April 27, 2007

### **India Economics**

# INR – RBI's Tough Task of Fine Balancing – Part II

Rupee at a nine-year high: We believe that in early March this year, the Central Bank made a clear shift in exchange rate management approach allowing faster appreciation of the currency. The rupee has appreciated by about 8.4% since early March, compared with 3.4% appreciation in the preceding six months. Apart from reducing the pressure on liquidity management, the currency appreciation will only help in reducing the inflation pressure.

Capital inflows spiking up: India's foreign exchange reserves have increased by US\$23 billion in the last 10 weeks – this implies an annualized run rate of US\$120 billion and compares with US\$40 billion accretion in the 12-month period prior to these 10 weeks. With the current account continuing to be in deficit, this increase in reserves is driven by strong capital inflows. This surge in inflows and rising cost of the sterilization appears to have triggered the shift on RBI policy to allow faster appreciation in the rupee.

Appreciation trend may remain intact but pace could slow: After the recent sharp appreciation, we estimate that on a real effective exchange rate basis the rupee has moved further away from its mean by about 10%. We believe that the medium-term implications of the over-valued currency for macro stability are that the RBI may have to start intervening soon to soften the pace of appreciation. However, this intervention would also necessitate further hike in the cash reserve ratio.

Capital controls next? While RBI may continue with the intervention for the next three months or so, if the pressure of capital inflows persists, it may have little choice but to initiate some capital controls on debt-oriented inflows. Some soft measures have already been announced recently – such as limiting returns on non-residents' deposits and restrictions on banks' borrowings from abroad.

### MORGAN STANLEY RESEARCH ASIA/PACIFIC

JM Morgan Stanley Securities

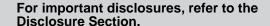
#### Chetan Ahya

Chetan.Ahya@morganstanley.com +91 22 2209 7940

#### Mihir Sheth, CFA

Mihir.Sheth@morganstanley.com +91 22 2209 7925

, tp... 27, 200



April 27, 2007 India Economics

### INR – RBI's Tough Task of Fine Balancing – Part II

#### Rupee has Appreciated to a Nine-Year High

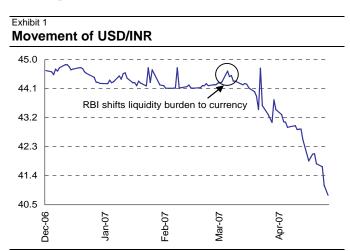
Our recent note (*INR – RBI's Tough Task of Fine Balancing*, dated April 9) highlighted the Reserve Bank of India's increasingly complex task of trying to pursue an independent monetary policy, a relatively open capital account and a managed exchange rate. We highlighted the possibility of the Central Bank having to let the rupee appreciate against the US dollar as it chooses to maintain an independent monetary policy (higher interest rates to control overheating) and an open capital account over a stable exchange rate regime. Since then (April 9), the Indian rupee has appreciated rapidly by 4.7% against the US\$ – a perceptible shift in approach towards currency management (Exhibit 1). In this follow-up note, we further analyze the dynamics of this trend and the potential implications for the same on export growth and trade deficit.

#### Spike in Capital Inflows in the Last Few Weeks

India's foreign exchange reserves have increased by US\$23 billion in the last 10 weeks – this implies an annualized run rate of US\$120 billion and compares with US\$ 40 billion accretion in the 12-month period prior to these 10 weeks. This surge has resulted in cumulative appreciation of 7.3% of the rupee against the US dollar in this period. With the current account continuing to be in deficit, this increase in reserves is driven by strong capital inflows. A bulk of this rise is due to non-FDI (foreign direct investment) inflows – primarily debt, portfolio equity and private equity inflows. Although FDI flows have picked up recently, in our view non-FDI flows would have accounted for about 75% of the total capital inflows.

### Rising Cost of Sterilization Makes it Difficult for RBI to Intervene in FX market

Even though the RBI may be concerned about the overvaluation of the currency and the widening trade deficit, we believe it is forced to let the currency move to the overvalued zone, as excessive intervention in the FX market is resulting in a large injection of liquidity in the banking system. Two years back, when domestic capacity utilization was low, the system could absorb this liquidity. With capacity utilization increasing to near peak levels, this liquidity has, over the last few months, posed a challenge to macro stability. To control this overheating, the Central Bank is forced to sterilize this excess liquidity via reverse repo (until recently), market stabilization scheme (MSS) bonds and cash reserve ratio hikes (see Exhibit 3 and Exhibit 8 for details).



Source: Bloomberg, Morgan Stanley Research

Exhibit 2

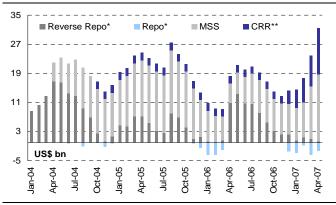
### **USD/INR versus FX Reserves Accretion**



Source: RBI, Morgan Stanley Research

Exhibit 3

### **Trend in Sterilized Liquidity Balance**



Source: RBI, Morgan Stanley Research; \* Repo and reverse repo balance represent average numbers for that month; \*\* CRR balances include the liquidity absorbed under this mechanism since October 2004 (raising the CRR from 4.5% to 6.5%)

MORGAN STANLEY RESEARCH

April 27, 2007 India Economics

Although many other Asian countries face a problem of excess liquidity, we think that the sterilization cost problem is more acute in India's case, as there is a negative carry involved (rates in India are significantly higher than in Asia and the US). Rising sterilized liquidity balances (Exhibit 3) and a sharp rise in short-term interest rates have led to an increase in sterilization costs to an estimated US\$1.2-1.4 bn1 (annualized in April 2007) from US\$0.7 bn in January (annualized). Indeed, if the Central Bank had not resorted to cash reserve ratio hikes and instead had used the reverse repo/MSS mechanisms, the sterilization cost would have been even higher at US\$1.8-2 bn<sup>2</sup> annualized in April 2007. This cost is currently being borne by the banking system as the money parked under the cash reserve ratio with the Central Bank earns no interest even as banks continue pay a weighted average deposit rate of 6.25-6.75% (including low-cost deposits) on them.

### **Burden Shifts to Exchange Rate**

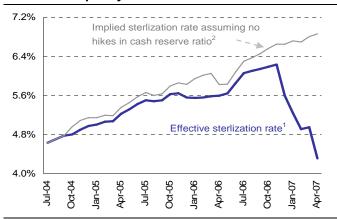
We believe that in early March this year, the Central Bank made a clear shift in exchange rate management approach allowing faster appreciation of the currency. The rupee has appreciated by about 8.4% since early March compared with 3.4% appreciation in the preceding six months. Apart from reducing the pressure on liquidity management, the currency appreciation will only help in reducing the inflation pressure. Over the last two months the commodity research bureau index has increased by 6.1%. The impact of the appreciating currency will help offset this rise of global commodities. Note that global commodity-linked products have a weighting of 37% in the wholesale price index.

#### Collateral Damage Will Be Felt on Export Growth

We believe the recent sharp appreciation against the US dollar could result in a further showdown in export growth. On a real effective exchange rate basis (REER, trade-weighted rupee adjusted for inflation differentials with trade partners), the

<sup>1</sup> This is an approximation based on available data. We have used the following components/assumptions – a) cost of reverse repo balance = average monthly reverse repo balance x reverse repo rate; b) gains from repo balance = average monthly repo balance x repo rate; c) cost of market stabilization scheme = outstanding MSS balance x trailing one-year average of 364-Day T-bill rate (assuming constant one-year maturity of issuances under MSS scheme); d) cost of cash reserve hikes = balance accumulated under CRR since October 2004 x prevailing rate of interest on CRR. The final number is computed as (a)-(b)+(c)+(d) divided by the total sterilized liquidity balance.

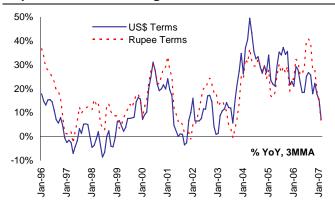
### Exhibit 4 Trend in Approximate Average Interest Rate Cost on Sterilized Liquidity Balances



Source: RBI, Morgan Stanley Research; Note: See footnotes 1 and 2 for computation methodology

Exhibit 5

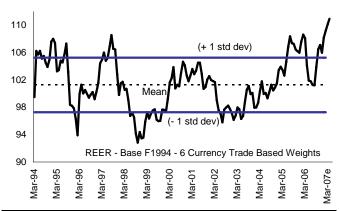
### Export Growth Touching 31/2 Year Low



Source: CEIC, Morgan Stanley Research

Exhibit 6

### Indian Rupee: Real Effective Exchange Rate<sup>3</sup> (REER)



Source: RBI, Morgan Stanley Research 3. REER is based on a 6-currency index of India's top trading partners; e= Morgan Stanley Research Estimates

<sup>&</sup>lt;sup>2</sup> For computing the implied cost if the Central Bank had not resorted to absorption via cash reserve hikes, we assume that the absorption would have alternatively been done by the reverse repo mechanism.

MORGAN STANLEY RESEARCH

April 27, 2007 India Economics

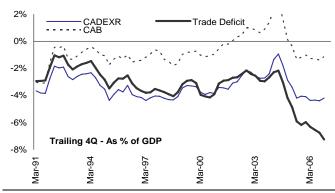
Indian currency has moved to its highest level in the last 14 years (maximum period for which we have data). On a REER basis, the rupee is now about 10% above its 10-year mean. Apart from the appreciation in currency, slower global demand growth is an added challenge for export growth trend. We believe that US dollar goods export growth, which recently slowed to just 7% (average during 3 months ended February), could potentially decelerate further to 0-3% in the next 3-4 months. Export growth in rupee terms has already slowed to 6% in this period. This trend would only cause further widening in the current account deficit excluding remittances, even as overall current account deficit may remain with manageable limits.

Although from a macro stability perspective one can look at the current account including a sustainable component of NRI remittances, we believe that, in the context of assessing the implication for the relative currency competitiveness and domestic output growth, CADEXR is a better measure. The current-account deficit, excluding non-resident Indians' (NRI) remittances (CADEXR) widened to the high level of 5.1% of GDP at quarter-end December 2006. We believe that this deficit would widen further to 6-6.5% of GDP over the next 2-3 quarters, if the rupee appreciation trend is maintained. We believe if export growth during 12 months ended March 2008 (F2008) reduces to 0-5% YoY in rupee terms compared with an estimated 23% in the 12 months ended March 2007 (F2007), it would reduce overall GDP growth by 0.8-1.2% points in F2008.

#### **Capital Controls Next?**

We believe that currently the RBI is focused more on slowing domestic demand growth and reducing inflationary pressure. Fighting the impossible trinity, RBI has so far chosen to let the currency appreciate and has tried to achieve greater

### India: Trailing Four-Quarter Trade and Current-Account Balance (as % of GDP)



CADEXR = Current Account Deficit Excluding Remittances; Source: RBI, CEIC, Morgan Stanley Research

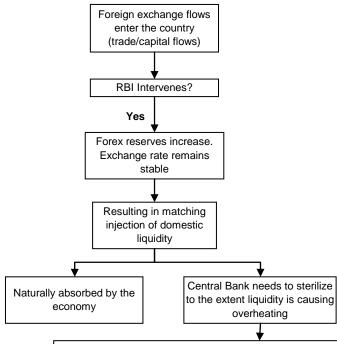
effectiveness in management of monetary policy. However, after the recent sharp appreciation, we estimate that on a real effective exchange rate basis, the rupee has moved further away from its mean by about 10%. We believe that the medium-term implications of overvalued currency on the macro stability are that the RBI may have to start intervening soon to soften the pace of appreciation. However, this intervention would also necessitate a further hike in the cash reserve ratio. While the RBI may continue with the intervention for the next three months or so, if the pressure of capital inflows persists, it may have little choice but to initiate some capital controls on debt-oriented inflows. Some soft measures have already been announced recently – such as limiting returns on non-residents' deposits and restrictions on banks' borrowing from abroad.

Continued....

April 27, 2007 India Economics

Exhibit 8

### Central Bank's Methodology of Intervention and Sterilization



**Option #1:** Issue market stabilization bonds (outstanding under this measure is US\$ 18 bn; maximum possible under this option is US\$ 23 bn). Approximate cost of this this measure - short term T-Bill rate)

**Option #2:** Absorb via daily reverse repo mechanism (outstanding under this measure is less than US\$ 0.4 bn; maximum possible under this option is US\$ 0.7 bn). Approximate cost of this this measure - 6.0% (policy rate)

**Option #3:** Increase cash reserve ratio for banks (outstanding under this measure is US\$ 10 bn; there is no upper limit for this measure). Historically, the Central Bank has paid low rate of interest on these balances (0.5%-1%); going forward the Central Bank has reduced this to zero.

Source: Morgan Stanley Research

April 27, 2007 India Economics

### **Disclosure Section**

Information and opinions in this report were prepared or are disseminated by one or more of the following, which accept responsibility for its contents: Morgan Stanley Dean Witter Asia Limited, and/or Morgan Stanley Dean Witter Asia (Singapore) Pte. (Registration number 199206298Z, regulated by the Monetary Authority of Singapore, and/or Morgan Stanley Asia (Singapore) Securities Pte Ltd (Registration number 200008434H, regulated by the Monetary Authority of Singapore), and/or Morgan Stanley Taiwan Limited and/or Morgan Stanley & Co International Limited, Seoul Branch, and/or Morgan Stanley Dean Witter Australia Limited (A.B.N. 67 003 734 576, holder of Australian financial services license No. 233742), and/or JM Morgan Stanley Securities Private Limited and their affiliates (collectively, "Morgan Stanley").

### **Global Research Conflict Management Policy**

This research observes our conflict management policy, available at www.morganstanley.com/institutional/research/conflictpolicies.

### **Important Disclosures**

This report does not provide individually tailored investment advice. It has been prepared without regard to the circumstances and objectives of those who receive it. Morgan Stanley recommends that investors independently evaluate particular investments and strategies, and encourages them to seek a financial adviser's advice. The appropriateness of an investment or strategy will depend on an investor's circumstances and objectives. This report is not an offer to buy or sell any security or to participate in any trading strategy. The value of and income from your investments may vary because of changes in interest rates or foreign exchange rates, securities prices or market indexes, operational or financial conditions of companies or other factors. Past performance is not necessarily a guide to future performance. Estimates of future performance are based on assumptions that may not be realized.

With the exception of information regarding Morgan Stanley, reports prepared by Morgan Stanley research personnel are based on public information. Morgan Stanley makes every effort to use reliable, comprehensive information, but we do not represent that it is accurate or complete. We have no obligation to tell you when opinions or information in this report change apart from when we intend to discontinue research coverage of a company. Facts and views in this report have not been reviewed by, and may not reflect information known to, professionals in other Morgan Stanley business areas, including investment banking personnel.

To our readers in Taiwan: This publication is distributed by Morgan Stanley Taiwan Limited; it may not be distributed to or quoted or used by the public media without the express written consent of Morgan Stanley. To our readers in Hong Kong: Information is distributed in Hong Kong by and on behalf of, and is attributable to, Morgan Stanley Dean Witter Asia Limited as part of its regulated activities in Hong Kong; if you have any queries concerning it, contact our Hong Kong sales representatives.

This publication is disseminated in Japan by Morgan Stanley Japan Securities Co., Ltd.; in Canada by Morgan Stanley Canada Limited, which has approved of and takes responsibility for its contents in Canada; in Germany by Morgan Stanley Bank AG, Frankfurt am Main, regulated by Bundesanstalt fuer Finanzdienstleistungsaufsicht (BaFin);in Spain by Morgan Stanley, S.V., S.A., a Morgan Stanley group company, supervised by the Spanish Securities Markets Commission(CNMV), which states that it is written and distributed in accordance with rules of conduct for financial research under Spanish regulations; in the US by Morgan Stanley & Co. Incorporated, which accepts responsibility for its contents. Morgan Stanley & Co. International plc, authorized and regulated by Financial Services Authority, disseminates in the UK research it has prepared, and approves solely for purposes of section 21 of the Financial Services and Markets Act 2000, research prepared by any affiliates. Private UK investors should obtain the advice of their Morgan Stanley & Co. International plc representative about the investments concerned. In Australia, this report and any access to it is intended only for "wholesale clients" within the meaning of the Australian Corporations Act.

Trademarks and service marks herein are their owners' property. Third-party data providers make no warranties or representations of the accuracy, completeness, or timeliness of their data and shall not have liability for any damages relating to such data. The Global Industry Classification Standard (GICS) was developed by and is the exclusive property of MSCI and S&P. Morgan Stanley bases projections, opinions, forecasts and trading strategies regarding the MSCI Country Index Series solely on public information. MSCI has not reviewed, approved or endorsed these projections, opinions, forecasts and trading strategies. Morgan Stanley has no influence on or control over MSCI's index compilation decisions. This report or portions of it may not be reprinted, sold or redistributed without the written consent of Morgan Stanley. Morgan Stanley research is disseminated and available primarily electronically, and, in some cases, in printed form. Additional information on recommended securities is available on request.

### MORGAN STANLEY RESEARCH

# Morgan Stanley JM MORGAN STANLEY

The Americas 1585 Broadway New York, NY 10036-8293 United States Tel: +1 (1) 212 761 4000

Europe
25 Cabot Square, Canary Wharf
London E14 4QA
United Kingdom
Tel: +44 (0) 20 7 425 8000

Japan 4-20-3 Ebisu, Shibuya-ku Tokyo 150-6008 Japan Tel: +81 (0) 3 5424 5000 Asia/Pacific
Three Exchange Square
Central
Hong Kong
Tel: +852 2848 5200