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# STUDY

## "BRIC: Forex reserves & Global currency imbalances"

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## INTRODUCTION

At a time of rising economic uncertainties, foreign exchange reserves have gained much larger importance in the present global scenario. A nation's foreign exchange reserves provide a cushion to protect the economy from speculative capital movements. From a peak of USD 315.6 billion in June 2008, India's foreign exchange reserves plunged by USD 67 billion to USD 248.6 billion in January end 2009.

The AEP study **"BRIC: Forex reserves & Global currency imbalances"** has analyzed the inter-play between the international currency dynamics and its impact on the foreign exchange reserves of the BRIC countries since the collapse of Lehman Brothers shook the world, exacerbating the global financial crisis.

During September 2008 – January 2009, the foreign exchange reserves of Russia plummet by a whopping USD 175 billion followed by India's decline of USD 43.2 billion. Brazil recorded a moderate fall of USD 6 billion in its international reserves position whilst China adding USD 4 billion, however at a diminishing pace. The BRIC together hold about 41 percent of global foreign-exchange reserves.

In a bid to put breaks to depreciation/devaluation in domestic currencies, the monetary authorities' intervention by flowing dollars to stem the downward pressure on local currencies has led to massive drainage of international reserves.

## PARAMETERS

The AEP study has taken into account parameters relating to the Foreign exchange reserves, exchange rates and Balance of Payments (BoP) and GDP of BRIC countries to assess the impact of financial crisis led global currency imbalances in these emerging countries as the drivers of the world economic growth.

## DATA SOURCE

The data for analysis has been taken from the Central Bank's website of BRIC:

Brazil: http://www.bcb.gov.br/

Russia: http://www.cbr.ru/eng/

India: http://www.rbi.org.in/

China: http://www.pbc.gov.cn/english/

The data for latest available BRIC GDP (nominal) for the Year 2008 has been taken from Central Intelligence Agency (CIA) website

## METHODOLOGY

I. An inter group analysis of BRIC countries has been done for the following parameters:
   i. Foreign exchange reserves
   ii. Currency movement against US dollar
   iii. Balance of Payments (BoP)

II. Changes in foreign exchange reserves have been taken between September 2008 and January 2009 to ascertain the impact of global financial crisis on the international reserve position of BRIC. The difference in the forex reserves during the period has also been measured as a loss/gain in terms of percentage of GDP.

III. Depreciation/Appreciation of BRIC currencies have been calculated using the Inter-bank rates against the US dollar.

IV. An analysis of Current account and Capital account surplus/deficit along with the overall Balance of Payments (BoP) of BRIC countries has been done to understand the forces under play on the currency side.

V. For India, while understanding the behavior of currency movements and its impact on forex reserves, the Reserve Bank of India's monthly purchase and sales data of the US dollars has been taken for April – November 2008.

VI. Monthly data on foreign exchange turnover in the merchant and Inter-bank segment has been analyzed for September 2008 – January 2009.

# EXECUTIVE SUMMARY

- The global financial crisis, by way of triggering currency imbalances internationally, is fast eroding the foreign exchange reserves of Russia and India along with a moderate decline in Brazil while China still being able to accumulate; however at a decelerating pace.

- Foreign exchange reserves of Russia have fallen by a whopping USD 175 billion since September 2008 followed by India's decline of USD 43.2 billion. Brazil recorded a moderate decline of USD 6 billion in its international reserves position whilst China adding USD 4 billion however at a diminishing pace.

- Among the BRIC currencies, only Chinese Yuan Renminbi held strong against the US dollar due to its twin surplus (Current as well as Capital account) in the overall strong Balance of Payment (BoP). During September – January 2008-09, the Chinese currency depreciated by a miniscule 0.19 per cent.

- Between September 2008 and January 2009, Russia's Ruble devalued by a staggering 44.71 per cent while Brazilian Real depreciated by a massive 41.46 per cent against the US dollar.

- Ever since the global financial crisis emanated to take its toll on the Indian economy, Indian rupee has been under strong pressure against the US dollar; that initiated the RBI to sell dollars to resist the fall in domestic currency. Indian Rupee depreciated by 12.58 per cent during September 2008 – January 2009.

- From a peak of USD 315.6 billion in June 2008, India's foreign exchange reserves plunged by USD 67 billion to USD 248.6 billion in January end 2009.

- During April-November 2008, the RBI net sold US dollars to the tune of 31.4 billion against net purchases of USD 55.2 billion made during the corresponding period in 2007.

## Crisis led global currency imbalances triggering rapid depletion of forex reserves: AEP

The global financial crisis, by way of triggering currency imbalances internationally, is fast eroding the foreign exchange reserves of Russia and India along with a moderate decline in Brazil while China still being able to accumulate; however at a decelerating pace, an inter BRIC analysis of Assocham Eco Pulse (AEP) revealed.

Exacerbated after the collapse of Lehman Brothers in mid September 2008, the global financial crisis led to an uncharacteristic plight to safety in the face of US dollar despite heavy disbursal of the greenback by the US Federal Reserve. The US dollar soared to unprecedented heights against major international currencies marking the end of 2008.

The US dollar has gained relative strength against major international currencies despite the key policy rate cuts to as low as 0 – 0.25 per cent by the US Federal Reserve along with enhanced measures to boost dollar supplies to deal with the credit crunch. Between September 2008 and January 2009, the Euro and British Pound depreciated by 14.5 per cent and 27.4 per cent respectively against the greenback.

In a bid to put breaks to depreciation/devaluation in domestic currencies, the monetary authorities' intervention by flowing dollars to stem the downward pressure on local currencies has led to massive drainage of international reserves.

Foreign exchange reserves of Russia have fallen by a whopping USD 175 billion (10 % of GDP) since September 2008 followed by India's decline of USD 43.2 billion (3.5 % of GDP). Brazil recorded a moderate decline of USD 6 billion (0.4 % of GDP) in its international reserves position whilst China adding USD 4 billion (1 % of GDP) however at a diminishing pace.

## BRIC: FOREIGN EXCHANGE RESERVES AND CURRENCY MOVEMENTS

| *Foreign Exchange Reserves (in USD billion)* | | | | *Dep$^n$(+) / App$^n$(-) against USD (in %) (Sep – Jan 2008-09)* |
|---|---|---|---|---|
| *Country* | *September-08* | *January-09* | *Difference* | |
| **B**razil | 207.0 | 200.8 | -6.2 | 41.46 |
| **R**ussia | 563.6 | 388.1 | -175.5 | 44.71 |
| **I**ndia | 291.8 | 248.6 | -43.2 | 12.58 |
| **C**hina | 1905.6 | 1946.0* | 40.4 | 0.19 |

Source: respective Central Bank websites
*corresponds to December 2008 (latest available)

Among the BRIC currencies, only Chinese Yuan Renminbi held strong against the US dollar due to its twin surplus (Current as well as Capital account) in the overall strong Balance of Payment (BoP). During September – January 2008-09, the Chinese currency depreciated by a miniscule 0.19 per cent. Even as the Chinese forex reserves swollen by USD 40.4 billion to USD 1.95 trillion during the period in 2008, the growth rate in its forex reserves took a dip for the first time since the year 2000.

In case of other BRIC countries, Russia's Ruble devalued by a staggering 44.71 per cent during the same period. The Russian central bank expanded its trading range for the ruble 20 times since mid-November before policy-makers switched policy to let market forces help determine the exchange rate within a widened limit. Tumbling oil prices and an exodus of capital put pressure on the Russian currency which led to a steep decline in its forex reserves.

During September – January 2008-09, Brazilian Real depreciated by a massive 41.46 per cent against the US dollar. However, robust capital inflows as evident from a capital account surplus of USD 36 billion and an overall balance of USD 8.6 billion (for January – November 2008) resisted an otherwise possible steep downfall in Brazil's foreign exchange reserves.

Ever since the global financial crisis emanated to take its toll on the Indian economy, Indian rupee has been under strong pressure against the US dollar. The rupee breached the psychological Rs 50/USD level in November 2008 and has been under sustained pressure against the greenback that initiated the RBI to sell dollars to resist the fall in domestic currency. Indian Rupee depreciated by 12.58 per cent during September 2008 – January 2009.

***Balance of Payments (BoP) in billion USD***

| *Country* | *Current account (A)* | *Capital account (B)* | *Errors & Omissions (C)* | *Overall Balance (A+B+C)* | *Period* |
|---|---|---|---|---|---|
| **B**razil | -25.8 | 35.9 | -1.5 | 8.6 | Jan-Nov 2008 |
| **R**ussia | 90.8 | 1.3 | -6.4 | 85.7 | Jan-Sep 2008 |
| **I**ndia | -12.5 | 8.2 | -0.4 | -4.7 | Jul-Sep 2008 |
| **C**hina | 191.7 | 71.9 | 17.1 | 280.7 | Jan-Jun 2008 |

Source: respective Central Bank websites

# THE INDIAN CASE:

An indicative analysis of the Reserve Bank's policy stance to fend off depressing forces on the Indian Rupee suggests that the heavy volumes of dollar sold by the monetary authority to avoid exchange rate depreciation has led to the rapid depletion of foreign exchange reserves.

From a peak of USD 315.6 billion in June 2008, a plunge of USD 67 billion in India's foreign exchange reserves to USD 248.6 billion in January end 2009 has been a consequence of RBI's strong measures to stem the global pressures on the Indian currency via draining US dollars to support the domestic currency.

During April-November 2008, the RBI net sold US dollars to the tune of 31.4 billion against net purchases of USD 55.2 billion made during the corresponding period in 2007 (thereby adding to India's forex reserves).

In October 2008 alone, RBI net sold more than USD 18 billion to stem the mounting pressure on Indian Rupee as the country's Exports registered a negative growth of 10.1 per cent that led to a widening trade as well as Current account deficit.

| ***Net Sale of USD by RBI (in million USD)*** | |
|---|---|
| *Month* | *Volume* |
| September-08 | 3784 |
| October-08 | 18666 |
| November-08 | 3101 |
| **Total** | **25551** |

Source: Reserve Bank of India

In the three months to November 2008, RBI net sold US dollars to the tune of whopping 25.5 billion to offset mounting pressure from negative growth in Exports during October – November 2008 and FII outflow of USD 6.5 billion from the Indian equity markets.

On the External Commercial Borrowings (ECBs) front, Indian corporate sector has acted reluctantly to the recent policy initiatives by the RBI. The external commercial borrowings for the period April to November 2008 declined steeply at a rate of 35.74 per cent as the gross amount raised through this route slipped from USD 21.45 billion in 2007 to USD 13.78 billion in 2008.

Out of the USD 1142 million of ADR/GDRs issued by the Indian companies during April – November 2008, only 7 million were raised between September and November as the collapse of Lehman Brothers shook the stock markets world over.

Also, despite the hike in the interest rate ceiling on the Non Residents deposits [FCNR(B) and NR(E)RA] by the RBI, the growth in these deposits failed to pick up during the period straining the capital inflows to the country.

In November 2008, the Indian Rupee had been trading close to Rs 50 per US dollar under sustained pressure from rising trade as well as current account deficit and rapidly declining capital inflows. The foreign exchange turnover data for November 2008 indicates the upheaval in the merchant as well as the inter-bank foreign exchange market.

***Net Sale of USD in foreign exchange market (September-January 2008-09)***

| *All Figures are in USD Millions* | *MERCHANT* | | | *INTER BANK* | | |
|---|---|---|---|---|---|---|
| | *FCY/INR* | | | *FCY/INR* | | |
| *Month/Position* | *Spot* | *Forward* | | *Spot* | *Swap* | *Forward* |
| | | | | | | |
| September 08 | 4882 | 7909 | | -11786 | 8179 | 94 |
| October 08 | 9315 | 10359 | | -22814 | 3674 | 2482 |
| November 08 | 31948 | 27784 | | 80693 | 115560 | 16666 |
| December 08 | 480 | -892 | | -4787 | -1356 | 143 |
| negative figures (-) represent net purchase | | | | | | |
| Source: Reserve Bank of India, Foreign Exchange Turnover Data & Assocham Research Bureau | | | | | | |

# APPENDIX:

## Table 1: Sale-Purchase of US dollars by RBI

| *Sale-Purchase of US dollars by RBI (in million USD)* | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| *Month* | *Purchase (+)* | | *Difference* | *Sale (–)* | | *Difference* | *Net (+/–)* | *Net (+/–)* |
| | *2008-09* | *2007-08* | | *2008-09* | *2007-08* | | *2008-09* | *2007-08* |
| | | | | | | | | |
| April | 4,325.00 | 2,055.00 | 2,270.00 | — | — | 0.00 | 4,325.00 | 2,055.00 |
| May | 1,625.00 | 4,426.00 | -2,801.00 | 1,477.00 | — | 1,477.00 | 148 | 4,426.00 |
| June | 1,770.00 | 3,192.00 | -1,422.00 | 6,999.00 | — | 6,999.00 | -5,229.00 | 3,192.00 |
| July | 3,580.00 | 11,428.00 | -7,848.00 | 9,900.00 | — | 9,900.00 | -6,320.00 | 11,428.00 |
| August | 3,770.00 | 1,815.00 | 1,955.00 | 2,560.00 | — | 2,560.00 | 1,210.00 | 1,815.00 |
| September | 2,695.00 | 11,867.00 | -9,172.00 | 6,479.00 | — | 6,479.00 | -3,784.00 | 11,867.00 |
| October | 1,960.00 | 12,544.00 | -10,584.00 | 20,626.00 | — | 20,626.00 | -18,666.00 | 12,544.00 |
| November | 2,355.00 | 7,827.00 | -5,472.00 | 5,456.00 | — | 5,456.00 | -3,101.00 | 7,827.00 |
| Total (April - November) | 22,080.00 | 55,154.00 | -33,074.00 | 53,497.00 | 0.00 | 53,497.00 | **-31,417.00** | **55,154.00** |
| Source: Reserve Bank of India | | | | | | | | |

## Table 2: Depreciation /Appreciation of BRIC currencies against US dollar

| *BRIC currencies movement against US dollar (in %)* | | | | |
|---|---|---|---|---|
| *Depreciation (+) / Appreciation(-)* | *Brazil* | *Russia* | *India* | *China* |
| September-January 2008-09 | 41.46 | 44.71 | 12.58 | 0.19 |

Source: x-rates.com

## Table 3: Foreign Institutional Investments (FIIs) September – January 2008-09

| *Month* | *Market* | *Net Investment( in million USD) at month exchange rate* |
|---|---|---|
| | | |
| Sep-08 | Equity | -2,052 |
| | Debt | 794 |
| | | |
| Oct-08 | Equity | -3,805 |
| | Debt | -461 |
| | | |
| Nov-08 | Equity | -644 |
| | Debt | 1,045 |
| | | |
| Dec-08 | Equity | 434 |
| | Debt | 155 |
| | | |
| Jan-09 | Equity | -1,052 |
| | Debt | 199 |
| | | |
| **Sep-Jan 08-09** | **Equity** | **-7,120** |
| | **Debt** | **1,733** |

Source: SEBI

## Table 4: Foreign Direct Investment (FDI) September – November 2008

| *Month* | *2008 (in USD million)* | *2007 (in USD million)* | *% change (y-on-y)* | *% change (m-on-m)* |
|---|---|---|---|---|
| | | | | |
| September | 2,562 | 713 | 259.33 | - |
| October | 1,497 | 2,027 | -26.15 | -41.57 |
| November | 1,083 | 1,864 | -41.90 | -27.66 |

Source: DIPP

## Table 5: India's Balance of Payments

### *India's Overall Balance of Payments*

(US $ million)

| *Items* | *Apr-Jun 2008 PR* | | | *Jul-Sep 2008 P* | | |
|---|---|---|---|---|---|---|
| | *Credit* | *Debit* | *Net* | *Credit* | *Debit* | *Net* |
| ***A. CURRENT ACCOUNT*** | | | | | | |
| I. Merchandise | 49060 | 79626 | –30566 | 47672 | 86287 | –38615 |
| II. Invisibles (a+b+c) | 37382 | 16610 | 20772 | 45528 | 19451 | 26077 |
| a) Services | 21633 | 11458 | 10175 | 26313 | 13612 | 12701 |
| i) Travel | 2504 | 2164 | 340 | 2786 | 2669 | 117 |
| ii) Transportation | 2530 | 3328 | –798 | 3041 | 3744 | –703 |
| iii) Insurance | 350 | 228 | 122 | 370 | 306 | 64 |
| iv) G.n.i.e. | 130 | 110 | 20 | 81 | 95 | –14 |
| v) Miscellaneous | 16119 | 5628 | 10491 | 20035 | 6798 | 13237 |
| of which | | | | | | |
| Software Services | 10656 | 857 | 9799 | 11220 | 924 | 10296 |
| Business Services | 3699 | 3114 | 585 | 5003 | 3515 | 1488 |
| Financial Services | 745 | 628 | 117 | 1018 | 965 | 53 |
| Communication Services | 510 | 226 | 284 | 740 | 296 | 444 |
| b) Transfers | 12176 | 665 | 11511 | 15070 | 838 | 14232 |
| i) Official | 151 | 118 | 33 | 53 | 106 | –53 |
| ii) Private | 12025 | 547 | 11478 | 15017 | 732 | 14285 |
| c) Income | 3573 | 4487 | –914 | 4145 | 5001 | –856 |
| i) Investment Income | 3418 | 4157 | –739 | 3855 | 4684 | –829 |
| ii) Compensation of Employees | 155 | 330 | –175 | 290 | 317 | –27 |
| Total Current Account (I+II) | 86442 | 96236 | –9794 | 93200 | 105738 | –12538 |
| ***B. CAPITAL ACCOUNT*** | | | | | | |
| 1 Foreign Investment (a+b) | 52921 | 48138 | 4783 | 51882 | 47629 | 4253 |
| a) Foreign Direct Investment (i+ii) | 12157 | 3163 | 8994 | 9251 | 3688 | 5563 |
| i) In India | 11918 | 22 | 11896 | 8833 | 52 | 8781 |
| Equity | 10240 | 22 | 10218 | 7304 | 52 | 7252 |
| Reinvested Earnings | 1502 | — | 1502 | 1502 | — | 1502 |
| Other Capital | 176 | — | 176 | 27 | — | 27 |
| ii) Abroad | 239 | 3141 | –2902 | 418 | 3636 | –3218 |
| Equity | 239 | 2339 | –2100 | 418 | 2854 | –2436 |
| Reinvested Earnings | — | 271 | –271 | — | 271 | –271 |
| Other Capital | — | 531 | –531 | — | 511 | –511 |
| b) Portfolio Investment | 40764 | 44975 | –4211 | 42631 | 43941 | –1310 |
| In India | 40745 | 44923 | –4178 | 42618 | 43919 | –1301 |
| Abroad | 19 | 52 | –33 | 13 | 22 | –9 |
| 2 Loans (a+b+c) | 13851 | 9622 | 4229 | 16531 | 13377 | 3154 |
| a) External Assistance | 909 | 558 | 351 | 1095 | 577 | 518 |

## India's Overall Balance of Payments (Contd.)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | i) By India | 6 | 8 | –2 | 6 | 8 | –2 |
| | | | ii) To India | 903 | 550 | 353 | 1089 | 569 | 520 |
| | | b) | Commercial Borrowings (MT & LT) | 2766 | 1285 | 1481 | 3827 | 1967 | 1860 |
| | | | i) By India | 404 | 193 | 211 | 532 | 138 | 394 |
| | | | ii) To India | 2362 | 1092 | 1270 | 3295 | 1829 | 1466 |
| | | c) | Short Term To India | 10176 | 7779 | 2397 | 11609 | 10833 | 776 |
| | | | i) Suppliers' Credit >180 days & Buyers' Credit | 9256 | 7779 | 1477 | 11609 | 9766 | 1843 |
| | | | ii) Suppliers' Credit up to180 days | 920 | — | 920 | — | 1067 | –1067 |
| | 3 | | Banking Capital (a+b) | 21952 | 19256 | 2696 | 16215 | 14084 | 2131 |
| | | a) | Commercial Banks | 21952 | 19105 | 2847 | 16215 | 14081 | 2134 |
| | | | i) Assets | 11457 | 10533 | 924 | 6446 | 5154 | 1292 |
| | | | ii) Liabilities | 10495 | 8572 | 1923 | 9769 | 8927 | 842 |
| | | | of which: Non-Resident Deposits | 9063 | 8249 | 814 | 9174 | 8915 | 259 |
| | | b) | Others | — | 151 | –151 | — | 3 | –3 |
| | 4 | | Rupee Debt Service | — | 30 | –30 | — | 3 | –3 |
| | 5 | | Other Capital | 1919 | 1831 | 88 | 1068 | 2431 | –1363 |
| | | | Total Capital Account (1 to 5) | 90643 | 78877 | 11766 | 85696 | 77524 | 8172 |
| ***C.*** | | | ***ERRORS & OMISSIONS*** | 263 | — | 263 | — | 368 | –368 |
| ***D.*** | | | ***OVERALL BALANCE*** (Total Current Account, Capital Account and Errors & Omissions (A+B+C) | 177348 | 175113 | 2235 | 178896 | 183630 | –4734 |
| ***E.*** | | | ***MONETARY MOVEMENTS (i+ii)*** | — | 2235 | –2235 | 4734 | — | 4734 |
| | i) | | I.M.F. | — | — | — | — | — | — |
| | ii) | | Foreign Exchange Reserves (Increase – / Decrease +) | — | 2235 | –2235 | 4734 | — | 4734 |

Source: Reserve Bank of India