

MHRI Brief

December 18, 2020

2021 Economic Outlook

Mizuho Research Institute Ltd.

1. Chief Economist's perspective – the year 2021 will be a year of transformation looking toward the world after Covid-19

(1) In 2021, the global and Japanese economies will head toward recovery from the Covid-19 pandemic

The year 2020 was rocked by the Covid-19 virus, recording the worst economic downturn since World War. In the US, it was the worst economic downturn in peacetime since the Great Depression in the early 1930s, and the first time since 1709 for the UK according to the Chancellor of the Exchequer of the UK. The coming 2021 will be a critical year to seek opportunities to recover worldwide. The Covid-19 pandemic is far from over, and the number of new Covid-19 cases is still rising at a high pace. As the pandemic remains an ongoing crisis, 2021 will be another year forced to coexist with Covid-19. For some time, it will be necessary to carry out a delicate balance between the curb of economic activity to prevent the further spread of Covid-19 cases and revitalizing economic activity when there is a pause in cases.

Having said so, it is also true that the end of the tunnel is in sight, given the practical application of the Covid-19 vaccine. Of course, the vaccine is not a magic wand, and the widespread administration of the vaccine will take time. It appears that many are still concerned whether the vaccine's efficacy and safeties are truly ensured. Furthermore, a successful vaccination alone will not enable us to completely regain our pre-pandemic daily routines. Nevertheless, 2021 will be a year of pent-up demand, namely demand suppressed by the Covid-19 pandemic, will gradually revitalize, and activities toward the post-pandemic era will pick up. In particular, we shall focus upon three transformations described below. In either of these transformations, we expect the seminal activities that had started from before the Covid-19 pandemic will be accelerated by the pandemic.

(2) Business process reengineering (BPR) through digital transformation (DX)

The first is digital transformation (DX). Rapid developments in areas such as teleworking, online meetings, online medical examinations, and online classrooms were enabled in just a few months, which would otherwise have required years or even decades if the Covid-19 pandemic had not occurred. According to a joint study by Nokia in Finland and Nokia Bell Labs in the US, global ICT (information and communication technology) investment is projected to grow from \$2.8 trillion in 2020 to \$6 trillion in 2030, of which 75%, or \$4.5 trillion, is investment related to 5G (5th generation mobile communication system), including such areas as edge infrastructure, cloud platforms, AI (artificial intelligence)-related services, and networks. In particular, it should be noted that there are





changes in the primary providers of such investments. Currently, 70% of ICT investment is invested in the digital industry (telecommunications, media, finance, etc.), and only 30% are invested in "non-digital industries" such as manufacturing, wholesale and retail, transportation, and construction. However, the main body of future ICT investment will be in the "non-digital industry," which is forecast to account for 65% of total ICT investment in 2030, and the weight of the digital industry in ICT investment is projected to drop to 35%. Digitization of the non-digital industry will be regarded as the next "new normal".

In particular, what is important for Japan is not to confine investments only in hardware and software, but also to areas linking government and business process reengineering (BPR) in the public and private sectors to create new added value. In such case, it is highly likely that the conventional methods of business operation, organization, and personnel affairs will change, which pose a huge challenge and opportunity to change in Japan.

(3) Restructuring business portfolios through portfolio transformation (PX)

The second transformation is portfolio transformation (PX). The progress of digitalization in various industry sectors is lowering barriers among industries, leading to expectations toward the flow of capital toward growth areas. Looking around the world, corporate M&A (mergers and acquisitions) continue to be active. According to the financial information company Refinitiv, it appears that the publicly released amount of M&As worldwide in 2020 exceeded a historically high level of \$3 trillion. By industrial sector, high-tech is the leading industry serving as the driver of M&A growth. Despite the sharp fall of M&A activity around the world given the unprecedented deterioration of the business environment, such as the evaporation of liquidity in the financial markets and the extreme rise of uncertainties, M&A activity has picked up significantly since the middle of the year. The amount of M&As involving Japanese companies reached a historical high in 2020. In particular, the odds are high that the value of deals renewed historical highs in terms of M&As involving non-bank financial institutions not affected by the realignment of major financial institutions. We expect to see a further rise of Portfolio Transformation (PX) also among Japanese corporations, which aim to increase corporate value by restructuring and optimizing business portfolios. The expansion of M&As should serve to raise the "metabolism" of industries and economy as a whole, leading in turn to the improvement of productivity. As a matter of course, the success of M&A deals depends not upon its initial fanfare, but upon its post-merger integration (PMI), namely the synergies of business integration obtained after completion of the mergers and acquisitions. In such context, businesses will be tested for their mettle in business management in the year 2021.

(4) Strengthening sustainability and resiliency through SX

The third transformation, SX consists of two aspects. One is sustainability transformation. There is no dispute that the response to climate change is an immediate task facing the world. The movement for the realization of a carbon-free society is accelerating. In the quest to achieve zero net greenhouse gas emissions by 2050, the EU (the European Commission) is the front runner, the Suga administration of Japan will follow suit, and the incoming Biden administration will return to the Paris Agreement in 2021 and share the same goals. China has also set 2060 as its goal to be achieve zero emissions, resulting in the alignment of major countries and regions. Looking forward, however, it will be necessary to create a clearer future roadmap for achieving the goal, which will not be an easy path. The EU advocates a "European Green Deal" that will invest at least EUR 1 trillion in the public and private

sectors over a period of 10 years, and a reconstruction fund branded the "Next Generation EU" is scheduled to start in 2021. The incoming Biden administration of the US also aims to promote massive investment of \$2 trillion in the environment and infrastructure in four years. Despite expectations of a "green recovery", that is, recovery from the Covid-19 pandemic through environment-related investment, raising the necessary funds will also be one of the future issues. It is necessary to monitor the course of discussions on Europe's imposition of a carbon border tax, in view of its possible controversy.

Even though responses toward climate change may become new cost burdens for corporations, the key is how to turn it into growth. Quite unintentionally, the Covid-19 pandemic served to shed light upon various social issues not only limited to climate change, leading to growing interest in sustainability transformation (SX). SX is a movement that seeks to upgrade the sustainability of society and the sustainability of corporate earning power as a whole. Business strategies that create new value-added while responding to social demands for sustainability are required.

The other aspect of SX is supply chain transformation. Even before the Covid-19 pandemic, corporations were forced to reassess their global supply chains under the escalation of US-China tensions. Under the incoming Biden administration, we do not expect a major change in the basic perception that China is a "strategic competitor" and a "revisionist power," and that the administration will continue to take a more severe stance regarding the regulation of high-tech corporations. As China aims to become self-dependent in science and technology, and pursues its domestic semiconductor production, Japanese corporations may be confronted with difficult choices between the US and China. Furthermore, given the Covid-19 pandemic, there is a rising necessity for strong supply chains which enable the stable supply of emergency and strategic goods. DX, which also utilizes blockchain technology, will be an effective in the reinforcement of supply chains, and the sustainability of supply chains may be necessary to maintain and deepen business relationships with global corporations. It such context, the two SXs described above are interrelated transformations, with PX also interrelated with the two SX transformations.

Recalling the world before the Covid-19 pandemic, the global economy was subject to existing structural problems such as low growth, excessive liquidity and increasing debt. The year 2020 was a year in which priority had to be placed upon support of short-term demand and economic and financial stability because of the Covid-19 pandemic. This resulted in the simultaneous surge of global liquidity and rise of debt, making it a double-edged sword. There is no rosy world awaiting at the end of the Covid-19 tunnel, and it is self-evident that we will eventually be forced to face these structural issues as the economy heads toward normalization. The world beyond the tunnel may be brighter if we can facilitate the three transformations mentioned above in the post-pandemic era.

(Katsuyuki Hasegawa, Chief Economist)

2. Outlook on the global economy in 2021: even though the global economy should recover, the pace of recovery will be varied

♠ In 2021, the global economy is expected to recover from the significant negative growth of the previous year, along with the spread of Covid-19 vaccines. However, it is likely that the timing of widespread vaccine uptake will take place earlier among the developed market countries and China than the emerging market countries, from the perspective of securing systems for inoculation and mass production of vaccines. Among the developed market countries, the US is expected to recover at a relatively faster pace, given behavioral shifts such as the expansion of IT investment and housing demand accompanying the progress of remote working lifestyles. On the other hand, it appears that the Japanese and European economies will recover at a moderate pace because of cautious household and corporate behavior. The Chinese economy is projected to remain on a recovery track, driven mainly by investment in the manufacturing sector and consumption of goods.

◆ The largest risk factors in 2021 are the feasibility and pace of spread of vaccine coverage. Since the efficacy and safety of vaccines are still unknown, there is growing concern that economic activity will stagnate over a prolonged period if the effects of the vaccines do not emerge. On the other hand, there is also the possibility that the production of vaccines will proceed smoothly and that its widespread uptake will be achieved earlier than expected. Even though this is a positive change in itself, it may also induce asset inflation. It will be necessary to keep a closer eye on both of these risks.

[Outlook on the global economy]

(Y-o-y % change)

		(Y-o-y % char						
	2018	2019	2020	2021				
	CY		(Outlook)					
Global real GDP growth	3.5	2.8	-4.0	4.8				
Japan, US, Europe	2.2	1.6	-5.6	4.0				
US	3.0	2.2	-3.7	3.9				
Eurozone	1.9	1.3	-7.3	4.5				
UK	1.3	1.3	-10.9	5.6				
Japan	0.6	0.3	-5.2	1.9				
Asia	6.1	5.2	-1.6	6.8				
China	6.7	6.1	1.9	7.1				
NIEs	2.9	1.8	-1.2	3.0				
ASEAN5	5.3	4.8	-3.9	5.3				
India	6.8	4.9	-8.8	8.8				
Australia	2.8	1.8	-3.1	2.8				
Brazil	1.8	1.4	-4.5	3.0				
Mexico	2.2	-0.1	-9.0	3.0				
Russia	2.5	1.3	-3.9	2.7				
Japan (FY)	0.3	-0.3	-5.4	3.4				

Note: The shaded areas indicate forecasts. The outlook on the global economy is calculated upon the GDP share (PPP) by the International Monetary Fund (IMF).

Sources: Made by MHRI based upon IMF and statistics of relevant countries and regions

3. Outlook on the Japanese economy in 2021: even though the Japanese economy will recover at a moderate pace, the effects of Covid-19 will linger

- ◆ Even though the Japanese economy is expected to recover at a moderate pace in 2021, we expect that household and corporate behavior will remain cautious due the risks of the resurge of Covid-19 infections, making it unlikely that economic activity will return to pre-pandemic levels.
- ♦ In view of prospects of a sluggish recovery in spending on services such as eating-out and travel, the odds are high that personal consumption will only recover at a moderate pace. Even though the special fixed amount cash payouts of JPY100,000/person supported disposable income in 2020, the fall of disposable income due to a backlash to the cash payouts will serve as a factor restraining consumption recovery in 2021. While capital investment will bottom out along with the upturn of corporate earnings, a strong rebound is unlikely, given strong future uncertainties. Exports will increase mainly to the US and China. However, we expect that the recovery of inbound visitors to Japan (services exports) will be delayed.
- ◆ The year-on-year change of the core CPI (all items, excluding fresh food) is expected to remain in the negative territory until mid-2021, given the fall of energy prices and hotel accommodation rates. The Bank of Japan (BOJ) will most likely maintain its current accommodative monetary policy stance.

[Outlook on the Japanese economy]

[Oddook on the dupunese economy]													
		2019 FY	2020 (Outle	2021 ook)	2020 Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	2021 Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	2022 Jan-Mar
GDP (real)	Q-o-q % ch	-0.3	-5.4	3.4	-0.5	-8.3	5.3	1.0	-0.2	0.9	0.4	0.6	0.7
	Q-o-q % ch p.a.	-	-	_	-2.1	-29.2	22.9	4.2	-0.6	3.5	1.8	2.6	2.8
Domestic demand	Q-o-q % ch	-0.1	-4.3	2.5	-0.2	-5.2	2.5	0.4	0.0	0.8	0.4	0.6	0.6
Private sector demand	Q-o-q % ch	-0.7	-6.7	2.8	-0.1	-7.1	2.6	0.6	-0.0	1.0	0.4	0.6	0.8
Personal consumption	Q-o-q % ch	-0.9	-5.9	3.3	-0.6	-8.3	5.1	1.2	0.1	0.7	0.2	0.5	0.5
Housing investment	Q-o-q % ch	2.5	-7.3	-4.3	-3.7	0.5	-5.8	0.6	-0.3	-2.2	-0.6	-1.0	0.5
Capital investment	Q-o-q % ch	-0.6	-8.5	2.9	1.4	-5.7	-2.4	0.1	-0.8	1.8	1.5	1.2	1.5
Inventory investment	Q-o-q contribution, % pt	(-0.1)	(-0.1)	(-0.0)	(0.1)	(0.1)	(-0.2)	(-0.2)	(0.0)	(0.1)	(0.0)	(0.0)	(0.0)
Public sector demand	Q-o-q % ch	1.9	2.7	1.8	-0.2	0.6	2.3	-0.1	0.2	0.5	0.4	0.5	0.3
Government consumption	Q-o-q % ch	2.0	2.4	1.2	-0.3	0.3	2.8	-0.5	0.2	0.3	0.2	0.3	0.3
Public investment	Q-o-q % ch	1.5	4.0	3.9	-0.0	1.9	0.5	1.3	0.2	1.1	1.2	1.5	0.6
External demand	Q-o-q contribution, % pt	(-0.2)	(-1.0)	(0.9)	(-0.4)	(-3.1)	(2.7)	(0.6)	(-0.2)	(0.0)	(0.0)	(0.1)	(0.1)
Exports	Q-o-q % ch	-2.6	-12.9	9.8	-5.3	-17.1	7.0	7.3	0.9	1.5	1.4	1.6	1.5
Imports	Q-o-q % ch	-1.2	-6.9	4.0	-3.1	1.4	-8.8	3.1	2.1	1.4	1.3	1.2	1.1
GDP (nominal)	Q-o-q % ch	0.5	-4.9	2.9	-0.5	-7.9	5.5	0.5	-0.7	0.7	1.6	-0.3	0.1
GDP deflator	Y-o-y % ch	0.8	0.5	-0.5	1.0	1.4	1.2	0.1	-0.6	-1.1	0.0	-0.4	-0.5
Domestic demand deflator	Y-o-y % ch	0.6	0.0	0.6	0.8	-0.1	0.1	-0.2	0.0	1.0	0.6	0.4	0.3

Note: The shaded areas indicate forecasts.

Source: Made by MHRI based upon the Cabinet Office, National Accounts

4. Outlook on the financial markets in 2021: moderate rise of stock prices and interest rates along with the recovery of economic conditions

- ◆ The financial markets in 2021 We expect a preference of risk assets in the financial markets, amid a backdrop of low interest rates and rising expectations toward the recovery of economic conditions reflecting the practical use and spread of vaccines.
- ♦ Government bonds The central banks of Japan, the US and Europe will most likely maintain their current policy interest rates and quantitative easing policies under limited inflationary pressures. Even though yields on 10-yr US treasury bonds are expected to rise as the economy recovers, interest rates are expected to rise only at a moderate pace due to the maintenance of an accommodative monetary policy stance.
- ◆ Japanese and US stock markets Given the sharp rise of stock prices, there is a rising perception that stocks are overvalued in both Japan and the US. Despite the possibility of a market adjustment over the short term, the improvement of corporate earnings due to the normalization of economic activity should gradually justify price valuation. The stock market driven mainly by high-tech stocks should follow firm footing, given the low interest rate environment.
- ◆ Foreign exchange rate Even though dollar-weakening pressures will persist in the first half of 2021 under the continuation of a low interest rate environment, we expect the dollar to strengthen in the second half of 2021 along with the normalization of economic activity and moderate rise of US long-term interest rates. However, given the ongoing high correlation between the US dollar and Japanese yen, the USD/JPY exchange rate should continue to move in a narrow range.

[Outlook on the financial markets]

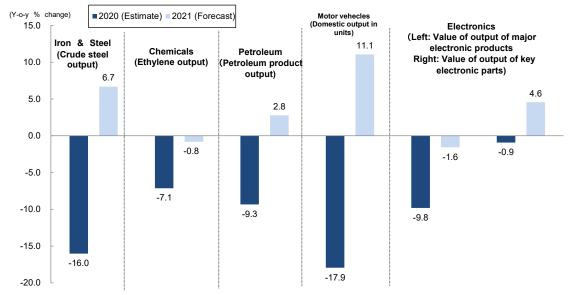
		2019	2020	2021	2020	2021				2022
		FY	FY	FY	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar
Japan										
Interest rate on Policy-Rate Balan	ces (%)	- 0.10	- 0.10	- 0.10	- 0.10	- 0.10	- 0.10	- 0.10	- 0.10	- 0.10
Euroyen TIBOR	(3-mo, %)	0.03	- 0.06	- 0.07	- 0.06	- 0.07	- 0.07	- 0.07	- 0.07	- 0.07
Interest Rate swaps	(5-yr, %)	- 0.07	- 0.05	- 0.05	- 0.05	- 0.05	- 0.05	- 0.05	- 0.05	- 0.05
Newly-issued JGBs	(10-yr, %)	- 0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nikkei average	(JPY)	21,915	23,400	26,200	24,600	25,400	25,700	26,000	26,400	26,500
US										
Federal funds rate	(End of period, %)	0.00-0.25	0.00-0.25	0.00-0.25	0.00-0.25	0.00-0.25	0.00-0.25	0.00-0.25	0.00-0.25	0.00-0.25
Newly-issued US treasury bonds	(10-yr, %)	1.82	0.75	0.95	0.85	0.90	0.90	0.95	0.95	0.95
Dow Jones Average	(USD)	26,758	27,500	30,000	28,800	29,300	29,600	29,900	30,100	30,400
Eurozone										
ECB deposit facility rate	(End of period, %)	- 0.50	- 0.50	- 0.50	- 0.50	- 0.50	- 0.50	- 0.50	- 0.50	- 0.50
German government bonds	(10-yr, %)	- 0.34	- 0.50	- 0.40	- 0.55	- 0.50	- 0.45	- 0.45	- 0.40	- 0.35
Foreign exchange rate				•		,	,	,		
USD/JPY	(USD/JPY)	109	106	107	105	105	105	106	107	108
EUR/USD	(EUR/USD)	1.11	1.16	1.18	1.18	1.19	1.19	1.18	1.17	1.17

Note: The shaded areas indicate forecasts. The forecasts are the averages of the relevant periods. However, the interest rate on uncollateralized overnight call rate, the federal funds (FF) rate and the ECB deposit facility rates are end-of-period rates. Source: Made by MHRI based on Bloomberg

5. Outlook on Japan's industrial sector in 2021: domestic demand will recover more slowly than global demand

- ◆ Japan's industrial sector should experience a slower recovery of domestic demand recovery in comparison to global demand, due to the prevailing impact of the Covid-19 pandemic. In 2021, domestic demand will not return to levels in 2019 before the pandemic in many of the industries.
- ◆ The Manufacturing Sector Given the fall of domestic and overseas demand, domestic production in 2021 is not expected to return to 2019 levels in many industries. On the other hand, the key electronic parts sector should remain relatively firm.
 - Basic materials sectors In the iron & steel sector, despite a quick recovery of exports in 2021 due to the steady rise of demand among emerging market (EM) countries such as China, crude steel output is not expected to recover to 2019 levels in 2021 because of the weak recovery of domestic demand for construction and industrial machinery. As for chemicals, we expect both exports and production to decline due to a prolonged easing of the supply-demand balance as a result of a delay in recovery of demand due to the Covid-19 pandemic and the construction of large overseas plants mainly in China. With respect to crude oil, production in 2021 is only expected to increase marginally over the previous year because of the weak recovery of demand due to the stagnation of economic activity and restrictions upon human mobility amid the ongoing structural contraction of domestic demand.
 - Processing sectors In 2021, production of motor vehicles is unlikely to return to levels in 2019 because of a slow recovery of exports due to the persisting impact of the Covid-19 pandemic in EM countries. For major electronic products, both domestic demand and production are expected to decline in 2021 because of the fading impact of the special demand stemming from the rapid expansion of teleworking in 2020. Turning to key electronic parts, we expect production to recover to 2019 levels in 2021 due to relative strength of domestic and overseas demand, as the spread of teleworking and expansion of video viewing boost demand for semiconductors and electronic parts.

[Outlook on domestic output growth in key manufacturing sectors]



Note: 1. Major electronic products cover personal computers (including tablet PCs), flat-screen TV sets, mobile phones and white goods (six items including refrigerators, washing machines, vacuum cleaners, dishwashing machines, microwave ovens, and air-conditioners). Key electronic parts cover semiconductors and electronic parts.

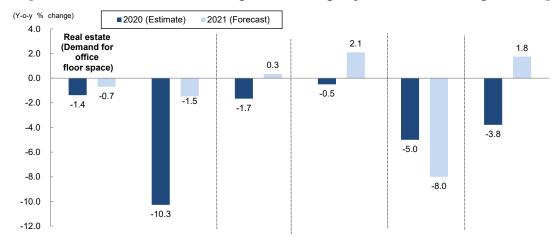
^{2.} Calendar year-basis.

^{3.} The growth rates are forecasts by the Industry Research Department of Mizuho Bank (as of December 3, 2020).
Source: Made by Industry Research Department, Mizuho Bank, based upon The Japan Iron and Steel Federation, Ministry of Economy, Trade and Industry, The Heavy & Chemical Industries News Agency, Petroleum Association of Japan, Japan Automobile Manufacturers Association, Inc., etc.

◆ The Nonmanufacturing Sector Despite a sluggish recovery of domestic demand in 2021, information services are expected to remain relatively firm against the backdrop of the expansion of digital investment triggered by the Covid-19 pandemic.

- Real estate (offices) Demand for office building floor space is expected to fall slightly from the previous year, as the vacancy rate continues to rise along with the deterioration of corporate earnings due to the Covid-19 pandemic. Even though the full-fledged proliferation of teleworking lifestyles is a cause for concern, its impact upon demand for office floor space over the medium term should be limited due to the increase of floor space per person along with a reaffirmation of the role of offices triggered by the Covid-19 pandemic and trends such as the establishment of satellite offices. Real estate (residential) demand is projected to fall slightly from the previous year amid the continuation of the market contraction reflecting demographic shifts.
- Retail sales The recovery of personal consumption should take time in view of the deterioration of the employment and income environment due to the impact of the Covid-19 pandemic. In 2021, we only expect a slight increase of retail sales from the previous year. Even though consumption of services should recover to some extent given the government's measures to stimulate demand, there is a risk that consumption of goods will decline. In the medium term, we forecast that retail sales will enter a downtrend from 2023 when the total number of households begins to decline.
- Information services We expect the steady expansion of the market due to expectations toward the acceleration of IT investment stemming from the rise of awareness on digitalization triggered by the Covid-19 pandemic. In telecommunications services, ARPU (Note 1) is expected to decline sharply year-on-year due to the rise of pressures from the Suga administration to reduce mobile phone charges.
- Electrical power Even though we expect a moderate recovery of demand for electrical power along with the recovery of economic activity from the Covid-19 pandemic, we only expect a slight increase of demand in 2021 from the previous year and expect that demand will remain more or less flat over the medium term given the progress of energy conservation.

[Outlook on domestic demand growth among key nonmanufacturing sectors]



Note: 1. ARPU is the abbreviation for Average Revenue Per Unit/User, a key performance indicator (KPI) of mobile carriers that represent unit prices per customer or contract.

- Calendar year-basis.
- 3. Retail sales exclude motor vehicles and fuel retailers.
- 4. The growth rates are forecasts by the Industry Research Department of Mizuho Bank (as of December 3, 2020).

Source: Made by Industry Research Department, Mizuho Bank, based upon data releases by Miki Shoji Co., Ministry of Land, Infrastructure, Transport and Tourism, Ministry of Economy, Trade and Industry, and Agency for Natural Resources and Energy, etc.

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