

## Economic and Fiscal Projections for Medium to Long Term Analysis

The Projections are updated revisions of the cases included in the "Economic and Fiscal Projections for Medium to Long Term Analysis"(June 2010), which was carried out in light of the clarification of interactions related to three issues (Economic Growth, Fiscal Consolidation, Construction of a Stable Social Security System). The Projections reflect recent economic and fiscal conditions.

January 21, 2011  
Cabinet Office

# I. Economic and Fiscal Projections under Medium-term Fiscal Framework

## A. Framework

### **1. Basic Concept**

Including additional data from the Quarterly Estimate of GDP: July-September 2010, the "Fiscal 2011 Economic Outlook and Basic Stance for Economic and Fiscal Management" (Cabinet decision on January 24, 2011), the Draft Budget for FY2011, etc, the projections are carried out with some assumptions.

### **2. Economic Scenarios**

As for the macro economy, the following two scenarios are considered.

#### **(1) Prudent Scenario**

An Economic Scenario with prudent domestic and foreign demand.

#### **(2) Growth Strategy Scenario**

An Economic Scenario with steady domestic and foreign demand. This scenario attains the targets of a more than 3% growth rate of nominal GDP and a 2% growth rate of real GDP in the "New Growth Strategy" (Cabinet decision on June 18, 2010).

### **3. Fiscal Assumptions**

#### **(Expenditure)**

Expenditure in FY2011 is based on the draft budget.

Based on the Medium-term Fiscal Framework in the "Fiscal Management Strategy" (Cabinet decision on June 22, 2010), the amount of General Account expenditure (excluding debt repayment and interest payment) is assumed to be the same level as it was in FY2011 during FY2012 and FY2013.

Thereafter, social security expenditure is assumed to increase due to the aging population, and other expenditure is assumed to increase in line with the CPI.

#### **(Tax Systems)**

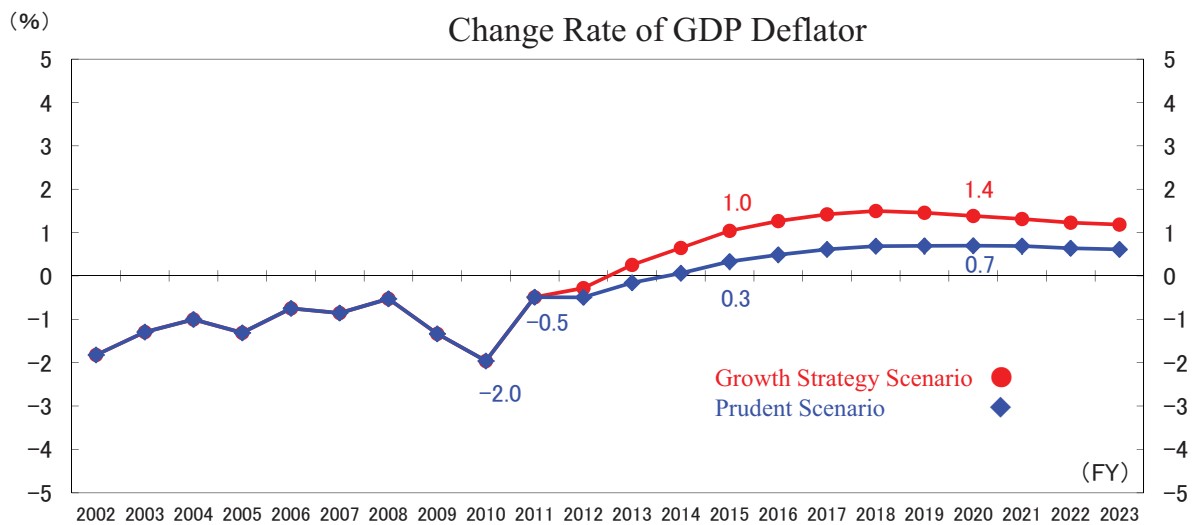
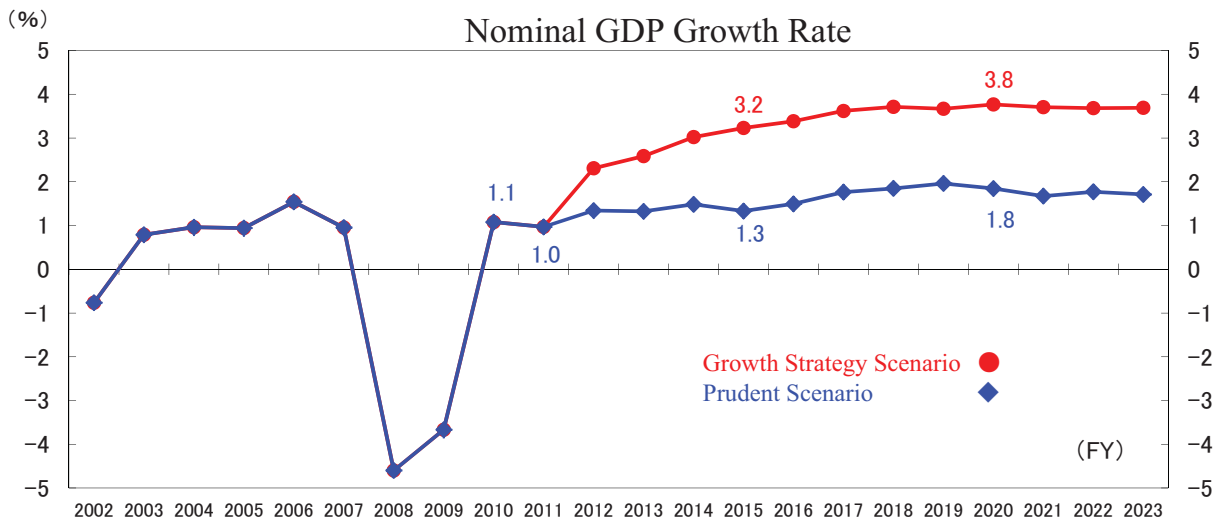
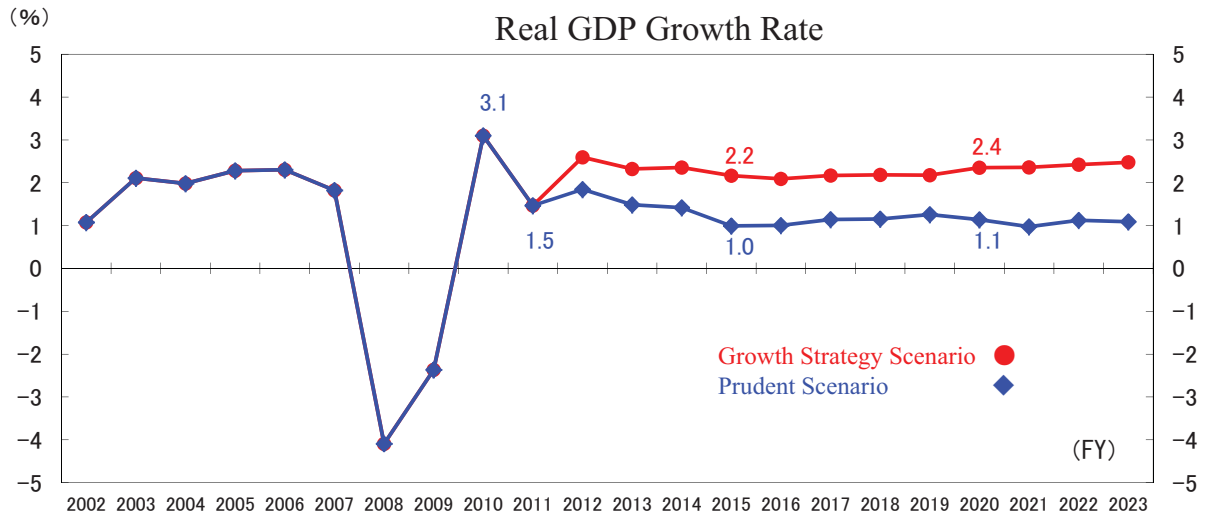
"FY2011 Tax Reform" (Cabinet decision on December 16, 2010) is reflected. Thereafter, the revised tax system is assumed to remain in use.

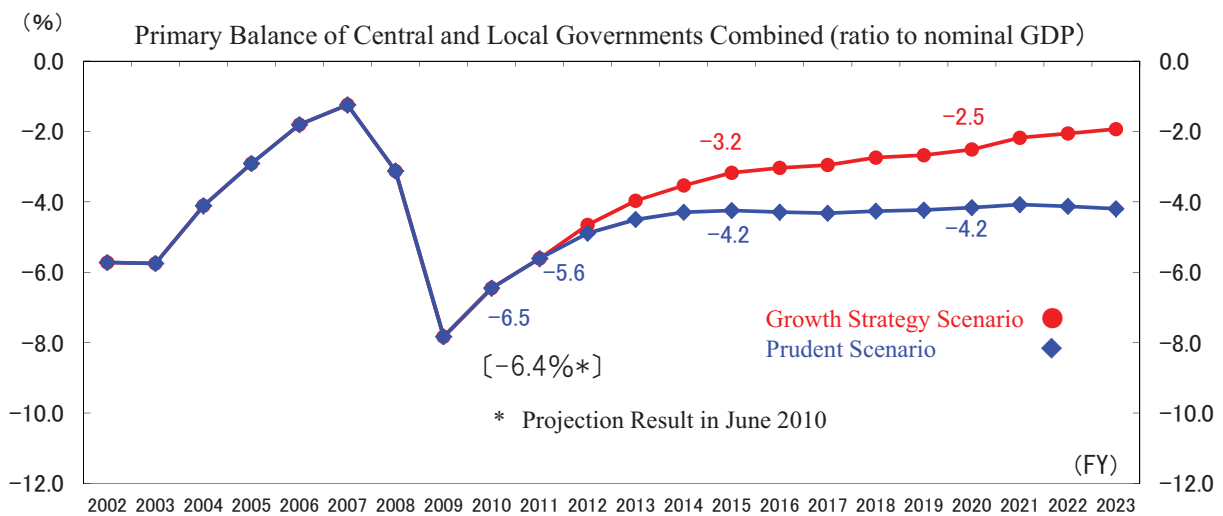
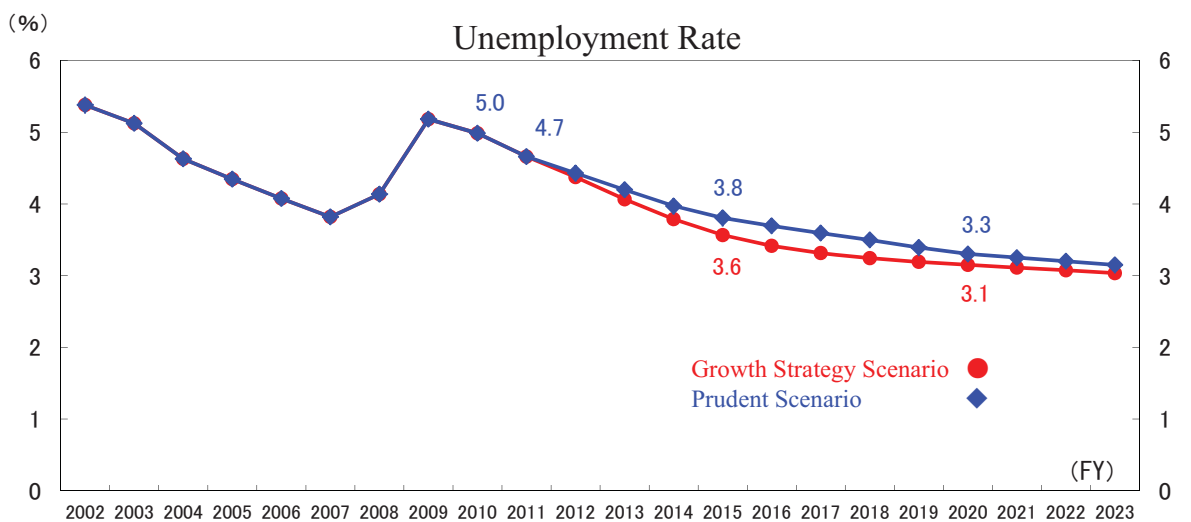
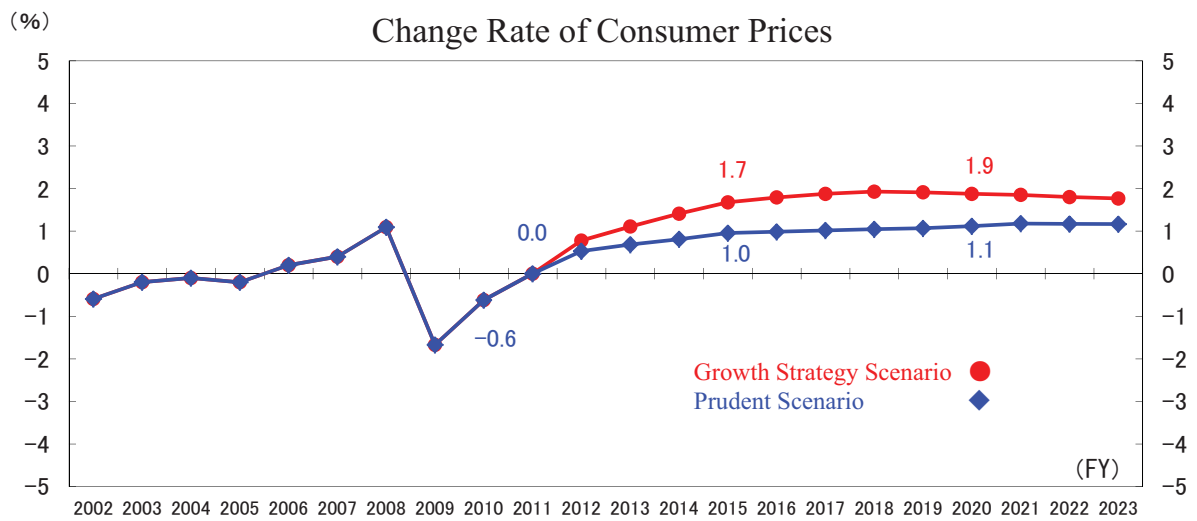
## **B. Methods**

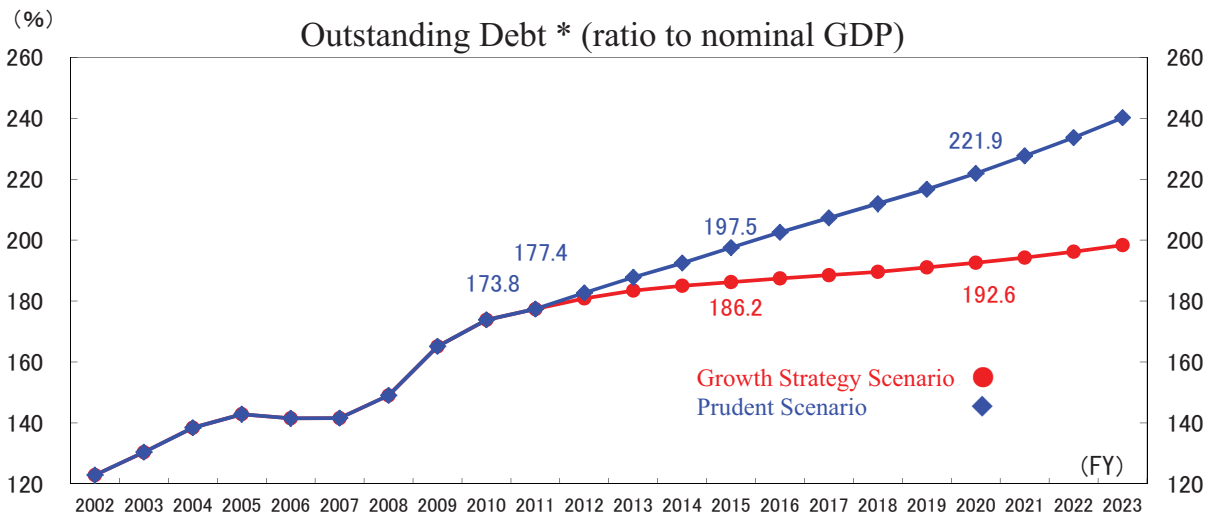
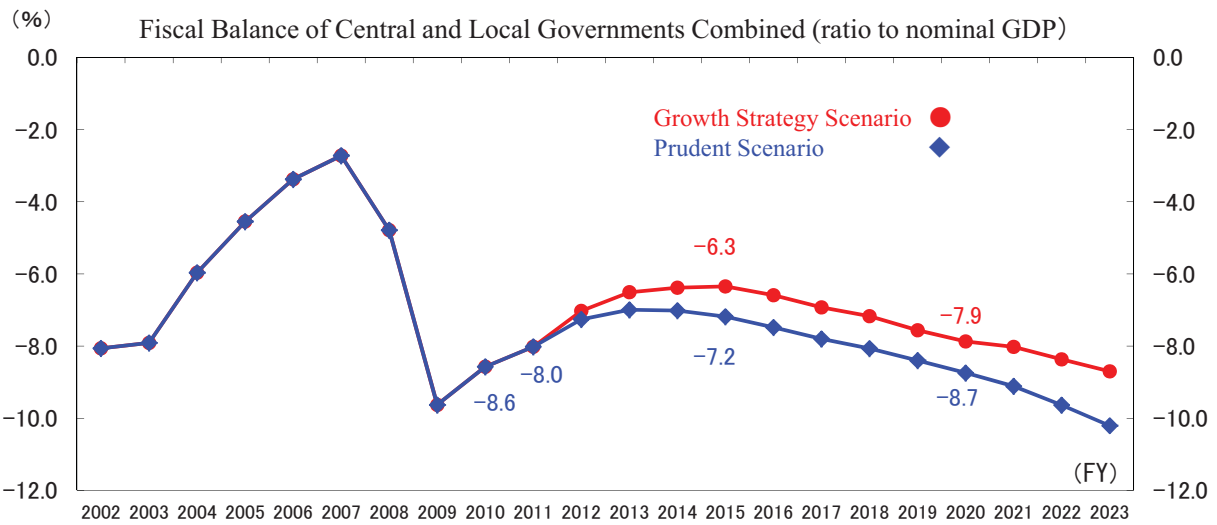
Projections are made using the "Economic and Fiscal Model (ver.2010)," which takes into account the interactions among the variables in three sections, i.e. macroeconomy, public finance and social security. Therefore, the main economic indicators—e.g. growth rates, inflation rates, and interest rates—are not exogenously assumed, but are endogenously obtained as a result of interactions among the variables.

The projections shown here should be interpreted with considerable margins.

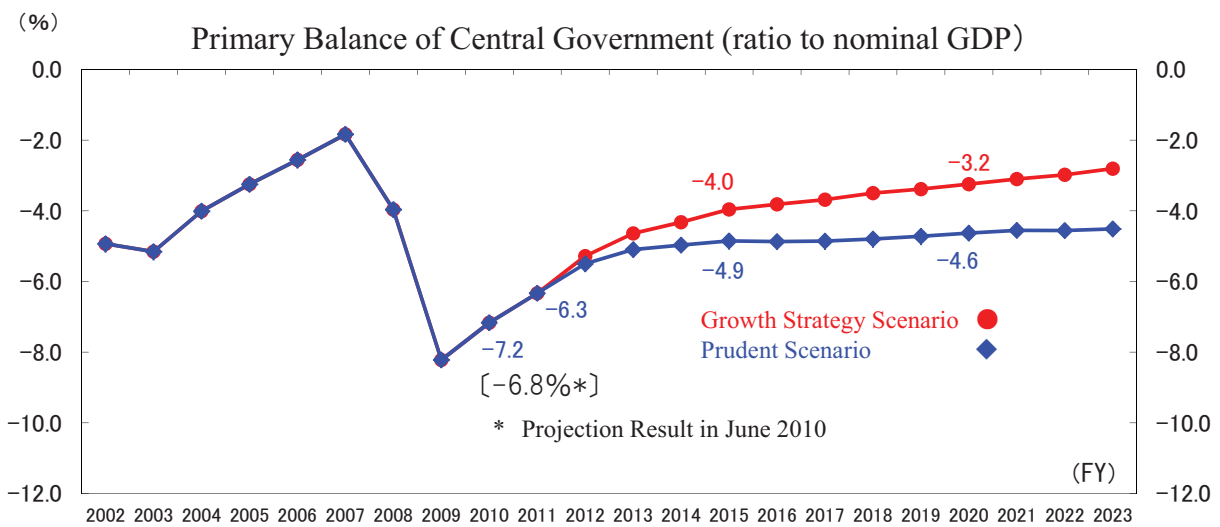
### C. Projection Results (Main Figures)







\* "Outstanding Debt" is the sum of general bonds, local government bonds and borrowings in the SALALTT.



## II. The Sizes of Necessary Balance Improvements to Achieve the Targets in "Fiscal Management Strategy"

[Fiscal Consolidation Targets in "Fiscal Management Strategy"]

The "Fiscal Management Strategy" provides the following fiscal consolidation targets.

- Flow Targets: Reduction by half of the primary balance deficit (ratio to nominal GDP) of the central and local governments combined by FY2015 and achievement of primary balance surplus by FY2020 (the same targets are set for the central government alone).
- Stock Targets: Stable reduction in the amount of outstanding debt (ratio to nominal GDP) from FY2021.

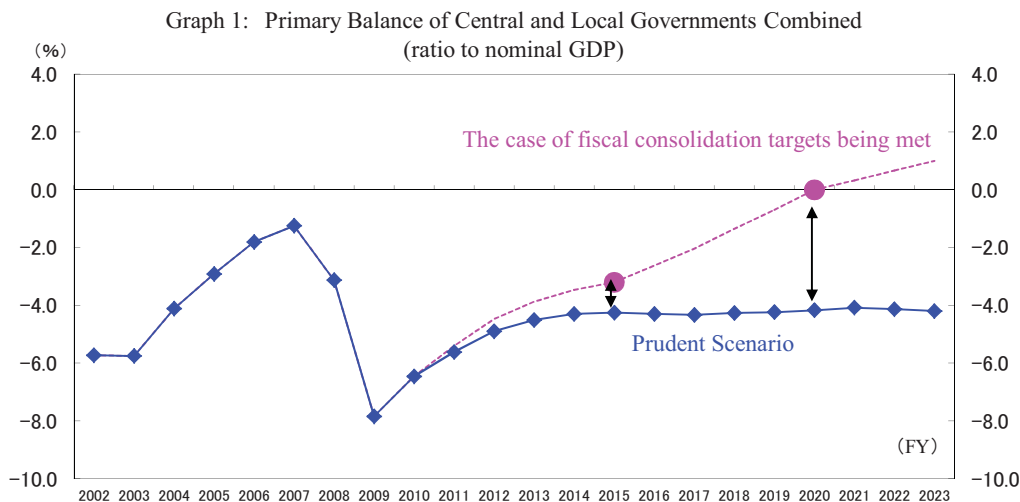
Note: The "Economic and Fiscal Projections for Medium to Long Term Analysis" released last June showed that the primary balance deficit (ratio to nominal GDP) of the central and local governments combined in FY2010 was 6.4%, and that of the central government was 6.8%. As indicated below, these figures are used as benchmarks when calculating the sizes of necessary balance improvements to achieve the target of a primary balance in FY2015.

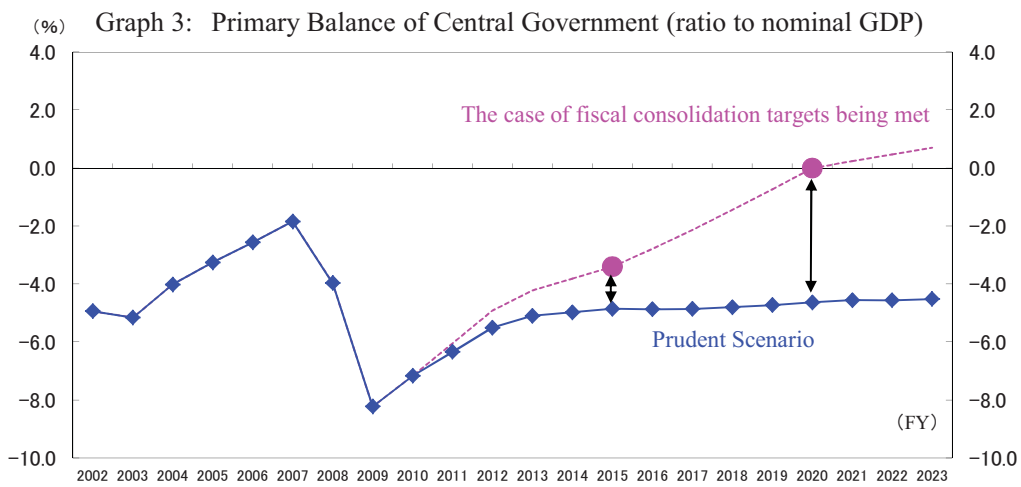
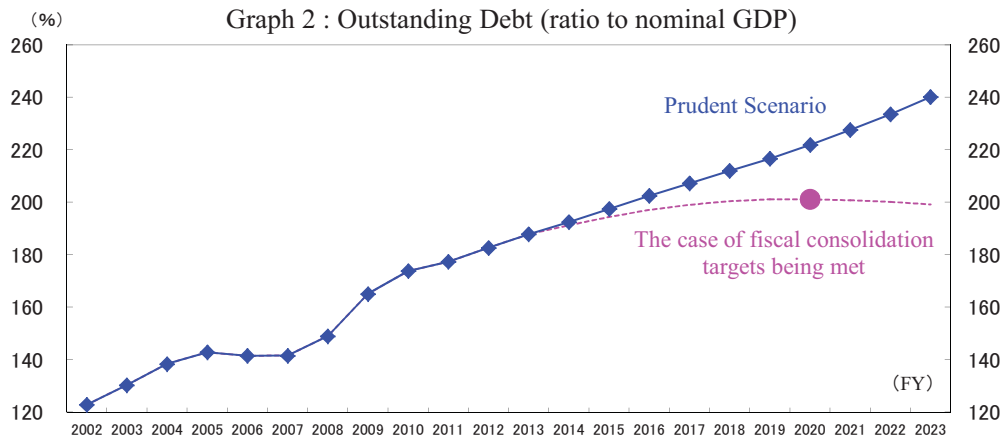
### Relationship between "Prudent Scenario (Social Security Expenditure increases as population ages)" and the Targets

By comparing the fiscal status in the Prudent Scenario with the fiscal consolidation targets, this section considers the sizes of necessary balance improvements to achieve the targets.

[The Sizes of Necessary Balance]

- It is expected that the sizes of necessary balance improvements of the central and local governments combined will need to be 1.0% pt (ratio to nominal GDP) in FY2015 and 4.2% pts in FY2020 to achieve the target of a primary balance for the central and local governments combined. From FY2021, it is expected that the sizes of balance improvements of the central and local governments combined will need to be more than 4.2% pts to reduce the outstanding debt (ratio to nominal GDP) stably, although this depends on the gap between the growth rate and interest rate.
- Also, it is expected that the sizes of balance improvements of the central government will need to be 1.5% pts (ratio to nominal GDP) in FY2015 and 4.6% pts in FY2020 to achieve the target of a primary balance for the central government.
- It should be noted that the sizes of necessary balance improvements will be smaller if the growth rate is higher than the one in the prudent scenario, and larger if the growth rate is lower.
- The sizes of necessary balance improvements to achieve these targets might be slightly larger than the above sizes due to impacts on the economy.





Note: "The case of fiscal consolidation targets being met" is not a result of a simulation but rather a plot including the targets defined in the "Fiscal Management Strategy." In the case of fiscal consolidation targets being met, as shown in Graph 2, it is assumed that the interest rate and growth rate are the same.

# Projection Results (Tables)

## (1) Prudent Scenario

[Macroeconomy]

(%), [Ratio to GDP, %], Trillions of Yen

	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2020	FY2023
Potential GDP Growth	(0.4)	(0.6)	(0.7)	(0.7)	(0.7)	(0.8)	(1.1)	(1.1)
Real GDP Growth	(3.1)	(1.5)	(1.8)	(1.5)	(1.4)	(1.0)	(1.1)	(1.1)
Nominal GDP Growth	(1.1)	(1.0)	(1.3)	(1.3)	(1.5)	(1.3)	(1.8)	(1.7)
Nominal GDP	479.2	483.8	490.3	496.8	504.2	510.9	558.1	587.3
Price Change								
Consumer Prices	(-0.6)	(0.0)	(0.5)	(0.7)	(0.8)	(1.0)	(1.1)	(1.2)
Corporate Goods Prices	(0.3)	(0.4)	(0.3)	(0.7)	(0.9)	(0.9)	(0.3)	(0.7)
GDP Deflator	(-2.0)	(-0.5)	(-0.5)	(-0.2)	(0.1)	(0.3)	(0.7)	(0.6)
Unemployment Rate	(5.0)	(4.7)	(4.4)	(4.2)	(4.0)	(3.8)	(3.3)	(3.1)
Long-term Interest Rate	(1.1)	(1.4)	(1.6)	(1.7)	(1.9)	(2.1)	(3.2)	(3.7)
Balance by Sector								
General Government	[-9.5]	[-9.3]	[-8.5]	[-8.1]	[-8.2]	[-8.2]	[-9.1]	[-10.3]
Private	[11.8]	[12.5]	[12.4]	[12.2]	[12.0]	[12.0]	[11.7]	[12.1]
Overseas	[-3.5]	[-3.7]	[-3.9]	[-4.0]	[-3.9]	[-3.8]	[-2.6]	[-1.8]

[Central and Local Governments' Public Finances]

[Ratio to GDP, %], Trillions of Yen

	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2020	FY2023
Primary Balance	-30.9	-27.1	-24.0	-22.4	-21.7	-21.7	-23.2	-24.6
(ratio to nominal GDP)	[-6.5]	[-5.6]	[-4.9]	[-4.5]	[-4.3]	[-4.2]	[-4.2]	[-4.2]
Central Government	-34.3	-30.6	-27.0	-25.3	-25.1	-24.8	-25.8	-26.5
(ratio to nominal GDP)	[-7.2]	[-6.3]	[-5.5]	[-5.1]	[-5.0]	[-4.9]	[-4.6]	[-4.5]
Local Government	3.4	3.5	3.0	3.0	3.4	3.1	2.6	1.9
(ratio to nominal GDP)	[0.7]	[0.7]	[0.6]	[0.6]	[0.7]	[0.6]	[0.5]	[0.3]
Fiscal Balance	-41.1	-38.8	-35.6	-34.8	-35.4	-36.7	-48.8	-60.0
(ratio to nominal GDP)	[-8.6]	[-8.0]	[-7.3]	[-7.0]	[-7.0]	[-7.2]	[-8.7]	[-10.2]
Central Government	-40.8	-38.6	-35.2	-34.2	-34.8	-35.6	-45.5	-54.7
(ratio to nominal GDP)	[-8.5]	[-8.0]	[-7.2]	[-6.9]	[-6.9]	[-7.0]	[-8.2]	[-9.3]
Local Government	-0.3	-0.2	-0.4	-0.5	-0.6	-1.1	-3.3	-5.3
(ratio to nominal GDP)	[-0.1]	[-0.0]	[-0.1]	[-0.1]	[-0.1]	[-0.2]	[-0.6]	[-0.9]
Outstanding Debt	832.9	858.1	895.6	933.0	970.3	1009.1	1238.1	1410.6
(ratio to nominal GDP)	[173.8]	[177.4]	[182.7]	[187.8]	[192.5]	[197.5]	[221.9]	[240.2]

[Central Government General Account]

Trillions of Yen

	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2020	FY2023
Expenditure	96.7	92.4	93.6	95.0	98.1	100.6	119.8	135.0
General Account expenditure excluding debt repayment and interest payment	75.8	70.9	70.9	70.9	72.2	72.9	78.4	81.9
Debt repayment and interest payment	20.2	21.5	22.7	24.1	25.9	27.8	41.4	53.2
Revenues	52.4	48.1	46.8	48.4	49.8	50.7	55.3	58.2
Tax Revenue	39.6	40.9	42.9	44.5	46.1	47.0	51.5	54.3
Other revenues	12.8	7.2	3.9	3.9	3.6	3.7	3.8	3.9
Difference between Expenditure and Revenues	44.3	44.3	46.7	46.6	48.4	50.0	64.4	76.8

Note: The Medium-term Fiscal Framework provides that the government will make every effort to steadily reduce the amount of newly issued government bonds in FY2012 and FY2013. Therefore the Difference between Expenditure and Revenues does not refer to government bond issuance.



## (2) Growth Strategy Scenario

[Macroeconomy]

(%), [Ratio to GDP, %], Trillions of Yen

	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2020	FY2023
Potential GDP Growth	(0.4)	(0.6)	(1.0)	(1.3)	(1.5)	(1.8)	(2.4)	(2.4)
Real GDP Growth	(3.1)	(1.5)	(2.6)	(2.3)	(2.4)	(2.2)	(2.4)	(2.5)
Nominal GDP Growth	(1.1)	(1.0)	(2.3)	(2.6)	(3.0)	(3.2)	(3.8)	(3.7)
Nominal GDP	479.2	483.8	495.0	507.8	523.1	540.0	645.4	719.6
Price Change								
Consumer Prices	(-0.6)	(0.0)	(0.8)	(1.1)	(1.4)	(1.7)	(1.9)	(1.8)
Corporate Goods Prices	(0.3)	(0.4)	(0.5)	(1.1)	(1.4)	(1.4)	(0.9)	(1.2)
GDP Deflator	(-2.0)	(-0.5)	(-0.3)	(0.3)	(0.6)	(1.0)	(1.4)	(1.2)
Unemployment Rate	(5.0)	(4.7)	(4.4)	(4.1)	(3.8)	(3.6)	(3.1)	(3.0)
Long-term Interest Rate	(1.1)	(1.4)	(1.8)	(2.1)	(2.5)	(2.9)	(4.6)	(5.2)
Balance by Sector								
General Government	[-9.5]	[-9.3]	[-8.2]	[-7.6]	[-7.3]	[-7.0]	[-7.2]	[-7.4]
Private	[11.8]	[12.5]	[12.1]	[11.6]	[11.4]	[11.0]	[9.0]	[7.9]
Overseas	[-3.5]	[-3.7]	[-3.9]	[-4.0]	[-4.0]	[-4.0]	[-1.8]	[-0.6]

[Central and Local Governments' Public Finances]

[Ratio to GDP, %], Trillions of Yen

	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2020	FY2023
Primary Balance	-30.9	-27.1	-23.0	-20.2	-18.5	-17.1	-16.2	-13.9
(ratio to nominal GDP)	[-6.5]	[-5.6]	[-4.7]	[-4.0]	[-3.5]	[-3.2]	[-2.5]	[-1.9]
Central Government	-34.3	-30.6	-26.2	-23.6	-22.6	-21.4	-20.9	-20.2
(ratio to nominal GDP)	[-7.2]	[-6.3]	[-5.3]	[-4.6]	[-4.3]	[-4.0]	[-3.2]	[-2.8]
Local Government	3.4	3.5	3.1	3.4	4.1	4.3	4.7	6.3
(ratio to nominal GDP)	[0.7]	[0.7]	[0.6]	[0.7]	[0.8]	[0.8]	[0.7]	[0.9]
Fiscal Balance	-41.1	-38.8	-34.8	-33.0	-33.4	-34.3	-50.8	-62.6
(ratio to nominal GDP)	[-8.6]	[-8.0]	[-7.0]	[-6.5]	[-6.4]	[-6.3]	[-7.9]	[-8.7]
Central Government	-40.8	-38.6	-34.4	-32.9	-33.3	-34.0	-48.8	-60.9
(ratio to nominal GDP)	[-8.5]	[-8.0]	[-7.0]	[-6.5]	[-6.4]	[-6.3]	[-7.6]	[-8.5]
Local Government	-0.3	-0.2	-0.3	-0.2	-0.1	-0.3	-2.0	-1.7
(ratio to nominal GDP)	[-0.1]	[-0.0]	[-0.1]	[-0.0]	[-0.0]	[-0.0]	[-0.3]	[-0.2]
Outstanding Debt	832.9	858.1	895.2	931.5	967.8	1005.6	1242.8	1427.4
(ratio to nominal GDP)	[173.8]	[177.4]	[180.9]	[183.4]	[185.0]	[186.2]	[192.6]	[198.4]

[Central Government General Account]

Trillions of Yen

	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2020	FY2023
Expenditure	96.7	92.4	93.8	95.7	100.0	103.9	134.2	157.6
General Account expenditure excluding debt repayment and interest payment	75.8	70.9	70.9	70.9	72.5	73.3	82.4	89.0
Debt repayment and interest payment	20.2	21.5	22.9	24.8	27.5	30.5	51.9	68.6
Revenues	52.4	48.1	47.7	50.2	52.5	54.6	64.4	71.9
Tax Revenue	39.6	40.9	43.7	46.2	48.8	50.8	60.3	67.5
Other revenues	12.8	7.2	3.9	3.9	3.7	3.8	4.1	4.4
Difference between Expenditure and Revenues	44.3	44.3	46.1	45.5	47.5	49.3	69.8	85.7

Note: The Medium-term Fiscal Framework provides that the government will make every effort to steadily reduce the amount of newly issued government bonds in FY2012 and FY2013. Therefore the Difference between Expenditure and Revenues does not refer to government bond issuance.

(Notes)

1. "Consumer Prices" means the general index (nationwide).
2. "Balance by Sector" represents "Net lending/net borrowing" in the System of National Accounts (SNA).
3. "Fiscal Balance (FB)" represents "Net lending/net borrowing" in the SNA. "Primary Balance (PB)" equals FB minus net receivable interest (receivables minus payables). The PBs of both the central and local governments include some special accounts, as well.  
The debt repayment and interest payment of the Special Account for the Local Allocation and Local Transfer Tax (hereafter referred to as SALALTT) are classified as central government in SNA, and here they are divided into central and local government in accordance with their contributions.
4. The figures for the fiscal and primary balances in FY2005 exclude transfers of assets and liabilities from the former Japan Highway Public Corporation and the other three highway-related public corporations to the Japan Expressway Holding and Debt Repayment Agency, which took place during the privatization of these public corporations. The same figures in FY2006, FY2008, FY2009, FY2010 and FY2011 exclude the transfer of funds from the Special Account for Fiscal Investment and Loan Program Funds to the Special Account for Government Debt Consolidation Funds and the general account. Furthermore, the same figure in FY2011 excludes the transfer of funds from Japan Railway Construction, Transport and Technology Agency, etc. to the general account.
5. "Outstanding Debt" is the sum of general bonds, local government bonds, and borrowing in SALALTT. The borrowing allocated from the SALALTT to the general account in FY2007 is included under outstanding debt in order to maintain the continuity of indices.

## (Appendix) Key Assumptions

GDP growth rate and price change, etc from FY2010 to FY2011 are from Fiscal 2011 Economic Outlook, the Quarterly Estimates of GDP: July–September 2010, etc.

### 1) Prudent Scenario

#### a) Total Factor Productivity (TFP) Growth

- \* The TFP growth rate remains as low as the current level (around 0.2% in FY 2009), then it gradually recovers to the historical average of around 1.1% (the historical average taking into account the economic cycles [from February 1983 to March 2009]) during the period from FY2010 to FY2020, and thereafter the rate remains constant.

#### b) Labor Force

- \* The Labor Force Participation (LFP) rate for each sex and age group remains constant at the current level.

#### c) World Economy

- \* GDP Growth Rate of World Economy (Real GDP Growth Rate considered the export share from Japan [10 major destination countries]).

The world economy growth rate increases at a rate below about 0.8 percentage points from the IMF's WEO (Fall 2010), from FY2012 onward (to around 3.7% to 4.1%).

- \* Inflation Rate (the rate considering the export shares from Japan [10 major destination countries])  
The inflation rate moves at around 1.4% to 1.7% from FY2012 onward, based on the IMF WEO (Fall 2010).

- \* Crude Oil Price

From FY2012 onward, the price shifts at a rate equal to the inflation rate above.

- \* Nominal Exchange Rate

The real exchange rate is assumed to be constant in the long term from FY2012 onward, i.e. the nominal exchange rate changes to offset the difference in the inflation rate, although influenced by international interest spread in the short term.

### 2) Growth Strategy Scenario

Differences from 1) Prudent Scenario are as follows:

#### a) Total Factor Productivity (TFP) Growth

- \* The TFP growth rate gradually increases to around 1.9% (an average taking into account the economic cycles [from February 1983 to October 1993]) from FY2010 to FY2020, and thereafter remains constant.

#### b) Labour Force

- \* Considering the labor market reforms, the LFP rate of each sex and age group gradually rises, chiefly among females and the elderly. (e.g., the LFP rate among females aged 30–34 gradually rises from around 67% in FY2009 to 75% in FY2023)

#### c) World Economy

- \* GDP Growth Rate of World Economy (Real GDP growth rate considering export shares from Japan [10 major destination countries])

The world economy growth rate moves at around 4.5% to 5.0% from FY2012 onward, based on the IMF's WEO (Fall 2010).