



Using statistics to inform citizens in the Covid-19 era

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“The cat got stuck **2.5 m**
up the tree”

The spread of the Coronavirus in mainland China

Jan 3

C H I N A

Hubei Wuhan

Confirmed cases

44*

Deaths

—

Sources: National Health Commission of the People's Republic of China; Taiwan Centres for Disease Control; Macau Health Bureau; The US Centers for Disease Control and Prevention

© FT



Coronavirus

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Coronavirus figures as the

The FT analyses the scale of outbreaks and the number of deaths around the world

FT Visual & Data Journalism team 19 MINUTES AGO

Be the first to know about every new COVID-19 case

The human cost of coronavirus: 34,000 cases confirmed globally

This page provides an up-to-date check back regularly by email and features as the story evolves

Mapping the coronavirus pandemic

As of 9:03am Feb 8 GMT

Confirmed cases
34,939



Source: Johns Hopkins University, CSSE & FT

SOURCES

National-level case and deaths data comes primarily from the European Centre for Disease Prevention and Control, the Covid Tracking Project and the Johns Hopkins University Systems Science and Engineering. Additional data comes from Worldometer.

Regional-level case and deaths data comes from official sources or verified local aggregation projects: the Covid Tracking Project (for US states), Hôpital de la Croix-Rouge (Spain), the Italian Department of Civil Protection, Public Health Agency, the Philipine Embassy (Germany), Cambridge Public Health

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Coronavirus tracked: the latest figures as countries fight to contain the pandemic | Free to read

The FT analyses the scale of outbreaks and the number of deaths around the world

FT Visual & Data Journalism team 4 HOURS AGO



DATE;
our Coronavirus Business



Get the



Coronavirus tracked: the latest figures as countries fight to contain the pandemic spreads |

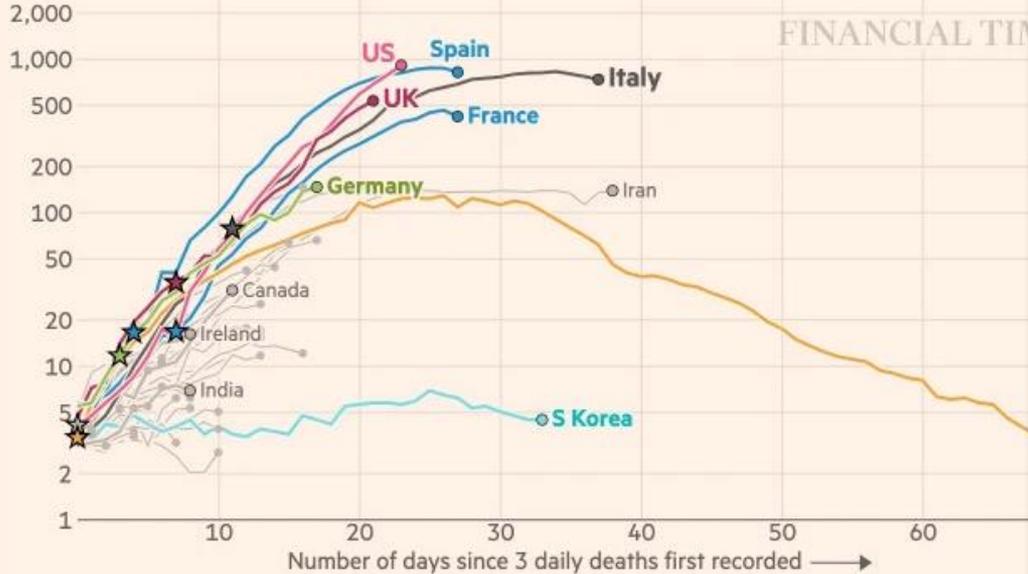
Free to read

Coronavirus + Add to myFT

Coronavirus tracked: the latest figures as countries fight to contain the pandemic

Italy and Spain's daily death tolls are plateauing, but in the UK and every day brings more new deaths than the last

Daily coronavirus deaths (7-day rolling avg.), by number of days since 3 daily deaths first



FT graphic: John Burn-Murdoch / @jburnmurdoch
Source: FT analysis of European Centre for Disease Prevention and Control; Worldometers; FT research. Data updated April 2020
© FT

LSE

Alessandro Romano | Chiara Sotis | Goran Dominioni | Sebastián Guidi | May 19th, 2020

The public do not understand logarithmic graphs used to portray COVID-19

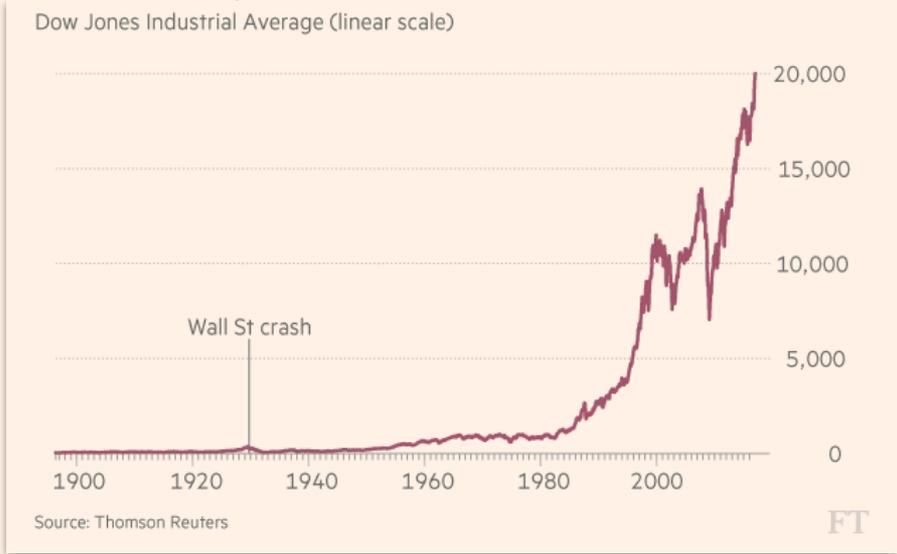
60 comments | 418 shares

Estimated reading time: 10 minutes

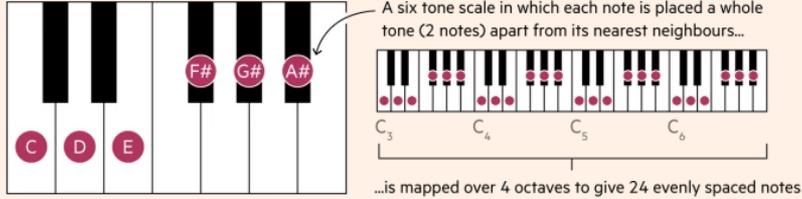
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FT
FINANCIAL TIMES

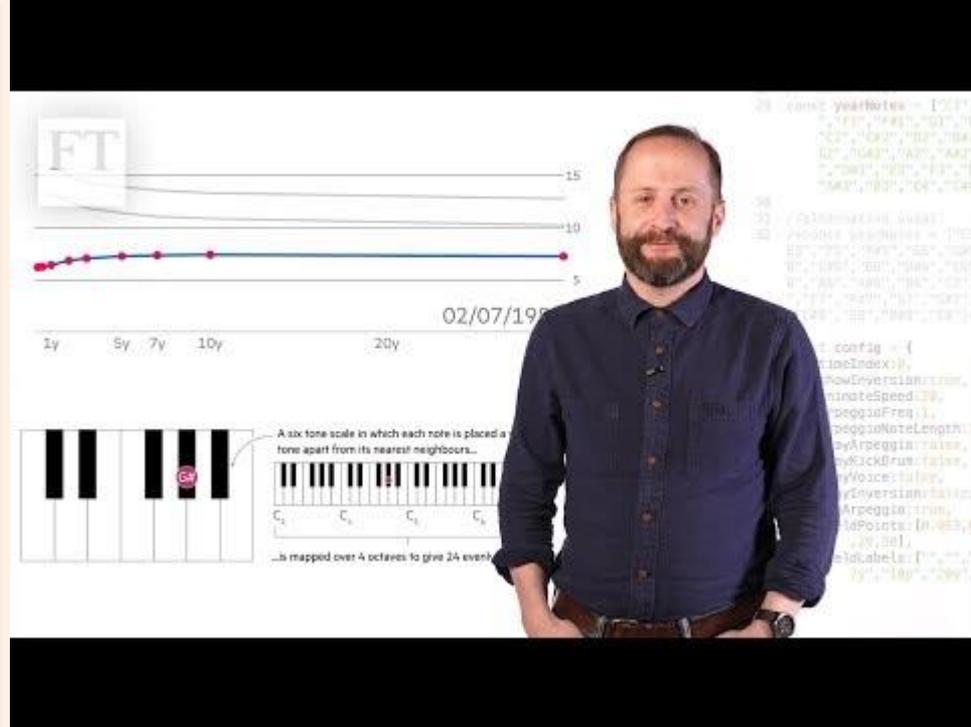
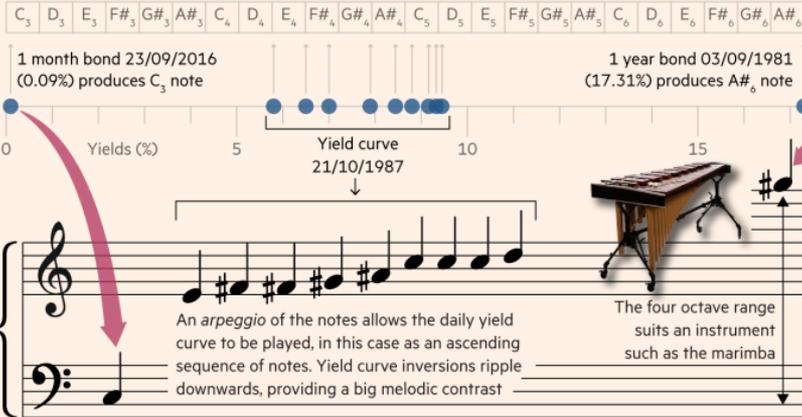
ft.com/chart-doctor



Using a whole tone musical scale to sonify the yield curve



The scale is then used to “quantise” the dataset, assigning each data point to a note in the scale



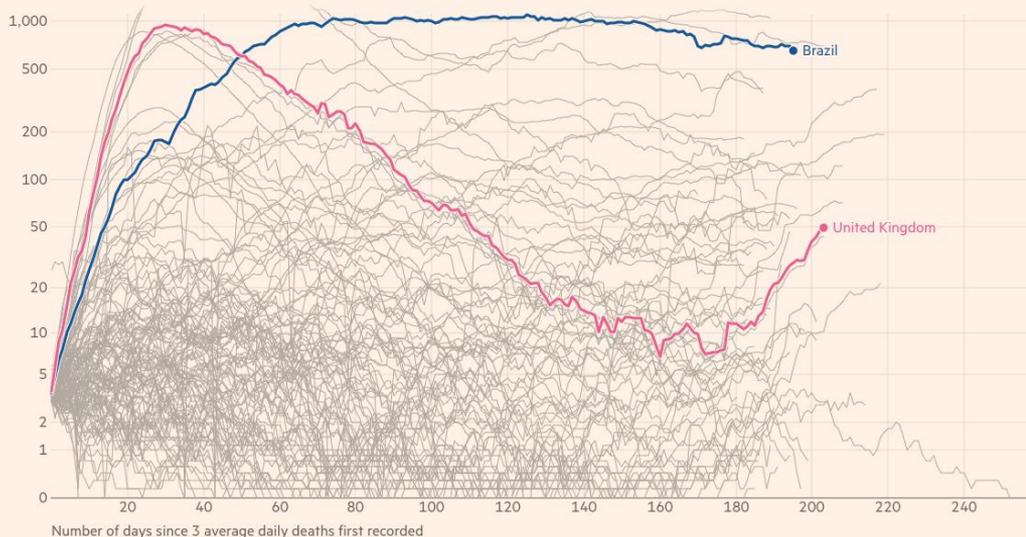
Choose country/bloc or select **up to six** to compare

Brazil X United Kingdom X Search... 🔍

Deaths Cases **New** Cumulative More options

New deaths attributed to Covid-19 in Brazil and United Kingdom

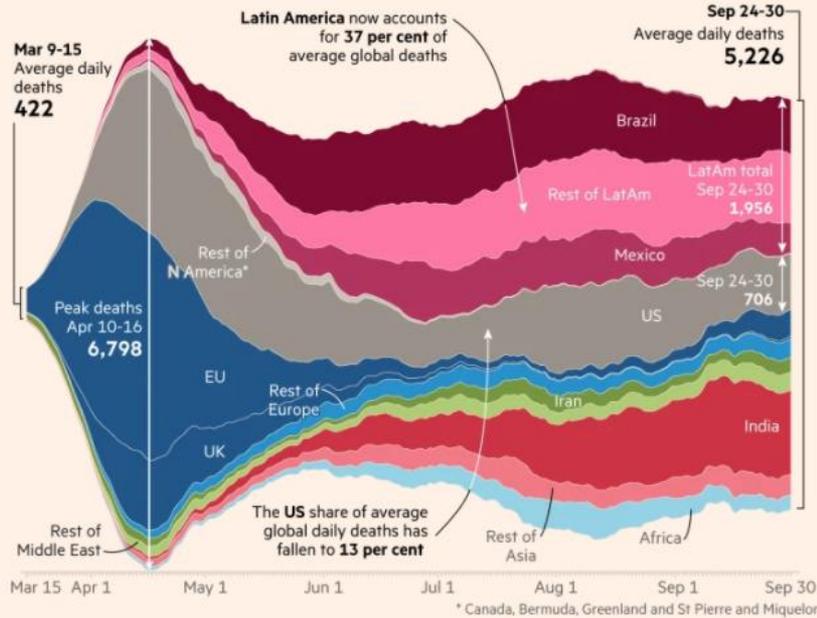
Seven-day rolling average of new deaths, by number of days since 3 average daily deaths first recorded



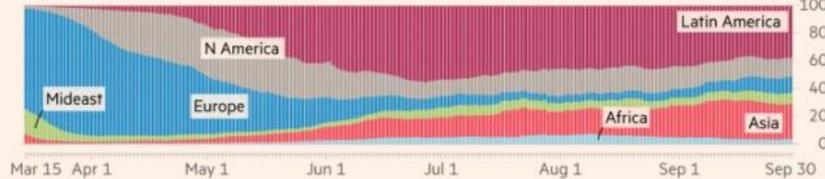
Source: Financial Times analysis of data from the European Centre for Disease Prevention and Control, the Covid Tracking Project, the UK Dept of Health & Social Care and the Spanish Ministry of Health. Data updated October 4 2020 2.45pm BST. Interactive version: ft.com/covid19

India's death toll surges as the Americas continue to struggle with Covid-19

Daily deaths of patients diagnosed with coronavirus (7-day rolling average)



Daily confirmed deaths (% by region, 7-day rolling average)



FT graphic: Steven Bernard / @sdbernard

Sources: FT analysis of data from the ECDC, the Covid Tracking Project, the UK Dept of Health and Social Care and the Spanish Ministry of Health

© FT

Death rates have climbed fast

Number of deaths per week from all causes

UK



France



Netherlands



Spain



*Italian figures may not exactly match the source
Source: FT analysis of mortality data. Data updated weekly
FT graphic: John Burn-Murdoch / @burnmurdoch
© FT

Financial-Times / coronavirus-excess-mortality-data

Unwatch 29 Star 89 Fork 8

<> Code Issues 3 Pull requests 1 Actions Projects 0 Wiki Security 0 Insights

Excess mortality data compiled by the FT Visual & Data Journalism team <https://www.ft.com/content/a26fbf7e-4...>

28 commits 1 branch 0 packages 0 releases 2 contributors

Branch: master New pull request

Create new file Upload files Find file Clone or download

martinstabe	Fix incorrect update	Latest commit 203574a 10 days ago
data	Fix incorrect update	10 days ago
.gitattributes	Initial commit	25 days ago
.gitignore	Add data file and update readme	25 days ago
README.md	Add El Pafs link	15 days ago
sources.md	Fix broken Peru link	12 days ago

README.md

Financial Times

Excess mortality during the Covid-19 pandemic

This repository contains excess mortality data for the period covering the 2020 Covid-19 pandemic. The data has been gathered from [national, regional or municipal agencies](#) that collect death registrations and publish official mortality statistics. These original data were reshaped into a standardised format by Financial Times journalists to allow cross-national comparisons, and have been used to inform the [FT's reporting on the pandemic](#).

The repository contains the excess mortality data for all known jurisdictions which publish all-cause mortality data meeting the following criteria:

- daily, weekly or monthly level of granularity
- includes equivalent historical data for at least one full year before 2020, and preferably at least five years (2015-2019)
- includes data up to at least April 1, 2020

Most countries publish mortality data with a longer periodicity (typically quarterly or even annually), a longer publication lag time, or both. This sort of data is not suitable for ongoing analysis during an epidemic and is therefore not included here.

- From 'storytelling' to 'product management'
 - Increased demand from other journalists for our help
 - Increased scrutiny from readers
 - Data sourcing...and updating!

Help us improve these charts: We are looking for further sources of national or municipal mortality data showing total deaths from all causes, preferably broken down by day or week and including figures for recent weeks. If you know of a source of this data for your area, please email coronavirus-data@ft.com.

The screenshot shows a Gmail inbox with the following visible email entries:

- Ireland** [LINK](#) [webmail](#) **Excess Mortality - Ireland** - You may have already seen this from Irish Government: <https://www.gov.ie/pdf/?file=https://assets.gov.ie/75011/b52b39d7-7472-49>
- [LINK](#) **Confirmation of receipt** - Thank you for contacting the Hiroshima Peace Memorial Museum. Below is a copy of your email as we received it. *Send date 2020/6/3 *Subject The mu
- Possibly Abusive** [x-axis](#) **Daily deaths 7 day average chart** - Hi I love your graphs. However the first daily deaths although looking good is very hard to see if a region is changing. Can it be
- 406 held Tasks are still waiting to be replayed** - Zapier Hey Ft, Congratulations, you're only a few steps away from releasing your 406 Tasks put on hold. It's easy to get going again, you j
- [LINK](#) [model](#) [UK](#) [webmail](#) **Comparative context** - Media and Government statistics fail to report -the percentage of population chance of catching COVID -the percentage of population
- [climate](#) [webmail](#) **All cause mortality data - Serbia** - Dear John and team, I have tracked down monthly all cause mortality data for Serbia for the last 5 years up to and including April 20:
- [cumulative](#) [IG](#) [LINK](#) **Re: Pennsylvania coronavirus data problem** - Hello ... I have nothing but praise for the coronavirus data pages, including the way this has evolved over time. As a team, the FT
- [Brazil](#) [France](#) [IG](#) [LINK](#) [Mexico](#) [model](#) [Peru](#) [rolling average](#) [table](#) [UK](#) [webmail](#) **Re: Costa Rica COVID data update: 01-June-2020** - On 5/14/2020 2:04 PM, D King wrote: Friends and
- [LINK](#) [webmail](#) **Israel mortality data** - https://www.health.gov.il/PublicationsFiles/corona_23052020.pdf page 11 section 8.1
- [ACADEMIC](#) [John cc'd](#) [LINK](#) [testing](#) [UK](#) **Data request** - Forwarded message ----- Date: Mon, 1 Jun 2020 at 18:
- [ACADEMIC](#) [LINK](#) [testing](#) [UK](#) **daily infection numbers per UK city and region** - Hi - thank you very much for your email and the links. Going forward, It is possible that the number of dea
- [UK](#) [webmail](#) **Question re the Coronavirus tracked data** - Hello ... I have nothing but praise for the coronavirus data pages, including the way this has evolved over time. As a team, the FT
- [Japan](#) [John cc'd](#) [LINK](#) [testing](#) [UK](#) [webmail](#) **Monthly Mortality data for Tokyo and Osaka** - Thank you for your reply. I wish Japan had the weekly or daily data. This is just a quick note.
- [ACADEMIC](#) [EuroMoMo](#) [LINK](#) [Possibly Abusive](#) **excess mortality in Brasil** - Hi, We are about to publish a repository of the data underlying our excess mortality charts, and will send you a
- [Ireland](#) [UK](#) **Excess mortality data for Northern Ireland.** - Comment from a guy who teaches viz stuff - I've seen a few people puzzled by what date range is used to calculate each count
- [Brazil](#) **Great job** - Hi, Appreciate your charts. Is it possible to have a chart state by state for Brazil, as you propose for US ? Many thanks. Envoýé depuis mon smartphone.
- [LINK](#) [UK](#) [webmail](#) **Significant changes to Spain data** - Hi ft team, Thanks for doing such an excellent job at visualising the data on this horrible pandemic. I have noticed and also seen i

Global responses to the pandemic

Oxford Covid-19 government response stringency index



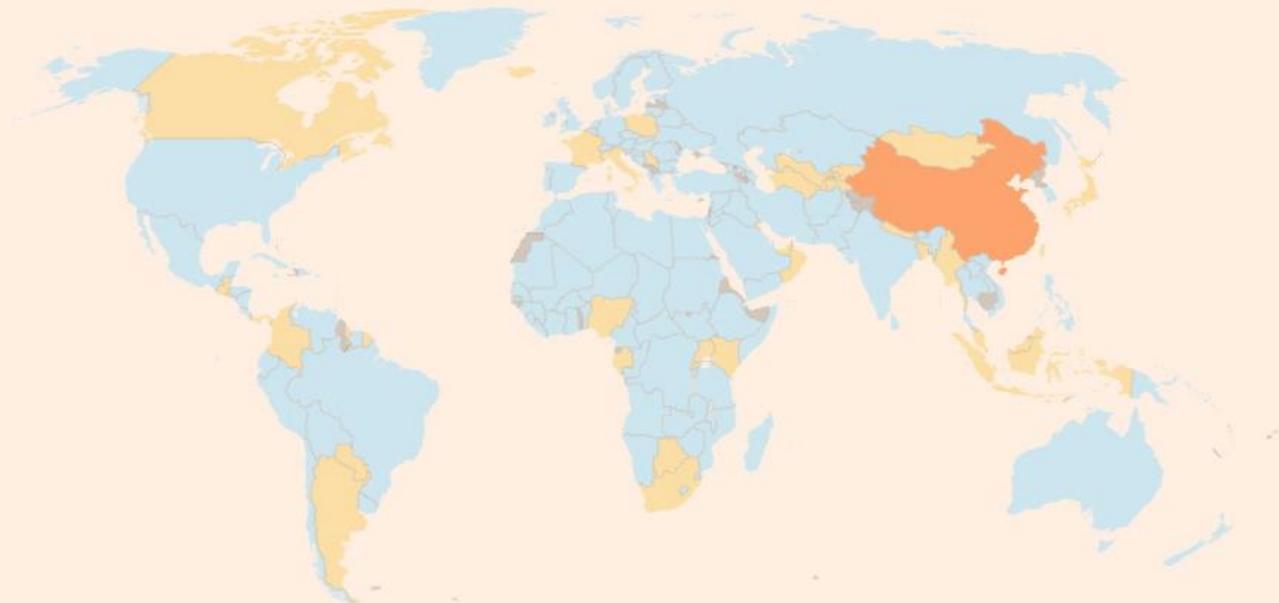
Graphic: Max Harlow, Caroline Nevitt and Aleksandra Wisniewska
 Source: Blavatnik School of Government, University of Oxford. Data for the most recent seven days may not yet reflect government response changes implemented during that period
 © FT



Jan 23

Lockdowns around the world

Oxford Covid-19 government response stringency index



Graphic: Alan Smith and David Blood

Source: Blavatnik School of Government, University of Oxford. Data as of June 1. Data for the most recent seven days may not yet reflect government response changes implemented during that period
 © FT

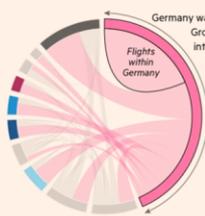
Airlines shaken as coronavirus comes to Europe

Number of scheduled flights departing from and arriving in Europe for Feb 18-24 (by selected airline group)

UK France Germany Italy Spain Other main routes Other routes

Lufthansa Group

19,200 scheduled flights for the week



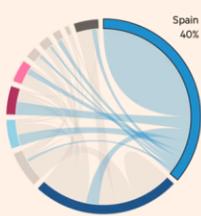
Share price (rebased), Feb 2020



One in five of the group's European flights were within Germany. Other popular connections include Austria and Switzerland

IAG

13,344 flights



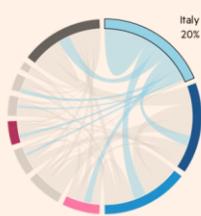
Share price (rebased), Feb 2020



Big markets are Spain and the UK, which together make up about two-thirds of its European capacity

Ryanair

13,200 flights



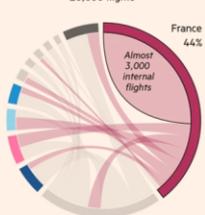
Share price (rebased), Feb 2020



For Milan, Ryanair services almost the same number of European flights as EasyJet and Lufthansa Group combined, totalling around 25% of those flights to the city's three airports

Air France-KLM

10,600 flights



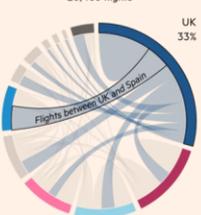
Share price (rebased), Feb 2020



Around 3,000 flights within France, almost 30% of its inter-European capacity. The UK and the Netherlands are also popular routes

EasyJet

10,400 flights



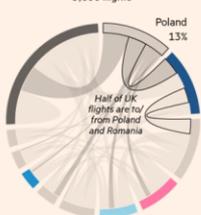
Share price (rebased), Feb 2020



Outside its home UK market, popular routes are France, Italy and Germany. More than half of its Spanish flights are to and from the UK

Wizz Air

3,600 flights



Share price (rebased), Feb 2020

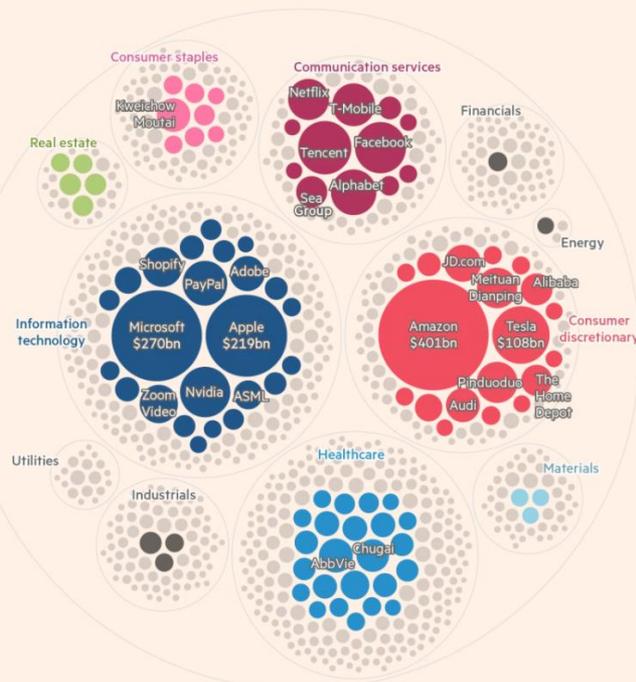


Hungarian airline Wizz Air is more vulnerable if eastern Europe goes on lockdown, with Poland and Romania among its biggest markets

Lufthansa Group includes Air Dolomiti, Austrian Airlines, Brussels Airlines, Eurowings, Swiss, Edelweiss Air, SunExpress; Ryanair includes Laudamotion; Air France-KLM includes Transavia; IAG includes British Airways, Aer Lingus, Iberia, Level, Vueling Airlines
Share prices to Feb 28 13:00 GMT
FT visual journalists Chris Campbell, Patrick Marthuri. Sources: OAG, Bloomberg, FT research
© FT

Big tech companies lead stock market winners

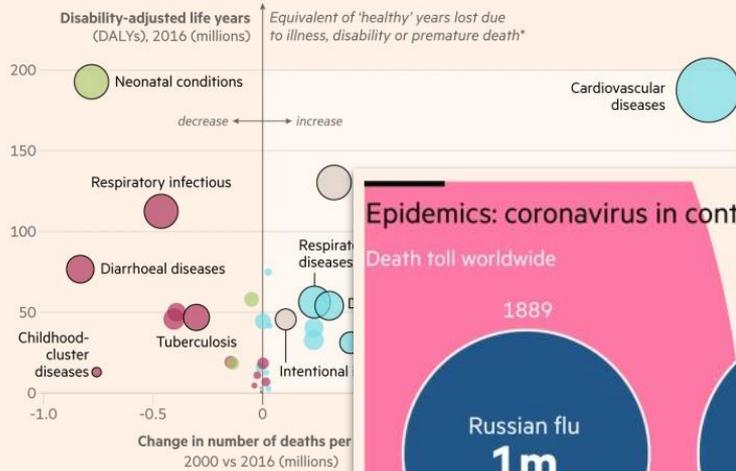
Companies with net market cap gain of more than \$1bn in 2020, by sector. Circle size shows market cap added YTD*, top 100 highlighted, top 25 labelled



* As of Jun 17
Graphic: Alan Smith Source: Capital IQ
© FT

While **infectious diseases** have been significantly reduced in developing countries in recent years, they are still a big killer

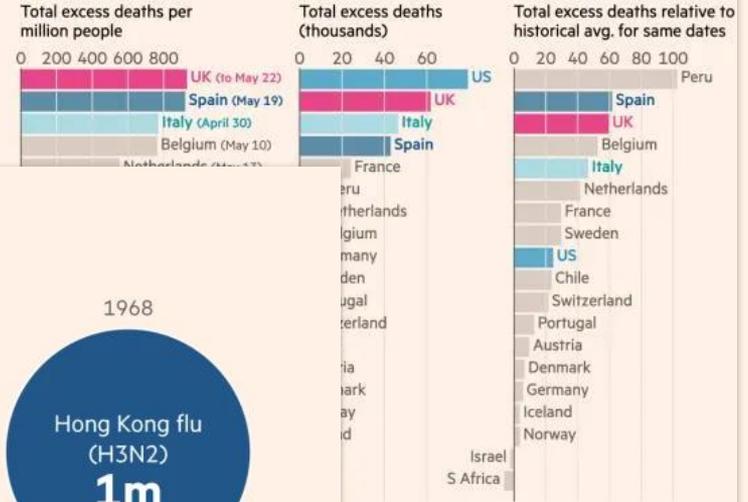
Lower and lower-middle income countries



*Aggregated DALYs can measure the gap between a country's current health status and a world where the entire population lives to an advanced age, free of disease.
Source: World Health Organization
© FT

UK has one of the highest excess deaths rates among countries producing comparable data

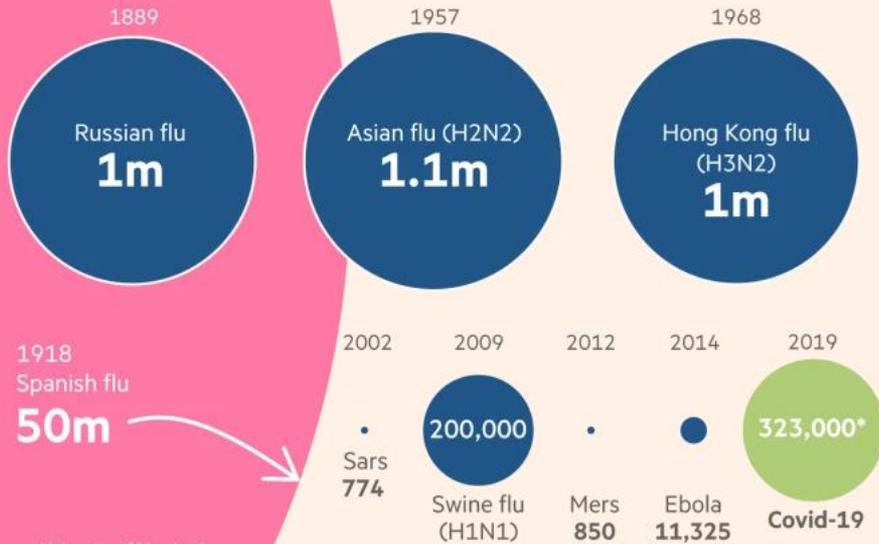
Measures of excess mortality* by country, during Covid outbreaks



*Numbers may not reflect latest situation due to lags in registration. Countries where all-cause mortality figures have been published

Epidemics: coronavirus in context

Death toll worldwide

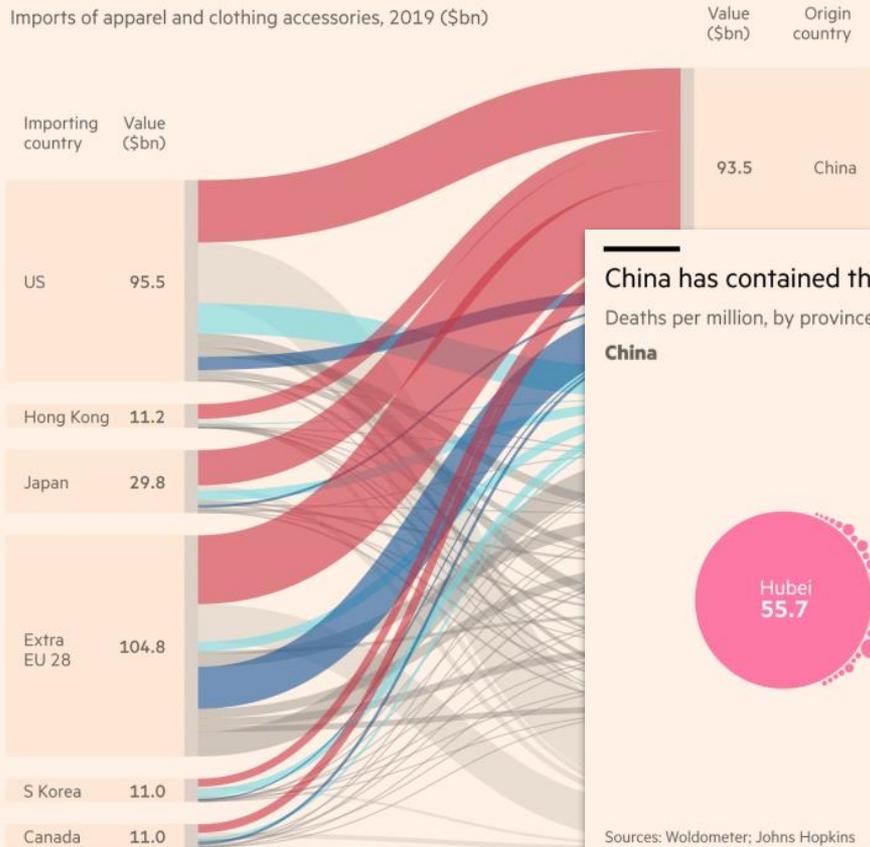


Sources: University of Maryland; CDC; WHO; Johns Hopkins
© FT

* running total

Where the biggest importers source their clothes

Imports of apparel and clothing accessories, 2019 (\$bn)



Only top 10 origins are labelled
 Visual journalism: Chelsea Bruce-Lockhart, Liz Faunce
 Source: UN Comtrade
 © FT

China has contained the disease to

Deaths per million, by province and state

China



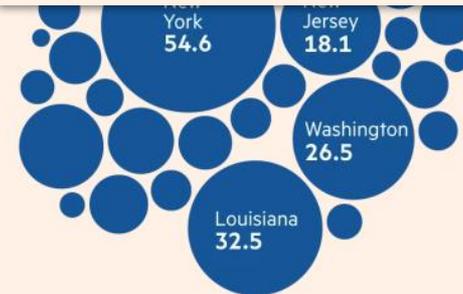
Sources: Woldometer; Johns Hopkins
 FT graphic: Bob Haslett; Chelsea Bruce-Lockhart
 © FT

A slump in consumption has caused China's steel inventory to surge

Total inventory, traders and mills (million tonnes)

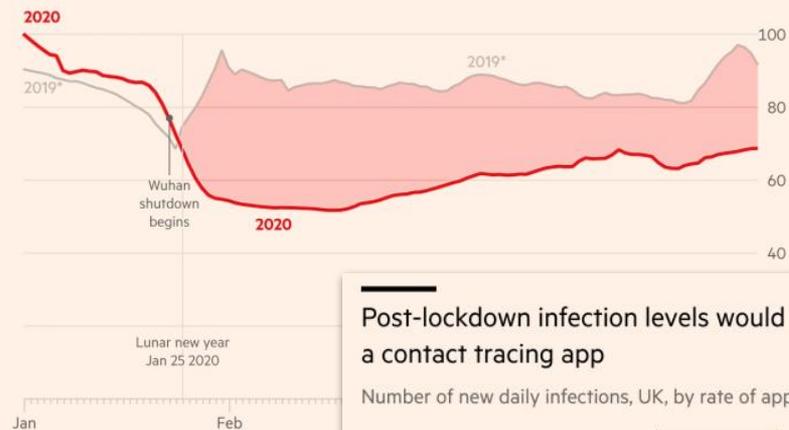


Source: Morgan Stanley Research
 © FT



The Chinese economy is slowly recovering from Covid-19

FT China Economic Activity Index (Jan 1 2020 = 100)



*2019 values at same number of days before/after the
Sources: WIND; EntGroup; FT research
© FT

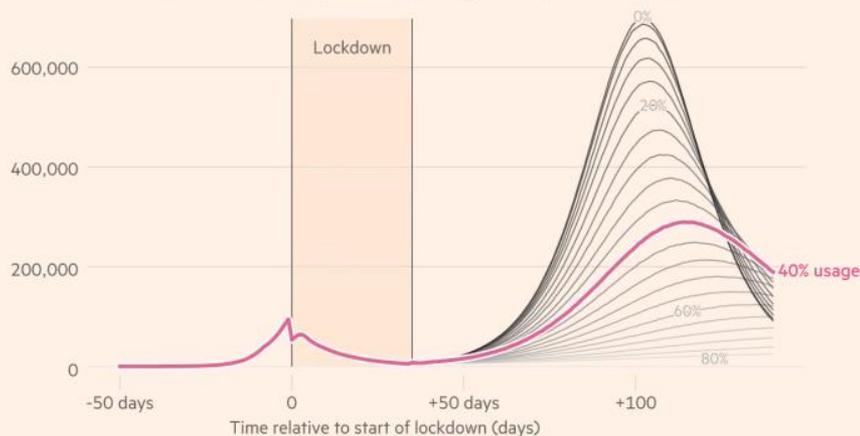
Weekly deaths in England & Wales have hit an all-time high

Weekly death numbers,
by date of death



Post-lockdown infection levels would be highly sensitive to uptake of a contact tracing app

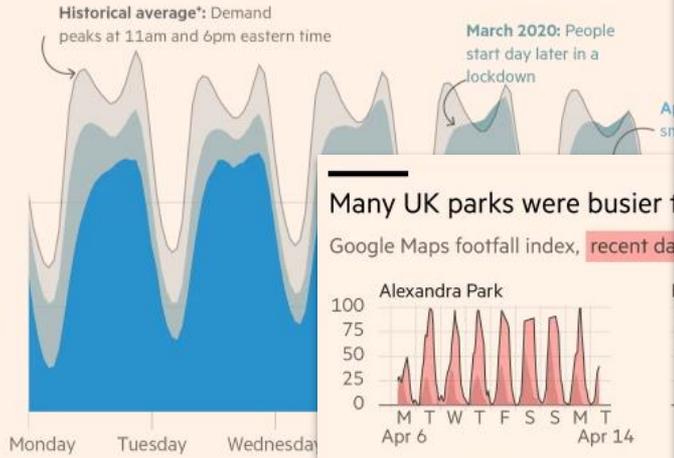
Number of new daily infections, UK, by rate of app usage among smartphone users*



* Assuming an epidemic doubling time of 3.5 days, under a "release after testing" scenario
Source: Fraser Group, Oxford university's Big Data Institute, Nuffield Department of Medicine
© FT

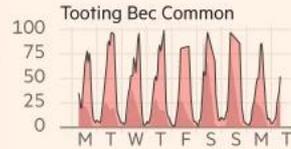
Coronavirus reduced and changed the pattern of electricity demand

Thousand megawatt-hours, hourly



Many UK parks were busier

Google Maps footfall index, recent data

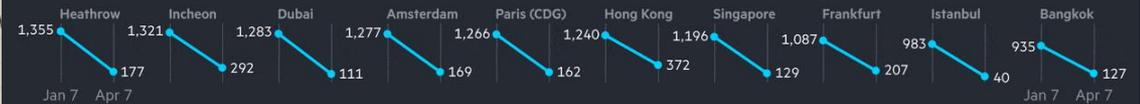


Source: FT analysis of Google Maps data © FT

Daily international flights have reduced by 87 per cent since January

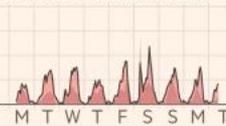


Total number of international flights by airport

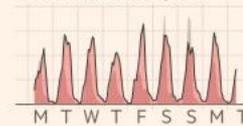


Graphic by Steven Bernard and David Blood
Sources: FT analysis of Flightradar24; OurAirports © FT

Woodhouse Moor (Leeds)



Sefton Park (Liverpool)

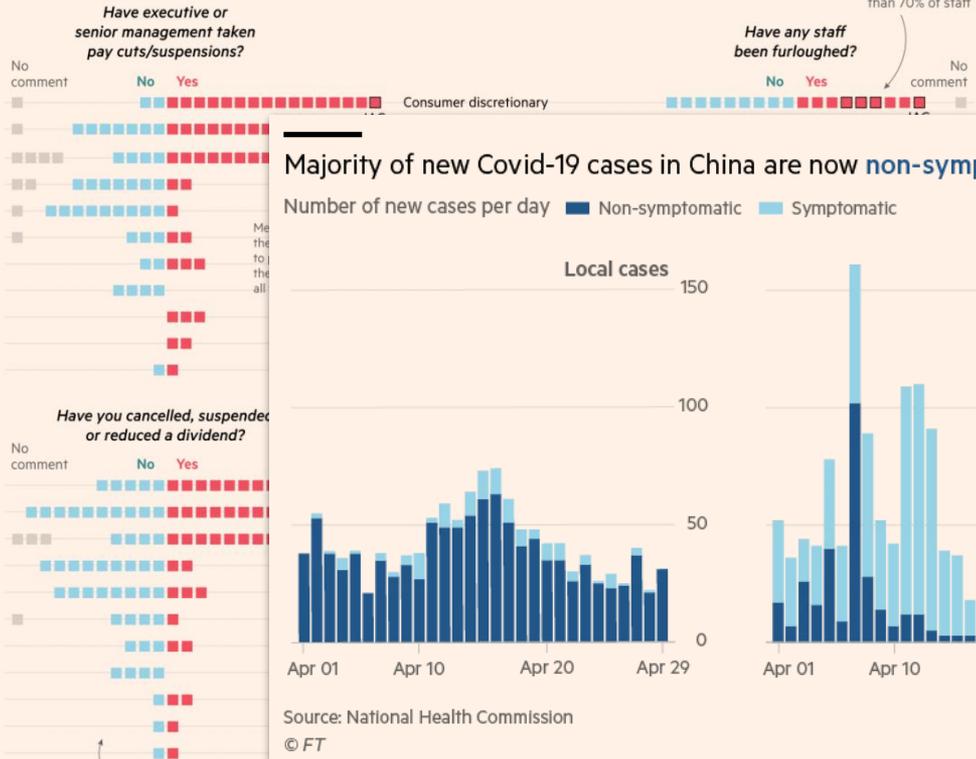


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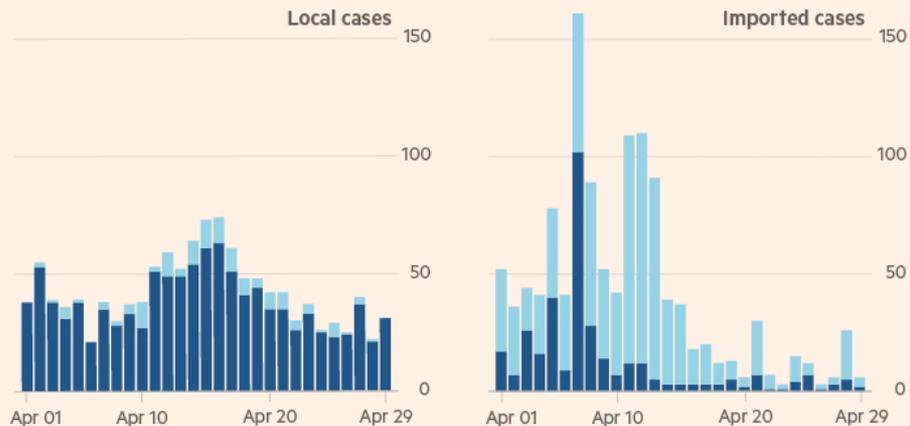
Tracking the fallout from coronavirus on the FTSE 100

Measures announced by the UK's biggest companies



Majority of new Covid-19 cases in China are now non-symptomatic cases

Number of new cases per day ■ Non-symptomatic ■ Symptomatic

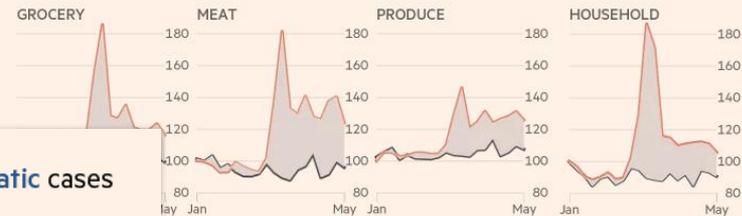


Source: National Health Commission
© FT

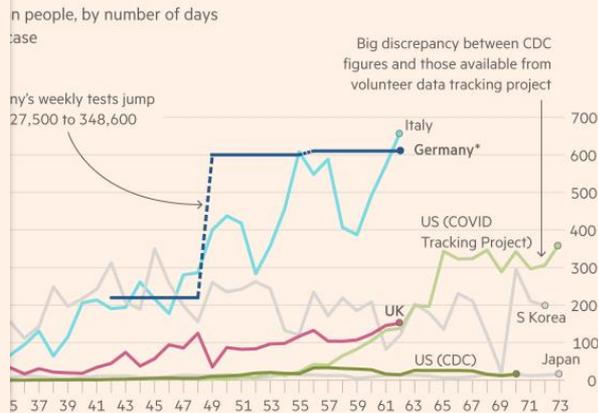
Half of the UK's largest blue-chip companies continue to pay out dividends despite growing concern over the nation's economic outlook

Panic-purchases have come down from peak levels

Jan 4 2020 = 100, last updated May 28 2020 — 2019 — 2020



Covid-19 testing ramps up; the UK lags behind



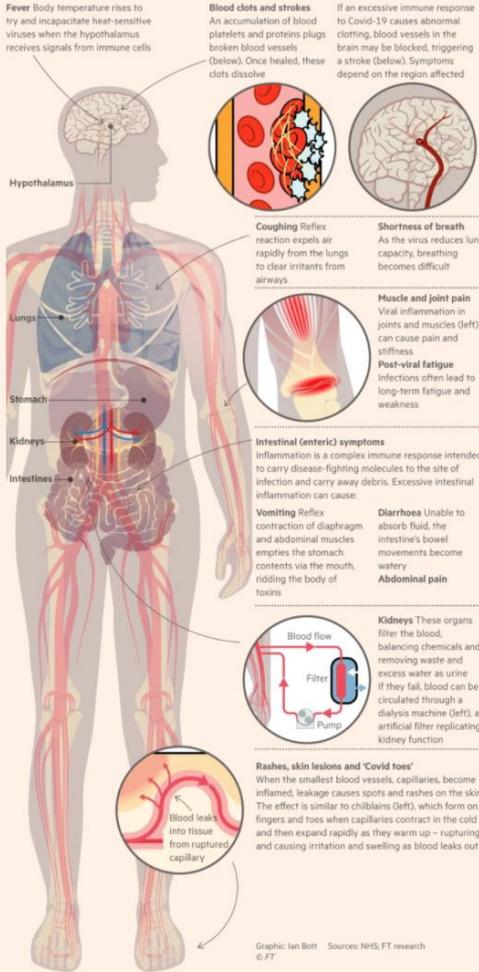
* Figures are daily averages calculated from weekly data provided by The Robert Koch Institute

FT Graphic: Chelsea Bruce-Lockhart

Sources: CDC, The COVID Tracking Project; Japan's Ministry of Health, Labour and Welfare; UK Department of Health and Social Care; FT research

© FT

How coronavirus affects the body from top to toe



Personal Protective Equipment (PPE)

For healthcare workers within a metre of a patient with possible or confirmed COVID-19

Public Health England recommends



For procedures generating airborne particles or droplets Public Health England recommends



Sources: NHS; FT research © FT

Mask types



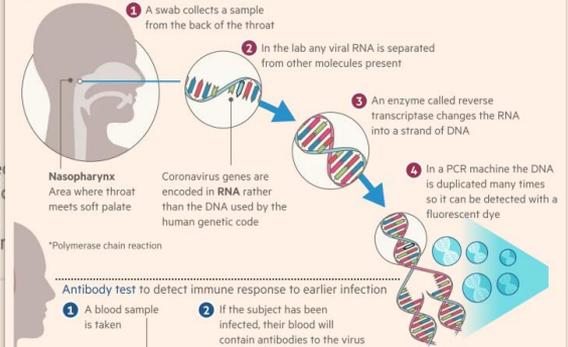
Surgical masks offer protection against large-particle droplets. But they do not block smaller particles in coughs and sneezes. They fit loosely and are intended to be used once

If the mask-wearer has a beard or facial deformity it can prevent a seal being formed

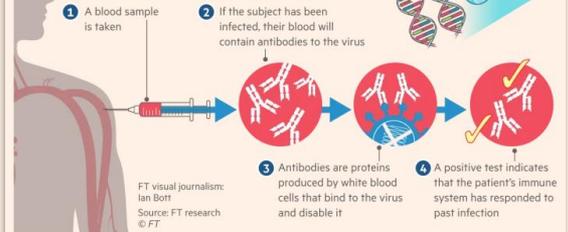
Sources: CDC; FT research © FT

Coronavirus testing methods

PCR* test to detect presence of virus in body



Antibody test to detect immune response to earlier infection



A respirator such as the N95 or FFP2 forms a tight seal around the nose and mouth and is designed to block even small particles. But it can be ineffective if not fitted correctly

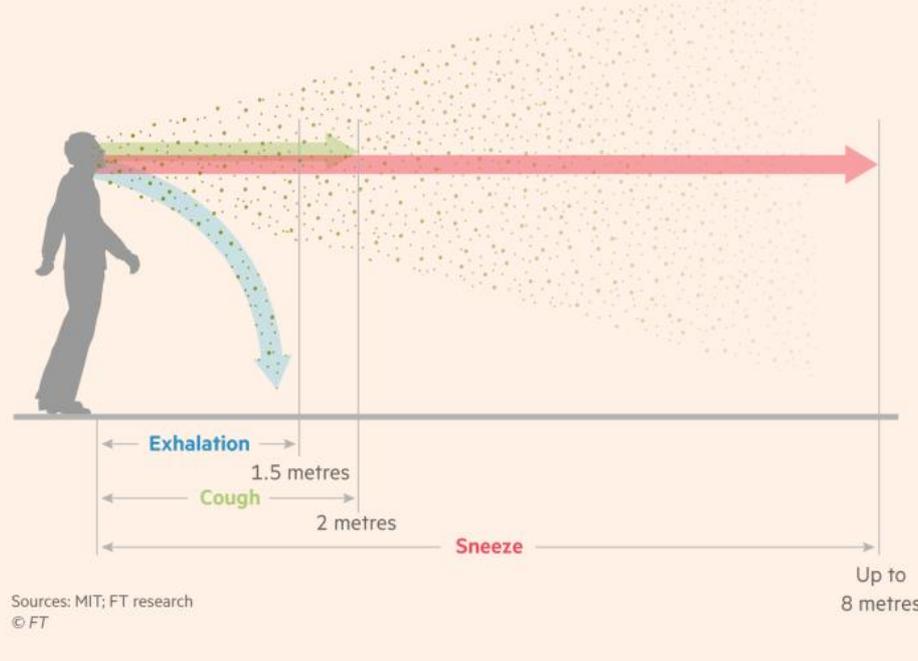
Coronavirus testing methods

PCR* antigen test to detect presence of virus in body

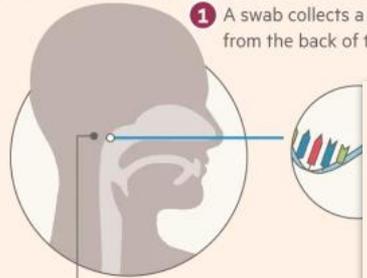
1 A swab collects a sample from the back of the throat

2 In the lab any viral DNA is separated

How far droplets travel



Sources: MIT; FT research © FT



Nasopharynx
Area where throat meets soft palate

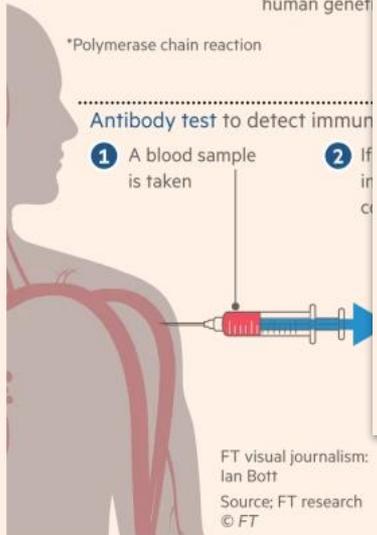
Coronavirus encoded in RNA than the DNA human genetic

*Polymerase chain reaction

Antibody test to detect immune response

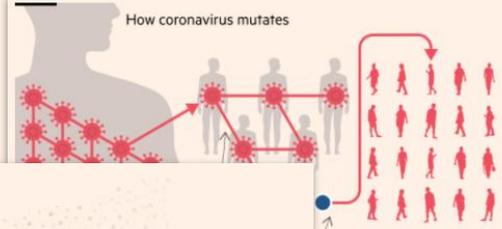
1 A blood sample is taken

2 If infection is confirmed



FT visual journalism: Ian Bott
Source: FT research © FT

produced by white blood cells that bind to the virus and disable it that the patient's immune system has responded to past infection



4 In any group of infected hosts, indicators of the geography or timing of the spread are not immediately apparent

5 However, if the genome samples come from hosts at a specific time and place, a picture of mutations and their connections - a phylogenetic tree - can be built up

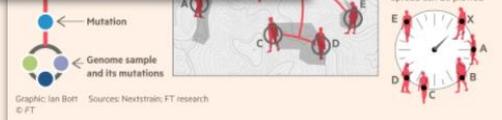
6 In this example: Virus X is the common ancestor

C and D share the same mutations

E is not identical but shares some of the mutations so is related to C and D but more distantly

A and B share more mutations with each other than the others, so can be plotted as having a relationship

7 If the time and location of sampling is logged, a map and timeline of spread can be plotted



Graphic: Ian Bott
Sources: Nextstrain; FT research © FT

We'd like feedback on your experience with the beta version of our graphics page.

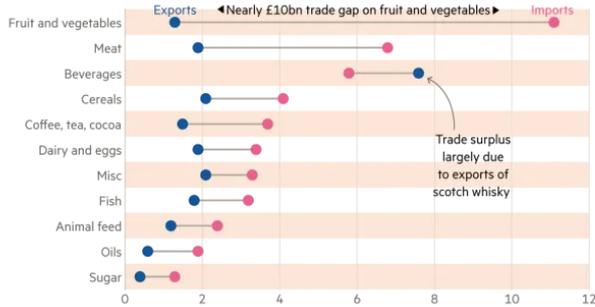
Give feedback ✕

Graphics BETA

Explore FT stories through charts and graphics

With one exception, the UK is a net importer of food and drink

UK trade in different food groups, 2018 (£bn)



Source: HMRC © FT

Editor's pick

Coronavirus: UK farmers face brutal test ahead of Brexit

The pandemic has exposed tensions over food security that are now playing out in the UK-EU trade talks

[Read full article](#)

TAGS: European Union, UK politics & policy, UK business & economy, Food & Beverage, Brexit, Global Economy, Coronavirus, UK agriculture

Search graphics

🔍 ✕ Coronavirus Search topics, organisations, places...

Clear all

Our suggestions

- + Oil
- + US presidential election
- + Donald Trump
- + Brexit



Using statistics to inform citizens in the age of coronavirus

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