Asset Management One Co., Ltd.

Japan Outlook 2023

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Contents

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Asset Management One

Creating a sustainable future through the power of investment

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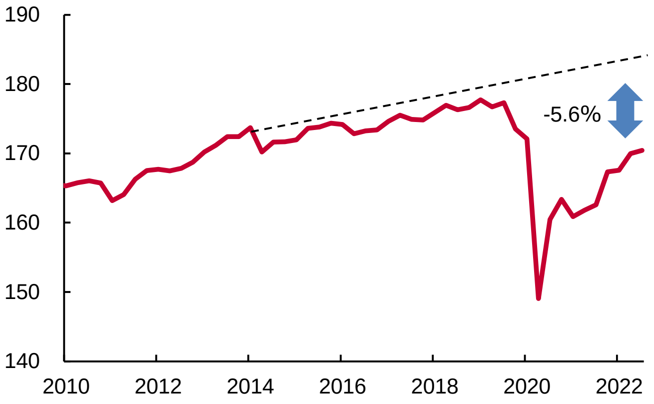
Japan Economic Outlook for 2023

Real GDP growth was unexpectedly negative in the July-September quarter in 2022, although this was due to a sharp increase in imports on the back of strong domestic demand. Relative to the U.S. and Europe, Japan has more room to recover from the economic stagnation caused by the Covid pandemic. We expect the Japanese economy to continue growing in 2023 against the backdrop of reopening and normalisation of economic activity. Although the effects of recession in the U.S. and Europe, and a sluggish Chinese economy will weigh upon the Japanese economy, we expect it will avoid dropping into negative growth or entering recession. We expect the Japanese economy to grow in the mid 1 percentage point range, outpacing the negative to zero growth in the U.S. and Europe. We expect the Japanese economy to be supported by (i) strong domestic capital investment demand, partly due to pent-up demand accumulated during the Covid pandemic, (ii) government price control measures in response to rising prices, (iii) easing terms of trade as resource prices retreat, and (iv) increased consumption on the back of surplus savings accumulated during the Covid pandemic.

"Japanese economy has greater room for recovery after Covid pandemic compared with US and Europe"

Real Service Consumption

CY2015 Chain-weighted prices, Trillion yen



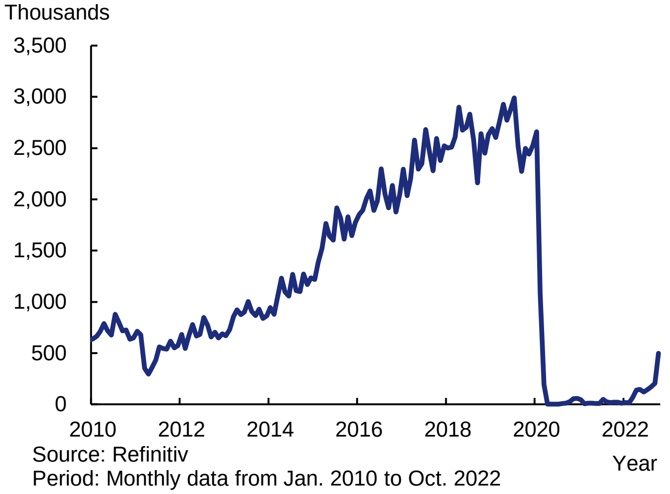
Source: Refinitiv
Period: Quarterly data from 1Q2010 to 3Q2022
Note: The data doesn't suggest or guarantee any future economic situations, market outlook, other trends related to investment environments, etc.

Forecast Summary

Calendar Year	Actual 2020	Actual 2021	Estimate 2022	Forecast 2023
Real GDP (YoY, %)	-4.6	1.6	1.5	1.6
Core CPI (YoY, %)	-0.2	-0.2	2.2	2.1
JGB 10-Year Yield (%)	0.02	0.07	0.25	0.20
USD/JPY	103	115	140	135
TOPIX EPS	80	127	150	157
YoY, %	-25.3	58.2	17.8	4.7
TOPIX	1805	1992	2050	2300
YoY, %	4.8	10.4	2.9	12.2

Source: Bloomberg, Factset
Note: The data doesn't suggest or guarantee any future economic situations, market outlook, other trends related to investment environments, etc.

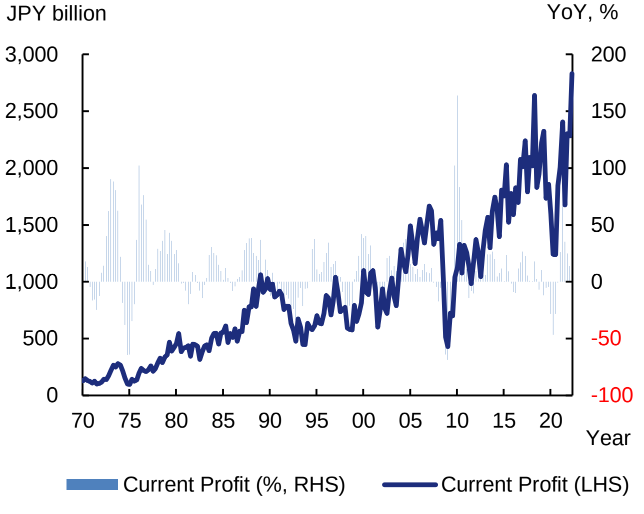
Foreign Visitors Arrivals



Source: Refinitiv
Period: Monthly data from Jan. 2010 to Oct. 2022
Note: The data doesn't suggest or guarantee any future economic situations, market outlook, other trends related to investment environments, etc.

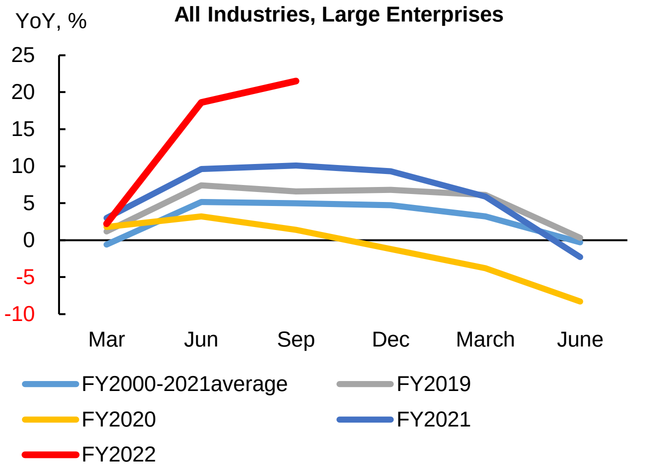
"Japanese companies have posted their greatest profits in history. Capex has recovered strongly partly because of pent-up demand

Corporate Profit (ex-financials)



Source: Refinitiv
Period: Monthly data from 1Q1970 to 2Q2022
Note: The data doesn't suggest or guarantee any future economic situations, market outlook, other trends related to investment environments, etc.

CAPEX plan



Source: BOJ
Period: Quarterly data from Mar. 2019 Survey to Jun. 2022 Survey
Note: -The horizontal axis represents the results of surveys from the initial survey (March) to the June survey of the following year (when the actual results are finalized), and the graph shows the year-on-year change (revision pattern) in the capital investment plan for each survey period.
-All industries are included in the survey.
-The graph shows the amount of capital investment including land investment and excluding software and research and development.
The data doesn't suggest or guarantee any future economic situations, market outlook, other trends related to investment environments, etc.

Prices as represented by CPI excluding fresh food reached the mid 3 percent level in the October-December quarter of 2022, and are expected to peak out going forward, although year-on-year volatility is expected to increase slightly due to the effects of government measures to support travel and curb energy and gas price rises. Wage trends are becoming more important, with much focus on the extent of wage increases at the coming Shunto – literal meaning 'spring battle' - annual wage negotiations between major labour unions and large corporations that take place every spring. We believe that there is a good possibility of wages rising by 3 percentage points in 2023, accelerating from growth of 2 percentage points in 2022. Whilst questions remain over possibility of maintaining price inflation of 2 percent, we believe we can safely assume sustained price increases of 1 to 2 percent will be achieved, without falling back into the deflationary environment again.

Japan Monetary and fiscal policy outlook

We may be able to confirm improvement in price momentum; specifically, output gap, inflation expectations and wage growth, which the Bank of Japan (BOJ) attaches importance to, in the first half of 2023, but with the Federal Reserve System (Fed) ending interest rate hikes and fears of recession in the U.S. and Europe growing, we believe the BOJ will not change monetary policy, partly due to concerns over making a policy mistake. Under the new Governor and Deputy Governors after April 2023, the central bank will need to confirm both (i) the start of a virtuous cycle in prices and wages and (ii) the emergence from a global recession, particularly in the U.S., before making changes to its monetary policy. If any, we expect the bank to delay them until 2024 or later.

This autumn's economic stimulus measures and supplementary budgets will have only limited effects, with the exception of measures to curb price hikes and some public works projects. However, now that the deflationary mindset of firms and households has begun to change, fiscal measures will play a major role in starting a virtuous cycle of wage and price increases, including (i) investment support measures to raise domestic growth expectations, (ii) raising publicly regulated prices and (iii) encouraging wage increases.

The government is expected to announce a plan to double asset income by the end of the year. This aims to increase investment by encouraging a shift from cash and deposits, which accounts for over 50 percent of Japan's household financial assets of approximately JPY2,000 trillion. The plan is expected to include to expansion and perpetuation of existing Nippon Individual Savings Account (NISA), a tax exemption program for small investments, and raising the eligible age limit for iDeCo membership, an optional defined contribution pension plan for individuals, and establishing a new organisation to promote financial literacy education. NISA is a fixed term tax exempt investment program currently allowing 5 years of tax exemption for investments up to JPY1.2 million per year or 20 years of regular investments up to JPY400 thousand per year, along with 5 year of tax exempt investments up to JPY800 thousand per year for minors. The program will transfer to a 5 year double decker program; (i) up to JPY200 thousand per year in regular investments and (ii) up to JPY1.02 million per year for investments, beginning from 2024. Possible enhancements include expansion of monetary limits and perpetuation of the program and removal of current fixed term limits. The eligibility age limit for iDeCo was initially set at 60 years old, and has been raised to 65 years old from May 2022. Discussions have begun towards increasing it again to 70 years old to enhance incentives for working people.

Kishida Cabinet's plan to formulate "Doubling Asset-based Incomes Plan"

In order for households to become financially more comfortable, it is necessary to create a virtuous cycle by redirecting some household deposits into investments so that households can receive the benefits of sustained increases in corporate value.

- **Significant expansion of NISA** (tax exemption program for small investment)

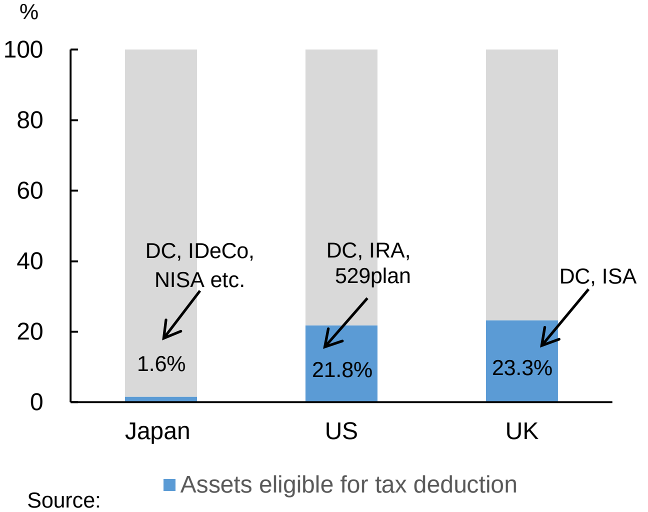
- **Reform of iDeCo** (individual-type DC pension plan)

- Establish a forum for these initiatives

- Formulate **the comprehensive "Doubling Asset-based Incomes Plan" by the end of 2022.**

Source: Cabinet Secretariat
Note: The data doesn't suggest or guarantee any future economic situations, market outlook, other trends related to investment environments, etc.

Household Financial Assets eligible for tax deduction



Source:
US/ Investment Company Institute (ICI)
UK/ Office for National Statistics (ONS), Investment Association, HMRC
Japan/ Liaison Committee for Defined Contribution Pension Plan Operational Management Institution, Ministry of Health, Labour and Welfare, Financial Services Agency
Note: Regarding the data of assets eligible for tax deduction, US is as of the end of 2021, UK is as of the end of 2021 (NEST and ISA is as of 2020), Japan is as of the end of Mar. 2021 (NISA is as of 2020). 1 USD = JPY113.0, 1GBP = JPY154.8 (as of the end of Dec.2021)
Note: The data doesn't suggest or guarantee any future economic situations, market outlook, other trends related to investment environments, etc.

Japan Market Outlook

Japanese equity, interest rate and currency exchange rate outlook for 2023

Japanese equities remained within a range in 2022, but were also noticeably resilient among developed markets. The firmness of Japanese equities was attributable to milder inflation than in the U.S. and Europe, despite the rapid depreciation of the yen. While the U.S. and Europe experienced high inflation and volatile interest rate environment, the BOJ maintained monetary easing and, unlike in the U.S. and Europe, high interest rates did not damage the economy and markets to the same extent. However, the yen's persistently weak outlook has kept foreign investors away from buying Japanese equities actively, restraining the upside of the market.

In 2023, corporate profits are likely to continue to increase due to the relatively strong domestic economy, securing a small increase in profits despite the recession in the U.S. and Europe.

The Fed's interest rate hike cycle is expected to end in the first half of 2023, and the outlook of the yen's weakness is likely to recede. A resurgence in buying of Japanese equities by foreign investors, who had previously avoided the asset class to stave off a decline in the value of their dollar-denominated assets, is also expected.

We expect TOPIX earnings per share (EPS) to increase by 4.7 percent year-on-year in 2023 although slowing down from 17.8 percent growth in 2022. The year-end price-to-earnings ratio (PER) is expected to recover mid-14x, which is the long term average level, due to a pause in interest rate hikes in the U.S. and Europe and expectations for a bottoming out of the global economy. Based on our EPS growth assumptions and the long term average PER multiple, we forecast the TOPIX index to reach 2,300 points by the end of 2023. However, we expect the index to remain below 2,000 points, in the range of 1,800 and 2,000 points which it has been trading since early 2021, during the first half of 2023, mainly due to concerns about monetary tightening and economic recession in the U.S. and Europe. We may see the index to temporarily fall below the lower end of the range when risk aversion intensifies due to the economic slowdown in the U.S. and Europe. Then we expect it to turn higher and break above the 2,000 mark as investor risk appetite improves globally with a pause in the Fed's interest rate hikes and high inflation subsiding.

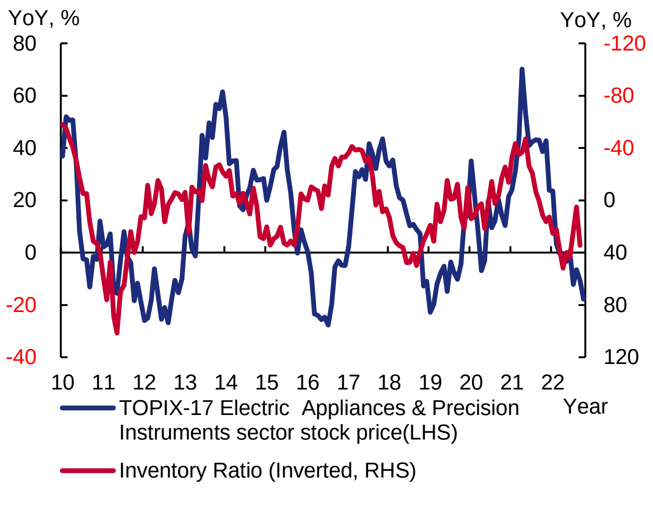
In 2022, the economic slowdown in China has partly weighed on the Japan's economy, but from next year onwards, if the zero-Covid policy is eased as a result of a pause in the spread of the virus or changes in the leadership, a recovery in inbound tourism demand from China can also be expected. Due in part to the yen's depreciation to date, travel demand to Japan is considered to be potentially extremely large, and a significant recovery is possible. Domestic labour costs may increase on the back of rising wages, but if this leads to increased consumption, it should contribute to a recovery in the domestic demand structure.

Japanese equities are perceived as highly cyclical in the global financial markets and are likely to attract buying as expectations for a bottoming out of the global economy strengthen over the second half of 2023. Share prices of the electric appliances and precision instrument sectors, which have large weightings in the TOPIX index, have recently been weak due to concerns a prolonged inventory adjustment phase in semiconductors. The recent rise in the inventory levels of electronic components and devices is expected to come to a halt, which would also contribute to a bottoming out of share prices in those sectors.

Alongside the cyclical perspective, the trend of global divide over key issues such as energy and semiconductor technology, due to the U.S.'s hardline stance against China and the situation in Ukraine, may lead to increased demand for capital investment to boost production capacity, which has been restrained globally, and will benefit Japanese equities.

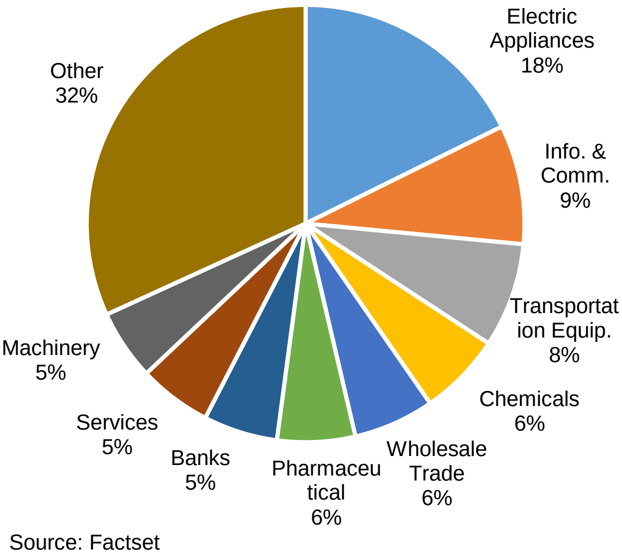
"Electronic components and devices seen to be approaching the end of inventory adjustment phase. Share prices bottomed out? "

Electronics & Precision Instruments Sector



Source: Refinitiv
Period: Monthly data from Jan. 2010 to Oct. 2022
Note: The Inventory ratio is for electronic parts and devices. The data doesn't suggest or guarantee any future economic situations, market outlook, other trends related to investment environments, etc.

TOPIX sector weight



Source: Factset
Period: As of Nov 24, 2022
Note: The data doesn't suggest or guarantee any future economic situations, market outlook, other trends related to investment environments, etc.

Even if the BOJ makes changes to its monetary policy, interest rates are likely to remain in a range, as incremental upward pressure on interest rates originating from overseas is likely to have receded by then.

If the U.S. and European Central Banks remain in a rate hiking cycle at the timing of the BOJ governor change in April 2023, speculation over the BOJ's yield curve control (YCC) target hike may intensify. In such event, the yield on Japan's 10-year government bonds (JGBs) may temporarily rise well above 0.25 percent due to foreign selling and other factors, but, in principle, we expect no change in its monetary policy. In the second half of 2023, we expect a decline in 10-year JGB yields to the 0.1 to 0.2 percent range as upward pressure on interest rates originating from overseas recedes given a pause in interest rate hikes in the U.S. and Europe.

The USD/JPY exchange rate is expected to favour a somewhat stronger yen as the Fed pauses its hikes. However, as the interest rate differential between the U.S. and Japan will remain wider than before the Covid pandemic, the risk of the yen turning sharply stronger is low. We expect the USD/JPY exchange rate to remain in the range of JPY130 and JPY140.

Risk Factors

Risk factors for 2023 are (i) prolonged global recession, (ii) rapid appreciation of the yen, (iii) prolonged effects of high costs and (iv) domestic political instability.

i. A prolonged recession in the U.S. and Europe or a further delay in the easing of China's zero-Covid policy would, needless to say, weigh on Japanese equities.

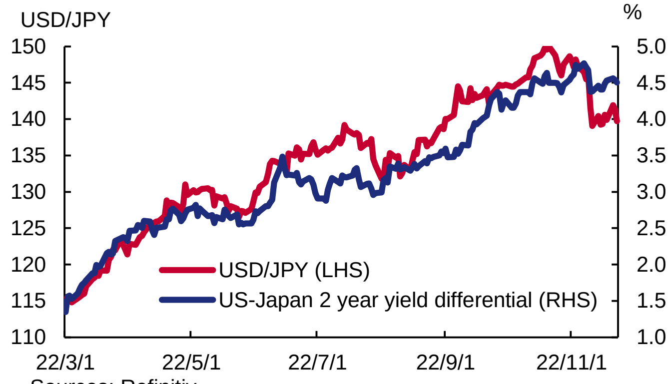
ii. Although some are wary of the risk of the yen strengthening due to the current round of the Fed rate hikes coming to an end and a shift to rate cuts, the yen is expected to remain at around JPY130 to JPY140, a weaker level than before the Covid pandemic, as the Fed is unlikely to return to a zero-interest-rate policy and the interest rate differential between the U.S. and Japan is expected to remain wide.

iii. Looking at the change in producer prices (referred to as domestic corporate prices in Japan), export prices appear to have successfully passed through rising import costs to selling prices to a considerable extent, while the growth of domestic producer prices has been restrained. This suggests that domestic demand-based industries have not yet been able to pass on higher prices, and caution should be exercised over the possibility that the impact of higher costs stemming from import inflation will remain through the first half of 2023.

iv. The Kishida government's approval rating has fallen significantly, and there is a risk that it will be unable to take bold steps on economic policy. If the decline in support does not stop, Kishida’s political capital within the party may decline further and the possibility of a snap election under the Prime Minister's authority, which would cause a certain amount of uncertainty for Japanese stock markets, cannot be ruled out.

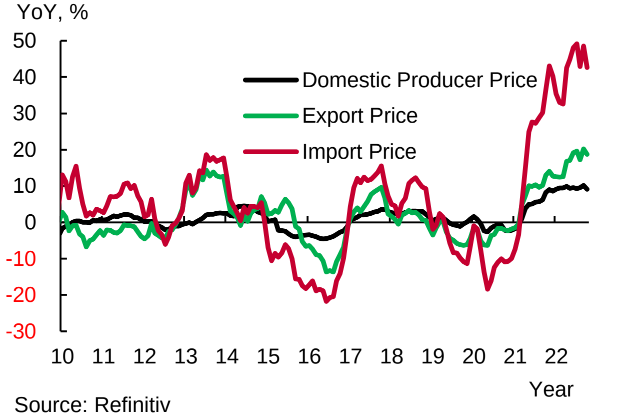
“USD/JPY is sensitive to US-Japan yield differentials, this differential is likely to remain even after the Fed begins to cut rates” Pass through of import price inflation to sales prices has been improving in overseas demand related companies but domestic demand related companies yet to show progress.”

USD/JPY and US-Japan yield differential



Sources: Refinitiv
Period: Daily data from Mar 1, 2022 to Sep 9, 2022
Note: The data doesn't suggest or guarantee any future economic situations, market outlook, other trends related to investment environments, etc.

Producer Price



Source: Refinitiv
Period: Monthly data from Jan. 2010 to Oct. 2022
Note: The data doesn't suggest or guarantee any future economic situations, market outlook, other trends related to investment environments, etc.

Focus in 2023: A virtuous economic cycle of wage increases and domestic capital investment will begin to take hold.
"Wage increases"

40-year highs in the rate of price increases and 30-year lows in the yen may provide the final push to start a virtuous economic cycle of higher wages and domestic capital investment.

In the 2023 Shunto, the rate of wage increases may increase and we see the beginning for a potential virtuous cycle of price and wage increases, against a background of maintaining living standards and securing the labour force as a result of rising prices.

i, Key points to watch: 2023 Japanese economy

In 2022, prices soared globally and rapid monetary tightening was implemented in many countries. Meanwhile, in Japan, the BOJ has maintained monetary easing and the low interest rate environment has continued. The Japanese economy is expected to remain relatively resilient as economic activity is on the way to normalisation, while Europe and the U.S. are heading towards recession and China's economy continues to stagnate due to the zero-Covid policy. The focus of the Japanese economy in 2023 will be on wage increases and domestic capital investment, which will lead to an economic virtuous circle.

ii, Signs of change in firms' and households' zero inflation expectation

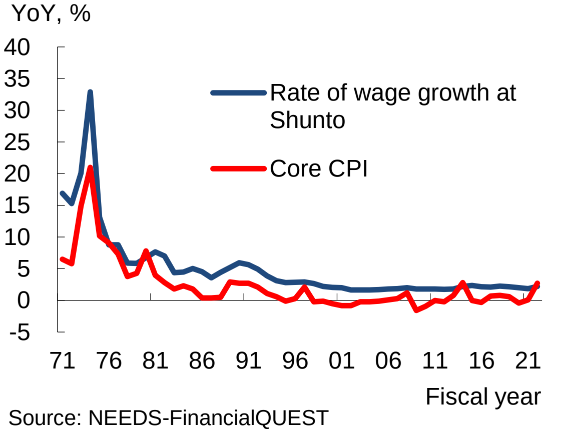
In Japan, import costs rose sharply in 2022 due to rising global commodity prices and the ongoing depreciation of the yen against a backdrop of ongoing monetary easing. In the past, during this type of environment Japanese companies have tended to sacrifice profits to avoid passing on higher costs to customers for fear of losing them. However, this time faced with an unprecedented surge in import prices, many companies have decided to raise prices concurrently. Consumer prices, as represented by core CPI, which excludes fresh food but includes energy, have been above 2 percent year-on-year for more than six months, although not as high as in overseas economies, and reached the mid 3 percent level in October 2022. This time, households have been forced to accept price increases as many companies decided to raise prices across a wide range of items. In addition, (i) the coincidence of pent-up consumption as economic activity normalises and (ii) savings from the government's Covid and anti-price inflation benefits are also likely to have supported consumption amid the price hikes.

iii, Signs of change in wage increases push for an economic virtuous circle

Meanwhile, wage increases have not kept pace with price increases and real wages have so far declined. Whether Japan will return to deflation or start a virtuous cycle of rising wages and prices depends on wage rises, and attention is focused on wage increases in the 2023 Shunto, annual negotiations between labour unions and large corporations. Japanese Trade Union Confederation (JTUC-RENGO), is aiming for a pay rise of around 5 percent in the 2023 Shunto, taking into account high prices and other factors. This is the first time we have seen demands for a 5% increase since 1995 and the last time such a level was achieved was 1991, shortly after the bursting of the bubble economy. (Figure 1) A 5 percent rise target may be too ambitious in reality, yet if the pace of wage rises accelerates from the long-standing growth rate of around 2 percent to around 3 percent in 2023, it would be noted as a game changer for Japan as it will match the level of the current productivity gains of around 1 percent plus the BOJ's price target of 2 percent. Before the mid-1990s, when the wage growth rate was above 3 percent, companies referenced 'price trends', the need to 'secure and retain labour force' and 'secular market trends' in making wage decisions. (Figure 2) Already in the past few years, consideration of 'attracting and retaining labour force' has increased in importance against the background of a declining working population. As Japan is faced with the declining birth rate and the aging population, 'secular market trends' may also become more important due to fierce competition for human resources against a background of labour shortages.

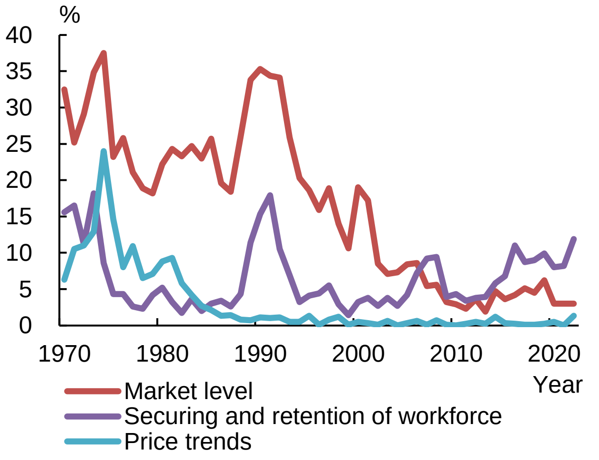
Higher wages could lead to higher service prices, which have remained restrained in Japan. In general, prices of goods tend to fluctuate according to international commodity prices, and sustained price increases require pass through to service prices. We expect that the labour-intensive service sector will also move to pass through higher costs in the future as wages rise, making it less likely for Japan to return to deflation and starting a virtuous cycle of price and wage increases.

Figure 1: Rate of wage growth at Shunto and Core CPI



Source: NEEDS-FinancialQUEST
Period: Annual data from 1971 to 2022
Note: 2022 data of Core CPI is based on the Asset Management One outlook.
The data doesn't suggest or guarantee any future economic situations, market outlook, other trends related to investment environments, etc.

Figure 2: Factors chosen by companies as the most important in determining wage revision rates



Source: Ministry of Health, Labour and Welfare
Period: Annual data from 1970 to 2022
Note: The sum of these three factors is not 100% as there are other factors.
The data doesn't suggest or guarantee any future economic situations, market outlook, other trends related to investment environments, etc.

Focus in 2023: “Domestic capital investment”

Broad-based supply chain reviews are urgently needed due to rising geopolitical risks, restrictions on U.S. exports to China, the need to strengthen the supply system for components and materials, and increasing awareness of human rights at work.

Among other factors, the ongoing depreciation of the yen, increased cost competitiveness through automation, and government support for attracting semiconductor related and other advanced industries to Japan have increased momentum towards reshoring of production and increased domestic capital investment in Japan.

i, Domestic and foreign capital investment trends of Japanese companies to date

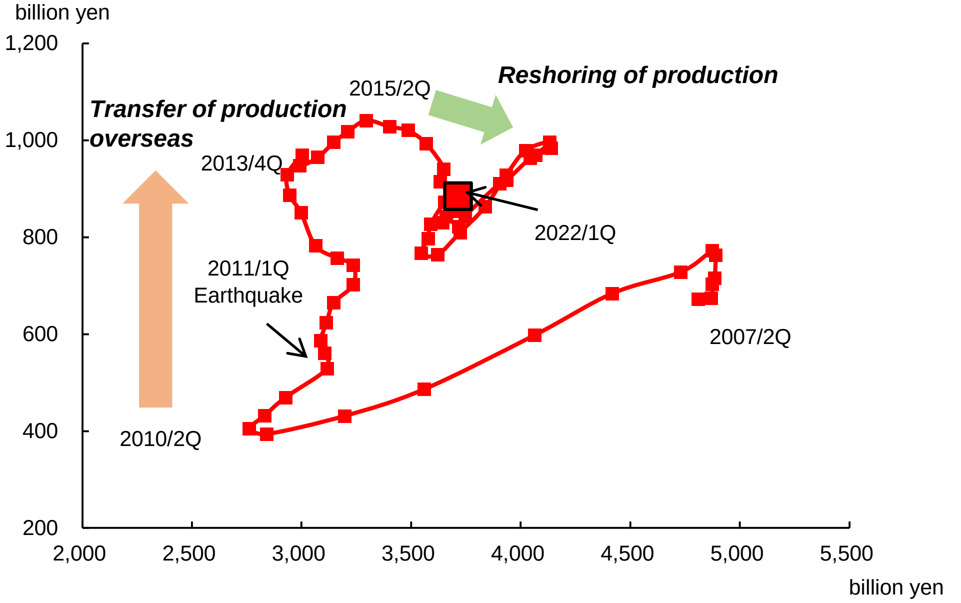
Looking back at past trends in capital investment by Japanese companies in Japan and overseas, the ratio of overseas production has increased incrementally since around 2010, as Japanese companies, particularly in manufacturing industries, increased capital investment overseas due to (i) match local production for local consumption, (ii) response to the strong yen, (iii) avoidance of trade friction with the U.S. and (iv) cost advantages overseas in terms of labour costs and other factors.

In 2020, the spread of Covid-19 exposed the vulnerability of the Japanese supply chain in terms of procurement of masks and other hygiene products, semiconductors and other components. The Japanese government's economic measures in response to the pandemic in April 2020 included measures to restructure supply chains to promote a return to domestic production and diversification of supply sources. At that time, the focus was on items whose suppliers were concentrated in one country, but gradually the economic security perspective became more important against the backdrop of the Sino-U.S. conflict, and in its economic measures of November 2021, the Government indicated a policy of focusing on attracting production plants for semiconductors and other critical goods to Japan.

ii, Factors contributing to the recent return to domestic production and domestic capital investment

Domestic capital investment plans for FY2022, according to the Bank of Japan Tankan survey and other similar surveys, have been strong for the past few years. There have been multiple reports of apparel and daily goods manufacturers returning to domestic production, as well as major investments by semiconductor companies in Japan. While overseas production for the purpose of matching local production with local consumption in huge markets such as China and the U.S. is not expected to change in importance, the trend of strengthening domestic production functions in parallel with overseas production is accelerating. (Figure 3)

Figure 3: CAPEX plan



Source: Ministry of Economy, Trade and Industry Japan, Ministry of Finance Japan
Period: Quarterly data from 2Q2007 to 1Q2022
Note: The data is 4 quarter moving average. The horizontal axis represents domestic capex (manufacturing) and the vertical axis represents overseas capex by Japanese manufacturers.
The data doesn't suggest or guarantee any future economic situations, market outlook, other trends related to investment environments, etc.

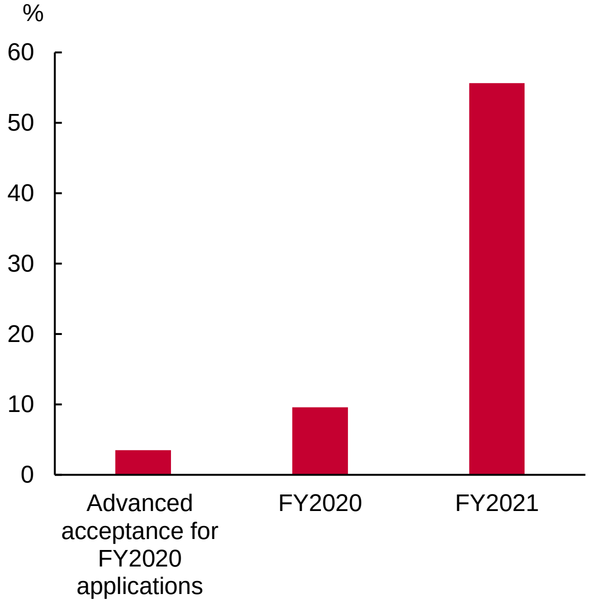
Reasons for returning to or increasing production in Japan include (i) heightened geopolitical risk, (ii) the application of U.S. export restrictions on China to Japanese companies, (iii) strengthening the supply system for components, (iv) increased awareness of human rights in labour, (v) the weakening of the yen, and (vi) government support for attracting semiconductors and other advanced industries to the country. Among various factors, the most important factors for business continuity are probably cost and profitability. Government support measures and subsidies are important for the initial costs of relocating or expanding factories. From FY2020 onwards, a budget of around JPY2 trillion has been set aside for domestic investment promotion projects for supply chain measures and for securing domestic bases for advanced semiconductors. Furthermore, companies returning to domestic production say that automation has enabled them to reduce labour and other costs. Although labour costs are rising in China and other emerging economies, the level of labour costs in Japan remains above them and wages are likely to rise in Japan in the future due to labour shortages. With regard to these costs, it is considered significant that government subsidies and further DX (digital transformation) promotion (e.g. automation) have made it possible to reduce costs.

In addition, reports have emerged that Japanese manufacturers are returning some of their production bases to Japan as a result of the weaker yen, as the previous inclination to respond to the strong yen has highlighted issues such as the high cost burden of imported raw materials when the yen weakens, and the difficulty in benefiting from the weaker yen through exports.

iii, Expectations for semiconductor-related investments

Particularly promising from an economic security perspective is the strengthening of production bases for semiconductors, which are essential in the supply chain.(Figure 4) Furthermore, the government has created and stepped up investment to a fund for promoting the domestic location of production bases for advanced semiconductors from the perspective of the domestic growth strategy. The fund has attracted foreign companies to the country to build a manufacturing base, such as Taiwan Semiconductor Manufacturing Company (TSMC) using the Ministry of Economy, Trade and Industry (METI) subsidies to build a new plant in Kumamoto Prefecture located on the south west island of Kyushu, one of the four major islands that consist Japan. Positive developments in the development of advanced semiconductors have been widely reported, such as the establishment of a new company aiming at research and development and mass production by 2027, with eight Japanese companies investing and the METI also supporting this with subsidies.

Figure 4: Semiconductor related investments as a ratio of successful applicants selected for the Program for Promoting Investment in Japan to Strengthen Supply Chains



Source: METI
Note: The data doesn't suggest or guarantee any future economic situations, market outlook, other trends related to investment environments, etc.

Focus in 2023: "Capital investment raises growth expectations; outlook for monetary policy"

Domestic capital investment, including DX, will contribute to wage increases through productivity gains and domestic growth expectations; 2023 is a year in which wage increases and domestic capital investment are expected to boost the economy

i, Domestic capital investment, including DX, contributes to wage growth

From companies' perspectives, domestic growth expectations and increased labour productivity are essential for companies to take steps to raise wages, which leads to increased labour costs, an important cost component for businesses. In this sense, domestic capital investment, including a return to the domestic production, and the labour-saving investment, including DX, to address the labour shortage issues, will contribute to improvements in growth expectations and productivity gains

In Japan, with an ageing and declining population, the expected domestic growth rate, the forecast real economic growth rate for the next five years, has remained in the low 1 percent level for more than a decade, according to a survey of companies conducted by the Cabinet Office. Raising labour productivity requires investment in people, such as re-learning, re-skilling, and training, and capital investment, including DX, to increase the labour equipment rate, also known as the capital equipment rate. It is the equipment used per employee, closely related to labour productivity (Figure 5), and is an effective measure to increase labour productivity.

Although the Kishida government focused on the distribution of income to people at the beginning of its term, since around mid-2022, it has also shown an emphasis on 'investment and growth'. The growth strategy includes the promotion of science, technology and innovation, support for start-ups and promotion of investment in DX and GX (green transformation).

In 2023, a virtuous cycle of wage and price increases is expected to take hold, with efforts to improve domestic growth expectations and productivity to avoid falling back into deflation again.

ii, Outlook for the BOJ's monetary policy

Of the price momentum that the BOJ focuses on, the average corporate price outlook or inflation expectations were 2.1 percent for the three-year outlook and 2.0 percent for the five-year outlook. Both horizons reached the BOJ's price target of 2 percent, with the five-year outlook doing so for the first time since the BOJ Tankan survey, which covers all industries and companies of all sizes, started in 2014. Other improvements in price momentum, such as the output gap and wage growth, could also be confirmed in 2023. However, in 2023, the BOJ is unlikely to change its monetary policy towards tightening in an environment where the U.S. ends interest rate hikes and enters economic recession. Changes in monetary policy are only expected after the new governor takes office in April 2023 and after (**i**) the start of a virtuous cycle in prices and wages and (**ii**) confirmation that the global recession, particularly in the U.S., is out of the way, which are more likely to take place from 2024 onwards. However, it should be noted that the 2 percent price target and its monetary policy means, which had failed achieve the targets for last 10 consecutive years under BOJ Governor Kuroda, may be fundamentally reviewed after the new Governor and Deputy Governors take office, and some modifications or changes may be made at an early stage.

Figure 5: Labour productivity and Labour equipment

Year	1960 ～ 1969	1970 ～ 1979	1980 ～ 1989	1990 ～ 1999	2000 ～ 2009	2010 ～ 2019
Labour productivity rate, %	9.4	4.6	3.6	1.7	0.8	0.8
Labour equipment rate, %	10.4	10.8	7.6	4.1	-1.4	0.3

Source: Japan Productivity Center, Ministry of Finance Japan
Period: Annual data from 1960 to 2019. Labour equipment rate was calculated from 1961.
Note: Labour productivity shows output per hour. Labour equipment rate shows the average growth rate of each FY.
The data doesn't suggest or guarantee any future economic situations, market outlook, other trends related to investment environments, etc.

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