Global economy to take a serious hit from major restrictions on economic activity

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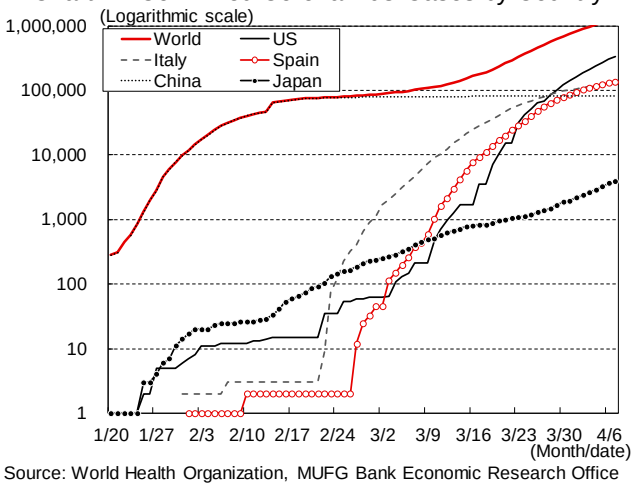
Tentative Outlook for the Global Economy

NOVEL CORONAVIRUS OUTBREAK BECOMES A PANDAMIC

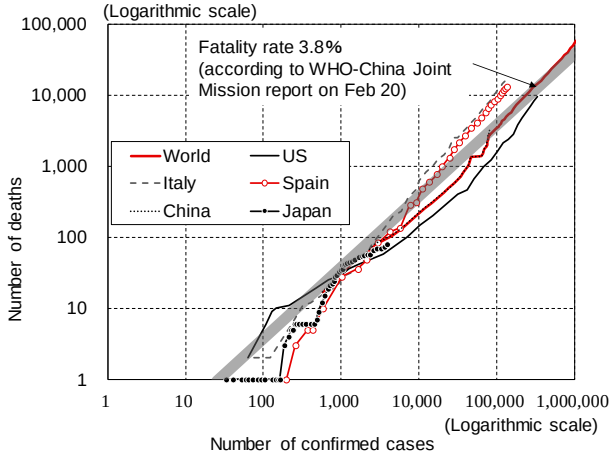
The spread of the novel coronavirus is causing unprecedented disruption to the economy. Until the end of January, the outbreak was thought to be generally contained in China, with just a few exceptions in other parts of the world. In February, case increases in China started slowing down thanks to stringent public health measures such as area lockdowns and restrictions on people's movements. However, around the same time, a second wave of the outbreak was developing beneath the surface, in places like Europe and the US. From the latter half of February, cases surged in Italy, Iran and South Korea. And in March, the virus spread rapidly across all of Europe and the US. World Health Organization (WHO) Director-General Tedros Adhanom announced on March 11 that the outbreak can be characterized as a "pandemic." As of April 2, more than 896,000 cases and nearly 46,000 deaths have been confirmed, according to the WHO. Around 50,000 to 70,000 new cases are reported each day, and the cumulative case count is rising at an increasing pace. Cases appear to be increasing exponentially (Chart 1 & Chart 2).

Chart 1: Confirmed Coronavirus Cases by Country



Source: World Health Organization, MUFG Bank Economic Research Office

Chart 2: Confirmed Coronavirus Cases and Deaths



Source: World Health Organization, MUFG Bank Economic Research Office

FINANCIAL MARKET TRENDS

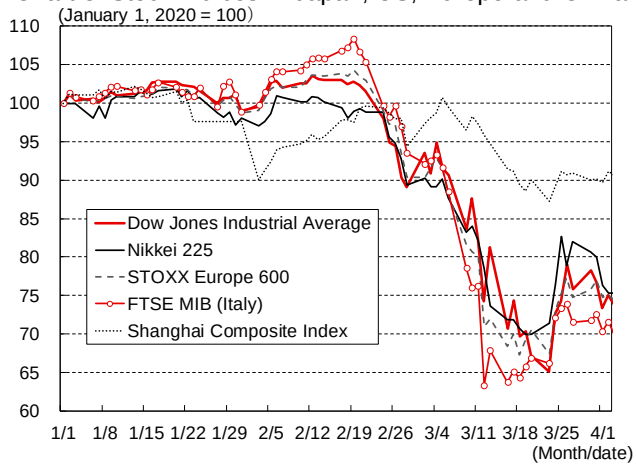
Stock and other financial markets have been among the first to react to these developments of the past month or so. Investors in European and US stocks initially seemed to assume that that virus would not spread beyond certain localities and that the impact on the European and US economies would be limited, even if Asian countries with strong economic ties with China take a serious hit. Thus, until mid-February, they likely expected solid economic growth and commensurate corporate earnings growth in Europe and the US for 2020. Reflecting such expectations, the Dow Jones Industrial Average (the Dow Industrials) reached its highest closing record on February 12.

However, from around February 20, European and US stocks quickly entered a correction territory when cases of infection increased significantly in Italy, Iran and South Korea. On February 24, the Dow Industrials fell more than 1,000 points in a single day for the first time since the start of the outbreak. As cases surged in Europe and the US, countries introduced stringent public health measures such as restrictions on people's movements (Annex Table 3). Coincidentally, OPEC+ negotiations on a coordinated oil production cut broke down in early March. As a result, market volatility increased further, sending the Dow Industrials up or down by more than 1,000 or 2,000 points in a single day on many days. The Dow Industrials fell by 2,997 points on March 16, marking a record single-day decline (Chart 3).

The sharp correction over the short period of time is mainly attributed to the fact that the optimistic outlook on the European and US economies and corporate earnings had to be revised down significantly due to the unexpected outbreak there (because public health measures that restrict business and consumer activity are likely to negatively impact the economy). Another factor contributing to the correction is uncertainty, which market economy dislikes. This crisis is unique in that it involves a virus, much about which is still unknown. Even experts cannot predict with any level of certainty the ultimate scope of the pandemic and when the crisis will end.

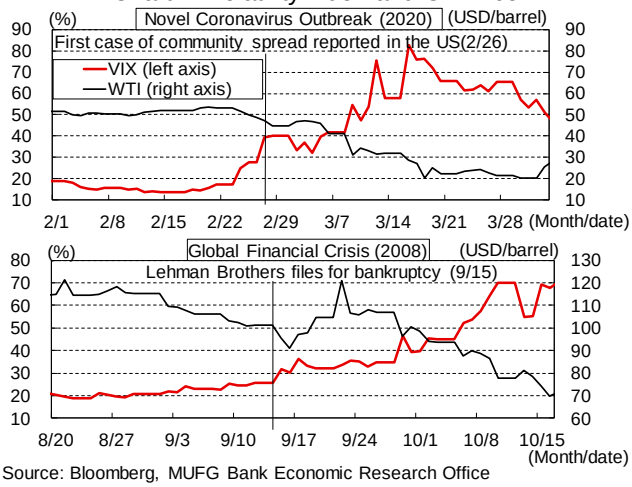
For issues arising from human interactions, such as geopolitical risks, trade friction or a financial crisis, discussing things like A) the intent of a national government and B) risks latent in the market may be useful, but that is not the case for a pandemic. Investors are pulling money out of the market in the face of unprecedented uncertainty, and this is eroding market liquidity and increasing risk premiums. The virus spread has resulted in market volatility comparable to that during a financial crisis (Chart 4). Recently, stock prices appear to be testing a bottom thanks to policy responses around the world. Still, with the future course of the outbreak unknown, it is difficult to predict future trends in financial markets.

Chart 3: Stock Indices in Japan, US, Europe and China



Source: Bloomberg, MUFG Bank Economic Research Office

Chart 4: Volatility Index and Oil Price



Source: Bloomberg, MUFG Bank Economic Research Office

ECONOMIC IMPACT OF THE OUTBREAK

While the reaction of financial markets are quantified daily through asset pricing, the economic impact of stringent public health measures is not yet clear because monthly economic data for March will not be released until April at the earliest. Nonetheless, concern is growing over the pandemic's impact on the economy. On March 27, International Monetary Fund (IMF) Managing Director Kristalina Georgieva said "it is now clear that we have entered a recession – as bad as or worse than in 2009," adding that there may be a sizable rebound in 2021 if the virus is successfully contained. In China and other parts of the world, sentiment indexes and daily or weekly economic indicators have shown that the impact of the outbreak is unprecedented in the modern economic history, except during a war or revolution.

In China, key economic indicators such as retail sales, fixed-asset investment, production and exports declined by a double-digit percentage on a year-over-year (YoY) basis in January and February, when the outbreak peaked in the country. The data covers early and mid-January when the impact was minimal outside of Hubei Province. At a later point in time, the YoY decline was probably steeper when stringent public health measures were expanded to other parts of China. It is not easy to estimate a decline in the real gross domestic product (GDP) from declines in individual indicators, but available data like the daily tracking of coal consumption at major power generating companies suggests that China's real GDP could have dropped as much as 25% at the worst moment. China is geographically vast and has a large population, so the effects of the outbreak and its economic impact probably varied widely by location (i.e. Wuhan the epicenter, broader Hubei Province, and other parts of China).

As for other parts of the world that introduced stringent public health measures in March, the economic impact will depend on the severity of the outbreak, the type of public health measures taken, policy responses to allay the economic blow and how swiftly those responses are implemented. Yet the economic toll of social distancing will likely be significant because consumer spending in large cities, business activity, and global movements of people and goods are key drivers of the economy. Thanks to the widespread use of digital communication tools like social media, remote work systems, and video conferencing, business activity and communication among people are being maintained to an extent. Still, to expect that these

tools will completely neutralize the impact of the outbreak is unrealistic. With people ordered to stay home and borders and factories shut down in many parts of the world, global economic activity at the worst moment will probably decline by not just a few percent but by a double-digit percentage from when the economy is growing at the trend rate.

GOVERNMENTS AND AUTHORITIES TAKE SWIFT ACTION

In the face of the financial markets turmoil and significantly deteriorated economic expectations, governments and monetary authorities around the world have responded quickly. In the US, for instance, Federal Reserve Chairman Jerome Powell signaled at the end of February that the central bank was ready to cut interest rates when he said it would "act as appropriate." Then on March 3, the Fed held an unscheduled FOMC meeting and cut the policy rate by 0.5% point. The policy rate was cut by an additional 1.0% point after the Fed held another unscheduled FOMC meeting on March 15, a Sunday – sending the lower end of the policy rate target range to 0% for the first time in four years and three months. On the same day, the Fed also announced a resumption of quantitative easing of at least $700 billion. On March 23, the Fed held a third unscheduled FOMC meeting in March and removed the numerical target ($700 billion) for the asset purchase program announced earlier, stating that it would buy assets "in the amounts needed to support smooth market functioning and effective transmission of monetary policy to broader financial conditions and the economy." In addition, the Fed rolled out policy steps not taken during the 2008-2009 financial crisis – to establish two facilities to support credit to large employers: the Primary Market Corporate Credit Facility (PMCCF) for new bond and loan issuance and the Secondary Market Corporate Credit Facility (SMCCF) to provide liquidity for outstanding corporate bonds.

Other central banks also took swift action. The following are some of the common aspects of their responses:

1) Policy rate cuts if the rate was previously in the positive territory, as seen in the US, Australia, Canada and the UK
2) Liquidity support to short-term funding operations
3) Expanded asset purchases
4) Purchases of commercial paper and corporate bonds to support credit markets
5) Other means to support businesses to improve cash flow, such as offering low-interest loans to banks that lend to businesses

Major central banks have also announced coordinated efforts to enhance the provision of US dollar liquidity via US dollar liquidity swap lines. All in all, whatever means tried out in the financial crisis a decade ago are being carried out, and more quickly this time around (Annex Table 2).

With public health measures significantly limiting normal economic activity, industries like air travel, food service and accommodation are directly hit with revenue losses, and some manufacturers are struggling to continue operations due to supply chain disruptions. Given the nature of the current condition, monetary easing is expected to have limited effect to support the economy, as pointed out by many observers from early on. Countries around the world are thus drawing up comprehensive packages of monetary and fiscal policies to support businesses facing cash flow problems and households facing income losses.

On March 27, the US passed a $2.1 trillion stimulus package (equivalent to around 10% of US nominal GDP), which focuses on cash payments to households and loans to support businesses. The two stimulus packages for the 2008-2009 financial crisis also amounted to around 10% of the nominal GDP at the time. The packages, worth more than $700 billion each, were enacted in October 2008 and February 2009 respectively. What is different this time around is that the speed of response is much faster. Even in the Europe, where an EU treaty puts restrictions on member states' fiscal deficits, countries like Germany are rolling out major fiscal stimulus packages. Similarly, Japan is exploring a supplementary budget of "unprecedented scale," Prime Minister Shinzo Abe has said. Stimulus packages worth about 10% of nominal GDP may become common (Annex Table 4).

2020 OUTLOOK FOR THE GLOBAL ECONOMY

At least for the short term outlook, the virus outbreak necessitates a significant revision. In February, we stated that any country or region could carry out emergency measures in response to a surge in cases of infection, so we would postpone the compilation of a quarterly outlook report and release it when enough information can be gathered to rationally gauge scenarios for an end or stabilization of the outbreak.

Since then, as the virus spreads around the world and the WHO has called it pandemic, governments in Europe, the US, Asia and Latin America have introduced stringent public health measures that were unthinkable before. It is now the beginning of April and we still cannot rationally predict when the crisis will end. We will, however, attempt to estimate declines in economic activities resulting from these public health measures and create rough estimates of economic performance in 2020 by simulating multiple paths of recovery with certain assumptions.

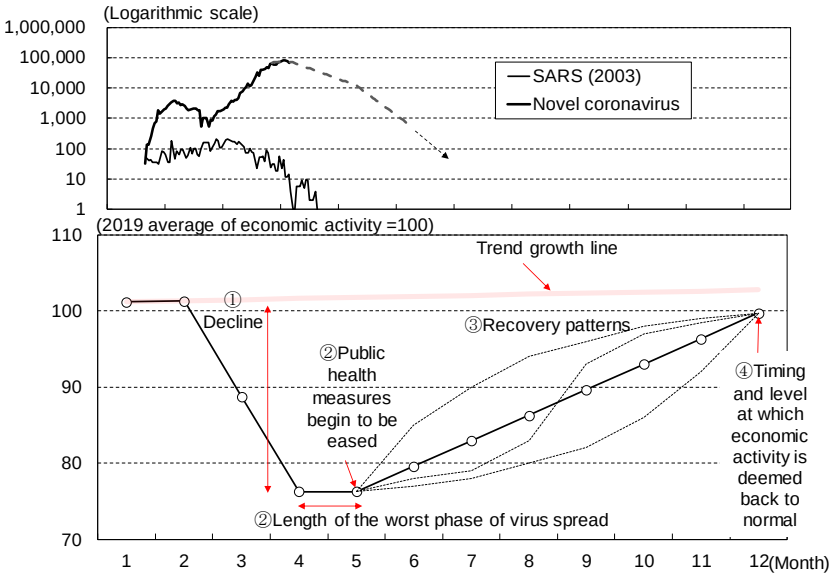
(1) Framework of forecast

Under the current condition in which people are ordered to stay home and national borders are closed by advanced economies, it is difficult to compile growth forecasts through usual methods, like stacking up demand components. It is also important to note that forecasts may be off by as much as 10% points rather than the 0.1% point or so deviations in normal circumstances.

To estimate the 2020 growth rate based on expected impact of stringent public health measures (Chart 5), the following variables need to be taken into account:

1) Extent to which economic activity declines from normal levels
2) Length of the worst phase of the virus spread (how long before stringent public health measures begin to be eased)
3) Paths and patterns of economic recovery amid easing of public health measures
4) Timing and level at which economic activity is deemed back to normal

Chart 5: New Cases of Coronavirus Infection and Economic Activity



Note: Line for SARS starts when case count was 264, on March 19, 2003
Source: World Health Organization, MUFG Bank Economic Research Office

(2) Assumptions for forecast

Regarding the variable 2), the length of the worst phase of the virus spread, China is the only country that has experienced general containment of the virus after a significant spread, according to data from the WHO and others. China took about a month to contain the virus through stringent public health measures, and another month to start easing lockdowns in Wuhan and other parts of Hubei Province in phases, starting at the end of March.

With no reliable vaccinations or medicine available currently, non-medical interventions like public health measures are the only way to contain the virus in other parts of the world as well. The specific steps taken in each country vary based on factors such as the severity of the virus spread, geographical scope of the virus spread, philosophy behind public health measures, people's response, and legal framework. Yet, common aspects of these measures include restrictions on people's movements, school closures and border closures. Many countries put in place stringent public health measures at the end of March, so if it takes one month to contain the virus and one more month to monitor the situation, public health measures could be eased in stages starting in June, enabling economic activity to resume gradually.

As for the variable 4), the timing and level at which economic activity is deemed back to normal, we will assume that economic activity will normalize to an extent by the end of 2020, although we do not expect consumer and business activity to fully return to pre-outbreak levels due to lingering concerns over a resurgence of cases before vaccinations and medicine can be developed. (In the February report *Global Economy: Current situation*, we stated that economic activity would quickly recover because there is no physical destruction like in a natural disaster. We would like to revise this view at this time).

(3) Global economic forecast and points to keep in mind

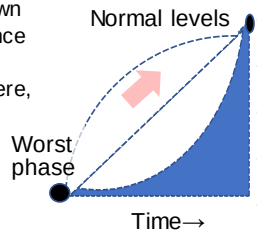
Under the two assumptions mentioned above, the global growth rate for 2020 can be simulated as shown in Table 1 below, using variable 1), the extent to which economic activity declines from normal levels, and 3), the paths and patterns of economic recovery amid easing of public health measures. Here, the global economy is perceived as a single economy whose trend

growth rate is around 2% YoY (this rate is probably close to the actual trend growth rate of the world economy excluding China, which has undergone the outbreak and containment ahead of others and thus will have a different recovery pattern).

Table 1: 2020 Annual GDP Growth Rate Simulation
(Assumption: trend growth rate is 2%, cases surge in March, worst phase in Apr-May, normalization in Dec)

		Gini coefficient (path of recovery) (Note 1)						
		- 0.6	- 0.4	- 0.2	0	0.2	0.4	0.6
Decline of economic activity (from trend growth to worst phase)	-5%	-0.8%	-1.0%	-1.2%	-1.4%	-1.6%	-1.8%	-2.0%
	-10%	-2.1%	-2.6%	-3.2%	-3.7%	-4.3%	-4.8%	-5.4%
	-15%	-3.4%	-4.3%	-5.2%	-6.1%	-7.0%	-7.8%	-8.7%
	-20%	-4.7%	-5.9%	-7.2%	-8.4%	-9.6%	-10.8%	-12.1%
	-25%	-6.0%	-7.6%	-9.2%	-10.7%	-12.3%	-13.9%	-15.4%

Note 1: Recovery paths from the worst phase to normalization are shown on chart on the right. The straight path follows arithmetic sequence and the two curves represents Gini coefficients of 1.0 and -1.0. Recovery can start slow and accelerate later, and vise versa. Here, Gini coefficient of 1.0 means the worst phase will last longer.
Source: MUFG Bank Economic Research Office



Different paths of economic recovery are simulated here using the Gini coefficient, a common measure of economic inequality. If the level of economic activity declines by 10-20% (from when the economy is growing at trend rate) at the worst moment, and the Gini coefficient is 0, the recovery path would trace the straight diagonal line in the diagram, and the annual economic contraction will come to around 5-6% for 2020. Even though China's recovery pattern may differ from that in other parts of the world, the overall scenario will remain roughly the same (China accounts for a little less than 20% of the global economy). As indicated by the IMF, the global economy may contract more than it did in 2009. On the quarterly basis, annualized growth rate could range from well below -10% (during the period of contraction) to well above 10% (during the period of recovery).

Even during the 2008-2009 global financial crisis, levels of economic activity rarely declined 10-20% in advanced economies. Declines of such magnitude are often thought to be observed only during a war. As such, German Chancellor Angela Merkel's characterization of the coronavirus as the biggest challenge the country has faced since World War II is no exaggeration. The numbers shown in the table above are calculated based on an assumption that the virus spread will peak out in the April-June quarter, but we cannot rule out the possibility of a later peak-out. The Spanish flu from a century ago spread in multiple waves and ended up infecting a significant portion of the global population. In Japan, reported cases of infection are fewer than in Europe or the US so far, but domestic demand has already declined, and the Japanese economy will likely take a hit from the significant decline in economic activity abroad (Europe, the US and China etc.). Caution must be maintained over a possible surge in cases as well.

Translated by Chie Okada-Wighe

Table 2: Additional Easing Measures Announced in March

US (FRB)	■Policy rate cuts of 150 bps to 0.00-0.25% ■Quantitative easing with no numerical target for asset purchase (mainly Treasuries and mortgage backed securities) ■Establish programs to provide liquidity to commercial paper, corporate bond, asset-backed securities (ABS), money market mutual funds (MMMF) etc.
Eurozone (ECB)	■In addition to current asset purchase of 20 billion euros per month, purchase 120 billion euros of corporate bonds and other assets by the end of the year ■Easing of conditions for targeted longer-term refinancing operations (TLTRO Ⅲ) - to provide commercial banks loans at -0.75%. ■Additional asset purchase of 750 billion euros as part of the Pandemic Emergency Purchase Program (including Greek government bonds and commercial paper of nonfinancial companies, with flexibility under the capital key rule). This will be terminated as soon as the coronavirus crisis is over.
UK (BOE)	■Policy rate cuts of 65bps to 0.1% ■Establish framework for long-term funding with lending rate as low as -0.25% to commercial banks ■Purchase of commercial paper with maturity of up to a year ■Additional asset purchase of 200 billion pounds (mainly UK government bonds)
Japan (BOJ)	■Increase annual pace of purchases (ETF: 12 trillion yen, J-REIT: 180 billion yen) ■Increase the cap of commercial paper outstanding to 3.2 trillion yen and of corporate bonds outstanding to 4.2 trillion yen ■Establish Special Funds-Supplying to facilitate corporate funding (lending rate to commercial banks : 0%)
Six major central banks	■Expand currency swap agreement and lower the cost of existing arragements to improve the liquidity of US dollar globally

Note: Six major central banks include the FRB, ECB, BOJ, BOE, Bank of Canada and Swiss National Bank
Source: Governments, central banks, media reports, MUFG Bank Economic Research Office

Table 3: Public Health Measures Taken by Governments to Contain Novel Coronavirus

■Mandatory nationwide ■Mandatory in some areas

	Stay-at-Home	Store closing	School closing	Summary of Public Health Measures
US				■Stay-at-home order issued in New York, California, Illinois, Connecticut, New Jersey, Ohio, Louisiana, Delaware, Washington, Maryland, Virginia. ■Gatherings of more than 10 people and nonessential travel to be avoided across the US
Italy				■All stores are closed except food stores and pharmacies. All events and gatherings are banned and schools are closed across the country. Restrictions on people's movement in effect until April 12 (violators are punished). ■From March 21 to April 12, all business activity is suspended except for supermarkets, pharmacies, public transportation, logistics etc.
Germany				■Stores are closed indefinitely except for food stores and pharmacies, and restaurants are closed for at least two weeks except for take-out orders. Gatherings at places of worship are banned, schools are closed across the country. People are banned from going out except for buying essential items, commuting to work, and seeking medical care (violators are punished in some states) ■National borders with five countries including France are closed except for logistics operations and commute for work.
France				■People across the country are to stay home from March 17 to at least until April 15, except for buying essential items, commute for work, seeking medical care (violators are punished). ■Restaurants, shops, entertainment facilities are closed indefintely, and shools are closed across the country.
Spain				■Stores are closed across the country until April 9, except for food stores and pharmacies. People are to stay home except for commute to food stores, pharmacies, or financial institutions (violators are punished). Schools are closed across the country.
UK				■Schools are closed indefinitely across the country from March 20. Stores are closed for a minimum of three weeks starting March 23, except for those selling essential items. ■Prime Minister Boris Johnson orders people to stay at home, stating that violators may be fined.

Source: Governments, media reports, MUFG Bank Economic Research Office

Table 4: Fiscal and Financial Policy Responses to the Coronavirus Outbreak

	Fiscal Policy		Financial Support	
	Size of package (% of GDP)	Measures	Size of package	Measures
US	State of national emergency declaired to free up 50 billion dollars in funding (0.3% of GDP) 2.3 trillion dollar package (phase 1 to 3) (10.3% of GDP)	■Cash payment of 1,200 dollars per adult and 500 dollars per child to help households ■Improve unemployment insurance payout and provide paid time off to those infected ■Funding assistance to state and local governments ■Provide support to healthcare institutions and development of vaccines	See left	■Funding of 500 billion dollars made available for loans to businesses in heavily affected industries like accomodation and restaurants ■Funding of 367 billion dollars to help small and midsize businesses retain workers ■Treasury Department to make 425 billion dollar equity investment to Federal Reserve's special purpose vehicles for buying corporate bonds and other instruments.
Italy	25 billion euros (1.4% of GDP)	■Help pay for overtime worked by healthcare workers ■Guarantee monthly payment of 600 euros to small business owners ■Payment of 600-1,000 euros to guardiants of childrent up to age 12. ■Defer March and April payment of VAT and withholding tax for industries hit hard, such as tourism ■Store owners can deduct 60% of store rent for March in the current tax year	See left	■Small and midsize companies and individuals are given moratorium on debt repayment including mortgages ■Increase guarantee funds to support small and midsize businesses ■Strengthen loan guarantee for the self-employed, freelance workers, and entrepreneurs ■Provide guarantee for foreseeable emergency funding needs by businesses
Spain	18.2 billion euros (1.5% of GDP)	■Increase healthcare budget and procure medical equipment ■Small and midsize companies and individual business owners can pay six months of tax in installment or delay the payment ■Reduce social security premiums for workers in tourism and other industries ■Pay 75% of monthly social security benefit to those quarantined at home	See left	■Loan guarantee to tourism and other businesses
Germany	122.5 billion euros (3.6% of GDP)	■Payment to small and midsize businesses and individual business owners ■Waive penalties for late tax payments until the end of 2020	600 billion euros	■Business loans backed by the govenrment (through KfW, state-owned development bank) ■Up to 100 billion euros in investment in businesses through the newly launched Economic Stabilization Fund ■Increase guarantee of business loans by guarantee banks to 2.5 million euros
France	45 billion euros (1.9% of GDP)	■Guarantee partial payment of allowance paid by companies to workers on leave ■Allow companies to defer or skip payment of corporate taxes and wages ■Provide payment of 1,500 euros to small businesses in tourism, food service and other industries	300 billion euros	■Government guarantee for new bank loans
UK	50 billion pounds (2.3% of GDP)	■Establish a 5 billion pound emergency response fund (to support the National Health Service and other public insurance services) ■Self-isolating workers get statutory sick pay sooner than previously stipulated by law ■Support individual business owners to retain workers ■Provide two-week worth of sick pay to businesses with staff of 250 people or fewer ■Waive business taxes for retailers and entertainment facilities in England for one year	See left, plus 330 billion pounds	■Support small businesses through the Coronavirus Business Interruption Loan Scheme, which provides loans of up to 5 million pounds ■330 billion pounds in govenrment-backed loans ■Mortgage payment moratorium of up to three months ■Support to heavily impacted businesses such as aviation companies
Japan	446.1 billion yen (0.1% of GDP)	■Support for parents of school-age children to get time off from work during school closures. Expand eligibility for businesses to apply for employment adjustment subsidies ■Support to bolster healthcare system, testing through polymerase chain reaction (PCR) kits, and address facemask shortages ■Support to tourism industry, children's meals while school lunch programs are suspended	1.6 trillion yen	■Financing and guarantee support to Japan Finance Corporation ■ "Safety Net" financing guarantees for small and midsize businesses ■Special loans for small businesses ■Financing support for businesses to secure supply chain (through Japan International Bank for Corporation)

Source: Governments and central banks, media reports, MUFG Bank Economic Research Office

Table of Global Economic Forecasts

		Nominal GDP (2018)		Real GDP (YoY, %)		
		Trillion USD	Japan=100	2018	2019	2020
World (41 economies) (GDP weighted average)		71.13	1,439	3.2	2.6	- 2.6
	Advanced economies	46.46	940	2.2	1.7	- 4.2
	Emerging economies	24.67	499	5.1	4.5	0.5
Asia & Oceania	Japan (FY)	4.94	100	0.3	- 0.1	- 0.5
	Asian 11 economies	21.58	437	6.1	5.3	1.5
	China	13.37	270	6.7	6.1	2.0
	India (FY)	2.72	55	6.1	4.8	2.7
	NIEs 4 economies	3.04	61	2.8	1.6	- 1.0
	Korea	1.72	35	2.7	2.0	- 0.8
	Taiwan	0.59	12	2.7	2.7	1.0
	Hong Kong	0.36	7	3.0	- 1.2	- 2.0
	Singapore	0.36	7	3.1	0.7	- 3.8
	ASEAN5	2.46	50	5.2	4.8	0.5
	Indonesia	1.02	21	5.2	5.0	2.5
	Thailand	0.50	10	4.1	2.4	- 5.0
	Malaysia	0.36	7	4.7	4.4	- 3.0
	Philippines	0.33	7	6.2	5.9	3.6
	Vietnam	0.24	5	7.1	7.0	4.0
	Australia	1.42	29	2.7	1.8	0.5
America	U.S.A	20.58	416	2.9	2.3	- 4.5
	Latin America (6)	4.46	90	1.5	0.5	- 4.2
	Brazil	1.87	38	1.3	1.0	- 2.5
	Mexico	1.22	25	2.1	- 0.1	- 5.0
	Argentina	0.52	11	- 2.5	- 2.6	- 10.0
Europe	Euro area (19)	13.64	276	1.9	1.2	- 5.9
	Germany	3.95	80	1.5	0.6	- 6.1
	France	2.78	56	1.7	1.3	- 5.8
	Italy	2.08	42	0.9	0.2	- 6.8
	U.K.	2.83	57	1.4	1.3	- 5.3
	Russia	1.66	34	2.3	1.1	- 2.0
Reference						
Weighted mean of 41 economies' GDP based on purchasing power parity				3.9	3.2	- 1.6

Note 1: CPI for Japan is on a general basis excluding perishable items, in the Eurozone and UK are based on the EU Harmonised Indices of Consumer Prices (HICP)

Note 2: Published figures for Japan, India are on a fiscal-yearly basis (April-March the following year). "41 economies", "advanced economies" and "emerging economies" are based on the calendar year

Note 3: According to IMF classification, "Advanced Economies" are Japan, NIEs economies, United States, the 19 Eurozone countries, UK. "Emerging Economies" are China, India, ASEAN5, Latin America and Russia.

Note 4: "Latin America" includes Columbia, Chili, Peru as well as Brazil, Mexico, Argentina.

Source: Statistics from each country, MUFG Bank Economic Research Office

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