Japan

Is the Sun set to rise again?

Contributors

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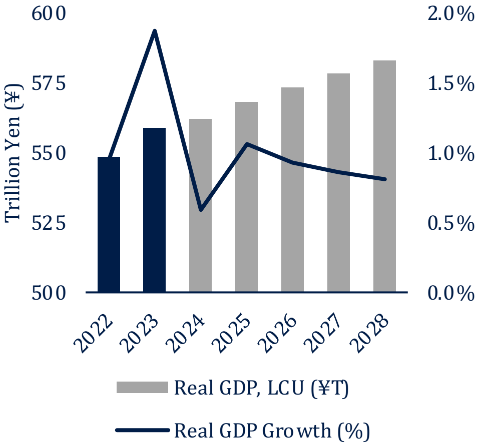
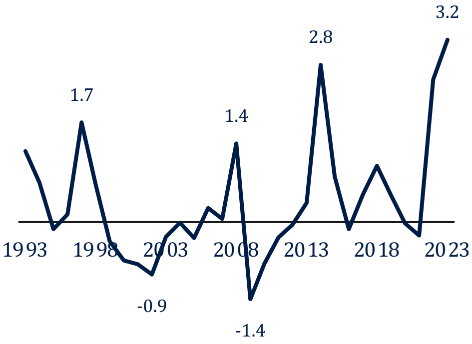
Real GDP and Growth (%)



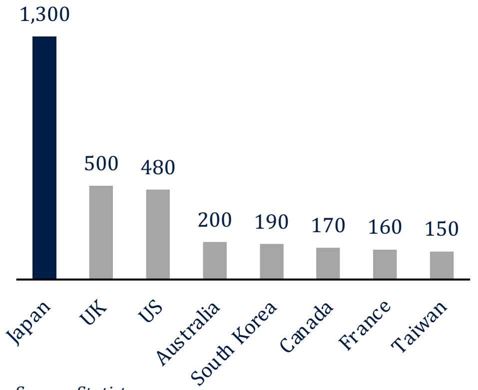
Source: CapitalIQ

Japan's Inflation Rate (%) (1993 - 2023)



Source: CapitalIQ

Number of Institutions supporting carbon net zero initiatives



Source: Statista

Japan: An Overview

Japan is currently the fourth largest economy in the world by nominal GDP, behind U.S., China and Germany. Japan has been struggling with a stagnating economy for the past 30 years after decades of rapid growth post-World War 2. Despite unique economic policies such as Yield Curve Control (YCC) and negative interest rates, Japan has so far been unable to reignite its economy growth after the asset bubble burst in the 1990s and failing to hit Bank of Japan (BOJ) inflation target of 2%. However, recent global trends such as supply chain disruptions and heightened energy prices has indirectly reignited the Japanese economy.

Executive Summary

Japan's economy navigates through challenges with resilience, marked by a recent downturn after reaching pre-pandemic levels. Despite weakened domestic demand and reduced government spending, the export sector, especially in IT and tourism, offers hope for recovery in fiscal 2024 and 2025. Political reforms are underway amidst the dominance of the Liberal Democratic Party, while fiscal and monetary policies aim for strategic autonomy and economic stabilization. Collaborations with global allies deepen, emphasizing defence, technology, and supply-chain security. Socio-demographic challenges persist due to ageing population and declining birth rates.

Japan's market policies undergo shifts as the Bank of Japan ends negative interest rates, prompting cautious optimism despite persistent yen depreciation against the dollar. Long USD/JPY recommendations prevail amidst evolving market dynamics, with wage negotiations and interest rate differentials influencing short-term currency movements. Despite challenges, strategic opportunities exist in navigating the yen's volatility and capitalizing on evolving market trends.

Efforts to revive capital markets centre on corporate governance reforms and investment attractiveness, with sectors like the automotive and financial industries showing resilience and growth potential. Initiatives to uphold ESG standards and stimulate retail investing reflect optimism for market expansion, driven by technological advancements and policy support. Opportunities emerge for investors seeking long-term growth in sectors poised for innovation and adaptation.

Japan's commitment to reducing fossil fuel reliance and carbon emissions drives initiatives in renewable energy and carbon credit trading. Leading companies spearhead innovation in green hydrogen and nuclear energy sectors, aligning with Japan's ambitious carbon neutrality goals. Investment opportunities arise in sustainable growth sectors, reflecting a broader trend towards environmental consciousness and long-term sustainability.

Japan: An Overview

Economy

Japan's economy, after experiencing a temporary standstill with negative growth in two consecutive quarters of 2023, faces significant challenges yet shows signs of resilience. This period marked the first such downturn since the 2018 recession, driven by declines in private consumption and corporate investment. Despite reaching pre-pandemic levels earlier in 2023, the economy has experienced a slight drop off, largely due to weakened domestic demand in various sectors and reduced government spending.

However, Japan's export sector offers a glimmer of hope for an economic rebound, particularly in IT-related items and inbound tourism, remains robust. The high demand for exports, coupled with anticipated improvements in nominal wages and employment conditions, suggests a potential gradual rebound in fiscal 2024 and 2025. The economy's path forward is expected to benefit from global demand for technology products and the completion of domestic semiconductor infrastructure, despite looming inflationary pressures and the critical role of upcoming wage negotiations. This complex landscape underscores the challenges and opportunities within Japan's economic horizon, pointing towards a cautious yet optimistic outlook for recovery.

Politics

The political landscape in Japan is characterized by the enduring dominance of the Liberal Democratic Party (LDP), notwithstanding recent scandals that have slightly tarnished its public standing. Prime Minister Kishida Fumio is anticipated to call an early election within the year, with predictions indicating a significant reduction in the LDP's majority. This political manoeuvring comes amid efforts to reform the party's faction system, aiming to dilute the powers of internal factions without completely eradicating their influence on policy deliberation.

Fiscal and Monetary Policies

Economic policymakers in Japan are navigating a period of transition. The government's fiscal stance remains expansionary, underscored by a persistent deficit driven by high public spending on welfare, health, and defence. Concurrently, Japan aims to increase its defence spending to 2.0% of GDP by 2027, reflecting a broader shift towards enhancing the nation's strategic autonomy and resilience. On the monetary front, the Bank of Japan (BOJ) has concluded its negative interest rate policy, signalling a cautious approach towards policy normalization in the face of changing economic conditions.

Geopolitics

Japan is deepening its collaborations with the United States and other allies in Europe and Asia, focusing on defence, technology, and supply-chain security. While managing its complex relationship with China, Japan seeks to balance its economic interdependence with the imperative of mitigating geopolitical risks, especially concerning regional security dynamics and the Taiwan Strait.

Socio-Demographics

Japan grapples with significant challenges stemming from its rapidly aging population and declining birth rate. Government initiatives aim to address these issues through policies designed to promote wage growth and encourage family formation. However, the long-term impact of these measures remains uncertain, as Japan endeavours to reverse demographic trends that pose a substantial constraint on its economic and social vitality.

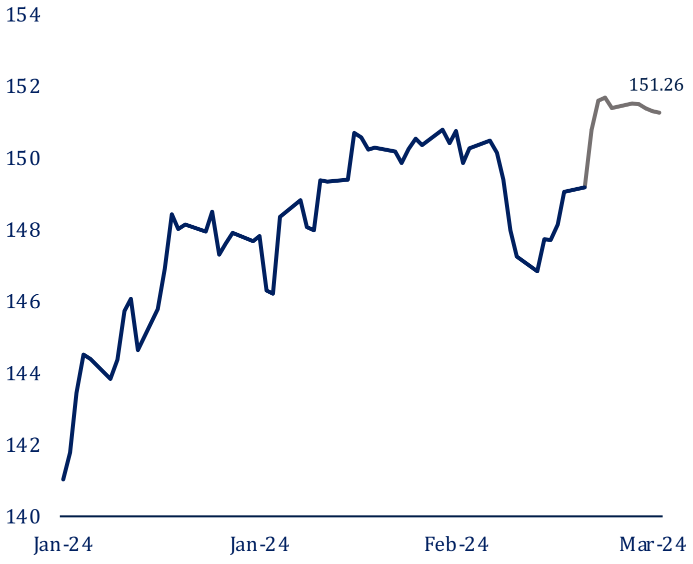
Thesis 1: The Market Policies of Yen

Since the late 1990s, Japan has long battled deflation and economic stagnation. Over the years, it has sought to encourage prices to rise by using a combination of conventional and unconventional monetary policies, including zero or negative interest rates and large-scale asset purchases. In 2016, Japan shifted from a policy of quantitative easing to yield curve control as the BOJ guided short-term rates at –0.1% and pegged the 10-year JGB yield at 0.0% to stimulate the economy and combat deflation. However, immense pressure was exerted on the BOJ due to the widening interest rate differential between the tightening Federal Reserve and permanently ultra-loose BOJ, causing a constant downward pressure on the yen as it hit a 33-year low against the dollar in 2023. The weakness of yen diminishes not only the purchasing power of consumers in Japan, but the value of Japan's exports.

A change in stance: the end of negative interest rates

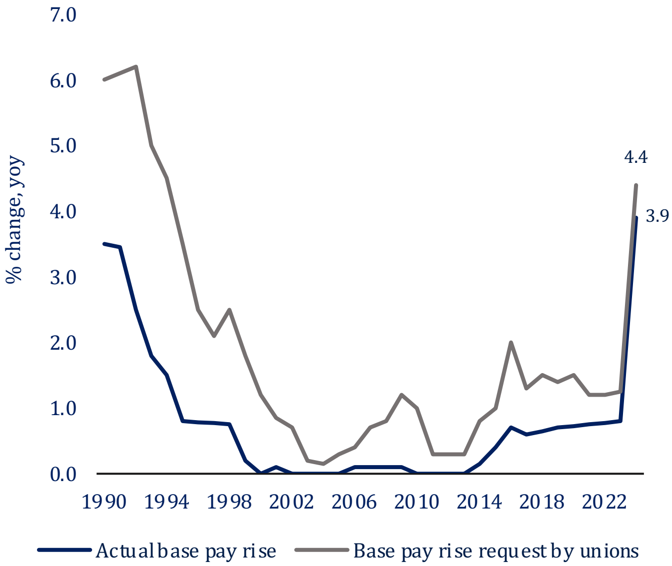
The weak performance of the yen forced the BOJ to look into the possibility of changing their policies in late 2023, as they announced the 1% cap on 10-year JGB yields to be used as a reference rate due to the negative side effects of strictly capping long-term interest rates such as adding onto the volatility of Japanese financial markets. BOJ has cited wage outlook and inflation targets as one of the main factors in considering shifts in market policies. The annual spring wage negotiation (*Shunto**) that occurred in March 2024 yielded positive results as Japan's biggest companies agreed to raise wages by 5.3%, which caused BOJ to end negative interest rates during the March policy meeting.

USD/JPY 2024Q1 performance



Source: Capital IQ

Annual Shunto* base pay rises



Source: Goldman Sachs, Keidanren, RENGO

Unexpected outcome

Despite the ending of negative interest rates which resulted in the narrowing of the interest rate differential, this has not reflected well on the yen. On March 27, the yen fell to **a historic 34 year low** against the dollar at 151.98. As the BOJ's policy rate remains at 0.0%, markets have interpreted the BOJ's dovish stance as suggesting slow rate hike attempts in the future. This has caused traders to continue selling yen due to the popular belief that the interest rate differential will remain wide in the near future, resulting in a decline of the yen.

While Japanese authorities have announced intervention in response to disorderly currency movements, which caused the yen to rebound to 151.35 on March 29, intervention is likely going to be successful in the short-term. The yen is only likely to improve when the interest rate differential narrows further, i.e. when the Fed begins the cutting cycle of interest rates.

FX Recommendation: LONG USD/JPY

As the yen continues to show extreme volatility, the Bank of Japan has continuously announced verbal intervention to ensure the yen's stability and prevent overspeculation in the market. Even though Japan has raised its interest rates in March, marking the end of negative interest rates – the BOJ is unlikely to continue to raise its interest rates in the near term. Japanese workers' real wages had fallen for the 23rd consecutive month by 1.3% in February from a year earlier, following a revised decline of 1.1% in January. This suggests higher prices kept up pressure on consumers' spending appetite. To refrain from straining household budgets and dampen economic activity, it is likely that the BOJ will temporarily stop hiking interest rates until better economic performance is observed in the local economy. On the other hand, the US economy has yet to show signs of cooling, with annual inflation rates coming in higher than expected at 3.2%, a strong labour market with an increase in job creations and a decrease in unemployment rates to

****Shunto*** *refers to the annual wage negotiations between enterprise unions and the employers in Japan that takes place during spring.*

to 3.8%. We believe that these are indicative of the Fed not cutting rates anytime soon. We see a compelling investment opportunity of 1.7 Risk-to-Reward ratio, with a entry price of 146.36, taking profit at 154.54 and a stop loss of 145.75.

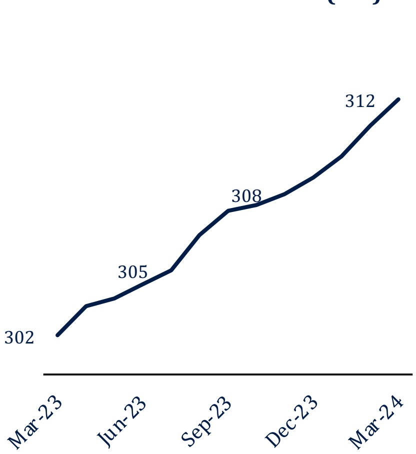
TBL-T-5 Real Wage Indices

(Establishments with 5 or more employees) (2020 average = 100)

Year/Month	Total Cash Earnings								Contractual Cash Earnings			
	Industries Covered				Manufacturing				Industries Covered			
			30 or more				30 or more				30 or more	
		R.P.		R.P.		R.P.		R.P.		R.P.		R.P.
		%		%		%		%		%		%
2022	99.6	-1	101.3	0.1	100.9	-1.3	101	-1.5	99.2	-1.6	100.9	-0.6
2023	97.1	-2.5	99.3	-2	98.9	-2	99.6	-1.4	96.6	-2.6	98.8	-2.1
2023 Jan	82.5	-4.1	82.2	-2.8	80.1	-4.3	78.9	-3.8	96.1	-4	98.3	-3.2
Feb	81.4	-2.9	81	-2.3	79.4	-3.5	77.8	-3.5	96.9	-2.9	98.9	-2.5
Mar	87.4	-2.3	87.4	-2.2	84.6	-2.1	83.7	-1.8	97.4	-3.3	99.5	-2.8
Apr	84.3	-3.2	84	-2.9	81.7	-4.2	80.6	-3.7	98.1	-3.3	100.1	-3
May	84.4	-0.9	84.5	0.2	82.3	0.4	81.7	1.5	97.2	-2.1	99.1	-1.6
Jun	136.8	-1.6	150	-0.5	131.8	0	139.2	1.6	97.7	-2.5	99.5	-2.1
Jul	111.9	-2.7	114.6	-2.2	135.6	-2.4	139	-2.3	97	-2.5	99.1	-1.8
Aug	82.7	-2.8	81.4	-2.2	82	-1.6	79.7	-1.4	95.9	-2.4	98	-1.8
Sep	81.3	-2.9	81.1	-2.3	80.2	-1.6	78.8	-1.1	96	-2.6	98.1	-2
Oct	80.9	-2.3	80.8	-1.7	79.2	-2.2	78	-1.9	95.7	-2.6	97.9	-2
Nov	84.3	-2.5	83.8	-2.6	85	-3.4	84.2	-3.3	95.8	-2.3	98.1	-1.6
Dec	166.5	-2.1	180.7	-1.4	183.9	-0.3	193.1	0.4	96	-1.7	98.3	-1.2
2024 Jan	83.5	-1.1	81.1	-0.9	79.5	-1.4	77.6	-1.3	96.8	-1.4	96.6	-1.3
Feb	82.1	-1.3	79.9	-0.9	78.2	-2	76.1	-1.9	97.9	-1.1	98	-0.5

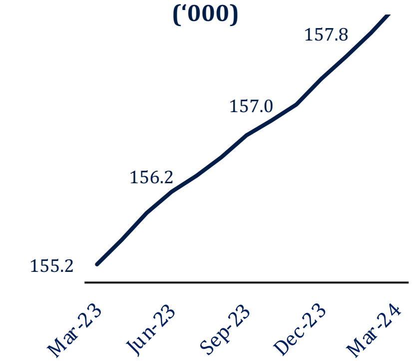
**R.P means "Ratio to the same period of the preceding year"*

US Consumer Price Index (CPI)



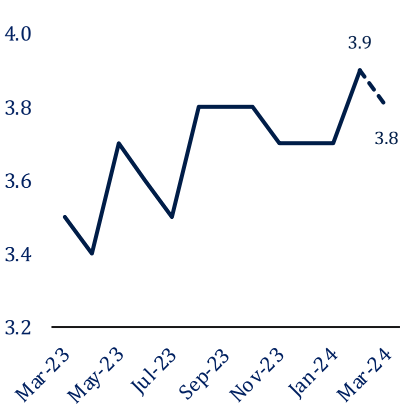
Source: FRED

US Monthly Job Creation ('000)



Source: FRED

US Unemployment Rate (%)



Source: FRED

As the BOJ and the Fed show no signs of raising interest rates and cutting interest rates respectively, the interest rate differential between both countries is therefore unlikely to decrease in the short-term. Since the strength of the dollar is dependent on factors such as interest rate differential, economic strength and central bank policies, the sticky inflation economic situation in the U.S. insinuates lesser rate cuts this year, thus maintaining the high interest rate differential between the U.S. and Japan.

Considering the circumstances, we believe investors should seize the short-term opportunity to short the yen against the dollar to profit as the yen continues to weaken. However, this does not suggest an overall negative outlook for Japan, but rather a golden opportunity for investors to profit before both central banks collaborate to intervene to prop up the yen. As such, we will recommend investors to long USD/JPY until it hits the range of 160-170 to profit as the strength of the dollar is likely to further increase as markets continue to navigate around the volatility of the yen amid current stagnant rates from both US and Japan.

Thesis 2: Revival of Japan's Capital Markets

As the Japan economy desperately attempt to revive consumption and investment from local and global markets, the Tokyo Stock Exchange and individual companies fervently push for improved corporate performance to bolster investor interest.

The Tokyo Stock Exchange (TSE) continues to put pressure on listed companies to secure a base level market value with a P/B ratio of 1.0 to strengthen valuation and investment prospects. Generating higher demand for financial services such as M&A, valuation, and consulting. Moreover, banks such as Barclay's analysis of Japan's CAPE ratios are lower than U.S. stocks, propelling foreign investment into the region.

The Japanese government striving to uphold ESG standards, implemented stringent corporate reporting regulations such as large shareholding and tender offer rules. Increased streamlining of processes while improving transparency and fairness of transactions build investor confidence in the long-term. Additionally, the recent Nikkei bull run has shed light on the possible rejuvenation of Japan's corporate governance, where transparent report practices and shareholder involvement have brought

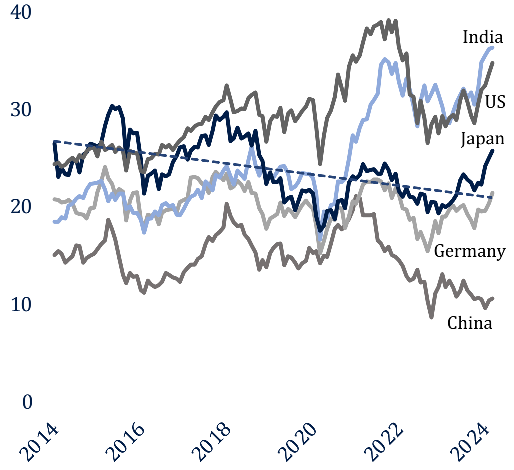
Valuation vs 15-year median (% above or below)

Equity Market	United States	United Kingdom	Europe ex. UK	**Japan**	Emerging Markets
Forward P/E	19x (14%)	10x (-19%)	13x (-6%)	**14x (1%)**	12x (1%)
Trailing P/E	22x (9%)	12x (-18%)	15x (-9%)	**17x (5%)**	13x (-4%)
P/B	4.1x (44%)	1.6x (-8%)	1.9x (9%)	**1.3x (4%)**	1.6x (-4%)
Dividend Yield	1.6x (25%)	4x (-4%)	3.1x (4%)	**2.4x (-14%)**	3.4x (-20%)

Legend:	
<-25%	0% to 5%
-25% to -15%	5% to 15%
-15% to -5%	15% to 25%
-5% to 0%	>25%

Source: Schroders

***CAPE Ratios of Largest Economies Globally**



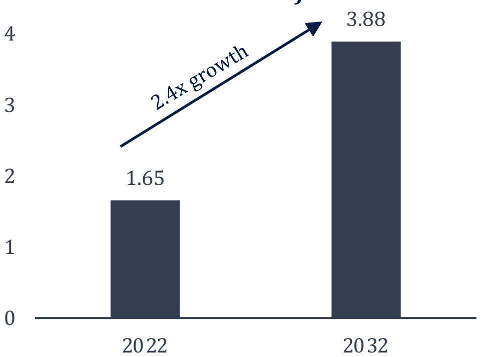
Source: Barclays Bank

*CAPE ratio measures the real Earnings Per Share (EPS) over a 10-year period. The ratio smooths out fluctuations in corporate profit that occur during business cycles.

Balance of Payment - Goods: Expenditure for Japan (Trillion ¥)

Source: FRED Economic Data

Japan Automotive Market Size (USD billions)



Source: Spherical Insights

significant revival to larger Japanese countries. However, the sustainability of reforms have been doubted by many, questioning whether smaller companies are able to deliver results and reforms like their larger counterparts. Japan's hope to recover its GDP brings new tax deferments for the Nippon Individual Savings Account (NISA). Shifting household savings into capital markets by attracting interest in retail investing stimulates economic growth, where local business expansion is supported, and international investments swell.

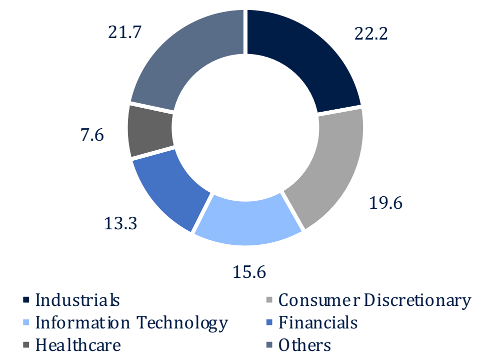
Automotives Driving Exports

During the Covid-19 pandemic, automakers struggled with the semiconductor chip shortage and rising energy costs, along with the supply chain crunch leading to sluggish production. The recovery of the automakers in Japan are pronounced, with industry leader Toyota experiencing a record production and sales of 5 million units in the first half of March 2024. This recovery trend is expected to grow along with global auto sales forecasted to grow at an annual rate of 3.0% from 2024 to 2027 and a projection of 6.0% CAGR as the impacts of the pandemic fully fades away. Japan automakers are mostly late to the EV trend, but we do not see this as a fatal issue. The EV process has different requirements than traditional automobiles which are a strength of Japanese automakers, who are producing reliable and affordable units for the masses focusing on their petrol and petrol hybrid cars, which are significantly easier to produce and develop, accounting for a higher portion of their sales and demand. A significant pivot and strategy adjustment is needed to accommodate the needs of EV assemblers and is only now slowly gaining economies of scale for cheaper and more efficient production which does not hamper the late joining of the EV trend. Japanese automakers plan to increase their investments in EV through 2030, with goals to increasing number of models and sales of EV, leveraging the breakthrough of technologies such as "giga casting" which allows multiple labor consuming large parts to be molded in one singular process, and the implementation of all solid-state batteries which are safer than lithium-ion batteries and features fast charging that can bridge the gap between other EV producers such as Tesla by 2027.

Favouring Financials

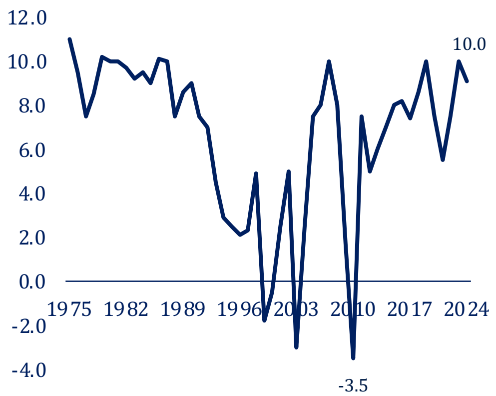
The low yen, albeit concerning, has driven exports for the first quarter with the resurgence of global demand, in semiconductor and electronic-parts sectors have grown 7.1% and 11.3% respectively in March of this year. The BOJ policy shift of the Yield Curve Control (YCC) has also brought success with Japan government bonds increasing in yields, attracting domestic and foreign investments. Financial services will be able to leverage on wider interest rate spreads and enhance profit margins. However, disparity between the size of banks in the region has led to larger banks disproportionately benefiting from the shift in said circumstances.

Sector Weights in Japan Equities (%)



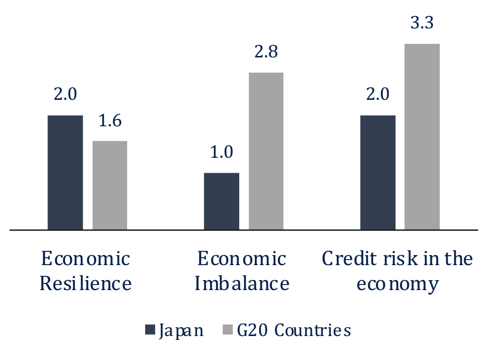
Source: MSCI Japan Index

Return on Japanese equities (%)



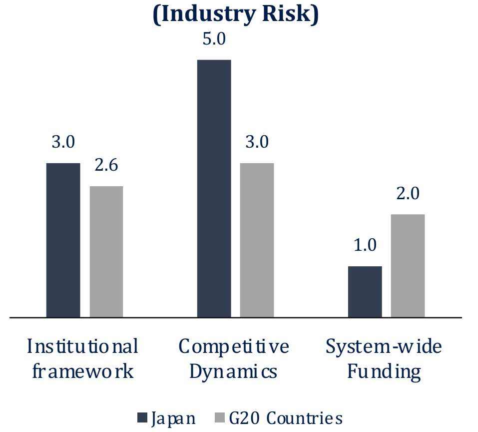
Source: MSCI Japan Index

BICRA Score Comparison (Economic Risk)



Source: CapitalIQ

BICRA Score Comparison (Industry Risk)



Source: CapitalIQ

Larger banks enjoy amplified profits due to their strong pricing power and ability to write off unrealised losses and purchase high-yield bonds at lower prices, further increasing their interest income. Top performing asset manager Evarich achieved a return of 22.0%, beating 96.0% of their peers, in its Nippon growth fund. Mitsubishi UFJ Financial Group Inc. and Sumitomo Mitsui Financial Group Inc. made up a large majority of the fund being the largest banks in Japan. Expected rate hikes signalling positive growth outlooks provide stability and longevity of the success of the sector.

Additionally, the increasing development of Fin-Tech will ensure sufficient infrastructure of changing retail investor behaviour given the Shunto wage increases. In February, Fin-Tech firm Nium has was authorised by the Japan Financial Services Agency with a Type 1 Funds Transfer Services provider, the first of its kind. The platform boasting a valuation of US$2 billion and 2.7-times YoY revenue growth last year, allows for ease of large fund transfers on Zengin.net, Japan's domestic fund transfer system. The capability will facilitate cost-efficient and streamlined payments between local and foreign markets, signifying a significant step towards modernizing out-dated processes, foster local partnerships, and stimulate investor interest overseas. With other ventures such as the acquisition of Credit Suisse Japan by UBS and sizeable funding of Smartpay, the revolution of Fin-Tech will catalyse the integration of the country with the digital economy and further enhance its appeal as a foreign investment hub.

Equities Recommendation

Japanese equities had a strong showing in 2023 driven by 3 main factors of moving away from deflation, augmentation of corporate governance and Japan being an increasingly appealing target for investment diversification within Asia, and this situation is expected to hold strong into 2024. With The Tokyo Stock Exchange pushing for companies whose shares are trading below book value to improve performance, along with reduced cross-shareholding by banks and insurers, we have chosen Toyota Motor Corp and Mitsubishi UFJ Financial Group for their already strong current performance and attractiveness of foreign investments. With the potential pick-up in retail and financial participation, strong balance sheets, improving shareholder focus, better consumer real income growth along with supportive policy, these further backs up our choice of equities.

We believe that the market's newfound enthusiasm and attention for better corporate governance is not over exaggerated and signals for bountiful opportunities ahead. With compelling forecasts of the deflation in Japan finally coming to end, along with promising evidence that the wage increases are here to stay long term, supported by the fastest pace of rising wages in 2024 seen in 30 years which are both positive factors pointing towards the end of deflation. Furthermore, the potential reversal in the deeply undervalued Japanese Yen presents a low risk of impacting profits due to the low sensitivity of corporate profits to currency changes. Current valuations are reasonable, and we anticipate a comeback of the longer-term winners.

Toyota Motor Corp. [7203:TYO]

Position: LONG

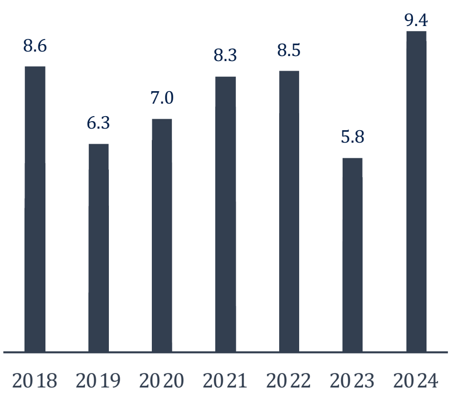
Toyota has held its ground as a long-term favourite with a remarkable 10-year growth rate even amidst low CPI growth, supported by healthy and steady financials. Holding a strong P/E of 11.0x which is slightly lower than the industry average of 11.6x, posing as a better value offering supported by its P/B of 1.5.x With their innovative leadership bolstering development within the electric vehicle scene, Toyota's ground-breaking Solid-State Batteries and hybrid hydrogen technologies gives it a strong global presence even among other huge global competitors. Carrying a multi-pronged approach with its diverse product line and strategic focus on sustainability, Toyota positions itself well for future growth even amongst the subduing EV hype.

Toyota experienced a one-year revenue growth 23.27%, EBITDA growth 45.53%, which put into 10 years annualised will give a strong 5.75% growth in revenue and 6.31% EBITDA growth. We would like to place more focus of a strong net income growth of 54.99%, or 10.59% annualised over 10 years, along with producing a strong 1-year ROE of 14.97% in 2023. This positions Toyota as a highly desirable investment that aligns with current trends and reforms.

NIKKEI 225 Index (JPY¥)

Source: FRED Economic Data

Toyota Motor Corp. Net Income in USD$ billions



Source: Capital IQ

Mitsubishi UFJ Financial Group Inc. [8036:TYO]

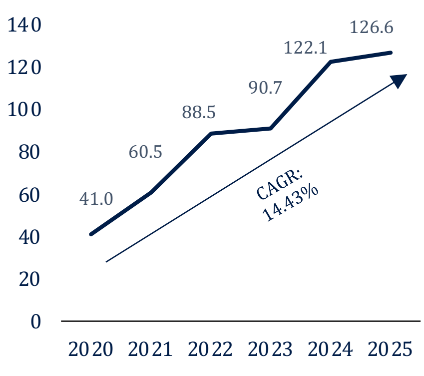
Position: LONG

MUFG operates across major segments such as digital services, retail and commercial banking, asset management and global markets, presenting a well-diversified and business model. The group is committed to improving its ROE and has outperformed the US bank industry over the past years, along with going through significant changes to management and executive structure which is a positive strategic pivot.

Presenting a P/E of 9.1 and P/B of 0.9, MUFG is an extraordinary investment with an industry-leading ROE of 11.7% and relatively low beta of 1.1. MUFG is currently capitalizing heavily on Fin-Tech, where they currently are developing AI infrastructure to streamline small business banking processes, as well as its multi-year long partnership with Amazon Web Services (AWS) to lower IT operational costs, providing bright prospects for the Group. Furthermore, its investment into Robo-adviser "WealthNavi" supports its focus on retail-investing with the incoming demand in view of the NISA tax deferments.

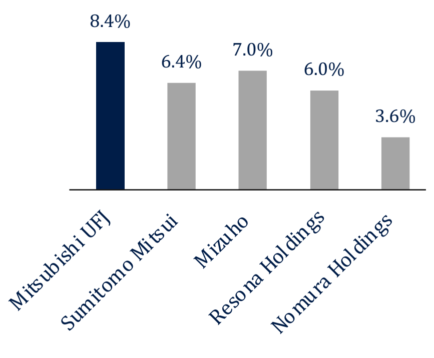
Additionally, it's market cap of JPY 18.3 trillion provides the group an advantageous position to leverage on rising interest rates for its portfolio. It's robust capital raising strategy with substantial buffers via the Total-Loss Absorbing Capacity (TLAC) ratios in its 2023 Interim report shows the Group's resilient preparation for any unpredictability in the world markets.

MUFG Forecasted EPS



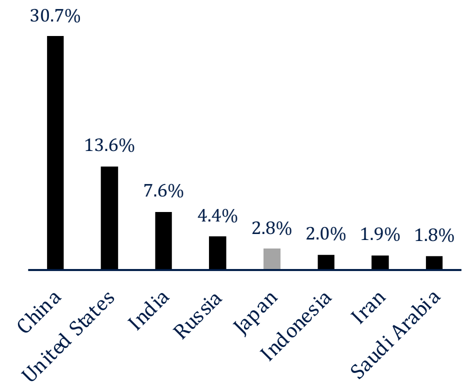
Source: Financial Times

ROE Comparison of Japan's Top Banks



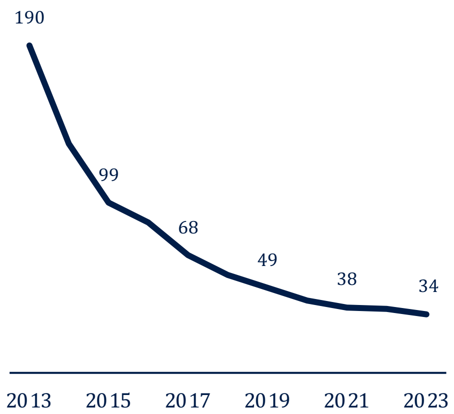
Source: Japan Exchange Group

Carbon Dioxide Emission (%)



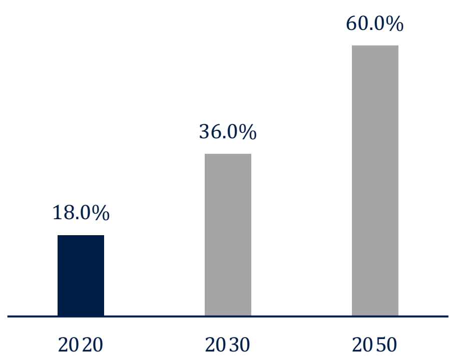
Source: Statista

Cost of Renewable Energy ($)



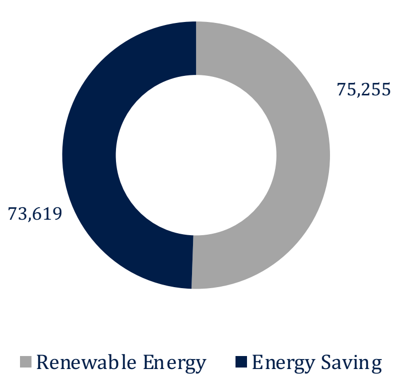
Source: World Economic Forum

Japan's Renewable Energy Proportion (%)



Source: Reuters

Total Trading Volume (t-CO2)



Source: Japan Exchange Group

Net Zero Carbon Emissions by 2050

Japan is actively steering towards a greener future, achieving a significant reduction in fossil fuel reliance by 2030. The country expects renewables to contribute up to 40% of its electricity generation mix. This shift is part of Japan's broader strategy to decarbonize its economy and move towards renewable solar and wind production.

Japan's Bold 2050 Carbon Neutrality Goals

Japan is one of the 136 countries in the world who have pledged to meet carbon net zero neutrality by 2050. They have recognised the urgent need to reduce emissions to combat climate change and is on track to reduce Greenhouse Gas (GHG) emissions by 46.0% compared to 2013 levels by 2030. This is a drastic increase from their previous target of reducing emissions by 26.0% by 2030 and 80.0% by 2050 according to the Paris Agreement.

Japan is the world's 5th largest emitter of carbon dioxide, behind China, United States, India and China, contributing 2.8% to all global emissions. Most of the emissions can be attributed to 5 sectors – power, industry, transportation, buildings and agriculture. Fortunately, Japan has many strengths to tap on as it embarks on its path to net-zero. Japan is overall more energy efficient, using less energy to produce every $1,000 of GDP as compared to their peers like US and Germany.

Japan's extensive railway infrastructure offers a viable and convenient alternative to cars while the life cycle of Japanese buildings are much shorter than in regions like the EU, making it easier to impose green regulations on new constructions. Furthermore, building owners often retrofit to withstand earthquakes, posing more opportunities to install better insulation and sustainable heating and cooking solutions. Put together, these factors make it easier to implement widespread change.

Renewable Energy as a Central Pillar

Japan expects renewable energy to account for 38% of the country's electricity generation in the future. In addition, the cost of renewable energy has plummeted 60-70% over the past decade and is expected to decrease another 30% in the future falling further below coal and gas. The benefit of rapid renewable deployment is greater energy security and independence, plus long-term energy price deflation due to it being a manufactured technology as it gets cheaper with more installation.

Carbon Credit Trading Market

The government and the Tokyo Stock Exchange (TSE) have developed a carbon credit trading market. This market establishment aligns with Japan's "Green Transformation (GX)" policies aimed at advancing the country's transition to a low-carbon economy. The TSE's carbon credit market involved 679 companies, trading a total of 148,933 tons of CO2 which accounts for more than 40% of Japan's emissions. Companies can reduce more CO2 emissions to gain carbon credits, which they can sell for profit, providing an economic incentive for reducing emissions.

Sumitomo Forestry Group [1911:TYO]

Position: **LONG**

Generating Carbon Credit for the World

Carbon credit created from forests includes carbon dioxide removal by implementing afforestation (AR) and forest management (FM). The total GHG emission of Japan in 2022 was 1,050 million tons. In this case, forests have the potential to offset 17% of the national carbon emissions in Japan in the following 20 years, significantly contributing to the net-zero target with the implementation of effective management strategies for existing forests and expansion of forestation.

The challenge with carbon credits lies in the multitude of certification bodies, lacking universal standards for certification and circulation. This discrepancy creates a demand for high-integrity carbon credits, rooted in transparent processes and universal standards. To meet this demand head-on, Sumitomo Forestry Group and nine other Japanese companies have launched the Eastwood Climate Smart Forestry Fund. This innovative initiative aims to monitor global trends and produce high-integrity carbon credits, ensuring transparency and adherence to universal standards.

Forestry Fund Initiative

Sumitomo Forestry Group is spearheading forestry fund initiatives to scale up carbon sequestration efforts. Forests are gaining attention as a nature-based solution to combat social issues such as climate change. With a bold target of sequestering an additional 1 million tons of carbon dioxide annually, this initiative promises tangible results. The increased sequestration will pave the way to produce trading of high-integrity carbon credits, propelling us closer to the realization of a decarbonized society. By 2030, the pooled capital of JPY 100 million will have catalysed the acquisition and management of 500 thousand hectares of forest, marking a significant stride towards, a greener and more sustainable future.

Iwatani Corporation [8088:TYO]

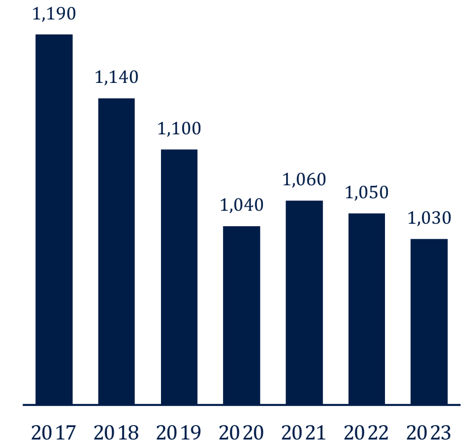
Position: **LONG**

Leading Player for Green Hydrogen

Japan formulated the world's first national hydrogen strategy in 2017. Since then, more than 30 countries and regions have followed suit, demonstrating an acceleration of government interest in the role of hydrogen as part of a nation's long-term energy goals. Among the contenders, Japan emerges as a formidable frontrunner in the global hydrogen industry. Green hydrogen has no carbon dioxide during utilization. It can fuel carbon-free energy systems through renewable energy integration or carbon capture and storage. With domestic hydrogen demand projected to skyrocket from 1.5 million tons in 2030 to a staggering 24 million tons by 2050, Japan braces for a seismic shift in energy dynamics.

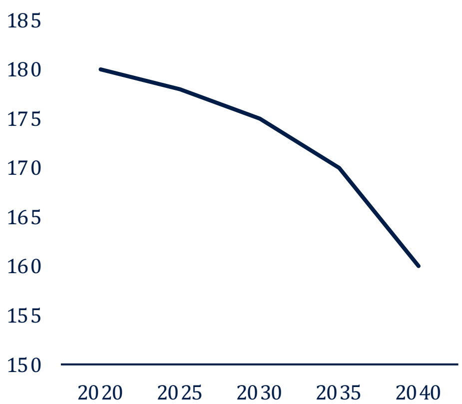
Japan can potentially supply up to 5 million tons/year of domestic hydrogen, necessitating an additional 20 million tons from overseas sources. To secure its position as a dominant player in the global

Total GHG Emissions (mt-CO2)



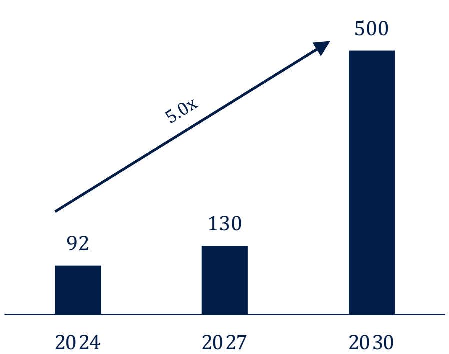
Source: Statista

CO2 Removal (mt-CO2)



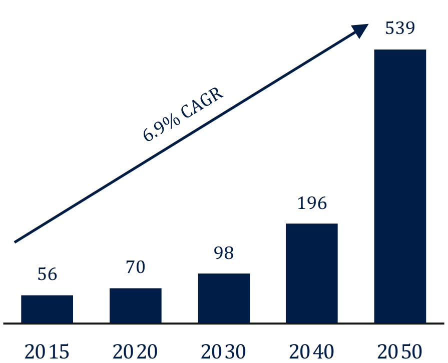
Source: Reuters

Sumitomo's Forest Land Managed (thousand ha)



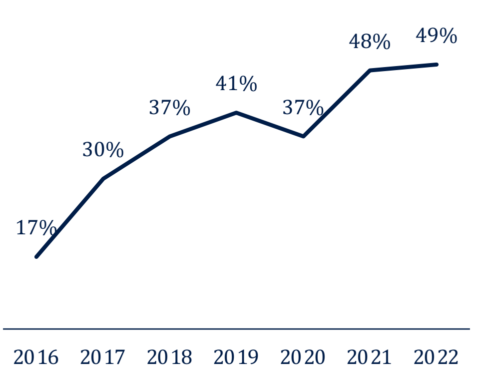
Source: Company Filings

Global Demand for Hydrogen (million metric tonnes)



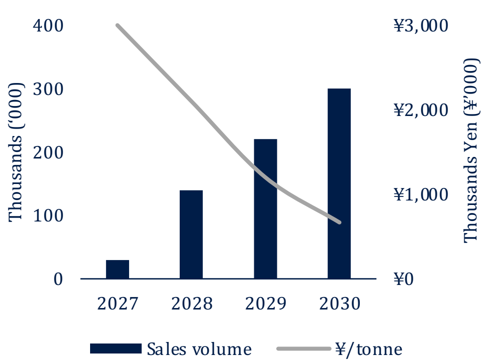
Source: PricewaterhouseCoopers

Reduction of CO2 emissions (%)

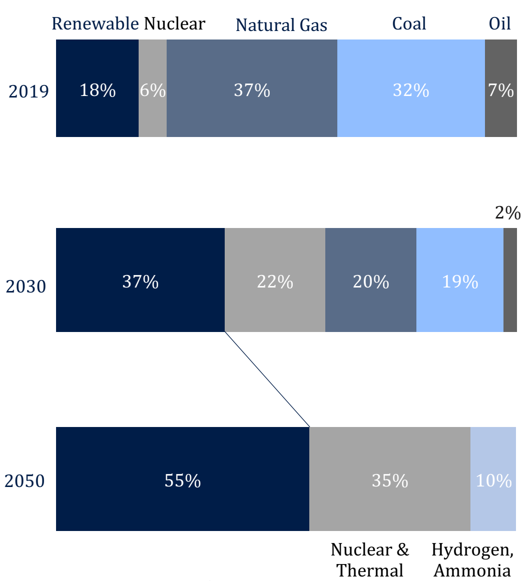


Source: World Economic Forum

Hydrogen Sales and ¥/ton

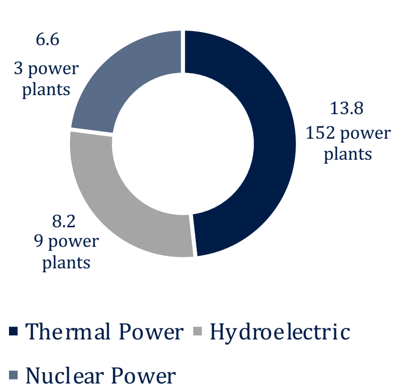


Japan's Energy Mix Goal



Source: European Parliament

KEPCO Installed Capacity (GW)



Source: Company Filings

hydrogen, necessitating an additional 20 million tons from overseas sources. To secure its position as a dominant player in the global hydrogen space, Japan unveiled plans to invest a staggering JPY 3 trillion over the next 15 years. This ambitious initiative aims to subsidize cleaner hydrogen production, fostering robust collaboration with the private sector to develop a resilient domestic supply chain for this transformative energy source.

Pioneering the Green Hydrogen Revolution in Japan

At the forefront of Japan's hydrogen movement is Iwatani, the country's sole supplier of liquid hydrogen. Iwatani has achieved several milestones, like building Japan's first large-scale hydrogen production plant and commercial hydrogen stations. Iwatani embarks on an ambitious 5-year cumulative investment plan to fortify supply chains in anticipation of large-scale hydrogen supply. This strategic move aims to catapult sales volume from 14,000 tons per year to a staggering 300,000 tons per year by 2030, cementing Iwatani's pivotal role in shaping Japan's hydrogen landscape.

Kansai Electric Power Company (KEPCO) [9503:TYO]
Position: LONG

Going Nuclear

Up till the 2011 Fukushima Nuclear Power Plant Disaster, Japan was the third-largest user of nuclear energy, meeting nearly 30% of their electricity needs. Due to safety concerns, all 17 power plants nationwide, consisting of 48 reactors, was shut down post-2011. However, 6 nuclear plants have been restarted ever since PM Suga spelled out the roadmap for Japan to achieve carbon neutrality, where nuclear energy is expected to meet upwards of 20% of Japan's electricity demands by 2030. Despite lingering safety concerns among the Japanese population, they understand that reverting to nuclear energy is the most cost-effective option, with electricity generated from nuclear being 43.1% cheaper than coal and natural gas.

Strategically Placed to Capitalise on Nuclear Energy

KEPCO is strategically positioned in the nuclear energy space. KEPCO operates 3 of the 6 nuclear power plants that has been restarted, amounting to 6.6 GW in nuclear power capacity. They have plans to improve and expand their current reactors in line with the government goals. Their reactors are also expected to produce Hydrogen will serve as the upstream base for Japan's large-scale hydrogen and ammonia supply chain, which is expected to account for 10.0% of their energy mix by 2050.

KEPCO accounts for nearly 10.0% of Japan's total electricity output, with a focus on serving the Kansai region, the second-largest industrial area in Japan. Besides nuclear power, more than half of their power-generating capacity are in renewables (14.8GW of 27.8GW), indicating their strategic positioning in an economy that is heavily reliant on conventional sources of energy. They complement this with an extensive network of distribution and transmission lines, supplying upwards of 111 billion kWh of electricity as Japan strives to meet its 2050 net zero emission goals.