## **1**

#### **Best studies conclude inflation is expected to level out and is transitory – err neg other predictions are based off intuitions and have bad track records.**

Mark Hulbert 10/26 [, Why These Economists Aren't Worried About Inflation. Barrons (10-26-2021) https://www.barrons.com/articles/inflation-economists-51635264860?tesla=y]//anop

The consumer price index is likely to rise next year by about 3%—and perhaps even less. If so, of course, inflation in 2022 could be much less the 5.4% rate at which the CPI has risen over the past 12 months. This rosy projection comes from the inflation models that have the best historical track records, according to a new study. Focusing on the models with the best track records would seem to be an obvious approach to the debate over whether inflation’s recent spike is transitory. But surprisingly few commentators have done so. Many appear to have instead based their projections on little more than intuitions and hunches, picking and choosing among the myriad pieces of available economic data and anecdotal evidence to find what supports their prior beliefs. Their approach, in effect, is: “Here’s the conclusion on which I will base my facts.” The new study that instead focuses on historical track records is written by two economists at the Cleveland Federal Reserve Bank, Randal Verbrugge and Saeed Zaman. Their study is entitled “Whose Inflation Expectations Best Predict Inflation”? (Note that the conclusions of their study are theirs, they write, “and not necessarily those of the Federal Reserve Bank of Cleveland or the Board of Governors of the Federal Reserve System.”) After studying a number of competing models, the economists found that the models based on the forecasts of “professional economists and businesses have tended to provide more accurate predictions of future inflation than the [models based on] expectations of households and of financial market participants.” That’s good news because households are among those who currently believe that inflation’s recent spike will be more than transitory. Consider the University of Michigan’s Survey of Consumers, which finds that consumers on average expect the CPI to rise 4.7% over the coming year. That’s only slightly below the 5.4% rate at which the CPI has risen over the trailing year. In contrast, consider the much lower projections of three models that are based on the forecasts of professional economists and businesses: The quarterly survey of 36 professional economic forecasters conducted by the Philadelphia Fed. Their latest median forecast for the CPI’s increase in 2022 is 2.4%—barely half that of consumers’ expectations. Wolters Kluwer Blue Chip. The median of their 2022 CPI forecasts is for an increase of 3.3%. That’s higher than in the Philadelphia Fed’s survey, but still a lot lower than the CPI’s trailing 12-month increase. The Atlanta Fed each month surveys approximately 300 businesses in the Southeast U.S., asking for their inflation expectations for the subsequent year. The consensus expectation in the latest such survey is an increase of 3.1%. The average of these three projections is below 3%. In an email, Dr. Zaman mentioned another inflation model whose record in their study was almost as good. This additional model, which was devised a number of years ago by the Cleveland Fed, has a number of inputs, including Treasury yields, surveys of professional forecasters, and inflation swaps (derivatives in which one party to the transaction agrees to swap fixed payments in return for payments tied to the inflation rate). This model is currently forecasting that the CPI over the next 12 months will rise 1.8%. There’s no guarantee that any of these models’ projections will be accurate, needless to say. But if you believe that inflation will be much higher, the burden of proof is on you to both codify the model on which your belief is based and document that it has a superior historical record*. It’s not good enough simply to refer to potentially inflationary factors like supply-chain bottlenecks , higher energy prices, increased government borrowing, or the (hopefully) imminent end of pandemic-induced dampers on economic activity*. Those factors are also being taken into account by the professional economists, forecasters, and businesses whose median projections came out ahead in this new study’s performance ranking. And yet they, on balance, are still in the “inflation is transitory” camp. What about the “break-even inflation rate“—the inflation model that is referred to most often in the financial press? It measures the difference between the yields on nominal Treasuries and those of Treasury inflation-protected securities, or TIPS, of similar maturities. It’s referred to as the break-even rate because it is the future inflation rate that would mean the total return from investing in TIPS today would be identical to that from buying nominal Treasuries. But, as Dr. Verbrugge said in an email, “Breakevens are notoriously poor predictors [of inflation], compared to these other measures” that their study found to have decent track records.

#### The plan spurs persistent inflation – unions realize they are disenfranchised but have a unique opportunity to rebuild into disruptive strikes.

Liz Peek 21 [Liz Peek is a former partner of major bracket Wall Street firm Wertheim & Company, Biden's Big Labor policies will create next round of inflation. The Hill. (10-22-2021) https://thehill.com/opinion/finance/577933-bidens-big-labor-policies-will-create-next-round-of-inflation]//anop

Americans blame President Biden for rising inflation; it could get worse. The administration’s big-spending policies and inability to cure our supply chain woes have driven prices higher. In addition, Biden’s generous handouts and vaccine mandates have pushed workers to the sidelines, making it difficult to fill jobs and raising costs even further. But it is Biden’s enthusiasm for Big Labor that is going to make matters worse. We are now entering a new phase of inflation pressures. A rising cost of living is pushing workers to demand higher wages, which in turn prompts companies to raise prices even more, igniting an unholy cycle that penalizes everyone. ADVERTISEMENT Unions, cheered on by Biden’s White House, have decided to take advantage of this moment. Labor strikes are on the increase, which will lead to higher wages, take workers offline and make it even harder to get goods to customers. Those bare shelves popping up around the country may just be a teaser for what comes next. A wage-price spiral is the phenomenon that causes inflation to become “*persistent” and not “transitory*.” This is what Democrats will bring to the 2022 midterm elections. A recent Morning Consult/Politico poll found that 62 percent of registered voters, including 61 percent of independents and even 41 percent of Democrats, blame Biden’s policies for soaring inflation. With prices rising at the fastest rate in 13 years, less than half of those surveyed attribute the increase to Americans returning to pre-pandemic behavior. Though the policies that contributed to price hikes on everything from rents to gasoline to chicken were not specified in this poll, other surveys have found voters pinning rising inflation on Democrats’ big spending programs, such as the $1.9 trillion American Rescue Plan. That is one reason (along with a healthy survival instinct) that moderate Democrats are now slow-walking Biden’s $3.5 trillion “social infrastructure” bill. Transportation Secretary Pete Buttigieg acknowledged the connection the other day, when he shirked responsibility for port delays and trucker shortages by arguing that we don’t have just a supply problem but also a demand problem. Buttigieg is correct. With Congress authorizing an unprecedented $5 trillion in “relief” spending over the past two years and with the Federal Reserve pumping trillions into the money supply, the country is awash with money. Put most simply, there is too much money chasing too few goods. As a consequence, prices in September rose 5.4 percent from the year before, faster that the growth in wages, which increased 4.6 percent. Over the past year, real average hourly wages are down almost one percent. Workers are falling behind, and they know it. Unions have taken notice and decided that this is the time to begin rebuilding their ranks among private companies. Only 6.3 percent of private-sector workers today belong to unions, a massive drop from 12 percent in 1990. Clearly, labor leaders would like to reverse that trend. With the nation short of workers, this may be the perfect time to do so. Just recently, 10,000 United Auto Workers at tractor manufacturer John Deere went out on strike for the first time in three decades, while 31,000 employees at Kaiser Permanente are also staging a walkout. Some 1,400 workers at cereal-maker Kellogg are striking. All in, there have been 12 strikes of 1,000 workers or more so far this year, according to the Bureau of Labor Statistics, and a total of 178 work stoppages. Those figures are way above 2020 totals, but about the same as in 2018 and 2019. My guess: We’re in the early innings. Workers are aware that they have leverage, and union leaders know there is a pro-Big Labor president in the White House. Early in his tenure, Biden posted a message about workers’ right to organize and the virtues of collective bargaining on Twitter that many saw as encouraging employees at an Amazon facility in Alabama to vote in favor of forming a union. It was an unprecedented intrusion by a president into such contests. As it happened, Biden’s push failed when workers overwhelmingly defeated the organizing effort. President Biden has gone further, inserting into his stimulus bills pro-union items like making union dues deductible and requiring that federal funds flow predominantly to union shops. As important, he has packed the National Labor Relations Board with former union lawyers committed to advancing the cause. Politico reports that the agency’s expected rulings could “serve as a backdoor for enacting provisions … that would vastly expand workers’ ability to join unions in potentially the most important overhaul of U.S. labor law since the 1940s.” Organizing gig workers is one of the new board's top ambitions. The Los Angeles Times affirms: “Biden has put unions at the center of policy — viewing them as vehicles not only to rebuild middle-class jobs but also to address climate change and racial and gender inequity.” The John Deere workers rejected a contract that would have awarded raises of 5 percent to 6 percent and offered another 3 percent wage hike in 2023 and 2025. Deere’s employees are emboldened by the company’s current profitability and the struggle to hire new employees. Most likely, workers elsewhere will follow suit. We have not seen a wave of disruptive labor strikes for many years. For the past two decades globalization put a lid on the demands of workers who were wary of shipping jobs overseas, and the Great Recession crimped corporate profits. ADVERTISEMENT White House 'confident' Manchin will back reconciliation framework Only 35 percent say US economy doing well: poll Biden’s pro-union efforts could win back some of those blue-collar workers who defected to Donald Trump in 2016, but the president’s encouragement of Big Labor will surely lead to higher wages. Those pay hikes will spur even higher inflation; it will be hard to stop the merry-go-round. It will also be hard for Biden and his fellow Democrats to escape responsibility for what many voters consider the country’s number one problem: inflation.

#### Excess inflation causes collapse – destroys savings of millions of households.

Jo Harper 21 [Jo Harper is a freelance British journalist based in Warsaw, writing for the BBC, Politico, Deutsche Welle and others. How big a threat is inflation? – DW – 07/30/2021. dw (7-30-2021) https://beta.dw.com/en/how-big-a-threat-is-inflation/a-58653487]//anop

Many economists advocate a middle-ground of low to moderate inflation of around 2% per year. When inflation breaches that figure some benefit and others lose out. Inflation is usually considered a problem when it goes above 5%, Brigitte Granville, a professor of economics at Queen Mary University, London, told DW. If inflation causes a currency to decline, then it can benefit exporters by making their goods more affordable when priced in other currencies. People with assets that are priced in a particular currency, like property or commodities, may like to see some inflation as that raises the price of their assets. Inflation can also increase profit margins and reduce debt in real terms. It can benefit borrowers because the inflation-adjusted value of their outstanding debts shrinks. However, higher inflation tends to harm savers as it erodes the purchasing power of the money they have saved. People holding assets denominated in currency, such as cash or bonds, may also not like inflation, as it erodes the real value of their holdings. Moreover, if central banks felt obliged to tighten monetary policy to check rising prices, it could cause a sharp correction in financial markets, which have been pumped up by a decade of QE-style liquidity injections. "Millions of middle-class households which have been placing increasing proportions of their savings in mutual funds invested in equities would suffer," Granville says. However, inflation of 3% or 4% could be positive for many economies at the moment. There are economists who argue strongly that it would reduce the debt overhang in real terms, for example.

#### Recuperating growth is key to international cooperation to solve multiple existential threats

Haass 17 [Richard Haass, President of the Council on Foreign Relations, previously served as Director of Policy Planning for the US State Department (2001-2003), and was President George W. Bush's special envoy to Northern Ireland and Coordinator for the Future of Afghanistan.] “A World in Disarray: American Foreign Policy and the Crisis of the Old Order” published January 10, 2017

A large portion of the burden of creating and maintaining order at the regional or global level will fall on the United States. This is inevitable for several reasons, only one of which is that the United States is and will likely remain the most powerful country in the world for decades to come. The corollary to this point is that no other country or group of countries has either the capacity or the mind-set to build a global order. Nor can order ever be expected to emerge automatically; there is no invisible hand in the geopolitical marketplace. Again, a large part of the burden (or, more positively, opportunity) falls on the principal power of the day. There is more than a little self-interest at stake. The United States cannot remain aloof, much less unaffected by a world in disarray. Globalization is more reality than choice. At the regional level, the United States actually faces the opposite problem, namely, that certain actors do have the mind-set and means to shape an order. The problem is that their views of order are in part or in whole incompatible with U.S. interests. Examples would include Iran and ISIS in the Middle East, China in Asia, and Russia in Europe. It will not be an easy time for the United States. The sheer number and range of challenges is daunting. There are a large number of actors and forces to contend with. Alliances, normally created in opposition to some country or countries, may not be as useful a vehicle in a world in which not all foes are always foes and not all friends are always friendly. Diplomacy will count for a great deal; there will be a premium on dexterity. Consultations that aim to affect the actions of other governments and their leaders are likely to matter more than negotiations that aim to solve problems. Another reality is that the United States for all its power cannot impose order. Partially this reflects what might be called structural realities, namely, that no country can contend with global challenges on its own given the very nature of these challenges. The United States could reduce its carbon footprint dramatically, but the effect on global climate would be modest if India and China failed to follow suit. Similarly, on its own the United States cannot maintain a world trading system or successfully combat terrorism or disease. Adding to these realities are resource limits. The United States cannot provide all the troops or dollars to maintain order in the Middle East and Europe and Asia and South Asia. There is simply too much capability in too many hands. Unilateralism is rarely a serious foreign policy option. Partners are essential. That is one of the reasons why sovereign obligation is a desirable compass for U.S. foreign policy. Earlier I made the case that it represents realism for an era of globalization. It also is a natural successor to containment, the doctrine that guided the United States for the four decades of the Cold War. There are basic differences, however. Containment was about holding back more than bringing in and was designed for an era when rivals were almost always adversaries and in which the challenges were mostly related to classical geopolitical competition.1 Sovereign obligation, by contrast, is designed for a world in which sometime rivals are sometime partners and in which collective efforts are required to meet common challenges. Up to this point, we have focused on what the United States needs to do in the world to promote order. That is what one would expect from a book about international relations and American foreign policy. But a focus on foreign policy is not enough. National security is a coin with two sides, and what the United States does at home, what is normally thought of as belonging to the domestic realm, is every bit as much a part of national security as foreign policy. It is best to understand the issue as guns and butter rather than guns versus butter. When it comes to the domestic side, the argument is straightforward. In order to lead and compete and act effectively in the world, the United States needs to put its house in order. I have written on what this entails in a book titled Foreign Policy Begins at Home.2 This was sometimes interpreted as suggesting a turn away from foreign policy. It was nothing of the sort. Foreign policy begins at home, but it ends there only at the country’s peril.3 Earlier I mentioned that the United States has few unilateral options, that there are few if any things it can do better alone than with others. The counterpart to this claim is that the world cannot come up with the elements of a working order absent the United States. The United States is not sufficient, but it is necessary. It is also true that the United States cannot lead or act effectively in the world if it does not have a strong domestic foundation. National security inevitably requires significant amounts of human, physical, and financial resources to draw on. The better the United States is doing economically, the more it will have available in the way of resources to devote to what it wants and needs to do abroad without igniting a divisive and distracting domestic debate as to priorities. An additional benefit is that respect for the United States and for the American political, social, and economic model (along with a desire to emulate it) will increase only if it is seen as successful. The most basic test of the success of the model will be economic growth. U.S. growth levels may appear all right when compared with what a good many other countries are experiencing, but they are below what is needed and fall short of what is possible. There is no reason why the United States is not growing in the range of 3 percent or even higher other than what it is doing and, more important, not doing.4

## **2**

#### The Indian economy is recovering post-2nd COVID wave, but it’s tentative – COVID mutation and consumption hesistancy

Majmudar ’21 [Dr. Rumki Majumdar is an associate director and economist with Deloitte India. She writes on several contemporary economic and sector-specific issues related to India with a focus on policy implications on industries such as consumer, financial services, energy and resources, technology, and public services. She has also written on numerous economic issues about the United States and several emerging economies for Deloitte Insights in the past. She currently heads the Client and Insights research team and regularly advises Deloitte India’s executive leadership on Indian economic outlook, “With risks looming over, are we over relying on pent-up demand?”, 07-26-2021, https://www2.deloitte.com/us/en/insights/economy/asia-pacific/india-economic-outlook.html]//pranav

The economy was gradually turning towards recovery early this year until the much more severe second COVID-19 wave hit India in April. The comforting news is that improving business sentiments, coupled with a strong recovery among industrial nations, propelled growth in the January–March quarter of FY2020–21. While substantial spending by the government provided the biggest boost to growth, private investments and goods exports—in segments such as engineering goods, chemical products, and pharmaceuticals—did remarkably well in the last quarter of the fiscal year.

What, however, emerged as a worrying trend (from the GDP numbers) is that traction in consumption spending seemed restrained, highlighting spending hesitancy due to health and financial anxieties. With more COVID-19 variants emerging across the world and certain mutations suggesting variants of concern, the ebb and flow of the pandemic is likely to continue.1 This raises several questions: How damaging would the impact of successive waves be on the economy? Can consumers eventually shirk off their anxieties and resume spending with confidence? While we pin our hopes on pent-up demand to lift recovery, are there any risks that may materialize?

We responded to the first question in our earlier publication (see “The tunnel just got longer, but you can still see the light” for more details)—we are cautiously optimistic about the economy’s ability to bounce back once we tide over the second wave.2 Successive waves will likely have a diminishing economic impact as a larger proportion of the population gets vaccinated. Recovery, however, is likely to be delayed and will flow into the next fiscal year.

In this report, we try to answer the other two questions. High-frequency data suggests that consumers are yet to recover from the emotional and financial scars of the second wave. While the upper-middle or higher-income class with larger savings are longing to spend, the weakening labor market, rising inflation, and deteriorating household balance sheets are risks that may test the resilience of a majority of consumers for some time. To bring back consumer confidence, India must vaccinate its population rapidly. At the same time, it is important for policymakers to understand the above risks looming over pent-up demand that we are so relying on for a strong recovery. That way, they can take quick actions to prevent these factors from spinning out of control.

#### Indian farmer strikes hamstring the economy

Krishnan ’20 [Murali, “How India's farmer protests could take a toll on the economy”, 09-12-2020, https://www.dw.com/en/how-indias-farmer-protests-could-take-a-toll-on-the-economy/a-55885748]//pranav

For nearly two weeks, tens of thousands of farmers have been staging protests on roads leading into Delhi. The farmers want to pressure Indian Prime Minister Narendra Modi into repealing a new set of farming laws, which they say liberalizes the agriculture market at farmers' expense. On Tuesday, the farmers called for a nationwide shutdown, which closed businesses and disrupted traffic as protesters squatted on roads and train tracks in several parts of the country. The impact of the shutdown, which was called "Bharat Bandh," was particularly strong in northern states like Punjab and Haryana, and the capital region, Delhi. Industry in Punjab, already reeling under the disruption of coronavirus lockdowns, has been doubly hit as train services remain suspended by the protests. "This protest has lasted for a long time and has begun eating up the economy of the state," Badish Jindal, president of Punjab's federation of small businesses, told DW. Making a bad economic situation worse Last week, India's central bank, the Reserve Bank of India, predicted India's economy will contract by 9.5% in the current fiscal year, which ends on March 31, 2021. In the April-June quarter of 2020, when the lockdown was in full force, India's economy contracted by nearly a quarter, which is the worst-ever decline since India started compiling GDP statistics on a quarterly basis in 1996. Economists and policy analysts believe the ongoing disruption caused by the protests could further upset the already fragile economic situation. "Obviously, this strike will have repercussions. Agricultural supply has already dipped and this will lead to inflation. Agrarian distress will be further compounded," as Jawaharlal Nehru University economist Himanshu — who only goes by one name — told DW. Agriculture accounts for nearly 15% of India's 2.4 trillion-euro economy, and farmers' unions are a powerful political constituency. Although most economists are reluctant to estimate a ballpark figure on the economic losses brought on by the demonstrations, some pointed out that the effects will likely extend beyond the agriculture sector into the overall economy. "At a time when the economy is upended and lives and livelihoods are affected, this current impasse will add further distress. It is difficult to estimate the production loss, but all of this will have a ripple effect," Mahesh Vyas, CEO of the Centre for Monitoring Indian Economy (CMIE), told DW. "A contraction in the Indian economy would continue into the next three quarters and a recession is inevitable," he added.

#### Strong Indian economy is key to deter Pakistani conflict and prevent collapse of conventional deterrence– Pakistan’s growing now

Jaffery ’20 [Syed Ali Zia Jaffery, Research Associate at the Center for Security, Strategy and Policy Research at the University of Lahore. He is also the Associate Editor of Pakistan Politico, the country’s first strategic and foreign affairs magazine. He is also teaching undergraduate courses on Foreign Policy and National Security, “Enhancing Deterrence Stability on the Subcontinent: The Case for Conventional Deterrence”, 04-08-2020, https://www.stimson.org/2020/enhancing-deterrence-stability-on-the-subcontinent-the-case-for-conventional-deterrence/]//pranav

Experts in Washington, D.C. termed Pakistan’s weak economic profile as one of the biggest impediments to a strengthened conventional deterrent. They contended that Pakistan, beset with debt, low-growth, and structural anomalies, will find it difficult to afford sustained investments in defense that could help keep a semblance of balance with a behemoth economic power, India. There is no doubt that Pakistan is in the midst of an economic crisis. That said, the country is slowly but surely extricating itself from dire straits.23 According to the World Bank, Pakistan could become a 2-trillion-dollar economy by 2047.24 This statistic inspires confidence given that nothing proposed in this memo caters to the short and medium terms. Even were economic challenges to persist, triggered by China Pakistan Economic Corridor (CPEC) investments, COVID-19 response, or otherwise, many policy options recommended below involve allocation of existing resources rather than significant new expenditures.

#### Future conflict between Indo Pak *goes nuclear*.

Dalton and Kalwani 2 [Dalton, Toby and Kalwani, Gaurav. Toby Dalton is co-director and a senior fellow of the Nuclear Policy Program at the Carnegie Endowment. An expert on nonproliferation and nuclear energy, his work addresses regional security challenges and the evolution of the global nuclear order. Fourth-year Gaurav Kalwani has been named a junior fellow for the Carnegie Endowment for International Peace and will have a unique opportunity to explore his interests in public service and nuclear policy.War on the Rocks. “Might India Start the Next South Asia Crisis?,” November 1, 2019. https://warontherocks.com/2019/11/might-india-start-the-next-south-asia-crisis/.]//anop

As with all historical cases, there are limitations in drawing inferences for contemporary conditions. As compared to 2001, India and Pakistan now have two decades of experience with crises under the nuclear overhang, even as both continue to build out their nuclear arsenals and adapt postures accordingly. India is slowly realizing its global aspirations, giving it more leverage in international politics. China is a more important actor in the region today than 20 years ago, whereas U.S. interests in the region are in flux as Washington seeks to wind down its presence in Afghanistan. Yet, fundamentally, the cases underscore that India can be revisionist in its aims with respect to the Line of Control, whether for political or military reasons. Under the right circumstances, it is conceivable India may opt to challenge the status quo again. How might a crisis initiated by an Indian cross-border operation differ from the pattern of the past couple of decades? Most critically, it would shift the onus of decision-making to Pakistan. As the aggrieved party, and as the smaller power, Pakistani leaders would face immense pressure to restore deterrence through escalation. Whereas Indian leaders have sought to manage escalation by targeting militant groups and their infrastructure, Pakistan would have no choice but to attack Indian forces directly in order to evict them from what Pakistan perceives as its territory. A calibrated response might be an insufficient demonstration of Pakistan’s resolve to impose high costs on India and prevent further encroachment. Pakistan might therefore attack not just Indian forces over the Line of Control, but could also carry out longer-range strikes on more valuable military targets in India. Pakistan could also escalate in ways that invite greater risk of engaging nuclear weapons in the conflict, which has been an important element of its strategy in previous episodes. For instance, it might decide to cross an important symbolic threshold by using ballistic or cruise missiles against military targets in India. It could also try to test Indian resolve by dispersing short-range nuclear weapons in the field in an attempt to manipulate Schelling’s “threat that leaves something to chance.” In this regard, it is notable that Pakistani strategists seem to have drawn quite different lessons from the 2019 crisis than their Indian counterparts. Pakistani officials believe they won the last conflict by successfully escalating in response to India’s airstrike, leading to the downing of an Indian MiG-21 aircraft and capture of its pilot. They might also conclude that nuclear signaling — calling a meeting of the National Command Authority in response to Indian threats to carry out missile strikes — succeeded in deterring Indian escalation. If Pakistani leaders believe that escalate-to-deescalate worked in 2019, it is likely they would implement the same strategy in the next crisis. A crisis initiated by India is also likely to escalate far more quickly. Notably, in the 2016 and 2019 crises, India waited a week or more following the instigating terror attack to prepare and calibrate its responses. But if India commenced a cross-border operation, Pakistan likely would not wait even hours to launch a counter-offensive to disrupt Indian efforts to consolidate its hold on captured territory. In this context, de-escalation and conflict termination also become far more complex. The peak of the crisis following the 2019 Pulwama attack played out in the span of a few days, and arguably de-escalated mostly due to the lucky stroke of Pakistan capturing alive the Indian MiG pilot whom it was able to return. Captured soldiers are considerably easier to give back than territory, and the more aggressive an opening land grab, the more difficult it will be to de-escalate in a condensed time frame. The stakes of a crisis like this would also be much greater. India would be loath to return any captured territory in the name of de-escalation, especially if the offensive is framed or justified in terms of expanding India’s control over disputed territory. Given rising Indian nationalism, coupled with historical disdain for third-party meddling in Kashmir, outside efforts to arrest the crisis are less likely to result in Indian restraint. For Pakistan, hyped fears of an existential threat from India are likely to reinforce risk-taking to reclaim territory it sees as sovereign. It is unclear that there are any non-military options Pakistan could exercise to incentivize India to return the territory. This could lead to a situation in which both countries find themselves unable to back down and without peaceful paths to resolve the dispute. Of course, India may not attempt an operation as audacious as its 1984 occupation of the Siachen Glacier, or as risk-acceptant as its planned 2001 cross-border capture of Pakistani guard posts. Even so, there are ample reasons for analysts to question the standing assumptions about how the next South Asia crisis might begin. Doing so is a necessary first step toward thinking through the full range of possible crises and how states might prepare for them. With that in mind, scholars and policymakers should analyze and debate several questions: What are the different types of crisis catalysts and how might escalation pathways vary by type? What are the beliefs on each side about crisis management and control, and are there shared ideas about escalation thresholds? And, how are changes in military, surveillance, and other relevant technologies affecting crisis calculations? These are all questions without easy answers, but they demand attention. Preparing for the next crisis on the basis of the last one runs the same risks as planning to fight the next war in the same way as the previous one. Both India and Pakistan, as well as third parties interested in trying to facilitate crisis de-escalation and termination, would be wise to plan for a range of contingencies. Crisis management in South Asia is hugely consequential. A limited nuclear exchange between India and Pakistan would be disastrous for people in the region, but the effects could spread well beyond South Asia. Preventing the next crisis from escalating to a point at which nuclear weapons might be used is therefore a global imperative. It is far better that the next South Asia crisis be managed, to the extent possible, with careful planning and preparation, rather than counting on luck to see it through.

#### Even limited conflict goes nuclear and causes extinction

Baum 15 [Seth D. Baum, Ph.D. in Geography @ Pennsylvania State University, did his doctoral work on the concept of space-time discounting within the context of climate change decisions, co-founder and Executive Director of the think tank *Global Catastrophic Risk Institute*, and has a Post-Doctoral Fellowship with the Columbia University Center for Research on Environmental Decisions. “Winter-safe Deterrence: The Risk of Nuclear Winter and Its Challenge to Deterrence,” 23 February 2015, [http://www.tandfonline.com/doi/full/10.1080/13523260.2015.1012346]//recut](http://www.tandfonline.com/doi/full/10.1080/13523260.2015.1012346%5d//recut) anop

The concept of nuclear winter was first developed in the early 1980s by scientists including Paul Crutzen, who later won a Nobel Prize in Chemistry for his work on the ozone hole, and legendary astronomer Carl Sagan.3 Sagan went to great lengths to raise awareness about nuclear winter in the 1980s and early 1990s.4 This episode apparently had some influence on policy, with Mikhail Gorbachev citing it as a factor in his desire to cool that era's nuclear tensions and reverse the arms race.5 After fading from the spotlight, nuclear winter began a bit of a comeback in 2007 with the publication of new research examining nuclear winter with the latest scientific models.6 Several follow-up studies and commentaries have been published since, and research is ongoing.7 In technical terms, ‘nuclear winter’ refers specifically to a cooling of Earth's surface such that winter-like temperatures occur during summer, as caused by a sufficiently large nuclear war. Cooling to warmer-than-winter temperatures can be called ‘nuclear autumn’. As per this definition, nuclear winter/autumn is part of a broader suite of environmental consequences of nuclear war. However, all of the environmental consequences can have profound consequences for the planet and for human civilization, and likewise are important for policy. No separate term has been coined for the full suite of environmental consequences of nuclear war, so this paper will use ‘nuclear winter’ as shorthand for the full suite. This use of ‘nuclear winter’ may be interpreted metaphorically: a time of cold, darkness, and death. Nuclear winter is caused by the burning of cities, industrial facilities, trees, and other flammable materials, sending smoke into the atmosphere. The main effects of the smoke derive from the fact that the smoke rises high up into the atmosphere, past the clouds, into the stratosphere where it will not quickly fall back out in rain. At this altitude, the smoke spreads across the planet and gradually falls back out over the next 10–20 years. While it is aloft, the smoke absorbs incoming sunlight and blocks it from reaching the surface. As the smoke absorbs sunlight, the stratosphere warms, causing ozone depletion at a potentially massive scale.8 The ozone depletion causes more ultraviolet radiation to reach Earth's surface. Increased UV radiation can harm living organisms, including humans. Harmful effects include skin cancer and eye damage to animals and the inhibition of photosynthesis in plants.9 Meanwhile, the smoke blocking sunlight from reaching the surface causes colder surface temperatures and less precipitation. Precipitation declines because there is less heat to power the hydrological cycle. The main harmful effect that has been identified is a decline in plant growth, including agricultural production. Secondary effects could include disease outbreaks and additional conflicts.10 The effects occur worldwide, regardless of where the detonations occur, though detonation location can affect the spatial distribution of impacts. For both UV radiation and cooling, the magnitude of the disruption is proportionate to the amount of smoke put into the atmosphere, which in turn depends on the number of nuclear detonations, the bombs’ yields, the detonation locations, and other factors. Regarding detonation location, a key variable is whether the detonation occurs in a city, and if it does, the population density of the city. Other locations such as industrial zones can also produce significant quantities of smoke. This is why nuclear weapons testing has not caused nuclear winter: the tests were conducted in remote locations or at high altitude, and thus did not have much to burn. The location of a city on the globe can also make a difference, given Earth's topography and atmospheric circulation patterns, but this effect is smaller. The most heavily studied nuclear winter scenario involves war between India and Pakistan in which each country uses 50 nuclear weapons, each with a 15 kiloton yield, comparable to the Little Boy weapon dropped on Hiroshima. The studies assume that the weapons are dropped on each country's major cities, and not on, for example, remote military targets, producing 5 teragrams of smoke.11 In this scenario, ozone loss would range from 20 per cent to 70 per cent from low to high latitudes.12 Temperatures would fall about 1.25°C within the first year. Even ten years after, temperatures would still be about 0.5°C below normal.13 Crop yields in China and the Midwestern United States are projected to decline by around 10–30 per cent.14 One analysis estimates that at least two billion people would be at risk of starvation.15 A core point is that even a ‘limited’ regional nuclear war could have catastrophic global consequences. It should be emphasized that what drives nuclear winter is the quantity of smoke entering the stratosphere, not where the nuclear war occurs. Thus, a comparably large nuclear war between other countries would have similar global climatic and humanitarian effects. The India–Pakistan scenario offers an illustrative and relatively probable case, but any nuclear weapon state except North Korea could produce similar effects. A larger nuclear exchange involving American and Russian arsenals would cause further disruption. An exchange of about 1,200 weapons could produce about 50 teragrams of smoke, causing temperatures to fall by about 4°C. For 4,000 weapons – around what New START prescribes – there could be 150 teragrams of smoke, with a temperature fall of about 8°C. Agriculture failure would be so severe and widespread that it becomes easier to count the survivors than the fatalities.16 Climate scientist Alan Robock, who has led many of the recent nuclear winter studies, expects some survivors ‘especially in Australia and New Zealand’.17 While this is hardly a cheerful evaluation, even this may be too optimistic. Hopefully some people somewhere would find some way to survive. But the conditions would be harsh enough that survival is no guarantee.18 Finally, it should be acknowledged that, over the years, there has been some scepticism of whether nuclear winter would actually occur, or would occur with enough severity to be worth factoring into security policy.19 To an extent, one cannot be sure what would happen, because a large exchange of nuclear weapons has fortunately never occurred. However, there are at least two reasons to believe that the current round of nuclear winter science is yielding results that are at least in the general vicinity of what would actually happen. One reason is that the science uses modern climate models developed for the study of global warming. Global warming has its own sceptics and controversies, which has led to the climate models being heavily scrutinized.20 Climate science may well be the most carefully vetted of all the sciences. The nuclear winter researchers are themselves distinguished climate scientists and are using state-of-the-art climate models. And two distinct nuclear winter research groups from two different countries using two different sets of models both report approximately the same results.21 While some uncertainties in the science of nuclear winter remain and additional research could provide additional confidence, it should be expected that the current research results are basically sound. The second reason for believing that nuclear winter would occur is that it has a historical precedent in volcano eruptions. Volcano eruptions, like nuclear weapon detonations, cause large amounts of smoke to rise into the atmosphere. An insightful example is the 1815 Mount Tambora eruption. The Tambora eruption caused temperatures to fall by about 0.5°C, resulting in major food shortages and other disruptions, such that 1816 is now known as the ‘Year Without Summer’.22 While humanity ultimately survived Tambora, nuclear war could put even more smoke into the atmosphere and cause more severe disruption. It, thus, is important to factor into nuclear security policy.