GEM Economics | Asia | India
10 November 2014

What will RBI do after Rs62/USD?

Indranil Sen Gupta +91 22 6632 8653
India Economist
DSP Merrill Lynch (India)
indranil.sengupta@baml.com

Abhishek Gupta +91 22 6632 8682
India Economist
DSP Merrill Lynch (India)
a.gupta@baml.com

Bottom line: RBI to hold Rs58-62/USD; USD may breach temp

We have grown more confident of our call that the RBI will hold Rs58-62/USD with lower oil prices and gold import curbs offsetting US Dollar strength. At the same time, there is a rising possibility of a temporary breach of Rs62/USD if the US Dollar appreciates to, say, 1.20/€ (1.25/€ in December BAMLe). In this report, we look at the RBI's potential response. We think the RBI will sell a token US$500mn-US$1bn to signal Gov Rajan's Rs60-62/USD preferred range if the INR crosses Rs62/USD levels. Second, it will likely explain the need to live to fight another day by ignoring cross-currency pressures from a stronger US Dollar in the Rs63-65/USD zone. Finally, it will likely mount a full barreled defense to anchor INR expectations, at Rs65/USD, selling, say, up to US$20bn, if need be. On balance, we continue to expect Gov Rajan to continue to recoup FX reserves to guard against contagion. Our estimates estimate that the RBI needs to pick up US$30-35bn to maintain 8-month import cover in March. Our Asia FX strategist, Adarsh Sinha, sees the INR at Rs61/USD in December. Do read our last INR report here.

RBI to hold Rs58-62/USD; recoup FX for 8-mth import cover

Our call that the RBI will hold Rs58-62/USD has held so far, although the stronger US Dollar may force a temporary breach. By and large, USD strength should continue to be offset by falling oil prices and gold import restrictions. Given gold import curbs, we forecast the current account deficit at a manageable 1.5% of GDP for the current fiscal at our house US$100/bbl Brent forecast (Table 1). Note US$10/bbl in Brent price swings the CAD by US$8bn (0.4% of GDP).

We continue to expect RBI governor Raghuram Rajan to recoup FX reserves to guard against contagion. After all, we estimate that the RBI will need buy US$30-35bn just to maintain 8 month import cover in March 2016 (Chart 1). In fact, the RBI has added US$2.6bn (net) to its forward book even in September (Table 2).

#1. Rs62/USD: Token defense of Rs60-62/USD

We expect the RBI to mount a token defense, selling, say, US$500mn-US$1bn, if the INR breaches Rs62/USD with the US Dollar hardening towards 1.20/€, which is not our house call. It would ideally want to hold Gov Rajan's preferred Rs60-62/USD zone. At the same time, it will not spend too much of precious FX at a time the INR has outperformed most BRIC/TIM currencies (Table 3). With US Dollar strength pulling down oil prices in US Dollar terms, there is a natural offset. In our view, the RBI may not be required to exert itself too much if the US Dollar settles at 1.25/€ as our FX strategists expect. At the same time, some FX intervention may be needed as the RBI has virtually bought banks' *nostro* cover forward.

Forwards to be rolled over if US$9bn FX loans are not: We expect banks and corporates to roll over the maturity of FX loans and bonds of US$9.3bn until March 2015 (Chart 2). In case of any difficulty, the RBI will roll over its forwards with banks.

Hedging: The RBI is repeatedly cautioning the market and corporates to hedge their FX exposures. In our view, they could ask banks to provide a higher capital charge for loans to borrowers with large unhedged exposures in the December 2 policy.

#2. Rs63-65/USD: Highlight cross-currency pressures

The RBI will likely explain the need to live to fight another day by ignoring cross-currency pressures from a stronger US Dollar in the Rs63-65/USD zone. While USD-INR accounts for about 85% of trade transactions, it is, after all, scarcely possible to fight a rising Dollar, with a low import cover of 8.3-months. In any case, the RBI did not usually fight cross-currency pressures in the past when the import cover was much higher.

Can the RBI hold INR expectations beyond Rs62/USD? Yes, we believe that Gov Rajan will be able to anchor INR expectations if he takes the FX market into confidence. During bouts of cross-currency pressures in the past, Govs Jalan and Reddy were able to anchor INR expectations, without even selling FX at times, by driving home the difference between cross-currency pressures and, say, BoP weaknesses.

INR does better when RBI focusses on FX reserves: Experience tells us that the INR ultimately came to grief in end-2011 as the RBI allowed the INR to appreciate by suspending FX buying in the preceding years. Charts 1 and 3 shows that the INR appreciated from Rs48/USD levels in end-2009 to Rs44/USD levels by mid-2010 and stayed there until end-2011 as import cover fell in the absence of FX buying. This policy of unsustainable appreciation eventually led the INR to depreciate by close to 50% until last August.

#3. Rs65/USD: Full-scale FX intervention

We expect the RBI to mount a full barreled defense to anchor expectations, at Rs65/USD, selling, say, up to US$20bn, if need be. Given the low import cover, the INR has tended to fall below the previous low in each successive rounds of volatility. The INR dropped to Rs53/USD during the end-2011 European crisis. It fell further to Rs57/USD during the 2012 Greek crisis. The INR collapsed to Rs68/USD during the taper tantrum of 2013. Against this backdrop, Gov Rajan will not want to take chances with INR expectations beyond Rs65/USD.

So, why not sell early at Rs62/USD itself? The RBI has typically taken guard at a later stage of INR depreciation to conserve ammunition even when it had more-than-sufficient import cover. Barring the ill-fated FX crisis of 2013, it has virtually never ever given up a level that it has decided to defend.

How much can the RBI sell? We would estimate that it can sell ~US$35bn to defend the INR and still maintain 8-month import cover by March 2016 as per our BoP estimates (Table 1). Bouts of FX volatility typically cost US$20bn to stabilize. Below 8-month import cover, selling FX only goes to weaken the INR further as it raises a question mark over the adequacy of FX reserves.

INR responds more to USD than Brent; gold swing factor

Our phase-wise analysis shows that the INR is more sensitive to USD than falling oil prices (Charts 4-5). Falling Brent episodes have had a strong correlation with strengthening USD. The INR has typically been unable to withstand this cross-currency pressure despite a favorable movement in Brent. So, what's different now? Gold import curbs that are compressing the current account deficit for the time being. Just as importantly, the INR may have over-reacted during the 2013 FX crisis.

2007 Fed easing cycle: After the Fed paused the tightening cycle in August 2006 and began easing in 2007, the USD depreciated all the way to 1.6/Euro by mid-2008. The ensuing liquidity resulted in Brent moving up from US$55/bbl to

US$140/bbl levels. Despite that, strong FII inflows during this period coupled with weakening USD led the INR to appreciate appreciated from Rs47/USD in July 2006 to Rs39/USD levels in October 2007, despite the RBI buying about US$70bn during this period.

2008 financial crisis: The collapse of the US economy appreciated the US Dollar to 1.20s/Euro as it was seen as a safe haven. With global growth in question and a stronger USD, Brent collapsed to US$40/bbl levels. Despite the positive impact of falling Brent price on Indian macro, the INR depreciated to Rs50/USD levels as FII equity investors pulled out over US$10bn in FY09. In response, the RBI had to sell about US$35bn to stabilize the INR.

2009 US QE1: As the US unveiled its quantitative easing program in end-2008, easy liquidity once again funneled into commodity markets with Brent recovering to US$80/bbl levels and the USD depreciating to 1.5/Euro levels by end 2009. With FII inflows resuming again, the INR appreciated from Rs50/USD levels to Rs46/USD levels by end-2009 as the RBI stopped buying FX.

2010-2011 European debt crisis and Fed QE2: The only time the INR did not respond to US Dollar strength was during 2010-2011. The INR hovered around Rs46/USD as the Euro weakened and appreciated the US Dollar to 1.2/Euro levels initially by mid-2010. Post that as the Fed undertook QE2, it once again led to USD weakening amidst increasing liquidity that fueled Brent prices higher. This time around INR appreciated mildly as RBI continued to stay away from intervention in FX markets. Depreciating USD and RBI inaction should logically have appreciated the INR a lot more during this period. However, as FDI inflows slowed and import bill increased due to rising crude and higher commodity prices, the overall BoP situation limited further INR gains. RBI's policy of not building FX reserves during this period eventually resulted in a sharp depreciation in late 2011 as import cover fell.

2013 Fed tapering: With the Fed announcing its intentions of QE tapering, there was a sudden pullout from Indian debt and equity markets that led to a big depreciation of the INR. The weakening rupee was further confounded by the domestic policy of raising interest rates by almost 300bp that killed growth and pushed back a fragile recovery that seemed to be underway. Brent was largely stable during this period even though the USD depreciated against the EUR during this period. INR largely depreciated due to domestic policy mistakes during this period aggravating the impact of the taper tantrums.

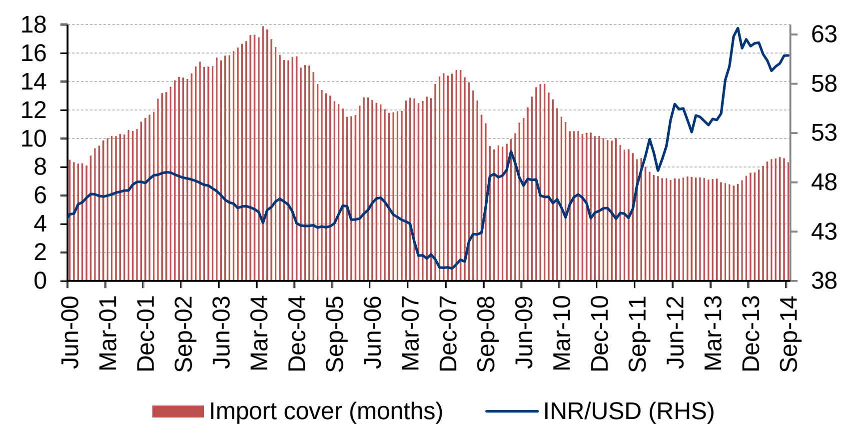
2014 expectation of Fed tightening cycle: Expectations of US economy picking up and anticipation of Fed rate hikes in 2H15 has resulted in USD strength from 1.38/Euro levels to 1.24/Euro levels. Strengthening USD and squeezing out of global liquidity has pulled down Brent prices to US$83/bbl levels. RBI's recouping of FX reserves has added stability to the INR around Rs61/USD level. This has been possible with renewed equity and debt inflows amidst a stable political environment.

Table 1: Falling crude further lowers the CAD to 1.5% in FY15 and 1.7% in FY16

Item	FY13 (US$ 107/bbl)	FY14	4Q FY14	1Q FY15	FY15E (US$ 99.4/bbl)	FY16E (US$ 100/bbl)
Current Account	-88.1	-32.4	-1.34	-7.86	-31.4	-41.4
% of GDP	-4.8	-1.7	-0.3	-1.7	-1.5	-1.7
Trade balance	-195.6	-147.6	-30.7	-34.6	-141.4	-161.4
- Exports	306.6	318.6	83.7	81.7	340.3	386.8
- Imports	502.2	466.2	114.3	116.4	481.7	548.2
o/w Oil imports	164.0	166.8	42.7	40.8	161.9	178.5
o/w net gold imports	47.3	22.8	3.8	5.7	23.3	38.3
Invisibles	107.5	115.2	29.3	26.8	110	120
o/w private transfers	64.3	65.5	16.2	16.4	67.4	69.5
o/w income from reserve assets	3.7	3.5	0.8	0.7	5.0	5.0
Capital Account	89.4	48.8	9.2	19.9	94.0	98.0
Foreign investment	46.7	26.4	10.2	20.6	60.0	55.0
- FDI	19.8	21.6	0.9	8.2	25	25
- FII+	26.9	4.8	9.3	12.4	35	30
Banking capital	16.6	25.4	-1.8	-0.1	15	20
- NRI deposits	14.8	38.9	3.7	2.4	14	15
External assistance	1.0	1.0	0.9	0.0	5	5
ECBs	8.5	11.8	5.1	1.7	8	12
Short term credit	21.7	-5.0	-4.5	0.2	6	6
Other Capital	-5.0	-10.8	-0.7	-2.5	0.0	0.0
Errors and Omissions	2.6	-0.9	-0.7	-0.8	0.0	0.0
Overall balance	3.9	15.5	7.1	11.2	62.6	56.6
Memo						
RBI's forex intervention	-0.8	11.0	5.4	10.6	52.6	46.6
Import Cover (in months)	7.0	7.8			8.9	8.8

Source: RBI, BofA Merrill Lynch Global Research estimates.

Chart 1: RBI needs to buy US$ 30-35bn by March 2016 to maintain 8-month import cover



Source: BofAML Global Research Estimates, RBI

Table 2: RBI's forwards position increased to US$8.4bn as it bought net US$2.6bn in Sep

	Short term O/s		Long term O/s	Total O/s
	Short	Long	Short	Net Fwd Sales O/s
US$bn	(1)	(2)	(3)	(4) = (1)+(2)+(3)
Jun-13	-7.16	2.25	0.00	-4.91
Jul-13	-6.93	2.20	0.00	-4.74
Aug-13	-10.84	1.79	0.00	-9.05
Sep-13	-14.46	6.80	-1.92	-9.58
Oct-13	-16.80	10.88	-8.54	-14.46
Nov-13	-18.50	12.05	-25.96	-32.40
Dec-13	-18.34	11.70	-25.96	-32.60
Jan-14	-17.51	11.63	-25.97	-31.85
Feb-14	-16.98	11.63	-25.97	-31.32
Mar-14	-16.90	11.84	-25.97	-31.03
Apr-14	-16.11	10.02	-25.97	-32.06
May-14	-14.65	29.16	-25.97	-11.46
Jun-14	-12.47	38.28	-25.97	-0.15
Jul-14	-9.89	41.25	-25.97	5.40
Aug-14	-9.15	40.94	-25.97	5.82
Sep-14	-7.45	41.84	-25.97	8.42

Source: BofAML Global Research Estimates, RBI

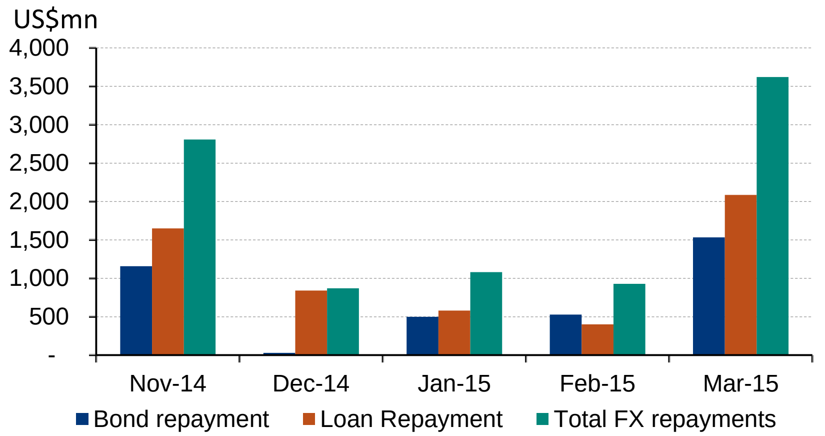
Table 3: INR has outperformed other BRICs and TIMs currencies

% Δ since	22 May'13	15 Jul'13	18 Dec'13	1 Aug'14
Brazil	-25.2	-15.6	-10.0	-13.6
Russia	-50.4	-44.3	-43.1	-31.5
India	-11.1	-2.9	0.7	-0.8
China	0.1	0.3	-0.8	0.9
Turkey	-23.2	-17.6	-10.9	-6.6
Indonesia	-24.6	-20.9	-0.1	-3.2
Mexico	-10.4	-7.3	-5.0	-3.5

Note: As on 7th November 2014

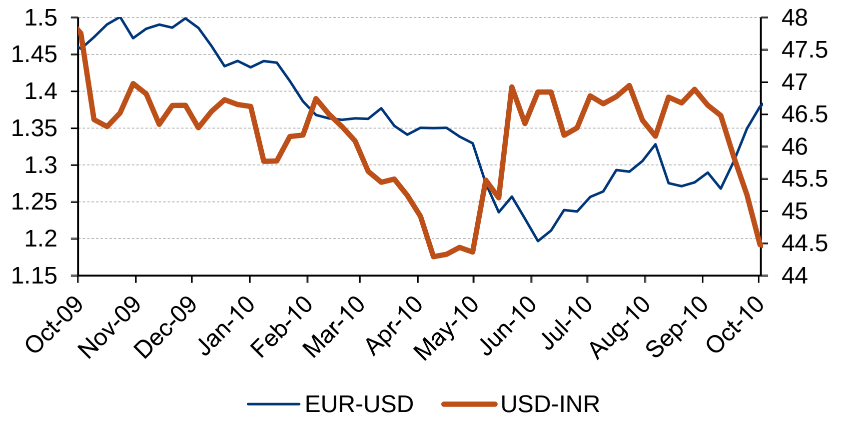
Source: BofA-ML Global Research Estimates, Bloomberg

Chart 2: Rollover of FX repayments likely



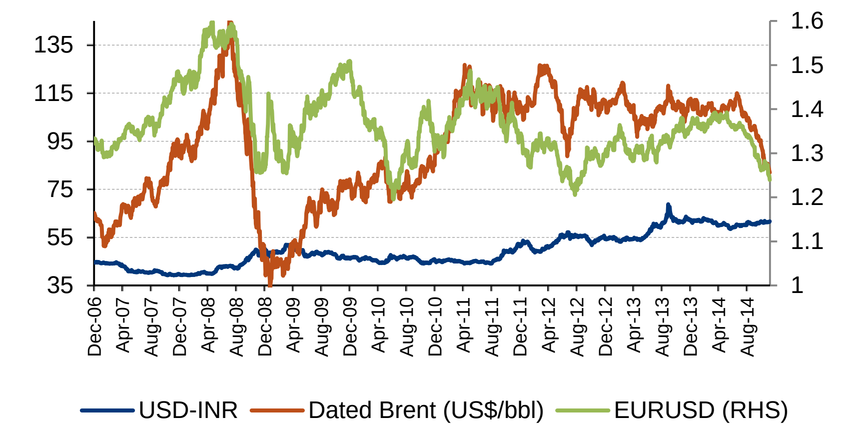
Source: BofA-ML Global Research Estimates, Bloomberg

Chart 3: 2010: INR was supported against stronger USD by absence of FX intervention



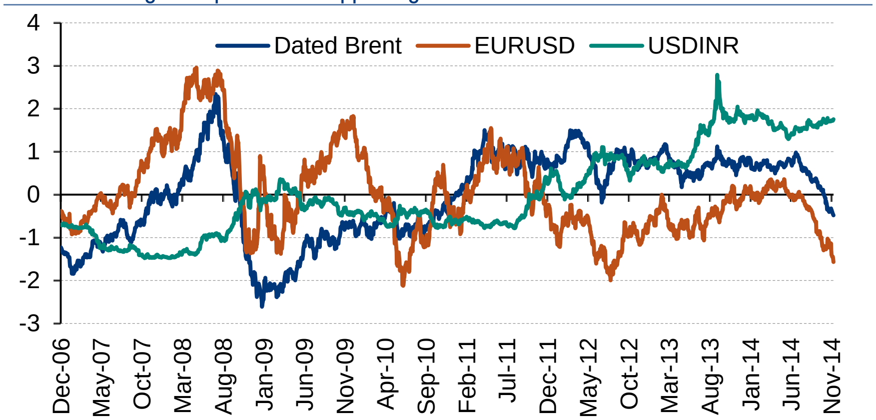
Source: Bloomberg.

Chart 4: INR responds more to USD than Brent…



Source: BofA Merrill Lynch Global Research estimates, Bloomberg

Chart 5: … but gold import curbs supporting INR now



Note: All series have been normalized for ease of comparison.
Source: BofA Merrill Lynch Global Research estimates, Bloomberg

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

From time to time research analysts conduct site visits of covered companies. BofA Merrill Lynch policies prohibit research analysts from accepting payment or reimbursement for travel expenses from the company for such visits.

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 Conduct Authority and the Prudential Regulation Authority) by Merrill Lynch International and Bank of America Merrill Lynch International Limited, which are authorized by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority, and is distributed in the United Kingdom to retail clients (as defined in the rules of the Financial Conduct Authority and the Prudential Regulation Authority) by Merrill Lynch International Bank Limited, London Branch, which is authorised by the Central Bank of Ireland and subject to limited regulation by the Financial Conduct Authority and Prudential Regulation Authority - details about the extent of our regulation by the Financial Conduct Authority and Prudential Regulation Authority are available from us 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 to institutional investors and/or accredited investors (each as defined under the Financial Advisers Regulations) by Merrill Lynch International Bank Limited (Merchant Bank) and Merrill Lynch (Singapore) Pte Ltd. (Company Registration No.'s F 06872E and 198602883D respectively). 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. Hong Kong recipients of this research report should contact Merrill Lynch (Asia Pacific) Limited in respect of any matters relating to dealing in securities or provision of specific advice on securities. Singapore recipients of this research report should contact Merrill Lynch International Bank Limited (Merchant Bank) and/or Merrill Lynch (Singapore) Pte Ltd in respect of any matters arising from, or in connection with, this research report.

General Investment Related Disclosures:

Taiwan Readers: Neither the information nor any opinion expressed herein constitutes an offer or a solicitation of an offer to transact in any securities or other financial instrument. No part of this report may be used or reproduced or quoted in any manner whatsoever in Taiwan by the press or any other person without the express written consent of BofA Merrill Lynch.

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.