

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

The Projections were carried out by the Cabinet Office in light of the clarification of interactions related to three issues (Economic Growth, Fiscal Consolidation, Construction of the Stable Social Security System) and therefore, were not subject to the cabinet decision.

June 22, 2010  
Cabinet Office

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

## A. Framework

### **1. Basic Concept**

Adding the data of the Quarterly Estimate of GDP: January–March 2010, the "Mid-year Economic Projection for FY2010" (Published on June 22, 2010), the Initial Budget for the FY2010, 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".

### **3. Fiscal Assumptions**

(Expenditure)

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 FY2010 during FY2011 and FY2013.

(Tax Systems)

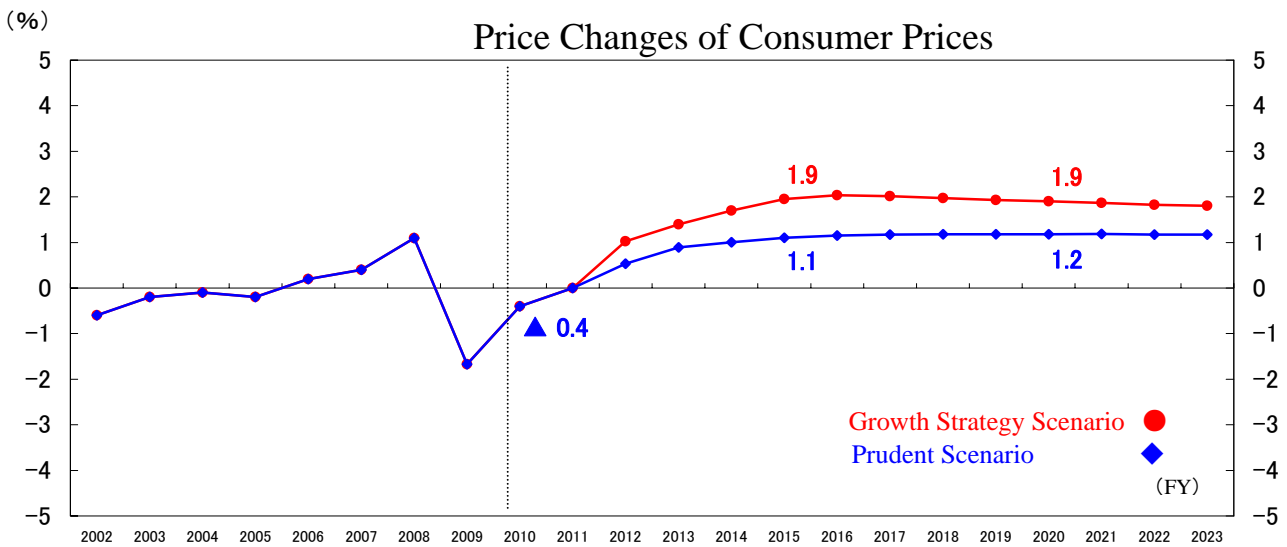
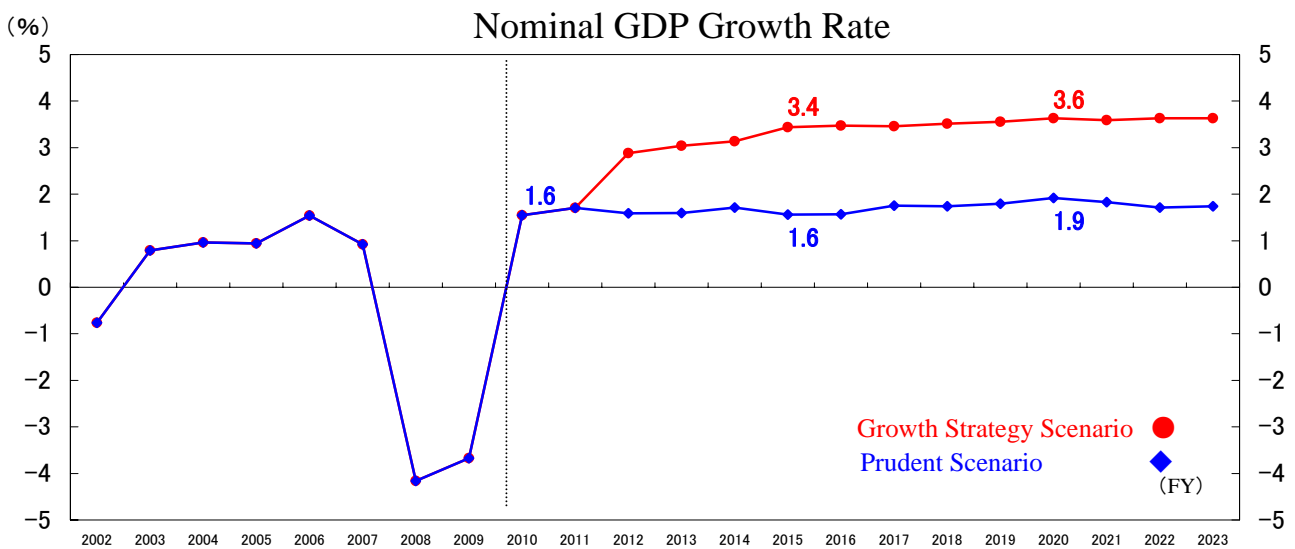
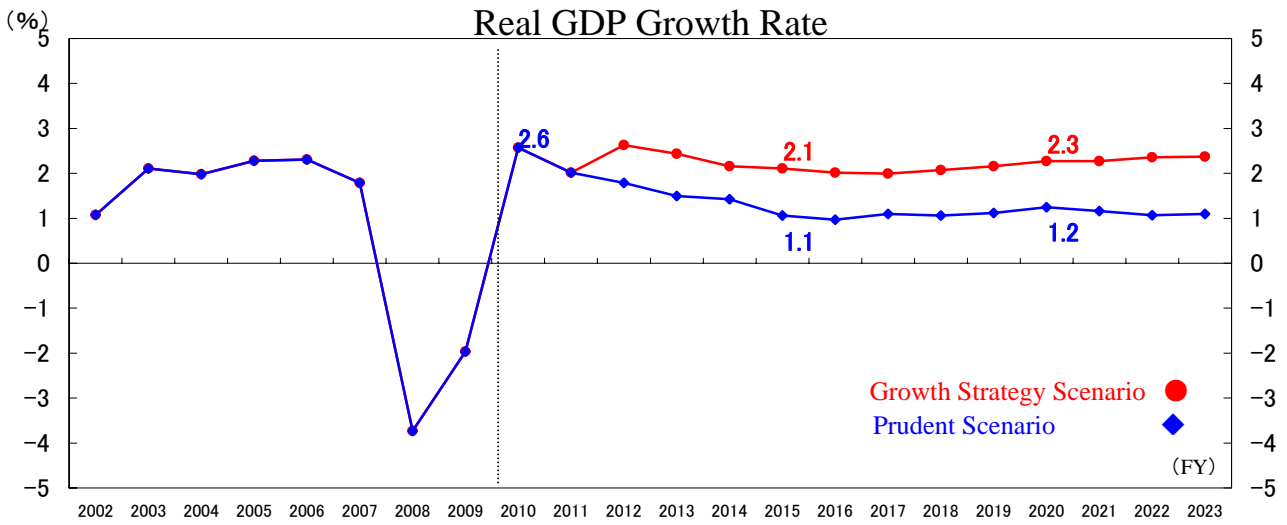
The current tax system remains in use

## B. Methods

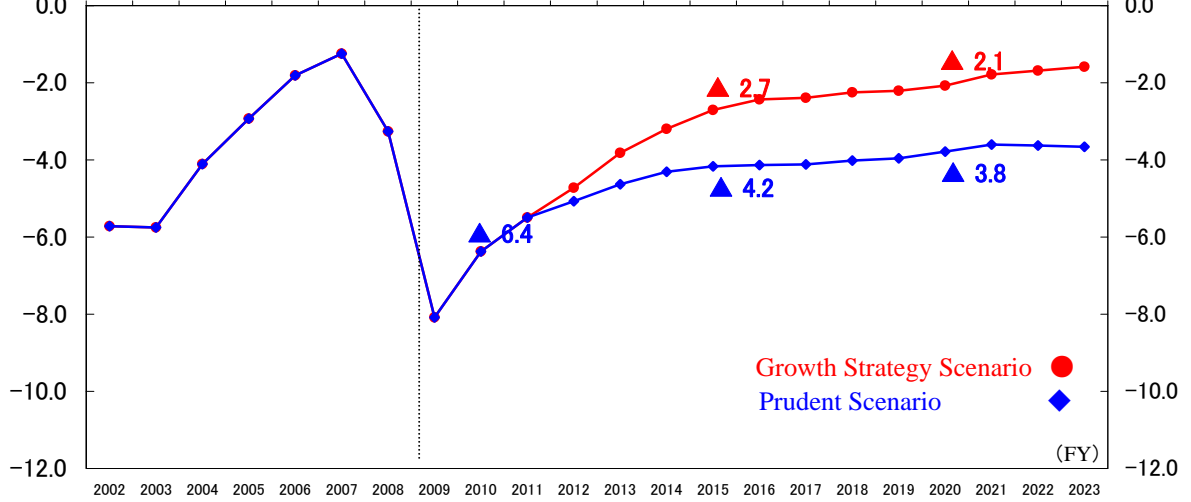
Projections are made using the "Economic and Fiscal Model (ver.2010)," which takes into account the interactions among the variables in three sections, i.e. macroeconomy, public finance and social security. Therefore, the main economic indicators—e.g. growth rates, inflation rates, and interest rates — 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.

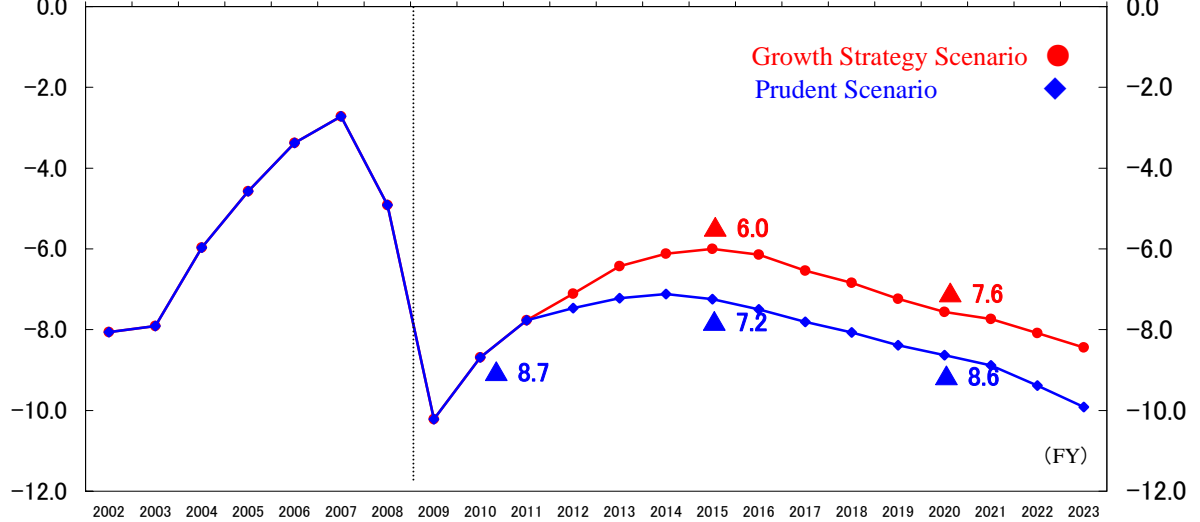
# C. Projection Results (Main Figures)



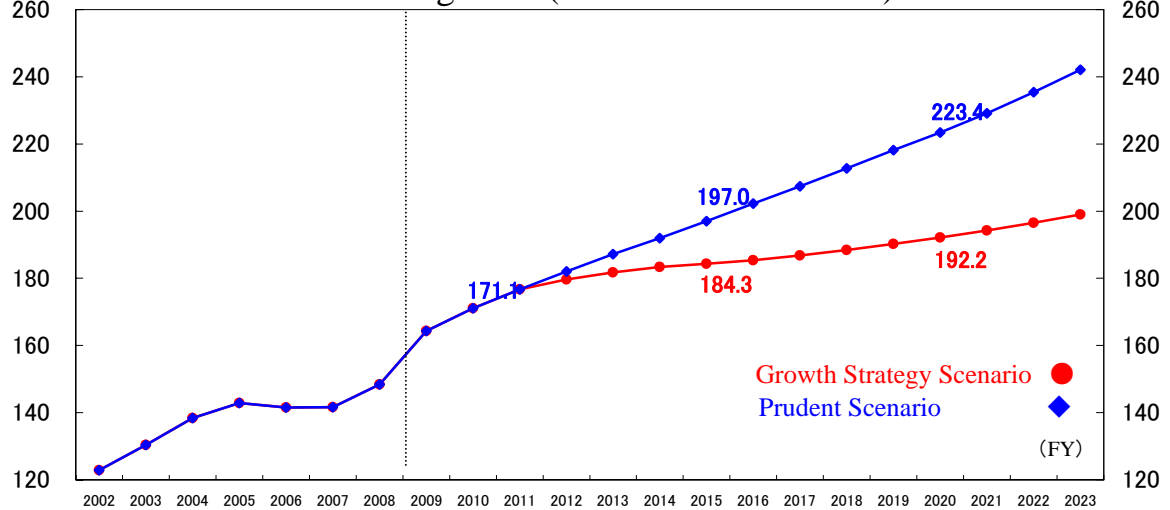
(%) Primary Balance of Central and Local Government Combined (ratio to nominal GDP)

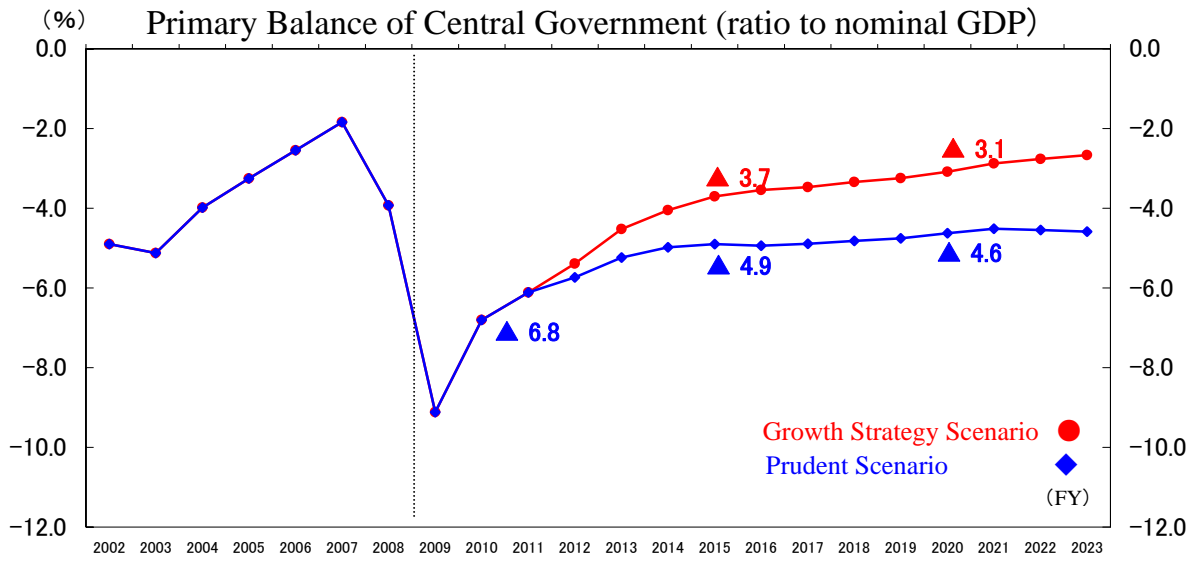


(%) Fiscal Balance of Central and Local Government Combined (ratio to nominal GDP)



(%) Outstanding Debt (ratio to nominal GDP)





## 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.

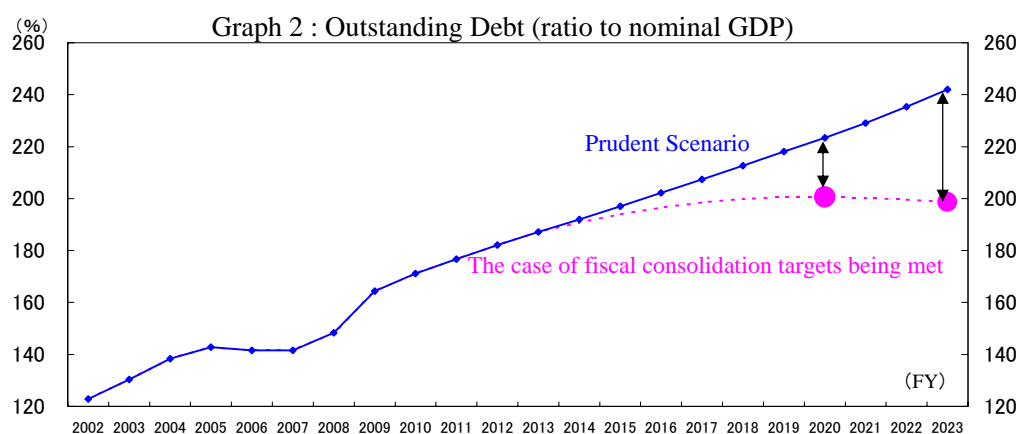
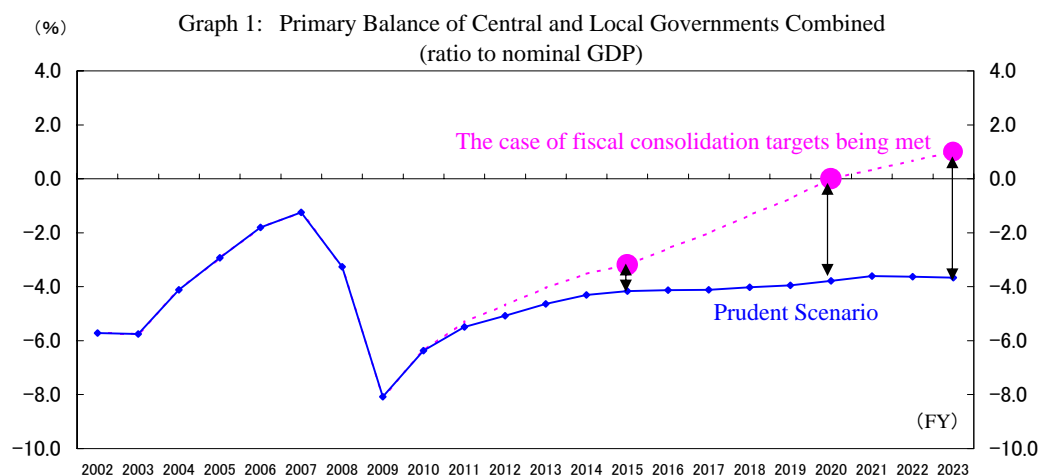
- Flow Targets: Reduction by half of the primary balance deficit relative to GDP of central and local government combined by FY2015 and achievement of primary balance surplus by FY2020. (The same targets are set for the central government alone.)
- Stock Targets: Stable reduction in the amount of outstanding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

### **(1) 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.

[Necessary Balances]

- It is expected that the sizes of necessary balance improvements will be 1% pt (relative to nominal GDP) in FY2015 and 4% pts in FY2020 to achieve the targets of a primary balance for national and local government combined, and more than 4% pts to reduce the outstanding debt stably, although this depends on the gap between the growth rate and interest rate.
- 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 magnitude of measures to be taken might be slightly larger than the sizes of necessary balance improvements due to the impacts on the economy.

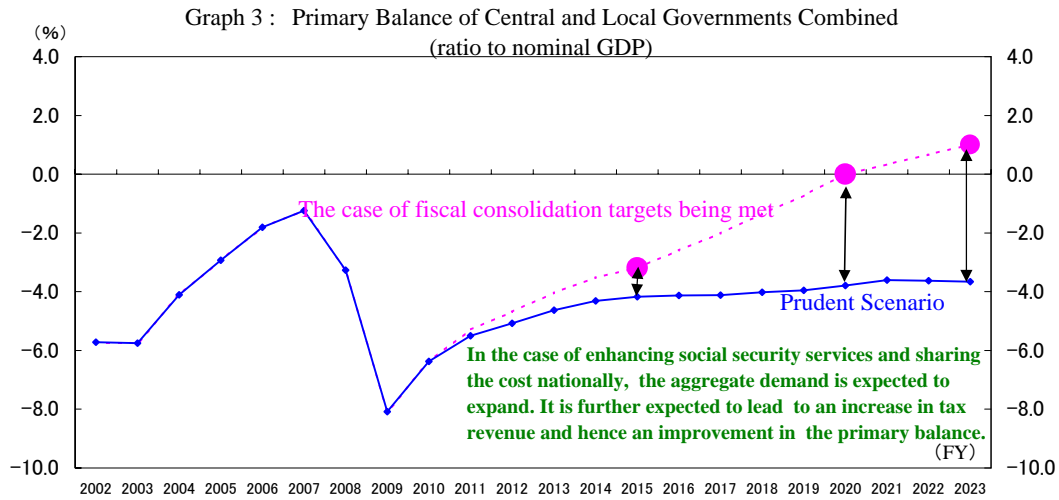


(Note) The case of fiscal consolidation targets being met is not the result of simulation but the plot including the targets defined in the "Fiscal Management Strategy." In the graph of the case of fiscal consolidation targets being met, it is assumed that the interest rate and growth rate are the same.

## (2) The Case of Enhancing Social Security Services and Sharing the Cost Nationally

(Primary Balance)

- In the case of enhancing social security services and sharing the cost nationally, the aggregate demand is expected to expand. It is further expected to lead to an increase in tax revenue and hence an improvement in the primary balance.



# Projection Results (Tables)

## (1) Prudent Scenario

[Macroeconomy]

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

	FY2009	FY2010	FY2011	FY2012	FY2013	FY2015	FY2020	FY2023
Potential GDP Growth	(0.6)	(0.7)	(0.8)	(0.7)	(0.7)	(0.8)	(1.0)	(1.0)
Real GDP Growth	(-2.0)	(2.6)	(2.0)	(1.8)	(1.5)	(1.1)	(1.2)	(1.1)
Nominal GDP Growth	(-3.7)	(1.6)	(1.7)	(1.6)	(1.6)	(1.6)	(1.9)	(1.7)
Nominal GDP	476.0	483.4	491.7	499.4	507.4	524.2	571.9	602.6
Price Change								
Consumer Prices	(-1.7)	(-0.4)	(0.0)	(0.5)	(0.9)	(1.1)	(1.2)	(1.2)
Corporate Goods Prices	(-5.2)	(0.7)	(0.8)	(0.1)	(0.4)	(0.6)	(0.5)	(0.6)
GDP Deflator	(-1.7)	(-1.0)	(-0.3)	(-0.2)	(0.1)	(0.5)	(0.7)	(0.6)
Unemployment Rate	(5.2)	(4.8)	(4.4)	(4.2)	(4.0)	(3.7)	(3.3)	(3.1)
Long-term Interest Rate	(1.3)	(1.6)	(1.7)	(1.8)	(2.0)	(2.2)	(3.2)	(3.7)
Balance by Sector								
General Government	[-10.7]	[-9.1]	[-8.1]	[-7.9]	[-7.4]	[-7.2]	[-7.9]	[-8.9]
Private	[13.9]	[12.7]	[12.1]	[12.2]	[12.1]	[11.9]	[11.5]	[11.9]
Overseas	[-3.2]	[-3.7]	[-3.9]	[-4.3]	[-4.6]	[-4.7]	[-3.6]	[-3.0]

[Central and Local Governments' Public Finances]

[Ratio to GDP, %], Trillions of Yen

	FY2009	FY2010	FY2011	FY2012	FY2013	FY2015	FY2020	FY2023
Primary Balance	-38.5	-30.8	-27.0	-25.3	-23.5	-21.8	-21.7	-22.1
(ratio to nominal GDP)	[-8.1]	[-6.4]	[-5.5]	[-5.1]	[-4.6]	[-4.2]	[-3.8]	[-3.7]
Central Government	-43.4	-32.9	-30.0	-28.6	-26.6	-25.7	-26.4	-27.6
(ratio to nominal GDP)	[-9.1]	[-6.8]	[-6.1]	[-5.7]	[-5.2]	[-4.9]	[-4.6]	[-4.6]
Local Government	4.9	2.1	3.0	3.3	3.1	3.8	4.8	5.6
(ratio to nominal GDP)	[1.0]	[0.4]	[0.6]	[0.7]	[0.6]	[0.7]	[0.8]	[0.9]
Fiscal Balance	-48.6	-42.0	-38.2	-37.3	-36.6	-38.0	-49.4	-59.8
(ratio to nominal GDP)	[-10.2]	[-8.7]	[-7.8]	[-7.5]	[-7.2]	[-7.2]	[-8.6]	[-9.9]
Central Government	-50.1	-40.6	-38.0	-37.2	-36.2	-37.8	-48.5	-58.4
(ratio to nominal GDP)	[-10.5]	[-8.4]	[-7.7]	[-7.5]	[-7.1]	[-7.2]	[-8.5]	[-9.7]
Local Government	1.5	-1.4	-0.2	-0.1	-0.5	-0.1	-0.9	-1.4
(ratio to nominal GDP)	[0.3]	[-0.3]	[-0.0]	[-0.0]	[-0.1]	[-0.0]	[-0.1]	[-0.2]
Outstanding Debt	782.2	827.1	868.9	909.4	949.8	1032.7	1277.7	1458.6
(ratio to nominal GDP)	[164.3]	[171.1]	[176.7]	[182.1]	[187.2]	[197.0]	[223.4]	[242.0]

[Central Government General Account]

Trillions of Yen

	FY2009	FY2010	FY2011	FY2012	FY2013	FY2015	FY2020	FY2023
Expenditure	102.6	92.3	92.9	94.1	96.0	102.6	123.8	140.5
General Account expenditure excluding debt repayment and interest payment	83.3	70.9	70.9	70.9	70.9	73.3	80.3	85.0
Debt repayment and interest payment	19.3	20.6	22.0	23.2	25.1	29.2	43.5	55.5
Revenues	49.1	48.0	43.7	46.1	48.1	51.4	57.8	61.3
Tax Revenue	36.9	37.4	39.6	41.6	43.6	46.9	53.0	56.4
Other revenues	12.2	10.6	4.1	4.5	4.5	4.6	4.8	4.9
Difference between Expenditure and Revenues	53.5	44.3	49.2	48.1	47.9	51.1	66.0	79.2

Note: The Medium-term Fiscal Framework provides that the government will make every effort to ensure that the value of new government bonds issued in FY2011 does not exceed that of FY2010 (around 44 trillion yen), and steadily decreases thereafter. Therefore the Difference between Expenditure and Revenues does not mean government bond issuance



## (2) Growth Strategy Scenario

[Macroeconomy]

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

	FY2009	FY2010	FY2011	FY2012	FY2013	FY2015	FY2020	FY2023
Potential GDP Growth	(0.6)	(0.7)	(0.8)	(1.0)	(1.2)	(1.7)	(2.3)	(2.4)
Real GDP Growth	(-2.0)	(2.6)	(2.0)	(2.6)	(2.4)	(2.1)	(2.3)	(2.4)
Nominal GDP Growth	(-3.7)	(1.6)	(1.7)	(2.9)	(3.0)	(3.4)	(3.6)	(3.6)
Nominal GDP	476.0	483.4	491.7	505.8	521.2	556.0	661.2	735.6
Price Change								
Consumer Prices	(-1.7)	(-0.4)	(0.0)	(1.0)	(1.4)	(1.9)	(1.9)	(1.8)
Corporate Goods Prices	(-5.2)	(0.7)	(0.8)	(0.4)	(0.8)	(1.2)	(1.1)	(1.2)
GDP Deflator	(-1.7)	(-1.0)	(-0.3)	(0.2)	(0.6)	(1.3)	(1.3)	(1.2)
Unemployment Rate	(5.2)	(4.8)	(4.4)	(4.2)	(3.9)	(3.4)	(3.1)	(3.0)
Long-term Interest Rate	(1.3)	(1.6)	(1.7)	(2.2)	(2.4)	(3.1)	(4.6)	(5.1)
Balance by Sector								
General Government	[-10.7]	[-9.1]	[-8.1]	[-7.4]	[-6.5]	[-5.6]	[-5.9]	[-6.2]
Private	[13.9]	[12.7]	[12.1]	[11.7]	[11.1]	[10.3]	[8.7]	[7.6]
Overseas	[-3.2]	[-3.7]	[-3.9]	[-4.3]	[-4.6]	[-4.7]	[-2.7]	[-1.5]

[Central and Local Governments' Public Finances]

[Ratio to GDP, %], Trillions of Yen

	FY2009	FY2010	FY2011	FY2012	FY2013	FY2015	FY2020	FY2023
Primary Balance	-38.5	-30.8	-27.0	-23.9	-19.9	-15.0	-13.7	-11.7
(ratio to nominal GDP)	[-8.1]	[-6.4]	[-5.5]	[-4.7]	[-3.8]	[-2.7]	[-2.1]	[-1.6]
Central Government	-43.4	-32.9	-30.0	-27.2	-23.6	-20.6	-20.4	-19.6
(ratio to nominal GDP)	[-9.1]	[-6.8]	[-6.1]	[-5.4]	[-4.5]	[-3.7]	[-3.1]	[-2.7]
Local Government	4.9	2.1	3.0	3.3	3.7	5.5	6.7	7.9
(ratio to nominal GDP)	[1.0]	[0.4]	[0.6]	[0.7]	[0.7]	[1.0]	[1.0]	[1.1]
Fiscal Balance	-48.6	-42.0	-38.2	-36.0	-33.5	-33.4	-50.0	-62.1
(ratio to nominal GDP)	[-10.2]	[-8.7]	[-7.8]	[-7.1]	[-6.4]	[-6.0]	[-7.6]	[-8.4]
Central Government	-50.1	-40.6	-38.0	-35.9	-33.5	-34.6	-50.0	-61.7
(ratio to nominal GDP)	[-10.5]	[-8.4]	[-7.7]	[-7.1]	[-6.4]	[-6.2]	[-7.6]	[-8.4]
Local Government	1.5	-1.4	-0.2	-0.1	0.0	1.2	0.1	-0.4
(ratio to nominal GDP)	[0.3]	[-0.3]	[-0.0]	[-0.0]	[0.0]	[0.2]	[0.0]	[-0.0]
Outstanding Debt	782.2	827.1	868.9	908.7	947.0	1024.7	1270.7	1463.8
(ratio to nominal GDP)	[164.3]	[171.1]	[176.7]	[179.7]	[181.7]	[184.3]	[192.2]	[199.0]

[Central Government General Account]

Trillions of Yen

	FY2009	FY2010	FY2011	FY2012	FY2013	FY2015	FY2020	FY2023
Expenditure	102.6	92.3	92.9	94.5	97.0	106.2	137.6	160.7
General Account expenditure excluding debt repayment and interest payment	83.3	70.9	70.9	70.9	70.9	73.9	84.0	90.7
Debt repayment and interest payment	19.3	20.6	22.0	23.5	26.0	32.3	53.6	70.0
Revenues	49.1	48.0	43.7	47.5	51.1	57.2	67.7	75.3
Tax Revenue	36.9	37.4	39.6	42.9	46.5	52.5	62.6	69.9
Other revenues	12.2	10.6	4.1	4.5	4.6	4.7	5.1	5.4
Difference between Expenditure and Revenues	53.5	44.3	49.2	47.0	45.9	49.0	69.9	85.4

Note: The Medium-term Fiscal Framework provides that the government will make every effort to ensure that the value of new government bonds issued in FY2011 does not exceed that of FY2010 (around 44 trillion yen), and steadily decreases thereafter. Therefore the Difference between Expenditure and Revenues does not mean 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 (receivable minus payable). The PBs of both central and local governments include some special accounts, as well.
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 and FY2010 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.
5. "Outstanding Debt" is the sum of general bonds, local government bonds and borrowings in the 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 FY2009 to FY2011 are from the Mid-year Economic Projection for FY2010, the Quarterly Estimates of GDP: January–March 2010, etc.

### (1) Prudent Scenario

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

- \* The TFP growth rate remains as low as the current level (around 0.3% in FY 2009) in FY 2010, 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]). In the period from FY2011 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% from the IMF's WEO (Spring 2010), from FY2012 onward (to around 4.3% to 4.5%).

- \* Inflation Rate (the rate considering the export shares from Japan [10 major destination countries])

The inflation rate increases at a rate of 1.6% to 2.0% from FY2012 onward, based on the IMF WEO (Spring 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 seniors. (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 from 5.1% to 5.3% from FY2012 onward, based on the IMF's WEO (Spring 2010).