Mizuho Economic Outlook & Analysis

"Three inconvenient truths" and "three proposals" concerning Japan's exit policy

- How can Japan escape the "eternal zero?" -

May 19, 2017

Mizuho Research Institute

Summary

- With the United States entering an interest rate hike cycle amid speculation that the ECB will cut back on monetary easing, the Bank of Japan's ("BOJ") exit strategy is attracting more and more attention. But the BOJ suffers from "three inconvenient truths" that are hampering its exit strategy and risking the chance that the BOJ may be compelled to maintain the "eternal zero." We offer "three proposals" that would enable the Bank to head toward exit.

- These "three inconvenient truths" involve the following: (1) The BOJ has a limited grace period, from now until the United States starts to lower interest rates, in which to implement its exit strategy. (2) Although the BOJ's shift to an interest rate target has enabled it to maintain monetary easing over the long term, it has also made it difficult for the Bank to implement additional easing on its own, and whether monetary easing succeeds or not will depend on the recovery of the US economy. (3) With the BOJ having anesthetized the market with negative interest rates and yield curve control, it is now difficult for the Bank to engage in dialogue with the market, and the powerful anesthetic can have serious side effects on the financial system. Any extension of monetary easing will inevitably cause the BOJ to bear additional costs at the exit.

- The "three proposals" include (1) the BOJ creating an external consensus on adopting a new inflation target in accordance with the world economy's new "normal"; (2) the BOJ working together with the government based on the Japanese version of the "Treasury-Fed accord" to bolster the Japanese economy's metabolism, and at the same time, the BOJ and the government jointly committing to covering the potential losses on the BOJ's balance sheet when exiting; and (3) the BOJ clarifying the way toward exit (tapering, increasing long-term interest rates/policy interest rates, and reducing the balance sheet, among others), in other words, the details of the BOJ version of a roadmap.

Six keywords

- **[Five jinxes]** Monetary policies in Europe and the United States are heading toward exit, but the BOJ's exit always comes last. The BOJ has only a limited grace period in which to implement its exit strategy, a period from now until the United States starts lowering interest rates.

- **[Yacht with no engine]** As the difference in interest rates between Japan and the United States widens due to yield curve control, the BOJ is able to maintain its long-term monetary easing supported by the recovery of the US economy. On the other hand, the BOJ has abandoned its own engine, or the implementation of additional easing measures, by giving up on quantitative measures.

- **[Dog training]** The Japanese government bond (JGB) market has lost its free-wheeling market mechanism, having been anesthetized under the control of the BOJ, just like a dog being trained. An anesthetic can be a powerful drug and its long-term use can have serious side effects on the financial system.

- **[The BOJ version of the "OK(gimme)" rule]** Amid falling economic growth rates worldwide, the 2 percent price stability target is difficult to achieve. In addition, cost increase due to protracted monetary easing is a concern. With the BOJ chained to its inflation target, it is essential to foster an environment that can tolerate a change in the Bank's policy framework.

- **[Japan version of the "Treasury-Fed accord"]** A unified response by monetary and financial authorities is important in terms of the BOJ's exit policy.

- **[The BOJ version of a roadmap]** This involves the creation of a roadmap comprising (1) a reduction in quantity, (2) a long-term interest rate hike, (3) a policy interest rate hike, and (4) a contraction of the balance sheet.

“Three inconvenient truths” about Japan’s monetary policies

<u>“Five jinxes” of the BOJ</u>

- An interest rate hike by the BOJ is only possible when the US is raising interest rates.
- When the United States starts cutting interest rates, the grace period of the BOJ to raise interest rates will be over.
- Due to low interest rates worldwide, Japan may not raise interest rates this time in the sixth cycle.

<u>The BOJ is like a yacht with no engine</u>

- The BOJ shifted its policy target from quantity to interest rates through yield curve control, thereby enabling it to maintain long-term monetary easing.
- Although it has had a positive effect thanks to the recovery of the US economy, the Bank has abandoned the expansion of quantity and surrendered the option of implementing easing measures on its own.
- The policy of yield curve control depends on a tailwind from overseas markets; it is the “FTPL (Fiscal Theory of the Price Level)” that counts in US fiscal policy.

<u>The market is being anesthetized under the BOJ’s control, like a “dog being trained”</u>

- The market has been tamed by the BOJ, just like a dog being trained, and the market’s free-wheeling mechanism is now anesthetized.
- Japan’s version of pegging has characteristics similar to a managed float system.
- Long-term interest rate control and the BOJ’s interest rate outlook are incompatible (dialogue with the market is difficult).
- The market’s anesthetized condition and the banks’ challenging management environment are generating concerns over dislocation of the financial system.

MHRI's "three proposals" toward exit

□ <u>The BOJ version of the "OK(gimme)" rule and a more flexible inflation target</u>

- Considering the cost of long-term monetary easing (lower financial intermediation function and difficulty of adopting an exit policy with the BOJ's expanding balance sheet), the BOJ should reexamine the position of its price stability target and terminate long-term monetary easing. Those conceding this situation are players other than the BOJ. The Bank must try to nurture an environment where its policy change will be tolerated by external parties that include the market and the government that is in charge of policy management.
- While leaving unchanged the Bank's policy of achieving the 2 percent price stability target as early as possible, the BOJ should shift to a long-term (final) target.
- The BOJ should diversify the target by revising the position of its reference values (growth rate, creating a positive supply and demand gap, raising the wage increase rate, etc.) and changing the target achievement criteria to a comprehensive assessment.

□ <u>Exit strategy based on the unified response of the government and the BOJ through the Japan version of the "Treasury-Fed accord"</u>

- The BOJ should put an end to excessive dependence on the BOJ's monetary policy and confirm a joint commitment by the government and the BOJ to implement economic recovery measures.
- The BOJ should collaborate with the government in placing more emphasis on fiscal policy and growth strategies.
- The government and the BOJ should work together to cover the losses created by interest rate hikes when implementing the exit strategy (by such means as deferring payments to the national treasury, etc.).

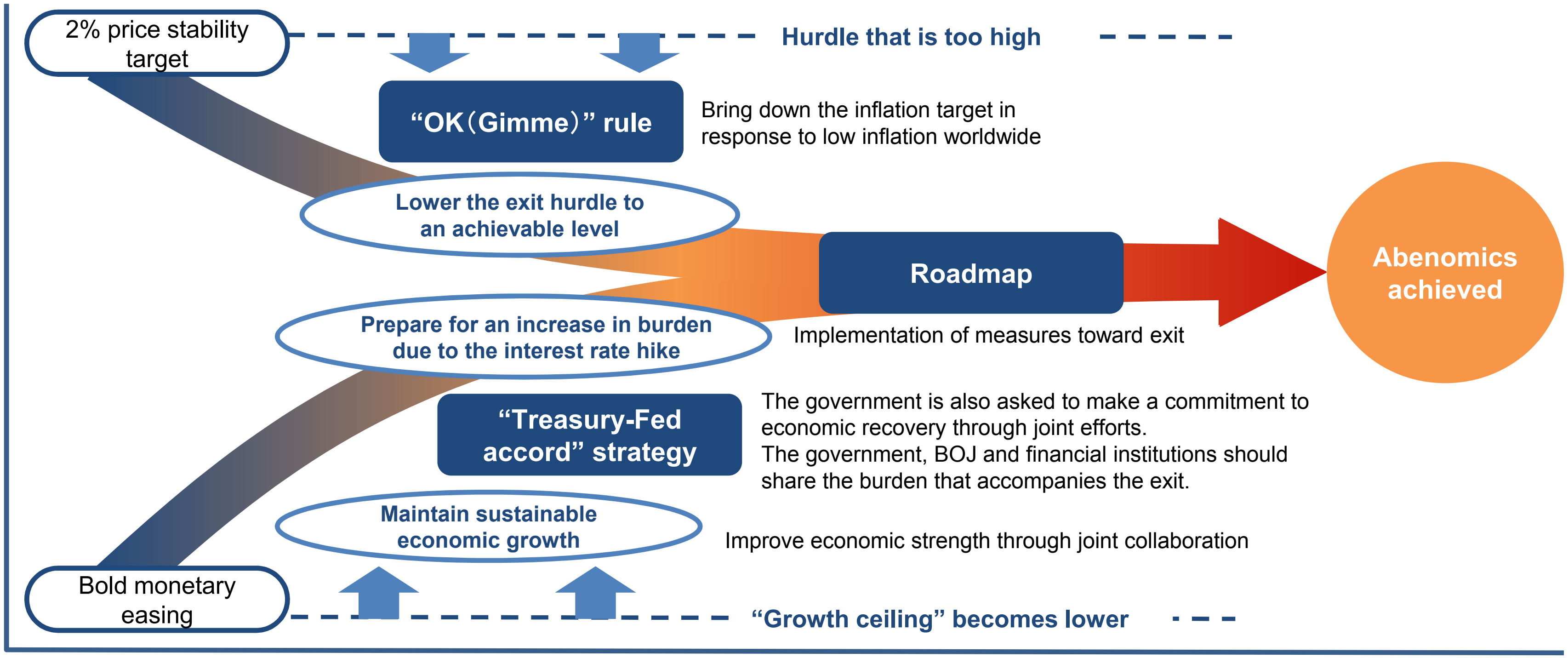
□ <u>Clarifying the BOJ version of a roadmap</u>

- While the Bank can reveal its price stability target and economic growth rate forecast, it may be difficult to present an interest rate target.
- The final goal of the policy is to achieve Abenomics and this assumes that the BOJ will head toward an exit strategy.
- Although the BOJ should lower its target level, it should also present a policy package aimed at fueling the Japanese economy through an all-out battle.
- The BOJ should present a roadmap to (1) reduce quantity, (2) raise long-term interest rates, (3) raise policy interest rates, and (4) reduce its balance sheet.
- The BOJ should simulate the fiscal burden that will accompany the exit. (The decline in fair value due to a 1 percent interest rate hike is estimated at roughly 29 trillion yen at the end of FY2020.)
- The BOJ should implement an exit strategy by considering the costs and benefits of the exit strategy and extended monetary easing.

Envisaging a three-pillar exit strategy that assumes the achievement of Abenomics

- The BOJ version of the "OK(gimme)" rule: Revise the price stability target to an achievable level in response to the global "3L" (low interest rate, low economic growth rate, and low inflation) situation.
- The Japan version of the " Treasury-Fed accord": Unify the response in preparation for an interest rate hike.
- Clarification of the BOJ version of a roadmap: Advance the exit strategy through an all-out battle.

[Three pillars of the exit strategy that assumes the achievement of Abenomics]



Source: Made by Mizuho Research Institute Ltd. (MHRI).

Sharing the burden of the interest rate hike through a tripartite structure

- In the 2020 exit strategy, a 1 percent increase in the deposit facility rate will lead to an earning loss of 4 trillion yen, while a 1 percent rise in the interest rate will reduce the fair value of shares and bonds held by the BOJ by 29 trillion yen.
  - If the BOJ continues with quantitative easing until 2020, the additional cost will amount to 1 trillion yen in earnings losses and a 5 trillion yen decline in the fair value of securities held by the BOJ.
- Upon exit, the burden borne by the government, BOJ and financial institutions will expand. Sharing this burden through a tripartite structure will become necessary.
  - Although the BOJ's burden will increase with the interest rate hike, the burden can be reduced through joint collaboration between the government and the BOJ.
  - While JGBs held by financial institutions will be subject to valuation losses, their income flow will improve thanks to the normalization of lending and deposit operations.
- To alleviate the pain of financial market dislocation due to the collapse in value of JGBs and the sharp increase in the government's JGB costs, the implementation of a full-fledged exit strategy should be postponed until the outstanding balance of JGBs starts to decline.
  - There is a need to implement the exit strategy by taking into account the costs and benefits of the exit strategy and extended monetary easing.

[Change in burden through a tripartite structure after the interest rate hike]

	Change in periodic income	Change in balance sheet
Government	× Increase in the fiscal deficit due to the rise in JGB costs ○ Increase in tax income thanks to the economic recovery ○ Gain from asset sales due to higher asset prices	○ Decrease in the fair value of liabilities (JGBs already issued) (decrease by 87 trillion yen note 1)
BOJ	× Increase in the interest payment burden on facility deposits (→ cost increase by 4 trillion yen note 2) ○ Increase in the yield of purchased JGBs	× Decrease in the fair value of JGB holdings (decrease by 39 trillion yen note 3) ○ Rise in the fair value of ETF holdings (increase by 10 trillion yen note 4)
Financial institutions	○ Increase in the lending and deposit margin	× Decrease in the fair value of JGB holdings

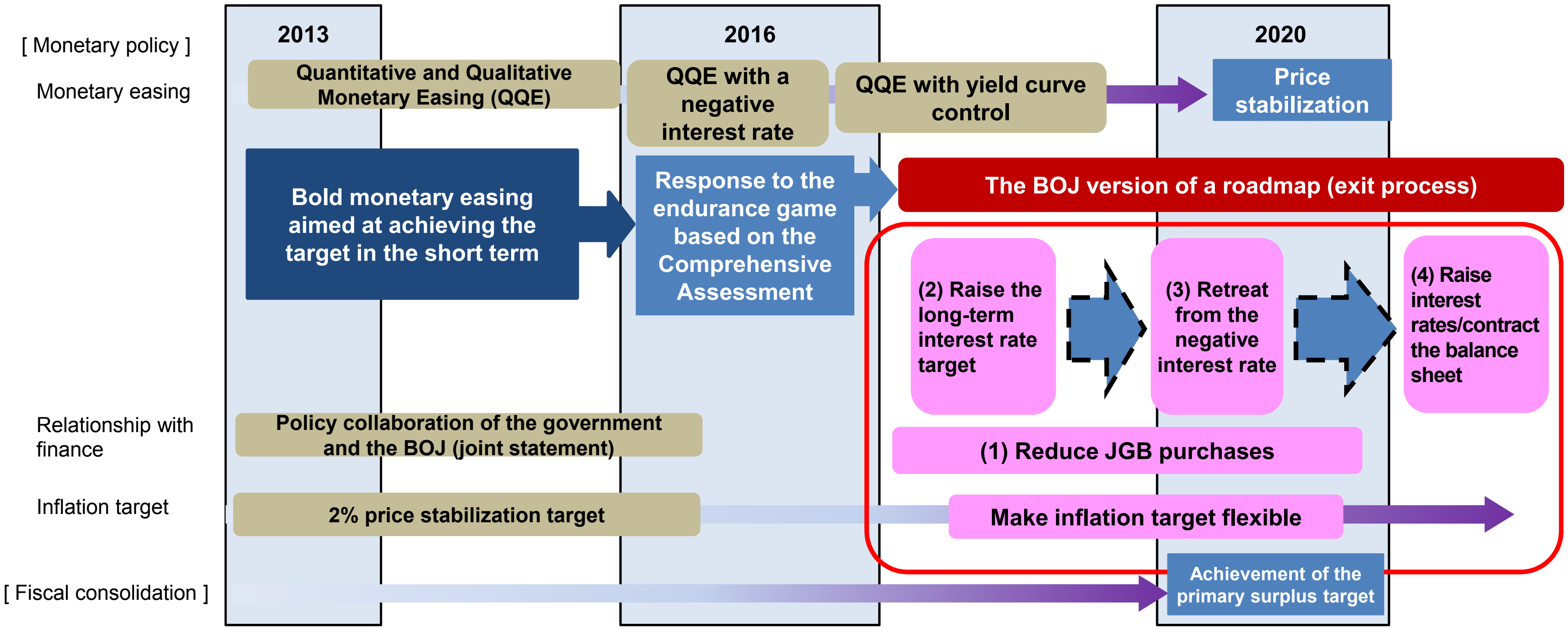
Integrating the impact of ○ and × items of the government will reduce the overall burden.

Notes: 1. Decrease in the fair value of outstanding JGBs in the case where the market interest rate rises by 1% in FY2020.
2. Decrease in periodic income due to an increase in interest payments in the case where the BOJ's facility deposit rate rises by 1% in FY2020.
3. Decrease in the fair value of JGB holdings in the case where the market interest rate rises by 1% in FY2020.
4. Increase in the fair value of ETF holdings in the case where the market interest rate rises by 1% in FY2020.
5. ○ means improvement and × means worsening of earnings and the balance sheet due to implementation of the exit strategy.
Source: Made by MHRI.

Roadmap toward exit

- The BOJ will reveal its roadmap toward exit based on a comprehensive assessment of the economy, inflation and financial market while the US maintains higher interest rates. Although predictability is essential for the BOJ, it is contradictory to present an interest rate goal when it has already set an interest rate target. The BOJ is expected to show positive economic indicators, including the inflation rate, as well as attempt to engage the market in dialogue, but it is essentially contradictory when the Bank has anesthetized the market function.

[Roadmap of monetary and fiscal policies under Abenomics]

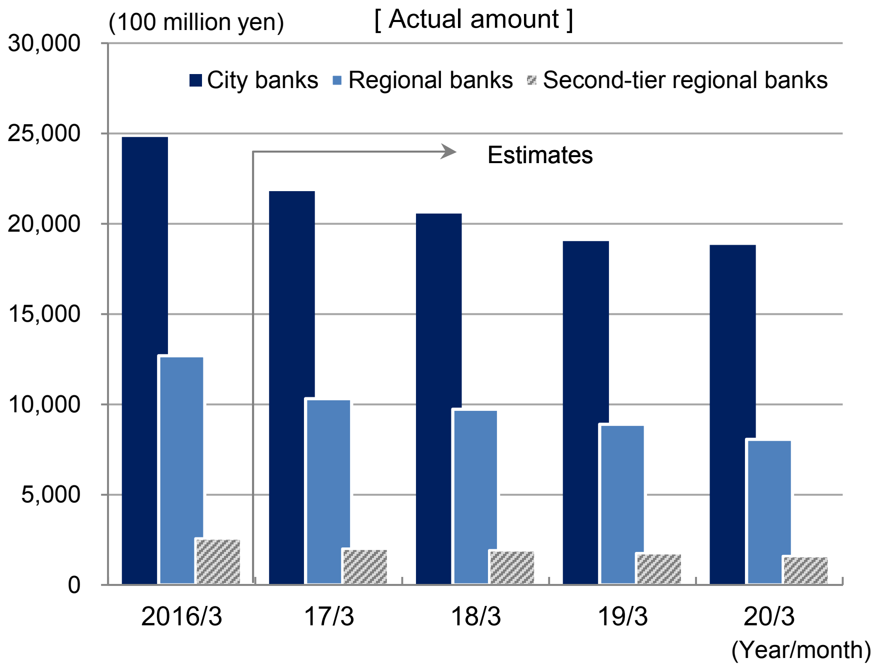


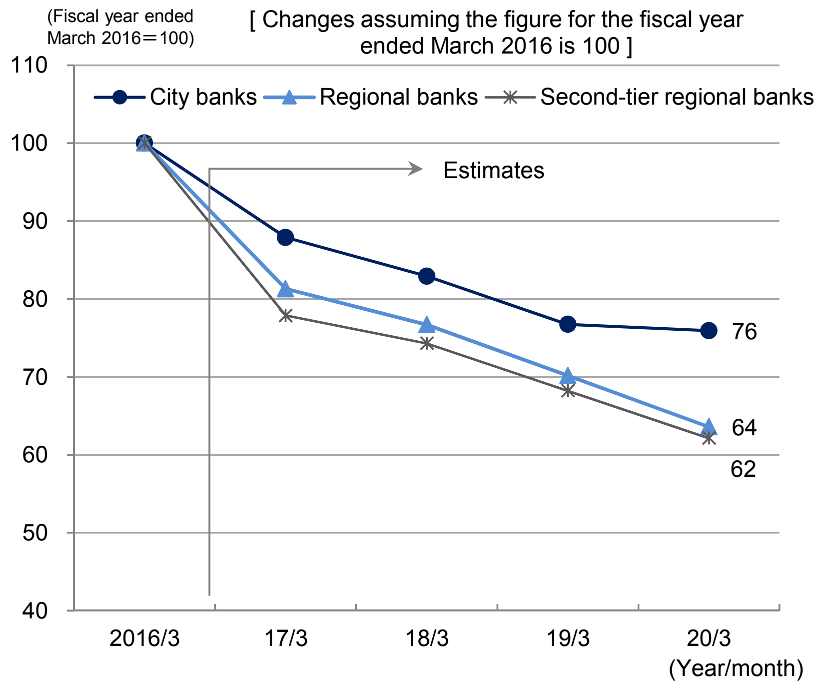
Source: Made by MHRI.

Cost (1) Impact on the financial intermediation function:
Concerns over destabilizing the financial system due to extended monetary easing

- There are concerns over the impact on the financial intermediation function due to extended monetary easing. According to the estimate based on certain assumptions, the earnings of Japanese banks are expected to deteriorate significantly through the fiscal year ending March 2020, compared with the fiscal year ended March 2016 for all business types of city banks and regional financial institutions (regional banks and second-tier regional banks) due to the decline in net interest income.

[Estimate of net core business profits of Japanese banks (by business type)]





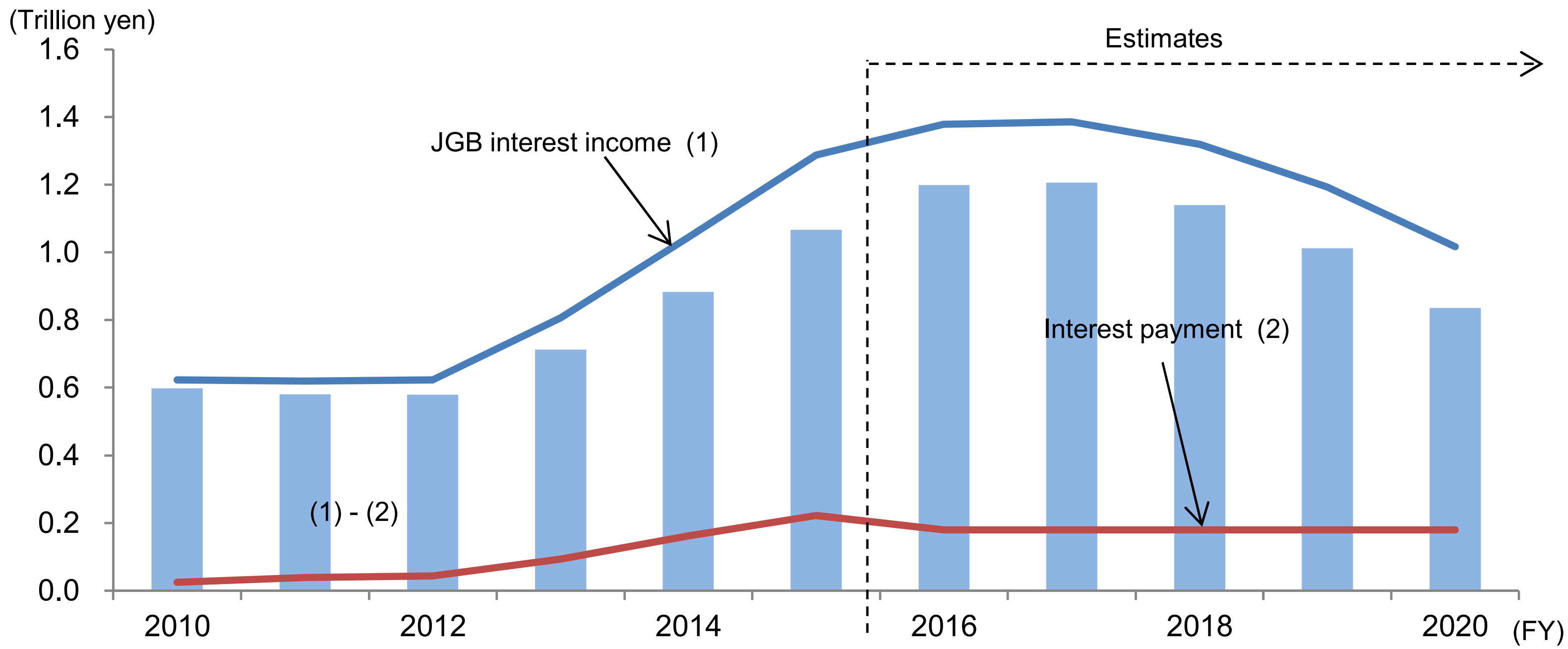
Note: Assumptions of the estimate: We estimated the increase/decrease amount of the net interest income (interest income and expenses) of Japanese banks' domestic operations caused by the negative interest rate policy. The assumptions include (1) the outstanding loan and deposit amounts calculated considering the recent increase/decrease trends of their balances; (2) a reduction in lending margin estimated at -12bp year on year for the fiscal year ended March 2017 and -2bp up until the fiscal year ending March 2020, based on the average lending contract rate after February 2016 when the negative interest rate policy was introduced; (3) the deposit rate falling by -1bp from the fiscal year ended March 2017 to the fiscal year ending March 2018 and staying unchanged thereafter; and (4) equal replacement of domestic bonds (JGBs, regional bonds, and corporate bonds) with 0.05% bonds during their respective remaining maturity (city banks: 3 years; regional financial institutions: 4 years).

Source: Made by MHRI based on releases by the Japanese Bankers Association.

Cost (2) Impact on the BOJ's financial position: A 1% deposit facility rate hike will lead to a 4 trillion yen earnings loss by the BOJ in FY2020

- While interest income is expected to fall due to the lower yield of JGB holdings, interest payments are expected to rise following the increase in the current account balance. The extension of monetary easing may not only lead to a substantial decline in the amount of payments to the national treasury but also become a restraining factor in raising the deposit facility rate in the future.
  - A rise in the deposit facility rate on the excess reserve balance (about 510 trillion yen) to 1.0% in FY2020 is estimated to reduce the BOJ's income by about 4.2 trillion yen.

[BOJ's profit and loss balance and its outlook]



Note: JGB interest income after FY2016 is calculated based on a reduction in the weighted average interest rate in FY2014 (4bp). We assumed that net JGB purchases will decline from 60 trillion yen in FY2017 to 30 trillion yen in FY2020. For the deposit facility rate increase, we assumed the legally required reserve in FY2020 will be 10 trillion yen and the deposit facility rate for other excess reserve balance will increase to 1%. JGB interest income is calculated assuming the interest rate on net JGB purchases will increase to 2.5%.

Source: Made by MHRI based on the Bank of Japan.

A 1% interest rate hike will reduce the fair value of stocks and bonds held by the BOJ by 29 trillion yen at the end of FY2020

- It is highly likely that the BOJ's balance sheet in real terms (fair value) will be impaired when exiting the current monetary policy.
  - The current accounting system does not require to reflect JGB valuation losses on the balance sheet, but valuation losses from risk assets such as stocks are subject to impairment loss treatment.
  - Considering that the value of stocks has a reverse correlation with bonds, the impairment loss on the BOJ's balance sheet due to an interest rate hike will be partly offset. The drop in the fair value of securities holdings is estimated to be roughly 29 trillion yen with a 1 percent interest rate hike.
  - By the time monetary policy changes direction, the government may be compelled to prepare a system to indirectly support the BOJ's losses.

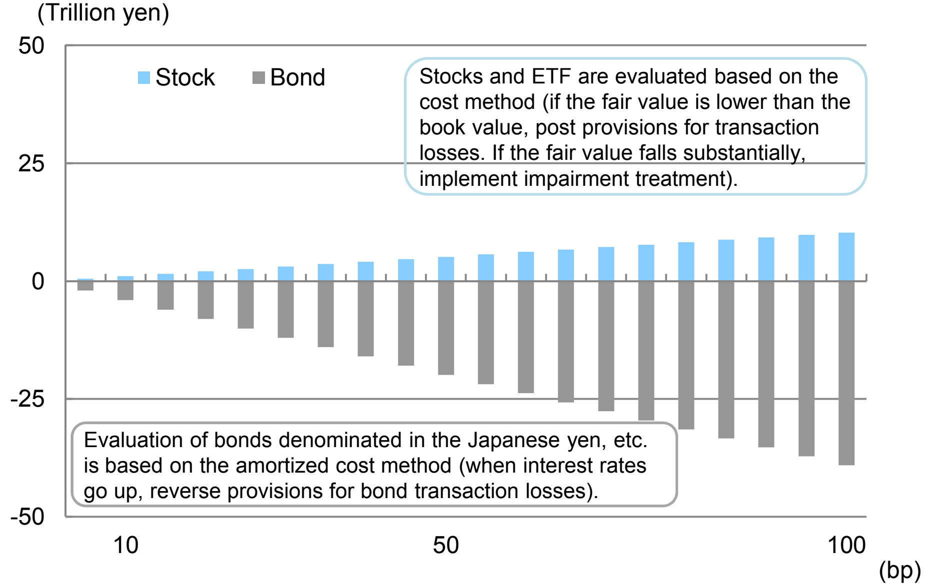
[Interest rate hike and drop in fair value of securities held by the BOJ (at the end of FY2020)]

(Trillion yen)

	Assumed range of interest rate hike			
	10bp	25bp	50bp	100bp
Decline in fair value	-3.5	-7.5	-14.7	-28.8

Note: We conducted a simulation based on the BOJ's purchase balance amounting 635 trillion yen (bonds 598 trillion yen/stocks 37 trillion yen) at the end of FY2020. We estimated the amount of fair value loss at the time of an interest rate hike using the correlation coefficient of the change rate in the bond and stock market. We employed the correlation coefficient of the past 20 years (0.28) in the estimate.
Source: Made by MHRI based on the Bank of Japan.

[Change in fair value of stocks and bonds due to an interest rate hike]

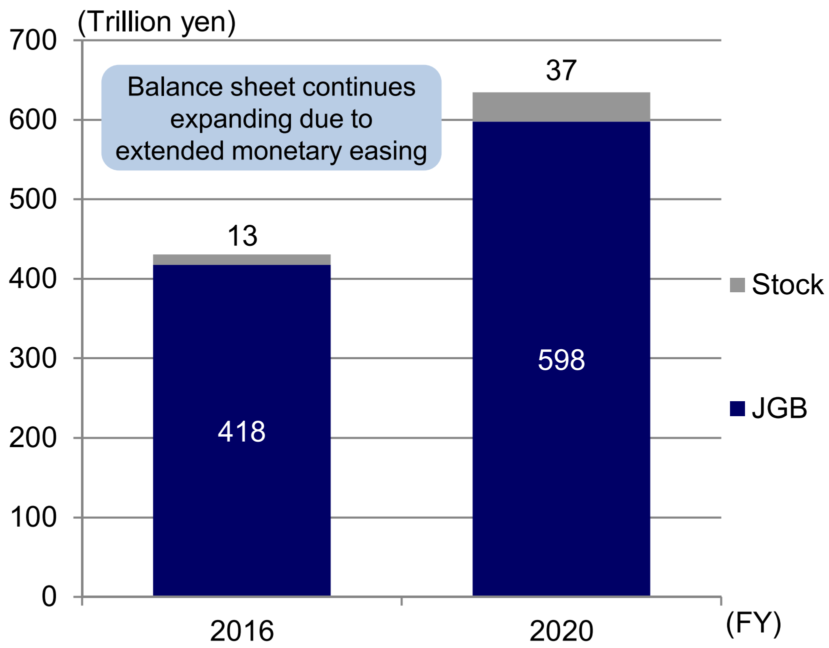


Note: We calculated the amount of decrease in the fair value of bond and stock holdings by each range of interest rate hikes, using the correlation coefficient of the bond and stock market over the past 20 years.
Source: Made by MHRI based on the Bank of Japan.

Delaying the exit strategy to 2020 will cost an additional 1 trillion yen in earnings loss and 5 trillion yen in fair value decline

- An increase in the BOJ's financial burden due to continued expansion of the balance sheet is another cost of postponing the exit.
  - Delaying the exit strategy to 2020 will cause a 1 trillion yen earnings loss due to a 1 percent increase in the deposit facility rate and a 5 trillion yen valuation decline resulting from a drop in the fair value of security asset holdings due to a 1 percent interest rate hike.
  - Implementing the exit strategy after 2020 may heighten the BOJ's financial burden even further.

[Amount of asset holdings until the end of FY2020]



Source: Estimated by MHRI based on the Bank of Japan.

[Increase in BOJ's burden due to postponing the exit]

	End of FY2016 (1)	End of FY2020 (2)	Postponing cost (2) – (1)
Loss of earnings due to a 1% increase in the facility deposit rate	3.1 trillion yen	Exit burden 4.2 trillion yen	Increase in burden due to continued easing +1.1 trillion yen
Drop in fair value of asset holdings due to a 1% interest rate hike	23.5 trillion yen	28.8 trillion yen	+5.3 trillion yen
(Of which bonds)	(27.1 trillion yen)	(39.1trillion yen)	(+12.0 trillion yen)
(Of which stocks)	(-3.6 trillion yen)	(-10.3 trillion yen)	(-6.7 trillion yen)

Note: Negative figures mean an increase in fair value.
Source: Estimated by MHRI based on the Bank of Japan.