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Japan's Medium-term Economic Outlook
—*February 2014*—

Commitment to Japan's revitalization will be put to the test

Economic Research Dept
Tomoya Kondo
Mikio Mizobata
Shunsuke Kobayashi

Summary

- **World economy over next ten years.** With steady growth seen for the U.S. economy, the main risk factor is change in financial policy on the part of the advanced nations during the period covered by this outlook. Maintenance of financial policy provides the foundation for this outlook, and any changes could have a major impact on the economies of emerging nations. Factors which have inhibited equipment investment up to now (such as the decline in prospective profit and the increase in uncertainty) are gradually being removed, and we believe that it can be deduced that the global economy has now entered the expansionary phase of the business cycle.

- **Japan's economy over the next ten years.** The outlook for Japan's real economic growth rate over the next ten years is an annual average of 1.5%. However, the pattern of said growth is expected to be different in the first and second halves of this period. While a growth rate of 1.7% is seen for the first half of the ten-year period, changes in government monetary policy are expected to erode the effects of the weak yen, causing growth to slow somewhat to 1.3% in the second half. Implementation of an effective growth strategy is essential to maintaining growth in the second half the period. The synergy effect of the 2020 Tokyo Olympics is much-anticipated.

- **BOJ will continue monetary easing.** The decline in interest rates and the weak yen are expected to push the Japanese domestic economy up, but this is only a short-term, limited effect. The inflation target cannot be achieved through monetary policy alone. This must be combined with a growth strategy to become more effective.

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Medium-term Outlook for Japan's Economy (as of Feb 2014)

	Actual		DIR estimates		
	FY2004-08	FY2009-13	FY2014-23	FY2014-18	FY2019-23
Real GDP (y/y %)	0.6	0.9	1.5	1.7	1.3
Private final consumption	0.5	1.5	0.7	0.6	0.8
Private capital investment	1.9	-0.9	3.6	5.0	2.2
Private housing investment	-3.1	-2.2	-1.8	-2.4	-1.1
Public fixed capital formation	-7.3	3.2	0.1	-1.5	1.8
Government final consumption	0.5	2.0	2.0	1.9	2.1
Export of goods and services	5.1	1.5	5.3	6.5	4.1
Import of goods and services	2.7	2.5	3.9	3.9	3.9
Nominal GDP (y/y %)	-0.5	-0.1	2.3	2.6	2.0
GDP deflator (y/y %)	-1.1	-1.0	0.8	0.8	0.7
Corporate Goods Price Index (y/y %)	2.2	-0.7	1.2	1.4	0.9
Consumer Price Index (y/y %)	0.3	-0.4	1.4	1.6	1.3
O/N call rate (%)	0.2	0.1	0.0	0.0	0.0
Yield on 10-yr JGBs (%)	1.5	1.0	1.6	1.3	1.9
Exchange rate (Y/$)	110.5	88.0	93.9	100.0	87.8
Current balance (% of nominal GDP)	3.8	2.1	2.5	2.6	2.4
Nominal employee compensation (y/y %)	0.1	-0.4	1.6	1.3	2.0
Unemployment rate (%)	4.2	4.6	3.5	3.6	3.3
Labor's share (ratio of employee compensation to national income)	68.5	69.6	65.1	65.6	64.7
Central & local government balance (% of nominal GDP)					
Fiscal balance	-4.0	-8.5	-4.6	-5.2	-4.0
Primary balance	-2.4	-6.8	-3.2	-3.8	-2.6
Central & local government debt (% of nominal GDP)	181.4	225.9	240.8	241.8	239.9

Source: Compiled by DIR.
Notes: 1) Period avg.
2) Some FY13 figures: DIR estimates.
3) Fiscal balance: excl. ad-hoc factors.

Main Economic Indicators

(FY)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Nominal GDP (Y tril)	489.5	473.9	480.2	473.7	472.6	487.1	501.9	514.6	528.8	541.2	553.2	565.8	578.8	590.5	601.4	612.0
(Y/y %)	-4.6	-3.2	1.3	-1.4	-0.2	3.1	3.0	2.5	2.8	2.3	2.2	2.3	2.3	2.0	1.8	1.8
Nominal GNI (Y tril)	504.8	487.0	493.5	488.4	488.0	503.1	519.8	533.5	548.6	562.2	574.1	586.8	599.4	610.8	621.4	632.1
(Y/y %)	-4.9	-3.5	1.3	-1.0	-0.1	3.1	3.3	2.6	2.8	2.5	2.1	2.2	2.2	1.9	1.7	1.7
Real GDP (chained [2005]; Y tril)	505.8	495.5	512.5	514.0	517.5	529.4	535.3	544.8	555.6	566.8	576.7	586.7	595.2	602.5	608.8	615.4
(Y/y %)	-3.7	-2.0	3.4	0.3	0.7	2.3	1.1	1.8	2.0	2.0	1.8	1.7	1.4	1.2	1.0	1.1
Domestic demand (contribution to real GDP growth; % pt)	-2.7	-2.2	2.6	1.3	1.5	2.1	0.7	1.4	1.3	1.8	1.5	1.6	1.3	1.3	1.3	1.1
Foreign demand (contribution to real GDP growth; % pt)	-1.1	0.2	0.8	-1.0	-0.8	0.1	0.4	0.4	0.7	0.2	0.3	0.2	0.2	-0.1	-0.2	0.0
Per capita real GDP (chained [2005]; Y mil)	4.0	3.9	4.0	4.0	4.1	4.2	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.8	4.9	5.0
(Y/y %)	-3.7	-1.9	3.1	0.4	0.9	2.4	1.3	2.0	2.2	2.3	2.1	2.1	1.8	1.7	1.5	1.6
Real GDI (chained [2005]; Y tril)	491.8	488.3	500.2	495.5	498.6	509.5	514.2	523.0	532.0	540.5	547.7	555.5	562.1	567.2	571.2	575.3
(Y/y %)	-4.4	-0.7	2.4	-0.9	0.6	2.2	0.9	1.7	1.7	1.6	1.3	1.4	1.2	0.9	0.7	0.7
Index of Industrial Production (2005 = 100)	94.4	86.1	94.1	93.2	90.0	93.1	93.9	96.0	98.6	101.3	103.5	105.8	107.4	108.6	109.4	110.2
(Y/y %)	-12.6	-8.8	9.4	-1.0	-3.4	3.4	0.8	2.3	2.7	2.8	2.2	2.2	1.6	1.1	0.7	0.7
Corporate Goods Price Index (2010 = 100)	105.2	99.8	100.2	101.6	100.5	101.8	104.6	105.4	107.1	108.1	109.0	109.8	111.1	112.2	113.2	114.2
(Y/y %)	3.2	-5.1	0.4	1.3	-1.0	1.3	2.8	0.8	1.6	0.9	0.9	0.8	1.1	1.0	0.9	0.8
Consumer Price Index (2010 = 100)	102.1	100.4	99.9	99.8	99.5	100.1	102.9	104.3	106.0	107.0	108.3	109.7	111.2	112.7	114.2	115.6
(Y/y %)	1.1	-1.7	-0.4	-0.1	-0.3	0.6	2.8	1.4	1.6	1.0	1.2	1.3	1.4	1.4	1.3	1.2
O/N call rate (%)	0.4	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yield on 10-yr JGBs (%)	1.5	1.4	1.1	1.0	0.8	0.7	1.0	1.2	1.4	1.6	1.5	1.6	1.8	1.9	2.0	2.0
Y/$	100.5	92.9	85.7	79.0	83.1	99.5	101.0	98.3	100.7	102.0	97.8	92.3	89.0	86.9	85.8	84.8
Y/EUR	143.4	131.2	113.2	108.9	107.1	134.9	133.2	125.2	124.3	124.0	118.9	112.0	107.7	105.1	103.7	102.6
Current balance (Y tril)	12.6	16.3	16.7	7.6	4.4	5.0	8.6	11.5	15.0	16.2	16.2	16.2	16.0	14.2	12.1	11.4
(% of nominal GDP)	2.6	3.4	3.5	1.6	0.9	1.0	1.7	2.2	2.8	3.0	2.9	2.9	2.8	2.4	2.0	1.9
Labor force (0000)	6,674	6,643	6,630	6,578	6,555	6,532	6,502	6,483	6,467	6,437	6,404	6,372	6,344	6,320	6,298	6,274
(Y/y %)	-0.2	-0.5	-0.2	-0.8	-0.3	-0.4	-0.5	-0.3	-0.2	-0.5	-0.5	-0.5	-0.4	-0.4	-0.4	-0.4
No. employed (0000)	6,399	6,301	6,301	6,280	6,275	6,266	6,248	6,236	6,230	6,211	6,189	6,165	6,140	6,115	6,088	6,060
(Y/y %)	-0.5	-1.5	0.0	-0.3	-0.1	-0.1	-0.3	-0.2	-0.1	-0.3	-0.4	-0.4	-0.4	-0.4	-0.4	-0.5
No. of employees (0000)	5,544	5,488	5,508	5,501	5,511	5,518	5,518	5,523	5,533	5,532	5,528	5,521	5,514	5,507	5,499	5,489
(Y/y %)	0.1	-1.0	0.4	-0.1	0.2	0.1	0.0	0.1	0.2	0.0	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2
No. unemployed (0000)	275	343	328	298	280	266	254	247	237	226	215	208	204	205	210	214
Unemployment rate (%)	4.1	5.2	5.0	4.5	4.3	4.1	3.9	3.8	3.7	3.5	3.4	3.3	3.2	3.2	3.3	3.4
Nominal employee compensation (Y tril)	254	243	244	246	246	249	251	253	257	261	265	270	276	282	288	293
(Y/y %)	-0.5	-4.4	0.4	0.7	0.1	1.3	0.6	1.0	1.4	1.6	1.7	1.7	2.2	2.1	2.1	1.9
Nominal household disposable income (Y tril)	288	288	287	288	286	290	295	299	303	307	311	316	323	329	334	340
(Y/y %)	-0.9	-0.2	-0.2	0.2	-0.5	1.3	1.5	1.5	1.2	1.6	1.3	1.4	2.1	1.9	1.6	1.7
Labor's share (%)	71.6	70.6	69.2	70.4	70.1	67.9	66.6	66.1	65.6	65.0	64.8	64.4	64.4	64.6	64.9	65.1
Household savings rate (%)	1.5	2.6	2.5	2.2	1.0	-0.7	-1.2	-1.2	-2.0	-2.1	-2.4	-2.7	-2.5	-2.5	-2.5	-2.3
Central & local government																
Fiscal balance (Y tril)	-21.8	-44.1	-40.0	-40.9	-38.0	-40.0	-36.5	-30.6	-25.5	-23.6	-22.1	-21.7	-21.2	-22.7	-24.8	-26.9
(% of nominal GDP)	-4.5	-9.3	-8.3	-8.6	-8.0	-8.2	-7.3	-5.9	-4.8	-4.4	-4.0	-3.8	-3.7	-3.8	-4.1	-4.4
Primary balance (% of nominal GDP)	-2.9	-7.6	-6.6	-6.8	-6.2	-6.6	-5.7	-4.5	-3.4	-3.0	-2.6	-2.5	-2.3	-2.5	-2.7	-3.0
Central & local government debt (Y tril)	933	979	1,029	1,081	1,131	1,174	1,215	1,249	1,279	1,307	1,333	1,359	1,385	1,412	1,442	1,474
(% of nominal GDP)	190.7	206.6	214.2	228.3	239.2	241.1	242.0	242.8	241.9	241.4	241.0	240.2	239.3	239.2	239.8	240.8

Source: Compiled by DIR.
Notes: 1) Through FY12: actual; some FY13 figures: DIR estimates.
2) Fiscal balance: excl. ad-hoc factors.

Nominal Gross Domestic Expenditure (Y tril)

(FY)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Nominal GDP	489.5	473.9	480.2	473.7	472.6	487.1	501.9	514.6	528.8	541.2	553.2	565.8	578.8	590.5	601.4	612.0
(Y/y %)	-4.6	-3.2	1.3	-1.4	-0.2	3.1	3.0	2.5	2.8	2.3	2.2	2.3	2.3	2.0	1.8	1.8
Domestic demand	491.1	469.6	475.9	480.0	482.9	497.8	510.7	521.3	532.8	545.1	557.0	569.7	582.5	595.8	608.6	620.0
(Y/y %)	-2.7	-4.4	1.3	0.9	0.6	3.1	2.6	2.1	2.2	2.3	2.2	2.3	2.3	2.3	2.1	1.9
Private final consumption	288.1	284.2	284.5	286.4	288.1	296.8	302.9	307.5	313.8	318.9	324.4	330.0	336.4	342.7	348.6	353.8
(Y/y %)	-2.2	-1.4	0.1	0.7	0.6	3.0	2.1	1.5	2.0	1.6	1.7	1.7	1.9	1.9	1.7	1.5
Private housing investment	16.5	12.6	12.9	13.4	14.0	14.5	15.1	14.6	14.1	13.9	13.9	13.9	14.0	14.1	14.0	13.9
(Y/y %)	1.1	-23.5	2.3	3.7	4.7	3.3	4.1	-3.4	-3.0	-1.8	-0.2	0.4	0.7	0.2	-0.7	-0.7
Private capital investment	71.0	60.7	61.9	64.3	64.6	63.8	67.4	71.1	74.4	78.6	82.6	85.8	88.8	91.2	93.2	95.3
(Y/y %)	-7.6	-14.5	2.0	3.8	0.5	-1.3	5.6	5.6	4.5	5.8	5.0	3.9	3.4	2.7	2.2	2.2
Change in private inventories	1.3	-5.0	-0.3	-1.6	-1.9	-1.5	-2.6	-2.3	-1.2	-0.8	-0.6	-0.1	0.6	0.9	1.1	0.8
Government final consumption	92.9	94.2	95.5	96.7	97.1	100.0	102.5	105.5	107.2	109.6	112.3	115.1	117.9	121.0	124.5	128.0
(Y/y %)	-0.4	1.4	1.4	1.2	0.5	2.9	2.5	2.9	1.7	2.2	2.5	2.4	2.5	2.6	2.9	2.8
Public fixed capital formation	21.2	22.8	21.3	20.8	21.0	24.3	25.5	24.9	24.5	24.9	24.4	25.0	24.8	25.9	27.2	28.4
(Y/y %)	-4.0	7.7	-6.5	-2.5	1.1	15.4	5.0	-2.2	-1.8	1.8	-2.2	2.8	-0.9	4.5	4.7	4.5
Change in public inventories	0.1	0.0	-0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Export of goods and services	78.6	64.5	73.8	70.9	70.4	78.7	84.1	86.2	92.0	98.9	103.0	105.0	107.3	110.1	113.4	117.7
(Y/y %)	-15.0	-17.9	14.4	-3.9	-0.7	11.7	6.9	2.5	6.8	7.4	4.2	1.9	2.2	2.6	3.0	3.8
Import of goods and services	80.2	60.2	69.5	77.3	80.8	89.4	92.9	92.9	96.0	102.8	106.8	108.9	111.0	115.4	120.6	125.7
(Y/y %)	-4.9	-25.0	15.5	11.2	4.5	10.7	3.9	0.0	3.4	7.0	3.9	1.9	2.0	3.9	4.6	4.3

Real Gross Domestic Expenditure (chained [2005]; Y tril)

(FY)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Real GDP	505.8	495.5	512.5	514.0	517.5	529.4	535.3	544.8	555.6	566.8	576.7	586.7	595.2	602.5	608.8	615.4
(Y/y %)	-3.7	-2.0	3.4	0.3	0.7	2.3	1.1	1.8	2.0	2.0	1.8	1.7	1.4	1.2	1.0	1.1
Domestic demand	493.1	482.2	495.1	501.6	508.9	519.6	523.3	530.6	537.3	546.7	554.9	563.6	570.8	578.4	585.6	592.0
(Y/y %)	-2.7	-2.2	2.7	1.3	1.5	2.1	0.7	1.4	1.3	1.8	1.5	1.6	1.3	1.3	1.2	1.1
Private final consumption	291.4	295.0	299.8	303.8	308.5	313.2	312.3	314.1	316.9	320.1	323.0	325.6	328.3	331.1	333.6	335.8
(Y/y %)	-2.0	1.2	1.6	1.3	1.5	1.5	-0.3	0.6	0.9	1.0	0.9	0.8	0.8	0.8	0.8	0.6
Private housing investment	15.5	12.3	12.5	12.9	13.6	13.9	14.0	13.4	12.8	12.4	12.3	12.2	12.2	12.0	11.8	11.6
(Y/y %)	-1.1	-21.0	2.2	3.2	5.3	1.9	0.9	-4.6	-4.6	-2.6	-1.1	-0.5	-0.6	-1.0	-1.9	-1.8
Private capital investment	71.1	62.5	64.9	68.0	68.5	68.0	71.6	75.5	78.6	82.9	86.8	89.9	92.3	94.1	95.3	96.7
(Y/y %)	-7.7	-12.0	3.8	4.8	0.7	-0.7	5.3	5.3	4.2	5.5	4.7	3.6	2.8	1.9	1.3	1.4
Change in private inventories	1.8	-5.0	0.0	-1.5	-1.9	-1.5	-2.5	-2.2	-1.1	-0.8	-0.5	-0.1	0.6	0.8	1.0	0.7
Government final consumption	93.4	96.0	97.9	99.1	100.6	103.0	104.6	107.5	108.8	110.9	113.2	115.5	117.7	120.0	122.7	125.4
(Y/y %)	-0.4	2.7	2.0	1.2	1.5	2.4	1.6	2.7	1.2	1.9	2.1	2.0	1.8	2.0	2.3	2.2
Public fixed capital formation	19.8	22.1	20.7	20.1	20.3	23.2	23.6	22.8	22.1	22.2	21.5	21.9	21.4	22.0	22.8	23.6
(Y/y %)	-6.7	11.5	-6.4	-3.2	1.3	14.4	1.5	-3.2	-3.4	0.7	-3.2	1.7	-2.2	3.0	3.4	3.3
Change in public inventories	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Export of goods and services	79.0	71.3	83.6	82.3	81.3	85.0	91.3	95.7	102.1	109.6	116.5	122.0	126.6	131.4	136.4	142.4
(Y/y %)	-10.6	-9.7	17.2	-1.6	-1.2	4.6	7.4	4.8	6.6	7.4	6.3	4.7	3.8	3.8	3.8	4.4
Import of goods and services	66.8	59.6	66.8	70.3	73.0	75.4	78.7	80.6	82.4	87.1	91.3	94.7	97.4	101.5	106.2	110.8
(Y/y %)	-4.7	-10.7	12.0	5.3	3.8	3.3	4.4	2.4	2.2	5.8	4.7	3.7	2.9	4.2	4.7	4.3

Deflator (chained [2005])

(FY)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
GDP deflator	96.8	95.6	93.7	92.1	91.3	92.0	93.8	94.5	95.2	95.5	95.9	96.4	97.2	98.0	98.8	99.5
(Y/y %)	-0.9	-1.2	-2.0	-1.7	-0.9	0.8	1.9	0.7	0.8	0.3	0.5	0.5	0.8	0.8	0.8	0.7
Domestic demand	99.6	97.4	96.1	95.7	94.9	95.8	97.6	98.3	99.2	99.7	100.4	101.1	102.0	103.0	103.9	104.7
(Y/y %)	0.0	-2.2	-1.3	-0.5	-0.8	1.0	1.9	0.7	0.9	0.5	0.7	0.7	1.0	0.9	0.9	0.8
Private final consumption	98.9	96.3	94.9	94.3	93.4	94.8	97.0	97.9	99.0	99.6	100.5	101.3	102.5	103.5	104.5	105.4
(Y/y %)	-0.2	-2.6	-1.5	-0.6	-0.9	1.4	2.4	0.9	1.1	0.6	0.8	0.9	1.1	1.0	1.0	0.8
Private housing investment	106.5	103.1	103.2	103.7	103.2	104.5	107.8	109.1	110.9	111.8	112.9	114.0	115.4	116.8	118.2	119.5
(Y/y %)	2.2	-3.2	0.2	0.5	-0.5	1.3	3.1	1.2	1.6	0.9	1.0	0.9	1.3	1.2	1.2	1.1
Private capital investment	99.9	97.1	95.5	94.6	94.4	93.8	94.1	94.2	94.6	94.9	95.2	95.5	96.1	96.9	97.8	98.6
(Y/y %)	0.2	-2.8	-1.7	-0.9	-0.2	-0.6	0.2	0.2	0.4	0.3	0.3	0.4	0.7	0.8	0.9	0.8
Government final consumption	99.4	98.2	97.6	97.6	96.6	97.1	97.9	98.1	98.5	98.8	99.2	99.6	100.2	100.9	101.5	102.0
(Y/y %)	0.0	-1.2	-0.6	-0.1	-1.0	0.5	0.9	0.2	0.4	0.3	0.4	0.4	0.6	0.6	0.6	0.5
Public fixed capital formation	106.8	103.2	103.1	103.7	103.5	104.4	108.1	109.1	110.9	112.1	113.3	114.5	116.1	117.7	119.2	120.6
(Y/y %)	2.9	-3.4	-0.1	0.7	-0.2	0.9	3.5	1.0	1.6	1.1	1.1	1.0	1.4	1.4	1.3	1.2
Export of goods and services	99.5	90.4	88.3	86.2	86.6	92.5	92.1	90.0	90.2	90.2	88.4	86.1	84.8	83.8	83.2	82.6
(Y/y %)	-4.9	-9.1	-2.4	-2.3	0.5	6.9	-0.5	-2.3	0.2	0.0	-2.0	-2.6	-1.6	-1.1	-0.7	-0.6
Import of goods and services	120.2	100.9	104.1	109.9	110.7	118.6	118.0	115.2	116.5	117.9	117.0	115.1	114.1	113.7	113.6	113.5
(Y/y %)	-0.2	-16.0	3.1	5.6	0.7	7.2	-0.5	-2.4	1.1	1.2	-0.8	-1.7	-0.9	-0.3	-0.1	0.0

Source: Compiled by DIR.
Note: Through FY12: actual.

Assets and Labor and Capital Supply

(FY)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Potential GDP (real GDP chained [2005]; Y tril)	516.6	520.1	527.8	527.0	529.4	535.4	539.5	546.1	553.7	560.9	567.9	575.7	583.5	591.2	598.8	606.4
Hourly labor productivity (yen)	4,295	4,340	4,465	4,483	4,536	4,642	4,711	4,800	4,892	5,000	5,103	5,206	5,299	5,385	5,466	5,551
(Y/y %)	-1.3	1.1	2.9	0.4	1.2	2.3	1.5	1.9	1.9	2.2	2.1	2.0	1.8	1.6	1.5	1.6
Hours worked per annum and per capita	1,794	1,768	1,780	1,782	1,771	1,775	1,775	1,777	1,780	1,783	1,785	1,789	1,791	1,793	1,794	1,796
(Y/y %)	-1.8	-1.5	0.7	0.1	-0.6	0.2	0.0	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1
Labor participation rate (%)	60.2	59.9	59.7	59.2	59.1	58.9	58.6	58.5	58.4	58.2	58.0	57.9	57.8	57.7	57.7	57.7
Net corporate sector capital stock (2000 prices; Y tril)	1,042	1,040	1,035	1,033	1,031	1,031	1,036	1,044	1,054	1,067	1,082	1,098	1,113	1,129	1,144	1,158
(Y/y %)	0.2	-0.3	-0.4	-0.2	-0.2	0.0	0.5	0.7	1.0	1.2	1.4	1.4	1.4	1.4	1.3	1.3
Household financial assets (Y tril)	1,469	1,493	1,511	1,521	1,589	1,590	1,599	1,614	1,630	1,646	1,661	1,677	1,694	1,712	1,729	1,748
(% of nominal GDP)	300.1	315.0	314.7	321.1	336.1	326.4	318.5	313.7	308.2	304.1	300.3	296.4	292.8	289.9	287.6	285.6
External assets (Y tril)	573	594	603	626	629	686	697	698	721	742	743	744	745	749	753	758
(% of nominal GDP)	117.0	125.2	125.6	132.1	133.1	140.9	139.0	135.5	136.4	137.2	134.3	131.6	128.8	126.8	125.2	123.8
Net external assets (Y tril)	236	265	258	268	270	310	318	317	334	349	348	342	343	345	348	351
(% of nominal GDP)	48.3	55.9	53.8	56.5	57.2	63.6	63.3	61.7	63.1	64.4	62.8	60.5	59.2	58.5	57.9	57.4
Stock prices (TOPIX)	1,057	904	885	792	811	1,256	1,254	1,326	1,411	1,484	1,553	1,629	1,710	1,779	1,841	1,901
(Y/y %)	-32.0	-14.5	-2.2	-10.5	2.3	55.0	-0.1	5.7	6.4	5.1	4.7	4.9	4.9	4.1	3.5	3.2
Land Price Index (nationwide; all purposes; 2000 = 100	62.9	59.9	57.3	55.1	53.4	52.3	52.6	54.2	54.5	55.8	56.2	57.1	58.1	59.0	59.9	60.6
(Y/y %)	-2.0	-4.8	-4.3	-3.8	-3.1	-2.1	0.5	3.2	0.5	2.3	0.7	1.7	1.7	1.6	1.5	1.2

Assumptions

(FY)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
World economic growth (PPP; y/y %)	1.9	1.0	4.9	3.7	3.1	3.0	3.3	3.5	3.6	3.8	3.7	3.6	3.6	3.5	3.4	3.4
Oil price (WTI; $/bbl)	85.9	70.7	83.4	97.3	92.1	99.3	99.5	101.2	102.7	104.7	108.2	111.3	114.4	117.4	119.3	121.1
(Y/y %)	4.5	-17.7	17.9	16.7	-5.4	7.9	0.2	1.7	1.4	2.0	3.4	2.8	2.7	2.6	1.7	1.5
Population (mil)	127.7	127.5	127.9	127.8	127.5	127.3	127.1	126.8	126.5	126.2	125.8	125.3	124.9	124.3	123.8	123.2
(Y/y %)	-0.1	-0.1	0.3	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3	-0.4	-0.4	-0.4	-0.4	-0.5
Population 15-64 (mil)	82.5	81.9	81.6	81.2	80.1	79.0	77.8	76.8	76.0	75.2	74.6	74.0	73.3	72.8	72.3	71.8
Population over-65 (mil)	28.3	29.1	29.5	29.8	30.8	31.9	33.1	34.0	34.8	35.4	35.8	36.2	36.5	36.7	36.8	36.9
Ratio of those over 65 to overall population (%)	22.2	22.8	23.0	23.3	24.2	25.1	26.0	26.8	27.5	28.0	28.5	28.9	29.2	29.5	29.7	30.0
Consumption tax rate (%)	5.0	5.0	5.0	5.0	5.0	5.0	8.0	9.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Effective corporation tax rate (%)	39.5	39.5	39.5	39.5	37.0	37.0	34.6	34.6	34.6	34.6	34.6	34.6	34.6	34.6	34.6	34.6
Employees' pension contribution rate (%)	15.4	15.7	16.1	16.4	16.8	17.1	17.5	17.8	18.2	18.3	18.3	18.3	18.3	18.3	18.3	18.3

Source: Compiled by DIR.
Note: Through FY12: actual; some FY12 figures: DIR estimates.

Introduction

① World Economy Over Next Ten Years

With steady growth seen for the U.S. economy, the main risk factor is change in financial policy on the part of the advanced nations during the period covered by this outlook. Maintenance of financial policy provides the foundation for this outlook, and any changes could have a major impact on the economies of emerging nations.

Both the U.S. and the EU carry their own unique structural problems which must be carefully monitored over time.

Factors which have inhibited equipment investment up to now (such as the decline in prospective profit and the increase in uncertainty) are gradually being removed, and we believe that it can be deduced that the global economy has now entered the expansionary phase of the business cycle. An expansion in equipment investment is seen while interest rates remain at a low level. However, towards the last half of the period covered by this outlook, interest rates should rise again, inhibiting further growth in equipment investment.

② Japan's Economy Over Next Ten Years

The outlook for Japan's real economic growth rate over the next ten years is an annual average of 1.5%. However, the pattern of said growth is expected to be different in the first and second halves of this period. While a growth rate of 1.7% is seen for the first half of the ten-year period, changes in government monetary policy are expected to erode the effects of the weak yen, causing growth to slow somewhat to 1.3% in the second half.

Implementation of an effective growth strategy is essential to maintaining growth in the second half the period. The synergy effect of the 2020 Tokyo Olympics is much-anticipated.

Despite the forceful tailwind providing momentum for the Japanese economy, there are five structural factors inhibiting growth in export volume which creates some dangers up ahead. However, an overly pessimistic viewpoint can turn out to be a self-fulfilling prophecy. Most of these factors are expected to be resolved eventually, and may even have the unexpected effect of leading to improvements in Japan's economy from a completely different direction. Only one of these five factors is expected to have long term effects, and that is declining exports associated with the moving of production offshore. Countermeasures to the resulting hollowing out effect will be essential to Japan's future.

③ Outlook for Exchange Rates Over Next Ten Years

In the short term, the yen will continue to weaken due to the widening gap between Japan and U.S. interest rates. However, in the long-term, the U.S.-Japan inflation differential should serve to push the yen up higher. The risk scenario acting as the trigger for a high yen suggests three major danger sources which should be watched carefully – the U.S., China, and Europe.

④ Energy Policy and Assumptions Regarding Price of Crude Oil

Japan is expected to gradually return to the status quo with nuclear reactors going back on line, while at the same time introducing renewable energy sources. An increase in demand for electrical power is also expected. Throughout the next ten years upward pressure will continue to occur on the price of electrical power. One of the causes of this development is the price of crude oil. It is always possible that this area will become even more volatile depending on trends in the U.S.

⑤ With CPI Growth Rate Under 2%, BOJ Will Continue Monetary Easing

The decline in interest rates and the weak yen are expected to push the Japanese domestic economy up, but this is only a short-term, limited effect. The inflation target cannot be achieved through monetary policy alone. This must be combined with a growth strategy to become more effective.

⑥ Abe Administration's Growth Strategy Grades B Minus

In order to achieve a higher growth rate, fair competition and utilization of diverse human resources are required. The creation of special economic zones, membership in the TPP, and direct investment in Japan will increase pressure to compete in the domestic market. Meanwhile, regulatory and systemic reform which makes use of the market is essential in encouraging innovation.

⑦ Missing from Fiscal Consolidation Efforts: Social Security System Reform

The review of health service providers will soon move into the implementation stage. Along with demand restraint, a review of allocation of financial burden will also be performed, with an eye toward changing the current age based system to one based on ability to pay.

Raising the current amount of financial burden will be unavoidable even amongst the aged, but in order to correctly determine ability to pay, a stronger information infrastructure will be required. While promoting restraint in benefit payout, it is also important to develop a clear sense what reforms are necessary for the social security system and how this is linked to fiscal health and consolidation.

1. World Economy and Japan's Economy over Next 10 Years

1.1 World economy over the next 10 years

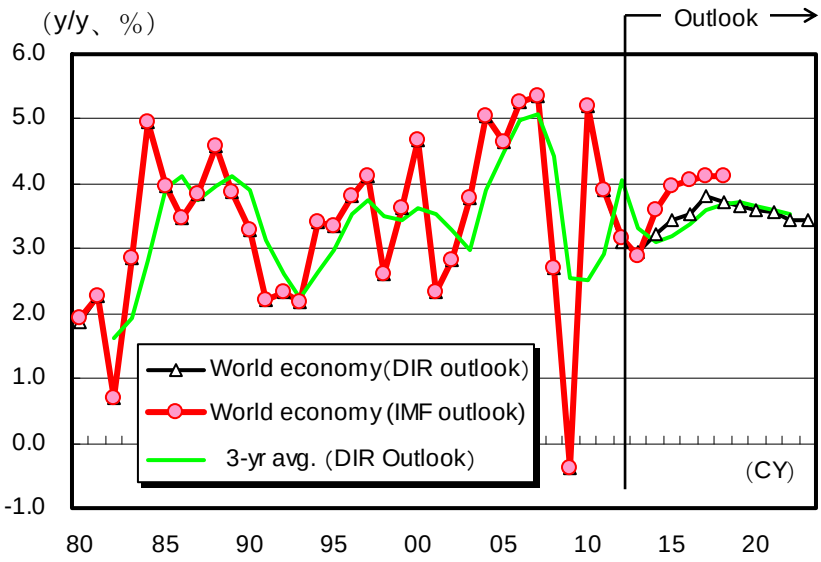
1.1.1 Assumptions for the world economy: A cautious stance broadly in line with our previous outlook's assumptions

In our current medium-term outlook, we assume that the world economy will grow an annualized 3.5% over the next 10 years (2014–23; Chart 1.1.1). Growth will average 3.5% in both the first and second half of this period. Examined more closely, we assume that growth of 3% in 2013 will gradually accelerate to a peak of 3.8% in 2017. Then, in the second half, the growth rate will gradually slow. While this is far below the average of 4.8% recorded in the period before the financial crisis (2003–07), the economy is still foreseen to grow firmly.

However, compared to our February 2013 outlook (an annualized 3.7%), we have downgraded our forecast by 0.2 percentage points. With respect to 2014 and 2015, for which forecasting probability is high, we lowered it from 3.7% to 3.3%. For the remaining eight years, we reduced it by around 0.1 percentage points. Thus, our revision mostly concerns nearby years, which reflects the cautious stance we have taken toward emerging-market economies in contrast to advanced economies.

The main risk factor we have assumed for our current medium-term outlook is changes in the monetary policies of advanced economies during the middle years of our forecast period. In particular, policy changes in the US may have a sizable impact on emerging-market economies through the global flow of money. In addition, such changes will have downside risks for both the United States and Europe. The problems Europe faces concern what to do should unification not deepen and crisis conditions return. There is the possibility that structural factors will impede needed internal adjustments.

World Economic Outlook **Chart 1.1.1**



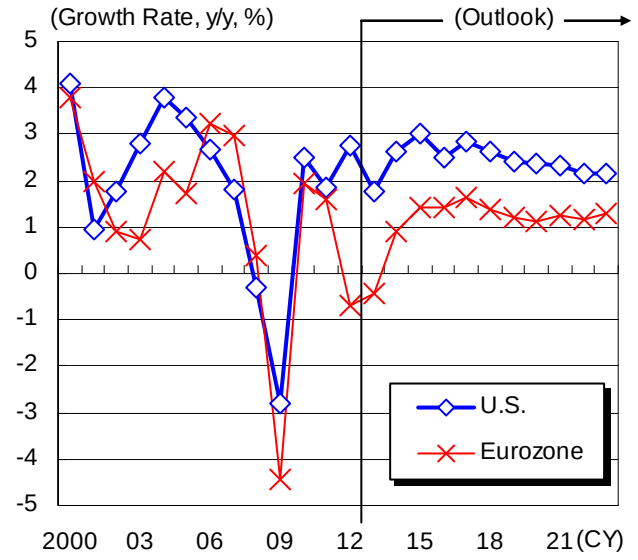
Source: IMF, *World Economic Outlook*, Oct 2013; compiled by DIR.
Note: Purchasing power parity basis.

1.1.2 US Economic Outlook

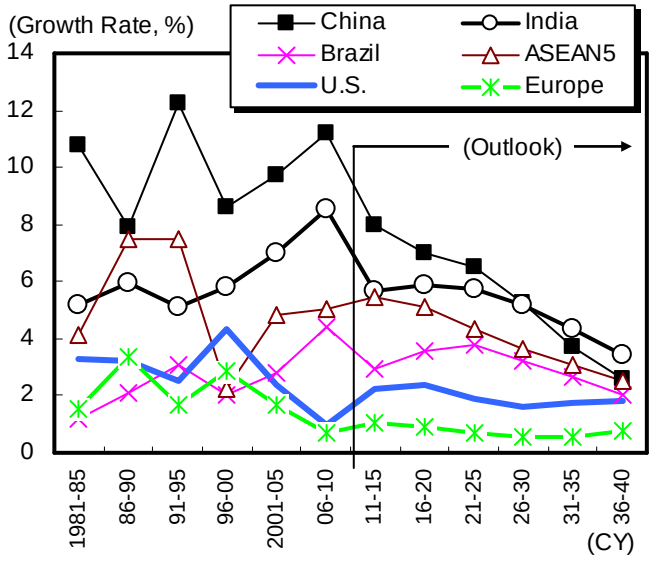
Autonomous recoveries are seen despite being buffeted by political turmoil

The European debt crisis has had an enormous impact on the United States through global financial markets. What encumbered the US economy in each succeeding year since 2011, however, were domestic factors—in particular, political turmoil. Such turmoil included concerns about a potential default on US Treasuries in the summer of 2011 and the give-and-take over the so-called fiscal cliff as 2012 turned into 2013. Political turmoil returned in 2013 regarding the FY14 budget and raising the debt ceiling, sowing fears that markets and the economy would be functionally impaired. A partial shutdown of the government had not occurred since 1995 and 1996, and the controversy surrounding the threat to default in negotiations on raising the debt ceiling recalled the experience of 2011.

US and Euro Economic Outlook **Chart 1.1.2a**



World Long-term Outlook by Area **Chart 1.1.2b**



Source: BEA, Eurostat; compiled by DIR. DIR report, "Thirty-year Outlook for a Super-aged Japan" (May, 2013)
Note: DIR estimates. Figures are all period average values. ASEAN5 stats from ASEAN, Europe stats include UK.

While a partial government shutdown began in October 2013, the market reacted as if its impact on the overall economy would not be all that large. What concerned the market even more was whether the debt ceiling would be raised or not. If Congress did not increase the debt ceiling by the time the Treasury Department said it was necessary, in the worst possible case, the payment of interest on US treasuries would stop and a default would occur. Despite such worries, optimism dominated the market. The stock market was firm, and the yield on long-term government debt was stable. In this time as well, a compromise was reached at the very last moment, confirming that the market had read the situation correctly. A broad framework for the FY14–15 budget was reached, a provisional budget to end-September 2014 was passed, and additional mandatory cuts to expenditures were avoided. With this, the immediate problem was put to rest. Political turmoil, however, remains a factor for uncertainty, as seen in the need to raise the debt ceiling and the approach of midterm elections in November.

Monetary policies were also a factor for uncertainty in 2013. In May and June 2013, just the suggestion by former Fed Reserve Chairman Ben Bernanke of a schedule for beginning to taper and end the third round of quantitative easing (QE3) was enough for markets to begin factoring in a full-fledged exit strategy, despite monetary authorities insisting that that would not happen for some time, and the long-term interest rate surged upward. However, contrary to market expectations, concerns about the effect of higher interest rates on the real economy caused the Federal Open Market Committee to postpone the start of tapering at its September meeting. Then, with turmoil in Congress abating and with the release of economic data needed in determining monetary policy, such as an improved employment environment, the FOMC decided at its December 2013 meeting to begin winding down QE3 from the start of the new year, and former Chairman Bernanke indicated at a press conference that the Fed would reduce the pace of asset purchases. With the decision to taper, monetary authorities have also sought to strengthen forward guidance so as to send a message to markets that have overreacted to their intentions that they will not bring forward the timing for reversing the Fed's zero interest rate policy.

Direction of US monetary policy

With fiscal policies barely functioning owing to gridlocked politics as epitomized by a divided Congress, excessive expectations and burdens were placed on the monetary policies of the Federal Reserve. The fact that the US economy has expanded for four and a half years attests that the responses of the Fed more or less worked. The Fed, however, also assumed unfinished business of enormous proportions. As households adjusted their balance sheets, the Fed's balance sheet swelled 4.5 times to $4 trillion from about $0.9 trillion before the Lehman crisis.

After serving for two four-year terms as chairman of the Federal Reserve, a volatile period that included the growth and collapse of a housing bubble as well the Lehman crisis and subsequent recovery, Mr. Bernanke stepped down at the end of January 2014, and his position was assumed by Vice-Chair Janet Yellen in February. Ms. Yellen has participated continuously in FOMC discussions since June 2004 either as Fed vice-chair or as president of the San Francisco Federal Reserve Bank. Thus, we do not believe there will be major changes in the basic management and future course of monetary policy.

Former Chairman Bernanke changed the management of the FOMC to one where agreement was reached by respecting the freedom of individual participants. In the Bernanke era, the number of members voting against FOMC decisions increased notably, and full consensus became a rare occurrence at the FOMC. While this may have brought greater clarity to the thinking and stances of committee members, it is also a fact that the freely made statements of the presidents of Federal Reserve Banks, made public through speeches and the media, invited market confusion. Increasing the transparency of discussion with the view of strengthening communication with the market is a policy

that Chair Yellen has pursued while she was vice chair. Hence, it is reasonable to think that markets will continue to be swayed by the individual statements of FOMC members in the future.

For the time being, it will be appropriate if QE3 is reduced in steps as suggested by former Chairman Bernanke. Chair Yellen faces a major policy issue of how to adjust a balance sheet that may soar to $4.5 trillion, and she will be pressed to steer monetary policy under difficult conditions. The new Fed chair will need to wind down a series of non-traditional monetary policies and clarify a roadmap toward an exit (normalization) without creating turmoil in financial markets or adversely affecting the real economy.

The zero interest rate policy will be reversed in 2015

When we examine the timing for raising interest rates envisioned by Federal Reserve members, during the last year and a half, more than two-thirds anticipated an end to the zero interest rate policy during 2015. In terms of the specific timing, however, they appear to think it will be somewhat delayed. In our current medium-term outlook, we predict that interest rates will begin to be raised from end-2015, that monetary policy will be tightened through 2016, and that the target rate for federal funds will be increased to 4.25% in 2017, at which point the tightening phase will come to an end.

Since the US economy is expected to grow at a faster pace than its potential growth rate, the GDP gap will shrink, and inflationary pressure will mount. Chair Yellen has already indicated a desire to improve the employment environment by a certain degree even if this means a somewhat higher inflation rate. In other words, given the Fed's two major policy objectives of maximizing employment and maintaining stable prices, Chair Yellen appears to be thinking that she should work toward achieving the former even if this sacrifices to some degree the latter. Based on such thinking, a prolonged period of zero interest rates may require raising interest rates all the more in the future, and our forecast above reflects this concern. In the second half of our forecast period, we anticipate that the Fed will make slight adjustments to interest rates that have overshot their mark. Since the growth of the US economy is expected to revert to its potential growth rate, interest rates will be reduced by a limited amount. While an interest rate of 3.50% that we foresee for the final years of our forecast period is not high for a policy interest rate, this figure is based on the assumption that prices will stabilize at a level somewhat less than the inflation target.

Regarding the direction for an exit strategy, a useful reference is provided by the "Exit Strategy Principles" adopted by the FOMC in June 2011. The schedule drawn up at that time appeared to be one where the policy interest rate would be raised, where this would be followed after some time with the sale of GSE debt securities and mortgage-backed securities, and where this process would be completed in three to five years' time. However, now that the Fed's balance sheet has expanded more than 1.5 times since these principles were adopted, the time needed for normalization will be considerably longer. Hence, there will be a need to carefully monitor whether intended policy outcomes are being achieved or whether or not the exit strategy is having side effects. While many nations centering on advanced economies are implementing extremely loose monetary policies, the current positions and directions of their economies are not necessarily identical. The effect of changes in the Fed's monetary policies will not be limited to the US but has the potential of propagating widely around the globe through changes in foreign exchange rates. The Fed's balance sheet has grown to an unprecedented level, and the path to normalization will represent a grand experiment.

While the Fed was able to skillfully respond to the crisis it faced by learning from the Bank of Japan's experience, the exit strategy that it will implement is unknown territory with no precedents, and the Fed will be compelled to feel its way forward. While global inflationary concerns have greatly retreated at the present moment, there is no guarantee that this success in restraining inflationary expectations will continue. The collapse of securitized products in the US was followed by the

European debt crisis and then the expansion of the balance sheets of central banks. Cleaning up after this succession of responses to the crisis will require a considerable amount of time.

Are there no blind spots for the US in the medium to long term?

An examination of the past trends of the market consensus reveals that, even if the US economy is growing slowly, the short-term outlook is generally one that foresees a return to annualized growth of 3% in one to two years. In actuality, not only the market, but such US public entities as the Federal Reserve and the Congressional Budget Office and such multilateral organizations as the IMF, the OECD, and the World Bank broadly assume that the US economy will achieve growth in excess of 3% in 2014 and 2015. If we take a longer view of five to ten years, however, the consensus view is that the growth rate of the US economy will slow to the lower range of the 2% level. This outlook appears to be based on a shared understanding that this level corresponds to the potential growth rate of the US economy. In other words, even if the US economy is able to grow faster than its potential growth rate in reaction to its past low growth (annualized 2.3% between 2010 and 2013), the growth rate is expected to eventually converge on the potential growth rate. This being the case, are there no downside risks associated with this orthodox outlook?

Medium- to long-term downside risk: Sluggish productivity

According to the long-term employment projections released by the US Bureau of Labor Statistics in December 2013, the US labor force is expected to grow at an annualized rate of 0.5%, and the labor force participation rate (labor force divided by population of 16 years or older) that has fallen sharply since 2000 will decline further to 61.6% in 2022, a low not seen since 1976. The aging of the baby-boomer generation (people between the ages of 58 and 76 in 2022) will be one factor placing downward pressure on the labor force participation rate.

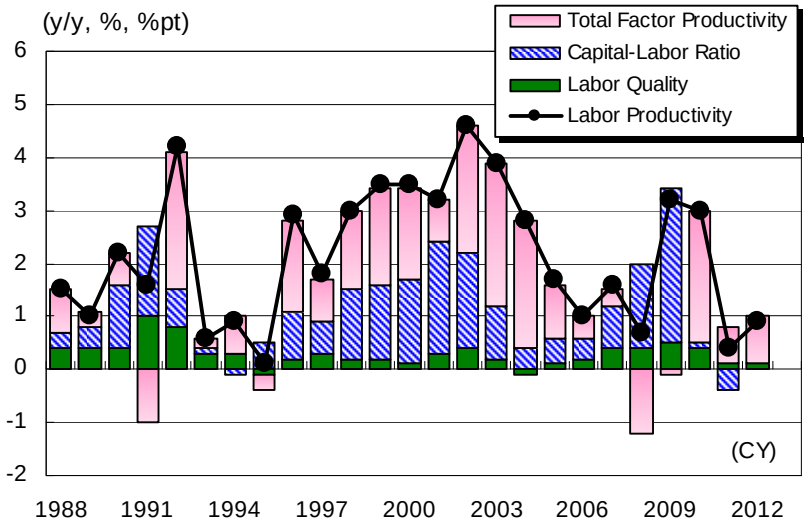
A notable feature of the structural changes of the last 10 years is the decline of the labor force participation rate of younger workers (between the ages of 16 and 24), which will fall further to 49.6% in 2022, an all-time low. In contrast, the participation rate of people 55 years or older will continue to rise steadily and reach 41.5% in 2022. Thus, the deterioration of the skills of younger workers accompanying the loss of employment opportunities in recent years is a problem that will not find easy solutions going forward.

Since the financial crisis, with employment mismatches such as between job categories or geographic regions serving as a contributing factor, the number of long-term unemployed has continued to account for about 25% of the total unemployed. Structural problems like those regarding young people or long-term unemployment raise concern since they have the potential of constraining the growth of labor productivity over the long term and of blunting economic growth. In actuality, labor productivity has climbed at a rate less than 1% in the United States from 2011 to 2013. A factor analysis by the Bureau of Labor Statistics discloses that the contribution of the quality of labor remains at a low level compared to the last five years.

The contribution of the capital-labor ratio has also declined since 2010. With respect to capital stock, companies' interest in capex continues to be weak relative to past years, which the Congressional Budget Office has indicated as a major factor behind the downward revision of the potential growth rate of the economy since the collapse of the IT bubble. This situation is thought to be the outcome of the cautious attitudes of business leaders toward capex from a lack of optimism about the future and of multinational firms shifting operations abroad in the 2000s by prioritizing foreign capital investments with higher profitability over domestic investments. In our current outlook, we have determined that capital stock has entered an accumulation phase in the US, and we predict that capex will grow to some degree. However, if the capital-labor ratio remains low and the sluggish growth of productivity

persists, the recovery scenario for the potential growth rate of the US economy may need to be revised (the CBO estimates average growth of 2.0% in 2014–17 increasing to 2.2% in 2018–24).

US labor productivity **Chart 1.1.3**



Source: BLS, compiled by DIR.
Note: Bar graph shows contribution ratio.

1.1.3 Outlook for European economies

Negative growth turns positive for European economies

After recording six straight quarters of negative growth, such growth turned positive in the eurozone in 2Q13. Business and consumer confidence has continued to improve, and the EU economy is thought to have bottomed in mid-2013. The principal cause of the economic downturn is located in efforts to restore public finances to health due to concerns about the debt crisis, which led to decreases in government expenditures, personal consumption, and capex. While policies to rebuild public finances continued in 2013, their downside pressure on the economy has waned compared to previous years, and domestic demand ending its decline contributed to the bottoming of the economy. On the other hand, the weakness of exports stood out in 2013, and their contribution to the recovery was limited. Exports to advanced economies led by the US and to China and other emerging-market economies did not recover as far as expected. What supported the economy was the monetary easing of the European Central Bank. The ECB reduced the interest rate for euro open market operations, its main policy interest rate, to 0.25% in November 2013, the lowest rate recorded in the history of the eurozone. What forced the ECB's hand was the growth rate of consumer prices slowing sharply and the attendant rise of deflationary concerns.

If low growth continues in the eurozone, the bad debt ratio of financial institutions will increase, which will risk curbing the activities of the private sector through a credit crunch. Thus, it is difficult to portray a scenario where the recovery will accelerate in the near future. The European Commission estimates that the potential growth rate of the eurozone will be slightly more than 1% over the next 10 years, which is about half its level before the debt crisis.

While the capacity for recovery is weak overall, there are clear differences between the situations for winning and losing nations. Germany is a leading winner. On the other hand, some nations among the losers have tired of reform and are in a situation where public dissatisfaction will readily erupt in elections. Elections for the European Parliament that will take place in May 2014 have become the focus of attention, and conservative forces and the far right have the potential of making further gains. Should such forces attain a certain degree of influence, they could become a source of turmoil similar to the way the Tea Party has become the leading cause of political turmoil in the United States. The

probability of the worst case scenario should be viewed as more than zero, where such forces act against the movement toward the euro and EU unification, where their statements and actions draw public attention to the structural problems of the EU, and where conflict intensifies.

Europe's structural problems

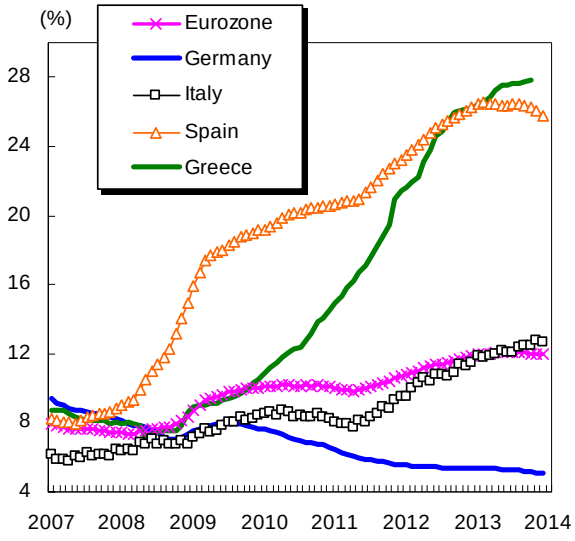
After making its start with six member nations, the European Union grew to 15 nations in 1995. Then, in 2004, 10 nations including three Baltic nations joined at once. The EU has steadily expanded in subsequent years, with the most recent accession being Croatia in July 2013, and now consists of 28 nations. Five nations including Turkey and Iceland are currently candidates for accession. Moreover, the EU encompasses the eurozone.

In this manner, the European market has expanded greatly. In the eurozone, which shares a common currency, there is no foreign exchange risk, and interest rates and inflation have generally trended at low levels. What was expected for the eurozone was a mechanism where economic imbalances within the region would be corrected through the free flow of capital and labor. Adjustments, however, have not necessarily proceeded according to theory. This is evidenced by an unemployment rate trending at an all-time low of 5% in Germany in contrast to one in four persons being out of work in Spain and Greece.

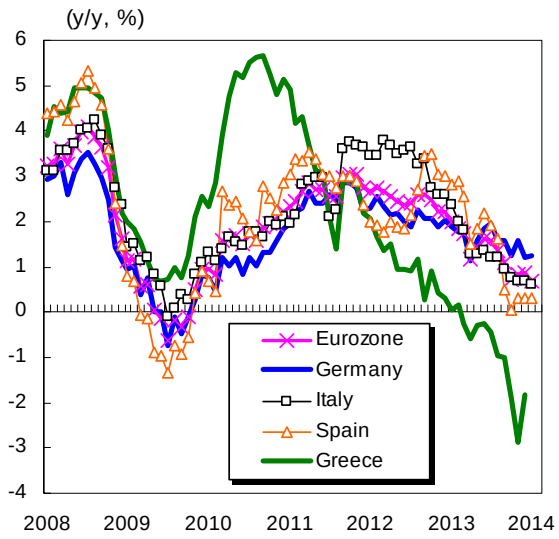
Although monetary policy has been unified, the structural problem of each nation implementing its own fiscal policy remains, even though this is constrained by the requirement to hold budget deficits and debt balances within certain limits. The impact of the Lehman crisis and the policy responses made in the aftermath have greatly worsened the public finances of EU nations, and the sovereign debt crisis of Greece became amplified as a debt crisis for the whole of Europe. Adjustments have been incomplete in the eurozone since nations in greatly differing circumstances share a single exchange rate.

Given the above, several more years will be needed before it can be safely said that the crisis in Europe has ended for the government, banking, and private sectors and that conditions have normalized. This is not anticipated to occur before the mid-2010s. Hence, the ECB is not expected to raise its policy interest rate before 2017. In our current medium-term outlook, we do not foresee a worst-case scenario that would lead to the breakup of the eurozone, and we predict in our basic scenario that European unification will deepen in the direction of a banking union and fiscal unification.

Eurozone Unemployment Rate **Chart 1.1.4a**



Eurozone CPI Growth Rate **Chart 1.1.4b**



Source: Eurostat, Haver Analytics, compiled by DIR.

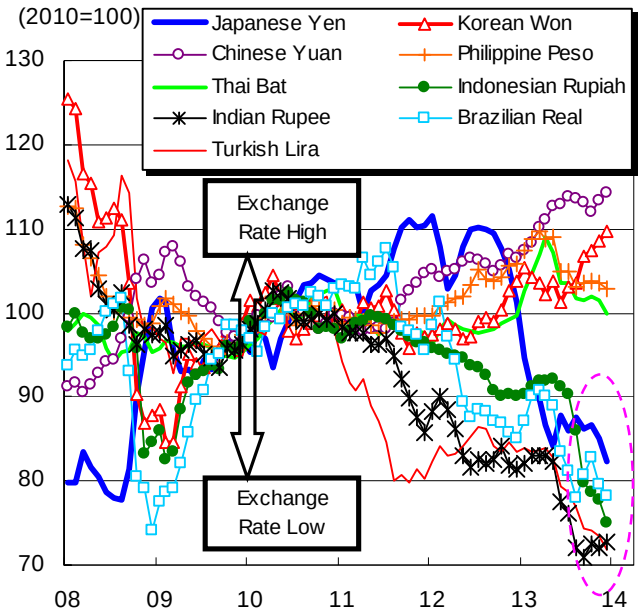
1.1.4 Outlook for emerging-market economies

Some emerging economies will experience turmoil

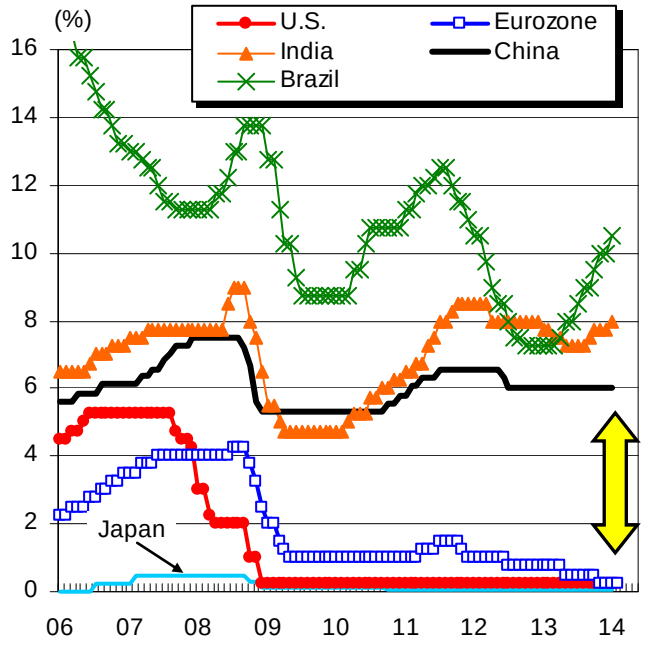
A potential risk in bringing a phase of global monetary easing to an end is instability in global financial markets. The greatest risk for exit strategies is the risk that interest rates, particularly long-term rates, will surge upward beyond expectations. Such an occurrence could result in capital losses on the fixed-interest assets of central banks and other financial institutions. Moreover, should markets react faster than the intentions of the Fed, fund-raising costs will ascend for companies and households, and the perception of a higher interest burden can be expected to affect capex plans and the purchases of housing and durable goods like automobiles. If the increase of interest rates is one that accompanies the recovery of the economy, borrowers' capacity to service debt will rise at the same time. However, if interest rates are hiked because of inflationary concerns, there is the potential that only the perception of a higher interest burden will climb.

Some emerging-market economies that have raised interest rates with the tapering of QE3 are already marking down their expected economic growth rates. Further downside risks are likely to materialize as the global flow of money experiences turbulence. Emerging-market economies are likely to be impacted by the increase of policy interest rates in Europe and the United States that we foresee for the middle years of our forecast period and by the implementation of exit strategies in the latter years of our forecast period.

Nominal Effective Exchange Rates Chart 1.1.5a



Official Interest Rates Chart 1.1.5b



Source: BIS, Haver Analytics, compiled by DIR.

Outlook for the Chinese economy remains cautious

Real GDP grew 7.7% in 2013 in China, falling below 8% for a second straight year. Even so, growth exceeded the government target of 7.5%. While the Chinese government is expected to focus on responses to the immediate economic environment for the time being, there will be a need to maintain jobs and stabilize the economy while avoiding soaring housing prices and inflation. Should the economy grow far slower or faster than the government target, this will risk inviting employment uncertainties in the former case and overheated investments in the latter.

Questions for the medium to long term are what rate of growth the economy will settle on after a period of rapid expansion and whether China will be able to skillfully shift to stable growth. The Chinese government has established a target of doubling real GDP by 2020 compared to 2010. Achieving this target will require annualized growth of 6.8% between 2013 and 2020. The government has also established a target of doubling the per capita income of citizens in urban and rural areas. Since China's population will continue to increase, the economy will need to grow by an annualized 7.0% to achieve the per capita target. Given China's past record, growth of around 7% should not be all that difficult to attain.

Achieving overall (quantity) and per capita (quality) targets at the same time, however, will not be easy since it will require the resolution of a variety of imbalances. Eliminating the gap between rich and poor and the excess stock of fixed assets are but two of the issues that China will need to address. One issue worth focusing on in particular is eliminating the gap between rich and poor so as to shift from a growth pattern excessively reliant on investments and exports as in the past to growth driven by personal consumption while endeavoring to augment the value-added of exports. Unlike democratic nations where political power can alternate through elections, in one-party states like China, the sudden eruption of citizen dissatisfaction or backlashes has the potential of shaking the political system to its core. Thus, deterring such risk will be an important measure to consider for China's new leadership.

While the Chinese government is planning to ease its one-child policy, it will be some time in the future before the effects of this change will become manifest and begin to support the macroeconomy. The aging of society and the contraction of the working age population are demographic changes that are foreseen for China. In view of this outlook, it is natural to think that China's economy will gradually slow in the long term. According to the World Bank and other institutions, China's economy is expected to grow at a rate between 5% and 6% in 2020 and beyond. Hence, the growth process of the next 10 years will be extremely important for China.

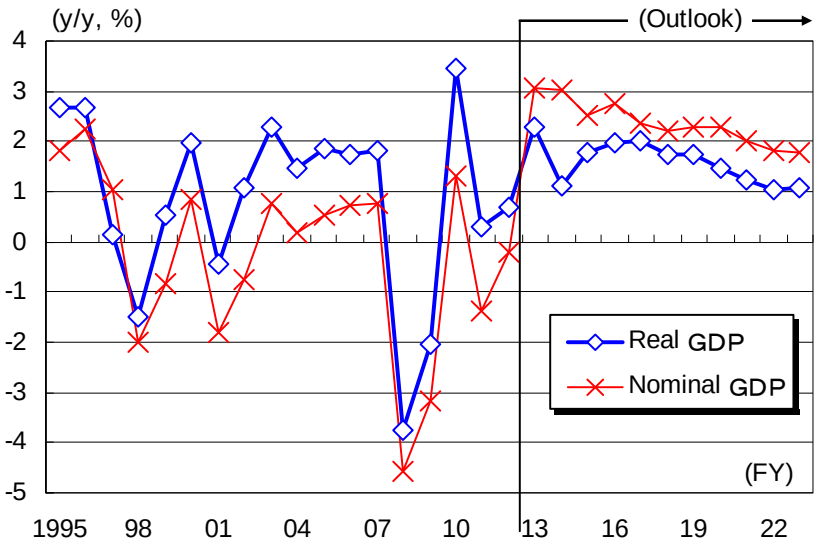
If our cautious outlook for China is fortuitously found to be erroneous, it will be because China was able to smoothly shift from an investment-driven to consumption-driven economic structure. Rising wages and the worsening of environmental problems are causing China to lose its attractiveness as a production platform. However, if the Chinese market with a population of more than 1 billion people can shift to consumption-driven growth, it is likely to regain its allure for global corporations.

1.2 Japan's economy over the next 10 years

1.2.1 Outlook for Japan's economy

Factoring in our outlook for the world economy, we predict that Japan's economy will grow 2.3% (nominal) and 1.5% (real) over the next 10 years (annualized average rates; Chart 1.2.1). We also forecast that per capita real GDP will grow at an annualized rate of 1.9%. Besides the macro growth rate, per capita GDP is an important indicator for a society with a declining population, and it can be viewed as a measure of average living standards.

Economic Growth Outlook **Chart 1.2.1**

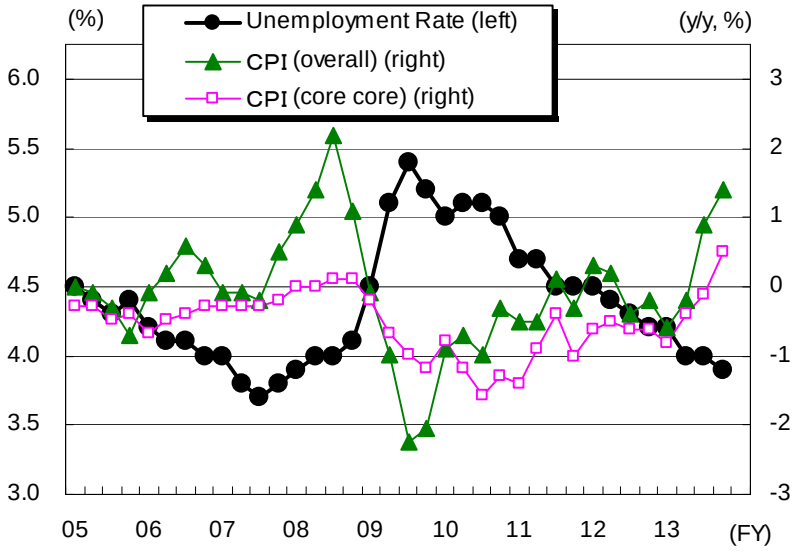


Source: Cabinet Office; compiled by DIR.

A differing pattern of growth for the first and second five years

If we divide our forecast period into two halves (FY14–18 and FY19–23), real GDP will increase by an average rate of 1.7% in the first half and by a slower 1.3% in the second (annualized average rates). Compared to our previous outlook of February 2013 (average growth of 1.5% over the next 10 years; 1.5% in the first half and 1.4% in the second), while real growth will largely be the same for the next 10 years, we have revised the growth rate upward for the first half and downward for the second half. This clear contrast reflects in part our factoring in such effects as the yen's depreciation in the first half based on the results observed for Abenomics in the last year. Specific results include the unemployment rate dropping below 4% for the first time since 2008 and the growth rate of CPI (excluding food and energy) turning positive for the first time in five years (Chart 1.2.2).

Unemployment Rate and CPI Growth Rate **Chart 1.2.2**

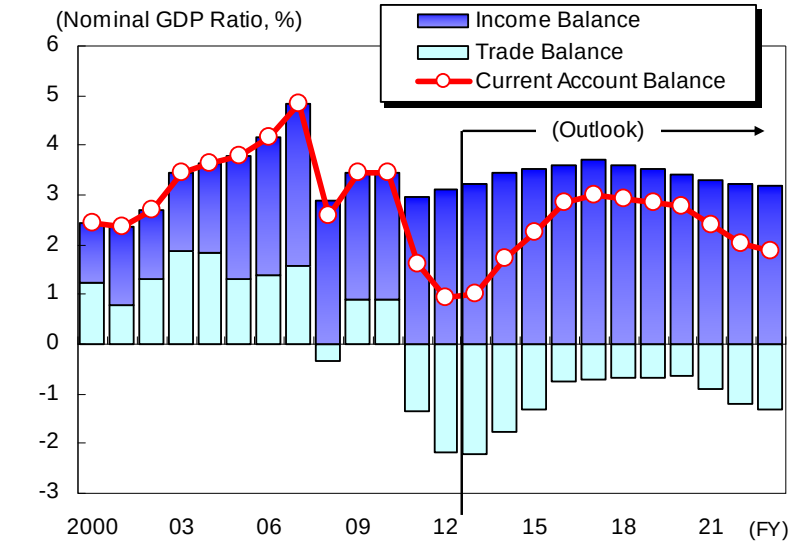


Source: Ministry of Internal Affairs and Communication, compiled by DIR.
Note: Core core subtracts foodstuffs and energy.

Next, turning to trade, since the Great East Japan Earthquake and nuclear accident of March 2011, Japan's import of fossil fuel has risen sharply, and the nominal trade and service balance has turned negative. In our current forecast period, we anticipate that the trade and service balance will remain a deficit and will be an annualized -1.0% as a percentage share of GDP. The trade deficit, however, is expected to shrink momentarily during the middle years of our forecast period due to the effects of a weaker yen. On the other hand, the income surplus will remain at a high level throughout our forecast period, thanks to the growth of net external assets and the improvement of the rate of return on external assets, and it is expected to offset the trade deficit. Thus, we predict that the current account balance will avoid becoming a deficit (Chart 1.2.3).

Despite our cautious outlook for the world economy, foreign demand's higher contribution in the first half of our forecast period is explained by the yen's shift toward depreciation (an average of Y80.7/$ for the first half in our previous forecast shifting to Y100/$ in our current forecast). The basis for this change in outlook is the way bold monetary easing, the first arrow of Abenomics, has ushered in an expanding economy through lower interest rates and the depreciation of the yen as well as turning the growth rate of CPI positive. In a fortunate turn of events, support is also being provided by an external environment that is accepting of a weaker yen. Not only is the US economy growing firmly, but the Bank of Japan's quantitative and qualitative monetary easing is being more or less perceived as policies intended to end deflation. It should, however, be kept in mind that, should the taper of QE3 bring turmoil to emerging market economies, a risk-off trend will strengthen and the yen will readily swing toward appreciation.

Current Account Outlook **Chart 1.2.3**



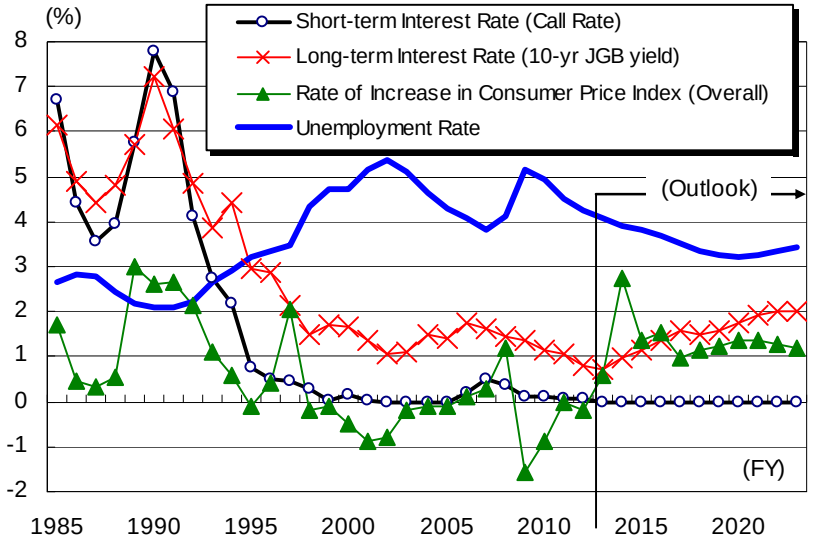
Source: BOJ, Ministry of Finance, Cabinet Office, compiled by DIR.
Note: Estimates by DIR. Trade balance figures include service industry.

We anticipate that the macroeconomic supply-demand balance will tighten with the expansion of the economy and that deflationary pressure brought to bear by the GDP gap will gradually weaken. The Lehman crisis of September 2008 caused the GDP gap to worsen to about -5%, but it has now improved to about -1.5%.

We also predict that the GDP gap will continue to improve and that it will turn positive for the first time in nine years in FY16. This will mainly be the outcome of the growth rate of the economy viewed from the demand side exceeding its potential growth rate. On the supply side, Japan's baby boomer generation (born in 1947–49) will reach retirement age and begin leaving the labor market. This decrease in potential labor input will serve to suppress the potential growth rate. It is usually the case that, when the macroeconomic supply-demand balance improves and inflationary pressure is brought

to bear by the real economy, central banks will tighten monetary policy to quell future inflation. CPI (all items), however, is expected to increase by an average of around 1.4% during our forecast period. Hence, it is difficult to imagine at the present moment that the BOJ's price stability target of 2% will be exceeded. For this reason, we anticipate in our current outlook that the BOJ will be compelled to maintain its zero interest rate policy.

Outlook for Prices and Interest Rates **Chart 1.2.4**



Source: Ministry of Finance, Ministry of Internal Affairs and Communication, compiled by DIR.
Note: Estimate by DIR.

Despite the adverse impact of a higher consumption tax (FY14), the first half of our forecast period can be expected to benefit from bold monetary easing and flexible fiscal expenditures, the first and second arrows of Abenomics. Their effects, however, will lose force in the second half. First of all, the impact of monetary easing is both limited and for the short term. If the BOJ maintains its current accommodative policy, its balance sheet will grow to 50% of GDP at end-FY14 (no longer about 25% of the Fed's balance sheet). As a result, the BOJ's policy choices will narrow, and their expected impact will diminish. Similarly, the government's capacity for fiscal expenditures will be limited if it seeks to undertake such expenditures while keeping a positive primary balance as its target for restoring public finances to health.

Given the situation described above, expectations are being placed on growth strategies, the third arrow of Abenomics, which are likely to consist of policies that encourage company renewal and increase the rate of return on economic activities. However, in our current medium-term outlook, we have not gone so far as to include a scenario where structural changes will be made to Japan's economy that result in a higher economic growth rate. Certainly, the Japan Revitalization Strategy, the growth strategies outlined by the Abe administration, cover nearly all the issues that Japan must address, and a key question will be whether they can be implemented according to schedule and achieve the numerical targets established. While each individual plan may seem promising, there are doubts about whether there are sufficient workers or funds to cover all as is highlighted by the shortage of workers in the construction industry. This being the case, these plans will need to be prioritized in the midst of limited resources. At the present moment, there are considerable uncertainties in trying to predict which items will be implemented according to what timing.

Thus, in our current outlook, we have allowed for the possibility of the economy swinging upward depending on the progress in implementing growth strategies. At the same time, we have indicated that

a slowdown in growth will be unavoidable if no progress is made while time is gained through the implementation of the first and second arrows of Abenomics.

1.2.2 Positioning of growth strategies – the third arrow of Abenomics in government policies

The policies of the previous Democratic Party of Japan (DPJ) administration were strongly colored by a preference for direct income subsidies from the government to households. In contrast, the basic stance of the Abe administration is to establish incentives that will promote vigorous corporate activities. This can also be said about the first arrow of quantitative and qualitative monetary easing, which can be viewed as helping to eliminate the deflationary mindset of households. The Abe administration envisions a virtuous circle where the fruits that result from corporate activities (earnings) will be steadily recycled to employees (households) and will generate further household expenditures. Thus, the main difference with the previous DPJ administration is the Abe administration's intent to improve income through the intermediation of companies. Also, while the first and second arrows of Abenomics will be effective only for a limited time (to instill positive expectations and confidence), the growth strategies of the Japan Revitalization Strategy, the third arrow of Abenomics, seek to make structural changes to Japan's economy, industry, and society from a longer point of view. As indicated by the statement, "A growth strategy that encourages private-sector investment" appearing in a government overview of the Japan Revitalization Strategy, the subject of the strategy is without question the private sector.

Growth strategies are not the sort of policies that achieve visible results in a short period of time. Even so, there is no denying that the Abe administration appears to be in a hurry to establish an agenda for growth strategies while the first and second arrows of Abenomics are having an impact in view of the tailwind Abenomics is providing market expectations in the form of a weaker yen and higher share prices. For example, whether to raise wages or not should be determined based on the individual circumstances of companies. The government, however, is currently placing enormous pressure on companies to do so with the view of achieving a virtuous circle.

Of the calls for higher wages, some are being made not only for higher bonuses but for increases to base pay, which would have an impact on permanent income. Japanese companies are currently sitting on huge cash hordes. When viewed as a whole, they are not in a position to argue that higher pay is not possible. Although some companies would be able to raise wages, others are not in such a position. The trend to request across-the-board wage increases would represent an enormous burden for the latter companies and would risk reducing their competitiveness. What is desired is an orderly response, such as increasing wages in line with the growth of productivity. Another issue to consider is the burden that higher inflation or a higher consumption tax rate would place on households. If wages are not increased by a certain amount, the real income of consumers would decline, and there is risk that consumption would lose momentum.

A focal point will be reducing the effective corporate tax rate

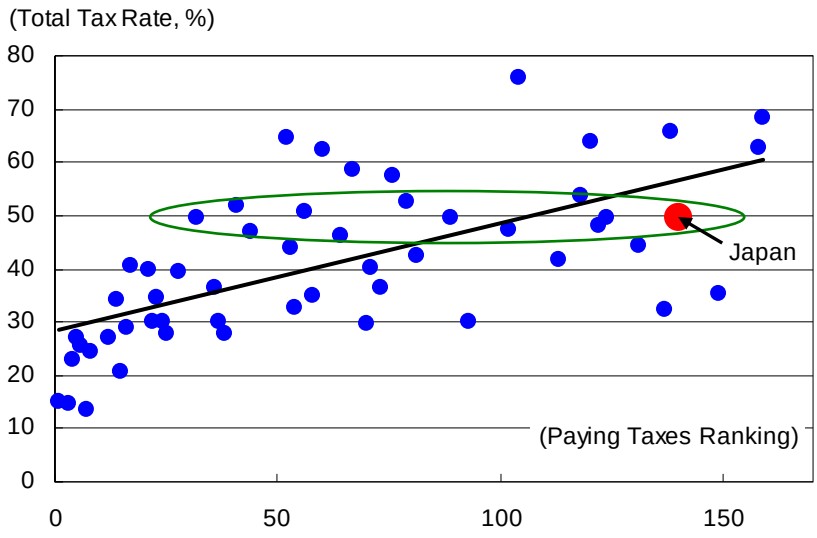
In January, Prime Minister Abe delivered a keynote address at the annual meeting of the World Economic Forum (Davos meeting). In this address, he stated, "Companies and people from abroad will find Japan among the most business-friendly places in the world." In this manner, he underscored his commitment to reforming the corporate tax. Moreover, Prime Minister Abe has indicated that the changes he envisions for the corporate tax will not necessarily be revenue neutral.

In simple terms, if the corporate tax rate is reduced, besides benefiting domestic companies, it can be expected to encourage foreign companies to move their operations to Japan. This should be apparent since the biggest hurdle cited by foreign companies desiring to set up operations in Japan is the cost of

doing business. Specific hurdles that are cited are labor costs followed by the tax burden, office lease expenses, and social security expenses. Thus, reducing the corporate tax can be viewed as a measure that is consistent with growth strategies aiming to increase inbound direct investments in stages.

It would be somewhat shortsighted, however, to assume that everything will be fine once the corporate tax rate is lowered. In the ease of doing business rankings reported by the World Bank, of the 10 items composing these rankings, it is the difficulty of paying taxes and starting a business that are hindering businesses in Japan. In aiming for a top-level ranking, these impediments will need to be removed. However, when the relationship between the paying taxes rank and one of its components, the total tax rate (taxes as a percentage of profits), is examined, for nations like Japan with a total tax rate of around 50%, paying taxes rankings are distributed widely from rankings of around 30 to more than 100. Thus, it is not necessarily the case that a low total tax rate will mean a high paying taxes rank. This is because such factors as the frequency of and the time required to pay taxes are also considered in the paying taxes ranking. Thus, it is not necessarily the case that reducing the corporate tax rate alone will significantly improve the paying taxes rank or the ease of doing business rank. The World Bank notes that the total tax rate is only one of 30 or so indicators included in the ease of doing business rankings and that its impact on total rankings is slight (See also: 2.2 What direction should the growth strategies of Abenomics take?).

Ease of Doing Business **Chart 1.2.5**



Source: World Bank, compiled by DIR.
Note: Total of 54 countries including comprehensive ranking of top 20 OECD member countries. Tax payment ranking expresses ranking of 189 countries.

1.2.3 Japan stands out against other nations in the aging of its society

The trend toward smaller families and an aging population is accelerating in Japan, and hopes are being placed on women's participation in the labor force. In this context, the elimination of the so-called M-shaped curve of the labor force participation rate of women has become an issue. This is, however, no longer just a future issue since companies are making progress in developing a suitable working environment for women. When compared to past years, the participation rate of women has increased. However, even if we assume that the M-shaped curve for women is gradually eliminated and that the labor force participation rate of older people will increase as the pension eligibility age is raised, Japan's working age population will continue to decline and is foreseen to contract by about 20% over a 30-year period to about 54 million people in FY40.

Another aspect of the aging of society is the growing number of people who will require nursing care. With this in mind, efforts should be directed toward the development of a framework so people can better balance the needs of work and nursing care. If nursing care facilities and services are inadequate, there will be cases where people are forced to quit their jobs to provide nursing care to family members. The loss of workers in this manner will adversely affect the economy as a whole. Expanding facilities and services in the nursing care field will prevent this adverse effect and will create jobs in the same field. What will be desired as a response are efforts to improve the employment environment in the nursing care field to eliminate mismatches in employment. More broadly, consideration should also be given to the hiring of workers from abroad.

1.2.4 Positioning of the Tokyo Olympic Games

What is needed to maximize the economic impact?

In September 2013, Tokyo was selected as the host city for the 2020 Summer Olympic Games and Paralympic Games. This is the second time for Tokyo to host the Olympic Games after doing so in 1964. That was a time when Japan was undergoing double-digit economic growth (the host of the 1964 Olympic Games was selected in May 1959.) Any effort to build some sort of analysis on a comparison between that time of rapid economic growth and present-day Japan, a nation that has finally put an end to a deflationary period lasting more than 10 years, may be an exercise in futility. On the other hand, given the definite schedule of hosting the Olympics in 2020, it will be desirable to develop a menu of growth strategies with this in mind and to implement a range of measures toward this year.

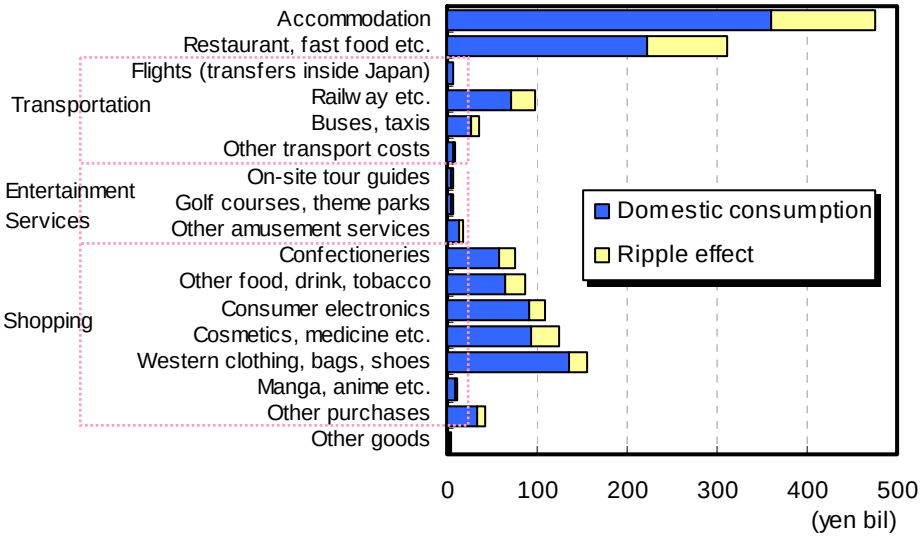
Increase of foreign visitors to Japan

One of the economic effects being hoped for is the increase of foreign tourists. The number of foreign visitors to Japan has grown weakly since 2008. With the depreciation of the yen and the easing of the terms for tourist visas for people from Southeast Asia, such visitors rose 24% y/y to 10.36 million in 2013, surpassing 10 million for the first time. However, in a ranking of nations for 2012 (Japan National Tourism Organization), more than 20 nations had a higher number of foreign visitors than Japan. In relation to the domestic population, foreign visitors amounted to less than 10% of Japan's total population. Thus, there is still room for such visitors to increase. In the Japan Revitalization Strategy, a target of more than 30 million foreign visitors to Japan was established for 2030. Expectations are being placed on the 2020 Tokyo Olympic Games as an event that will jump start the growth of foreign visitors to Japan.

What sort of effect would the sharp increase of foreign visitors have on Japan's economy? Even if the number of foreign visitors rises by 10 million, its impact on GDP, including knock-on effects, would be a figure in excess of Y1.5 trillion (Chart 1.2.6). This is only 0.3% of Japan's nominal GDP (about Y473 trillion in FY12). When viewed at the level of individual companies, however, this effect is not negligible. Should the number of foreign visitors increase, such categories of consumption as accommodation, eating- and drinking-related, apparel, and cosmetics and pharmaceuticals will grow. As a result, the earnings of department stores, hotels, restaurants, and drug stores that mainly handle such goods and services can be expected to improve.

As a recent example of the Olympic Games being held in a mature city, the London Olympic Games of 2012 provide a useful reference. Whether the number of foreign visitors will increase with the hosting of the Olympic Games is actually an unknown. During the period when London was designated the host and then actually hosted the Olympic Games, there was no noticeable increase in foreign visitors to the United Kingdom. Hence, Japan should not be complacent about the effect of the Olympic Games in attracting foreign visitors to Japan, and it should skillfully leverage this occasion to take determined action.

Foreign Visitors to Japan **Chart 1.2.6**



Source: Japan Tourism Agency, Japan National Tourist Organization, Ministry of Internal Affairs and Communication, compiled by DIR.
Note 1: Amount of growth in domestic consumption was found by multiplying purchase rate with purchaser's price per expense item for each country or region in Apr-Jun 2013, and then multiplying this by growth in number of foreign tourists visiting Japan.
Note 2: The ripple effect is calculated using the endogenous growth model for imports based on the input-output table (108 sectors) for 2005. It shows how growth in domestic consumption has had a ripple effect on a wide range of sectors, encouraging growth in added value (GDP).

1.2.5 Priority for achieving sound government finances appears to have lessened

In our current medium-term outlook, we have assumed that the consumption tax rate will increase from 5% to 8% in April, that it will increase further to 10% in October 2015, after which it will be maintained at this level. The increase of the consumption tax is to provide a source of funds to cover rising social security expenses. However, in consideration of the economy, about Y5 trillion will be set aside for stimulus measures. While a temporary measure, this will mean that about two-thirds of the tax increase will be recycled through stimulus measures. Thus, it is reasonable to think that a repeat of the sharp downward reaction that occurred when the consumption tax was last raised in 1997 will be avoided and that its overall impact on the economy will be limited. On the other hand, the process of restoring government finances to health through higher taxes will be deferred somewhat.

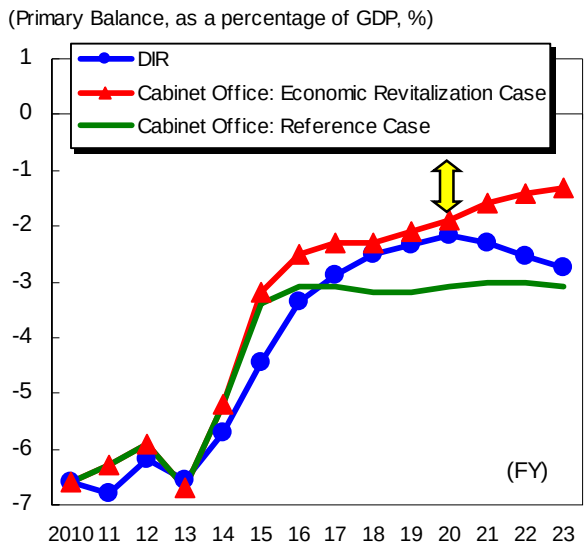
As its target for restoring sound government finances, the government has established a goal of reducing by half the ratio of the primary balance of central and local governments to GDP from its FY10 level by FY15 (-3.3% of GDP) and of achieving a positive primary balance in FY20. A report on medium- to long-term economic and fiscal projections published by the Cabinet Office in January 2014, however, does not show the achievement of a positive primary balance in FY20.

The portrait we have drawn for Japan's economy in our current medium-term outlook is less positive than the optimistic economic revitalization case specified by the Cabinet Office. Naturally, our estimate of the situation for government finances is more severe than the Cabinet Office (Chart 1.2.7). Specifically, we foresee the ratio of the primary balance to GDP continuing to improve in the 2010s and shrinking to -2.3% of GDP in FY20, after which the primary balance deficit will gradually worsen (-3.0% in FY23). Thus, to further promote a return to sound government finances, the additional increase of taxes or reduction of fiscal expenditures will be unavoidable.

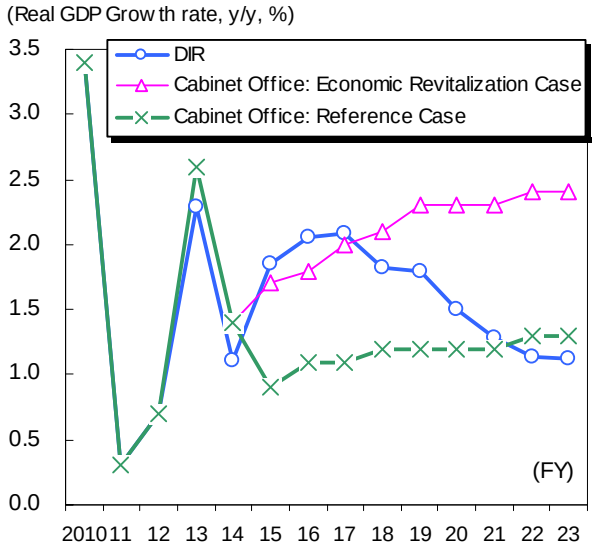
We also anticipate that the outstanding debt of central and local governments (ratio to nominal GDP) will trend at a level around 240%. One might view this as a respite from the steady increase of the debt

balance since 1990. This apparent pause, however, will be a momentary phenomenon reflecting the slower growth of the elderly population (people 65 or older) and the moderation of the growth rate of social security benefits. When the second baby boomer generation of the 1970s reaches their 60s in the 2030s, the aging of Japan's society will reaccelerate, and the government debt outstanding is predicted to rise at a faster pace. Hence, it will be difficult to carry out far-reaching reforms in the 2030s, and there will be a need to engage in the early and full-scale reform of the social security system.

Outlook for Primary Balance **Chart 1.2.7a**



Real GDP Growth Rates **Chart 1.2.7b**



Source: Cabinet Office; compiled by DIR
Note: Based on data from central and regional governments.

1.3 Outlook for exchange rates over the next 10 years

In our current outlook, our forecast of the exchange rate (Y/$) is mainly based on the two factors of (1) divergence of the rates of inflation of Japan and the US and (2) changes in the interest rate spread between Japan and the US.

(1) above is a long-term factor. If we assume that the divergence of the rates of inflation of Japan and the US will persist (US > Japan), this will be a factor for the appreciation of the yen over the long term. In our forecast period, we predict that Japan's rate of inflation (CPI growth rate) will be less for the most part than the rate of inflation of the US, a situation that will place upside pressure on the yen with respect to the long-term yen/dollar rate. In contrast, (2) is mainly a short-term factor. In the first half of our forecast period, when the interest rate spread between Japan and the US will widen, downside pressure will be placed on the yen. Then, in the second half of our forecast period, when the interest rate spread will shrink, upside pressure will be placed on the yen.

In addition to the above, (3) risk tolerance can be cited as a factor that determines the short-term swings of exchange rates. Given the structure of Japan's balance of payments, the possibility of the yen strengthening when risk tolerance declines should be borne in mind as an alternative scenario. As risk factors for an alternative scenario where the yen strengthens beyond expectations, we will need to pay attention to disturbances in the global flow of money should US monetary authorities turn to tighten policy excessively, the collapse of a real estate bubble in China, and the resurfacing of the European debt crisis. It is worth noting, however, that when events occur that serve to reduce the possibility of these downside risks, this will usher in an upside scenario where the yen weakens beyond expectations.

Bearing these alternative scenarios in mind, in this section we present risk simulations of the case where the growth rate of the world economy slows by 1% during our forecast period and the yen strengthens by Y10/$ and the case where the growth rate of the world economy increases by 1% during our forecast period and the yen weakens by Y10/$.

Factors Determining Exchange Rates **Chart 1.3.1**

	Forecast Period (FY 2014-18)	Forecast Period (FY 2019-23)
Long-term Determining Factors		
Purchasing Power Parity	Yen Appreciation Factor: Ongoing inflation differential (US＞Japan)	
Interest Parity	Yen Appreciation Factor: Ongoing interest differential (US＞Japan)	
Short-term Determining Factors		
Change in Interest Spread	Yen Depreciation Factor: Widening interest differential	Yen Appreciation Factor: Shrinking interest differential
Risk Appetite	Take care regarding event risk where an alternative scenario arises.	

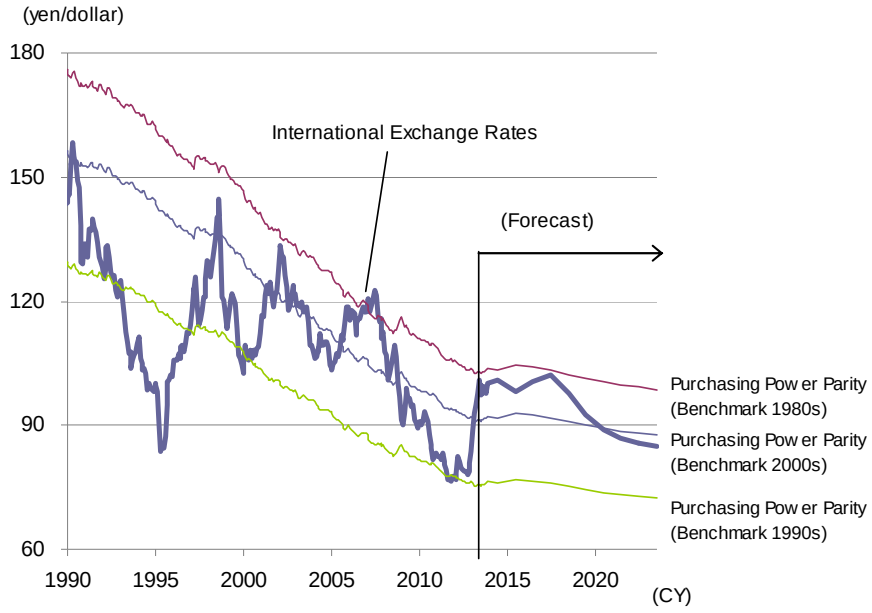
Source: Produced by DIR.

1.3.1 Long-term factor: The trend is toward a stronger yen

Purchasing price parity (PPP) can be mentioned as a long-term determining factor for foreign exchange rates. If we examine the future direction of the yen/dollar rate in terms of PPP, we anticipate that Japan's rate of inflation (CPI growth rate) will be less for the most part than the rate of inflation in the US during our forecast period, a situation that will place upside pressure on the yen with respect to the long-term yen/dollar rate (Chart 1.3.2).

Another long-term determining factor worth considering is uncovered interest rate parity. Given that central banks determine their policy interest rates in response to the rate of inflation and that market interest rates react to this, the broad movement of uncovered interest rate parity should in large measure coincide with PPP. In our current forecast period, we predict that interest rates in Japan will be less than interest rates in the US, a situation that will place upside pressure on the yen over the long term.

Exchange Rate Outlook with PPP **Chart 1.3.2**



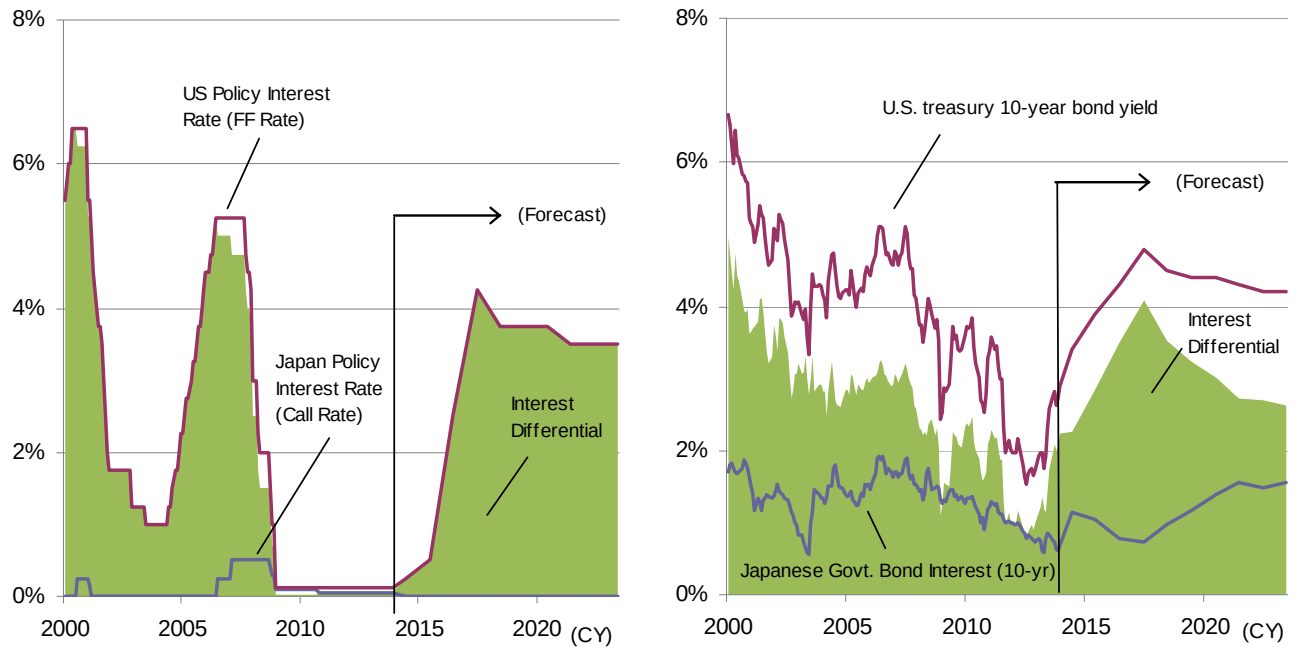
Source: Ministry of Internal Affairs and Communications, FRB, Bureau of Labor Statistics, compiled by DIR.

1.3.2 Short-term factor: Downside pressure on the yen in the first half of our forecast period

The two factors discussed above serve to explain the long-term equilibrium level of foreign exchange rates, and they are not factors that explain the short-term fluctuations of forex. Hence, in anticipating the future direction of exchange rates, we will need to reference PPP and interest rate parity as the long-term equilibrium level and turn to other short-term factors to account for deviations from the equilibrium level as well as cyclical changes. One short-term factor to consider is changes in the spread in interest rates between Japan and the US. The level of the spread in interest rates (US > Japan) is a long-term factor for a stronger yen mediated through interest rate parity as we have discussed above. In the short term, however, the widening of the interest rate spread between Japan and the US (not the level itself but change in the level) will be a factor for a weaker yen. This is a phenomenon known as overshooting in such economic theories as the Dornbusch model.

This factor will work to shift the actual exchange rate from its long-term equilibrium rate toward a weaker yen in the first half of our forecast period. In terms of a time series, in the period to end-FY14, while the BOJ maintains its quantitative and qualitative easing and the Fed reduces QE3, the spread in interest rates between Japan and the US will widen, generating downward pressure on the yen. Then, in 2015–17, a new factor will step in to put downward pressure on the yen. As the US raises interest rates and the spread in interest rates between Japan and the US widens, the yen/dollar rate (deviation from its long-term equilibrium level) will once again move in the direction of a weaker yen. On the other hand, in the second half of our forecast period, this same factor will work to place upside pressure on the yen. In 2018 and beyond, the increase of interest rates in the US will come to an end, and the effect of the BOJ's quantitative easing will wane. As the long-term interest rate rises in Japan, the spread in interest rates between Japan and the US will turn to narrow. As a result, the yen/dollar rate will revert toward its long-term equilibrium rate determined by the terms of PPP and interest rate parity.

US and Japan Interest Differential **Chart 1.3.3**

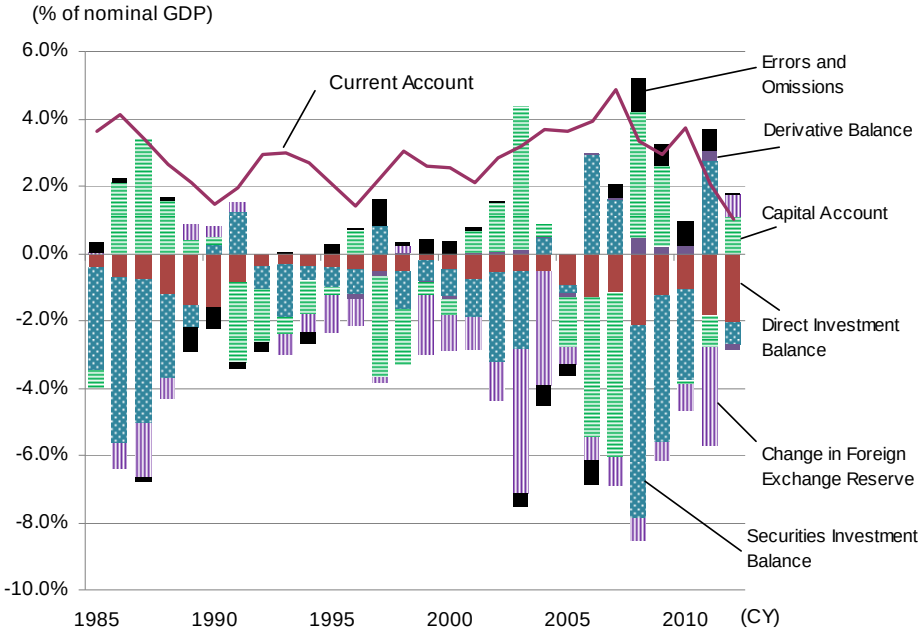


Source: Bank of Japan, Ministry of Finance, FRB, US Treasury Dept., compiled by DIR.

1.3.3 Three risk scenarios

In addition to the above, changes in risk tolerance can be mentioned as a factor with the potential of causing large short-term shifts in the exchange rate. Japan is known as a nation that records massive current account surpluses. Since current account surpluses correspond to capital account deficits, such surpluses denote that investment funds are flowing abroad to that extent. Given Japan's trade structure, when risk tolerance declines for investments, the flow of funds abroad will wane, giving rise to upside pressure on the yen.

Balance of Payments **Chart 1.3.4**



Source: Bank of Japan, Ministry of Finance, Cabinet Office, compiled by DIR.

It is extremely difficult to incorporate the factor of risk tolerance in model-based forecasts. Hence, we qualitatively assess three risk scenarios that risk tolerance changes and then shifts in the exchange rate are caused. The first scenario is the case where US monetary policy brings emerging market economies to the brink of crisis. According to this scenario, as Japan's net foreign investments contract from lower risk tolerance, the yen has the potential of appreciating sharply. Even so, emerging-market economies have greatly improved in their capacity to withstand changes in the global flow of money, and we believe the likelihood of this risk materializing is not all that high at the present moment (See also: 3.2 US monetary policies and the global flow of money).

The second risk scenario is the collapse of an asset bubble in China. The current slowing of China's economy is occurring within the structural cycle of the world economy. That said, it is also highly probable that an asset bubble has inflated in China (See also: 3.1 World economic cycle revealed by the capex cycle). While it is extremely difficult to predict when this bubble will burst, the possibility that the further increase of interest rates in the US will be one of the triggers cannot be ruled out. The Chinese yuan has a de facto peg to the dollar. Hence, procuring dollar funds at low interest rates and investing such funds in yuan in China's domestic market was a surefire investment promising all but certain returns. Given that the yuan is currently drifting higher against the dollar, it is reasonable to think that real interest was even lower than the nominal interest rate spread and that high profit margins were realized. This margin will narrow, however, once the interest rate for dollar funds turns to rise. Should the inflow of funds slow as a result, upside pressure on the yuan will weaken, and the effective profit margin will narrow further. In addition, currency market intervention will have less of an effect in expanding the supply of China's domestic liquidity. Consequently, it is highly probable that market participants' interest in investing will ebb. Given these prospects, the possibility that

higher interest rates in the US would trigger the collapse of China's asset bubble should not be overlooked.

The third risk scenario is the breakup of the euro system. The euro crisis that materialized as the sovereign debt crisis of southern European nations appears to have wound down for the time being as a path toward sound public finances comes into view and as financial markets regain their calm with the support of monetary policies like long-term refinancing operations and outright monetary transactions. The basic problem of the euro system, however, is found in the adoption of a single monetary and currency system, despite member nations being placed at greatly differing stages of economic development, while fiscal unification is far from completion.

What gave rise to the sovereign debt problems of the southern periphery that surfaced with the Greek debt crisis of October 2009? When Europe adopted a single currency, policy interest rates declined, the forex risk premium vanished, and relief measures by the European Commission became a tacit expectation. These developments dramatically improved southern European nations' capacity to borrow. As a result, foreign funds flowed into these nations, and the savings shortfall of the southern periphery worsened at the same time. The ballooning of external debt was followed by the collapse of an asset bubble, the outflow of funds, and the sharp increase of interest rates, which unleashed the debt crisis. Naturally, if the growth of external debt is accompanied by investments that strengthen domestic production capacity, this would have the potential of improving the current account balance (improve the savings shortfall) in the long term. However, as evidenced by soaring housing prices in the southern periphery prior to the crisis, the inflow of funds was not directed toward such growth areas and went instead for speculative plays.

Nations that are lagging behind in industrialization face difficulties in attracting investments as a production platform. This is all the more so when broadly-defined inflation (including wages) is progressing due to speculative investments. To solve this problem, peripheral nations would need to maintain deflationary policies, such as restraining the growth rate of wages or curtailing fiscal expenditures. It would not be easy, however, to maintain such austerity measures while aiming for economic recovery at the same time. Another possible solution would be to have the advanced nations of the eurozone provide ongoing fiscal support to peripheral nations. However, since fiscal unification is lacking, this could only be achieved in part under current circumstances. Also, given the political opposition to fiscal unification existing in advanced nations of the eurozone, the likelihood of fiscal support should be viewed as no more than a remote prospect.

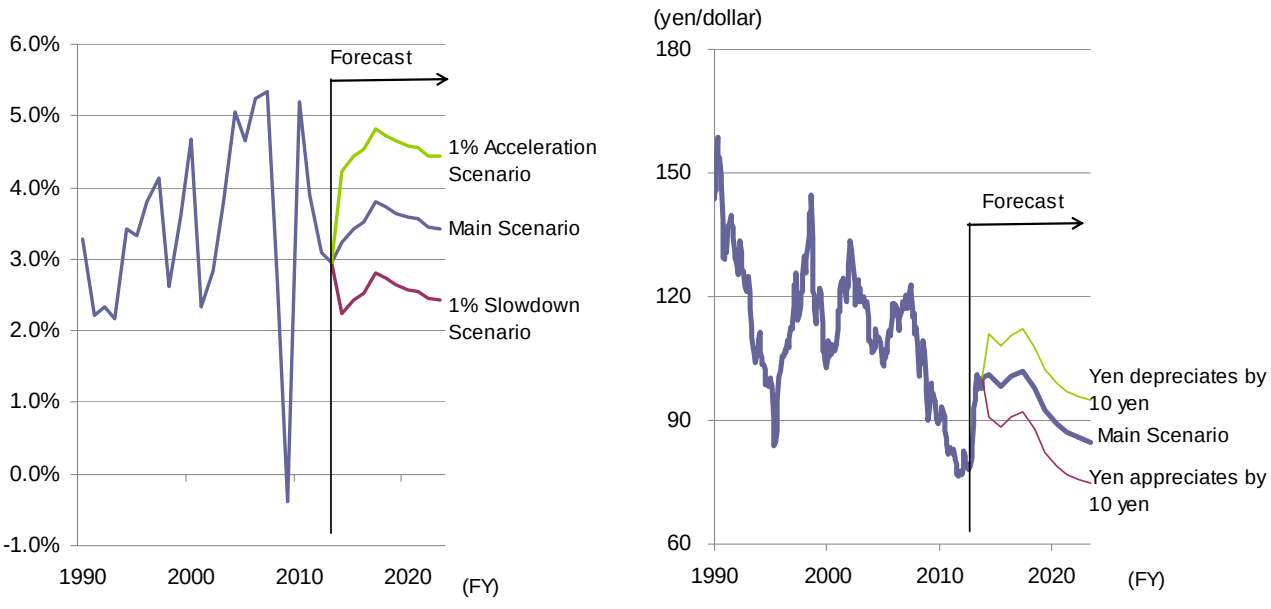
Should there be an event that greatly reduces risk tolerance as discussed above, there is the possibility that the yen would appreciate sharply away from the level we have established in our main scenario. As an alternative scenario, we carried out a risk simulation assuming that the growth rate of the world economy would slow by 1% in our forecast period and that the yen would appreciate by Y10/$ (Chart 1.3.5). Should the yen strengthen beyond expectations, Japan's economy would grow more slowly than in our main scenario. The main causes for this would be the weaker growth of exports and the reduced growth of private capex owing to the faltering of exports.

Downside Risk Simulation — Chart 1.3.5

	Main scenario			World economy slows by 1%, appreciation of Y10/$			Deviation from main scenario;%,%pt		
	FY2014-23	FY2014-18	FY2019-23	FY2014-23	FY2014-18	FY2019-23	FY2014-23	FY2014-18	FY2019-23
Real GDP (y/y %)	1.5	1.7	1.3	1.0	1.0	1.1	-0.5	-0.8	-0.2
Private final consumption	0.7	0.6	0.8	0.5	0.4	0.6	-0.2	-0.2	-0.2
Private capital investment	3.6	5.0	2.2	2.5	2.9	2.1	-1.1	-2.1	-0.1
Private housing investment	-1.8	-2.4	-1.1	-2.0	-2.8	-1.3	-0.3	-0.3	-0.2
Public fixed capital formation	0.1	-1.5	1.8	0.7	-0.5	1.9	0.5	1.0	0.1
Government final consumption	2.0	1.9	2.1	1.9	1.9	1.9	-0.1	0.0	-0.2
Export of goods and services	5.3	6.5	4.1	2.9	2.7	3.0	-2.4	-3.8	-1.1
Import of goods and services	3.9	3.9	3.9	2.5	1.9	3.0	-1.5	-2.0	-0.9
Nominal GDP (y/y %)	2.3	2.6	2.0	1.4	1.5	1.3	-0.9	-1.0	-0.7
GDP deflator (y/y %)	0.8	0.8	0.7	0.4	0.6	0.2	-0.4	-0.3	-0.5
Corporate Goods Price Index (y/y %)	1.2	1.4	0.9	0.5	0.8	0.2	-0.6	-0.6	-0.7
Consumer Price Index (y/y %)	1.4	1.6	1.3	1.1	1.3	0.8	-0.4	-0.3	-0.5
O/N call rate (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yield on 10-yr JGBs (%)	1.6	1.3	1.9	1.3	1.0	1.5	-0.3	-0.3	-0.4
Exchange rate (Y/$)	93.9	100.0	87.8	83.9	90.0	77.8	-10.0	-10.0	-10.0
Current balance (% of nominal GDP)	2.5	2.6	2.4	0.7	1.2	0.2	-1.8	-1.4	-2.1
Nominal employee compensation (y/y %)	1.6	1.3	2.0	0.9	0.7	1.2	-0.7	-0.6	-0.8
Unemployment rate (%)	3.5	3.6	3.3	4.0	4.1	3.9	0.5	0.4	0.6
Labor's share	65.1	65.6	64.7	67.0	67.3	66.7	1.9	1.7	2.0
Central & local government balance (% of nominal GDP)									
Fiscal balance	-4.6	-5.2	-4.0	-6.0	-6.3	-5.6	-1.4	-1.1	-1.7
Primary balance	-3.2	-3.8	-2.6	-4.5	-4.8	-4.2	-1.4	-1.1	-1.6
Central & local government debt (% of nominal GDP)	240.8	241.8	239.9	259.5	251.7	266.7	18.7	9.9	26.8

Source: Compiled by DIR.
Notes: 1) Period avg., 2) Labor's share: ratio of employee compensation to national income, 3) Fiscal balance: excl. ad-hoc factors.

Alternative Scenario: World Growth Rate (left) and Exchange Rate (right) — Chart 1.3.6



Source: Compiled by DIR using a variety of source material

These are downside risks, but it should also be borne in mind that they are coupled with upside risks. The upside would be triggered by an event that reduces the possibility of a downside risk. Examples would include the acceleration of emerging-market economies as the US maintains monetary easing beyond expectations, China succeeding in shifting from investment-driven to consumption-driven economic growth and maintaining high growth, and progress in the fiscal unification of the eurozone. Regarding these upside risk scenarios, we performed a risk simulation assuming that the growth rate of the world economy would increase by 1% in our forecast period and that the yen would weaken by Y10/$ (Chart 1.3.7). Should the yen depreciate beyond expectations, Japan's economy would grow faster than in our main scenario, with the main causes being exports and private capex growing at a more rapid pace.

Upside Risk Simulation **Chart 1.3.7**

	Main scenario			World economy increases by 1%, depreciation of Y10/$			Deviation from main scenario;%,%pt		
	FY2014-23	FY2014-18	FY2019-23	FY2014-23	FY2014-18	FY2019-23	FY2014-23	FY2014-18	FY2019-23
Real GDP (y/y %)	1.5	1.7	1.3	2.1	2.6	1.6	0.6	0.9	0.3
Private final consumption	0.7	0.6	0.8	1.0	0.9	1.0	0.3	0.3	0.3
Private capital investment	3.6	5.0	2.2	4.9	7.3	2.4	1.3	2.3	0.2
Private housing investment	-1.8	-2.4	-1.1	-1.5	-2.0	-1.0	0.3	0.4	0.1
Public fixed capital formation	0.1	-1.5	1.8	-0.6	-2.8	1.7	-0.7	-1.2	-0.1
Government final consumption	2.0	1.9	2.1	2.1	1.9	2.3	0.1	0.0	0.3
Export of goods and services	5.3	6.5	4.1	7.7	10.2	5.1	2.4	3.7	1.0
Import of goods and services	3.9	3.9	3.9	5.4	6.0	4.9	1.5	2.1	0.9
Nominal GDP (y/y %)	2.3	2.6	2.0	3.4	3.8	3.1	1.1	1.2	1.0
GDP deflator (y/y %)	0.8	0.8	0.7	1.3	1.1	1.5	0.5	0.3	0.7
Corporate Goods Price Index (y/y %)	1.2	1.4	0.9	1.9	2.0	1.8	0.7	0.6	0.9
Consumer Price Index (y/y %)	1.4	1.6	1.3	1.9	1.8	2.0	0.5	0.3	0.7
O/N call rate (%)	0.0	0.0	0.0	0.3	0.0	0.5	0.3	0.0	0.5
Yield on 10-yr JGBs (%)	1.6	1.3	1.9	2.0	1.5	2.5	0.4	0.1	0.7
Exchange rate (Y/$)	93.9	100.0	87.8	103.9	110.0	97.8	10.0	10.0	10.0
Current balance (% of nominal GDP)	2.5	2.6	2.4	4.4	4.0	4.8	2.0	1.4	2.5
Nominal employee compensation (y/y %)	1.6	1.3	2.0	2.5	1.9	3.1	0.9	0.6	1.1
Unemployment rate (%)	3.5	3.6	3.3	2.9	3.2	2.5	-0.6	-0.4	-0.8
Labor's share	65.1	65.6	64.7	62.9	63.8	62.1	-2.2	-1.8	-2.6
Central & local government balance (% of nominal GDP)									
Fiscal balance	-4.6	-5.2	-4.0	-2.9	-4.0	-1.9	1.7	1.2	2.0
Primary balance	-3.2	-3.8	-2.6	-1.6	-2.6	-0.6	1.6	1.1	2.0
Central & local government debt (% of nominal GDP)	240.8	241.8	239.9	219.9	231.9	209.8	-20.9	-9.9	-30.1

Source: Compiled by DIR.
Notes: 1) Period avg., 2) Labor's share: ratio of employee compensation to national income, 3) Fiscal balance: excl. ad-hoc factors.

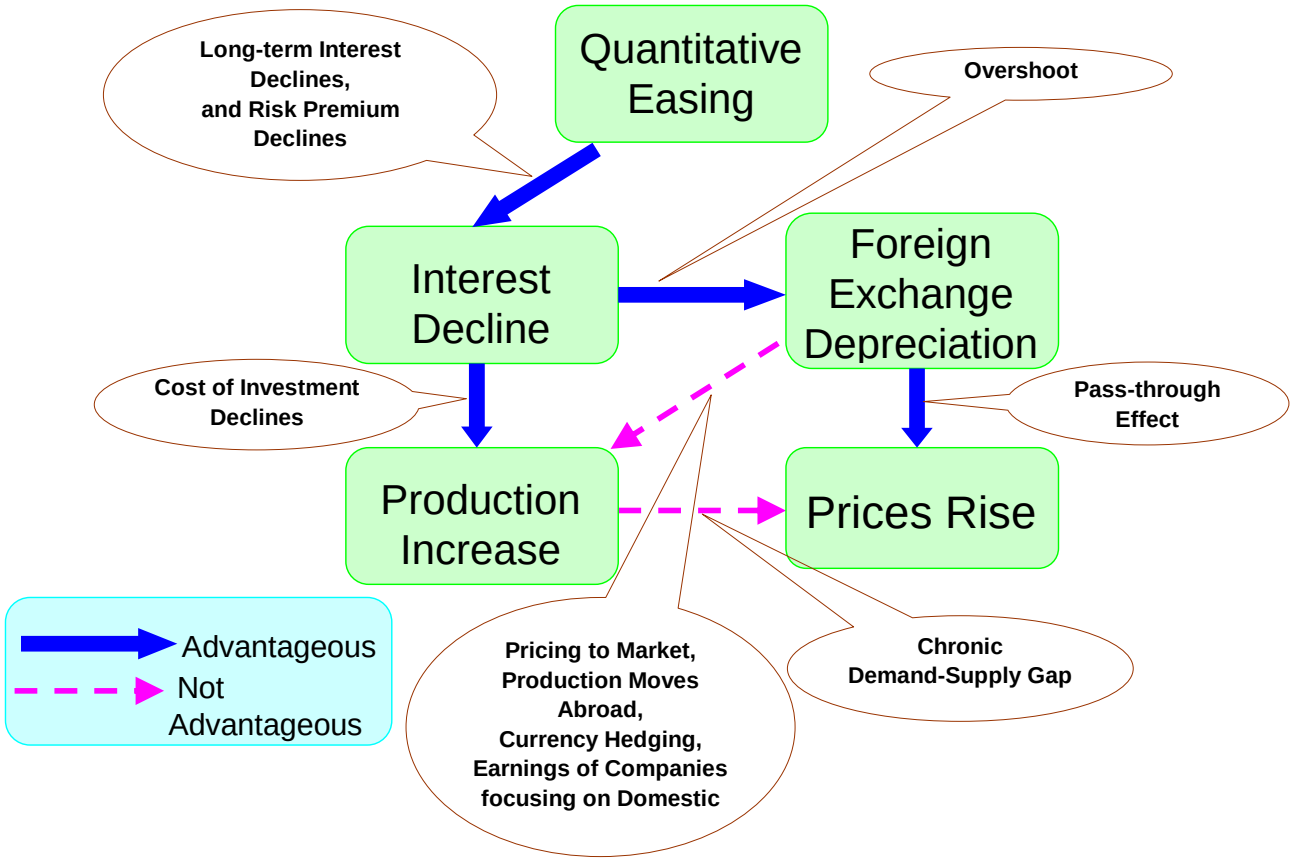
2. Assessment of and Challenges Facing Abenomics in its Second Year

2.1 Impact and Limitations of Monetary Policy

In the second half of the 2000s, the yen experienced a long trend of appreciation in the aftermath of the Lehman crisis. Then, from end-2012, the yen turned to depreciate sharply. This was the consequence of the new Abe administration assuming office in December 2012, which was viewed as favoring bold monetary easing, and of the announcement of quantitative and qualitative monetary easing by Haruhiko Kuroda, the new governor of the Bank of Japan, in April 2013. Interest rates, led by the interest on JGBs, have trended at a low level, despite the rise of global interest rates that ensued from the preannouncement of the tapering of QE3, which the Federal Reserve chairman made in May 2013.

In this section, we provide an analysis of the effects of quantitative monetary easing using a structural vector autoregression model based on the Dornbusch model to verify their impact on exchange rates and interest rates and to examine their mechanism of propagating to production and prices. Estimation results show that quantitative easing (1) reduces the long-term interest rate and risk premium, (2) stimulates production activity as a result, and (3) depreciates the exchange rate at the same time (Chart 2.1.1). On the other hand, we also learned that (1) the depreciation of the exchange rate accompanying quantitative easing is temporary, (2) the depreciation of the exchange rate does not expand production activity at a statistically significant level, and (3) the increase of production activity does not lead to higher prices. As a result, this suggests that quantitative easing has only a limited impact in achieving the objective of ending deflation.

Effects of Quantitative Monetary Easing **Chart 2.1.1**



Source: Produced by DIR.

Estimation results revealed that the effect of quantitative easing first appears as lower interest rates. Quantitative easing not only reduces risk-free interest but has the effect of lowering the risk premium, such as regarding the interest on corporate bonds. In addition to the decrease of such interest rates, quantitative easing will boost the domestic economy (production) by maintaining the function of the short-term financial market and by reducing the premium on even higher risk. In terms of the exchange rate, the effect of quantitative easing materializes in the short term and results in the sharp depreciation of the yen.

The effectiveness of quantitative monetary easing, however, is limited in three ways in relation to the Abe administration's objective of ending deflation. First, policies for quantitative monetary easing have only a temporary effect in depreciating the exchange rate. Thus, unless bank reserves are accumulated at a geometrical pace, it is difficult to imagine the exchange rate of the Japanese yen on a constant trend of depreciation.

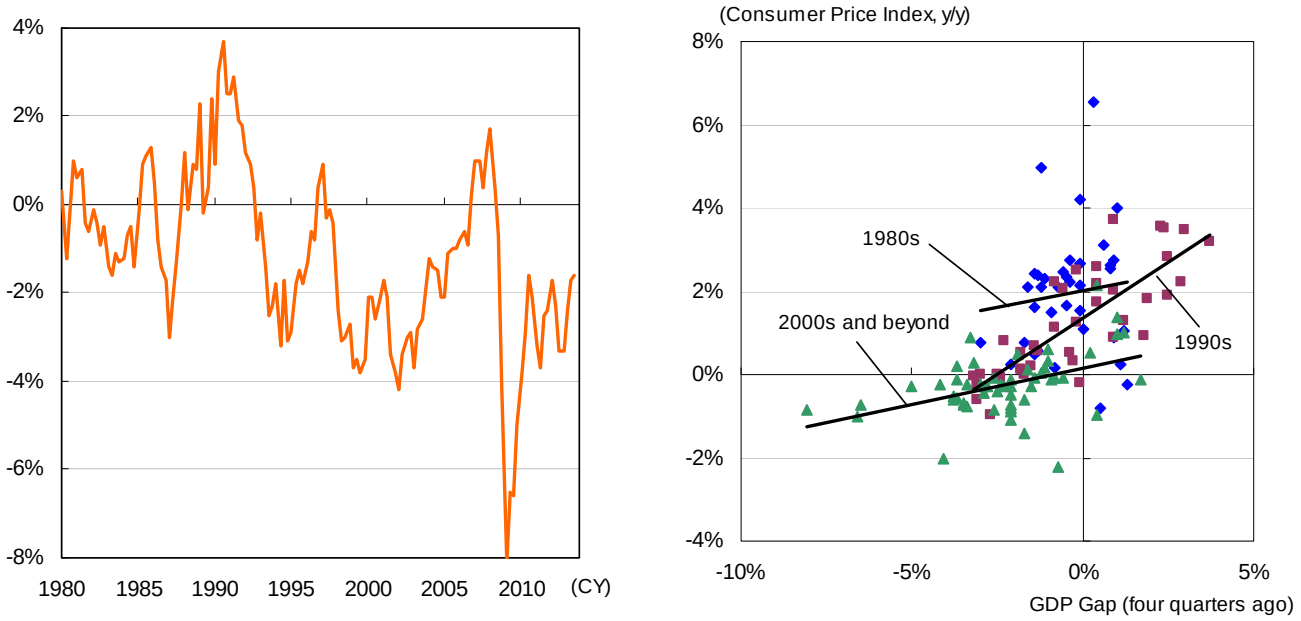
Second, estimation results suggest that an exchange rate shock will not have a statistically significant impact on production. Miyao[1] [2006] can be cited as prior research yielding similar results. Based on a vector autoregression analysis of Japan from 1975 to 2001, this research indicates that changes in the exchange rate do have a consistent and statistically significant impact on imports, but their effect on exports was moderate for the entire period. In particular, this effect has weakened dramatically since the Plaza Accord (p. 157). Factors explaining these results are (1) "exporting companies establishing export prices in the currencies of trading-partner nations and pricing to market—that is to say, adjusting the markup in relation to changes in exchange rates (p. 157)" and (2) "given the sharp appreciation of the yen following the Plaza Accord, exporting companies paying sunk costs to accelerate local production and multinational operations. As a result, exchange rate changes within a certain range may no longer have an effect on the market structure or trade structure (p. 160)".

Should the former factor be the main cause of estimation results, this would clearly be consistent with results showing that changes in the exchange rate do not affect production activity in the short term. However, since changes in the markup will alter companies' production plans by way of changes to their earnings, the possibility should be entertained that VAR analysis does not fully capture such long-term effects. On the other hand, should the latter factor be the main cause, the direct effect of changes in the exchange rate on production will be slight even in the long term. Also, (3) these effects will diminish further if companies' forex hedging capacities have increased. Moreover, since (4) the depreciation of the yen can become a factor that squeezes the profit margins of domestic industries through higher import prices, the effect of the depreciation of the exchange rate on lifting the overall production of a nation should be estimated with care (See also: 3.3 Five risks where exports would not grow even with a weaker yen and the recovery of foreign economies).

Third, the most important point to note is that estimation results do not offer verification that quantitative easing has an effect in increasing prices. Estimation results do show that quantitative monetary easing increases production by lowering the long-term interest rate and the risk premium. This increase in production activity, however, is not correlated in a statistically significant way with prices. This is thought to be the consequence of (1) total demand being less than potential supply capacity, which has given rise to a consistent negative gap between demand and supply, and of (2) persistent and widespread deflationary expectations (which means that inflationary expectations have waned,) and the downward shift of the Phillips curve. When such a demand-supply gap and deflationary expectations exist, it will be difficult to increase prices through some form of a shock caused by higher production.

[1] Miyao, Ryuzo., (2006), "Time Series Analysis of Macro Financial Policies (in Japanese)" Nihon Keizai Shimbun Sha

Japan's Demand-Supply Gap (left) and the Phillips curve (right) **Chart 2.1.2**



Source: Cabinet Office, Ministry of Internal Affairs and Communications, compiled by DIR.
Note: Consumer price index figures do not include foods or energy.

The gap between demand and supply has trended persistently in the negative zone since the 1990s in Japan, and the demand shortfall is thought to be continuing in view of the downturn of the economy since the Lehman crisis and the impact of the Great Earthquake (Chart 2.1.2 (left)). Furthermore, the relationship between the demand-supply gap and prices has likely changed on account of the prolonged shortfall of demand and attendant, ongoing deflation. Chart 2.1.2 (right) portrays the Phillips curve, which plots the relationship between the demand-supply gap and the growth rate of prices. As can be ascertained from the chart, this relationship has changed in the 1990s, a decade that experienced a chronic demand shortfall and deflation. The chart also discloses that the Phillips curve has shifted significantly downward in the years since 2000 compared to the 1980s. Stated another way, the hurdle for overcoming deflation has become higher than before, which is likely the consequence of long-term deflation reducing the expected growth rate of prices.

According to the Phillips curve since 2000, the demand-supply gap will need to shrink to nearly zero if deflation is to be overcome. The Cabinet Office estimates that the demand-supply gap was -1.6% in 3Q13. Thus, based on a rough calculation applying the Phillips curve since 2000, a demand shortfall of around Y8 trillion will need to be eliminated (from the creation of demand or the scrapping of supply capacity) to end deflation. Also, when we estimate the size of the demand surplus needed to achieve an inflation target of 2%, a surplus of about 10.7% of GDP will be required. This suggests that, when the current demand-supply gap is included, demand corresponding to 12.3% of GDP (about Y60 trillion) will need to be created (including the scrapping of supply capacity) to achieve the inflation target. It is not reasonable to think that this quantity of demand can be generated solely with the quantitative and qualitative monetary easing announced in April 2013.

Given this situation, what can be hoped to increase inflation is the pass-through effect accompanying higher prices for imported goods stemming from the depreciation of the exchange rate. As noted above, the effect of current quantitative easing in depreciating the exchange rate is expected to be temporary. Hence, it is highly probable that the pass-through effect will also be a short-term phenomenon.

As can be observed from the way the lengthy experience of deflation in the 1990s shifted downward the expected rate of inflation (and its relationship with the demand-supply gap), a prolonged experience of non-deflationary conditions will likely be necessary to shift the Phillips curve upward

again. Thus, it is highly probable that a higher expected rate of inflation will not begin to spur the economy through a lower real interest rate until after the economy has broken free of deflation. What can be expected of monetary policies for the time being will most likely center on effects that derive from a lower nominal interest rate. The path of lower interest rates, however, will not be capable of generating demand of an order that would turn the rate of inflation clearly positive. What will prove essential in ending deflation are policies that will promote the renewal of industries, so as to reduce excess supply, and supportive policies that will increase the profitability of economic activities.

2.2 What direction should the growth strategies of Abenomics take?

The consumption tax will increase to 8% in April 2014, and the final decision of whether to raise the tax further to 10% will be made by year-end. In evaluating the growth strategies of the Abe administration as they stand now, we can say they are pointing in the right direction, but they need to do more in the area of regulatory reform and still appear insufficient. In this context, new growth strategies are to be determined in June 2014, and the Abe administration's efforts to implement them can be expected to receive even more critical scrutiny. In this section, we review the main points of the growth strategies of the Abe administration and the progress achieved, describe the growth strategies that are needed, and evaluate the growth strategies of the Abe administration while indicating the sorts of reforms that are desired going forward.

2.2.1 Assessment of and challenges facing growth strategies

Main points of growth strategies

The Japan Revitalization Strategy (subsequently, "growth strategies") approved by the cabinet in June 2013 has three pillars (Chart 2.2.1). The first is the plan for the revitalization of Japanese industry that aims to strengthen domestic industrial foundations. Specifically, in accordance with the Industrial Competitiveness Enhancement Act and other acts, the plan will establish a system of regulatory exemptions for company pilot programs (where exemptions are made to regulations on a company basis while ensuring safety), a gray zone resolution system (a system where companies can verify the applicability of regulations beforehand), and tax incentives to promote business venture investments and business restructuring. Through such measures, the government intends to expand capital expenditures by 10% over three years and to increase the business startup ratio and the business closure ratio from their current 4.5% to the 10% level.

In terms of employment, the government will shift budgetary funds from the employment adjustment subsidy program, which has encouraged labor hoarding, to a labor transfer support subsidy program by FY15, make use of private-sector placement agencies, revise labor hour legislation and the worker dispatch system, accelerate the resolution of nursery school waiting lists, reform the university system, and strengthen the development of global human resources. In particular, the government plans to raise the employment rate of women by 5 percentage points by 2020 and double the number of foreign students studying in Japan and Japanese students studying abroad by 2020.

In terms of competitiveness in the siting of businesses, the government is working to establish national strategic special zones to develop a dynamic business environment within metropolitan areas. Specifically, legislation has already been passed in relation to special zones on the easing of floor area ratios, the establishment of public schools that are privately managed, the clarification of employment terms, the exemption of fixed-term employment, the easing of hospital bed regulations, and the easing of terms for agricultural production corporations. Other issues like allowing foreign doctors and nurses to work and provide medical care and the expansion of mixed medical treatments combining procedures with and without public health insurance coverage are continuing to be debated. Measures other than those involving special zones include allowing the private sector to manage public facilities and the overcoming of environmental and energy constraints (reform of the electric power system,

installation of high-efficiency thermal power plants, and expanding the nations participating in the Bilateral Offset Credit Mechanism where technology is provided to emerging-market economies in exchange for emission credits). In particular, a new basic energy plan incorporating the overcoming of environmental and energy constraints is expected to be approved by the cabinet in February 2014 or later. Moreover, through such measures as the promotion of innovation in science and technology, the realization of a world-class IT society, and the reform of small- and medium-sized enterprises and small businesses, the government aims to energize Japanese companies as a whole and to enable individuals to express their capabilities.

The second pillar of growth strategies is the strategic market creation plan that will create four new markets. In the first new market of healthcare, healthcare will be divided into the three stages of prevention and health maintenance, treatment, and recovery. Headquarter functions will be strengthened for research and development to promote state-of-the-art healthcare technology, and examination functions will be strengthened for pharmaceuticals and medical equipment. In addition, to curtail public healthcare costs, the plan specifies the development of a prevention and healthcare industry as well as support programs such as robotic care to promote patients' return to society. As targets for 2020, the plan envisions increasing the years of healthy living by one year or more and raising the ratio of people receiving physical checkups (including special physical checkups) to 80%. In the second new market of the environment and energy, the plan aims to diversify energy sources to achieve a clean and economical energy supply that includes renewable energy and state-of-the-art thermal power generation. On the demand side, it will promote energy conservation, such as through the top runner program that increases energy conservation standards. In addition, the plan seeks to reform the electric power system by aiming to increase transmission efficiency. In the third new market of infrastructure, the plan intends to build an infrastructure inspection and diagnosis system incorporating information technology and to establish a safe driving support system. The fourth area in the strategic market creation plan is prioritizing local agriculture, forestry and fishery industries and tourism. In the area of agriculture, the plan specifies increasing cost competitiveness by consolidating agricultural land through a mechanism for its intermediate management and by ending the acreage reduction policy for rice cultivation. In addition, the plan specifies promoting the development of a senary (sixth) industry through alliances between agriculture, commerce, and industry as well as policies to double the export value of agricultural, forestry, and fishery products and food products by 2020. In the area of tourism, aided by the easing of the terms for issuing visas for the citizens of Thailand, Malaysia, and other nations since last summer, the number of foreign visitors to Japan achieved the annual target of 10 million visitors in 2013 (naturally, the depreciation of the yen also had an effect), and the plan seeks to increase this figure to 20 million by 2020 and 30 million by 2030.

The third main pillar of growth strategies is a strategy of global outreach that aims to capture global markets. By strengthening economic ties and by developing strategic commercial relationships through the Trans-Pacific Strategic Economic Partnership Agreement (TPP) consisting of 12 nations facing the Pacific and the Regional Comprehensive Economic Partnership (RCEP) encompassing the 16 nations of ASEAN nations, Japan, China, South Korea, Australia, New Zealand, and India, this strategy seeks to increase the ratio of trade covered by free trade agreements to 70% from its current 19% by 2018. In addition, the strategy of global outreach specifies securing foreign infrastructure demand, promoting the Cool Japan initiative, as well as doubling inbound direct investments from their current figure of less than Y18 trillion to Y35 trillion in 2020 by the fundamental reform of the special zone system to invigorate inbound direct investments.

Summary of Japan's Revitalization Strategy — Chart 2.2.1

① The Plan for Japan's Industrial Revitalization

1. Emergency structural reform program: corporate evaluation, gray zone dissolution, tax breaks to encourage venture capital, business restructuring, and capital investment in leading industries and technologies.

⇒ Plans call for increasing capital investment by 10% over a three-year period (70 tril yen per year), and upping the business entry and exit rates to the 10% level.

2. Reform employment system and strengthen workforce (shift to policy supporting labor fluidity, review legislation regarding work hours, promote women in the work force, intensive use of foreign labor resources)

⇒ Employment rate of persons aged 20-64 80% (75% in 2012), reduce number of persons unemployed for over 6 months by 20% over the next 5 years, increase women's employment rate between ages 25-44 (68% in 2012) to 73% by 2020, Increase number of women in leadership roles to 30% by 2020, double number of foreign students by 2020.

3. Promote innovation in science and technology (strengthen command functions of Council for Science and Technology, enhance research support activities, improve intellectual asset strategy.)

⇒ Become world's no. 1 in innovation (technological capability) within 5 years.

4. Realize world class IT society (reform regulations and systems to expand and improve IT, make government data available to private sector)

⇒ World class disclosure of government data (over 10,000 data sets) by 2015.

5. Further strengthen locational competitiveness (create strategic zones, open public facility management to private sector, overcome environmental/energy restrictions)

⇒ Achieve no. 3 or better in World Bank Business Environment ranking by 2020 (currently no. 15), raise Tokyo's Global Power City Index rating to 3 or better by 2020 (currently at 4).

6. Reforms to improve small business environment (regional resource utilization, collectivization, branding, review system of guarantees for individuals, support for small to medium size enterprises entering global marketplace.

⇒ Raise business entry and exit rate to 10% level, double number of small businesses in the black to 700,000 by 2020, increase number of small businesses entering global marketplace to 10,000 within 5 years.

② Building Strategic Markets

1. Lengthen number of years of a healthy life for Japanese citizens (medical and elder care information in electronic form, promote preventive medicine, establish Japanese version of NIH to provide leadership in research and develop new areas of medical treatment.

⇒ Increase healthy life expectancy to more than 1 by 2020, raise medical examination rate (including for special health checkups) to 80%, expand domestic market for health services from 16 tril yen to 26 tril yen by year 2020, and to 37 tril yen by 2030.

2. Increase both supply and demand for clean and economic energy (promote wind power and geothermal power, reduce environmental assessment time for coal-fired thermal power, reform electrical power system.)

⇒ Commercialize floating wind turbine by 2018, residential and non-residential buildings required to be in compliance with energy efficiency standards by 2020.

3. Build safe, convenient, and economical next generation infrastructure (build infrastructure inspection & maintenance system utilizing IT, safe operation support system, etc.)

⇒ Expand scale of domestic infrastructure market from 2 tril yen to 16 tril yen by 2020, then to 33 tril yen by 2030.

4. Realize regional communities that can create value out of local resources, thus attracting interest on a global scale (activate agriculture, forestry and fisheries, as well as tourism industry)

⇒ Increase exports of agriculture, forestry and fishery products as well as foods from 450 bil yen to 1 tril yen by 2020, increase number of tourists visiting regional areas from 10 million to 20 million by 2020 and to 30 million by 2030.

③ Globalization Strategy

1. Build strategic trade relations and promote economic partnerships (sign Trans-Pacific Partnership (TPP) and Regional Comprehensive Economic Partnership (RCEP) agreements).

⇒ Increase involvement in free trade agreements from current 19% to 70% by 2018.

2. Strategic efforts to gain access to overseas markets (infrastructure exports, resource acquisition, promotion of "Cool Japan" program).

⇒ Orders for infrastructure systems to total 30 tril yen by 2020 (currently 10 tril yen), double amount in exports compared to 2010 by small and medium sized businesses by 2020.

3. Lay foundations supporting Japan's growth, such as capital and human resources (activate direct investment in domestic economy, strengthen global human resources).

⇒ Double amount of domestic direct investment from current 18 tril yen to 35 tril yen by 2020)

Source: "Japan's Revitalization Strategy - Japan Is Back" June 14, 2013, compiled by DIR.

Progress achieved

With the view of implementing these growth strategies, such acts as the Electricity Business Act and the Pharmaceutical Affairs Act were revised in November 2013 and the Industrial Competitiveness Enhancement Act, the National Strategic Special Zones Act, and legislation promoting the intermediate management of agricultural land were passed in December 2013. In addition, tax incentives for companies were incorporated in the tax revision framework for FY14. The passage of a total of 33 bills is being aimed for in the Diet's normal session for 2014 in accordance with the action plan approved by the cabinet in January 2014 (which lists the issues to be addressed in the next five years and will ascertain their achievement or progress each successive January). The newly established Special Zone Advisory Council, headed by the prime minister, will determine basic policies for national strategic special zones, will designate such zones (to be selected in March 2014), and will decide zone policies. Moreover, special zone promotion headquarters will be established for each special zone, whose members will consist of government ministers, the local chief executive, and private-sector leaders, and these headquarters will develop detailed business plans for each special zone.

In the revision of growth strategies that is scheduled for June 2014, such themes as employment, agriculture, and healthcare are expected to be featured, which were not included in the Japan Revitalization Strategy since they required careful discussion. Specifically, issues that are expected to be addressed include (1) realization of a world-leading employment and business environment (resolution of waiting lists for after-school programs, neutral tax and social insurance systems regarding work choices, "three-in-one" reform of labor hour policies [regulation of the upper limit of working hours, mandatory measures for acquiring days off and leaves, and creation of a labor hour system appropriate for workers where uniform labor hour management is not well suited], development of an environment for accepting foreign workers, revision of vocational training programs, strengthening of the system for promoting inbound direct investments, and tax measures to invigorate corporate activities), (2) development of new growth industries (reform of the corporation system to promote the provision of unified services in healthcare and nursing care, reform of the insurance system to strengthen competitiveness, invigoration of the service industry excluding public health insurance regarding services in prevention and the promotion of health, adoption of information and communication technology (ICT) for healthcare and nursing care, and review of the suitable nature of agricultural committees, agricultural production corporations, and agricultural cooperatives), and (3) upgrading the level of regional communities and small and medium-sized enterprises (formation of regional growth clusters, promotion of regional growth strategies, and expansion of the number of foreign visitors to Japan).

Desired growth strategies: What are needed are fair competition and the utilization of diverse human resources

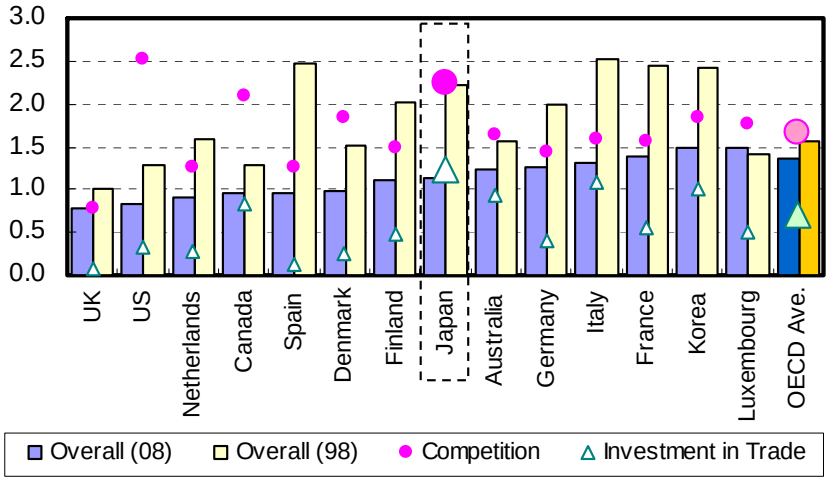
The policy menu itemized in growth strategies is quite large, giving the impression that it is merely a listing of policies. As a result, it is difficult to understand which policies would contribute the most to economic growth. Given the need to start from Japan's current situation, what are required to achieve economic growth in a difficult environment of globalization and a hyper-aged society with a declining birth rate are corporate innovation and the effective use of limited human and other resources.

Fair competition

Chart 2.2.2 portrays the Indicators of Product Market Regulation (PMR), which depict the degree of product market regulation by major OECD nations. The bar graphs illustrate figures for 2008 and 1998, with smaller figures indicating lighter regulation and an environment conducive to corporate activities. In the case of Japan, deregulation has proceeded by a considerable decree in the decade shown, and its PMR for 2008 is less than the OECD average. However, the regulation of competition and of trade and

investment shown respectively by circles and triangles (both for 2008) indicate that such regulation is still strong. It is particularly strong for network industries such as electric power and railroads and for service industries. There will be a need to realize a fair environment for competition by promoting market entry and exit and by lessening the degree of vertical integration in these areas. In addition, Japan's regulation of inbound direct investments has been pointed out for its severity (for example, the restriction of foreign investors' purchases of domestic stocks).

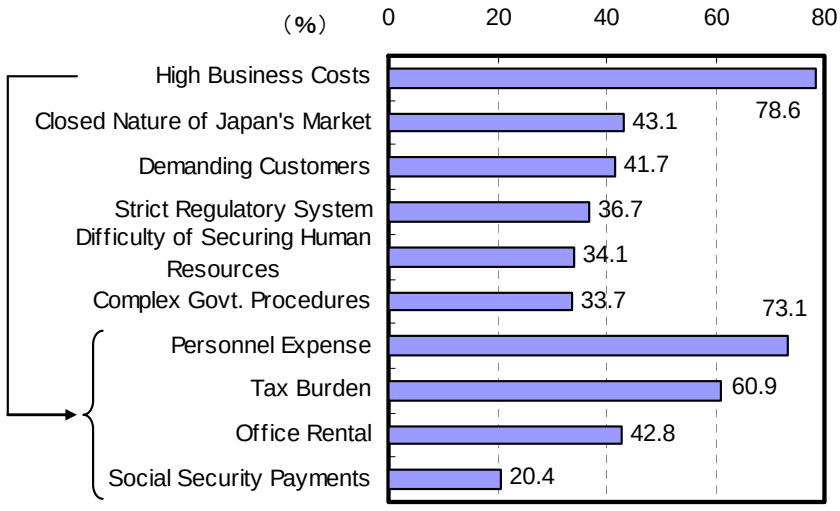
Degree of Market Regulation in Major Nations **Chart 2.2.2**



Source: OECD, "Indicators of Product Market Regulation (PMR)", compiled by DIR.
Note: The smaller the figure the more lax are market regulations. Data on competition and trade investment are from 2008. Figures for the year 1998 are for Luxemburg only, 2003.

A questionnaire survey by the Ministry of Economy, Trade, and Industry of foreign companies with operations in Japan reveals that the cost of doing business is a barrier to pursuing business opportunities here (Chart 2.2.3). Specific barriers mentioned include high labor costs (resulting from the scarcity of global human resources), a large tax burden (as will be noted below, this is thought to include a large burden related to tax filing), and high office rental rates.

Barriers to Establishing a Business in Japan **Chart 2.2.3**



Source: METI "FY2012 Survey of Trends in Business Activities of Foreign Affiliates (FY 2011 Results)", compiled by DIR.
Note 1: Percentage of companies which marked all items as barriers (except for the financial and insurance industries and real estate). However, the top five of those giving multiple answers were counted.
Note 2: Lower half of the graph shows business cost factors considered to be barriers to doing business in Japan.

Moreover, when the perspective of the renewal of industries (and job creation) is included, there will be a need to create a convenient business environment so small and medium-sized enterprises and business ventures can start and sustain new businesses. According to data published annually by the World Bank (Chart 2.2.4), Japan currently ranks 15th among 34 OECD nations in an ease of doing business ranking (in 2013). While Japan ranks first in resolving insolvency, it ranks near the bottom among OECD nations in the cases of paying taxes (frequency of payment, time required, and total tax rate) and starting a business (number of processes, number of days, and cost). Japan also has low rankings for such items as registering property and dealing with construction permits.

World Bank Ease of Doing Business Ranking (Recounted Using 34 OECD Members Only, 2013)
Chart 2.2.4

Country	Ease of Doing Business Rank	Starting a Business	Dealing with Construction Permits	Getting Electricity	Registering Property	Getting Credit	Protecting Investors	Paying Taxes	Trading Across Borders	Enforcing Contracts	Resolving Insolvency
New Zealand	**1**	1	3	17	1	2	1	9	12	13	11
US	**2**	6	9	6	8	2	3	20	13	9	15
Denmark	**3**	14	1	8	2	9	11	3	4	19	9
Korea	**4**	10	5	2	26	6	15	10	1	2	14
Norway	**5**	19	8	7	3	26	10	7	16	4	2
UK	**6**	8	7	25	25	1	6	4	9	24	6
Australia	**7**	3	2	13	15	2	20	16	24	10	16
Finland	**8**	20	10	9	9	15	20	8	5	8	3
Iceland	**9**	18	14	1	5	15	15	13	27	3	10
Sweden	**10**	22	6	5	14	15	11	15	2	16	17
Ireland	**11**	4	31	28	22	6	3	1	11	27	7
Canada	**12**	2	32	33	20	9	2	2	23	25	8
Germany	**13**	29	3	3	27	9	26	26	8	5	12
Estonia	**14**	22	12	19	6	15	20	12	3	17	30
Japan	**15**	31	23	10	24	9	8	34	14	20	1
Netherlands	**16**	5	26	24	17	26	30	11	7	18	4
Switzerland	**17**	27	17	4	7	9	34	6	19	14	28
Austria	**18**	32	25	11	12	9	26	24	10	6	13
Portugal	**19**	9	20	14	10	31	15	25	15	15	19
Slovenia	**20**	13	18	12	28	31	7	19	25	22	26
Chile	**21**	7	29	16	20	21	11	14	21	28	33
Israel	**22**	11	33	29	32	6	3	27	6	32	23
Belgium	**23**	17	28	27	34	26	8	23	17	12	5
France	**24**	15	24	15	30	21	24	17	20	7	27
Poland	**25**	30	22	32	19	2	15	29	26	23	24
Slovakia	**26**	28	16	22	4	15	30	28	34	29	25
Spain	**27**	33	27	21	23	21	26	21	18	26	18
Mexico	**28**	16	13	31	31	15	20	30	30	30	20
Hungary	**29**	21	15	30	16	21	32	32	32	11	31
Luxemburg	**30**	26	11	23	29	34	32	5	22	1	29
Italy	**31**	24	30	26	11	31	15	33	29	34	22
Turkey	**32**	25	34	18	18	29	11	22	33	21	34
Greece	**33**	12	19	20	33	29	24	18	28	33	32
Czech Republic	**34**	34	21	34	13	21	26	31	31	31	21

Source: World Bank (2013), Doing Business 2014: Understanding Regulations for Small and Medium-Size Enterprises, compiled by DIR.
Note1: Rankings listed in order from best ranking on down. Figures were recalculated after 34 OECD member countries were removed from the total 189 countries surveyed. Consumer price index figures do not include foods or energy.
Note 2: Rankings were based on the following.
Starting a Business: Number of processes, number of days, expense (percentage of income per employee), minimum capital (percentage of income per employee)
Dealing with Construction Permits: Number of processes, number of days, expense (percentage of income per employee)
Getting Electricity: Number of processes, number of days, expense (percentage of income per employee)
Registering Property: Number of processes, number of days, expense (percentage of asset value)
Getting Credit: Strength of legal rights index, credit information index, public credit registry coverage (percentage of adults), strength of private credit bureau coverage (percentage of adults)
Protecting Investors: Disclosure index, director responsibility index, ease of stockholder litigation index, strength of investor protection index.
Paying Taxes: Number of payments per year, time (amount of time per year), comprehensive tax rate (percentage of profit)
Trading Across Borders: Amount of paperwork required to export, number of days required to export, expenses required to export (US dollars per container), amount of paperwork required to import, number of days required to import, expenses required to import (US dollars per container).
Enforcing Contracts: Number of processes, number of days, expense (percentage of cost of filing a claim)
Resolving Insolvency: Time (per year), expense (percentage of bankrupt estate), collection rate (cents on the US dollar)

The government's growth strategies aim to increase Japan's World Bank ranking to at least third place by 2020. However, a considerable degree of systemic reform, including the items just mentioned, will be necessary to become a world-leading business environment in just a few years' time. Taking the example of paying taxes, this will require not only reducing the effective corporation tax rate but the application of information and communication technology as well as systemic reform that includes the simplification of administrative procedures for paying taxes and starting a business. There is an urgent need to build a convenient business environment for small and medium-size enterprises and business ventures, the driving force of innovation, to achieve an environment of equal footing (an environment of fair competition) in relation to the global environment.

The current growth strategies of the government specify strengthening competitiveness in business siting through national strategic special zones as well as the promotion of trade policies (such as TPP and RCEP) and inbound direct investments in the strategy of global outreach. National strategic special zones represent systemic reform meant for large metropolitan areas with high population densities. They can be expected to contribute significantly to improving productivity through the benefits of clustering primarily for the service sector. Relevant measures listed in growth strategies include easing the floor area ratio (promotion of appropriate office rental rates and the effective use of urban spaces) and the development of a system for accepting highly skilled foreign personnel that will encourage the diversification of human resources (such as allowing foreign doctors and nurses to work and provide treatment). TPP seeks to harmonize trade rules and to bring the transaction rules of domestic markets in closer alignment with international rules so as to lessen the closed and particular nature of domestic markets and to reduce the various costs of economic transactions. Should these measures function effectively, they can be expected to increase competitive pressure on domestic companies and promote innovation. Moreover, the reform of the electric power system being instituted in the 2010s aims to ease vertical integration by liberalizing entry into the retail electricity market and by separating power generation from transmission. Such systemic reform should also contribute to growth since it will ease by some degree the regulation of network industries (Chart 2.2.2).

On the other hand, barriers to entry exist in such areas as healthcare, nursing care, and nursery schools in the service sector. It will be important to examine the nature of optimal regulations that will contribute to growth in these areas while carefully monitoring outcomes. Moreover, multifaceted tax reform, such as reducing the effective corporation tax rate and simplifying procedures for paying taxes as well as the simplification of administrative procedures for starting businesses and the easing of restrictions on foreign investors' purchases of domestic stocks are the sorts of systemic reforms that are needed to encourage inbound direct investments and to strengthen competitiveness in the siting of businesses.

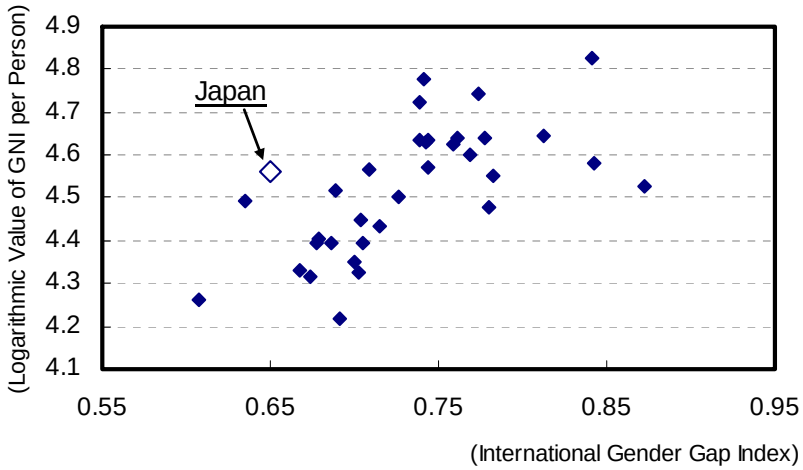
Utilization of diverse human resources

From the perspective of innovation, an environment that will avail of diverse human resources is also needed. Japan's existing employment system is one that is centered on regular employment where employment is guaranteed in exchange for no limitations regarding the hours employees work, on where they work, or on the work they perform. The long working hours of this system of employment has been particularly difficult for women. However, in a hyper-aged society with a declining birth rate, women are not only an important part of the workforce, but they are a valuable source of new ideas for the market. Also, since foreign employees with sophisticated skills bring new perspectives to Japan, their active utilization is desired. To avail of diverse human resources led by women, there will be a need to realize a way of working that reconciles work with diverse lifestyles.

To analyze the diversity of human resources, we selected the participation of women as one measure and used the Global Gender Gap Index of the Global Gender Gap Report published by the World Economic Forum to examine the relationship between the numerical representation of the gender gap

and per capita income for 34 OECD nations. We learned that nations where women have many opportunities for participation tend to be those with high income levels (Chart 2.2.5). Japan's ranking in this index was 32th among OECD nations in 2013 and was placed in the lowest group with Chile (31st), South Korea (33rd), and Turkey (34th).

The Gender Gap and Income per Person (OECD 34 Member Countries) Chart 2.2.5



Source: World Economic Forum, "The Global Gender Gap Report 2013", compiled by DIR.
Note: A higher score in the Global Gender Gap Index means a smaller gender gap.
Index figures are for 2013. Figures for GNI per person are from 2012 (PPP basis).

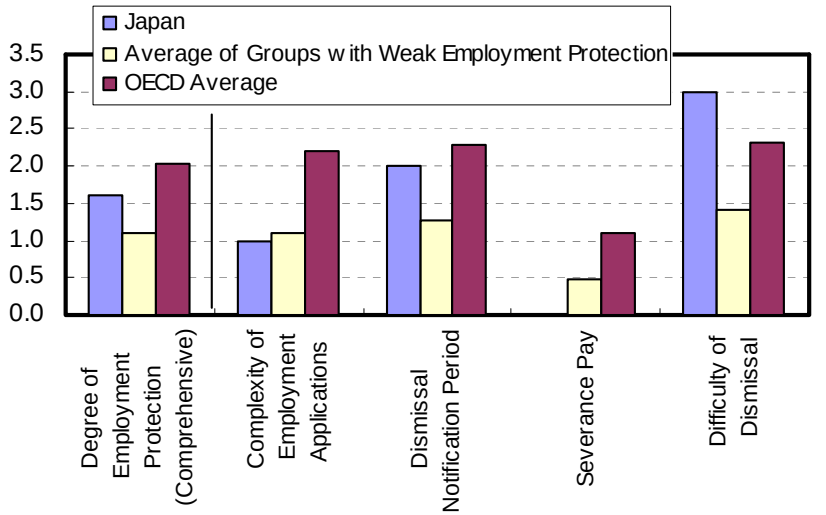
In the interim report of the employment and human resources subcommittee of the Industrial Competitiveness Council released in December 2013, employment system reforms were specified based on a similar understanding of the issues as discussed above. Specifically, in relation to full-time workers in Japan continuing to work longer hours per day on weekdays than their counterparts in other nations, the interim report proposes the adoption of an upper limit on working hours as is widely seen in advanced nations as well as shifting overtime compensation from extra pay to compensatory time off. The report also proposes the establishment of one day off per week as absolutely necessary rest time to maintain health. Other policies that may be effective in eliminating the causes of long working hours are the establishment of flexible working hours and ways of working based on employment agreements rather than uniform legal obligations (for example, expanding the applicability of discretionary labor where the wages received are not tied to the hours worked or making the submission of employment agreements to Labor Standards Inspection Offices mandatory to eliminate their discretionary application by employers) and the contractual clarification of job positions through the adoption of job-defined regular employment where the jobs assigned are limited. Such changes can be expected to promote the consideration of health management and to contribute to the improvement of labor productivity in Japan, which is low among advanced nations. In the revision of growth strategies scheduled for mid-2014, it appears that the next five years will be designated a period for focused reform and that the new growth strategies will aim for the realization of a world-leading employment environment.

As noted in OECD [2013][2], to respond to major changes in the economic environment, advanced nations are easing the protection of regular employment in their employment systems and are proceeding with reforms to eliminate the differences existing between regular and non-regular employment. If Japan is to secure global human resources and promote inbound direct investment, it will need to be aware of whether its employment environment is on an equal footing with other nations and to respond this global trend for reform.

[2] OECD[2013], "Protecting jobs, enhancing flexibility: A new look at employment protection legislation," Chapter 2, OECD Employment Outlook 2013.

Given the above, how strong is Japan's protection of regular employment? Chart 2.2.6 presents a numeric representation of the degree to which regular employment is protected in Japan using the Indicators of Employment Protection published by the OECD. Japan's situation is then compared to the average for five nations with lax protection (group average of nations where employment protection is weak) and the OECD average. The chart indicates that, while employment protection in Japan is stricter than the average for the weak group, it is more lax than the OECD average. This is thought to be explained by the small size of severance payments and by dismissal procedures not being all that cumbersome in Japan (notification procedures in advance of dismissal and length of notice period). On the other hand, in regard to the difficulty of dismissal, the figure for Japan is far higher than the average for the weak protection group and the OECD average. It is believed that the widely held impression that the protection of regular employment is strong in Japan is derived from this situation.

Degree of Employment Protection in Japanese Regular Employment (2013) **Chart 2.2.6**



Source: OECD Indicators of Employment Protection, compiled by DIR.
Note 1: Higher numbers mean better employment protections.
Note 2: The average of groups with weak employment protection is the average of five countries - The US, Canada, UK, New Zealand, and Hungary.
Note 3: The comprehensive index for regular employment is made up of the four indices on the right side of the chart. (Weight is placed on the following ratios moving from left to right - 7:3:4:7.
Note 4: Difficulty of dismissal is determined by the following factors. The definition of unfair dismissal, trial period in which employment protections are not applied, Compensation for unfair dismissal, possibility of returning to work after unfair dismissal, period in which it is possible to file a motion of appeal of unfair dismissal.

The government has established the objective of realizing a world-leading employment environment in its growth strategies. If this to be achieved, it will be necessary to revise the lengthening period for appealing unfair dismissals and to extend currently short trial employment periods (periods when employment protection does not apply) so as to reduce the employment adjustment costs of companies, which are factors making dismissals difficult in Japan. On the other hand, from the perspective of worker protection, there will be a need to examine the possibility of increasing severance payments to raise the amount of monetary compensation workers receive when they are dismissed. Moreover, as is being discussed by the Council for Regulatory Reform, similar examination should be made of the creation of clear rules for offering ample monetary compensation as an alternative to reinstatement when courts decide that dismissals were unfair (adoption of a monetary solution to court rulings that dismissals were invalid). Doing so will be important for both labor and management in terms of lessening uncertainties regarding employment adjustments. In particular, with respect to the latter, this can become a policy that protects the workers of small- and medium-sized enterprises whose severance payments tend to be small on dismissal. What deserves attention in this context is the way employment

systems and practices are strongly influenced by the surrounding social environment and by the history and culture of a nation from which it is formed. For this reason, the review of employment systems and practices will need to be performed together with a similar review of the surrounding environment, such as social systems that assume the presence of full-time housewives (the spousal income deduction and PTA participation in school events), regarding which one possible response would be to liberalize the market entry of private nursery schools so as to eliminate waiting lists. By doing so, the reform of the employment system, based on flexible and highly transparent rules, will function effectively while taking advantage of the strengths of Japan's employment system and practices, while respecting the diversity of individuals and companies, and while promoting the smooth transfer of labor to growth industries at the same time.

Evaluation of the growth strategies of the Abe administration

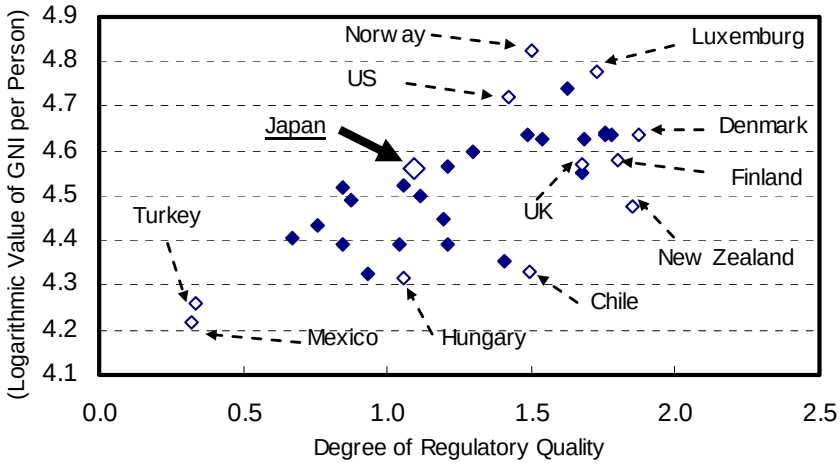
Should we evaluate the current growth strategies of the Abe administration based on the above perspective, we can say they are pointing in the right direction, but they need to do more in the area of regulatory reform and still appear insufficient. They would deserve something like a B- if given a college grade. Specifically, the promotion of trade policies, inbound direct investments, and regulatory reform through national strategic special zones centering on metropolitan areas will have a positive impact on the economy's growth rate by increasing competitive pressure in the domestic market. Also, the active use of the diverse labor power of women and other workers and the priority given to a labor transfer support subsidy to promote the transfer of labor can be commended for encouraging innovation and for enabling the efficient allocation of human resources. Further reforms, however, should be made. Such reforms should concern not only the reduction of the effective corporation tax rate but the simplification of tax and administrative procedures such as for paying taxes, regulations on the entry of domestic and foreign companies in the service sector, and the establishment of clear rules on hiring and dismissal.

To further improve the assessment of growth strategies, it will be important to realize fair competition by promoting the entry and exit of companies. Just as important will be to create an environment that realizes the appropriate allocation of resources (such as the allocation of human resources). Doing so will increase the growth rate of the economy and raise per capita income. To achieve such outcomes, it will be necessary to work toward the creation of an environment where the market functions effectively.

Chart 2.2.7 compares the quality of regulations of 34 OECD nations with their per capita GNIs (log value). The quality of regulations, represented as an index, expresses the ease of doing business, and it is constructed so that it increases when there are few regulations that impede business activities. We can see in the chart that, as the quality of regulations increases, per capita income rises toward the upper right. Such nations as the US and the UK are positioned quite far to the right compared to Japan, indicating that their regulations promote corporate activities.

Japan's income level, however, seems relatively high compared to the quality of its regulations. This may be the outcome of the high level of Japan's capital-labor ratio (capital stock per unit of labor) and the high level of education. There may also be other factors serving to increase the confidence of economic transactions and invigorate corporate activities. For example, the Worldwide Governance Indicators of the World Bank reveal that, compared to other nations whose quality of regulations is similar, Japan ranks high in the control of corruption and in the absence of violence/terrorism. It may be that such quality in the surrounding environment is reducing the uncertainty of business and is energizing corporate activities, resulting in a relatively high level of income compared to the quality of regulations.

Regulatory Quality and Income per Person (OECD 34 Member Countries) Chart 2.2.7



Source: World Bank Worldwide Governance Indicators, compiled by DIR.
Note 1: GNI per person (logarithmic value), 2012, PPP basis.
Note 2: Regulatory quality (ease of doing business factor), world average of 153 countries is 0. Higher numbers mean better quality.
Note 3: Figures expressing regulatory quality (announced annually) are the average of the past 5 years.

Even if this might be the case, it does not become a reason for arguing that Japan need not improve the quality of its regulations. To activate inbound direct investments in the midst of globalization and to encourage the expansion of cross-border transactions through TPP and other trade agreements, it will be desirable to build a trustworthy market system based on the rule of law where the entry and exit of companies is facilitated.

An estimate by the Cabinet Secretariat published in March 2013 shows that, should Japan eliminate all tariffs by participating in TPP, GDP would expand by Y3.2 trillion in about 10 years' time (consumption would increase by Y3.0 trillion, investments by Y0.5 trillion, exports by Y2.6 trillion, and imports would decrease by Y2.9 trillion). In addition, the Pacific Economic Cooperation Council, whose members represent the industries, academia, and governments of 25 nations centering on APEC, has estimated the total economic effect of Japan's participation in TPP, taking into account the elimination of tariffs, reduction of non-tariff barriers, and liberalization of services and investment. In this estimate, Japan's macro income would be augmented by around Y10 trillion. As indicated by Todo [2013][3], however, these estimates do not include the cumulative effect of sustained innovation ensuing from the widening of diversification in the context of globalization. For this reason, it is entirely possible that the actual economic effect would be even greater. Furthermore, should the annual number of foreign visitors to Japan double or triple (to 20 to 30 million people) from their current level through such regulatory reform as the easing of the terms for issuing visas, current annual consumption of around Y1.3 trillion estimated to result from foreign visitors to Japan would rise to at least Y2.5 to 3.7 trillion (an increase of Y1.2 to 2.4 trillion in consumption), and its impact on the economy (increase of GDP) should come to more than Y1.5 to 3 trillion. It goes without saying that such estimates should be interpreted with a certain degree of latitude. Even so, it is reasonable to think that regulatory reform that further utilizes market transactions will have a positive effect on economic growth.

To draw out innovation, regulatory reform that utilizes market discipline will be essential

This approach of relying on the market might be criticized as being problematical in terms of consumer safety or that it would cause the loss of jobs or risk widening the gap between rich and poor.

[3] Todo[2013], "Estimating the TPP's Expected Growth Effects" (http://www.rieti.go.jp/en/special/policy-update/048.html)

Certainly, in the simplified view of regulatory easing, there is risk that the discipline applied to corporate behavior will be weakened and that fraudulent dealings will permeate the market. Hence, regulations that restrict beforehand the activities of companies that are the source of innovation should be held to a minimum, and priority should be shifted to ex post facto regulation where fraudulent dealings are prevented beforehand by having all market participants monitor the behavior of companies. This can be done by increasing the staffing of regulatory authorities (such as the Fair Trade Commission), by strengthening the penalties for fraudulent behavior, and by mandating the thorough disclosure of information. The point here is how discipline should be applied to companies and not the relaxing of discipline itself. In actuality, such agencies as the Fair Trade Commission and Labor Standards Inspection Office called the guardian of the market as well as the Pharmaceuticals and Medical Devices Agency, which examines pharmaceuticals and medical equipment, are seriously short-staffed. Needed resources should be shifted to such areas where only the government is able to respond. The government's growth strategies specify the disclosure of financial statements by social welfare corporations, and advancing such information disclosure is desirable policy.

Naturally, to mitigate the adverse consequences of the market, the safety net will need to be strengthened. In this case as well, it will be desirable if such efforts provide incentives for shifting to new jobs and for increasing competitiveness. Thus, the priority given to a labor transfer support subsidy to promote the transfer of labor, which is included in the growth strategy menu, is an appropriate policy. This also has the objective of preventing the expansion of the gap between rich and poor as much as possible.

The government will draw up new growth strategies in the summer. In doing so, it should be fully aware of the danger manifest in simplified regulatory easing that ignores the development of the surrounding environment. It is our hope that the government will carry out high-quality regulatory reform that engages institutional systems as a whole.

3. Changes in the World Economy and Japan's Economy

3.1 World economic cycle revealed by the capex cycle

In this section, we focus on capex as an important determining factor in considering the economic cycles of the world economy as well as the economies of major nations and regions. We determine the current phase of the economic cycle and examine its future direction. Capex is an expenditure item that fluctuates more widely than consumption expenditures whose fluctuations tend to be smaller due to the ratchet effect. It is an important determining factor with a major impact on the economic cycle. One of the main reasons why capex can fluctuate so widely is the way the optimal level of capital stock changes in accordance with changes in demand outlooks. The adjustment of capital stock to its the optimal level is achieved through changes in capex flows. In other words, when capital stock is in excess compared to its optimal level, capex flows are held below the level of depreciation until the adjustment of capital stock is achieved. This process works in the same manner when conditions are reversed. When capital stock is less than its optimal level, capex flows will be greater than the level of depreciation, and capital stock will be accumulated. In other words, the difference between the current and optimal level of capital stock is adjusted through changes in capex flows. It is this relationship that gives capex flows their tendency to fluctuate widely.

Capital expenditures have the dual effect of increasing supply capacity and increasing demand. When capital stock is being accumulated, investment demand will rise and induce further investments, creating a phenomenon where investments invite additional investments. On the other hand, when capex is contracting, the decline of investment demand will induce the cumulative decrease of capex. For this reason, in the short term, particularly in manufacturing industries with investment good divisions, the fluctuations of capex tend to become magnified based on the acceleration principle. As a result, the impact of capex on the economic cycle also becomes magnified. To conclude, since the optimal level of capital stock changes in line with changes in demand outlooks, the cyclical fluctuations of capex tend to be wide.

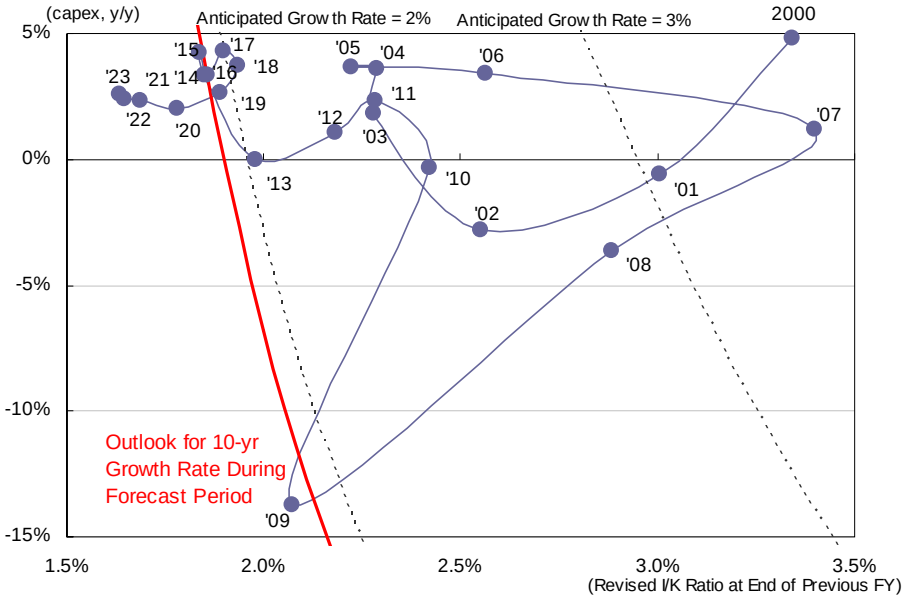
These oscillations of the economic cycle caused by capital expenditures are known as the Juglar cycle. Observation demonstrates that its cyclical period is around 10 years, which coincides with the forecast period of our current medium-term outlook. While there is no clear basis for this figure of 10 years, since there are limits to the speed with which capital stock can be adjusted through depreciation (fixed capital consumption) and net investments (gross fixed investments minus fixed capital consumption), it is theoretically consistent to think that several years will be needed to adjust capital stock to its optimal level.

Building on the above discussion, we now present an overview of the capex cycle for the world economy as a whole as well as for major nations and regions. In this section we perform an analysis mainly based on a modified capital stock cycle to better understand the capex cycle in visual terms. The modified capital stock cycle charts the growth rate of capex and the modified I/K ratio and, in view of their relationship, expresses what levels of these two parameters correspond to an expected growth rate of a given percentage. In addition, by noting the degree of deviation of the growth rate of capex and the modified I/K ratio from the long-term expected growth rate, it is possible to determine the current phase of the economic cycle.

The modified capital stock cycle alone, however, is insufficient to explain the reasons for this deviation or to predict the speed of adjustment to an optimum level. Hence, we will need to adopt a different point of view to consider short-term cyclical factors. Bearing this in mind, in this section we also analyze the determining factors for capex based on a standard investment theory and, given their outlooks, consider how capex may change for the world as a whole and for major nations and regions.

Determining factors for capex include (1) expected returns, (2) interest rate, (3) depreciation rate, (4) corporation tax rate, (5) depreciation deduction of the tax code, (6) capital good prices, (7) uncertainty, and (8) cash flow. In the paragraphs to follow, we proceed with our discussion by focusing especially on (1) expected returns and (2) changes in interest rates.

World Capital Stock Cycle **Chart 3.1.1**



Source: Compiled by DIR using various statistics.

Summary Table **Chart 3.1.2**

		Forecast Period (FY 2014～18)	Forecast Period (FY 2019～23)
Japan			
	Expected Advantage	＋(Weak yen; external environment improves)	－(Strong yen)
	Interest	＋(Low interest)	
	Uncertainty Factor	＋(External environment improves)	
	Cash Flow	＋(Past retained earnings)	－(Capex grows in first half)
	Risk Scenario	Situation of production facilities moving overseas progresses further.	
US			
	Expected Advantage	＋(Recovery from adjustments after US financial crisis)	
	Interest	＋(Low interest)	－(Tight money policy)
	Uncertainty Factor	＋(Sense of uncertainty regarding default issue and monetary policy resolved.)	
	Cash Flow	＋(Past retained earnings)	－(Capex grows in first half)
	Risk Scenario	Global money flow in tumult in reaction to shift toward tight money policy.	
EU			
	Expected Advantage	＋(Financial problems settle down)	
	Interest	＋(Low interest)	－(Tight money policy)
	Uncertainty Factor	＋(Financial problems settle down)	
	Cash Flow	＋(Financial problems settle down)	－(Capex grows in first half)
	Risk Scenario	Europe's structural problems reappear	

Source: DIR.

Generally speaking, such factors restraining capex to date as (1) lower expected returns and (7) higher uncertainty accompanying the financial crisis originating in the US, the European sovereign debt crisis, and the major earthquake in Japan are being resolved through the success of policy responses. As a result, the capex cycle has entered a global phase of capital stock accumulation, and capital expenditures can be expected to recover to a level corresponding to the expected growth rate. In addition, in the first half of our forecast period, (2) interest rates are predicted to remain at a low level, which will be a factor placing upside pressure on capital expenditures (to a level somewhat above the

midpoint of the cycle corresponding to the expected growth rate). However, in the second half of our forecast period, the growth of capex will be restrained from the waning effect of low interest rates and from higher investment costs as the United States and Europe raise interest rates.

Risk factors to bear in mind include (1) disturbances in the global flow of money as US monetary authorities turn to tighten policy, (2) the resurfacing of structural problems for the Euro area, (3) the contraction of domestic capex as more of Japan's production facilities are transferred overseas, and (4) the collapse of an asset bubble in China.

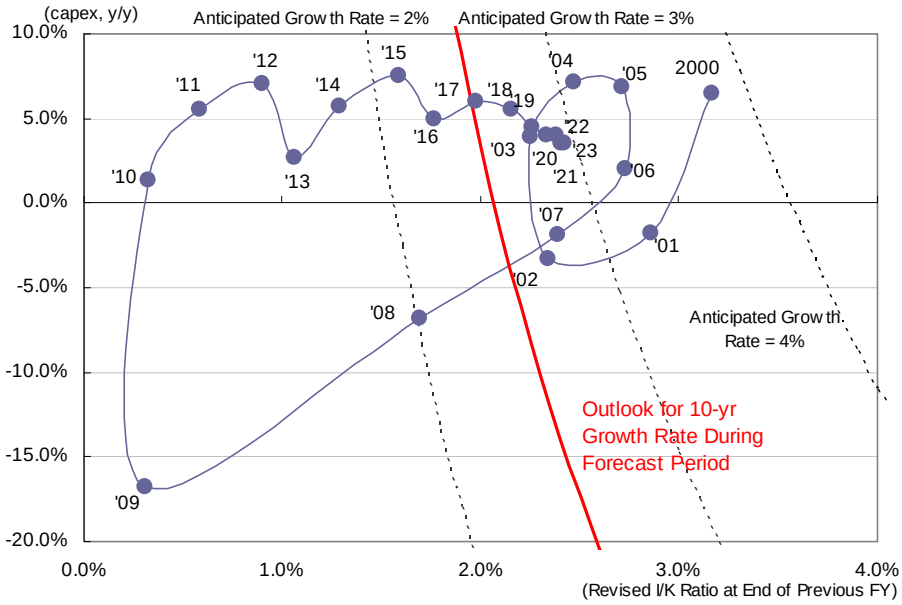
3.1.1 Capex cycle of the United States

The US has led other advanced nations (the eurozone and Japan) in moving past an adjustment phase, and it has entered a phase of capital stock accumulation. Turning back on recent history, with the collapse of a housing bubble and with the so-called Lehman crisis that followed, such adverse factors as (1) lower expected returns, (2) higher capital raising costs, (7) higher uncertainty, and (8) lower cash flow occurred together, and capex underwent a major adjustment between 2007–09. However, with the rapid supply of liquidity by the Federal Reserve, the propagation of the financial crisis was averted. Also, aggressive monetary easing through the reduction of interest rates and quantitative easing supported financial markets, and such factors with an adverse effect on capex as a lower expected growth rate, higher interest rates, and higher uncertainty were tempered. These developments are thought to have moderated the impact of the capital stock adjustment. Moreover, the early start of capital stock adjustments in the US relative to other advanced nations, which led to the early recovery of cash flow, is believed to have contributed to capital stock's relatively early entry into an accumulation phase.

To present our future outlook based on the above, with (1) the recovery of expected returns acting as the primary factor, the general trend going forward will be one where capital stock is accumulated and where net investment continues increase toward a cyclical level corresponding to the medium- and long-term expected growth rate. Since the expected growth rates of the agents of capital expenditures are not easy to observe and since the expectations of economic agents have proven to be adaptive by a considerable degree, it is possible that the expected growth rate itself will fluctuate cyclically. For this reason, as a point of reference for our report, we used the 10-year average growth rate (2.5%) of our forecast for the US economy, which is one of the assumptions employed in this medium-term outlook, to indicate the long-term equilibrium level depicted by the bold red hyperbolic curve in Chart 3.1.3.

Examining the cyclical trend more closely, in view of the surfacing of the debt ceiling issue and a statement by the Fed chairman on the tapering of QE3, (2) higher capital raising costs and (7) higher uncertainty are expected to curb the growth of capex in 2013. However, with the debt ceiling issue being resolved more or less and with the Fed's message penetrating financial markets, uncertainty over monetary policy has abated. As a result, these factors curtailing capex are expected to dissipate in 2014 (they will, however, deserve a certain degree of attention as future risk factors (See also: 3.2 US monetary policies and the global flow of money)). Hence, capex is foreseen to accelerate in 2015. Then, interest rates are predicted to rise from 2015 to 2017, and the growth of capex will slow due to the (2) increase of capital raising costs. Around 2018, as the capital stock cycle reaches a level corresponding to the average growth rate, capital stock will begin to shift from accumulation to adjustment in cyclical terms. Also, since capex has grown at a faster pace than the economy as a whole, we anticipate that, with (8) the decline of cash flow, the growth of capex will be restrained going forward.

US Capital Stock Cycle **Chart 3.1.3**



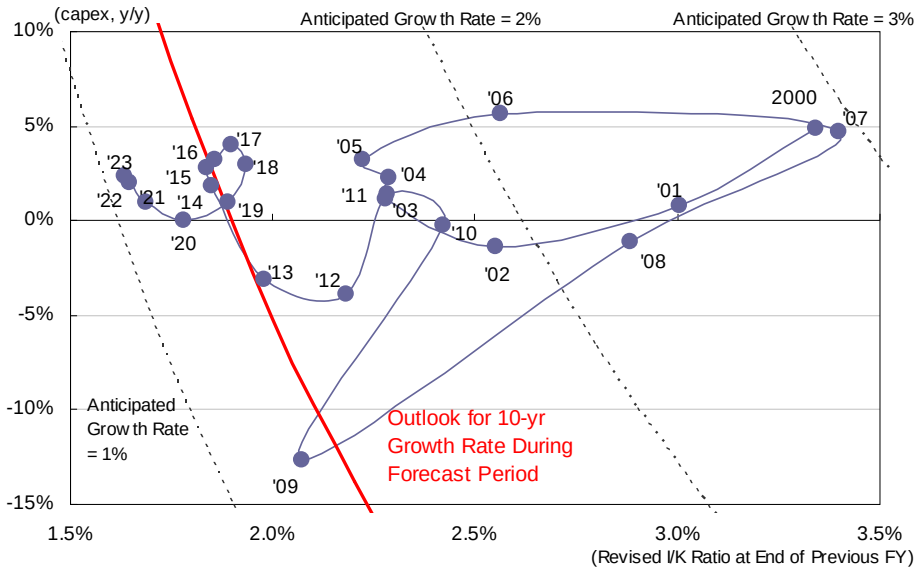
Source: Compiled by DIR using various statistics.

3.1.2 Capex cycle of Europe (eurozone)

The adjustment of capital stock has lagged in Europe (eurozone) compared to the US. This is thought to be the outcome of the slow start of this adjustment relative to the US, the epicenter of the financial crisis, and of the less aggressive support provided through monetary policies (reduction of interest rates and quantitative easing) relative to the United States. Also, the capital stock cycle has worsened again since 2012 (Chart 3.1.4). This is the consequence of (2) higher capital raising costs occasioned by the surfacing of a debt crisis centering on southern European nations in 2009–12 and of (1) lower expected returns ensuing from severe austerity measures taken to restore sound public finances. Moreover, rising doubts about the sustainability of the euro system itself has (7) increased uncertainty. Influenced by these factors, the growth rate of capex is believed to have been negative in 2012–13.

Looking ahead, with the progress being made in rebuilding government finances and with the support on the monetary side in the form of long-term refinancing operations and outright monetary transactions, progress is being achieved in (1) the recovery of expected returns, (2) the normalization (reduction) of capital raising costs, and (7) the decrease of uncertainty. Should these conditions be sustained, it is reasonable to think that capital stock will be accumulated and that net investment will continue to rise toward a cyclical level corresponding to the medium- and long-term expected growth rate (the resurfacing of a debt crisis, however, will deserve a certain degree of attention as a future risk factor). Supported by such factors, capex is foreseen to accelerate to around 2017 when the capital stock cycle reaches a level corresponding to the average expected growth rate. However, since the materialization of a debt crisis as described above has spotlighted the structural problems of the euro system itself, the expected growth rate has shifted sharply downward from its past level. Thus, the acceleration of the economy from the accumulation of capital stock will likely be limited. Also, given that the ECB is expected to begin tightening monetary policy in 2017–18, this in combination with (2) higher capital raising costs will likely mean that capex will be relatively lackluster going forward.

Europe(eurozone) Capital Stock Cycle **Chart 3.1.4**



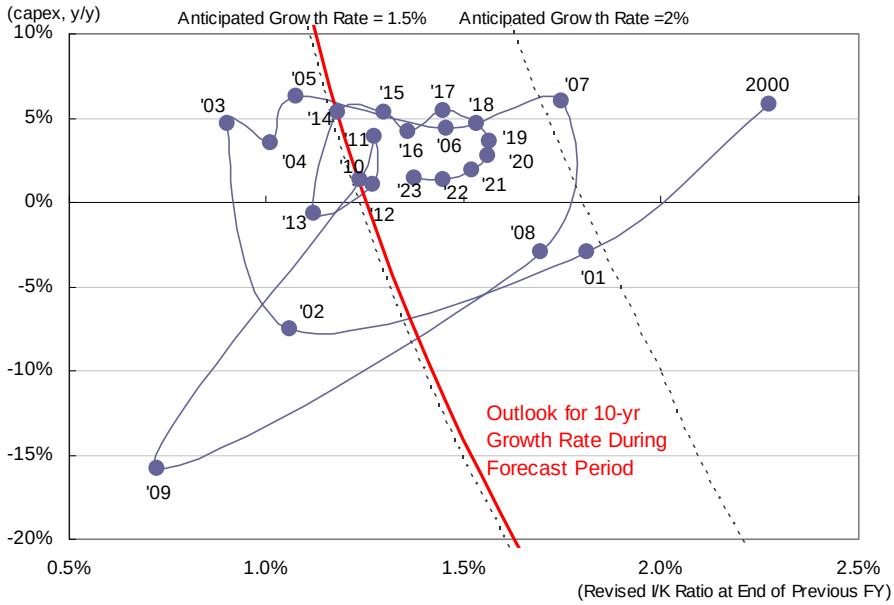
Source: Compiled by DIR using various statistics.

3.1.3 Capex cycle of Japan

The adjustment of capital stock in Japan has also lagged after the United States. Similar to the case for Europe (eurozone), this is in part the outcome of the adjustment starting later than in the US. Other contributing factors are thought to be (1) lower expected returns and (7) higher uncertainty that resulted from a major earthquake in 2011. Owing to these factors, the growth rate of capex will remain in the negative zone in 2013. Looking ahead, these adverse factors will begin to normalize, and (7) uncertainty will decrease. Also, quantitative and qualitative policies for monetary easing will keep (2) interest rates low, and the expansion of the world economy and the widening of the spread in interest rates between Japan and the US will keep the yen weak (See also: 1.3 Outlook for exchange rates over the next 10 years). These developments will enable (1) expected returns to rise, and capital stock is foreseen to begin an accumulation phase toward a level corresponding to the expected growth rate. These factors contributing to higher expected returns will have a strong impact in the first half of our forecast period. We believe that the accumulation of capital stock will continue to a level somewhat above its cyclical position corresponding to the 10-year average expected growth rate (1.5%). These positive factors, however, will recede in the second half of our forecast period. In addition, the growth rate of the economy will slow, and we believe capital stock will enter a phase of cyclical adjustment.

A potential risk factor that should be mentioned is the accumulation of capital stock falling short of forecast assumptions owing to the expanding international presence of Japanese companies and their efforts to rationalize the global siting of operations. Even if a scenario materializes where capital expenditures increase from the growth of foreign demand, there will be room to question how much of such capex will occur in Japan and how much will occur overseas such as through the foreign subsidiaries of Japanese firms (See also: 3.3 Five risks where exports do not grow while the yen depreciates and foreign economies recover). The foreign direct investments of Japanese companies have grown at a faster pace than their domestic capital expenditures, with their direct investments in advanced economies progressing through horizontal specialization and their direct investments in Asian nations advancing through vertical and horizontal specialization. As a result, the domestic capex ratio has declined, and the possibility should be entertained that the expansion of foreign economies and the depreciation of the yen may now have less of an effect in boosting domestic production and domestic capex than before.

Japan Capital Stock Cycle **Chart 3.1.5**



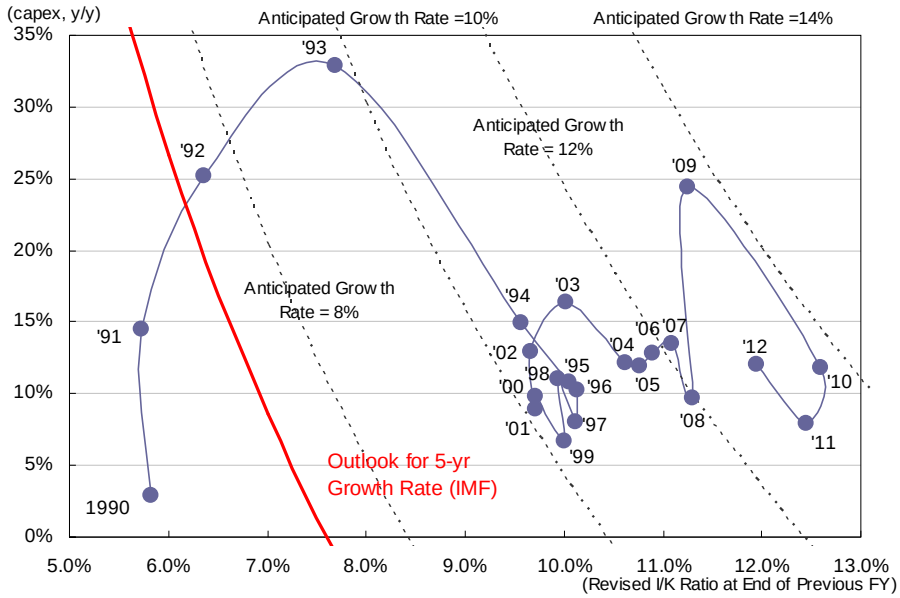
Source: Compiled by DIR using various statistics.

3.1.4 Asia as a risk factor

As noted above, the direction of Asia cannot be ignored as a risk factor for Japan. Chart 3.1.6 portrays the capital stock cycle of China. Reform and opening up policies accelerated in 1992 in China, and a higher expected growth rate was accompanied by an increase in fixed capital formation. Then, with the unfolding of the Asian currency crisis, the Russian financial crisis, the financial crisis in Japan, and the collapse of an IT boom in the US, fixed capital formation entered an adjustment phase in the second half of the 1990s to the start of the 2000s. Fixed capital formation then surged to 2007 as China eased monetary policies through unsterilized foreign exchange intervention and as the world economy expanded. In 2008, fixed capital formation momentarily adjusted from the Lehman crisis, but it then turned to increase sharply in 2009 due to massive fiscal stimulus of 4 trillion yuan and accommodative monetary policies. While fixed capital formation has adjusted moderately in subsequent years, as of 2012, it has accumulated to a level surpassing an expected growth rate of 13% as much as can be verified through the capital stock cycle. This is a level far above the current growth rate of China's economy or forecasts of this growth rate published by forecasting institutions (for example, the five-year average growth rate in IMF forecasts). The likelihood is strong that a major adjustment is in store for China.

However, given the changes being seen in the selection of production sites in Asia as noted above, fixed capital formation in China that clearly appears excessive may be justified in part. A comparison of Chart 3.1.5 and Chart 3.1.6 indicates that, while the trend for Japan's capital stock cycle has shifted to the left, China's capital stock cycle is shifting to the right. Naturally, this is in part the consequence of changes in expected growth rates (lower for Japan and higher for China). This factor alone, however, fails to explain why Japan's capital stock cycle is trending at a level below its expected growth rate or why China's capital stock cycle is trending at a level far above its expected growth rate. It may be that the transfer of production activity to China by Japan and other advanced economies as described above is a contributing factor.

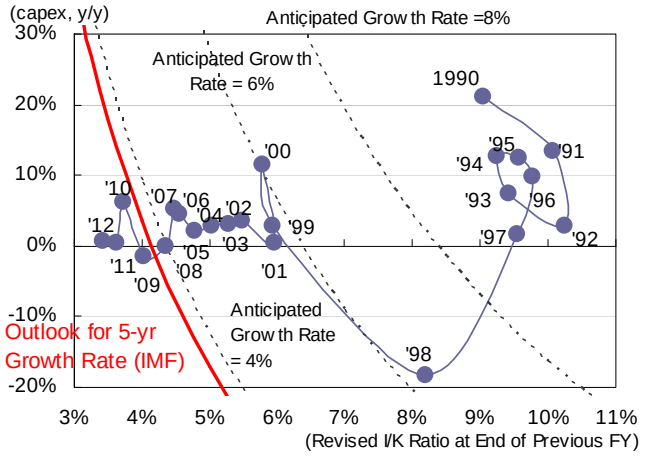
China Capital Stock Cycle **Chart 3.1.6**



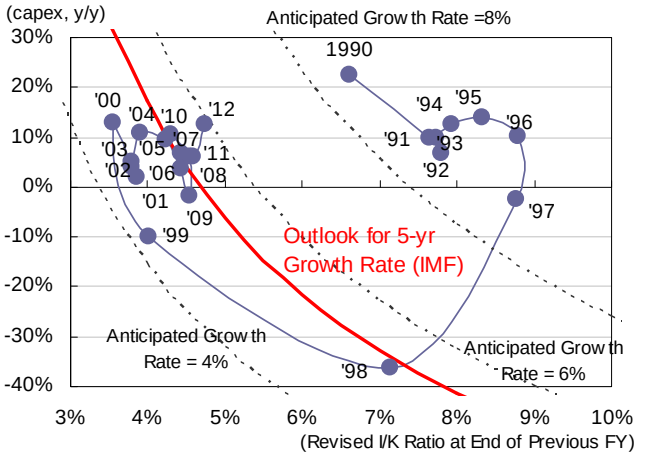
Source: Compiled by DIR using various statistics.

Hence, the possibility is suggested that the difference observed in the tone for capital formation in nations and regions is arising from the international transfer of production activity within the Asian region guided by comparative advantages in production costs and by industrial clustering. The probability is high that, as a comparison of the capital stock cycles of the NIEs and ASEAN suggests, vertical direct investments in Asian nations with low production costs gave way to industrial clustering and an increase in the comparative advantage of local production, which then attracted horizontal direct investments. Should we accept this hypothesis, the possibility should be allowed that the growth rate of domestic investments may turn out to be less in Japan than would be anticipated from higher foreign demand and a weak yen.

NIEs Capital Stock Cycle **Chart 3.1.7**



ASEAN Capital Stock Cycle **Chart 3.1.8**



Source: Compiled by DIR using various statistics.
Note: NIEs: Hong Kong, Republic of Korea, Singapore. ASEAN: Indonesia, Malaysia, Philippine, Thailand.

3.2 US monetary policies and global flow of money

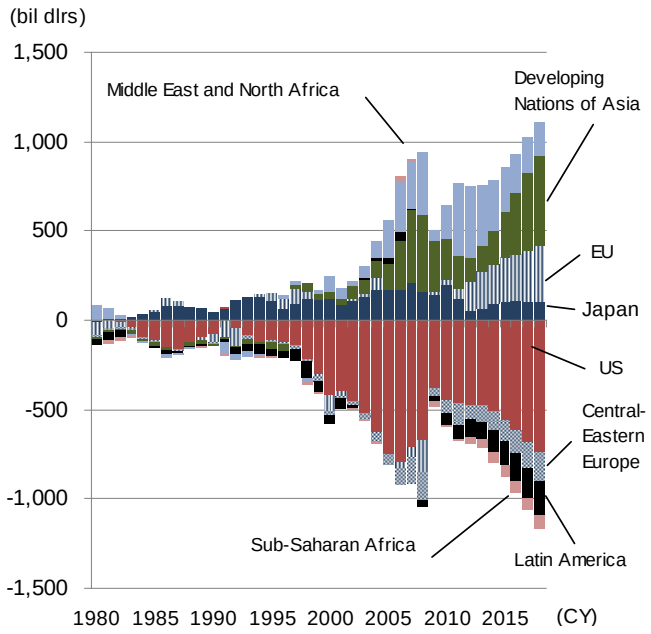
As we have noted above, for advanced economies centering on Japan, the US, and Europe, factors that have placed downward pressure on growth, such as lower expected returns and higher uncertainty accompanying the financial crisis originating in the US, the European sovereign debt crisis, and the

major earthquake in Japan, are being resolved through the success of policy responses. Thus, it is reasonable to think that advanced economies will trend toward a cyclical recovery and expansion.

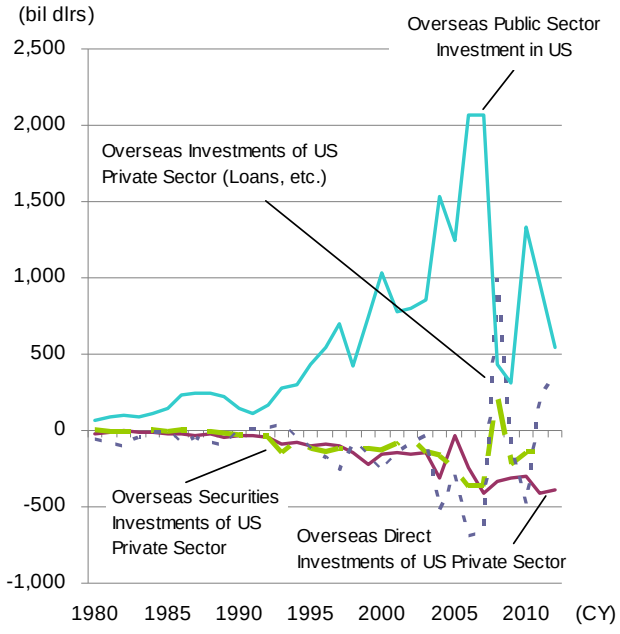
The recovery and expansion of advanced economies will be a factor increasing global demand. Through the growth of both trade volume and value, this recovery and expansion will also be a positive factor for emerging-market economies that satisfy advanced-economy demand. However, once the recoveries of advanced economies move toward a more mature stage, advanced nations will begin to tighten monetary policies of low interest rates and quantitative easing that they had been maintaining. Thus, the likelihood is strong that emerging-market economies whose growth was augmented by the supply of funds from advanced economies will experience an adverse impact from the monetary side. In 2013, when the Fed chairman commented on the tapering of QE3 in May, interest on US Treasuries rose, and foreign exchange rates depreciated and economic outlooks were revised downward centering on emerging-market economies. Then, when the Federal Reserve decided to reduce its asset purchase program based on QE3 in December, significant turbulence did not arise since financial markets had already factored in this prospect. It is highly likely, however, that the world economy, particularly emerging-market economies, will experience turbulence through a similar route when the full-fledged tightening of monetary policy including the policy interest rate commences. In this section, we clarify the adverse effects that monetary tightening in advanced economies (the United States) will have on the world economy and examine its impact.

The US dollar is the world's principal reserve currency, and US monetary policy, which influences the supply of the dollar, also influences the risk tolerance and the expected rate of return of the global flow of funds and financial markets. Hence, it is highly likely that changes in the monetary policy of the US have an asymmetrical effect on the world economy. As indicated in Chart 3.2.1, the US with the key reserve currency gathers investments from the world (primarily the foreign currency reserves of the public sector going to purchase risk-free US Treasuries), and such funds and a part of domestic liquidity is recycled abroad as external investments (risk assets, such as stocks, direct investments, and loans).

Global Imbalance (left) and Global Flow of Money (right) **Chart 3.2.1**



Source: IMF, compiled by DIR.
Note: Figures after 2013 are IMF projections



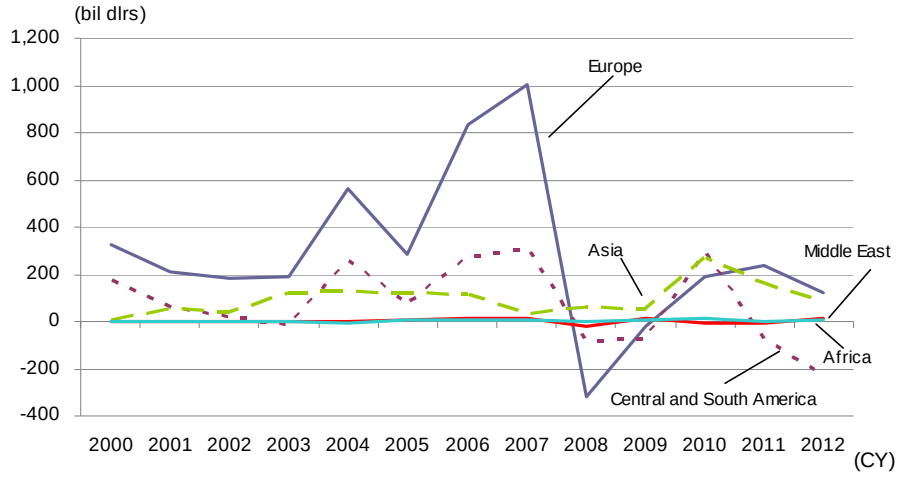
Source: Bureau of Economic Analysis, compiled by DIR.
Note: Net basis

What effect will the tightening of monetary policy in the US have on the global flow of money revolving around the US? Three effects can be mentioned. It will (1) shrink the supply of liquidity (or slow the speed of its growth), (2) raise interest rates (for risk-free assets like US Treasuries) and increase the expected rate of return for other assets through international arbitrage, and (3) increase the difficulty of maintaining exchange rates and monetary policies for nations that peg their currency to the dollar on account of the dollar's higher effective exchange rate.

While the impact of factor (1) is self-explanatory, there is a matter that deserves attention. Changes in the supply of liquidity through monetary policies and the flow of funds through markets and private financial institutions do not necessarily have a one-to-one relationship. During economic downturns, a strong tendency was seen for the demand for funds not to grow and for the money multiplier to decline even when monetary policies were eased. The same tendency, however, was not seen when monetary policy was tightened during economic recoveries and expansions. The demand for funds is expanding as suggested by the global rise of asset prices and the economic recoveries and expansions of the last several years. The contraction (or slower rate of growth) of the supply of liquidity under such circumstances is highly likely to establish a ceiling for the money stock and to increase the selectivity of the flow of funds.

Which nations and regions will be readily influenced by a contraction in the supply of liquidity? Chart 3.2.2 illustrates the flow of capital from the US to different geographic regions. Based on the chart, it appears that changes in the supply of liquidity will have a direct impact centering on Europe, Asia, and Central and South America. It is worth noting, however, that this impact is being measured in absolute terms. Given that Europe has the largest economy in the chart followed by Asia, the impact on Central and South America may be relatively larger in proportional terms.

Capital Inflow from US by Region **Chart 3.2.2**

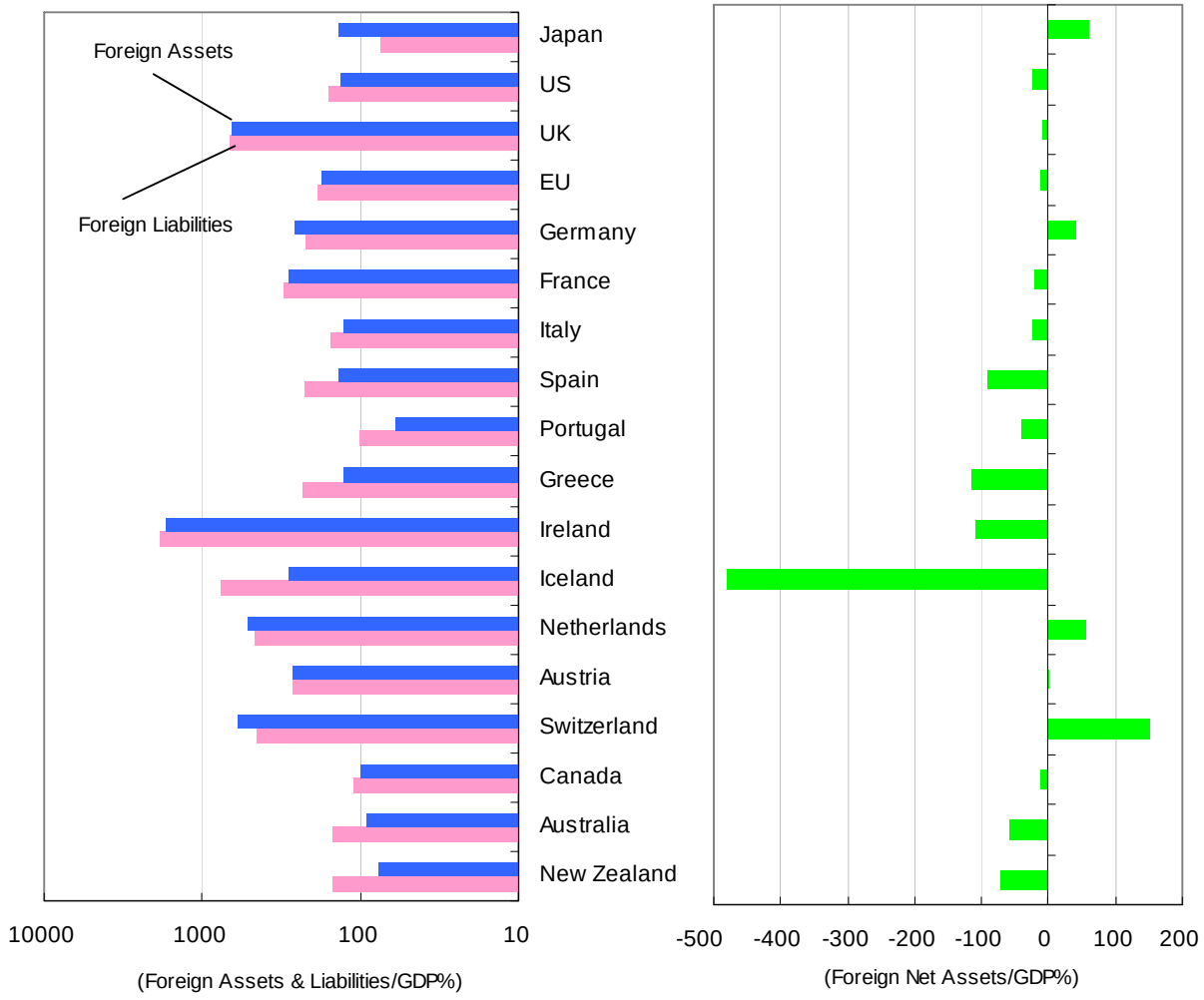


Source: Bureau of Economic Analysis, compiled by DIR.

Factor (2) is a phenomenon arising from international arbitrage. When interest on risk-free assets like US Treasuries increases, the expected rate of return will also increase for all asset classes. Should the expected rate of return be unchanged for other assets, the demand for US Treasuries can be expected to rise and the demand for other assets to fall. This change in relative demand will then move toward equilibrium through the convergence of the expected rate of return. Keeping this market mechanism in mind, it is reasonable to think that interest rates will rise in the bond markets of many nations and regions or that refinancing will become difficult. The sensitivity of the expected rate of return to higher US interest rates is thought to depend on how well asset classes substitute for US Treasuries. Based on this perspective, when viewed in national terms, nations likely to be strongly affected by higher interest on US Treasuries will be those with large exposures to international financing.

To measure the exposure to international financing that will influence the impact of higher risk-free interest, Chart 3.2.3 presents the national balance sheets of advanced nations. The left graph shows the ratio of foreign assets to GDP and the ratio of foreign debt to GDP, and the right graph shows the ratio of net foreign assets to GDP. The chart discloses that the so-called GIIPS[4] have relatively sizable net foreign debts. These nations' troubled public finances have continued to draw attention. The basic problem lies with these nations' savings shortages and the way they financed themselves though the flow of foreign funds. In view of this point, as these nations deal with their fiscal crises, there will be a need to carefully monitor not only circumstances within Europe, such as the process of restoring sound public finances or the relief measures of the European Commission, but changes in the rate of return expected by market participants ensuing from international arbitrage as well as attendant changes in fiscal balance outlooks.

Balance Sheets of Advanced Nations **Chart 3.2.3**



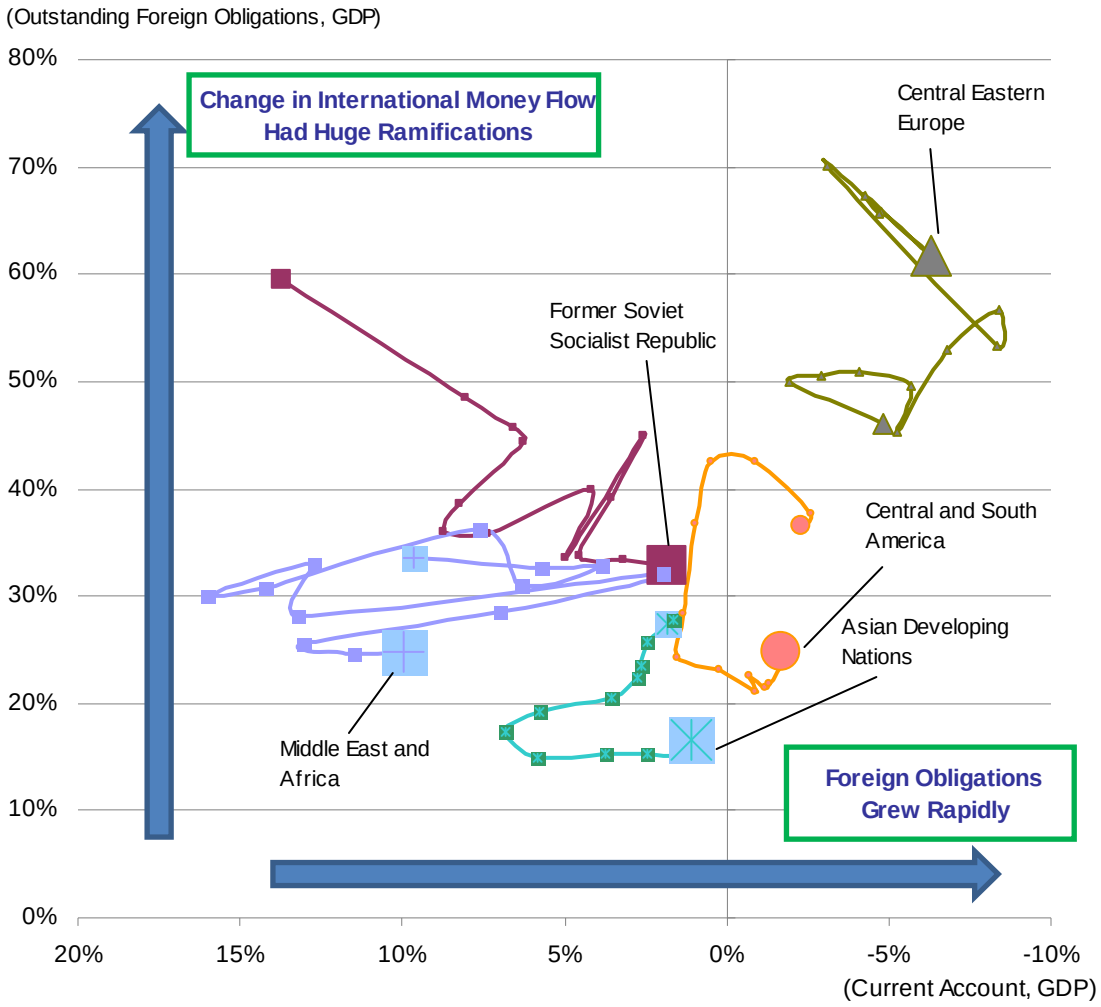
Source: Statistics of listed countries, Haver Analytics, compiled by DIR.
Note: End 2012, left side chart horizontal axis (Foreign Assets & Liabilities/GDP%) is a logarithmic scale.

To measure the exposure to international financing not only for advanced economies but for emerging-market economies as well, Chart 3.2.4 presents the degree of dependence on foreign capital of emerging-market regions' debt stock and debt flows since 2000. In the chart, the dependence of debt stock (ratio of foreign debt to GDP) on foreign capital is plotted along the vertical axis and the dependence of debt flows (ratio of current account balance to GDP) on foreign capital—that is to say, the growth rate of external debt—is plotted along the horizontal axis. In emerging markets in 2013,

[4] GIIPS: Greece, Italy, Ireland, Portugal, Spain

perhaps because of psychological factors growing out of historical memory, both exchange rates and stocks fell sharply for the nations of Asia and Central and South America that experienced crises in the past. These developments were also likely influenced by factor (1) above, concerns over the size of the direct impact proceeding from the contraction of liquidity supplied by the United States. However, the balance sheets of the nations that experienced crises in the past, such as Asian and Central and South American nations, have improved for the most part in the 2000s in regional terms. From the perspective of factor (2), the impact of the global rise of the expected rate of return, there will be a need to pay attention to the balance sheet of Central and Eastern Europe as a region, which has worsened from the inflow of funds made possible by the expansion of the eurozone economy.

Degree of Dependence on Foreign Capital of Emerging-market regions' debt stock and debt flows
Chart 3.2.4

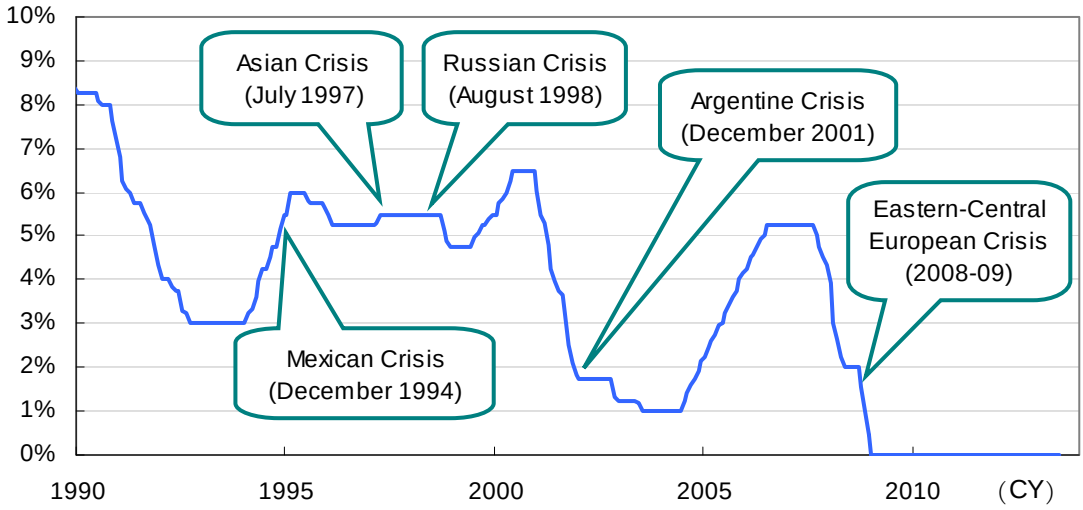


Source: IMF World Economic Outlook, compiled by DIR.
Note 1: Figures for outstanding foreign obligations are on a gross basis. The horizontal axis (current account, GDP) uses an inverse scale.
Note 2: In the 2000-12 range, large squares represent 2012, and middle-sized squares represent the year 2000.

Regarding the effect of factor (3), this would mainly concern nations that have fixed exchange rate regimes. A higher value for the dollar would directly increase the value of the domestic currency and would worsen the competitive terms for exports. More importantly, these nations would be affected by the increase of US interest rates and, to defend their currency's exchange rate, they would either need to raise domestic interest rates or consume foreign currency reserves (and absorb the domestic currency at the same time) to intervene in foreign exchange markets, or they would be pressed to do

both. As a result, the adverse impact of factors (1) and (2) would fall more heavily on these nations. Moreover, if they fail in their efforts to defend their currencies, this would erase existing premises for the inflow of funds, which could turn into a currency crisis and financial crisis. Should these factors come into play at the same time as the Federal Reserve tightens monetary policy, the historical record offers cases where crises have ensued, such as the Mexican financial crisis of 1994, the Asian financial crisis of 1997, and the Russian financial crisis of 1998.

FF Target **Chart 3.2.5**

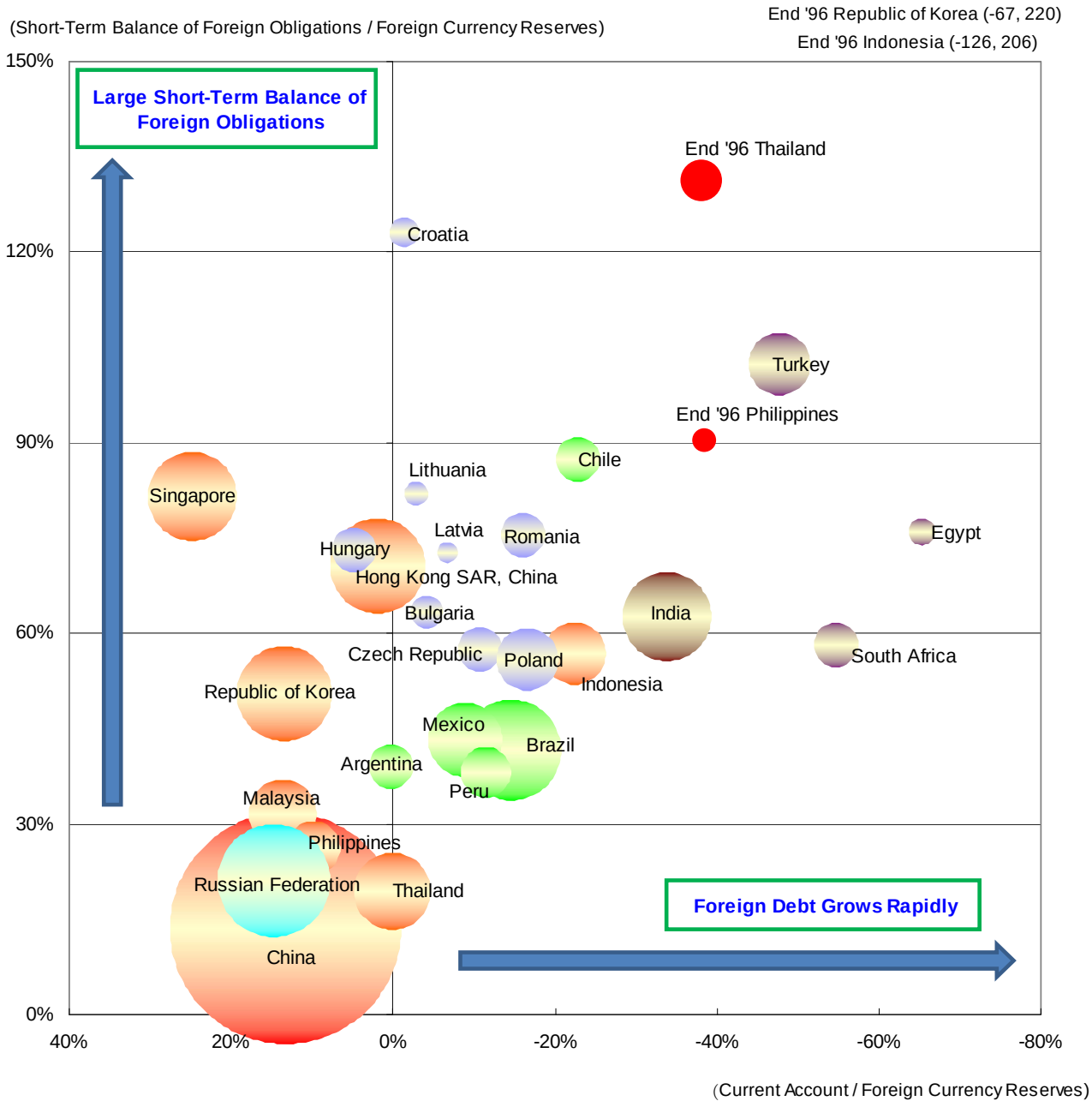


Source: Federal Reserve Board, compiled by DIR.

In essence, fixed exchange rates do not necessarily have a decisive impact on policies to accept the inflow of foreign funds or on the instability of the economy (while it will increase such instability). Even if a fixed exchange rate regime is adopted, if a nation has sufficient foreign currency reserves to withstand the outflow of external debt and if it maintains healthy current account balances, such a nation will be able to withstand the outflow of foreign capital (while this will translate into monetary tightening in the case of unsterilized foreign exchange intervention). In contrast, even if a floating exchange rate regime is adopted, should the exchange rate depreciate sharply with the sudden outflow of capital, it may become necessary to intervene in foreign exchange markets and to tighten monetary policy in order to stabilize the financial sector and to prevent higher import prices being accompanied by inflation. Thus, for such nations, the level of foreign currency reserves will have significant meaning.

In view of this point, Chart 3.2.6 portrays the ratio of short-term external debt to foreign currency reserves (vertical axis) and the ratio of the current account balance to foreign currency reserves (horizontal axis) for emerging-market nations and regions. External debt in the chart includes both the public sector and private sector, which is compared not just to foreign currency reserves but to the external current assets of the nation of whole. Given that foreign currency reserves have a decisive meaning in measuring the capacity of policy responses and given the considerable attention they receive from markets as a readily understood figure, however, there is significance in ascertaining the levels of these indicators. Chart 3.2.6 shows that, compared to Asian nations in 1997 when a currency crisis occurred, emerging-market nations and regions are generally maintaining healthy conditions. At the same time, however, concern is raised by the sizable levels of some nations' short-term external debt and current account deficits relative to their foreign currency reserves.

Short-Term Foreign Obligations **Chart 3.2.6**



Source: World Bank, Statistics from countries listed, compiled by DIR.
Note: The sizes of the circles in the chart are proportional to the scale of foreign currency reserves. (Data as of end 2012.)
The horizontal axis （Current Account / Foreign Currency Reserves) uses an inverse scale.

3.3 Five risks where exports would not grow even with a weaker yen and the recovery of foreign economies

The depreciation of the yen and the expansion of foreign economies can be expected to provide a powerful tailwind to Japan's economy. This is because the depreciation of the yen and the expansion of foreign economies lead to the growth of export volume. This in turn augments domestic production and invigorates employment and capex. These developments then give rise to expectations for the broad-based expansion of economic activity through a virtuous cycle involving domestic demand. Such ripple effects can be meaningfully verified in the historical record for Japan's economy, and they are incorporated in the macroeconomic forecasting model used in this medium-term outlook. If we turn our attention to 2013, however, despite the sharp depreciation of the yen that occurred together

with the recovery and expansion of foreign economies, exports, production, and capex grew weakly. In this section, we indicate the possibility that structural changes stand behind this paradox, and perform risk simulations to present alternative scenarios.

Regarding the question of why export volume did not grow in tandem with the depreciation of the yen and the recovery of foreign economies, five reasons can be cited: (1) low capacity utilization rates in export market economies, (2) the pricing-to-market behavior of Japanese companies, (3) the prioritizing of markups (gross profit margin) by Japanese firms, (4) uncertainties about the direction of foreign exchange rates, and (5) the decrease of exports accompanying the offshoring of production. In the short term, each of these factors would slow the growth of export volume and would weigh on Japan's economy as a whole through the curtailment of domestic production, capex, and employment.

Factors (1) and (4) will delay the timing for the increase of export volume. Their effect, however, will eventually materialize as long as the depreciation of the yen and the expansion of foreign economies continue. Conditions for this materialization will be the increase of the capacity utilization rate in export market economies and the formation of expectations for a weaker yen. Factors (2) and (3) will serve to reduce export volume's sensitivity to forex changes and can be welcomed for strengthening the capacity to withstand periods of yen appreciation. In addition, factor (3) will improve corporate earnings through the improvement of the markup, even when export volume is struggling. Moreover, should the improvement of corporate earnings lead to higher bonuses or generate a wealth effect through higher stock prices, this will contribute to higher domestic consumption. Thus, the effect of the depreciation of the yen in improving Japan's economy will materialize through a different route than before. What deserves attention is factor (5). This represents structural change as a trend, and it falls short in explaining the current lackluster condition of exports. However, its potential adverse effect on Japan's economy going forward is more serious than scenarios based on other hypotheses. Developing responses to the long-term hollowing out of domestic industry will prove indispensable.

3.3.1 Five risks where exports do not grow while the yen depreciates and foreign economies recover

Risk that exports do not grow even when foreign economies recover

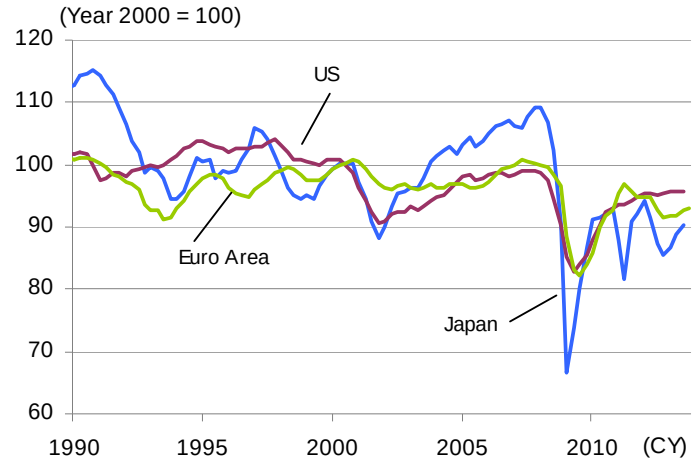
(1) Low capacity utilization rates in export market economies

First, we consider the situation where the expansion of foreign economies does not lead to higher export volume. One hypothesis to consider is a situation where, given the low capacity utilization rates of export market economies, increases in demand can be met by raising the capacity utilization rate (there is no need to depend on imports). A low capacity utilization rate also means that the demand for capex will not readily grow, which can be specified as a factor explaining why the growth of foreign economies does not contribute all that much to the export of machinery and other capital goods. While capex has entered a cyclical accumulation phase in global terms (See also: 3.1 World economic cycle revealed by the capex cycle), it has just made the transition from negative to positive growth, and the current level of demand cannot be called strong.

Examining the capacity utilization rates of Japan, the US, and Europe based on the above discussion, while such utilization rates are generally recovering after falling sharply following the Lehman crisis, they cannot be called high compared to their former levels (Chart 3.3.1). Also, in the Asian region, Japan's major export market besides the US and Europe, it is highly probable that capacity utilization rates have declined due to the huge accumulation of capital stock in past years centering on China (See also: 3.1 World economic cycle revealed by the capex cycle). Given these factors, for export volume to increase in earnest from the expansion of foreign economies, demand will need to grow until the capacity utilization rates of export market economies return to their former levels. Thus, it is quite possible that the expansion of foreign economies is now associated with a longer time lag before export volume is affected.

Excessive pessimism, however, is unwarranted in the medium term. This factor is one that merely delays the timing for the growth of export volume. This effect will eventually materialize as long as the depreciation of the yen and the expansion of foreign economies continue. The condition for materialization is the increase of the capacity utilization rate in export market economies.

Capacity Utilization Rates by Area **Chart 3.3.1**



Source: Ministry of Economy, Trade and Industry, European Commission, and FRB, compiled by DIR.

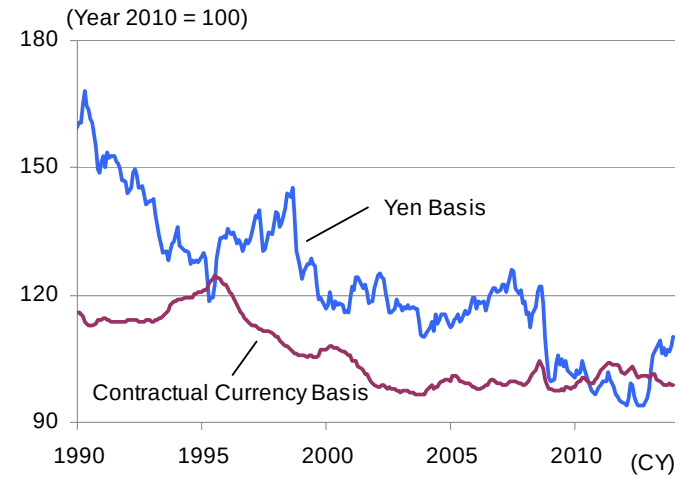
Risk that exports do not grow even when the yen depreciates

Next, we examine the effect of the depreciation of the yen. The growth of export volume when the yen depreciated was a phenomenon that was seen in the past. Two premises must be satisfied for this phenomenon to materialize. First, prices denominated in the local currency must decline with the depreciation of the yen. Second, sales volume needs to grow with the decline of selling prices denominated in the local currency. Due to the three factors discussed below, however, these premises may be going unfulfilled.

(2) Pricing-to-market behavior (setting prices in the local currency) and lower sensitivity to forex changes through hedging

As our first hypothesis, it is possible that Japanese exporters are not setting prices in yen (compared to the past). In other words, contracted prices for export goods are being set in the local currency, and export prices are not changing when exchange rates shift. Hence, export volume will also not change. Adjusting selling prices one by one in accordance with changes in exchange rates will increase menu costs, and it is difficult to develop sales volume forecasts in the context of such corporate behavior. As foreign markets grow in importance for Japanese companies, the need to respond to these issues is also rising in importance, and companies are likely finding it increasingly rational to set prices in local currencies based on demand forecasts for local markets.

Export Price Index **Chart 3.3.2**



Source: Bank of Japan, compiled by DIR.

Naturally, when exporting companies set export prices in local currencies, given that a portion of production and selling costs accrue on a yen basis, markups will change in accordance with shifts in exchange rates. In other words, companies will assume the risk that profit margins will change in line with changes in exchange rates. In the yen's sharp appreciation to 2012, companies setting export prices in local currencies are believed to have operated with greatly diminished markups. To avoid such dramatic declines in markups when the yen appreciates, it will become rational for companies to increase the number of items in production and selling costs priced in the local currency of the export market economy so as to reduce the effect of shifts in exchange rates and to hedge risk exposure through foreign exchange contracts. Such changes in corporate behavior were also observed when the yen appreciated sharply after the Plaza Accord, and it is highly probable that the same phenomenon occurred when the yen strengthened to 2012.

If such structural changes are taking place in the behavior of Japan's exporters, export volume will grow less than before when the yen depreciates. Since selling prices are being set in the local currency, such prices will not fall when the yen weakens, and sales volume will not rise. Also, if the markup is changing less from shifts in the exchange rate, the depreciation of the yen will have less of an effect in improving corporate income than it did before. However, since these effects are the consequence of the diminished impact of exchange rate changes, it also means that the appreciation of the yen will have less of an effect in reducing export volume or in worsening the markup.

Based on the above discussion, we assumed as an alternative scenario to our current forecast the case of the sensitivity of export volume to exchange rate changes decreasing by half and performed a risk simulation. Compared to our main scenario, the growth of export volume would be suppressed while the yen depreciates in the first half of our forecast period. On the other hand, the growth rate of export volume would slow moderately while the yen appreciates in the second half of our forecast period.

Risk Simulation **Chart 3.3.3**

	Main scenario			Sensitivity of export volume decreasing			Deviation from main scenario;%,%pt		
	FY2014-23	FY2014-18	FY2019-23	FY2014-23	FY2014-18	FY2019-23	FY2014-23	FY2014-18	FY2019-23
Real GDP (y/y %)	1.5	1.7	1.3	1.5	1.6	1.4	-0.1	-0.2	0.0
Private final consumption	0.7	0.6	0.8	0.7	0.5	0.8	0.0	-0.1	0.0
Private capital investment	3.6	5.0	2.2	3.5	4.5	2.5	-0.1	-0.5	0.3
Private housing investment	-1.8	-2.4	-1.1	-1.9	-2.6	-1.1	-0.1	-0.1	0.0
Public fixed capital formation	0.1	-1.5	1.8	0.2	-1.3	1.7	0.0	0.2	-0.1
Government final consumption	2.0	1.9	2.1	2.0	1.9	2.0	0.0	0.0	-0.1
Export of goods and services	5.3	6.5	4.1	5.0	5.6	4.5	-0.3	-0.9	0.4
Import of goods and services	3.9	3.9	3.9	3.7	3.3	4.2	-0.2	-0.7	0.2
Nominal GDP (y/y %)	2.3	2.6	2.0	2.2	2.3	2.0	-0.1	-0.2	0.0
GDP deflator (y/y %)	0.8	0.8	0.7	0.7	0.8	0.6	-0.1	-0.1	-0.1
Corporate Goods Price Index (y/y %)	1.2	1.4	0.9	1.1	1.3	0.8	-0.1	-0.1	-0.1
Consumer Price Index (y/y %)	1.4	1.6	1.3	1.4	1.5	1.2	-0.1	-0.1	-0.1
O/N call rate (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yield on 10-yr JGBs (%)	1.6	1.3	1.9	1.6	1.3	1.9	0.0	0.0	0.0
Exchange rate (Y/$)	93.9	100.0	87.8	93.7	99.9	87.4	-0.2	0.0	-0.4
Current balance (% of nominal GDP)	2.5	2.6	2.4	2.3	2.4	2.2	-0.2	-0.2	-0.2
Nominal employee compensation (y/y %)	1.6	1.3	2.0	1.5	1.1	1.9	-0.1	-0.1	-0.1
Unemployment rate (%)	3.5	3.6	3.3	3.6	3.7	3.4	0.1	0.1	0.1
Labor's share	65.1	65.6	64.7	65.4	65.9	64.8	0.2	0.3	0.2
Central & local government balance (% of nominal GDP)									
Fiscal balance	-4.6	-5.2	-4.0	-4.8	-5.5	-4.2	-0.3	-0.3	-0.3
Primary balance	-3.2	-3.8	-2.6	-3.4	-4.0	-2.8	-0.2	-0.2	-0.2
Central & local government debt (% of nominal GDP)	240.8	241.8	239.9	244.6	244.2	245.0	3.8	2.4	5.1

Source: Compiled by DIR.
Notes: 1) Period avg., 2) Labor's share: ratio of employee compensation to national income, 3) Fiscal balance: excl. ad-hoc factors.

(3) Declining sensitivity to forex changes from the prioritizing of markups and a lengthening time lag

As our second hypothesis, we posit that Japanese exporters are prioritizing the improvement of markups at the current moment. In simple terms, the gross profit of companies corresponds to the product of the markup and volume. Thus, to maximize profits, either the markup or volume will need to improve. In the context of profit maximizing behavior, our hypothesis assumes that Japanese exporters are giving priority to improving markups.

As noted above, when the yen appreciated sharply to 2012, companies setting export prices in the local currency of export markets were forced to operate with greatly diminished markups. This impact was likely huge for companies lacking the capacity to moderate the effect of exchange rate changes such as through forex hedges. With the depreciation of the yen that began in 2013, these companies are finally able to benefit from an improved markup, and there is little incentive for them to reduce the markup on their own.

Other factors may also be reducing the incentive to lower prices. First, it may be that high value-added goods, one of the strengths of Japanese companies, are not that sensitive to prices. Unless price sensitivity is quite high, the reduction of selling prices would find little support from the perspective of maximizing profit. Second, companies may be downgrading their outlooks for the growth rates of foreign markets. When markets are expanding rapidly, such as for emerging-market economies before the Lehman crisis, companies could justify sacrificing the markup to secure sales volume in the hope of expanding market shares and maximizing future profits. Such behavior cannot be justified given

lower growth expectation of foreign market than before. Third, it is possible that the financial strength of companies has diminished. If financial strength has weakened from the dramatic worsening of the markup, even if the two factors above are absent, companies will maintain markups until cash flow improves so as to secure profits.

Given the above, it is possible that not only has the sensitivity of export volume to exchange rate changes declined but that exchange rate changes impact export volume with a longer time lag.

(4) Lengthening time lag resulting from uncertainties about the direction of exchange rates

As our third hypothesis, it may be that, due to uncertainties about the direction of exchange rates, exchange rate changes are impacting export prices and export volume with a longer time lag. In past periods when the yen depreciated, it was often the case that this depreciation became a trend lasting for quite some time. The expectations of economic agents are adaptive to a considerable degree, and in such cases it was easy to anticipate a continuing trend toward depreciation or that the yen would stabilize at a weak level. The current depreciation of the yen, however, is not the result of a trend, but it has occurred suddenly with the change in political administration (and accompanying expectations for monetary easing) and with the institution of quantitative and qualitative monetary easing. Thus, there are many doubts about whether this depreciation will be sustained as a trend or whether the current exchange rate level will be maintained. Given that companies are accountable for changes to their behavior, it would be difficult to alter such behavior under current circumstances on the assumption that the yen would remain weak going forward. In other words, it would be hard to justify the reduction of selling prices in the hope of higher sales volume or the reduction of forex hedges based on the assumption of a weak yen. Thus, for corporate behavior to change in earnest, it will be necessary for the depreciation of the yen to continue as a trend or for a weaker yen to maintain its current level for a certain period.

Thus, it is possible that exchange rate changes now impact export volume with a longer time lag. In view of this point, we assumed the case where exchange rate changes impact export volume with a lag one year longer than before and performed a risk simulation. A summary of this simulation is presented in Chart 3.3.4. According to this scenario, while the growth of export volume will differ from our main scenario, since it is assumed that the effect of the yen's depreciation will eventually materialize with a longer time lag, the long-term average growth rate does not diverge significantly from our main scenario.

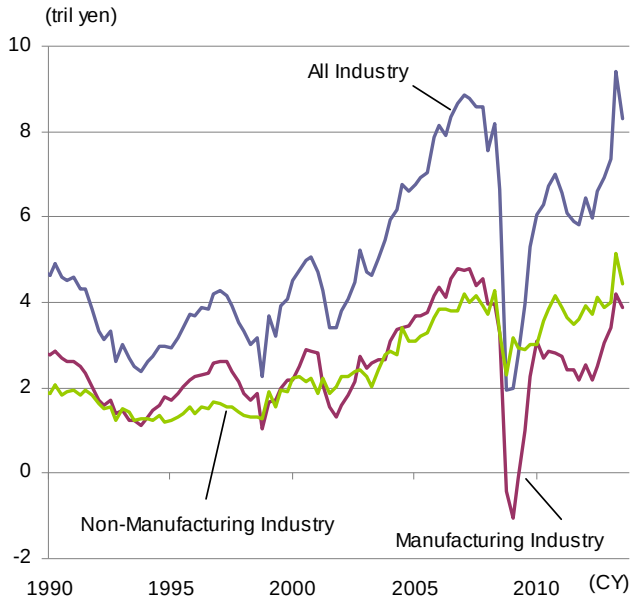
Since export volume will be less responsive in the short term and since the growth of domestic production leading to higher capex and employment will also lag, the start of a virtuous cycle involving domestic demand will also be delayed. However, there is no need to be overly pessimistic about this issue as well. If it is true that export volume is growing sluggishly due to Japanese companies preferring to maintain selling prices and the markup rather than increasing sales volume, it may be that in exchange for the sluggish growth of sales volume, profit margins are benefiting from a weaker yen and are holding to high levels. In actuality, when we turn to the Financial Statement Statistics of Corporations by Industry, we find that corporate income has risen sharply centering on large corporations in the manufacturing sector (Chart 3.3.5). An improved markup's effect in augmenting corporate income will continue as long as the yen remains weak and as long as companies maintain the behavior described above. Should the improvement of corporate income lift household income through wage hikes and should higher stock prices generate a wealth effect, such developments will serve to increase domestic consumption. Taken together, while the effect of a weaker yen in increasing sales volume and thereby boosting domestic production, investment, and employment and expanding domestic demand as it used to do may have diminished, it is possible that the effect of a weaker yen in improving the markup and thereby boosting corporate income, wages, and stock prices and expanding domestic demand has strengthened. In short, the route by which the depreciation of the yen improves the domestic economy has changed.

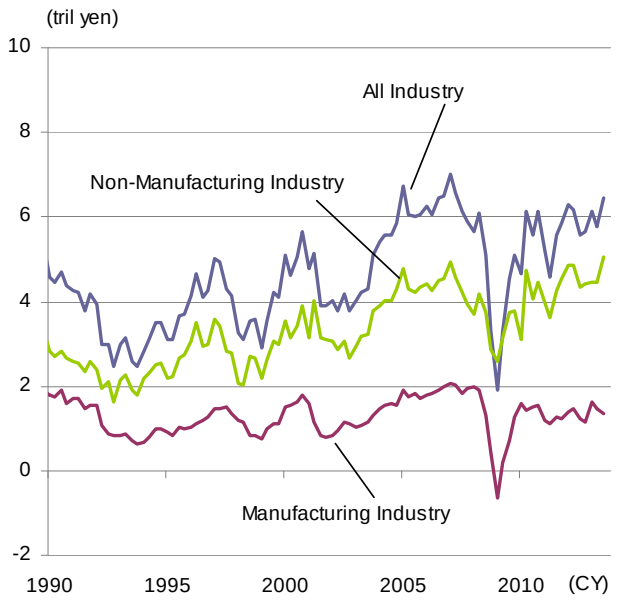
Risk Simulation — Chart 3.3.4

	Main scenario			Impact export volume with a longer time lag			Deviation from main scenario;%,%pt		
	FY2014-23	FY2014-18	FY2019-23	FY2014-23	FY2014-18	FY2019-23	FY2014-23	FY2014-18	FY2019-23
Real GDP (y/y %)	1.5	1.7	1.3	1.6	1.8	1.4	0.1	0.0	0.1
Private final consumption	0.7	0.6	0.8	0.7	0.6	0.9	0.0	0.0	0.1
Private capital investment	3.6	5.0	2.2	3.8	5.2	2.4	0.2	0.2	0.2
Private housing investment	-1.8	-2.4	-1.1	-1.7	-2.4	-1.0	0.1	0.0	0.1
Public fixed capital formation	0.1	-1.5	1.8	0.1	-1.6	1.8	-0.1	-0.1	-0.1
Government final consumption	2.0	1.9	2.1	2.0	1.9	2.1	0.0	0.0	0.0
Export of goods and services	5.3	6.5	4.1	5.6	6.8	4.4	0.3	0.3	0.3
Import of goods and services	3.9	3.9	3.9	4.2	4.1	4.3	0.2	0.2	0.3
Nominal GDP (y/y %)	2.3	2.6	2.0	2.4	2.6	2.2	0.1	0.0	0.2
GDP deflator (y/y %)	0.8	0.8	0.7	0.8	0.8	0.8	0.0	0.0	0.1
Corporate Goods Price Index (y/y %)	1.2	1.4	0.9	1.2	1.4	1.0	0.1	0.0	0.1
Consumer Price Index (y/y %)	1.4	1.6	1.3	1.5	1.6	1.4	0.0	0.0	0.1
O/N call rate (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yield on 10-yr JGBs (%)	1.6	1.3	1.9	1.6	1.3	1.9	0.0	0.0	0.0
Exchange rate (Y/$)	93.9	100.0	87.8	93.9	99.9	87.8	0.0	0.0	0.0
Current balance (% of nominal GDP)	2.5	2.6	2.4	2.5	2.6	2.5	0.1	0.0	0.1
Nominal employee compensation (y/y %)	1.6	1.3	2.0	1.7	1.3	2.2	0.1	0.0	0.2
Unemployment rate (%)	3.5	3.6	3.3	3.4	3.6	3.2	-0.1	0.0	-0.1
Labor's share	65.1	65.6	64.7	65.0	65.6	64.4	-0.1	0.0	-0.2
Central & local government balance (% of nominal GDP)									
Fiscal balance	-4.6	-5.2	-4.0	-4.4	-5.2	-3.7	0.1	0.0	0.2
Primary balance	-3.2	-3.8	-2.6	-3.0	-3.8	-2.4	0.1	0.0	0.2
Central & local government debt (% of nominal GDP)	240.8	241.8	239.9	239.3	241.9	237.1	-1.5	0.1	-2.8

Source: Compiled by DIR.
Notes: 1) Period avg., 2) Labor's share: ratio of employee compensation to national income, 3) Fiscal balance: excl. ad-hoc factors.

Corporate profits (left: large enterprises, right: medium-sized & small enterprises) — Chart 3.3.5





Source: Ministry of Finance, compiled by DIR.
Note: Capital of 1 bil yen or more, seasonally adjusted figures from DIR.

Note: Up to 1 bil yen in capital

(5) Exports trending downward from the shift to offshore production

In the paragraphs above, we indicated the possibility that the effect of the depreciation of the yen and the expansion of foreign economies in increasing export volume has weakened or that its time lag has lengthened. There is also a need to consider the possibility that the transfer of production overseas is restraining the growth of exports. This represents structural change as a trend, and it falls short in explaining the current lackluster condition of exports. However, its effect on Japan's economy going forward is likely to be greater than scenarios based on other hypotheses. It is therefore the most important factor to examine in anticipating the medium- to long-term structural changes of Japan's economy. The proportion of local demand being satisfied by the local subsidiaries that Japanese companies have established abroad is trending upward (local subsidiary sales (of which, sales to the local market) / (exports + local subsidiary sales (of which, sales to the local market))). This would also mean that the proportion of overseas production going to satisfy overseas demand is increasing and that the proportion being satisfied by exports is decreasing.

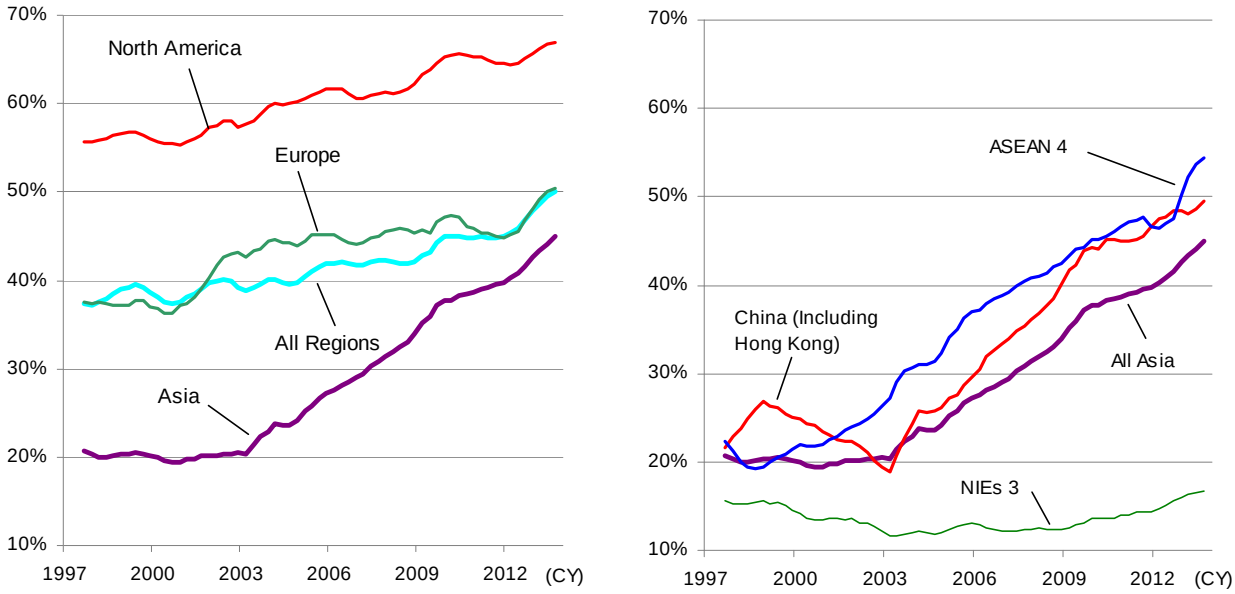
The rise of the foreign production ratio can be attributed to the deepening of horizontal specialization and the growing shift from vertical specialization to horizontal specialization that ensued from the enhanced benefits of foreign production (waning of drawbacks).

First, we consider the deepening of horizontal specialization. A leading example of horizontal specialization is the transportation equipment industry targeting the US market. Horizontal specialization progressed in this industry to resolve the trade friction that flared between Japan and the US since the 1980s. In recent years, however, the transportation equipment industry is thought to be advancing local production in the US not so much for such political considerations but because of the waning drawbacks of horizontal specialization. One of the drawbacks of horizontal specialization is the loss of economies of scale accompanying the dispersion of production activities (the occurrence of such new costs as the fixed costs of factory construction). However, with the progress of local production and the clustering of industry as parts suppliers shift operations to the local market, the drawback of the loss of economies of scale has likely become smaller than before. Based on this perspective, the possibility should be entertained that horizontal specialization will continue going forward centering on industries like transportation equipment where trade costs are high and that the local production ratio will rise as local production substitutes for exports.

Next, we consider the shift from vertical specialization to horizontal specialization. A leading example of vertical specialization is the electrical machinery industry targeting the Asian market. One of the benefits of vertical specialization is the curbing of production costs (labor costs, corporation taxes, and indirect taxes). In the Asian region, labor costs and taxes like the corporation tax are for the most part far lower than in Japan. On the other hand, drawbacks of vertical specialization are additional trade costs arising from the segmentation of production processes and the loss of economies of integration between production processes. Trade costs declined when China joined the WTO in 2001. Spurred by China's membership in the WTO, differences in production costs drew renewed attention as vertical specialization progressed in the Asian region, and cost-control-led rationalization advanced at the global level.

Factors for the growth of Japanese companies' direct investments in the Asian region are not limited to production substitution accompanying vertical specialization. As can be seen in Chart 3.3.6 (left), the ratio of local subsidiary sales is increasing for each region. This increase is most rapid for the local sales ratio of the Asian region. What this indicates is a growing trend to satisfy local demand with local production rather than exports. Not only vertical specialization, but horizontal specialization is advancing rapidly.

Overseas Subsidiaries Sales Ratio to Local Demand **Chart 3.3.6**



Source: Ministry of Finance, Ministry of Economy, Trade and Industry, compiled by DIR
Note 1: Ratio of overseas subsidiary sales = overseas subsidiary sales (portion of sales to Japan / (exports + overseas subsidiary sales (portion of sales to Japan))
Note 2: The NIEs include Republic of Korea, Singapore, and Taiwan. ASEAN countries are Indonesia, Malaysia, The Philippines, and Thailand.

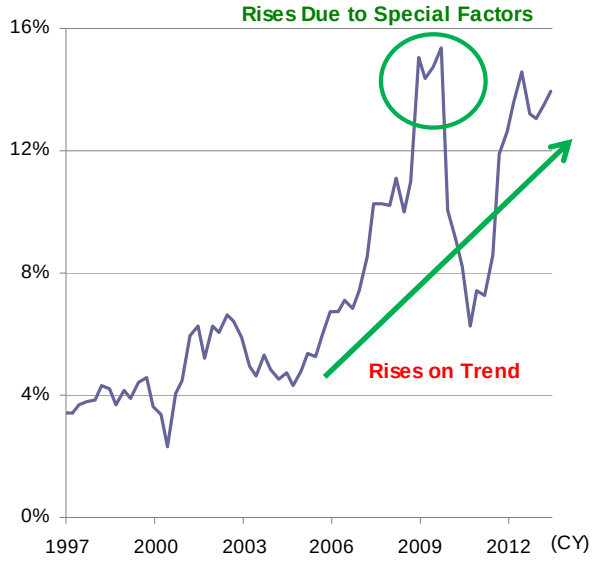
What explains this progress of horizontal specialization? It may be that industrial clustering has intensified as local production grows rapidly in Asia, and it has become rational in cost terms to respond to local demand through local production rather than exports. It is also possible that the competitiveness of local production is rising not only for labor-intensive downstream processes like the assembly of final goods but for more upstream processes like intermediate goods. Bearing this in mind, Chart 3.3.6 (right) provides a further breakdown of the local subsidiary sales ratio in the Asian region. While this ratio has climbed rapidly in China and in ASEAN nations, it remains at a low level for the NIEs. This suggests that, as local production initiated by vertical specialization progressed in nations with low production costs, industrial clustering escalated. This then increased the comparative advantage of local production, leading to advances in local production initiated by horizontal specialization. Hence, the possibility should be allowed that the growth of exports as a trend has been structurally suppressed due to the deepening of horizontal specialization and the shift from vertical specialization to horizontal specialization as discussed above. It is also highly probable that the industrial clustering of offshore production, the backdrop to this trend, will advance further. In view of this point, we assumed the case where the growth of export volume as a trend declines by 1% each year and performed a risk simulation. A summary of this simulation is presented in Chart 3.3.7. According to this scenario, the growth of export volume would slow each year compared to our main scenario, and its effect in augmenting domestic production would also decline. Thus, not only exports but domestic capex and private consumption would decline, and the overall growth rate would also be held to a low level. Developing responses to the long-term hollowing out of domestic industry will prove indispensable.

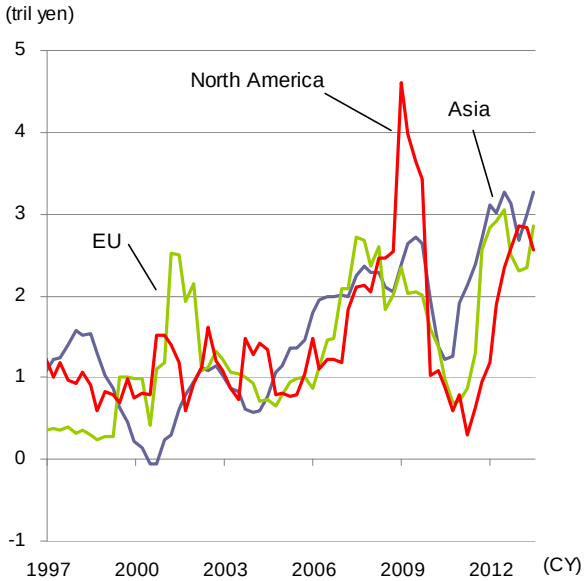
Risk Simulation — Chart 3.3.7

	Main scenario			growth of export volume as a trend declines			Deviation from main scenario;%,%pt		
	FY2014-23	FY2014-18	FY2019-23	FY2014-23	FY2014-18	FY2019-23	FY2014-23	FY2014-18	FY2019-23
Real GDP (y/y %)	1.5	1.7	1.3	1.3	1.6	1.1	-0.2	-0.2	-0.2
Private final consumption	0.7	0.6	0.8	0.6	0.6	0.6	-0.1	-0.1	-0.1
Private capital investment	3.6	5.0	2.2	3.0	4.4	1.6	-0.6	-0.6	-0.6
Private housing investment	-1.8	-2.4	-1.1	-2.0	-2.5	-1.4	-0.2	-0.1	-0.2
Public fixed capital formation	0.1	-1.5	1.8	0.4	-1.3	2.1	0.3	0.2	0.3
Government final consumption	2.0	1.9	2.1	2.0	1.9	2.0	0.0	0.0	-0.1
Export of goods and services	5.3	6.5	4.1	4.2	5.5	3.0	-1.1	-1.0	-1.1
Import of goods and services	3.9	3.9	3.9	3.1	3.3	3.0	-0.8	-0.7	-0.9
Nominal GDP (y/y %)	2.3	2.6	2.0	2.0	2.3	1.6	-0.3	-0.2	-0.4
GDP deflator (y/y %)	0.8	0.8	0.7	0.7	0.8	0.5	-0.1	-0.1	-0.2
Corporate Goods Price Index (y/y %)	1.2	1.4	0.9	1.0	1.3	0.7	-0.2	-0.1	-0.3
Consumer Price Index (y/y %)	1.4	1.6	1.3	1.3	1.5	1.1	-0.1	0.0	-0.2
O/N call rate (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yield on 10-yr JGBs (%)	1.6	1.3	1.9	1.6	1.3	1.9	0.0	0.0	0.0
Exchange rate (Y/$)	93.9	100.0	87.8	93.7	100.0	87.5	-0.2	0.0	-0.3
Current balance (% of nominal GDP)	2.5	2.6	2.4	2.2	2.4	2.0	-0.3	-0.2	-0.4
Nominal employee compensation (y/y %)	1.6	1.3	2.0	1.4	1.2	1.7	-0.2	-0.1	-0.4
Unemployment rate (%)	3.5	3.6	3.3	3.6	3.7	3.5	0.2	0.1	0.2
Labor's share	65.1	65.6	64.7	65.6	65.9	65.3	0.4	0.3	0.6
Central & local government balance (% of nominal GDP)									
Fiscal balance	-4.6	-5.2	-4.0	-5.0	-5.4	-4.6	-0.4	-0.2	-0.6
Primary balance	-3.2	-3.8	-2.6	-3.6	-4.0	-3.2	-0.4	-0.2	-0.6
Central & local government debt (% of nominal GDP)	240.8	241.8	239.9	245.9	243.6	248.0	5.1	1.8	8.1

Source: Compiled by DIR.
Notes: 1) Period avg., 2) Labor's share: ratio of employee compensation to national income, 3) Fiscal balance: excl. ad-hoc factors.

Ratio of Foreign Direct Investment and Types of Investments by Region — Chart 3.3.8





Source: Ministry of Finance, Bank of Japan, and Cabinet Office, compiled by DIR. Four-quarter moving average deviation.
Note: Foreign direct investment ratio = foreign direct investment amount / (foreign direct investment + domestic private sector capex)

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