## 1

#### The stock market is trending upwards but it’s uncertain – blips aren’t enough to disprove the general trend and recent developments prove.

Miao and Macheel 10/21 [Tanaya and Hannah; 10/21/21; Reporter at CNBC, Associate Markets Reporter, graduated summa cum laude from Duke University with a degree in public policy; “S&P 500 slips from record, but heads for winning week on strong earnings,” CNBC, <https://www.cnbc.com/2021/10/21/stock-market-futures-open-to-close-news.html>] Justin

The S&P 500 edged lower a day after the benchmark closed at a record. The broad market index fell 0.3% while the Dow Jones Industrial Average added 12 points, or 0.03%, helped by a 4% rise in shares of American Express, which reported strong quarterly earnings Thursday. Meanwhile, the Nasdaq Composite shed 1% after poor results from two technology companies. Shares of Intel retreated more than 10% following a weaker-than-expected sales report. The semiconductor company blamed an industry-wide chip shortage for its revenue miss. Social media stocks also dropped after Snap said its advertising business declined due to Apple’s privacy changes. Snap shares sunk more than 23%. Facebook and Twitter pulled back 4% and 3%, respectively. However, several tech stocks rose to all-time highs. Tesla shares extended their rally, rising 1% after hitting a new intraday high earlier in the morning. The stock closed 3% higher Thursday after posting record profit and revenue, along with strong margins. Netflix, Ebay and Microsoft also climbed to new all-time highs. Despite the blips in the tech sector, overall earnings season has been terrific so far, boosting the broader market back to an all-time high following a two-month lull. So far for the third quarter earnings season, 84% of the 117 companies that have reported have beat analysts’ earnings estimates, according to Refinitiv. Profits are on pace in the quarter to increase 34.8%, according to Refinitiv. “After a 5% rally on seven green days in a row for the S&P it makes some sense for the market to consolidate,” said Cliff Hodge, Cornerstone Wealth’s chief investment officer, adding that disappointing results from Intel and IBM and hawkish comments from Federal Reserve chair Jerome Powell on inflation and policy tightening “are adding some jitters.” “The setup into year-end looks great given the liquidity dynamics on corporate buybacks,” Hodge said, “but longer term there are still the unresolved headwinds of valuation, the transition to mid-cycle in the economy, and a tightening Fed that may prove challenging now that we’re back at all-time highs.” S&P 500 posts new record Stephen Kolano, CIO for BNY Mellon Investor Solutions, added that although the S&P 500 is up 20% for the year, things may still seem a little uncertain for investors looking toward the end of the year due to cost pressures, labor shortages and commentary from company management on earnings calls and comments from Fed chair Jerome Powell and other policymakers. “You’re starting to see some profit taking as a result of that,” Kolano told CNBC. “Where investors are going first and foremost is the companies that have run the fastest, which is a lot of the tech.” In Thursday’s regular session, the S&P 500 notched both a fresh intraday high and new record close. The broad index rose 0.3% for its seventh consecutive positive session. The Nasdaq Composite rose 0.6%, while the Dow shed 6.26 points, or 0.02%. All three major averages are on track to close the week higher for three straight weeks of gains. The Dow touched an intraday record earlier in the week. On the month, the Dow and S&P are up 5% while the Nasdaq is up 4%. “In a quarter where we thought things would slow down and there was concern about what profit margins were going to look like, these companies are still doing well,” said Victoria Fernandez, chief market strategist at Crossmark Global Investments. Strong jobs data also added to the positive market sentiment on Thursday. Initial jobless claims fell to a new pandemic low of 290,000 last week, the Labor Department reported Thursday — down 6,000 from the previous week and lower than the 300,000 expected from economists surveyed by Dow Jones. One of investors’ fears during the market’s recent struggles was a China property crisis. However, investors got good news on that front overnight with China’s Evergrande reportedly paying a key interest payment that was due to foreign bondholders, staving off a default for the property developer.

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#### Best data proves union strike victories statistically cause stock market crash.

Lee and Mas 12 [David; Princeton University and National Bureau of Economic Research; Alexandre; Princeton University and National Bureau of Economic Research; “Long-Run Impacts of Unions on Firms: New Evidence from Financial Markets, 1961–1999,” The Quarterly Journal Of Economics; February 2012; <https://academic.oup.com/qje/article-abstract/127/1/333/1834007?redirectedFrom=fulltext>] Justin

We begin analyzing the stock market reaction to union victories using event-study methodologies. The most distinctive feature of our data—crucial for our research design—is the long panel (up to 48 months before and after the election) of high frequency data on stock market returns for each firm. This feature allows us to use the pre-event data to test the adequacy of the benchmarks used to predict the counterfactual returns in the postevent period. The long panel also allows us to examine returns several months beyond the event, so as to capture the long-run expected effects of new unions, without having to rely heavily on the assumption that the stock price immediately and instantaneously adjusts to capture the expected presence of the unions.9

Our event-study analysis reveals substantial losses in market value following a union election victory—about a 10% decline in market value, equivalent to about $40,500 per unionized worker. According to our calculations, if unionization represented a one-to-one transfer from investors to workers through higher wages, this magnitude would be in line with a union wage premium of 10%. Because the total loss of market value represents the sum of transfers to workers and any other productivity impacts of unionization this implies, for example, that if the true union compensation premium were greater than 10%, there would be positive productivity effects of unions. The evidence supporting our event-study estimates is compelling: we find that these firms’ average returns are quite close to the benchmark returns every month leading up to the election, but precisely at the time of the election, the actual and benchmark returns diverge. The results for these firms are robust to a number of different specifications. In the sample of firms where we know that the union is a small fraction of the workforce, we donot find a similar divergence of returns from the benchmark.

Importantly, we find that the effect takes 15 to 18 months to fully materialize, a somewhat slow market reaction. As we discuss, this short-run mispricing can persist if exploiting the slow reaction is not sufficiently profitable to arbitrageurs. Indeed, our own analysis shows that strategies designed to exploit the mispricing entail a significant degree of fundamental risk. The fact that union victories are sufficiently rare and spread throughout time prevents the necessary diversification that could generate an attractive arbitrage opportunity. For example, our analysis suggests that attempts to exploit the short-lived mispricing would lead to a portfolio that would be dominated by simple buy-and hold strategies

The event-study estimate appears to average a great deal of heterogeneity in the effects. We additionally employ a regression discontinuity (RD) design, implicitly comparing close union victories to close union losses, and consistent with DiNardo and Lee (2004), we find little evidence of a significant discontinuous relationship between the vote share and market returns. If anything, the RD point estimates show a 4% positive (though statistically insignificant) effect of union certification (vis-`a-vis union defeat). The event-study estimates vary systematically by the observed vote share, with the largest negative abnormal returns for cases where the union won the election by a large margin.

#### The next market crash causes economic collapse – conditions are ripe for failure.

Vallejo 10/4 [Justin; 10/4/21; Citing personal finance expert Robert Kiyosaki; “‘Biggest crash in world history’: Personal finance expert Robert Kiyosaki predicts economic crisis in October,” Independent, <https://www.independent.co.uk/news/world/americas/us-politics/robert-kiyosaki-market-crash-october-b1930754.html>] Justin

"This is going to be the biggest crash in world history. We have never had this much debt pumped up… the debt to GDP ratio is out of sight," Mr Kiyosaki said. Mr Kiyosaki said the stock market was being artificially inflated by the Treasury Department and the Federal Reserve with decisions disconnected from the realities of the current economy in the United States. The reason why Ms Yellen and Mr Powell are "scrambling", he said, is they’ve expanded the volume of money while the velocity of money is plummeting as no one spends and their cash lingers in savings. Mr Kiyosaki said people don’t have to go to Harvard University to understand that "you can’t keep printing fake money … that’s not good". "So they pump all this money in, prices go up," he told Kitco News on Wednesday. "So it is transitory inflation, but we’re stacked with this massive debt and all it’s done is bump up the stock market and real estate market." "The money has not gone into the economy, that’s the sad part. So the rich get richer, but the poor and middle class are getting poorer. It’s tragic what’s happening today." He added earlier that the "house of cards" is coming down and that real estate would crash with the stock market, while the impact from China’s Evergrande Group implosion would spread to the United States. Evergrande, the second-largest developer in China, is on the brink of bankruptcy with more than $300bn in debt – the most indebted company in the world.

#### Extinction.

Liu '18 [Qian; 11/13/18; Managing Director of Greater China for The Economist Group, previously director of the global economics unit and director of Access China for the Economist Intelligence Unit, PhD in economics from Uppsala University; "The next economic crisis could cause a global conflict. Here's why," <https://www.weforum.org/agenda/2018/11/the-next-economic-crisis-could-cause-a-global-conflict-heres-why/>] Justin

The next economic crisis is closer than you think. But what you should really worry about is what comes after: in the current social, political, and technological landscape, a prolonged economic crisis, combined with rising income inequality, could well escalate into a major global military conflict. The 2008-09 global financial crisis almost bankrupted governments and caused systemic collapse. Policymakers managed to pull the global economy back from the brink, using massive monetary stimulus, including quantitative easing and near-zero (or even negative) interest rates. But monetary stimulus is like an adrenaline shot to jump-start an arrested heart; it can revive the patient, but it does nothing to cure the disease. Treating a sick economy requires structural reforms, which can cover everything from financial and labor markets to tax systems, fertility patterns, and education policies. Policymakers have utterly failed to pursue such reforms, despite promising to do so. Instead, they have remained preoccupied with politics. From Italy to Germany, forming and sustaining governments now seems to take more time than actual governing. And Greece, for example, has relied on money from international creditors to keep its head (barely) above water, rather than genuinely reforming its pension system or improving its business environment. The lack of structural reform has meant that the unprecedented excess liquidity that central banks injected into their economies was not allocated to its most efficient uses. Instead, it raised global asset prices to levels even higher than those prevailing before 2008. In the United States, housing prices are now 8% higher than they were at the peak of the property bubble in 2006, according to the property website Zillow. The price-to-earnings (CAPE) ratio, which measures whether stock-market prices are within a reasonable range, is now higher than it was both in 2008 and at the start of the Great Depression in 1929. As monetary tightening reveals the vulnerabilities in the real economy, the collapse of asset-price bubbles will trigger another economic crisis – one that could be even more severe than the last, because we have built up a tolerance to our strongest macroeconomic medications. A decade of regular adrenaline shots, in the form of ultra-low interest rates and unconventional monetary policies, has severely depleted their power to stabilize and stimulate the economy. If history is any guide, the consequences of this mistake could extend far beyond the economy. According to Harvard’s Benjamin Friedman, prolonged periods of economic distress have been characterized also by public antipathy toward minority groups or foreign countries – attitudes that can help to fuel unrest, terrorism, or even war. For example, during the Great Depression, US President Herbert Hoover signed the 1930 Smoot-Hawley Tariff Act, intended to protect American workers and farmers from foreign competition. In the subsequent five years, global trade shrank by two-thirds. Within a decade, World War II had begun. To be sure, WWII, like World War I, was caused by a multitude of factors; there is no standard path to war. But there is reason to believe that high levels of inequality can play a significant role in stoking conflict. According to research by the economist Thomas Piketty, a spike in income inequality is often followed by a great crisis. Income inequality then declines for a while, before rising again, until a new peak – and a new disaster. Though causality has yet to be proven, given the limited number of data points, this correlation should not be taken lightly, especially with wealth and income inequality at historically high levels. This is all the more worrying in view of the numerous other factors stoking social unrest and diplomatic tension, including technological disruption, a record-breaking migration crisis, anxiety over globalization, political polarization, and rising nationalism. All are symptoms of failed policies that could turn out to be trigger points for a future crisis. Voters have good reason to be frustrated, but the emotionally appealing populists to whom they are increasingly giving their support are offering ill-advised solutions that will only make matters worse. For example, despite the world’s unprecedented interconnectedness, multilateralism is increasingly being eschewed, as countries – most notably, Donald Trump’s US – pursue unilateral, isolationist policies. Meanwhile, proxy wars are raging in Syria and Yemen. Against this background, we must take seriously the possibility that the next economic crisis could lead to a large-scale military confrontation. By the logic of the political scientist Samuel Huntington , considering such a scenario could help us avoid it, because it would force us to take action. In this case, the key will be for policymakers to pursue the structural reforms that they have long promised, while replacing finger-pointing and antagonism with a sensible and respectful global dialogue. The alternative may well be global conflagration.

## 2

#### Bill passes now- negotiations are holding with Manchin and Sinema-but UN meeting and state elections make it so that there is no margin for error

Edmonson and Cochrane 10-24 Catie Edmondson and Emily Cochrane, 10-24-2021, "Biden Meets With Manchin and Schumer as Democrats Race to Finish Social Policy Bill," New York Times, https://www.nytimes.com/2021/10/24/us/politics/biden-manchin-schumer-spending-bill.html/SJKS

WASHINGTON — President Biden huddled with key Democrats on Sunday to iron out crucial spending and [tax provisions](https://www.nytimes.com/2021/10/26/us/politics/democrats-billionaires-tax.html) as they raced to wrap up their expansive social safety net legislation before his appearance at a U.N. climate summit next week. Speaker Nancy Pelosi of California said Democrats were close to completing the bill, displaying confidence that the negotiations over issues like paid leave, tax increases and Medicare benefits that have bedeviled the party for months would soon end. “We have 90 percent of the bill agreed to and written. We just have some of the last decisions to be made,” Ms. Pelosi said on CNN’s “State of the Union,” adding that she hoped to pass an infrastructure bill that had already cleared the Senate and have a deal in hand on the social policy bill by the end of the week. “We’re pretty much there now.” Her comments came as Mr. Biden met with Senators Chuck Schumer of New York, the majority leader, and Joe Manchin III of West Virginia, one of the critical centrist holdouts on the budget bill. The White House called the breakfast at Mr. Biden’s Wilmington home a “productive discussion.” For weeks, intraparty divisions over the scope and size of their marquee [domestic policy plan](https://www.nytimes.com/live/2021/10/26/us/biden-spending-bill-deal) have delayed an agreement on how to trim the initial $3.5 trillion blueprint Democrats passed this year. In order to bypass united Republican opposition and pass the final bill, Democrats are using an arcane budget process known as reconciliation, which shields fiscal legislation from a filibuster but would require every Senate Democrat to unite behind the plan in the evenly divided chamber. The party’s margins in the House are not much more forgiving. Facing opposition over the $3.5 trillion price tag, White House and party leaders are coalescing around a cost of up to $2 trillion over 10 years. They have spent days negotiating primarily with Mr. Manchin and Senator Kyrsten Sinema, Democrat of Arizona and another centrist holdout. House Democratic leaders hope to advance both a compromise reconciliation package and the $1 trillion bipartisan infrastructure package. Liberals have so far balked at voting on the bipartisan deal until the more expansive domestic policy package — which is expected to address climate change, public education and health care — is agreed upon. But Democrats are facing a new sense of urgency to finish the legislation before Mr. Biden’s trip to a major United Nations climate change conference, where he [hopes to point to the bill](https://www.nytimes.com/2021/10/15/climate/biden-clean-energy-manchin.html) as proof that the United States is serious about leading the effort to fight global warming. “The president looked us in the eye, and he said: ‘I need this before I go and represent the United States in Glasgow. American prestige is on the line,’” Representative Ro Khanna, a California Democrat who met with Mr. Biden last week at the White House, said on “Fox News Sunday.” Democrats are also increasingly eager to deliver the bipartisan legislation to Mr. Biden’s desk before elections for governor in Virginia and New Jersey on Nov. 2, to show voters the party is making good on its promise to deliver sweeping social change. And a number of transportation programs will lapse at the end of the month without congressional action on either a stopgap extension or passage of the infrastructure bill, leading to possible furloughs. The legislation is expected to include a one-year extension of payments to most families with children, first approved as part of the $1.9 trillion pandemic relief plan, as well as an increase in funds for Pell grants, support for home and elder care, and billions of dollars for affordable housing. It would also provide tax incentives to encourage use of wind, solar and other clean energy. While aides cautioned that details were in flux, the plan is also expected to address a cap on how much taxpayers can deduct in state and local taxes, a key priority for Mr. Schumer and other lawmakers who represent higher-income residents of high-tax states affected by the limit. But negotiators on Sunday were still haggling over a number of outstanding pieces, including the details of a federal paid family and medical leave program — already cut to four weeks from 12 weeks — Medicaid expansion and a push to expand Medicare benefits to include dental, vision and hearing. With Mr. Manchin pushing for a $1.5 trillion price tag, Democratic officials are urging for him to accept more spending in order to avoid dropping other programs.

#### Labor reform saps PC – empirically prove with Obama, corporate opposition, and Democratic resistance

Leon 21 Luis Feliz Leon, 01-06-2021, “"If we want it, we’re going to have to fight like hell for it" - Labor faces an uphill battle to pass the PRO Act,” Strike Wave, https://www.thestrikewave.com/original-content/labor-faces-uphill-battle-to-pass-pro-act/SJKS

The Employee Free Choice Act (EFCA), which died in the Senate during President Barack Obama’s first term, had similar potential to increase union membership, as it would have enabled workers to get union representation if a majority signed union cards (“card check”) rather than through an election. It died because Obama was unwilling to put political capital behind it to overcome opposition from Republicans and center-right Democrats. “EFCA was very close to becoming law. At the end of the day, in my view, the Obama administration did not put the necessary political capital into securing its passage,” said EPI's McNicholas. “The Obama administration decided to focus on ‘bipartisan’ and ‘reach across the aisle’ type solutions to the 2008 financial crisis, and thus didn't care about EFCA in the face of the anti-EFCA mobilization by strong ‘antis’ like the Chamber of Commerce,” says Susan Kang, a professor of political science at John Jay College who studies political economy, labor, and human rights. “Basically, labor was swept aside by the Obama administration … at the exact moment when he had the strongest mandate and political capital.” Another issue, said Patrick Burke, an organizer with United Auto Workers Local 2322 in Massachusetts, was that EFCA's card-check provisions, when framed as a replacement for elections, “became very easy to demonize and difficult to explain to people not already familiar with labor law.” “The short story is that the EFCA was doomed from a few moderate Dems not being willing to go through with card check once actually in power to enact it. The long story is that the labor movement's disappearance from the ‘adult table’ of Democratic politics has cyclical downward effects. They're less able to convince Dems to go out on the limb for them and to prioritize their legislative requests,” said Brandon Magner, a labor lawyer in Indiana. Despite a history of betrayal and rejection, labor and immigrant rights organizations, [coalesced](https://progressive.org/dispatches/power-behind-win-feliz-leon-201123/) around Biden, a self-professed “[union guy](https://www.cnbc.com/2020/11/16/biden-holds-joint-meeting-with-union-leaders-and-retail-auto-tech-ceos.html),” after the primaries and [helped deliver](https://progressive.org/dispatches/bargaining-rights-with-that-feliz-leon-201229/) him to the White House in the hope that doing so would lead to [executive action](https://indypendent.org/2020/12/immigrants-rights-advocates-descend-on-delaware/) on immigration and labor law reform. “We call on Congress to pass and Biden to sign the Protecting the Right to Organize (PRO) Act early in 2021 to make sure every worker who wants to form or join a union is able to do so freely and fairly,” AFL-CIO President Richard Trumka said in a [statement](https://aflcio.org/press/releases/afl-cio-looks-forward-working-president-elect-joe-biden-0) after the election. But union organizers, researchers, and labor lawyers see dim prospects for winning significant labor reform during the Biden administration. “The PRO Act is obviously dead in the Senate unless Mitch McConnell gets knocked into the minority, but I don't see it being passed without full-throated support for gutting the filibuster from Biden, Harris, Schumer, Durbin, and more,” said Magner, the labor lawyer, adding that “the history of failed labor law reform efforts indicates you need 60 votes to pass anything.” That is particularly true of Democrats in “right-to-work” states like [South Carolina](https://www.postandcourier.com/politics/scs-rep-joe-cunningham-to-vote-against-pro-union-bill-in-break-with-democrats/article_426b38e2-4862-11ea-a0d9-77a96531c47e.html) where U.S. Rep. Joe Cunningham was a reliable opponent in the House. But the greatest liability might be Biden himself. “The few times that Biden met McConnell at the negotiating table during the Obama years, McConnell [left with Biden’s wallet](https://theintercept.com/2019/06/24/joe-biden-tax-cuts-mitch-mconnell/),” dryly [observed](https://theintercept.com/2020/12/28/mcconnell-trump-election/) The Intercept’s Ryan Grim. “Even if the Democrats capture the Georgia Senate seats, their margin will be too small to overcome a Republican filibuster or, if they change the rules, more than one Democrat will break ranks, and no Republicans will support the act,” said Friedman. Even if Biden were to somehow outmaneuver McConnell’s chicanery, there would be fierce opposition to contend with on the corporate side from the likes of Americans for Tax Reform, which has [used](https://www.atr.org/ab5) Georgia runoff elections as an opportunity to fearmonger on the PRO Act, and, when backed against the wall, Biden may revert to his timeworn moderate instincts and not go to bat for labor reform unless forced to. “Prospects for major labor law reform under the Biden administration are directly tied to unions’ and union federations’ willingness to hold the administration’s feet to the fire. They are not going to do it on their own – if we want it, we’re going to have to fight like hell for it,” said Pitkin, the former UNITE HERE organizer. “The biggest question is whether there is enough street heat and organizing to prioritize legislation like this," said Burke, the UAW organizer. “Workers in motion spur labor-law reforms, not the other way around.”

#### Infrastructure secures the grid against worsening and increasing cyberattacks.

Carney 21 [Chris; 8/6/21; Senior policy advisor at Nossaman LLC, former US Representative, former professor of political science at Penn State University; "*The US Senate Infrastructure Bill: Securing Our Electrical Grid Through P3s and Grants*," JDSupra, <https://www.jdsupra.com/legalnews/the-us-senate-infrastructure-bill-4989100/>] Justin

As we begin to better understand the main components of the Infrastructure Investment and Jobs Act that the US Senate is working to pass this week, it is clear that public-private partnerships ("P3s") are a favored funding mechanism of lawmakers to help offset high costs associated with major infrastructure projects in communities. And while past infrastructure bills have used P3s for more conventional projects, the current bill also calls for P3s to help pay for protecting the US electric grid from cyberattacks. Responding to the increasing number of cyberattacks on our nation’s infrastructure, and given the fragile physical condition of our electrical grid, the Senate included provisions to help state, local and tribal entities harden electrical grids for which they are responsible. Section 40121, Enhancing Grid Security Through Public-Private Partnerships, calls for not only physical protections of electrical grids, but also for enhancing cyber-resilience. This section seeks to encourage the various federal, state and local regulatory authorities, as well as industry participants to engage in a program that audits and assesses the physical security and cybersecurity of utilities, conducts threat assessments to identify and mitigate vulnerabilities, and provides cybersecurity training to utilities. Further, the section calls for strengthening supply chain security, protecting “defense critical” electrical infrastructure and buttressing against a constant barrage of cyberattacks on the grid. In determining the nature of the partnership arrangement, the size of the utility and the area served will be considered, with priority going to utilities with fewer available resources. Section 40122 compliments the previous section as it seeks to incentivize testing of cybersecurity products meant to be used in the energy sector, including SCADA systems, and to find ways to mitigate any vulnerabilities identified by the testing. Intended as a voluntary program, utilities would be offered technical assistance and databases of vulnerabilities and best practices would be created. Section 40123 incentivizes investment in advanced cybersecurity technology to strengthen the security and resiliency of grid systems through rate adjustments that would be studied and approved by the Secretary of Energy and other relevant Commissions, Councils and Associations. Lastly, Section 40124, a long sought-after package of cybersecurity grants for state, local and tribal entities is included in the bill. This section adds language that would enable state, local and tribal bodies to apply for funds to upgrade aging computer equipment and software, particularly related to utilities, as they face growing threats of ransomware, denial of service and other cyberattacks. However, under Section 40126, cybersecurity grants may be tied to meeting various security standards established by the Secretary of Homeland Security, and/or submission of a cybersecurity plan by a grant applicant that shows “maturity” in understanding the cyber threat they face and a sophisticated approach to utilizing the grant. While the final outcome of the Infrastructure Investment and Jobs Act may still be weeks or months away, inclusion of these provisions not only demonstrates a positive step forward for the application of federal P3s and grants generally, they also show that Congress recognizes the seriousness of the cyber threats our electrical grids face. Hopefully, through judicious application of both public-private partnerships and grants, the nation can quickly secure its infrastructure from cyberattacks.

#### Cyberattacks on the grid spiral to all-out nuclear conflict.

Klare 19 [Michael; November 2019; Professor emeritus of peace and world security studies at Hampshire College; “*Cyber Battles, Nuclear Outcomes? Dangerous New Pathways to Escalation*,” Arms Control Association, <https://www.armscontrol.org/act/2019-11/features/cyber-battles-nuclear-outcomes-dangerous-new-pathways-escalation>] Justin

Yet another pathway to escalation could arise from a cascading series of cyberstrikes and counterstrikes against vital national infrastructure rather than on military targets. All major powers, along with Iran and North Korea, have developed and deployed cyberweapons designed to disrupt and destroy major elements of an adversary’s key economic systems, such as power grids, financial systems, and transportation networks. As noted, Russia has infiltrated the U.S. electrical grid, and it is widely believed that the United States has done the same in Russia.12 The Pentagon has also devised a plan known as “Nitro Zeus,” intended to immobilize the entire Iranian economy and so force it to capitulate to U.S. demands or, if that approach failed, to pave the way for a crippling air and missile attack.13 The danger here is that economic attacks of this sort, if undertaken during a period of tension and crisis, could lead to an escalating series of tit-for-tat attacks against ever more vital elements of an adversary’s critical infrastructure, producing widespread chaos and harm and eventually leading one side to initiate kinetic attacks on critical military targets, risking the slippery slope to nuclear conflict. For example, a Russian cyberattack on the U.S. power grid could trigger U.S. attacks on Russian energy and financial systems, causing widespread disorder in both countries and generating an impulse for even more devastating attacks. At some point, such attacks “could lead to major conflict and possibly nuclear war.”14

## 3

#### Tech can solve infrastructure concerns but needs to be integrated – operators are key.

Jacobs 5/31 [Lionel; Senior Security Architect in the Palo Alto Networks ICS and SCADA solutions team. Coming from the asset-owner side , Lionel has spent more than 20 years working in the IT/OT environment, with a focus on ICS systems design, controls, and implementation. He was a pioneer in bridging the IT-OT security gap and implementing next-generation security into performance and safety critical process control areas. During his tenure, he successfully deployed a large scale ICS/SCADA security architecture composed of over 100 next-generation firewalls, hundreds of advanced endpoint protection clients and SIEM, distributed over dozens of remote plants and a centralized core, all based on a "Zero Trust" philosophy. Lionel graduated from Houston Baptist University with a double degree in Physics and Mathematics and has held certifications as a MCSE, CCA, CCNP, CCIP, CCNA, CSSA, and GICSP; “Critical Infrastructure Protection: Physical and Cyber Security Both Matter,” eSecurity Planet; 5/31/21; <https://www.esecurityplanet.com/networks/critical-infrastructure-protection-physical-cybersecurity/>] Justin

Segmentation based on business criteria

Segmentation is not just breaking apart the network based on the IP-Address space. True segmentation requires identifying and grouping devices into Zones or Enclaves based on meaningful business criteria to protect better vulnerable devices found within the address space. Access to devices in the zone needs to be restricted by users, groups, protocols, networks, and devices. In some instances, you may even consider restricting access by time of day.

IoT/IIoT is beginning to take hold in the energy industry, which means there are going to be more devices attached to these networks gathering information and possibly running on a vendor’s proprietary software and hardware, which more than likely will not be managed or patchable by the operator of the system. So O&G needs to have a definite plan on how they will address this growing trend, and a zero trust-based strategy offers the best means of doing this integration in a safe, secure, and, most important, reversible manner.

Camera and sensor security

Segmentation will also include the zoning of radio frequency (RF) technologies like Wi-Fi, Microwave, satellite, and cellular. ICS and SCADA systems operators must remain mindful of the possibility of an upstream attack by threat actors who have managed to compromise their RF facilities. Remote facilities and devices often have cameras and sensors to alert when a door has been opened. Still, because they are remote, attackers have time to enter the facilities and plant a device that can go completely unnoticed.

Another option physical access affords them is the opportunity to compromise the runtime operating systems and/or OS of the devices they find. The only way you will find these would be to do a physical search of the facility or cabinet and run an audit of the OS to ensure nothing has been tainted.

Zoning limits damage

So the reason why the zone trust segmentation (zoning) is so important is if you don’t have the time to perform these acts to confirm that the site is not compromised. With proper zoning enforcement, you can limit and isolate the damage to a region or just that location.

Zones in a Zero Trust network also serve as an inspection point for traffic entering and exiting the enclave. The enabling of IPS, IDS, and virtual sandboxing technology can be applied on a per-zone basis, allowing for customized protection for the vulnerable devices contained within. Implementing these security measures is a best practice even on zones where devices can receive updates and have some form of endpoint protection.

With proper design and device consideration, zoning with the different inspection technologies enabled can also be a remediating factor for those devices in your network that cannot be patched, updated, and even those that are end-of-life. In short, zoning with inspection technology enabled helps to ensure IT and OT network systems’ safe operations. In even the most secure environments, it is never safe to assume that data traffic transversing the network is free of a potential threat.

#### Increased strikes send a clear signal to terrorists that critical US infrastructure is vulnerable by weakening organizations.

Davies 6 [Ross; George Mason University - Antonin Scalia Law School, Faculty, The Green Bag; “Strike Season: Protecting Labor-Management Conflict in the Age of Terror,” SSRN; 4/12/06; <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=896185>] Justin

Strikes (and, to a lesser extent, lockouts) are painful but necessary parts of private-sector American labor-management relations. Even if they weren't - even if sound public policy called for their eradication - we couldn't stop them. They are an inevitable byproduct of the conflicting interests and limited resources of organized workers and their employers. History shows that this is true even in times of warfare overseas or crisis at home: labor-management strife lessens at the beginning of a conflict and then bounces back. Now, however, we are confronted with warfare at home, a phenomenon that the United States has not had to deal with since the Civil War - before the rise of today's unprecedentedly large, complex, and interdependent economy and government.

And history is repeating itself again. After a lull at the beginning of the war with terrorists, work stoppages have returned to their pre-war levels. The overall rate of strike activity is substantially lower than it was during previous wars (it has been slowly declining, along with overall union membership in the private sector, for decades). Today's war, however, is being fought in part on American soil, and against enemies who operate worldwide, but whose attacks tend to be small and local, seeking advantage from the unpredictability and brutality of the damage they inflict rather than from its scale. Thus, even small, localized, and occasional work stoppages - not just the large-scale strikes that arguably affected the military-industrial complex and thus the war efforts in the past - have the potential to increase risks to critical infrastructure and public safety during the war on terror. In other words, persistent strike activity at current levels poses risks of public harm, albeit risks that are difficult to anticipate with specificity in the absence of much experience or available data. This justifies taking some reasonable precautions, including the proposal made in this Article.

By its very nature, a labor strike increases the vulnerability of that employer's operations to a terrorist attack. A strike is an act specifically designed to disrupt and weaken an employer's operations, for the (usually) perfectly lawful purpose of pressing for resolution of a dispute with management. A weakened organization or other entity is, of course, less capable of resisting and surviving exogenous shocks, whether they be commercial competition or terrorist attacks. In the United States, with its fully extended and endlessly interconnected critical infrastructure that touches everything from food processing to energy distribution to water quality, a strike in the wrong place at the wrong time that disrupts and weakens some part of that infrastructure could be decisive in the success or failure of a terrorist attack of the small, local sort described above, on such a weakened link in some infrastructural chain. Of course, none of this is to suggest that any union or its members (or any employer or its managers) would knowingly expose their fellow citizens or their property to a terrorist attack. To the contrary, experience to date suggests that union members are at least as patriotic and conscientious as Americans in general. In fact, the effectiveness of the proposal made in this Article is predicated in part on the assumption that neither workers nor their employers will knowingly contribute to the incidence or effectiveness of terrorist attacks. The concern addressed here is, rather, that innocent instigators or perpetuators of a work stoppage might unwittingly facilitate a successful terrorist attack or aggravate its effects.

#### Attacks on critical infrastructure collapses the economy through multiple avenues.

FAS 6 [DCSINT Handbook No. 1.02; Info directly from US army and Deputy Chief of Staff for Intelligence; “Critical Infrastructure Threats and Terrorism,” DCSINT/FAS; 8/10/6; <https://fas.org/irp/threat/terrorism/sup2.pdf>] Justin

Agriculture

In 1984, a cult group poisoned salad bars at several Oregon restaurants with Salmonella bacteria as the first recorded event of bioterrorism in the United States. This resulted in 750 people becoming sick.24 A review of the agriculture infrastructure results in vulnerable areas such as the high concentration of the livestock industry and the centralized nature of the food processing industry. The farm-to table chain contains various points into which an attack could be launched. The threat of attack would seriously damage consumer confidence and undermine export markets. Understanding the goal of the threat points to the area most likely attacked. If the intent was economic disruption the target would be livestock and crops, but if the intent was mass casualties the point of attack would be contamination of finished food products. Damage to livestock could be very swift, the USDA calculated that foot-and mouth disease could spread to 25 states in 5 days.25 CDC is presently tracking and developing scenarios for the arrival of Avian Flu.

Banking

Prior to the destruction of the Twin Towers, physical attacks against the banking industry, such as the destruction of facilities, were rare. Unfortunately, evidence indicates that may change, in March 2005 three British al-Qa’ida operatives were indicted by a U.S. federal court on charges of conducting detailed reconnaissance of financial targets in lower Manhattan, Newark, New Jersey, and Washington, D.C. In addition to video taping the Citigroup Center and the New York Stock Exchange in New York City, the Prudential Financial building in Newark, and the headquarters of the International Monetary Fund and the World Bank in Washington D.C., the men amassed more than 500 photographs of the sites.26 The Banking infrastructures primary weakness is along its cyber axis of attack. Through phishing and banking Trojan targeting specific financial institutions, attackers reduce confidence among consumers. Recently American Express posted an alert online, including a screenshot of a pop-up that appeared when users log in to its secure site.27

The attack not only attempts to obtain personal information that can be used for various operations, but also launches a virus into the user’s computer. CitiBank, and Chase Manhattan Bank have both been victim during 2005 and 2006 to phishing schemes misrepresenting their services to their clients.

Energy

Recently the oil industry occupied the headlines, and the criticality of this infrastructure is not lost on terrorists. In mid-December 2004, Arab television aired an alleged audiotape message by Usama bin Laden in which he called upon his followers to wreak havoc on the U.S. and world economy by disrupting oil supplies from the Persian Gulf to the United States.28 The U.S. uses over 20.7 million barrels a day of crude oil and products and imports 58.4% of that requirement.29 On 19 January 2006 al-Qaeda leader Osama bin Laden announced in a video release that, “The war against America and its allies will not be confined to Iraq…..”, and since June of 2003 there have been 298 recorded attacks against Iraqi oil facilities.30 Terrorists conduct research as to the easiest point to damage the flow of oil or to the point where the most damage can be done. Scenarios involving the oil fields themselves, a jetliner crashing into the Ras Tanura facility in Saudi Arabia could remove 10 percent of the world’s energy imports in one act.31 Maritime attacks are also option for terrorists; on October 6, 2002 a French tanker carrying 397,000 barrels of crude oil from Iran to Malaysia was rammed by an explosive laden boat off of the port of Ash Shihr, 353 miles east of Aden. The double-hulled tanker was breached, and maritime insurers tripled the rates.32 Energy most travel often long distances from the site where it is obtained to the point where it is converted into energy for use, a catastrophic event at any of the sites or along its route can adversely impact the energy infrastructure and cause ripples in other infrastructures. The security of the pipeline in Alaska increases in importance as efforts are made to make America more independent on energy use.

Economy

The U.S. economy is the end-state target of several terrorist groups as identified in the introduction quote. The means by which terrorists and other threats attempt to impact the economic infrastructure is through it’s linkage to the other infrastructures. Attacks are launched at other infrastructures, such as energy or the Defense Industrial Base in an effort to achieve a “cascading” result that impacts the economy. Cyber attacks on Banking and Finance are another effort to indirectly impact the economy. The short term impacts of the 9/11 attacks on Lower Manhattan resulted in the loss of 30% of office space and a number of businesses simply ceased to exist. Close to 200,000 jobs were destroyed or relocated out of New York City. The destruction of physical assets was estimated in the national accounts to amount to $14 billion for private businesses, $1.5 billion for state and local government enterprises and $0.7 billion for federal enterprises. Rescue, cleanup and related costs are estimated to at least $11 billion for a total direct cost of $27.2 billion.33 The medium and long term effects cannot be accurately estimated but demonstrate the idea of cascading effects. The five main areas affected over a longer period were Insurance, Airlines, Tourism and other Service Industries, Shipping and Security and military spending. At various times terrorist rhetoric has mentioned attacks against Wall Street proper, but the more realistic damage to the economy will come through the indirect approach of cascading effects.

Transportation

The attack on commuter trains in Madrid in March of 2004 and the London bombings in July of 2005, which together killed 243 people, clearly indicated the threat to the transportation infrastructure. Statistics provided by the Brookings Institute in Washington DC show that between 1991 and 2001 42% of worldwide terrorist attacks were directed against mass transit. Transportation is viewed by terrorists as a “soft target” and one that will impact the people of a country. Mass Service Transportation (MST) is the likely target of a terrorist attack.

MST caters to large volumes of people, crammed into narrow confined spaces

MST is designed to move large numbers of people quickly and efficiently, which is often counter to protective measure

MST assets are enclosed, serving to amplify explosions

MST attacks can result in “cascading effects” because communications and power conduits are usually collocated in proximity to their routes

The Department of Homeland Security sent a “public sector notice” in May of 2006 based on two incidents of “suspicious videotaping” of European mass-transit systems.34 The individual had several tapes besides the one in his camera, none of which showed any tourist sites. The tapes focused on the insides of subway cars, the inside and outside of several stations and exit routes from the stations. In June of 2003 the FBI arrested Iyman Faris, a 34 year old naturalized American citizen who had been in contact with Al Qaeda conducting research and reconnaissance in an effort to destroy the Brooklyn Bridge.35 Mr. Faris had traveled to Afghanistan and Pakistan in 2000, meeting with Osama bin Laden, he returned to the U.S. and began gathering information concerning the Brooklyn Bridge and communicating via coded messages with Al Qaeda leaders. An attack on the bridge would have not only damaged the transportation infrastructure, but also a known American landmark. On 24 May 2006, a Pakistani immigrant was convicted on charges of plotting to blow up one of Manhattan’s busiest subway stations in retaliation for the U.S. actions at the Abu Ghraib prison.36

Terrorist threats to the transportation infrastructure extend beyond land to the sea. Vice Admiral Jonathan Greenert, commander of the U.S. Seventh Fleet, said “one of my nightmares would be a maritime terrorism attack in the Strait of Malacca”.37 “There is a strain of al-Qaida in Southeast Asia, called Jemaah Islamiya. They are actively pursuing a maritime terrorism capability that includes diving and mining training.”38 As how this might impact on the economy, $220 billion in trade comes through the Seventh Fleet area of responsibility and 98% of the commerce is moved by sea. Just as ports can be viewed a SPOF within the maritime transport system, there are certain waterway chokepoints or heavily trafficked areas that can be viewed as a high payoff target to a terrorist or result in catastrophic damage from a natural disaster.