



Coronavirus: world economy in freefall

The economic consequences of Covid-19

**National Bureau of Economic Research (NBER)
Asset Pricing Meeting**

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**Laurence Boone
OECD Chief Economist**



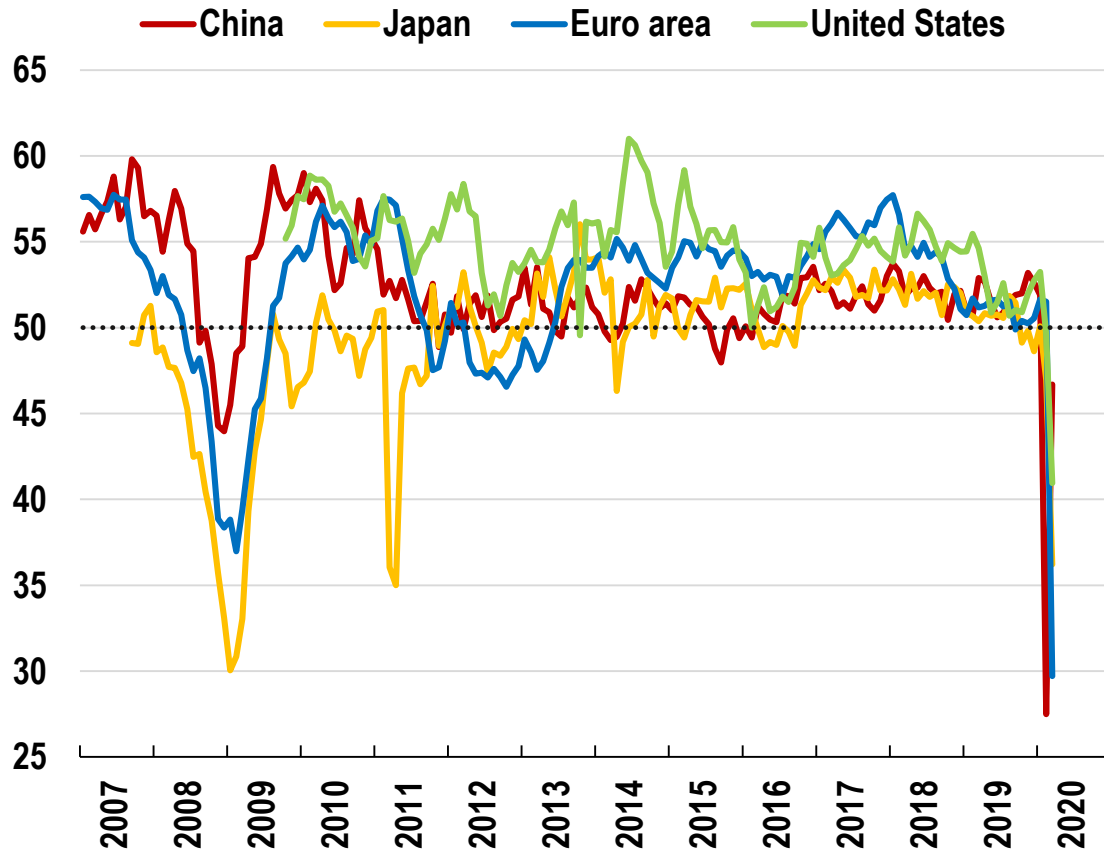
Key messages

- Impact of Covid-19 on economic activity:
Containment measures to flatten the epidemic curve are necessary but tough on the economy
- Policies to deal with Covid-19:
Reactions have been large in magnitude and scope
- Exit strategy will be gradual:
Evolving policy measures will be necessary

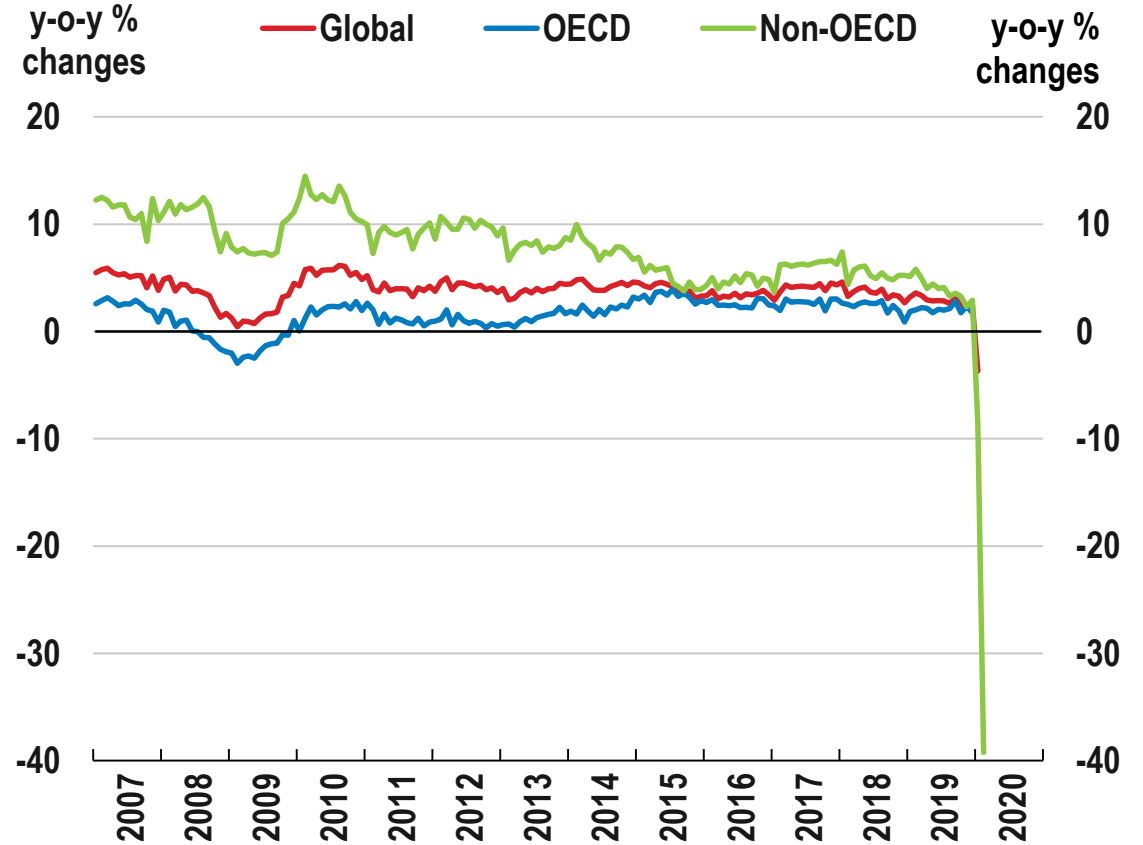


Activity and consumption have dropped drastically since Covid-19

Composite PMI



Consumption index



Note: LHS: The latest data point is for March 2020. RHS: Data are for retail sales in the majority of countries. Monthly household consumption is used for the United States and the monthly synthetic consumption indicator is used for Japan. The aggregations are based on PPP weights. Non-OECD includes Albania, Belarus, Brazil, Bulgaria, China, Chinese Taipei, Colombia, Croatia, Hong Kong - China, Indonesia, Malta, Romania, Russia, Singapore and South Africa.
Source: Refinitiv; Markit; OECD database and OECD calculations.

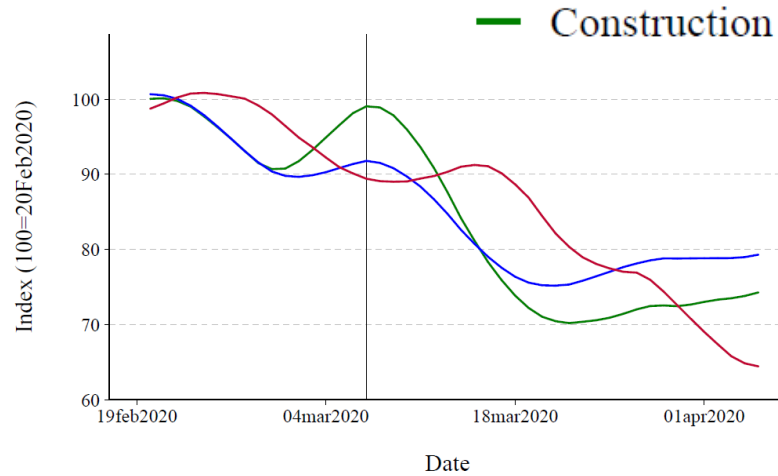


Tracker based on Google trends suggests that activity collapses following a lockdown

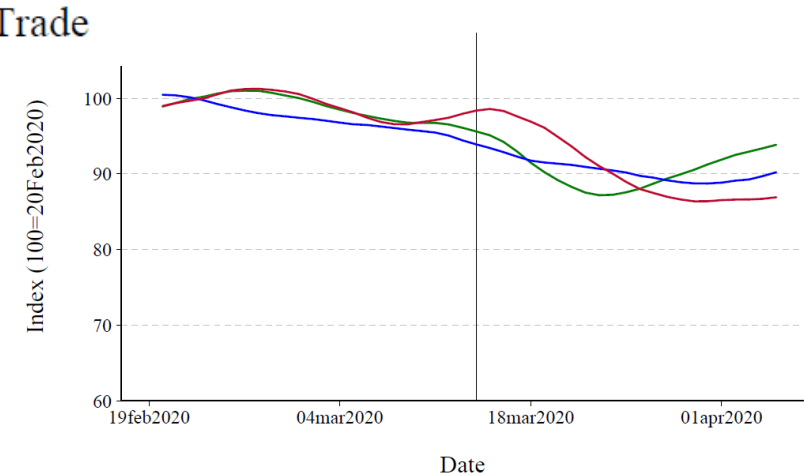
National lockdown announcements

Tightened recommendations to stay home

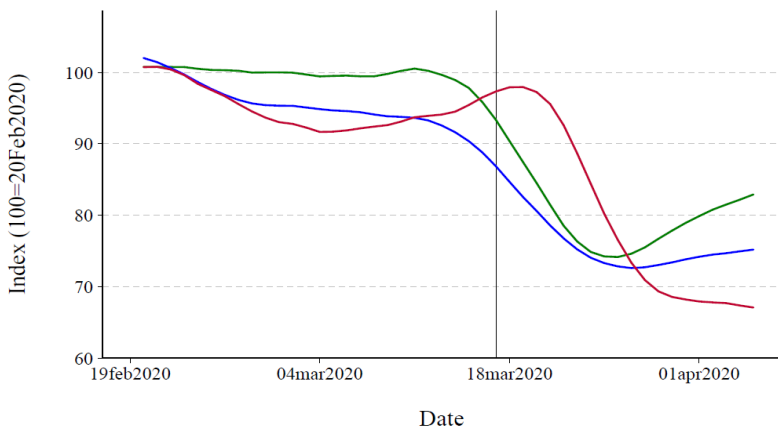
ITA



USA



FRA



JPN



Note: Series show seven-day moving averages changes since 20 February 2020. Each 'tracker' is an index of the relative search intensity for keywords related to construction, retail sales and trade i.e. it is an index of Google Trends categories. Trackers are compiled based on search categories that are harmonised across countries and languages. Data as of 5 April 2020. Vertical lines represent approximated national lockdown announcements or tightened recommendations to stay home.

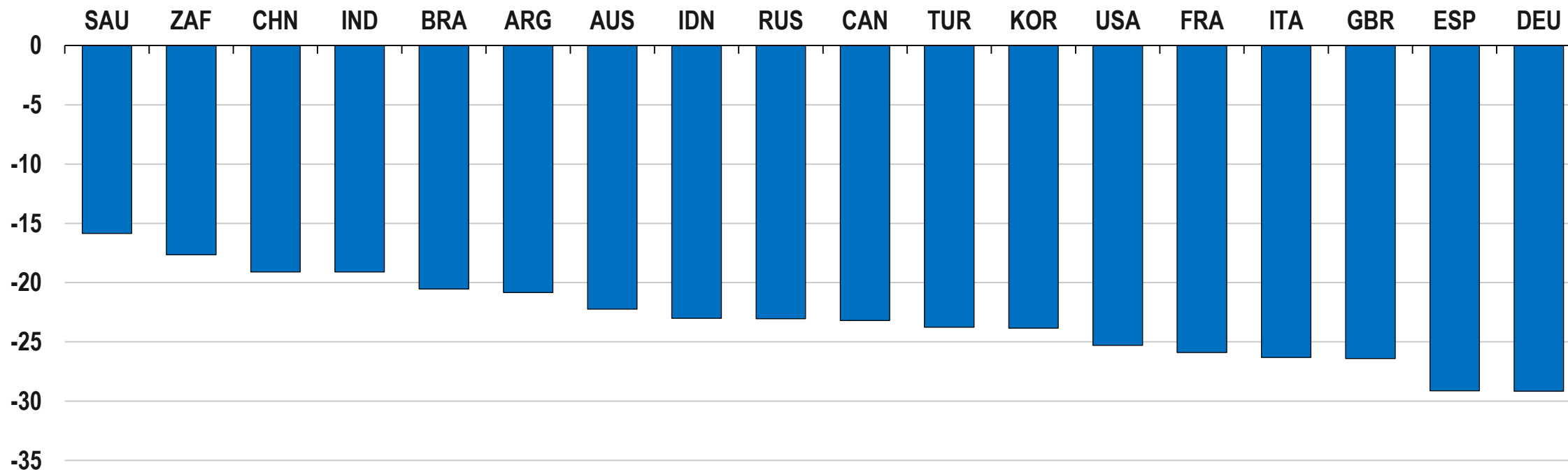
Source: Google Trends; Assessment Capacities Project (ACAPS) tracker; Oxford Covid-19 Government Response Tracker; OECD Covid-19 Policy tracker and OECD calculations.



Illustrative estimates of the initial direct impact of shutdown - impact felt worldwide

Potential initial impact of partial or complete shutdowns on activity

% GDP at constant prices



Note: The sectoral data are on an ISIC rev. 4 basis in all countries. The sectors included are manufacturing of transport equipment (ISIC V29-31), construction (VF), wholesale and retail trade (VG), air transport (V51), accommodation and food services (VI), real estate services excluding imputed rent (VL-V68A), professional service activities (VM), arts, entertainment and recreation (VR), and other service activities (VS). The latter two are grouped together as other personal services in the figure. Full shutdowns are assumed in transport manufacturing and other personal services; declines of one-half are assumed for output in construction and professional service activities; and declines of three-quarters are assumed in all the other output categories directly affected by shutdowns. The sectoral data are on an ISIC rev. 4 basis in all countries apart from Korea and Brazil, where national data are used. Real estate services excluding imputed rent are assumed to be 40 per cent of total real estate services in countries in which separate data are not available.

Sources: OECD Annual National Accounts; OECD Trade in Value-Added database; Statistics Korea; Brazilian Institute of Geography and Statistics; and OECD calculations.



Evolving policies from wide-ranging support

People

- **Extra spending on the healthcare sector** (e.g., mass testing, PIT/SSC cuts for health workers, VAT exemptions/cuts for medicines/equipment)
- **Income support measures** (e.g., expansion of short-time working schemes, paid sick leave and unemployment benefits)

Firms

- **Reductions in tax and social security contributions** (e.g., enhanced tax loss provisions for firms)
- **Delays and deferrals to taxes, SSCs and other compulsory payments**
- **Support to workers and employers in SMEs** (e.g., reduction of working hours)

Macro policy

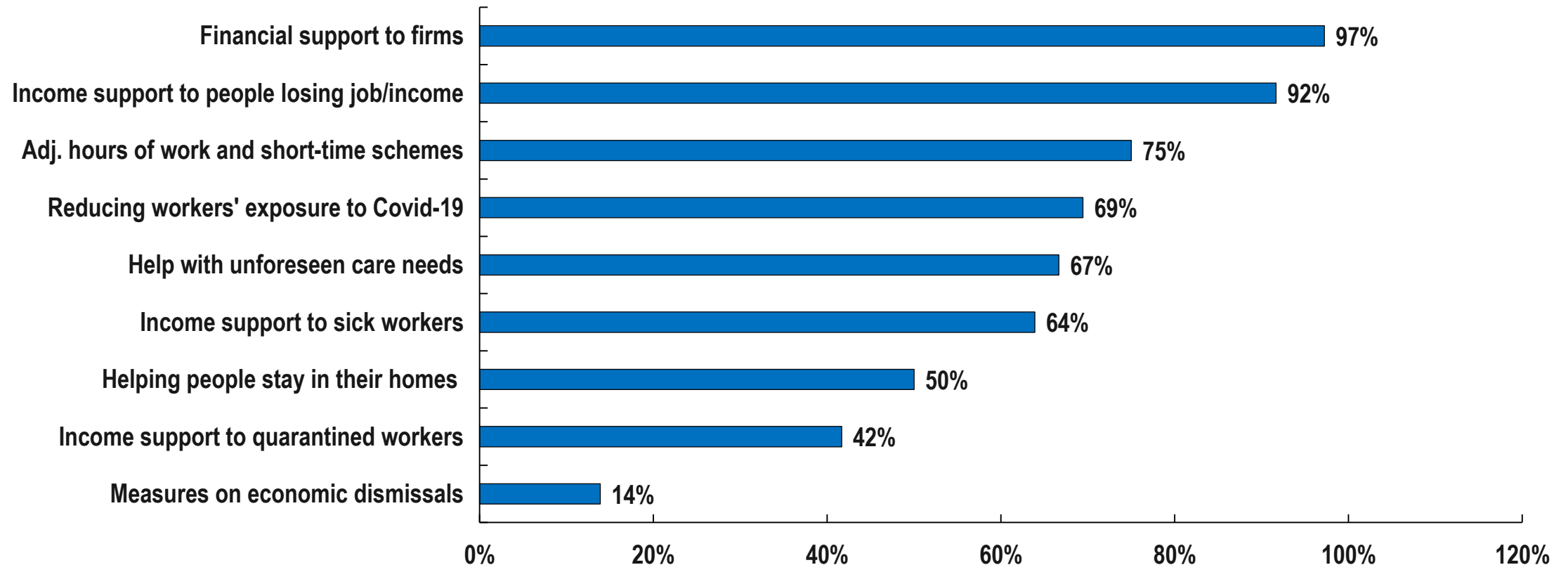
- **State loan guarantees for private borrowers**
- **Asset purchases** (e.g., government bonds and private securities)
- **Liquidity support measures** (e.g., standard lending facilities)
- **Lending support measures** (e.g., reserve requirement reductions)
- **Prudential regulation to support bank lending** (e.g., favorable NLP treatment)
- **Cuts in interest rates**



Adopted measures across OECD countries

(1st April)

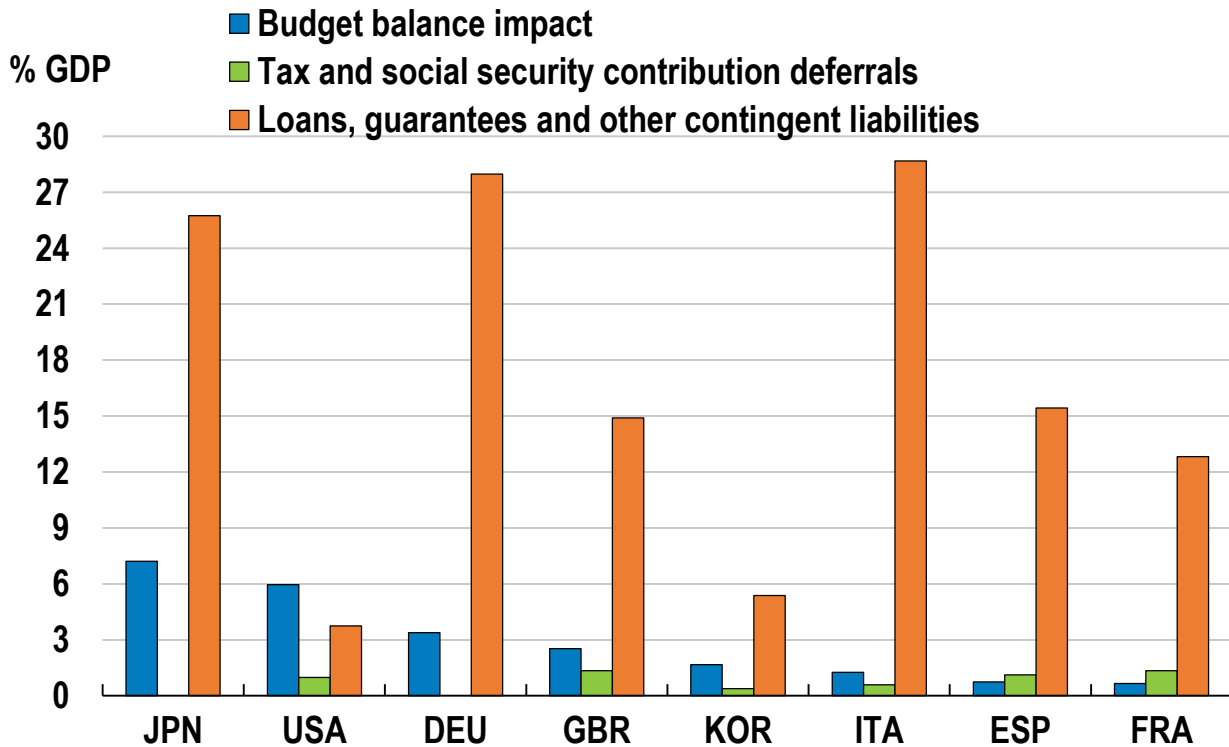
Share of OECD countries that have introduced (or announced) new measures or expanded existing ones in response to Covid-19



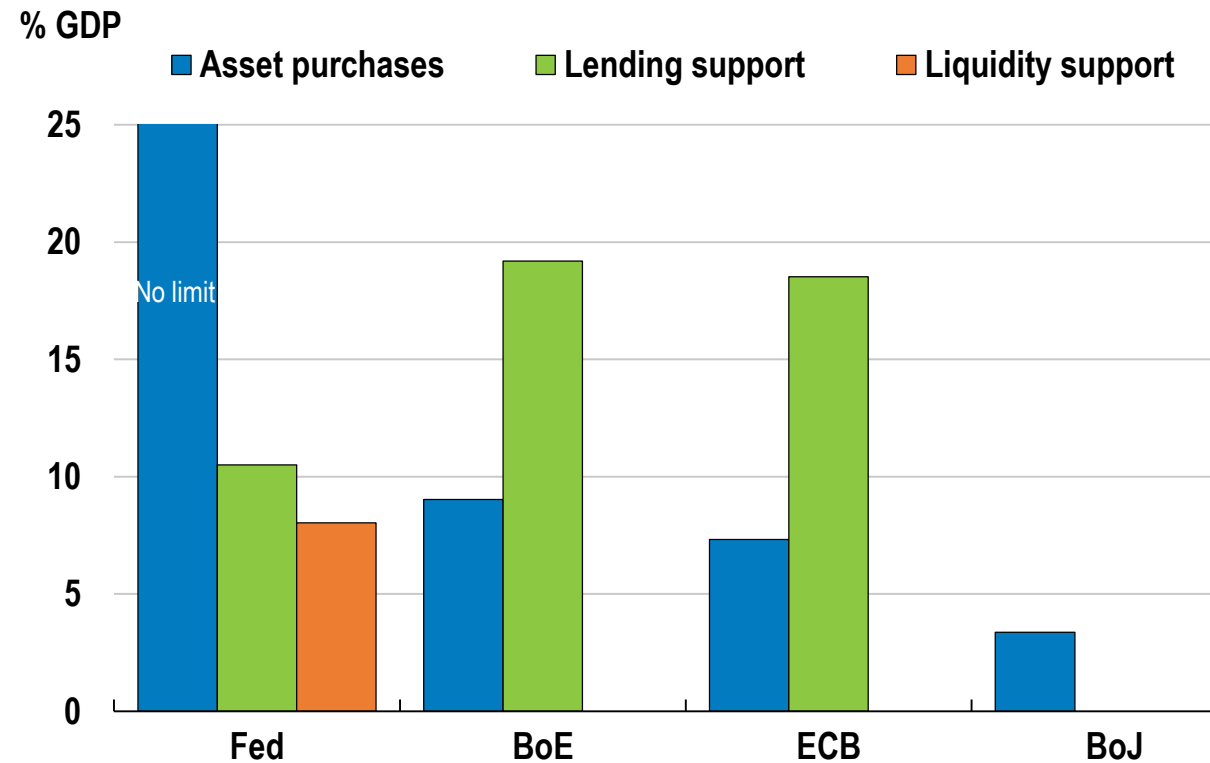


Government financial support is sizeable

Official estimates of financial help to the economy



Possible impact on central bank total assets



Note: For country-specific notes, see the Annex. LHS: The figure shows official estimates, when available, of financial help included in emergency packages announced by governments in response to the Covid-19 crisis, as of 9 April. Budget balance impact includes wage support for affected workers and businesses, welfare measures (income support for vulnerable people), tax reductions, support for healthcare and support for affected industries. In many cases, the estimates are highly uncertain due to an unknown duration of the crisis and take-up of various programmes by the private sector, and may not be comparable across countries. RHS: Shows the announced allowable increases in government and private asset purchases, and potential funds for programmes to support lending to firms and households and to support market liquidity.

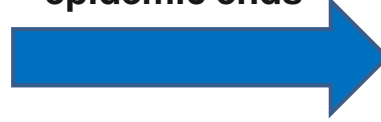


Several exit strategies are possible: a stylised gradual exit path

Phase 1: National containment measures and mass testing

- Virus reproduction rate slows significantly and for a sufficiently long time
- **Expand healthcare capacity**

National epidemic ends



Phase 2: Gradual return to work and school with mass testing

- **Expand healthcare capacity globally** (e.g. testing, treatment, vaccine development)
- Required test for immunity or a regular Covid negative test to attend work and school
- **Maintain border controls, selective lockdown and restrict mass gatherings**
- **Enhance fiscal and monetary support**

Potential new coronavirus wave



Phase 4: Vaccine developed

- Mass rollout of vaccine
- **Fully remove** border controls, mass testing and restrictions on mass gatherings



Phase 3: Epidemics end across the world

- Ease border controls, restrictions on mass gatherings and mass testing
- **Maintain accommodative fiscal and monetary support**





Key messages

Covid-19 is affecting people and the global economy on multiple fronts

- Tragically, the virus is taking a heavy toll on people's health
- Covid-19 is severely disrupting people's life and the world economy
- A large part of the world economy is facing increasingly stringent containment measures

The spread of the virus is having a massive impact on the global economy

- Whole sectors are coming to a standstill, supply chains are being disrupted, commodity prices are falling and financial markets are stressed
- OECD currently estimates a decline in annual GDP growth of about 2 percentage points for each month that strict containment measures continue in many major advanced economies
- The economic impact is strongly connected with testing and isolation strategies

Governments must increase coordination

- Joint government action to ramp up the production of medical equipment and supplies to ensure that affordable vaccines and treatments are widely and swiftly available
- Coordinate monetary and fiscal support across countries
- The public sector is a life line to the private sector and people



ANNEX



Country-specific notes for Government financial support

- **DEU:** State loans and credit guarantees include EUR 100 bn (2.9% of GDP) for recapitalisation of larger companies and important start-ups by an economic stabilisation fund and an extension of the limit on available credit guarantees by the state-owned development bank KfW of EUR 357 bn (10.4% of GDP). On 6th April, another immediate loan scheme for SMEs via KfW was announced, but at the moment there is no official estimate of its size. The estimate of the volume of announced tax deferrals is not available.
- **GBR:** Welfare measures with direct budget impact include the Coronavirus Job Retention Scheme and the Self-Employed Income Support Scheme. Their size will depend on the take-up and duration, the number used (GBP 14.7bn; 0.7% of GDP) is based on the Resolution Foundation estimates, it assumes 3.5 million people using the schemes for 3 months. Contingent liabilities include over GBP 330 billion (14.9% of GDP) of state loans and guarantees for struggling businesses, through the Coronavirus Corporate Financing Facility (CCFF) and the Coronavirus Business Interruption Loan Scheme (CBILS).
- **FRA:** Credit guarantees are assumed to apply to EUR 300 billion of bank loans.
- **ITA:** State loans and credit guarantees include the expected multiplication effect on the credit market. Extra liquidity will be provided by the moratorium on debt repayment and debt interest payments until end-September on an approximated volume of firm loans of EUR 220 bn; the moratorium on mortgage payments for vulnerable households. Estimates for these measures are not available. The Italian government is currently discussing a further fiscal stimulus of EUR 25-30 bn (1.4%-1.7% of 2019 GDP), that has not been included.
- **ESP:** The wage support and welfare measure are estimated at EUR 5 bn for one month; if the crisis lasts longer, spending will be higher. Measures to support credit consist of EUR 102 bn in state guarantee, EUR 10 bn capital increase in the Instituto Credito Oficial (ICO) to boost its lending capacity and includes EUR 80 bn of private capital. Extra liquidity will be also provided by the 6-month moratorium on mortgage payments for vulnerable households, the moratorium on gas and electricity bills for vulnerable households and SMEs and self-employed in distressed sectors, and the 1-year deferral of debt payments for SMEs for debt contracted with the Secreteria General de Industria. Estimates of these measures are not available.
- **USA:** Tax referral represent the fiscal cost incurred in 2020 as estimated by the Joint Committee on Taxation (JCT).
- **KOR:** Contingent liabilities include WON 48.5 trillion (2.5% of GDP) used to create funds aimed at stabilising financial markets (corporate bond market stabilisation fund, short-term monetary market stabilisation fund, stock market stabilisation fund and a primary collateralised bond obligations scheme).
- **JPN:** The total recent fiscal package to cope with downside risks, including those related to the COVID19 crisis is JPY 180 trillion, including around JPY 40 trillion of public spending and around JPY 140 trillion of state loans and guarantees Estimates of tax deferral measure are not available.



Country-specific notes for central bank support

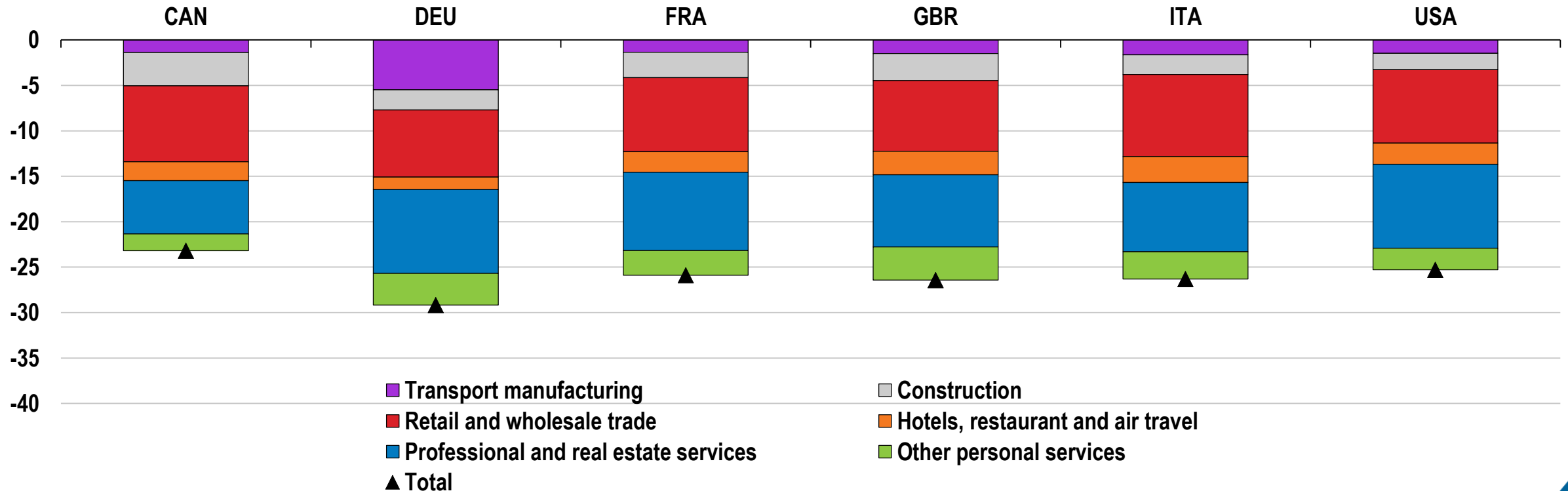
- **Federal Reserve (Fed):** Asset purchases include unlimited purchases of treasury securities and agency mortgage-backed securities. Lending support includes new programmes that support the flow of credit to employers, consumers, and businesses; the Main Street Lending programme; the Primary and Secondary Market Corporate Credit Facilities; the Term Asset-Backed Securities Loan Facility; and the Municipal Liquidity Facility. Liquidity support: maximum available funds (the take-up could be lower), it excludes discount window lending.
- **Bank of England (BoE):** Lending support is the BoE estimate of the Term Funding Scheme with additional incentives for SMEs (TFSME) – GBP 100 bn and government announced estimate of available funds covering the Covid Corporate Financing Facility (CCFF) of GBP 325 bn, which will provide funding to businesses by purchasing commercial paper of up to one-year maturity, issued by firms making a material contribution to the UK economy; the effects of the reduction in the countercyclical capital buffer rate to 0% are not included. For liquidity support no estimates are available but the BoE provides liquidity via regular sterling market operations (the Indexed Long-Term Repo (ILTR) and Discount Window Facility (DWF)) and the newly established Contingent Term Repo Facility (CTRF). The HM Treasury and the BoE have agreed to extend temporarily the use of the government's long-established Ways and Means (W&M) facility, which enables sterling cash advances from the BoE to the government. The amount of future advances is not known.
- **European Central Bank (ECB):** Lending support is an approximate maximum amount available under the TLTRO, although take-up was far less than the maximum available in the past. The ECB has made the terms of its TLTRO III programme of funding for banks more generous, and relaxed bank capital requirements. The ECB has also temporarily eased collateral requirements, which will contribute to easing of financial conditions.
- **Bank of Japan (BoJ):** Asset purchases show an indicative sum for 2020, equal to changes in BoJ's holdings of government securities and private assets during 2019, as the BoJ implements a yield curve control. The BoJ increased its targets of corporate bonds and exchange traded funds purchases. Liquidity support: The BoJ undertook emergency market operations (purchases of JGBs under repurchase agreements) to provide additional liquidity to financial markets and committed to provide ample liquidity and ensure stability in financial markets through appropriate market operations and asset purchases.



Illustrative estimates of the initial direct impact of shutdown - impact will be enormous

Potential initial impact of partial or complete shutdowns on activity

% GDP at constant prices



Note: The sectoral data are on an ISIC rev. 4 basis in all countries. The sectors included are manufacturing of transport equipment (ISIC V29-31), construction (VF), wholesale and retail trade (VG), air transport (V51), accommodation and food services (VI), real estate services excluding imputed rent (VL-V68A), professional service activities (VM), arts, entertainment and recreation (VR), and other service activities (VS). The latter two are grouped together as other personal services in the figure. Full shutdowns are assumed in transport manufacturing and other personal services; declines of one-half are assumed for output in construction and professional service activities; and declines of three-quarters are assumed in all the other output categories directly affected by shutdowns.

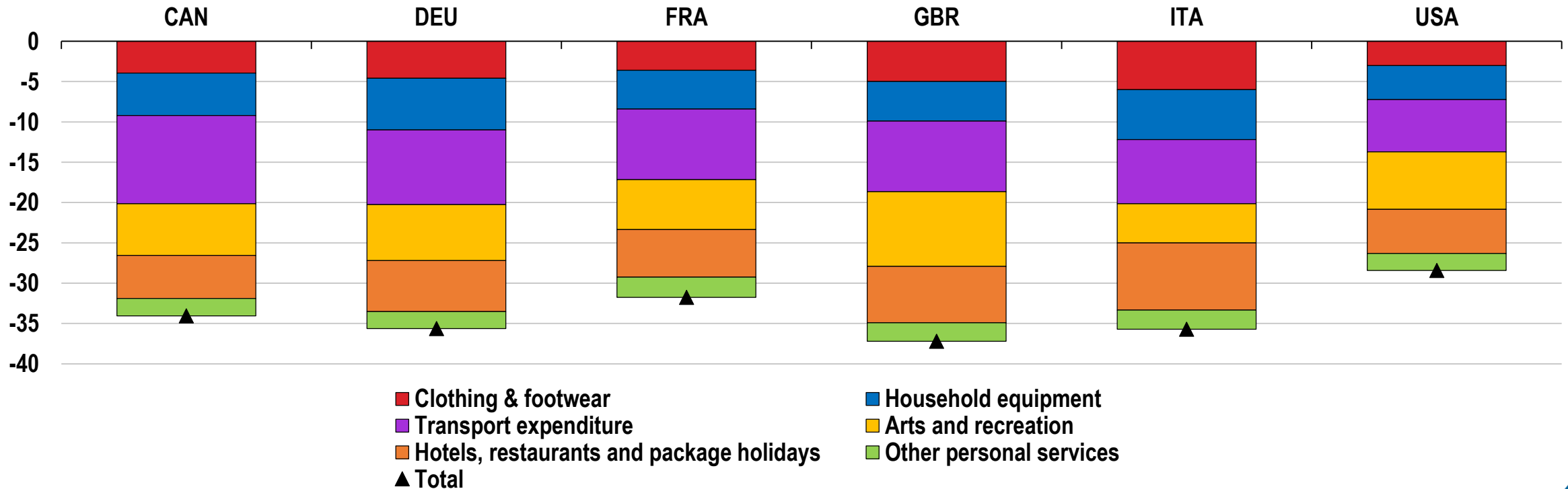
Sources: OECD Annual National Accounts; and OECD calculations.



Initial impact on GDP will be enormous and far larger than GFC

The potential initial impact of partial or complete shutdowns on:

Private consumption *% total consumers' expenditure*



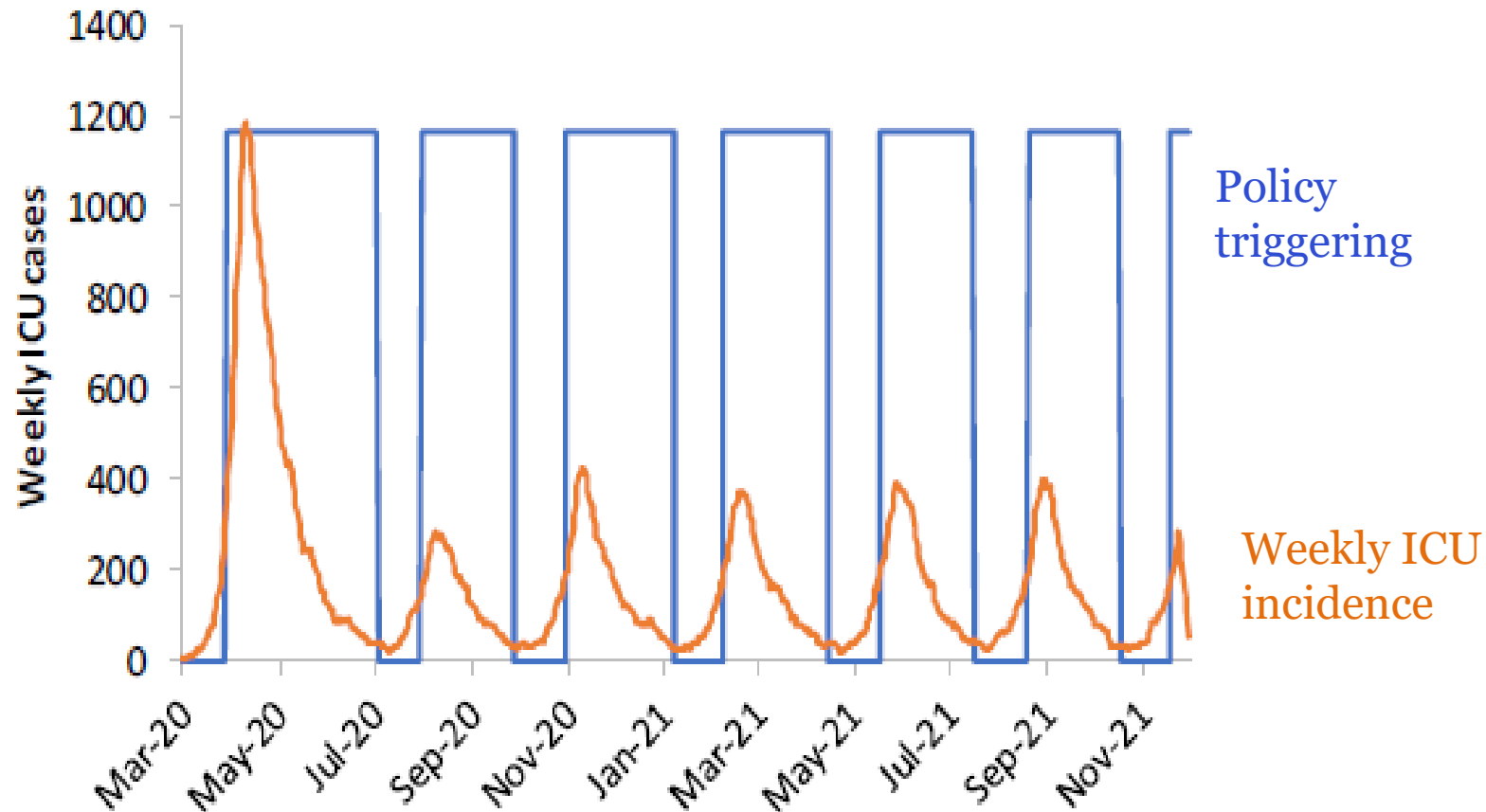
Note: The spending data are based on a COICOP classification in all countries. The categories included are clothing and footwear (COICOP 3); furnishings and household equipment (5); vehicle purchases (7.1); operation of private vehicles (7.2); transport services (7.3); recreation and culture excluding package holidays (9.1-9.5); package holidays (9.6); hotels and restaurants (11); and personal care services (12.1). All expenditure on clothing and footwear, furnishings and household equipment, vehicle purchases, package holidays and personal care services is assumed to stop completely; spending on recreation and culture, and hotels and restaurants is assumed to decline by three-quarters; and spending on transport services and the operation of private vehicles to decline by one-half.

Source: OECD Annual National Accounts; Statistics Bureau, Japan; and OECD calculations.



Looking ahead

Illustration of adaptive triggering of suppression strategies in the United Kingdom



- Containment is linked to evolution of the virus
- Containment strategies will condition economic impact

Note: Assumes a reproduction number of 2.2, an “on” policy trigger of 100 ICU cases in a week and an “off” policy trigger of 50 ICU cases where policies of social distancing and school/university closure are triggered. The policy is in force approximately 2/3 of the time. Case-based policies of home isolation of symptomatic cases and household quarantine (if adopted) are continued throughout. Source: Fergusson et al. (2020) “Impact of non-pharmaceutical interventions to reduce Covid-19 mortality” <https://www.imperial.ac.uk/media/imperial-college/medicine/sph/ide/gida-fellowships/Imperial-College-COVID19-NPI-modelling-16-03-2020.pdf>