

India Macro View

Savings Rate Drops Sharply, Reiterate Priority for Capital Raising

- **FY12 Savings Drop Sharply; Investments continue to moderate** — Recently released CSO data indicate a sharp deceleration in savings to 30.8% of GDP from 34% in FY11, while investments slowed to 35% of GDP in FY12 from 36.8% in FY11. Given the increase in stalled projects, the relatively lower deceleration in investments is a bit of surprise. As seen on pg 2, this compares with peak savings and investment rates of 36.8% and 38.1% in FY08. Thus, despite growth slowing to a decade low, the substantial fall in savings relative to investments is key for India's widening current account deficit (CAD). Going forward, given the macro back drop, domestic savings could remain under pressure and trend lower in FY13.
- **Savings: Lower across all components** — Households are the main contributor (~73% of total), followed by private corporate sector at 23% and public sector at 4%. The 320bps fall in savings rate in FY12 is due to (2) 120bps decline in household savings to 22.3% of GDP in FY12 vs 23.5% in FY11. Sticky inflation has led to a sharp fall in financial savings which has offset the rise in physical savings and (3) 130bps drop in public sector savings to 1.3% GDP vs 2.6% in FY11 reflecting rising deficits (4) 70bps fall in corporate savings to 7.2% vs. 7.9% in FY11.

 - **Financial Savings Fall to single-digits** — An alarm bell in the savings data is the continued deceleration in financial savings, now in single digits, i.e. 8% of GDP vs 10.4% in FY11 and 12% in FY10. This can be explained by ~3 years of sticky inflation and better returns on alternate assets like gold/real estate. This brings to fore the RBI's dilemma of responding to industry demands of lowering rates to boost growth vs the need to keep the interests of savers into account.
 - **Physical Savings Edge Higher** – The uptrend in physical savings since FY09 continued in FY12, rising to 14.3% from 13.1% last year. The widening gap between household financial and physical savings has resulted in (1) annual average gold imports at 850-900 tonnes from 650-700 tonnes earlier. This is one of the key reasons for the sharp deterioration in India's current account deficit from US\$38.2bn or 2.8% of GDP in FY10 to US\$78.2bn or 4.2% of GDP in FY12. (We expect the CAD to edge higher to US\$88bn or 4.7% in FY13E). (2) Tight domestic liquidity conditions as deposit growth has come off from 16%+ to 12% currently while loan growth continues to hover in the 16% range.
- **Bottom Line** - Going forward given the macro back drop of a further widening in the CAD in FY13 (see [BOP Revisions](#)), domestic savings could trend below 30% of GDP in FY13. As discussed in [India Macroscope –The Capital Question](#), we reiterate that capital raising will be key in 2013.

Rohini Malkani
+91-22-6631-9876
rohini.malkani@citi.com

With thanks to
Abha Agarwal

WHAT'S INSIDE

- Trends in Savings – pg 2
- Implications – pg 3
- Trends in Investments – pg 4
- Statistical Snapshot – pg 5

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.

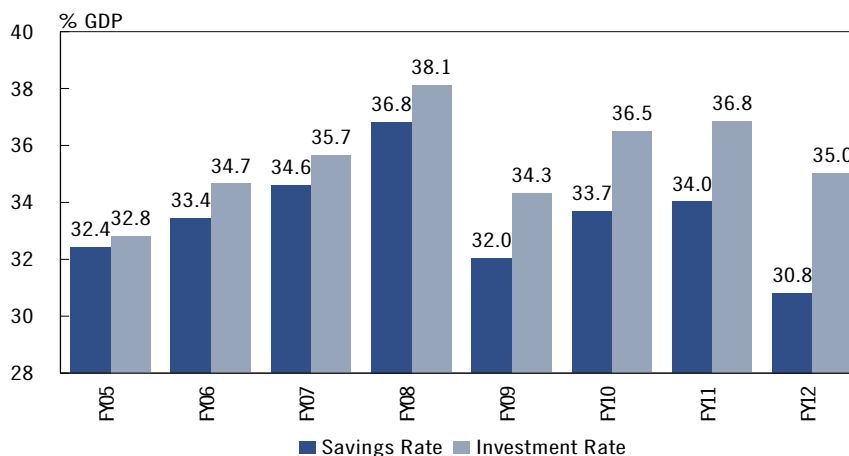
Trends in Savings

SAVINGS AND INVESTMENTS CONTINUE TO FALL IN FY12

Savings in FY12 came in lower at 30.8% GDP vs. 34% in FY11

Investments also showed moderation, at 35% in FY12 vs. 36.8% in FY11

Figure 1. Trends in Savings and Investments (% GDP)



Source: CSO

KEY TRENDS ACROSS COMPONENTS OF SAVINGS:

1. Household savings: were lower at 22.3% GDP vs 23.5% GDP in FY11

2. Corporate Sector Savings: moderated slightly to 7.2%GDP from 7.9% in FY11

3. Public Sector Savings: dropped significantly, to 1.3% GDP from 2.6% in FY12

Figure 2. Broad Categories within Savings (Rs bn at current prices, %)

	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12
TOTAL SAVINGS (I+II+III)	10,507	12,352	14,859	18,363	18,026	21,823	26,519	27,653
% to GDP	32.4	33.4	34.6	36.8	32.0	33.7	34.0	30.8
I. Household sector	7,637	8,690	9,944	11,183	13,309	16,308	18,329	20,037
% to GDP	23.6	23.5	23.2	22.4	23.6	25.2	23.5	22.3
- Financial Savings	3,280	4,383	4,843	5,802	5,710	7,748	8,083	7,195
% GDP	10.1	11.9	11.3	11.6	10.1	12.0	10.4	8.0
-Physical Savings	4,357	4,307	5,101	5,381	7,598	8,560	10,246	12,842
% GDP	13.4	11.7	11.9	10.8	13.5	13.2	13.1	14.3
II. Public Sector	745	890	1,529	2,490	543	106	1,997	1,171
% to GDP	2.3	2.4	3.6	5.0	1.0	0.2	2.6	1.3
III. Pvt Corporate sector	2,125	2,772	3,386	4,690	4,175	5,410	6,194	6,445
% to GDP	6.6	7.5	7.9	9.4	7.4	8.4	7.9	7.2

Source: CSO

FINANCIAL SAVINGS AT A LOW

Financial savings declined further, and were at 8% of GDP in FY12 vs. 10.4% in FY11.

This was largely due to lower cash balances, decline in shares and debentures, and claims on government which did not offset the increase in deposits and contractual savings.

Physical savings were higher at 14.3%GDP vs 13.1% in FY11.

Figure 3. Financial Savings of the Household Sector (Rs bn, %)

	FY10	FY11	FY12
Financial Assets (A)	9,836	9,906	9,706
1. Currency	969	1,371	1,090
% GFA	9.9	13.8	11.2
2. Net Deposits	4,149	4,517	5,120
% GFA	42.2	45.6	52.8
3. Shares and Debentures	448	17	(65)
% GFA	4.6	0.2	-0.7
4. Net Claims on Govt	435	411	(205)
% GFA	4.4	4.1	-2.1
- Invst In G-secs	4	3	3
- Invst in small savings	425	676	676
5. Contractual Savings	1,299	1,390	1,516
% GFA	13.2	14.0	15.6
6. Life Insurance Funds	2,536	2,200	2,250
% GFA	25.8	22.2	23.2
Financial Liabilities(B)	2,034	2,783	2,742
Net Savings (A-B)	7,748	8,083	7,195
% GDP	12.0	10.4	8.0

Source: RBI

Implications of Lower Savings

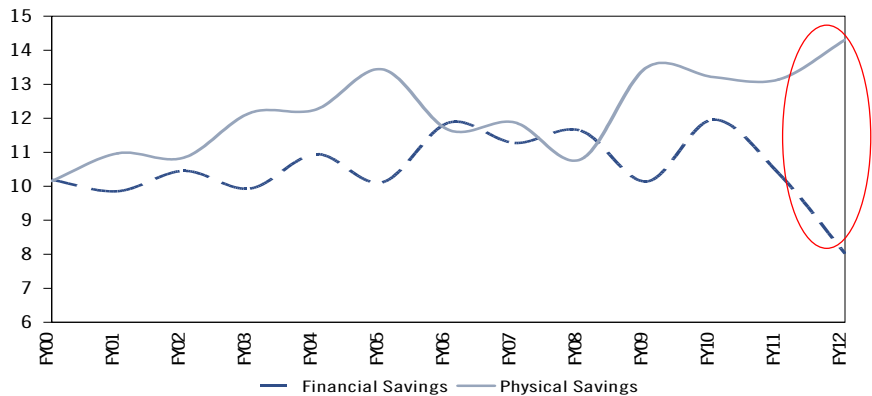
FINANCIAL AND PHYSICAL SAVINGS SHOW DIVERGING TRENDS

Financial savings decelerate further, now falling to single digits, i.e. 8% vs 10.4% in FY11 and 12% in FY10.

Physical savings were higher at 14.3%GDP vs 13.1% in FY11

The divergence in financial/physical savings is mainly due to sticky inflation and, consequently, better returns on alternate assets like gold/real estate

Figure 4. Trends in Financial Savings and Physical Savings (%GDP)



Source: RBI

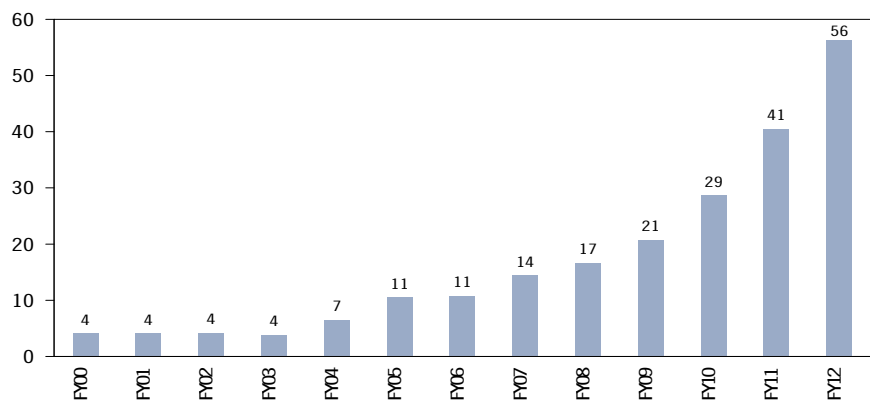
GOLD IMPORTS CONTINUE TO RISE

The rise in physical savings is reflected in higher gold imports.

Imports rose significantly to US\$56bn in FY12 vs US\$41bn in FY11 and US\$29bn in FY10

RBI measures to curb trends include:
- increase in gold import duty to 6%
- introduce gold-linked financial products to reduce demand for physical gold

Figure 5. Trends in Gold Imports (US\$bn)



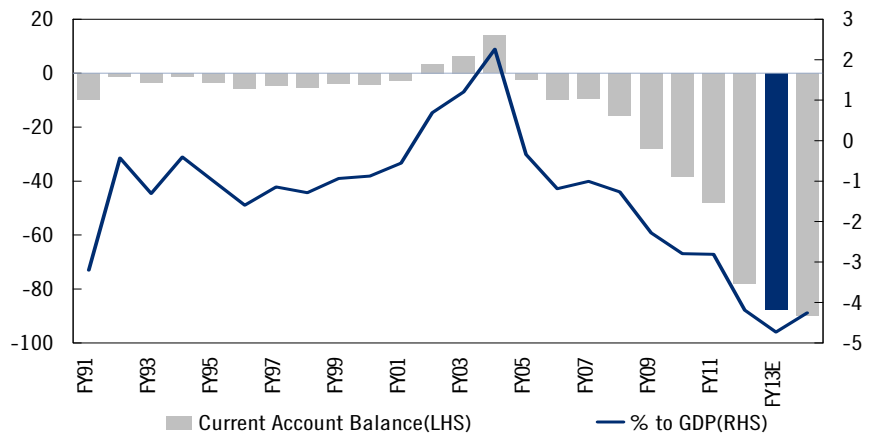
Source: RBI

CURRENT ACCOUNT DEFICIT TO REMAIN ELEVATED

Given that gold makes up ~11% of total imports, the continuous increase in demand for gold would take its toll on the current account...

...we expect CAD to remain elevated in FY13 and FY14 at 4.7% and 4.3% of GDP respectively.

Figure 6. Trends in Current Account Deficit (US\$bn, %GDP)



Source: RBI, Citi Research Estimates

Trends in Investments

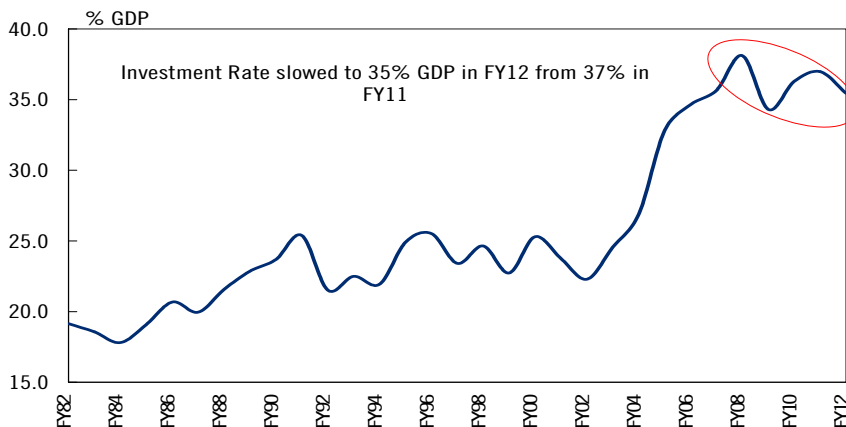
INVESTMENTS ARE LOWER

Investments have slowed down further, to 35% GDP in FY12 vs 37% in FY11

This was due to a drop in both public and private sector investments..

However, positive effects of reforms and attempts to resolve policy bottlenecks could be seen in the next year.

Figure 7. Trends in the Investment Rate (%)



Source: CSO

PUBLIC AND PRIVATE SECTORS DISAPPOINT

Private sector investments are down to 25% GDP from 26.5% in FY11

Public sector investments are also lower, at 7.9% GDP vs 8.4% in FY11

Figure 8. Trends in Investments (Rs bn, %)

	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12
TOTAL INVESTMENTS(I+II+III)	10,640	12,798	15,314	19,008	19,314	23,631	28,717	31,415
% to GDP	32.8	34.7	35.7	38.1	34.3	36.5	36.8	35.0
I. Private Sector	7,706	9,313	11,343	14,013	13,962	16,422	20,656	22,332
% to GDP	23.8	25.2	26.4	28.1	24.8	25.4	26.5	24.9
II. Public Sector	2,406	2,934	3,566	4,419	5,317	5,928	6,540	7,052
% to GDP	7.4	7.9	8.3	8.9	9.4	9.2	8.4	7.9
III. Valuables	410.5	413.9	497.1	535.9	722.1	1163.1	1628.4	2429.7
% to GDP	1.3	1.1	1.2	1.1	1.3	1.8	2.1	2.7

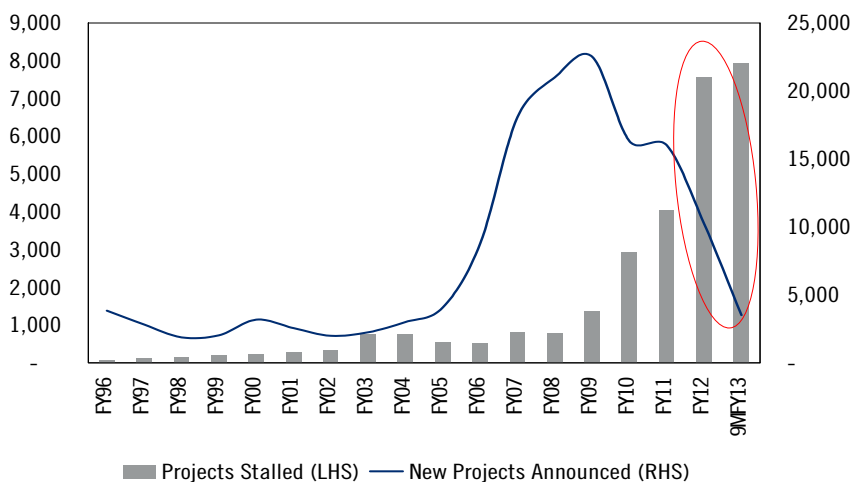
Source: CSO

PROJECTS NEED A PUSH

Important large-scale projects, particularly those in infra, are continually stalled due to environmental/forest clearance issues.

Continued policy efforts would help speed up these stalled projects, and improve investor sentiment

Figure 9. Projects Announced vs Projects Stalled (Rs bn)



Source: Source: <http://capex.cmie.com> (Centre for Monitoring Indian Economy), Citi Research

Statistical Snapshot

Figure 10. Macro Economic Summary (FY01- FY14E)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012E	2013E
Fiscal Year to 31 March	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13E	FY14E
National Income Indicators*														
Nominal GDP (Rs bn)	21,840	23,676	25,500	28,617	32,422	36,934	42,947	49,871	56,301	64,778	77,953	89,749	100,281	113,017
Nominal GDP (US\$ bn)	478	493	528	623.5	720.5	833.7	950.2	1240.6	1223.9	1366.6	1710.2	1,866	1,857	2,112
Per Capita GDP (US\$)	469	474	500	582	662	754	847	1,090	1,061	1,168	1,442	1,552	1,522	1,681
Real GDP growth (%)	4.3	5.5	4.0	8.1	7.0	9.5	9.6	9.3	6.7	8.6	9.3	6.2	5.0	5.7
Agriculture growth (%)	0.0	6.0	-6.6	9.0	0.2	5.1	4.2	5.8	0.1	0.8	7.9	3.6	1.8	3.0
Industry growth (%)	6.0	2.6	7.2	7.3	9.8	9.7	12.2	9.7	4.4	9.2	9.2	3.5	3.1	4.4
Services growth (%)	5.4	6.9	7.0	8.1	8.1	10.9	10.1	10.3	10.0	10.5	9.8	8.2	6.6	7.0
By Demand * (%YoY)														
Consumption	3.0	5.3	2.3	5.4	2.3	8.6	7.9	9.3	7.6	8.2	8.1	8.1	4.1	5.7
Pvt Consumption	3.4	6.0	2.9	5.9	2.1	8.5	8.7	9.2	7.1	7.1	8.6	8.0	4.1	5.5
Public Consumption	0.9	2.3	-0.4	2.6	3.4	8.9	3.8	9.6	10.4	13.9	5.9	8.6	4.1	7.0
Gross Fixed Capital Formation	0.0	7.4	6.8	13.6	20.7	16.2	13.8	16.2	3.5	7.7	14.0	4.4	2.5	4.0
Cons; Invst, Savings ** (%GDP)														
Consumption	78.5	78.9	77.2	75.0	70.1	69.2	68.0	67.2	68.6	69.1	67.2	68.0	68.7	69.2
Gross Capital Formation	23.8	22.3	24.6	26.9	32.8	34.7	35.7	38.1	34.3	36.3	37.0	35.4	35.3	35.7
Gross Domestic Savings	23.2	22.9	25.7	29.1	32.4	33.4	34.6	36.8	32.0	33.7	34.0	30.8	29.9	30.5
Real Indicators (%YoY)														
Cement dispatches (domestic)	-1.9	9.8	8.7	5.8	8.1	10.1	10.2	9.8	8.5	11.2	5.2	7.0	8.0	9.0
Commercial vehicle sales	-11.9	-4.5	40.4	37.5	25.5	12.3	32.2	5.8	-22.3	39.2	27.0	19.5	1.2	12.9
Car sales	-5.3	3.2	5.3	32.1	19.2	7.4	19.7	11.7	7.0	25.7	29.3	3.9	-1.4	8.0
Two-wheelers	0.7	15.3	15.8	12.6	16.8	15.0	12.1	-4.8	4.7	25.8	25.8	13.9	3.5	12.5
Diesel consumption	-3.4	-3.7	0.3	1.2	6.9	1.4	6.7	11.1	8.5	8.9	6.5	8.0	8.0	8.0
Mobile Tele density	0.3	0.6	1.3	3.1	4.8	8.2	14.1	22.0	33.0	48.5	66.8	75.1	79.0	80.0
Monetary Indicators (% YoY)														
Money supply	15.9	16.0	16.1	13.0	14.0	15.9	20.0	22.1	20.5	19.2	16.0	16.0	16.0	17.0
Inflation – WPI (Avg)	7.1	3.6	3.4	5.5	6.5	3.7	6.5	4.8	8.0	3.6	9.6	8.8	7.5	7
CPI (Avg)	3.7	4.3	4.1	3.8	3.9	4.2	6.8	6.2	9.1	12.3	10.5	8.4	9.0	8
Bank credit growth	17.3	15.3	23.7	15.3	30.9	37.0	28.1	22.3	17.5	16.9	21.5	17.0	16.0	15.0
Deposit growth	18.4	14.6	16.1	17.5	13.0	24.0	23.8	22.4	19.9	17.0	16.0	16.0	12.0	15.0
Fiscal Indicators (% GDP)														
Centre's fiscal deficit	-5.4	-6.0	-5.7	-4.3	-3.9	-4.0	-3.3	-2.5	-6.0	-6.5	-4.8	-5.8	-5.9*	-5.5
State fiscal deficit	-4.0	-4.0	-3.9	-4.2	-3.3	-2.4	-1.8	-1.5	-2.4	-2.9	-2.7	-2.5	-2.5	-2.5
Combined deficit (Centre+State)	-9.2	-9.6	-9.2	-8.2	-7.2	-6.5	-5.4	-4.1	-8.4	-9.7	-8.3	-8.4	-8.4	-8.0
Off Balance Sheet Items						-0.5	-0.9	-0.6	-1.7	-0.2	0.0	0.0	0.0	0.0
Combined liabilities (dom+ext)	82.6	87.2	90.7	90.0	88.8	84.6	79.9	76.1	76.8	75.8	70.7	69.9	67.6	67.6
External Sector (% YoY)														
Exports (US\$bn)	45.5	44.7	53.8	66.3	85.2	105.2	128.9	166.2	189.0	182.4	256.2	309.8	294.3	317.8
% YoY	21.1	-1.6	20.3	23.3	28.5	23.4	22.6	28.9	13.7	-3.5	40.4	20.9	-5.0	8.0
Imports (US\$bn)	57.9	56.3	64.5	80.0	118.9	157.1	190.7	257.6	308.5	300.6	383.5	499.5	494.5	524.2
%YoY	4.6	-2.8	14.5	24.1	48.6	32.1	21.4	35.1	19.8	-2.6	27.6	30.3	-1.0	6.0
Trade deficit (US\$bn)	-12.5	-11.6	-10.7	-13.7	-33.7	-51.9	-61.8	-91.5	-119.5	-118.2	-127.3	-189.8	-200.3	-206.4
Invisibles (US\$bn)	9.8	15.0	17.0	27.8	31.2	42.0	52.2	75.7	91.6	80.0	79.3	111.6	112.4	116.5
Current Account Deficit (US\$bn)	-2.7	3.4	6.3	14.1	-2.5	-9.9	-9.6	-15.7	-27.9	-38.2	-48.1	-78.2	-87.9	-89.9
% to GDP	-0.6	0.7	1.2	2.3	-0.3	-1.2	-1.0	-1.3	-2.3	-2.8	-2.8	-4.2	-4.7	-4.3
Capital Account (US\$bn)	8.8	8.6	10.8	16.7	28.0	25.5	45.2	106.6	6.8	51.6	63.7	67.8	86.6	87.6
% GDP	1.9	1.7	2.1	2.7	3.9	3.1	4.8	8.6	0.6	3.8	3.7	3.6	4.7	4.1
Forex Assets (excl gold) (US\$bn)	39.6	51.0	71.9	106.1	135.1	145.1	191.9	299.1	241.6	252.8	273.7	260.9	259.6	257.3
Months of imports	8.2	10.9	13.4	15.9	13.6	11.1	12.1	13.9	9.4	10.1	8.6	6.3	6.3	5.9
External Debt (US\$bn)	101.3	98.8	104.9	112.7	134.0	139.1	172.4	224.4	224.5	260.9	305.9	345.4	360.4	375.4
Short Term Debt (US\$bn)	3.6	2.7	4.7	4.4	17.7	19.5	28.1	45.7	43.3	52.3	65.0	78.2	83.2	88.2
Exchange Rate														
US\$/INR - annual avg	45.7	48.0	48.3	45.9	45.0	44.3	45.2	40.2	46.0	47.4	45.6	48.1	54.0	53.5
% depreciation	5.3	5.0	0.6	-5.0	-2.0	-1.6	2.0	-11.1	14.4	3.0	-3.8	5.5	12.3	-0.9

*This could come in lower at 5.3-5.5% depending on the Telecom Re-auction and Fuel Subsidy Sharing Mechanism

** At current prices.

Source: CSO, RBI, Ministry of Finance, Citi Research Estimates

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

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.

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. 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.

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 India Private Limited Rohini Malkani

OTHER DISCLOSURES

Citigroup Global Markets Inc. and/or its affiliates has a significant financial interest in relation to India. (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.)

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 Smith Barney disclosure website at www.morganstanleysmithbarney.com/researchdisclosures.

For Morgan Stanley and Citigroup Global Markets, Inc. specific disclosures, you may refer to www.morganstanley.com/researchdisclosures and 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/Citigroup Private Clients. CSL provides no independent research or analysis of the substance or in preparation of this report. Please contact your Citigroup/Citigroup 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, Bangrak, Bangkok 10500, Thailand. The Product is made available in **Turkey** through Citibank AS which is regulated by Capital Markets Board. Tekfen Tower, Eski Buyukdere 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.

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, redisseminated 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
