

Equities

27 May 2012 | 17 pages

India Equity Strategy

Currency – Cause or Casualty?

Equities

- It's a big and different depreciation** — India's rupee has fallen 12% from its 2012 peak, is off 20% from its 12-month high, and is among the worst-performing currencies YTD. So is it a cause of the market's/economy's recent weakness, or a consequence of it? More important, how does one play it?
- Weak rupee is bad for the market, but impact moderating?** — The INR and the equity markets are a) positively correlated; b) this correlation has been weakening in the recent past; and c) the market rises more when the INR rises sharply (than the fall when currency depreciates). Does the currency matter less to the market than before?
- Portfolio: indirect impact more than the direct one** — The best-performing sector in a depreciating rupee environment is the completely domestic Consumer staples (IT—almost 100% of FX revenues, is only 4th). In contrast, the weakest sectors are Realty, Metals and Financials – all impacted only indirectly. So portfolio positioning could be more critical than underlying FX exposures, when playing a falling/rising INR.
- Stocks: Balance-sheet pain/gain over that of the P&L** — There is more P&L gain on INR weakness for India's top stocks (IT, Pharma and metals) than loss (Utilities) – mixed for Auto's and Energy. But, the BS offsets - increased (and less transparent) FX debt hurts P&Ls, and BS swings might be a more dominant theme than the P&L one.
- What is driving the currency this time?** — INR swings in the last 5 years have been driven/accompanied by strong equity flows. This is not the case this time (CAD/Economy/Global uncertainty) – and could impact the market differently. The INR's woes are a little different this time – more a casualty (rather than a cause) of India's economy/market performance
- Our view, and portfolio position** — We expect the INR to be at 54.8 in Mar '13, continue to OW rate sensitives (Financials, Cap goods, Autos) but keep a traditional currency hedge in the portfolio – OW Pharmaceuticals, Neutral IT services. Maintain our December 2012 Sensex Target of 18,400 (+13%).

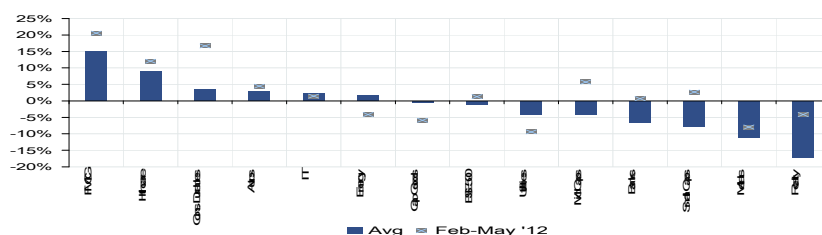
Aditya Narain, CFA

+91-22-6631-9879

aditya.narain@citi.com

Jitender Tokas, CFA

jitender.tokas@citi.com

Figure 1. Sectors rel. to Sensex when INR weakens*


Source: Bloomberg, CIRA * Avg performance over 5 periods of sharp INR depreciation

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

Citi Investment Research & Analysis 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.

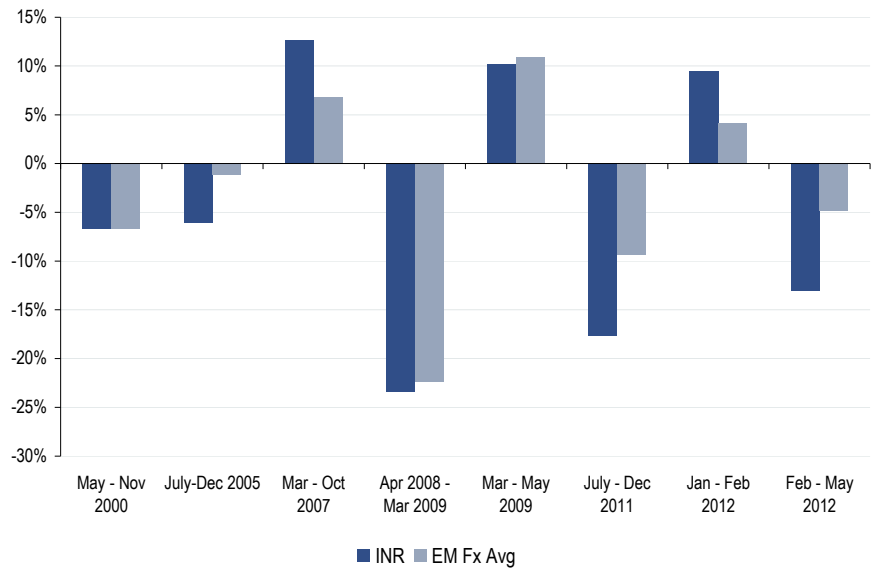
Currency – Cause or Casualty?

A big dip...more damaged than peer currencies

A big depreciation

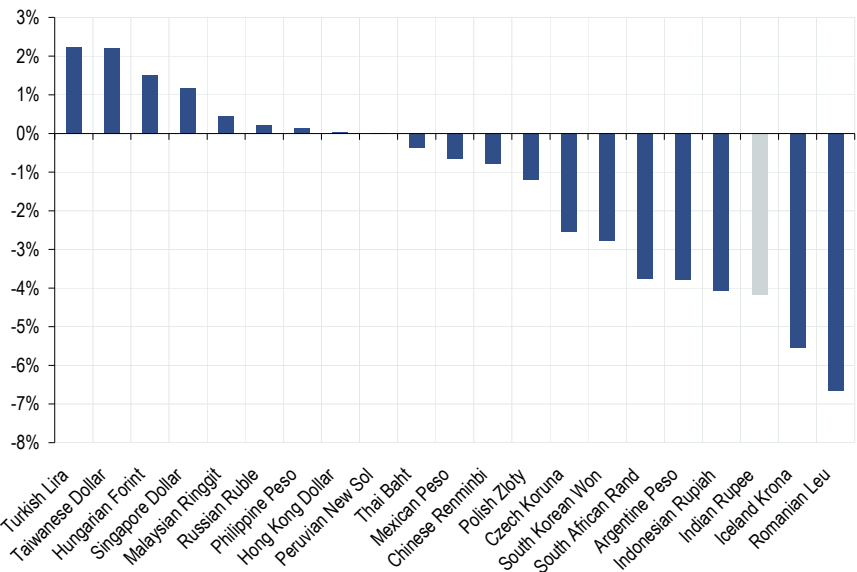
The INR has taken a beating. It has hit an all-time low, is down 12% from its 2012 peaks, and is down over 20% from its peak over the last 12 months. It is not the only one – EM currencies have been under pressure over 2012, but it clearly has been more damaged than most peer currencies. The sheer scale of the fall too has been disconcerting, and has tended to shift the market’s focus to India’s burgeoning CAD deficit, which at 4% of GDP is large and structurally challenged.

Figure 2. Currency moves: INR vs. EM currencies (against USD)



Source: Bloomberg

Figure 3. Performance of EM fx 2012 YTD

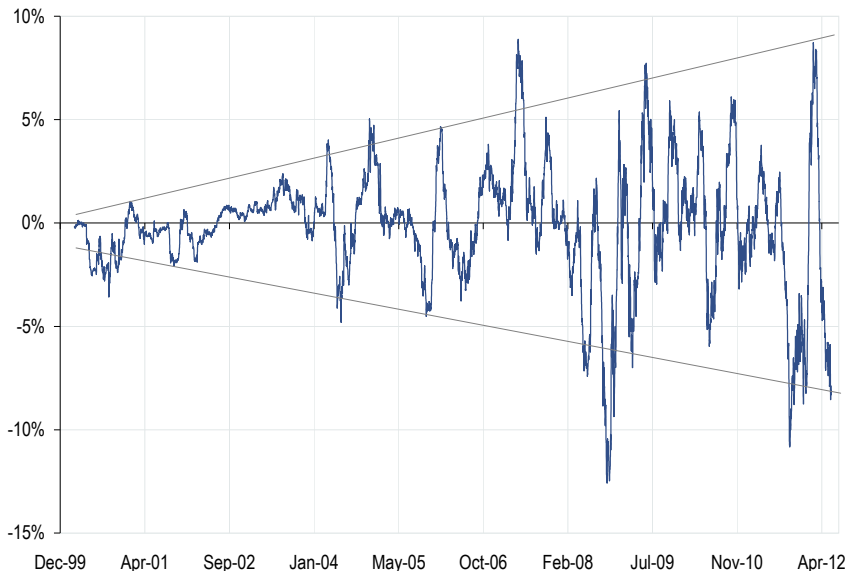


Source: Bloomberg

Sharper currency swings...which have only been rising

What has also changed is the fact that the INR's swing has been relatively sharper this time than on previous occasions when the currency has moved sharply (up or down) – suggesting that some of the drivers are probably a little more local / India-specific than in the past. This is also accompanied by a longer-term trend of increasing volatility in the INR. It has not been as volatile as at the time of the financial crises, but the current swing is distinctly more extreme than at any time in the past.

Figure 4. 2-mth rolling % moves in USD/INR



Source: Bloomberg

So how has it been impacting the market?

Figure 5. Sensex and the INR



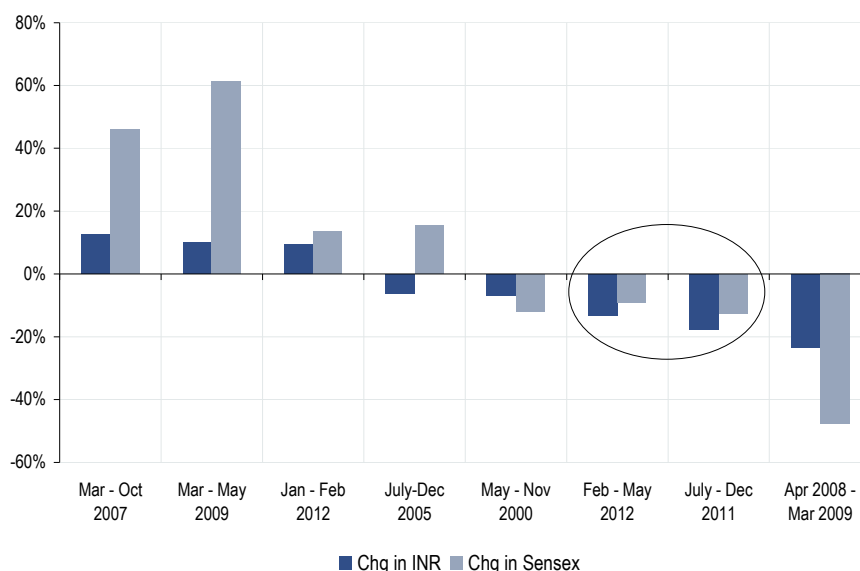
Source: Bloomberg

In the recent INR fall, the market has not fallen as much as in previous times

It's the old 'chicken and egg' phenomenon – is the currency bringing the market down (or up), or is it the state of the market/economy? What came first? We believe it's a bit of both – they do influence the outlook, confidence and underlying dynamics. But more important, we believe there might be a moderation in the impact under way – a falling INR might not hurt the underlying equity market as much as previously, and likewise, an appreciation might have less of an impact on equities.

In the last two INR depreciations, the market has fallen less than the currency....in all INR rises, the market has gained more than the INR

Figure 6. INR vs. Sensex changes in periods of sharp INR moves



Source: Bloomberg, CIRA

Very visually, the data also suggests that over the last five years, market upswings as the INR has appreciated have tended to be more pronounced than equity market downswings when the currency has fallen sharply. In fact in two-thirds of cases when the currency has appreciated, the market has gained over 2X of what the currency gains, whereas in the last two periods of INR depreciation, the equity market has actually fallen less than the Rupee. While these are historical trends (we have taken periods of sharp currency appreciation / depreciation), they seem to get support from correlation analysis.

INR and market correlations remain positive but have been falling

The correlation between the INR and the equity market remain distinctly positive but has moderated in the recent past. This also seems to stand out when we analyze periods of sharp up/down swings in the INR. Quite clearly, the equity market moves on currency depreciation in Aug 2011 and Mar 2012 have been more modest than upswings in the past.

Figure 7. Correlations of INR with...

	10_Yr Yield	Sensex	Brent Crude
1-month	0.51	0.47	0.26
3-months	0.25	0.47	0.39
1 year	0.15	0.52	0.29
3 years	0.13	0.55	0.33

Source: Bloomberg, CIRA

* these correlations are computed using INR/ USD rate, i.e. the exchange rate goes up with INR appreciates and vice versa

Interest rates – INR correlations are up, the INR-Sensex ones are down

Importantly, even as correlations between the INR and equities have moderated, those between the INR and interest rates have actually risen quite meaningfully. While in many senses this is traditional economics coming to the fore – the fact that India still is a fairly regulated market from a fixed income side suggests we need a longer time frame to track these correlations for stronger inferences. But it does

India's returns vs. GEMs on local currency and on \$ basis are now wide...and have widened recently...the INR seems to have de-rated more than the other EM currencies

suggest the interest rate-currency correlations could be trending higher, and equity market and INR ones lower.

It's also interesting to note that over an extended period, India's returns relative to GEMs were relatively similar in local currencies and USD. This trend however broke with the financial crises, and the gap has only widened – in fact the most recent move has significantly widened this gap. This would suggest that India's currency has somewhat structurally depreciated vs. EMs – and its sharp recent deterioration has only added to this.

Figure 8. Returns of MSCI India relative to MSCI GEMs



Source: MSCI, Datastream

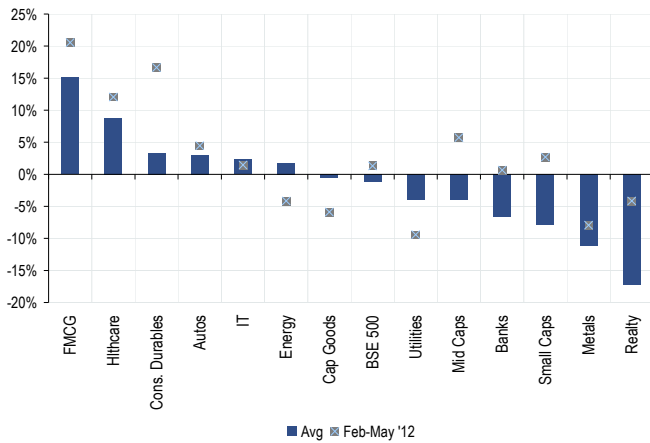
A lot of this data could suggest that if there is to be some form of mean reversal, then either the INR needs to strengthen quickly, or the equity market could be facing meaningful downside adjustments.

How do you manage the portfolio in such a scenario?

The best-performing sector in an INR dip has nothing to do with the currency: consumer staples...and the best sectors in an appreciating INR are rate cyclicals, again with little to do directly with the currency

Conventional wisdom suggests that to hedge your portfolio against a falling INR you should load up on businesses that are export oriented, and have their revenues in USD. However, if you look at periods of sharp rupee depreciation, these would not have been the best sectors to have been positioned in. In fact IT services, where almost 100% of revenues are FX denominated, was only the 4th best performing sector. And Pharmaceuticals, with FX revenues in the 60-90% range (with off-shore debt in a few cases), was the second best.

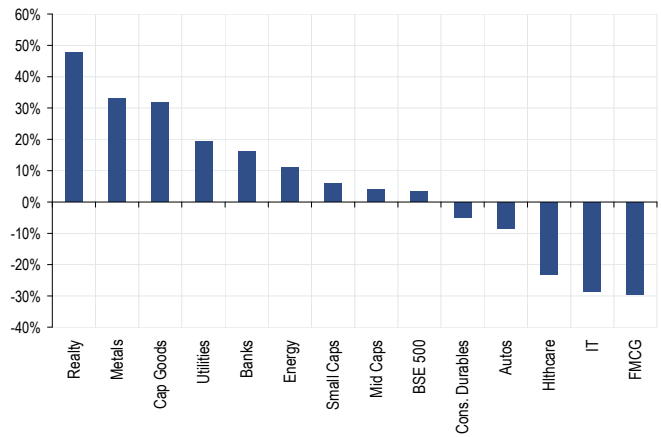
Figure 9. Sectors rel. to Sensex when INR weakens*



Source: Bloomberg, CIRA

* Avg performance over 5 periods of sharp INR depreciation

Figure 10. Sectors rel. to Sensex when INR strengthens*



Source: : Bloomberg, CIRA

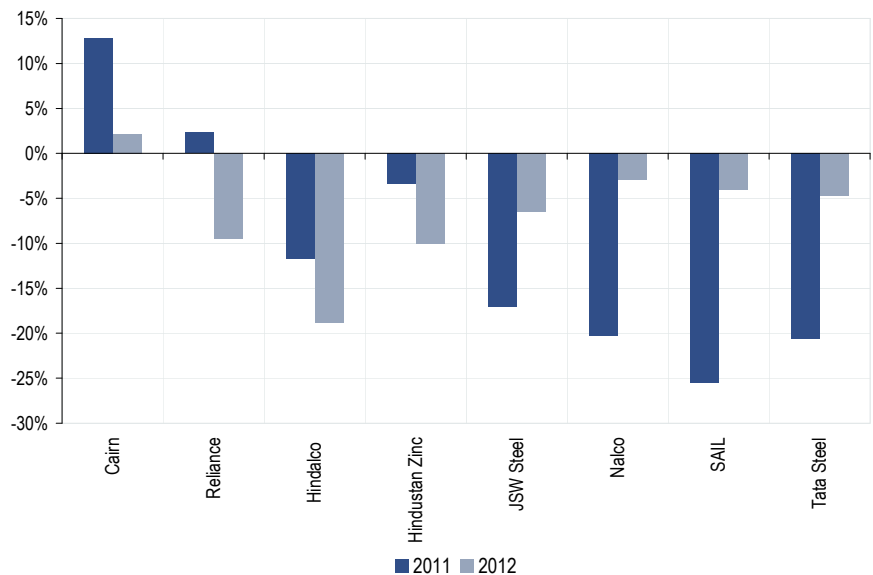
* Avg performance over 3 periods of sharp INR appreciation

IT services....with almost 100% of revenues in FX is only the 4th best performer

But what has worked best and consistently over depreciation episodes has actually been the Consumer staples sector, which has no FX gains, but is seen as a portfolio defensive. It also has the tailwind of strong consumption growth – which is perceived to be relatively intact. On the flip side, the worst-performing sectors have been real estate, Metals and Banking. Real Estate and Banking have no direct FX linkages. And Metals (oddly enough), should actually be a beneficiary, as these businesses get more pricing headroom as the selling prices are benchmarked to global prices (which rise as the currency depreciates).

The commodity space is an aberration....in spite of earnings upsides on INR depreciation; they do poorly when the INR falls...Commodity prices possibly over-ride the INR

Figure 11. Metals and Energy performance in INR depreciation episodes in 2011 & 2012



Source: Bloomberg, CIRA

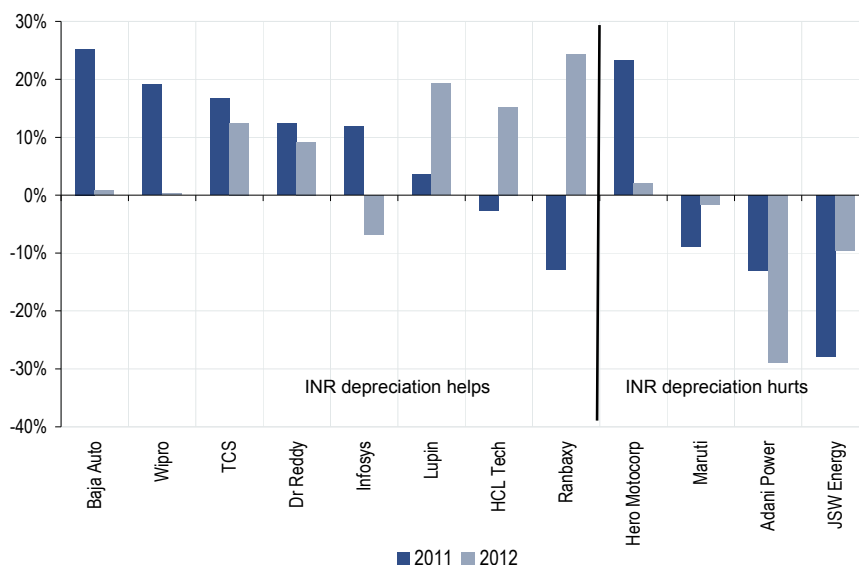
Sector positioning could well be more critical for managing a portfolio during INR swings, than focusing on P&L and BS exposures

So while stocks do matter, we would argue that portfolio positioning on swings on the currency might be a more dominant theme, than purely stock picking. While we do recognize some of these skews could be influenced by the underlying demand / business environment (weak IT outlook, strong Indian consumption perspective), there clearly is a strong underlying theme driving these performances.

Balance Sheet pain or P&L gain – What stocks would you pick?

With a weaker INR, is there an earnings gain at the aggregate? We do believe there will be an aggregate gain on the P&L. More sectors than not are leveraged to a weakening INR. Those that gain and typically see earnings upsides are IT Services, Pharmaceuticals and Metals; Utilities usually see earnings downsides, while Energy and Autos are more mixed. At aggregate though, there are earnings upsides.

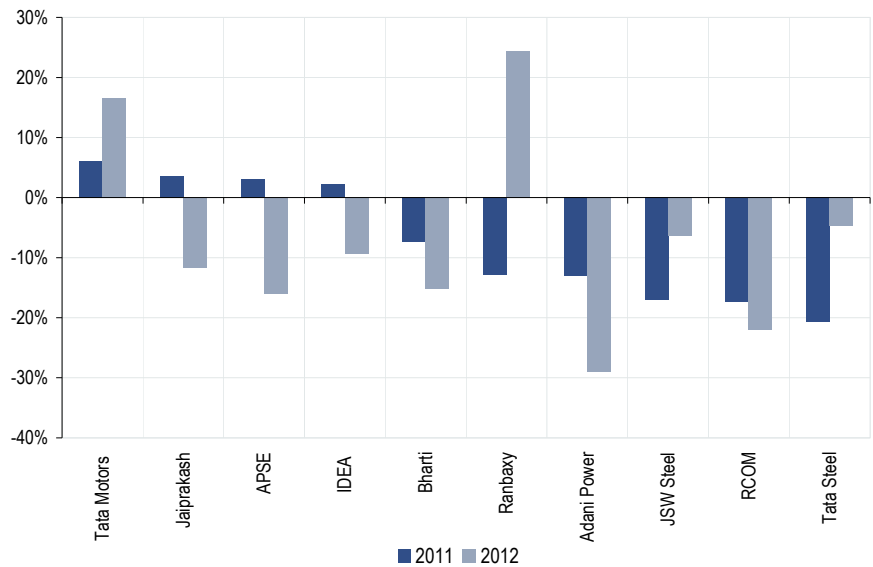
Figure 12. Performance of key stocks with P&L exposures in episodes of INR depreciation



Source: Bloomberg, CIRA

There is however an offset – on the Balance-sheet. This is because an increasing number of businesses have aggressively borrowed from off-shore markets as funding has been cheaper, easily available (including aggressively priced convertible bonds), and during a lot of times this has had the tailwind of an appreciating currency. In addition, a few corporates have made relatively aggressive offshore acquisitions. All this has meant that there is a reasonable level of off-shore funding on Indian balance-sheets; some of it hedged naturally (with exports), some of it hedged through market mechanisms, but a fair share of it possibly un-hedged (with moderate transparency, at best). A lot of this will need to be marked to market – and will eventually come through the P&L.

Figure 13. Performance of key stocks with BS exposures in episodes of INR depreciation

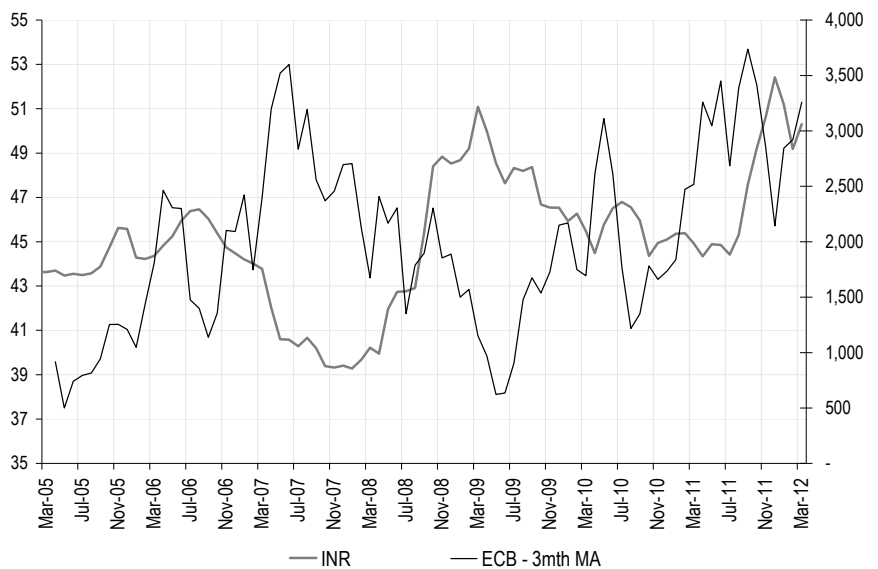


Source: Bloomberg, CIRA

So if the INR continues to depreciate, at aggregate, is there more BS induced pain than P&L driven gain? We do not have data to back a strong claim, but we would argue the potential risks and surprises on the BS will outweigh the gains on the P&L. We believe this will also play through more aggressively on individual stock performances – where stocks with unhedged or large FX exposures will likely see more of a valuation charge than necessarily a financial one. That some of this will necessarily come through the P&L will also be an offset for aggregate earnings gains on account of a weaker INR (or vice-versa).

Corporates have borrowed aggressively as and when the currency has appreciated...and will have to pay as it depreciates

Figure 14. Trend in USD/ INR vs. External Commercial Borrowing



Source: Citi Investment Research and Analysis

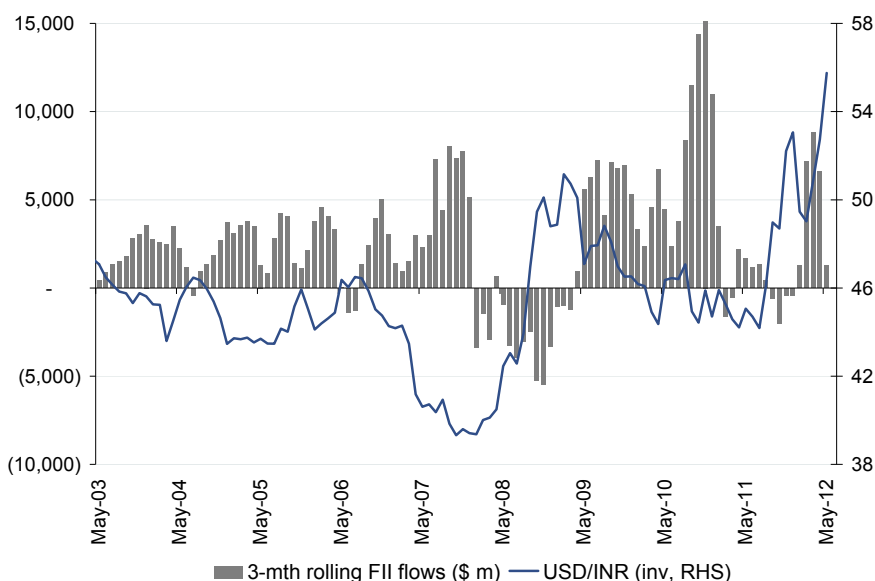
Effectively, we would argue that the BS pain and uncertainty of FX exposures would cause greater stock pain if the currency were to weaken than purely P&L driven ones. But it is these stocks that would potentially see more gain if the currency were to show signs of appreciating.

Anything different about the INR's move this time?

Yes. The INR has historically either been driven by, or at least accompanied by, strong equity inflows/outflows. This has not been the case in the INR's recent depreciation in 2012 (although the Jan/Feb 2012 appreciation was driven by flows) or the one in Aug 2011. We would believe it's a combination of CAD pressures (and Oil and Gold prices), increasing concerns on India's economic growth outlook and its ability to attract capital, and global uncertainty (which has seen most EM currencies weak) that has driven the rupee recently.

A first ...INR depreciating without meaningful equity outflows

Figure 15. FII Flows vs. the INR



Source: SEBI, Bloomberg, CIRA

This could suggest that the INR's moves could well be different from previous patterns. It could also more suggest that the way the market, portfolios and stocks behave on INR moves could well be relatively different. We do believe that it is critical to keep this in mind – given equity flows driving the currency, and the currency determining portfolio and stock positioning.

Figure 16. Citi India Model Portfolio

	Price	YTD	YTD			MSCI	Portfolio	OW/ MSCI (bps)	FY13			
	26-May-12 (Rs)	Perf. (%)	Rel. Perf.	RIC	Rating				Weight (%)	Weight	UW/Rel. PE (x)	EPS Growth (%)
Automobiles and Components						7.8	8.9	109				
M&M	638.2	-6.6%	-12.7%	MAHM.BO	2		2.2	O/W	14	4.3%	2.6	20.8%
Maruti	1117.1	21.4%	15.3%	MRTI.BO	1		2.5	O/W	16	26.6%	1.9	12.8%
Tata Motors	269.4	51.0%	44.8%	TAMO.BO	1		4.2	O/W	7	22.8%	2.0	37.9%
Banks & Diversified Financials						25.3	30.6	527				
AXIS Bank	1000.6	24.0%	17.9%	AXBK.BO	1		4.0	O/W	9	14.4%	1.6	19.2%
IDFC	124.9	36.1%	30.0%	IDFC.BO	1		1.0	M/W	10	11.8%	1.3	13.7%
HDFC Bank	500.4	17.2%	11.0%	HDBK.BO	2		5.5	U/W	18	26.8%	3.2	19.7%
ICICI Bank	815.9	19.2%	13.0%	ICBK.BO	1		6.0	O/W	12	21.0%	1.5	12.4%
State Bank of India	2005.0	23.8%	17.7%	SBI.BO	1		3.5	O/W	9	20.0%	1.4	16.2%
Yes Bank	330.6	38.6%	32.4%	YESB.BO	1		1.0	O/W	10	23.5%	2.0	23.3%
Kotak Mahindra	544.1	25.9%	19.7%	KTKM.BO	2		1.0	U/W	18	23.8%	2.7	16.2%
MMFSL	615.1	1.5%	-4.6%	MMFS.BO	1		1.0	O/W	9	15.2%	1.8	22.4%
Bank of Baroda	671.9	1.7%	-4.5%	BOB.BO	1		1.0	O/W	5	18.2%	0.9	20.9%
MCX	896.8			MCEI.BO	1		0.5	O/W	12	25.6%	3.5	30.6%
Industrials & Capital Goods						6.7	7.5	76				
Larsen & Toubro	1186.4	19.2%	13.1%	LART.BO	1		4.0	O/W	15	10.0%	2.5	18.0%
Adani Port & SEZ	114.0	-5.4%	-11.6%	APSE.BO	1		1.5	O/W	15	31.4%	3.5	26.2%
Havells	569.8	48.5%	42.3%	HVEL.BO	1		1.0	O/W	19	20.4%	3.7	21.2%
IRB Infra	113.6	-12.6%	-18.7%	IRBI.BO	1		1.0	O/W	7	7.2%	1.1	16.8%
Energy						11.4	9.2	-229				
Reliance Industries	692.0	-0.1%	-6.3%	RELI.BO	1		7.0	U/W	11	1.8%	1.2	11.5%
Cairn	324.3	3.4%	-2.7%	CAIL.BO	1		2.2	O/W	5	49.5%	1.1	22.5%
Consumer						9.5	6.2	-332				
ITC	231.8	15.1%	9.0%	ITC.BO	1		3.7	U/W	25	18.8%	10.2	42.3%
United Spirits	640.1	30.3%	24.2%	UNSP.BO	2		1.5	O/W	20	16.3%	1.7	8.5%
Hindustan Unilever	421.0	3.2%	-2.9%	HLL.BO	3		1.0	U/W	30	18.5%	21.8	80.0%
Materials						10.3	8.7	-163				
Coal India	313.3	4.1%	-2.0%	COAL.BO	1		1.0	U/W	13	11.0%	3.9	33.3%
Hindalco	111.8	-3.4%	-9.5%	HALC.BO	1		1.0	U/W	8	0.6%	0.6	8.3%
Jindal Steel & Power	456.5	0.7%	-5.4%	JNSP.BO	1		1.7	O/W	10	11.0%	1.9	22.4%
Grasim	2374.1	-5.4%	-11.5%	GRAS.BO	1		1.0	O/W	7	12.1%	1.1	15.9%
Ambuja Cement	143.6	-7.6%	-13.7%	ABUJ.BO	1		3.0	O/W	12	36.8%	2.4	21.5%
JSW Steel	607.1	19.7%	13.6%	JSTL.BO	1		1.0	O/W	7	111.9%	0.7	11.1%
Pharmaceuticals, Biotechnology, Agrochem						5.1	7.0	187				
Ranbaxy	530.3	30.9%	24.7%	RANB.BO	1H		1.5	O/W	20	43.1%	3.8	30.6%
Dr Reddy	1692.6	7.3%	1.1%	REDY.BO	1		2.5	O/W	16	36.6%	3.7	26.8%
Lupin	532.9	19.2%	13.0%	LUPN.BO	1		1.5	O/W	19	31.5%	4.7	27.8%
IPCA Lab	333.9	21.5%	15.4%	IPCA.BO	1		0.5	O/W	11	26.3%	2.6	26.2%
United Phosphorous	114.7	-9.6%	-15.8%	UNPO.BO	1		1.0	O/W	6	36.7%	1.1	19.6%
Software & Services						17.1	17.2	6				
Infosys Technologies	2372.0	-14.2%	-20.3%	INFY.BO	1		12.0	O/W	15	12.1%	3.4	25.4%
Tata Consultancy Services	1221.6	5.2%	-0.9%	TCS.BO	2		2.0	U/W	18	23.5%	5.9	35.9%
Wipro	393.6	-1.3%	-7.5%	WIPR.BO	1		1.8	O/W	14	20.5%	2.9	21.7%
HCL Technologies	487.0	25.4%	19.3%	HCLT.BO	1		1.4	O/W	13	25.6%	2.9	24.8%
Telecom Services						2.5	2.0	-47				
Bharti Airtel	298.7	-12.9%	-19.0%	BRTI.BO	1		2.0	O/W	14	67.1%	1.9	14.4%
Utilities						3.1	2.0	-110				
Tata Power	89.2	2.2%	-4.0%	TTPW.BO	2		1.0	O/W	22	-10.5%	1.8	8.1%
Power Grid Corp	104.2	4.3%	-1.8%	PGRD.BO	1		1.0	M/W	14	16.8%	1.9	14.4%
Real Estate						1.0	0.8	-23				
DLF	188.5	3.0%	-3.2%	DLF.BO	1		0.5	U/W	18	38.3%	1.2	7.1%
Phoenix	184.3	11.5%	5.3%	PHOE.BO	1		0.3	O/W	21	34.7%	1.4	7.2%
Total						100.0	100.0					

Source: Citi Investment Research and Analysis

*Weights may not add up 100 due to regulatory restrictions; ** Green: stocks that benefit from INR depreciation, Yellow: stocks that hurt from INR depreciation

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 beneficially owns 1% or more of any class of common equity securities of Havells India, IRB Infrastructure Developers, Larsen & Toubro, Multi Commodity Exchange Ltd., Mahindra And Mahindra Financial Services, Phoenix Mills, Tata Motors, United Phosphorus, Yes Bank. This position reflects information available as of the prior business day.

Within the past 12 months, Citigroup Global Markets Inc. or its affiliates has acted as manager or co-manager of an offering of securities of AXIS Bank, Bank of Baroda, Hindustan Zinc, Larsen & Toubro, Multi Commodity Exchange Ltd., Reliance Industries, State Bank of India, Tata Motors, Wipro, Yes Bank.

Citigroup Global Markets Inc. or its affiliates has received compensation for investment banking services provided within the past 12 months from AXIS Bank, Bank of Baroda, Cairn India, Coal India, Hindalco Industries, HDFC Bank, Hindustan Unilever, Hindustan Zinc, ICICI Bank, Infrastructure Development Finance, Jindal Steel and Power, Kotak Mahindra Bank, Larsen & Toubro, Mahindra & Mahindra, Multi Commodity Exchange Ltd., Mahindra And Mahindra Financial Services, National Aluminium, Power Grid Corporation of India, Dr Reddy, Reliance Industries, Steel Authority of India, State Bank of India, Tata Motors, Tata Consultancy Services, Tata Steel, United Spirits, Wipro, Yes Bank.

Citigroup Global Markets Inc. or its affiliates expects to receive or intends to seek, within the next three months, compensation for investment banking services from Bank of Baroda, Cairn India, Coal India, DLF, Hindustan Zinc, ICICI Bank, National Aluminium, Power Grid Corporation of India, Steel Authority of India, State Bank of India.

Citigroup Global Markets Inc. or an affiliate received compensation for products and services other than investment banking services from Ambuja Cements, Adani Power, Adani Port And Special Economic Zone, AXIS Bank, Bajaj Auto, Bank of Baroda, Bharti Airtel, Cairn India, Coal India, DLF, Grasim Industries, Hindalco Industries, HCL Technologies, HDFC Bank, Hindustan Unilever, Hero MotoCorp, Havells India, Hindustan Zinc, ICICI Bank, IDEA Cellular, Infrastructure Development Finance, Infosys Ltd, Ipca Laboratories, ITC, Jaiprakash, Jindal Steel and Power, JSW Steel, Kotak Mahindra Bank, Larsen & Toubro, Lupin, Mahindra & Mahindra, Multi Commodity Exchange Ltd., Mahindra And Mahindra Financial Services, Maruti Suzuki India, National Aluminium, Power Grid Corporation of India, Phoenix Mills, Ranbaxy, Dr Reddy, Reliance Industries, Reliance Communications, Steel Authority of India, State Bank of India, Tata Motors, Tata Consultancy Services, Tata Steel, Tata Power, United Phosphorus, United Spirits, Wipro, Yes Bank 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): Tata Steel, JSW Steel, Cairn India, AXIS Bank, Bank of Baroda, Coal India, DLF, Hindalco Industries, HDFC Bank, Hindustan Unilever, Hindustan Zinc, ICICI Bank, Infrastructure Development Finance, Jindal Steel and Power, Kotak Mahindra Bank, Larsen & Toubro, Mahindra & Mahindra, Multi Commodity Exchange Ltd., Mahindra And Mahindra Financial Services, National Aluminium, Power Grid Corporation of India, Dr Reddy, Reliance Industries, Steel Authority of India, State Bank of India, Tata Motors, Tata Consultancy Services, United Spirits, Wipro, Yes Bank.

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: Adani Power, Adani Port And Special Economic Zone, AXIS Bank, Bajaj Auto, Bank of Baroda, Bharti Airtel, Cairn India, Coal India, DLF, Grasim Industries, Hindalco Industries, HCL Technologies, HDFC Bank, Hindustan Unilever, Hero MotoCorp, Havells India, Hindustan Zinc, ICICI Bank, IDEA Cellular, Infrastructure Development Finance, Infosys Ltd, Ipca Laboratories, ITC, Jindal Steel and Power, Kotak Mahindra Bank, Larsen & Toubro, Lupin, Mahindra & Mahindra, Mahindra And Mahindra Financial Services, Maruti Suzuki India, National Aluminium, Power Grid Corporation of India, Phoenix Mills, Ranbaxy, Dr Reddy, Reliance Industries, Reliance Communications, Steel Authority of India, State Bank of India, Tata Motors, Tata Consultancy Services, Tata Steel, Tata Power, United Phosphorus, Wipro, Yes Bank.

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: Ambuja Cements, Adani Power, Adani Port And Special Economic Zone, AXIS Bank, Bajaj Auto, Bank of Baroda, Bharti Airtel, Cairn India, Coal India, DLF, Grasim Industries, Hindalco Industries, HCL Technologies, HDFC Bank, Hindustan Unilever, Hero MotoCorp, Havells India, Hindustan Zinc, ICICI Bank, IDEA Cellular, Infrastructure Development Finance, Infosys Ltd, Ipca Laboratories, ITC, Jaiprakash, Jindal Steel and Power, JSW Steel, Kotak Mahindra Bank, Larsen & Toubro, Lupin, Mahindra & Mahindra, Multi Commodity Exchange Ltd., Mahindra And Mahindra Financial Services, Maruti Suzuki India, National Aluminium, Power Grid Corporation of India, Ranbaxy, Dr Reddy, Reliance Industries, Reliance Communications, Steel Authority of India, State Bank of India, Tata Motors, Tata Consultancy Services, Tata Steel, Tata Power, United Phosphorus, United Spirits, Wipro, Yes Bank.

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 Infosys Ltd.

For important disclosures (including copies of historical disclosures) regarding the companies that are the subject of this Citi Investment Research & Analysis product ("the Product"), please contact Citi Investment Research & Analysis, 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.

Citi Investment Research & Analysis Ratings Distribution

<i>Data current as of 31 Mar 2012</i>	12 Month Rating			Relative Rating		
	Buy	Hold	Sell	Buy	Hold	Sell
Citi Investment Research & Analysis Global Fundamental Coverage	52%	37%	11%	10%	79%	10%
<i>% of companies in each rating category that are investment banking clients</i>	44%	42%	40%	47%	42%	43%

Guide to Citi Investment Research & Analysis (CIRA) Fundamental Research Investment Ratings:

CIRA's 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: CIRA's 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 CIRA 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: CIRA 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 CIRA's 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 India Private Limited

Aditya Narain, CFA; Jitender Takas, CFA; Pradeep Mahtani; Venkatesh Balasubramaniam; Deepal Delivala; Jamshed Dadabhoj; Manish Chowdhary, CFA; Gaurav Malhotra, CFA; Saurabh Handa; Raashi Chopra, CFA; Surendra Goyal, CFA; Atul Tiwari, CFA; Anshuman Gupta; Prashant Nair, CFA

OTHER DISCLOSURES

Citigroup Global Markets Inc. and/or its affiliates has a significant financial interest in relation to AXIS Bank, Bank of Baroda, Hindalco Industries, HDFC Bank, ICICI Bank, Infrastructure Development Finance, Kotak Mahindra Bank, Larsen & Toubro, Mahindra And Mahindra Financial Services, Reliance Industries, Reliance Communications, State Bank of India, Tata Steel, Wipro. (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.)

Citigroup Global Markets Inc. or its affiliates beneficially owns 2% or more of any class of common equity securities of Mahindra And Mahindra Financial Services, Tata Motors, Yes Bank.

Citigroup Global Markets Inc. or its affiliates beneficially owns 10% or more of any class of common equity securities of Havells India.

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 Investment Research & Analysis (CIRA) does not set a predetermined frequency for publication, if the Product is a fundamental research report, it is the intention of CIRA 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 Investment Research & Analysis (CIRA) research report. Ask your Financial Advisor or use smithbarney.com to view any available Morgan Stanley research reports in addition to CIRA research reports.

Important disclosure regarding the relationship between the companies that are the subject of this CIRA 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 CIRA 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 CIRA. 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 Citigroup 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 110-180, 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 **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 Comision Nacional Bancaria y de Valores. Reforma 398, Col. Juarez, 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 Citigold/Citigold Private Clients. CSL provides no independent research or analysis of the substance or in preparation of this report. Please contact your Citigold/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, 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 CIRA 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 CIRA'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), CIRA concurrently disseminates its research via proprietary and non-proprietary electronic distribution platforms. Periodically, individual CIRA 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. CIRA simultaneously distributes product that is limited to QIBs only through email distribution.

The level and types of services provided by CIRA 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.

CIRA product may source data from dataCentral. dataCentral is a CIRA proprietary database, which includes Citi estimates, data from company reports and feeds from Reuters and Datastream.

© 2012 Citigroup Global Markets Inc. Citi Investment Research & Analysis 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
