

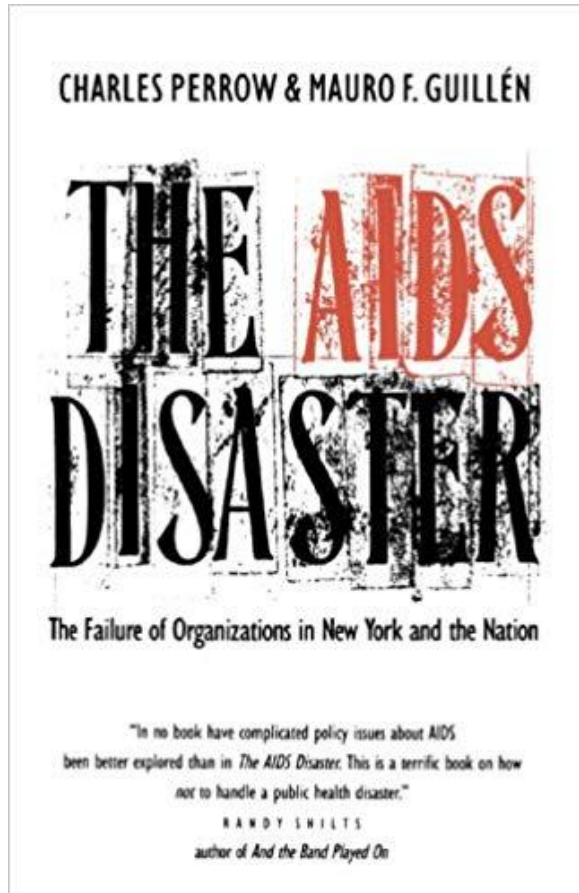
Preparing for, and Dealing with, the Covid Pandemic

Mauro F. Guillén

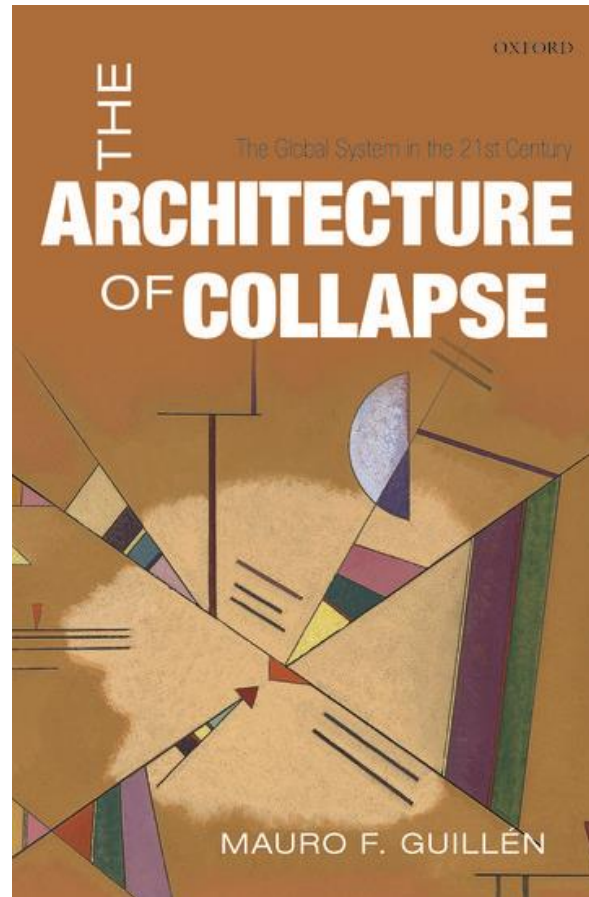


Wharton
UNIVERSITY of PENNSYLVANIA

My Expertise



1990

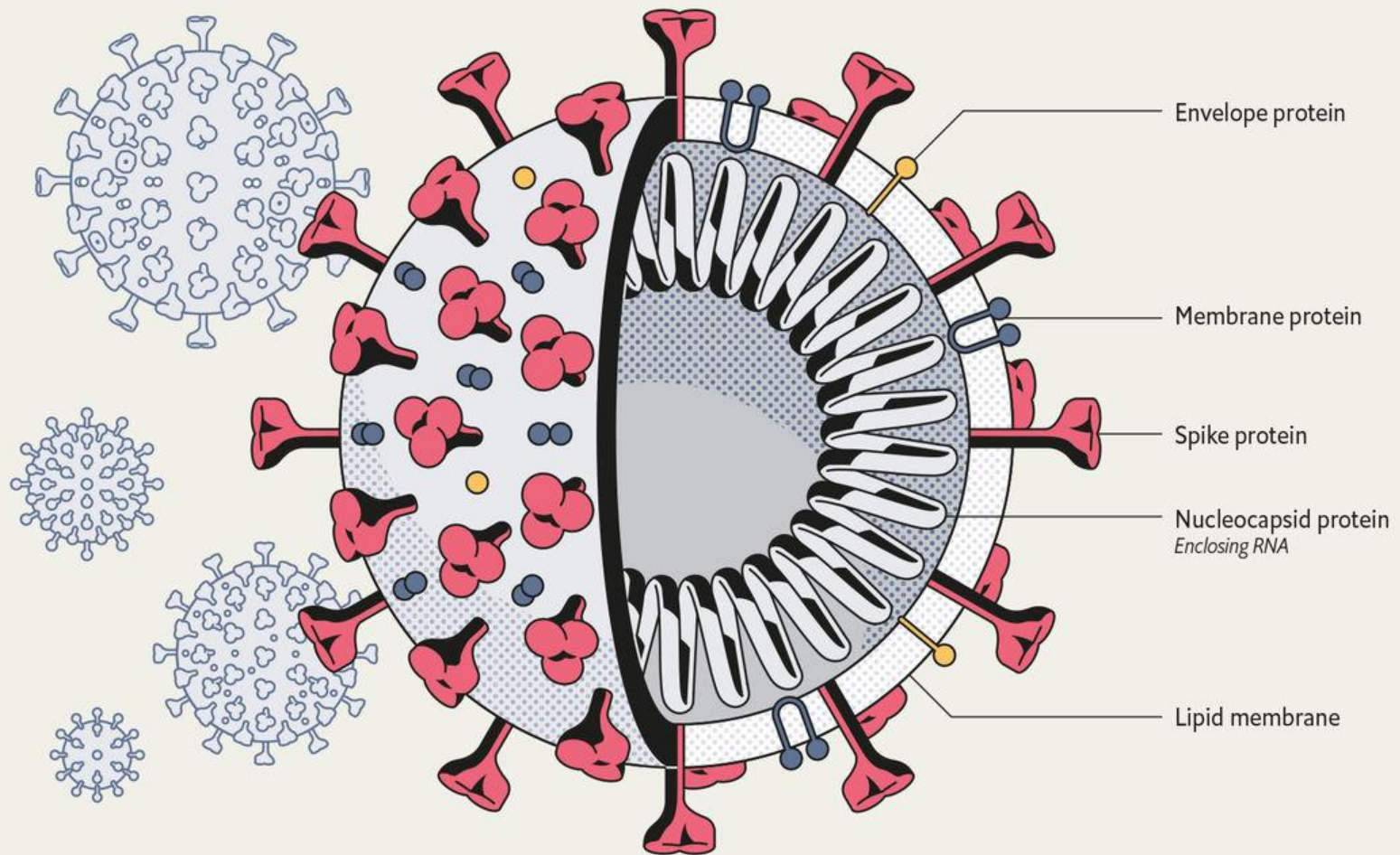


2016



2020

The Enemy

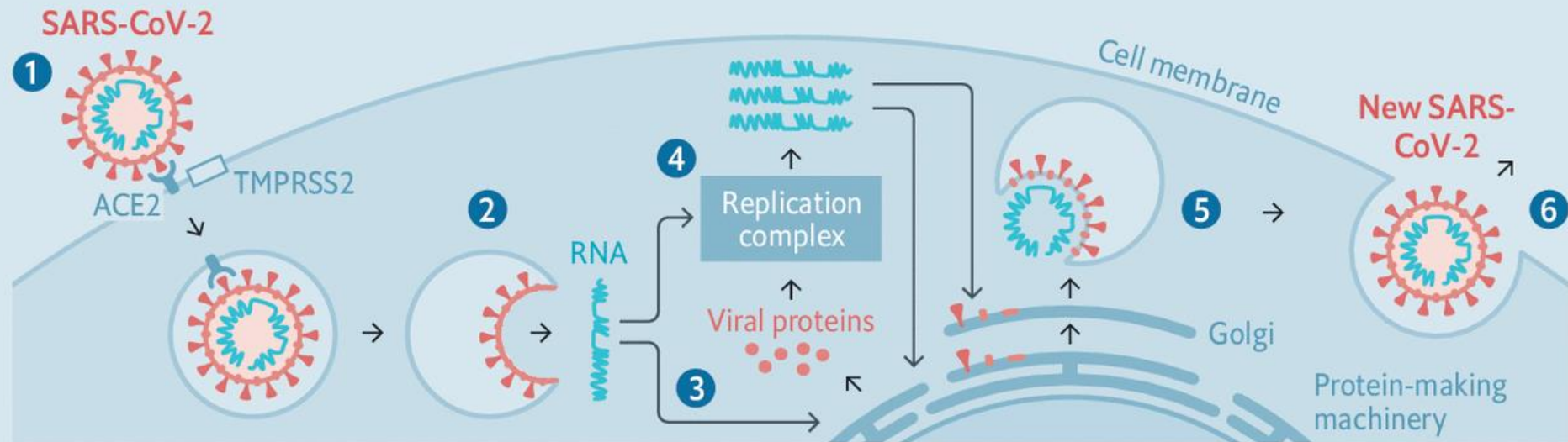


Manuel Bortoletti

Replication of the Virus

Hijack

How SARS-CoV-2 replicates itself in the cells of those infected



1 Spike protein on the virion binds to ACE2, a cell-surface protein. TMPRSS2, an enzyme, helps the virion enter **2** The virion releases its RNA **3** Some RNA is translated into proteins by the cell's machinery **4** Some of these proteins form a replication complex to make more RNA **5** Proteins and RNA are assembled into a new virion in the Golgi and **6** released

Sources: Song et al., *Viruses*, 2019; Jiang et al., *Emerging Microbes and Infections*, 2012; *The Economist*

The Economist

<https://www.economist.com/briefing/2020/03/12/understanding-sars-cov-2-and-the-drugs-that-might-lessen-its-power>

Preparedness

- Organizations, and society at large, always prepare for catastrophic events like earthquakes and hurricanes.
- Why aren't we prepared for epidemics and pandemics?
- Perhaps because we perceive them as being rare events that are unlikely to affect us.

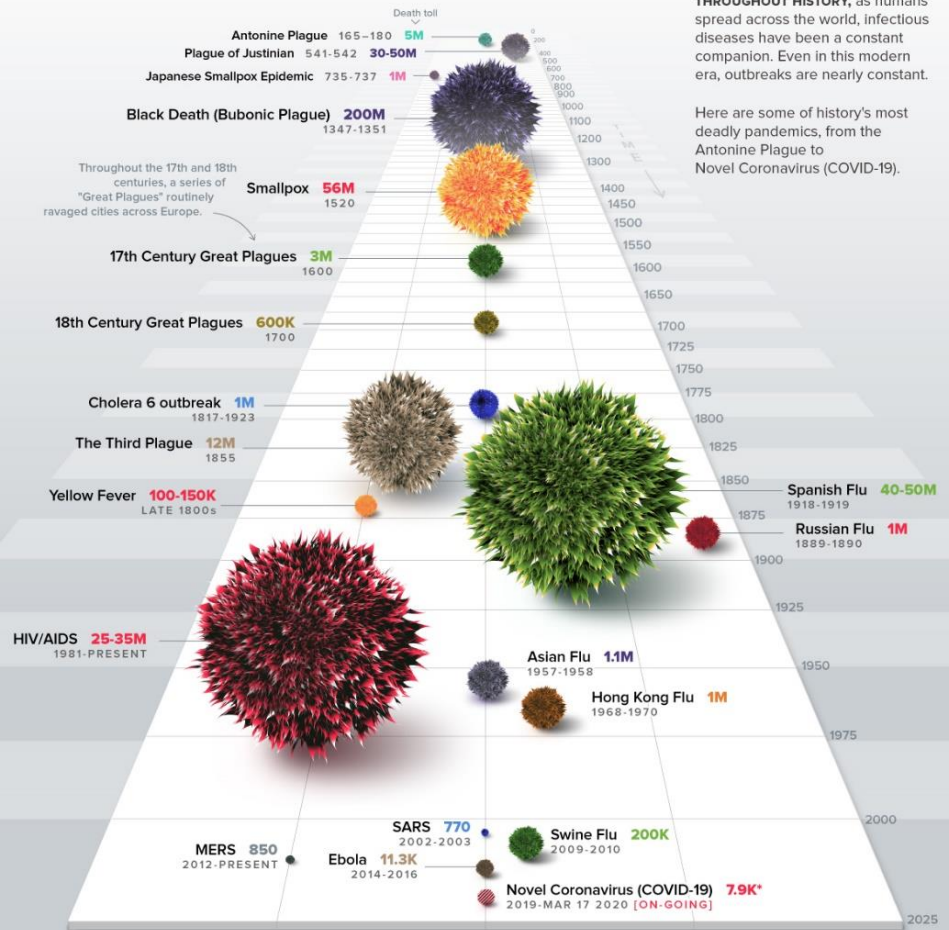
Pandemics are as frequent as major earthquakes

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.

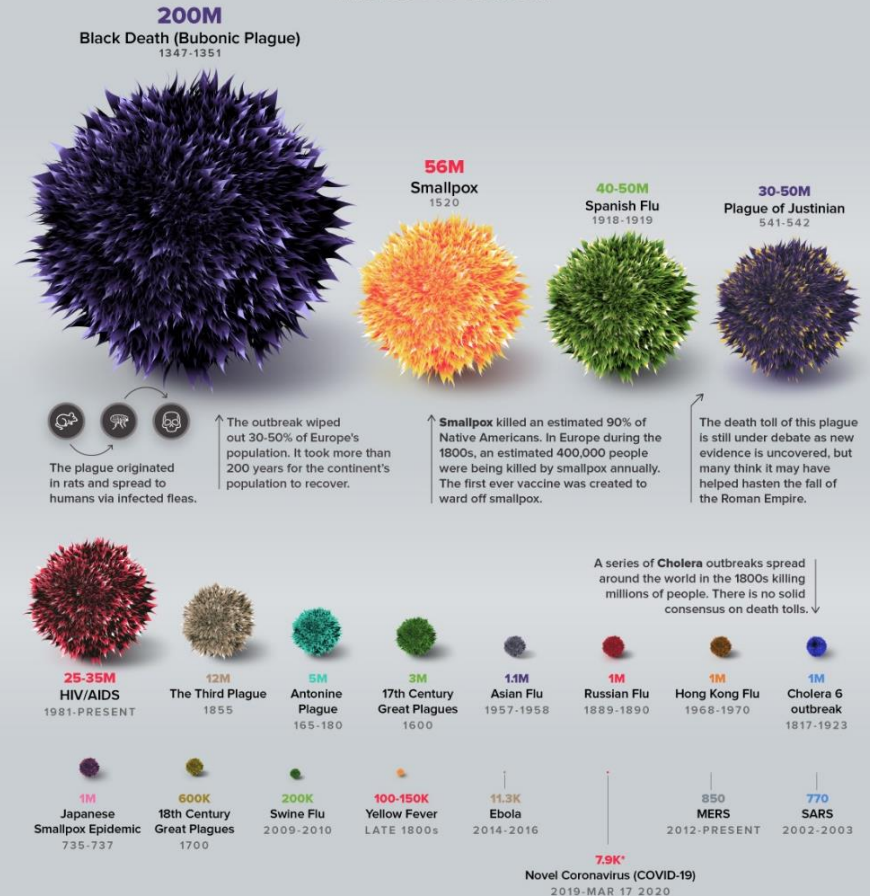
Here are some of history's most deadly pandemics, from the Antonine Plague to Novel Coronavirus (COVID-19).



DEATH TOLL

[HIGHEST TO LOWEST]

It is hard to estimate the impact of COVID-19 because the disease is new to medicine, and data is still coming in.

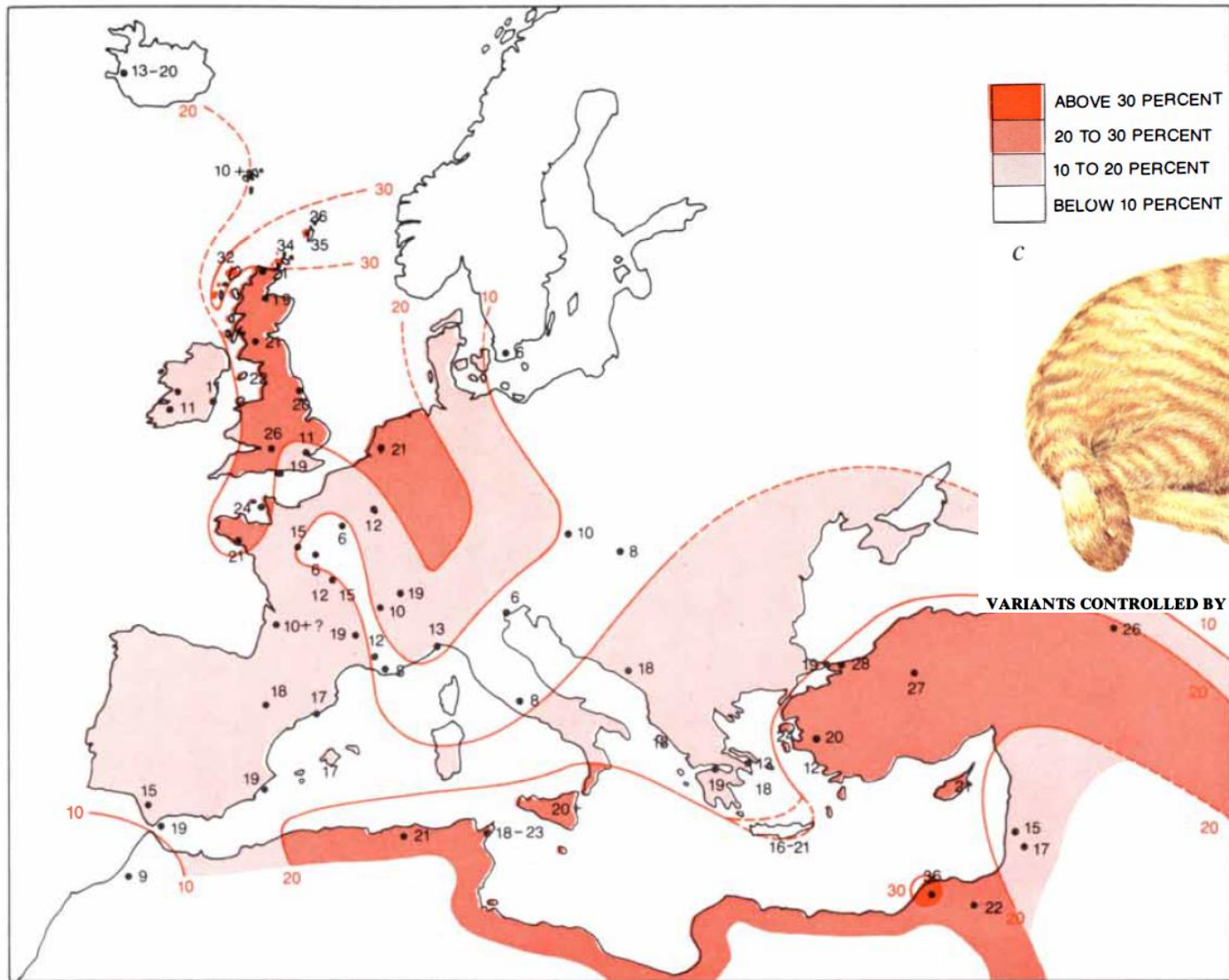


VISUAL
CAPITALIST

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

Facebook YouTube Instagram Twitter
/visualcapitalist @visualcap visualcapitalist.com

Diffusion: Cats and Commerce

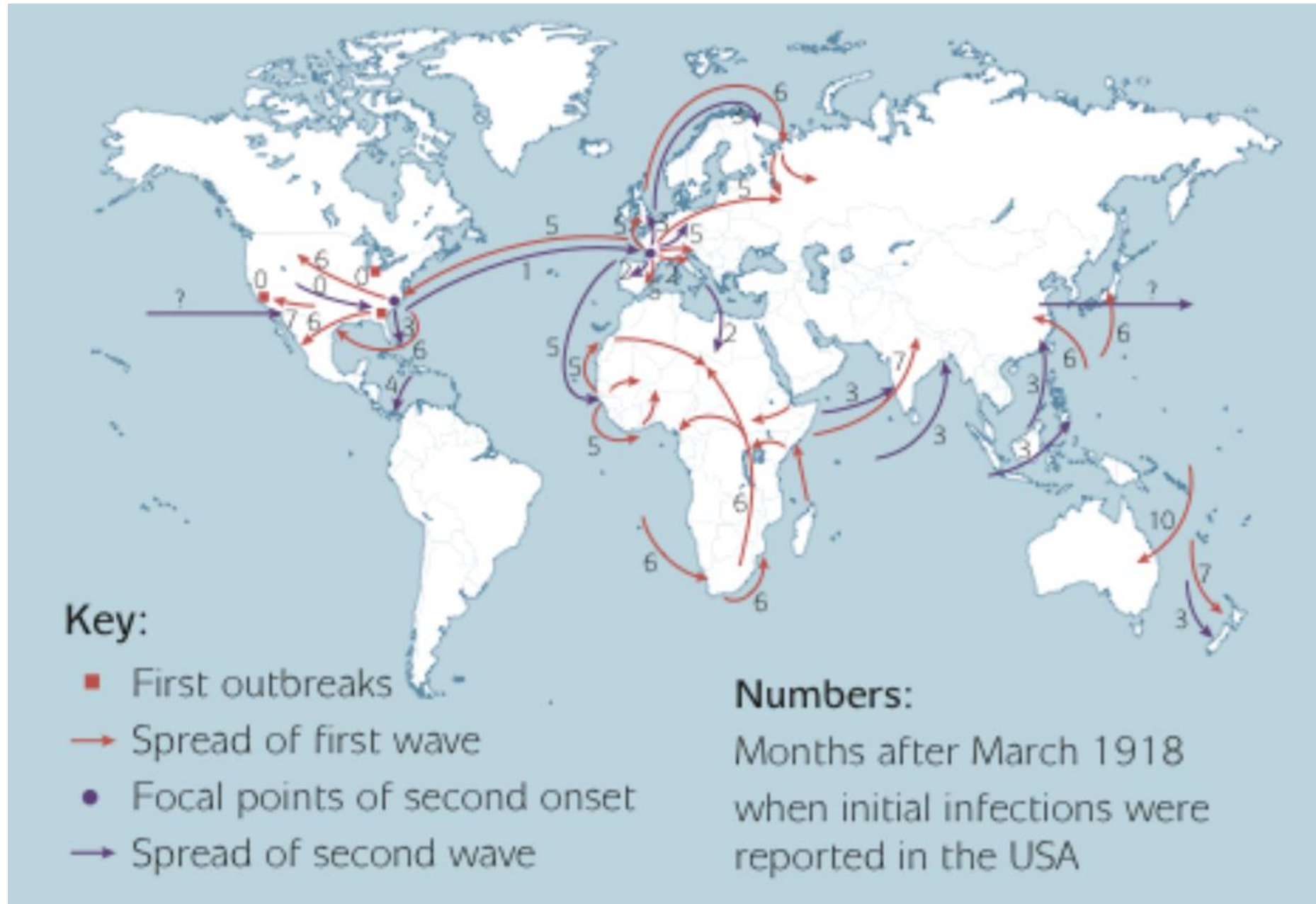


VARIANTS CONTROLLED BY THE SEX-LINKED-ORANGE ALLELE are represented

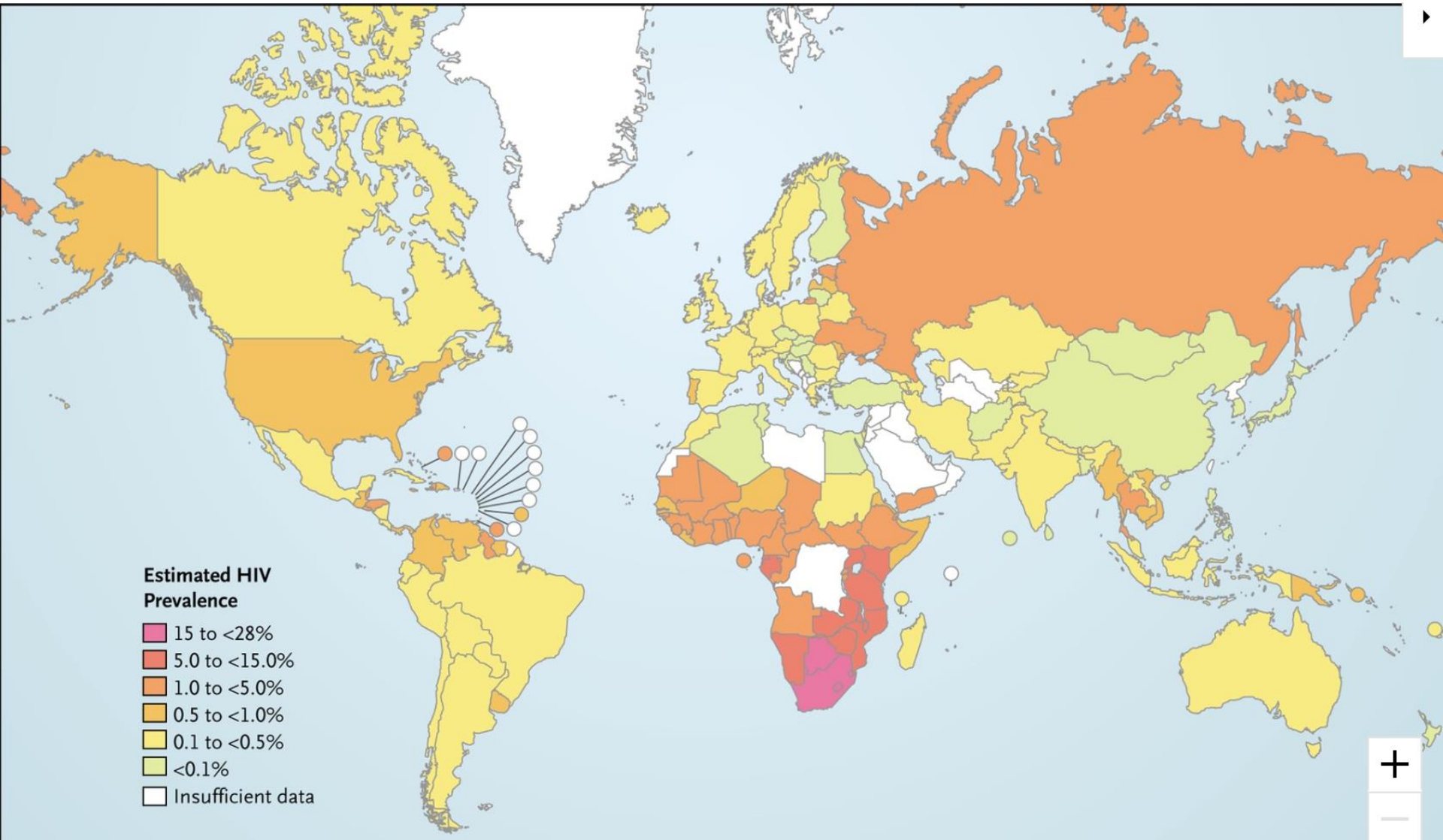
Bubonic Plague in the 1300s



The ~~Spanish~~ Flu of 1918



HIV



The Guardian Fake News

Why conspiracy theories spread faster than coronavirus

Did the virus originate in a US weapons lab, or is it a plot to destabilise Iran? The 'infection' of social media by these stories is a deliberate strategy

The New York Times

Surge of Virus Misinformation Stumps Facebook and Twitter

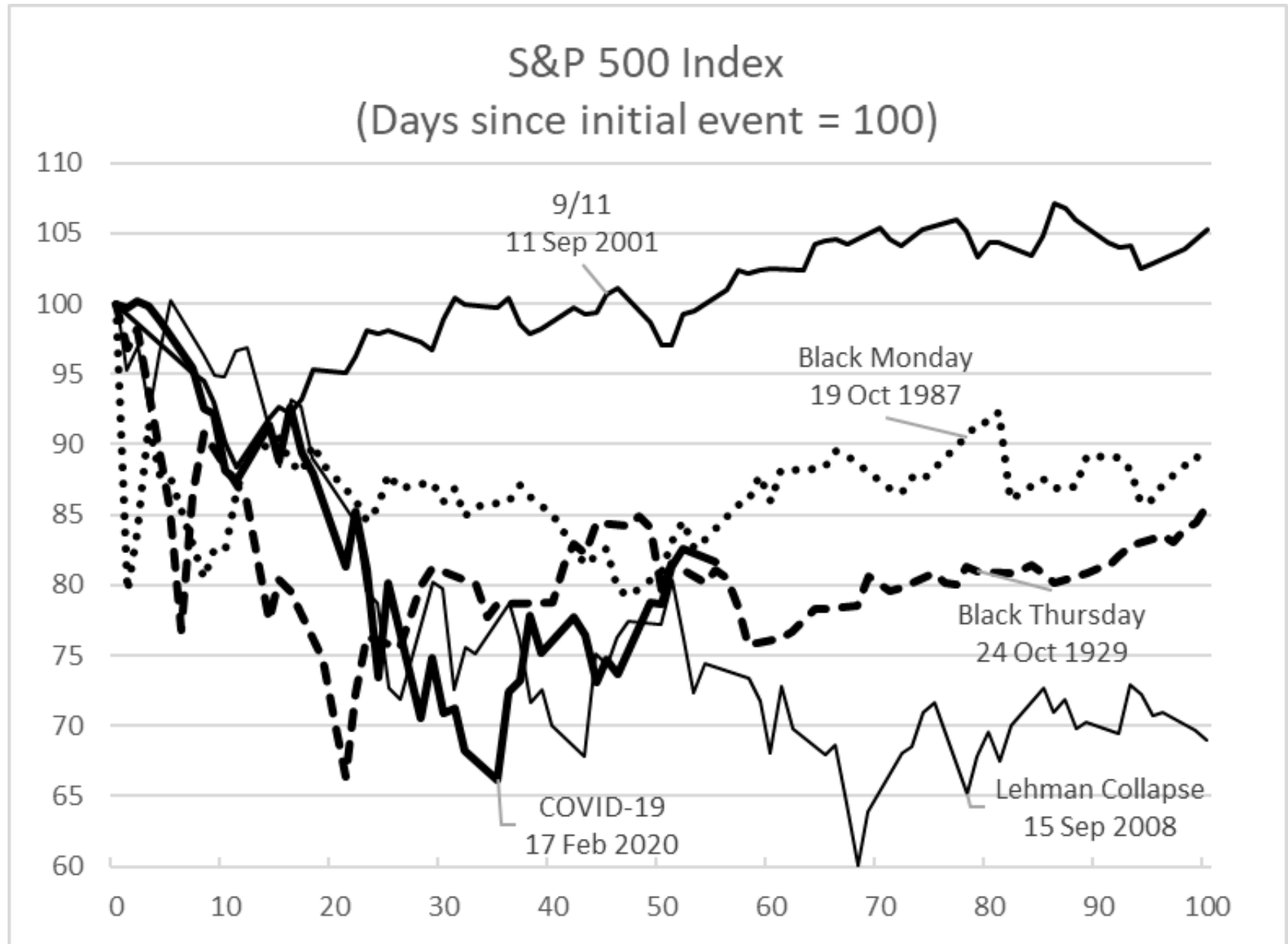
Secret labs. Magic cures. Government plots. Despite efforts by social media companies to stop it, false information about the coronavirus is proliferating around the world.

The Washington Post

Conspiracy theorists blame U.S. for coronavirus. China is happy to encourage them.

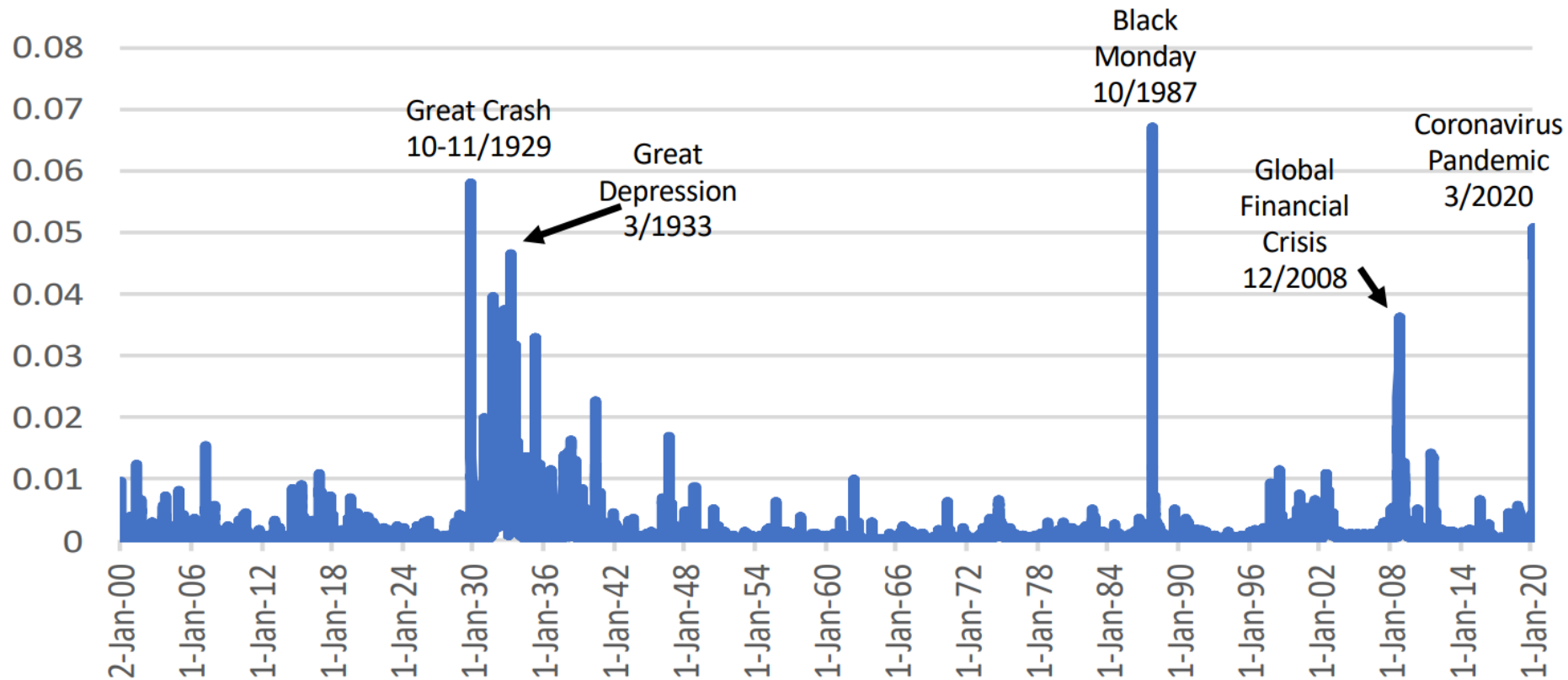
Economic Impact

Stocks



S&P 500 Volatility

Volatility Last Two Weeks

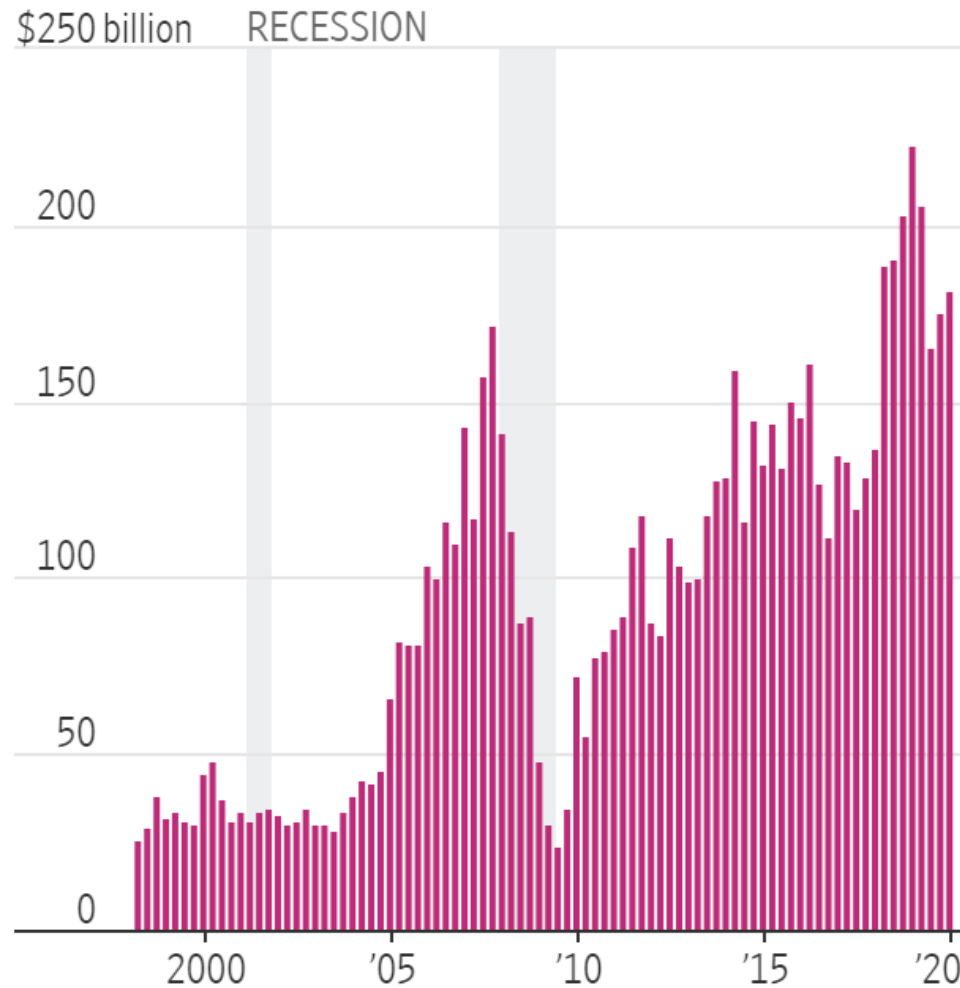


Notes: Sample period, 1/1/1900-3/23/2020. From 12/1925-Present, returns are computed using Yahoo Finance's 'adjusted close' series for the S&P 500 (^GSPC). Before that, returns are from the Global Financial Data extension of the Dow Jones Index. Volatility last two weeks is the sum of squared returns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

The Unprecedented Stock Market Reaction to COVID-19

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>

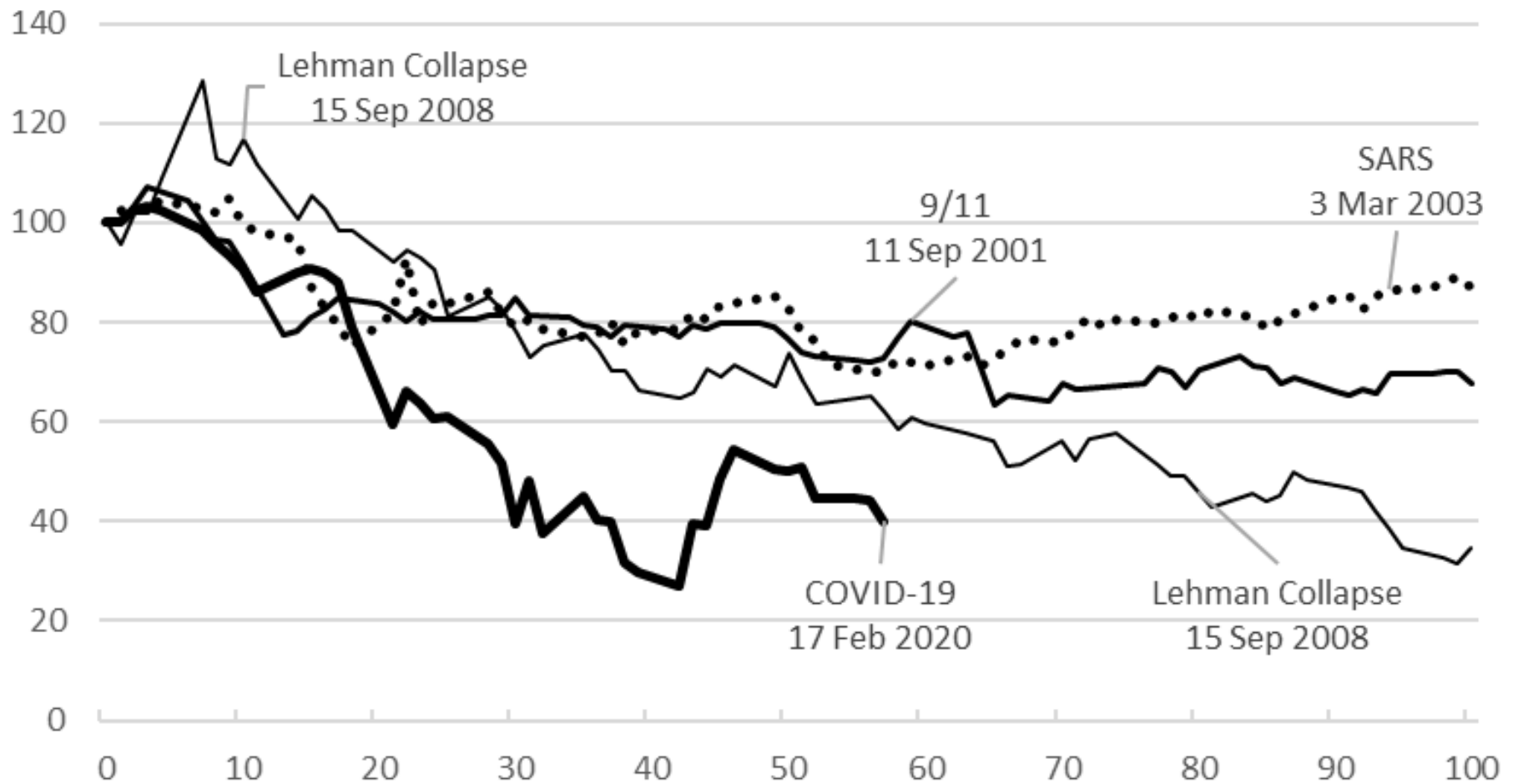
GDP

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

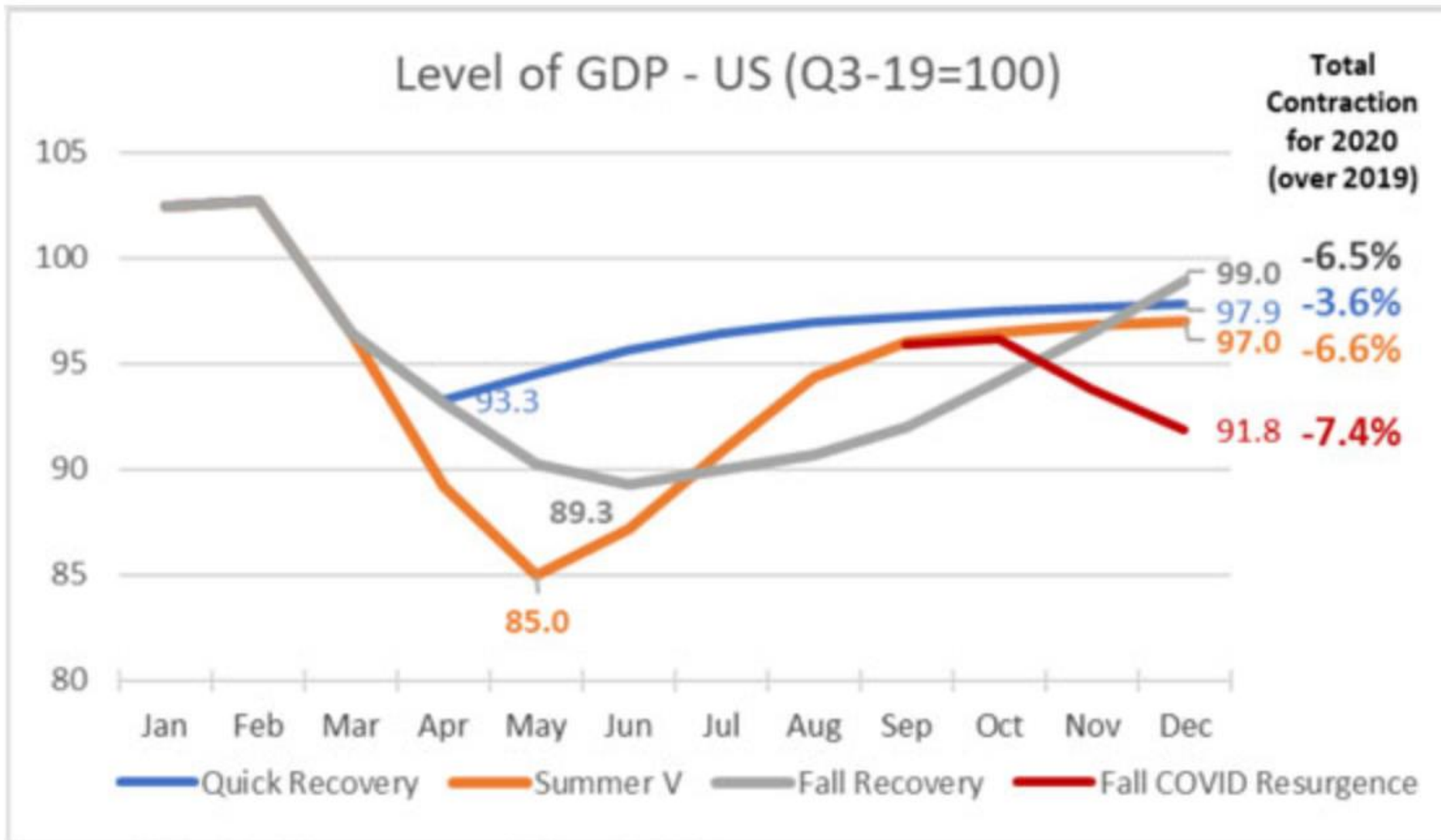
	2019		2020				2018	2019	2020
	1 st half	2 nd half	I Q	II Q	III Q	IV Q	ANNUAL	ANNUAL	ANNUAL
Real GDP	2.6	2.1	-5.8	-33.3	0.1	27.4	2.9	2.3	-6.5
Real Consumer Spending	2.8	2.5	-6.5	-40.0	-1.4	28.4	3.0	2.6	-8.3
Residential Investment	-2.0	5.6	0.0	-20.0	-7.0	10.0	-1.5	-1.5	-2.9
Real Capital Spending	1.7	-2.4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

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

Doom and gloom

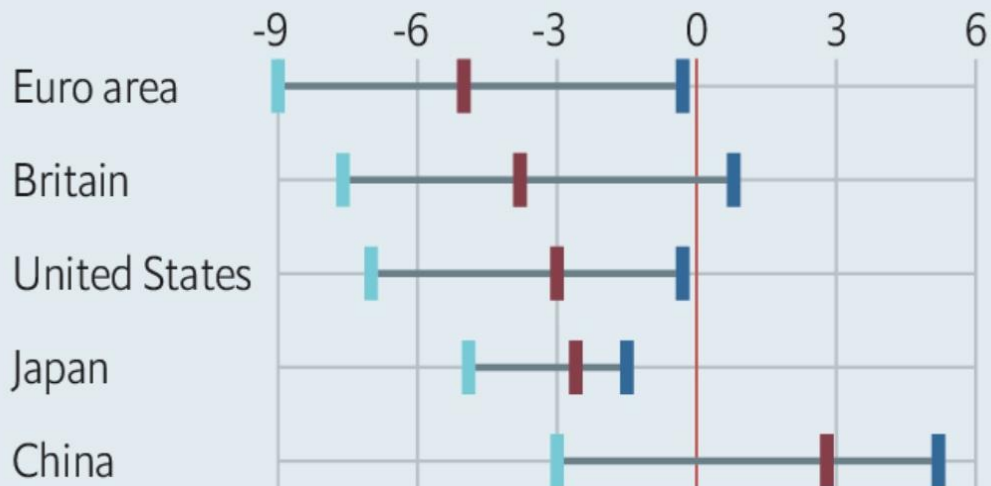
Economists' forecasts* for GDP, 2020

% change on a year earlier

Low

Median

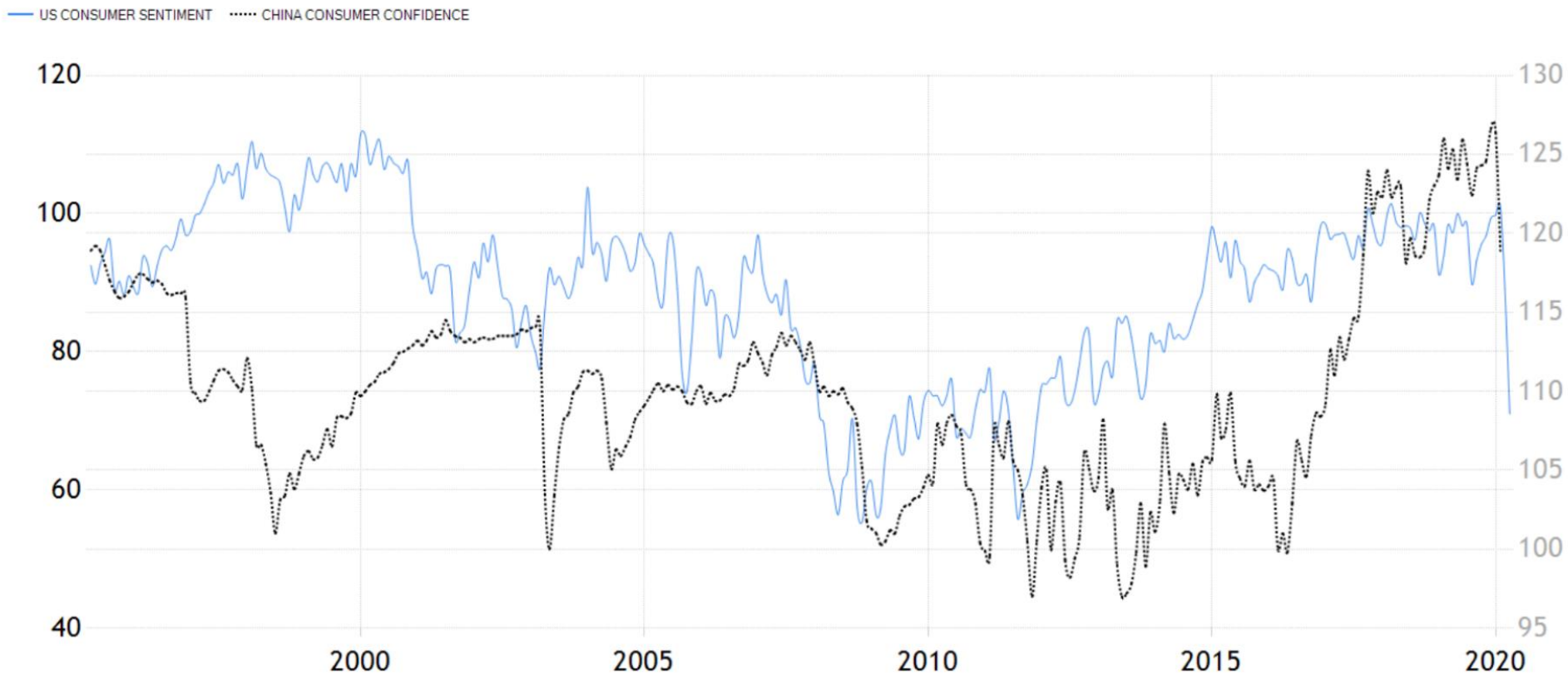
High



Sources: *The Economist*; 18 investment banks and economics consultancies

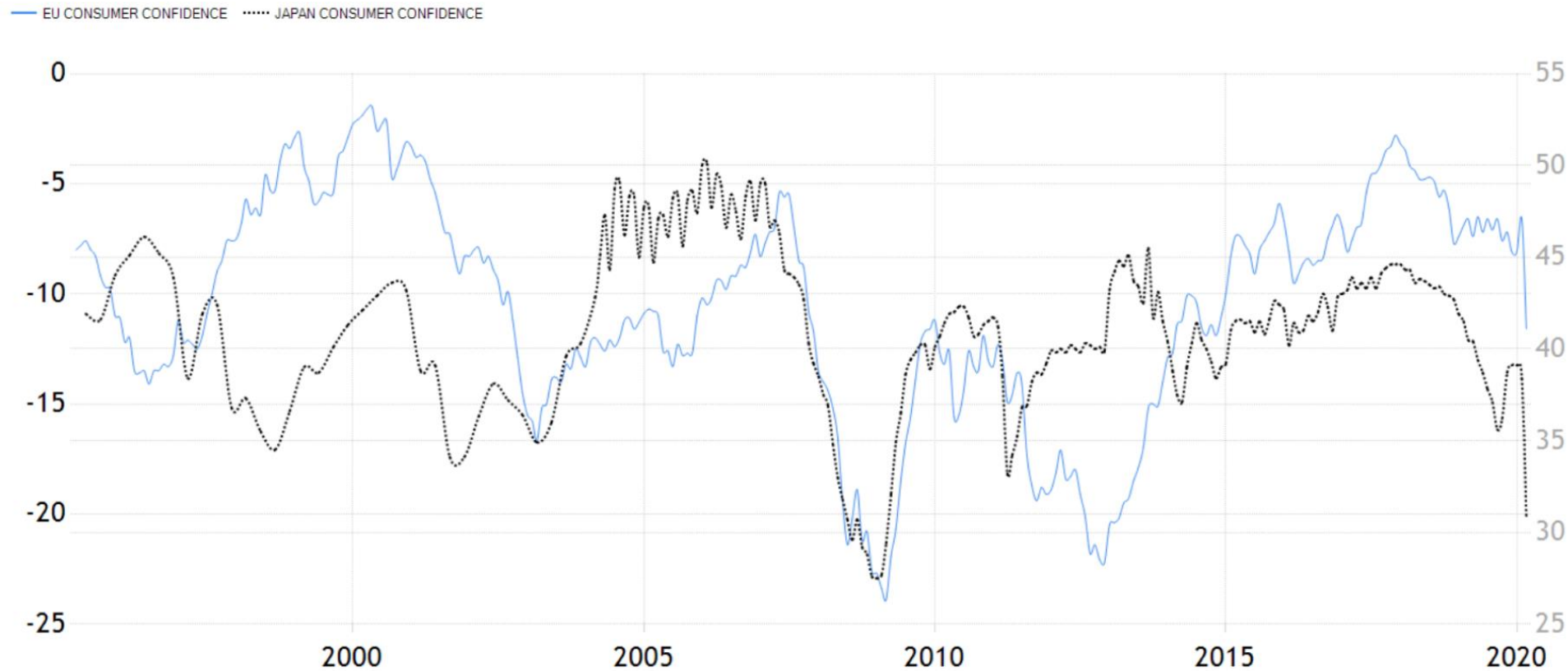
*Made in March 2020

Consumer Confidence: US & CN



SOURCE: TRADINGECONOMICS.COM

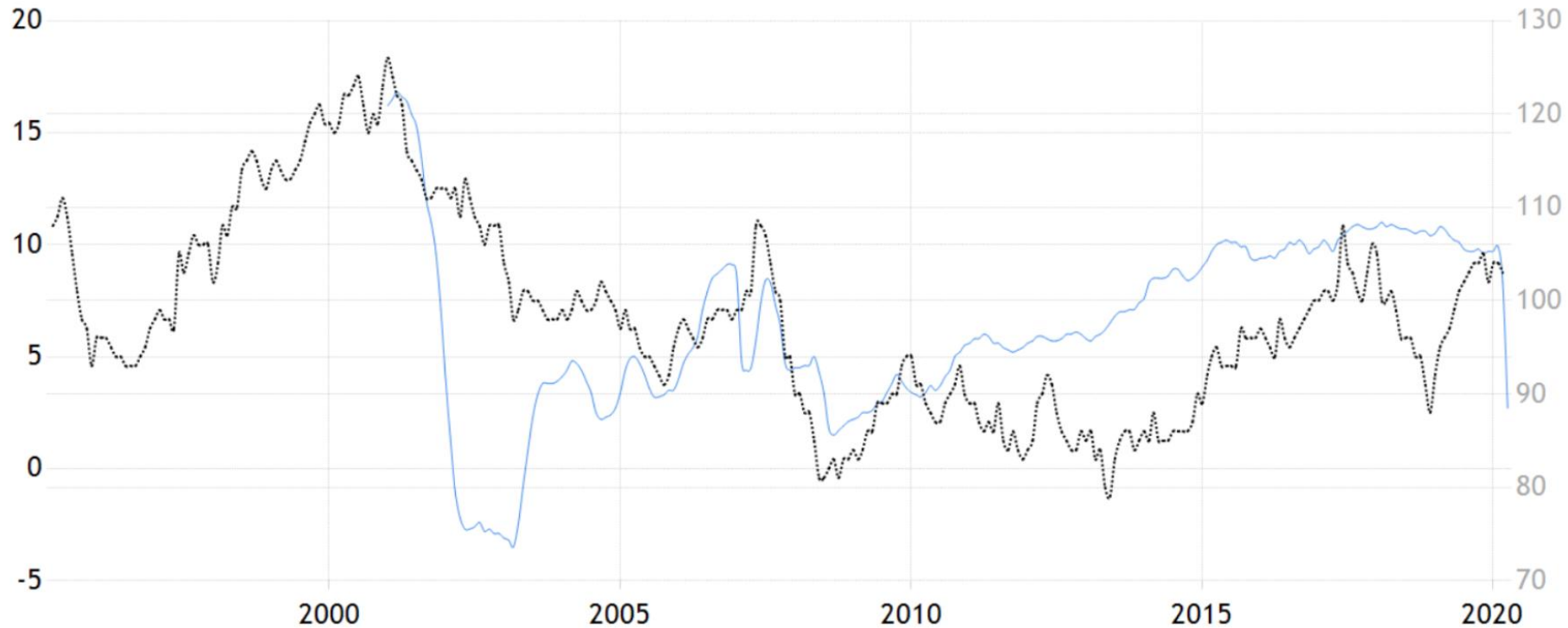
Consumer Confidence: EU & JP



SOURCE: TRADINGECONOMICS.COM

Consumer Confidence: DE & FR

— GERMANY GFK CONSUMER CLIMATE FRANCE CONSUMER CONFIDENCE



SOURCE: TRADINGECONOMICS.COM

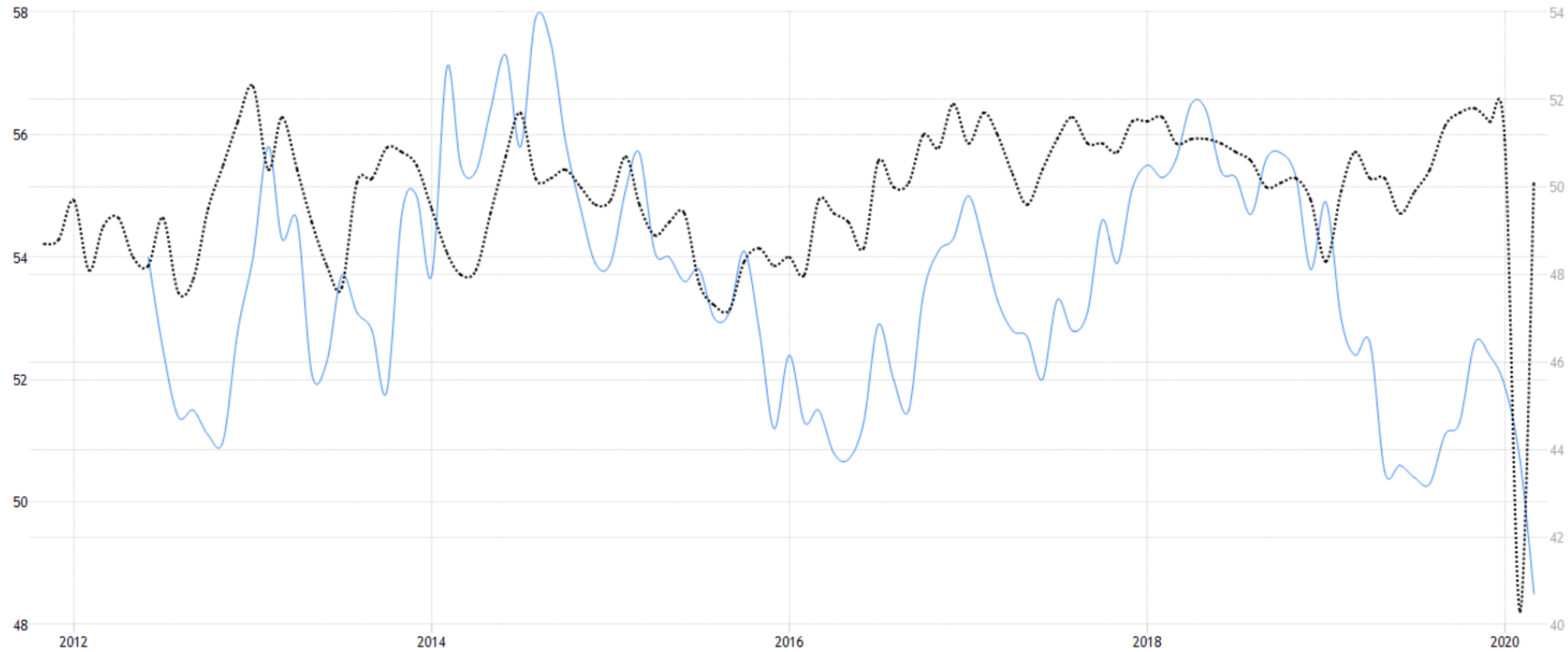
Consumer Confidence: ES & IT



SOURCE: [TRADINGECONOMICS.COM](https://tradingeconomics.com)

Manufacturing PMI: US & CN

— US MANUFACTURING PMI CHINA CAIXIN MANUFACTURING PMI

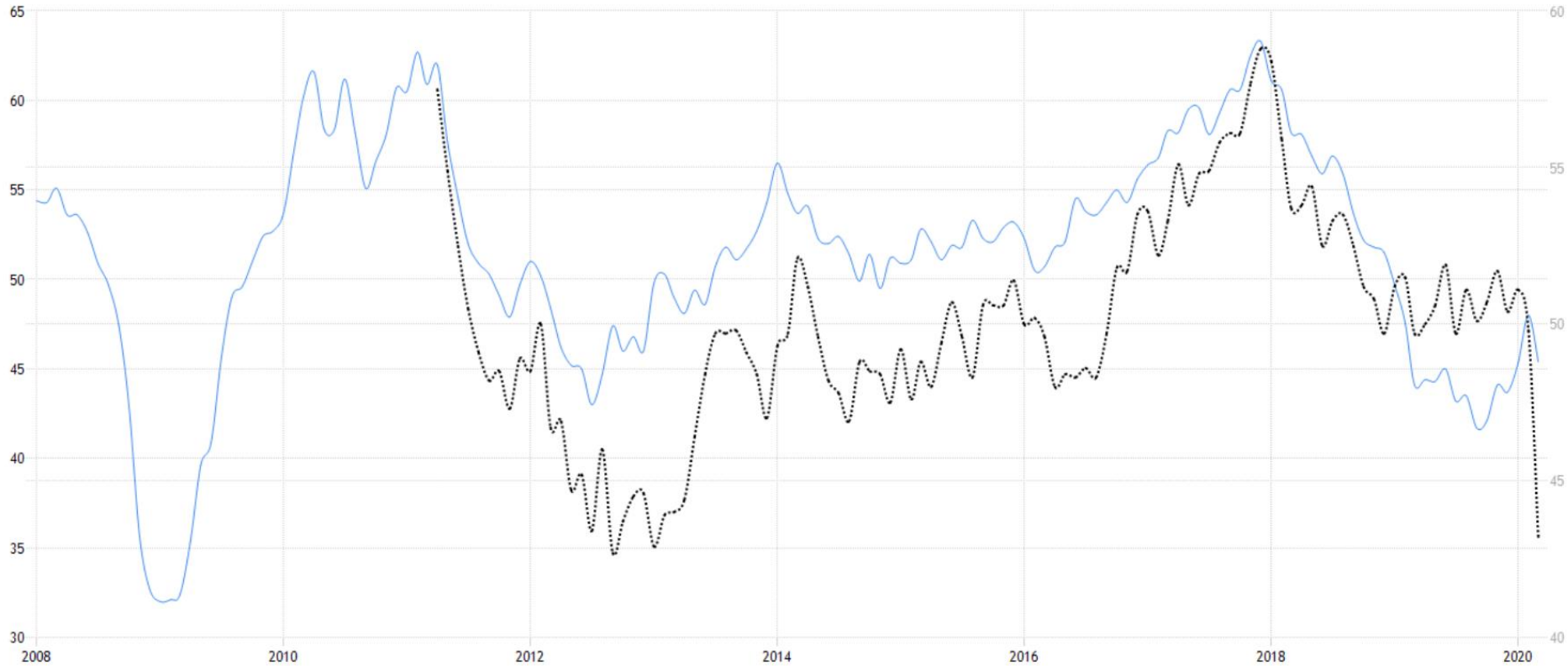


Manufacturing PMI: EU & JP

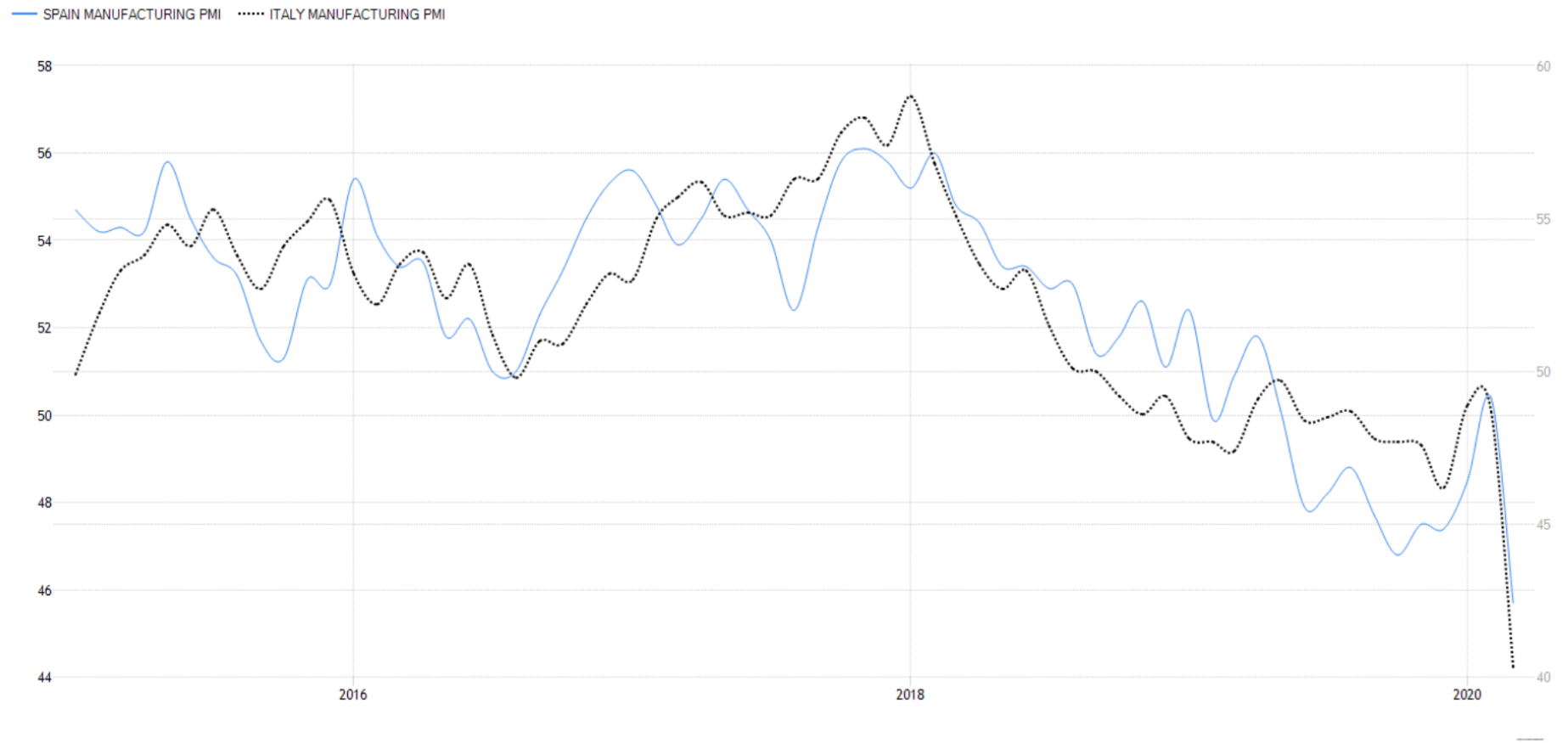


Manufacturing PMI: DE & FR

— GERMANY MANUFACTURING PMI FRANCE MANUFACTURING PMI

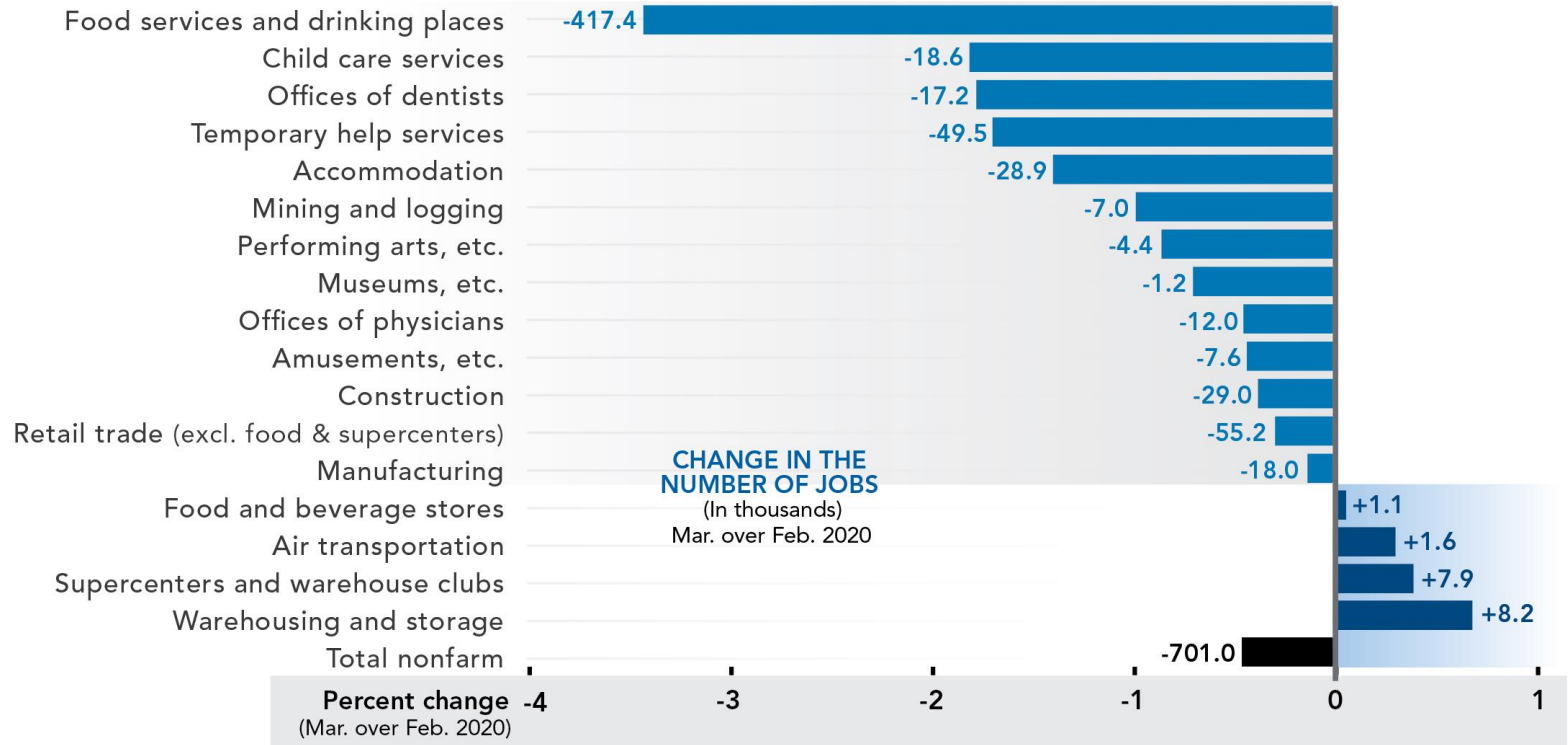


Manufacturing PMI: ES & IT



Job Losses

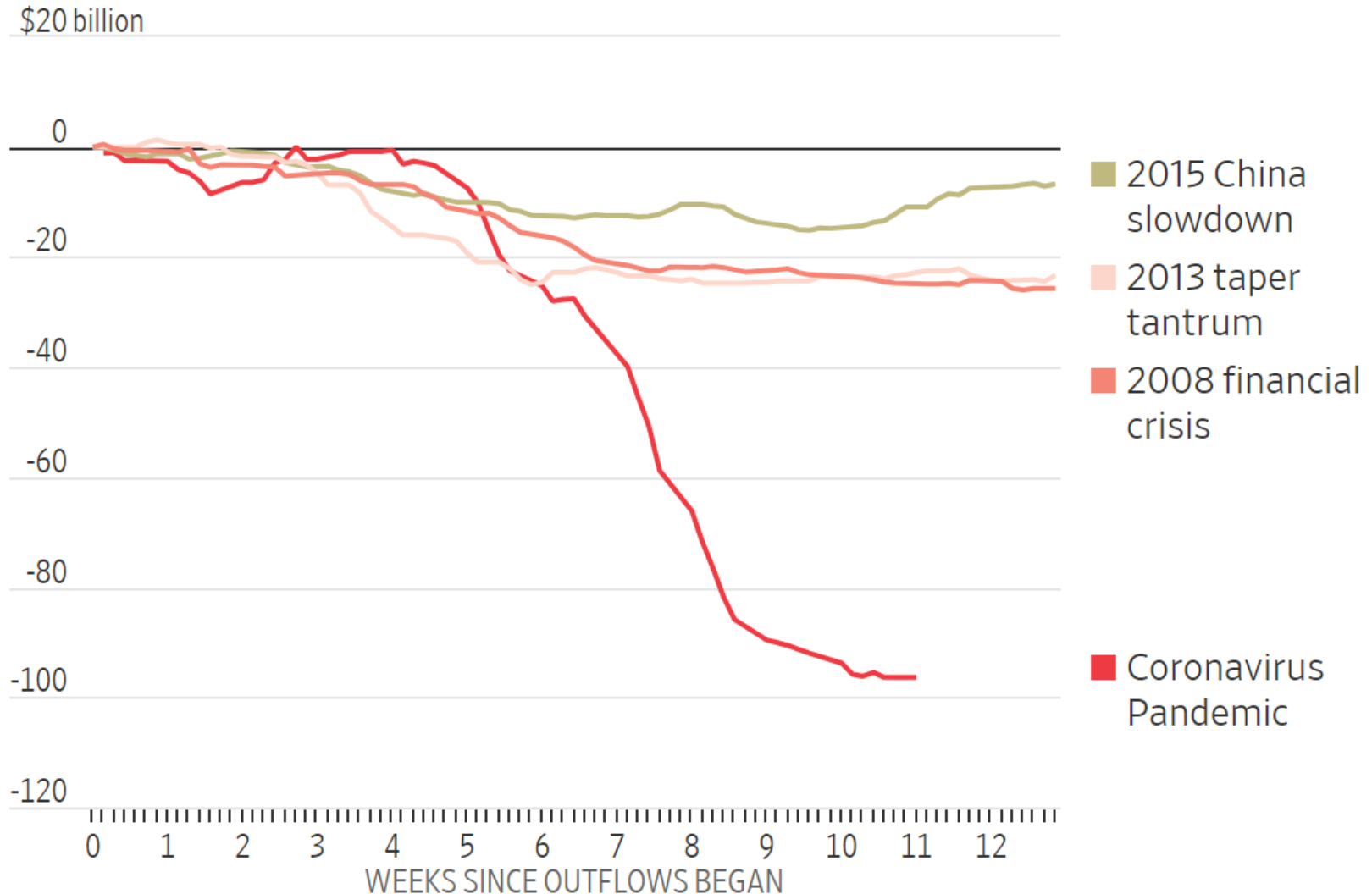
60 PERCENT OF JOB LOSSES FROM ONE INDUSTRY: FOOD AND DRINK



Source: The Conference Board using data from the US Bureau of Labor Statistics
www.conferenceboard.org

Emerging Markets

Cumulative portfolio flows out of emerging markets



Why is this crisis so bad?

- Population growth, especially in cities.
- Rise of global middle-class consumption:
 - Mobility and travel.
 - Interconnectivity.
- Global value chains.
- Fake news.
- Hubris, denial by politicians and the public.
- Anti-science attitudes.
- It's a supply and a demand shock, all at once.

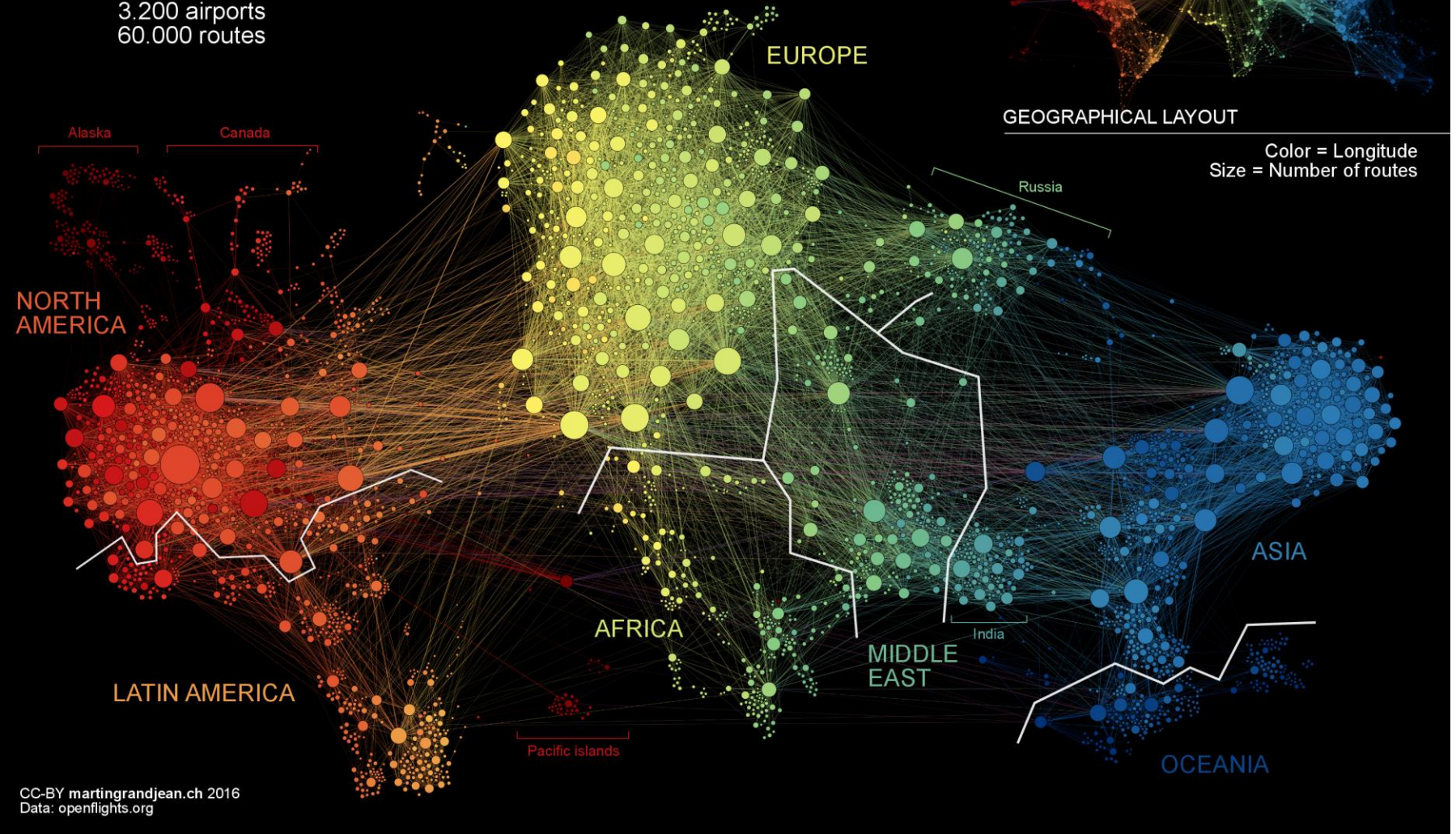
TRANSPORTATION CLUSTERS

3.200 airports
60.000 routes



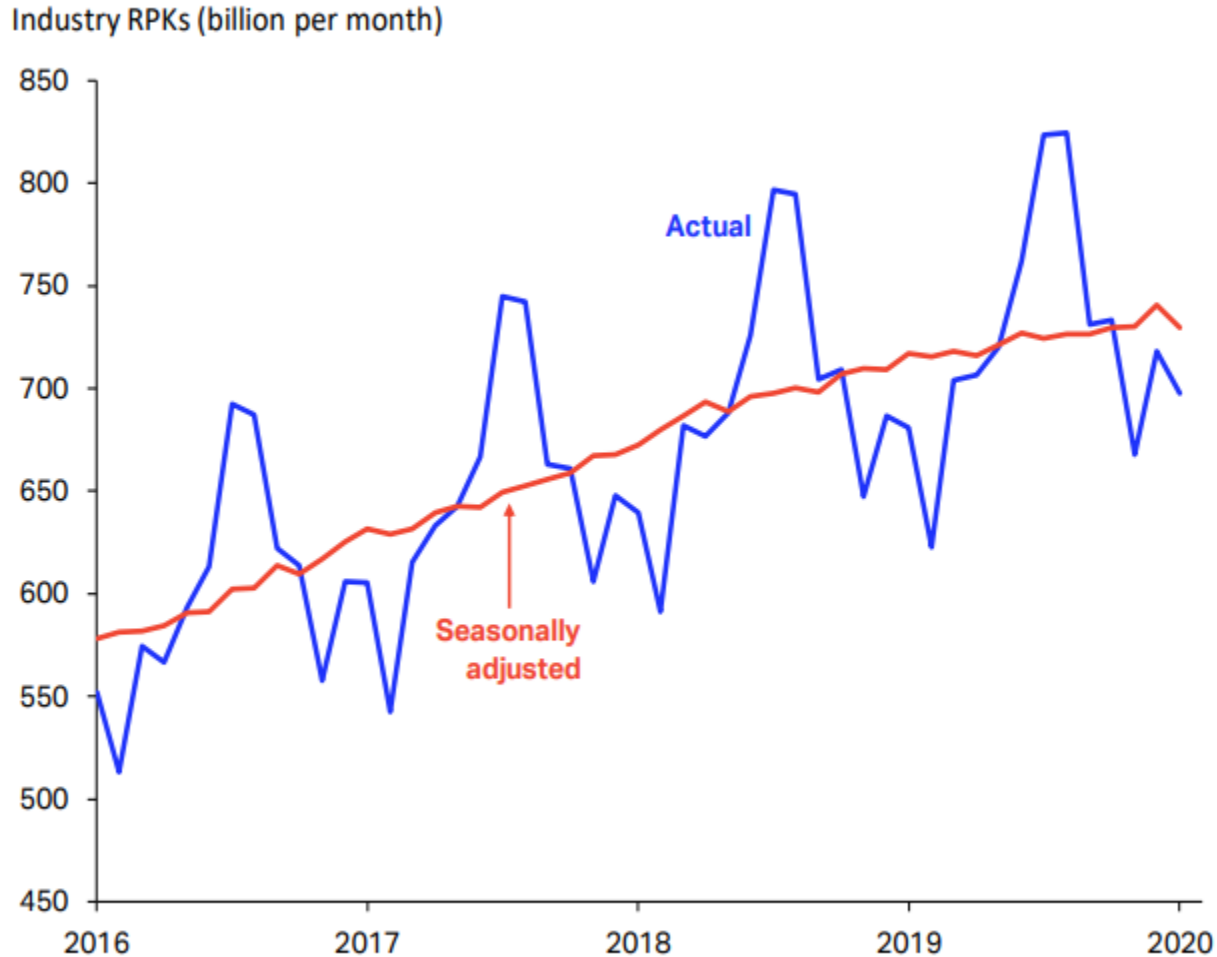
GEOGRAPHICAL LAYOUT

Color = Longitude
Size = Number of routes



Growth in Air Traffic

Chart 1 – Air passenger volumes and latest trend



Sources: IATA Economics, IATA Monthly Statistics

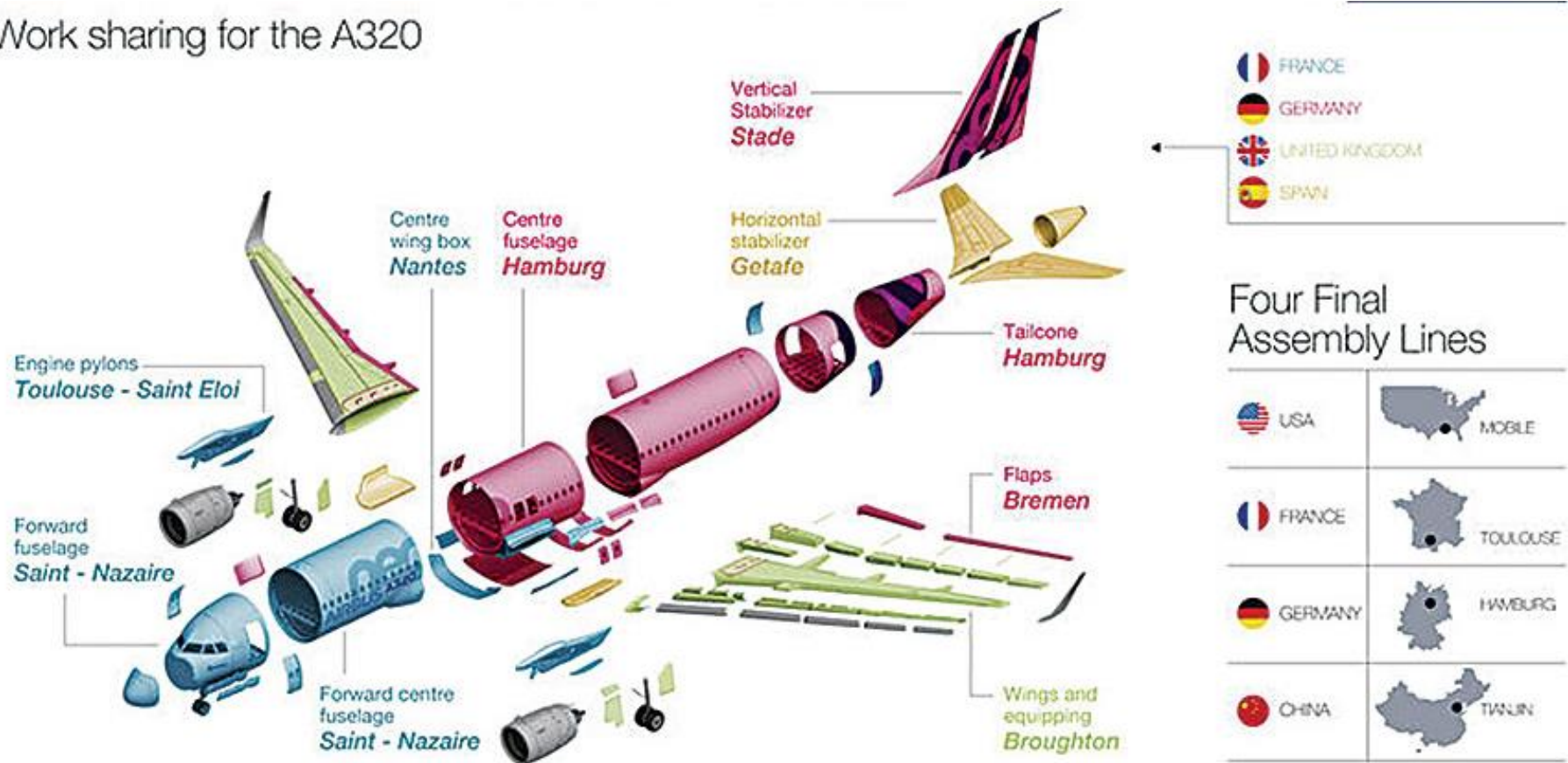
Value Chains: The iPhone

<i>iPhone-related U.S. Trade Deficit with:</i>	Final Value (USD mn)	Value added (USD mn)
China	-1901.2	-73.5
Japan	0	-685.0
South Korea	0	-259.0
Germany	0	-341.0
Rest of the world	0	-543.0



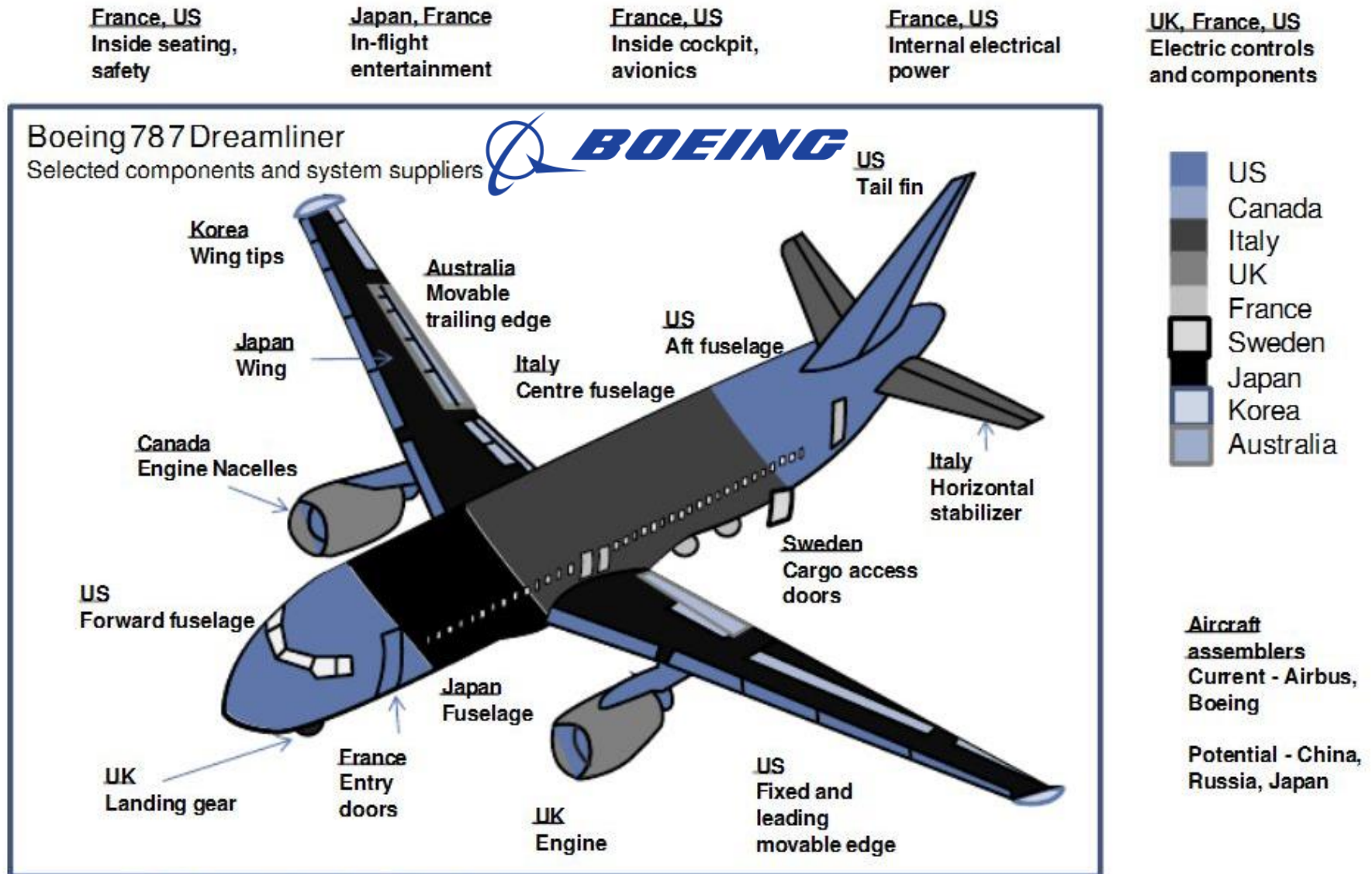
Global Value Chain: Airbus

Work sharing for the A320



AIRBUS

Global Value Chain: Boeing

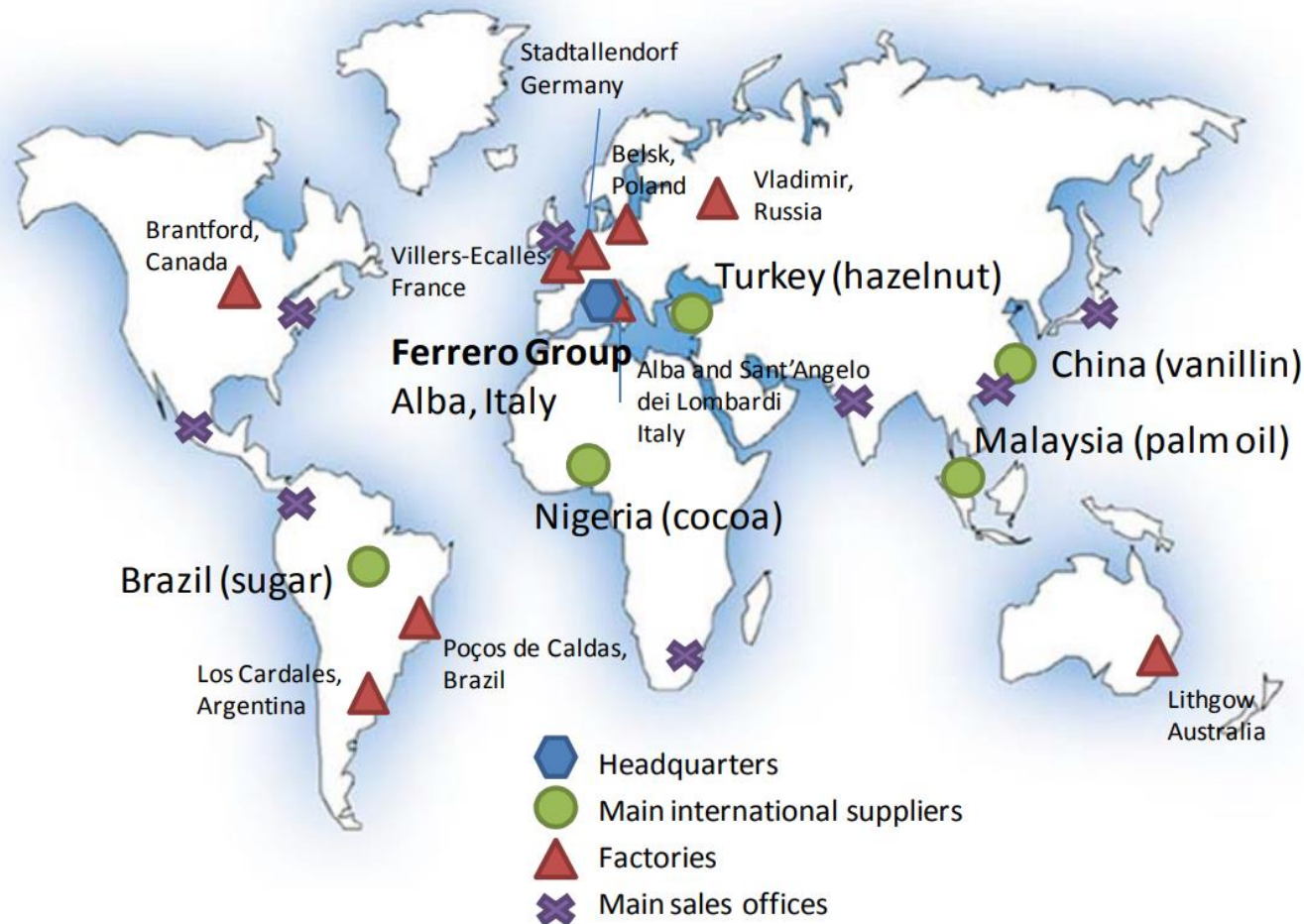


Source: Company data (Boeing), Goldman Sachs Research.

<http://www.businessinsider.com/graphic-boeing-787-dreamliner-suppliers-2013-1>

Global Value Chain: Nutella

Figure 6. The Nutella® global value chain

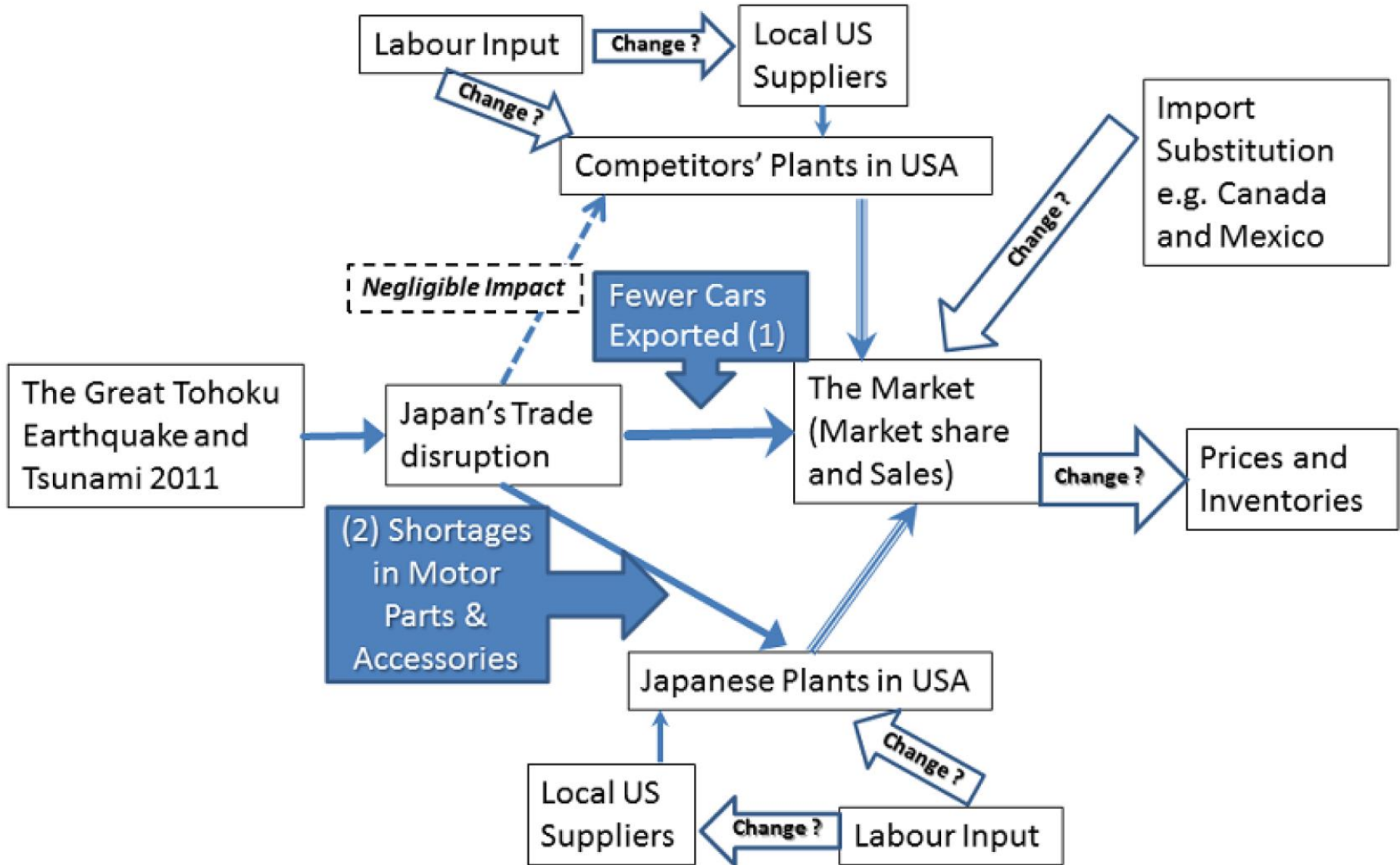


Source: Ferrero, Sourcemap and various on-line sources.

Tight Coupling

- The global system is more tightly coupled than ever:
 - Trade integration.
 - Portfolio and direct investment.
 - Cross-border banking assets.
 - Global value chains.
 - Travel.
- This means there are few degrees of freedom, no buffers, backups, or cushions.
- A disturbance somewhere in the system diffuses rapidly across the world.

Japanese Earthquake and Tsunami of 2011



What To Do?

- When disaster strikes, “plans are worthless, but *planning* is everything.”
- CEO must become “explainer in chief.”
- Establish a “War Room” (Churchill) or “ExComm” (Kennedy).
- Organizations need to have protocols in place:
 - Communication.
 - On-site versus telework & virtual teams.
 - Enhancing wellbeing, motivation, and productivity.

Repair the Supply Chain

- Repair the supply chain if it is broken or under strain.
- Create redundancies and buffers.
- Strike a different balance between efficiency and resiliency.
- I am against government nationalist policies regarding the supply chain.

Engaging Customers

- Even if your business shuts down temporarily, you need to continue engaging customers.
- Think about laying the groundwork for opening up for business and for taking advantage of the rebound.
- Plan for pent-up demand.

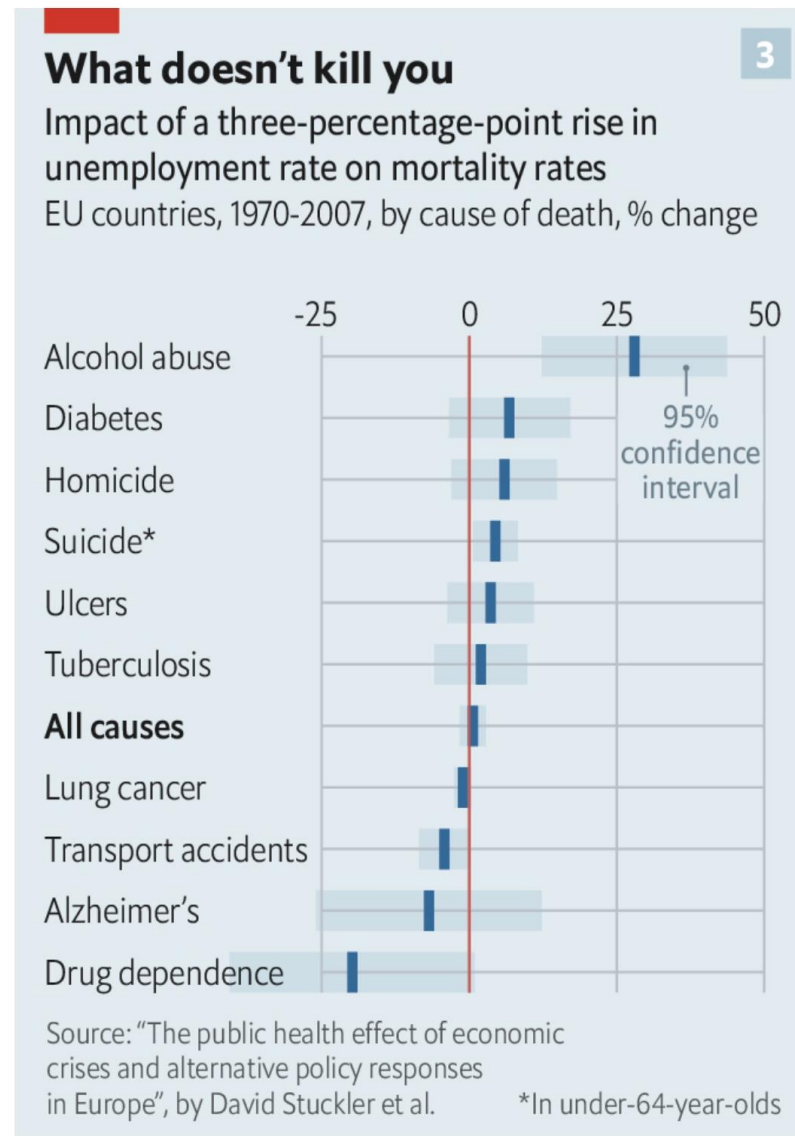
Shifts in Consumer Preferences

- 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?

The “New” Retail Normal

- Omnichannel?
- Prestige online channel.
- Click and collect.
- Social distancing at stores.
- Virtual reality.
- One-time samples.
- Maintaining brand loyalty.

Saving Lives / Saving Economy



How to Restart the Economy

- Tradeoff between saving lives and saving the economy is tricky.
- Economic crises cause deaths, suicide, mental illness, stress, and social dislocation.
- Recipe to restart the economy:
 - Track, trace, and stop the spread of the virus.
 - Certify virus-free communities.
 - Segment the implementation of containment policies.
 - Slowly reopen the economic and social interaction.
 - Wait for relief & stimulus measures to work.

Longer-Term Implications

- Technology use.
- Declining fertility.
- Senior citizens: higher mortality and negative wealth effect.
- Women: they take fewer risks and have better anti-viral defenses to begin with.

In Conclusion

- The global system is more tightly coupled than in the past.
- Epidemics are more frequent than most people assume.
- One can, and should, do planning for pandemics.
- One can develop skills, protocols, and systems for dealing with a crisis.
- It's key to plan for the recovery.

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 implications of COVID-19 for businesses? How should they prepare for the coming recession? The challenges affect not only global supply chains but business continuity in general. One must continue to engage customers with a view to the recovery. Organizational processes need to be overhauled to accommodate new work practices, including telework and virtual teams. One must prepare for pent-up demand and for other types of demand before the recovery starts.

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