

Japan: a tale of two countries

By Angelo Katsoras

Introduction

Hovering perpetually between stagnation and sluggish growth yet boasting some of the world's most competitive companies, Japan defies easy categorization. Despite having the world's oldest population and the highest public debt-to-GDP ratio, many of its companies continue to excel in key sectors such as automobiles and robotics and have a significant global manufacturing footprint.

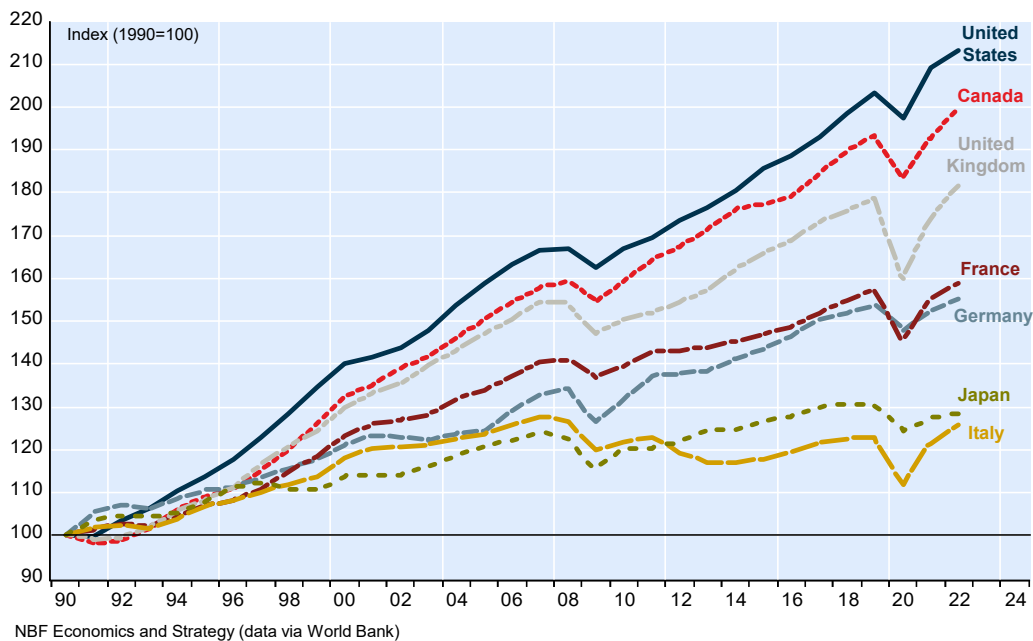
This report argues that because of Japan's enduring mix of strengths and weaknesses, the wide gap between its stagnant economy and its globally competitive companies will remain for the foreseeable future.

Japan's long stagnant economy

Japan's sluggish growth began in the early 1990s when its real estate and stock market bubbles burst.

Japan's economy has been in the doldrums for a very long time

GDP in PPP (constant 2017 international \$), index (1990=100)



Recently, Japan's economy has been experiencing modest growth. In December, the OECD estimated that real GDP would grow by 1.9% in 2023, and then slow down to 1% in 2024.¹ It is important to note, however, that Japan has had many false economic dawns over the past three decades. The latest possible source of disappointment is the slowing global economy, which is exerting pressure on Japan's trade-dependent economy and may force a downward revision of future growth estimates.

Japan's currency, meanwhile, has long been under downward pressure due to factors such as a stagnant economy, declining population, deflation and lower government bond yields than in other countries.

In the long run, and regardless of the economic cycle, Japan may find it difficult to move away from a low interest rate environment because both the government and the financial system have become heavily dependent on these low rates. We saw what the risks are of transitioning to higher interest rates last March when the U.S. Federal Reserve's monetary tightening triggered a reaction that led to the collapse of Silicon Valley Bank and several other financial institutions.

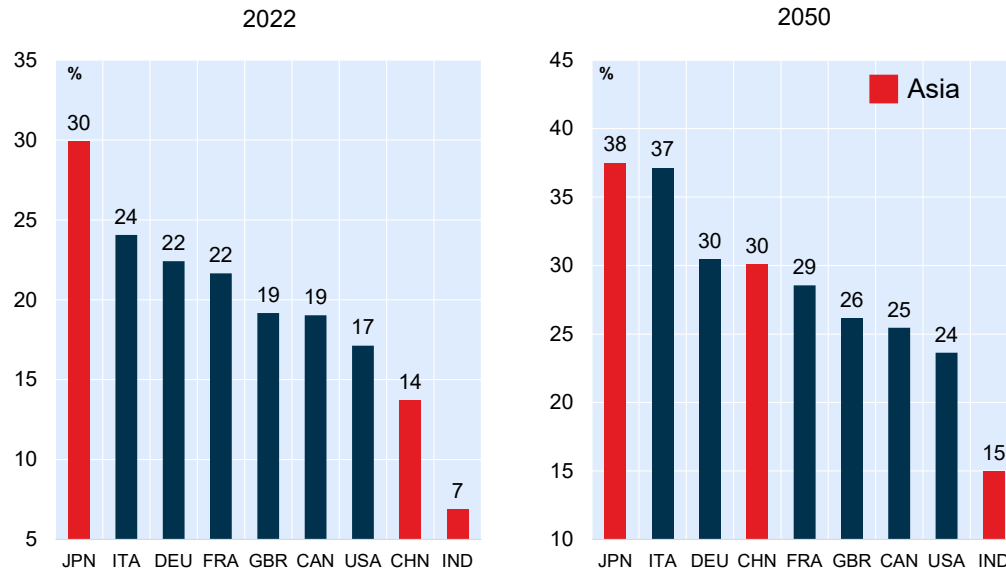
¹ "Japan 2024," OECD Economic Summary, January 2024

Japan's growing demographic storm

Dealing with the immense costs of having the world's oldest population is, by far, Japan's biggest challenge.

Japan's rapidly aging population

Countries with the highest share of people aged 65 and over, 2022 and 2050 projections



NBF Economics and Strategy (data via [United Nations](#))

The proportion of seniors in the Japanese population is growing largely because of the country's low birth rate. In 2022, it stood at 1.26 children per woman² (whereas a rate of 2.1 is needed to keep the population stable over the long-term). Overcoming this low birthrate is complicated by the fact that Japan is one of the most expensive places in the world to raise children.³ Large-scale immigration could be at least a partial solution, but the country has traditionally resisted this option.

The government has recently pledged to spend about 20 trillion yen (about \$140 billion or 4% of GDP) on measures to support couples who want to have more children. It is important to note, however, that similar policies enacted in other countries have almost always failed to boost the birth rate significantly.

The United Nations has predicted that if current trends continue, Japan's population will shrink from 126 million in 2020 to between 98 and 106 million in 2050.⁴

This will hurt the economy in two ways. First, it means there will be fewer workers to drive economic growth and to pay taxes to fund public services. Second, proportionally more seniors equal more spending on pensions and healthcare. Further, the electoral clout of senior citizens is amplified by their tendency to vote in much higher numbers than younger people. All of this makes politicians extremely wary of cutting age-related benefits.

But there are two factors working in Japan's favour that are worth noting:

- While Japan is aging faster than the United States, its healthcare costs are much lower. In 2022, per capita healthcare costs stood at \$5,250 for Japan versus \$12,555 for the United States.⁵
- Japan's aging population makes layoffs politically easier because displaced workers can quickly find new jobs. Unemployment peaked at 5.5% in 2002. Today, the unemployment rate is only 2.7%.⁶

² Japan Ministry of Health, Labor, and Welfare, 2022

³ "It's 'now or never' to stop Japan's shrinking population, PM says," Reuters, January 23, 2023

⁴ "Japan's Eighth National Communication and Fifth Biennial Report," The Government of Japan, December 2022

⁵ OECD, 2022

⁶ "Japan's GDP Bump Is Real but Fragile," Foreign Policy, August 30, 2023

Debt as far as the eye can see

Since the bursting of Japan's real estate and stock market bubbles in the early 1990s, a combination of very slow growth and a rapidly aging population has left Japan with the world's highest public debt-to-GDP ratio. As of December 2022, Japan's gross government debt amounted to 263% of GDP, according to the International Monetary Fund. In fact, the government spent 22% of its annual budget on debt and interest payments last year, more than the 15% spent on public works, education and defence combined.⁷

Why is there no debt crisis in Japan?

Unlike many other debt-burdened countries, Japan finances almost all of its debt domestically. The debt is largely owned by Japanese banks, pension funds and the central bank, which alone holds about half of all government bonds.⁸ Japan also has a large current account surplus, which has been bolstered by exports and payments from overseas subsidiaries (more on this later). All of this has allowed Japan to simultaneously have the world's highest national debt and the world's lowest interest rates.

However, these low interest rates carry significant risks. For starters, any indication that the central bank is tapering its purchases of government bonds could cause a spike in yields and hurt economic growth. Longer term, the growing number of retirees could eventually draw down their savings to the point where Japan will have to start borrowing more from abroad at higher rates.

Finally, the OECD has warned that Japan's debt will grow to even higher levels unless policymakers enact major reforms.

Japan's energy and food vulnerability

Japanese households are particularly vulnerable to food and energy costs. This is because Japan imports about 60% of its food and 90% of its energy. The weaker the yen, the more expensive these imports become.⁹

Japan's sluggish economy stands in stark contrast to the strength of many of its global companies

Japanese companies generate more than 50% of sales abroad. For companies such as Sony and Toyota, the level of foreign sales reaches 70% to 80%.¹⁰ These revenues come not only from exports, but also from production shifted overseas to overcome trade barriers and diversify away from a long-stagnant domestic economy.

In 2022, about 35% of industrial production by Japanese firms occurred overseas, up from just over 10% in the 1980s.¹¹ Japanese automakers have been at the forefront of offshoring. In 2022, they produced more than twice as many vehicles at their production facilities outside Japan (16.96 million) as they did inside.¹² Their profits have been bolstered by the yen's significant long-term decline, which makes every dollar earned abroad by Japanese companies more valuable when it is repatriated to Japan and converted to its home currency. This, along with other investments abroad, allows Japan to run a current account surplus and not rely on foreign capital to finance its public debt.

Japan's companies a very competitive in certain key sectors

Japan's robotics advantage

Japan is a world leader in robotics. The country has a 46% share of the global industrial robot manufacturing market, according to the International Federation of Robotics. From 2017 to 2022, production grew at a compound annual growth rate of 6% and, in 2022, exports reached a new high of 207,737 units.¹³ This figure does not include industrial robots manufactured by Japanese companies in other countries.

⁷ "Japan's debt time bomb to complicate BOJ exit path," Reuters, February 10, 2023

⁸ "Japan's growing debt mountain: Crisis, what crisis?," Nikkei Asian Review, August 1, 2023

⁹ "Yen tumbles and shares soar as Japan inflation begins to bite," Financial Times, October 1, 2023

¹⁰ "Japan: Reclaiming Lost Decades," Charles Schwab, June 2023

¹¹ "Survey Report on Overseas Business Operations by Japanese Manufacturing Companies," Japan Bank for International Co-operation, May 26, 2023

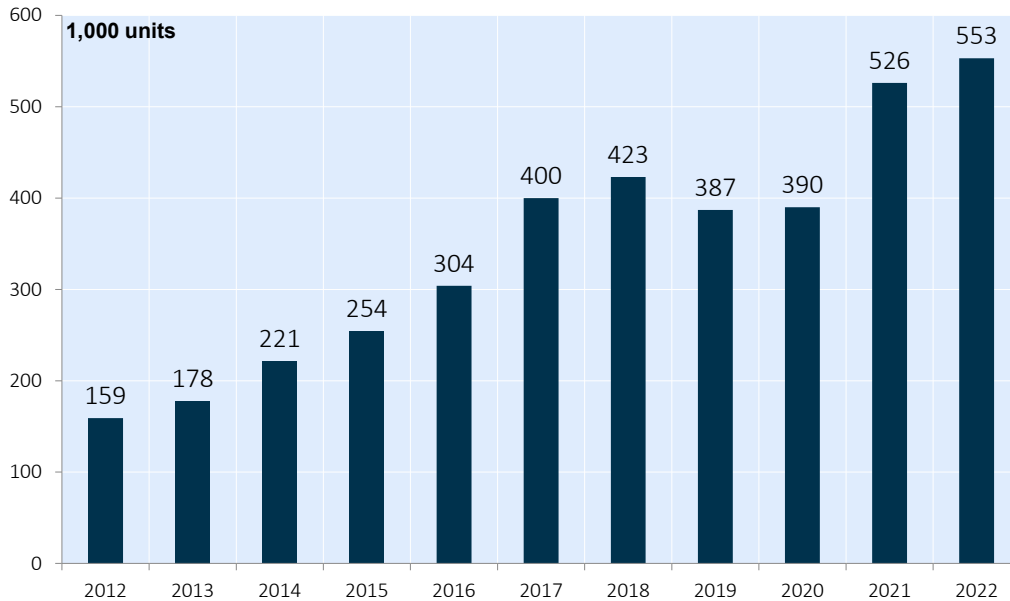
¹² "Japan Automobile Manufacturers Association (Via Statista), February 2023

¹³ "Robot Installations in Japan up by 9%," International Federation of Robotics, September 25, 2023

The following chart reveals that over 553,000 industrial robots were installed globally in 2022, an increase from only 159,000 in 2012. The International Federation of Robotics predicts that annual installations will reach 718,000 by 2026.¹⁴

World: Automation has accelerated

World annual installations of industrial robots



NBF Economics and Strategy (data via World Robotics 2023 and International Federation of Robotics)

In addition to the demand for industrial robots, there is a growing global demand for service robots used in sectors such as healthcare, logistics and agriculture. In 2022, 158,000 of these robots were sold, a 48% increase from 2021.¹⁵

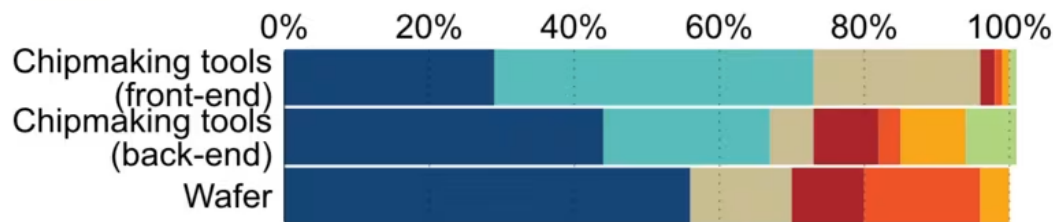
Japan's semiconductor strengths

While its share of the semiconductor market has slid from 50% in the late 80s to about 10% today, Japan remains a major supplier of chip-making machines and semiconductor materials.

Market leaders in chipmaking equipment and materials

(In percent)

Japan U.S. Europe South Korea Taiwan China Other



Source: "Japan's world-leading chip materials makers risk being acquired," Nikkei Asian Review, Sept. 16, 2023

¹⁴ "World Robotics 2023," International Federation of Robotics, September 2023

¹⁵ "World Robotics Service Robots 2023 (summary)," International Federation of Robotics, September 2023

How Japan stands to benefit from China-U.S. tensions

Japan is well positioned to benefit from efforts being made by many Western companies to partially diversify their supply chains away from China and prioritize resilience. Here's why:

- Even if manufacturers do not build factories in Japan, they may enter into joint ventures with Japanese companies overseas and/or rely on their expertise to help build more automated factories
- Japanese firms hold a significant geopolitical edge over their Chinese competitors: access to U.S. tax credits provided by the Inflation Reduction Act. This legislation offers preferential treatment to companies in key sectors that set up manufacturing plants in the U.S.
- Japanese manufacturers have steadily lost market share to their Chinese and South Korean counterparts, particularly in the EV battery market. By 2022, only one Japanese company—Panasonic, with a global market share of less than 6%—ranked among the top 10 battery manufacturers in the world.¹⁶ U.S. legislation aimed at reducing reliance on EV supply chains from China provides an opportunity for Japan to regain market share in this sector.
- As noted in the previous section, Japan is well positioned to benefit from the global reconfiguration of semiconductor supply chains

India attempting to gradually reduce reliance on Chinese companies

Tensions between India and China following the 2020 border standoff (which resulted in deaths on both sides) have made it more difficult for Chinese companies to operate in India. For example, India recently announced that it would not consider allowing Chinese suppliers to Apple to set up operations unless they first found local joint venture partners. This disadvantage is highlighted by the fact that China's Luxshare (the second-largest iPhone assembler after Foxconn) is struggling to get approval for an iPhone plant in India, while Japan's TDK has already begun building a wholly owned 180-acre facility to manufacture battery cells for iPhones.¹⁷

Conclusion

Investors face a tale of two Japans. On the one hand, there is the domestic Japan, which is struggling with high debt levels and a rapidly aging population, factors that have contributed to its long period of sluggish economic growth.

On the other hand, there is a Japan characterized by highly competitive globally oriented companies with substantial overseas industrial production capacity. This side of Japan is the driving force behind its current account surplus, which allows it to finance its substantial debt at very low interest rates.

As long as this balance is maintained, Japan will be able to maintain its ability to struggle and prosper at the same time.

¹⁶ "Japan a likely winner in the United States" China strategy," Japan Times, July 4, 2023

¹⁷ "Apple moves toward India-made iPhone in push away from China," Financial Times, December 6, 2023



Economics and Strategy

Montreal Office

514-879-2529

Stéfane Marion

Chief Economist and Strategist
stefane.marion@nbc.ca

Kyle Dahms

Economist
kyle.dahms@nbc.ca

Alexandra Ducharme

Economist
alexandra.ducharme@nbc.ca

Matthieu Arseneau

Deputy Chief Economist
matthieu.arseneau@nbc.ca

Daren King, CFA

Economist
daren.king@nbc.ca

Angelo Katsoras

Geopolitical Analyst
angelo.katsoras@nbc.ca

Jocelyn Paquet

Economist
jocelyn.paquet@nbc.ca

Toronto Office

416-869-8598

Warren Lovely

Chief Rates and Public Sector Strategist
warren.lovely@nbc.ca

Taylor Schleich

Rates Strategist
taylor.schleich@nbc.ca

General

This Report was prepared by National Bank Financial, Inc. (NBF), (a Canadian investment dealer, member of IIROC), an indirect wholly owned subsidiary of National Bank of Canada. National Bank of Canada is a public company listed on the Toronto Stock Exchange.

The particulars contained herein were obtained from sources which we believe to be reliable but are not guaranteed by us and may be incomplete and may be subject to change without notice. The information is current as of the date of this document. Neither the author nor NBF assumes any obligation to update the information or advise on further developments relating to the topics or securities discussed. The opinions expressed are based upon the author(s) analysis and interpretation of these particulars and are not to be construed as a solicitation or offer to buy or sell the securities mentioned herein, and nothing in this Report constitutes a representation that any investment strategy or recommendation contained herein is suitable or appropriate to a recipient's individual circumstances. In all cases, investors should conduct their own investigation and analysis of such information before taking or omitting to take any action in relation to securities or markets that are analyzed in this Report. The Report alone is not intended to form the basis for an investment decision, or to replace any due diligence or analytical work required by you in making an investment decision.

This Report is for distribution only under such circumstances as may be permitted by applicable law. This Report is not directed at you if NBF or any affiliate distributing this Report is prohibited or restricted by any legislation or regulation in any jurisdiction from making it available to you. You should satisfy yourself before reading it that NBF is permitted to provide this Report to you under relevant legislation and regulations.

National Bank of Canada Financial Markets is a trade name used by National Bank Financial and National Bank of Canada Financial Inc.

Canadian Residents

NBF or its affiliates may engage in any trading strategies described herein for their own account or on a discretionary basis on behalf of certain clients and as market conditions change, may amend or change investment strategy including full and complete divestment. The trading interests of NBF and its affiliates may also be contrary to any opinions expressed in this Report.

NBF or its affiliates often act as financial advisor, agent or underwriter for certain issuers mentioned herein and may receive remuneration for its services. As well NBF and its affiliates and/or their officers, directors, representatives, associates, may have a position in the securities mentioned herein and may make purchases and/or sales of these securities from time to time in the open market or otherwise. NBF and its affiliates may make a market in securities mentioned in this Report. This Report may not be independent of the proprietary interests of NBF and its affiliates.

This Report is not considered a research product under Canadian law and regulation, and consequently is not governed by Canadian rules applicable to the publication and distribution of research Reports, including relevant restrictions or disclosures required to be included in research Reports.



UK Residents

This Report is a marketing document. This Report has not been prepared in accordance with EU legal requirements designed to promote the independence of investment research and it is not subject to any prohibition on dealing ahead of the dissemination of investment research. In respect of the distribution of this Report to UK residents, NBF has approved the contents (including, where necessary, for the purposes of Section 21(1) of the Financial Services and Markets Act 2000). This Report is for information purposes only and does not constitute a personal recommendation, or investment, legal or tax advice. NBF and/or its parent and/or any companies within or affiliates of the National Bank of Canada group and/or any of their directors, officers and employees may have or may have had interests or long or short positions in, and may at any time make purchases and/or sales as principal or agent, or may act or may have acted as market maker in the relevant investments or related investments discussed in this Report, or may act or have acted as investment and/or commercial banker with respect hereto. The value of investments, and the income derived from them, can go down as well as up and you may not get back the amount invested. Past performance is not a guide to future performance. If an investment is denominated in a foreign currency, rates of exchange may have an adverse effect on the value of the investment. Investments which are illiquid may be difficult to sell or realise; it may also be difficult to obtain reliable information about their value or the extent of the risks to which they are exposed. Certain transactions, including those involving futures, swaps, and other derivatives, give rise to substantial risk and are not suitable for all investors. The investments contained in this Report are not available to retail customers and this Report is not for distribution to retail clients (within the meaning of the rules of the Financial Conduct Authority). Persons who are retail clients should not act or rely upon the information in this Report. This Report does not constitute or form part of any offer for sale or subscription of or solicitation of any offer to buy or subscribe for the securities described herein nor shall it or any part of it form the basis of or be relied on in connection with any contract or commitment whatsoever.

This information is only for distribution to Eligible Counterparties and Professional Clients in the United Kingdom within the meaning of the rules of the Financial Conduct Authority. NBF is authorised and regulated by the Financial Conduct Authority and has its registered office at 70 St. Mary Axe, London, EC3A 8BE.

NBF is not authorised by the Prudential Regulation Authority and the Financial Conduct Authority to accept deposits in the United Kingdom.

U.S. Residents

With respect to the distribution of this report in the United States of America, National Bank of Canada Financial Inc. ("NBCFI") which is regulated by the Financial Industry Regulatory Authority (FINRA) and a member of the Securities Investor Protection Corporation (SIPC), an affiliate of NBF, accepts responsibility for its contents, subject to any terms set out above. To make further inquiry related to this report, or to effect any transaction, United States residents should contact their NBCFI registered representative.

This report is not a research report and is intended for Major U.S. Institutional Investors only.

This report is not subject to U.S. independence and disclosure standards applicable to research reports.

HK Residents

With respect to the distribution of this report in Hong Kong by NBC Financial Markets Asia Limited ("NBCFMA") which is licensed by the Securities and Futures Commission ("SFC") to conduct Type 1 (dealing in securities) and Type 3 (leveraged foreign exchange trading) regulated activities, the contents of this report are solely for informational purposes. It has not been approved by, reviewed by, verified by or filed with any regulator in Hong Kong. Nothing herein is a recommendation, advice, offer or solicitation to buy or sell a product or service, nor an official confirmation of any transaction. None of the products issuers, NBCFMA or its affiliates or other persons or entities named herein are obliged to notify you of changes to any information and none of the foregoing assume any loss suffered by you in reliance of such information.

The content of this report may contain information about investment products which are not authorized by SFC for offering to the public in Hong Kong and such information will only be available to, those persons who are Professional Investors (as defined in the Securities and Futures Ordinance of Hong Kong ("SFO")). If you are in any doubt as to your status you should consult a financial adviser or contact us. This material is not meant to be marketing materials and is not intended for public distribution. Please note that neither this material nor the product referred to is authorized for sale by SFC. Please refer to product prospectus for full details.

There may be conflicts of interest relating to NBCFMA or its affiliates' businesses. These activities and interests include potential multiple advisory, transactional and financial and other interests in securities and instruments that may be purchased or sold by NBCFMA or its affiliates, or in other investment vehicles which are managed by NBCFMA or its affiliates that may purchase or sell such securities and instruments.

No other entity within the National Bank of Canada group, including National Bank of Canada and National Bank Financial Inc, is licensed or registered with the SFC. Accordingly, such entities and their employees are not permitted and do not intend to: (i) carry on a business in any regulated activity in Hong Kong; (ii) hold themselves out as carrying on a business in any regulated activity in Hong Kong; or (iii) actively market their services to the Hong Kong public.

Copyright

This Report may not be reproduced in whole or in part, or further distributed or published or referred to in any manner whatsoever, nor may the information, opinions or conclusions contained in it be referred to without in each case the prior express written consent of NBF.