Lead indicators: Still stagnating since April

GEM Economics | Asia | India
12 February 2013

Bank of America Merrill Lynch

Indranil Sen Gupta +91 22 6632 8653
India Economist
DSP Merrill Lynch (India)
indranil.sengupta@baml.com
Asia FI Strategy & Economics
Merrill Lynch (Singapore)

Bottom line: Lending rate cuts key to recovery

Gong Xi Fa Cai! Incoming data support our view that while the worst is over, the bottom out will have to await lending rate cuts till mid-2013. We have cut our growth forecasts by 30bp to 5.2% in FY13 and 6.2% in FY14 in response to the CSO's partly statistically lower 5% FY13 projection on Friday. Just as importantly, our lead indicators continue to stagnate at April levels, when they first signaled that growth was bottoming. December industrial production, at -0.6%, surprised our 1% expectation (1.8% consensus) on the down. In our view, growth is unlikely to turn around until lending rates come off. After all, India is that rare economy in which lending rates are still running close to peak 2008 levels. We are relieved that the RBI resumed OMO (of Rs100bn) today (Rs180bn by March BofAMLe). It should cut CRR 25bp on March19. The RBI will likely cut policy rates by 25bp each on May 3 and June. This, in turn, should pull down lending rates by an additional 75bp in FY14 atop 50-75bp this fiscal. Do also find our 2013 India report here.

30bp growth cut: 5.2% growth FY13, 6.2% FY14

We have cut our growth forecasts by 30bp to 5.2% in FY13 and 6.2% in FY14 in response to the CSO's lower 5% FY13 growth forecast on Friday. Growth will likely slow to 4.7% (from 5% earlier) in the December quarter and recover to 5.5% (from 6% earlier) in the March 2013 quarter. In particular, we have cut our growth forecast for trade, transport and tele-communications (28% of GDP) to 5.5% from 6.2% (5.2% CSO). Our downgrade is partly statistical reflecting a 0.8% increase in the FY12 GDP. FY13 growth will likely eventually be revised back to 5.5%.

Lead indicators: Stagnating at April levels

Our lead indicators continue to stagnate at April levels, when they first signaled growth bottoming. Real cash demand has bottomed out. A relief is that our measure of risk aversion (M1growth/M3 growth, *ie* the share of active money in overall money supply) has also turned the corner. That said, three key indicators – credit, industrial growth and capex – persist in negative territory. In our view, industrial growth is unlikely to turn around until lending rates come off to revitalize loan demand. We do not expect capex will turn around till the summer 2014 polls.

RBI: OMO, CRR cut on March 19, 50bp rate cut by June

We expect the RBI to continue to ease liquidity to pull down lending rates to support growth. After all, it has only a six-month window as inflation will likely cross 7.5% in 2H13. We are relieved that the RBI resumed OMO of Rs100bn today (Rs180bn by March). It should cut CRR 25bp on March19. The RBI will likely cut policy rates by 25bp each on May 3 and June. This, in turn, should pull down lending rates by an additional 75bp inFY14 atop 50-75bp this fiscal.

Table 1: Worst over

Variable	FY12	FY13E	FY14E	FY15E
Real GDP	6.2	5.2	6.2	7.5
Agriculture	3.6	1.6	4.0	3.5
Industry	2.7	2.3	4.5	7.3
Services	7.9	6.7	7.2	8.3
M3	13.0	16.0	16.5	17.0
Commercial credit	17.0	16.0	16.0	18.0
WPI inflation (eop)	7.7	7.3	6.8	6.5
Fiscal deficit (% of GDP)	-8.4	-8.7	-8.2	-8.0
Current account balance (% of GDP)	-4.2	-4.1	-3.3	-3.0
Forex reserves (US$bn)	294.4	293.0	315.0	295.0
RBI's LAF reverse repo rate	7.50	6.75	5.75	6.75
RBI's LAF repo rate	8.50	7.75	6.75	7.75
Cash reserve ratio (% of bank book)	4.75	4.00	3.75	3.75
10-year GoI yields	8.25	8.00	8.00	8.00
PLR	14.25	13.50	12.75	13.25
US$/INR	49.6	53.0	50.0	

Source: BofA Merrill Lynch Global Research estimates.

India Macro Weekly

Refer to important disclosures on page 8 to 9. Link to Definitions on page 6.

Lead indicators: Still stagnating at April levels

Gong Xi Fa Cai! Incoming data support our view that while the worst is over, the bottom out will have to await lending rate cuts till mid-2103. We have cut our growth forecasts by 30bp to 5.2% in FY13 and 6.2% in FY14 in response to the CSO's partly statistically lower 5% FY13 projection on Friday. Just as importantly, our lead indicators continue to stagnate at April levels, when they first signaled that growth was bottoming. December industrial production, at -0.6%, surprised our 1% expectation (1.8% consensus) on the down. In our view, growth is unlikely to turn around until lending rates come off. After all, India is that rare economy in which lending rates are still running close to peak 2008 levels (Table 2). We are relieved that the RBI resumed OMO of Rs100bn today (Rs180bn by March). It should cut CRR 25bp on March19. The RBI will likely cut policy rates by 25bp each on May 3 and June. This, in turn, should pull down lending rates by an additional 75bp inFY14 atop 50-75bp this fiscal.

Table 2: Lending rates still near 2008 peak

	Pre-Crisis	Crisis	Current
BRICs			
India	13.8	11.8	13.5
Brazil	31.8	25.5	23.5
Russia	17.4	8.0	9.1
China	7.5	5.3	6.0

Source: BofA Merrill Lynch Global Research estimates.

Bottom line: Rains, lending rate cuts key to recovery

We grow more confident of our call that while the worst is over, there is still pain left for a few months. We do not set much store by the fact we are cutting growth estimates as that is partly driven by the CSO's statistical bias depressing current growth numbers. That said, there is no denying that the real economy will remain soft – like other BRICs – into FY14 (Table 3). We have decomposed the 250bp slowdown in growth into global factors (100bp), RBI tightening (75bp), investment slowdown (50bp) and poor rains (25bp). Our global economists do not expect global growth to turn around. We do not see the domestic investment cycle picking up till the 2014 summer polls. In sum, we believe that recovery will be driven by the 2'R's – better rains and lending rate cuts.

Table 3: India's slowing like other BRICs

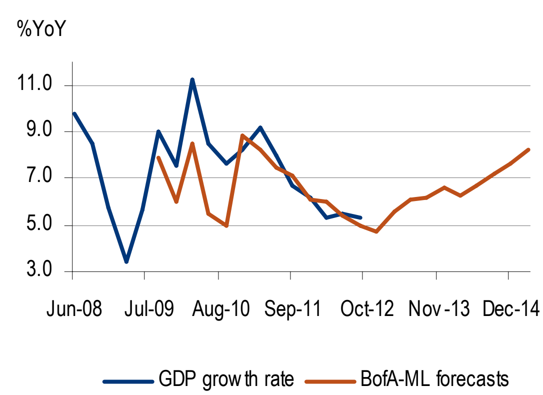
	Pre-Crisis		Crisis		Current	
	Growth	Inflation	Growth	Inflation	Growth	Inflation
Brazil	6.1	3.6	-0.3	4.9	1.9	6.0
Russia	8.1	9	-7.9	11.7	3.9	6.9
India	9.3	4.8	8.4	3.8	5.7	8.3
China	14.2	4.8	9.2	-0.7	8.6	4.0

Source: BofA Merrill Lynch Global Research estimates.

30bp growth cut: 5.2% growth FY13, 6.2% FY14

We have cut our growth forecasts by 30bp to 5.2% in FY13 and 6.2% in FY14 in response to the CSO's lower 5% FY13 growth forecast on Friday (Chart 1 and Table 4). Growth will likely slow to 4.7% (from 5% earlier) in the December quarter and recover to

Chart 1: Growth to bottom out in mid-2013...



Source: CSO, BofA Merrill Lynch Global Research estimates.

Table 4: ... to 6% levels in FY14

Item (%)	Weight	Fy13 Govt. adv. Est.	FY13E	FY14E	FY15E
Agriculture and allied activities	16.8	1.8	1.6	4.0	3.5
Industry	20.3	2.0	2.3	4.5	7.3
Mining and quarrying		0.4	2.0	3.0	3.0
Manufacturing		1.9	2.0	4.5	8.0
Electricity, gas and water supply		4.9	5.5	6.0	6.0
Services	62.8	6.5	6.7	7.2	8.3
Construction		5.9	5.8	4.5	5.0
Trade, hotels, transport, storage and communication		5.2	5.5	6.8	9.0
Financing, insurance, real estate and business services		8.6	9.0	9.0	9.0
Community, social and personal services		6.8	6.8	7.0	7.5
Real GDP at Factor Cost	100	5.0	5.2	6.2	7.5

Source: CSO, BofA Merrill Lynch Global Research estimates.

5.5% (from 6% earlier) in the March quarter. On our part, we have pared our growth forecast for the trade, transport and telecommunications sector (28% of GDP) to 5.5% from 6.2% (5.2% CSO) with railway traffic slowing to 3.9% in the December quarter from 4.9% in September. A relief is that January railway traffic grew 6.4%.

There also appears to be a statistical issue. FY12 absolute growth numbers have been revised up by 0.8% of GDP. The CSO's, ours and market's absolute GDP numbers are close for FY13. The CSO's growth rate, however, is 50bp lower because the base FY12 numbers were revised up. Had the old FY12 numbers been retained, growth would have been closer to 5.5%.

Lead indicators: Still stagnating at April levels

Our lead indicators continue to stagnate at April levels, when they first signaled that growth was bottoming (Table 5 and Charts 3-11). Real cash demand has bottomed out. A relief is that our measure of risk aversion (M1growth/M3 growth, *ie* the share of active money in overall money supply) has also turned the corner (Chart 2). That said, three key indicators – credit, industrial growth and capex – continue to be in negative territory. In our view, industrial growth is unlikely to turn around until lending rates come off to revitalize loan demand. We do not expect capex to turn around till the summer 2014 polls. Do find our last leading indicator report here.

RBI: OMO, 25bp CRR cut March 19, 50bp rate cut by June

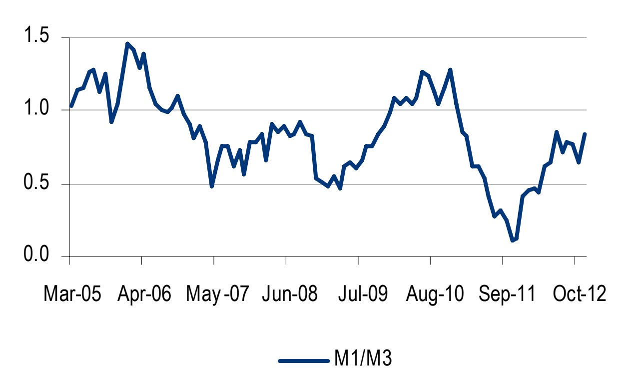
Against this backdrop, we expect the RBI to continue to ease liquidity to pull down lending rates to support growth (Chart 12). After all, it has only a six-month window as inflation will likely cross 7.5% in 2H13 and halt rate cuts (Chart 13). Against this backdrop, we are relieved that the RBI resumed OMO of Rs100bn today (Rs180bn by March BofAMLe). It should cut CRR 25bp on March19. The RBI will likely cut policy rates by 25bp each on May 3 and June. This, in turn, should pull down lending rates by an additional 75bp in FY14 atop 50-75bp this fiscal.. This, in turn, should pull down lending rates by an additional 75bp in FY14 atop 50-75bp this fiscal. Do read our last inflation report here.

Table 5: Lead indicators stagnating since April

	Sector	Jan-10	Dec-11	Apr-12	Current
Real cash demand		Positive	Negative	Positive	Positive
Industrial production	Industry	Positive	Negative	Negative	Negative
Credit	Industry, services	Neutral	Neutral	Negative	Negative
Capex	Industry	Positive	Negative	Negative	Negative
Business Confidence Index	Industry, services	Positive	Negative	Neutral	Neutral
Earnings	Industry, services	Positive	Negative	Neutral	Neutral
Construction	Industry, services	Positive	Neutral	Neutral	Neutral
Traffic	Industry	Positive	Neutral	Neutral	Neutral
Telecom subscribers	Services	Neutral	Neutral	Neutral	Neutral
OECD lead indicator	Industry, services	Positive	Negative	Neutral	Neutral

Source: BofA Merrill Lynch Global Research estimates.

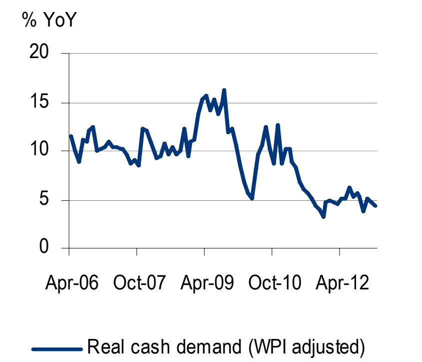
Chart 2: Risk aversion has turned the corner



Source: RBI

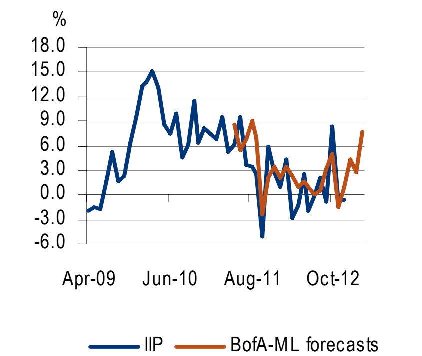
Lead indicators

Chart 3: Real cash demand



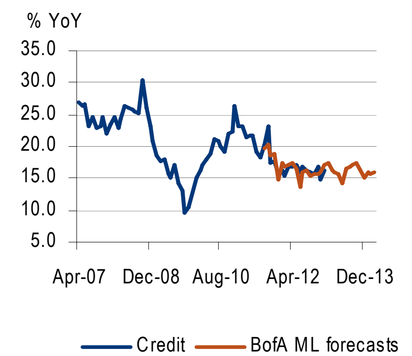
Source: RBI, BofA Merrill Lynch Global Research estimates.

Chart 4: Industrial growth



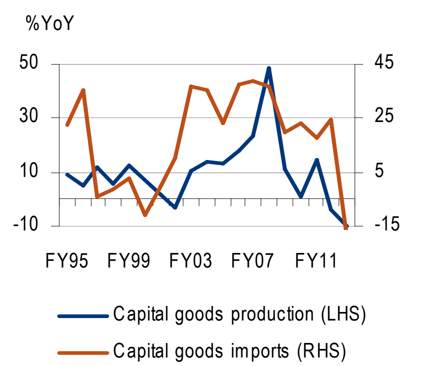
Source: CSO, BofA Merrill Lynch Global Research estimates.

Chart 5: Loan demand



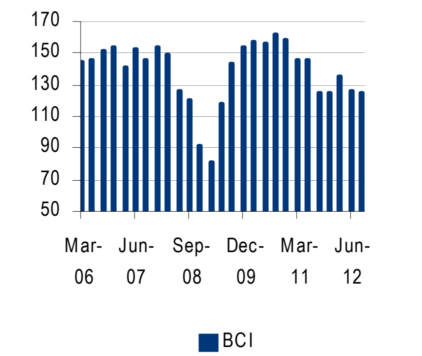
Source: RBI, BofA Merrill Lynch Global Research estimates.

Chart 6: Capital goods



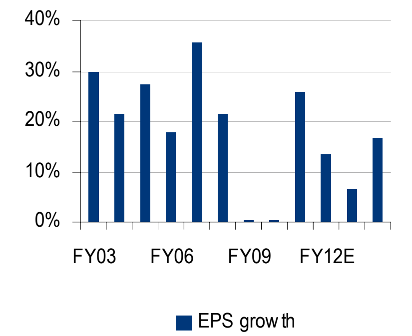
Source: CSO, DGC&IS.

Chart 7: Business Confidence



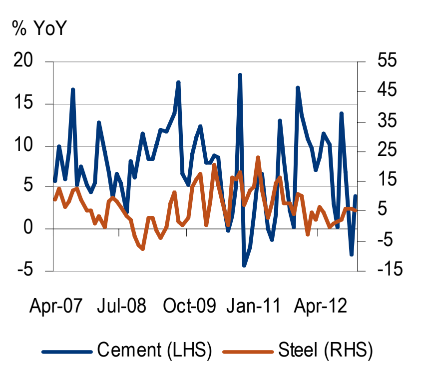
Source: ET-NCAER Business Confidence Index (BCI)

Chart 8: Earnings



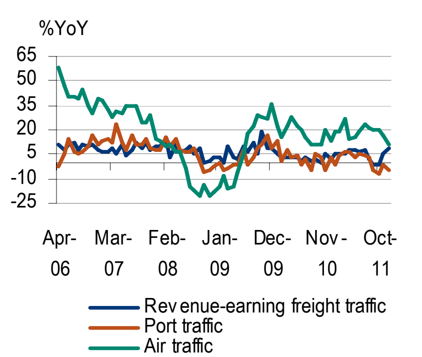
Source: BSE,, BofA Merrill Lynch Global Research estimates

Chart 9: Construction



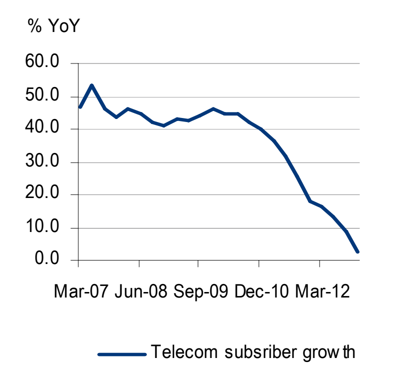
Source: Ministry of Industry

Chart 10: Traffic



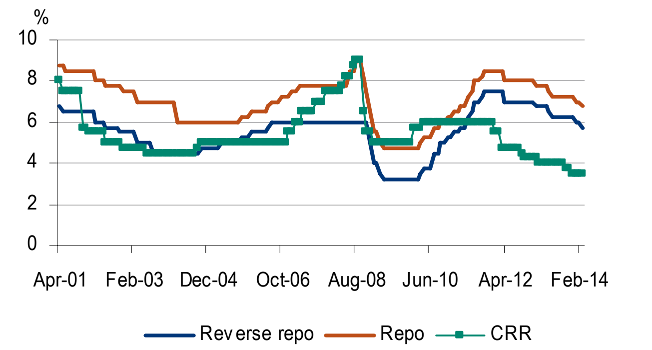
Source: CMIE.

Chart 11: Telecom



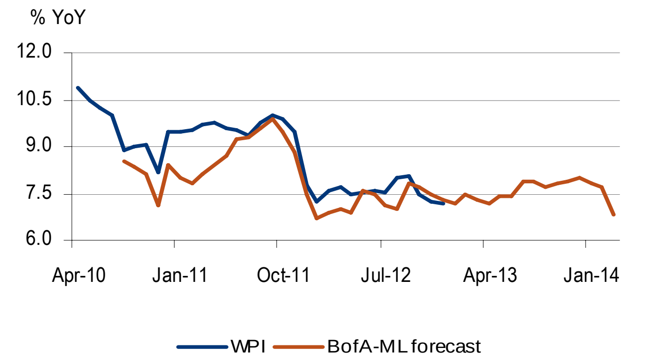
Source: CMIE.

Chart 12: RBI to cut policy rates by 50bp by June...



Source: BofA Merrill Lynch Global Research estimates.

Chart 13: ... as higher 2H13 inflation will force a halt to easing



Source: BofA Merrill Lynch Global Research estimates.

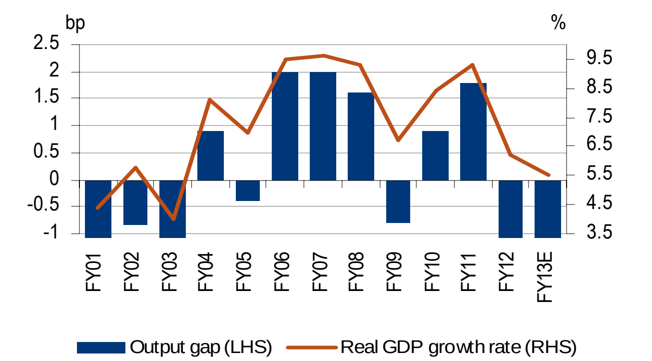
Experience suggests that the economic cycle turns around when real lending rates - currently 7.5% - slip below the medium-term 7.5%potential growth rate (Charts 14-15).

Key watch: Deposit growth, loan demand

What should one monitor, clients ask, to get a lead to the potential turnaround of the economy? Deposit growth, we reply, and loan demand, which hold the key to lending rate cuts. Charts 16-17 present our projections.

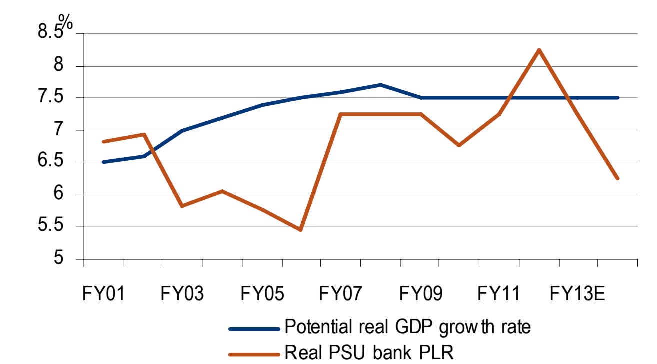
Although high lending rates are hurting loan demand, they are not commensurately coming off as RBI FX intervention has pulled down deposit growth. It is for this reason we have been expecting - correctly - that the RBI step up OMO/cut CRR to step up deposit growth to 15% by March from 13.1% now as base effects kick in. High lending rates should continue to soften loan growth to 14-15% from 15.8% now. This improvement in bank liquidity should make way for lending rate cuts of 75bp in FY14 atop 50-75bp in FY13.

Chart 14: Lower lending rates key...



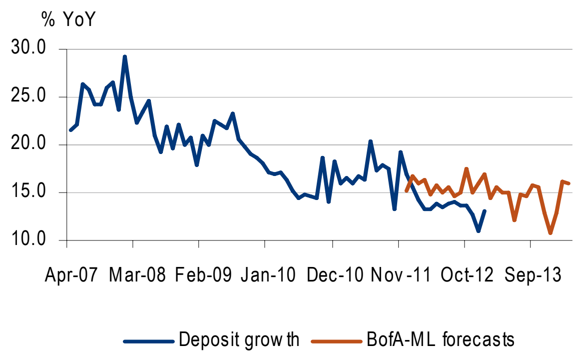
Source: BofA Merrill Lynch Global Research estimates.

Chart 15: ... to higher growth



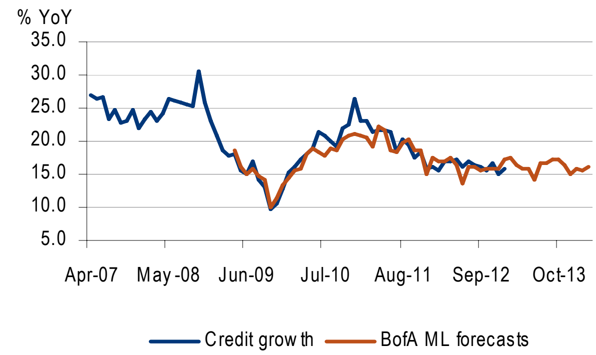
Source: BofA Merrill Lynch Global Research estimates.

Chart 16: RBI OMO/CRR cuts to push up deposit growth...



Source: RBI, BofA Merrill Lynch Global Research estimates.

Chart 17: ... high lending rates hurting loan demand



Source: RBI, BofA Merrill Lynch Global Research estimates.

Link to Definitions

GEM Macro

Click here for definitions of commonly used terms.

Macro

Click here for definitions of commonly used terms.

Special Disclosures

In accordance with the SEBI (Foreign Institutional Investors) Regulations and with guidelines issued by the Securities and Exchange Board of India (SEBI), foreign investors (individuals as well as institutional) that wish to transact the common stock of Indian companies must have applied to, and have been approved by SEBI and the Reserve Bank of India (RBI). Each investor who transacts common stock of Indian companies will be required to certify approval as a foreign institutional investor or as a sub-account of a foreign institutional investor by SEBI and RBI. Certain other entities are also entitled to transact common stock of Indian companies under the Indian laws relating to investment by foreigners. BofA Merrill Lynch reserves the right to refuse copy of research on common stock of Indian companies to a person not resident in India. American Depositary Receipts (ADR) representing such common stock are not subject to these Indian law restrictions and may be transacted by investors in accordance with the applicable laws of the relevant jurisdiction. Global Depository Receipts (GDR) and the Global Depository Shares of Indian companies, Indian limited liability corporations, have not been registered under the U.S. Securities Act of 1933, as amended, and may only be transacted by persons in the United States who are Qualified Institutional Buyers (QIBs) within the meaning of Rule 144A under the Securities Act. Accordingly, no copy of any research report on Indian companies' GDRs will be made available to persons who are not QIBs.

DSP Merrill Lynch Limited
SEBI Regn no. : BSE - INB/INF 011348134 NSE – INB/INF 231348138
Address – Mafatlal Centre, 8th Floor, Nariman Point, Mumbai, India. 400021
Tel : +91 22 6632 8000

Important Disclosures

BofA Merrill Lynch Research personnel (including the analyst(s) responsible for this report) receive compensation based upon, among other factors, the overall profitability of Bank of America Corporation, including profits derived from investment banking revenues.

Other Important Disclosures

Individuals identified as economists do not function as research analysts under U.S. law and reports prepared by them are not research reports under applicable U.S. rules and regulations. Macroeconomic analysis is considered investment research for purposes of distribution in the U.K. under the rules of the Financial Services Authority.

BofA Merrill Lynch Global Research policies relating to conflicts of interest are described at http://www.ml.com/media/43347.pdf.

"BofA Merrill Lynch" includes Merrill Lynch, Pierce, Fenner & Smith Incorporated ("MLPF&S") and its affiliates. Investors should contact their BofA Merrill Lynch representative or Merrill Lynch Global Wealth Management financial advisor if they have questions concerning this report.
"BofA Merrill Lynch" and "Merrill Lynch" are each global brands for BofA Merrill Lynch Global Research.

Information relating to Non-US affiliates of BofA Merrill Lynch and Distribution of Affiliate Research Reports:

MLPF&S distributes, or may in the future distribute, research reports of the following non-US affiliates in the US (short name: legal name): Merrill Lynch (France): Merrill Lynch Capital Markets (France) SAS; Merrill Lynch (Frankfurt): Merrill Lynch International Bank Ltd., Frankfurt Branch; Merrill Lynch (South Africa): Merrill Lynch South Africa (Pty) Ltd.; Merrill Lynch (Milan): Merrill Lynch International Bank Limited; MLI (UK): Merrill Lynch International; Merrill Lynch (Australia): Merrill Lynch Equities (Australia) Limited; Merrill Lynch (Hong Kong): Merrill Lynch (Asia Pacific) Limited; Merrill Lynch (Singapore): Merrill Lynch (Singapore) Pte Ltd.; Merrill Lynch (Canada): Merrill Lynch Canada Inc; Merrill Lynch (Mexico): Merrill Lynch Mexico, SA de CV, Casa de Bolsa; Merrill Lynch (Argentina): Merrill Lynch Argentina SA; Merrill Lynch (Japan): Merrill Lynch Japan Securities Co., Ltd.; Merrill Lynch (Seoul): Merrill Lynch International Incorporated (Seoul Branch); Merrill Lynch (Taiwan): Merrill Lynch Securities (Taiwan) Ltd.; DSP Merrill Lynch (India): DSP Merrill Lynch Limited; PT Merrill Lynch (Indonesia): PT Merrill Lynch Indonesia; Merrill Lynch (Israel): Merrill Lynch Israel Limited; Merrill Lynch (Russia): OOO Merrill Lynch Securities, Moscow; Merrill Lynch (Turkey I.B.): Merrill Lynch Yatirim Bank A.S.; Merrill Lynch (Turkey Broker): Merrill Lynch Menkul Değerler A.Ş.; Merrill Lynch (Dubai): Merrill Lynch International, Dubai Branch; MLPF&S (Zurich rep. office): MLPF&S Incorporated Zurich representative office; Merrill Lynch (Spain): Merrill Lynch Capital Markets Espana, S.A.S.V.; Merrill Lynch (Brazil): Bank of America Merrill Lynch Banco Multiplo S.A.; Merrill Lynch KSA Company, Merrill Lynch Kingdom of Saudi Arabia Company.

This research report has been approved for publication and is distributed in the United Kingdom to professional clients and eligible counterparties (as each is defined in the rules of the Financial Services Authority) by Merrill Lynch International and Banc of America Securities Limited (BASL), which are authorized and regulated by the Financial Services Authority and has been approved for publication and is distributed in the United Kingdom to retail clients (as defined in the rules of the Financial Services Authority) by Merrill Lynch International Bank Limited, London Branch, which is authorized by the Central Bank of Ireland and is subject to limited regulation by the Financial Services Authority – details about the extent of its regulation by the Financial Services Authority are available from it on request; has been considered and distributed in Japan by Merrill Lynch Japan Securities Co., Ltd., a registered securities dealer under the Financial Instruments and Exchange Act in Japan; is distributed in Hong Kong by Merrill Lynch (Asia Pacific) Limited, which is regulated by the Hong Kong SFC and the Hong Kong Monetary Authority; is issued and distributed in Taiwan by Merrill Lynch Securities (Taiwan) Ltd.; is issued and distributed in India by DSP Merrill Lynch Limited; and is issued and distributed in Singapore by Merrill Lynch International Bank Limited (Merchant Bank) and Merrill Lynch (Singapore) Pte Ltd. (Company Registration No.'s F 06872E and 198602883D respectively) and Bank of America Singapore Limited (Merchant Bank). Merrill Lynch International Bank Limited (Merchant Bank) and Merrill Lynch (Singapore) Pte Ltd. are regulated by the Monetary Authority of Singapore. Bank of America N.A., Australian Branch (ARBN 064 874 531), AFS License 412901 (BANA Australia) and Merrill Lynch Equities (Australia) Limited (ABN 65 006 276 795), AFS License 235132 (MLEA) distributes this report in Australia only to 'Wholesale' clients as defined by s.761G of the Corporations Act 2001. With the exception of BANA Australia, neither MLEA nor any of its affiliates involved in preparing this research report is an Authorised Deposit-Taking Institution under the Banking Act 1959 nor regulated by the Australian Prudential Regulation Authority. No approval is required for publication or distribution of this report in Brazil and its local distribution is made by Bank of America Merrill Lynch Banco Múltiplo S.A. in accordance with applicable regulations. Merrill Lynch (Dubai) is authorized and regulated by the Dubai Financial Services Authority (DFSA). Research reports prepared and issued by Merrill Lynch (Dubai) are prepared and issued in accordance with the requirements of the DFSA conduct of business rules.

Merrill Lynch (Frankfurt) distributes this report in Germany. Merrill Lynch (Frankfurt) is regulated by BaFin.

This research report has been prepared and issued by MLPF&S and/or one or more of its non-US affiliates. MLPF&S is the distributor of this research report in the US and accepts full responsibility for research reports of its non-US affiliates distributed to MLPF&S clients in the US. Any US person receiving this research report and wishing to effect any transaction in any security discussed in the report should do so through MLPF&S and not such foreign affiliates.

General Investment Related Disclosures:

This research report provides general information only. Neither the information nor any opinion expressed constitutes an offer or an invitation to make an offer, to buy or sell any securities or other financial instrument or any derivative related to such securities or instruments (e.g., options, futures, warrants, and contracts for differences). This report is not intended to provide personal investment advice and it does not take into account the specific investment objectives, financial situation and the particular needs of any specific person. Investors should seek financial advice regarding the appropriateness of investing in financial instruments and implementing investment strategies discussed or recommended in this report and should understand that statements regarding future prospects may not be realized. Any decision to purchase or subscribe for securities in any offering must be based solely on existing public information on such security or the information in the prospectus or other offering document issued in connection with such offering, and not on this report.

Securities and other financial instruments discussed in this report, or recommended, offered or sold by Merrill Lynch, are not insured by the Federal Deposit Insurance Corporation and are not deposits or other obligations of any insured depository institution (including, Bank of America, N.A.). Investments in general and, derivatives, in particular, involve numerous risks, including, among others, market risk, counterparty default risk and liquidity risk. No security, financial instrument or derivative is suitable for all investors. In some cases, securities and other financial instruments may be difficult to value or sell and reliable information about the value or risks related to the security or financial instrument may be difficult to obtain. Investors should note that income from such securities and other financial instruments, if any, may fluctuate and that price or value of such securities and instruments may rise or fall and, in some cases, investors may lose their entire principal investment. Past performance is not necessarily a guide to future performance. Levels and basis for taxation may change.

BofA Merrill Lynch is aware that the implementation of the ideas expressed in this report may depend upon an investor's ability to "short" securities or other financial instruments and that such action may be limited by regulations prohibiting or restricting "shortselling" in many jurisdictions. Investors are urged to seek advice regarding the applicability of such regulations prior to executing any short idea contained in this report.

Certain investment strategies and financial instruments discussed herein may only be appropriate for consideration in accounts qualified for high risk investment.

Foreign currency rates of exchange may adversely affect the value, price or income of any security or financial instrument mentioned in this report. Investors in such securities and instruments effectively assume currency risk.

UK Readers: The protections provided by the U.K. regulatory regime, including the Financial Services Scheme, do not apply in general to business coordinated by BofA Merrill Lynch entities located outside of the United Kingdom. BofA Merrill Lynch Global Research policies relating to conflicts of interest are described at http://www.ml.com/media/43347.pdf.

Officers of MLPF&S or one or more of its affiliates (other than research analysts) may have a financial interest in securities of the issuer(s) or in related investments.

MLPF&S or one of its affiliates is a regular issuer of traded financial instruments linked to securities that may have been recommended in this report. MLPF&S or one of its affiliates may, at any time, hold a trading position (long or short) in the securities and financial instruments discussed in this report.

BofA Merrill Lynch, through business units other than BofA Merrill Lynch Global Research, may have issued and may in the future issue trading ideas or recommendations that are inconsistent with, and reach different conclusions from, the information presented in this report. Such ideas or recommendations reflect the different time frames, assumptions, views and analytical methods of the persons who prepared them, and BofA Merrill Lynch is under no obligation to ensure that such other trading ideas or recommendations are brought to the attention of any recipient of this report.

In the event that the recipient received this report pursuant to a contract between the recipient and MLPF&S for the provision of research services for a separate fee, and in connection therewith MLPF&S may be deemed to be acting as an investment adviser, such status relates, if at all, solely to the person with whom MLPF&S has contracted directly and does not extend beyond the delivery of this report (unless otherwise agreed specifically in writing by MLPF&S). MLPF&S is and continues to act solely as a broker-dealer in connection with the execution of any transactions, including transactions in any securities mentioned in this report.

Copyright and General Information regarding Research Reports:

Materials prepared by BofA Merrill Lynch Global Research personnel are based on public information. Facts and views presented in this material have not been reviewed by, and may not reflect information known to, professionals in other business areas of BofA Merrill Lynch, including investment banking personnel. BofA Merrill Lynch has established information barriers between BofA Merrill Lynch Global Research and certain business groups. As a result, BofA Merrill Lynch does not disclose certain client relationships with, or compensation received from, such companies in research reports. To the extent this report discusses any legal proceeding or issues, it has not been prepared as nor is it intended to express any legal conclusion, opinion or advice. Investors should consult their own legal advisers as to issues of law relating to the subject matter of this report. BofA Merrill Lynch Global Research personnel's knowledge of legal proceedings in which any BofA Merrill Lynch entity and/or its directors, officers and employees may be plaintiffs, defendants, co-defendants or co-plaintiffs with or involving companies mentioned in this report is based on public information. Facts and views presented in this material that relate to any such proceedings have not been reviewed by, discussed with, and may not reflect information known to, professionals in other business areas of BofA Merrill Lynch in connection with the legal proceedings or matters relevant to such proceedings.

Any information relating to the tax status of financial instruments discussed herein is not intended to provide tax advice or to be used by anyone to provide tax advice. Investors are urged to seek tax advice based on their particular circumstances from an independent tax professional.

The information herein (other than disclosure information relating to BofA Merrill Lynch and its affiliates) was obtained from various sources and we do not guarantee its accuracy. This report may contain links to third-party websites. BofA Merrill Lynch is not responsible for the content of any third-party website or any linked content contained in a third-party website. Content contained on such third-party websites is not part of this report and is not incorporated by reference into this report. The inclusion of a link in this report does not imply any endorsement by or any affiliation with BofA Merrill Lynch. Access to any third-party website is at your own risk, and you should always review the terms and privacy policies at third-party websites before submitting any personal information to them. BofA Merrill Lynch is not responsible for such terms and privacy policies and expressly disclaims any liability for them.

All opinions, projections and estimates constitute the judgment of the author as of the date of the report and are subject to change without notice. Prices also are subject to change without notice. BofA Merrill Lynch is under no obligation to update this report and BofA Merrill Lynch's ability to publish research on the subject company(ies) in the future is subject to applicable quiet periods. You should therefore assume that BofA Merrill Lynch will not update any fact, circumstance or opinion contained in this report.

Certain outstanding reports may contain discussions and/or investment opinions relating to securities, financial instruments and/or issuers that are no longer current. Always refer to the most recent research report relating to a company or issuer prior to making an investment decision.

In some cases, a company or issuer may be classified as Restricted or may be Under Review or Extended Review. In each case, investors should consider any investment opinion relating to such company or issuer (or its security and/or financial instruments) to be suspended or withdrawn and should not rely on the analyses and investment opinion(s) pertaining to such issuer (or its securities and/or financial instruments) nor should the analyses or opinion(s) be considered a solicitation of any kind. Sales persons and financial advisors affiliated with MLPF&S or any of its affiliates may not solicit purchases of securities or financial instruments that are Restricted or Under Review and may only solicit securities under Extended Review in accordance with firm policies.

Neither BofA Merrill Lynch nor any officer or employee of BofA Merrill Lynch accepts any liability whatsoever for any direct, indirect or consequential damages or losses arising from any use of this report or its contents.