INSURANCE
INVESTMENT
EXCHANGE

Covid-19: Cutting through the Noise

Weekly Summary and Update

Dr Bob Swarup

As of 21 April 2020

Copyright © 2020 Camdor Global Advisors All rights reserved.

TABLE OF CONTENTS

COVID-19: CUTTING THROUGH THE NOISE

KEY FACTS AND ACCOMPANYING ANALYSIS AS OF 21st APRIL

Copyright © 2020 Camdor Global All rights reserved

COVID-19: KEY EPIDEMIOLOGICAL TRENDS

Copyright © 2020 Camdor Global All rights reserved

Some words of wisdom for this week

When the map and the territory don’t agree, always believe the territory.

Swedish Army training

Uncertainty is not an indication of poor leadership; it underscores the need for leadership.

Andy Stanley

What we think, or what we know, or what we believe is, in the end, of little consequence. The only consequence is what we do.

John Ruskin

Copyright © 2020 Camdor Global All rights reserved

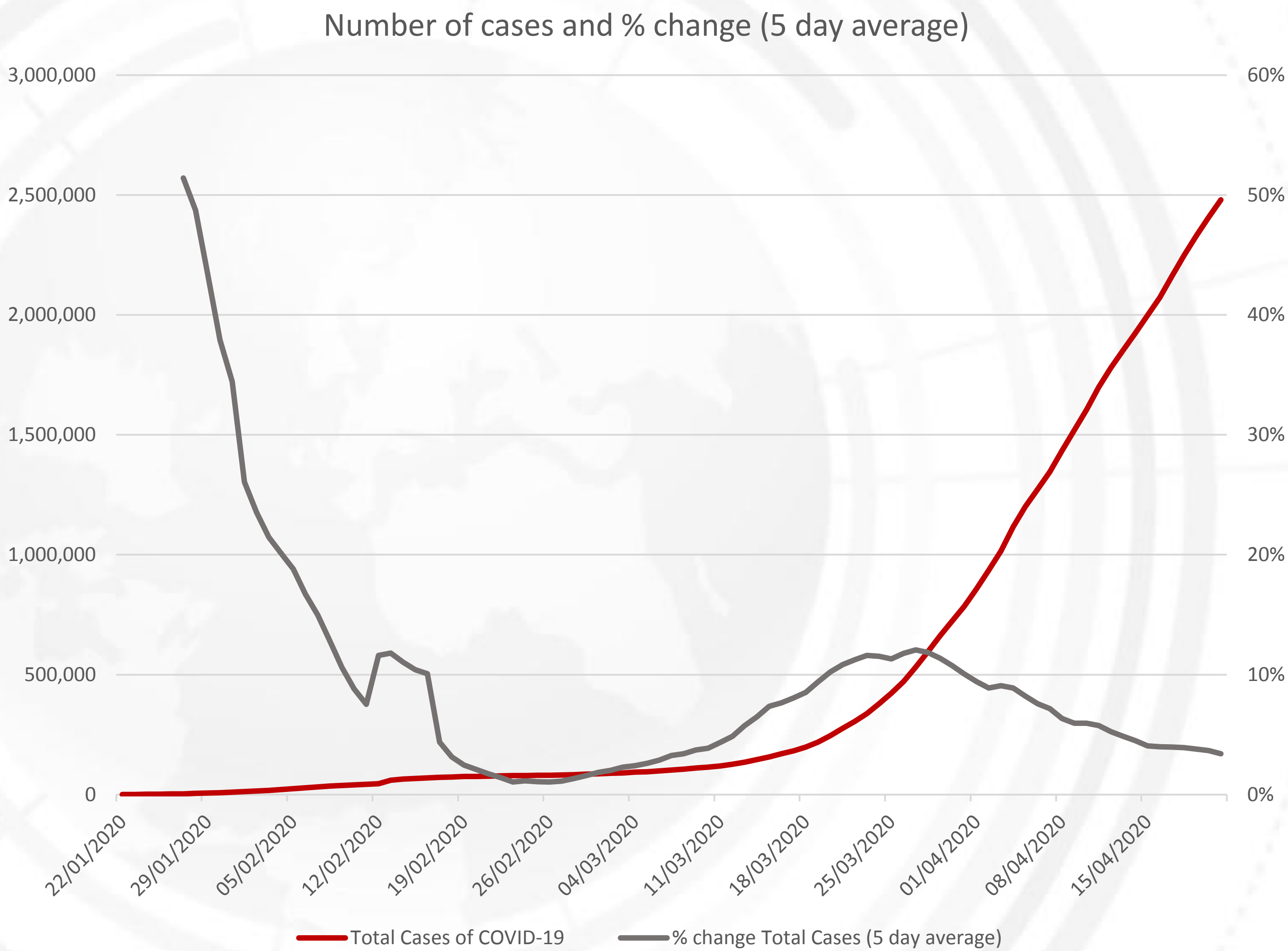
A global pandemic

Source: JHU CSSE

Concentrated in the developed world, but also spreading and data remains patchy…

Copyright © 2020 Camdor Global All rights reserved

Cases still growing but the rate has slowed…

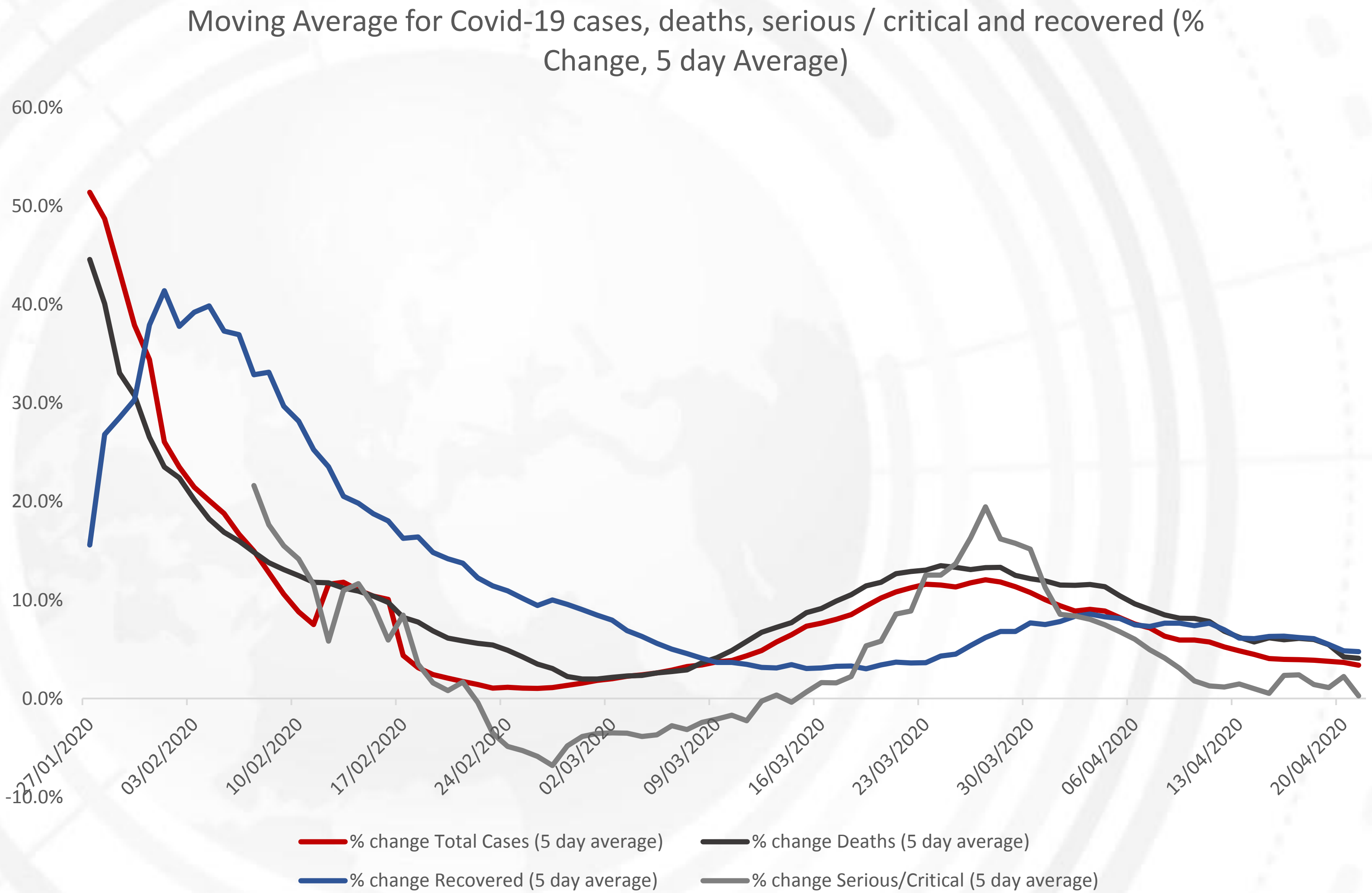


Source: WHO, Camdor Global

…with the 5 day moving average indicating peak growth at the end of March

Copyright © 2020 Camdor Global All rights reserved

A deceleration trend is now evident…

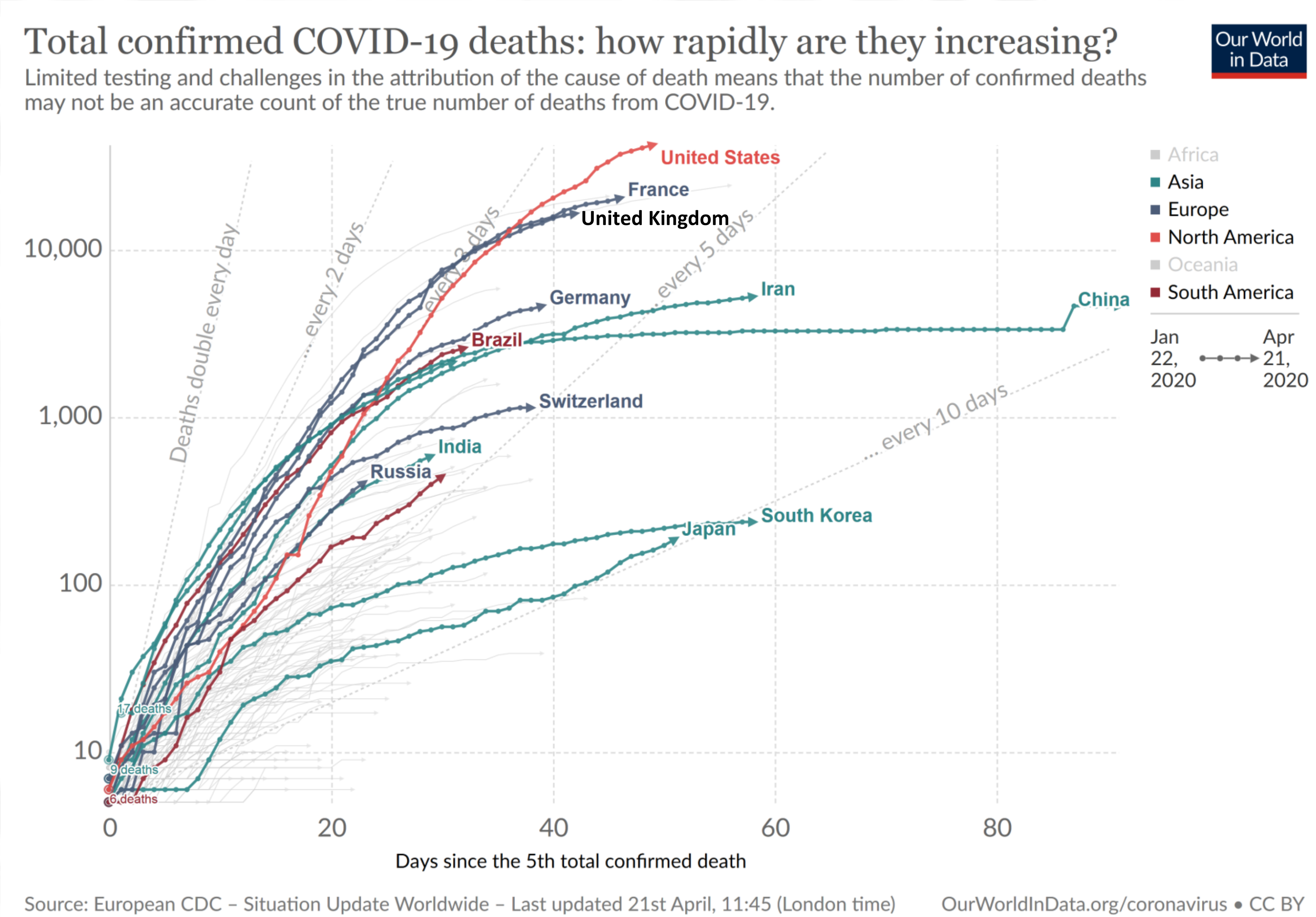


Source: WHO, Camdor Global

Acceleration in serious cases appears to have peaked c. 27th March, with a tapering in the growth of deaths since.

Copyright © 2020 Camdor Global All rights reserved

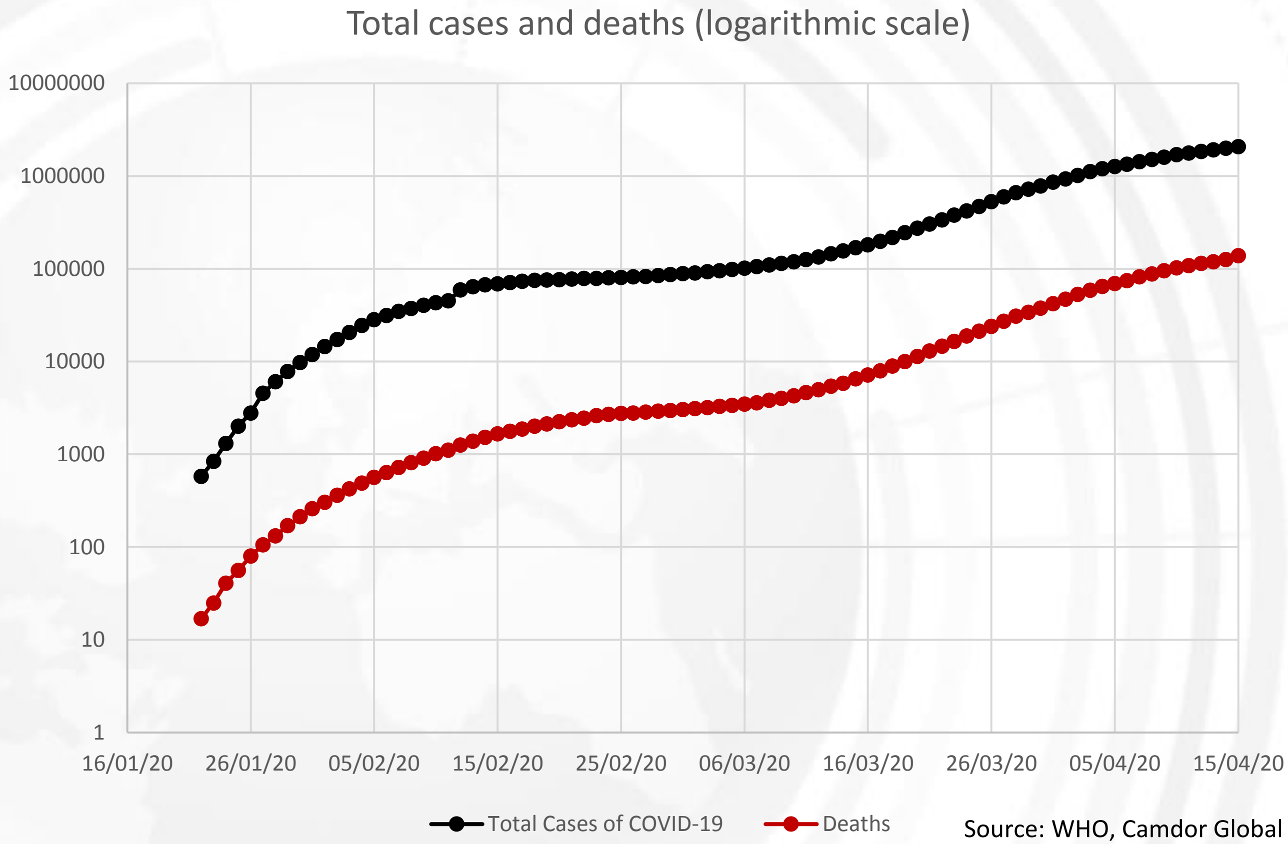
Deaths are doubling c. 9-11 days currently



- US has a steeper trajectory, indicating it is about a week behind
- UK is hugging the same trajectory as France

Copyright © 2020 Camdor Global All rights reserved

The overall trend, however, remains upward

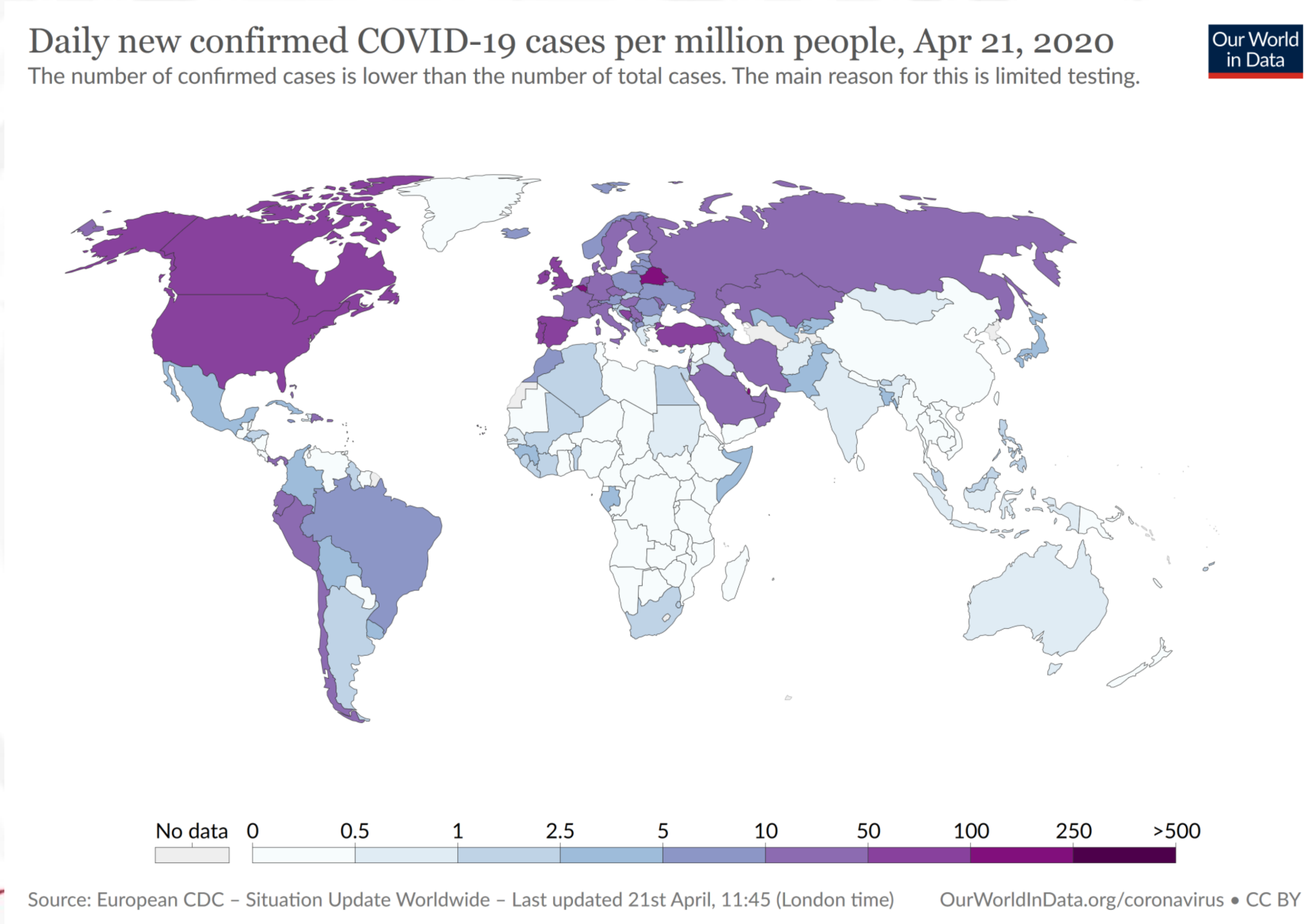


Source: WHO, Camdor Global

- Slope of logarithmic plot indicates only the beginning of the end
- More worryingly, the lull in the middle indicates that there was a second wave of new infections and deaths as new geographic clusters emerged.
- Significant underreporting of cases/deaths outside hospitals coupled with lags in scaling up testing and new hotspots mean a new lease of life cannot be ruled out.
- Where are the next hotspots or are we truly getting a handle on this?

Copyright © 2020 Camdor Global All rights reserved

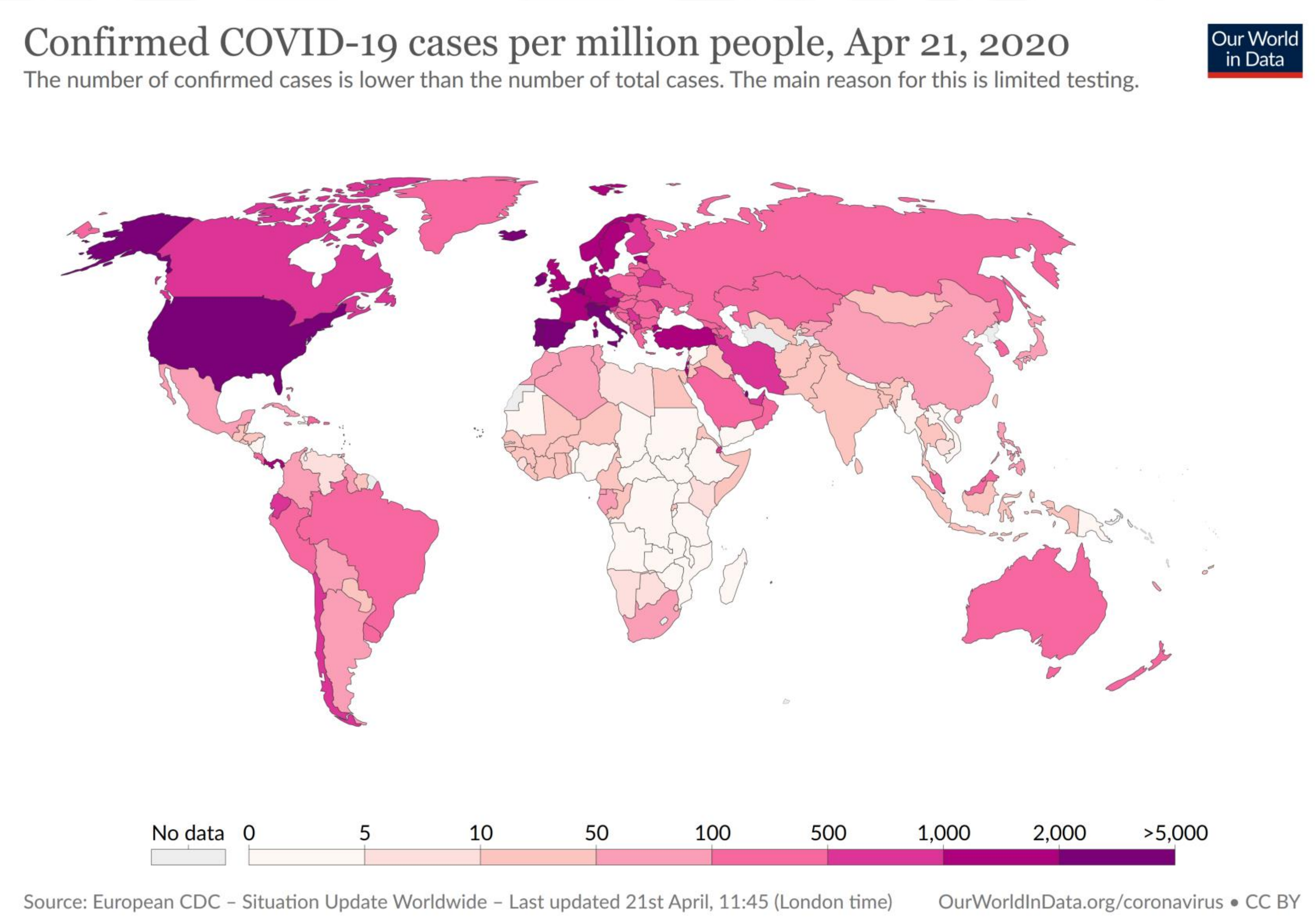
Growth in new cases no longer a Europe/US story



South America, Russia, Turkey and Middle East emerging as new clusters.

Copyright © 2020 Camdor Global All rights reserved

Cases per million indicate more below the radar



South America, Russia and the Middle East are troubling, while limited testing makes Africa and South Asia unknowns.

Copyright © 2020 Camdor Global All rights reserved

The US is the epicentre, with Europe tapering

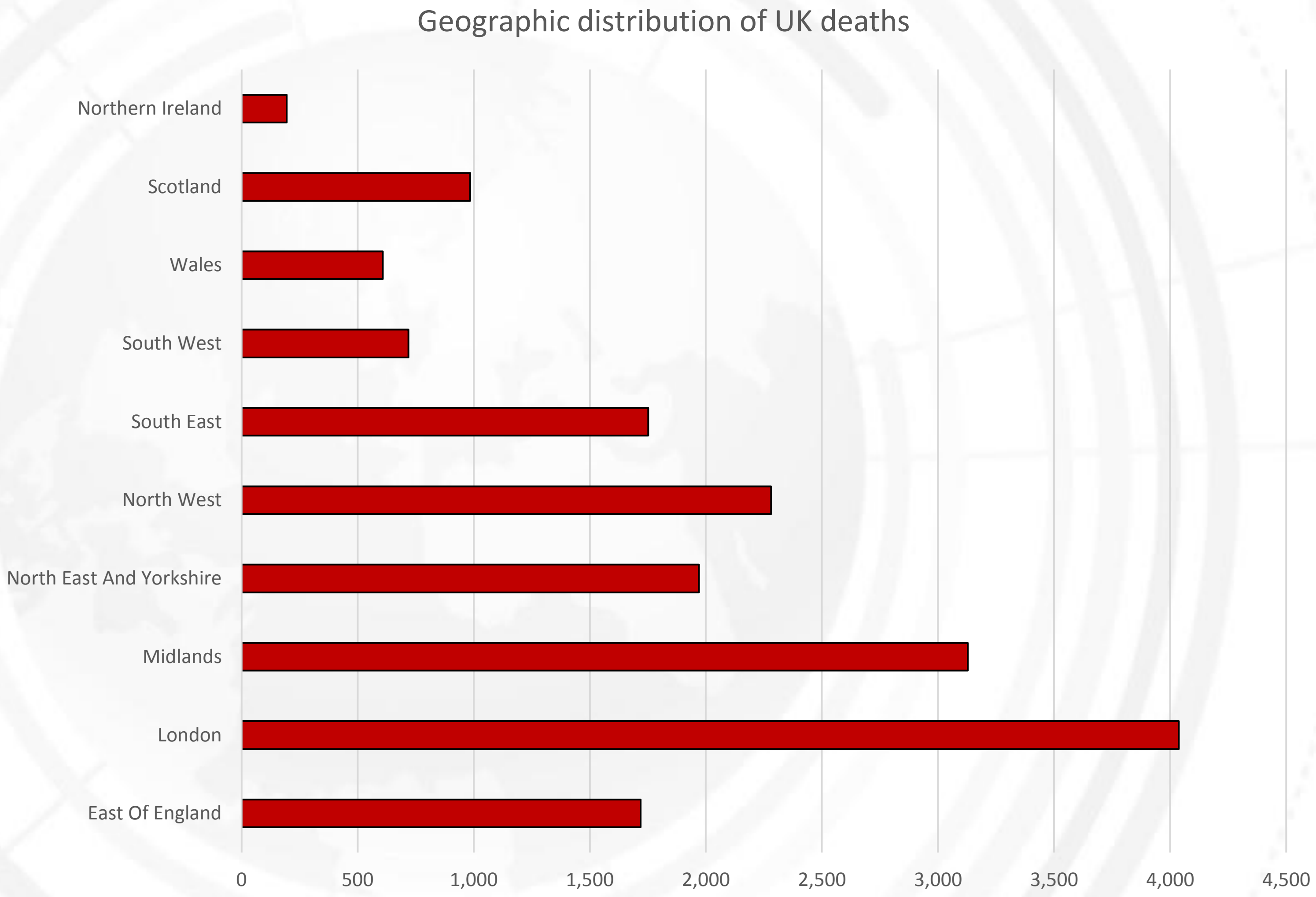
Country	Cases	Deaths	Region	Case per mn	Deaths per mn
USA	**819,164**	**45,340**	**North America**	**2,475**	**137**
Italy	**183,957**	**24,648**	**Europe**	**3,043**	**408**
Spain	**204,178**	**21,282**	**Europe**	**4,367**	**455**
France	**158,050**	**20,796**	**Europe**	**2,421**	**319**
UK	**129,044**	**17,337**	**Europe**	**1,901**	**255**
Iran	**40,956**	**5,998**	Asia	**3,534**	**518**
Belgium	**84,802**	**5,297**	**Europe**	**1,010**	**63**
Germany	**148,453**	**5,086**	**Europe**	**1,772**	**61**
China	**82,788**	**4,632**	Asia	**58**	**3**
Netherlands	**34,134**	**3,916**	**Europe**	**1,992**	**229**
Global	**2,557,183**	**177,641**		**328**	**22.8**

Source: Worldometers

Cases and deaths per mn indicate the US and UK are beginning to peak for now. But global metrics are still muted, indicating we have some way to go still.

Copyright © 2020 Camdor Global All rights reserved

What is the geographic distribution for the UK?

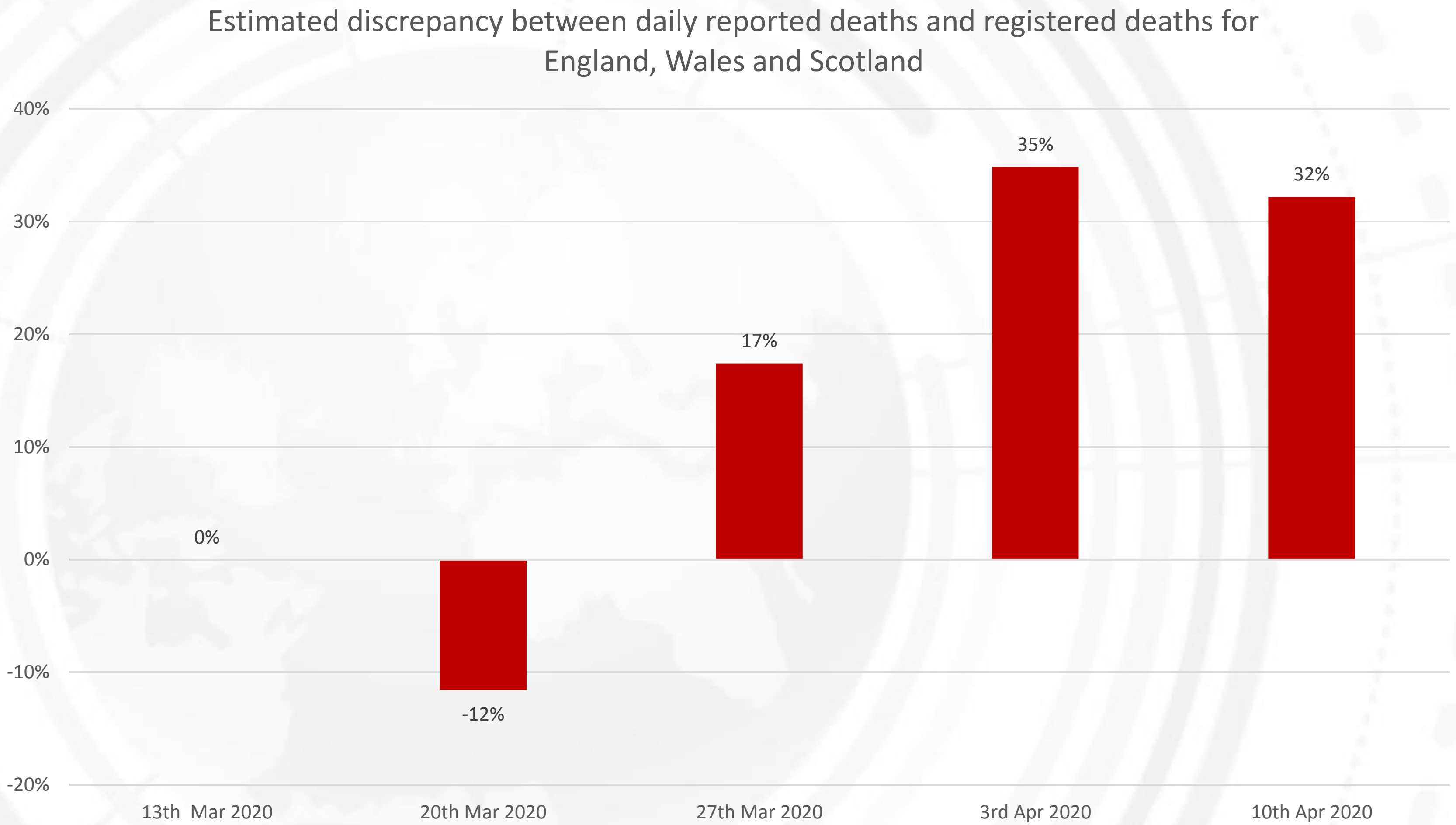


Source: Camdor Global (based on various government sources)

London and the Midlands have been particularly badly hit to date. Not surprising given population densities and deeper global links. Also important to note that many deaths potentially are missing, e.g. care homes.

Copyright © 2020 Camdor Global All rights reserved

What is the true number of deaths?

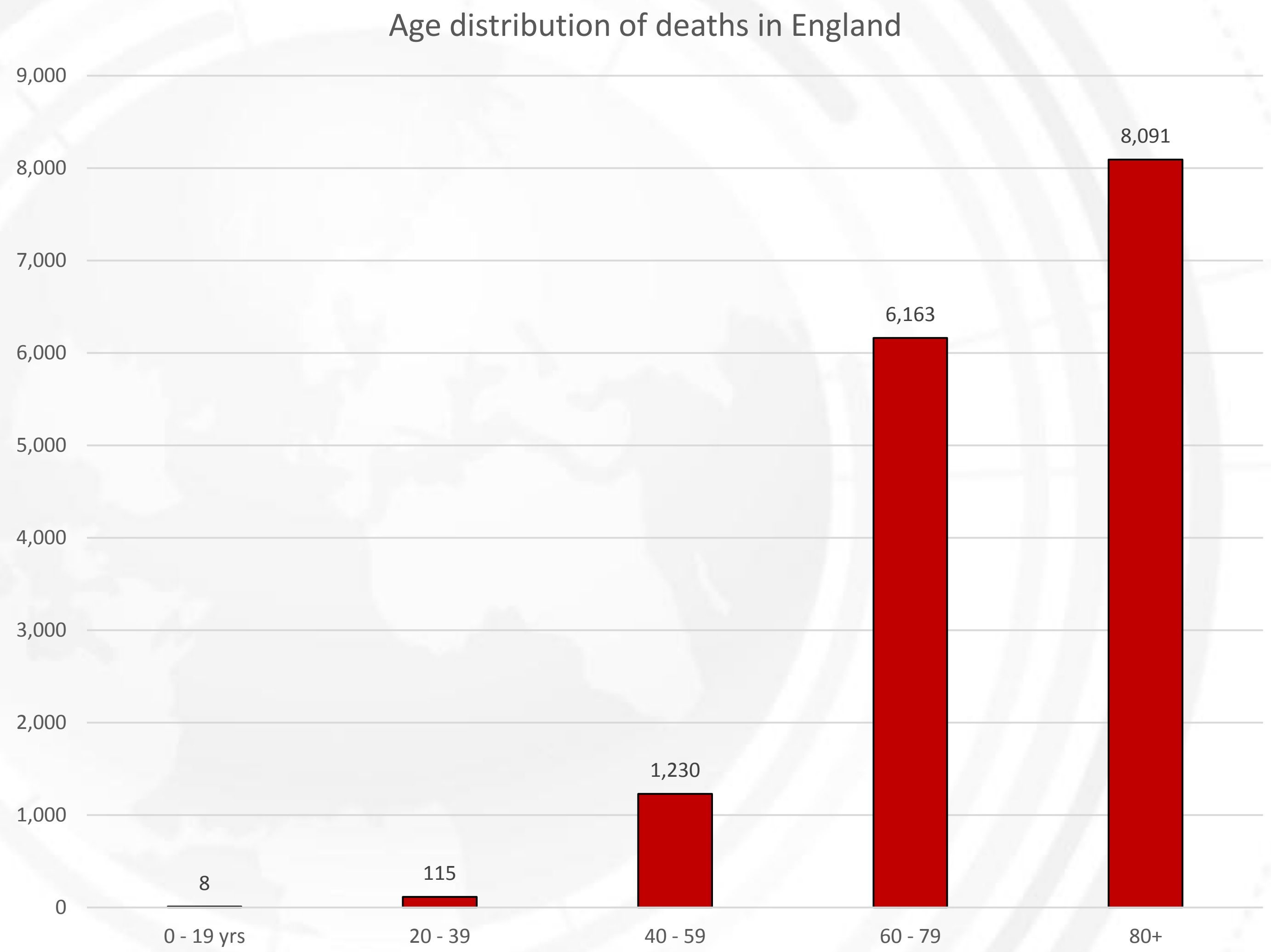


Source: Camdor Global (based on various government sources)

- Government numbers are estimates and cover only hospital deaths, while public register data captures all deaths albeit with a lag.
- **Currently, indicate deaths are about a third higher – circa 23,000 or over 5,500 higher.** Lags and limited testing means true gap could be higher still.

Copyright © 2020 Camdor Global All rights reserved

What is the indicative age distribution?

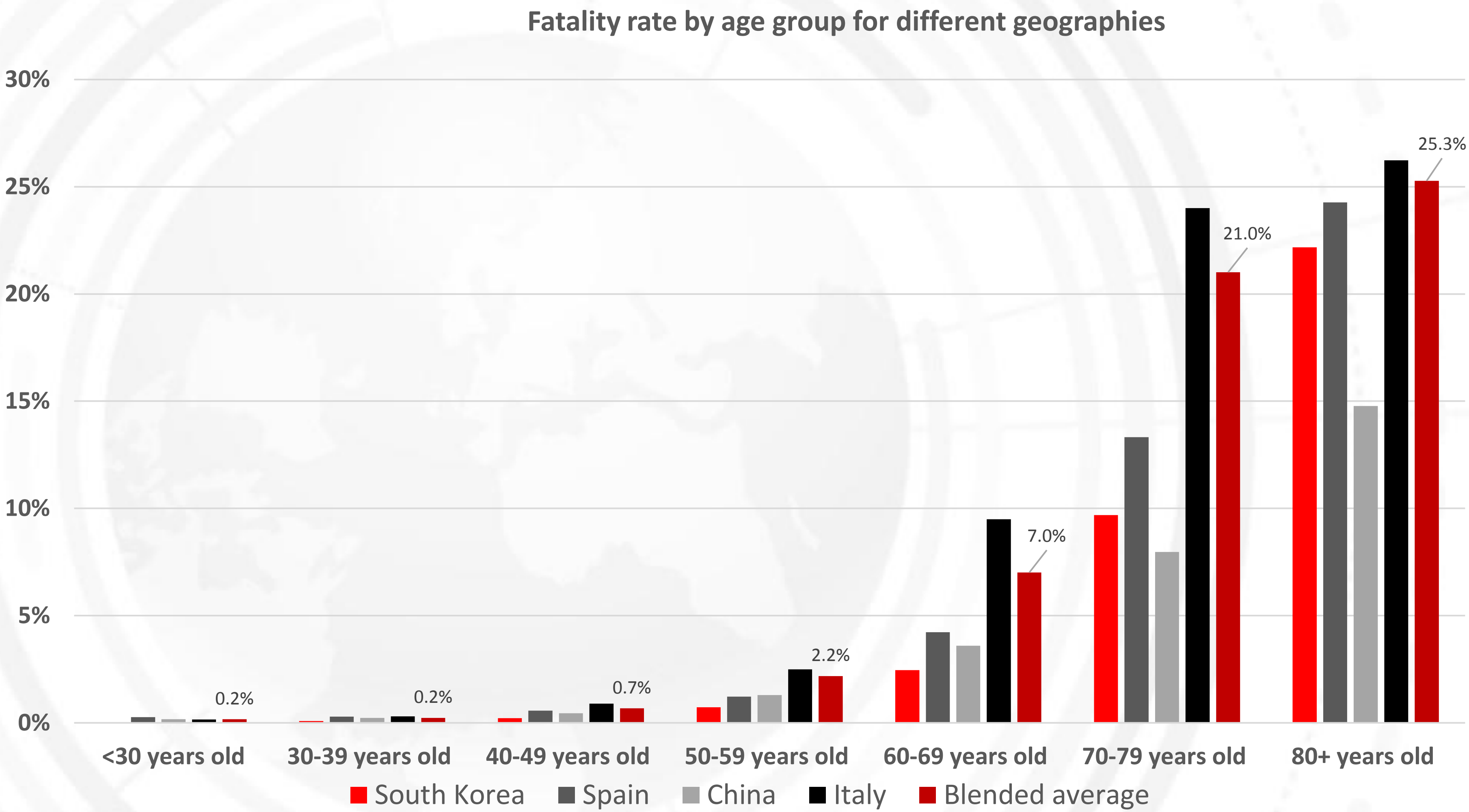


Source: NHS

Mortality rises sharply above 60 years of age.

Copyright © 2020 Camdor Global All rights reserved

And fatality rates?



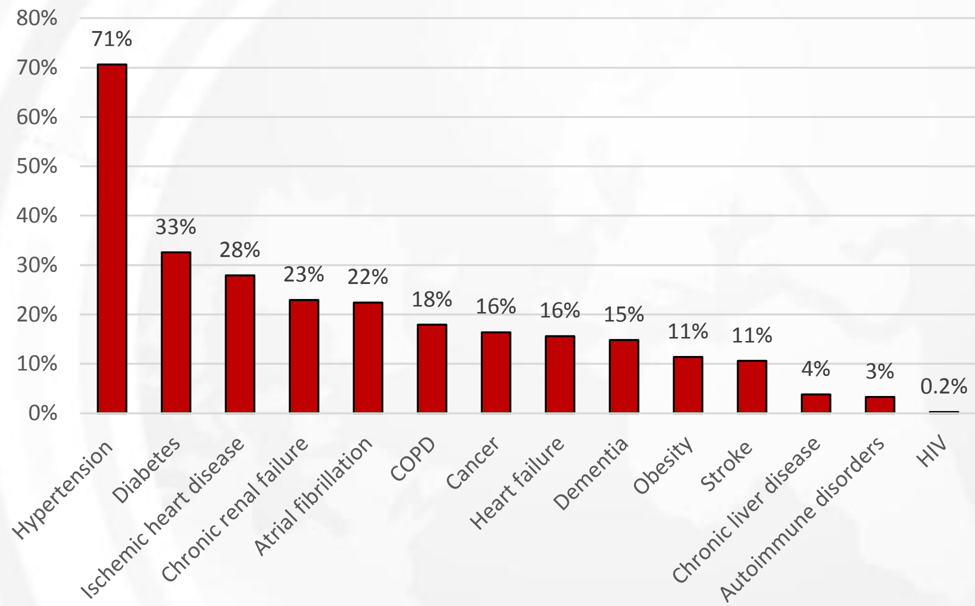
Source: Camdor Global (based on various government sources)

Emerging data implies countries with significant old age populations will be hard hit, viz. Italy. The Chinese data also appears to be an outlier.

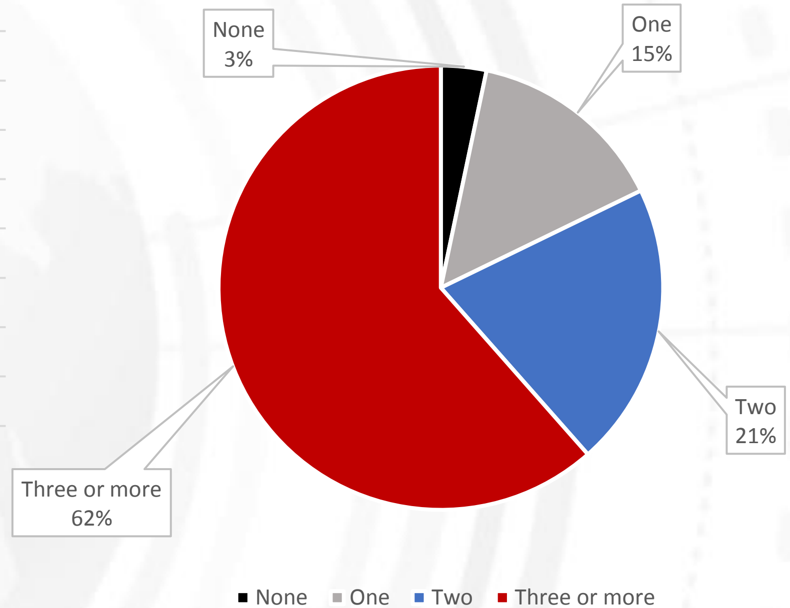
Copyright © 2020 Camdor Global All rights reserved

Understanding what contributes to deaths…

Most common underlying health conditions observed in diseased Covid patients (Italian sample of 1,596 hospitalisations, %)



Number of underlying health conditions in deceased Covid patients (Italian sample of 1,596 hospitalisations, %)



Source: Camdor Global based on Italian govt data

- We examine recent Italian analysis, which indicates that for hospitalised patients, cardiovascular diseases and diabetes in particular stand out as significant risk factors.
- Having multiple underlying conditions significantly increases risk as well.
- But 3% had no underlying conditions, which indicates an aggressive viral disease

Copyright © 2020 Camdor Global All rights reserved

COVID-19: REAL ECONOMY IMPACT

Copyright © 2020 Camdor Global All rights reserved

The impact on global travel remains dramatic

Global Scheduled Flights Change year-over-year

Week compared with equivalent week in previous year i.e.
Monday 6 January 2020 vs. Monday 7 January 2019.

Region	Jan	Feb	2 Mar	9 Mar	16 Mar	23 Mar	30 Mar	6 Apr	13 Apr	20 Apr
ALL	0.8%	-8.6%	-7.9%	-10.1%	-12.4%	-28.7%	-47.7%	-59.2%	-64.1%	-66.0%
Spain	-3.7%	-1.8%	-1.4%	-2.9%	-13.7%	-74.3%	-88.5%	-92.6%	-94.2%	-95.1%
Hong Kong	-9.7%	-46.5%	-70.4%	-77.5%	-80.8%	-81.7%	-88.3%	-92.3%	-94.2%	-94.5%
Germany	-8.5%	-6.9%	-5.0%	-15.4%	-30.2%	-71.9%	-88.6%	-92.6%	-92.5%	-93.7%
Singapore	-0.1%	-16.1%	-25.4%	-35.7%	-35.5%	-76.9%	-90.8%	-89.9%	-92.5%	-97.1%
Italy	-3.3%	-4.2%	-8.8%	-21.6%	-73.9%	-88.0%	-89.2%	-89.0%	-92.2%	-81.2%
France	-0.8%	0.4%	-2.0%	-3.8%	-13.7%	-41.3%	-81.4%	-87.0%	-92.1%	-91.7%
UK	-3.8%	-3.3%	-2.7%	-15.5%	-19.3%	-53.5%	-75.6%	-90.7%	-92.0%	-93.2%
Australia	-3.5%	-3.2%	-1.7%	-2.3%	-2.9%	-15.9%	-63.1%	-78.1%	-84.6%	-83.7%
Sweden	-9.2%	-5.6%	-4.8%	-6.4%	-14.1%	-65.3%	-77.1%	-84.2%	-83.7%	-86.3%
UAE	-1.9%	-3.0%	-2.9%	-8.3%	-24.4%	-57.6%	-85.8%	-84.4%	-78.2%	-79.2%
South Korea	2.2%	-11.6%	-34.1%	-52.1%	-56.1%	-55.7%	-56.6%	-59.3%	-60.4%	-58.8%
USA	1.7%	1.2%	-2.1%	-1.3%	-0.5%	-4.8%	-23.0%	-45.2%	-58.0%	-60.8%
India	2.1%	6.3%	9.9%	10.0%	8.3%	1.8%	-68.0%	-71.1%	-53.2%	-52.3%
China	4.3%	-55.1%	-41.6%	-42.9%	-38.7%	-37.5%	-43.9%	-46.2%	-42.6%	-42.4%
Japan	2.4%	-3.5%	-7.6%	-15.0%	-19.2%	-24.3%	-27.9%	-32.0%	-40.1%	-44.4%

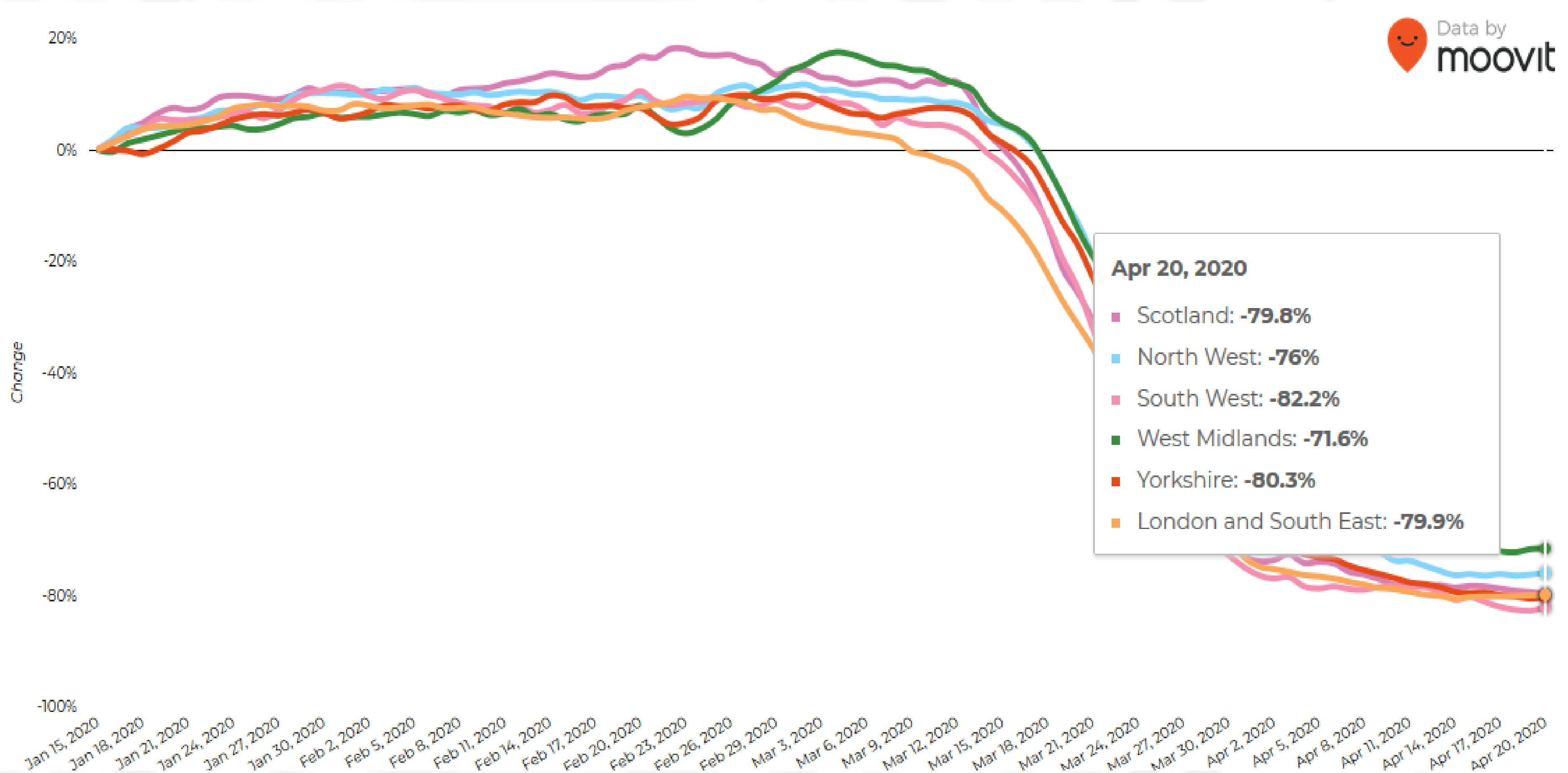
Source: Schedules Analyser

Source: OAG Aviation Worldwide

- Scheduled flights globally down by 66% year on year. US down 61% and the UK down 93% yoy.
- Lockdowns, restrictions and worries about imported (re-)infections continue to weigh.
- Worth noting in China, travel has been slow to resume and domestic airline seats are now being subsidised to encourage travel

Copyright © 2020 Camdor Global All rights reserved

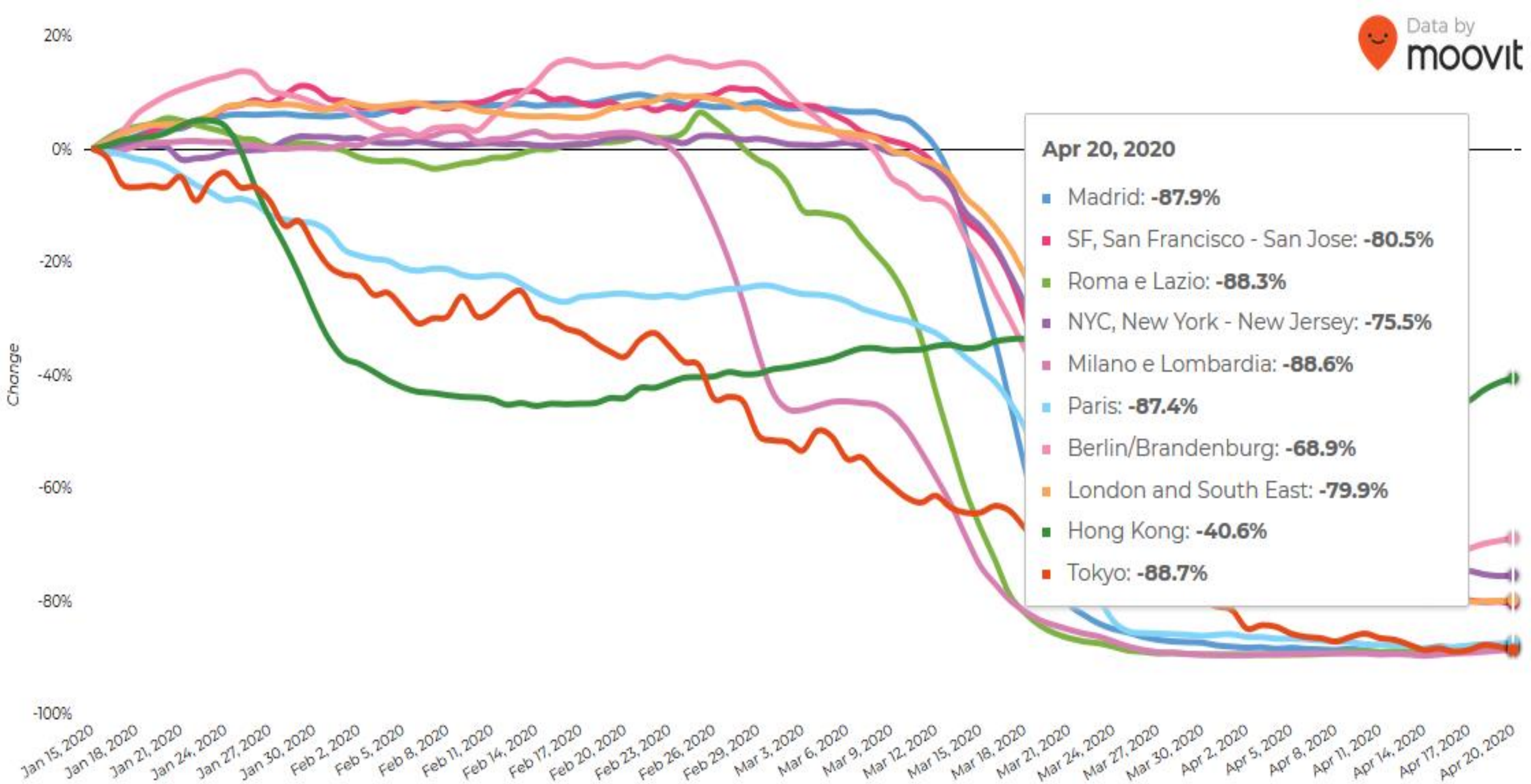
Public transit usage down sharply but levelling



Source: Moovit – www.moovit.com

Copyright © 2020 Camdor Global All rights reserved

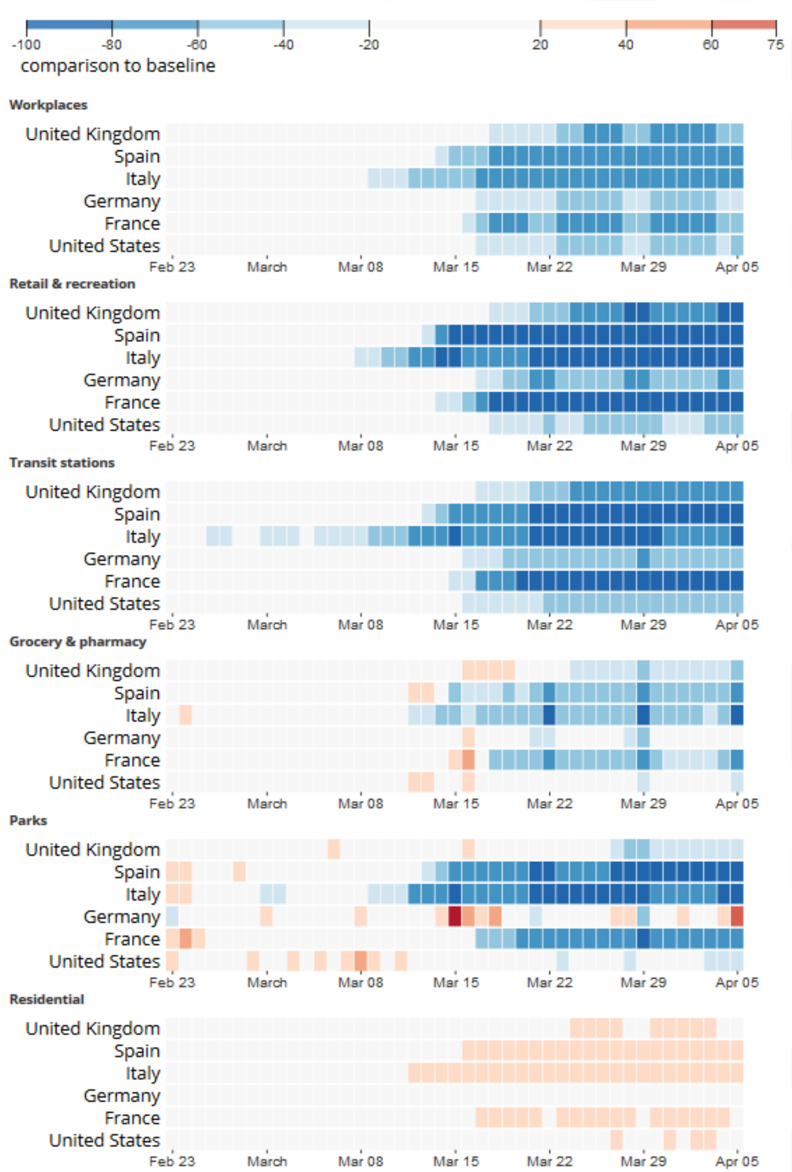
…but some gentle hints of reversion in Hong Kong



Source: Moovit – www.moovit.com

Copyright © 2020 Camdor Global All rights reserved

Mobility has fallen across the board

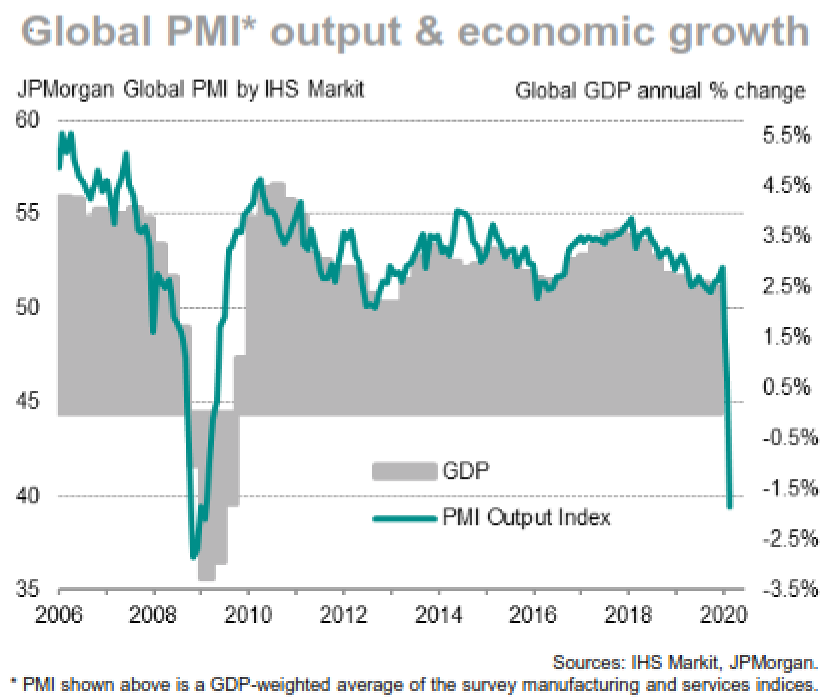


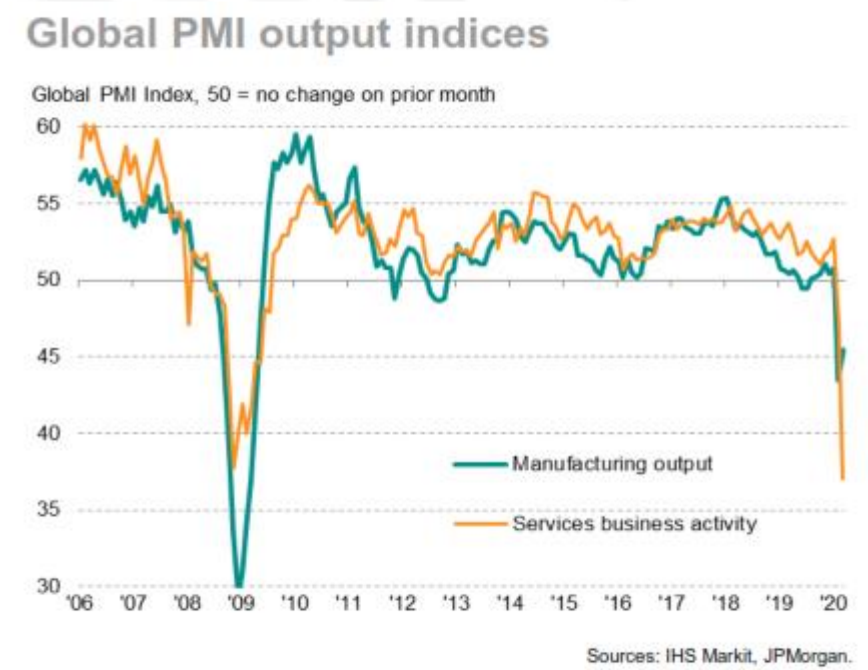
Source: Office for National Statistics, Google Community Mobility Reports

- The data examines a range of G20 countries over the last 6 weeks.
- Lockdowns are pervasive and hitting across the economic ecosystem
- Even grocery and pharmacy stores are down from their baseline generally, after initial spates of panic buying.
- The US has a lower reduction across the board, which speaks to both conflicting attitudes across the country and differing state policies
- Both the US and UK were slower to cut mobility than central Europe.
- This is an economic system, whose arteries have stopped flowing.

Copyright © 2020 Camdor Global All rights reserved

Global PMI shows significant deterioration…

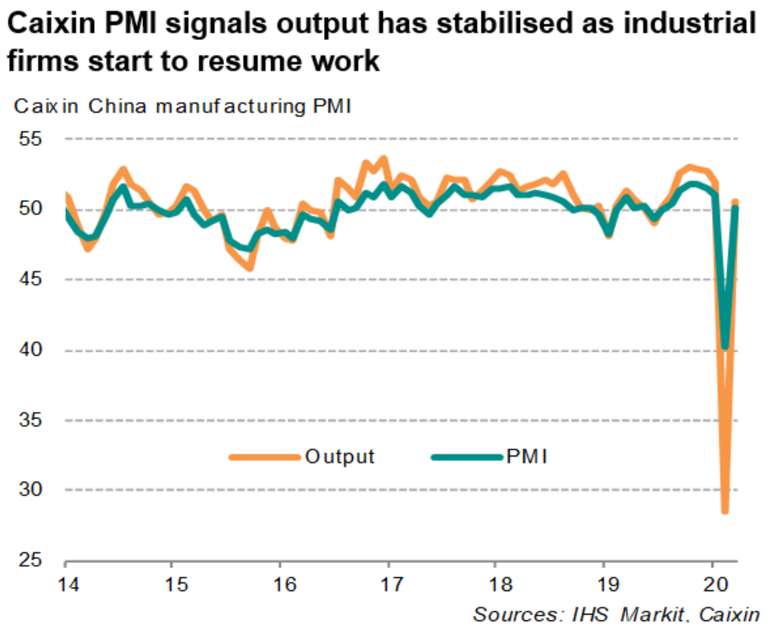


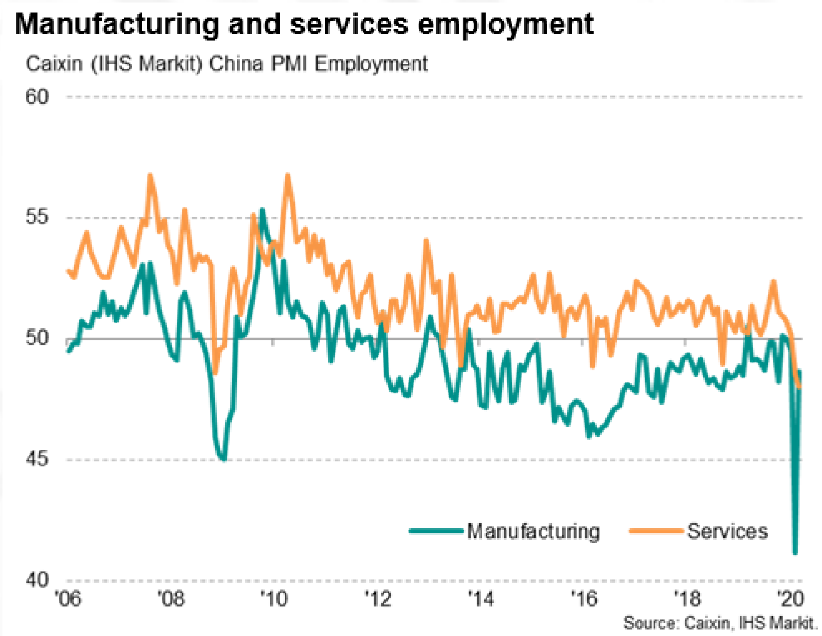


- Second month of deterioration. Worst set of readings since the financial crisis, and indicating a worsening economic contraction, with GDP set to follow.
- Services decline worst ever in survey's history. China's experience implies no rapid rebound.
- But results also masked by delivery delays. Under PMI methodology, delays are a positive contributor as they imply increased demand and a backlog of orders.
- Instead, here delays indicate stress in the supply chain - factory closures, Covid related restrictions, input shortages etc.
- Worst reading for delivery times since 2004, but that was due to a boom, not a shutdown!

Copyright © 2020 Camdor Global All rights reserved

…But China's bouncing back?



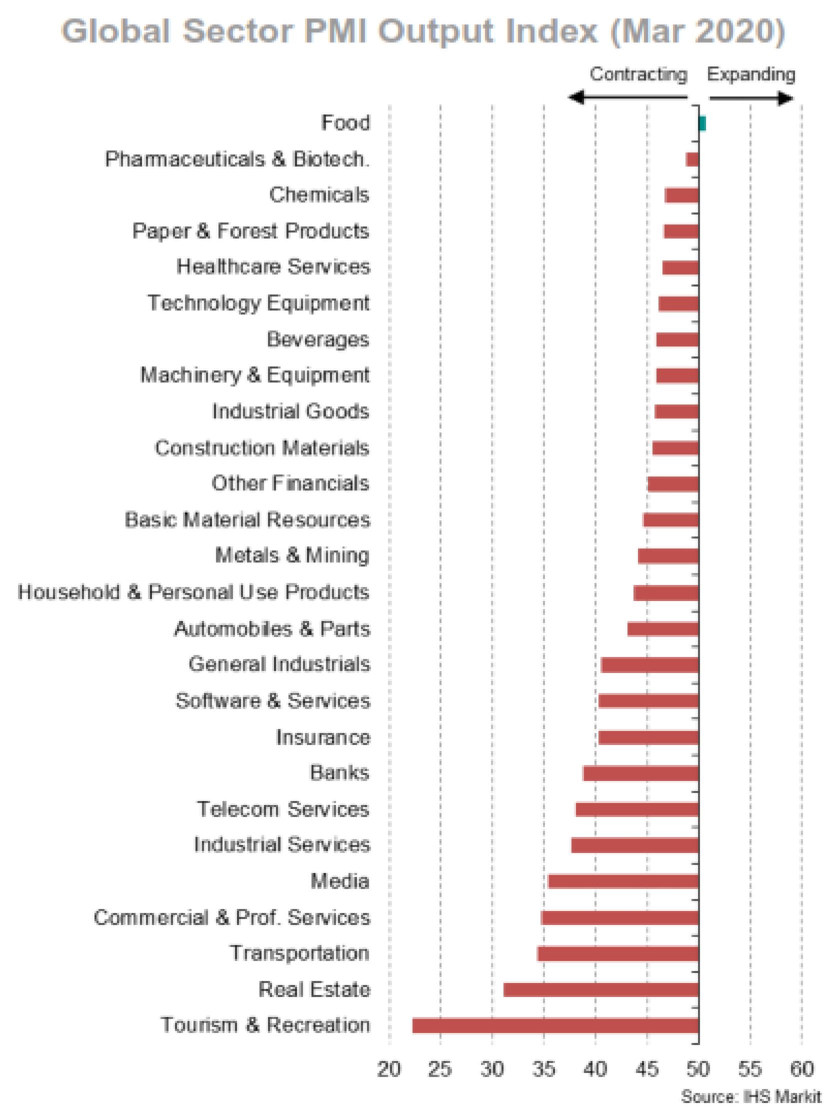


- China manufacturing PMI shows strong rebound after a record low in Feb. But this is not (yet) a recovery!
- Each PMI reading is relative to the previous, with 50 representing no change, so the rebound to 50.1 only means that they stabilised at the 'new' normal.
- Services show continued contraction, with orders shrinking and demand weakening. Price discounting has become the way for now to boost sales, coupled with lower employment to boost margins.

Copyright © 2020 Camdor Global All rights reserved

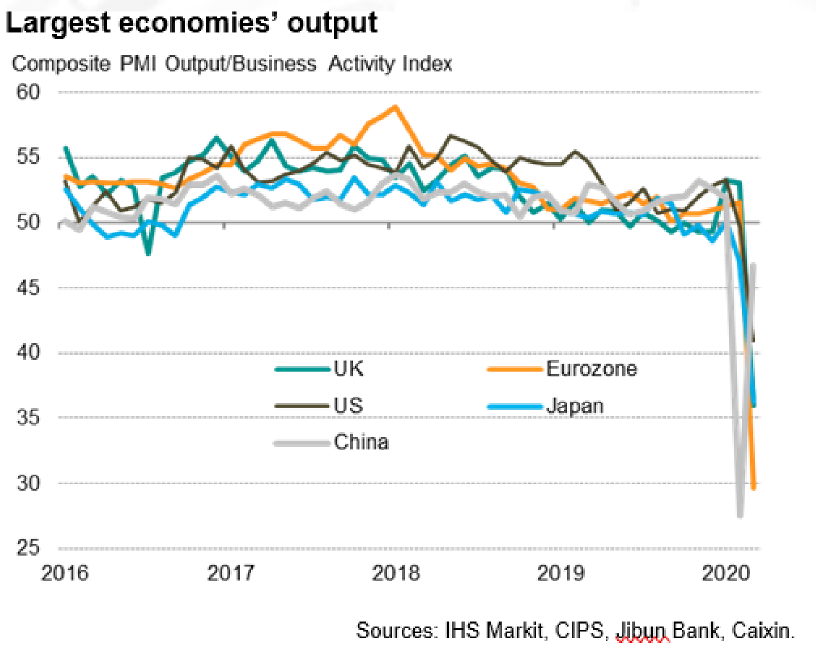
Where is the hit?

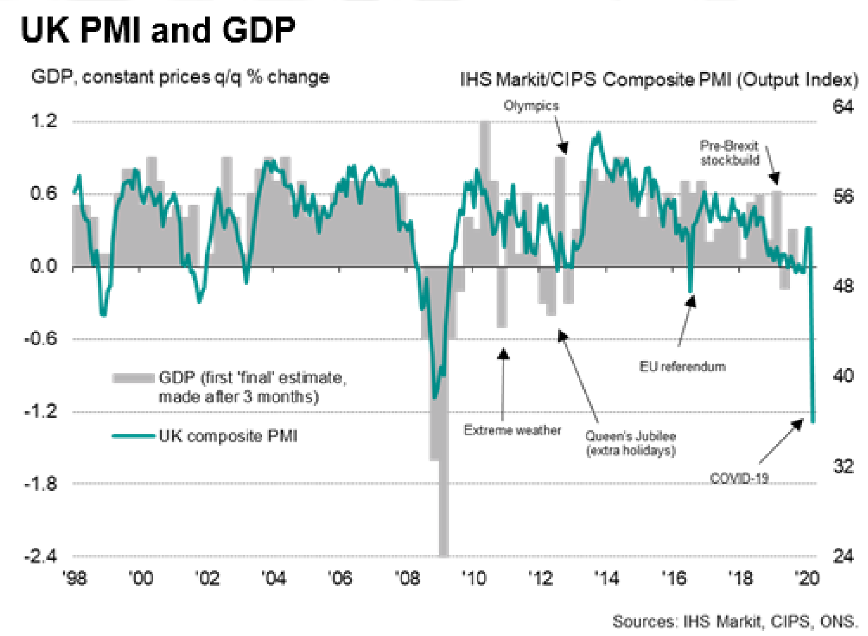
- Tourism, not surprisingly, but also real estate
- A broad based decline, implying a widespread shutdown. But also importantly some of the worst hit areas are not ones where you would expect to see a rapid recovery to pre-pandemic levels - particularly if behavioural confidence is impacted in the longer run, as people worry about re-infection and further waves.
- That does not bode well for the V-shaped recovery some are hoping for.
- It is also important to note that from the data, orders have collapsed and demand taken a cliff-edge plunge.
- The result has also been rapid cuts in employment (the largest fixed cost for most businesses) and discounting to salvage sales and margins.
- That implies lost demand and lost capacity, which will take time to rebuild, rather than instantly coming back on.



Copyright © 2020 Camdor Global All rights reserved

Major economies are suffering

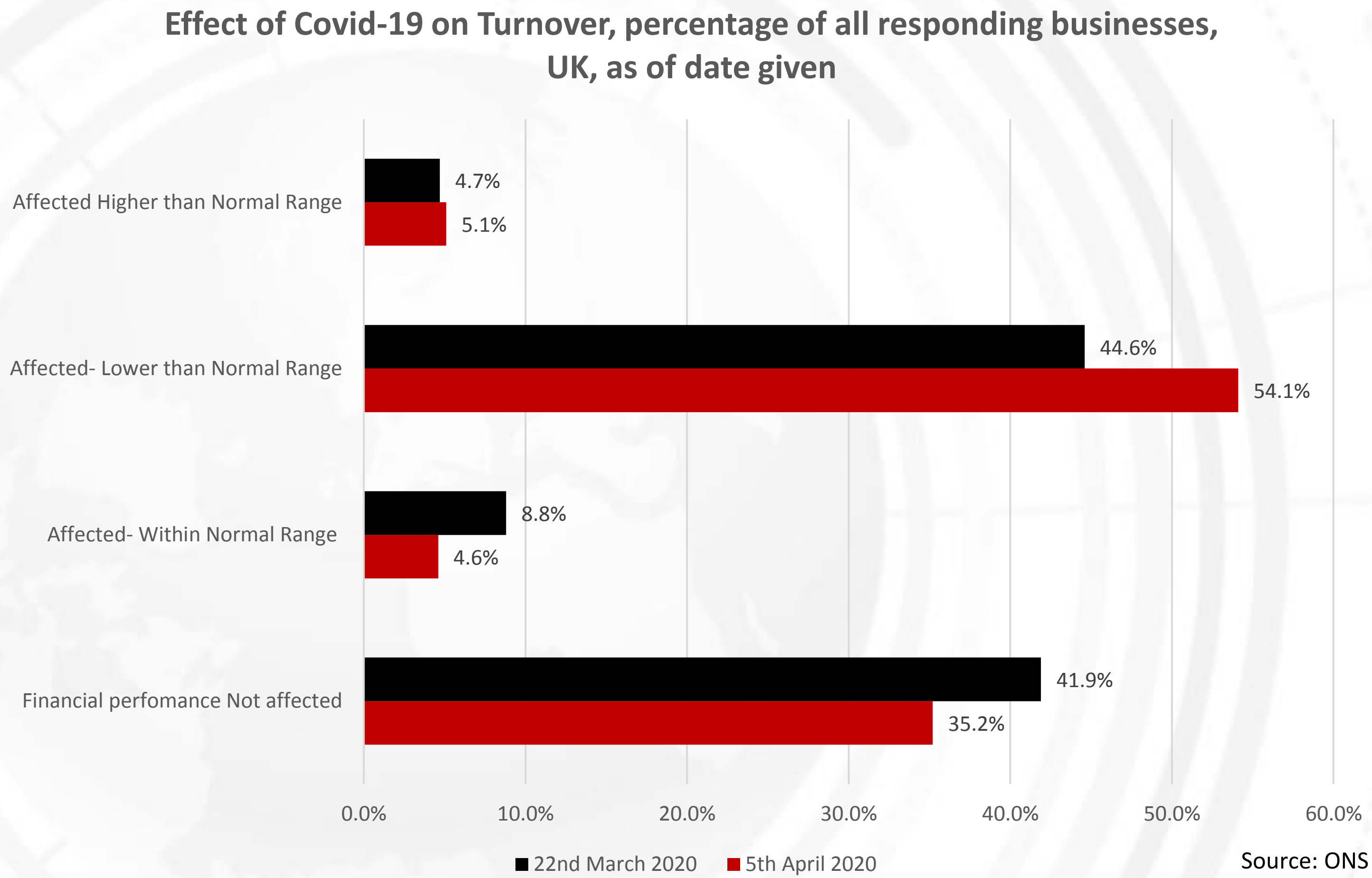




- The Eurozone is faring worse than the UK or US.
- But that is poor comfort – UK data indicates an annualised of contraction approaching 5% in March, potentially surpassing the downturn seen in 2008-09.
- Given that lockdowns began later in the UK and US, the rate of contraction has likely accelerated over April.
- Services faring worse than manufacturing is a common theme and will worsen over April.
- That also means a bigger problem for economies like the UK that are largely services dependent.

Copyright © 2020 Camdor Global All rights reserved

The signs going forward for the UK are not positive



Source: ONS

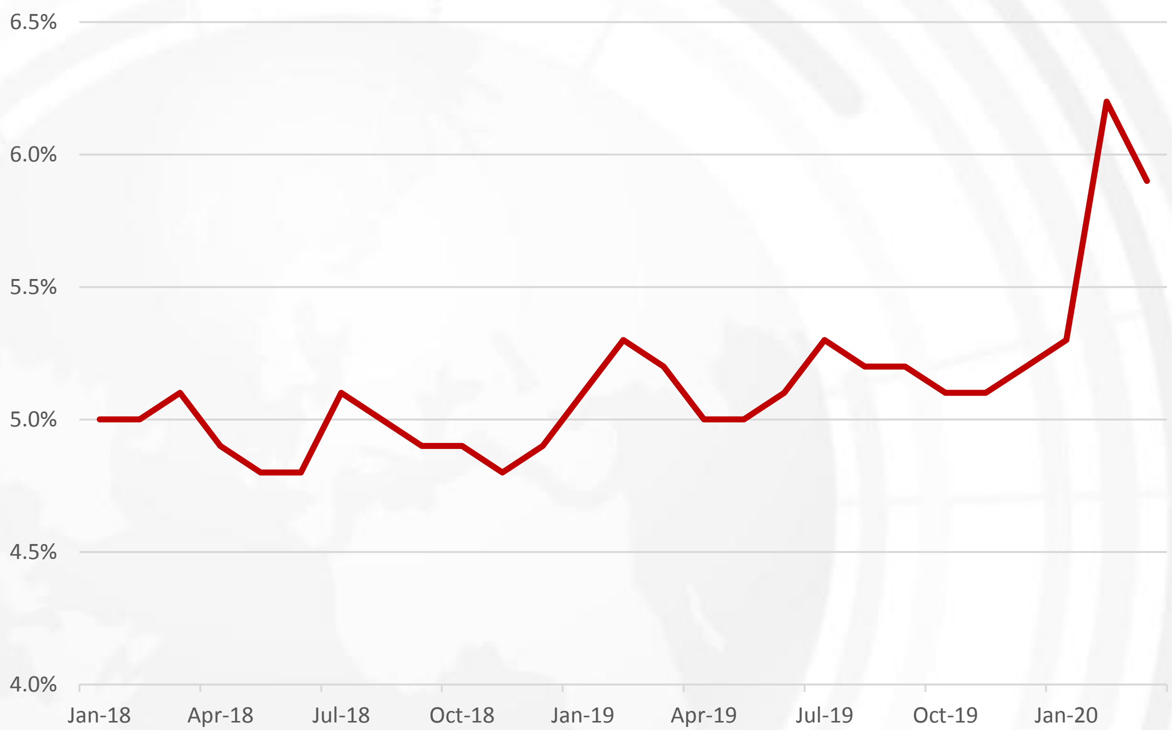
- Rapid fortnightly surveys as of 22nd March and 5th April show a worsening picture with over 54% of businesses showing lower turnover outside normal ranges
- Services and the rentier culture make the UK particularly vulnerable, propagating contagion effects throughout the economy

Copyright © 2020 Camdor Global All rights reserved

COVID-19: WHAT ABOUT JOBS?

Copyright © 2020 Camdor Global All rights reserved

Reading Chinese tea leaves: How many job losses?



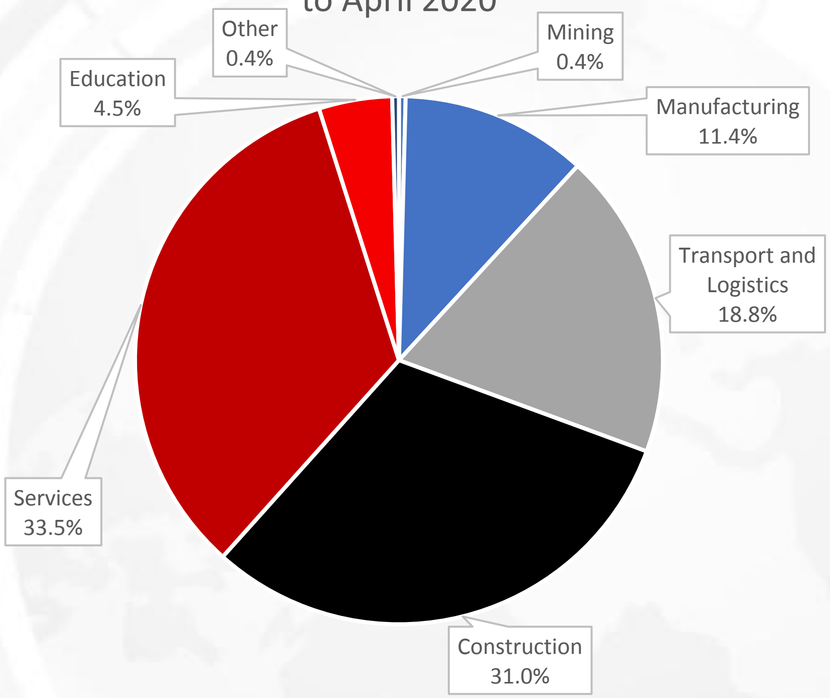
Source: NBS China

- Chinese urban unemployment fell slightly in Mar, but masks true unemployment.
- It captures only circa 60% of labour force and does not include rural workers and workers in part-time or casual work. These are likely to be far more sensitive to the current uncertainty and impacted harder.
- Worth also noting that real Chinese unemployment in 2002-09 was estimated to be 10.9% vs an official average of only 4.2%.
- A similar spread today implies a real unemployment rate of 13% and given the shock, may even be north of 20%.

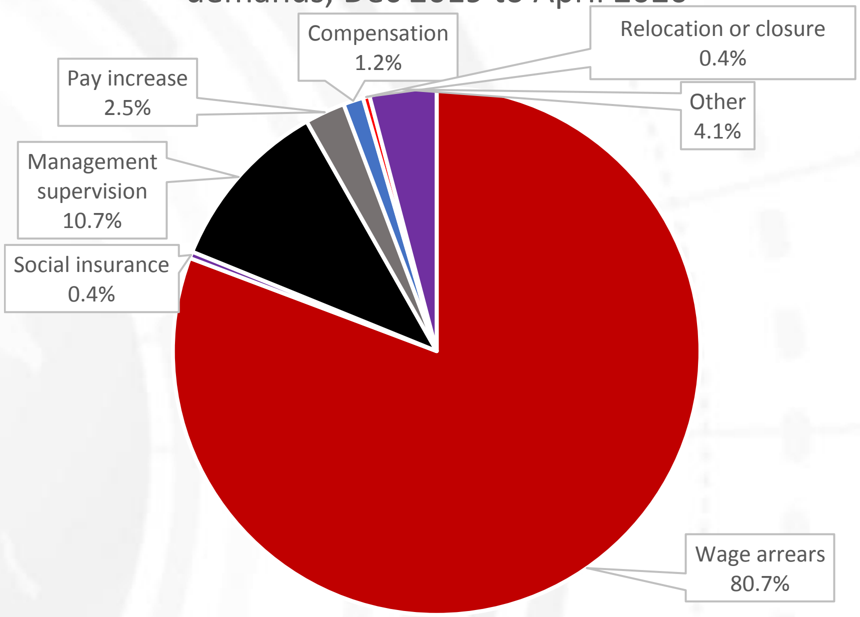
Copyright © 2020 Camdor Global All rights reserved

Reading Chinese tea leaves: Labour tensions

Reported Chinese strikes by industry, Dec 2019 to April 2020



Reported Chinese strikes by employee demands, Dec 2019 to April 2020

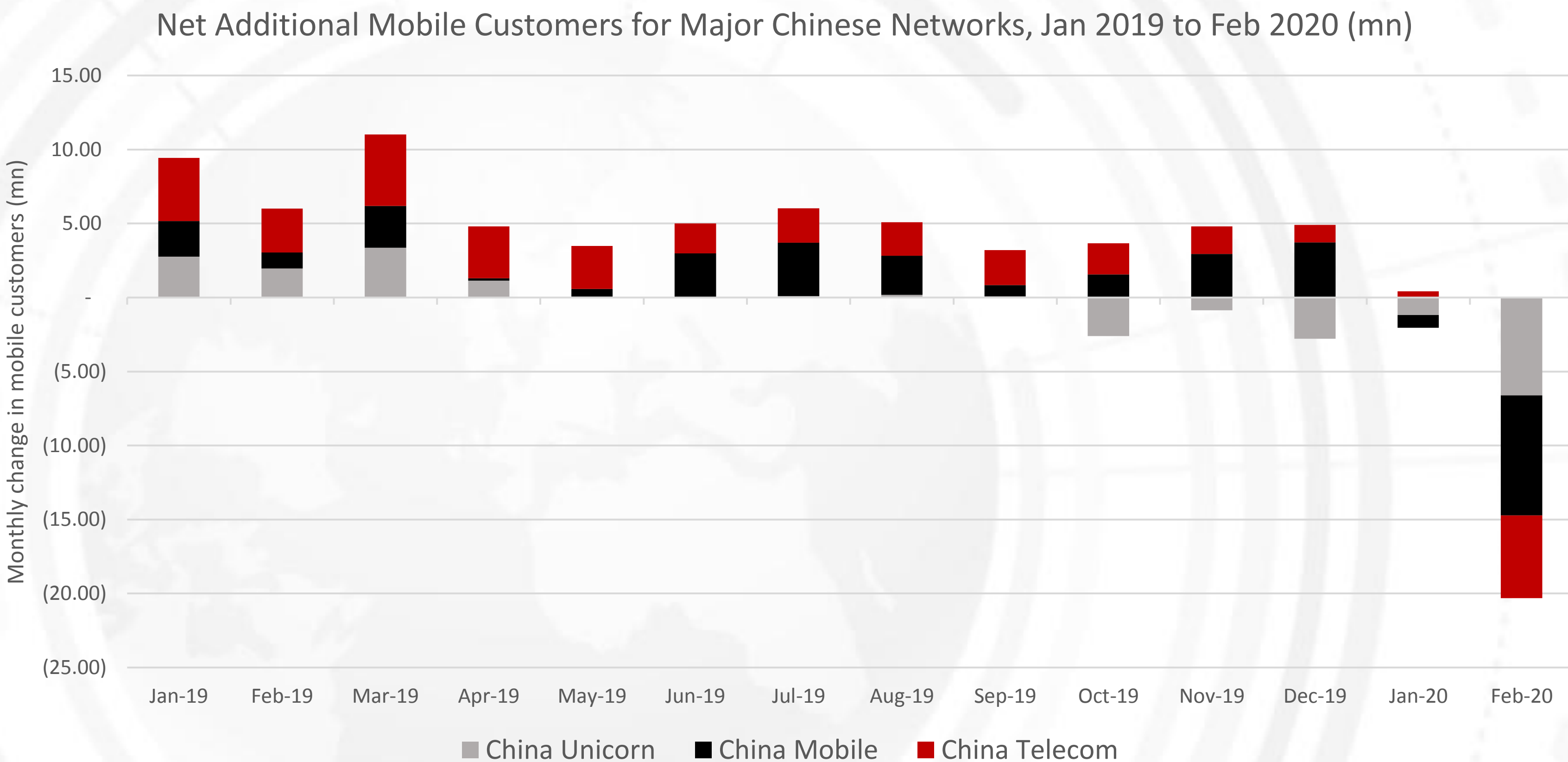


Source: China Labour Bulletin

- Strikes have been muted in China in recent months, likely due to the lockdown and increased policing presence, but data hints at emerging tensions.
- Strikes spread across industry, rather than focused in the construction sector as usual.
- Over 80% were focused on wage arrears, but more recently, there are emerging strikes demanding rent cuts and protesting fee increases (e.g. amongst taxi drivers).

Copyright © 2020 Camdor Global All rights reserved

Reading Chinese tea leaves: Mobile phones

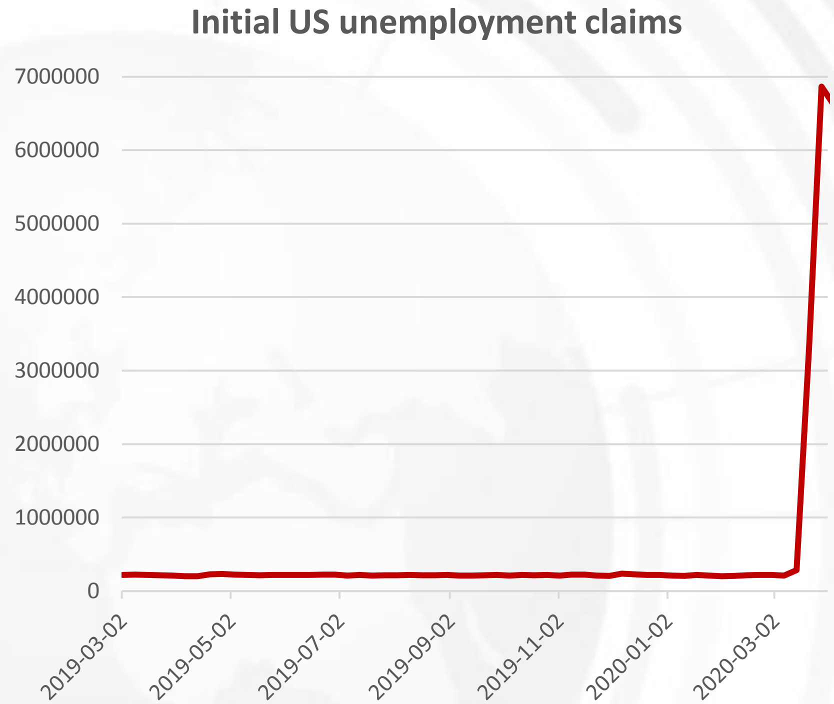


Source: Camdor Global, based on company data

- Mobile phones are essential items in China, much more so than in the West, and fundamental to much economic activity.
- After sustained growth as per normal, customer numbers collapsed by almost 22 million in 2020. Across all networks, wiping out all H2 2019 growth.
- Not a business effect, but socio-economic. Points to much deeper pain than the official data implies.

Copyright © 2020 Camdor Global All rights reserved

Post-Covid: Job losses are the new export

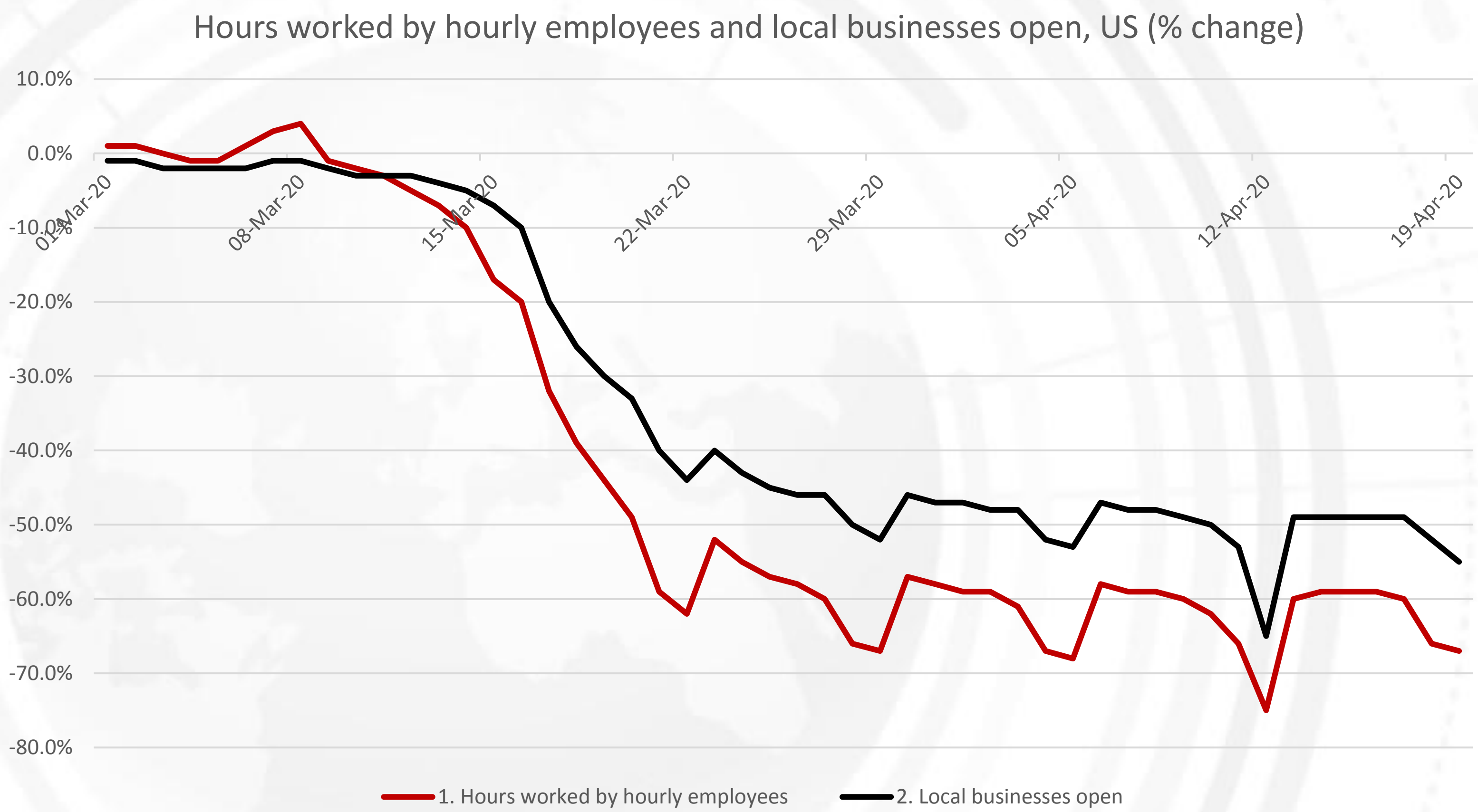


Source: U.S. Employment and Training Administration

- US initial claims spiked over March and early April from a baseline of circa 220,000 per month historically to 22 million for the 4 weeks ending 11th April – a rise of tenfold.
- Expansion of benefits through stimulus packages will have contributed to numbers, but also reflects significant labour market stress thanks to the contagion from demand collapse.

Copyright © 2020 Camdor Global All rights reserved

But it's not just jobs but also hours lost

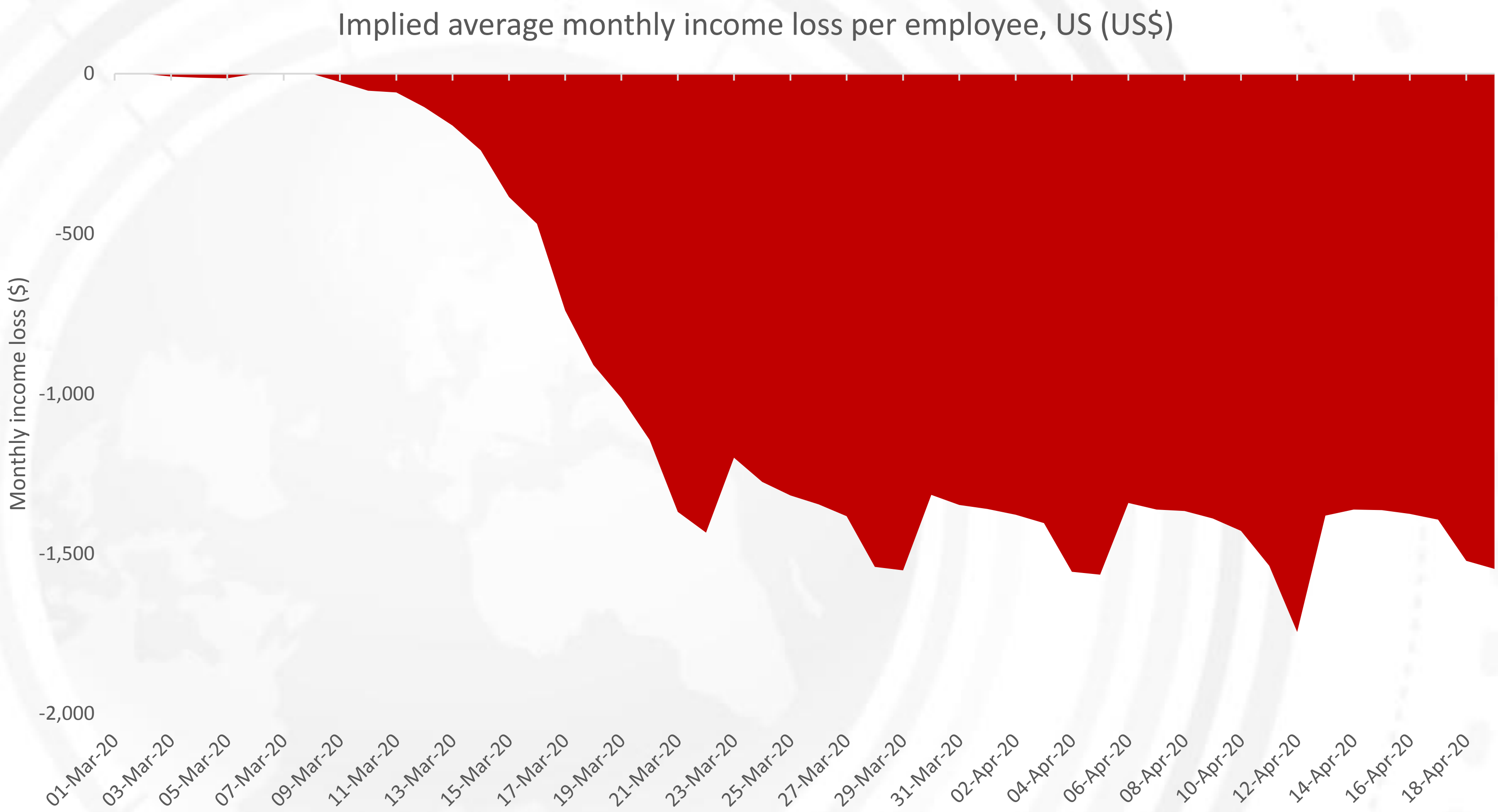


Source: Homebase data

- Homebase is a real time tracking tool covering over 60,000 businesses and 1 million hourly employees in US metropolitan areas. Largely SMEs, so a much clearer picture of life in the real economy.
- Significant closures coupled with some reductions in hours has led to a precipitous decline across all industries. Leisure/entertainment, beauty and food & drink are the worst hit, in some cases down over 90% - effectively a dead halt.

Copyright © 2020 Camdor Global All rights reserved

The economic impact on individuals is significant

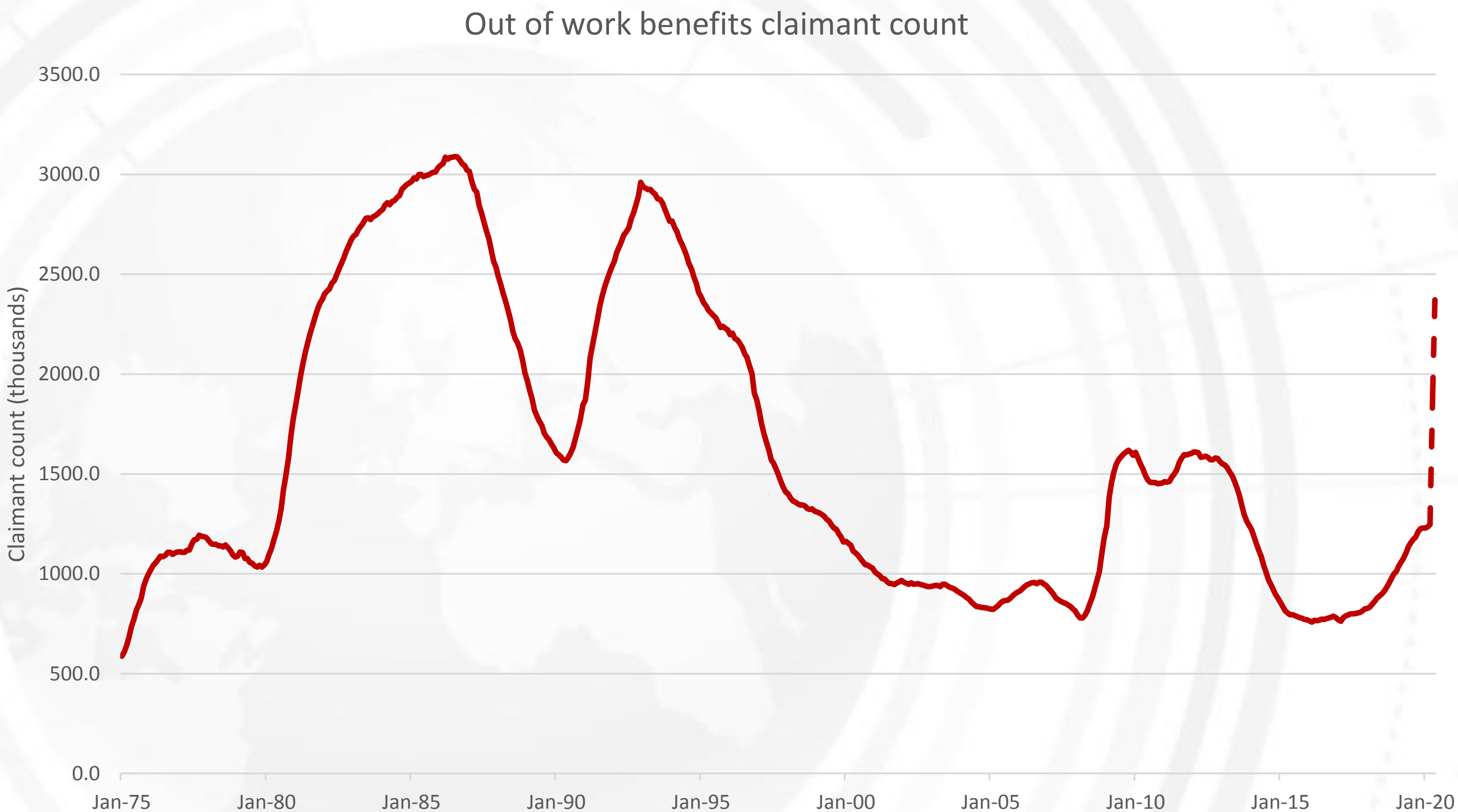


Source: Homebase, U.S. Bureau of Labor Statistics data

- The implied monthly income loss is over $1,500 on average.
- Given the socio-economic composition of these workers, that is a significant drop in income. Importantly, the ability to sustain a period of attrition and meet typical debt servicing needs is very limited, given low savings rates.
- And what about the longer-term behavioural impact?

Copyright © 2020 Camdor Global All rights reserved

UK out of work claims reflect this global trend

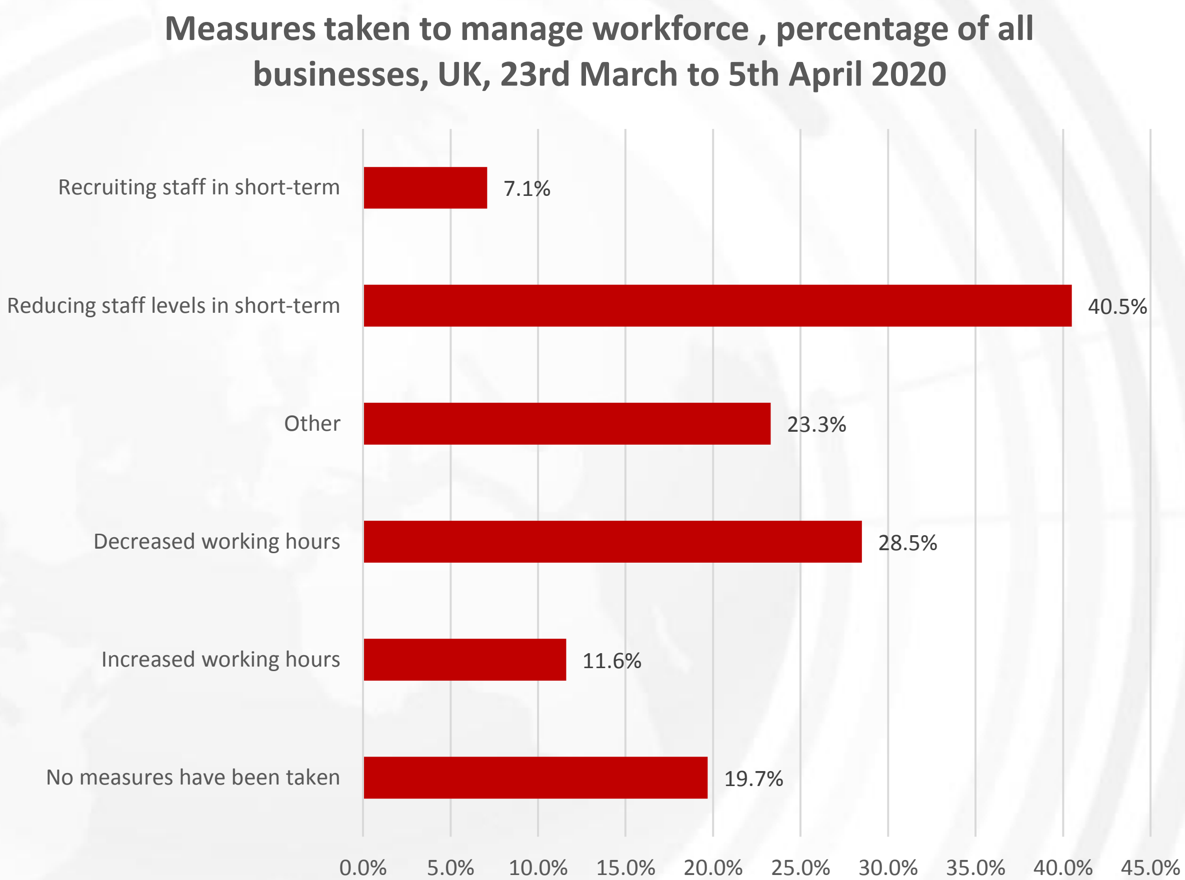


Source: ONS, Camdor Global estimates

- UK claims were rising already, but indications are 1.8 million new claims were filed for universal credit since the start of March.
- The process means there is a lag before these show up in data. Assuming most are approved, there could be a sharp rise to 2.4mn claims in coming months – levels last seen in the early 1990s.
- Even a rapid reduction thereafter is a question of years, not months.

Copyright © 2020 Camdor Global All rights reserved

Returns to labour are under pressure

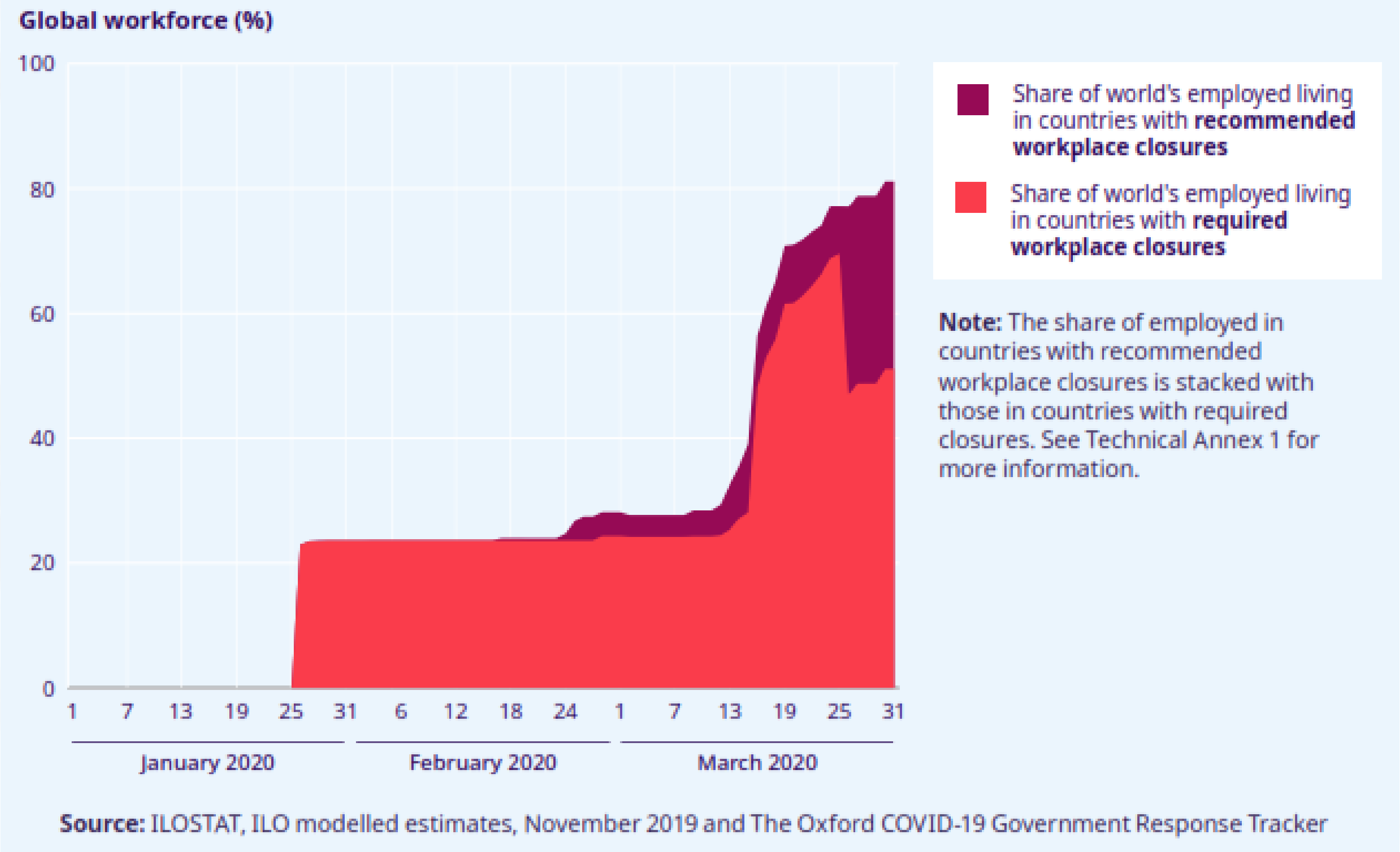


Source: ONS

- Over 40% of businesses reduced staff levels.
- **BUT** 28.5% are reducing hours instead of cutting head count.
- These are the hidden underemployed, who are taking earning hits.
- What the survey does not capture is the anecdotal and other evidence emerging of pay cuts to allow businesses to survive.
- This all adds up to a toxic picture for demand.

Copyright © 2020 Camdor Global All rights reserved

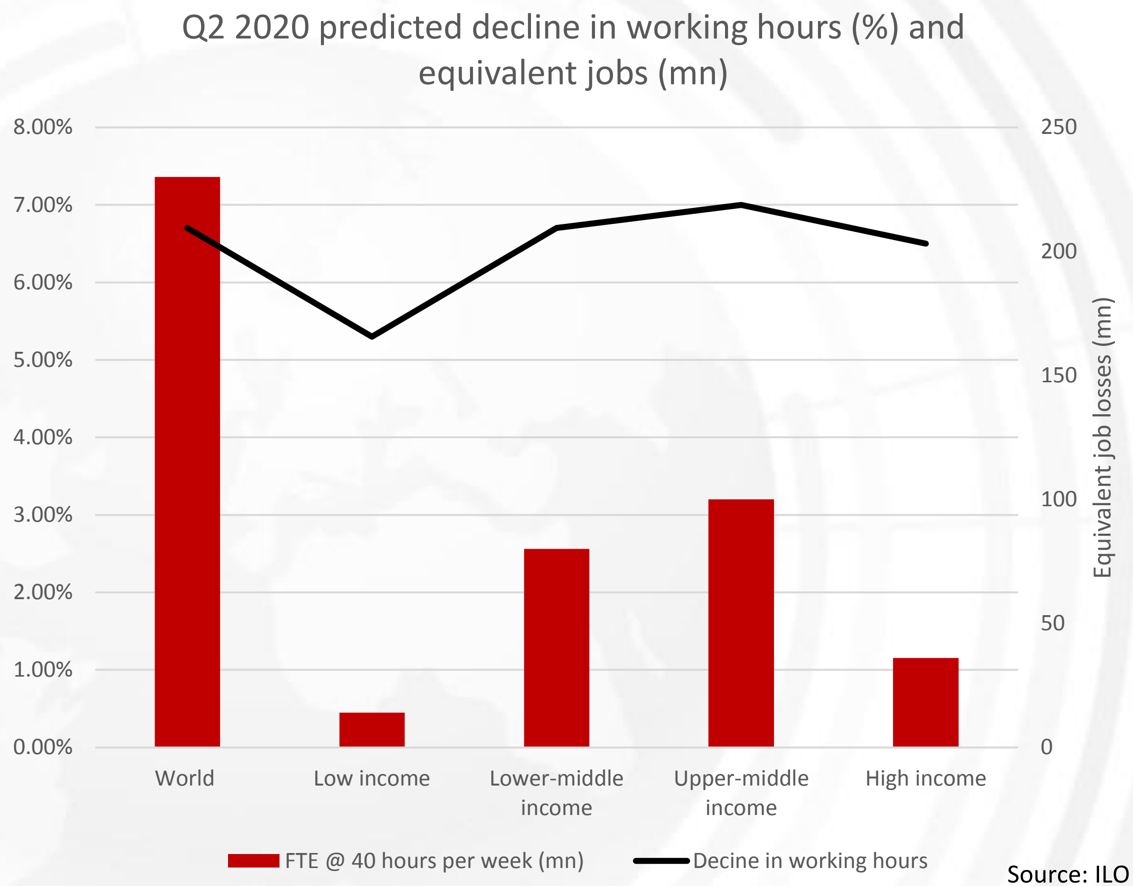
Globally, the pressure remains relentless



- Over 80% of the world faces impediments to work as usual

Copyright © 2020 Camdor Global All rights reserved

The real pain is lower earnings for the middle class



Source: ILO

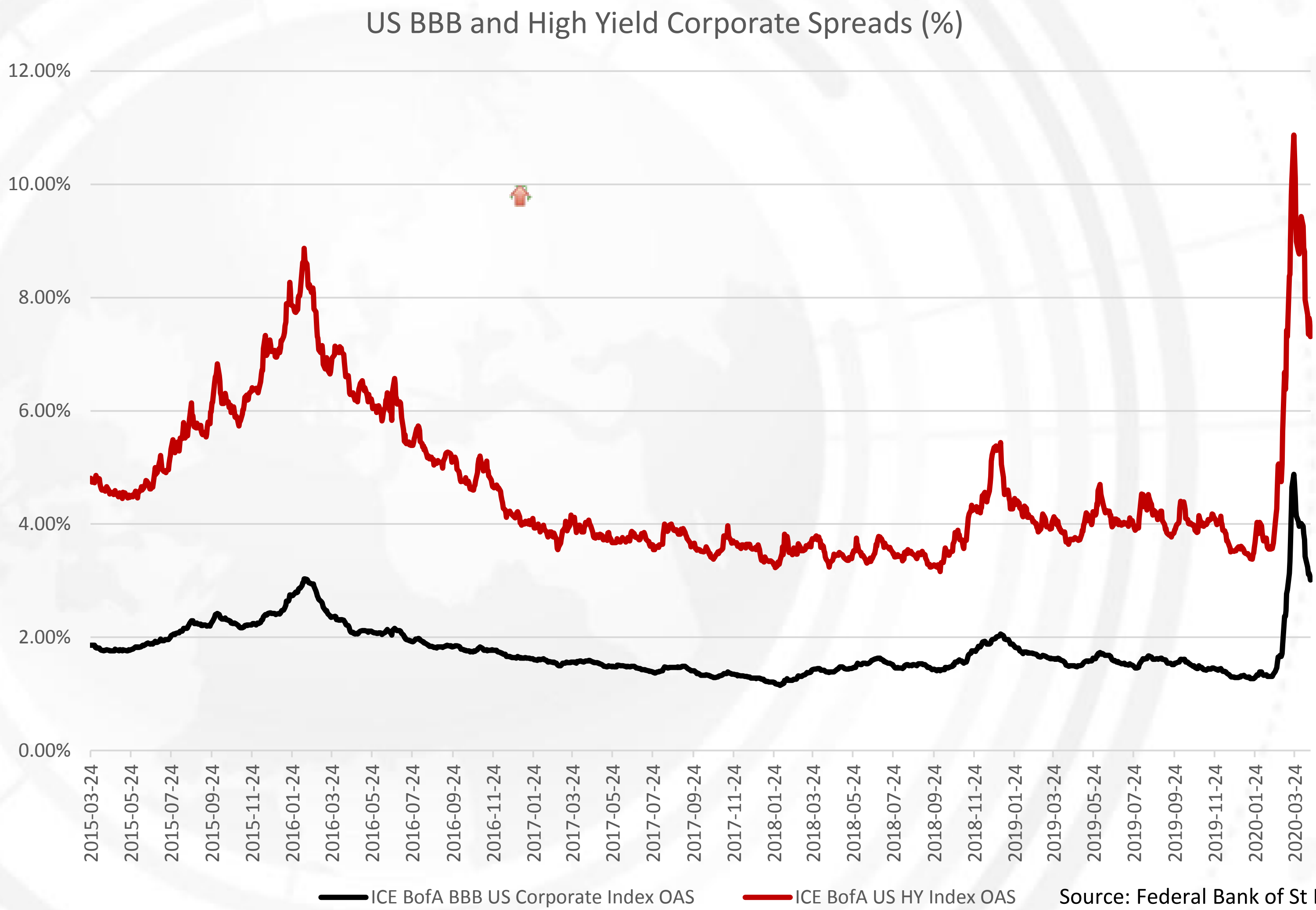
- Broadly consistent decline in working hours across incomes – less lost jobs, and more a case of fewer hours.
- Equivalent to north of 200mn job losses globally, and more worryingly, concentrated in the middle class, where the bulk of discretionary demand sits.
- Asia is worst hit, accounting for two-thirds, but the Americas also make up over 12%.
- The consumer has gone into isolation.

Copyright © 2020 Camdor Global All rights reserved

COVID-19: THE FINANCIAL FALLOUT

Copyright © 2020 Camdor Global All rights reserved

Markets paint a very different picture…



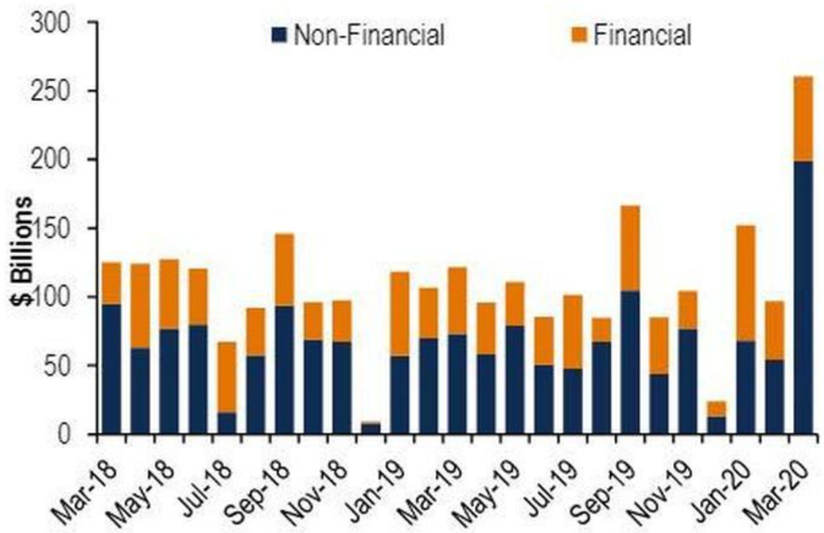
Source: Federal Bank of St Louis

Bond spreads are recovering thanks to central bank support in the main, though elevated yields create some opportunities.

Copyright © 2020 Camdor Global All rights reserved

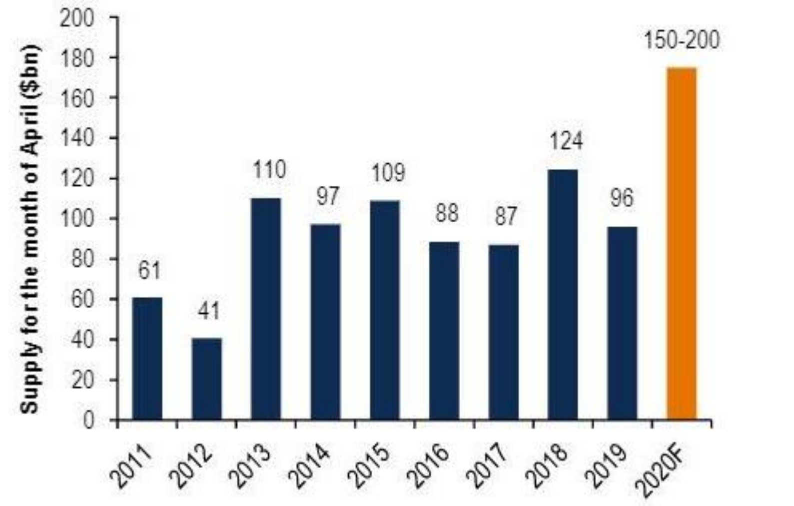
…making this not a debt crisis (yet)

Figure 8: Monthly US IG supply volume



Source: BofA Global Research

Figure 2: US IG supply in April

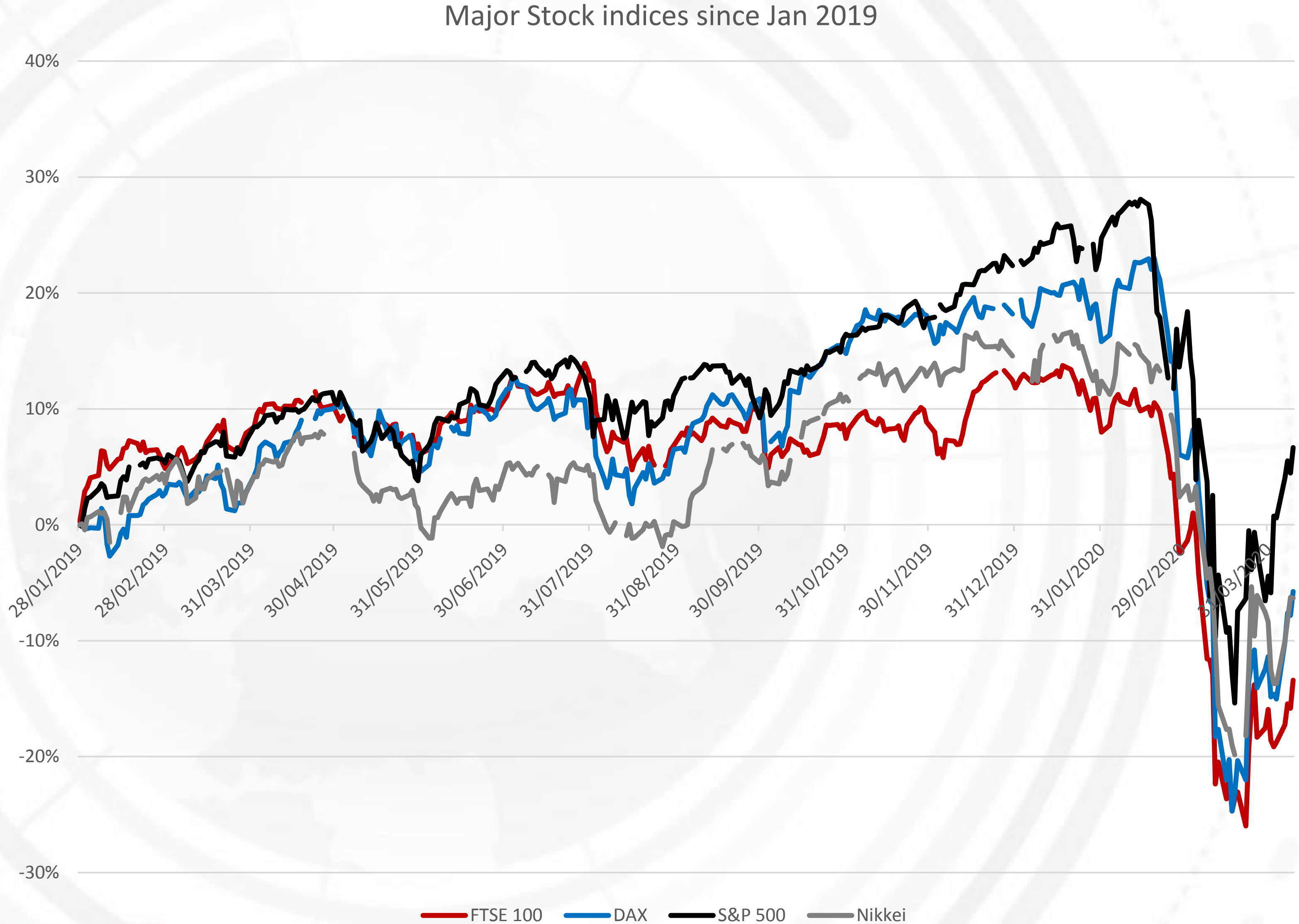


Source: BofA Global Research

- Bond issuance is hitting record highs, as markets take advantage of the Fed’s guarantee
- Significant increase on 2019
- Importantly, completely opposite to what happened in 2007-09, when issuance dried up
- Currently corporates are looking to extend (and perhaps pretend) when it comes to refinancing
- Does not bode well for leverage or for longer-term debt outcomes

Copyright © 2020 Camdor Global All rights reserved

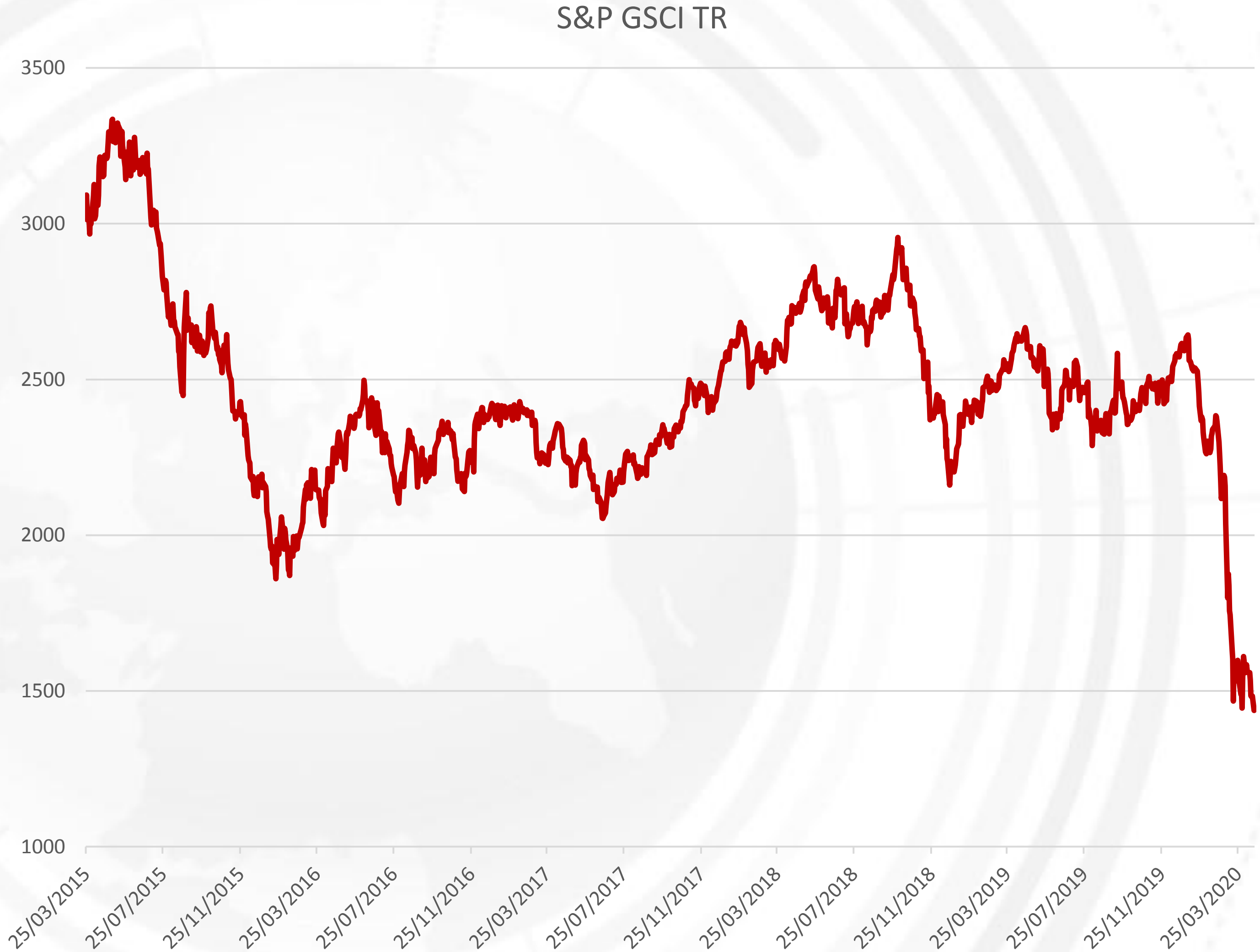
Stock markets have rebounded



After giving up all their 2019 gains, major indices have recovered ground sharply as people begin to price in government support and a short sharp recession.

Copyright © 2020 Camdor Global All rights reserved

Commodities are down – after all, who's working?

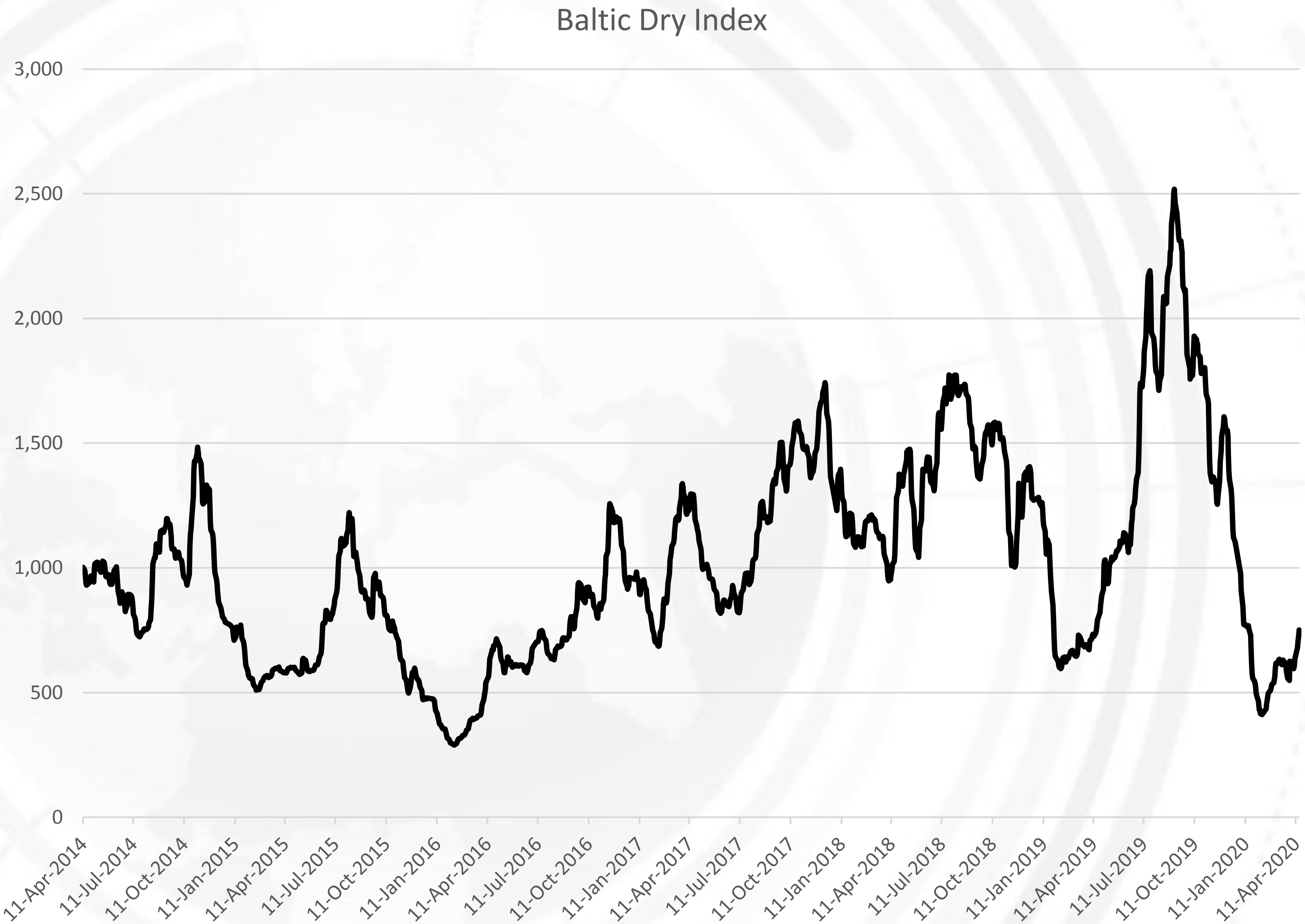


Source: S&P Dow Jones Indices

A reflection of falling demand, most recently the rout in oil, but also leading to lower input costs and growing deflationary pressures

Copyright © 2020 Camdor Global All rights reserved

The Baltic Dry Index doesn't seem to care(?!?)

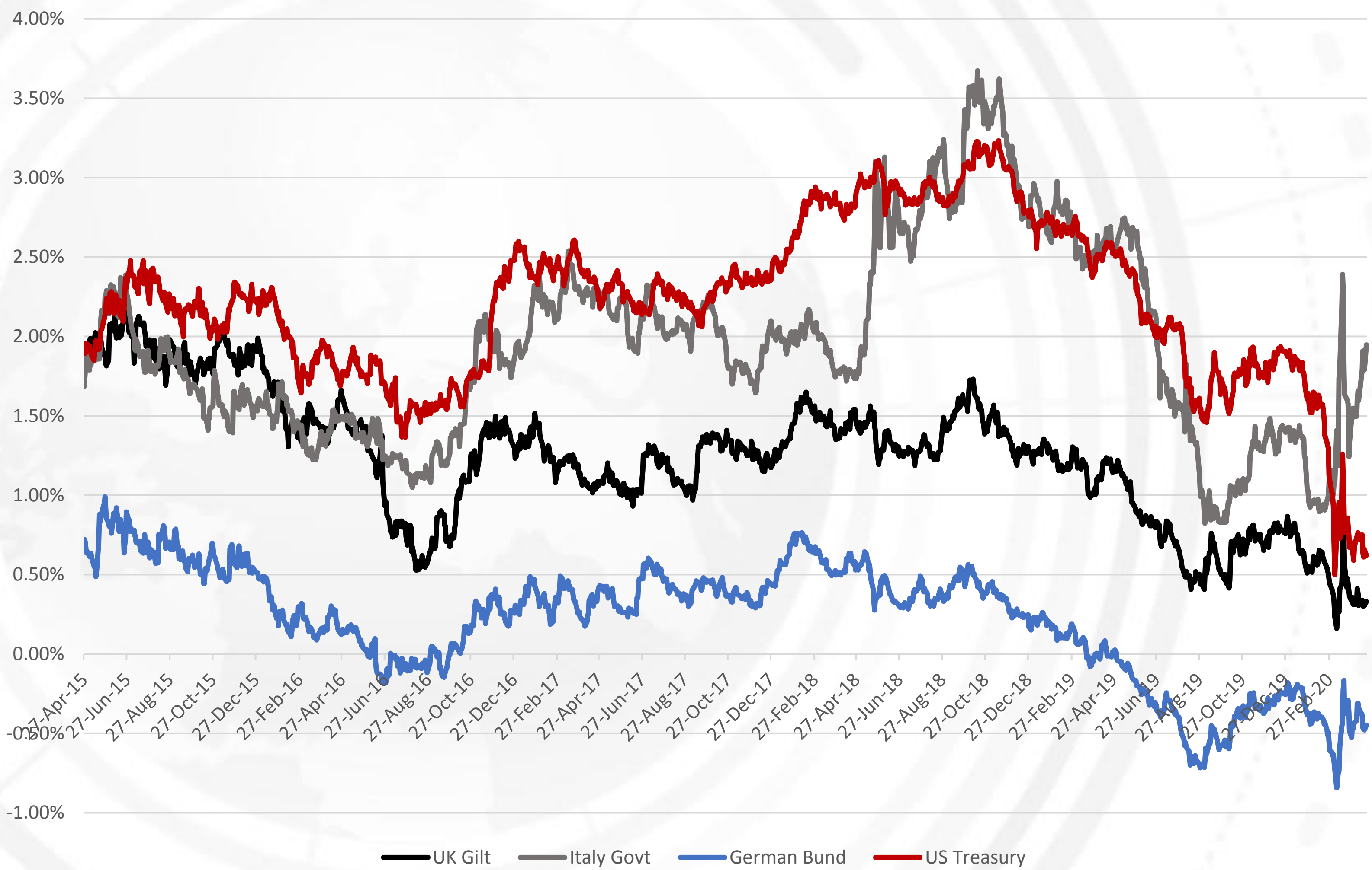


- Significant fall of -84% in late 2019 thanks to US-China and other trade jitters.
- Since then, it has counterintuitively rebounded (a little bit)in the pandemic.
- Thanks to growing demand for oil storage though, given the supply glut and trader action. Hardly a positive sign!

Copyright © 2020 Camdor Global All rights reserved

A general flight to quality despite all the stimulus

10 year Govt Yields for a selection of developed economies



- A re-emphasising of lower for longer, with bunds in negative territory and UK/US both below 1%.
- But also some emerging jitters about sovereign balance sheets (e.g. Italy).

Copyright © 2020 Camdor Global All rights reserved

COVID-19: THE PORTFOLIO IMPACT

Copyright © 2020 Camdor Global All rights reserved

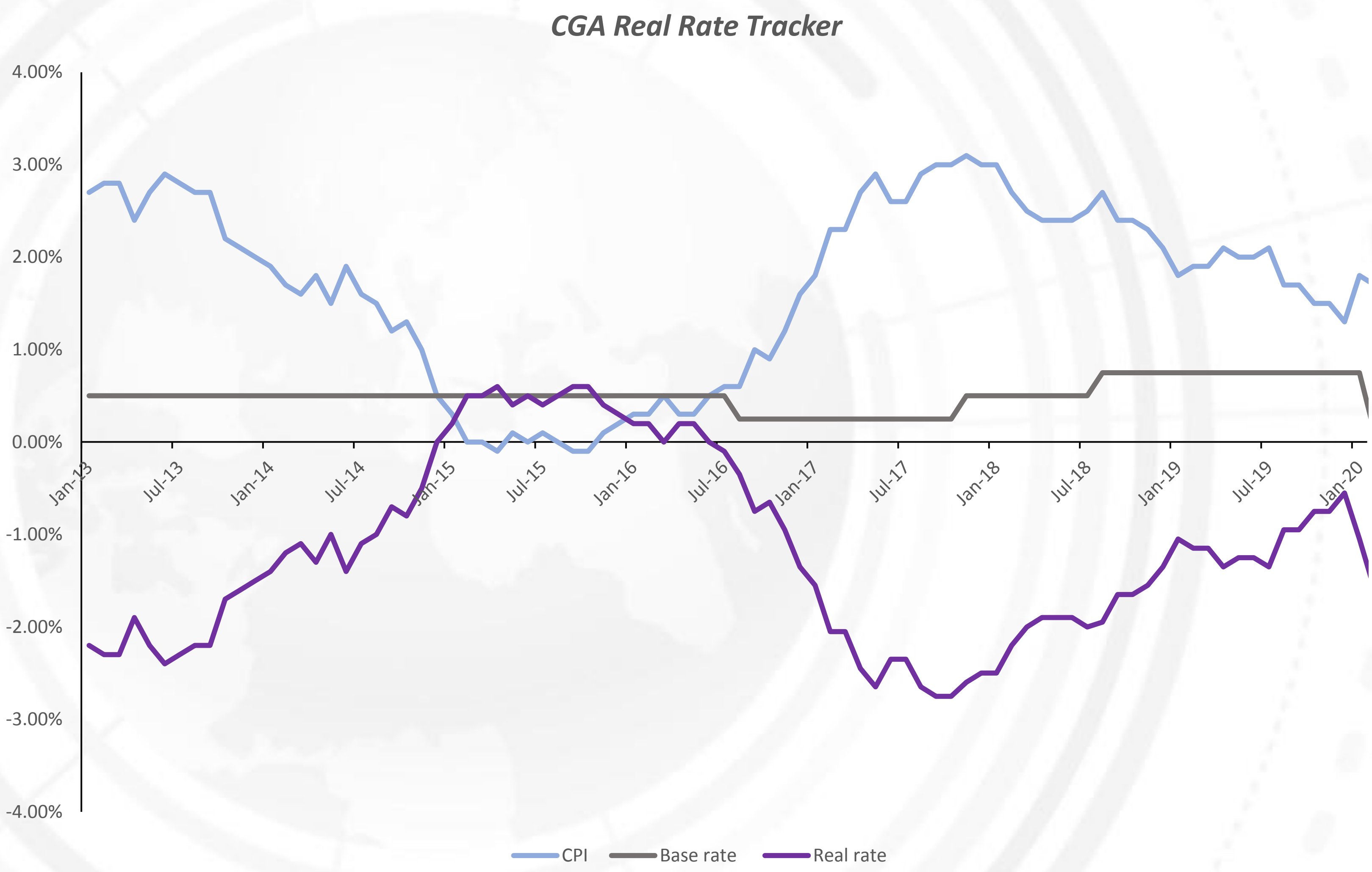
Central banks have responded with rate cuts

Name of interest rate	country/region	current rate	direction	previous rate	change
United States (Fed)	**United States**	**0.00-0.25 %**	↓	**1.250 %**	**03-15-2020**
Australia (RBA)	**Australia**	**0.25 %**	↓	**0.500 %**	**03-19-2020**
UK (BoE)	**Great Britain**	**0.10 %**	↓	**0.250 %**	**03-19-2020**
China (PBC)	**China**	**4.05 %**	↓	**4.150 %**	**02-20-2020**
Eurozone (ECB)	Europe	0.000 %		0.050 %	03-10-2016
Japan (BoJ)	Japan	-0.100 %		0.000 %	02-01-2016
Sweden (Riksbank)	Sweden	0.000 %		-0.250 %	12-19-2019
Switzerland (SNB)	Switzerland	-0.750 %		-0.500 %	01-15-2015

109 rate cuts now in 2020 globally, only 4 rate rises (Kazakhstan, Kyrgyzstan, Tajikistan, Czech Republic repo rate)

Copyright © 2020 Camdor Global All rights reserved

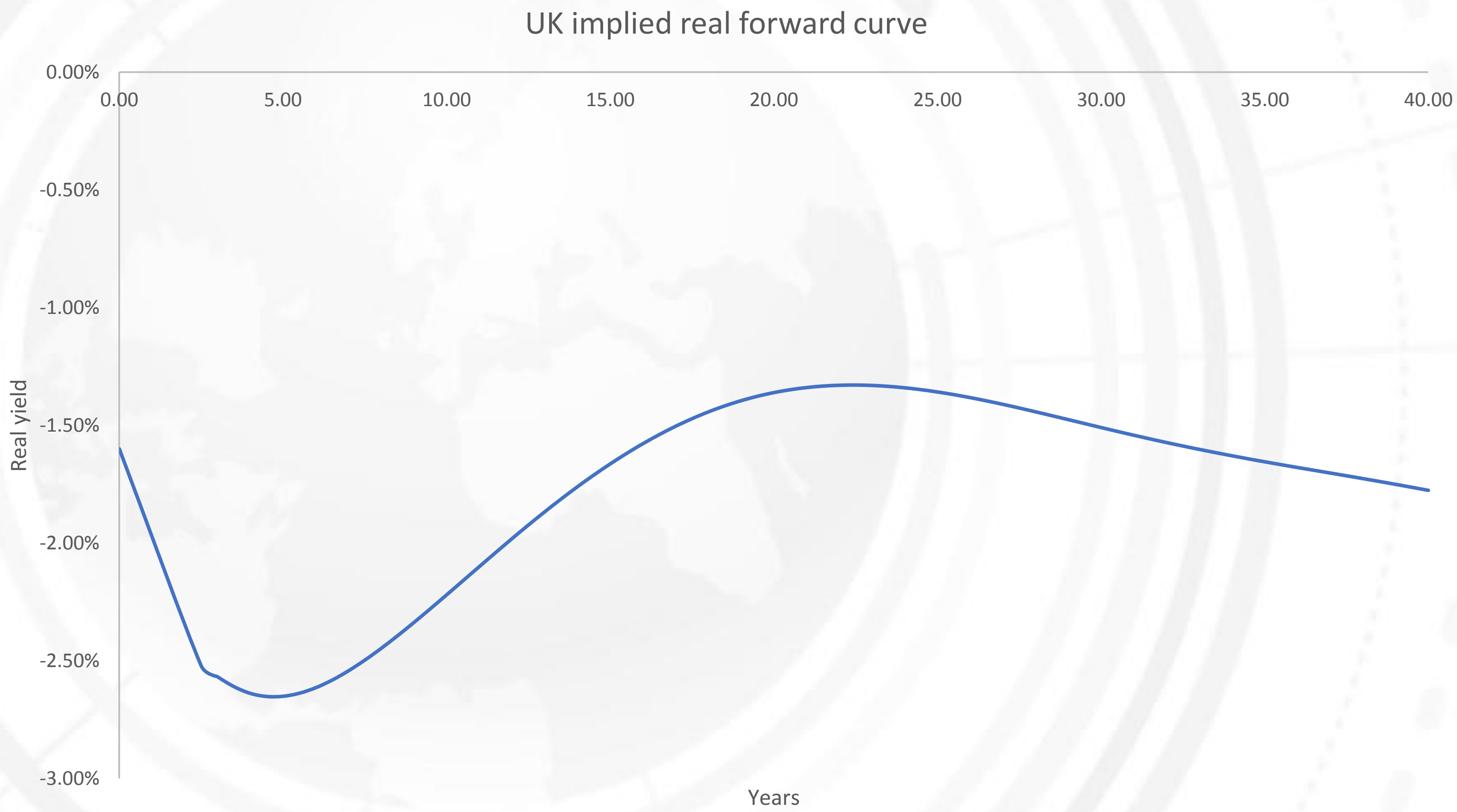
UK real rates have turned sharply negative again



Source: Camdor Global, ONS

Copyright © 2020 Camdor Global All rights reserved

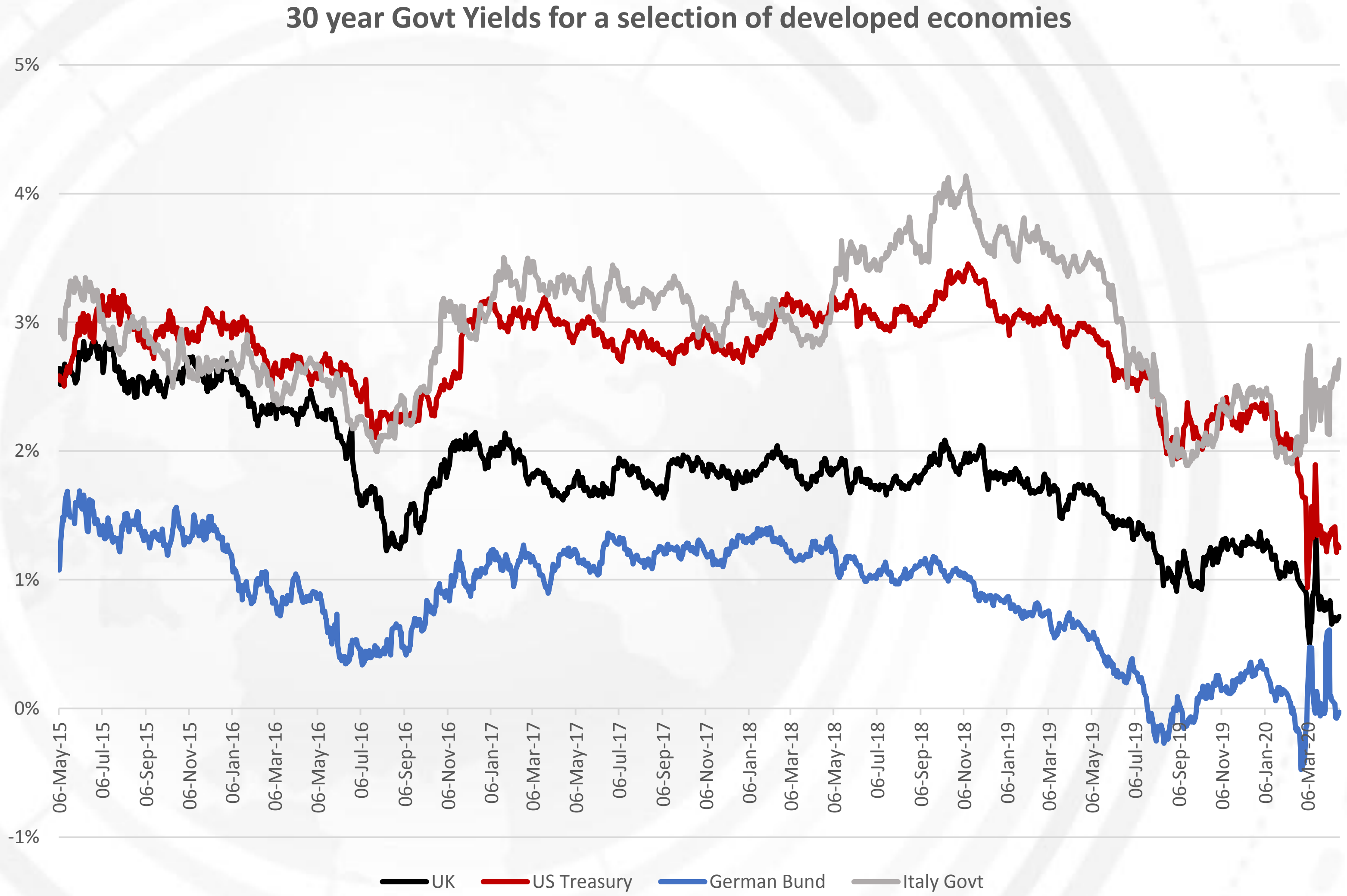
And may worsen going forward



Source: Camdor Global Advisors, BoE

Copyright © 2020 Camdor Global All rights reserved

30 year government bonds bear this out



- Berman bunds are flirting with negative yields, while UK yields are now below 1% and US yields are approaching that line in the sand.

Copyright © 2020 Camdor Global All rights reserved

What is the impact on portfolios?

- Decrease in real interest rates will hit real returns and reduce risk-adjusted yields.
- For investment pools, the frictional drag is greater now at currently -1.6%.
- Over time, this will accentuate the demand for yield if unchanged, and we note there are significant pressures going forward, notably demand deflation.
- Lack of economic activity will impact credit ratings, leading to potential downgrades, and may also cause defaults in some sectors.
    - We note, for example, that Fitch has already placed several companies on negative watch, including Lloyd's of London, due to the insurance fallout.
- On the equity side, there will be pain from recent falls, though recoveries have helped.
    - That is still likely to drive a further move to ETFs as recoveries also remain indiscriminate
    - More broadly, a growing move towards portfolio hedging strategies and private assets for most investors as they look to remove volatility in both their assets and their balance sheets.

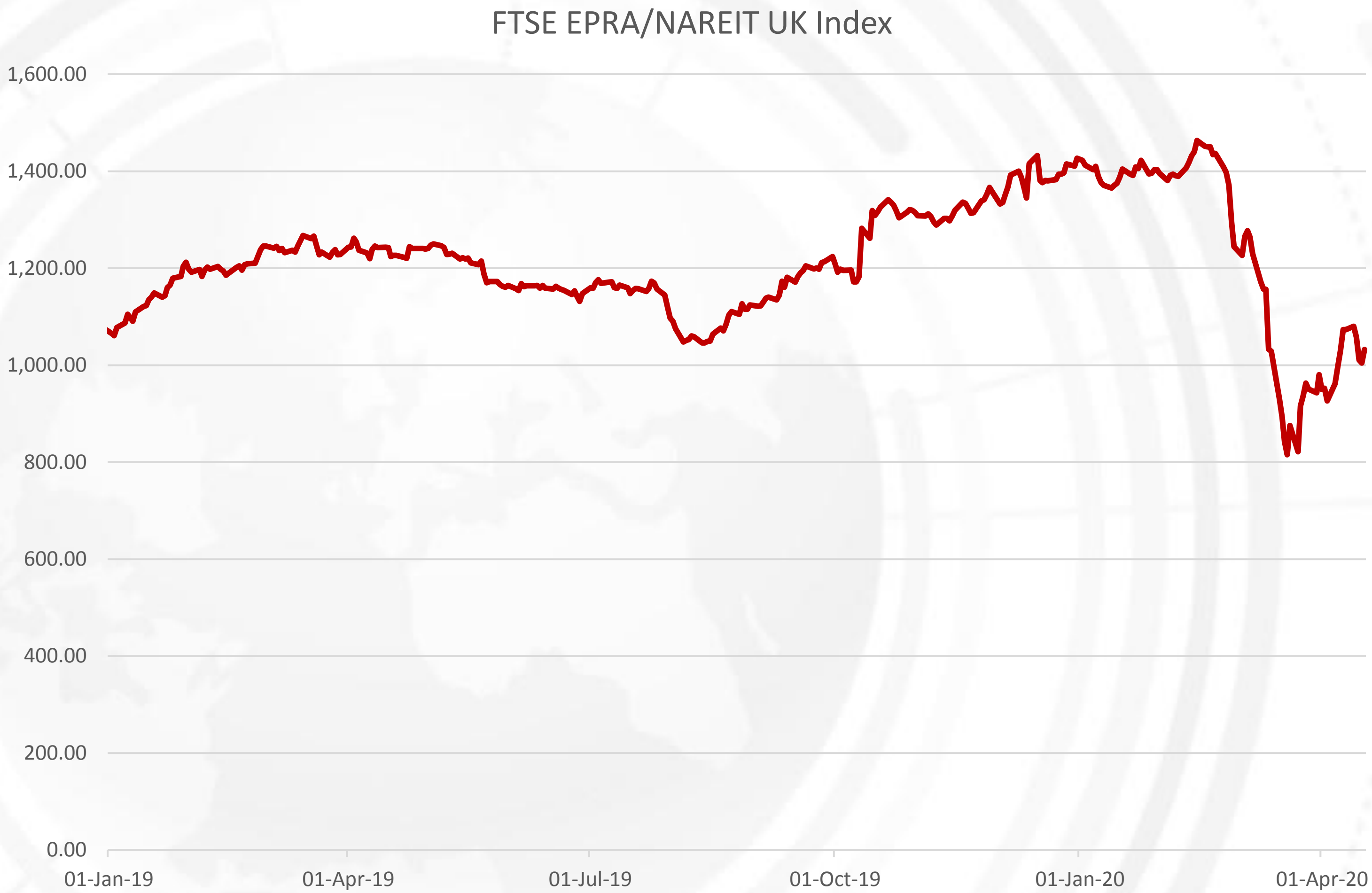
Copyright © 2020 Camdor Global All rights reserved

What about private or illiquid assets?

- Private assets have been silent for now, but are still trading on stale NAVs. 31st March NAVs will flow end April and early May, showing the hit there.
- In particular, private debt funds are more at risk, as their lending profile is broadly high yield from an internal ratings perspective, companies are mid-market or smaller, and covenants tend to be sterner. Investors also are not prepared for losses here unlike PE. Workout skills will come to the fore and could be the differentiator if there is a sustained economic hiatus.
- Hedge funds finally have volatility, so despite closet longs taking hits, there is more to play with now and dispersion of returns is returning to the sector after a long gap of grinding returns. But government policy creates a dampening effect and restrictions such as short selling bans will limit the opportunity set.
- UK commercial property market at risk in some sectors, which will impact voids. Tenants may also look to prefer shorter leases and postpone any increase in space while they assess the economic impact. Some areas such as logistics will benefit.
- For distressed, after a seeming eternity, there is finally a growing opportunity set. However, we caution against any free-for-all. Loan guarantees and the opening of liquidity windows create a get-out clause for larger problem companies, and opportunities are more likely to arise steadily and in areas with secular trends.
- Overall, we see this as accelerating the move towards real assets / private assets (with some renewed interest in macro and trading strategies), as investors look to compensate for the negative real rate and for volatility by extending their horizons

Copyright © 2020 Camdor Global All rights reserved

A bellwether of things to come?



- REITs show significant price falls and significant discounts to NAV
- Indicate concerns about leverage, future yields and most importantly, cashflow
- Intu, for example, noted that it only received 29% of the rent due for Q2 2020, down from 77% for the same period last year. The company also has over £4.5bn of debt – the excess of previous times.

Copyright © 2020 Camdor Global All rights reserved

And the bigger picture?

- A recession will be painful and increase government borrowing significantly, given the recent fiscal support. That has knock-on implications for the UK's ability to manage the uncertainty of Brexit that has dropped off the front pages for now.
- We should note the sheer quantum of stimulus means that we expect a financial markets rally in the nearer-term as people seek buying opportunities, but this is not a brief pullback before we resume BAU.
- The longer-term picture is bleak as the underlying economy continues to become more fragile and tail risks grow.
- The pandemic accentuates existing trends, notably much lower for much longer rates, a reliance on policy and monetary/fiscal support, a weakening of consumer demand, a continued rise in debt and leverage, a move from physical to online, further fractures progressing deglobalisation. We will explore these in further updates.
- Longer-term, in the UK, retail will continue to come under pressure and the balance sheets on the high street are set to become more strained.
- Transaction volumes across the economy will fall in coming two quarters across industry, retail and real estate, due to uncertainty and differences of opinion on price discovery, so this needs to be factored into strategies linked to these.
- On the other hand, debt financing needs from sovereigns, supranationals and other public sector entities will rise strongly as they take on the role of being the primary source of support and investment for economies in the near-term.

Copyright © 2020 Camdor Global All rights reserved

APPENDIX

Copyright © 2020 Camdor Global All rights reserved

The Insurance Investment Exchange

- An award winning independent and credible forum, driven by feedback from the industry
- Since 2013, providing thoughtful exchange and debate on key investment related issues and trends of relevance to the insurance industry
- Events throughout the year, including:
  - A series of quarterly half-day events, comprising panels and breakout sessions
  - Intimate breakfast and lunch roundtables to dive into and debate key topics of interest in detail
  - Our pioneering annual IIE Investment Awards, recognising talent across insurers, asset managers and service providers
  - CIO dinners to hear from key thought leaders and debate broader strategic and macro issues

Copyright © 2020 Camdor Global All rights reserved

Author Bio

Dr Bob Swarup is co-Founder of the Insurance Investment Exchange, the leading forum for knowledge sharing in the insurance industry. He is a respected international expert on macro, financial markets, investment strategy and regulation. He is also Director of the CIO Network for the Geneva Association, the leading international think tank of the insurance industry gloablly.

Bob was formerly a partner at Pension Corporation, a leading UK-based pension buyout firm, where he ran alternative investments, was Chief Risk Officer and oversaw thought leadership. He also served as Senior Investment Advisor to the Pensions Regulator, advising them on the development of the new regulatory framework for DB schemes from an investment, risk and governance perspective.

Bob has served on numerous industry, fund and fintech boards, including the Advisory Board of Adveq, a leading $6bn Swiss PE firm; the Board of CatCo, a $2bn reinsurance hedge fund that he helped seed in 2011; the CRO and Solvency II committees of the ABI; and the Exam Council of the Chartered Alternative Investment Analyst Association.

Bob is a Fellow of the Institute of Economic Affairs and on the Advisory Council of the Columbia Committee for Global Thought. He was previously a Senior Visiting Fellow at Cass Business School, Visiting Fellow at the London School of Economics and on the Editorial Board of the *Journal of Alternative Investments*. He holds a PhD in cosmology from Imperial College London and an MA (Hons) in Natural Sciences from the University of Cambridge.

Bob has written extensively on diverse topics, with his work being featured across major publications and media. He is also the author of the internationally acclaimed bestseller *Money Mania* on 25 centuries of financial crises and the lessons to learn (Bloomsbury, 2014).

Copyright © 2020 Camdor Global All rights reserved

Contact Us

Bob Swarup

T: +44 (0)7801 552755

E: Bob.swarup@insuranceinvestmentexchange.com

To join our mailing list and receive updates as well as register for our events, please email us at:

events@insuranceinvestmentexchange.com

Copyright © 2020 Camdor Global All rights reserved

Disclaimer and Additional Notes

All rights reserved. Any performance information contained herein may be unaudited and estimated. Past performance is not indicative of future results. Although all reasonable efforts have been made to ensure the accuracy of the information herein, neither the Insurance Investment Exchange, Camdor Global nor any other person or party involved with the research, compilation, editing or printing of this report gives any representation, warranty, indemnity or undertaking (whether express or implied) as to the truthfulness, accuracy or completeness of the information, statements, and opinions given, made or expressed herein, nor is any responsibility accepted for any act or omission made in reliance thereon. To the extent permitted by law, the Insurance Investment Exchange, Camdor Global and any other person or party involved with the research, compilation, editing or printing of this report does not accept or assume any liability, responsibility or duty of care for any consequences of you or anyone else acting, or refraining to act, in reliance on the information contained in this report or for any decision based on it. All information herein is subject to change without notice.

The Insurance Investment Exchange is the trading name of IIEXCHANGE Limited, which is incorporated as a Private Limited Company in England and Wales No 09039920. Neither this document nor the information contained herein may be shared with any third party without the consent of the Insurance Investment Exchange or Camdor Global.

Copyright © 2020 Camdor Global All rights reserved