



Turun yliopisto
University of Turku

The impact of COVID-19 on global supply chains and the transport sector*

UPDATE 16 April 2020

(Previous longer version updated 9 April 2020 to be found in the site's [Archive](#))

Professor of Logistics Lauri Ojala

lauri.ojala@utu.fi

Operations & Supply Chain Management, University of Turku, Finland

***) This presentation can be freely disseminated**

If cited or re-used, please, provide the appropriate references to the original sources!

**The "Big Picture" of COVID-19 impact
on world economy
in end-March and early April 2020**

Macroeconomic (country) estimates based on COVID-19 impacts*:

- [IMF](#), International Monetary Fund, **the latest estimate released on 14 April 2020**
- [The World Bank](#), key [site on COVID-19](#)
- [ECB](#) European Central Bank
- [EIB](#) European Investment Bank
- [ILO](#) International Labour Organization
- [OECD](#) and ITF at the OCED (International Transport Forum)
- [ASEAN](#)
- [Fitch](#) ratings*
- [Standard & Poors](#)*
- Centre for Global Development on [Africa](#), 3 April 2020
- McKinsey, [Implications for Business](#), 13 April 2020

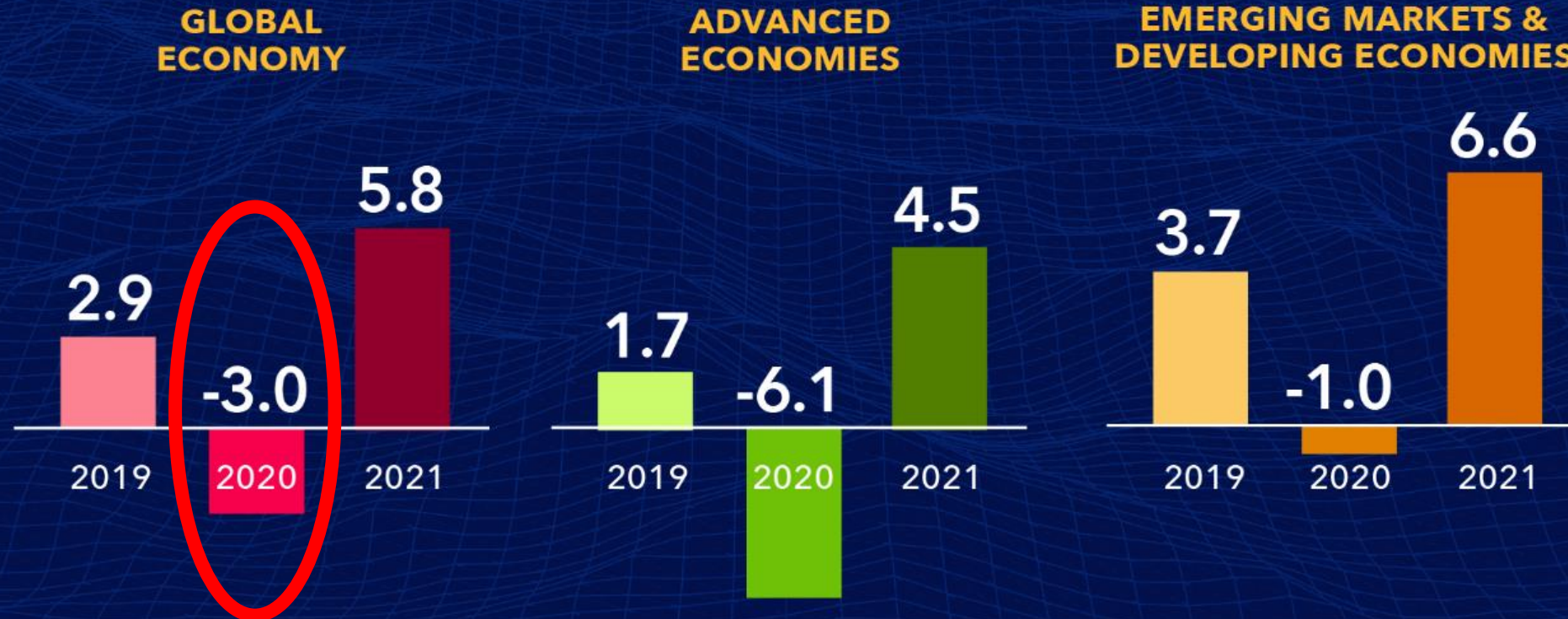
**) All other Open access, but these may require registration*

IMF on 14 April 2020: Global GDP -3.0 % in 2020

WORLD ECONOMIC OUTLOOK APRIL 2020

GROWTH PROJECTIONS

The COVID-19 health crisis will have a severe impact on economic activity in 2020

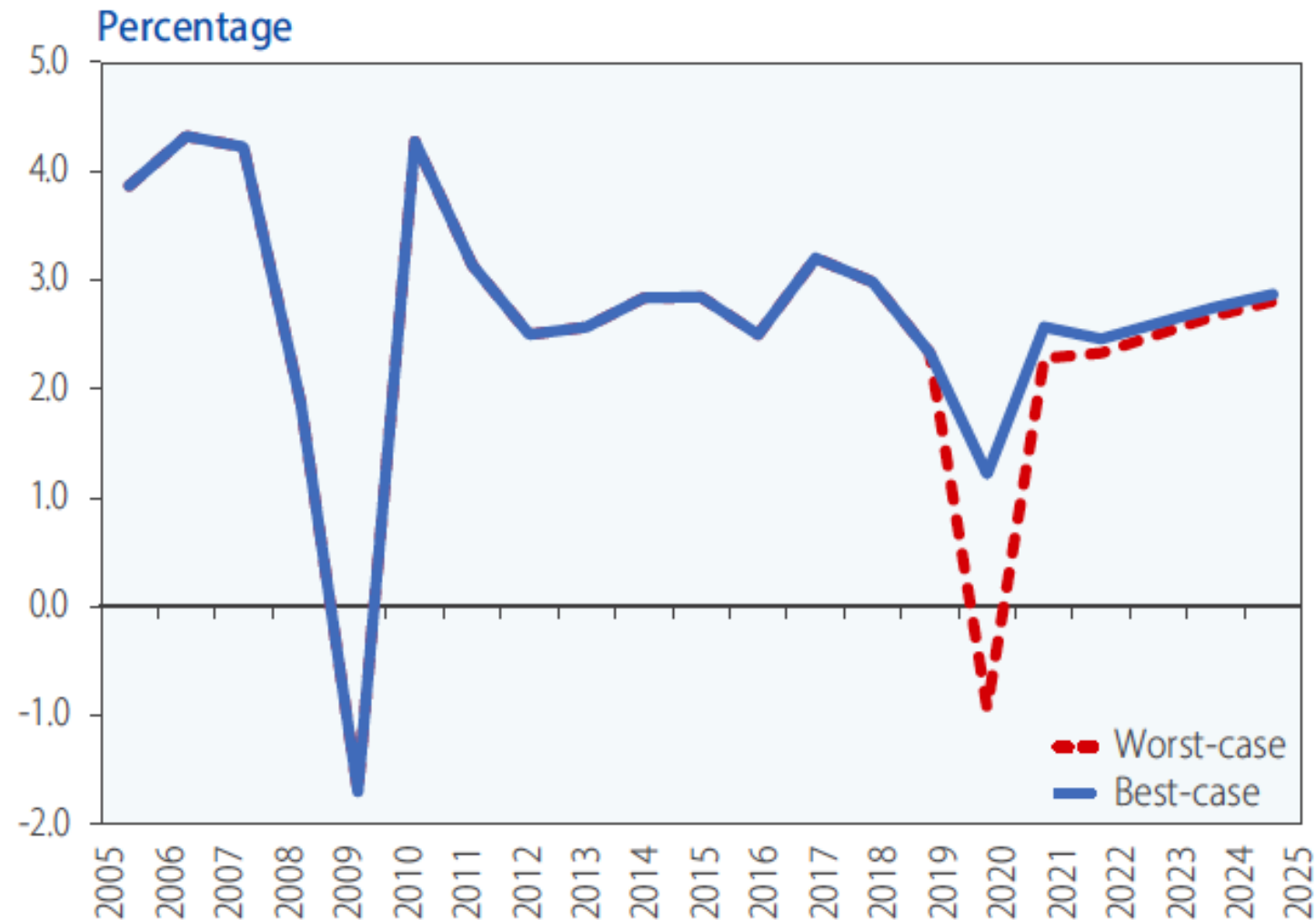


UN on 1 April 2020: COVID-19 likely to shrink global GDP by almost one per cent in 2020

Governments are considering and rolling out large stimulus packages to avert a sharp downturn of their economies which could potentially plunge the global economy into a deep recession.

According to [UN DESA*](#) on 1 April 2020, the world economy could contract by 0.9 per cent in 2020 in the worst-case scenario.

World growth outlook for 2020 in the best- and worst-case scenarios, as of late March 2020



Source: UN DESA.

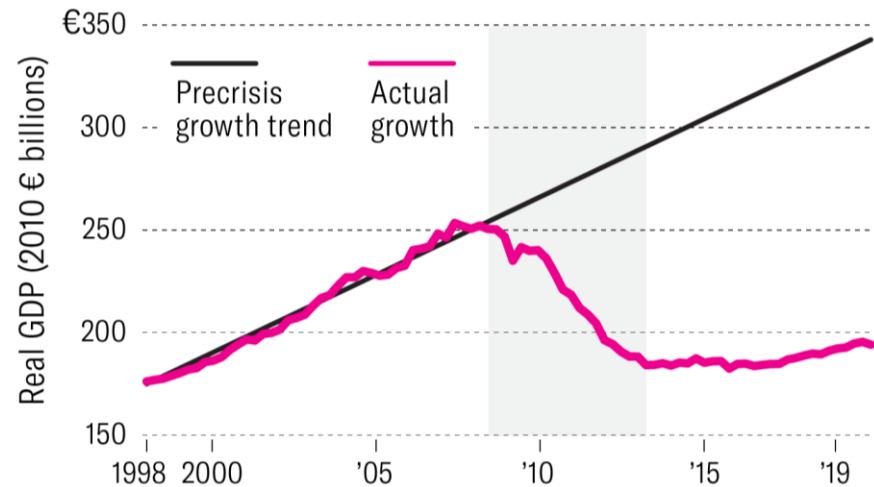
**Examples of three types of economic shock:
the L-, V- and U-shaped developments**

Examples of three types of economic shock: the L-, V- and U-shaped developments

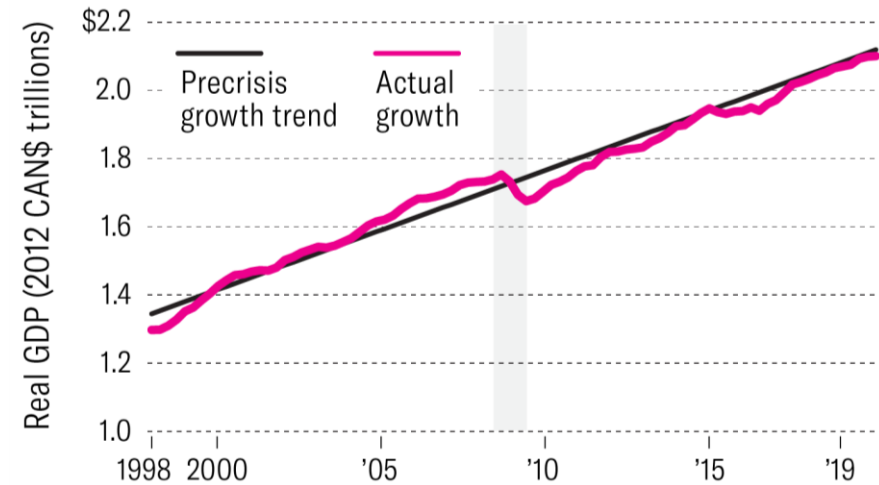
Economic Shock: 3 Examples

The concept of a recession is binary and blunt. The bigger-scenario question revolves around the shape of the shock and its structural legacy. To illustrate, consider how the 2008 global financial crisis delivered recessions in three sample countries, yet followed vastly different shapes in terms of shock progression and recovery.

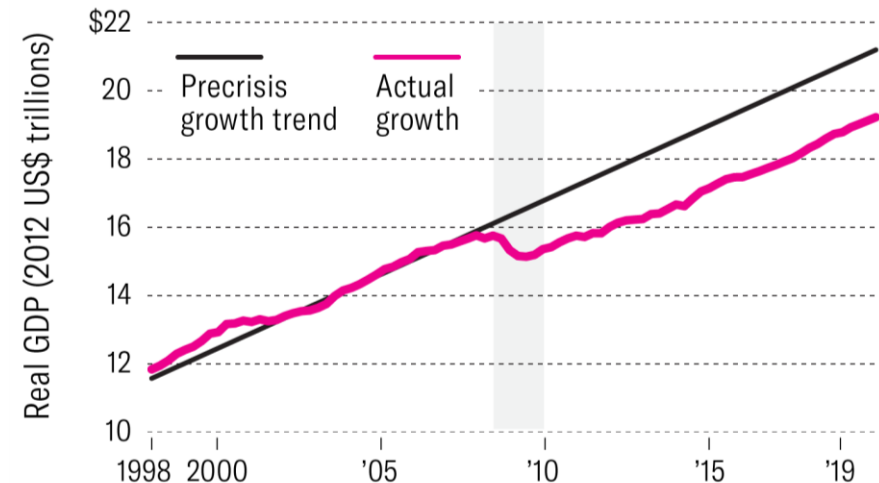
L-shaped (Greece)



V-shaped (Canada)



U-shaped (United States)



Two Economic Supply-Side Threats from Covid-19

The Covid-19 shock uniquely raises liquidity and capital risks in both the financial system *and* the real economy simultaneously.

The two paths of COVID-19's structural damage in a **U-shaped scenario**:

Financial system risks. The unprecedented Covid-19 shock has already generated stress in capital markets, triggering a forceful response from central banks. If liquidity problems persist and real economy problems lead to write-downs, capital problems can arise. While from a policy perspective we may know the solutions, bailouts and recapitalization of banks are politically controversial. In the case of a financial crisis, capital formation would take a huge hit, driving a prolonged slump with damage to labor and productivity as well.

Extended real economy “freeze.” The truly unprecedented possibility. Months of social distancing could disrupt capital formation and ultimately labor participation and productivity growth. Unlike financial crises, an extended freeze of this magnitude damaging the supply side would be new territory for policy makers.



Source: BCG Center for Macroeconomics analysis



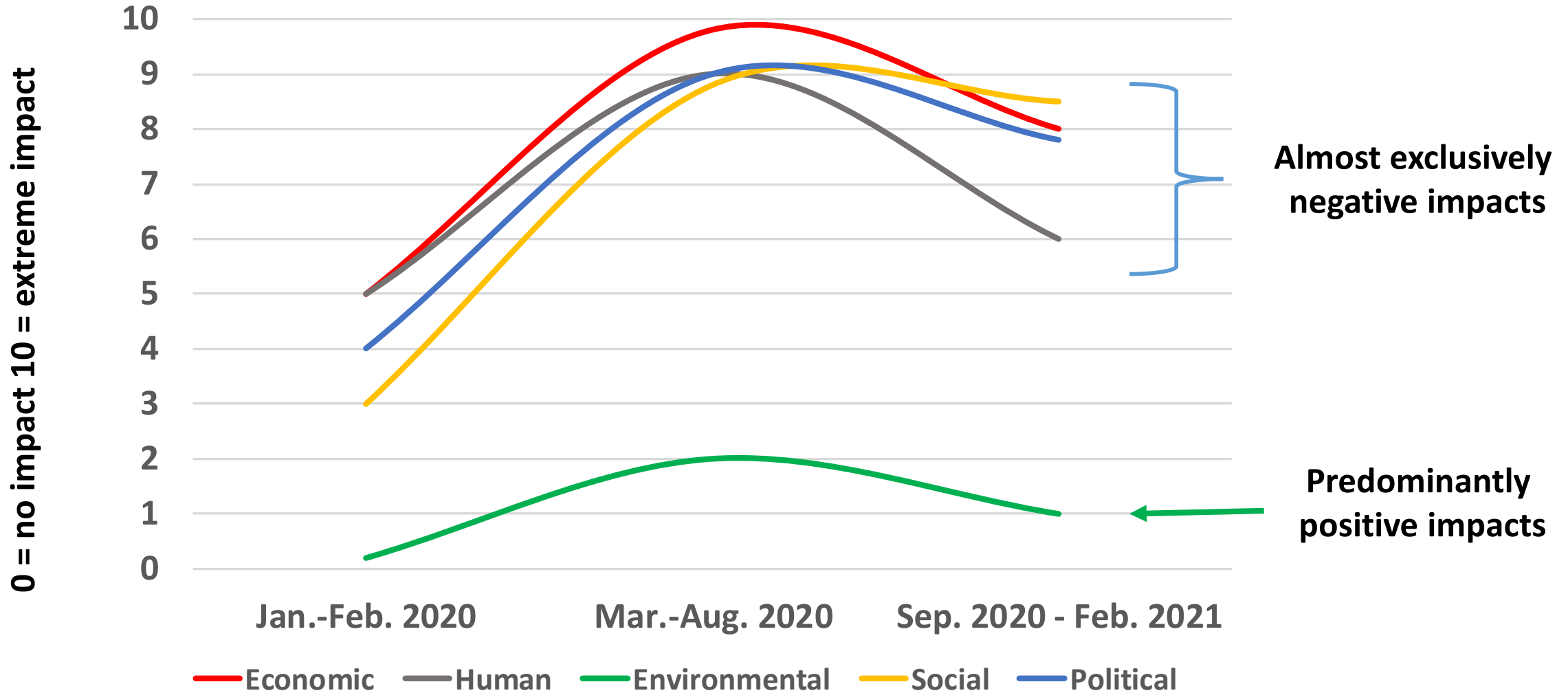
[Philipp Carlsson-Szlezak](#), [Martin Reeves](#) and [Paul Swartz](#), Harvard Business Review, 27 March 2020; read more [here](#)

**How long will this last,
and what shape will it take?**

– well, too early to say:

**nobody seems to have the answer right now,
only good or less good guesses...**

An initial "questimate"* of broader impacts of COVID-19 in EU countries: social problems may become the main concern by early 2021



***) N.B. This is purely for illustration purposes, and reflects the Author's personal "questimate" in early April 2020**

What type of financial or economic help is on offer?

Some of the largest help packages since mid-March 2020

- On Thu, [26 March 2020](#), [G20](#) economies announced to pump **US\$5,000 billion** into the world economy as part of a joint pledge to use all policy tools available to cushion the impacts of the global COVID-19 pandemic
- [ECB](#) (European Central Bank) injected an additional **870 billion euro** – about 7% of the euro area's GDP – into financial markets to address the challenge. Through its refinancing lines it is also making up to **3,000 billion euro** in liquidity available, at the lowest interest rate it has ever offered: -0.75%.
- [IMF](#) (International Monetary Fund) ready to deploy US\$1,000 billion in lending capacity
 - On 25 March 2020, IMF launched a [Tracker](#) of fiscal, monetary or macro-financial policies Governments are taking in response to COVID-19 **covering 186+ economies**
- The [EIB Group](#) (European Investment Bank) has proposed a plan to mobilise up to €40 billion of financing.
- On 17 March 2020, [World Bank Group Increases COVID-19 Response to US\\$14 Billion To Help Sustain Economies and Protect Jobs](#)

**How does COVID-19 impact on trade
and supply chains look like now*?**

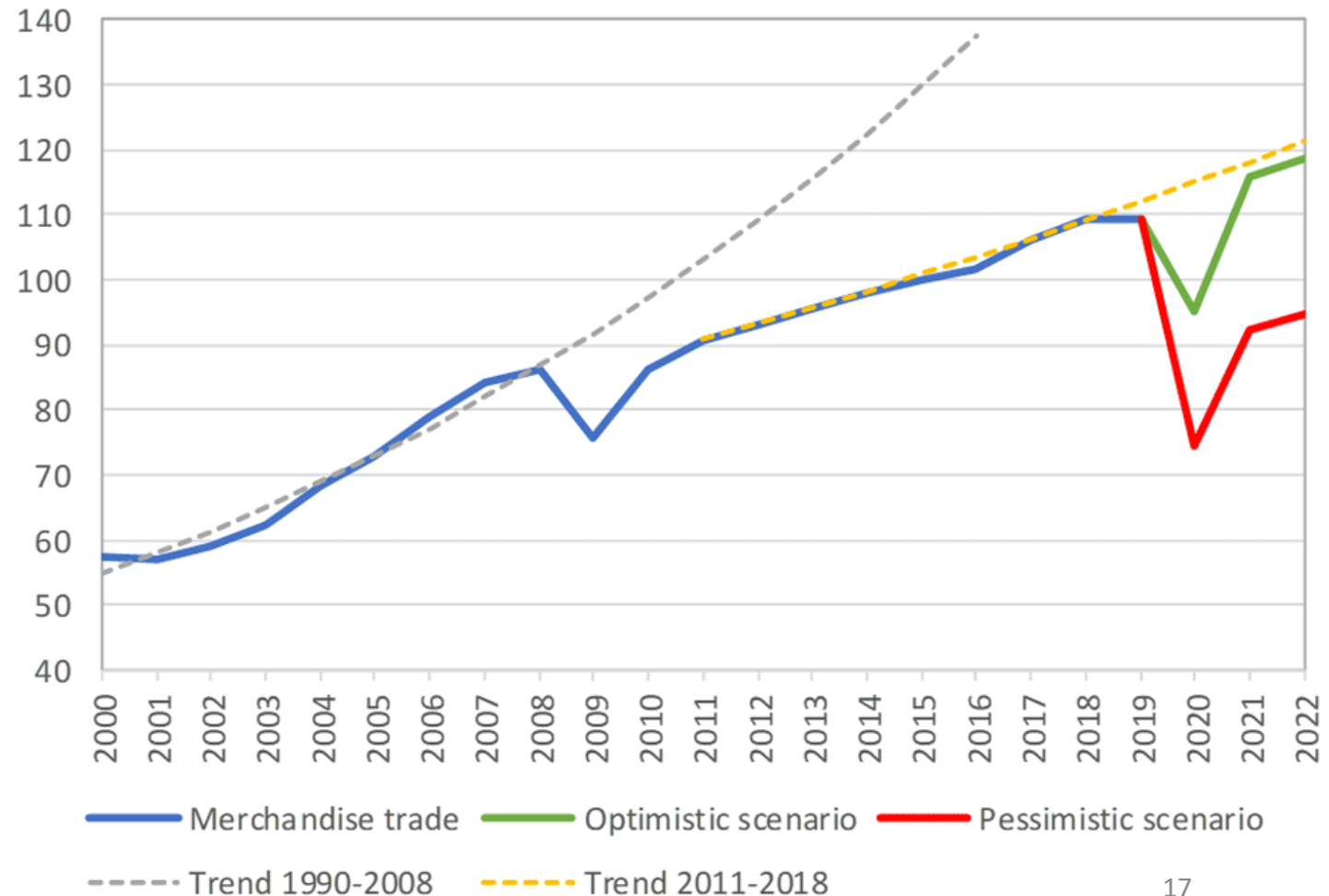
***) Early April 2020**

WTO on 8 April 2020: Trade set to plunge as COVID-19 pandemic upends global economy

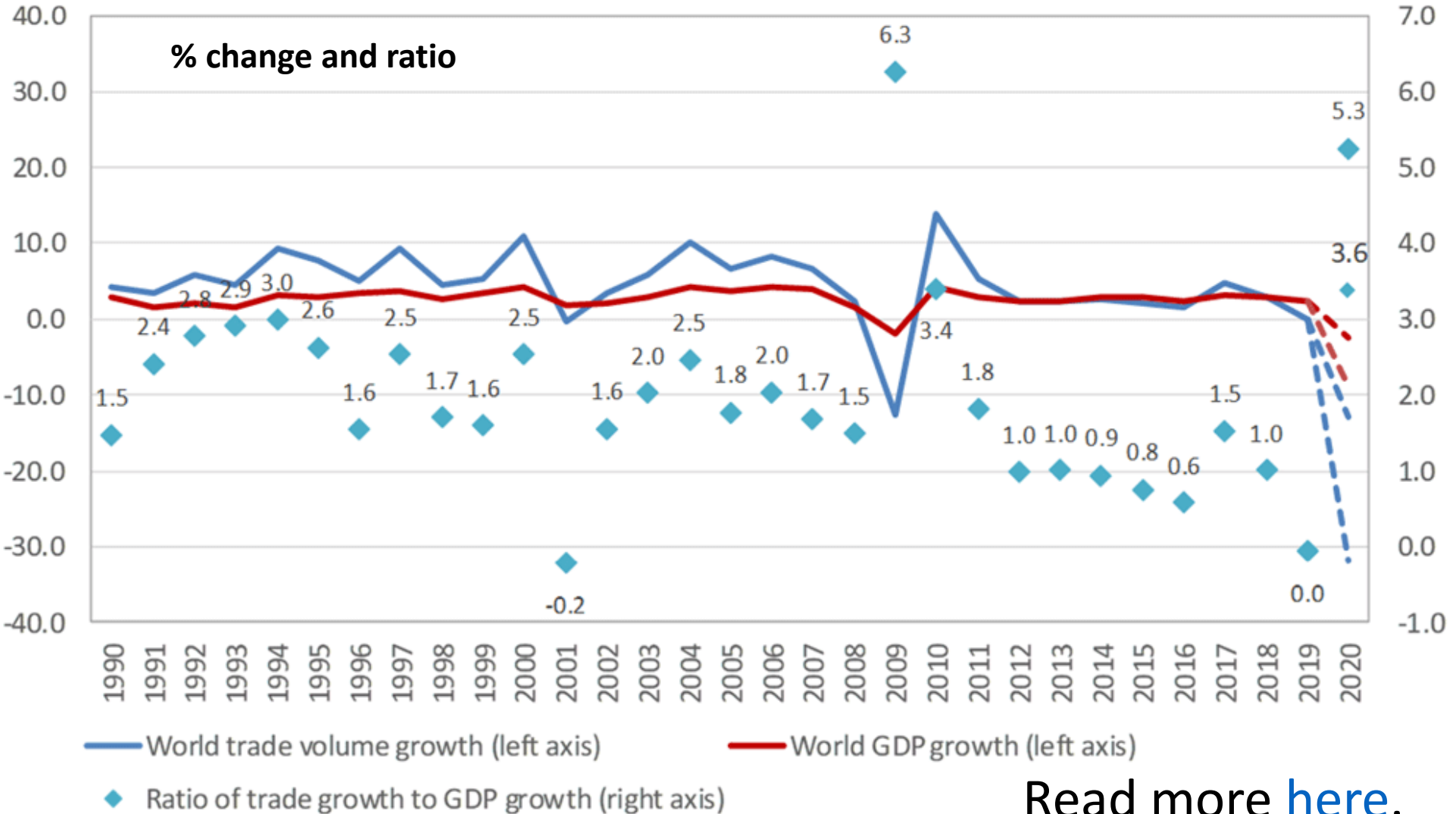
WTO expects world trade to fall by between 13% and 32% in 2020 as the COVID 19 pandemic disrupts normal economic activity and life around the world.

Read more [here](#).

World merchandise trade volume, 2000-2022



WTO on 8 April 2020: Ratio of world merchandise trade growth to world GDP growth, 1990-2020

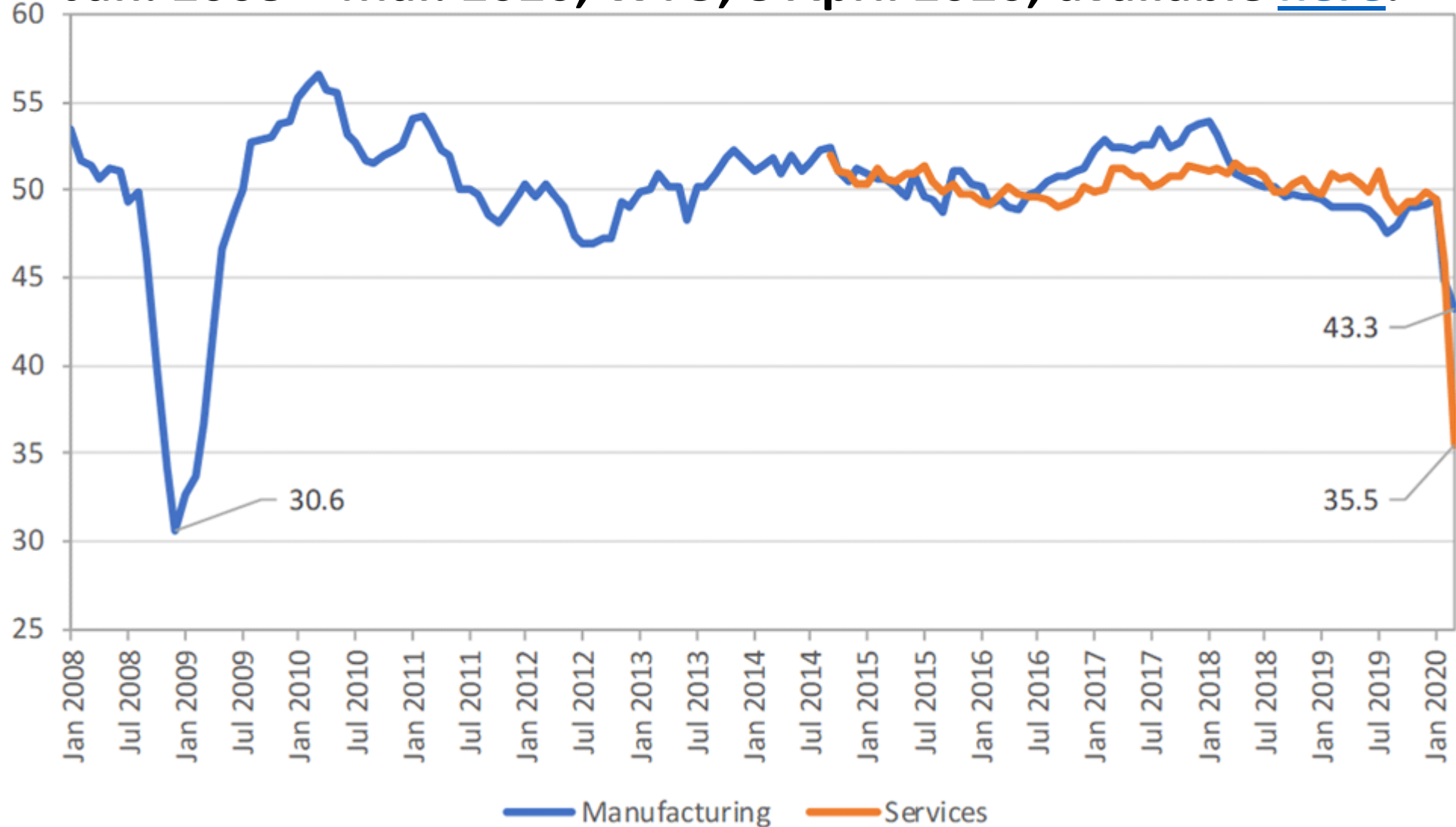


Read more [here](#).

New export orders from purchasing managers indices (Global)

Jan. 2008 – Mar. 2020; WTO, 8 April 2020; available [here](#).

Index
base = 50



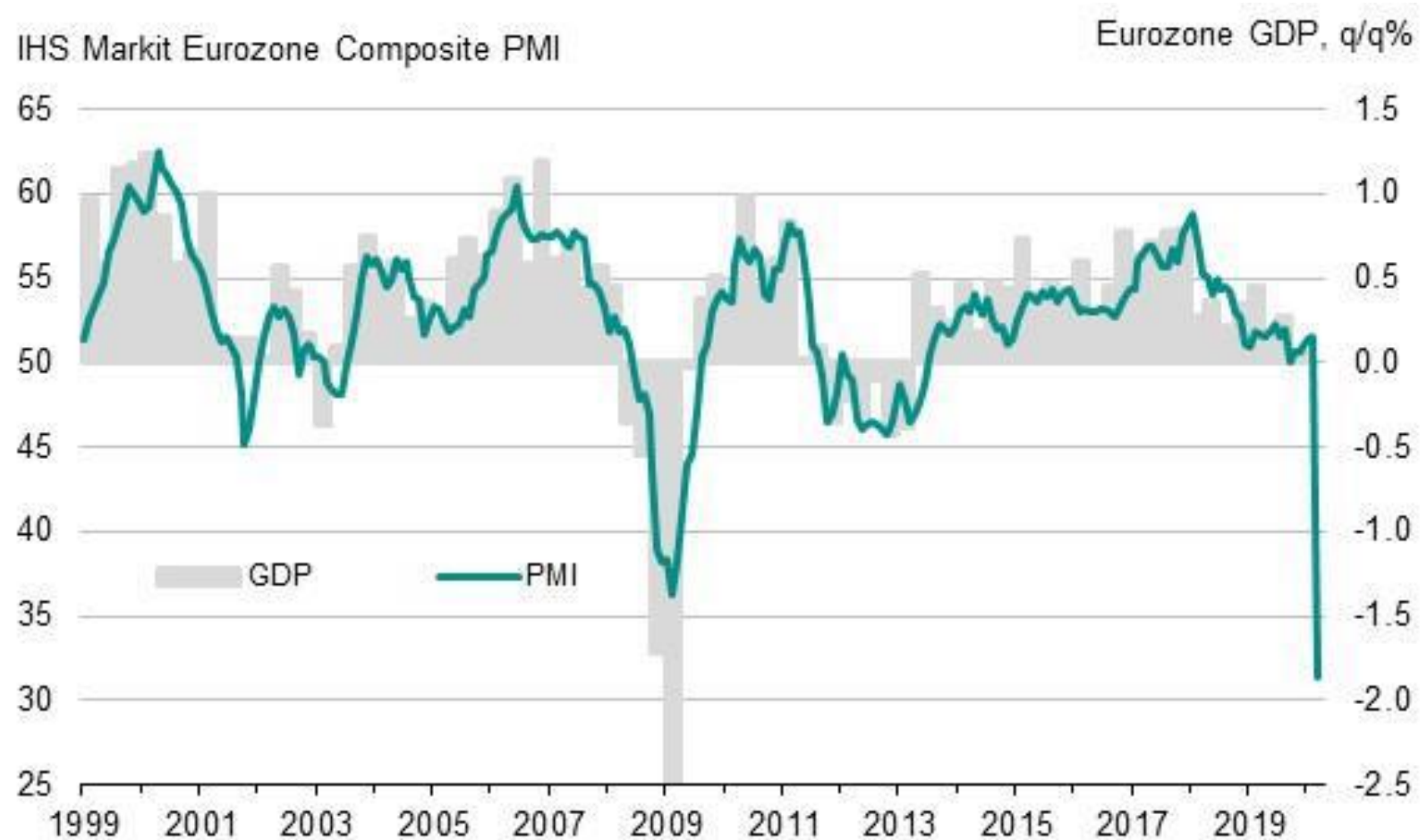
Note: Values greater than 50 indicate expansion while values less than 50 denote contraction.

Source: IHS Markit.

IHS Markit Eurozone PMI[®]: COVID-19 outbreak leads to largest collapse in business activity ever recorded

Key findings:

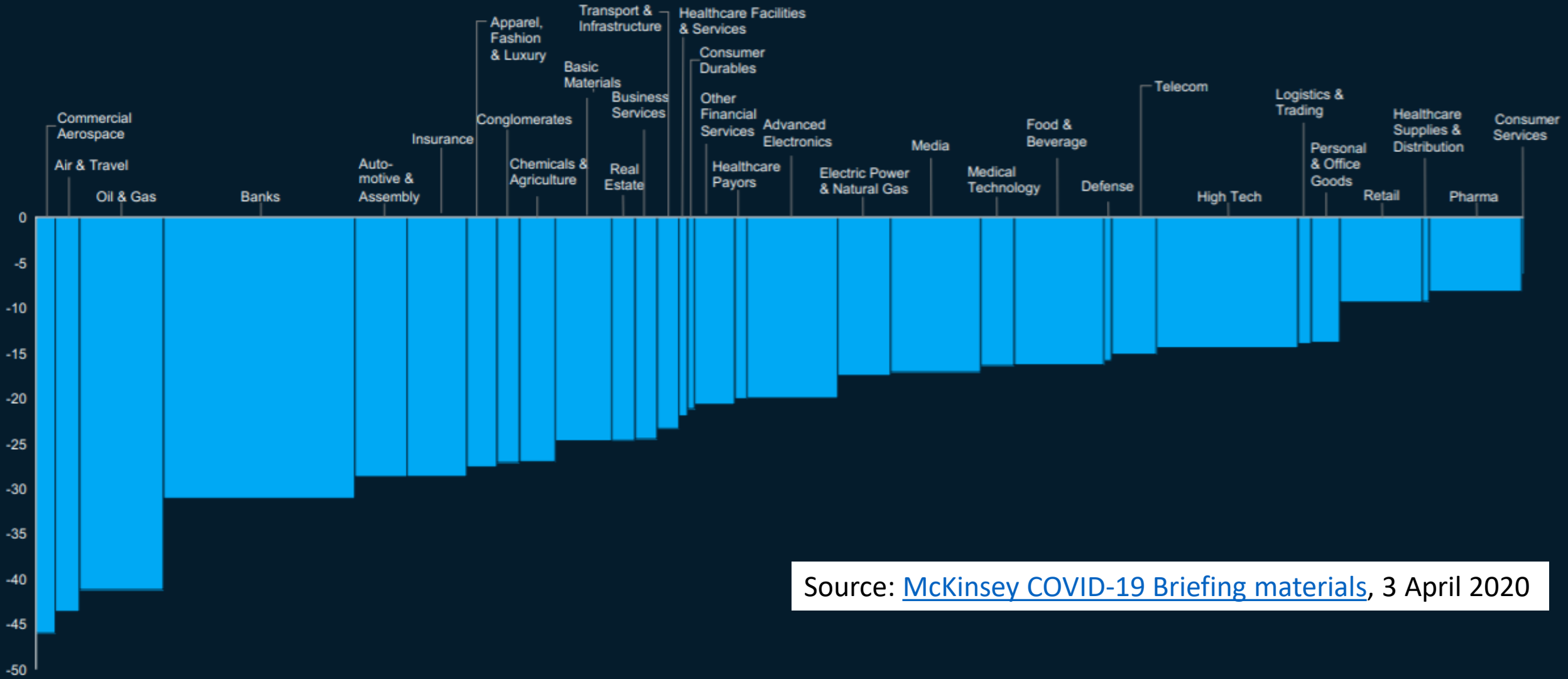
- Flash Eurozone PMI Composite Output Index(1) at 31.4 (51.6 in February). Record low (since July 1998).
- Flash Eurozone Services PMI Activity Index(2) at 28.4 (52.6 in February). Record low (since July 1998).
- Flash Eurozone Manufacturing PMI Output Index(4) at 39.5 (48.7 in February). 131-month low.
- Flash Eurozone Manufacturing PMI(3) at 44.8 (49.2 in February). 92-month low.



Sources: IHS Markit, Eurostat.

Market capitalization has declined across sectors, with significant variation to the extent of the decline

Weighted average year-to-date local currency total shareholder returns by industry in percent¹. Width of bars is starting market cap in \$

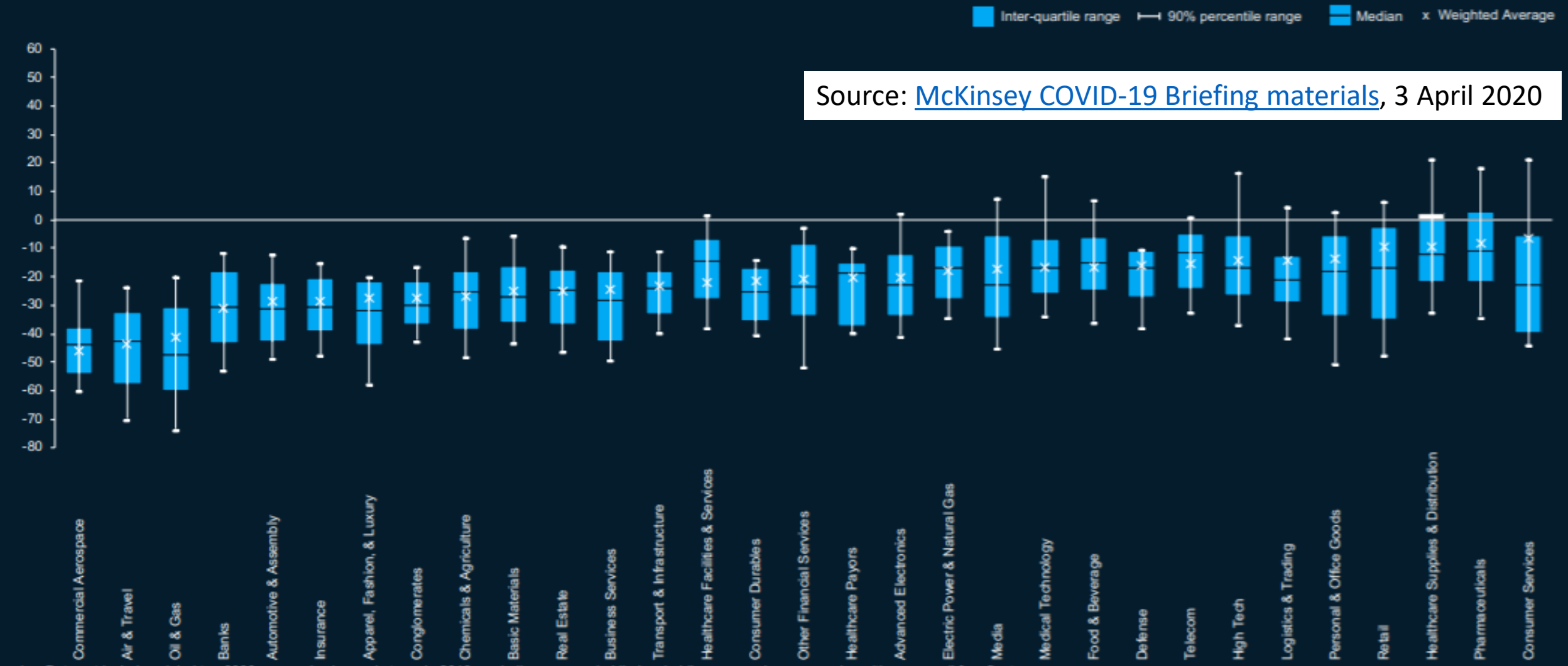


Source: [McKinsey COVID-19 Briefing materials](#), 3 April 2020

1. Data set includes global top 3000 companies by market cap in 2019, excluding some subsidiaries, holding companies, companies with very small free float and companies that have delisted since

Even within sectors, there is significant variance between companies

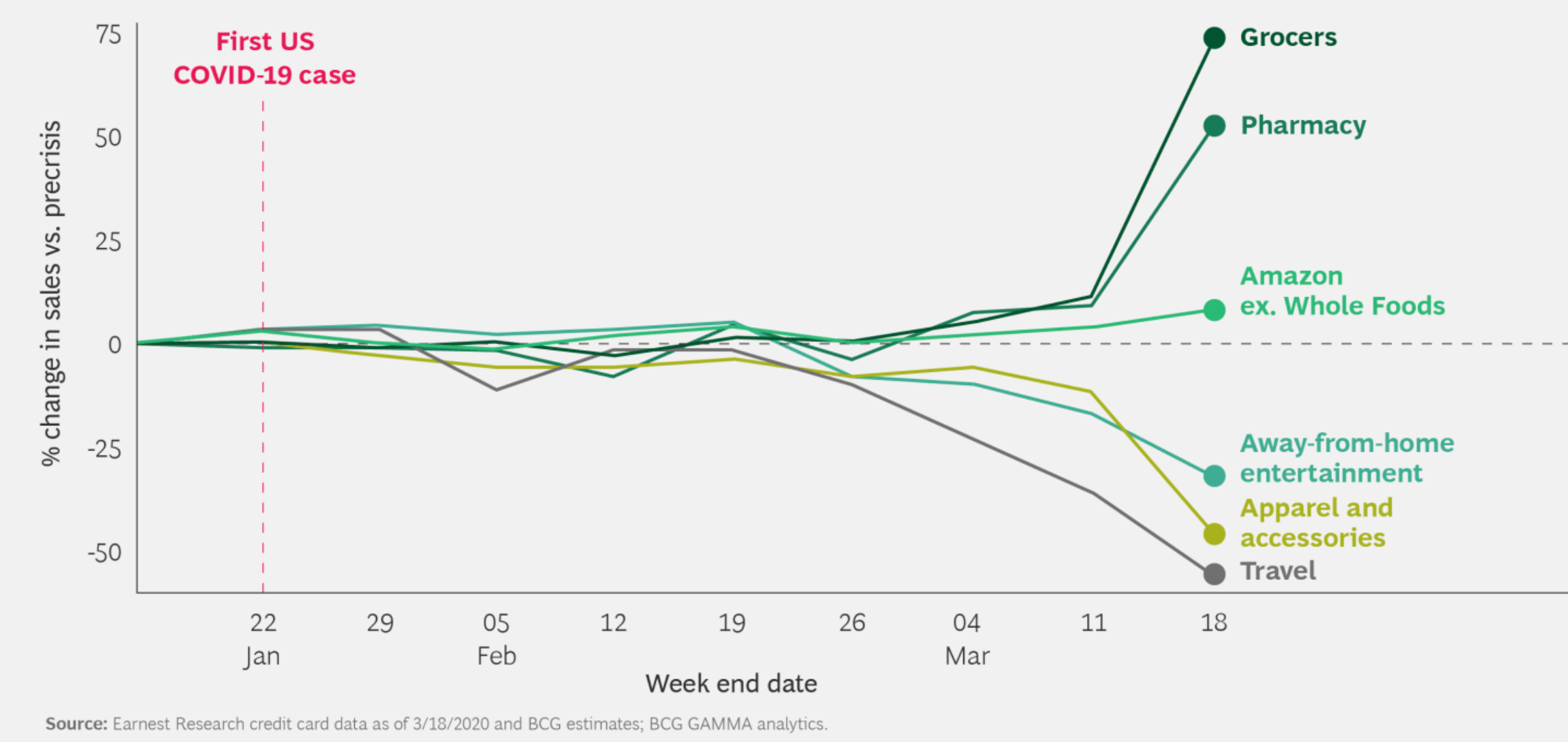
Distribution of year-to-date total shareholder returns by industry percent¹



Source: [McKinsey COVID-19 Briefing materials](#), 3 April 2020

1. Data set includes global top 3000 companies by market cap in 2019, excluding some subsidiaries, holding companies, companies with very small free float and companies that have delisted since

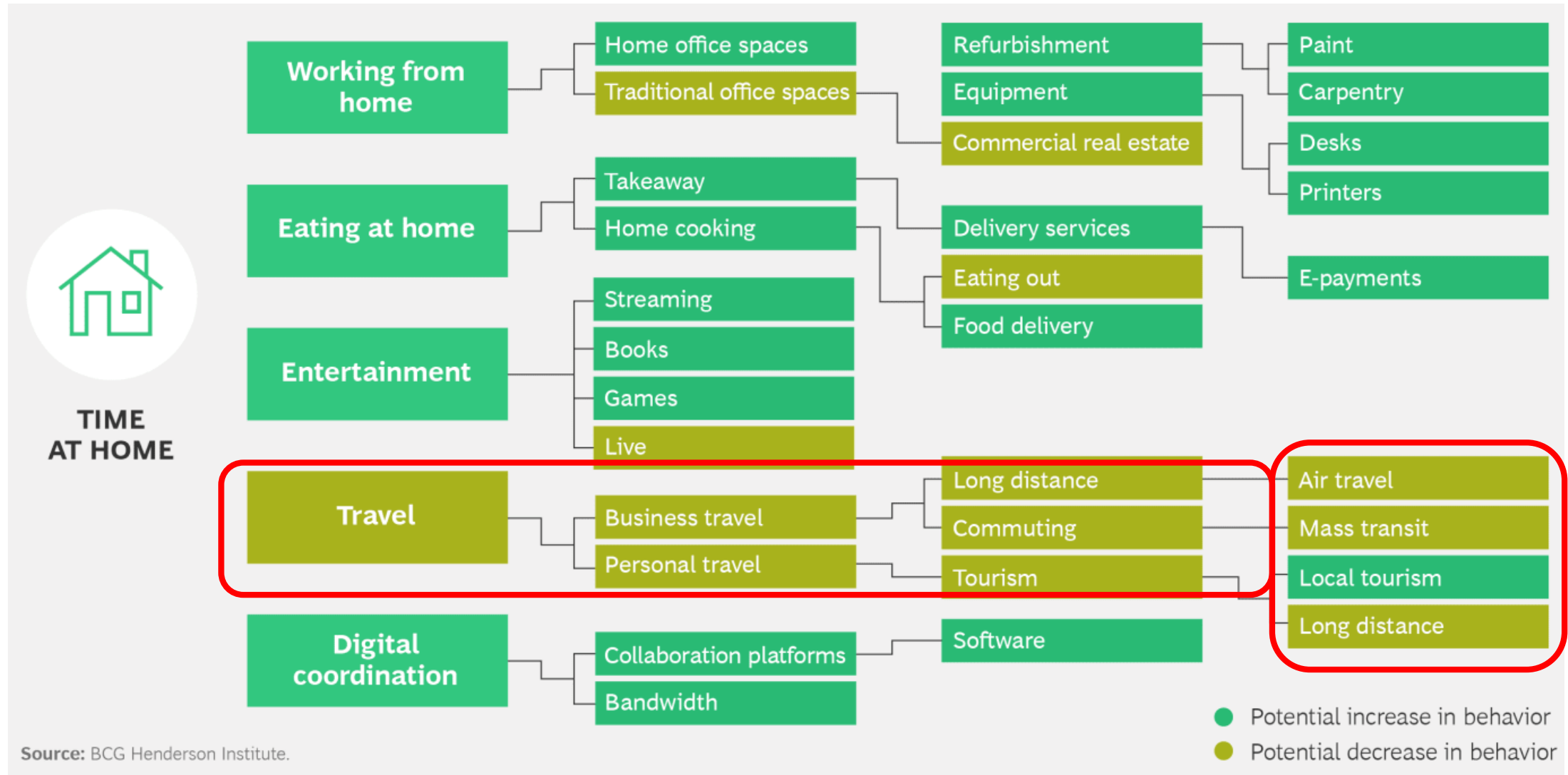
Shifts in U.S. purchasing patterns as the COVID-19 outbreak intensifies



Source: [Sensing and Shaping the Post-COVID Era](#), April 3, 2020

By [Martin Reeves](#) , [Philipp Carlsson-Szlezak](#) , [Kevin Whitaker](#) , and [Mark Abraham](#) , BCG Henderson Institute

Potential implications of spending more time at home



Source: [Sensing and Shaping the Post-COVID Era](#), April 3, 2020

By [Martin Reeves](#) , [Philipp Carlsson-Szlezak](#) , [Kevin Whitaker](#) , and [Mark Abraham](#) , BCG Henderson Institute

Example of market information on COVID-19 in the public domain

Early April 2020



Observatory on border crossing status due to COVID-19



The Observatory was opened on 26 March 2020; find it [HERE](#)

Supported by the:

UNECLAC, United Nations Economic Commission for Latin America and the Caribbean

UNESCAP, United Nations Economic and Social Commission for Asia and the Pacific

UN ESCWA, United Nations Economic and Social Commission for Western Asia

ECO Secretariat, the Economic Cooperation Organization

IRU, the International Road Transport Union



Selected examples of market intelligence gathering on COVID-19 in the public domain:

- [DHL Ocean freight market update](#), April 2020
- [BIMCO Market Analysis](#), April 2020 (Maritime shipping)
- [IATA](#), April 2020 (Air transport)
 - IATA especially on [Air passenger transport](#), 2 April 2020 update
- [Bolloré](#) generally on logistics markets, update 15 April 2020
- [Statista](#) on Transportation & Logistics; (Constant updates)
- [Saloodo](#) on Transportation & Logistics; (Constant updates)

**Road freight transport
congestion at
European borders
somewhat increasing
in Central Europe, but
mostly free of major
slow-downs**

**Situation as at
Sun 9 Apr 2020
11:37 (CET)**

**Real-time updates
available at
(public domain):**

<https://covid-19.sixfold.com/>



Some useful sites to follow

Some useful sites to follow on COVID-19 response and info:

- Selected UN Agencies on COVID-19:
- [IMO](#) [ICAO](#) [UNECE](#) (Europe) [UNESCAP](#) (Asia Pacific)
 - [UNECE Observatory on Border Crossings](#) due to COVID-19 launched on 26 March 2020
- [EU Mobility and Transport](#) (European Commission)
 - European Maritime Safety Agency [EMSA listings on MS actions](#)
- Impacts on road haulage by [IRU](#)
- Aviation industry by IATA: <https://www.iata.org/en/>
- [Baltic Sea Ports and Shipping](#) by BPO (30 March 2020)

Major logistics firms on COVID-19 (updated constantly):

- [DB Schenker](#) [DHL](#) [DSV](#) [CEVA](#) [UPS](#) [FedEx](#)
- Wilhelmsen COVID-19 [Global Port Restrictions Map](#) (a very good one!)
- Bolloré COVID-19 [IMPACT UPDATE](#) March 27th, 2020
- Kuehne & Nagel https://www.kn-portal.com/updates_on_coronavirus
- Maersk: <https://www.maersk.com/stay-ahead>
- Ti Coronavirus March 2020 [updates](#)
- Zipline Logistics, [2020 Q2 Freight Market Update](#), 24 March 2020

Selected sources

- [DHL Ocean freight market update](#) (March 2020)
- Hybrid CoE (2019) [HANDBOOK ON MARITIME HYBRID THREATS](#) — *10 Scenarios and Legal Scans*
- [IATA](#) (24 March 2020) *Deeper Revenue Hit from COVID-19*
- McKinsey ([25 March 2020](#))
- McKinsey (16 March 2020) [COVID-19 Briefing Note](#)
- [UNCTAD](#) (26 March 2020) *Coronavirus could cut global investment by 40%*
- [WEF a\)](#) (March 2020) , World Economic Forum
- [WEF b\)](#) (23 March 2020) , *How China can rebuild global supply chain resilience after COVID-19*
- [WTO](#) (2020) *World Trade Statistical Review 2019*

Selected Video presentations:

- [MIT video briefing](#) “A Coronavirus Briefing - The Impact of COVID-19 on Business and Supply Chain”, 16 March 2020, 56 minutes

Thank you – and take care!



[I got the flight path via:](#)

Jan Hoffmann, UNCTAD,
27 March 2020

-Lauri