreements for antitrust violations may be its sharpest tool, it has a broad mandate to monitor all parties in the US-international ocean shipping industry to ensure “just and reasonable practices.” It is also the Commission’s job to facilitate “alternative dispute resolution” when problems crop up between parties, and to seek remedies when necessary. The Commission has the authority to conduct investigations and hold legal proceedings overseen by the Commission’s Administrative Law Judges, and prosecuted by its Bureau of Enforcement. Yet despite audible discontent within the industry, the Commission has found that “few private parties have filed complaints seeking reparations,” in part because shippers and truckers fear retaliation. While the Commission is taking steps to minimize barriers to private party complaints, the prohibitive cost of retaliation is indicative of the container lines’ tight grip on the industry.

### 2

#### Advantage 2---Ports:

**\*\*\*Ports defer co-beneficial investments because those sunk costs give alliances greater bargaining power over ports. Uncertainty makes hold-up worse.**

**Merk 18** [Olaf Merk, leads the ports and shipping work at the International Transport Forum (ITF) of the Organisation for Economic Co-operation and Development (OECD), Lucie Kirstein and Filip Salamitov, "The Impact of Alliances in Container Shipping", 11/2/18, https://www.itf-oecd.org/sites/default/files/docs/impact-alliances-container-shipping.pdf]

The extent to which public money has been **misspent on port infrastructure** has been **well documented** for Europe in a series of reports by the European Court of Auditors, who identified various ports financed by EU-funds that were underutilised or not utilised at all (ECA, 2011; ECA, 2016). Underutilisation of ports is not reserved to Europe; many world regions have more port capacity than needed (OECD/ITF, 2016). Port infrastructure is lumpy and maritime trade projections frequently inaccurate, so there is an inherent challenge in providing the appropriate amount of port capacity. Moreover, the relation between carriers and container ports is subject to **hold-up problems**, which increase the **bargaining power of carriers** (Box 11). However, this challenge has been **amplified by the effects of alliances**, as will be set out below.

Buying power of carriers

The buying power of carrier alliances stems from the fact that only a few world-wide ports seem truly inevitable. In North America only six ports receive calls from the three alliances on the two main trade lanes with Asia and Europe (Figure 19); this is 9 ports in Asia (Figure 20) and 5 ports in Europe (Figure 11). This implies that most large container ports are dependent on just one or two alliances; a decision of alliances to revise their port networks has **large effects for the ports**, which gives them huge leverage over these ports. Apart from a very select group of ports that seem inevitable for all alliances, most of the other ports have the constant risk that the alliance carriers will review their schedule and stop calling the port. Even the largest ports are not immune to the pressure and leverage from carriers.

Moreover, many **ports compete with each other**, so they provide carriers with real alternatives that they can use as leverage. Cargo shifts between ports are very frequent. Carriers and alliances very regularly update their service schedules and often change ports. The effects of these changes have much larger impacts than one or two decades ago, considering that much larger flows are now involved. We illustrated this with Figure 6 in Chapter 2 for the case of North-West European container ports. The relation between shipping lines and ports is per definition asymmetric, as ships are movable assets, whereas ports cannot be moved and have a longer investment repayment span. This asymmetry has increased due to the combined effects of alliances, consolidation and mega-ships.

Box 11. The hold-up problem of carriers and container ports A **hold-up problem** can be defined as a situation where two parties would derive benefits from cooperating, but **refrain** from doing so because they **fear** that they may give the other party **increased bargaining power**, which could **reduce** their own **profits**. This is pertinent in the case of **infrastructure investment**: when **firm A** makes an **investment** from which firm B derives a benefit, this could be considered "**sunk investment**", so firm B could change the rules of cooperation **after the investment** to implicitly or explicitly **expropriate the investor** (OECD/ITF, 2018). The ex post bargaining position of the investor will be **weaker** if the **share** of **sunk investment** is **larger**. In other words, the risk of a **hold-up problem** is **larger** with high asset specificity: the **assets** **cannot be redeployed** elsewhere because they are specific to that transaction. The risk of hold-up problems is **higher** in **cases of high uncertainty** because contracts cannot foresee every potential eventuality (they are "incomplete"). In case of competition amongst buyers and repeated transactions the hold-up risk is lower. In the latter case the investor's next investment could be used as a threat to contain the buyer's incentives to behave oppotiunistically (CRA, 2015). Hold-ups also tends to be less severe in situations where both parties could take some of the other side's specific investments "hostage" (Williamson, 1983).

#### \*\*\*Alliance leverage prioritizes handling cost reduction over all else, this causes infrastructure underinvestment and inefficiencies

Barnard 16 [Bruce Barnard, Special Correspondent, "Europe port operators seek regulatory clarity in daunting market", 12/8/16, https://www.joc.com/regulation-policy/transportation-regulations/international-transportation-regulations/europe-port-operators-seek-regulatory-clarity-daunting-market\_20161208.html]

Private port companies, which have “massively” invested on the seaside and landside, are facing “big” challenges in today’s market, Feport said.

“In the container sector, the ever-increasing alliances are seeking to leverage their position to drive down handling costs while at the same time expecting port operators to invest in the necessary equipment to handle bigger ships.”

Industry analyst Drewry sounded a similar warning last week, saying the perpetual drive for lower handling costs by container lines could lead to underinvestment in port infrastructure.

“This situation is becoming unsustainable in a context where the regulatory framework for ports is constantly changing, be it at national or European level,” Feport said in the white paper.

“The current depressed growth aggravates the impact of market inefficiencies and reveals the necessity to better target investments on hinterland connections to improve the connectivity of the transport network,” said Feport president Gunther Bonz.

Private operators want to continue investing, but they need a clear and stable framework including fair and transport governance rules and a real protection from risks of distortion of competition, he said.

“If the burden of restraints becomes too heavy, then private investment in ports and beyond will be postponed to the detriment of the European transport sectors.”

#### It also force equipment manufacturers to recycle legacy models, crowding out independent owners that enhance sustainable development

PT 16 [Port Technology, "Shipping Alliances to Challenge Tech Innovation?", 9/13/16, https://www.porttechnology.org/news/shipping\_alliances\_to\_challenge\_tech\_innovation/]

Maritime Strategies International (MSI), a leading independent research and consultancy firm, has announced that container lines have shifted their focus towards alliance structures for operational efficiency, rather than relying on large scale technological innovation.

The lines’ profile as technology innovators is well known, having rewritten the rule book on economies of scale, adopting alternative marine power and electronic-controlled fuel-injection engines that support slow steaming.

However, alliance structures within the industry may challenge the speed and shape of technological innovation in future.

With container lines continuing to seek cost savings, Jamie Seneviratne Analyst for MSI said that any equipment manufacturer looking to drive innovation must consider how vessels employing their systems can be compatible with other ships operated in the same alliance structure.

He said: “Historically, container shipping has seen some of the most pioneering uses of technology and new vessel designs, with bold movements towards innovation.

“Pushing the bounds of technology were independent owners who built a series of containerships designed with specific objectives in mind. These ships were built with an eye on sustainable development and efficiency in ways many others had not considered.”

Despite these achievements, the drive for innovation in container shipping has proceeded at an uneven pace, with technical innovations such as eco-ships and new vessel sizes, have been followed by an increase in ordering.

Technical Paper: Unprecedented Alliances: Tackling the Biggest Alliances

However, the dynamics of the new alliance structures within the industry may challenge the speed, and shape of technological innovation.

Nearly eight years into the container industry crisis, the recent intensification of alliances marks something of a step-change in the attitudes of key players.

Rather than focussing on technical innovation – beyond the increase in slot capacity that has seen vessel sizes increase to a new ceiling – the industry seems to have settled on alliances as the primary means to achieve this, says Seneviratne.

Seneviratne said: “The containership industry is in a state of transition and whilst some liner companies and owners are trying to embrace and drive change, others have struggled to shift their business model.

“Liner companies need to find a way to consolidate their operations sufficiently to gain economies of scale, achieve cost synergies and eventually obtain some degree of pricing power.”

Within this context, any distinct design features or technical innovations on those ships must be compatible in terms of operating alongside a string of other vessels, potentially of different designs.

Any technology innovation which makes it easier to operate joint services would be highly valuable, but to do this it would have to satisfy design constraints from multiple owners. As such, it represents both a challenge and an opportunity for technology innovators within the industry.

**Port infrastructure stops extinction**

**Mutombo** et al **19**, [Kana Mutombo World Bank A.I. Ölçer World Maritime University Lawrence Kuroshi World Maritime University, A new approach to assessing port infrastructure resilience to climate risks and adaptive solutions prioritization, https://www.researchgate.net/publication/332735226\_A\_new\_approach\_to\_assessing\_port\_infrastructure\_resilience\_to\_climate\_risks\_and\_adaptive\_solutions\_prioritization]

In recent decades, focussing on logistic chain has proved tobe a way of reducing the price of goods (PIANC, 2014) andtherefore gaining competitive advantage. An eﬃcient logistic chain can effectively contribute to lower ﬁnal cost of product ei-ther by reducing transport costs or inventory costs or both. Lo-gistic chains have nowadays become the main drivers for trade(Liu & Lam, 2015). Ports, as essential players in the logis-tic chains, are increasingly expected to fulﬁl seamless logisticchain requirements (Gaur, 2006). This is heightened by the factthat global trade is largely seaborne (91%); with cargo shipscarrying approximately 50 000 billion tonne-miles (UNFCCC,2013) moving through ports to reach consumers. Seaport eﬃ-ciency has been widely recognised as a major determinant of maritime transport costs (Loh & Thai, 2015; Dollar, Clark, &Micco, 2002). As a result, the development of maritime trans-portation infrastructure is increasingly becoming a key enablerand catalyst for the competitiveness and development of anyregional economy, especially due to the large positive exter-nalities often generated by port activities (Liu & Lam, 2015).Poor infrastructure is believed to account for more than 40% oftransport costs (Dollar, Clark, & Micco, 2002). As distancesare shortened by globalisation, the economies of the world be-come more interdependent and the role of ports is graduallyshifting from a set of complex infrastructures to a major player in national logistic chain management which majority of the population heavily rely on for **day to day necessities** and em-ployment. Given the current high **pop**ulation **growth** rate, this trend is **likely** to continue and further **increase** in future, therebygradually **strengthening** the **positive correlation** between **logistic chain services** and **human survival**. In spite of this develop-ment, climate change has however brought serious threats to theport logistic chain and this is mainly due to the fact that seaportsare located on coasts that are susceptible to climate variations (Becker et al., 2011; Villatoro et al., 2014; Arns, Wahl, Haigh, Jensen, & Pattiaratchi, 2013; Demirbilek, 2013; PIANC Envi-com - Task Group 3, 2008). Given that port activities naturallypresent substantial multiplier effect, disruptions due to climateon port logistic can drastically change the supply chain conﬁg-uration (Dollar, Clark, & Micco, 2002; Loh & Thai, 2015) withmajor consequences on regional economy at large. Ports, there-fore, require a unique forward-looking management approachto climate change based on port logistic resilience rather thaninfrastructure resistance (Mutombo & ¨Olc¸er, 2016). The pro-posed methodology in this paper o↵ers a unique and practicaltool for assessing and scoring climate resilience of port infras-tructure within the broader context with the view to prioritiseadaptive initiatives. Central to this process is the need to main-tain seamless port logistic services when exposed to climateevents; as a result of improved decision making. The paperbegins with an overview on climate change and ports in section2, followed by a brief literature review on climate adaptation oninfrastructure under Section 3. Section 4 discusses the proposedmethodology for scoring resilience and prioritising adaptive so-lutions. To demonstrate the applicability of the methodology,Section 5 presents a case study related to Port X; a real existingport under anonymity due to ethical considerations. Section 6concludes the paper and provides some recommendations.2. Climate change and ports.As a result of a better understanding of climate processes,predictions of climate change have largely improved. Over thepast 50years, observed global mean surface temperature trendhas closely matched model simulations (IPCC, 2014). The IPCCpredicts that global temperature for the end of the 21st cen-tury is likely to exceed 1.5 oC relative to 1850 to 1900 forall RCP scenarios except RCP2.6. It is likely to exceed 2 oCfor scenarios RCP6.0 and RCP8.5. However, even if the worldcommits to signiﬁcant greenhouse gas (GHG) emissions reduc-tions, change to the current climatic process is unfortunatelyinevitable. The earth system will continue to experience sealevel rise, droughts, ﬂoods, increase heat, intense storm andwaves. Most common visible impacts of climate change onport infrastructure include failure of foundations, damage anddeterioration to structures, inundation, increased wave overtop-ping, barrier material displacement and fracture, erosion, andincrease in sediment inﬂow. Adapting **port infrastructure** to climate change has, therefore, become compelling and this isachieved by assessing the port ability to withstand climate vari-ation, whereby thresholds of tolerance to climate variation areidentiﬁed. These thresholds are then raised through adaptation(Burton, Diringer, & Smith, 2006). Despite the current avail-ability of scientiﬁc and technical data in the industry, there isstill presently no provision in the maritime industry for a portwide approach or methodology for assessing and incorporatingthese risks into port adaptation. Recommendations to **incorporate sustainability** into early stages of **infrastructure development** have been largely highlighted on many studies (Espinet,Schweikert, Heever, & Chinowsky, 2016; Araos et al., 2016);suggesting a holistic planning process taking into considerationasset life cycle assessments which include repairs and provision for alternatives. Such inclusive approach is known to **substantially reduce** **ﬁnancial costs** from **increased vulnerabilities**, re-habilitation and additional maintenance (Espinet, Schweikert,Heever, & Chinowsky, 2016; Araos et al., 2016).

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**Solves growing climate risk, SDGs, local renewables, and sea rise**

**Asariotis 21**, [Regina Asariotis | Chief, Policy and Legislation Section, Trade Logistics Branch, UNCTAD, Climate change impacts on seaports: A growing threat to sustainable trade and development, June 4, https://unctad.org/news/climate-change-impacts-seaports-growing-threat-sustainable-trade-and-development]

Seaports are **essential** for global trade-led development, and for the ‘**Blue Econ**omy’. They provide access to global markets and supply-chains for all countries, and are integral to maritime transport, as well as fisheries, offshore energy development, and many economic activities in coastal zones. With over 80 % of world trade volume carried by sea - from port to port -, they are **crucial** infrastructure nodes that **underpin** **g**lobal **s**upply **c**hain**s** and are **key** to **future trade** and **development** prospects, particularly of developing States which currently account for around 60 % of goods loaded and unloaded globally. At the same time, ports are particularly exposed to various natural hazards, due to their locations along open coasts or in low-lying estuaries and deltas; their setting makes them susceptible to impacts of climatic hazards such as rising sea levels, storm surges, waves and winds, riverine and pluvial flooding, as well as tectonic events (e.g. tsunamis).

Given the critical role of ports in the global trading system and their potential **exposure** to **climate** related **damage**, **disruptions** and **delays**, **enhancing** their **climate resilience** is a matter of **strategic** socio-economic importance for the **global econ**omy and society as a whole (UNCTAD, 2020a). It is also key to **enabling small island developing** States (SIDS) and other vulnerable coastal and island nations to explore and harness the full potential and benefits of the blue economy for sustainable development. SIDS and other island nations depend on their sea**ports** as **lifelines** for external trade, food and energy security, tourism – often a major driver of economic growth and development, as well as in the context of Disaster Risk Reduction. Ports also provide vital socio-economic linkages and are key to regional and inter-island connectivity. However, in many SIDS these **critical assets** are at **high** and **growing risk** of climate change impacts such as coastal flooding, from as early as in the 2030s.

Although many climatic hazards can affect seaports (e.g. heat waves, extreme winds and precipitation), mean sea-level rise (SLR) and associated extreme sea-levels (ESLs) pose a particularly important threat, which is growing. A brief overview of the increasing hazards and impacts of sea level rise on ports under climate change illustrates the urgent case for action.

Sea level rise: impacts, trends and projections

Ports and connecting coastal transport infrastructure form complex systems that can be heavily impacted by rising mean sea levels as well as potential increases in the frequency/intensity of extreme sea levels (ESLs) due to **storm surge**s and **extreme waves**, that can cause permanent or temporary inundation, respectively. In the case of ports integrated within large coastal urban agglomerations, there can be also impacts for large populations and a broad range of stakeholders and socio-economic activities. Coastal land subsidence due to extensive urban development may result in additional (relative) sea level rise and increased flood risk for many large port cities, requiring improved adaptation pathways.

Economic losses arising from both direct damages to infrastructure and operational **disruptions**/delays across interconnected global supply chains can be **extensive**, particularly in regions affected by **tropical cyclones** and related storm **surges** and **waves**. For example, the total losses from weather-related disasters in 2017, including the devastating Caribbean hurricane season, have been estimated at US$ 320 billion, with damages and losses in many affected SIDS amounting to a significant share (or multiple) of GDP, whereas the cost of the 2019 Hurricane Dorian for the Bahamas alone were estimated at US$ 3.4 billion, with a large fraction of these damages/losses associated with transport infrastructure. Hurricane Sandy (2012) caused over US$ 62 billion losses in New York, New Jersey and Connecticut, including extensive damage and a week-long shut-down of the US New York/New Jersey container port. A recent study estimates that the total value of assets exposed to episodic coastal flooding by 2100 could increase to 12 – 20 % of the global GDP, if no adaptation measures are taken.

Sea-level rise is largely driven by global warming. Global warming of more than 1.0°C above pre-industrial levels has already been observed and is predicted to reach 1.5°C as early as in the 2030s, with significant impacts for coastal developing States (IPCC, 2018). A 2°C of global temperature increase - widely regarded as the threshold beyond which climate change risks may become unacceptably high - may be reached by the 2050s, depending on the future GHG emissions. Despite a brief **emission dip** caused by the COVID-19 pandemic, and signs of acceleration of ambition in many countries, the latest UNEP Emissions Gap Report indicates that the world is still heading for a temperature rise in **excess of 3°C** this century – far beyond the Paris Agreement goals of limiting global warming to well below 2°C and pursuing a limit of 1.5°C.

Global warming can force large mean sea level changes, by the combination of: (i) ocean thermal expansion due to the increase of the ocean heat content; (ii) ocean water mass increases from the melting of the continental ice sheets, caps and glaciers; (iii) isostatic adjustment, anthropogenic coastal subsidence and changes in land water storage. Recent observations suggest a globally averaged mean sea level rise (SLR) of about 4.0 cm per decade (WMO, 2021). SLR projections are being continuously revised upwards, with recent projections suggesting that, by 2100, with 2°C of global warming above pre-industrial levels (specific Warming Level-SWL of 2°C), global SLR will be 30 - 93 cm higher than the mean of the 1986 - 2005 period (IPCC, 2018). Importantly, higher mean sea levels, combined with future extreme storm surges, waves and tides, could generate devastating extreme sea level (ESL) events, which pose a particular threat to seaports across the globe.

Extreme sea levels are set to increase almost everywhere (IPCC 2019 SROCC), and ESL events of a certain magnitude that presently have a low recurrence frequency (e.g. 1-in-100 years) are expected to become more frequent in most locations (Fig. 1). The baseline 1-in-100 years ESL (i.e. the mean of the 1986-2014 period, in m) varies considerably across regions, with major hot spots found along the macrotidal NW and NE American, western European, and East Asian coasts (Fig. 1a). Future ESLs are projected to increase for ports in all regions, with effects worsening under increasing global warming. Even in a 1.5 °C warmer world – i.e. as soon as in the 2030s, extreme sea levels of a magnitude so far expected to occur once a century, may occur as frequently as once every ten years in many South American, African, Gulf, SE Asian and Pacific ports (Fig. 1b). In a 3 °C warmer world, many ports could experience the baseline 1-in-100 years ESL several times per year (Fig. 1d).

These projections have important implications for the adaptation of ports to climate change. Ports are assets with long lifespans, which means that changes in the recurrence (return period) of extreme sea level events (and associated waves) over the course of the 21st century affect the risk of flooding at facility level and the choice and design of requisite climate change adaptation measures.

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Fig. 1 Extreme sea level (ESL) projections for global ports under climate change. a): Baseline (mean of the 1986-2014 period) 1-in-100 years extreme sea levels (ESLs100) (in m, upper left scale) at major ports along the global coastline. b), c) and d): Projected changes in the return period of the baseline 1-in- 100 years extreme sea levels (ESLs100) under Specific Warming Levels (SWLs) of 1.5, 2.0 and 3.0 C, respectively (bottom scale). Key: Tr (years), future return period; seaport location from World Port Index 2019. ESLs100 projections for the global coastline from EC-JRC data collection. See also Vousdoukas et al. (2018).

Although the above state-of-the-art modeling projections appear daunting, accelerating mean sea level rise in future decades could increase extreme sea levels even further. There are uncertainties concerning the evolution of future mean sea levels, stemming mainly from those associated with the ocean mass addition from continental ice melting. Recent studies suggest that polar and mountainous glaciers will lose between about 18 and 36 % of their ice mass (relative to 2015) over the course of the 21st century, depending on the climate scenario (IPCC, 2019 SROCC). At the same time, new research shows accelerated melting of the Greenland and Antarctic ice sheets (GIS and AIS, respectively). The GIS has been losing ice since the early 1990s (IPCC, 2019 SROCC; WMO, 2021) and is projected to continue its melting in the future; by 2100, the GIS mass loss may account for about 11 cm additional mean sea level rise. With regard to the AIS, it also appears that its melting has increased (IPCC, 2019 SROCC), with a very recent study suggesting that its future melting might be worse than previously expected; under scenarios in line with current emission pathways (i.e. allowing 3 °C SWL), an abrupt jump in the pace of Antarctic ice loss has been projected after around 2060, which would contribute about 0.5 cm/ýr to the global SLR by 2100. This could mean that from the 2060s, the overall annual rate of mean SLR could be more than double than that observed over the last decade. This would exacerbate future extreme sea levels and significantly increase the related risk of coastal flooding even further.

What needs to be done?

There is no single approach to climate change adaptation and resilience planning for ports, but an important message for policymakers, industry, international organizations and development partners is that there is **no time to lose** and “**all hands on deck**” are needed. An interconnected world depends on well-functioning transportation links. In the absence of timely planning and implementation of requisite adaptation measures, the projected impacts on seaports may have **broad econ**omic and **trade**-related **repercussions** and may **severely compromise** the **sustainable development** prospects of the most vulnerable groups of countries, such as SIDS. Given what is at stake and the potential costs of inaction, prevention and mitigation of climate change impacts on ports – and other key transport infrastructure, should become a **major priority** as part of **sustainable development** and climate strategies.

Enhancing the climate-resilience of sea**ports** and other critical transport infrastructure will be **central** to advancing the 2030 **Agenda** for **Sustainable Development** (e.g. goals 9, 13, 14 and target 1.5) and to achieving progress on the objectives of other international agreements, including the **Paris** Agreement, the Sendai Framework for Disaster Risk Reduction, the SIDS Accelerated Modalities of Action (SAMOA) Pathway, the Istanbul Programme of Action for the Least Developed Countries, and the New Urban Agenda.

Effective adaptation requires ‘fit-for-purpose’ risk assessment procedures (at local and facility levels), bridging of potential data and knowledge gaps, and the development of appropriate technical and management solutions that reduce vulnerability and allow for decision-making under uncertainty. It also requires **finance**, **tech**nology and **capacity-building**, as well as coordinated policy responses and supportive legal and regulatory approaches (UNCTAD 2020a; UNCTAD 2020b). Standards, guidance, and methodological tools also have an important role to play. Investment in energy **efficiency**, **decarbonization** and **renewables** may also provide major **co-benefits**, in terms of climate change **mitigation** and **adaptation**, as well as reduced dependency on energy imports and related expenditure.

Aiming for **synergy** and policy coherence in efforts at post-pandemic recovery and adopting more systemic, integrated approaches to climate change adaptation and **resilience-building** across sectors and networks could yield **major benefits**, especially for the most vulnerable communities. And investing in climate-resilience makes good economic sense: according to the World Bank, the overall net benefits of investing in resilient infrastructure in developing countries could amount to $4.2 trillion over the lifetime of new infrastructure – a $4 benefit for each dollar invested in resilience.

While the need for action on climate-change adaptation and resilience-building for ports is **increasingly** being **recognized**, including as part of the Global Climate Action Pathways for Transport and Resilience, much remains to be done. And time is of the essence.

**SDGs stop extinction**

**UNSC 17**, \*United Nations Security Council, (December 20th, 2017, “Prevention, Development Must Be at Centre of All Efforts Tackling Emerging Complex Threats to International Peace, Secretary-General Tells Security Council”, https://www.un.org/press/en/2017/sc13131.doc.htm)

Prevention, Development Must Be at Centre of All Efforts Tackling Emerging Complex Threats to International Peace, Secretary-General Tells Security Council

Prevention and **development** must be at the **centre** of **all efforts** to address both the **quantitative** and **qualitative** changes that were emerging in threats around the world, the Secretary‑General of the United Nations told the Security Council today, as some 60 Member States participated in an all‑day debate tackling complex contemporary challenges to international peace and security.

António Guterres said the perils of **nuclear weapons** were once again front and centre, with tensions higher than those during the Cold War.  Climate change was a **threat multiplier** and **technology advances** had made it **easier** for extremists to communicate.  Conflicts were longer, with some lasting **20 years** on average, and were more complex, with armed and extremist groups linked with each other and with the worldwide threat of **terrorism**.  Transnational **drug smugglers** and **human traffickers** were perpetuating the chaos and preying on **refugees** and **migrants**.

The changing nature of conflict meant rethinking approaches that included integrated action, he said, stressing that prevention must be at the centre of all efforts.  **Development** was one of the **best instruments** of **prevention**. The 2030 Agenda for Sustainable Development would help build **peaceful societies**. Respect for human rights was also essential and there was a need to invest in social cohesion so that all felt they had a stake in society.

He also emphasized that women’s participation was crucial to success, from conflict prevention to peacemaking and sustaining peace.  Where women were in power, societies flourished, he pointed out.  Sexual violence against women, therefore, must be addressed and justice pursued for perpetrators.

Prevention also included preventive diplomacy, he said, noting that the newly established High-level Advisory Board on Mediation had met for the first time.  The concept of human security was a useful frame of reference for that work, as it was people‑centred and holistic and emphasized the need to act early and prioritize the most vulnerable.

“Let us work together to enhance the Council’s focus on emerging situations, expand the toolbox, increase resources for prevention, and be more **systematic** in avoiding **conflict** and **sustaining peace**,” he said, emphasizing the need for Council unity.  Without it, he said, the parties to conflict might take more **inflexible** and **intransigent** positions, and the drivers of conflict might push situations to the point of **no return.**

Japan’s representative, Council President for December, spoke in his national capacity, noting that in the 25 years since the end of the Cold War, there had been a rise in complex contemporary challenges to **international peace** and **security**.  That included the proliferation of **w**eapons of **m**ass **d**estruction, the expansion of **terrorism**, and **non‑traditional challenges** such as non‑State actors and inter‑State criminal organizations.

While the Council had been tackling those challenges, in most cases through a country or region‑specific context, he stressed that a human security approach was highly relevant when addressing complex contemporary challenges to international peace and security.  Such an approach placed the individual at the centre, based on a cross‑sectoral understanding of insecurities.  It also entailed a broadened understanding of threats and challenges.

In the ensuing debate, speakers emphasized the need to **adjust** to the changing challenges to international peace and security and welcomed the Secretary General’s reform of the Organization’s security pillar and other initiatives.  Many stressed the need to address **root causes** of **instability** and **conflict**, including climate change, non‑State armed groups, extremism and terrorism, as well as **poverty** and **underdevelopment**.

**Local renewables solve nuclear war, sea rise irradiates the ocean---extinction**

**WFC 16**, [World Future Council, Examining the interplay between climate change and nuclear weapons, April 19, 2016, https://www.worldfuturecouncil.org/examining-interplay-climate-change-nuclear-weapons/]

Why is this so, when considering that renewable energy technologies provide viable alternatives? (see Figure 2) By harnessing **local renewable energy** sources, jurisdictions increase their **political** and **energy independency**, while the degree of local and international cooperation needed to transition to 100% Renewable Energy can act as a **catalyst** for **coop**eration in tackling **other transnational security** **threats**. This helps solving **geopolitical crises**, avoid **future armed conflicts** triggered by climate instability and resource scarcity, and build **cooperative security** mechanisms. Similarly, regional initiatives could attempt to tackle both climatic and security threats. For example, Nuclear Weapon-Free Zones (which already cover the entire Southern Hemisphere – see Figure 3) can, in turn, promote regional environmental and climate protection policies, as exemplified by the Antarctic Treaty System. Such action could also be sought in the Arctic, where the effects of climate change and the dangers of nuclear weapons come together as increased competition over resources and the opening up of routes for military maneuvering and posturing, including with **nuclear** weapons, can heighten **tensions** between the region’s powers.

The legal imperative

Finally, there exist international legal obligations both with regard to curbing climate change and achieving universal nuclear disarmament. It is thus not surprising that on both fronts, litigation has been pursued to ensure these obligations are implemented. Climate cases have been filed in several countries, including in the Netherlands, where the Court ruled in favour of the plaintiffs, noting that the State has a legal obligation to protect its citizens, ordering the Dutch government to reduce its CO2 emissions by a minimum of 25% (compared to 1990) by 2020.

On the nuclear front, the Republic of the Marshall Islands filed applications in 2014 in the International Court of Justice against the nine nuclear-armed states (US, UK, France, Russia, China, India, Pakistan, Israel, North Korea), claiming that they are in breach of obligations relating to nuclear disarmament under the NPT and under customary international law. Cases are proceeding in March 2016 against the three of the nuclear-armed states that have accepted the compulsory jurisdiction of the ICJ—the UK, India, and Pakistan.

A cautionary tale

For the people of the Marshall Islands, and a rising number of people in other parts of the world, the effects of these two threats are not a theoretical, future issue of concern. Behind the facts and figures are stories of real suffering from climate change and nuclear weapons programmes.

The plight of one group in particular is illustrative of the human impact of the nuclear enterprise and climate change. The inhabitants of the remote Pacific island chain of Bikini Atoll were forced from their homes in the 1940s so that the United States could test its atomic bombs there, bringing with it a legacy of transgenerational effects of radiation exposure, including high cancer rates, birth deformities and environmental poisoning. The lands they had called home were declared uninhabitable. Now, the tiny patches of earth they were relocated to in the Marshall Islands are at risk of suffering the same fate, as rising **sea** level**s** are **breach**ing sea walls, washing over their islands, killing crops and forcing the Bikini Atoll refugees to consider relocating again – this time to foreign continents thousands of miles away. As if to underline the potentially **catastrophic convergence** of both perils, there is even the danger that **rising sea levels** could spill the **radioactive waste** from testing, which has been stored **on** the **islands**, into the **ocean**. Their experience should serve as a cautionary tale. If we don’t seize the opportunities soon to rid the world of these threats, we will **drift** toward a similar **fate**.

#### OSRA thumps and increases enforcement

Grisales 4/1 [Claudia Grisales is a congressional reporter assigned to NPR's Washington Desk, "Bipartisan bill to address supply chain kinks moves closer to the president's desk", 4/1/22, https://www.npr.org/2022/04/01/1090313383/bipartisan-bill-to-address-supply-chain-kinks-moves-closer-to-the-presidents-des]

Bipartisan legislation that aims to help tackle supply chain woes that have wreaked havoc on the U.S. economy is inching closer to President Biden's desk.

The Ocean Shipping Reform Act was approved unanimously in the Senate chamber on Thursday after a version was approved in the House late last year. It aims to ease shipping backlogs by addressing challenges at U.S. ports, supporters said.

Minnesota Democratic Sen. Amy Klobuchar and South Dakota Republican Sen. John Thune led the bipartisan bill that had 29 cosponsors in the upper chamber. It was passed unanimously by voice vote.

"This is the beginning, but it's also tacking one of those thorny problems, Klobuchar said. "I think it is an example of how the solutions on the supply chain — there are many — and this is just one industry" with more to address.

Bottlenecks forming for U.S. exports have played a key role in the country's rising inflation.

The bill requires ocean carriers to certify that late fees comply with federal regulations or face penalties, prohibits carriers from unreasonably declining shipping opportunities for U.S exports, and ramps up reporting requirements to the Federal Maritime Commission. It also empowers the commission to initiate probes of carrier's business practices and apply enforcement actions.

White House press secretary Jen Psaki said Biden had called out ocean shipping carriers raising their rates during his February State of the Union address, saying "these costs pass through to American businesses and families and contribute to inflation."

"The Senate yesterday passed overwhelmingly bipartisan legislation to reform the ocean shipping industry and lower costs for American farmers, businesses and consumers," Psaki told reporters at a White House briefing.

A version of the plan passed the House with a large bipartisan vote, 364-60, in December. With the House passage that was led by California Democrat Rep. John Garamendi and South Dakota Republican Rep. Dusty Johnson, the plan now heads to final negotiations for a deal that could become law.

#### DOJ criminal enforcement is at a 30-year high and growing

Jay and Dillickrath 3-8, [Sheppard Mullin Richter & Hampton LLP, Executives Beware: DOJ Antitrust Division is Taking a Hard Look at a Wide Spectrum of Potential Criminal Violations, 2022, https://www.jdsupra.com/legalnews/executives-beware-doj-antitrust-1571372/]

On March 2, Deputy Assistant Attorney General Richard Powers laid out a significant and aggressive criminal enforcement agenda for the Antitrust Division of the Department of Justice. While speaking at the the ABA National Institute on White Collar Crime in San Francisco, CA, Powers began his remarks by noting that the Division’s Criminal Section currently had 18 indicted cases against 10 companies and 42 individuals, including 8 CEOs or Presidents. DAAG Powers also noted that the Section had 146 open grand jury investigations – more than at any time in the last thirty years and “expect[ed] to stay busy this year and beyond.”

DAAG Powers’ remarks came at a conference during which various government enforcement officials, including the U.S. Attorney General, focused not only increased white collar enforcement generally, but specifically on charges against individual defendants. DAAG Powers went further, noting that the Section was “willing to bring tough cases that are consistent with the facts and law,” even if it doesn’t win all of those cases. As DAAG Powers explained, “if we win every case, we are not being aggressive enough.” A defense lawyer on the panel summed up DAAG Powers’ remarks: “Be afraid, be very afraid,” to the nervous laughter of audience primarily composed of defense lawyers.

DAAG Powers’ speech also touched on other areas of focus for the Section. For example, Powers cited the S international reach of the Section’s enforcement and investigation efforts, noting that international cases, where the U.S. has an interest, will continue to be a priority for the Section.

DAAG Powers also noted the continuing significance of labor market investigations as a continuing priority, particularly with criminal enforcement given So-called “no poach,” “no hire,” or even “no solicit” agreements to harm individual Americans and reduce wages and livelihoods. To this end, DAAG Powers reported 6 currently indicted cases and noted that illegal labor market agreements need not be limited to agreements with traditional competitors, but could be extended to agreements with anyone; all such agreements are, in the government’s view, illegal.

DAAG Powers also pointed to two additional areas of targeted focus; first, a new supply chain initiative (in concert with the FBI) to detect, identify, investigation and, where appropriate, prosecute companies and individuals who seek to profit off of the supply chain crisis; and, the Procurement Collusion Strike Force formed in 2019. In connection with the Strike Force, DAAG Powers pointed to the use of data analytics in identifying potential leads for investigation of bid rigging and other collusive conduct in federal, state, and local procurement. DAAG Powers noted that, since 2019, there have been 50 grand jury investigations opened and that he expected that number could rise with the President’s infrastructure bill.

In closing, DAAG Powers reiterated that the Section was focused not just solely on corporate criminal cases, but especially on individual prosecutions. Echoing sentiments of other enforcement officials – and judges – at the Institute, there is no better deterrent in the eyes of the U.S. Department of Justice than individual liability and sending guilty executives to jail.

#### Labor enforcement thumps

Ihnat 3-17, [by Carrie G. Amezcua , Mark A. Kasten and Melissa M. Ihnat Buchanan Ingersoll & Rooney PC, United States: DOJ And DOL To Cooperate On Antitrust Enforcement In Labor Markets, https://www.mondaq.com/unitedstates/antitrust-eu-competition-/1173114/doj-and-dol-to-cooperate-on-antitrust-enforcement-in-labor-markets]

On March 10, 2022, the Department of Justice (DOJ) advanced its commitment to investigating and prosecuting anticompetitive conduct impacting labor markets by entering into a Memorandum of Understanding (MOU) with the Department of Labor (DOL). The MOU is an agreement between the two agencies to collaborate in addressing anticompetitive conduct that harms workers "including through collusive behavior and the use of business models designed to evade legal accountability, such as the misclassification of employees." Id. Collusive behavior in the labor market and misclassification of workers have been priorities of the DOJ and DOL as of late. The MOU is likely to add an arrow to DOJ’s enforcement quiver and lead to increased scrutiny of such conduct by both agencies.

The Memorandum of Agreement

According to Assistant Attorney General Jonathan Kanter of DOJ's Antitrust Division, "[b]y cooperating more closely with our colleagues in the Department of Labor, we can share enforcement information, collaborate on new policies, and ensure that workers are protected from collusion and unlawful employer behavior. Protecting the right of workers to earn a fair wage is core to the work of both our agencies, and it will continue to receive extraordinary vigilance from the Antitrust Division."

The MOU (1) promotes information sharing between the agencies; (2) commits each agency to provide training and technical assistance to the other; (3) directs each agency to regularly consult and coordinate with one another regarding enforcement activities; and (4) encourages the DOJ and DOL to make referrals to the other agency when an investigation reveals misconduct within the subject-matter jurisdiction of the other agency.

The fact that the MOU is not merely an information sharing agreement but promotes referrals is particularly significant.1 This is likely to lead to both increased prosecution by the DOJ of anticompetitive conduct in the labor market and increased enforcement by the DOL of labor law violations, including purported misclassification. The MOU also calls for the DOJ to train DOL staff on "identifying cases and issues" related to anticompetitive conduct where appropriate.2The MOU's training and technical assistance provision is likely to lead each agency to ultimately bring stronger cases and enforcement actions.

These provisions, in particular, have the potential to create a pipeline for case referrals to DOJ from the DOL for labor related violations of antitrust laws. Under the MOU, the DOJ is able to leverage the DOL staff's expertise in labor issues as well as the wealth of labor statistics it gathers.3

On the flip side, the MOU encourages the DOJ to refer cases to the DOL, such as cases where employers misclassify employees. On February 10, 2022, the DOJ weighed in on a National Labor Relations Board case concerning whether to clarify the definition of employee such that employees misclassified as independent contractors (i.e. "gig economy" workers) will be able to unionize without violating antitrust law. The DOJ filed an amicus curie brief that asserts that "[c]larity as to employee status is important, in part, because the antitrust laws otherwise scrutinize collective action among independent contractors or independent professionals, where they are not employees" and "leave affected workers with fewer tools to combat the exercise of monopsony power or superior bargaining leverage by employers." With DOJ on the lookout for labor-related antitrust violations, this could lead to an increase in referrals from DOJ to DOL as well.

DOJ's Continued Focus on the Labor Market

The DOJ warned employers in its 2016 Antitrust Guidance for Human Resource Professions of its ability and intention to bring criminal charges against employers for agreeing to fix wages. It was not until 2020, however, that the DOJ brought its first criminal indictment related to anticompetitive conduct in the labor markets against the owner of a home healthcare staffing company, alleging that the defendant conspired with other staffing companies to artificially fix the wages of therapists providing in-home care. But since then, the DOJ has been on a roll. A string of criminal indictments alleging that defendant employers engaged in per se anticompetitive conduct in the labor market followed.4 Taken as a whole, these indictments have alleged that employers engaged in both labor market price fixing by colluding to fix the wages paid to workers, as well as illegal market allocation by entering into naked no-poach agreements with other employers. Most recently, on January 28, 2022, the DOJ indicted four managers of home healthcare agencies for both wage fixing and market allocation. According to Richard Powers, the DOJ's Antitrust Division's Deputy Assistant Attorney General for Criminal Enforcement, the DOJ "views rooting out collusion in labor markets to be part of its mission to deter, detect, and prosecute cartels more generally" and is "essential" to protect labor market competition.

Conclusion

The DOJ has demonstrated its commitment to investigating and prosecuting cases concerning competition in the labor market. The MOU allows the DOJ to not only take advantage of the data and expertise at the DOL, but creates an effective pipeline for the identification of potentially anticompetitive conduct.

### Solvency

#### The plan aligns with international preference, other exemption removals disprove concerns

Whirley 18 [Gage Whirley. J.D. candidate 2019, Tulane University Law School; B.A., Political Science, 2016, Virginia Polytechnic Institute and State University, "A Forgotten Agreement: A Comparative Analysis of Tramp Pooling Agreements in American Antitrust Law", Winter 2018, Tulane Maritime Law Journal 43, no. 1, HeinOnline]

The United States has exempted liner conferences from antitrust law for over a century and there is now doubt both domestically and internationally on whether this policy still serves a legitimate purpose. This Section assesses this policy in terms of what is seen currently in the liner trade as well as ties in the comparative perspectives from the EU and Japan.

One explanation given for the antitrust exemption under American law was that Congress in 1916 made an error in the assessment of the maritime industry and did not fully appreciate the status of the shipping industry in the early twentieth century resulting in a regulatory scheme riddled with inefficiency that has been held onto throughout the last century."' One assumption Congress made at the time of the Alexander Report's release was that the maritime industry was unique and needed to be protected from "destructive competition" to ensure stability.14 0 It seems this was a continuing presumption in the following century of regulation seen in the 1984 Act and OSRA.

Recently, there have been discussions that the antitrust exemption is no longer serving a legitimate purpose. 14 1 This sentiment seems to be echoed on the international stage. A report used during the crafting of the EU's repeal of the exemption stated that "with conferences the source of price volatility comes from the structural instability of market participation and conference membership."1 42 More recently, the Japan Fair Trade Commission issued a 2016 press release stating that "it is difficult to claim that the tariffs conferences work well to stabilize freight rates because tariffs in conferences hardly have a significant impact on freight rates that are actually determined." 143

One striking remnant from the "glory days" of true cartel activity in shipping conferences is illustrated by the events of 2017 and 2018. United States authorities "crashed" the meeting of major container line CEOscalled the Box Club-early in 2017.1" Members of the Box Club are part of discussion agreements-which are not permitted to price fix, unlike conferences. 145 The article reports that, "Antitrust investigators believe that due to a history of legally having the ability to discuss pricing under antitrust immunity, the industry lacks a disciplined culture and would be vulnerable to illegal activity."l46 The CEOs of the largest container liner companies, such as Maersk and Mediterranean Shipping Company (MSC), were served subpoenas by the Department of Justice.147 This was not an isolated incident; in February 2018, EU authorities fined CSAV, KLine, WWL-EUKOR, and NYK a total of 6350 million for "coordinat[ing] prices, allocat[ing] customers and exchang[ing] commercially sensitive information."l4 8

In the modem, post-crisis era, one problem that was arguably less prevalent in previous eras, is the consolidation of market presence within the industry. The top ten carriers increased their market share from around 45% to 70% between 1996 and 2017.14 More interestingly, as of October 13, 2018, the top five shipping companies-APM-Maersk, MSC, COSCO, CMA-CGM, and Hapag-Lloyd-collectively represented 63.2% of the capacity in international liner trade.'s

On the notion that Congress erred in some assumptions in making the antitrust exemption for liner trades, it can be said that in the wake of the OSRA-and the ensuing defanging of conferences-that possibly the liner market began to emerge as an infantile market. What is meant by this is that the market is now increasingly exposed to the free market because conferences are no longer engaging in their historic, and exempted, "cartel"-like behavior such as price-fixing due to their retreat from the market. One way to understand this comes in a thirteen-year study of over 25,000 companies, which produced a predictable model for industries following deregulation.' 5 This model provides trends in understanding how industries consolidate over time as they mature through the movement of four stages.' 52 Industries that are either newly formed or deregulated, such as what OSRA did for the shipping industry, are found to typically follow a twenty-five year progress of the four stages: (1) opening, (2) scale, (3) focus, and (4) balance and alliance.'

The shipping industry generally is fragmented, with Clarkson Research reporting just over 24,000 shipowners worldwide; however, the liner shipping business is much more concentrated with the top eight operators deploying over one hundred ships where the shipping industry average is under four vessels per owner.5 4 The trend of market consolidation is expected to continue as mergers between the largest companies occur throughout the industry and there are fears among some that this will lead to an oligopoly market."'

Applying the consolidation curve, the shipping market would now be somewhere in stage three (i.e., focus) where market concentration is between 35% and 70% with anywhere from five to twelve top companies.1 56 Further, the timeline is roughly correct in the twenty-five year estimate for a maturing market, as applied at the start of the OSRA until the present.'5 7 Stage four is characterized as the top three companies controlling 70% to 90% of the market alongside joint operations between other companies to combat barriers to growth.' The top three industry titans, Maersk, Mediterranean Shipping Company, and CMA-CGM, currently compose 45.5% of the market share, although their market shares can fluctuate from time-to-time.1 59 Looking to the future, stage four (i.e., balance and alliance) may have already begun to shape in the wake of conference insignificance.

What then can be said is that the market consolidation could be a sign of a maturing liner market post-OSRA as a way of mitigating the loss of the traditional conference system as it enters its final stage on the consolidation curve after nearly a century of protection from the free market through the antitrust exemption.' 60 Under this theory the exemption for conferences should not be continued under U.S. law. Shipping has shown a relatively normal adjustment to the lack of meaningful, cartel-like conferences and follows a rather normal trend for most industries under the consolidation curve. A concern, however, is that the large companies will dictate industry standards and require smaller entities to follow suit if they wish to compete.'"' Nevertheless, this does not become the main concern that existed in 1916-that destructive competition would ensue in a free market liner industry-but rather normal antitrust concerns become applicable. 16 2 Finally, the arguments of this "destructive competition" model are best summarized by John M. Nannes:

Congress has heard them many times before, often with respect to transportation industries such as railroads, airlines, and motor carriers. At one time or another, each of those industries was subject to pervasive federal regulation and enjoyed a broad exemption from the antitrust laws. Over time, however, each of them has been substantially deregulated and the applicable antitrust exemption has been curtailed or eliminated, with the result that competition has increased for shippers and consumers, and without the parade of horribles predicted by industry. In fact, economists have often found that a "regulated" cartel yields the worst of both worlds: high prices and low profitability, as companies over-invest in capacity and lose the incentive to innovate and operate efficiently. Certainly, recent events have demonstrated that the ocean shipping exemption has not saved U.S. carriers.161

Thus, in the author's opinion, the U.S. exemption is likely no longer required as a prerequisite for a robust shipping industry.

As for other justifications for the exemption, such as the need for international congruency and volatility of freight rates, there is further doubt.1 " Regarding the need for international harmony concerns, there is already a deviation among Japan, the EU, and the United States, which becomes exacerbated once tramp pools are put into the analysis. Moreover, freight rates were found to not be tremendously affected by the EU's repeal of its block exemption, 165 and the OECD observed that the price fixing aspect of conferences just prevents rates from going to the most efficient market price. 166 This is not to suggest that ending liner conference agreements would be the end-all, be-all of the issues in liner trade because without jurisdictional cohesion amongst the international players there is still the risk of "information leakage" amongst liner companies.16

#### DOJ shares intel and coordinates with other countries. That’s key to shipping competition

Kulisch 2/23 [Eric Kulisch is the Supply Chain and Air Cargo Editor at FreightWaves, "‘Collusion’ drumbeat leads to multilateral probe of shipping lines", 2/23/22, https://www.freightwaves.com/news/collusion-drumbeat-leads-to-multilateral-probe-of-shipping-lines]

U.S. exporters and logistics companies aren’t the only ones banging on the government’s door to take action against global container lines for alleged service failures and unfair pricing during the pandemic.

The clamor from global forwarder and shipper organizations about anticompetitive behavior got so loud that five competition authorities, including the U.S. Department of Justice, on Friday established a working group that will meet regularly to share intelligence and coordinate investigations of suspected antitrust violations.

Many buyers of ocean transportation say the carriers have manipulated tight capacity during the pandemic through deferred and canceled sailings, and other measures, to drive rates up, resulting in record profits estimated to top $200 billion last year. A combination of antitrust immunity, a dozen years of consolidation that has left eight major carriers partnering in three alliances and an expansion into broader logistics services and control of data has enabled the largest carriers to dominate the market.

It’s the definition of an oligopoly, argue many users.

The collaboration among the Justice Department, Canadian Competition Bureau, the Australian Competition and Consumer Commission, the New Zealand Commerce Commission and the U.K. Competition and Markets Authority parallels a review underway by the U.S. Federal Trade Commission into whether anticompetitive conduct by large retailers and distributors contributed to supply chain disruptions.

It follows a joint campaign launched last summer by the Federal Maritime Commission and DOJ to ramp up oversight of foreign ocean carriers regarding unfair rates and fees. The FMC is also conducting an audit of whether carriers are using their concentrated market status to overcharge shippers container late fees at ports.

“While the Competition Bureau has offered businesses flexibility in contributing to legitimate pandemic response efforts that benefit Canadians, we want to be clear: We have zero tolerance for any attempts to use pandemic-related supply chain disruptions as a cover for criminal collusion that harms consumers and damages Canada’s economy,” Commissioner Matthew Boswell said in a statement.

Organizations representing cargo owners and freight agents said the collaboration among governments is positive because no single country can properly oversee the conduct of foreign-owned shipping lines and examine their activities within powerful alliances.

#### DOJ’s established Sherman working groups and amnesty coop are the most effective antitrust tool

Pate 15 [Hewitt, Former Assistant Attorney General Antitrust Division of DOJ, “International Anti-Cartel Enforcement”. 11/21/04 updated 6/25/15. https://www.justice.gov/atr/speech/international-anti-cartel-enforcement]

Development of the US Cartel Enforcement Program

The past thirty years have seen many milestones in the development and enhancement of U.S. anti-cartel laws and policies. The Antitrust Procedures and Penalties Act was enacted in 1974, making violations of the Sherman Act a felony and increasing the maximum corporate fine from $50,000 to $1 million. In 1978, our original Corporate Leniency Policy was announced. In 1990, the Sherman Act maximum corporate fine was increased from $1 million to $10 million. In the early 1990s, the Division recognized a need to revamp its leniency program, and in August 1993 a new Corporate Leniency Policy was issued. The amnesty program was enhanced further in 1994 with the issuance of an Individual Leniency Policy. As business became more globalized in the 1990s, the focus of the Division's enforcement efforts shifted to the detection and prosecution of international cartels, which inflict the greatest harm on U.S. businesses and consumers. The $100 million fine obtained in 1996 from Archer Daniels Midland Company for its participation in the international lysine and citric acid cartels marked the beginning of this new era in antitrust prosecutions. This record fine was surpassed beginning in 1998 by even larger fines against members of the international graphite electrode cartel, in 1999 by the $500 million and $225 million fines against F. Hoffmann-La Roche and BASF for their participation in the international vitamin cartel, and most recently by the $160 million fine agreed to by Infineon Technologies AG in our first prosecution against the international DRAM cartel. To date, the Division has obtained corporate fines at or above the former $10 million statutory maximum in 46 cases and fines of $100 million or more against seven corporations.

The enormity (in every sense of the word) of these cartels and the harm they inflict has recently required that our cartel laws be revised again to increase the maximum sanction that could be imposed for antitrust violations. In June, President Bush signed the Antitrust Criminal Penalty Enhancement and Reform Act of 2004, increasing the maximum corporate Sherman Act fine to $100 million. The Act also enhanced individual deterrence by increasing the maximum individual Sherman Act fine to $1 million and the maximum Sherman Act prison sentence to 10 years to make it more consistent with maximum prison sentences for other white collar crimes. And the legislation increased the incentives for firms to blow the whistle on cartels they have participated in by enhancing the Corporate Leniency Policy. Under the new legislation, the damages paid by a corporate amnesty applicant to private plaintiffs are detrebled and reduced to actual damages attributable to the applicant's sales of the affected product or service if the applicant cooperates with the plaintiffs in their efforts to recover joint and several treble damages from the other cartel members.

As we shifted our focus to the prosecution of international cartels in the 1990s, we also realized that our law enforcement relationships with other governments had to be strengthened to meet the investigative and prosecutorial challenges of international cartels. We stepped up our efforts to enter antitrust cooperation agreements with foreign enforcers, a process that had begun in 1976 when we entered a cooperation agreement with Germany. From 1991 to 2000, we entered cooperation agreements with the EC, Canada, Israel, Japan, Brazil, and Mexico and our first antitrust enforcement assistance agreement with Australia. During this same period, the Department of Justice negotiated a number of Mutual Legal Assistance Treaties with foreign nations, which are frequently used for evidence gathering in criminal antitrust investigations. Currently, the United States has more than fifty MLATs in force. In 1999, the Division organized the first International Anti-Cartel Enforcement Workshop, which brought together enforcers from twenty-seven jurisdictions to identify and share best practices in the investigation and prosecution of cartels. The workshop was such a success that it became an annual event, with later conferences in the United Kingdom, Canada, Brazil, and Belgium. This year Australia hosts the sixth annual workshop. The dialogue and cooperation we have developed with foreign authorities are essential to the obtaining of evidence from foreign locations, avoidance of conflicts, and the coordination of enforcement activities in multiple jurisdictions to avoid premature disclosure of an investigation and the destruction of evidence.

We have engaged in other multilateral efforts to promote the development of sound antitrust policy and practice, through the Organization for Economic Co-operation and Development, World Trade Organization, United Nations Conference on Trade and Development, and most recently the International Competition Network. The need to combat globalized cartels resulted in the landmark 1998 OECD Recommendation Concerning Effective Action Against Hard Core Cartels which recommended that member countries ensure that their competition laws provide for effective sanctions to deter participation in cartels and adequate enforcement procedures and institutions to detect and remedy cartels.

The Importance of Amnesty Programs

One key area in which governments have developed enforcement procedures for the detection of cartels has been the development and use of corporate amnesty policies. As amnesty policies were developed in multiple jurisdictions, it became clear that convergence in effective policies was needed. Over time, we learned that occasionally members of international cartels did not apply for amnesty in one jurisdiction because they had greater exposure in another jurisdiction that did not have a transparent and predictable amnesty policy. Recent convergence in amnesty policies in multiple jurisdictions, however, has led to many simultaneous amnesty applications, which has enhanced enforcement by providing opportunities for coordinated raids, interviews, and service of subpoenas.

The Antitrust Division's amnesty policy has become the cornerstone of our international anti-cartel enforcement program. It has led to the detection and prosecution of more international cartels than all of our search warrants, consensual monitoring, and FBI interrogations combined. Because cartel activities are hatched and carried out in secret, obtaining the cooperation of insiders is the best, and often the only way to crack a cartel. Obtaining the cooperation of knowledgeable insiders at an early stage of an investigation may shorten an investigation by many months, if not years. This saves scarce government resources, leads to the earlier termination of cartels, allows conviction of defendants that might otherwise never be prosecuted, and assists in securing recovery for the victims of the crime.

Through the years, we have faced the deficiencies in our amnesty program and revised it to make it more effective. Our original 1978 amnesty program lacked transparency and predictability and retained considerable prosecutorial discretion. It was difficult for corporations to predict with much certainty whether they would receive amnesty if they chose to apply. Our policy was designed to give "serious consideration" to refraining from prosecuting a company that confessed its wrongdoing before we began investigating the cartel. But we expressly refused to limit our prosecutorial discretion or to make amnesty automatic. There was no written policy, adding to the lack of transparency. A further deficiency, in addition to the unpredictable nature of the policy, was that amnesty was not available once an investigation had begun. Frequently, however, corporate counsel or a board of directors would not discover a cartel until counsel undertook a focused investigation as a result of the corporation's receipt of a Division document subpoena at the beginning of a grand jury investigation. In many cases, a company's authoritative representatives for legal matters might not even be aware of the need for amnesty until an investigation was under way. As a consequence of the unpredictable nature of the policy and lack of availability of amnesty once an investigation had begun, we had roughly one amnesty application per year from 1978 until the policy was revised in 1993.

Under the revised policy, we increased the transparency of the program and created an alternative amnesty for companies that come forward after an investigation has begun. Under Part A of the policy, which applies before an investigation has begun, amnesty is automatic if the applicant can meet six objective criteria. The requirements under Type A are (1) that the Division has not yet received information from any other source about the conspiracy, (2) that the applicant takes prompt and effective action to terminate its involvement in the conspiracy upon its discovery of the conspiracy, (3) that the applicant reports the wrongdoing with candor and completeness and provides full, continuing and complete cooperation throughout the investigation, (4) that the applicant's confession is truly a corporate act as opposed to isolated confessions of individual executives or officials, (5) that the applicant make restitution to injured parties, and (6) that the applicant did not coerce another party to participate in the cartel and was not the leader or originator of the cartel.

If an applicant cannot meet the above Type A factors, it might be able to qualify for amnesty under the alternative Type B amnesty in the revised 1993 policy. In addition to the Type A termination, corporate confession and restitution obligations, Type B amnesty also requires that the applicant be the first one to qualify for amnesty with respect to the cartel, that the Division not yet have evidence against the applicant that is likely to result in a sustainable conviction, that the applicant reports the cartel with candor and completeness and provides full, continuing and complete cooperation that advances the Division in its investigation, and that granting amnesty would not be unfair to others, considering the nature of the cartel, the applicant's role in it and when the applicant comes forward. In return for creating this additional opportunity for amnesty, the Division did retain some discretion under Type B amnesty, but this was deemed necessary because Type B generally comes into play after an investigation has begun. In addition to issuing a written policy, we have further clarified the application of the policy by publishing several speeches to address questions that have arisen regarding the policy.(1) Since the policy was revised in 1993, the application rate has soared to an average of approximately two per month.

#### Private rights boost deterrence

Vaheesan 19 [Sandeep Vaheesan is legal director at the Open Markets Institute. Vaheesan previously served as a regulations counsel at the Consumer Financial Protection Bureau, where he helped develop and draft the first comprehensive federal rule on payday, vehicle title, and high-cost installment loans. Paula Bliss, of counsel, Bernheim Kelley Battista & Bliss, MARK A. GOTTLIEB Counsel of Record PUBLIC HEALTH ADVOCACY INSTITUTE, PNE Energy Supply LLC, On Behalf Of Themselves And Others Similarly Situated V. Eversource Energy And Avangrid, Inc. Motion Of Open Markets Institute For Leave To File Amicus Curiae Brief In Support Of Plaintiff-Appellant. 10/25/19, https://static1.squarespace.com/static/5e449c8c3ef68d752f3e70dc/t/5eaa1d9d2790182e187cc171/1588207017816/19-1678\_Documents-as-filed.pdf]

The filed rate doctrine’s limitation on private antitrust enforcement subverts the effectiveness of the antitrust laws. The ability of injured consumers and businesses to bring antitrust suits is a pillar of the American antitrust enforcement regime. Under the Clayton Act, “[a]ny person who shall be injured in his business or property by reason of anything forbidden in the antitrust laws may sue . . ., and shall recover threefold the damages by him sustained, and the cost of suit, including a reasonable attorney's fee.” 15 U.S.C. § 15. See, e.g., Blue Shield of Va. v. McCready, 457 U.S. 465, 472 (1982) (quoting Mandeville Island Farms, Inc. v. Am. Crystal Sugar Co., 334 U.S. 219, 236 (1948)) (“Congress sought to create a private enforcement mechanism that would deter violators and deprive them of the fruits of their illegal actions, and would provide ample compensation to the victims of antitrust violations. . . . As we have recognized, ‘[t]he statute does not confine its protection to consumers, or to purchasers, or to competitors, or to sellers. . . . The Act is comprehensive in its terms and coverage, protecting all who are made victims of the forbidden practices by whomever they may be perpetrated.’”).

Empirical research shows the public importance of “private attorneys general” and the value of having more enforcers on the beat against corporate collusion, consolidation, and monopolization. A study of 60 private antitrust lawsuits between 1990 and 2011 found that these actions generated more deterrence than the federal government’s entire criminal antitrust enforcement activity over the same period. Joshua P. Davis & Robert H. Lande, Defying Conventional Wisdom: The Case for Private Antitrust Enforcement, 48 Ga. L. Rev 1, 26 (2013). And these lawsuits compensated injured parties, whereas public enforcement generally did not.