



FORUM PARA A
COMPETITIVIDADE

Com o apoio de:



SEMINÁRIO

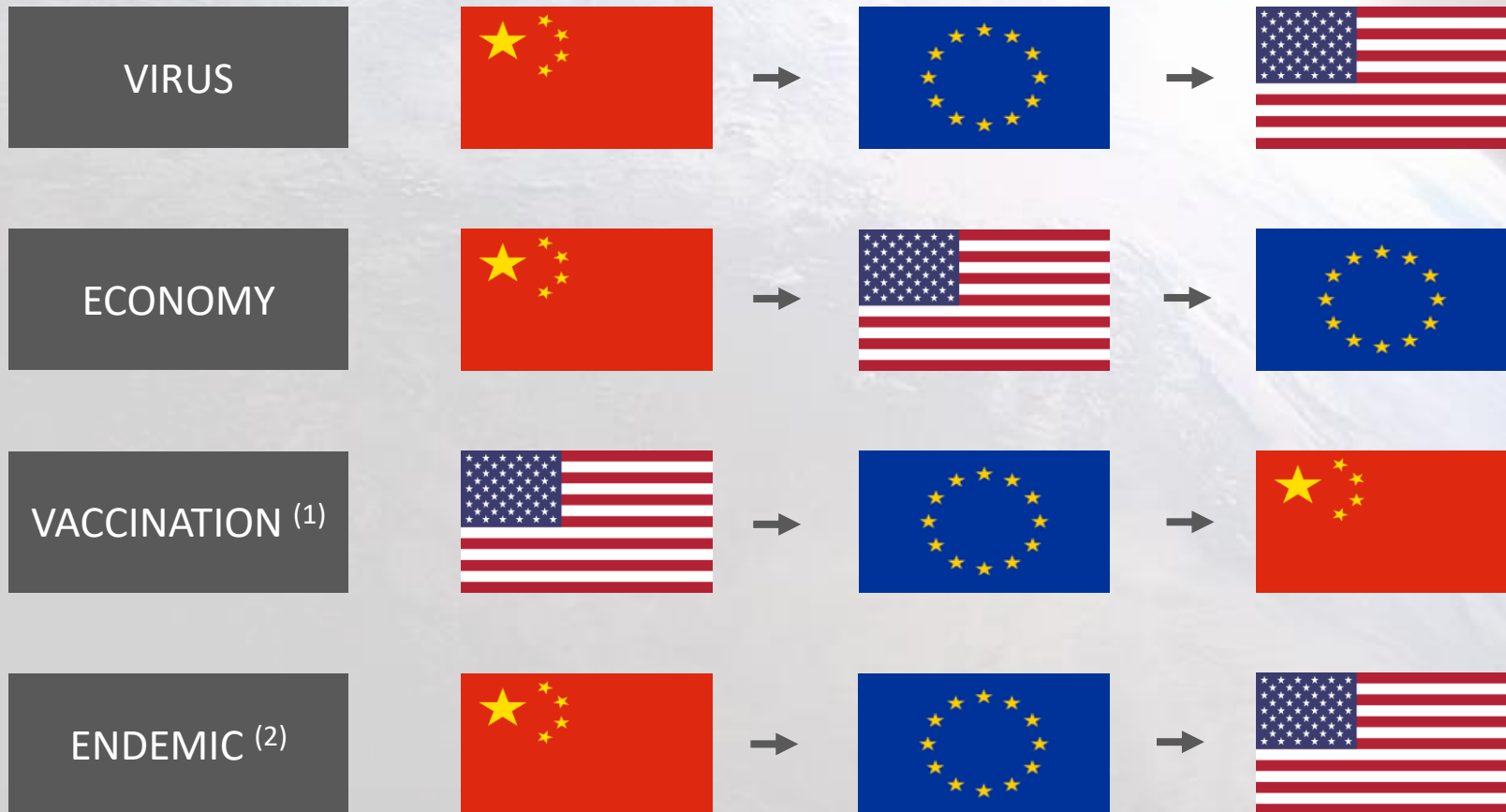
Orçamento do Estado 2022

**O MUNDO PÓS-COVID – TENDÊNCIAS GEOPOLÍTICAS E
GEOECONÓMICAS**

Paulo Portas

FOUR DIFERENT TIMELINES

Covid-19 was and still is global, but not symmetric at all

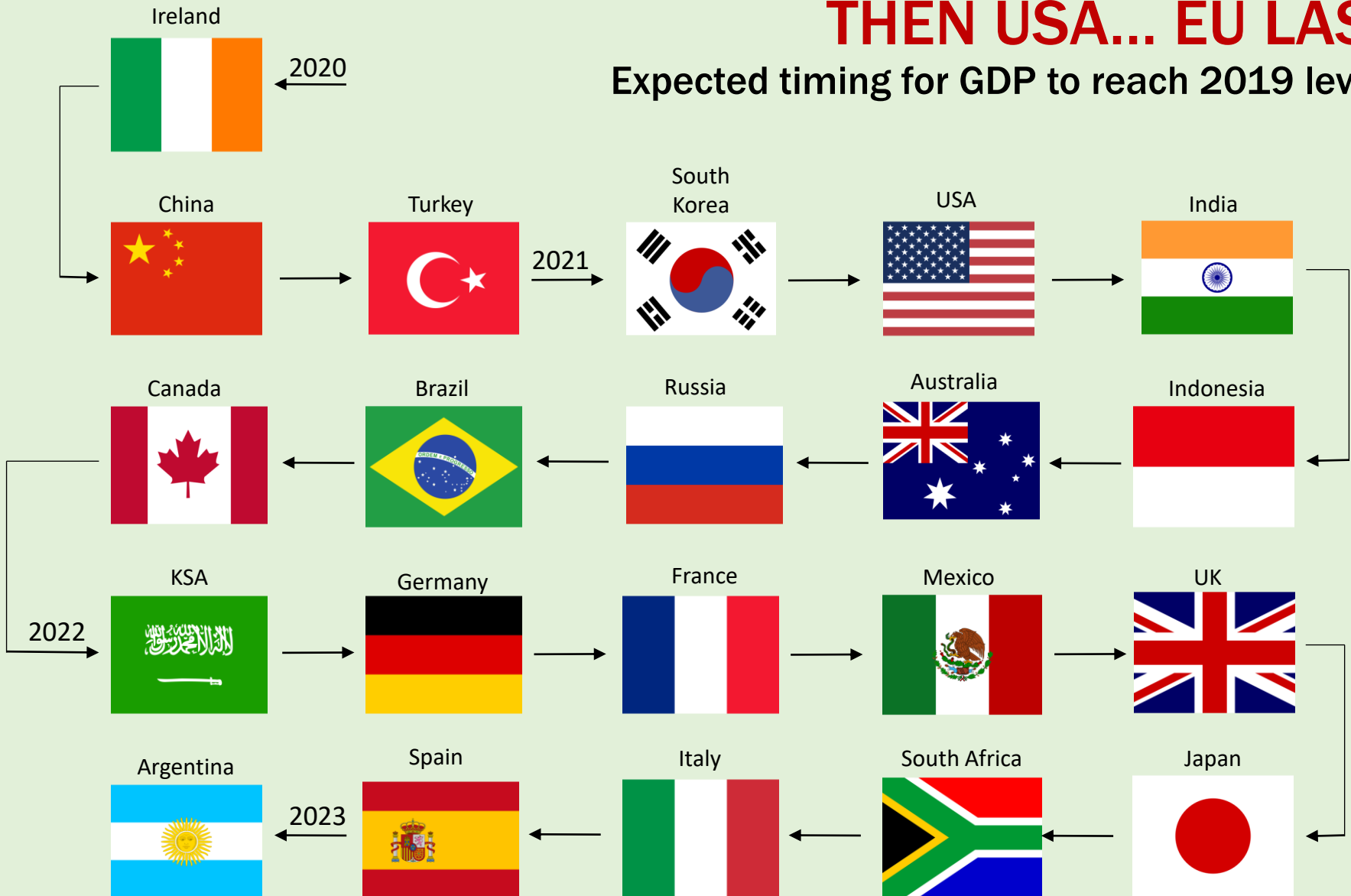


(1) First 6 months of vaccines inoculation

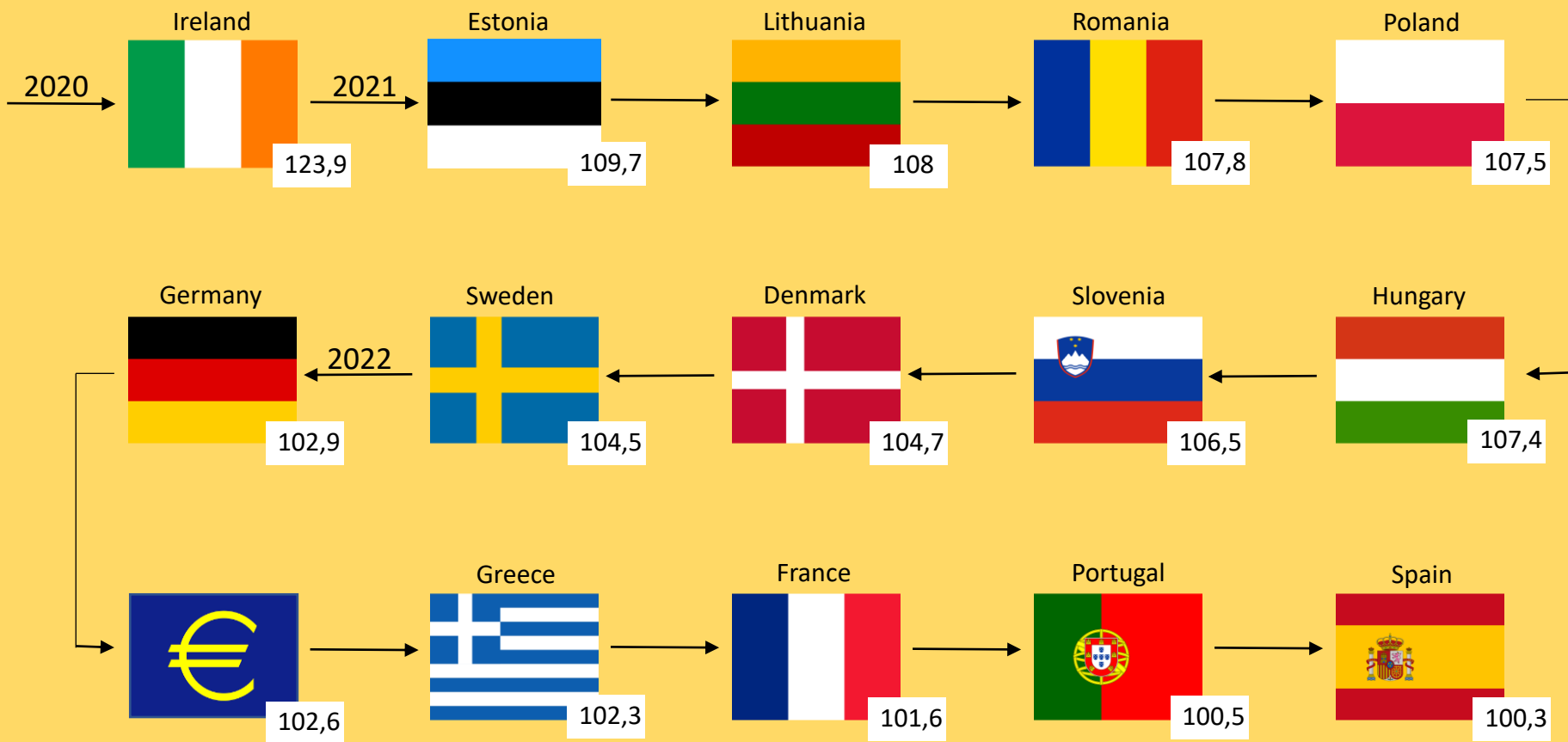
(2) How close from fully vaccination: China 72,6%, EU 63,6%, USA 55,7% (according to Our World in Data, as of October11, 2021)

RECOVERY: FIRST CHINA, THEN USA... EU LAST

Expected timing for GDP to reach 2019 levels

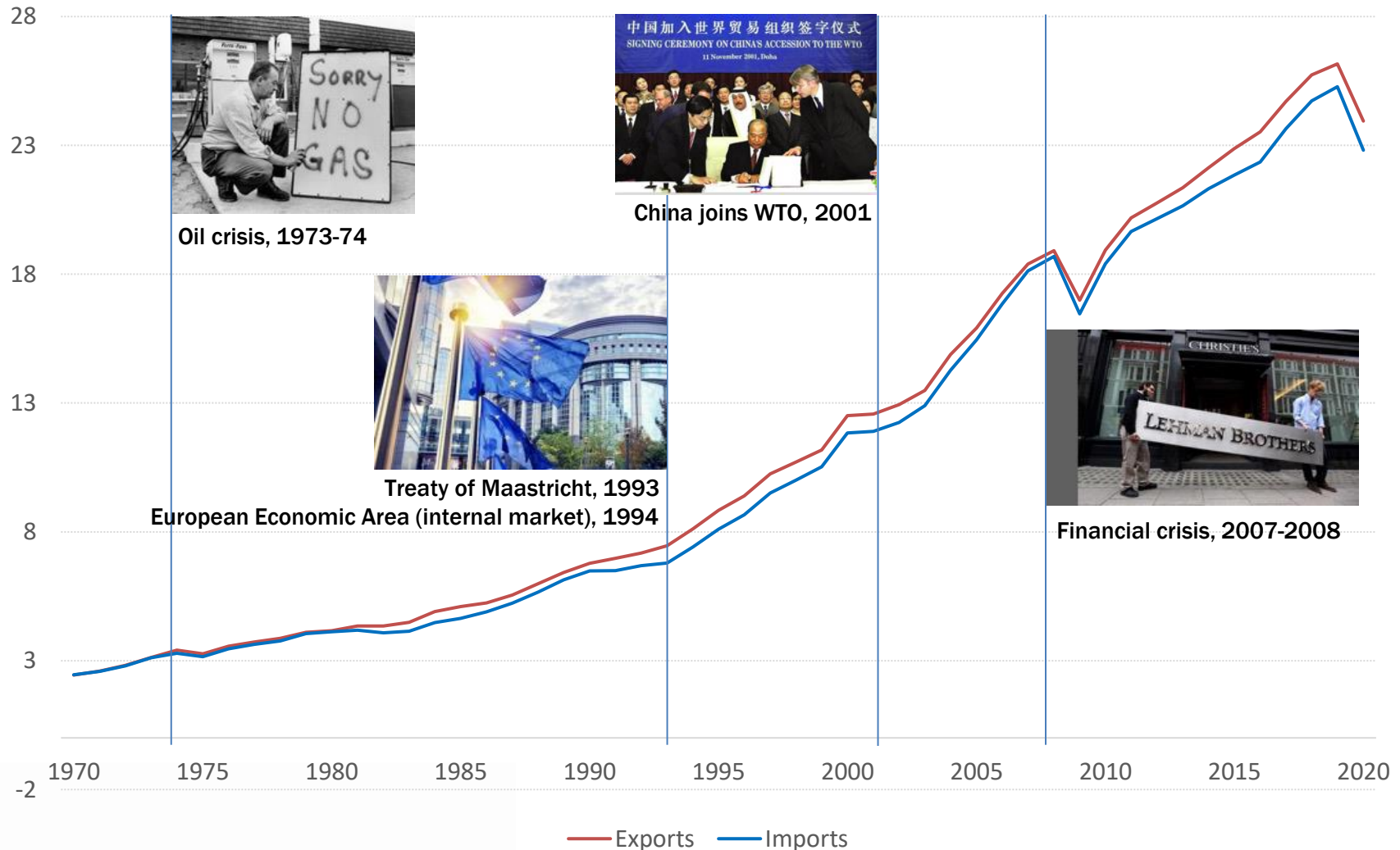


THREE EU SPEEDS: IRELAND, EAST AND NORDIC, SOUTH



THE RAPID GROWTH OF WORLD TRADE

World exports and imports of goods and services (constant 2010 trillion USD), 1970-2020



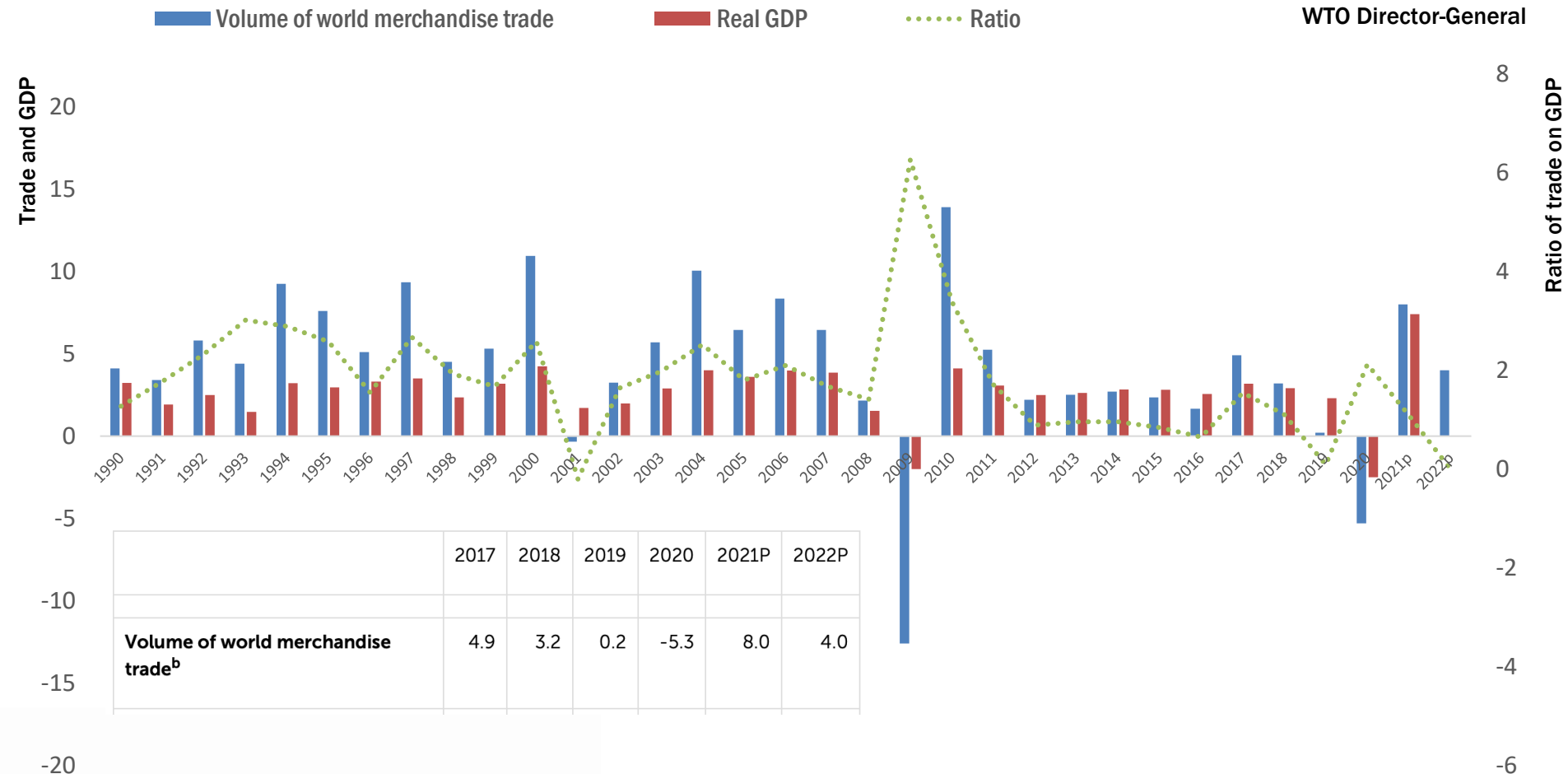
Source: The World Bank, 2021.

TRADE IS THE BOOSTER OF GLOBAL ECONOMY: WTO SCENARIOS

World merchandise trade volume and real GDP growth (%), 1990-2022



Ngozi Okonjo-Iweala
WTO Director-General



Note: GDP is measured at market exchange rates. Data for 2020 and 2021 are projections.

Source: WTO for trade, IMF for GDP, March 2021.

WHY ARE THERE NO LOCAL CRISES?

THE IMPACT ON MANUFACTURING

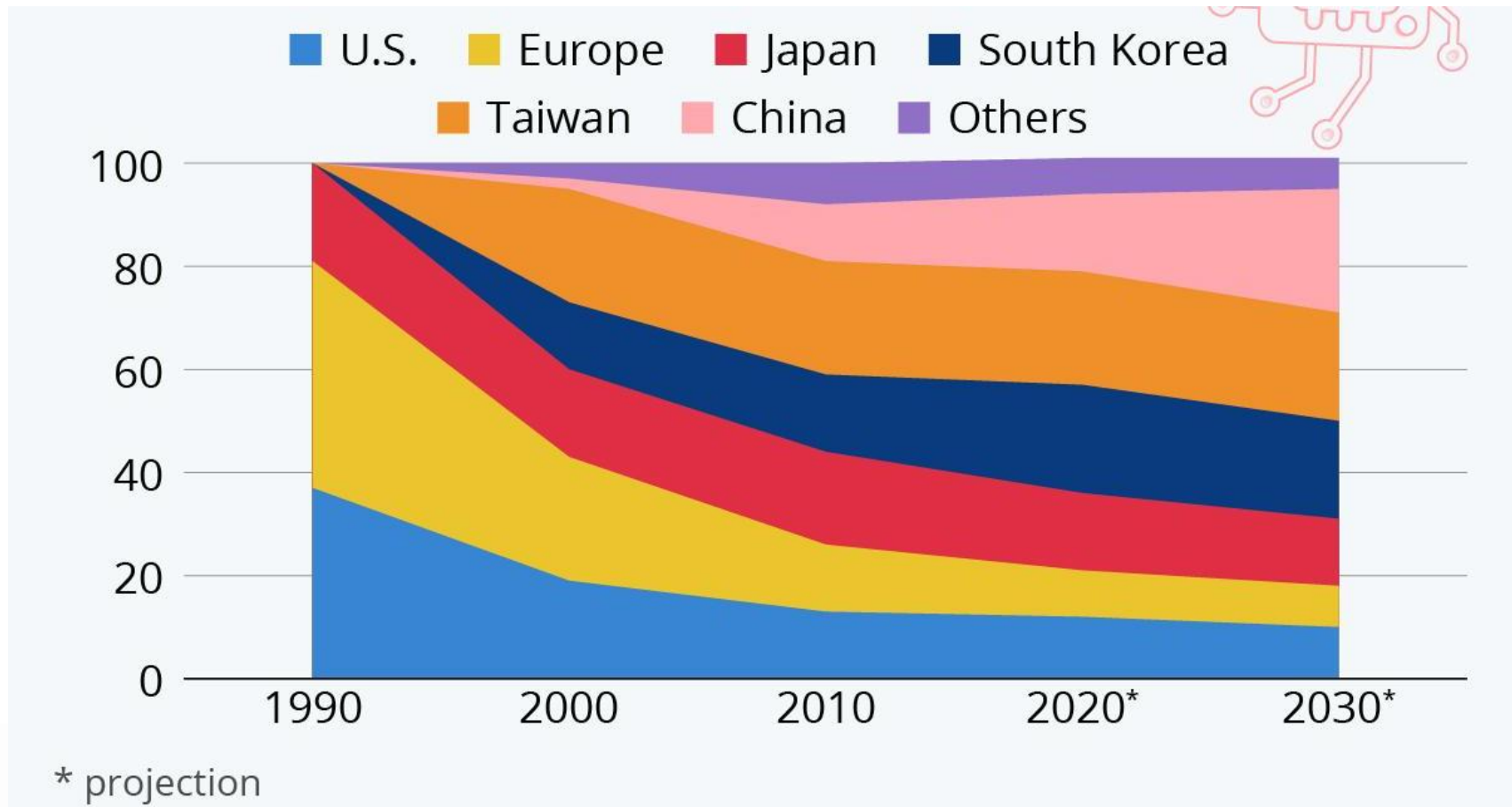
Chinese share in global production, exports and consumption - by economic sector

	PRODUCTION	EXPORTS	CONSUMPTION
COMPUTERS	49%	30%	38%
ELECTRICAL EQUIPMENT	59%	28%	54%
MACHINERY	47%	28%	44%
CARS	33%	5%	33%
TEXTILES	58%	32%	46%
CHEMICALS	42%	12%	40%

Source: McKinsey, 2020.

CHIP PRODUCTION SHIFTS AWAY FROM TRADITIONAL STRONGHOLDS

Global semiconductor manufacturing by location (in percent)



Source: BCG, 2021.

THE NIKE STORY: CHRISTMAS AT RISK BECAUSE OF EXCESSIVE DEPENDENCE ON... VIETNAM



**1.2M jobs
(5k in US only)**

**50% of tennis
from Vietnam**

**Transport: from
40 to 80 days**

**Factories
confined
(10 weeks)**

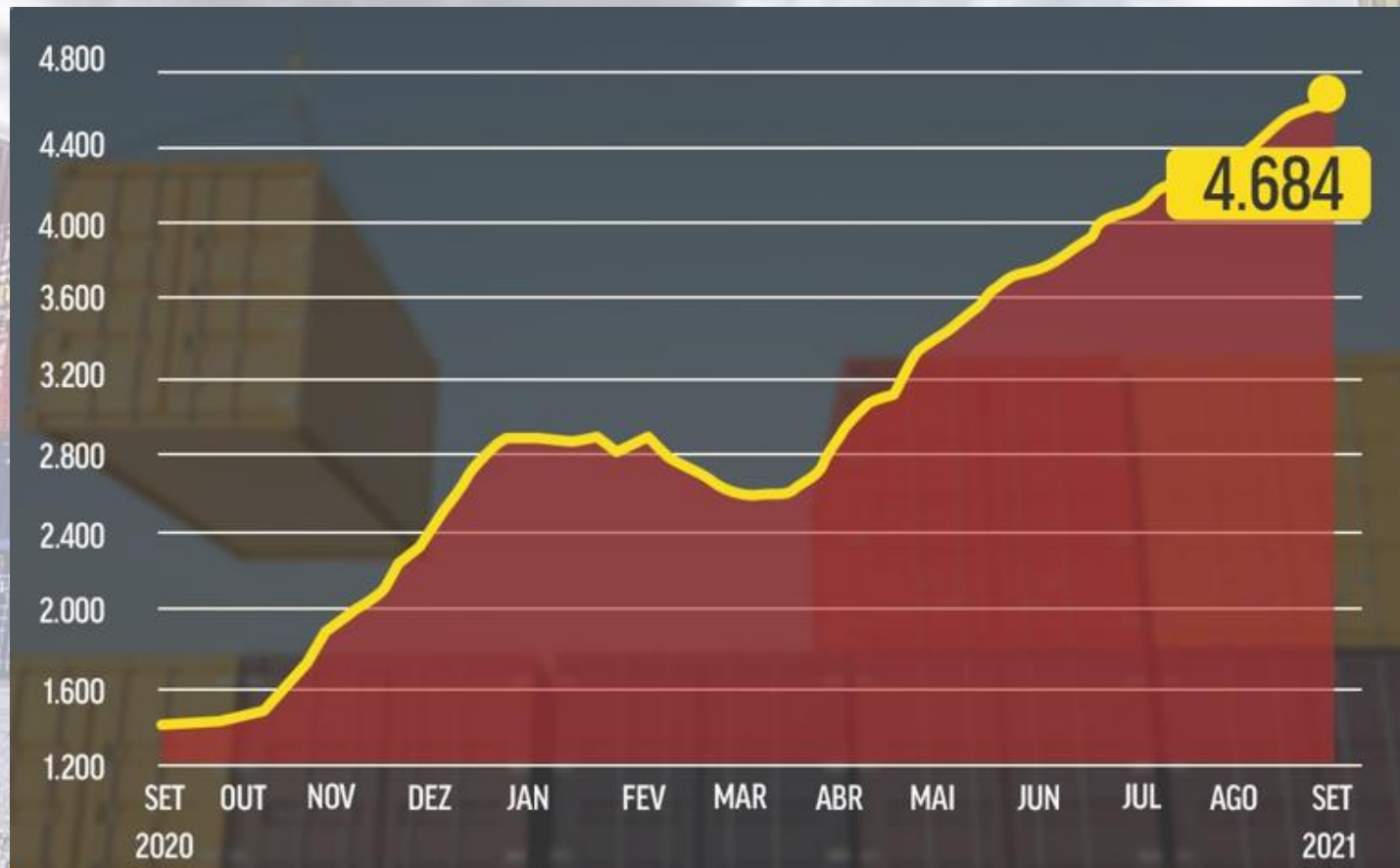
ECONOMY OF SCARCITY: HOW TRANSPORT PRICES (AND CALENDARS) ARE DISTURBING MARKETS

Shanghai - Rotterdam +528%

Shanghai - LA +217%

Shanghai - Genova +384%

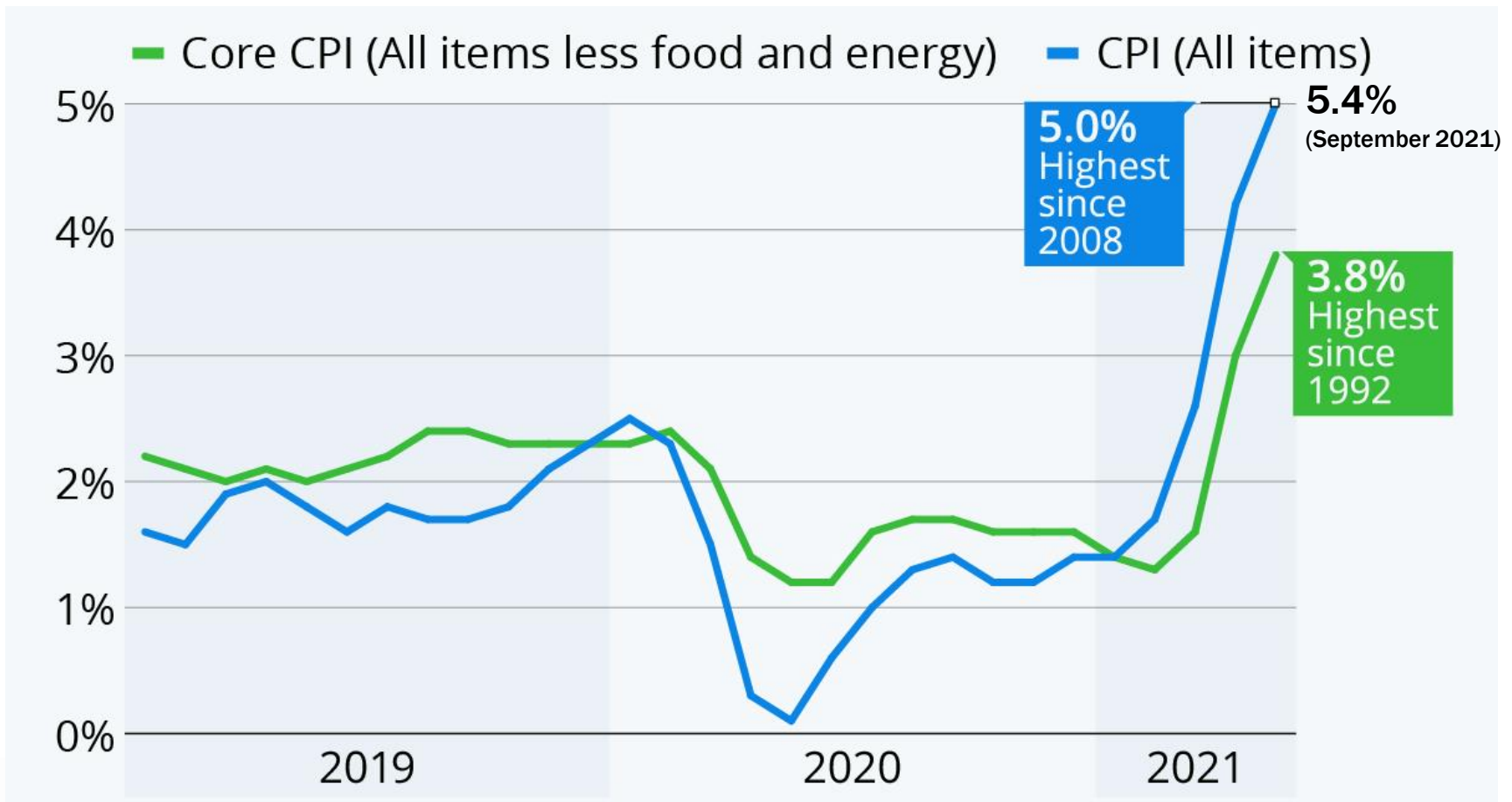
Shanghai - NY +236%



Source: El Mundo 03/10/2021

CORE INFLATION SHOOTS TO HIGHEST LEVEL SINCE 1992: FACING AN OVERALL PRICE INCREASE

Year-over-year change in the Consumer Price Index for all urban consumers in the US

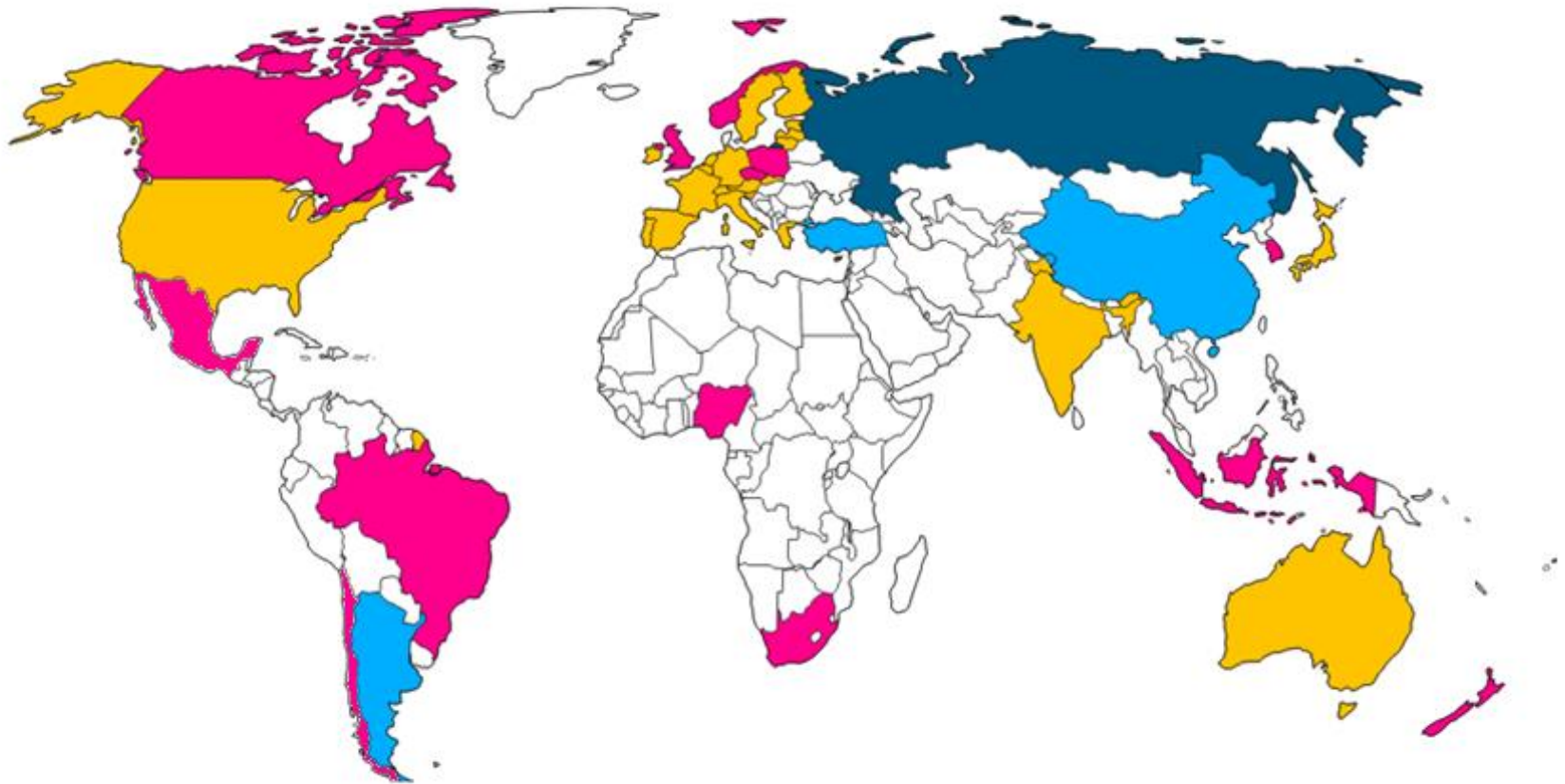


Source: Bureau of Labour Statistics, August 2021.

WITH INFLATION ACCELERATING, CENTRAL BANKS ARE REVIEWING POLICIES

FED slows asset purchase program and suggests 7 rises of interest rates till 2024 (2,5%)

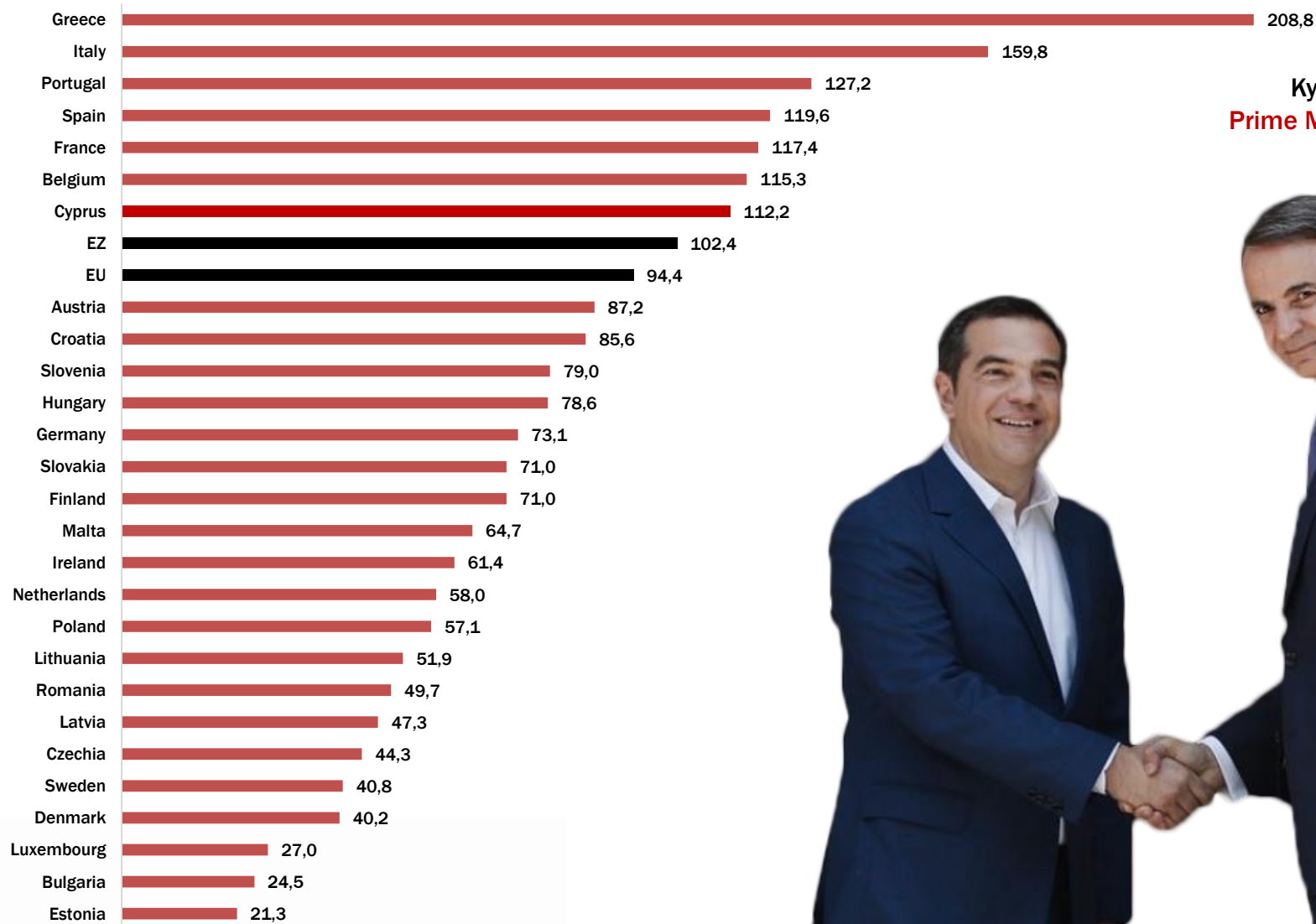
■ Unchanged ■ Hike ■ Cut ■ Hike in 2021, cut in 2022



THE NEW DEBT CLUB

AND THE CHALLENGE OF BALANCED PUBLIC FINANCES

Estimated public debt-to-GDP, 2021



Kyriákos Mitsotákis
Prime Minister of Greece
since July 2019



Source: European Commission, 2021. Spring Forecast, as of May 2021.

\$30 trillion Total Debt

1 block = \$3 Billion

HOW DID WE GET HERE?

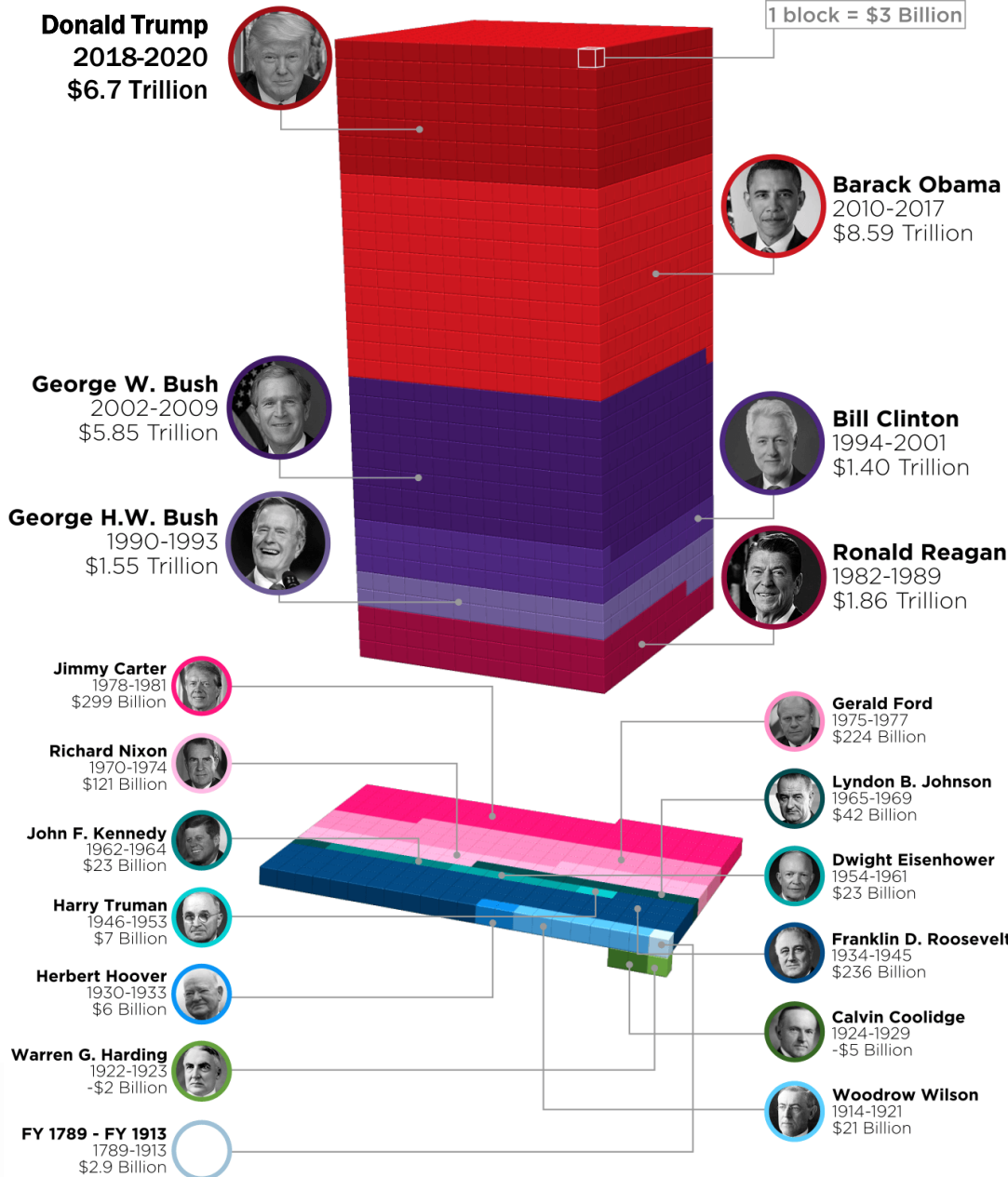
Government borrowing has ballooned as a percentage of GDP over the last decade.

It started during the Great Recession, when the government passed several stimulus measures to resuscitate the economy.

The national debt should have subsided as tax revenues recovered, but massive tax cuts in 2017 only added more red ink.

All that debt is only sustainable if interest rates remain as low as they have been on account of the Federal Reserve's prolonged strategy of buying US Treasuries in order to stimulate the economy.

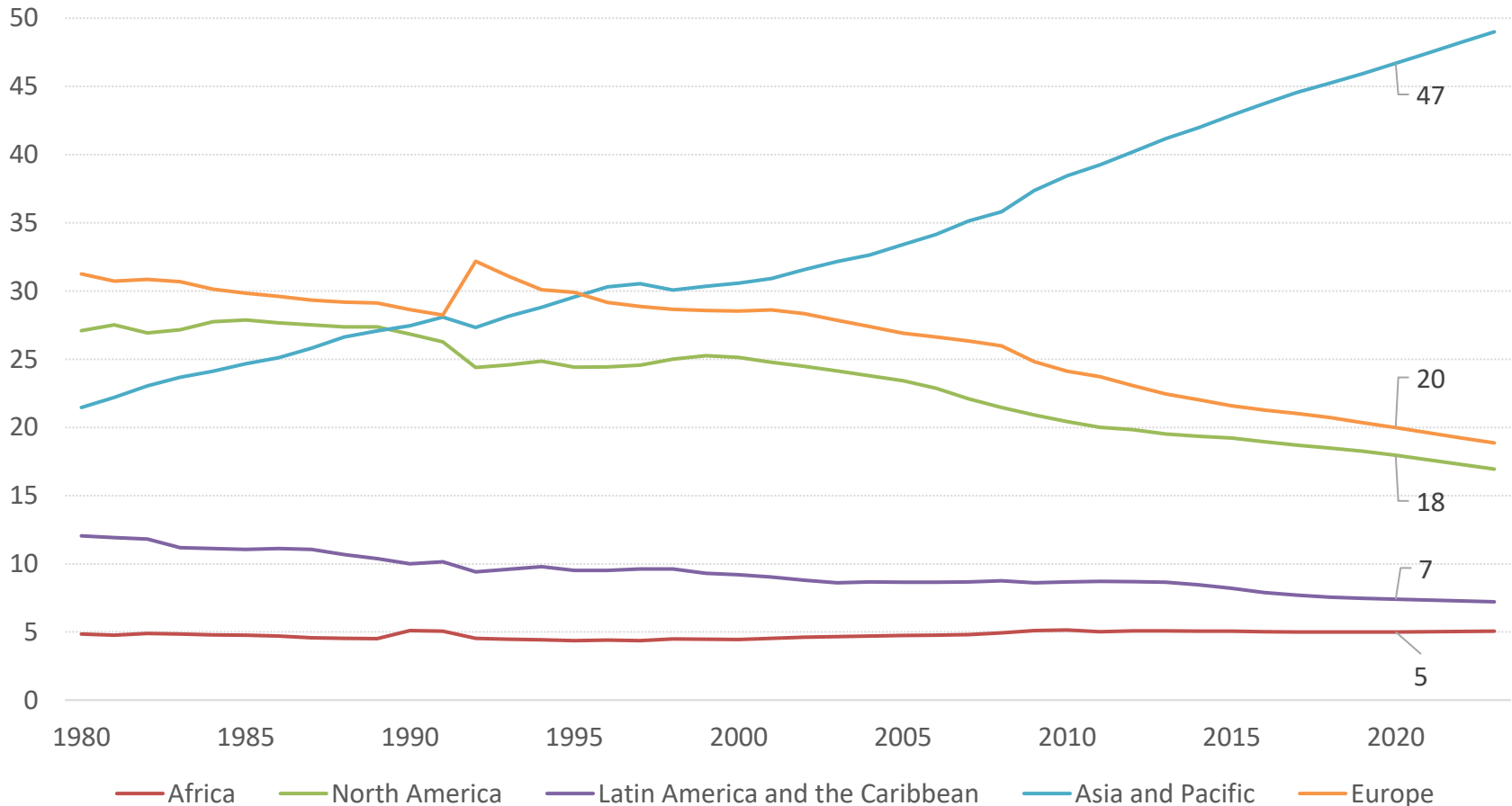
But an interest rate shock would swamp many deeply indebted companies in short order.



Source: US Department of the Treasury, 2021. 2021 would be adding \$2tr to the total estimate of \$30tr.

THE NEW SHARE OF WORLD GDP

Share of global real GDP PPP (%)

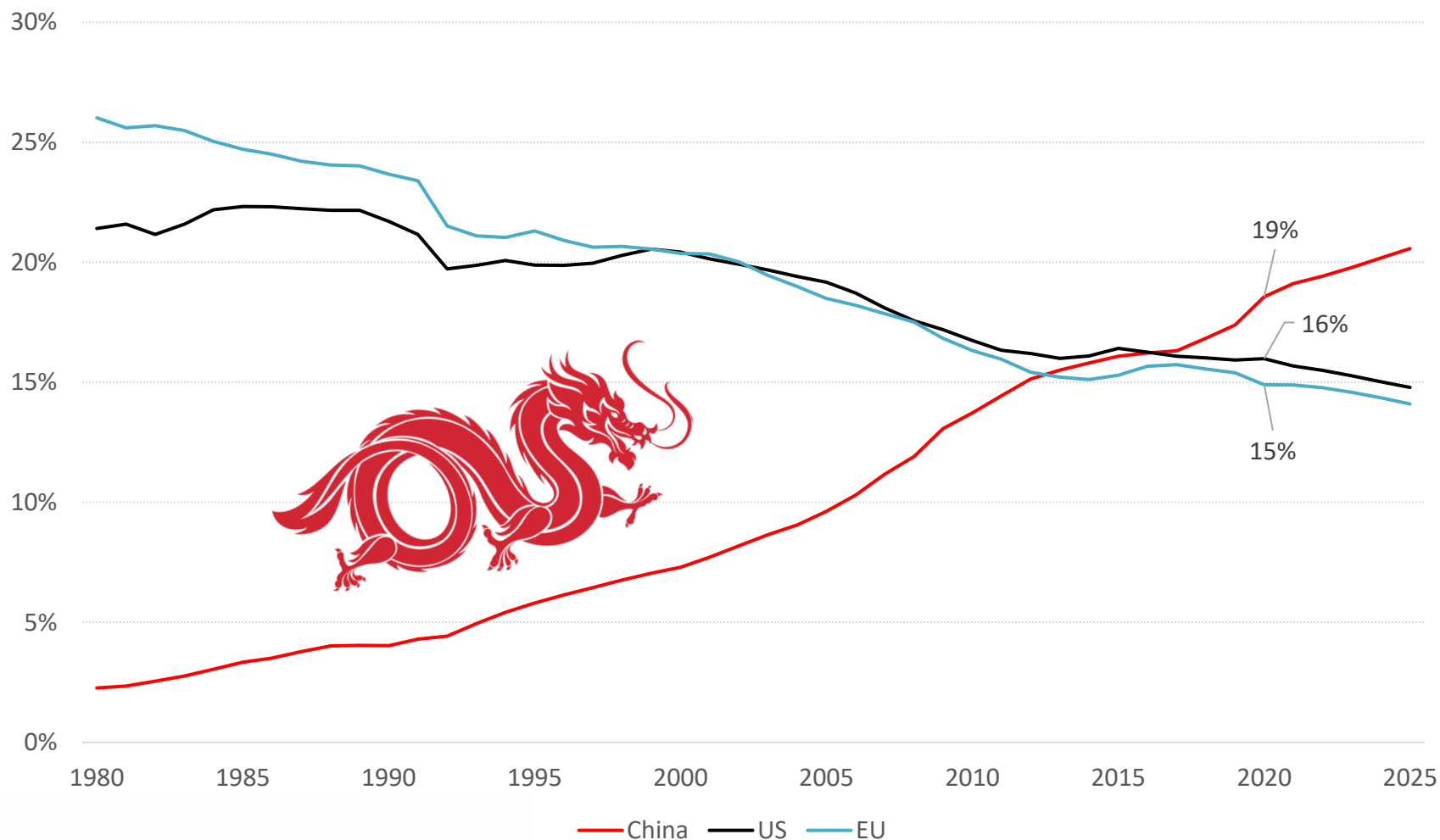


The chart above shows the percentage share of world's real GDP split by continents, and illustrates that the share of world's real GDP in the Asian region grew considerably faster than all other continents, from 16.8% in 1960 to 46.7% in 2020. Projections until 2023 show trends being reinforced.

Source: IMF, 2021.

CHINA'S SHARE OF WORLD GDP

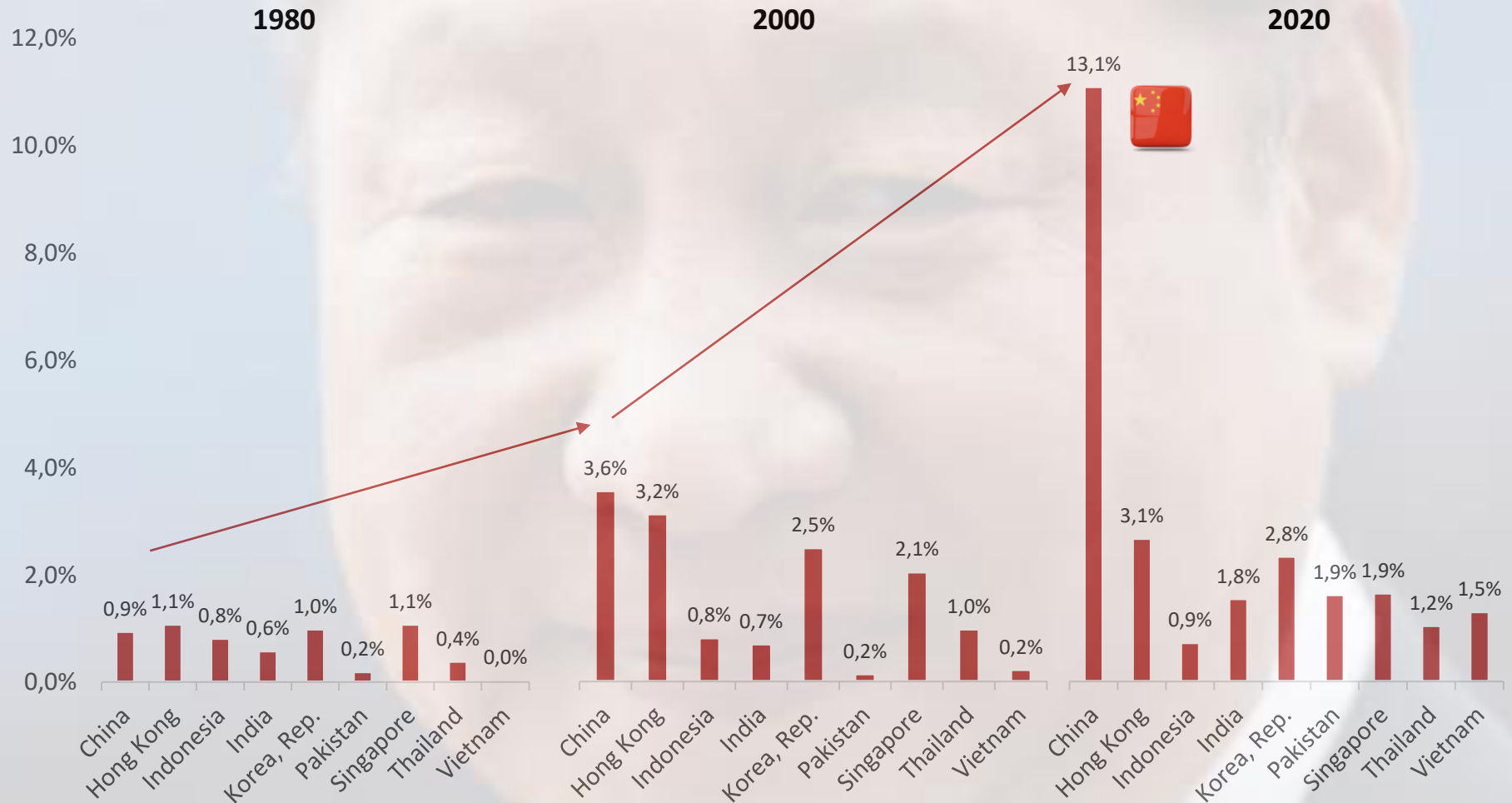
Share of global real GDP PPP (%)



Source: IMF, 2021. Highlighted number for 2020. Projections until 2025.

OLD PLAYERS AND... CHINA

Selected WTO Members Merchandise Trade (% global trade)



Source: The World Bank, 2021.

CHINA USURPS THE US AS DOMINANT EXPORTER

US or China as larger supplier of goods, 2000



Source: FT, 2020

CHINA USURPS THE US AS DOMINANT EXPORTER

US or China as larger supplier of goods, 2019

2019

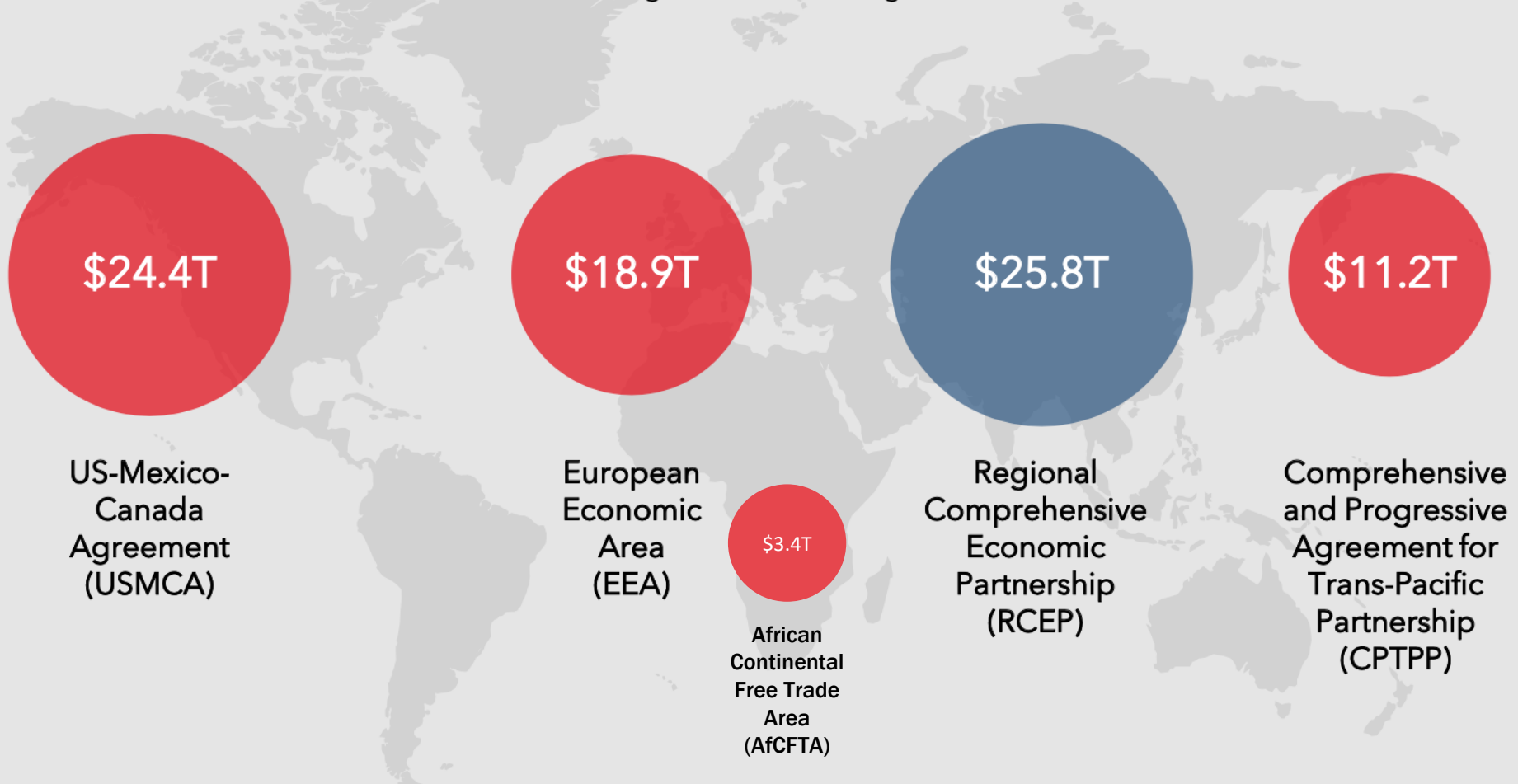


Source: FT, 2020

ASIA-PACIFIC FORMS WORLD'S LARGEST TRADE BLOC

In the weeks following the November 2020 US election, 15 Asia-Pacific countries representing 30% of global GDP signed the world's largest free trade agreement, called RCEP

Total 2019 GDP of member countries of selected regional free trade agreements



Source: The World Bank, 2021.

E-WORLD: GUESS WHO?

Market capitalization of the largest internet companies worldwide (bn USD)

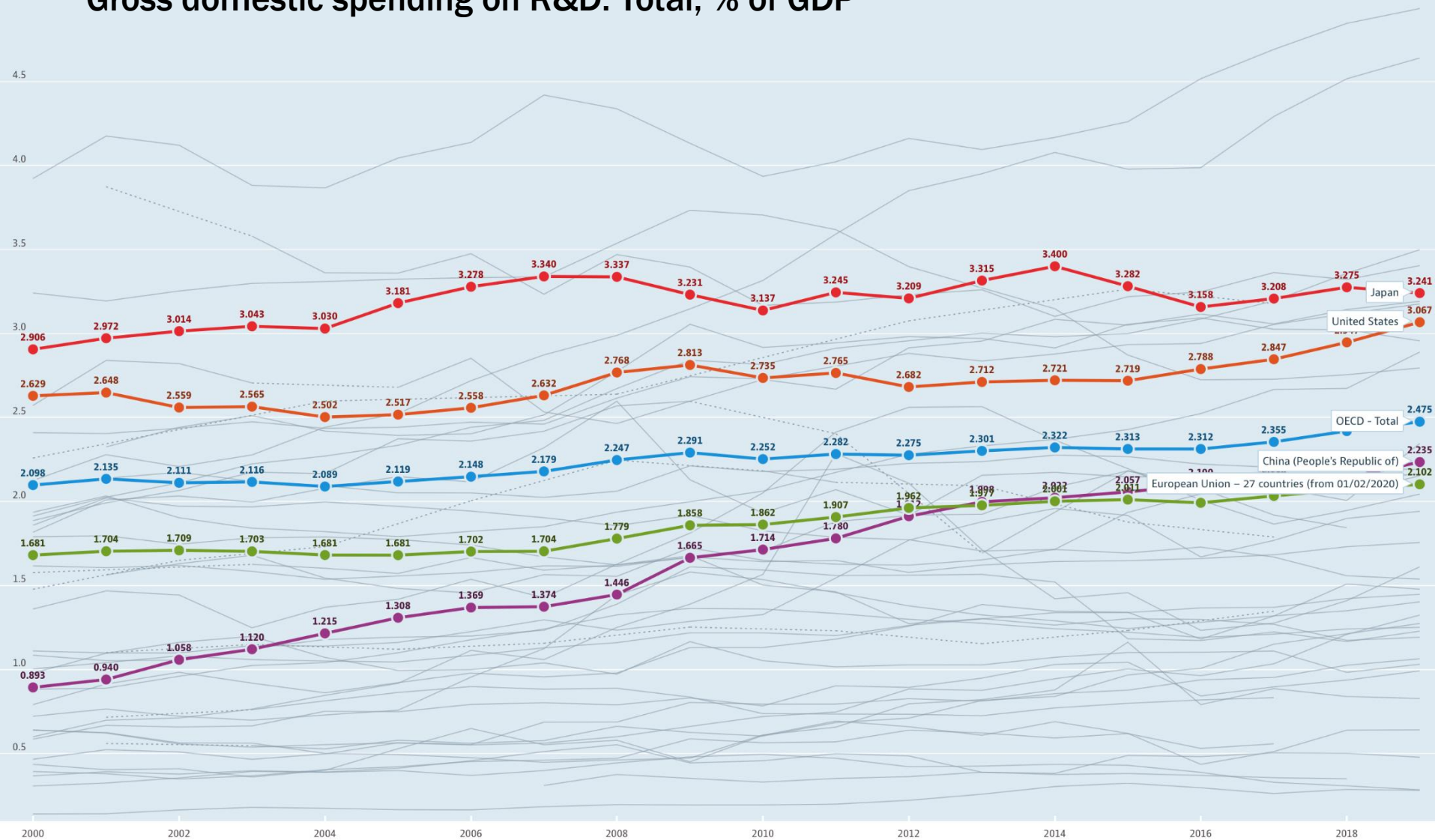


Source: YCharts, 2021. As of August 27, 2021.

Note: Ant Financial projected valuation expressed in view of its (failed) potential IPO.

CHINA'S GAINING MOMENTUM

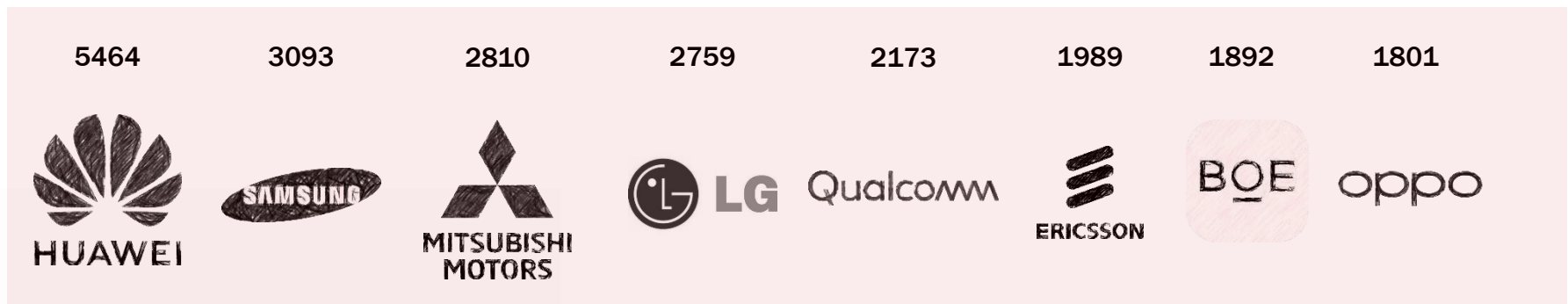
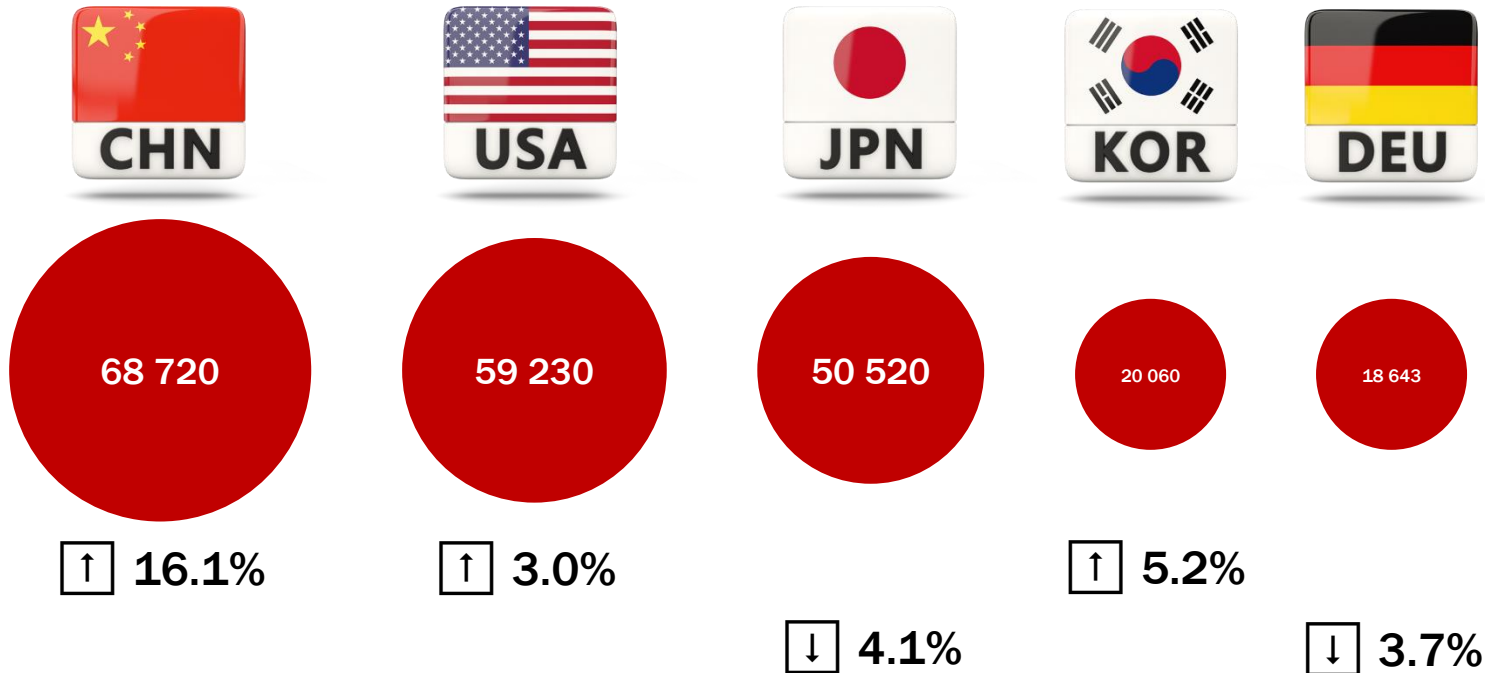
Gross domestic spending on R&D. Total, % of GDP



Source: OECD, 2021.

CHINA OVERCOMES THE US IN PATENTS

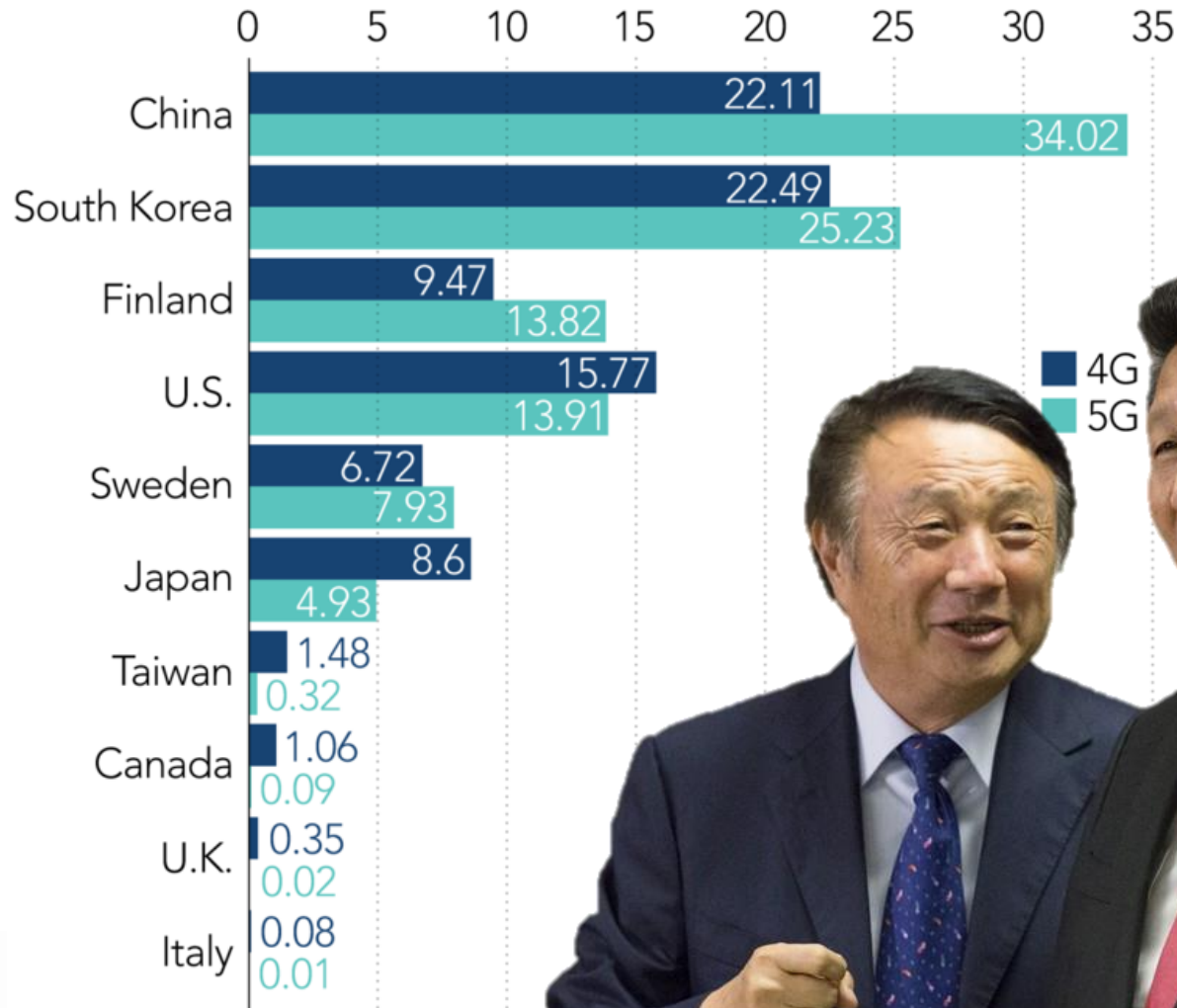
In 2020, China increased by 16.1% the number of patents. US led the ranking 1978-2018



Source: World Intellectual Property Organization, 2021.

WHERE 4G AND 5G PATENT HOLDERS COME FROM

In percent



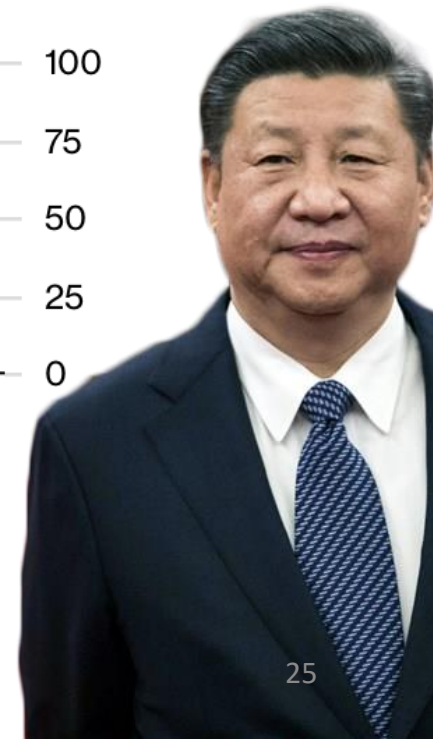
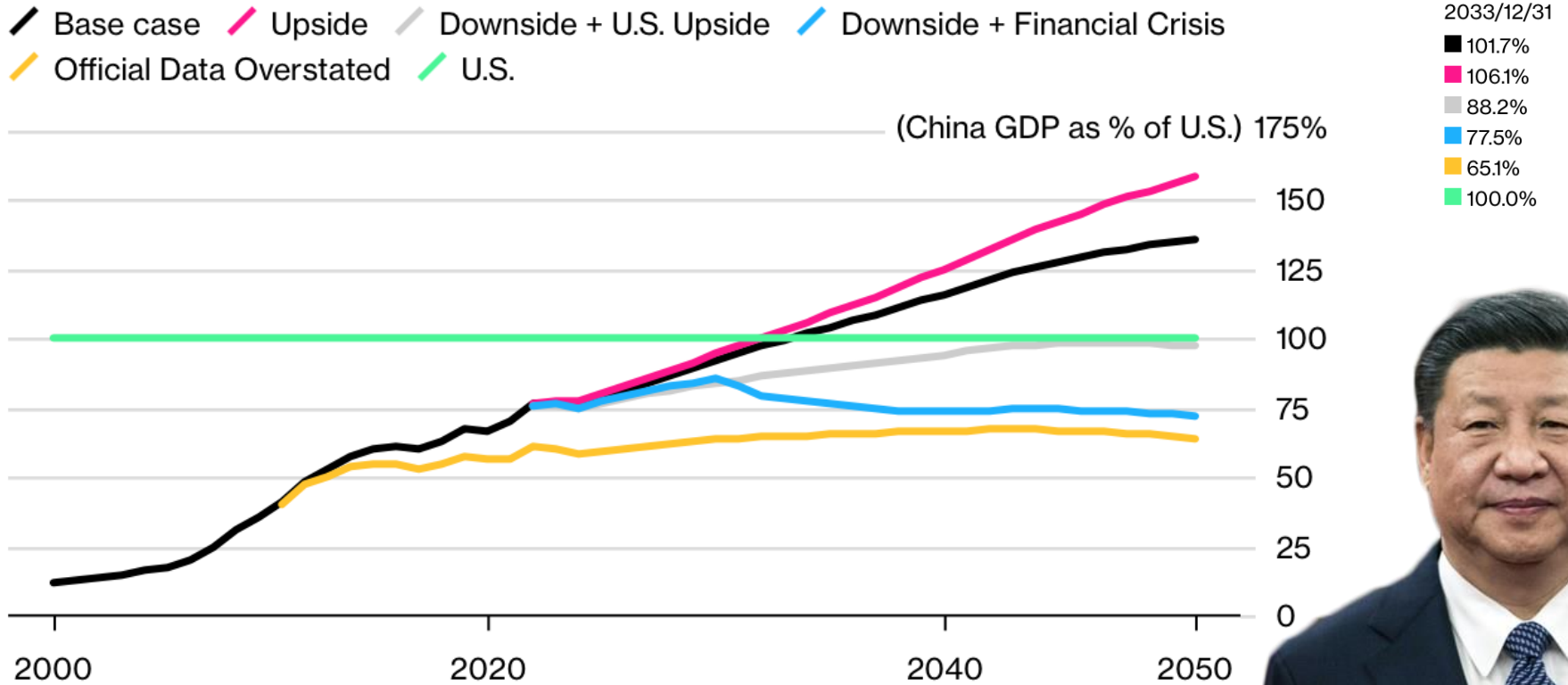
Huawei CEO, Ren Zhengfei (left)
China's President, Xi Jinping (right)



Source: Nikkei, 2020.

CHINA AS NUMBER 1?

Reform failure, international isolation, and financial crisis could halt China's rise

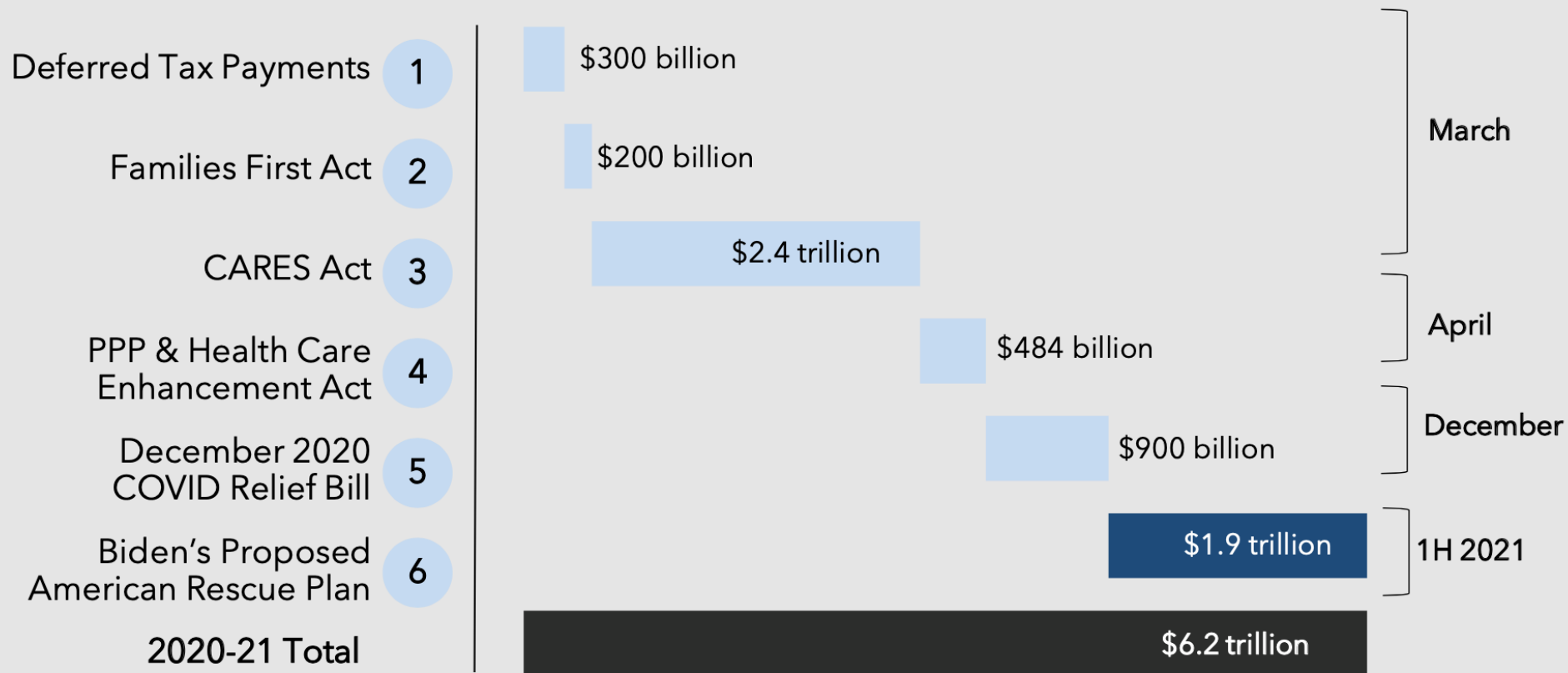


Xi Jinping
President of China
since 2012

Source: Bloomberg Economics, 2021.

THE ECONOMIC PLAN TO FIGHT COVID-19

In 2020, the US Congress and Treasury Department facilitated \$4.3 trillion of COVID related fiscal stimulus, already the largest stimulus in history at close to 20% of GDP. President Biden has released a plan for an additional \$1.9 trillion of stimulus that he hopes to pass in the first half of 2021.



STIMULUS PLANS: CASH, GRANTS, LOANS AND... SPEED

CASH TOTAL
AMOUNT



787b EUR

RECOVERY
PLAN AMOUNT



750b EUR

FIRST CASH



(MARCH 2020)

300b USD

1200 + 500 USD

SECOND CASH



(DECEMBER 2020)

166b USD

600 + 600 USD

SECOND CASH



(DECEMBER 2020)

THIRD CASH



(MARCH 2021)

465b USD

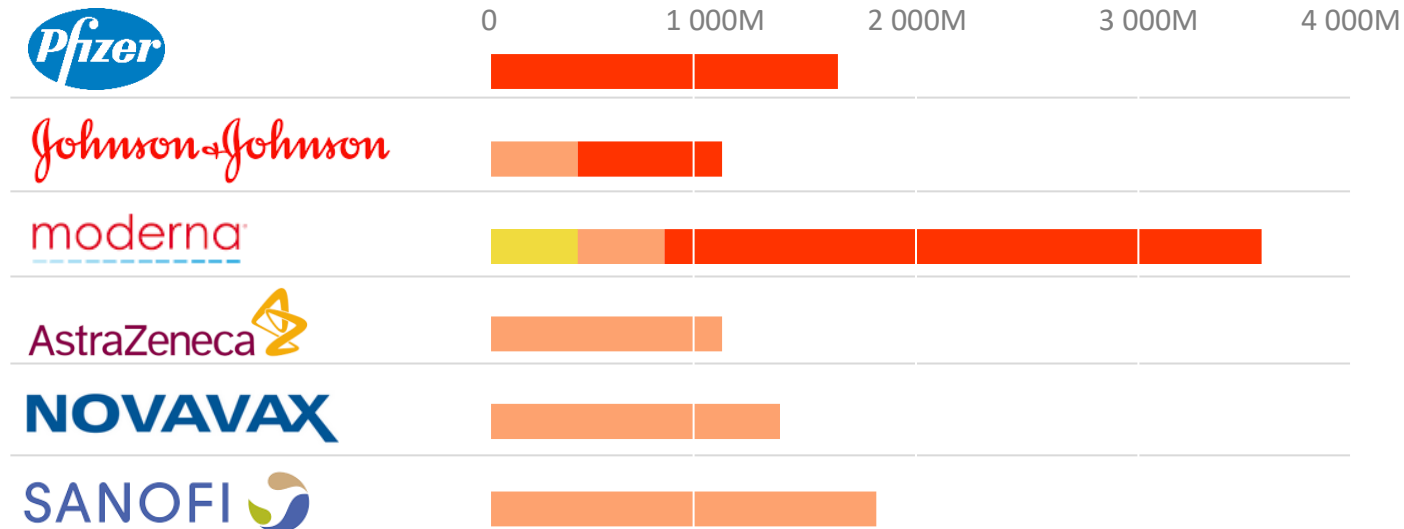
1400 + 1000 USD

USA INVESTED 4X MORE THAN EU IN R&D FOR VACCINES

12.4b
USD



2.8 B
USD (+0.5)



■ Research and Development

Source: Time, Peterson Institute (in USD), 2021.

US LOST THE LAST MILE OF VACCINATION: FACING NEGATIONISM

Source: Bloomberg (as of October 25)



72,6%



64,7%



56,7%

% of people fully vaccinated

1,05Bi

289 M

190 M

5M



3.37

4

3

2

1

0.83

0

Doses per day (million)

Jan. 10

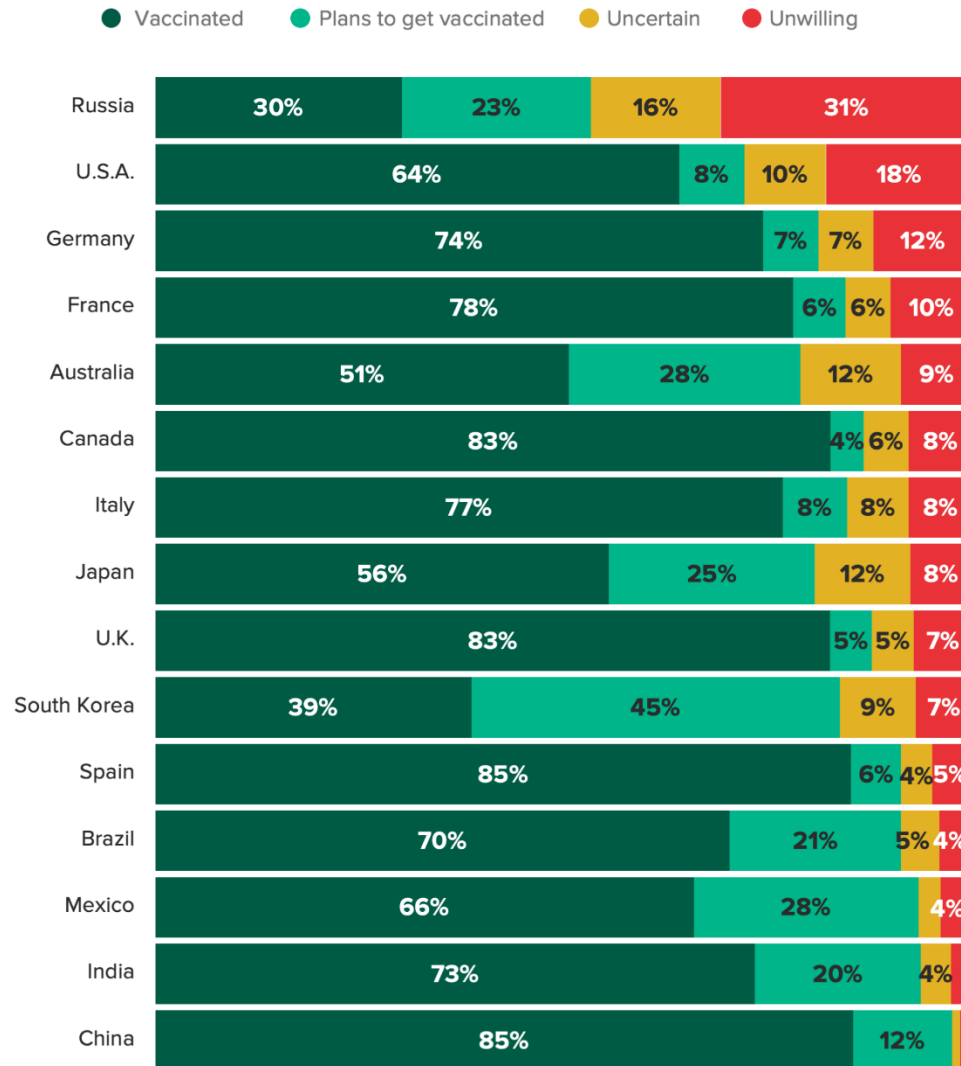
Mar. 10

May 10

July 10

Sept. 10

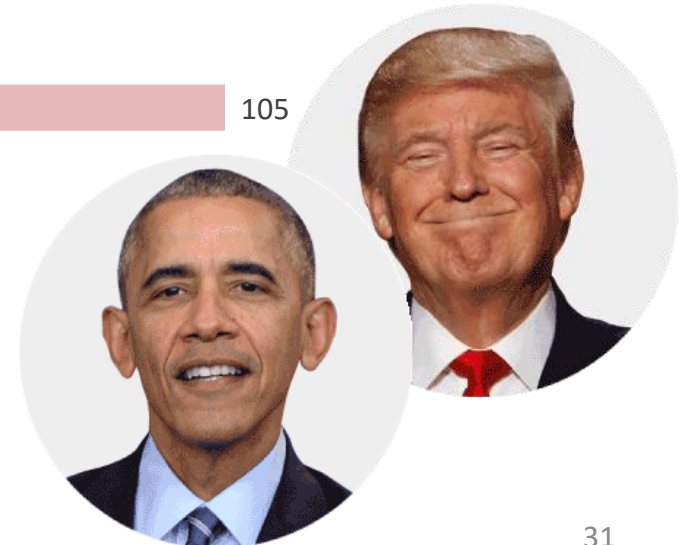
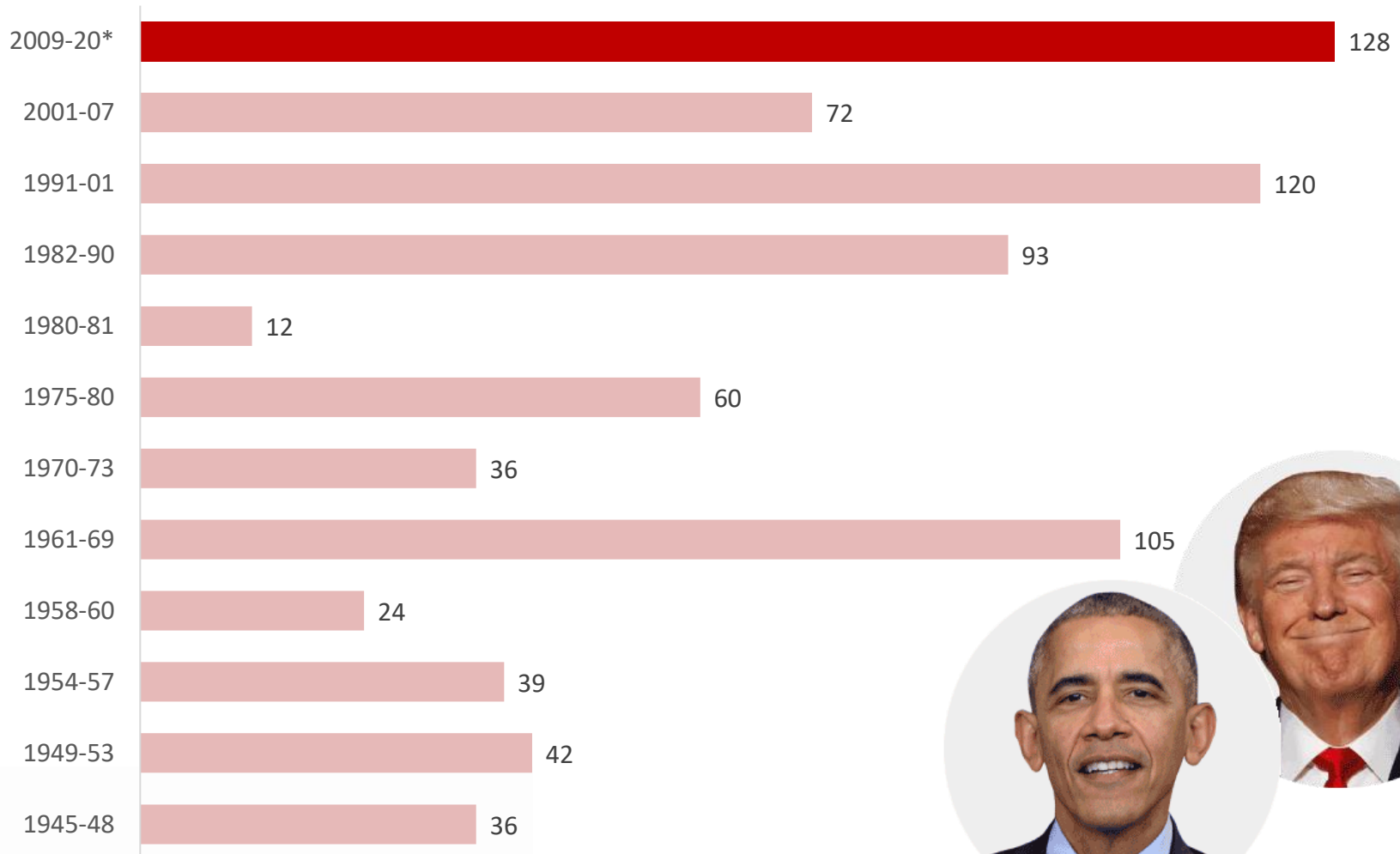
THE US HAS A HIGHER RATE OF VACCINE OPPOSITION THAN ANY COUNTRY TRACKED BESIDES RUSSIA



Source: Morning Consult, August 17-23, 2021.

LONGEST ECONOMIC EXPANSION ON RECORD ENDED BY COVID-19

Length of economic expansions, in months



Source: National Bureau of Economic Research, 2020. *Through February 2020.

SIGNALS TO THE WORLD:

PEACE WITH EU, GLOBAL TAX AND KEEP TOUGH ON CHINA



15% Global Corporate Tax (136 countries)

End of litigation Boeing - Airbus

Longer blacklist of Chinese companies

Bipartisan bill: reinforce R&D to face China

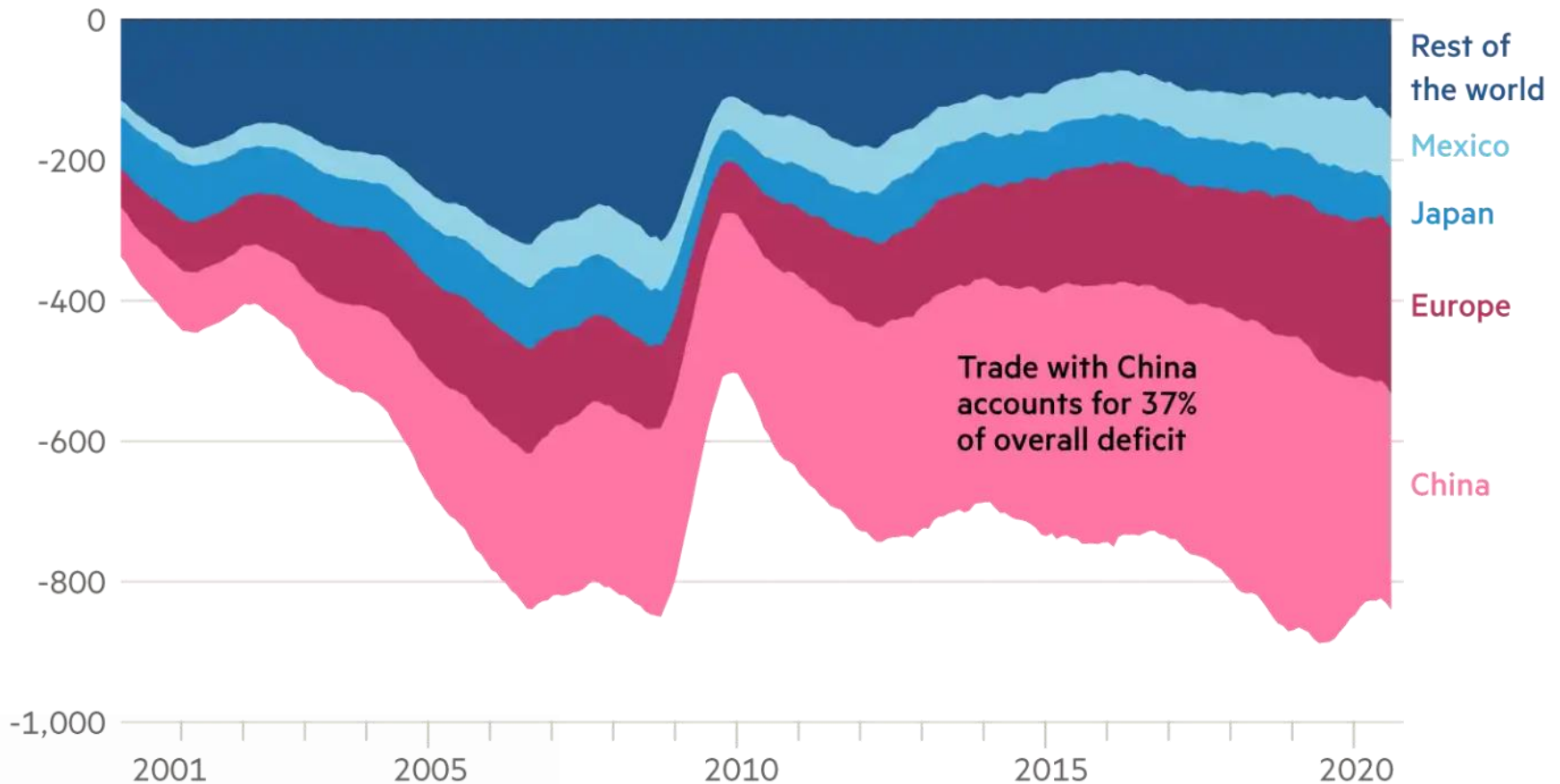
Ok to the new director of WTO

US TRADE DEFICIT WITH CHINA

Experts expect total US trade deficit to top \$1tr at the end of 2021.

In 20 years, the deficit with China went from near 0 to \$419b in 2018, then \$311b in 2020.

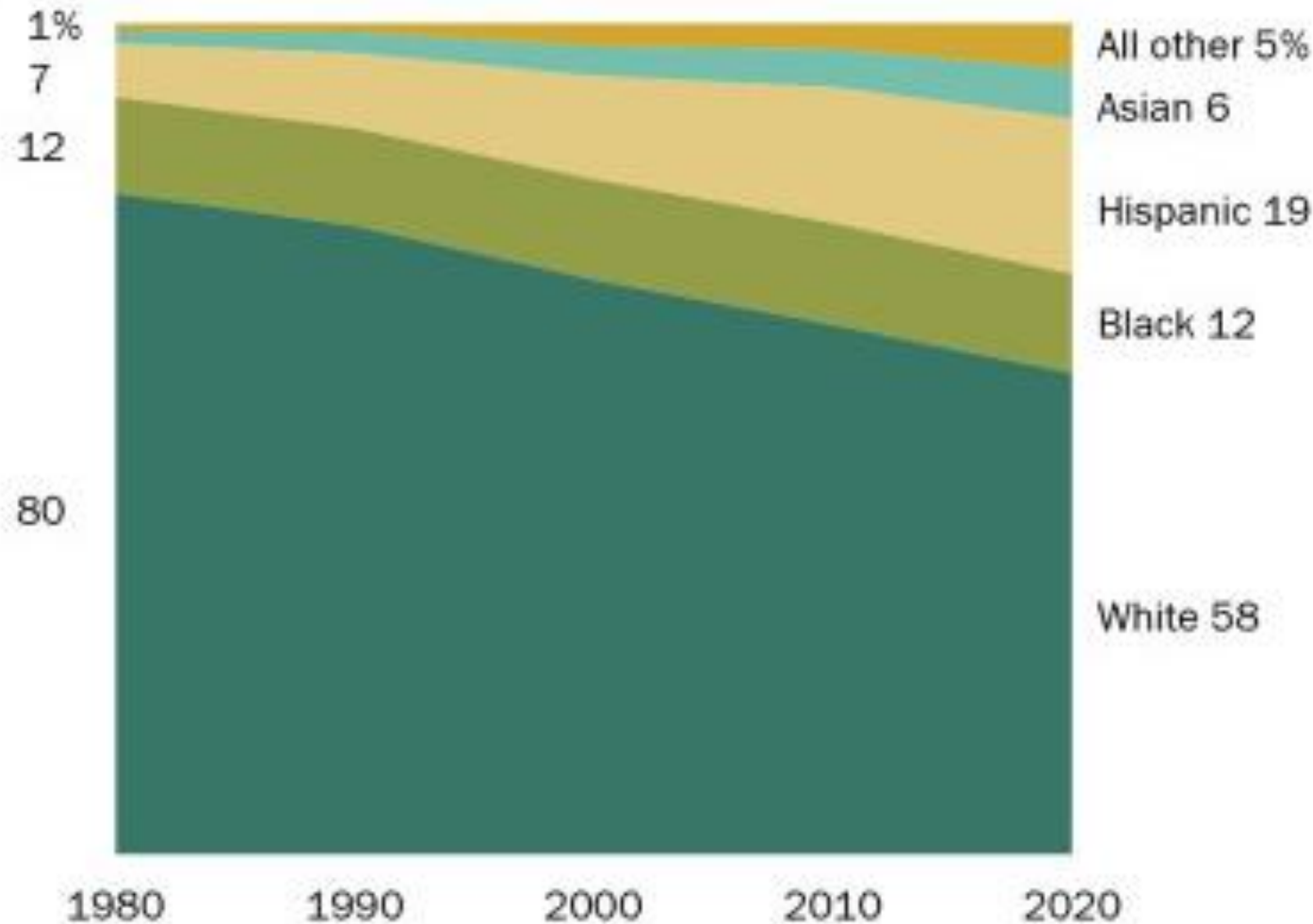
Net trade in goods, rolling 12-month total (\$bn)



Source: Foreign Trade Division, US Census Bureau, 2021.

A DIVERSE COUNTRY: WASP EXPECTED TO DECLINE TO LESS THAN HALF (44%) BY 2045

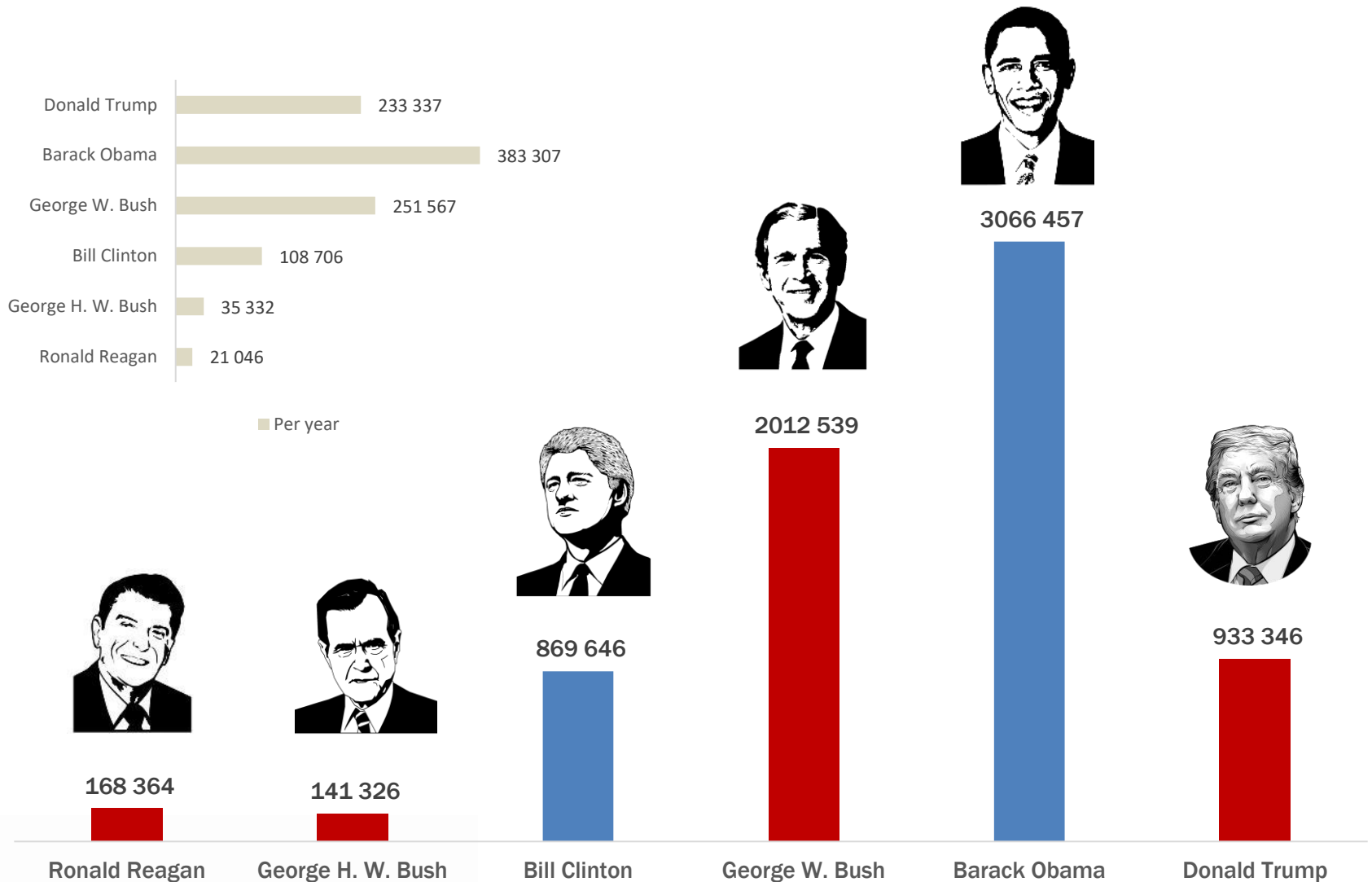
% of US population, by race and ethnicity



Source: Pew Research Center; Metropolitan Program at Brookings, August 2021.

US PRESIDENTS' *DEPORTATION* RANKING

Total Immigration Removals, by US Administration



Source: United States Department of Homeland Security, 2021.

GIVE ME YOUR FUTURE MILLIONNAIRES

How immigration boosts capitalism

FORTUNE
500

The immigrant-founded Fortune 500 by 2018 revenue

■ Founded by immigrants (100) ■ Founded by children of immigrants (123)

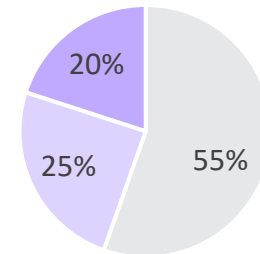
■ Non-immigrant founded (277) 🖱️ Hover for more information

IMMIGRANTS OR THEIR CHILDREN

\$6.1T

NON-IMMIGRANTS

\$7.6T



Immigrants and their children founded **45%** of the U.S. Fortune 500 companies

On average, they **employ 11% more** people than the average Fortune 500 company with a nonimmigrant founder

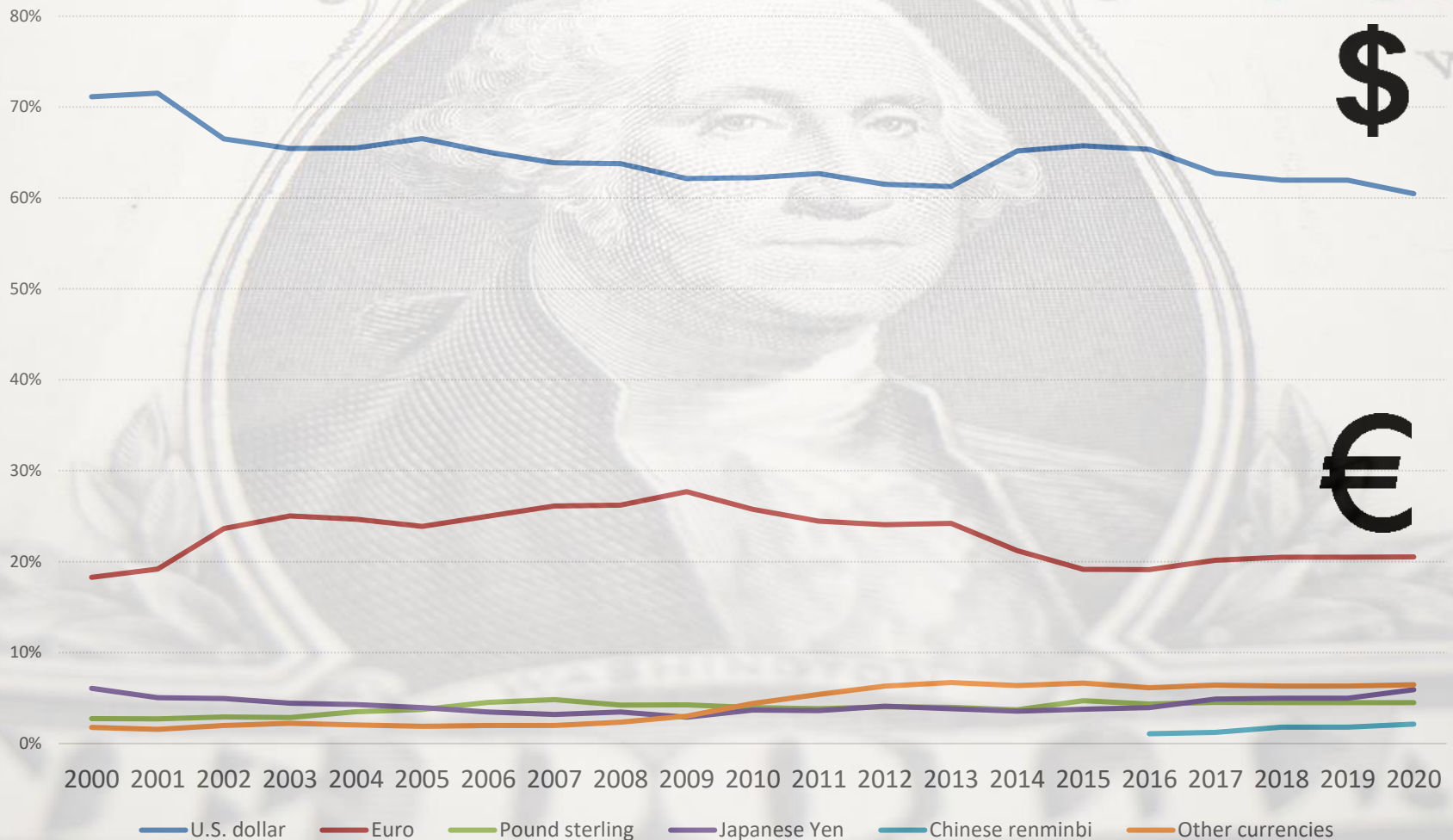
The **share of successful US companies with immigrant founders is growing**, despite the Administration making it more difficult for immigrants to come to the US



Source: New American Economy Research Fund, 2021.

THE GREAT AMERICAN POWER

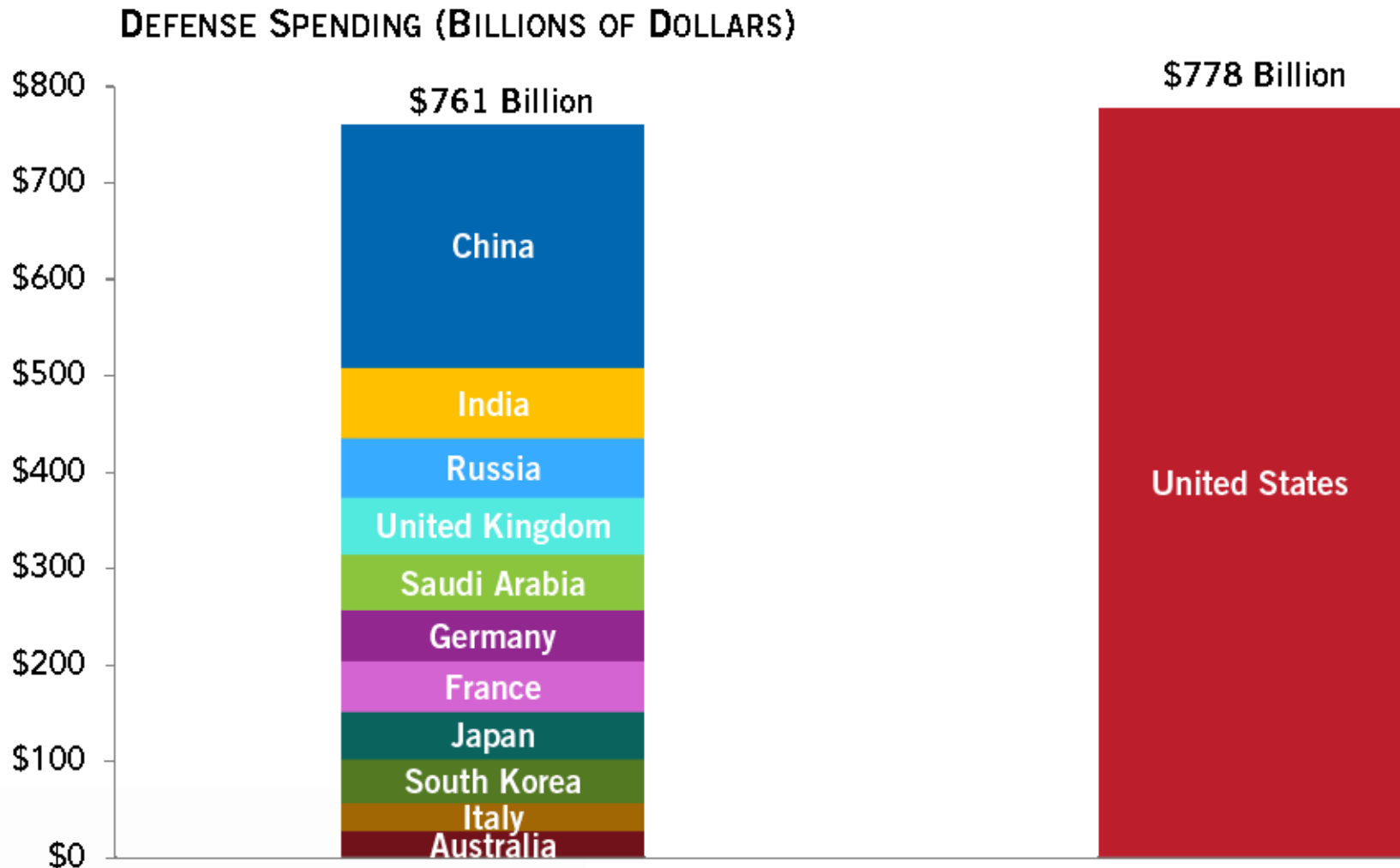
Share of currencies in global foreign exchange reserves



Source: IMF, 2021.

THE GREAT AMERICAN POWER

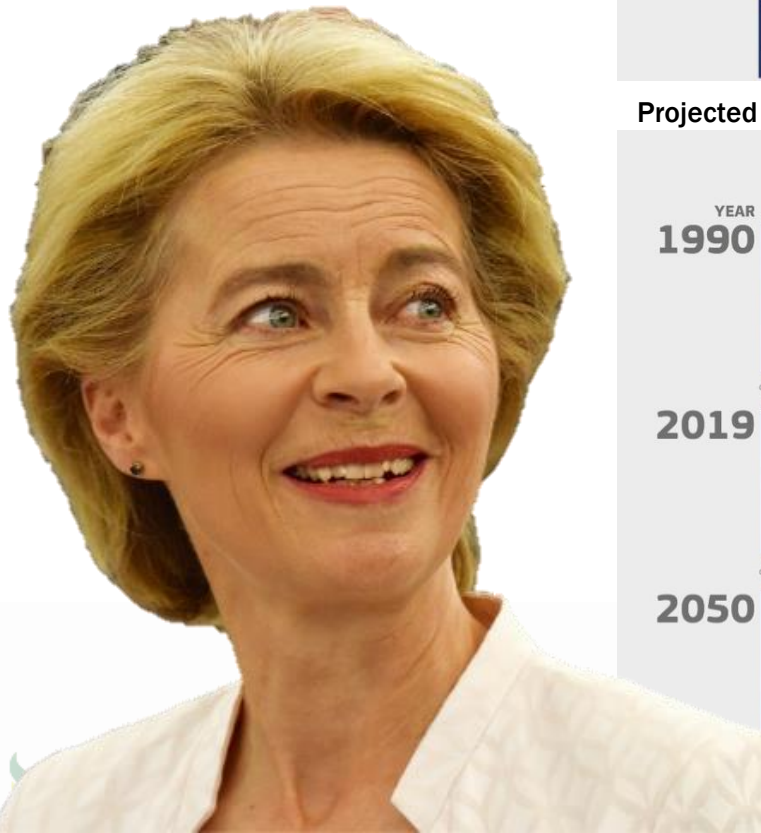
The US spends more on Defense than the next 11 countries combined



Source: Peter G. Peterson Foundation, 2021.

THE EU STRATEGIC DILEMMA

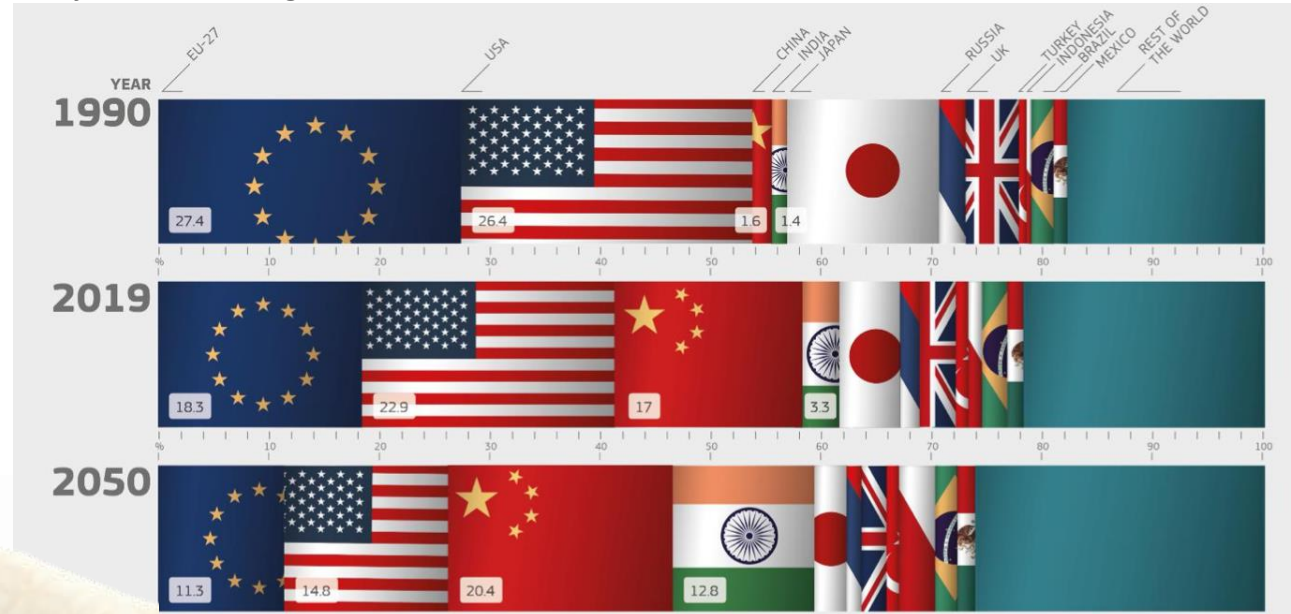
in an increasingly
multipolar global
order



Projected shares of global population



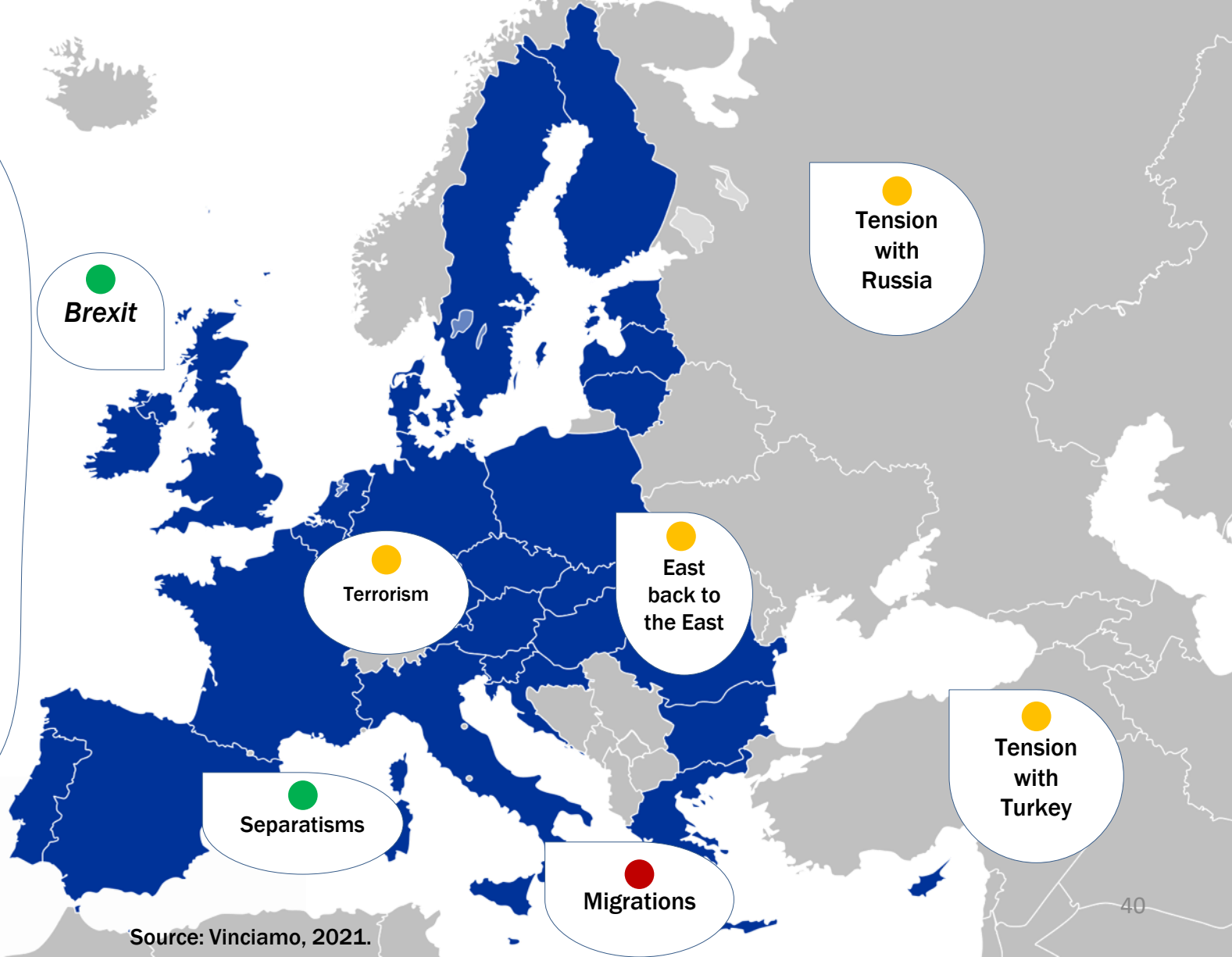
Projected shares of global GDP



Source: European Commission, 2021.

POLITICAL STRESS AND RISK

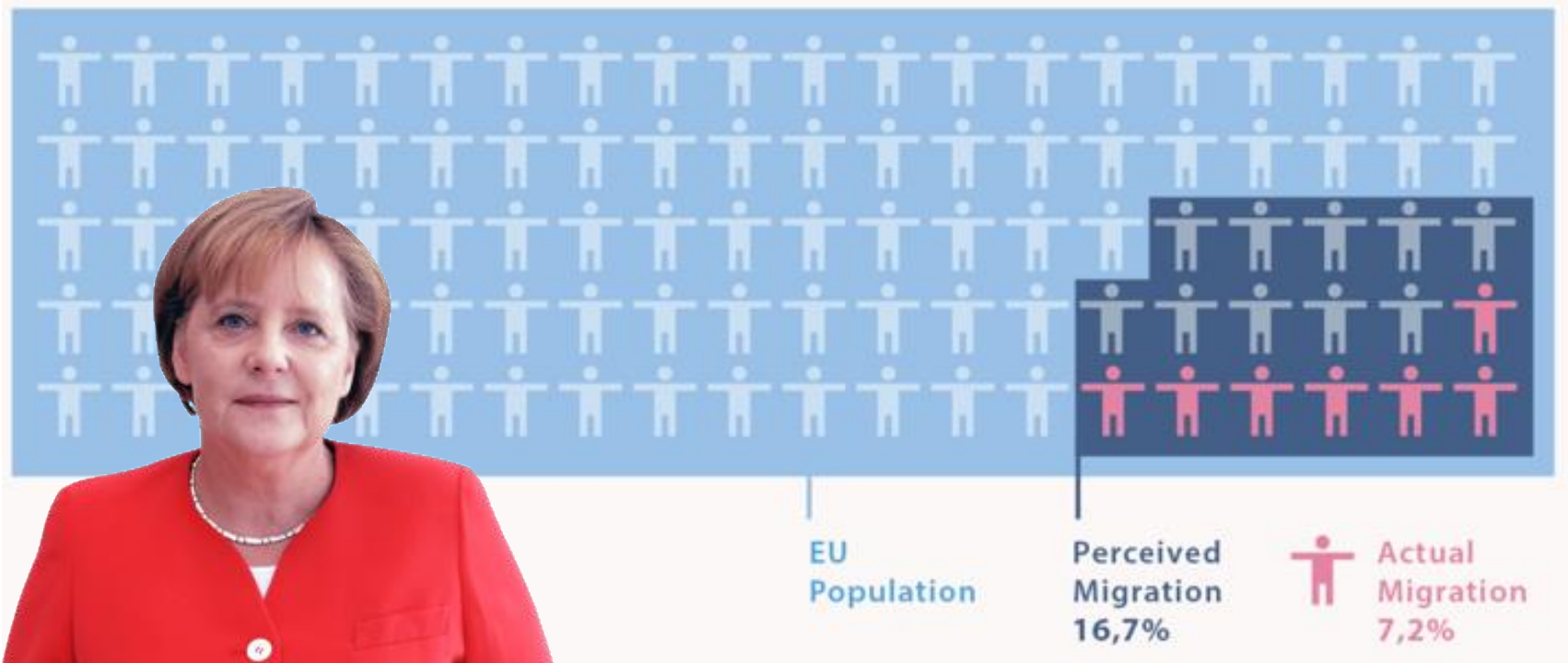
- Populism
- Demography
- Sovereign debt
- Energy dependency
- COVID-19
Vaccines and
Recovery Plans



Source: Vinciampo, 2021.

PERCEPTIONS IN EU MIGRATIONS

Share of non-EU migrants in population: perceptions vs reality

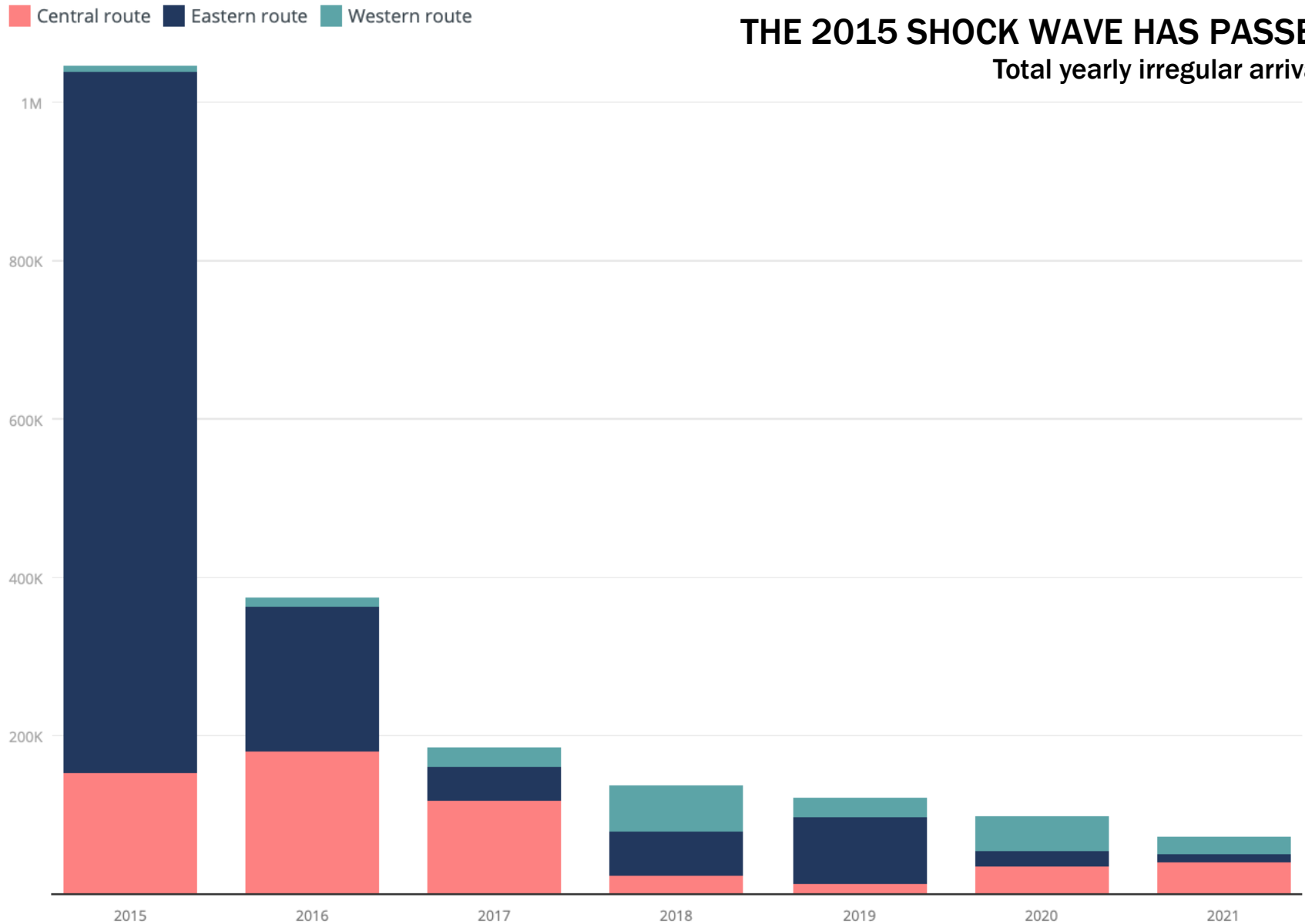


Source: European Commission, 2020.

EU MIGRATION CHALLENGE

THE 2015 SHOCK WAVE HAS PASSED

Total yearly irregular arrivals

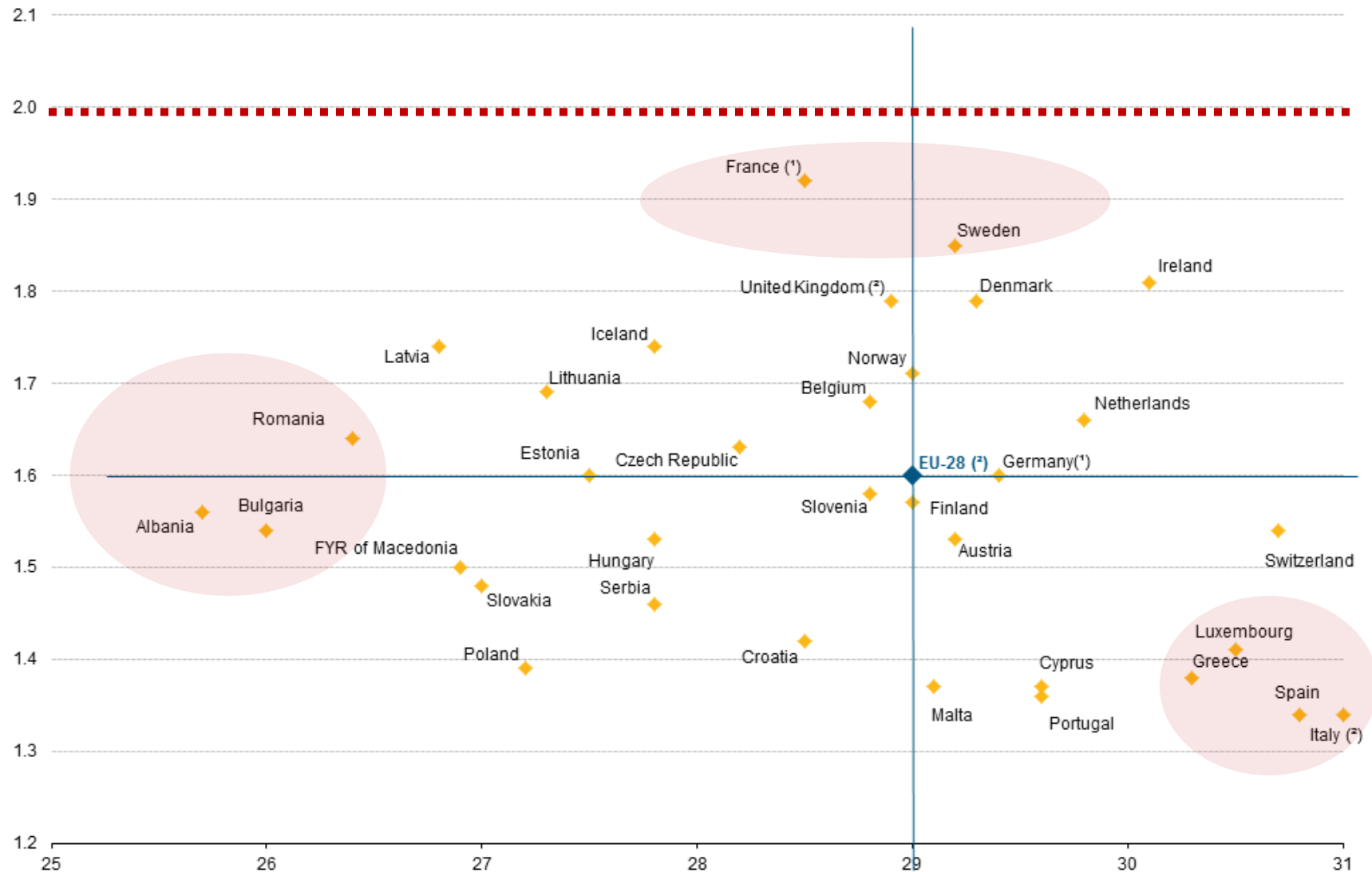


Source: Frontex, 2021. Data up to August 2021. Western route refers to Mediterranean and Western African routes.

THE DEMOGRAPHIC CHALLENGE IN EUROPE

Vertical axis: Total fertility rate (live births per women)

Horizontal axis: Mean age of women at birth of first child (years)



Source: World Population Prospects - The 2017 Revision, 2018. Data for 2016.

EUROPE AND THE REST OF THE WORLD

By 2100, it's projected that nearly half of the world's children aged 0-4 years old will be in Sub-Saharan Africa

Continent	Median Age
Europe	42 years
North America	35 years
Oceania	33 years
Asia	31 years
South America	31 years
Africa	18 years

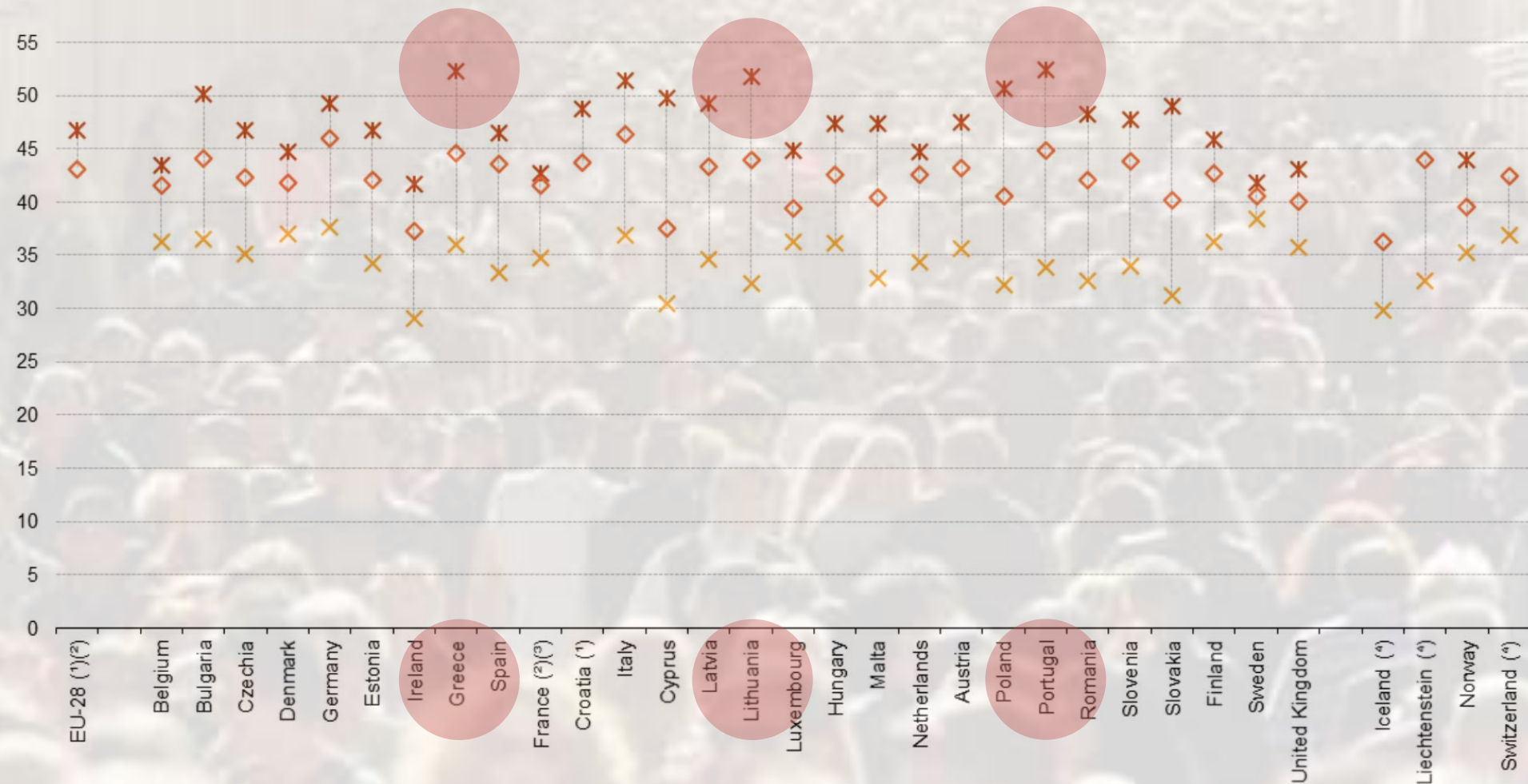
Rank	Country	Median Age (Youngest)	Rank	Country	Median Age (Oldest)
#1	Niger	15.4 years	#1	Monaco	53.1 years
#2	Mali	15.8 years	#2	Japan	47.3 years
#3	Uganda	15.8 years	#3	Germany	47.1 years
#4	Angola	15.9 years	#4	Italy	45.5 years
#5	Zambia	16.8 years	#5	Slovenia	44.5 years

Source: Bill and Melinda Gates Foundation, 2019.

EUROPE GETTING (SERIOUSLY) OLDER

Population median age (years)

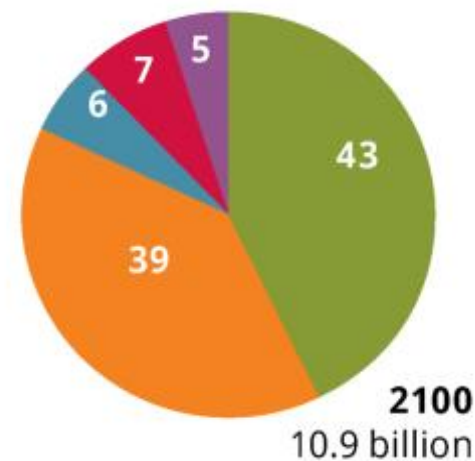
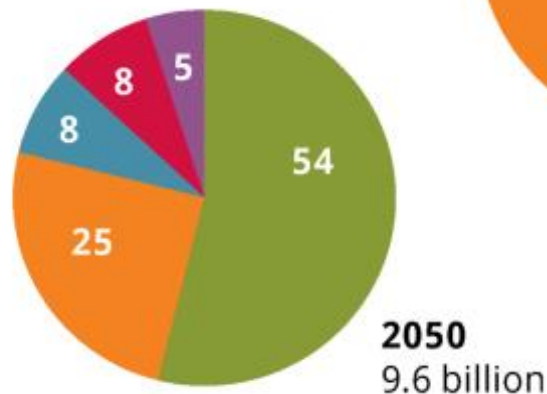
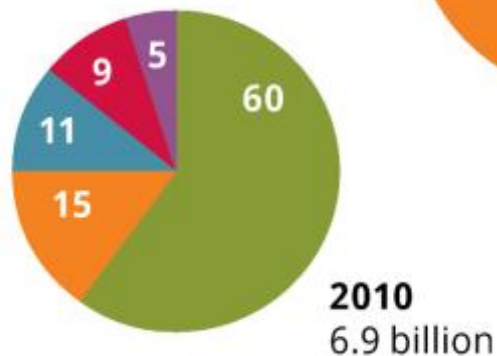
✱ 2050
◇ 2018
✱ 1990



Source: Eurostat, 2020.

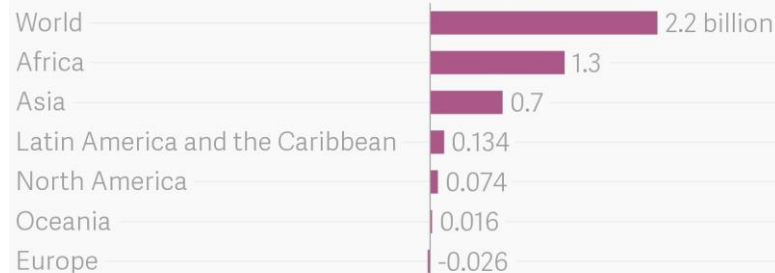
AFRICA

THE NEW DEMOGRAPHIC GIANT



More than half of global population growth will happen in Africa

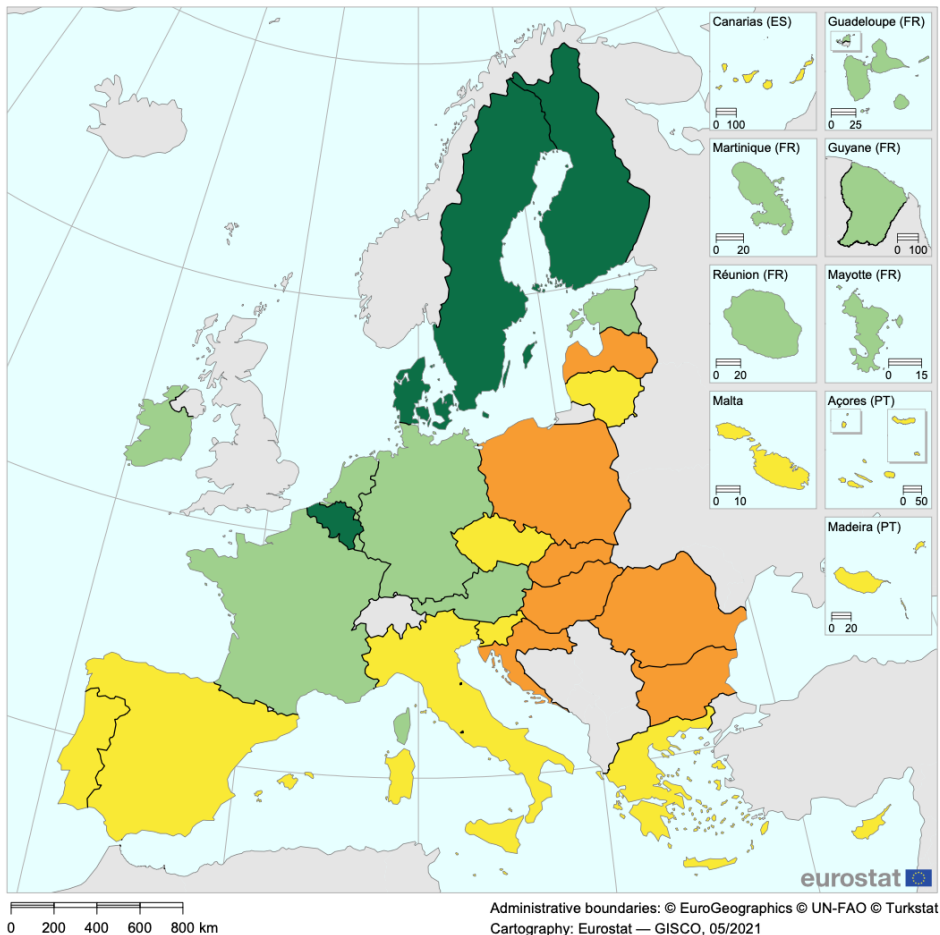
Increase by 2050



△ T L △ S | Data: UN World Population Prospects: The 2017 Revision

INNOVATION AT DIFFERENT SPEEDS

PERFORMANCE OF EU MEMBER STATES' INNOVATION SYSTEMS



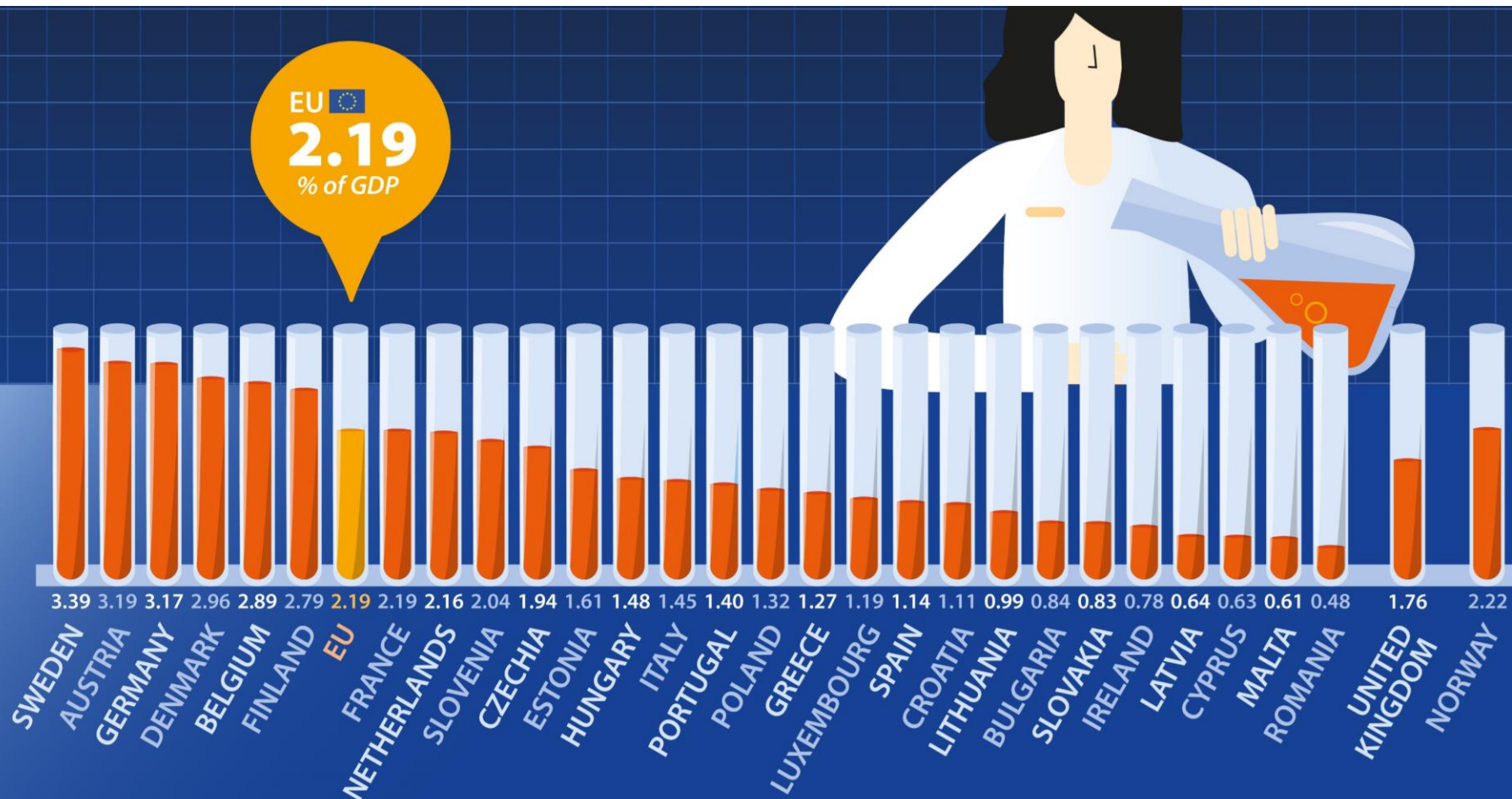
■ Innovation Leader
■ Strong Innovator
■ Moderate Innovator
■ Emerging Innovator

Sweden	Relative to EU 2021 in 2021	Relative to EU 2014 in 2021
SUMMARY INNOVATION INDEX	139.0	140.5
Human resources	183.6	208.0
Doctorate graduates	138.9	123.0
Population with tertiary education	157.7	203.3
Lifelong learning	278.8	306.7
Attractive research systems	160.3	163.2
International scientific co-publications	172.4	226.1
Most cited publications	133.0	130.7
Foreign doctorate students	190.7	226.5
Digitalisation	147.4	146.6
Broadband penetration	133.5	202.5
People with above basic overall digital skills	168.2	205.6
Finance and support	117.7	119.9
R&D expenditures in the public sector	141.8	136.8
Venture capital expenditures	130.7	219.9
Government support for business R&D	76.8	88.8
Firm investments	130.8	156.6
R&D expenditure in the business sector	169.5	188.2
Non-R&D Innovation expenditures	66.7	75.8
Innovation expenditures per employee	141.3	186.5
Use of information technologies	185.0	213.7
Enterprises providing ICT training	180.0	180.0
Employed ICT specialists	189.3	252.4
Innovators	145.0	198.4
Product innovators (SMEs)	162.1	228.7
Business process innovators (SMEs)	129.0	171.7
Linkages	132.0	156.2
Innovative SMEs collaborating with others	127.4	186.8
Public-private co-publications	228.2	255.9
Job-to-job mobility of HRST	78.6	112.8
Intellectual assets	166.5	147.5
PCT patent applications	259.5	225.2
Trademark applications	125.7	131.9
Design applications	123.8	84.9
Employment impacts	151.0	135.9
Employment in knowledge-intensive activities	162.2	177.3
Employment in innovative enterprises	142.0	137.1
Sales impacts	111.1	88.4
Medium and high tech goods exports	97.0	106.4
Knowledge-intensive services exports	120.6	127.7
Sales of innovative products	120.4	104.7
Environmental sustainability	90.8	88.9
Resource productivity	51.5	76.2
Air emissions by fine particulate matter	105.3	111.9
Environment-related technologies	110.5	83.0

Source: European Innovation Panel, 2021.

FAR FROM THE 3% PLEDGE BY 2020

R&D expenditure as % of GDP. Two thirds spent in the business enterprise sector.



Source: Eurostat, 2021

MORE CYBERATTACKS: TARGETING RUSSIA (AND CHINA)

For the first time, 39 countries identified major “malicious cyber activities” in China

SONY AND WANNACRY WARNS

COLONIAL PIPELINE DISASTER

MICROSOFT: THE UNIT 61398

US AND EU: HACKERS ARE IN CHINA

250.000 ORGANIZATIONS

GERMANY MORE IMPACTED

GAFA UNDER FIRE

Congress and US Justice targeting digital platforms with anti-trust investigations



6th

SUNDAR PICHAI

Browser as a monopoly

Monopoly raises price of advertisement

Political influence



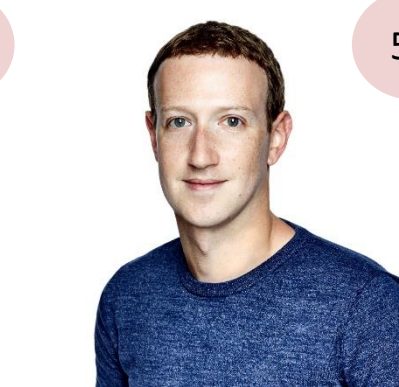
\$1.5
bn

TIM COOK

App monopoly

Abusive commissions

Smashing competition



5th

MARK ZUCKERBERG

Instagram and WhatsApp

Political influence and social tension

46 states (+DC +Guam)
lawsuit against acquisitions
(\$1bn Instagram, 2012;
\$19bn WhatsApp, 2014)



1st

JEFF BEZOS

Dominating position

Indirect technological copy

Labour regime

12 MARKET INTERFERENCES IN LESS THAN 1 YEAR: THE PARTY IS BACK

Regulators and CPC are tackling the internet companies (“spiritual opium”)



IPO suspended



Anti-monopoly



Anti-trust



Penalty



Anti-monopoly



Punishment



No data
overseas



Limited ownership



Social equality



Anti-monopoly



Social equality



Time limit

THE DIGITAL DIVIDE

Top internet-players in China and in the US

SEARCH



SHOPPING



PAYMENT



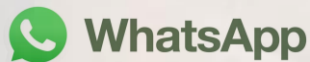
VIDEOS



MUSIC



MESSAGING



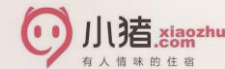
SOCIAL MEDIA



RIDE SHARING



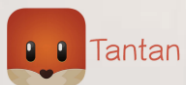
HOME SHARING



TRAVEL



DATING



STREAMING



FOOD DELIVERY



MAPS



PROFESSIONAL



职场舞台 机遇蓝海
(Maimai.cn)

Source: Nieman Lab, 2021.

A WORLD AT RISK OF CONFLICT

Globalization has changed the geography of risks



AFGHANISTAN



TURKEY



PERSIAN GULF



KASHMIR



SOUTH CHINA SEA



TAIWAN

CHINA (LONG) WAR HISTORY

since the Qing dynasty to tensions in the Himalayas



1949 - today
People's Republic of China

2009-2016 Somali pirates
2001-present War on Terror (Al-Qaeda, ISIS)
  **1996** Third Taiwan Strait Crisis
 **1979-1991** China-Vietnam conflicts
 **1979** China-Vietnam War
     **1965-1969** Vietnam War
 **1969** China-USSR border conflicts
 **1962** China-India War
 **1962** China-Burma border campaign
 **1959** Tibetan uprising
  **1958** Second Taiwan strait crisis
  **1954-1955** First Taiwan strait crisis
      **1950-1953** Korean War
 **1950** Invasion of Tibet - Battle of Chamdo
 **1945-1949** Chinese Civil War (Part II)

Before 1949
Previous major conflicts and wars

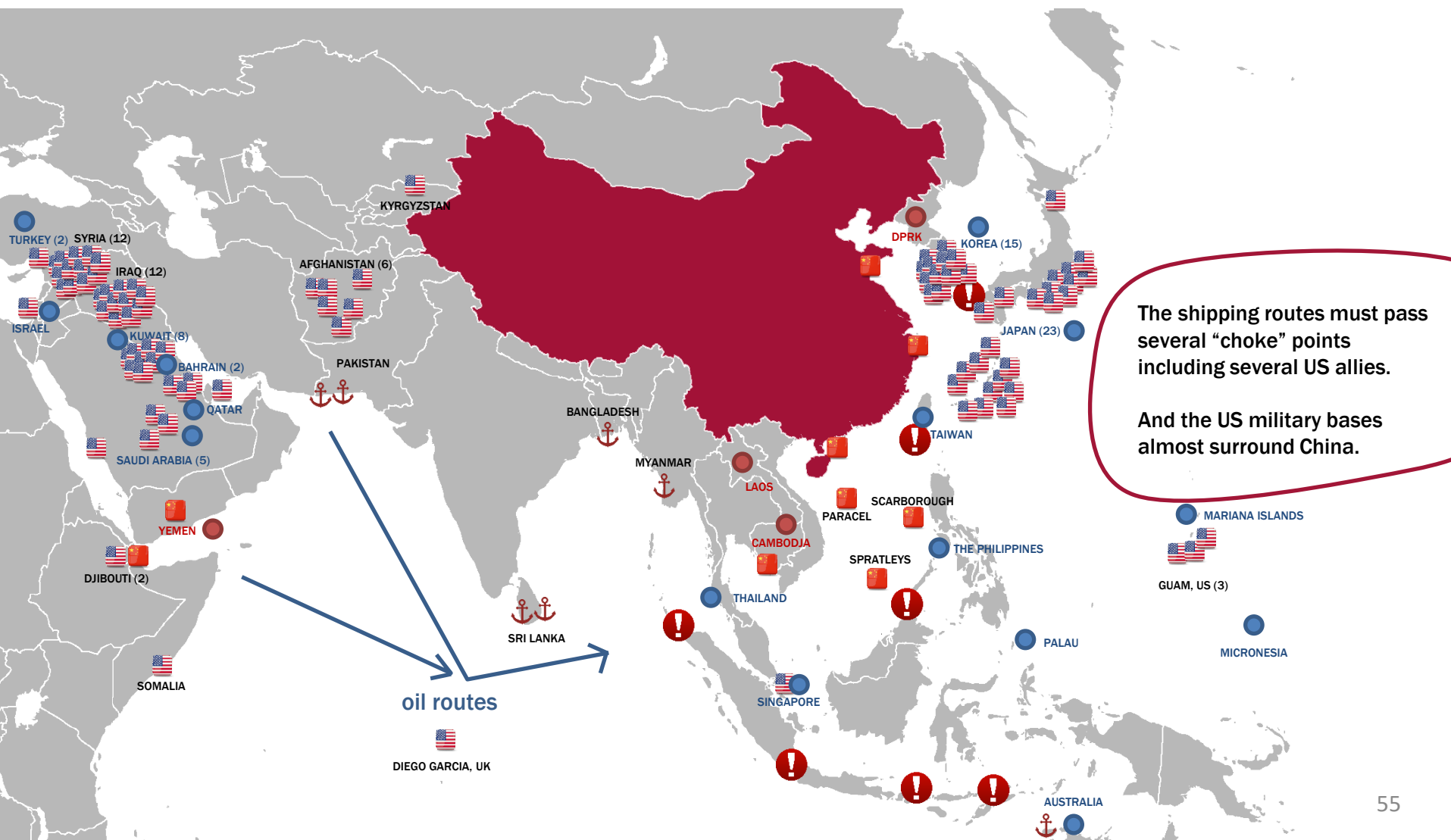
 **1931-1945** Second China-Japan War
 **1927-1936** Chinese Civil War (Part I)
 **1934** Soviet Invasion of Xinjiang
    **1930-1934** Kumul Rebellion
 **1932** China-Tibet War
...      **1899-1901** Boxer Rebellion
 **1894-1895** First China-Japan War
 **1884-1885** China-France War
 **1857** Ningpo massacre
   **1856-1860** Second Opium War
 **1839-1842** First Opium War
 **1788-1789** Qing invasion of Vietnam
 **1765-1769** China-Burma War
 **1661-1662** Siege of Fort Zeelandia
 **1652-1689** China-Russia border conflicts

Selected conflicts and wars in the History of China. Some flags may only correspond to today's geographical location of peoples and nations having fought with China. Not all conflicts not belligerents have been listed.

SURROUNDED BY THE WORLD

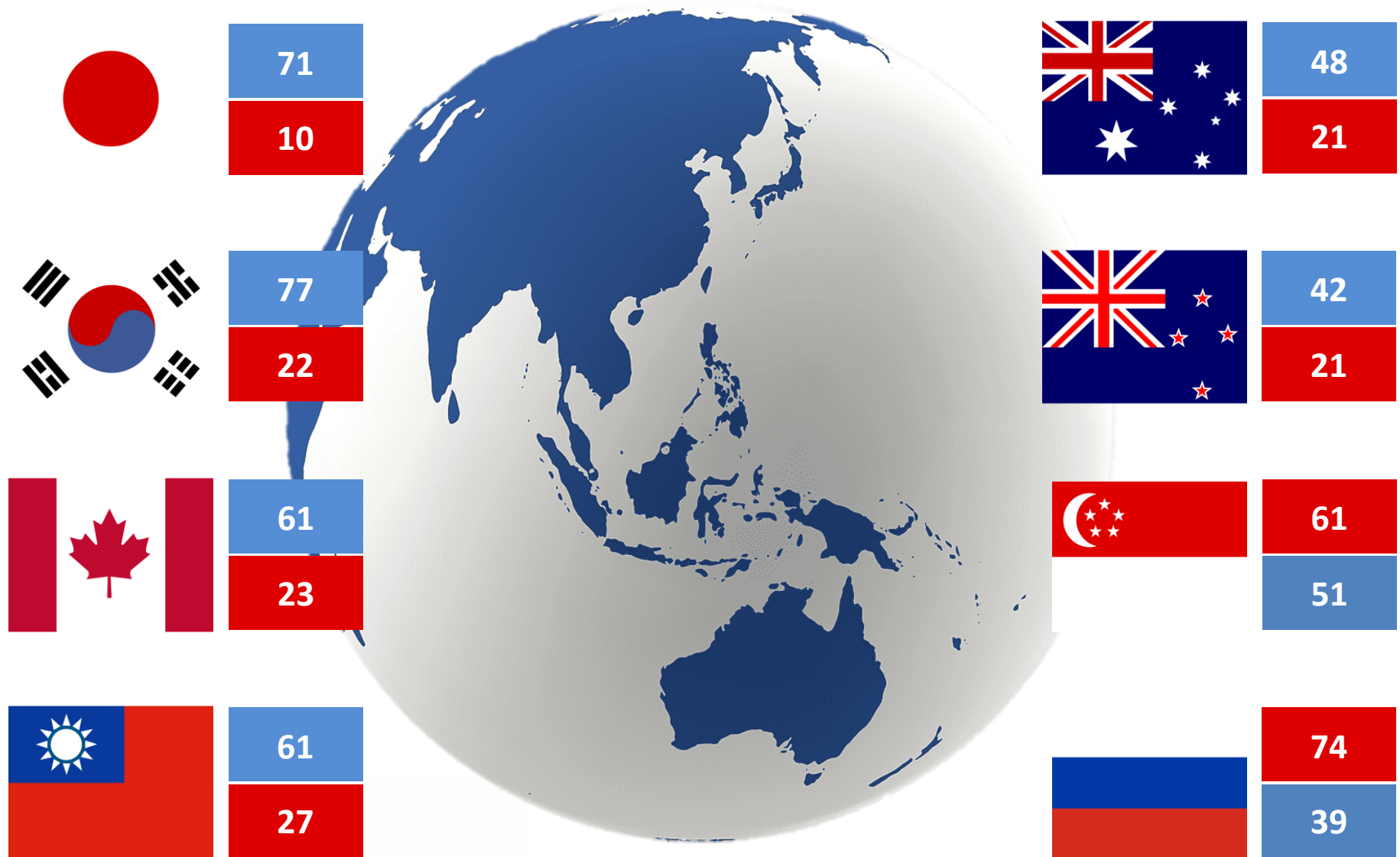
With most of its population in the coast, surrounded by desert and mountains, China imports 64.4% of the oil needed. Most of it by shipping

- ! Shipping route "choke" point
- ⚓ Chinese port authority
- 🇨🇳 Chinese military base
- 🇺🇸 US military base
- Chinese strategic military ally
- US strategic military ally



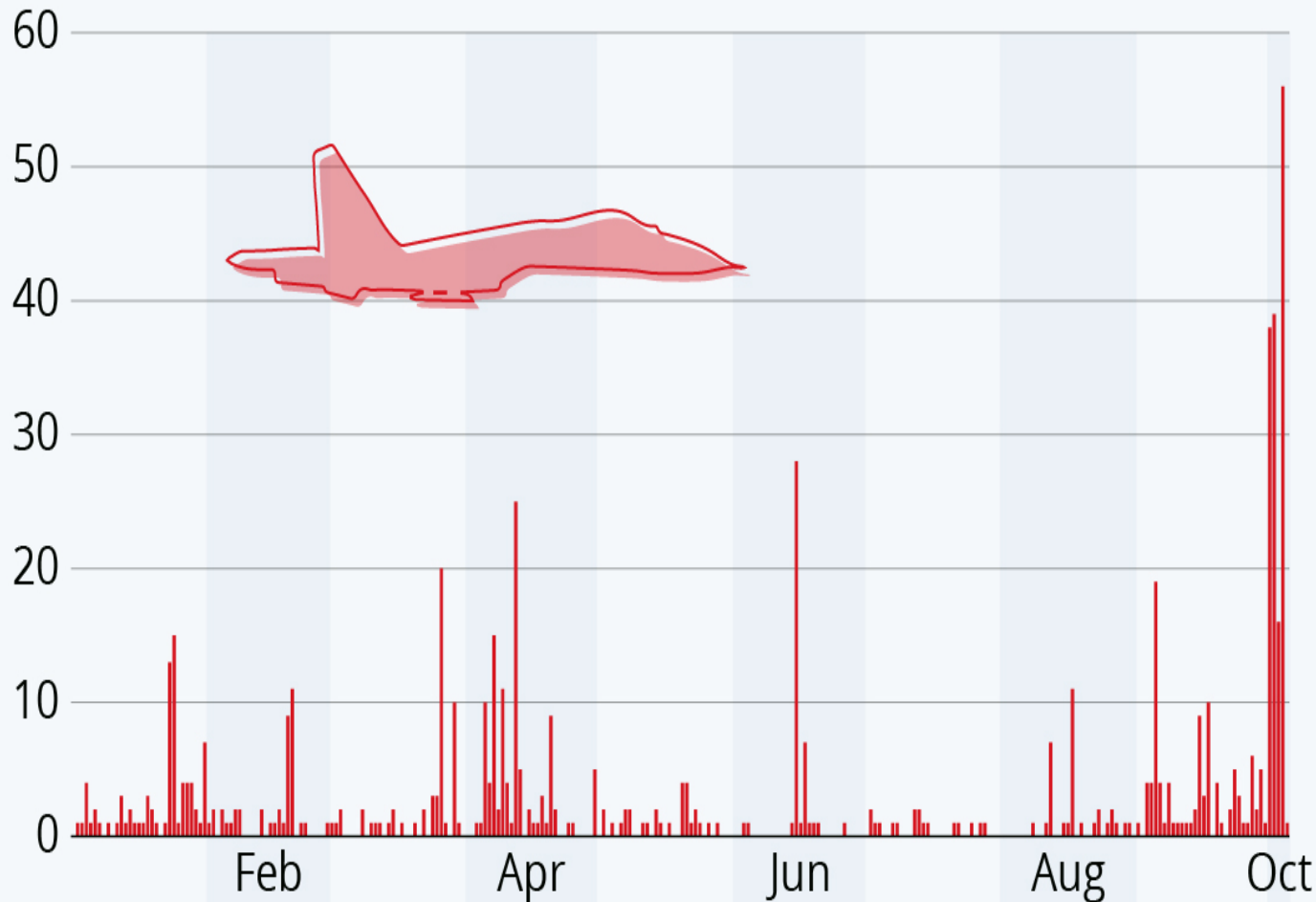
US-CHINA TENSION: THE PACIFIC (AND ASIAN) RESISTANCE TO BEIJING

Public opinions in Asia and Pacific are more favourable to US than to China



THE RISING THREAT OF CHINESE INCURSIONS IN TAIWAN AIR SPACE

Chinese pendulum towards Taiwan: through politics or by force?



2021

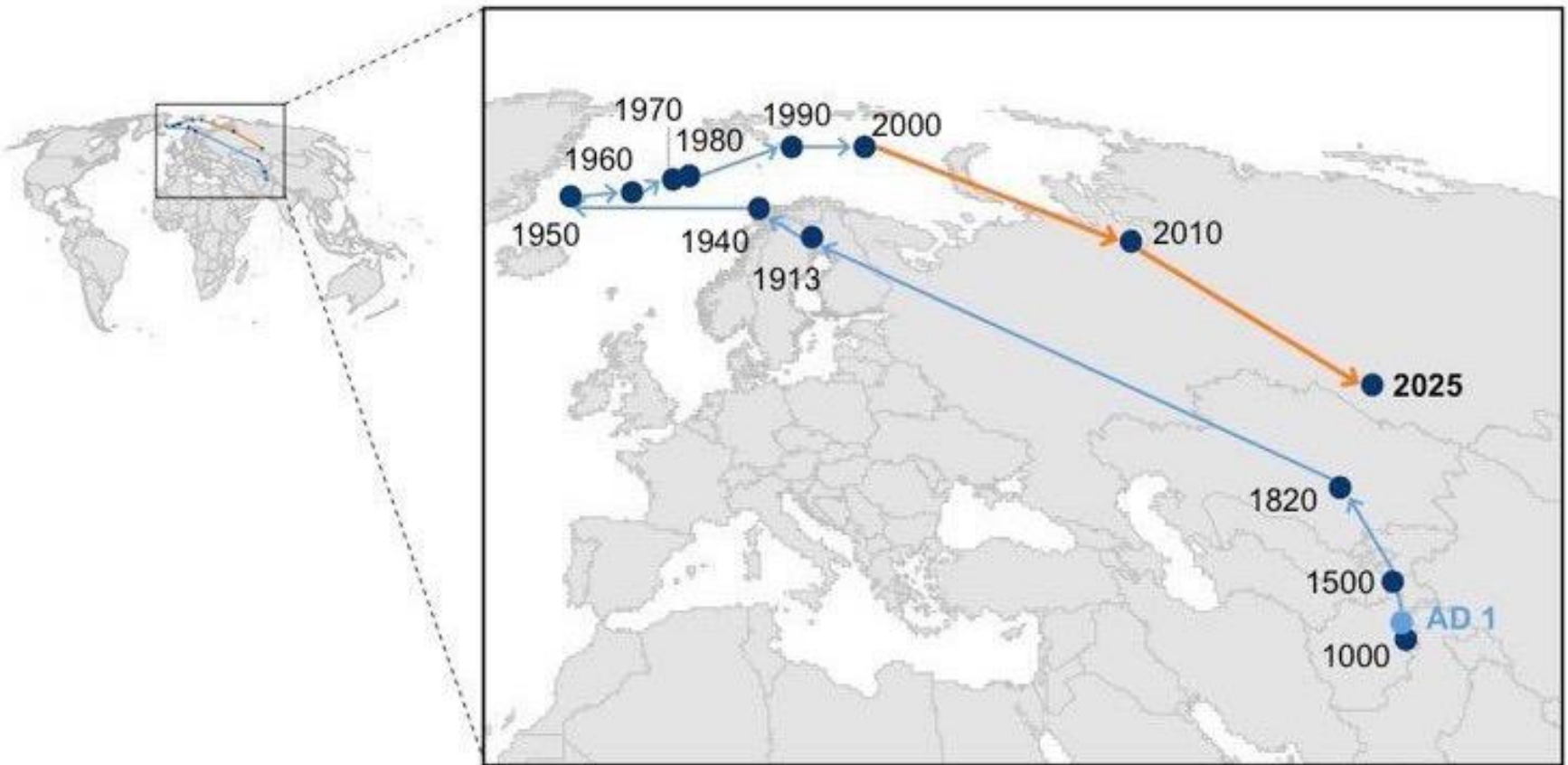
500
(til October 7)

2020

380

THE MOST RAPID SHIFT IN THE WORLD'S ECONOMIC CENTER OF GRAVITY

Evolution of the earth's economic center of gravity (AD 1 to 2025)

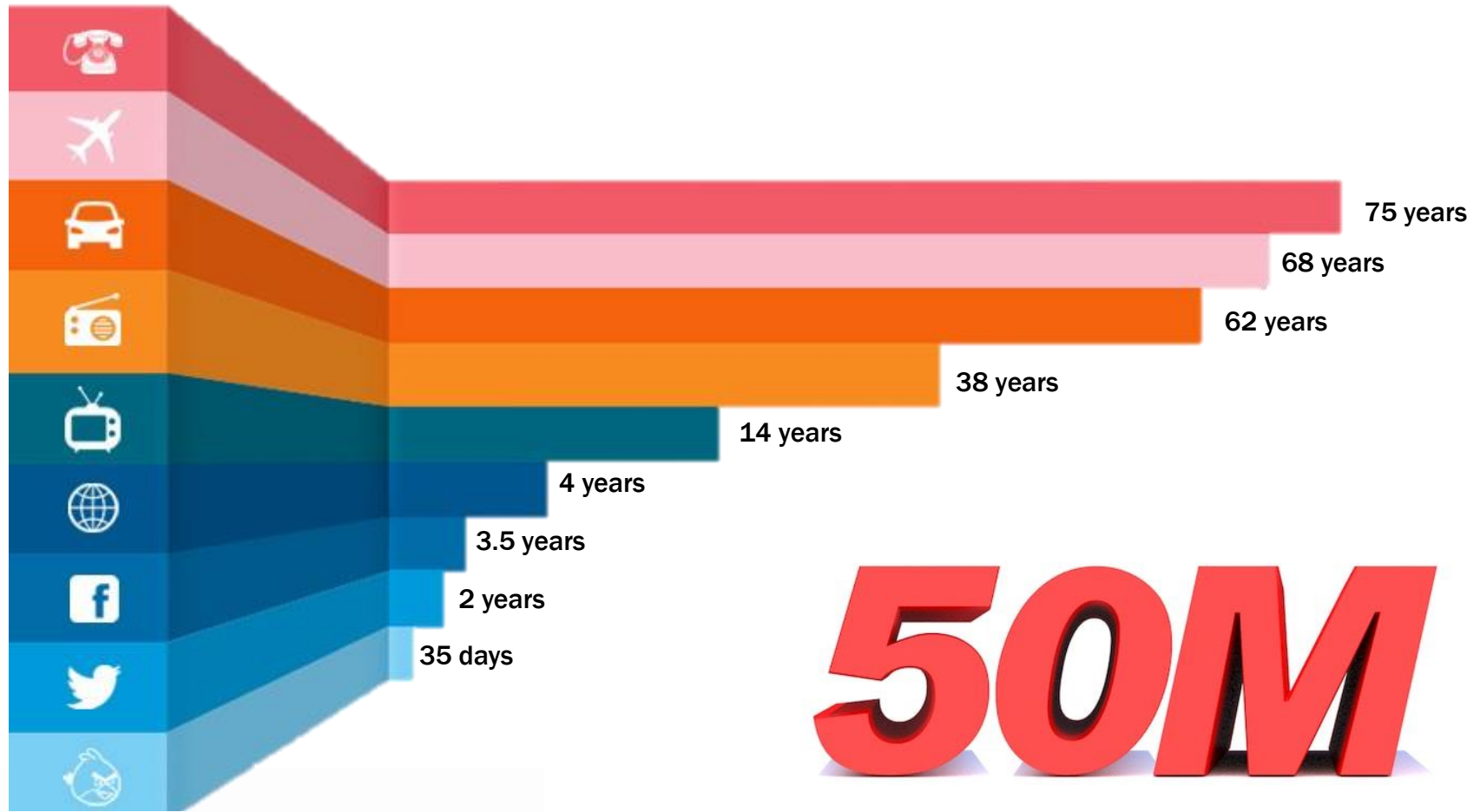


The economic center of gravity is calculated by weighting locations by GDP in 3 dimensions and projected to the nearest point on the earth's surface. The surface projection of the center of gravity shifts north over the course of the century, reflecting the fact that in 3-dimensional space America and Asia are not only “next” to each other, but also “across” from each other.

Source: McKinsey Global Institute analysis using data from Angus Maddison; University of Groningen, 2018.

THE ROAD TO UBIQUITY IS GETTING SHORTER

Time innovations needed to reach 50 million users (in years)



Source: Visual Capitalist, 2020.