



COVID-19: Economic and Social Implications

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Presentation

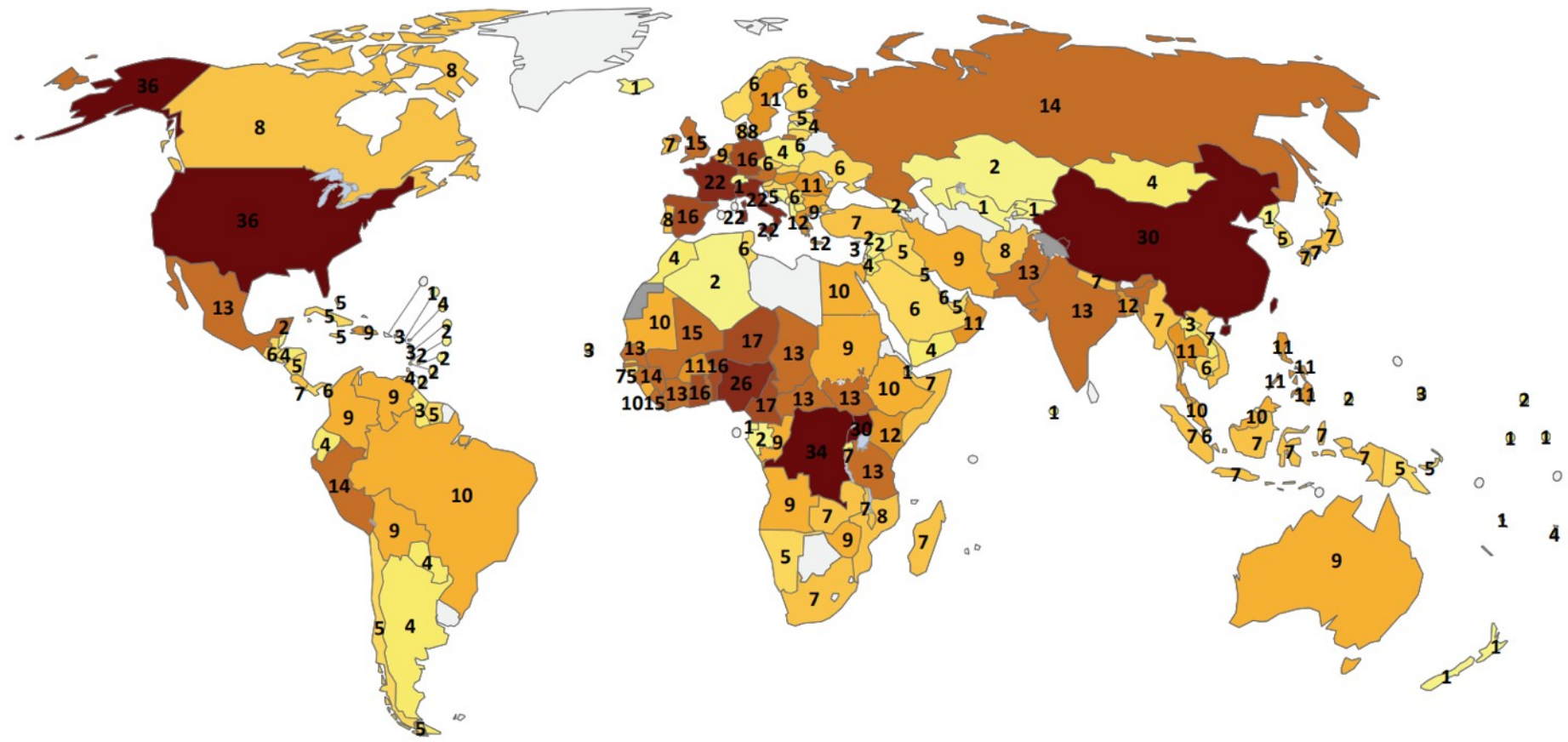
- Background and Economic Impact.
- When and How of the Recovery.
- Longer-Term Implications.

Part I: Background and Economic Impact

Epidemics Occur Very Frequently

Burden of epidemics: illustrations

Epidemic events* globally, 2011 – 2017**: A total of 1,307 epidemic events, in 172 countries



* Analysis excluded Poliomyelitis. The following *epidemic and pandemic diseases* were analysed: Avian Influenza A(H5N1), A(H7N9), A(H7N6), A(H10N8), A(H3N2), A(H5N6), A(H9N2), Chikungunya, Cholera, Crimean-Congo haemorrhagic fever, Ebola virus disease, Lassa fever, Marburg virus disease, Meningitis, MERS-CoV, Monkeypox, Nodding syndrome, Nipah virus infection, Plague, Rift Valley fever, Shigellosis, Typhoid fever, Viral haemorrhagic fever, West Nile fever, Yellow fever, Zika virus disease. If a disease caused more than 1 epidemic event by year in a country, it was only counted once for the year it occurred in that country. Includes cases imported or locally transmitted.

** WHO/IHM data as of 12 January 2018 (note: 2017 data is not complete) <https://www.who.int/emergencies/diseases/managing-epidemics-interactive.pdf>

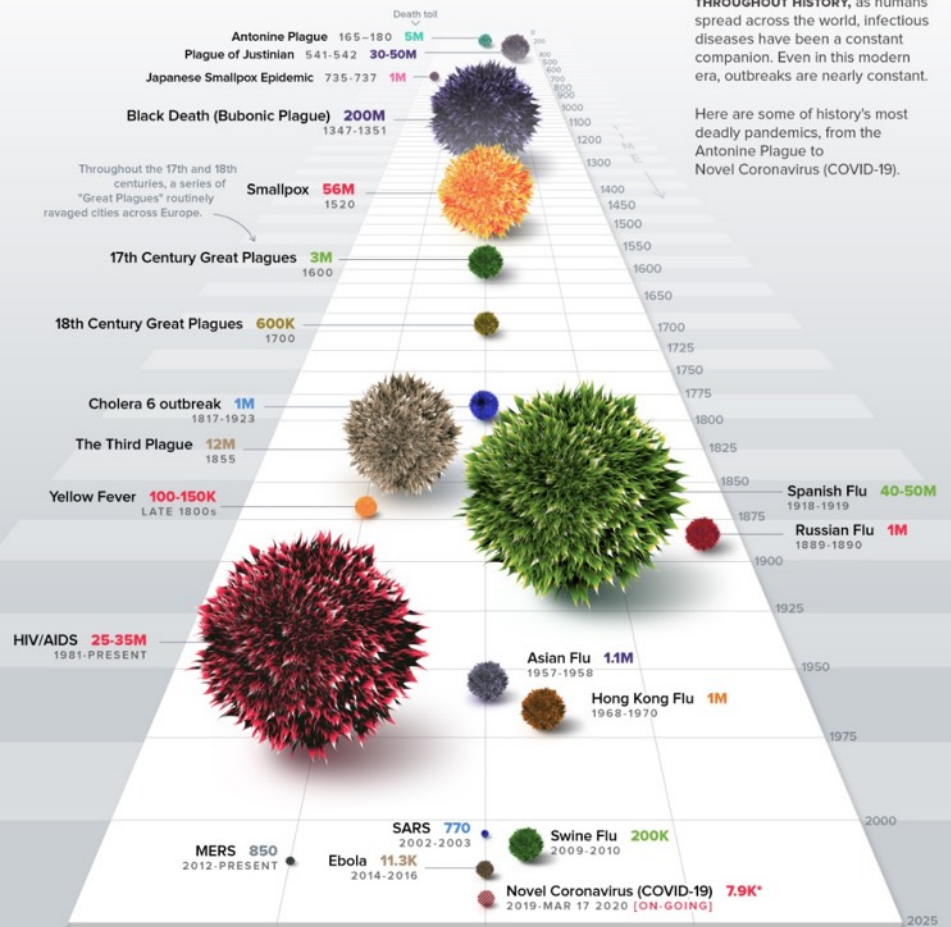
Pandemics Occur With Increasing Frequency

HISTORY OF PANDEMICS

PAN-DEM-IC (of a disease) prevalent over a whole country or the world.

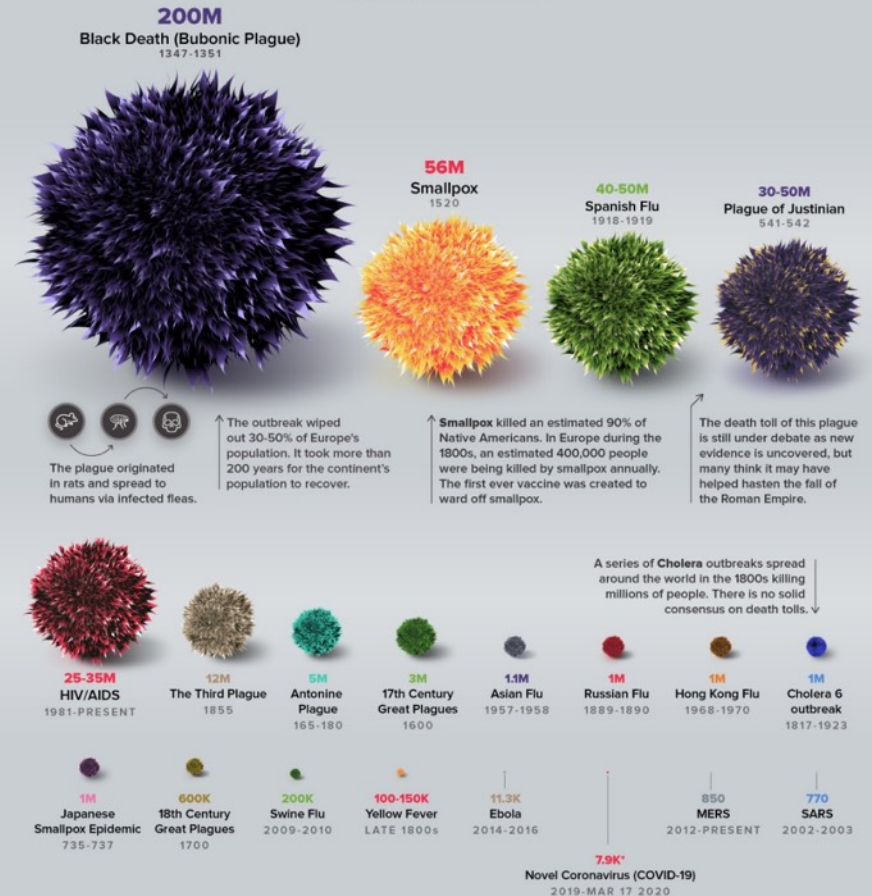
THROUGHOUT HISTORY, as humans spread across the world, infectious diseases have been a constant companion. Even in this modern era, outbreaks are nearly constant.

Here are some of history's most deadly pandemics, from the Antonine Plague to Novel Coronavirus (COVID-19).



DEATH TOLL

[HIGHEST TO LOWEST]

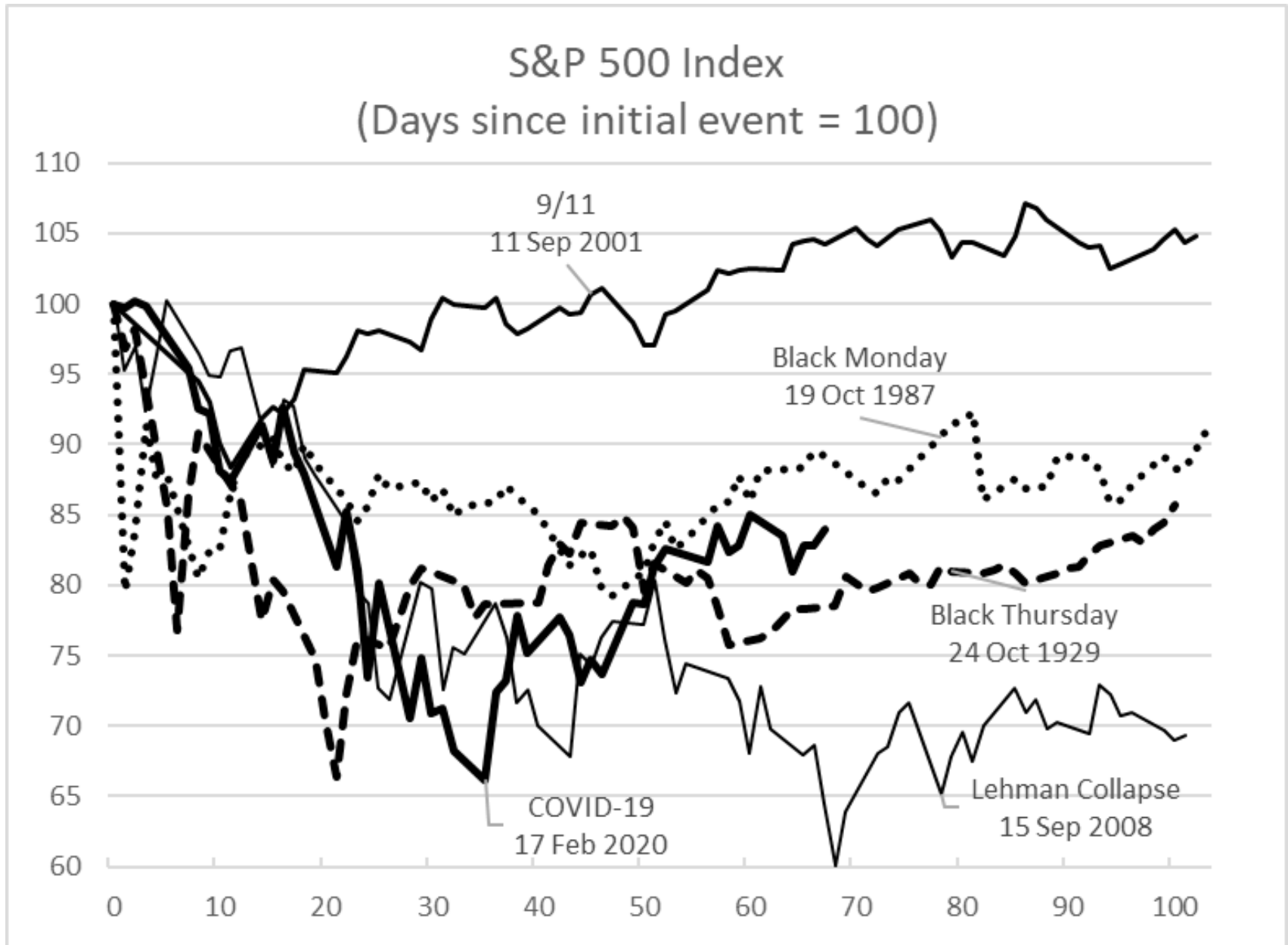


VISUAL CAPITALIST

Sources: CDC, WHO, BBC, Wikipedia, Historical records, Encyclopedia Britannica

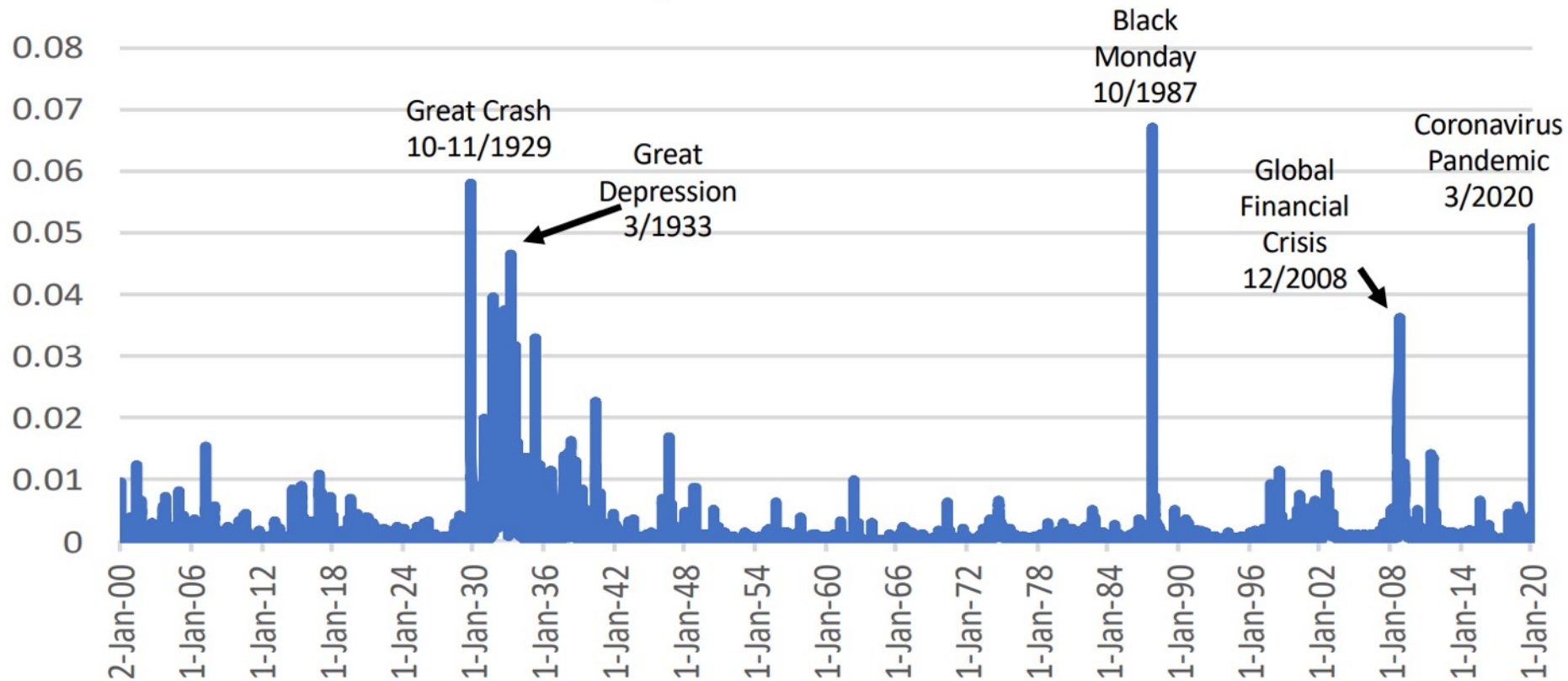
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Stocks



S&P 500 Volatility

Volatility Last Two Weeks



Notes: Sample period, 1/1/1900-3/23/2020. From 12/1925-Present, returns are computed using Yahoo Finance's 'adjusted close' series for the S&P 500 (^GSPC). Before that, returns are from the Global Financial Data extension of the Dow Jones Index. Volatility last two weeks is the sum of squared returns over the past 10 trading days.

The Unprecedented Stock Market Reaction to COVID-19

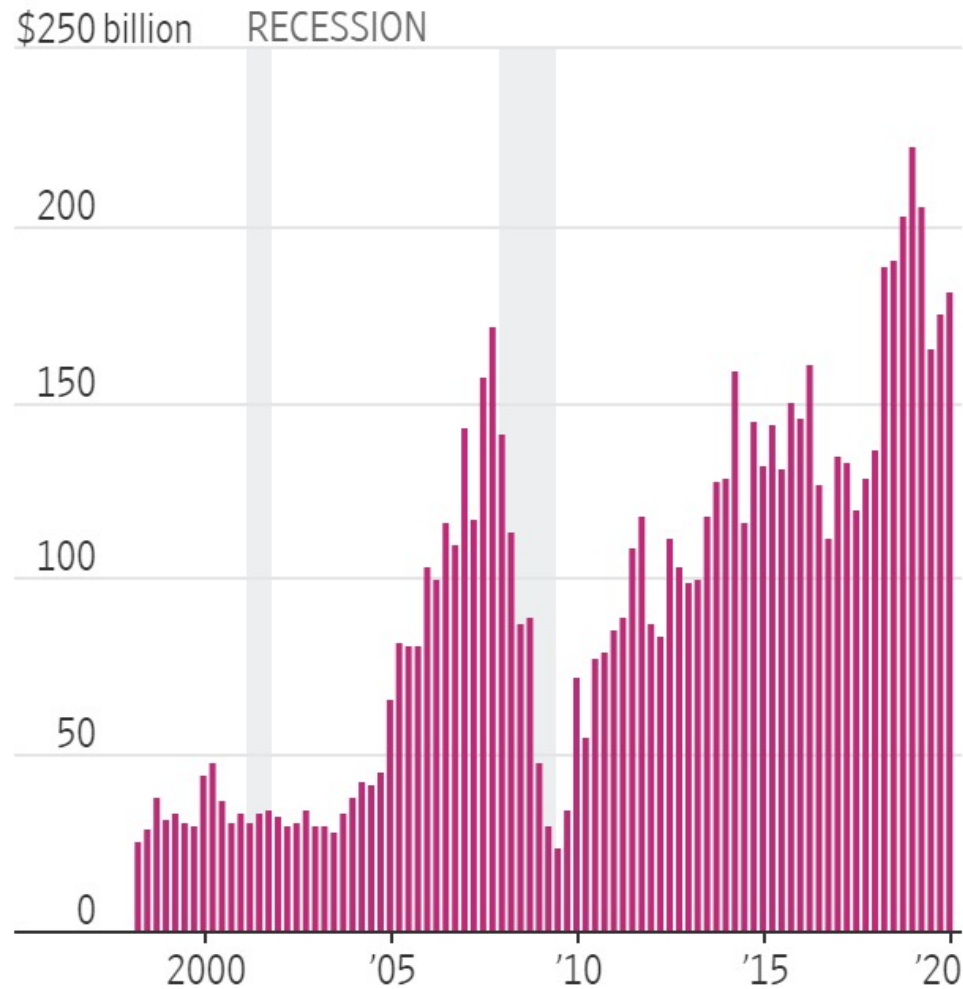
Scott R. Baker, Nicholas Bloom, Steven J. Davis, Kyle Kost, Marco Sammon, and Tasaneeeya Viratyosin

27 March 2020

https://www.policyuncertainty.com/media/StockMarkets_COVID.pdf

Stock Buybacks

S&P 500 companies' share buybacks,
quarterly



Source: S&P Dow Jones Indices

<https://www.wsj.com/articles/if-companies-arent-buying-their-own-stock-who-is-11586079000>

GDP

THE CONFERENCE BOARD ECONOMIC OUTLOOK, 2018-2019-2020
Percentage change, seasonally adjusted annual rates (except where noted)

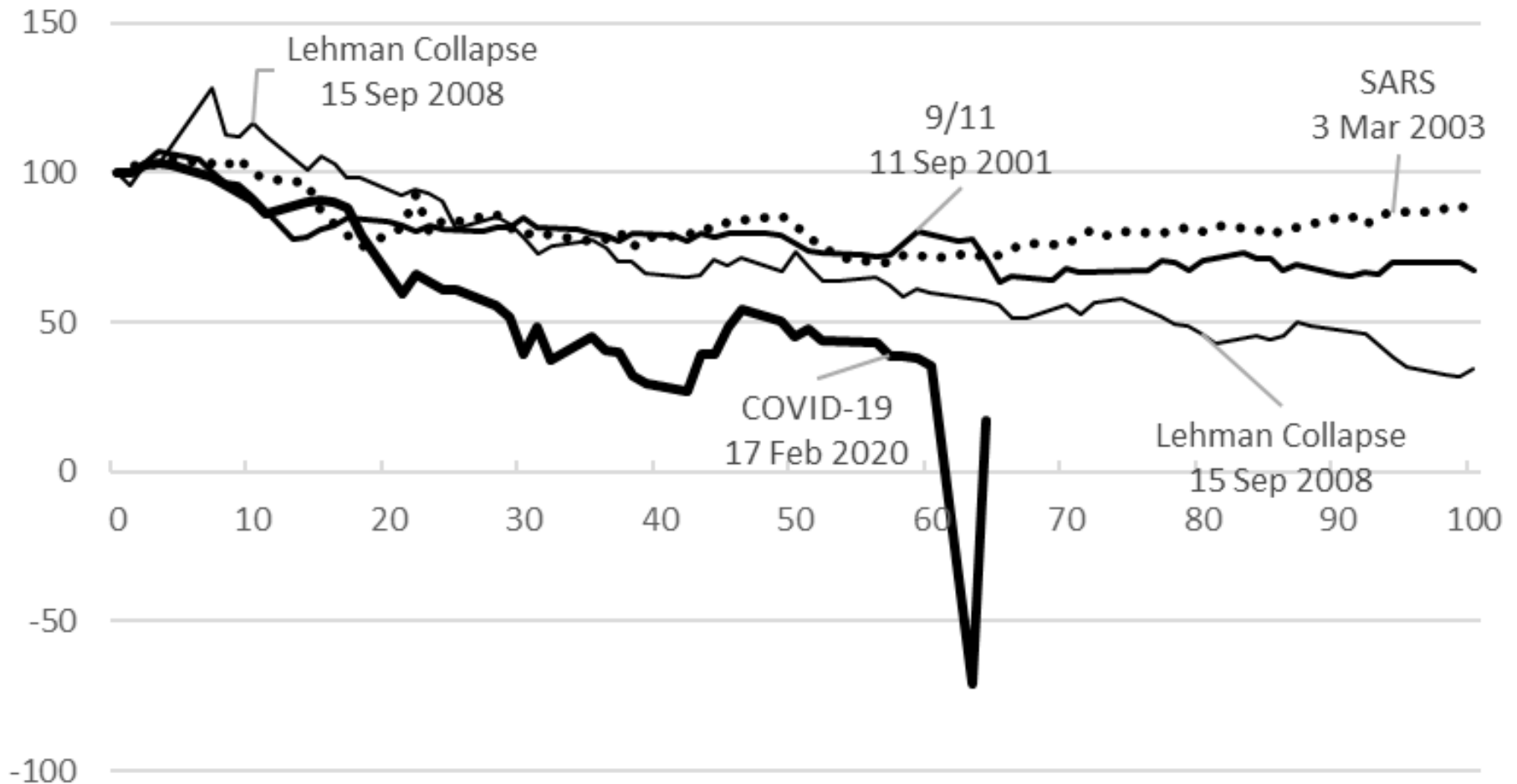
	2019		2020				2018	2019	2020
	1 st half	2 nd half	I Q	II Q	III Q	IV Q	ANNUAL	ANNUAL	ANNUAL
Real GDP	2.6	2.1	-5.8	-33.3	0.1	27.4	2.9	2.3	-6.5
Real Consumer Spending	2.8	2.5	-6.5	-40.0	-1.4	28.4	3.0	2.6	-8.3
Residential Investment	-2.0	5.6	0.0	-20.0	-7.0	10.0	-1.5	-1.5	-2.9
Real Capital Spending	1.7	-2.4	-2.4	-26.5	-3.2	8.6	6.4	2.1	-6.8
Exports	-0.7	1.5	1.0	-8.0	-3.0	9.0	3.0	0.0	-1.0

IMF Forecasts

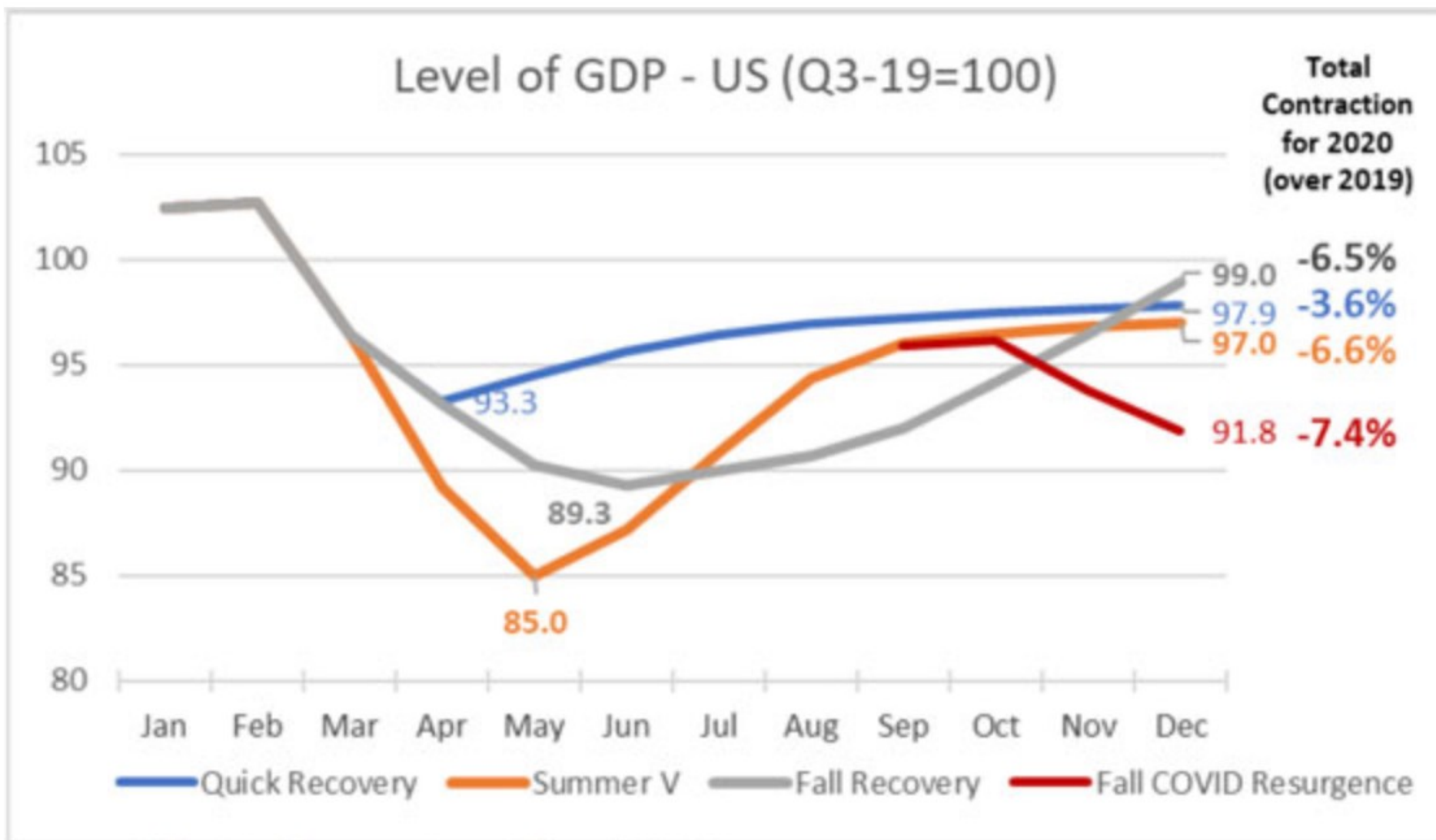
	2019	Projections	
		2020	2021
World Output	2.9	-3.0	5.8
Advanced Economies	1.7	-6.1	4.5
United States	2.3	-5.9	4.7
Euro Area	1.2	-7.5	4.7
Germany	0.6	-7.0	5.2
France	1.3	-7.2	4.5
Italy	0.3	-9.1	4.8
Spain	2.0	-8.0	4.3
Japan	0.7	-5.2	3.0
United Kingdom	1.4	-6.5	4.0
Canada	1.6	-6.2	4.2
Other Advanced Economies ²	1.7	-4.6	4.5
Emerging Market and Developing Economies	3.7	-1.0	6.6
Emerging and Developing Asia	5.5	1.0	8.5
China	6.1	1.2	9.2
India ³	4.2	1.9	7.4
ASEAN-5 ⁴	4.8	-0.6	7.8
Emerging and Developing Europe	2.1	-5.2	4.2
Russia	1.3	-5.5	3.5
Latin America and the Caribbean	0.1	-5.2	3.4
Brazil	1.1	-5.3	2.9
Mexico	-0.1	-6.6	3.0
Middle East and Central Asia	1.2	-2.8	4.0
Saudi Arabia	0.3	-2.3	2.9
Sub-Saharan Africa	3.1	-1.6	4.1
Nigeria	2.2	-3.4	2.4
South Africa	0.2	-5.8	4.0

Oil

West Texas Intermediate Spot Price FOB
(Days since initial event = 100)



Recovery

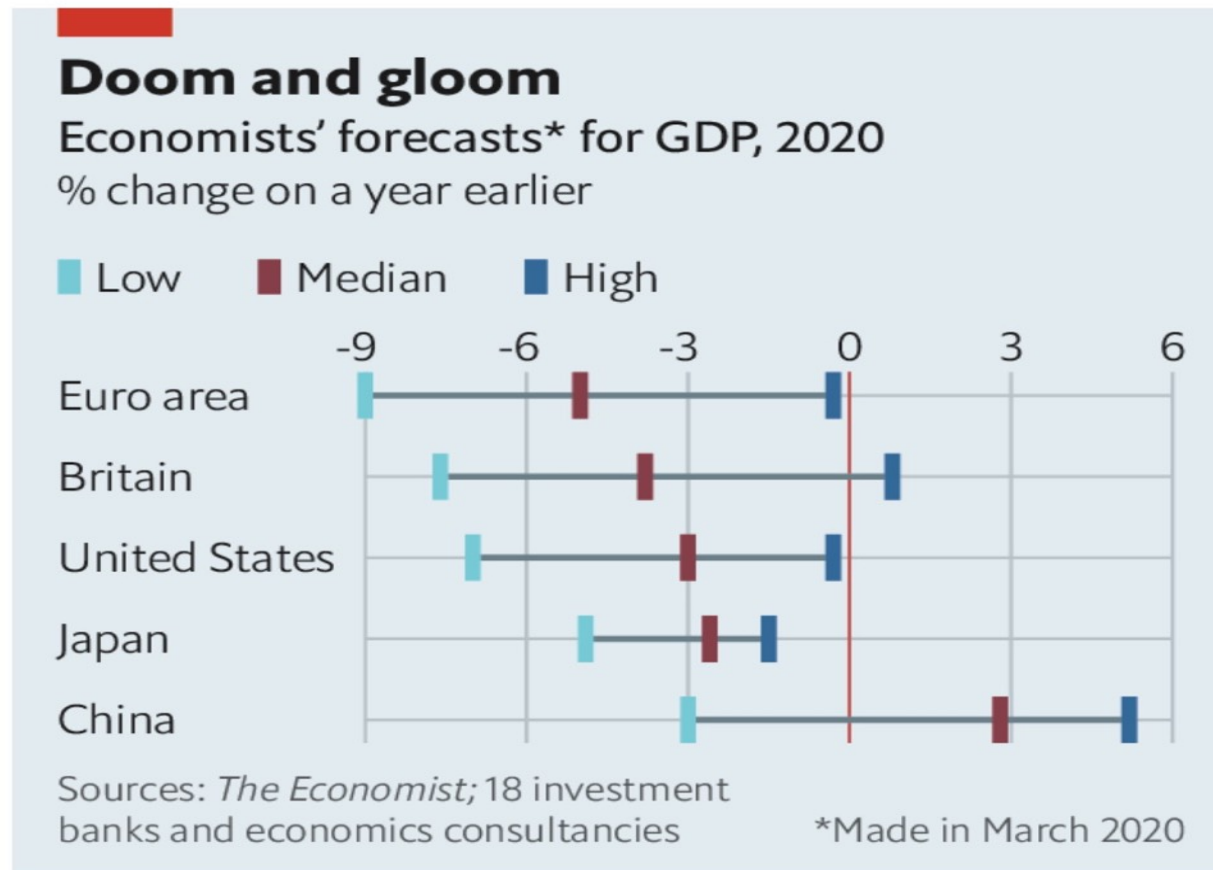


Source: The Conference Board, April 2020

<https://conference-board.org/data/usforecast.cfm>

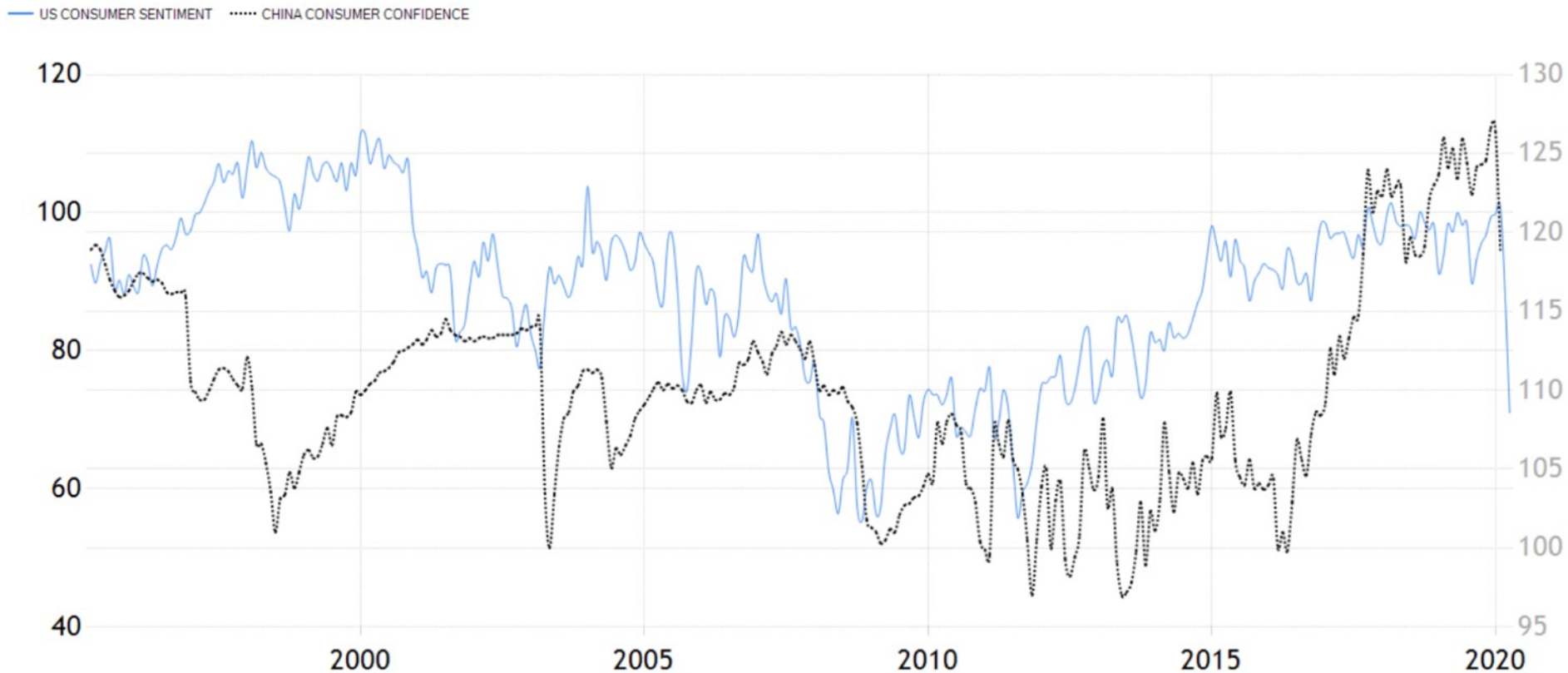
GDP Forecasts

GDP doom and gloom



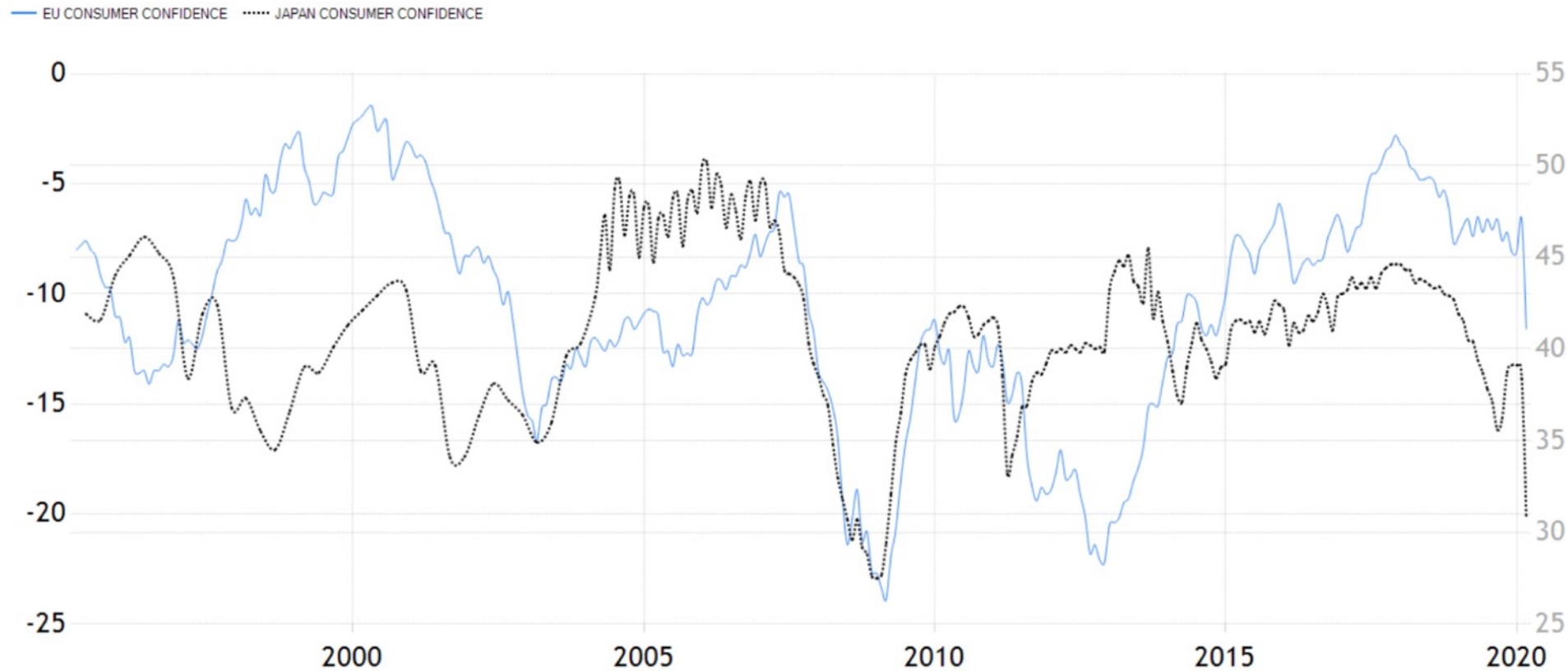
ECONOMISTS CANNOT revise down their forecasts of gdp growth for the effects of

Consumer Confidence: US & CN



SOURCE: TRADINGECONOMICS.COM

Consumer Confidence: EU & JP



SOURCE: TRADINGECONOMICS.COM

Consumer Confidence: DE & FR



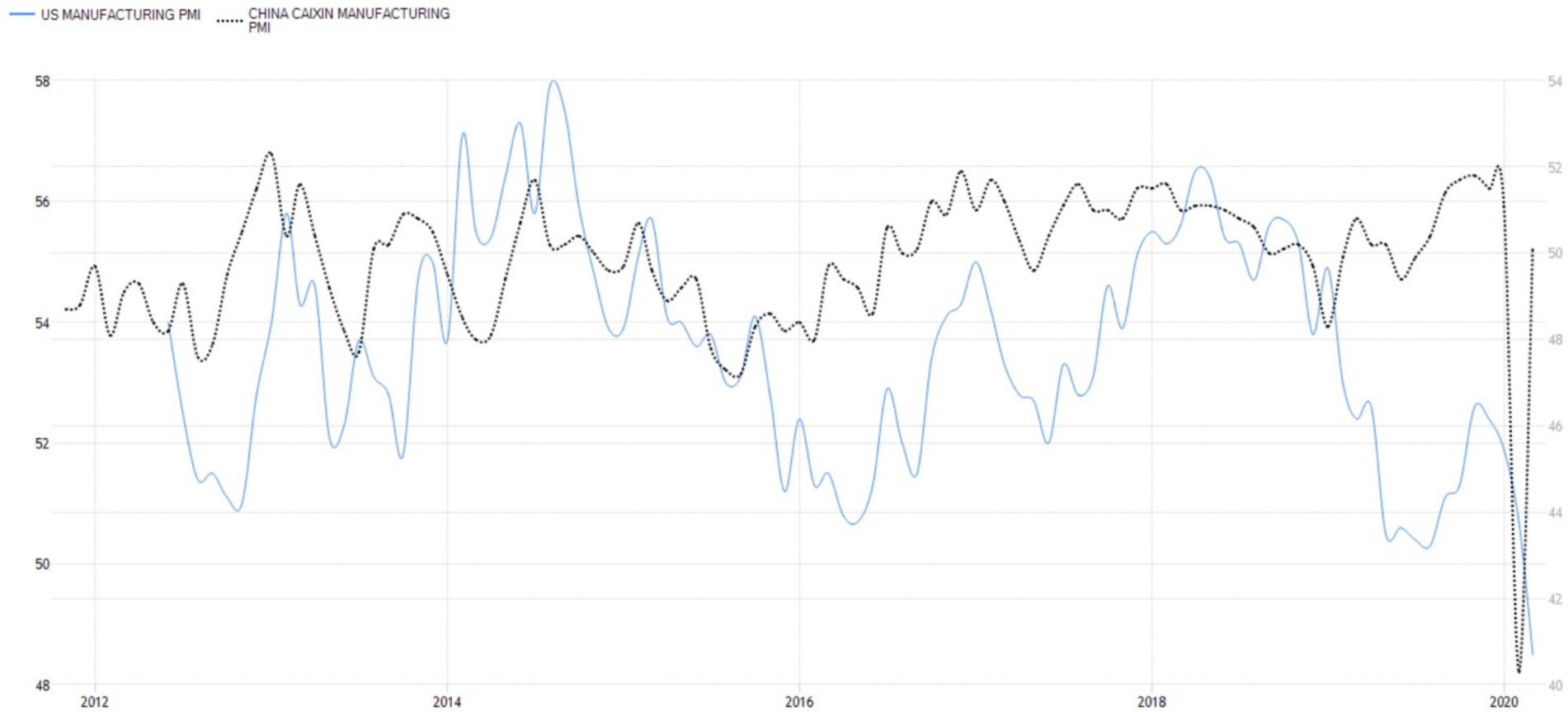
SOURCE: TRADINGECONOMICS.COM

Consumer Confidence: ES & IT



SOURCE: TRADINGECONOMICS.COM

Manufacturing PMI: US & CN

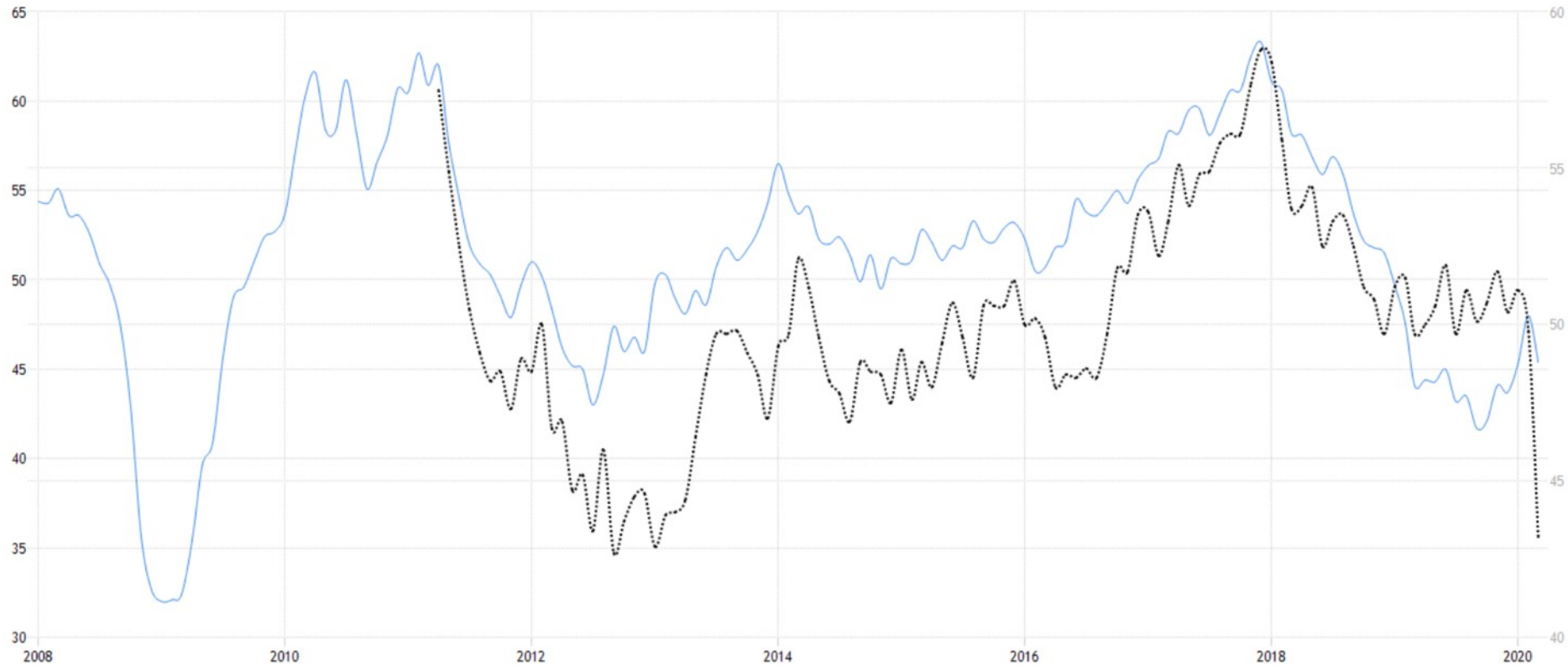


Manufacturing PMI: EU & JP

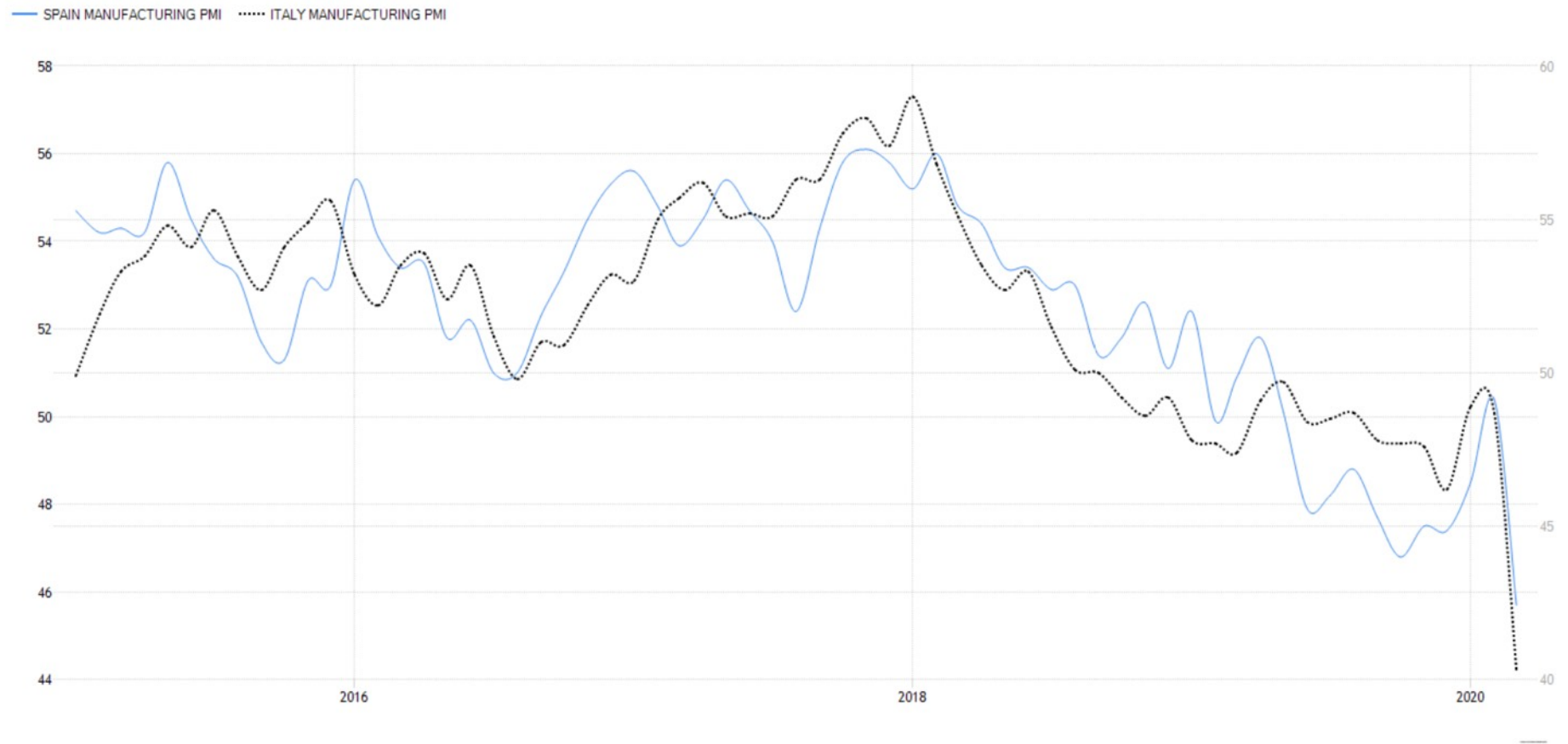


Manufacturing PMI: DE & FR

— GERMANY MANUFACTURING PMI FRANCE MANUFACTURING PMI

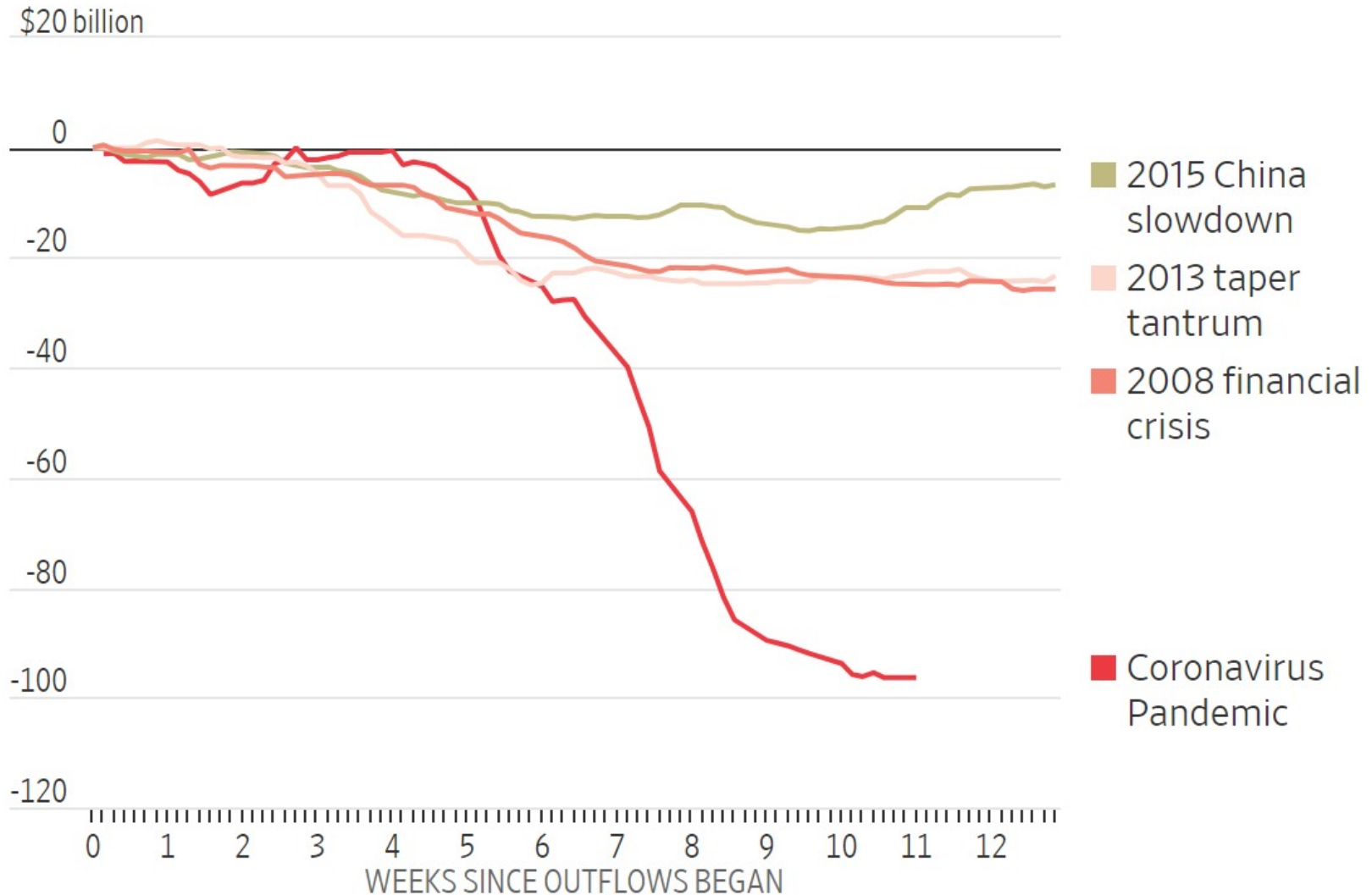


Manufacturing PMI: ES & IT



Emerging Markets

Cumulative portfolio flows out of emerging markets



Part II: When & How of the Recovery

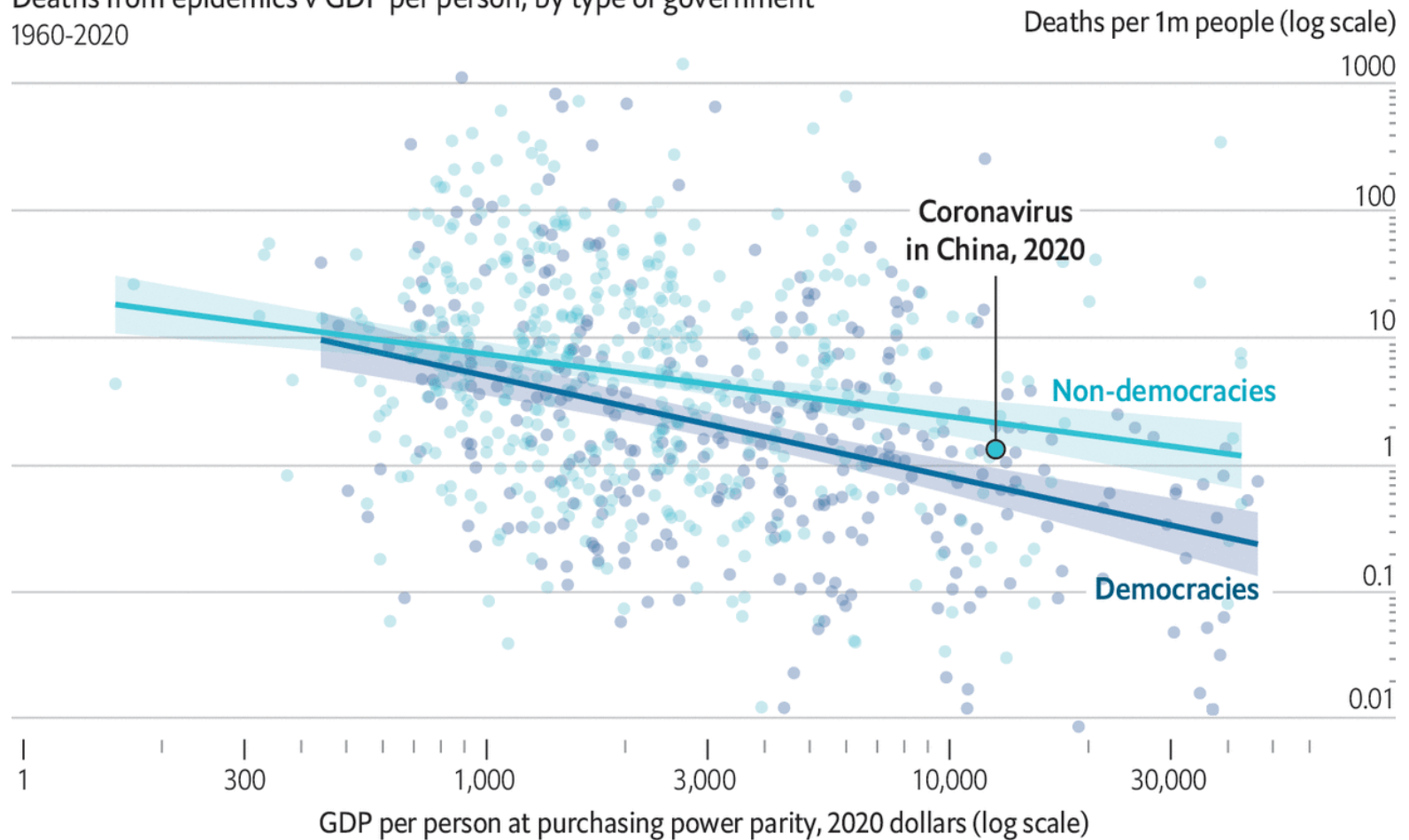
Objectives

- Minimize cases and deaths:
 - Shelter in place (quarantines): Bunker mentality.
 - Social distancing.
 - Contact tracing.
 - Travel bans.
 - Protecting the healthcare system.
- Minimize economic damage:
 - Definition of “essential” sectors.
 - Monetary measures.
 - Fiscal measures: relief packages.

Democracies vs. Dictatorships

One bug, two systems

Deaths from epidemics v GDP per person, by type of government
1960-2020



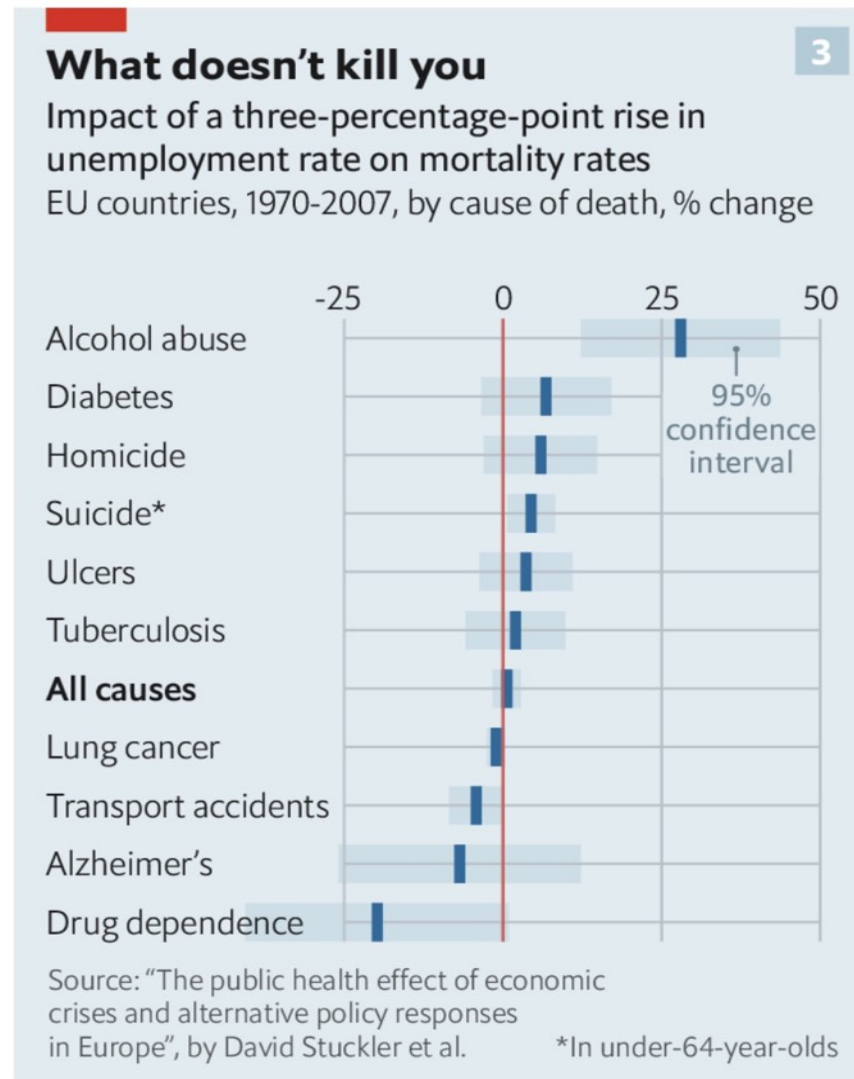
Sources: EM-DAT: The Emergency Events Database; the Maddison Project; Boix, Miller and Rosato (2015)

The Economist

<https://www.economist.com/graphic-detail/2020/02/18/diseases-like-covid-19-are-deadlier-in-non-democracies>

Recessions and Health

witnessed, overall mortality fell.



Some research suggests that the procyclical

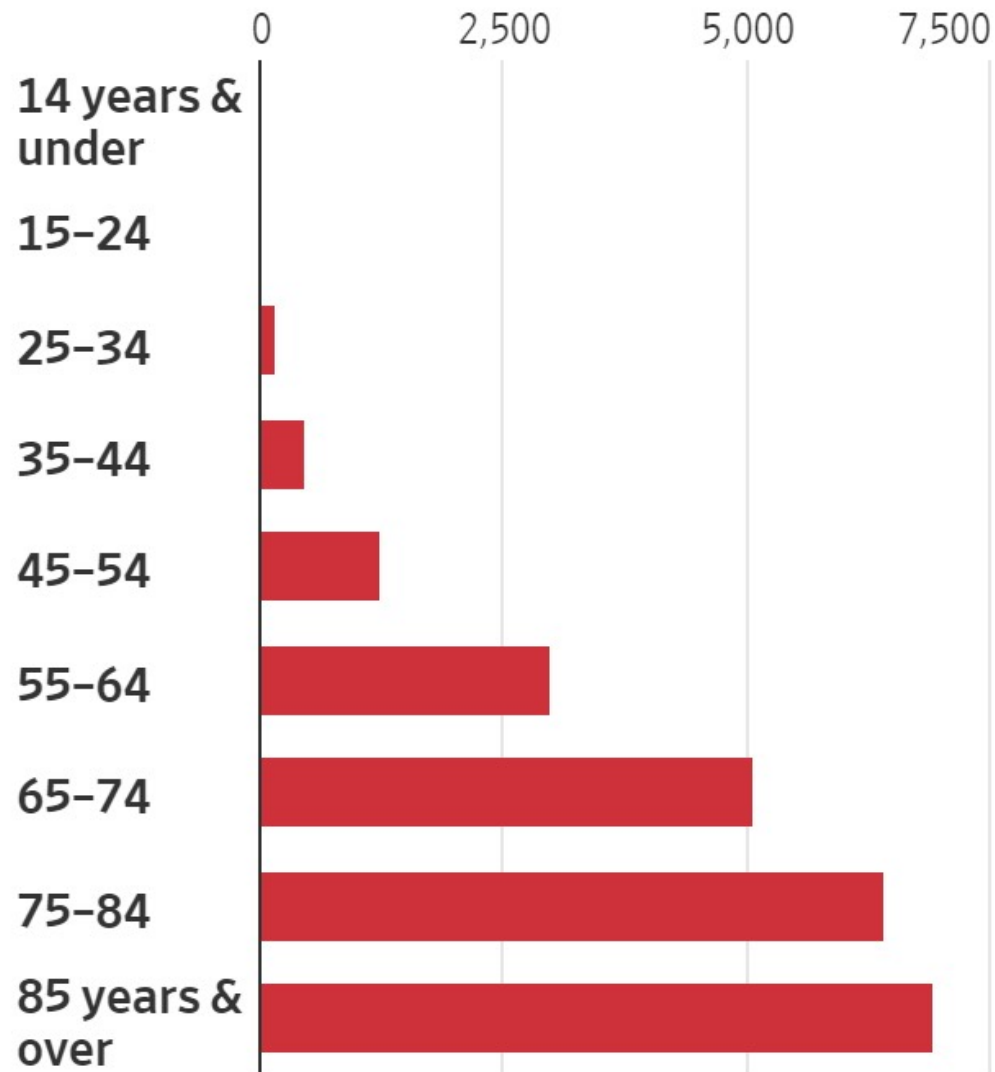
<https://www.economist.com/print-edition/2020-04-04>

Restarting the Economy

- *When*: Can't wait until everyone is tested or until the pandemic “ends” thanks to herd immunity or a vaccine.
- *How*: That's the harder question.
- Considerations:
 - Higher-risk populations.
 - Opening schools.
 - Making transportation safe.
 - Making workplaces safe.
 - Linkages along the supply chain.
 - Lifting travel bans.

Deaths by Age

U.S. deaths involving Covid-19, by age group



Overall Mortality

- Deaths / Cases = 54K / 956K = 5.6%
- # of cases is grossly underestimated:
 - Study in Santa Clara County, CA. Infection rates were 28 to 55 times greater than the confirmed # of cases.
 - Study in Los Angeles County: 28 to 55 times higher.
- Thus, mortality rates are very low, at least so far.

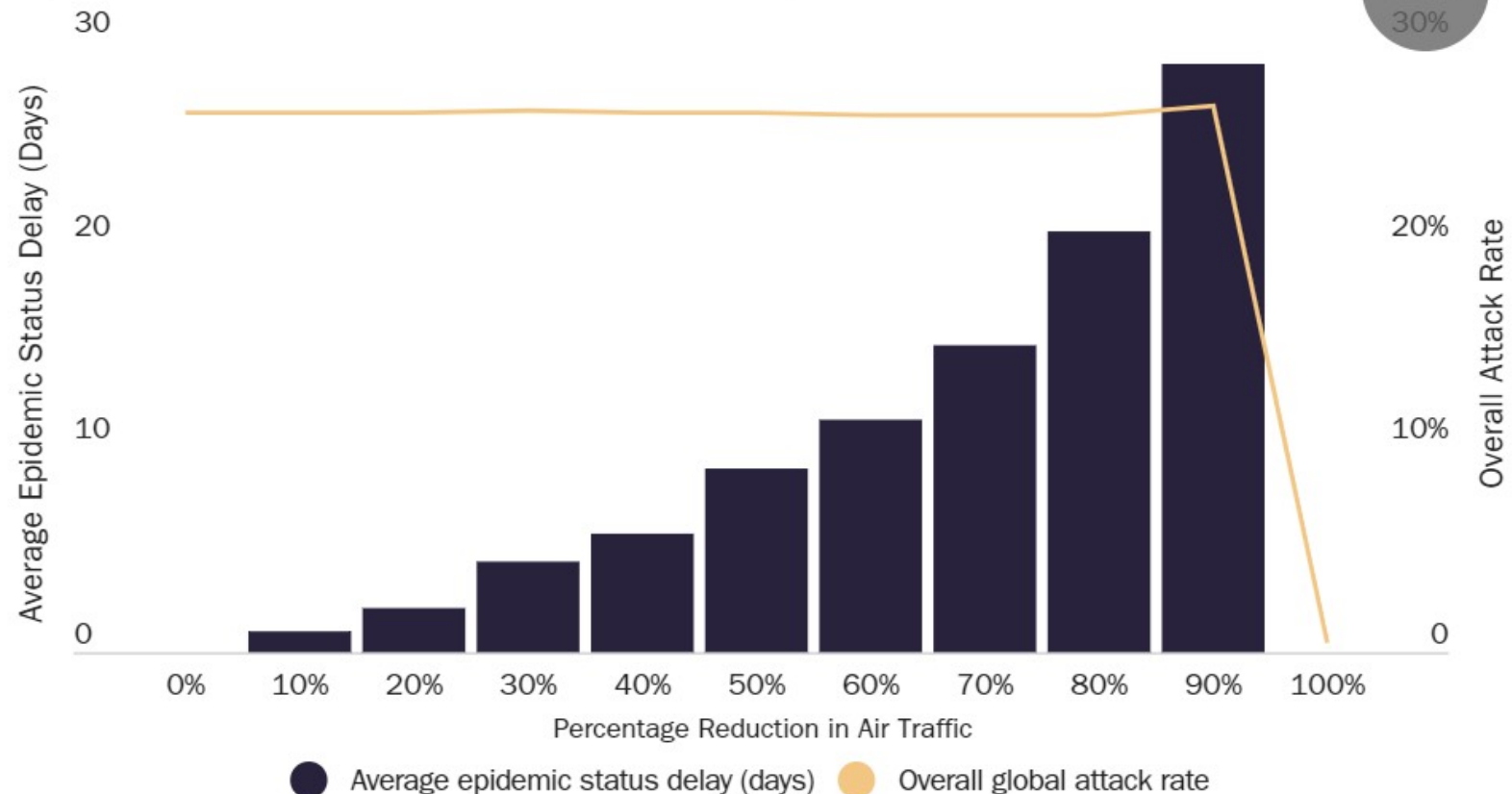
Travel Bans

- Only effective before a pandemic has spread.
- They would need to be complete and instantaneous.
- After 9/11, the flight ban resulted in a delayed and prolonged flu season.
- International travel bans create a false sense of security.

Reductions in Air Traffic

FIGURE 1

Impact of reductions in air traffic on an Influenza pandemic in 52 major cities



Source: Digitized from Figure 2a in Flahault, Antoine, Elisabeta Vergu, Laurent Coudeville, and Rebecca F. Grais. "Strategies for Containing a Global Influenza Pandemic." *Vaccine* 24, no. 44-46 (November 10, 2006): 6751-55.

Notes: Univariate sensitivity analysis. Outbreak starts in Hong Kong. "Average epidemic status delay" refers to the average number of additional days for the attack rate to reach epidemic threshold (1/100,000) in a city as a result of travel reductions. Overall attack rate refers to the percentage of infected persons in the 52 cities analyzed.

Temptations

- Government orchestration of the recovery.
- Protectionism.
- Anti-immigration measures.
- Universal basic income.

Part III: Longer-Term Implications

Macro: Economic Implications

- Populism and protectionism.
- Government indebtedness.
- Monetary abnormality.
- High unemployment.
- Economic inequality.

Macro: Social Implications

- Technology use.
- Declining fertility.
- Senior citizens: higher mortality and negative wealth effect.
- Gender:
 - Women take fewer risks and have better anti-viral defenses to begin with.
 - Household division of labor.
- Effects by race and ethnicity.

Micro: Companies

- New work arrangements.
- More resilient supply chains.
- Renewed push towards automation.
- Cash, cash, cash.

Micro: Workers

- Flight to more secure industries, jobs, and occupations.
- Shift in preferences about remote work.
- Displacement by automation.

Micro: Consumer Preferences

- Online shopping.
- Physical and mental wellbeing?
- Quality of life?
- Quality time?
- Safety?
- More space in the home?
- Small pleasures—the simple things in life?
- Introspection and soul-searching?

In Conclusion

- Need to avoid long-term economic damage.
- Finding a balance between saving lives and saving livelihoods.
- Huge macro transformations in the economy and the society.
- Micro shifts in behavior by companies, workers, and consumers.
- Preexisting trends:
 - A few will be derailed.
 - Most will be accelerated.

Resources

- Visit my website for free sources of information, presentations, and videos:

<https://whartonmgmt.wufoo.com/forms/covid19-resources/>

Online Courses

- Analyzing Global Trends for Business and Society.

<https://www.coursera.org/learn/wharton-global-trends-business>

- Managing the Global Firm.

<https://online.wharton.upenn.edu/leadership-and-management-certificate/>

- Managing in the Global Digital Economy.

<https://online.wharton.upenn.edu/courses-global-digital-management/>

- Globalization: Social, Economic, and Political Aspects

To be launched in the Spring of 2021.

Session Narrative Summary

What are the economic and social implications of COVID-19 in the short and in the long run? How will companies, workers, and consumers change their behavior? Is it possible to find a new balance between saving lives and saving livelihoods? This presentation makes use of the best available research to illuminate public policy debates and anticipate the big shifts that the pandemic will bring to the economy and the society.

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