Challenges of the BoJ’s QQE with YCC

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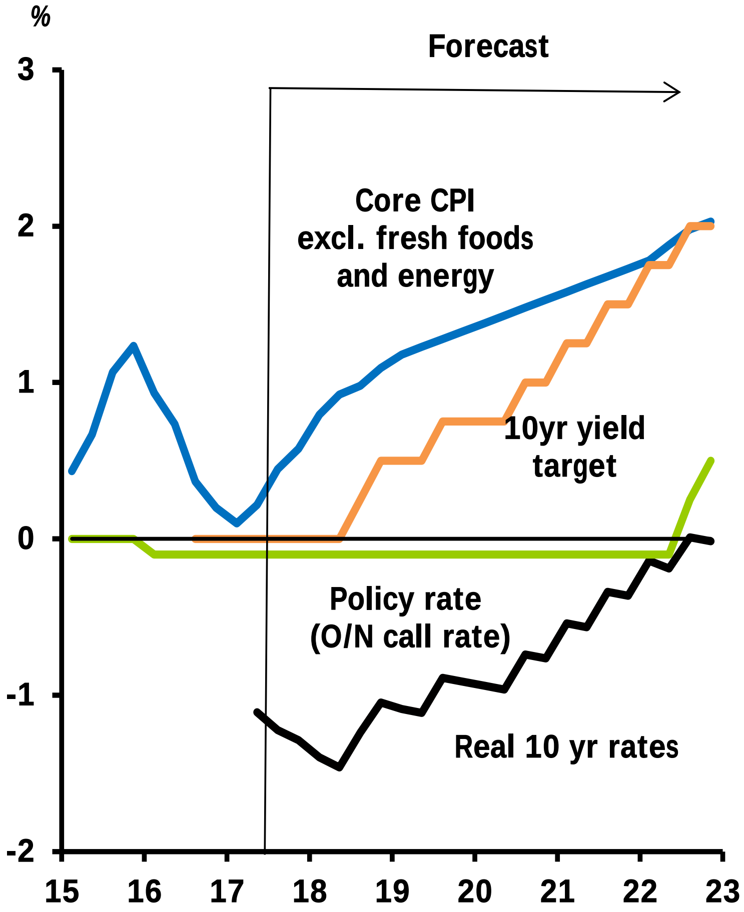
See the end pages of this presentation for analyst certification and important disclosures.

Today's points

- ✓ Japan's economic growth will continue to be solid, while inflation will accelerate very moderately
- ✓ Shift from QQE to YCC has reinforced the sustainability of the monetary easing
- ✓ If we cannot foresee the 2% inflation in a few years, should the BoJ be patient, shift to more stimulative stance, or shift to more neutral stance?
- ✓ Risks and possible countermeasures for BoJ's monetary policy framework
- ✓ Comprehensive policy package is needed

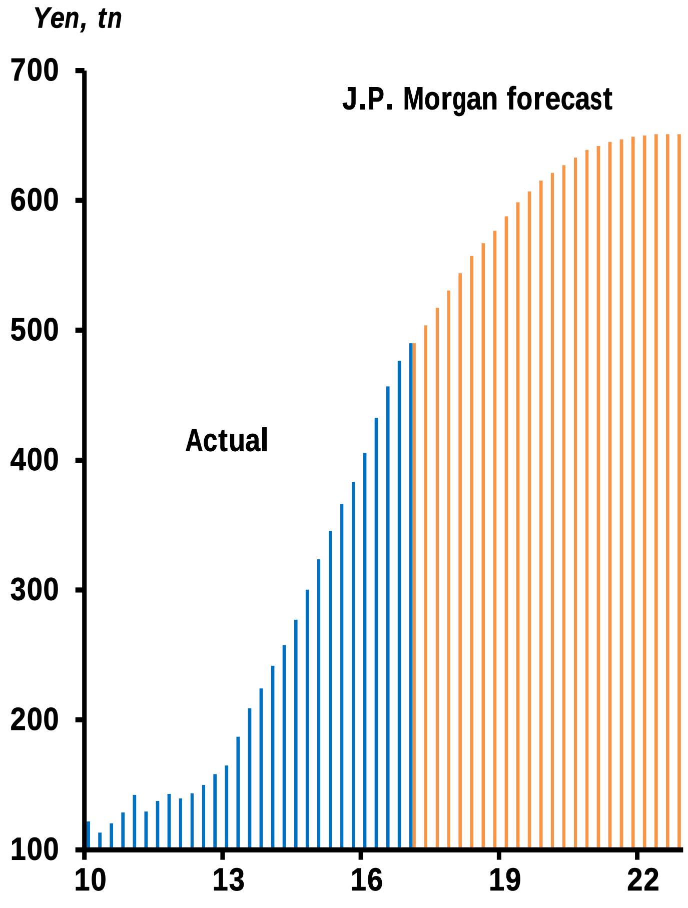
Baseline scenario towards the exit of QQE with YCC

Core CPI and BoJ policy outlook



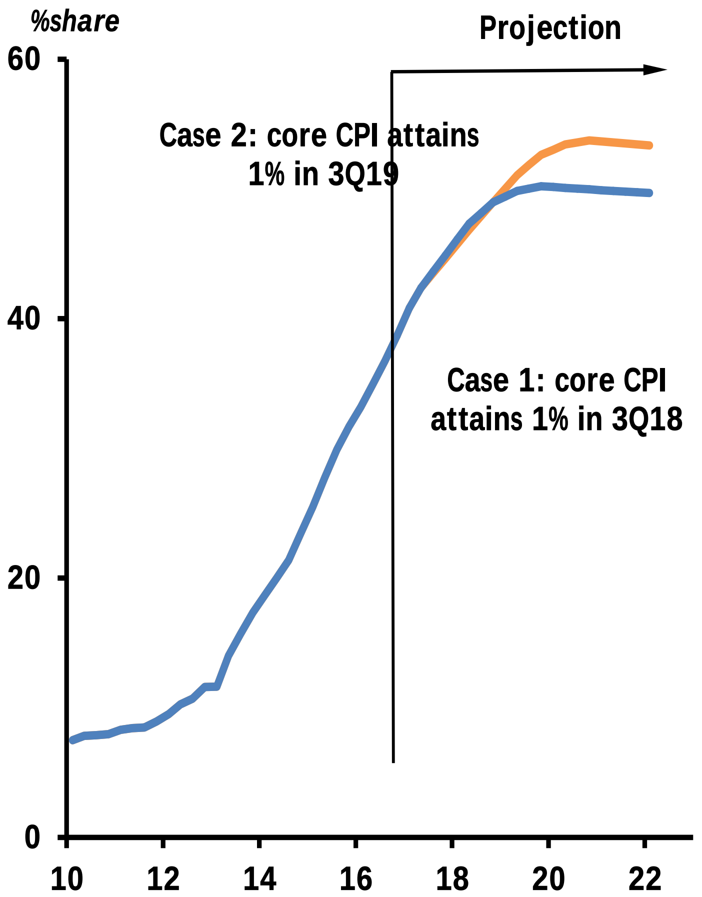
Source: Statistics Bureau, BoJ, J.P. Morgan

BoJ total assets



Source: BoJ, J.P. Morgan

Market share of JGBs held by the BoJ



Source: BoJ, J.P. Morgan

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Shifting to more stimulative stance?

CB's quadratic loss function

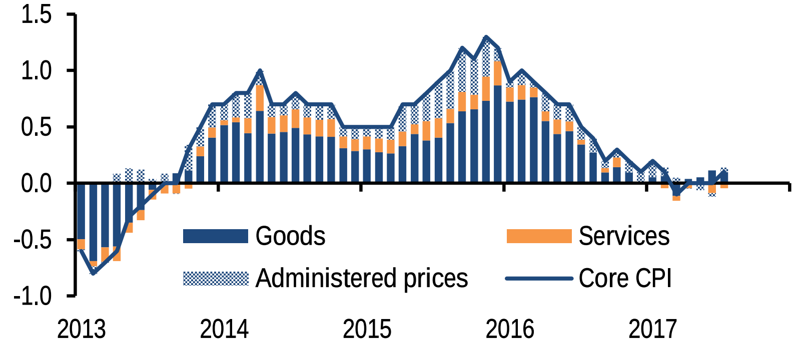
$$L = E_0\left[\sum_{t=0}^{\infty}\beta^t\Big((\pi_t-\pi_t^T)^2+\alpha(Y_t-Y_t^P)^2\Big)\right]$$

With the current YCC, inflation will accelerate very gradually, while economic growth will continue above potential growth rate

Closer the inflation rate is to the target, more attention should be paid for the consequence of tightened output gap

Core CPI (excl. fresh food and energy)

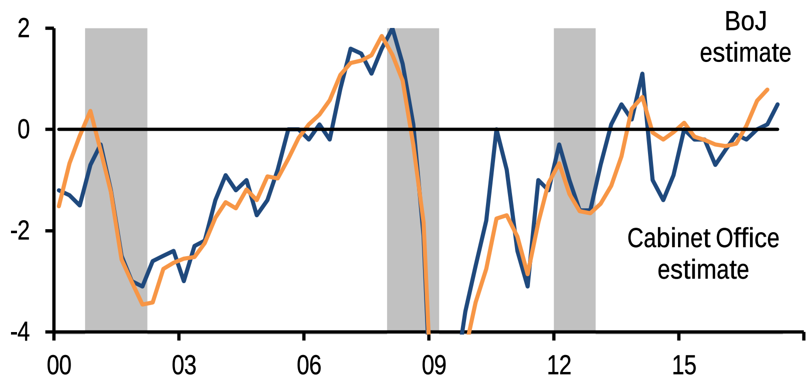
%oya contribution to core CPI inflation, excl. VAT hike impact



Source: Statistics Bureau, J.P. Morgan

Output gap

% of potential GDP, shading shows recessions



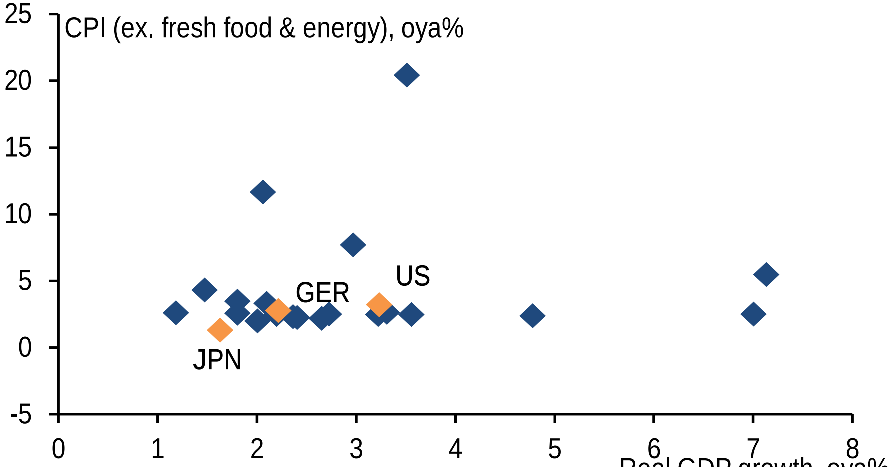
Source: Cabinet Office, BoJ

Shifting to more neutral stance?: Is inflation target too high?

Many in Japan assert 2% inflation target is too high relative to low potential growth and productivity, preventing the BoJ to shift to more neutral stance

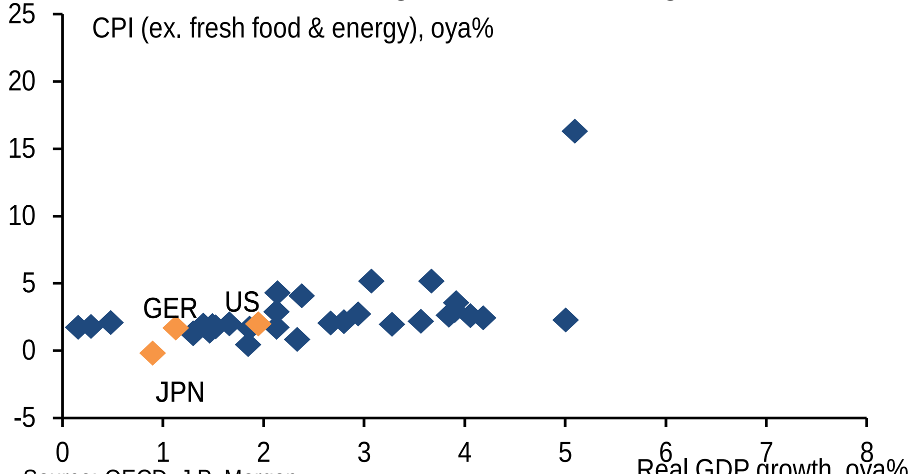
- No correlation between potential growth and long-run inflation…
- Rise in productivity by structural policy could accelerate inflation through spurring current expenditure by alleviating the future side-effects of population aging and decline. But this has no relation with long-run inflation rate (inflation target)

OECD CPI inflation and GDP growth, 1990s average



Source: OECD, J.P. Morgan

OECD CPI inflation and GDP growth, 2000s average



Source: OECD, J.P. Morgan

Some argue that inflation target should be changed as midterm concept

- The BoJ has already deemphasized the timing of achieving the target. This announcement would induce yen's appreciation without reinforcing the sustainability of QQE with YCC

Is inflation target too high? (2)

BoJ will not be compelled to lower the target

- Neutral interest rate will become very low (low natural rate of interest + lower inflation rate)
  - ✓ Short-term interest rates could hit the ELB as much as 30-40% of the time even in the US (Kiley and Roberts 2017)

Frequency and effect of hitting ELB (FRB/US model)

Case 1	Performance under estimated rule for Fed' policy		
Neutral rate	ELB frequency	Deviation of real GDP from potential (mean)	Deviation of CPI from goal (mean)
3.0%	31.7%	-1.3%	0.9%

Case 2	Performance under a simple Taylor rule		
Neutral rate	ELB frequency	Deviation of real GDP from potential (mean)	Deviation of CPI from goal (mean)
3.0%	38.3%	-1.1%	1.2%

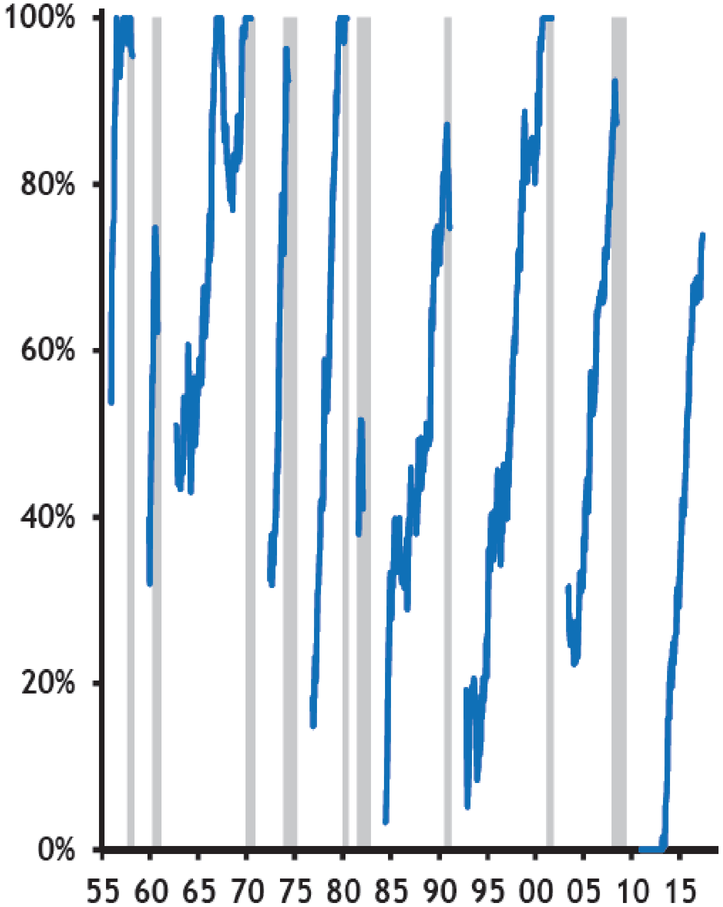
Source: Kiley, M., and J. Roberts (2017)

- Yen may become under steady appreciation pressure
- The statistical bias of CPI may be high

If BoJ tightens to regain their tools for future easing, it would heighten a probability of future recession and lower inflation

Risks (1) :
Will the economic growth continue more than 5 years?

Recession probability of the US economy



Source: J.P. Morgan

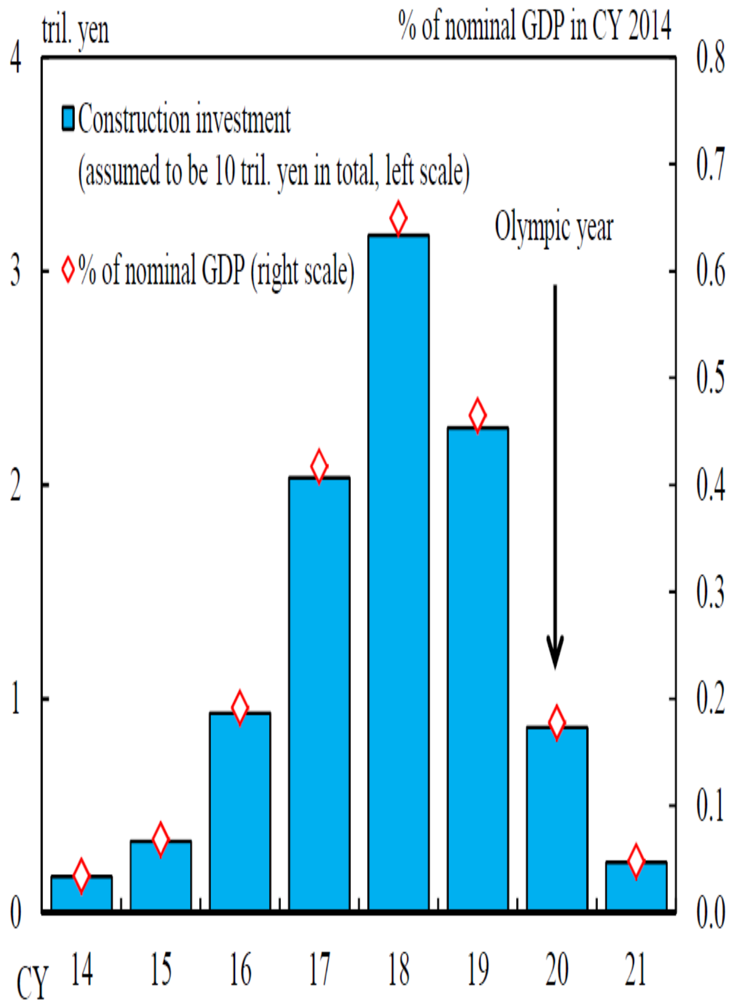
Impact of growth shock on real GDP, VAR analysis

%pt cumulative impact after 4qtrs from 1%pt real GDP impulse

	Impulse (shock) from:			
	USA	EMU	JPN	CHN
Global	1.2	0.9	0.3	0.5
Spillover	1.3	0.9	0.3	0.4
Developed	1.4	0.6	0.3	0.2
US	...	0.3	0.3	0.0
EMU	1.3	...	0.2	0.4
Japan	1.8	1.0	...	0.4
Emerging	1.2	1.3	0.2	1.1
Asia	0.7	1.1	0.1	0.9
Latam	1.5	1.2	0.3	1.2
EMEA	2.2	2.1	0.6	1.3

Source: J.P. Morgan; Sample 1Q00 to 2Q15. The spillover impact is the effect on GDP in the group excluding the impulse country. The global impact includes the direct impact of the country experiencing the shock (it is equal to its GDP-wgt multiplied by 1 plus the spillover effect multiplied by its weight).

Estimated construction expenditure on Tokyo Olympic-related projects



Source: BoJ (2016)

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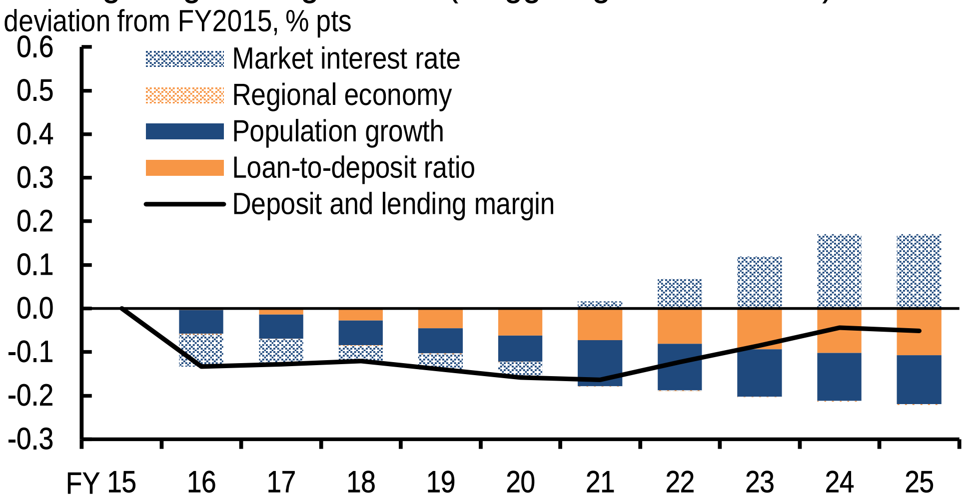
Need discussion of policy measures in advance of the next recession before the BoJ exits from its QQE with YCC

Lower negative rate or entire yield curve?

Lending margin of regional FIs (Sluggish growth scenario)



Source: BoJ (2016)

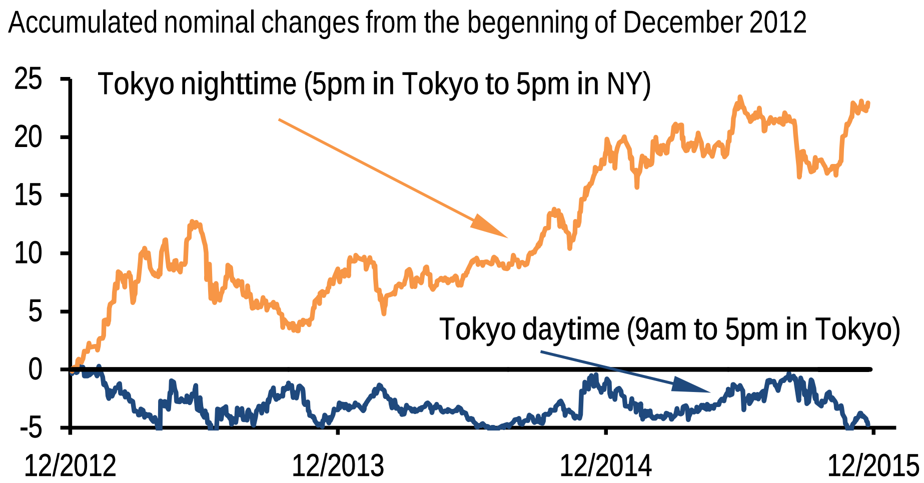
Deposit fees for corporates to offset decline in lending rate

Lending rate for corporates	Lending volume	Volume of spread lending	Decline in lending margin
-20bp	444tn yen	278tn yen	-0.56tn yen
Deposit fees for corporates	**Deposit volume**	**Volume of corporate deposits (inc. FIs)**	**Decline in lending margin**
23bp	658tn yen	237tn yen	0.56tn yen

Source: BoJ, J.P. Morgan

Purchase more JGBs?
– No more asymmetric information as of now
– At 0% rate money and JGB are perfect substitutes

Accumulated changes in the USD/JPY



Source: Ugai (2017)

Coordination of fiscal and monetary policies

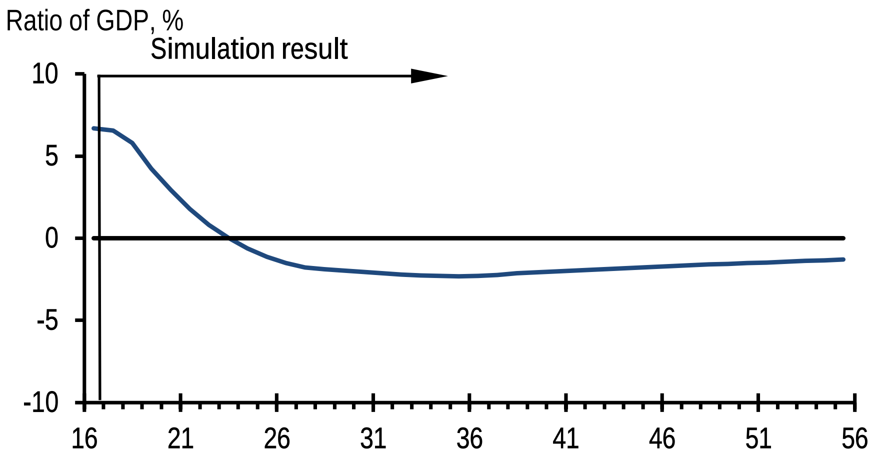
- Traditional policy mix (combination of fiscal spending and controlling 10yr yield at around 0%)
- BoJ independence: Bernanke' s proposal (the government commits to a new program of spending and tax cuts, and the BoJ promises to act as needed to offset any effects of the program on the path of Japan's ratio of government debt to GDP) is not feasible

Risks (2):
Large JGB holdings: Sustainability and BoJ independence at the exit

(1) The greater the BoJ's ownership of long-term JGBs, the shorter the average maturity of JGBs in the market issued by the consolidated government and the greater the increase in debt servicing costs associated with a rise in IOER: The government may pressure BoJ to keep IOER too low, threatening BoJ's independence. This would raise the risk of not controlling inflation.

(2) QQE policy's impact on BoJ's profits and losses (negative carry at the exit) Depending on the size of potential losses, a loss-sharing rule may be developed between the government and BoJ, and it could face political interference.

Estimation example of BoJ's accounting net assets



Source: Fujiki and Tomura (2017)

(3) It would undermine the market function as the policy exacerbates the scarcity of long-term safe assets for collateral transactions

Reduction of the potential side-effects of the QQE with YCC

Strengthen the sustainability of YCC

- Focus on the YCC purely
- Reduce the net purchase amount of JGBs more significantly (while controlling the 10yr yield target) by dropping the guidance of net JGB purchase amount
- This would need fine-tuned communication

Start discussing about the exit strategy and the measures to reduce the cost and side-effects of the exit at MPM

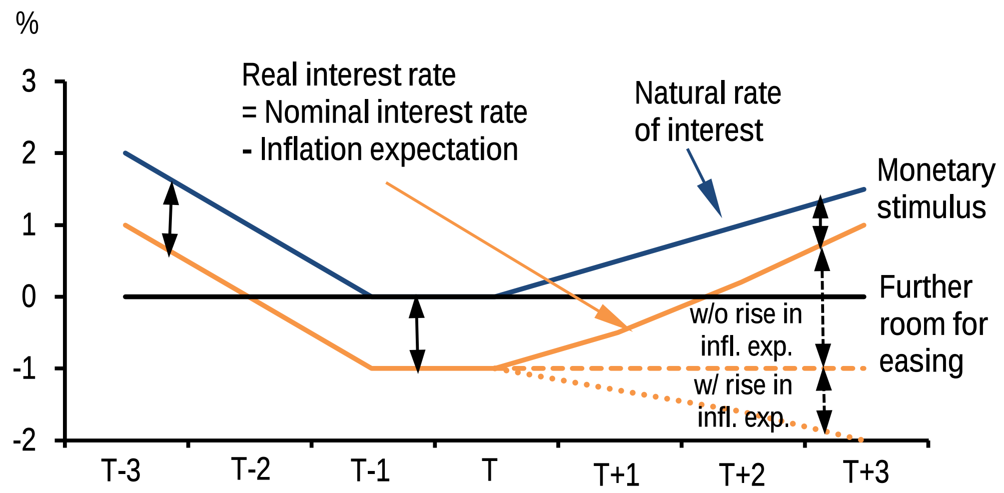
- Timing is a key. Private sectors are vulnerable to the large swing in FX market

Comprehensive policy package is important

Combination of structural reform, monetary policy, and fiscal policy

- Raise the natural rate of interest by raising the productivity (structural reform – esp. labor market reform), making monetary policy also function effectively

Case of the rise in natural rate of interest



Source: J.P. Morgan

- Alleviate the future side-effects of population aging and decline by social security reform
- Tax reform is also needed, not limited to VAT. Raising the VAT gradually with regular intervals would contribute both to consolidate the fiscal deficit and to raise the inflation expectations

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