

# Japan Equity Strategist

## Abenomics impact to become clearer

■ Equities

- **Uptrend for Japanese stocks likely to continue** — We think the impact of Abenomics will become even clearer as portfolio rebalancing by institutional investors and a weak yen-driven rise in export volume start in earnest. In our view, the yen will likely remain weak while equities continue to rise as confidence in Abenomics grows and expectations change. In our view, the aggregate market cap needs to get back to the 2007 pre-Lehman crisis level before the 2% inflation target can be achieved.
- **Abenomics effects** — Thus far the yen has weakened as the market's inflationary expectations have risen due to the setting of a 2% inflation target and the BoJ's decision on large-scale asset purchases. The way we see it is that a rise in the yen-equivalent value of income being repatriated has improved corporate earnings, and this combined with rising share prices has led to a wealth effect, which in turn has boosted consumer spending. Going forward, we think the process by which portfolio rebalancing by institutional investors and yen depreciation leads to increased export volume and improved corporate earnings, which in turn leads to increased capex, higher wages, and greater public works investment, thereby boosting the economy, will begin in earnest.
- **2007 market cap level a prerequisite** — We think that as the Abenomics impact becomes more pronounced, expectations of investors and members of the public at large who were skeptical about Abenomics could change, causing the uptrend in stock prices to continue. Indeed, we believe this trend will continue even if the growth strategy that is to be drawn up in June falls short of expectations. Even when share prices reached their pre-Lehman peak in 2007, CPI inflation (excluding food and energy) was far from 2%. We believe the aggregate market cap needs to get back to the 2007 level before 2% inflation can be achieved.
- **Considerable upside for financials** — We continue to think that the financial sector, which is likely to reap the benefits of Abenomics and whose aggregate market cap is now quite a ways from its pre-Lehman peak, has substantial upside. We also highlight the automotive sector and the companies that benefit from its capex, which remain highly competitive and are likely to reap the benefits of a US economic recovery.
- **Highlighting effect of growth strategy on agricultural industry** — We note that the agricultural sector's political clout is likely to shrink to some extent due to external pressure via the TPP even in the absence of moves by domestic political leadership. We also highlight measures to address the problem of Japan's aging infrastructure, increasingly seen as a severe problem that directly affects citizens' lives, via PFI and other means. Finally, we highlight the possibility of a gradual restart in nuclear-related exports and the restart of nuclear power plants, with Japan now two years on from the March 2011 disaster.

---

**Kenji Abe, PhD**  
+81-3-6270-4890  
kenji.abe@citi.com

---

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

Citi Research is a division of Citigroup Global Markets Inc. (the "Firm"), which does and seeks to do business with companies covered in its research reports. As a result, investors should be aware that the Firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision.

# Contents

<b>Japanese equities likely to continue rising</b>	<b>3</b>
<b>Abenomics effects to become clearer</b>	<b>4</b>
How Abenomics works and its likely effects	4
Expected and actual inflation rates	5
Portfolio rebalancing effect	7
Impact on the real economy	10
<b>Investment strategy</b>	<b>17</b>
Yen weakness/equity strength like to persist	17
Financials have relatively large upside	18
Growth strategy/structural reform-related names	21
<b>Appendix A-1</b>	<b>24</b>

## Japanese equities likely to continue rising

The yen-dollar rate rose above the ¥100/\$ mark for the first time in four years and one month on May 9 (Figure 1). With this important milestone reached, TOPIX has rebounded above 1,200, causing some to express concern about high prices for Japanese stocks. In this report we will clarify our outlook for Japanese equities in light of these developments. We begin with a summary of our conclusions.

### Abenomics effects to become clearer

1. Abenomics effects will become clearer. We think the process by which portfolio rebalancing by institutional investors and yen depreciation leads to increased export volume and improved corporate earnings, which in turn leads to increased capex, higher wages, and greater public works investment, thereby boosting the economy, is about to begin in earnest.

### Uptrend in Japanese stocks to continue even if growth strategy falls short of expectations

2. As Abenomics effects become more pronounced, we believe evidence of economic and earnings improvement, along with a rising inflation rate, will alter expectations among the investors and members of the public at large that have been skeptical about Abenomics. This should, in turn, cause the yen to remain weak and equity markets to remain strong. As a change in expectations is likely to be the main driver of this trend, we think the uptrend in share prices will continue even if, for example, the growth strategy that is to be drawn up in June falls short of expectations. We continue to believe that aggregate market cap needs to get back to the 2007 level (i.e., the pre-Lehman crisis peak) before the government's inflation target of 2% can be achieved.

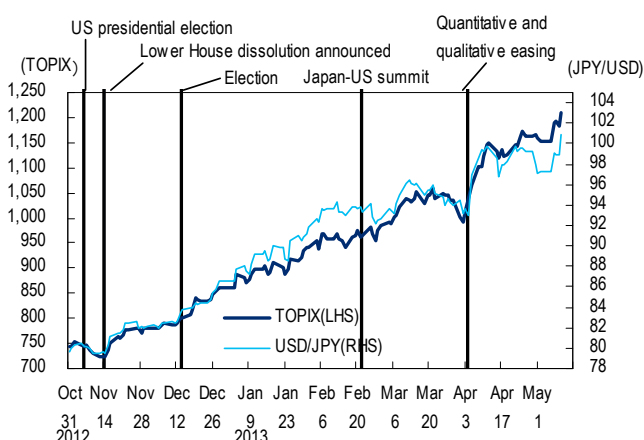
### Highlighting the financial and auto-related sectors

3. Our sector view is unchanged. We think the sectors with relatively large upside are 1) the financial sector, which is likely to reap the benefits of Abenomics and whose aggregate market cap is now quite a ways from its pre-Lehman peak; and 2) the automotive sector and companies that benefit from its capex, which remain highly competitive and are likely to reap the benefits of a US economic recovery.

### Agricultural sector, measures to address aging infrastructure also in the spotlight

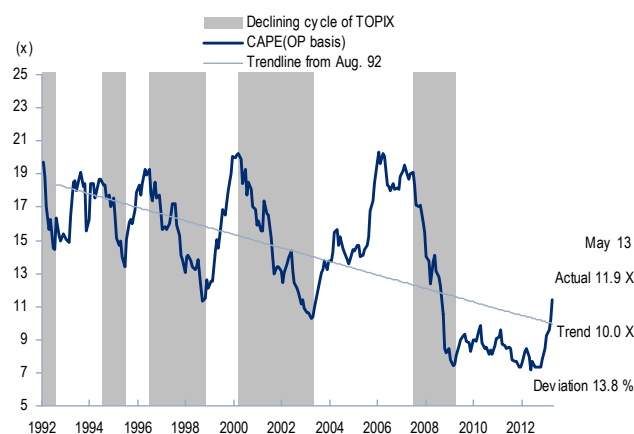
4. We also note that the agricultural sector's political clout is likely to shrink to some extent due to external pressure via the TPP even in the absence of moves by domestic political leadership. We also highlight measures to address the problem of Japan's aging infrastructure, increasingly seen as a severe problem that directly affects citizens' lives, via PFI and other means. Finally, we highlight the possibility of a gradual restart in nuclear-related exports and the restart of nuclear power plants, with Japan now two years on from the March 2011 disaster.

Figure 1. TOPIX and the ¥/\$ rate



Source: Datastream, Citi Research.

Figure 2. Cyclically adjusted PE



Source: Astra Manager, Citi Research.

# Abenomics effects to become clearer

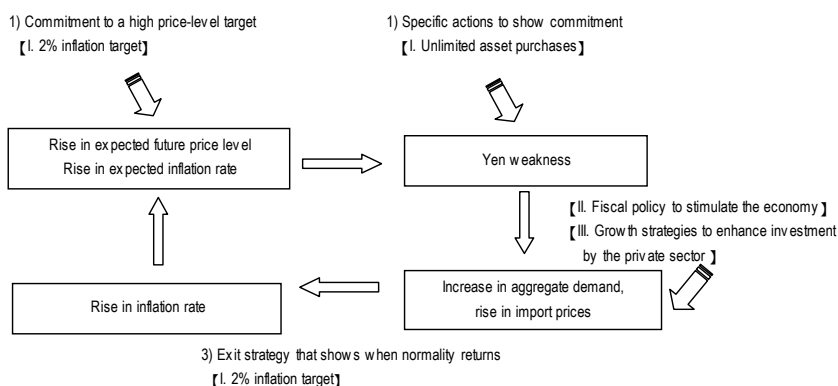
## How Abenomics works and its likely effects

Since November 2012, when the decision to dissolve the Lower House was made, the yen has depreciated sharply and equities have risen sharply on expectations related to government measures aimed at stimulating reflation advocated by PM Abe.

**Virtuous cycle of higher expected inflation rate leading to yen depreciation, increased aggregate demand, and rising imported goods prices, prompting higher inflation, higher expected inflation, etc.**

The mechanism of Abenomics is as follows. First, the BoJ and the government increase the expected inflation rate by setting a high inflation target. This leads to yen depreciation, which in turn increases aggregate demand and prices for imported goods. This causes the real inflation rate to start to rise, boosting the expected inflation rate further and stimulating additional yen depreciation. The government is trying to create this kind of virtuous cycle via a commitment to a 2% inflation target, massive buying of JGBs and ETFs, fiscal measures aimed at stimulating the economy, and a growth strategy aimed at promoting private-sector investment (Figure 3). For more on this, see our January 7 report [Japan Equity Strategist - Limited risk of Japanese equity correction](#) and our March 8 report [Japan Equity Strategist - Abenomics gets going](#).

Figure 3. PM Abe's reflationary policies



Source: Citi Research.

**Evidence of positive impact from Abenomics in consumer spending, corporate earnings**

The Abe government took power in December 2012, and in the more than four months since then we have begun to see evidence of positive impacts from Abenomics in portfolio rebalancing by households, consumer spending, and corporate earnings (Figures 4-5).

**However, many fields have yet to see expected Abenomics benefits**

However, there are number of fields in which expected Abenomics benefits have yet to emerge. We think the process by which portfolio rebalancing by institutional investors and yen depreciation leads to increased export volume and improved corporate earnings, which in turn leads to increased capex, higher wages, and greater public works investment, thereby boosting the economy, is about to begin in earnest.

**This should be viewed positively as an indication further upside for share prices**

We think the amount of time it is taking for Abenomics benefits to emerge in these areas should not be a reason to be bearish. In fact, we think it should be taken as a positive, as it suggests there is further improvement to come and thus additional upside for equities.

Figure 4. Abenomics impact (1)

		Changes thus far	Mark
Expected inflation rate	Forex	Yen has weakened to around ¥100/\$	○
	Surveys	Ratio of households expecting prices to rise has increased, while the ratio expecting prices to decline has decreased	○
	BEI	On an upward trajectory	○
	Import prices	Import prices up 10.6% in January-March	○
Portfolio rebalancing	Households	Rise in sales of domestic and overseas equity mutual funds	○
	Banks	Consumer lending expected to rise	△
	Lifers	Purchasing of foreign bonds could increase if domestic interest rates remain low	△
	GPIF	Expected to increase its domestic equities weighting	△

Note: Evaluations (Mark) are ours.  
Source: Citi Research.

Figure 5. Abenomics impact (2)

		Changes thus far	Mark
Real economy	Consumption	Spending on large-ticket items rising, condo sales up	○
	Corporate earnings	Revenue and profits expected to rise in FY12 and FY13	○
	Employment, wages	Bonuses expected to rise	△
	Capex	Auto-related capex expected to rise	△
	Exports	No volume benefits yet	△
	Public spending	Most of the FY12 supplemental budget has yet to be implemented	△

Note: Evaluations (Mark) are ours.  
Source: Citi Research.

We now examine Abenomics benefits in three areas: expected and actual inflation rates, portfolio rebalancing, and the real economy.

## Expected and actual inflation rates

Measuring the expected inflation rate is difficult because it involves gauging expectations. It requires looking at various indicators widely believed to reflect changes in expectations regarding inflation then making a judgment call about whether a change in expectations has occurred.

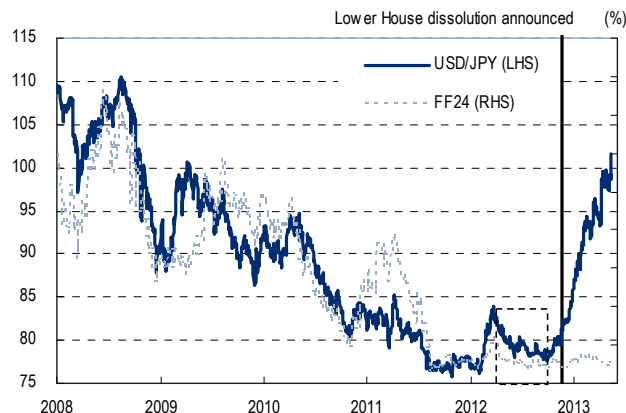
### Yen depreciation prime evidence of rise in expected inflation rate

In his 2003 paper “Escaping From a Liquidity Trap and Deflation: The Foolproof Way and Others”, former Princeton professor Lars E. O. Svensson argues that the yen weakens when the expected level of prices going forward increases. This argument suggests that the steep decline in the yen’s value since November 2012 is evidence that the expected inflation rate has gone up (Figure 6).

### Surveys indicate public’s inflation expectations have started to change

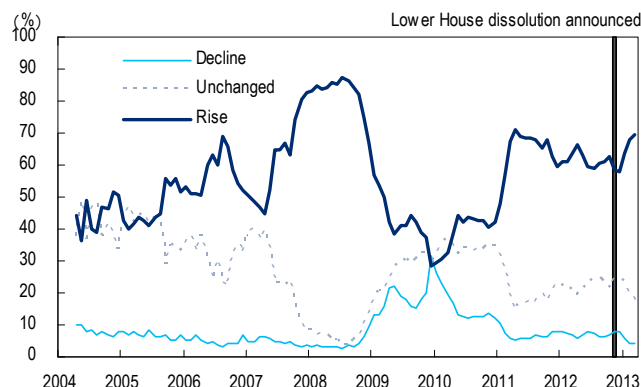
Household surveys show that the percentage of people who think that consumer prices will rise over the next year has gone up since the announcement of the Lower House dissolution (Figure 7), while the percentage that think they will not change or go down has decreased. In other words, surveys also suggest that the public’s inflation expectations have started to change.

Figure 6. Forecasts of policy rate in 24 months and dollar/yen rate



Source: Bloomberg, Citi Research.

Figure 7. Household price assumptions



Source: Cabinet Office, Citi Research.

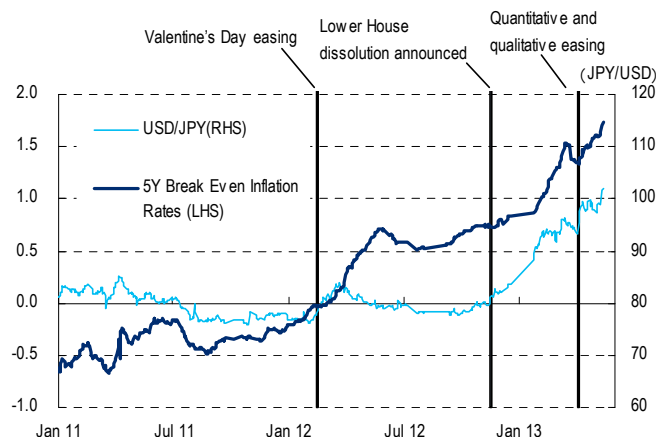
#### Breakeven inflation rate also on the rise

One indicator of the expected inflation rate is the breakeven inflation rate, which is calculated from data on inflation-indexed bonds. This rate began rising in February 2012 following the BoJ's Valentine's Day easing, and it continues to increase (Figure 8). However, caution is warranted regarding this data point because low liquidity may be introducing distortions, as well as because the looming consumption tax hike may be having an impact.

#### Import goods prices higher

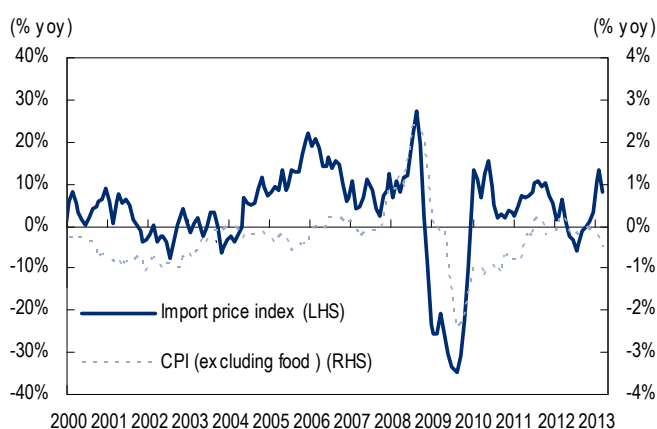
Import goods prices rose 10.7% YoY in January-March. The Tokyo Consumer Price Index (excluding fresh food) rose by 0.3% MoM in April, for a second consecutive month of positive growth, with higher electricity rates the main driver. This suggests that inflation from the supply side is occurring (Figure 9).

Figure 8. Breakeven inflation and the ¥/\$ rate



Source: Bloomberg, Citi Research.

Figure 9. Import prices and CPI (excluding fresh food)



Source: Datastream, Citi Research.

## Portfolio rebalancing effect

**Massive asset buying by BoJ stimulating risk-taking by households, financial institutions**

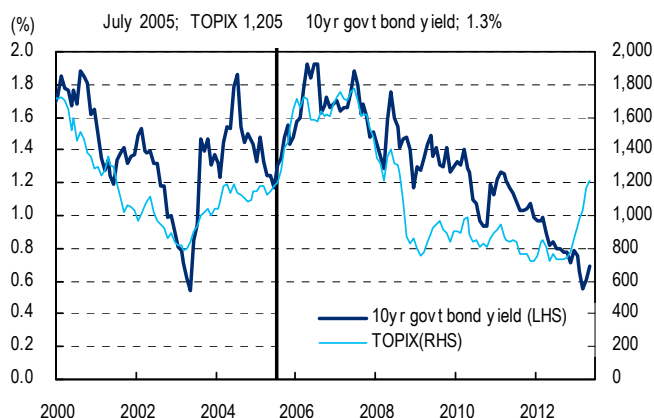
Next we look at the portfolio rebalancing effect of Abenomics. The idea is that if the BoJ announces and carries out massive purchases of JGBs and ETFs, it puts upward pressure on JGB and equities prices. This lowers the expected return on investments in JGBs and stocks, thereby stimulating investments in and lending for other assets, such as real estate and overseas assets. This results in higher real estate prices and causes bank lending to increase at the same time the yen is depreciating.

The yield on 10yr JGBs rose even after the introduction of quantitative and qualitative easing on April 4, causing the yield curve to steepen (Figures 10-11). However, we think it a mistake to believe that the BoJ's JGB purchases will fail to increase JGB prices and that the portfolio rebalancing effect will not occur.

**BoJ's JGB purchasing curtailing the rise in JGB yield**

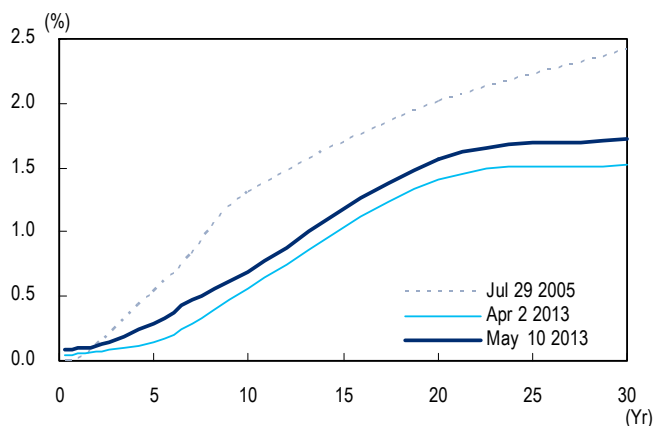
The yield on 10yr JGBs was around 1.3% in July 2005 (i.e., during the economic recovery that preceded the Lehman failure), when TOPIX was close to 1,200. This yield was around 60bps higher than it was as of May 10, and the yield curve was steeper than it is now. During periods of yen depreciation, high stock prices, and rising inflation, JGB purchases by the BoJ have had the effect of containing the rise in the yield curve, and to that extent it tends to trigger a rebalancing of portfolios toward other assets.

Figure 10. Yield on 10yr JGBs and TOPIX



Source: Bloomberg, Citi Research.

Figure 11. JGB yield curve



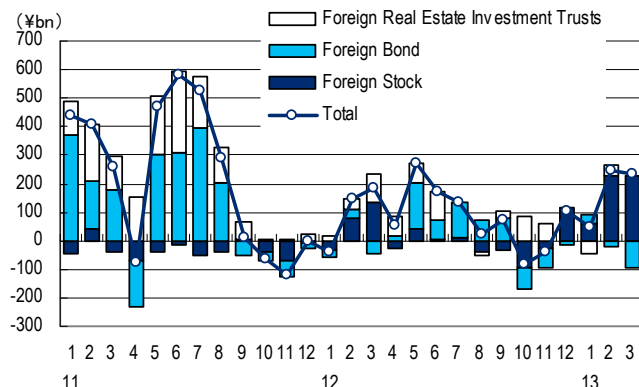
Source: Bloomberg, Citi Research.

## Households

**Increased purchasing of domestic and overseas investment trusts, greater condo buying**

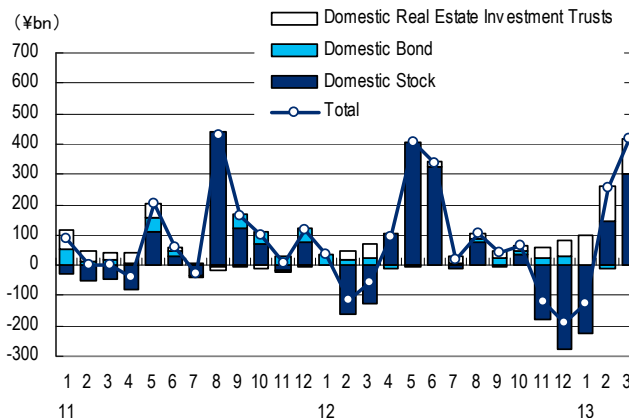
Household purchasing of both overseas and domestic investment trusts is on the rise (Figures 12-13), with the increase centering on equity investment trusts and domestic REITs. In addition, Tokyo metropolitan area condominium sales totaled 5,139 units in March, a 48.4% YoY increase, and the contract rate was 82.1%, the second consecutive month above 70% (widely considered the dividing point between strong and weak demand; Figure 14). The BoJ survey of lending trends at major banks shows that demand for funds by consumers (mainly for home loans) is rising (Figure 15). While this likely reflects in part a spike in demand ahead of the consumption tax hike scheduled for April 2014, we think it also means that households are altering their portfolios to add more risk.

Figure 12. Net sales of overseas investment trusts



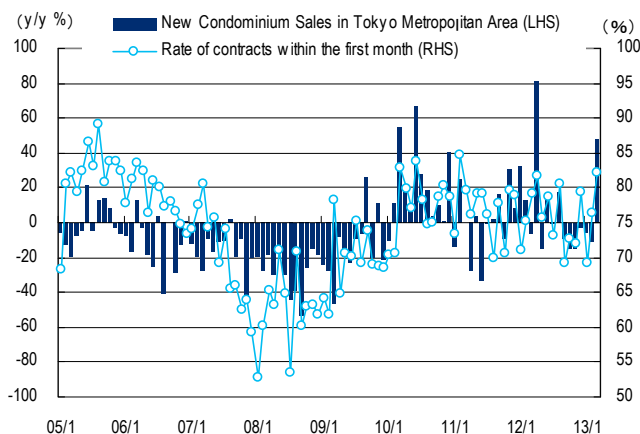
Note: Net sales exclude cancellations and redemptions.  
Source: JITA, Citi Research.

Figure 13. Net sales of domestic investment trusts



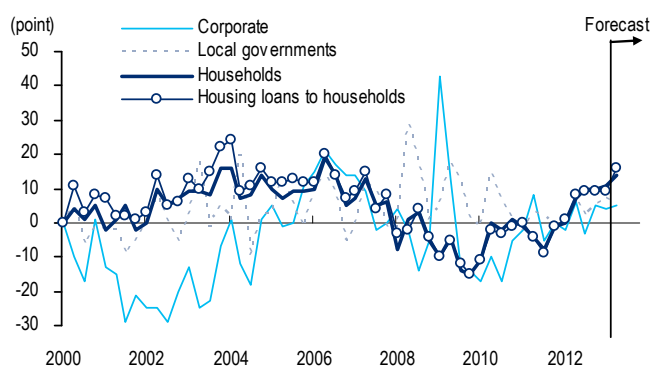
Note: Net sales exclude cancellations and redemptions.  
Source: JITA, Citi Research.

Figure 14. Condo sales, units on the market, and contract rates in the Tokyo greater metropolitan area



Source: Astra Manager, Citi Research.

Figure 15. Capital demand DI



Source: BoJ, Citi Research.

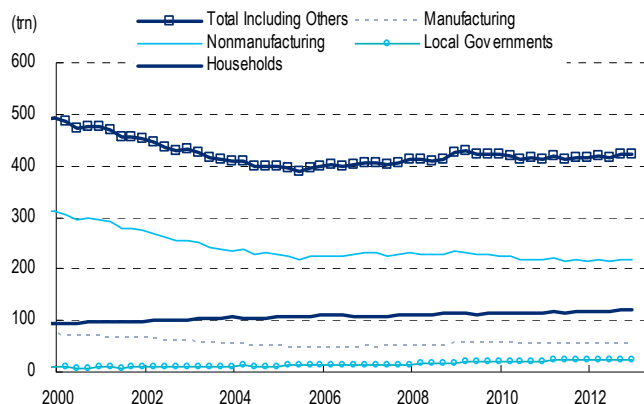
## Banks

### Lending rising, particularly consumer lending

Banks had been increasing lending prior to start of the Abe administration. Although loans to consumers only accounts for around one-fifth of bank lending, as discussed earlier bank loans are likely to rise sharply as demand for housing loans among individual consumers increases (Figures 16-17). Rising real estate prices would likely boost the growth of real estate related loans. If capex demand were to become robust it would similarly boost capex-related lending, but this is likely to take some time to happen.

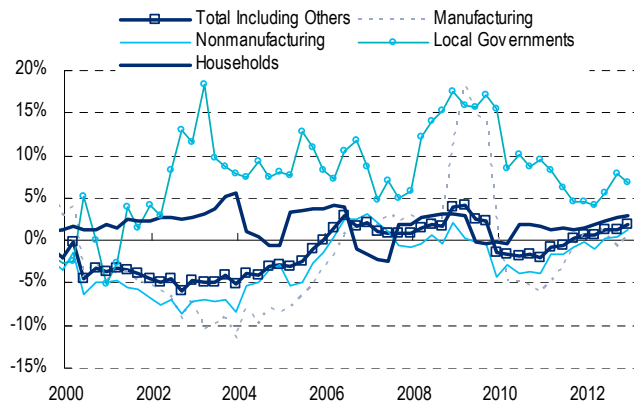


Figure 16. Lending by borrower (amount)



Source: BoJ, Citi Research.

Figure 17. Lending by borrower (growth)



Source: BoJ, Citi Research.

## Life insurers

### Only some companies are talking about increasing foreign-bond investment

Life insurers announced their investment plans in late April. Most of them will reduce their domestic stockholdings for regulatory reasons and increase their holdings of domestic bonds. Only some of them have clearly stated that they will also increase investments in overseas bonds, however. Based on the investment plans as announced, it is hard to say that there is a strong portfolio rebalancing effect among life insurers.

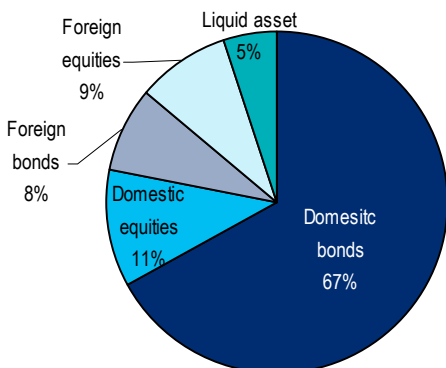
## GPIF

### GPIF investment committee debates review of basic portfolio twice in April

In a February 1 interview with Bloomberg, Government Pension Investment Fund (GPIF) president Takahiro Mitani said that in accordance with one of the items suggested by the Board of Audit of Japan in 2012 (that the GPIF ought to review its portfolio on a regular basis), the GPIF will begin said review process in April-May, and that this could result in some changes to the portfolio. He acknowledged that domestic bonds were how the GPIF made much of its money over the past 10 years, when interest rates were low, but that the environment would become more challenging if interest rates were to rise.

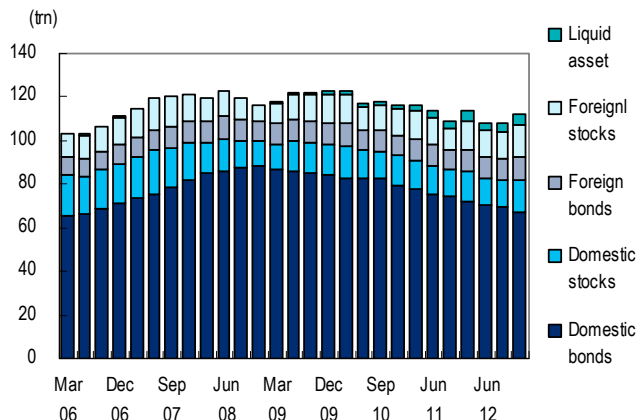
The GPIF's investment committee met on April 12 and 22. According to the agenda, there was to be debate about reviewing the basic portfolio. The committee does not formally issue any materials or summary of its proceedings, but it may be thinking about lowering the percentage of the basic portfolio accounted for by domestic bonds and increasing the share accounted for by other kinds of assets (Figures 18-19).

Figure 18. GPIF basic portfolio



Note: Tolerance bands are +/- 8% for domestic bonds, +/- 6% for domestic equities, +/- 5% for foreign bonds, and +/- 5% for foreign equities.  
Source: GPIF, Citi Research.

Figure 19. GPIF asset breakdown



Source: GPIF, Citi Research.

Households have been quite aggressive about rebalancing their portfolios thus far, while financial institutions and institutional investors have been somewhat passive. This passiveness has led some market participants to take a cautious outlook on yen depreciation and the state of the stock prices, but we do not agree with this view.

**BoJ Governor Kuroda will not hesitate to take action if necessary**

BoJ Governor Haruhiko Kuroda has stressed that the BoJ will take all steps necessary to achieve the 2% inflation target, so expectations for additional monetary easing are low. However, Governor Kuroda has also said that the economy and the financial sector are “living creatures”, so he will occasionally assess the situation and make adjustments without hesitation if the need arises.

As we discussed in our April 15 report [Japan Equity Strategist - Quantitative and qualitative easing and Japanese equities](#), we believe the aggregate market cap needs to get back to the 2007 level, at least, before the government’s inflation target of 2% can be achieved. If forex rates and share prices remain at their current levels, we think the BoJ will increase its asset purchasing, centering on risk assets.

**Even if institutional investors do not rebalance portfolios, we think households, BoJ, and foreign investors will all increase equities holdings**

Even if financial institutions and institutional investors do not rebalance their portfolios, we think that in their stead the BoJ, households, and overseas investors will all increase holdings of stocks and other risk assets. Regardless of what happens with financial institutions and institutional investors rebalancing their portfolios, however, we think the forex and aggregate stock market cap levels needed before the 2% inflation target can be achieved will not change significantly. But for this to become a consensus view, we think financial institutions and institutional investors will have to move forward with rebalancing their portfolios to add more risk.

## Impact on the real economy

### Consumption

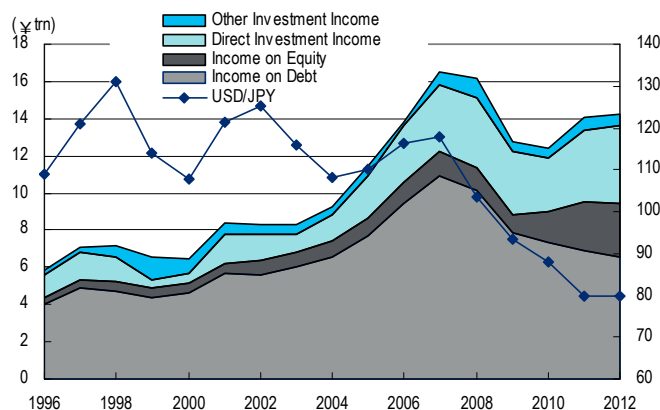
**Both sentiment and real consumer spending improving**

Abenomics has driven substantial depreciation for the yen and gains for stocks, and consumers’ economic outlook is improving (Figure 21). Both the consumer confidence index and the Economy Watchers survey’s economic conditions index

have recovered to levels marked during the economic recovery prior to the Lehman crisis. Similarly, the survey of households showed a significant 5.2% YoY increase in real consumer spending in March.

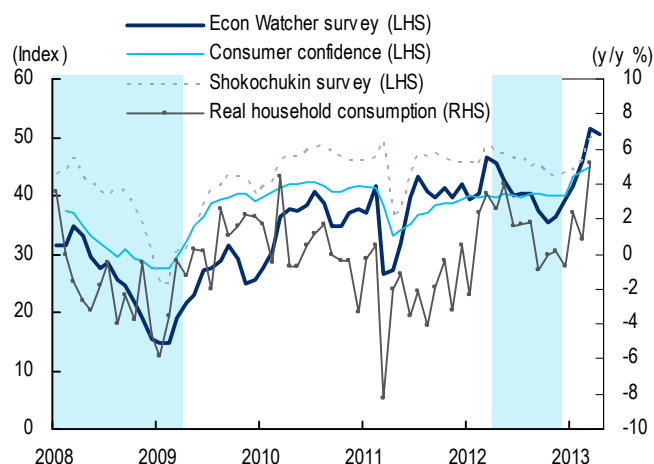
As discussed in our March 8 report [Japan Equity Strategist - Abenomics gets going](#), Abenomics may already be boosting consumption through a mechanism starting with yen depreciation, which has increased the yen value of income from overseas, leading to share price gains and wealth and income effects. This round of yen depreciation is characteristic in that its effects are showing up in consumption before exports.

Figure 20. Trends in Japanese income



Source: MoF, Citi Research.

Figure 21. Domestic sentiment and real household consumption

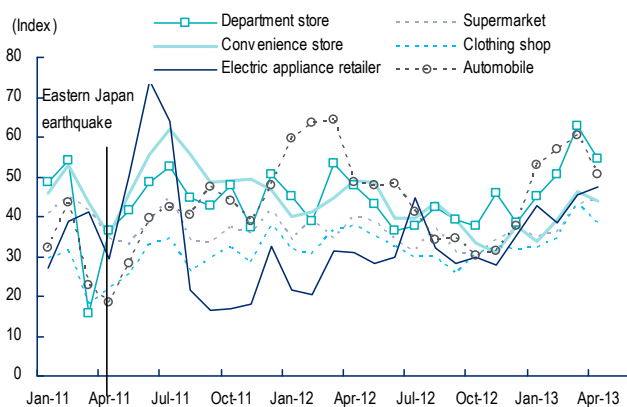


Source: Cabinet Office, Citi Research.

### Yen depreciation boosting overseas visitors to Japan

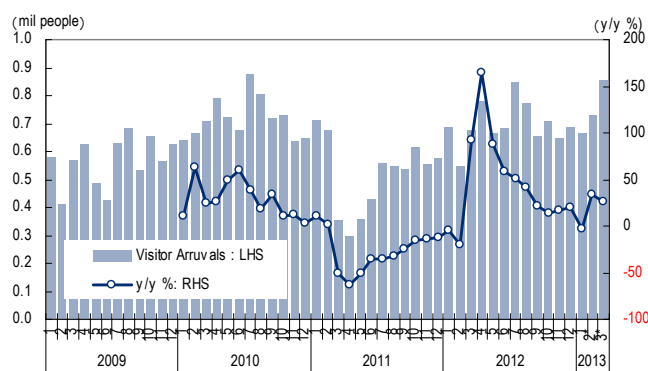
The number of foreign tourists visiting Japan reached 857,000 in March, the highest since July 2010. Spending by tourists should improve earnings in the domestic retail and tourism industries (Figure 23).

Figure 22. Economy Watchers survey: Current conditions DI by retail line



Source: Cabinet Office, Citi Research.

Figure 23. Foreign visitors to Japan



Note: Last two months are JNTO estimates.  
Source: JNTO, Citi Research.

**Marked improvement expected for  
corporate earnings**

**Corporate earnings**

For TSE1-listed firms who had announced results as of May 10, FY12 sales rose 2.9% YoY and RP 10.8% on aggregate. At those firms for which Quick consensus estimates are available, aggregate FY13 estimates call for sales to grow 7.6% and RP to grow 32.6% (Figure 24). That is, a second straight year of growth for both sales and profits is expected. Moreover, the RP margin is expected to widen substantially to over 30% in FY13. We expect a marked improvement for corporate earnings under Abenomics.

Figure 24. Corporate earnings

		Number of companies that have reported FY12 results	Number of companies in Quick consensus forecasts	FY12 results (YoY, %)				FY13 Q consensus forecasts (YoY, %)			
				Sales	OP	RP	NP	Sales	OP	RP	NP
TSE1		998	612	2.9	3.8	10.8	24.3	7.6	35.1	32.6	65.4
TSE1 (excl. electric power companies)		987	601	2.8	4.9	11.4	20.6	7.7	28.9	26.4	47.2
TSE1 (excl. financials)		922	581	2.8	5.8	9.4	21.5	7.6	34.9	33.4	68.4
High-tech	Elec. App.	98	82	-1.4	18.3	45.2	Loss reduced	4.8	41.9	83.9	To black
	Trans.Equip.	48	39	12.5	73.2	67.7	93.8	11.9	50.7	49.2	48.1
	Inf.&Com.	65	41	4.2	2.7	3.5	7.3	9.2	9.7	7.2	15.5
	Machinery	65	50	0.3	-8.9	-5.3	7.4	9.6	41.8	37.4	34.7
	Prec. Inst.	13	9	4.1	-27.8	-8.1	36.0	5.4	58.0	58.5	27.9
Cyclicals	Chemicals	81	52	0.1	-5.7	-0.1	-9.3	6.4	29.8	21.5	51.1
	Whsle Trade	83	34	-0.5	-19.0	-11.5	-8.3	7.2	32.9	8.3	11.6
	Iron & Steel	27	17	-0.8	-56.3	-48.5	To red	21.7	379.0	259.6	To black
	Nonfer.Mtls	19	14	-2.9	-4.2	8.5	44.3	6.2	25.5	17.8	33.5
	Gl.&Cer.Prod	11	6	-1.4	-26.4	-18.0	-7.3	0.9	16.1	10.0	4.4
	Text&Apparel	18	7	0.3	-17.2	-12.1	-34.9	5.0	25.7	20.6	119.4
	Oil&Coal P.	5	3	3.6	-22.1	-19.1	-11.1	3.6	-10.4	-6.8	4.9
	Rubber Prod.	4	2	2.4	-18.7	-11.4	-17.3	6.0	56.3	40.9	91.2
	Marine Trans	8	3	7.2	To black	To black	Loss widened	8.6	772.2	626.3	To black
	Pulp&Paper	2	1	2.6	-4.0	-1.0	51.3	0.2	-7.2	-10.7	-12.4
	Mining	5	4	1.1	-3.0	-5.9	-14.5	7.6	2.0	-6.7	3.0
Domestic demand	Retail Trade	100	57	2.7	-6.1	-5.2	-2.0	6.0	12.4	8.9	9.3
	Land Trans.	31	20	2.3	12.1	18.2	47.9	3.5	4.4	5.7	9.2
	Real Estate	22	12	3.7	1.2	4.3	-2.5	7.1	17.9	18.8	25.1
	Construction	47	18	5.8	9.6	16.2	43.8	6.5	7.1	1.9	7.6
	Other Prod.	27	10	1.7	21.4	125.0	To black	10.5	168.0	72.4	72.5
	Services	45	34	8.4	17.6	18.3	35.5	4.7	9.1	8.1	7.5
	Metal Prod.	16	9	8.0	35.0	45.5	5.8	7.3	28.6	18.5	104.6
	Air Trans.	3	3	4.0	-0.9	-1.2	0.2	1.9	-3.5	-4.5	-6.1
	Whsng&H.Tr.S	15	10	4.1	-11.3	-10.3	-2.7	4.0	18.9	16.7	15.3
Financials	Banks	41	13	--	--	5.6	19.4	-0.3	--	-3.6	-1.1
	Oth.Fin.Bus.	16	13	5.8	11.9	16.4	25.2	6.5	41.2	35.0	37.9
	Sec.&Com.Fut	19	5	14.8	372.5	320.4	To black	19.8	64.9	57.1	58.6
	Insurance	0	0	--	--	--	--	--	--	--	--
Defensive	Pharm.	16	12	3.4	-22.5	-23.1	21.6	2.8	18.4	20.0	-4.4
	Elec.Pwr&Gas	16	14	5.9	Loss widened	Loss widened	Loss reduced	5.1	To black	Loss reduced	Loss reduced
	Foods	30	18	2.0	10.4	10.8	8.8	5.2	15.1	15.4	17.5
	Fish/Ag.&For	2	0	-1.0	-20.7	-6.5	76.4	--	--	--	--

Note: As of May 10. Universe is TSE1-listed companies with March year-ends (including retailers with February year-ends).

Source: Astra Manager, Citi Research.

## Employment and wages

### Increases to wages, bonuses limited

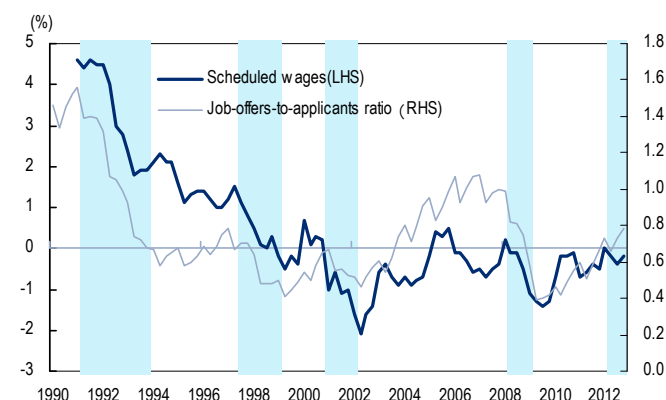
Prime Minister Abe has called upon business leaders to increase wages, in response to which several companies have move to lift wages and bonuses (Figure 25). Despite this, overall wages are not poised to rise: official wages, which drive the overall trend, declined 0.71% YoY in January-March (Figure 26). Looking ahead, however, we think improved corporate earnings and tighter labor supply/demand, coupled with stronger demands for wage hikes as the 2% inflation target comes into play, should see wages decline more slowly and eventually start to rise.

Figure 25. Key companies reported to be hiking wages and bonuses

3382	Seven & i Holdings	Upped wages for 53,500 employees across 54 group companies. First base salary hike for Ito-Yokado in four years
2651	Lawson	Raised annual salary for 3,300 regular employees in their late 20s and 30s by 3% via bonuses
8028	FamilyMart	Raised annual salaries by 2.2% on average for FY3/14. In addition to 1.5% hike for standard wages bonuses are to be hiked from FY3/13
3046	JIN (eyewear chain)	To pay a special bonus to 1,500 regular employees. Regular employee annual salaries will be raised 6% on average
7203	Toyota Motor	Posted parent operating profit in FY3/13 for the first time in five years. Bonus request is ¥270,000 over last year's agreement
7201	Nissan Motor	Said they will accede to union requests for bonus increases in FY3/14 salary negotiations
7267	Honda Motor	
7270	Fuji Heavy Industries	
6501	Hitachi	Union has requested bonus of 5.8 months' pay, 0.52 months more than previous year and a 22-year high
8411	Mizuho Financial Group	To raise annual bonus 5% YoY
8316	Sumitomo Mitsui Financial Group	To raise annual bonus 5% YoY
8306	Mitsubishi UFJ Financial Group	To raise annual bonus 1% YoY
6454	Max (stapler major)	To raise FY3/14 annual salaries by an average of 2.2%

Source: Media reports, Citi Research.

Figure 26. Job offers-to-applicants ratio and scheduled wages



Source: MHLW, Citi Research.

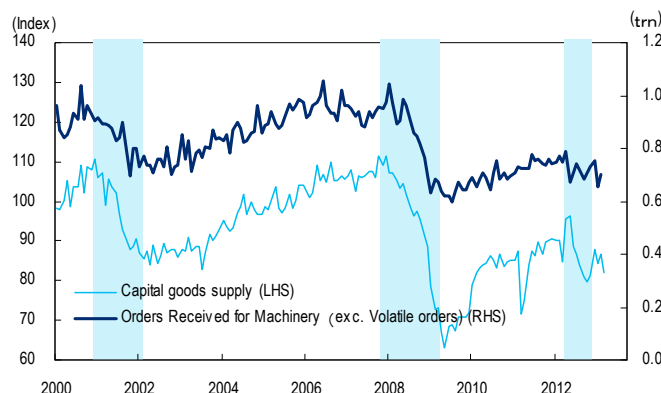
## Capex

### No Abenomics effect for capex yet

Machinery orders and aggregate capital goods supply, both capex-related indicators, have not shown any improvement since the Abe administration took over (Figure 27), suggesting Abenomics has yet to benefit capex. That said, we expect capex to start to improve, buoyed by better corporate earnings and management sentiment. In fact, many automakers have increased capex budgets for FY13.

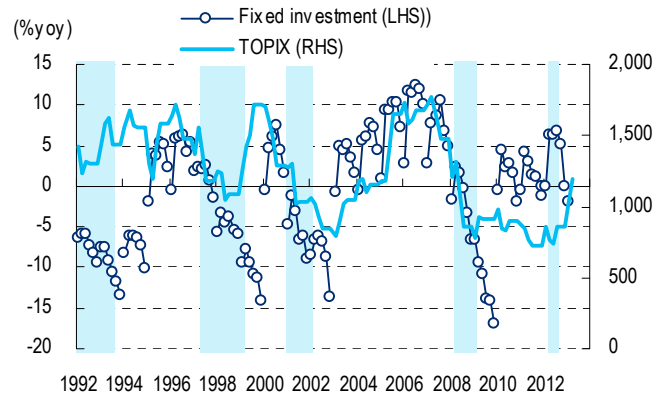
Moreover, when TOPIX exceeded 1,100 during the pre-Lehman economic upturn, capex plans in the BoJ Tankan started out conservative but were subsequently revised upward, and actual capex ended up growing YoY (Figure 28).

Figure 27. Capital goods supply and machinery orders



Note: Shaded areas represent recessionary periods.  
Source: Cabinet Office, METI, Citi Research.

Figure 28. BoJ Tankan: Fixed Investment



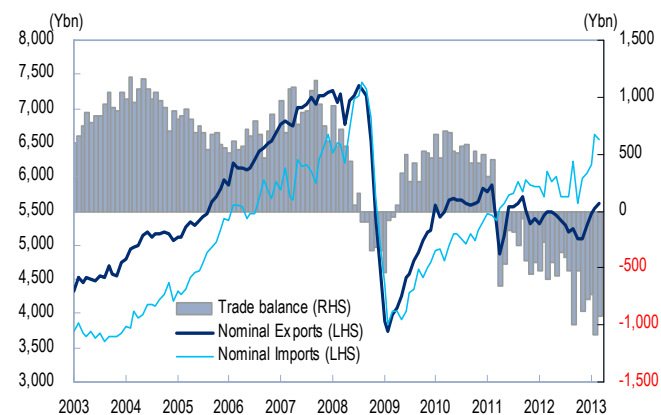
Note: Shaded areas are recessionary periods.  
Source: BoJ, Citi Research.

## Exports

### Poised for volume recovery

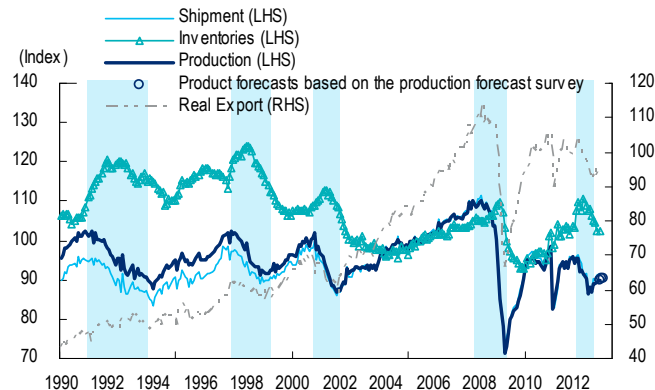
Nominal export value has risen on yen depreciation, but the real value of exports has merely stopped falling. We are not yet at the stage where export volume has increased due to yen depreciation making Japanese exports more competitive. However, such an effect can be anticipated, and we think it will probably take six months to a year. Now could be the time when large changes in volumes will start to be seen.

Figure 29. Nominal exports and imports



Source: MoF, Citi Research.

Figure 30. Industrial production, inventory, exports



Source: METI, Citi Research.

## Public spending

### FY12 supplementary budget implementation to gather pace

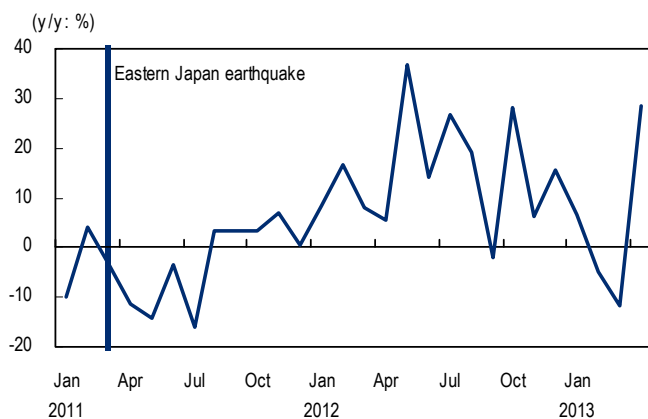
Of the initiatives in "Emergency Economic Measures for The Revitalization of the Japanese Economy" formulated in January, contracts were in place with private sector firms and work underway at just 61.3% as of April. It seems the real boost to the economy from these emergency measures is yet to come. In April, the value of

public works contracts (a leading indicator for public spending) grew 28.6% YoY (Figure 31).

#### Government recognizes severity of aging infrastructure

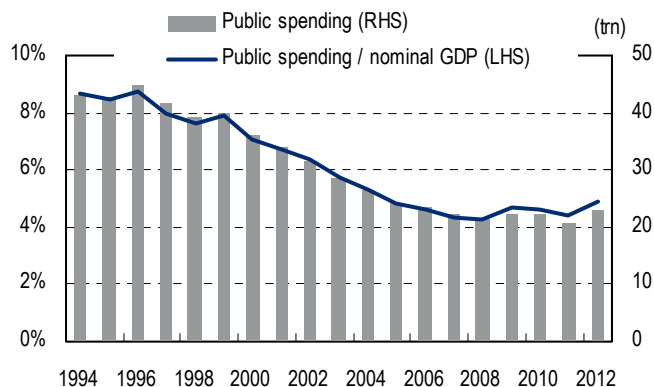
The problem of aging infrastructure is starting to be widely recognized within the government. The Council on Economic and Fiscal Policy and the Industrial Competitiveness Council have discussed a PFI-based response, and this is expected to form a pillar of the government's growth strategy. These developments also point to growth for public spending.

Figure 31. Public works construction contract amount



Source: EJCS, Citi Research.

Figure 32. Public spending versus nominal GDP



Source: Cabinet Office, Citi Research.



# Investment strategy

## Yen weakness/equity strength like to persist

We have argued that a medium-term upward trend has started for Japanese stocks, driven by the Abenomics policies aimed at defeating deflation (see our March 8 report, [Japan Equity Strategist - Abenomics gets going](#)). We maintain this view. There are three reasons we believe the upward trend will continue.

### Evidence of Abenomics' benefits can win over skeptics

First, as discussed earlier, the effect of Abenomics is likely to become more pronounced. We think this will cause a shift in expectations among the investors and members of the general public who were skeptical about Abenomics. This would likely bring about further yen depreciation and stock market gains.

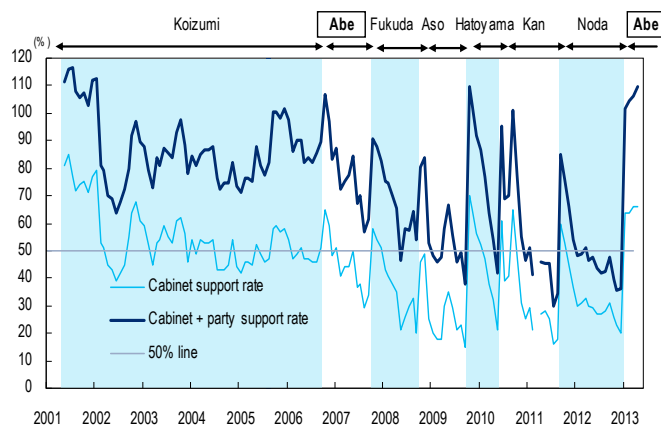
### Upper House election victory could boost administration's long-term prospects

Second, the stage is set for Abenomics to get a sustained run. The Abe cabinet and the LDP have high approval ratings and, if victorious at the Upper House election in July, PM Abe will not need to face another election for three years unless he decides to dissolve the Lower House. The Abe cabinet is likely to be able to continue to pursue Abenomics as it seems poised to be the longest-running administration since that of Junichiro Koizumi. Moreover, Bank of Japan governor Haruhiko Kuroda has just started a five-year term. There is some need for caution, however, regarding the potential impact on the Abe administration's approval ratings from discussions of constitutional reform.

### Excess recovery in US

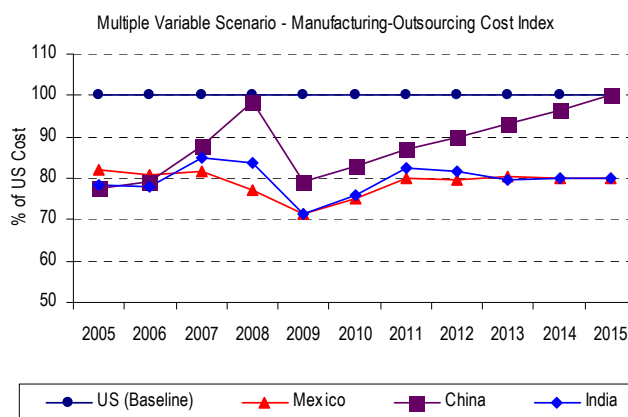
Finally, a major recovery is expected for the US economy. In 2011, our US strategist Tobias Levkovich identified four growth drivers for the US: 1) a housing market recovery; 2) the shale gas revolution; 3) a US manufacturing industry recovery; and 4) growth in investment in mobile technology infrastructure, and forecast a new bull market in the US in 2013 (Figure 34; for more, please see the December 14, 2011 report, ["Equity Strategy - Special Report - The Raging Bull Thesis"](#)).

Figure 33. Party and cabinet support rates



Note: As of April 2013. Excluding ad hoc surveys. There was no survey in March 2011 due to the disaster.  
Source: NHK opinion polls, Citi Research.

Figure 34. Outsourcing index

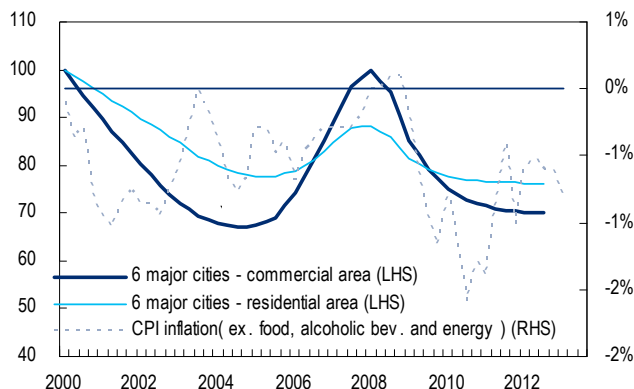


Source: AlixPartners, Citi Research.

### 2007 market cap level is a stepping stone

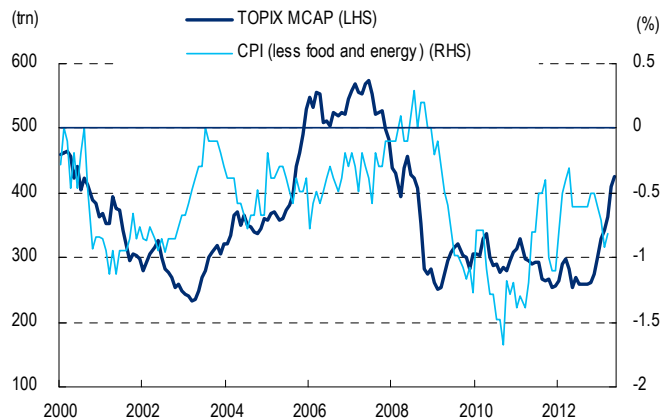
Real estate prices and the market cap of TSE1-listed firms peaked between 2007 and 1H 2008. Slightly later, CPI (ex. food and energy) marked a YoY peak, though even that was only +0.2% (Figures 35 and 36). It looks likely that aggregate market cap will reach the 2007 level before inflation hits the 2% target.

Figure 35. Real estate prices and CPI (excluding food and energy)



Source: Datastream, Astra Manager, Citi Research.

Figure 36. TOPIX market cap and CPI



Source: Datastream, Astra Manager, Citi Research.

## Financials have relatively large upside

### Financial sector market cap diverges significantly from pre-Lehman peak

Our sector view has not changed substantially from the view in our April 15 report, [Japan Equity Strategist - Quantitative and qualitative easing and Japanese equities](#). Market cap divergence from the pre-Lehman crisis peak is especially large at financials like brokers, other financing firms, banks, and insurance (Figures 37 and 38). In our view, these sectors stand to benefit from domestic economic recovery caused by Abenomics-driven asset price increases. As such, we think upside potential will remain larger for these sectors than for others.

Figure 37. Rate of divergence from the 2006-2008 market cap peak by sector (1)

	Sector	Divergence from the 2006-2008 peak (A)	Gain versus TOPIX since November 14 (B)	Divergence from the 2006-2008 peak in RP (C)	A - C
1	Marine Transportation	141.5%	35.6%	532.1%	-390.6%
2	Iron & Steel	116.4%	5.0%	236.1%	-119.7%
3	Other Products	101.8%	-28.1%	107.4%	-5.7%
4	Electric Power & Gas	90.8%	3.3%	NA	NA
5	<b>Other Financing Business</b>	<b>84.5%</b>	<b>23.4%</b>	<b>91.1%</b>	<b>-6.5%</b>
6	Textiles & Apparels	79.5%	-12.0%	67.1%	12.4%
7	Pulp & Paper	72.9%	-17.7%	70.6%	2.3%
8	Nonferrous Metals	72.1%	-13.1%	72.5%	-0.4%
9	Glass & Ceramics	71.3%	-13.2%	81.4%	-10.1%
10	<b>Securities</b>	<b>71.1%</b>	<b>132.2%</b>	<b>108.2%</b>	<b>-37.1%</b>
11	Oil & Coal Products	62.5%	-34.4%	44.9%	17.7%
12	Financials	61.9%	NA	25.6%	36.4%
13	<b>Banks</b>	<b>59.4%</b>	<b>16.0%</b>	<b>4.4%</b>	<b>55.0%</b>
14	Electric Appliances	55.5%	-3.4%	94.5%	-39.0%
15	Fishery, Agriculture & Forestry	52.1%	-27.4%	16.0%	36.1%
16	Mining	49.3%	-48.0%	-4.9%	54.1%
17	<b>Insurance</b>	<b>42.0%</b>	<b>2.3%</b>	<b>41.9%</b>	<b>0.1%</b>
18	Wholesale Trade	39.9%	-25.1%	16.1%	23.8%
19	Precision Instruments	39.5%	-10.7%	52.9%	-13.4%

Note: As of May 10. Rate of divergence from the 2006-2008 peak calculated by subtracting the natural log of the 2006-2008 peak market cap from the natural log of the current market cap.

Source: Astra Manager, Citi Research.

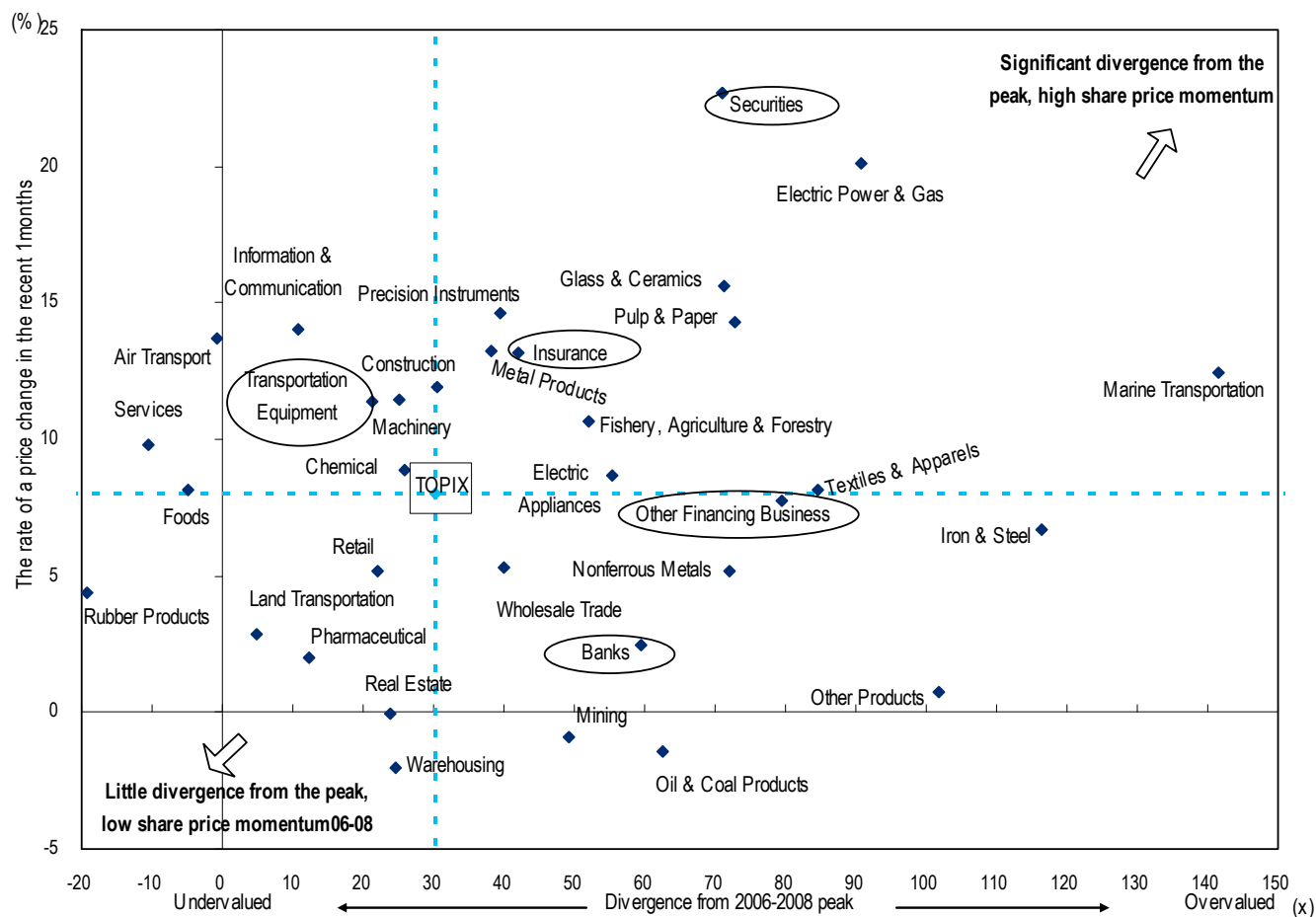
Figure 38. Rate of divergence from the 2006-2008 market cap peak by sector (2)

	Sector	Divergence from the 2006-2008 peak (A)	Gain versus TOPIX since November 14 (B)	Divergence from the 2006-2008 peak in RP (C)	A - C
20	Metal Products	38.3%	-11.2%	35.3%	2.9%
21	Manufacturing	35.7%	NA	51.1%	-15.4%
22	Construction	30.4%	-9.3%	5.7%	24.7%
23	TSE1	30.2%	NA	29.8%	0.4%
24	Chemical	26.0%	-8.8%	31.3%	-5.3%
25	Machinery	25.0%	12.2%	33.9%	-8.9%
26	Warehousing	24.7%	3.6%	14.0%	10.8%
27	Real Estate	23.8%	36.7%	52.1%	-28.2%
28	Retail	21.9%	-6.4%	-12.0%	33.9%
29	Transportation Equipment	21.4%	20.2%	40.2%	-18.8%
30	Nonmanufacturing	17.9%	NA	14.9%	3.1%
31	Pharmaceutical	12.3%	-25.3%	26.0%	-13.8%
32	Information & Communication	10.8%	-8.2%	-8.0%	18.7%
33	Land Transportation	4.9%	-6.3%	2.0%	3.0%
34	Air Transport	-0.7%	-39.5%	-66.6%	66.0%
35	Foods	-4.8%	-16.2%	-23.7%	18.9%
36	Services	-10.5%	-5.7%	-17.4%	6.9%
37	Rubber Products	-19.1%	37.7%	-26.6%	7.5%

Note: As of May 10. Rate of divergence from the 2006-2008 peak calculated by subtracting the natural log of the 2006-2008 peak market cap from the natural log of the current market cap.

Source: Astra Manager, Citi Research.

Figure 39. Rate of divergence from the 2006-2008 market cap peak and share price performance over the past month



Source: Astra Manger, Citi Research.

### Still highlighting auto-related stocks among manufacturers

In the manufacturing sector, we continue to highlight auto-related stocks because they remain competitive and appear well placed to benefit from US economic recovery. Major automakers are increasing FY13 capex budgets, in part because yen depreciation has made overseas investment more expensive in yen terms. The names on which we have a Buy (1) rating and which we believe stand to benefit from increased auto-related capex are Amada, Mori Seiki, and Komatsu (Figure 43).

Figure 40. Capex budget at major automakers

Capex budget	TOYOTA	HONDA	Nissan	MAZDA MOTOR	FUJI HEAVY INDUSTRIES
FY12 actuals	852.7	593.6	524.5	77.2	70.2
FY13 budget	910.0	700.0	570.0	130.0	67.0

Source: Company data, Citi Research.

## Growth strategy/structural reform-related names

### News flows on growth strategy likely to grow until June formulation

The government plans to formulate its growth strategy ahead of the G8 leader summit scheduled for June 17-18. News regarding the strategy will increase heading as we head toward that date, and potential beneficiaries will likely come more into the spotlight.

### Spotlight also on Council for Regulatory Reform discussions

The growth strategy is expected to incorporate some of the reforms discussed by the Council on Regulatory Reform. Refer to our May 8 report [Japan Equity Strategist - Regulatory Reform Committee debate and Japanese equities](#) for a discussion of the main items the council are looking at and related companies.

### Strategy could include Abenomics special zones, PPP-based infrastructure building/management

The growth strategy is likely to incorporate so-called Abenomics strategic special zones and PPP-based infrastructure building and management. The Industrial Competitiveness Council is discussing the use of special economic zones to open up government enterprise to the private sector, bolster agriculture, and promote the development of integrated resort complexes (Figures 41 and 42).

Figure 41. Specific examples of possible regulatory/tax reforms under the Abenomics strategic special zones for extensive regulatory/tax reform (provisional title)

<b>Tokyo Prefecture</b> <ul style="list-style-type: none"> <li>○ Permit holders of overseas medical licenses to perform certain medical procedures in Japan</li> <li>○ English-speaking ambulance staff, English-speaking pharmacists, and emergency treatment call centers with multilingual capability</li> <li>○ Invite top overseas schools (K-12)</li> <li>○ Integrate the subway, run Toei lines 24 hours</li> <li>○ Move Employment Security Bureau employment support division to regional management/open up to private sector</li> <li>○ <b>Integrated resorts</b></li> <li>○ Relaxing of town planning, plot ratio/use regulations at national, regional, and local level</li> </ul>	<b>Osaka Prefecture and Osaka City</b> <ul style="list-style-type: none"> <li>○ <b>Substantial reductions to corporate tax in innovation zones</b></li> <li>○ Fundamental improvement of exemptions for donations to research institutes, etc.</li> <li>○ Lift ban on publicly established/privately-run schools</li> <li>○ <b>Integrated resorts</b></li> <li>○ Privatization/regional management aimed at making port more competitive</li> </ul>
<b>Special agricultural zones (agricultural production corporations in Chubu region)</b> <ul style="list-style-type: none"> <li>○ <b>Exemption from agricultural production corporation requirements</b></li> <li>○ Application of credit guarantee associations to agriculture</li> <li>○ Preferential tax system for agricultural land</li> </ul>	<b>Aichi Prefecture</b> <ul style="list-style-type: none"> <li>○ <b>Toll road concession zones</b></li> <li>○ <b>Substantial reduction of corporate tax (to the lowest in Asia) for aerospace business clusters</b></li> <li>○ Move Employment Security Bureau employment support division to regional management/open up to private sector</li> <li>○ Relax regulations on bringing in high-quality foreign workers</li> <li>○ Car testing on public roads</li> </ul>
<b>Others</b> <ul style="list-style-type: none"> <li>○ Future-focused employment zones (relax working hour regulations, project-based employment, etc.)</li> </ul>	<b>Medical tourism (medical corporations)</b> <ul style="list-style-type: none"> <li>○ Scrap hospital bed restrictions</li> <li>○ Mixed medical treatment</li> </ul>

Source: Council for Industrial Competitiveness, Citi Research.

Figure 42. Major items in growth strategy and structural reforms, potentially related companies

Growth strategy/structural reform	Main points	Potentially related companies
Opening up government operations to private sector	Promote the opening up to the private structure of previously government-run infrastructure which entails usage fees (airports, toll roads, water/sewage systems, public subway lines, etc.)	9202 ANA HOLDINGS, 8031 MITSUI, 1812 KAJIMA, 1802 OBAYASHI, 1884 NIPPON ROAD
Exporting infrastructure overseas	Exporting nuclear power technology overseas	6501 HITACHI, 6502 TOSHIBA, 7011 MITSUBISHI HEAVY INDUSTRIES, 7013 IHI, 7004 HITACHI ZOSEN, 5631 JAPAN STEEL WORKS
Agriculture/TPP	Establish special agricultural zones which are exempt from production adjustments; establish regulatory exceptions, including for the requirements for agriculture production corporations. Implement financing support measures and a tax system to promote concentration of agriculture.	6326 KUBOTA, 6310 ISEKI, 4997 NIHON NOHYAKU, 4996 KUMIAI CHEMICAL INDUSTRY, 4005 SUMITOMO CHEMICAL

Source: Council on Economic and Fiscal Policy, Council for Industrial Competitiveness, Citi Research.

**We focus on agriculture, aging infrastructure countermeasures, and nuclear issues**

In the context of growth strategy and structural reforms, we focus on three areas where there is likely to be substantial impact. The first is agriculture, where even without any moves by domestic political leaders, political clout is likely to be eroded to some degree by external pressure exerted via the TPP. The second is PFI-based and other initiatives to address the issue of aging infrastructure, which is increasingly being recognized as a serious problem that directly affects citizen safety. The third is the restart of nuclear plants and export of nuclear technology, which we expect to gradually progress now that two years have passed since the March 11, 2011 disaster.

Figure 43. Companies that could benefit from growth strategy

	Company	Sector	MCAP (¥bn)	Share price (¥)	FY13 PE (X)	Divergence from 2006-2008 peak (%)	3m TOPIX relative change (%)	Rating
Rise in auto-related capex	6113 AMADA	Machinery	303	764	50.6	70.6	8.3	1
	6141 MORI SEIKI	Machinery	150	1,267	23.1	100.3	0.4	1
	6301 KOMATSU	Machinery	2,738	2,785	13.7	38.8	-10.1	1
Opening public sector businesses to the private sector	9202 ANA HOLDINGS	Air Trans.	742	211	14.9	22.3	-17.1	1
	8031 MITSUI	Whsle Trade	2,590	1,416	6.5	78.4	-24.5	1
	1812 KAJIMA	Construction	329	311	17.3	NA	-18.1	2
	1802 OBAYASHI	Construction	439	609	38.3	47.0	3.4	2
	1884 NIPPON ROAD	Construction	59	607	21.9	NA	18.8	NR
Nuclear exports, restarts	6501 HITACHI	Elec. App.	3,118	645	14.2	2.4	-3.6	1
	6502 TOSHIBA	Elec. App.	2,085	492	16.0	46.2	-6.2	1
	7011 MITSUBISHI HEAVY INDUSTRIES	Machinery	2,345	695	22.1	22.8	10.1	2
	7013 IHI	Machinery	538	367	19.9	30.0	22.7	NR
	7004 HITACHI ZOSEN	Machinery	126	158	13.3	40.1	-14.4	NR
	5631 JAPAN STEEL WORKS	Machinery	228	615	26.9	148.9	0.4	NR
	6326 KUBOTA	Machinery	1,802	1,434	23.7	-4.8	13.3	2
TPP, agriculture	6310 ISEKI	Machinery	83	359	18.3	38.7	13.8	NR
	4997 NIHON NOHYAKU	Chemicals	66	940	17.8	NA	35.9	NR
	4996 KUMIAI CHEMICAL INDUSTRY	Chemicals	57	655	24.8	NA	5.3	NR
	4005 SUMITOMO CHEMICAL	Chemicals	568	343	16.3	114.0	-6.1	1
	6417 SANKYO	Machinery	438	4,485	21.9	60.1	-2.7	2
Integrated resorts	6460 SEGA SAMMY HOLDINGS	Machinery	697	2,617	16.4	68.6	41.0	1
	7832 NAMCO BANDAI HOLDINGS	Other Prod.	376	1,695	16.0	31.2	-7.5	1
	9766 KONAMI	Inf.&Com.	329	2,295	22.4	55.0	-2.5	1
	6418 JAPAN CASH MACHINE	Machinery	50	1,669	34.1	NA	82.2	NR
	4676 FUJII MEDIA HOLDINGS	Inf.&Com.	532	225,000	21.3	54.7	29.4	1

Note: As of May 10. Based on Toyo Keizai forecasts. Rate of divergence from the 2006-2008 peak calculated by subtracting the natural log of the 2006-2008 peak market cap from the natural log of the current market cap.

Source: Astra Manager, Citi Research.

## Appendix A-1

### Analyst Certification

The research analyst(s) primarily responsible for the preparation and content of this research report are named in bold text in the author block at the front of the product except for those sections where an analyst's name appears in bold alongside content which is attributable to that analyst. Each of these analyst(s) certify, with respect to the section(s) of the report for which they are responsible, that the views expressed therein accurately reflect their personal views about each issuer and security referenced and were prepared in an independent manner, including with respect to Citigroup Global Markets Inc and its affiliates. No part of the research analyst's compensation was, is, or will be, directly or indirectly, related to the specific recommendation(s) or view(s) expressed by that research analyst in this report.

### IMPORTANT DISCLOSURES

Citigroup Global Markets Inc. or its affiliates has received compensation for investment banking services provided within the past 12 months from Komatsu, Hitachi, Toshiba, Sumitomo Chemical, Mitsui & Co., Mitsubishi Heavy Industries.

Citigroup Global Markets Inc. or an affiliate received compensation for products and services other than investment banking services from Fuji Media Holdings, Komatsu, Kajima, Kubota, Obayashi, Hitachi, Toshiba, Sega Sammy Holdings, Amada, Namco Bandai Holdings, Sumitomo Chemical, Mitsui & Co., Mitsubishi Heavy Industries, ANA Holdings in the past 12 months.

Citigroup Global Markets Inc. currently has, or had within the past 12 months, the following as investment banking client(s): Komatsu, Hitachi, Toshiba, Sumitomo Chemical, Mitsui & Co., Mitsubishi Heavy Industries.

Citigroup Global Markets Inc. currently has, or had within the past 12 months, the following as clients, and the services provided were non-investment-banking, securities-related: Komatsu, Kajima, Kubota, Hitachi, Toshiba, Amada, Namco Bandai Holdings, Sumitomo Chemical, Mitsui & Co., Mitsubishi Heavy Industries, ANA Holdings.

Citigroup Global Markets Inc. currently has, or had within the past 12 months, the following as clients, and the services provided were non-investment-banking, non-securities-related: Fuji Media Holdings, Komatsu, Kajima, Kubota, Obayashi, Hitachi, Toshiba, Sega Sammy Holdings, Amada, Namco Bandai Holdings, Sumitomo Chemical, Mitsui & Co., Mitsubishi Heavy Industries, ANA Holdings.

Analysts' compensation is determined based upon activities and services intended to benefit the investor clients of Citigroup Global Markets Inc. and its affiliates ("the Firm"). Like all Firm employees, analysts receive compensation that is impacted by overall firm profitability which includes investment banking revenues.

The Firm is a market maker in the publicly traded equity securities of Komatsu, Sega Sammy Holdings, ANA Holdings.

For important disclosures (including copies of historical disclosures) regarding the companies that are the subject of this Citi Research product ("the Product"), please contact Citi Research, 388 Greenwich Street, 28th Floor, New York, NY, 10013, Attention: Legal/Compliance [E6WYB6412478]. In addition, the same important disclosures, with the exception of the Valuation and Risk assessments and historical disclosures, are contained on the Firm's disclosure website at [https://www.citivelocity.com/cvr/eppublic/citi\\_research\\_disclosures](https://www.citivelocity.com/cvr/eppublic/citi_research_disclosures). Valuation and Risk assessments can be found in the text of the most recent research note/report regarding the subject company. Historical disclosures (for up to the past three years) will be provided upon request.

### Citi Research Equity Ratings Distribution

**Data current as of 31 Mar 2013**

	12 Month Rating			Relative Rating		
	Buy	Hold	Sell	Buy	Hold	Sell
Citi Research Global Fundamental Coverage	48%	39%	12%	7%	87%	7%
% of companies in each rating category that are investment banking clients	53%	49%	43%	65%	49%	51%

### Guide to Citi Research Fundamental Research Investment Ratings:

Citi Research stock recommendations include an investment rating and an optional risk rating to highlight high risk stocks.

**Risk rating** takes into account both price volatility and fundamental criteria. Stocks will either have no risk rating or a High risk rating assigned.

**Investment Ratings:** Citi Research investment ratings are Buy, Neutral and Sell. Our ratings are a function of analyst expectations of expected total return ("ETR") and risk. ETR is the sum of the forecast price appreciation (or depreciation) plus the dividend yield for a stock within the next 12 months. The Investment rating definitions are: Buy (1) ETR of 15% or more or 25% or more for High risk stocks; and Sell (3) for negative ETR. Any covered stock not assigned a Buy or a Sell is a Neutral (2). For stocks rated Neutral (2), if an analyst believes that there are insufficient valuation drivers and/or investment catalysts to derive a positive or negative investment view, they may elect with the approval of Citi Research management not to assign a target price and, thus, not derive an ETR. Analysts may place covered stocks "Under Review" in response to exceptional circumstances (e.g. lack of information critical to the analyst's thesis) affecting the company and / or trading in the company's securities (e.g. trading suspension). As soon as practically possible, the analyst will publish a note re-establishing a rating and investment thesis. To satisfy regulatory requirements, we correspond Under Review and Neutral to Hold in our ratings distribution table for our 12-month fundamental rating system. However, we reiterate that we do not consider Under Review to be a recommendation.

**Relative three-month ratings:** Citi Research may also assign a three-month relative call (or rating) to a stock to highlight expected out-performance (most preferred) or under-performance (least preferred) versus the geographic and industry sector over a 3 month period. The relative call may highlight a specific near-term catalyst or event impacting the company or the market that is anticipated to have a short-term price impact on the equity securities of the company. Absent any specific catalyst the analyst(s) will indicate the most and least preferred stocks in the universe of stocks under consideration, explaining the basis for this short-term view. This three-month view may be different from and does not affect a stock's fundamental equity rating, which reflects a longer-term total absolute return expectation. For purposes of NASD/NYSE ratings-distribution-disclosure rules, most preferred calls correspond to a buy recommendation and least preferred calls correspond to a sell recommendation. Any stock not assigned to a most preferred or least preferred call is considered non-relative-rated (NRR). For purposes of NASD/NYSE ratings-distribution-disclosure rules we correspond NRR to Hold in our ratings distribution table for our 3-month relative rating system. However, we reiterate that we do not consider NRR to be a recommendation.



Prior to October 8, 2011, the firm's stock recommendation system included a risk rating and an investment rating. **Risk ratings**, which took into account both price volatility and fundamental criteria, were: Low (L), Medium (M), High (H), and Speculative (S). **Investment Ratings** of Buy, Hold and Sell were a function of the Citi Research expectation of total return (forecast price appreciation and dividend yield within the next 12 months) and risk rating. Additionally, analysts could have placed covered stocks "Under Review" in response to exceptional circumstances (e.g. lack of information critical to the analyst's thesis) affecting the company and/or trading in the company's securities (e.g. trading suspension). Stocks placed "Under Review" were monitored daily by management and as practically possible, the analyst published a note re-establishing a rating and investment thesis. For securities in developed markets (US, UK, Europe, Japan, and Australia/New Zealand), investment ratings were: Buy (1) (expected total return of 10% or more for Low-Risk stocks, 15% or more for Medium-Risk stocks, 20% or more for High-Risk stocks, and 35% or more for Speculative stocks); Hold (2) (0%-10% for Low-Risk stocks, 0%-15% for Medium-Risk stocks, 0%-20% for High-Risk stocks, and 0%-35% for Speculative stocks); and Sell (3) (negative total return). For securities in emerging markets (Asia Pacific, Emerging Europe/Middle East/Africa, and Latin America), investment ratings were: Buy (1) (expected total return of 15% or more for Low-Risk stocks, 20% or more for Medium-Risk stocks, 30% or more for High-Risk stocks, and 40% or more for Speculative stocks); Hold (2) (5%-15% for Low-Risk stocks, 10%-20% for Medium-Risk stocks, 15%-30% for High-Risk stocks, and 20%-40% for Speculative stocks); and Sell (3) (5% or less for Low-Risk stocks, 10% or less for Medium-Risk stocks, 15% or less for High-Risk stocks, and 20% or less for Speculative stocks).

Investment ratings are determined by the ranges described above at the time of initiation of coverage, a change in investment and/or risk rating, or a change in target price (subject to limited management discretion). At other times, the expected total returns may fall outside of these ranges because of market price movements and/or other short-term volatility or trading patterns. Such interim deviations from specified ranges will be permitted but will become subject to review by Research Management. Your decision to buy or sell a security should be based upon your personal investment objectives and should be made only after evaluating the stock's expected performance and risk.

#### NON-US RESEARCH ANALYST DISCLOSURES

Non-US research analysts who have prepared this report (i.e., all research analysts listed below other than those identified as employed by Citigroup Global Markets Inc.) are not registered/qualified as research analysts with FINRA. Such research analysts may not be associated persons of the member organization and therefore may not be subject to the NYSE Rule 472 and NASD Rule 2711 restrictions on communications with a subject company, public appearances and trading securities held by a research analyst account. The legal entities employing the authors of this report are listed below:

Citigroup Global Markets Japan Inc.

Kenji Abe, PhD; Shusuke Terada; Takao Kanai; Hideki Takoh; Graeme McDonald; Lucy Liu; Soichiro Fukuda; Kota Ezawa; Takashi Miyazaki; Akira Funae

Citigroup Global Markets Inc

Tobias M Levkovich

#### OTHER DISCLOSURES

Citigroup Global Markets Inc. and/or its affiliates has a significant financial interest in relation to Komatsu, Sumitomo Chemical. (For an explanation of the determination of significant financial interest, please refer to the policy for managing conflicts of interest which can be found at [www.citiVelocity.com](http://www.citiVelocity.com).)

For securities recommended in the Product in which the Firm is not a market maker, the Firm is a liquidity provider in the issuers' financial instruments and may act as principal in connection with such transactions. The Firm is a regular issuer of traded financial instruments linked to securities that may have been recommended in the Product. The Firm regularly trades in the securities of the issuer(s) discussed in the Product. The Firm may engage in securities transactions in a manner inconsistent with the Product and, with respect to securities covered by the Product, will buy or sell from customers on a principal basis.

Securities recommended, offered, or sold by the Firm: (i) are not insured by the Federal Deposit Insurance Corporation; (ii) are not deposits or other obligations of any insured depository institution (including Citibank); and (iii) are subject to investment risks, including the possible loss of the principal amount invested. Although information has been obtained from and is based upon sources that the Firm believes to be reliable, we do not guarantee its accuracy and it may be incomplete and condensed. Note, however, that the Firm has taken all reasonable steps to determine the accuracy and completeness of the disclosures made in the Important Disclosures section of the Product. The Firm's research department has received assistance from the subject company(ies) referred to in this Product including, but not limited to, discussions with management of the subject company(ies). Firm policy prohibits research analysts from sending draft research to subject companies. However, it should be presumed that the author of the Product has had discussions with the subject company to ensure factual accuracy prior to publication. All opinions, projections and estimates constitute the judgment of the author as of the date of the Product and these, plus any other information contained in the Product, are subject to change without notice. Prices and availability of financial instruments also are subject to change without notice. Notwithstanding other departments within the Firm advising the companies discussed in this Product, information obtained in such role is not used in the preparation of the Product. Although Citi Research does not set a predetermined frequency for publication, if the Product is a fundamental research report, it is the intention of Citi Research to provide research coverage of the/those issuer(s) mentioned therein, including in response to news affecting this issuer, subject to applicable quiet periods and capacity constraints. The Product is for informational purposes only and is not intended as an offer or solicitation for the purchase or sale of a security. Any decision to purchase securities mentioned in the Product must take into account existing public information on such security or any registered prospectus.

Investing in non-U.S. securities, including ADRs, may entail certain risks. The securities of non-U.S. issuers may not be registered with, nor be subject to the reporting requirements of the U.S. Securities and Exchange Commission. There may be limited information available on foreign securities. Foreign companies are generally not subject to uniform audit and reporting standards, practices and requirements comparable to those in the U.S. Securities of some foreign companies may be less liquid and their prices more volatile than securities of comparable U.S. companies. In addition, exchange rate movements may have an adverse effect on the value of an investment in a foreign stock and its corresponding dividend payment for U.S. investors. Net dividends to ADR investors are estimated, using withholding tax rates conventions, deemed accurate, but investors are urged to consult their tax advisor for exact dividend computations. Investors who have received the Product from the Firm may be prohibited in certain states or other jurisdictions from purchasing securities mentioned in the Product from the Firm. Please ask your Financial Consultant for additional details. Citigroup Global Markets Inc. takes responsibility for the Product in the United States. Any orders by US investors resulting from the information contained in the Product may be placed only through Citigroup Global Markets Inc.

**Important Disclosures for Morgan Stanley Smith Barney LLC Customers:** Morgan Stanley & Co. LLC (Morgan Stanley) research reports may be available about the companies that are the subject of this Citi Research research report. Ask your Financial Advisor or use smithbarney.com to view any available Morgan Stanley research reports in addition to Citi Research research reports.

Important disclosure regarding the relationship between the companies that are the subject of this Citi Research research report and Morgan Stanley Smith Barney LLC and its affiliates are available at the Morgan Stanley Wealth Management disclosure website at [www.morganstanley.com/online/researchdisclosures](http://www.morganstanley.com/online/researchdisclosures).

For Morgan Stanley and Citigroup Global Markets, Inc. specific disclosures, you may refer to [www.morganstanley.com/researchdisclosures](http://www.morganstanley.com/researchdisclosures) and [https://www.citivelocity.com/cvr/eppublic/citi\\_research\\_disclosures](https://www.citivelocity.com/cvr/eppublic/citi_research_disclosures).

This Citi Research research report has been reviewed and approved on behalf of Morgan Stanley Smith Barney LLC. This review and approval was conducted by the same person who reviewed this research report on behalf of Citi Research. This could create a conflict of interest.

**The Citigroup legal entity that takes responsibility for the production of the Product is the legal entity which the first named author is employed by.** The Product is made available in **Australia** through Citi Global Markets Australia Pty Ltd. (ABN 64 003 114 832 and AFSL No. 240992), participant of the ASX Group and regulated by the Australian Securities & Investments Commission. Citigroup Centre, 2 Park Street, Sydney, NSW 2000. The Product is made available in Australia to Private Banking wholesale clients through Citigroup Pty Limited (ABN 88 004 325 080 and AFSL 238098). Citigroup Pty Limited provides all financial product advice to Australian Private Banking wholesale clients through bankers and relationship managers. If there is any doubt about the suitability of investments held in Citigroup Private Bank accounts, investors should contact the Citigroup Private Bank in Australia. Citigroup companies may compensate affiliates and their representatives for providing products and services to clients. The Product is made available in **Brazil** by Citigroup Global Markets Brasil - CCTVM SA, which is regulated by CVM - Comissão de Valores Mobiliários, BACEN - Brazilian Central Bank, APIMEC - Associação dos Analistas e Profissionais de Investimento do Mercado de Capitais and ANBID - Associação Nacional dos Bancos de Investimento. Av. Paulista, 1111 - 11º andar - CEP. 01311920 - São Paulo - SP. If the Product is being made available in certain provinces of **Canada** by Citigroup Global Markets (Canada) Inc. ("CGM Canada"), CGM Canada has approved the Product. Citigroup Place, 123 Front Street West, Suite 1100, Toronto, Ontario M5J 2M3. This product is available in **Chile** through Banchile Corredores de Bolsa S.A., an indirect subsidiary of Citigroup Inc., which is regulated by the Superintendencia de Valores y Seguros. Agustinas 975, piso 2, Santiago, Chile. The Product is made available in **France** by Citigroup Global Markets Limited, which is authorised and regulated by Financial Services Authority. 1-5 Rue Paul Cézanne, 8ème, Paris, France. The Product is distributed in **Germany** by Citigroup Global Markets Deutschland AG ("CGMD"), which is regulated by Bundesanstalt fuer Finanzdienstleistungsaufsicht (BaFin). CGMD, Reuterweg 16, 60323 Frankfurt am Main. Research which relates to "securities" (as defined in the Securities and Futures Ordinance (Cap. 571 of the Laws of Hong Kong)) is issued in **Hong Kong** by, or on behalf of, Citigroup Global Markets Asia Limited which takes full responsibility for its content. Citigroup Global Markets Asia Ltd. is regulated by Hong Kong Securities and Futures Commission. If the Research is made available through Citibank, N.A., Hong Kong Branch, for its clients in Citi Private Bank, it is made available by Citibank N.A., Citibank Tower, Citibank Plaza, 3 Garden Road, Hong Kong. Citibank N.A. is regulated by the Hong Kong Monetary Authority. Please contact your Private Banker in Citibank N.A., Hong Kong, Branch if you have any queries on or any matters arising from or in connection with this document. The Product is made available in **India** by Citigroup Global Markets India Private Limited, which is regulated by Securities and Exchange Board of India. Bakhtawar, Nariman Point, Mumbai 400-021. The Product is made available in **Indonesia** through PT Citigroup Securities Indonesia. 5/F, Citibank Tower, Bapindo Plaza, Jl. Jend. Sudirman Kav. 54-55, Jakarta 12190. Neither this Product nor any copy hereof may be distributed in Indonesia or to any Indonesian citizens wherever they are domiciled or to Indonesian residents except in compliance with applicable capital market laws and regulations. This Product is not an offer of securities in Indonesia. The securities referred to in this Product have not been registered with the Capital Market and Financial Institutions Supervisory Agency (BAPEPAM-LK) pursuant to relevant capital market laws and regulations, and may not be offered or sold within the territory of the Republic of Indonesia or to Indonesian citizens through a public offering or in circumstances which constitute an offer within the meaning of the Indonesian capital market laws and regulations. The Product is made available in **Israel** through Citibank NA, regulated by the Bank of Israel and the Israeli Securities Authority. Citibank, N.A. Platinum Building, 21 Ha'arba'ah St, Tel Aviv, Israel. The Product is made available in **Italy** by Citigroup Global Markets Limited, which is authorised and regulated by Financial Services Authority. Via dei Mercanti, 12, Milan, 20121, Italy. The Product is made available in **Japan** by Citigroup Global Markets Japan Inc. ("CGMJ"), which is regulated by Financial Services Agency, Securities and Exchange Surveillance Commission, Japan Securities Dealers Association, Tokyo Stock Exchange and Osaka Securities Exchange. Shin-Marunouchi Building, 1-5-1 Marunouchi, Chiyoda-ku, Tokyo 100-6520 Japan. If the Product was distributed by SMBC Nikko Securities Inc. it is being so distributed under license. In the event that an error is found in an CGMJ research report, a revised version will be posted on the Firm's Citi Velocity website. If you have questions regarding Citi Velocity, please call (81 3) 6270-3019 for help. The Product is made available in **Korea** by Citigroup Global Markets Korea Securities Ltd., which is regulated by the Financial Services Commission, the Financial Supervisory Service and the Korea Financial Investment Association (KOFIA). Citibank Building, 39 Da-dong, Jung-gu, Seoul 100-180, Korea. KOFIA makes available registration information of research analysts on its website. Please visit the following website if you wish to find KOFIA registration information on research analysts of Citigroup Global Markets Korea Securities Ltd. <http://dis.kofia.or.kr/fs/dis2/fundMgr/DISFundMgrAnalystPop.jsp?companyCd2=A03030&pageDiv=02>. The Product is made available in Korea by Citibank Korea Inc., which is regulated by the Financial Services Commission and the Financial Supervisory Service. Address is Citibank Building, 39 Da-dong, Jung-gu, Seoul 100-180, Korea. The Product is made available in **Malaysia** by Citigroup Global Markets Malaysia Sdn Bhd (Company No. 460819-D) ("CGMM") to its clients and CGMM takes responsibility for its contents. CGMM is regulated by the Securities Commission of Malaysia. Please contact CGMM at Level 43 Menara Citibank, 165 Jalan Ampang, 50450 Kuala Lumpur, Malaysia in respect of any matters arising from, or in connection with, the Product. The Product is made available in **Mexico** by Acciones y Valores Banamex, S.A. De C. V., Casa de Bolsa, Integrante del Grupo Financiero Banamex ("Accival") which is a wholly owned subsidiary of Citigroup Inc. and is regulated by Comisión Nacional Bancaria y de Valores. Reforma 398, Col. Juárez, 06600 Mexico, D.F. In **New Zealand** the Product is made available to 'wholesale clients' only as defined by s5C(1) of the Financial Advisers Act 2008 ('FAA') through Citigroup Global Markets Australia Pty Ltd (ABN 64 003 114 832 and AFSL No. 240992), an overseas financial adviser as defined by the FAA, participant of the ASX Group and regulated by the Australian Securities & Investments Commission. Citigroup Centre, 2 Park Street, Sydney, NSW 2000. The Product is made available in **Pakistan** by Citibank N.A. Pakistan branch, which is regulated by the State Bank of Pakistan and Securities Exchange Commission, Pakistan. AWT Plaza, 1.1. Chundrigar Road, P.O. Box 4889, Karachi-74200. The Product is made available in the **Philippines** through Citicorp Financial Services and Insurance Brokerage Philippines, Inc., which is regulated by the Philippines Securities and Exchange Commission. 20th Floor Citibank Square Bldg. The Product is made available in the Philippines through Citibank NA Philippines branch, Citibank Tower, 8741 Paseo De Roxas, Makati City, Manila. Citibank NA Philippines NA is regulated by The Bangko Sentral ng Pilipinas. The Product is made available in **Poland** by Dom Maklerski Banku Handlowego SA an indirect subsidiary of Citigroup Inc., which is regulated by Komisja Nadzoru Finansowego. Dom Maklerski Banku

Handlowego S.A. ul.Senatorska 16, 00-923 Warszawa. The Product is made available in the **Russian Federation** through ZAO Citibank, which is licensed to carry out banking activities in the Russian Federation in accordance with the general banking license issued by the Central Bank of the Russian Federation and brokerage activities in accordance with the license issued by the Federal Service for Financial Markets. Neither the Product nor any information contained in the Product shall be considered as advertising the securities mentioned in this report within the territory of the Russian Federation or outside the Russian Federation. The Product does not constitute an appraisal within the meaning of the Federal Law of the Russian Federation of 29 July 1998 No. 135-FZ (as amended) On Appraisal Activities in the Russian Federation. 8-10 Gasheka Street, 125047 Moscow. The Product is made available in **Singapore** through Citigroup Global Markets Singapore Pte. Ltd. ("CGMSPL"), a capital markets services license holder, and regulated by Monetary Authority of Singapore. Please contact CGMSPL at 8 Marina View, 21st Floor Asia Square Tower 1, Singapore 018960, in respect of any matters arising from, or in connection with, the analysis of this document. This report is intended for recipients who are accredited, expert and institutional investors as defined under the Securities and Futures Act (Cap. 289). The Product is made available by The Citigroup Private Bank in Singapore through Citibank, N.A., Singapore Branch, a licensed bank in Singapore that is regulated by Monetary Authority of Singapore. Please contact your Private Banker in Citibank N.A., Singapore Branch if you have any queries on or any matters arising from or in connection with this document. This report is intended for recipients who are accredited, expert and institutional investors as defined under the Securities and Futures Act (Cap. 289). This report is distributed in Singapore by Citibank Singapore Ltd ("CSL") to selected Citigroup/Citigold Private Clients. CSL provides no independent research or analysis of the substance or in preparation of this report. Please contact your Citigroup/Citigold Private Client Relationship Manager in CSL if you have any queries on or any matters arising from or in connection with this report. This report is intended for recipients who are accredited investors as defined under the Securities and Futures Act (Cap. 289). Citigroup Global Markets (Pty) Ltd. is incorporated in the **Republic of South Africa** (company registration number 2000/025866/07) and its registered office is at 145 West Street, Sandton, 2196, Saxonwold. Citigroup Global Markets (Pty) Ltd. is regulated by JSE Securities Exchange South Africa, South African Reserve Bank and the Financial Services Board. The investments and services contained herein are not available to private customers in South Africa. The Product is made available in **Spain** by Citigroup Global Markets Limited, which is authorised and regulated by Financial Services Authority. 29 Jose Ortega Y Gasset, 4th Floor, Madrid, 28006, Spain. The Product is made available in the **Republic of China** through Citigroup Global Markets Taiwan Securities Company Ltd. ("CGMTS"), 14 and 15F, No. 1, Songzhi Road, Taipei 110, Taiwan and/or through Citibank Securities (Taiwan) Company Limited ("CSTL"), 14 and 15F, No. 1, Songzhi Road, Taipei 110, Taiwan, subject to the respective license scope of each entity and the applicable laws and regulations in the Republic of China. CGMTS and CSTL are both regulated by the Securities and Futures Bureau of the Financial Supervisory Commission of Taiwan, the Republic of China. No portion of the Product may be reproduced or quoted in the Republic of China by the press or any third parties [without the written authorization of CGMTS and CSTL]. If the Product covers securities which are not allowed to be offered or traded in the Republic of China, neither the Product nor any information contained in the Product shall be considered as advertising the securities or making recommendation of the securities in the Republic of China. The Product is for informational purposes only and is not intended as an offer or solicitation for the purchase or sale of a security or financial products. Any decision to purchase securities or financial products mentioned in the Product must take into account existing public information on such security or the financial products or any registered prospectus. The Product is made available in **Thailand** through Citicorp Securities (Thailand) Ltd., which is regulated by the Securities and Exchange Commission of Thailand. 18/F, 22/F and 29/F, 82 North Sathorn Road, Silom, Bangkok, Bangkok 10500, Thailand. The Product is made available in **Turkey** through Citibank AS which is regulated by Capital Markets Board. Tekfen Tower, Eski Büyükdere Caddesi # 209 Kat 2B, 23294 Levent, Istanbul, Turkey. In the **U.A.E**, these materials (the "Materials") are communicated by Citigroup Global Markets Limited, DIFC branch ("CGML"), an entity registered in the Dubai International Financial Center ("DIFC") and licensed and regulated by the Dubai Financial Services Authority ("DFSA") to Professional Clients and Market Counterparties only and should not be relied upon or distributed to Retail Clients. A distribution of the different Citi Research ratings distribution, in percentage terms for Investments in each sector covered is made available on request. Financial products and/or services to which the Materials relate will only be made available to Professional Clients and Market Counterparties. The Product is made available in **United Kingdom** by Citigroup Global Markets Limited, which is authorised and regulated by Financial Services Authority. This material may relate to investments or services of a person outside of the UK or to other matters which are not regulated by the FSA and further details as to where this may be the case are available upon request in respect of this material. Citigroup Centre, Canada Square, Canary Wharf, London, E14 5LB. The Product is made available in **United States** by Citigroup Global Markets Inc, which is a member of FINRA and registered with the US Securities and Exchange Commission. 388 Greenwich Street, New York, NY 10013. Unless specified to the contrary, within EU Member States, the Product is made available by Citigroup Global Markets Limited, which is regulated by Financial Services Authority. Pursuant to Comissão de Valores Mobiliários Rule 483, Citi is required to disclose whether a Citi related company or business has a commercial relationship with the subject company. Considering that Citi operates multiple businesses in more than 100 countries around the world, it is likely that Citi has a commercial relationship with the subject company.

Many European regulators require that a firm must establish, implement and make available a policy for managing conflicts of interest arising as a result of publication or distribution of investment research. The policy applicable to Citi Research's Products can be found at [https://www.citivelocity.com/cvr/eppublic/citi\\_research\\_disclosures](https://www.citivelocity.com/cvr/eppublic/citi_research_disclosures).

Compensation of equity research analysts is determined by equity research management and Citigroup's senior management and is not linked to specific transactions or recommendations.

The Product may have been distributed simultaneously, in multiple formats, to the Firm's worldwide institutional and retail customers. The Product is not to be construed as providing investment services in any jurisdiction where the provision of such services would not be permitted.

Subject to the nature and contents of the Product, the investments described therein are subject to fluctuations in price and/or value and investors may get back less than originally invested. Certain high-volatility investments can be subject to sudden and large falls in value that could equal or exceed the amount invested. Certain investments contained in the Product may have tax implications for private customers whereby levels and basis of taxation may be subject to change. If in doubt, investors should seek advice from a tax adviser. The Product does not purport to identify the nature of the specific market or other risks associated with a particular transaction. Advice in the Product is general and should not be construed as personal advice given it has been prepared without taking account of the objectives, financial situation or needs of any particular investor. Accordingly, investors should, before acting on the advice, consider the appropriateness of the advice, having regard to their objectives, financial situation and needs. Prior to acquiring any financial product, it is the client's responsibility to obtain the relevant offer document for the product and consider it before making a decision as to whether to purchase the product. With the exception of our product that is made available only to Qualified Institutional Buyers (QIBs) and other product that is made available through other distribution channels only to certain categories of clients to satisfy legal or regulatory requirements, Citi Research concurrently disseminates its research via proprietary and non-proprietary electronic distribution platforms. Periodically, individual Citi Research analysts may also opt to circulate research posted on

such platforms to one or more clients by email. Such email distribution is discretionary and is done only after the research has been disseminated via the aforementioned distribution channels. Citi Research simultaneously distributes product that is limited to QIBs only through email distribution. The level and types of services provided by Citi Research analysts to clients may vary depending on various factors such as the client's individual preferences as to the frequency and manner of receiving communications from analysts, the client's risk profile and investment focus and perspective (e.g. market-wide, sector specific, long term, short-term etc.), the size and scope of the overall client relationship with Citi and legal and regulatory constraints. Citi Research product may source data from dataCentral. dataCentral is a Citi Research proprietary database, which includes Citi estimates, data from company reports and feeds from Reuters and Datastream.

---

© 2013 Citigroup Global Markets Inc. Citi Research is a division of Citigroup Global Markets Inc. Citi and Citi with Arc Design are trademarks and service marks of Citigroup Inc. and its affiliates and are used and registered throughout the world. All rights reserved. Any unauthorized use, duplication, redistribution or disclosure of this report (the "Product"), including, but not limited to, redistribution of the Product by electronic mail, posting of the Product on a website or page, and/or providing to a third party a link to the Product, is prohibited by law and will result in prosecution. The information contained in the Product is intended solely for the recipient and may not be further distributed by the recipient to any third party. Where included in this report, MSCI sourced information is the exclusive property of Morgan Stanley Capital International Inc. (MSCI). Without prior written permission of MSCI, this information and any other MSCI intellectual property may not be reproduced, disseminated or used to create any financial products, including any indices. This information is provided on an "as is" basis. The user assumes the entire risk of any use made of this information. MSCI, its affiliates and any third party involved in, or related to, computing or compiling the information hereby expressly disclaim all warranties of originality, accuracy, completeness, merchantability or fitness for a particular purpose with respect to any of this information. Without limiting any of the foregoing, in no event shall MSCI, any of its affiliates or any third party involved in, or related to, computing or compiling the information have any liability for any damages of any kind. MSCI, Morgan Stanley Capital International and the MSCI indexes are services marks of MSCI and its affiliates. The Firm accepts no liability whatsoever for the actions of third parties. The Product may provide the addresses of, or contain hyperlinks to, websites. Except to the extent to which the Product refers to website material of the Firm, the Firm has not reviewed the linked site. Equally, except to the extent to which the Product refers to website material of the Firm, the Firm takes no responsibility for, and makes no representations or warranties whatsoever as to, the data and information contained therein. Such address or hyperlink (including addresses or hyperlinks to website material of the Firm) is provided solely for your convenience and information and the content of the linked site does not in anyway form part of this document. Accessing such website or following such link through the Product or the website of the Firm shall be at your own risk and the Firm shall have no liability arising out of, or in connection with, any such referenced website.

---

ADDITIONAL INFORMATION IS AVAILABLE UPON REQUEST

---