Bank of Japan Combat with Hedge Funds
——How Long Can the Bank Maintains?

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Abstract:

Having observed pessimistic anticipations on the Japanese economy from investors in the form of a mass selloff of JGB and Shorting on both stock and Yen, we discuss the gloomy status of Japanese economy and the YCC from the following aspects.

Weakened national economy since 1990s

Global financial crisis and narrowing interest gap with the rest of the world first brought about stagnation in Japan's economy. While deflation reduced investment in new business, which hinders its development in globalization, structural problems such as aging population and heavy reliance on import add on to the problem.

Abenomics and YCC

Three arrows of both financial and fiscal policies to end the deflation and stimulate investment has been implemented by Abe. Later BOJ implement QQE and YCC for further monetary easing. While Abenomics has positive impact on consumption and company earning, sustainability of the policy is questioned.

Current economic downturn and related parties' reactions

Under the supply chain crisis and rate hiking in the rest of the world, unsolved problems rooted in Japan's economy revealed in the slow growth of GDP, and inflation in food and energy prices, along with weakened Yen. However, BOJ is still holding on to YCC and purchasing JGB to control the interest rate to defend shorting and avoid occurrence of overwhelming government debt should the YCC failed. Currently, market participants are still unsure about the ensuing consequences if the YCC would be abandoned.

BOJ's strategy and future of YCC

The report concluded with the advantages and disadvantages of maintaining YCC, along with analysis of Japan's monopoly position in certain industry, and other possible strategies for BOJ, along with 3 suspected cases for the future.

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Introduction

Hedge fund BlueBay is shorting Japanese bonds until BOJ breaks. As the BOJ escalates attempts to keep a lid on bond yields, BlueBay is betting the central bank will be forced to abandon a policy that's increasingly out of sync with global peers. The BOJ's so-called yield curve control is "untenable," according to Mark Dowding, BlueBay's London-based chief investment officer. He also said in an interview: "We have a sizable, short on JGBs." In the following session, we will deep dive into the Japanese economic system, operational logic of YCC (yield curve control) and the influence under this system to better understand the whole situation.

1. Abeconomics

Brief

Abenomics is the nickname for the economic policies set out for Japan in 2012 when prime minister Shinzo Abe came into power. Abenomics involved increasing the nation's money supply, boosting government spending, and enacting reforms to make the Japanese economy more competitive.

Background

1. Low growth and deflation

Japan's economy has been at a low growth rate for about 20 years since the bubble economy burst in the early 1990s as a watershed.

The economy has been growing at a very low rate for about 20 years. In particular, the global credit crunch and growth stagnation brought about by the Lehman Brothers incident in the latter half of 2008 and the subsequent European government debt crisis also had a significant impact on the Japanese economy. At that time, compared with the bold financial easing measures in Europe and the United States, which narrowed the interest rate gap between Japan and the rest of the world, Japanese economy was deeply in a vicious cycle of inflation and deflation.

2. Structural Problems

The deterioration of the general economy (boom) mentioned above has led to the deterioration of the individual aspects (structural problems) of the Japanese economy, resulting in a prolonged economic stagnation. In other words, the prolonged deflation has shrunk Japanese investment in equipment, research and development, and even human resources, as well as the willingness to start new businesses, which in turn has adversely affected the basic strength of the Japanese economy.

Under globalization, innovation can change the entire market environment in the blink of an eye, companies are becoming more aggressive in their choice of countries and regions, and institutional competition between countries is becoming more intense.

Faced with an aging and declining population, and the need to rely on imports for resources and food, Japan must undoubtedly respond immediately to globalization and create new value.

Basic strategies

The Abe regime believes that Japan should solve the current problems.

1. to get rid of the long-term deflation and downturn
2. to address the structural problems, the Japanese government, private enterprises and citizens should actively address them
3. to build a social foundation that can support Japan's economic development and an aging society

In order to achieve these goals, the Abe administration is promoting the so-called "three arrows" (also known as "Abe economics"), such as "bold financial policies," "dynamic fiscal policies," and "growth strategies to stimulate private investment," which are complementary to each other, in order to break away from the long-standing deflation and to seek long-term stable economic growth.

Bold financial policies

(1) With the progress of efforts to strengthen the competitiveness and growth of the Japanese economy, prices are likely to remain stable and the composite rate of price inflation will increase. Based on this understanding, the Bank of Japan has set a price stabilization target of a 2% increase in consumer prices from last year. It will implement

financial easing measures under the above price stabilization target with the aim of achieving it as soon as possible.

(2) At that time, the Bank of Japan will review the risk factors on the financial side, including the accumulation of imbalances, in light of the effects of financial policies and the time required, and confirm that there are no problems from the perspective of ensuring sustainable economic growth.
(3) The government will focus on innovative research and development, strengthening of the innovation base, bold regulation, institutional reform, and taxation system.
(4) The Bank of Japan will implement measures such as increasing the currency base, long-term bonds, and ETFs (Exchange Traded Funds) to "two times" within two years, etc.

Dynamic fiscal policies

On January 11, 2013, the Japanese government decided to combine the initial budget for fiscal 2013 into a 15-month budget for the purpose of avoiding a bottoming out of the economy and connecting to the growth strategy, naming the "Emergency Economic Policy for Japan's Economic Regeneration".

The main contents include

(1) Measures for recovery and disaster prevention, especially measures for reconstruction of infrastructure in response to the Great East Japan Earthquake and measures for earthquake resistance in tunnels and bridges.
(2) To create wealth through growth, including the strengthening of venture capital to support cutting-edge technologies, the enhancement of infrastructure that can generate innovative technologies, energy-saving measures to support enterprises, and the establishment of a fund by the public and private sectors to support enterprises to add new equipment or make overseas investments.
(3) To provide people with a secure and safe life, including ensuring the training of nursing mothers, promoting residential medical care, retaining local doctors, and reducing the burden of medical care for the elderly aged 70-74. The goal is to achieve a real GDP growth rate of 2% and create 600,000 jobs in Japan.

Growth strategies to stimulate private investment

The Abe administration believes that it is necessary to implement a growth strategy that brings out the potential demand both internally and externally. In order to increase labor productivity and strengthen Japan's potential growth, the government launched the "growth strategy": " The third arrow" to realize challenges, openness and innovation.

The main content includes:

(1) Acceleration of metabolism and venture capital

  a. Expanding private investment and promoting business restructuring
  b. Creation of new businesses
  c. Revise corporate governance and review the use of public funds.

(2) Resolutely implement legal and institutional reforms and open up the national business

  a. Create and nurture healthy and long-lived industries.
  b. Make the agriculture, forestry and water industry a growth industry
  c. Foster the energy industry to gain access to the world market
  d. To make use of private capital and wisdom to prepare, operate, and renew social capital
  e. Lead innovation using IT

2. YCC

In September 2016, after a comprehensive assessment of economic activity, prices and policy effects, the Bank of Japan introduced a new framework for enhanced monetary easing: QQE (quantitative quality easing) with YCC (yield curve control).

This policy framework consists of two components:

- The first component is "yield curve control," which is the control of short-term and long-term interest rates through market operations.
- The second component is the "inflation overshooting commitment," which is a commitment to continue to expand the base currency until the observed CPI growth rate exceeds 2% year-over-year and remains above target in a stable manner.

The YCC is a combination of a negative short-term policy rate and a long-term interest rate target, i.e., a policy rate of -0.1% on the current account balances of financial institutions at the central bank; and the purchase of Japanese government bonds to maintain the 10-year bond yield at 0% or below.

To smoothly control the yield curve, the BOJ introduced two new market manipulation tools.

- Fixed-rate purchase operations: direct purchases of JGBs at yields specified by the BOJ.
- Fixed-rate funding operation with a maximum duration of 10 years: the maximum duration of the funding operation will be extended from 1 year to 10 years.

Mechanism

The mechanism is that when the 10-year Japanese government bond (JGB) rate hits the upper end of +0.1%, BOJ will buy the 10-year JGB at that price to depress the rate. When the policy of controlling the 10-year government bond rate gains "credibility", the level of interest rates for other maturities and the weighted average interest rate on the bank's asset side will also be linked to the level of the policy rate and the risk-free rate (government bond rate).

Effects of Abenomics

After the execution of Abenomics, ESG issues in Japan have been gradually improved.

1. Personal consumption continued to rise.

   The rate of decline in equipment investment narrowed, residential construction continued to heat up, and exports grew faster. Personal consumption continued to rise in the first two quarters, both up 0.8% YoY.

2. Corporate earnings, mainly in the manufacturing sector, are improving, and the employment situation has improved significantly.

   Due to the recovery of demand and the depreciation of the yen, corporate earnings are gradually strengthening. Among them, the manufacturing industry's current earnings will increase by nearly 0.4 trillion yen compared with expectations at the beginning of the year. Industry-wide current earnings will increase by 26% in fiscal 2013. In addition, the employment situation continues to improve, with the complete unemployment rate of 4.1%, 4.1% and 3.9% from April to June, respectively.

3. Industrial ex-factory price index rose slowly, and the consumer price index showed positive growth.

   The factory price index for industrial goods rose 0.1% in June from a year earlier, while the CPI rose 0.4% year-over-year, regaining ground after a 14-month hiatus.

However, Abenomics is a double-edged sword. There is an array of drawbacks:

1. Consumption recovery is significantly better than investment.

   This round of economic recovery mostly benefited from robust consumer demand. In the first two quarters of this year, personal consumption drove GDP growth of 0.6 and 0.5 percentage points respectively, while private equipment investment is still the main drag on domestic demand growth, with six consecutive quarters of negative growth.

2. Uneven development across industries.

   The sharp depreciation of the yen triggered varying degrees of improvement in earnings across industries, with manufacturing generally doing better than non-manufacturing. Among the manufacturing industries, automobiles and electrical appliances were better than steel, shipbuilding and petrochemicals; among the non-manufacturing industries, public services were better than retail trade.

3. There are significant differences in the benefits for each class.

   The wealthy class enjoys the wealth effect of the appreciation of stocks and real estate more than the working class, and the import prices of energy and food increase significantly, but it increases the burden of living of ordinary consumers.

4. In terms of policy measures, the export growth driven by the depreciation of the ye is not sustainable.

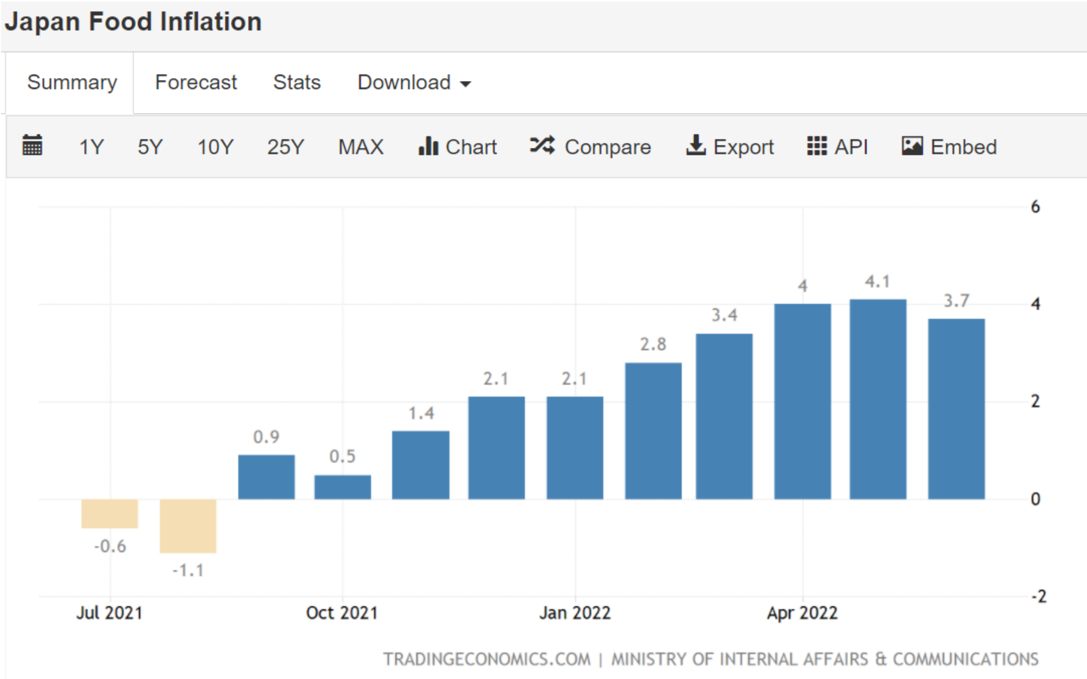
   Although the depreciation of the yen has benefited Japanese companies' exports, it has hurt neighboring Asian countries in the face of insufficient global effective demand, triggering a wave of interest rate cuts in economies such as Korea and Southeast Asia. The sharp depreciation of the yen has also damaged Japan's international image and put the Japanese government under greater political pressure.

3. Japanese Economics

After years of economic downturn, Japan is again hit hard by the surging commodity prices and cheapening yen. Food price in the global market stays high, with the food price index increasing by 12.7% in March 2022. With Russia and Ukraine's grain and oil products exports accounting for 19.2% and 75.9% of global supply respectively, the cut-back of exports due to the outbreak of war, ensuing shortage of fuel and fertilizers, shut-down of ports, and trade restrictions, resulted in severe insufficiency in supply.

Under the food crisis, other major exporters like India and Brazil are restricting their exports consequently, combined with the American QE and deflation of the yen resulted in increasing food prices. The energy prices in the global market also surged due to the war and pandemic outbreak, in particular, the natural gas price in Asia has risen nearly tenfold compared to the corresponding period last year. According to Bloomberg, Japan imports about 90% of its energy, mostly priced in dollars, the soaring prices from a hike in global oil, gas, and coal prices further increased as yen fell to its lowest level in two decades. Surging prices lead to increasing CPI. The CPI excluding fresh food but including fuel costs increased by 2.2% in June 2022 from the year earlier, exceeding the central bank's 2% target, mainly attributed to natural gas, crude oil, and coal, while the CPI excluding both food and energy remain steady over the past year. In particular, food inflation reached 3.7% after 10 straight months of increase, attributed mainly to the price surge of imported commodities, including fish and seafood (10.8%vs.9%), meats (3.3%vs.2.7%), cereal (4% vs.3.2%) and processed food (4.3%vs3.4%).

Figure: Japan food inflation



Source: Trading economics

The situation is unlikely to improve shortly, though the closing gap between demand and supply for crude oil is leading to a price pullback, food and natural gas prices will still experience high-level fluctuation as necessities with low elasticity, which has a larger impact on low-income families. People are forced to suppress their demand for certain products and services, leading to GDP growth slow down, which is expected to be increasing by only 2 % excluding inflation. The IPI also decreased by 7.5% month-on-month in May, suggesting the country's production fell by 3.1%.

Giants that short Japan:

Bluebay AM, Caygan Capital, and Aviva Investors believe that BOJ is not able to conduct continuous bond purchases and keep YCC, calling it "untenable" as BOJ is leaving Japan incompatible with the global environment where rates are hiking. As the yield gap between Japan and US widens, foreign investors in the cash market sold a record 4.8 trillion yen of Japanese bonds through the week of June 17, short sellers of JGB are also betting large on the plunging bond price as a result of increasing rate. On the other hand, investors in the currency market are shorting the yen by borrowing and selling the yen to drive down its price and use the money to buy oversea bonds to earn the yield differential, meanwhile, shorting JGB to hedge the risk of the yen strengthening once BOJ abandon YCC. The mass sell-off of JGB has brought the 10-year yen swap rate above the 0.25% target boundary, challenging BOJ's YCC policy.

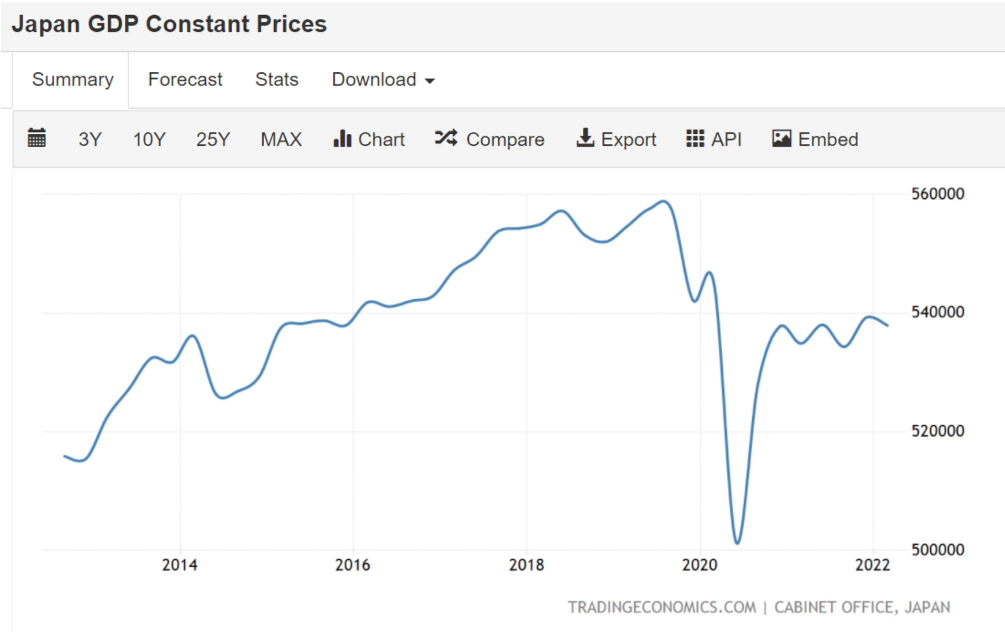
The two main reasons for the pessimistic expectation are the continued devaluation of the yen and high inflation. With the US and other western countries raising the interest rate, Japan is hanging onto QE to boost internal demand, low interest rate resulted in the outflow of foreign investment. With the high inflation, state finance is also under great pressure of the increasing import cost and large expenditure on pensions. After years of YCC, the government debt has amounted to 259% of its GDP, making raising the interest rate a painful option. So, BOJ is forced to print more money to stimulate the demand, leading to further devaluation of the yen, falling into a vicious cycle.

Why insisting YCC:

First, as the interest rate sank to a negative rate, the yield curve became flat, and this hurt the price discovery function of the bond market and the profits of Japan's aging savers. To correct the excessive side effects caused by negative interest rates, the Bank of Japan introduced the YCC policy, setting the 10-year interest rate around 0% and within a range of ± Between 0.1% (Post-adjusted to ±0.25%, held until now). It aims to sustain export-led growth, create imported inflation, and a favourable financing environment for the government to cover the large expenditure.

Second, BOJ is dissatisfied with Japan's current economic situation.

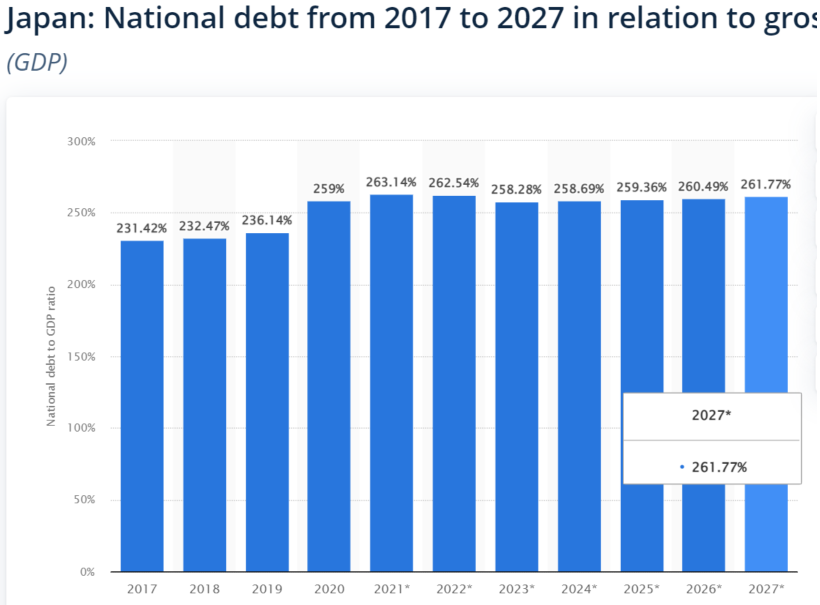
Figure: Japan GDP in constant prices



Source: Trading economics

Third, to defend against short. Although the gloomy economy is already jeopardizing the government support rate, BOJ is still holding onto YCC by frequently buying government bonds since March. If the BOJ failed to defend the short power and allow the interest rate to grow, the Japanese government would have to bear higher pressure from debt, as Japan's National Debt/GDP ratio has been climbing throughout the years and there's no signal to fall. As estimated by Mizuho Securities, abandoning YCC will lead to a 10-year-treasury yield hitting 1%, incurring a loss of 219billion dollars for the government.

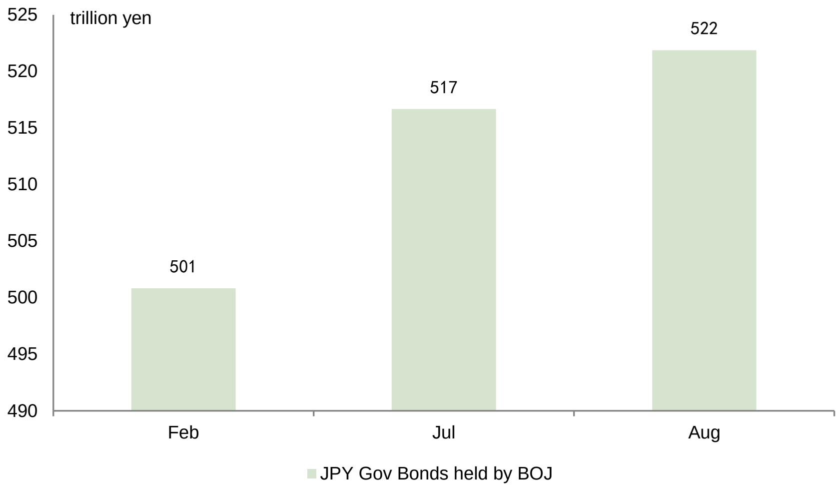
Figure: Japan national debt to GDP



Source: Trading economics

The specific operation of BOJ: Since March, BOJ has frequently purchased bonds to maintain the YCC curve:

Figure: Japan Gov Bonds held by BOJ

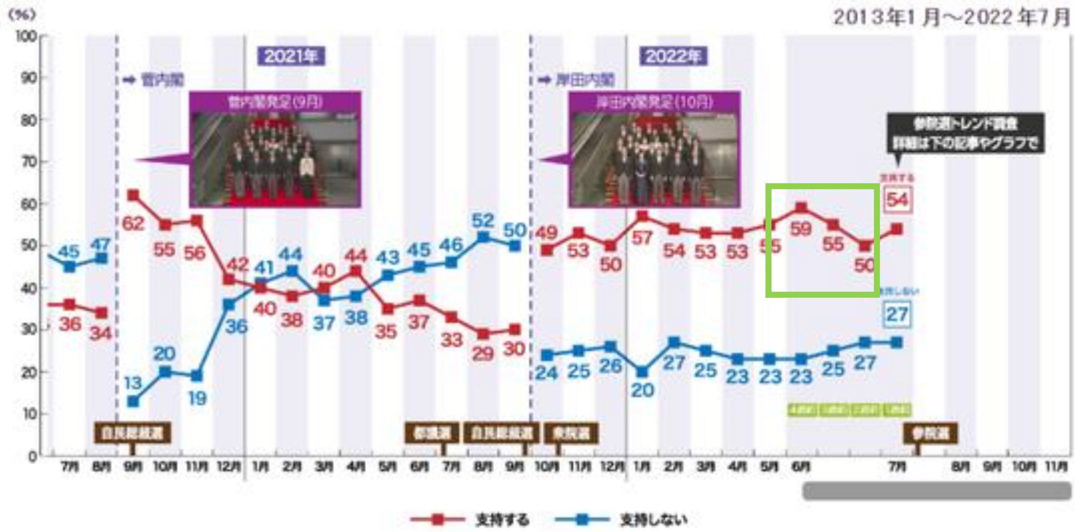


Source: CICC Research

Forth, Yen has gone weaker as there are more yen.The core reason for the recent rapid weakening of the yen came from the differentiation of the monetary policies of the U.S. and Japan. The recent high linkage between the exchange rate of the U.S. and Japan and the interest rate spread between the US and Japan is one of its manifestations. Due to the YCC policy adopted by the BOJ as well as the continuous rising interest rate of U.S. bond, there are more yen, less dollars and the US-Japan interest rate differential has been gradually widened.

The risk of FX intervention by the JP authorities may have been priced in the market, as the rapidly depreciating yen exchange rate would have increased the cost of imports. Reuters' business survey (implemented between March 30 and April 8, during which the exchange rate between the United States and Japan was 121-124(Now July 134-140) , received a total of 241 companies' responses) shows that nearly 50% of the companies indicated that the weak yen exchange rate level during the period of 121-124 was a factor in reducing profits, and on the contrary, the number of companies that believed that the weak yen would increase their profits was less than 1/4 of the total.

Figure: Japan Gov supporting rate



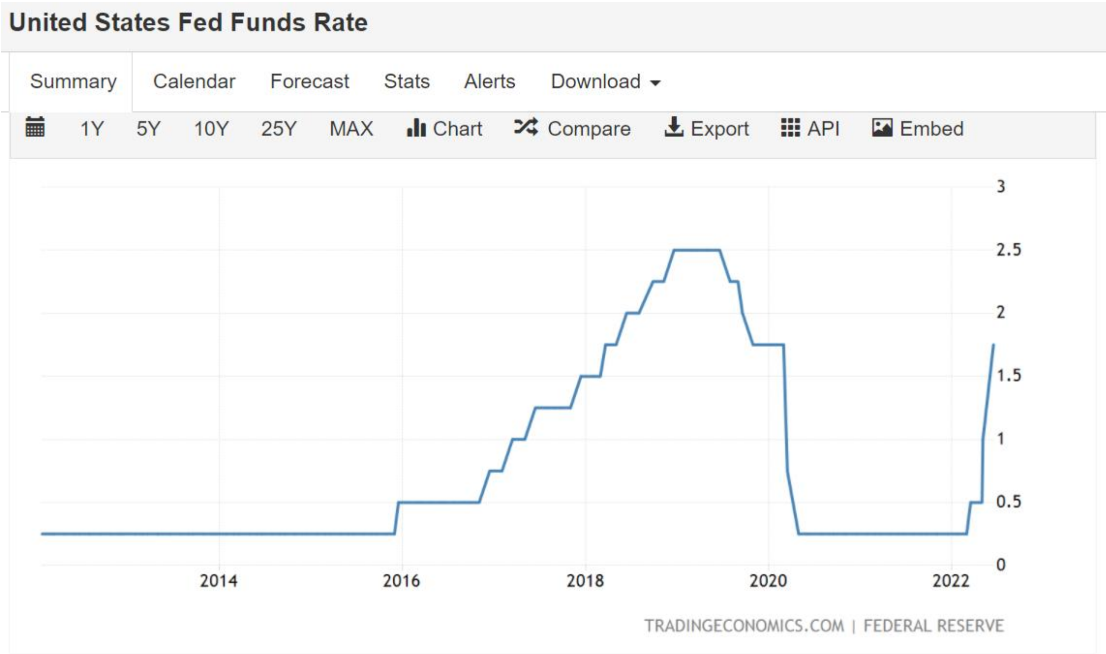
Source: Kyodo News

However, towards the current situation, The Bank of Japan believes that 1) the current domestic inflation in Japan is temporary and will not last for a long time; 2) GDP has not recovered to the level before the epidemic; 3) At the April BOJ meeting, BOJ announced that they tend to turn the “Continuous unlimited bond purchase" to a routinized tool. Therefore, the mainstream voice in the market believes that the BOJ has a clear willingness to maintain the current loose stance.

Fifth reason is about the Fed’s open market operation: In July rates hiked 75bp. In total, 2 more rate hikes are priced in the market within 2022, one for 50bp hike and the other for 25bp.

Terminal rate would be 3.25%~3.50%.If the Central Bank from other countries do not follow the pace of Fed's rate hikes, the investment would flow in US markets, as US would provide higher profits. Therefore, the major developed economies that are closely bonded to the US has raised interest rates: the Reserve Bank of Australia 50bp, Bank of England 75bp, etc. However, except Japan, then the JPY holders tend to long USD and short JPY, which lays strong pressure on USD/JPY exchange rate.

Figure: US Fed Fund Rate



Source: Trading economics

How do three parties： BOJ, domestic investors and foreign investors with different purposes react in the post-Abenomics Economy?

On condition that QQE and interest rate control have different impacts on different markets, for example, after the announcement of the QEE, the stock market and foreign exchange market responded positively while the bond market was rather neutral, different parities would have different concerns and have different strategies during this volatile period.

After the end of the latest BOJ meeting, there has no further announcement of tightening the monetary policy, while BOJ would continue its policy of purchasing long-term assets. However, BOJ now encounters an embarrassing situation. If YCC is no longer maintained, on the one hand, if inflation expectations had been revised upward, the nominal bond yield should rise; on the other hand, if the largescale bond purchase under the QQE made the demand overwhelm supply, the bond yield should decline.

Market participants could not decide which of these effects would dominate. The 1-year bond rate rose, suggesting that BOJ's announcement of a lengthening of the average maturity of bonds would mean that the second effect (large-scale purchases) would not apply to 1-year bonds, so the 1-year bond yield rose on the expectation of rise in the inflation rate.

The domestic investors such as financial institutions could take advantage of the low interest of the long-term bond by converting them to high interest short-term bond. The liquid money from QEE will be turned over among financial institutions rather than going into the real economy.

If YCC is maintained at its current level, while overseas markets continue raising interest of their own market and Yen continues depreciating, foreign investors will buy in Yen and arbitrage through the interest difference of the bond market. If YCC is loosen by raising the long-term bond interest, that would fit the expectations of the short positions' holders of the long-term bond interest.

4. Could BOJ maintain YCC - Pro

First, since late March this year, driven by the rise in US bond interest rates, the 10-year Japanese bond interest rate has repeatedly challenged the BOJ's 0.25% upper bond setting, and frequently triggers " Continuous unlimited bond purchase ". According to data on April 20, the total issuance of the latest three batches of 10-year government bonds targeted for the " Continuous unlimited bond purchase " was 19.11 trillion yen, and the BOJ already held 5.48 trillion yen. The balance is about 13.63 trillion yen. After that, during the three working days from April 22 to April 26, only through the "fixed interest rate unlimited bond purchase operation", the BOJ purchased 427.7 billion yen, 727.5 billion yen, and 921.5 billion Japanese yen's 10-year Treasury note. If the 10-year interest rate frequently challenges 0.25% and triggers the " Continuous unlimited bond purchase ", according to that purchase scale, the BOJ may fall into the dilemma of having no debt to buy in about 10 to 25 working days.

Second, at the same time, as Kuroda-- Governor of the BOJ, stated in Congress in February

2022, that the " Continuous unlimited bond purchase " is a last resort. And if the "Fixed rate continuous unlimited bond purchase " operation is frequently used to Intervening in the Japanese bond market, the price discovery function of the financial market would be impaired, and it will be detrimental to the sound development of the bond market.

Third, there is also political issue caused by the continuous impact from inflation. Low- and middle-income people and companies are mostly affected, which would be shown in the supporting rate of Japan's Kishida Cabinet.

5. Could BOJ maintain YCC - Con

Chinese process has broken Japan's monopoly (mostly in 1990s) in multiple industries.

New energy vehicles

Chinese electric vehicle maker BYD (002594.SZ) will enter into Japan's passenger car market in 2023. They held a brand conference in Tokyo and announced plans to start selling a small all-electric battery car called the ATTO 3 in Japan at the start of next year, followed by two additional EV models later in 2023.

Steel industry – since 2016

Since 2016, China has been the top one steel-producing nation, followed by Japan, India, the United States and Russia in order. Japan still being the exporters of steel, fell behind China and was even exceeded by India in 2021, with only 8.4Mt of steel production compared to 99.5Mt, which was Chinese production of steel.

Semiconductor industry – since 2022

China has its plan to become a semiconductor hub that weakens their reliance on Japanese semiconductors. SICC, the globally 3rd producer of SiC substrate announced IPO in 2022 January. Shenzhen SwaySure Technology, incorporated in March 2022 named Jap semiconductor industry heavyweight, Yukio Sakamoto, former chief executive of Japanese

DRAM maker Elpida Memory and more recently at Tsinghua Unigroup, as its chief strategy officer.

The world economic situation is not what it used to be. The essence between the former Japan-US economic relation can be simply described as below: Japan exports to the United States a lot, so the money inflow renders Japan to buy U.S. bonds, which means that United States transfers its debt risk to Japan. That's why Japan has been a well-known creditor country with a large amount of overseas net assets. According to Tokyo Reuters, Japan's net external assets were 1.3 times than those held by Germany, the world's No.2 creditor, followed by Hong Kong and China, as of end-2021. Meanwhile, the current global economic turmoil makes return from overseas investment rights uncertain. With exports revenue being uncertain either, there exist arguments believing the previous YCC cannot be sustained.

BOJ strategy revision

Revise forward guidance > Adjust YCC cap > 0.25% interest rate cap locked to 5 years > Negative interest rate raised to 0%

Figure: BOJ policies comparison

Item	Pros	Cons
Forward Guidance	The BoJ can smoothly keep pace with the Government on the break out of measures under COVID-19.	It will be perceived as a hawkish turn toward tighter monetary policy.
Expansion of YCC Range (±0.25% → ±0.50%)	Consistent with the explanation given at the policy meeting in March 2021.	Inconsistent with the recent stance of continued monetary easing.
Shortening YCC Time Span (10 years → 5 years)	Fixed-rate Purchase Operation will be no longer needed.	Inconsistent with the recent stance of continued monetary easing.
Policy Rate Control (-0.10% → 0%)	Profitability of financial institution will improve.	It will be more difficult to control the yield curve.

Source: CICC Research

Other consideration:

According to Financial Times, nominal wages have finally started to grow and contractual wages in May rose 1.5 per cent year-on-year. Since there is real wage growth which has been stagnant for decades, this may be what the BoJ wants to see even more than positive consumer inflation.

Figure: Japan average wage growth

Source: Bloomberg

“Deflation has continued for three decades and price stagnation has become the social norm. The society as a whole does not tolerate rising prices,” says Kazuo Momma, the former head of monetary policy at the BoJ who is now executive economist at Mizuho Research Institute. “There is fundamentally no exit for the BoJ.”

Conclusion – 3 suspected cases:

Base case:

Continuous inflation pressure on JPY, BOJ pay too much to maintain current upper bond, so BOJ erase monetary policies by “Forward Guidance” or enlarging the rate interval.

Positive case:

Shrinking demand after several rate hikes, commodities price go down; Forward Fed rates down is priced in the near term, thus USD goes down; Pressure of inflation on JP relieves, and JP keeps QQE.

Negative case:

Imported Inflation keeps uncontrol, Government approval ratings plummet, BOJ gives up YCC, JPY normalizes, the short wins.