

Japan Economics Weekly

Reflecting the consumption tax hike into our economic outlook

- **We now expect 2.5% growth in fiscal 2013 (2.1% for calendar 2013)** — Now that the consumption tax hike bill, calling for the tax rate hike to 8% in April 2014 from the current 5% and then to 10% in October 2015, is most likely to be approved by the Upper House in August, we are reflecting the tax hike into our economic forecasts. We expect that GDP growth in fiscal 2013 will be pushed up to 2.5% by a frontloading in spending ahead of the tax hike, compared with our previous forecasts of +1.3%.
- **But growth in fiscal 2014 will probably be virtually zero** — GDP growth in fiscal 2014 likely will slow sharply due to a payback to frontloaded spending and erosion in real household disposable income driven by tax hikes. We expect virtually zero growth in fiscal 2014, which in turn might make the second tax hike slated for October 2015 politically difficult to implement.
- **The BoJ's rate hike will likely be delayed until 2016** — The consumption tax hike likely will have a significant impact on monetary policy as well. We expect the BoJ to leave policy rates unchanged through fiscal 2014 given the likely sharp slowdown in the economy in that year. Moreover, if, as we anticipate, the government should forgo the second tax hike in October 2015 due to consideration for the economy, it would make the BoJ's rate hike in 2015 quite difficult.

Developed Markets Economics & Rates Strategy

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See Appendix A-1 for Analyst Certification, Important Disclosures and non-US research analyst disclosures.

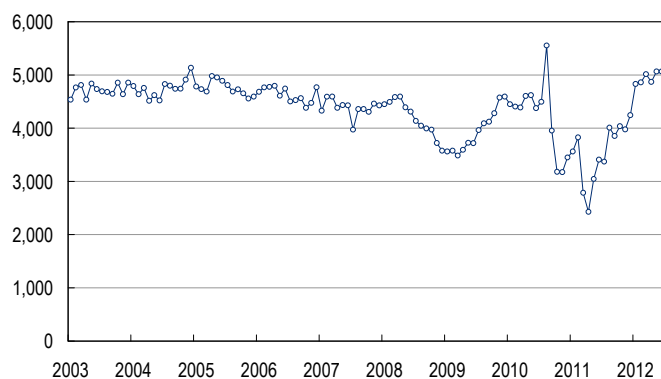
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Reflecting the consumption tax hike to our economic outlook

Now that the consumption tax hike bill, calling for the tax rate hike to 8% in April 2014, from the current 5% and then to 10% in October 2015, is most likely to be approved by the Upper House of the Parliament in August, we are reflecting the tax hike to our economic forecasts. We now expect that GDP growth in fiscal 2013 will be pushed up to 2.5% by a frontloading in household spending ahead of the tax rate hike, compared with our previous forecasts of +1.3% as of June (see Figure 6 for details). On a calendar year basis, we expect 2.1% for 2013. However, GDP growth in fiscal 2014 likely will slow sharply thanks to a payback to frontloaded spending and erosion in real household disposable income driven by tax hikes. We expect virtually zero growth in fiscal 2014, which in turn might make the second tax hike slated for October 2015 politically difficult to implement.

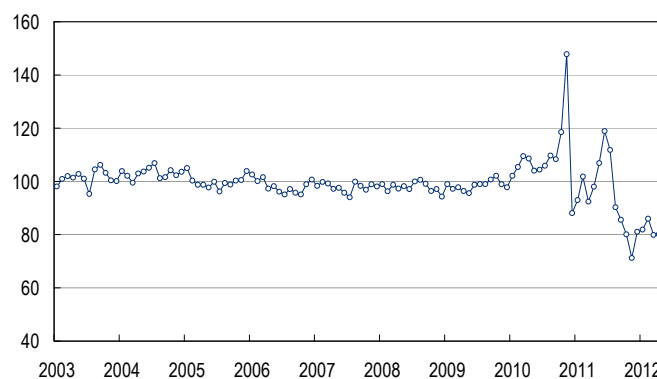
There have long been debates regarding whether the consumption tax rate hike from 3% to 5% in April 1997 was a principal reason for the sharp slowdown in the economy in that fiscal year. There are persistent views that the Asian currency crisis and the banking system problem are more important reasons for the sharp deterioration in the economy in 1997. Here, instead of discussing this question directly, we will take a look at other episodes that show how sensitive Japanese consumers' behavior has been to even moderate changes in prices¹.

Figure 1. Passenger Car Sales Including Light Vehicles (Seasonally Adjusted Annual Rate, Thousands Unit)



Source: Japan Automobile Dealers Association, Japan Mini Vehicles Association, Citi Research.

Figure 2. Sales of Home Machinery and Equipment (CY2005=100)



Note: Auto is not included.

Source: Ministry of Economy, Trade and Industry, Citi Research.

In the wake of the financial crisis in late 2008, the Japanese government introduced subsidies for purchases of consumer durables in order to support the economy. First, in April 2009, subsidies for environment-friendly car (eco-car) purchases were introduced². This subsidy expired in September 2010 once, but was reintroduced in December 2012 again³. Second, the government implemented the eco-point system for environment-friendly home appliances – specifically, television, air

¹ For our assessment of the impact of the consumption tax hike in April 1997, please see "Japan Weekly: Gauging impacts of the consumption tax hikes," January 6th 2012.

² ¥100 thousand for ordinary car and ¥50 thousand for light motor vehicle. Consumers who scrapped a car aged 13 years or older and bought a new eco-car could get subsidies of ¥250 thousand for ordinary car and ¥125 thousand for light vehicle. An average subsidy per car was about ¥130 thousand.

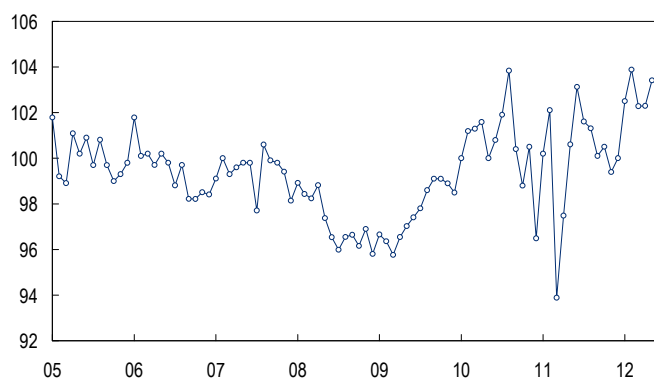
³ ¥100 thousand for ordinary car and ¥57 thousand for light motor vehicle.

conditioner and refrigerator -- in May 2009 through March 2011, which was economically a temporary price cut for these products.

For auto, sales unit increased roughly 10% QoQ for the second consecutive quarter in the second half of 2009 after the introduction of the eco-car subsidies (see Figure 1). However, sales plunged 30% QoQ in the fourth quarter of 2010. Sales again jumped 20% QoQ in the first quarter 2012 after the reintroduction of the subsidy. Meanwhile, for home appliances including television, air conditioner and refrigerator, sales increased for the 6th consecutive quarter after the introduction of the eco-point system but plunged 19.0% QoQ in the first quarter of 2012 (see Figure 2). These experiences indicate that Japanese consumers are very sensitive to even small (effective) changes in prices. In our view, this is because general expectation for income growth among consumers remains extremely low or nonexistent in Japan. Conversely, when or where expectation for income growth is strong, consumers probably do not pay much attention to modest price hikes. We believe that expectation for income growth is unlikely to improve in a meaningful manner in years to come.

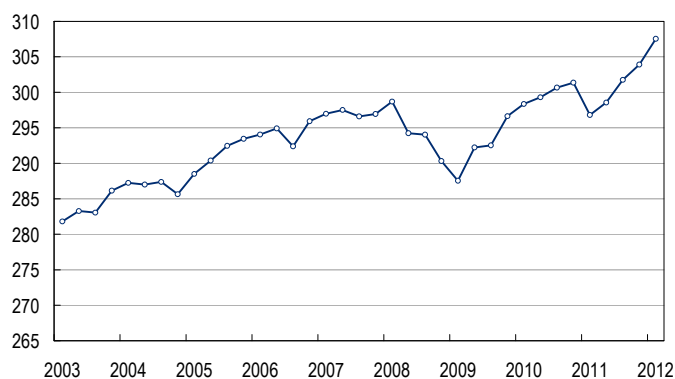
While the episodes above show a strong inter-temporal impact on consumer spending of the government's subsidies that are economically equivalent to price cuts, there is an episode that shows how vulnerable Japan's consumers are to price hikes and the resulting erosion in real disposable income. In spring and summer of 2008 when higher energy and food prices pushed up the headline CPI inflation to 2% or higher, real retail sales and real consumer spending both fell quite sharply. It is notable that this period precedes the Lehman shock in September 2008. Real retail sales, as calculated by nominal sales divided by the CPI for goods, fell 1.0% QoQ in the second quarter and 1.2% QoQ in the third quarter (see Figure 3). GDP-based real consumer spending also fell 1.5% QoQ and 0.1% in the second and third quarters (see Figure 4).

Figure 3. Real Retail Sales (CY2005=100)



Source: Ministry of Economy, Trade and Industry, Ministry of Internal Affairs and Communications, Citi Research.

Figure 4. Real Consumer Spending (Trillion Yen)



Source: Cabinet Office, Citi Research.

Given these experiences, we judge that the upcoming 3%-point consumption tax hike in April 2014 will have significant effects on economic activity in fiscal 2013 and 2014. First, as we discussed over the past weeks, we estimate that frontloaded demand ahead of the tax rate hike in April 2014 will amount to ¥9.8 trillion or 1.9% of GDP consisting of ¥8.2 trillion for consumer spending (mostly consumer durables) and ¥1.6 trillion for housing investment, based upon our experience in

1996 and 1997⁴ (see Figure 5). However, given that the government mulls on measures to mitigate a frontloading in spending and a payback (e.g. tax incentives for housing investment), the actual impact will probably be smaller. Meanwhile, we estimate based on the macroeconomic model that a 3%-point tax rate hike in fiscal 2014 will push down real consumption by about 0.8% and GDP by 0.5% by pushing down purchasing power of household nominal income. While frontloaded demand and a following payback are just an inter-temporal redistribution of spending with a net impact on total consumption being zero, the latter impact by way of erosion in real household income is permanent.

All in all, activity in fiscal 2013 will likely be buoyed by frontloaded spending before the hike, only to be reversed in fiscal 2014, when lower real disposable income would also affect real consumer spending. As a result, we currently expect real GDP growth of 2.5% for fiscal 2013 (2.1% for calendar 2013) but just 0.0% for fiscal 2014. In our view, most private forecasters underestimate a frontloaded demand and a following payback.

Figure 5. Estimation of rush demand ahead of consumption tax hike in April 1997 and April 2014 (real value, ¥tn)

	Assumed period of rush demand	Value of rush demand in FY1996	Percentage in overall spending in FY1996	Estimated rush demand in FY2013
Durables	3Q 1996-1Q 1997	1.9	12.8%	5.6
Semi-durables	1Q 1997	0.2	0.8%	0.2
Nondurables	1Q 1997	0.4	0.5%	0.3
Services	1Q 1997	1.8	1.3%	2.1
Subtotal: consumer spending		4.3	0.7%	8.2
Residential investment	1Q 1996 – 1Q 1997	3.0	12.3%	1.6
Total		7.3		9.8

Note: As for FY1996, we estimate a regression equation (on a quarterly basis) which explains real consumer spending (durables, semi-durables, nondurables and services) with real disposable income in the period before rush demand materialized. Then, applying the equation, we calculate the difference between estimated real consumer spending (an extrapolated value) and actual consumer spending in the period after rush demand surfaced. We regard this gap as rush demand.

Sources: Cabinet Office, Citi Research.

However, if we see such a large negative impact on economic activity in fiscal 2014, the second tax rate hike slated for October 2015 would be politically difficult to implement. Our base-case scenario expects that the second rate hike will not be implemented. To date, relatively benign perception about Japan's sovereign and persistent appetite for JGBs, especially among domestic investors, seem to be supported in part by general judgment that there is ample room for future consumption tax hikes. This, however, also means that if the government's inability to implement planned hikes becomes clear for political or economic reasons, that could severely undermine the current views about fiscal sustainability (especially among rating agencies) and JGBs.

Finally, the prospective consumption tax hike most likely will have a significant impact on monetary policy. We expect the BoJ to leave policy rates unchanged through fiscal 2014 given the likely sharp slowdown in the economy in that year. Moreover, if as we anticipate, the government should forgo the second tax hike in October 2015 reflecting its consideration for the economy, it would make the BoJ's rate hike within 2015 quite difficult.

⁴ Please see "Japan Economics Weekly: consumption tax hike bill: beginning or end of fiscal reform," June 29th 2012.

Figure 6. Economic Forecasts, 2011– 2013F

	CY			FY			2012				2013F				2014
	2011	2012F	2013F	2011	2012F	2013F	1Q	2QF	3QF	4QF	1Q	2Q	3Q	4Q	1Q
Real GDP (Qq%)	-0.7%	2.7%	2.1%	-0.0%	2.4%	2.5%	1.2%	0.6%	0.3%	0.3%	0.5%	0.6%	0.7%	0.7%	1.2%
Domestic Demand	0.1	3.0	2.1	1.0	2.6	2.4	1.0	0.7	0.4	0.2	0.6	0.6	0.8	0.7	1.1
Note: Private Domestic Final Sales	0.4	2.8	2.2	1.2	2.4	2.9	0.5	0.5	0.3	0.1	0.6	0.7	0.9	1.1	1.6
Private Consumption	0.1	2.9	1.4	1.1	2.2	2.2	1.2	0.5	0.2	-0.1	0.4	0.5	0.7	1.0	1.9
Business Investment	1.1	2.5	3.2	0.9	2.5	3.7	-2.1	0.6	0.6	0.6	0.7	0.9	1.2	1.2	1.0
Residential Investment	5.4	3.1	15.1	3.6	6.2	13.7	-1.5	1.9	1.4	3.7	4.9	4.1	3.9	1.6	-2.5
Government Consumption	1.9	1.7	0.9	1.8	1.4	1.0	0.7	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2
Public Investment	-3.6	8.1	-1.1	3.1	7.0	-4.3	3.8	3.6	1.2	0.6	-0.7	-1.1	-1.8	-2.5	-2.8
Inventories (Contribution)	-0.5	0.2	0.2	-0.4	0.2	0.2	0.3	0.0	0.1	0.0	0.1	0.1	0.1	0.0	0.0
Net Exports (Contribution)	-0.8	-0.3	0.0	-1.0	-0.1	0.1	0.2	-0.1	-0.1	0.1	0.0	0.0	0.0	0.0	0.1
Exports of Goods & Services	-0.1	4.2	3.7	-1.4	4.9	3.8	3.0	1.3	0.6	1.0	0.8	1.0	0.9	1.0	1.0
Imports of Goods & Services	5.9	6.9	4.1	5.3	6.5	3.8	1.9	2.0	1.3	0.8	0.8	0.9	1.1	1.1	0.7
Nominal GDP	-2.8	2.0	1.9	-2.0	2.0	2.3	1.2	0.4	0.3	0.1	0.7	0.5	0.7	0.6	1.2
Consumer Prices ex. Fresh Food (Yr.-Yr.)	-0.3	0.0	-0.1	0.0	-0.2	0.0	0.1	0.0	-0.2	-0.2	-0.3	-0.2	0.0	0.1	0.0
GDP Deflator (Yr.-Yr.)	-2.1	-0.7	-0.2	-1.9	-0.4	-0.2	-1.3	-0.7	-0.5	-0.3	-0.2	-0.2	-0.2	-0.2	-0.2
Current Balance (Yen in Trillions, SAAR)	9.6	5.0	5.9	7.6	4.9	6.3	5.9	4.4	4.5	5.1	5.6	5.9	5.9	6.4	7.1
Note: Pct. Of GDP	2.0	1.0	1.2	1.6	1.0	1.3	1.2	0.9	0.9	1.1	1.2	1.2	1.2	1.3	1.4
Trade Balance (Yen in Trillions, SAAR)	-1.6	-4.7	-3.4	-3.7	-4.5	-3.1	-4.5	-5.0	-4.9	-4.3	-3.8	-3.5	-3.5	-3.0	-2.3
Yen/US\$ (Average)	79.7	79.9	81.3	79.0	80.0	81.8	79.3	80.1	80.0	80.0	80.0	81.0	82.0	82.0	82.0
Landed Crude Oil Price (US\$/Barrel)	95.3	91.0	82.7	97.2	86.3	83.1	100.6	97.8	84.9	80.7	81.8	82.7	83.1	83.2	83.2
Industrial Production (Qr.-Qr.)	-2.4	3.0	3.9	-1.2	2.7	4.6	1.3	-1.4	1.2	0.9	0.9	1.4	1.5	1.0	0.5
Unemployment rate	4.6	4.5	4.3	4.5	4.4	4.3	4.5	4.5	4.4	4.4	4.3	4.3	4.3	4.3	4.2

Sources: Citi Research.

Economic Indicators

Economic Indicators

Jul. 19 (Thu) **All Industry Activity Index (May)**

1:30 p.m.

Forecast: -0.4% MoM; 3.1% YoY

Previous: 0.1% MoM; 4.1% YoY

We expect a 0.4% MoM drop in the all industry activity index for May (+0.1% MoM in April), based on a 3.1% MoM fall in industrial production and a 0.7% MoM rise in the tertiary industry activity index for the month. The construction industry activity index likely rose 4.5% MoM in May along with no change in the government services etc. index. If we are on the mark, the average all industry activity index in April and May is estimated to stand 0.3% below the first quarter average (-0.1% QoQ in 1Q).

Source: Ministry of Economy, Trade and Industry, Citi Research.

Main Forecasts

Currency and interest rate forecasts

	Current	Q3 12 Forecast	Q4 12 Forecast	Q1 13 Forecast	Q2 13 Forecast	Q3 13 Forecast
Japan: Yen/US\$	80	80	81	81	82	83
Call money	0.10	0.10	0.10	0.10	0.10	0.10
Long-term benchmark JGB	0.82	0.95	1.10	1.20	1.10	1.30

Source: 'Global Economic Outlook and Strategy', Citi Research. (June 27, 2012).

Macroeconomic and GDP data for FY2011-2013E (YoY %)

	2011	2012 E	2013 E
Real Gross Domestic Product	-0.0 %	2.4 %	2.5 %
Domestic Demand	1.0 %	2.6 %	2.4 %
•Private Domestic Final Sales	1.2	2.4	2.9
••Private Consumption	1.1	2.2	2.2
••Business Investment	0.9	2.5	3.7
••Residential Investment	3.5	6.2	13.7
•Government Consumption	1.8	1.4	1.0
•Public Investment	2.6	7.0	-4.3
•Inventories (Contribution) ^a	-0.4	0.2	0.2
Net Exports (Contribution) ^a	-0.9 %	-0.1 %	0.1 %
•Exports of Goods & Services	-1.4	4.9	3.8
•Imports of Goods & Services	5.3	6.5	3.8
Nominal GDP	-2.0	2.0	2.3
Consumer Prices ex. Fresh Food	0.0 %	-0.2 %	0.0 %
GDP Deflator	-1.9	-0.4	-0.2
Current Balance (Yen in Trillions)	7.6	4.9	6.3
•Pct. of GDP	1.6 %	1.0 %	1.3 %
Trade Balance (Yen in Trillions)	-3.7	-4.5	-3.1
Corporate Profits (Fiscal Year)	-12.5	22.5	15.0
General Govt. Balance (Fiscal Year)	-10.7 %	-10.5 %	-8.1 %

^a Contribution to GDP growth in percentage points. GDP: Gross Domestic Product.

E: Citi Research forecasts as of July 12, 2012.

Source: Economic and Social Research Institute; Ministry of Finance; Ministry of Public Management, Home Affairs, Posts and Telecommunications; Bank of Japan; *Nihon Keizai Shimbun*; Citi Research.

Major economy GDP growth forecasts, CY2011E-2013E (YoY %)

	2011 E	2012 E	2013 E
United States	1.7 %	2.1 %	2.0 %
Japan	-0.7	2.7	2.1
Euro Area	1.5 %	-0.7 %	-0.8 %
United Kingdom	0.6	-0.4	0.6
Asia	7.2 %	6.4 %	6.8 %
•People's Republic of China	9.2	7.8	7.9

E: Citi Research estimates.

Source: 'Global Economic Outlook and Strategy', Citi Research (June 27, 2012), Japan forecasts (July 12, 2012).

Recent economic indicators (YoY % or units as indicated, ¥bn)

	Mar	Apr	May	Jun
PRODUCTION				
Industrial Production	14.2 %	12.9 %	6.2 %	
Shipments	11.9	16.0	11.6	
Inventories	9.6	10.8	4.8	
Private Machinery Orders, Excl. Ships and Power	-1.1	6.6	1.0	
Contracted Public Works Orders	8.0	5.4	36.7	
CONSUMPTION				
Retail Sales (METI)	10.3 %	5.7 %	3.6 %	
All Household Consumption, Nominal	4.1	3.2	4.3	
New Motor Vehicle Registrations	71.8	93.7	66.4	
New Housing Starts	5.0	10.3	9.3	
LABOR MARKET				
Employment	-0.4 %	-0.4 %	-0.5 %	
Unemployment Rate (Level)	4.5	4.6	4.4	
Job Offers/Seekers Ratio (Level)	0.76	0.79	0.81	
New Job Offers	15.2	14.2	24.5	
Cash Earnings (5 Workers or More)	0.9	0.2	-0.8	
PRICES				
Nationwide Consumer Prices	0.5 %	0.4 %	0.2 %	
•Excl. Fresh Food	0.2	0.2	0.1	
Domestic Corporate Goods Prices	0.3	-0.4	-0.7	-1.3
MONEY AND CREDIT				
Monetary Base	-0.2 %	-0.3 %	2.4 %	5.9 %
M2	3.0	2.6	2.2	2.2
M3	2.6	2.3	1.9	2.0
L (Broadly-defined Liquidity)	0.4	0.4	0.1	0.2
Bank Lending	0.7	0.2	0.2	0.7
TRADE, CAPITAL FLOWS, AND CURRENCIES				
Trade Balance, Customs Clearance Basis, SA	¥-616.6	¥-512.0	¥-657.2	
Export Value Growth (Yen Basis)	5.9	7.9	10.0	
•Volume	3.7	4.7	9.4	
Import Value Growth (Yen Basis)	10.6	8.0	9.3	
•Volume	3.1	1.9	8.4	
Current Account, (SA, Billion yen)	785.5	288.6	282.2	
Yen/US Dollar Spot Rate	¥82.16	¥80.74	¥79.81	¥79.61

Source: Bank of Japan, government and industry association statistics, Citi Research.

Net buying/selling of Japanese stocks on three main exchanges by all 58 incorporated securities firms (¥bn)

	Individual			Corporate		Investment	Securities	
	Cash	Margin	Total	Financial	Nonfinancial	Trusts	Foreign	Firms
March	-191.0	211.0	20.1	-746.8	43.5	-36.6	242.6	467.8
April	11.5	230.6	242.0	-125.0	59.9	116.2	95.0	-420.2
May	255.3	166.4	421.7	121.7	142.4	128.7	-364.7	-478.0
June	-111.0	-11.5	-122.4	409.2	47.0	87.5	-127.5	-293.3
06/04~06/08	23.3	-7.5	15.8	152.1	19.0	28.4	-217.1	-1.0
06/11~06/15	-28.5	-8.6	-37.1	100.8	13.6	31.1	45.0	-155.8
06/18~06/22	-32.5	9.2	-23.3	51.6	-4.6	10.3	55.3	-88.1
06/25~06/29	-73.3	-4.6	-77.8	104.7	19.0	17.7	-10.7	-48.3

Note: Data based on net buying by 58 major securities firms with seats on the exchanges.

Source: Tokyo Stock Exchange, Citi Research.

Appendix A-1

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