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The Impact of Monetary Policy on the Indian Economy through Foreign Exchange Market

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ABSTRACT:

This study examines the macroeconomic transmission of the Reserve Bank of India's (RBI) monetary policy through the foreign exchange (forex) market during the turbulent 2013 "Taper Tantrum" crisis. Triggered by the US Federal Reserve's sudden signals to scale back quantitative easing, India faced severe external shocks characterized by unprecedented capital flight, a historic depreciation of the Indian Rupee (INR) and a blow out of the Current Account Deficit (CAD) to 4.8% of GDP.

KEY WORDS: Monitory Policy, CRR, SLR, Bank rate, Repo rate, Import, Export, RBI Policy, fiscal policy, exchange rate

INTRODUCTION:

Monetary policy by the Reserve Bank of India (RBI) impacts the Indian economy through the foreign exchange market primarily via interest rate differentials, capital flows, and exchange rate channels. Tightening policy raises domestic interest rates, attracting foreign portfolio and direct investments, strengthening the Indian Rupee (INR), and influencing import-export competitiveness. When the RBI increases the policy repo rate, domestic bond yields rise relative to global rates. This draws foreign institutional investors seeking higher returns, increasing the supply of foreign currency (like US dollars) and causing the Rupee to appreciate

Exchange Rate Pass-Through (ERPT):

Changes in the exchange rate driven by monetary policy alter the domestic price of imported goods and raw materials (such as crude oil), which then feeds into domestic consumer inflation and production costs.

RBI Intervention & Sterilization:

The RBI manages excessive exchange rate volatility by buying or selling US dollars in the spot and forward forex markets. It uses open market operations (OMOs) to sterilize these interventions so they do not unintentionally destabilize domestic money supply or liquidity.

The Policy Trilemma:

India navigates an open capital account alongside a managed/flexible exchange rate regime, meaning the RBI must balance domestic monetary independence with active forex market management to buffer external shocks. The Indian Rupee (INR) went into a sharp tailspin, tumbling to a historic low of 68.85 per U.S. dollar by August 28, 2013, registering 19% depreciation over the summer.

Forex Market Intervention:

The central bank deployed extraordinary administrative and liquidity measures—including a special dollar swap window for Public Sector Oil Marketing Companies (OMCs) and FCNR(B) deposit schemes—to attract dollar inflows and stabilize the forex market.

Restoration of Stability:

Consequent policy hikes and structural adjustments by late 2013 helped narrow the Current Account Deficit (CAD) and restore calm to both money markets and the foreign exchange segment by year-end.

Reserve Bank of India

Monetary Policy Independence under a Flexible Exchange Rate; - The dilemma poses a macroeconomic challenge for policymakers where monetary policy independence, exchange rate stability and capital account openness cannot analyze the impact of monetary transmission on Indian economy. The Reserve Bank of India (RBI) managed the 2013 **"taper tantrum**"—triggered by the U.S. Federal Reserve's May 2013 policy shift—by combining foreign exchange market interventions, sharp interest rate hikes (raising the Marginal Standing Facility rate by 300 bps), and strict capital/import controls. While the rupee depreciated significantly by over 19% to a low of 68.85 per USD in August 2013, aggressive liquidity sterilization and swap windows (such as for FCNR(B) deposits and oil marketing companies) restored stability by late 2013 without permanently compromising monetary policy independence.

Core Mechanism and the 2013 Taper Tantrum' External Trigger:

U.S. Federal Reserve Chairman Ben Bernanke hinted at scaling back quantitative easing (QE) on May 22, 2013, sparking massive foreign institutional investor (FII) outflows from emerging market debt and equity.

Macroeconomic Vulnerabilities:

India suffered from a high current account deficit (CAD) peaking near 4.9% of GDP in Q1 2013-14, sticky WPI/CPI inflation above 7–11%, and slowing GDP growth.

Policy Tightening & Defensive Measures:

- The RBI hiked short-term borrowing costs and tightened systemic liquidity through the Liquidity Adjustment Facility (LAF) and Marginal Standing Facility (MSF).
- Administrative restrictions targeted non-essential gold imports and foreign exchange derivatives, while special dollar swap windows were opened for public sector oil marketing companies (OMCs).
- Concessional swap schemes for Foreign Currency Non-Resident (FCNR(B)) deposits and overseas bank borrowings attracted over $34 billion in inflows

Empirical Impact on Monetary Independence & Forex Markets:

Research published by the RBI highlights how monetary policy interacted with the foreign exchange market during and after the 2013 shock-

Sterilization Coefficient: Estimated around −0.88 to −0.92, showing that the RBI actively sterilized the vast majority of reserve money impacts from foreign exchange interventions using open market operations and market stabilization schemes.

Offset Coefficient: Estimated around −0.56 to −0.73, proving that capital flows induced by domestic interest rate adjustments did not completely offset monetary policy actions, thereby preserving domestic monetary autonomy.

Inflation and Operating Target (WACR): Vector Autoregressive (VAR) models demonstrate that temporary foreign exchange interventions (FXINT) impacted broad money (M_3) only for a couple of months and did not trigger a persistent pass-through into retail inflation (INF) or force a permanent distortion in the Weighted Average Call Rate (WACR).

Reserve Bank of India

Official Website of Reserve Bank of India. The tightening in the overall financial market conditions started from May 22, 2013 following the testimony by Fed Chairman Ben Bernanke about the possible reduction.

METHODOLOGY:

Design/methodology/approach- this Study is mainly based on secondary data. Data are collected from secondary sources published on the RBI website and India s Export and Import website. Other required data is retrieved from the journals, Magazines, and government reports and publications for the analysis of the data researcher used the Descriptive statistical analysis.

SIGNIFICANCE OF THE STUDY:

This study is an attempt to examine the impact of monetary policy on foreign trade The study is based on the analysis of monetary policy and foreign trade

SCOPE OF THE STUDY:

Thus, the study is exclusively on the impact of monetary policy on foreign trade in the past period. This study is mainly concerned with India's Import-Export and Monetary policy of India.

OBJECTIVES OF THE STUDY:

1. Price stability

2. Controlled expansion of Bank credit

3. Promotion of fixed investment

4. Restriction of inventories of stocks

5. Promoting Efficiency.

ANALYSIS AND INTERPRETATION:

- **The "Rounded" Corner**:

India operates under an open capital account and a flexible exchange rate, yet actively intervenes to smooth excessive rupee swings. This creates a middle-ground approach to the Mundell-Fleming "impossible trinity".

- **Sterilization of Liquidity:**

When the RBI buys foreign currency, it injects domestic reserve money. To prevent inflation and lower money-market rates, it absorbs excess liquidity by selling government securities (via Open Market Operations or the Market Stabilization Scheme).

- **Sterilization & Offset Coefficients:**

Empirical studies (such as RBI and VAR models) show a high sterilization coefficient (approx. -0.92) and a moderate offset coefficient (approx. -0.56), confirming that foreign inflows induced by policy adjustments do not completely erode domestic monetary autonomy.

While the Reserve Bank of India (RBI) aims to maintain domestic price stability and economic growth through inflation targeting, its monetary policy objectives are frequently complicated by volatile capital flows and sharp fluctuations in the foreign exchange (forex) market. Under the macroeconomic constraint of the Mundell-Fleming **"Impossible Trinity**,"

To manage these competing pressures and maintain economic stability, the **Reserve Bank of India (RBI) operates a regime of "managed flexibility,"** actively intervening in foreign exchange markets without targeting a specific, rigid level for the currency.

By preventing the rupee from swinging too wildly in either direction, the central bank aims to provide stability for exporters and international investors alike.

However, because continuous intervention creates the monetary side-effects mentioned above, the RBI must constantly perform a delicate balancing act known as **monetary sterilization**.

When absorbing dollars, the RBI typically sells government securities through **Open Market Operations (OMOs)** or utilizes tools like the **Market Stabilization Scheme (MSS)** to mop up the excess rupee liquidity before it can spark runaway inflation.

Conversely, during periods of capital flight, the RBI must inject cash back into the banking system through repo operations or bond purchases to ensure domestic credit does not dry up. Ultimately, this continuous fine-tuning underscores the challenges of the **"impossible trinity,"** proving that a central bank cannot perfectly control its exchange rate, keep capital doors wide open, and dictate domestic interest rates all at the same time.

India cannot simultaneously maintain a fixed exchange rate, free capital movement, and independent monetary policy. Because the RBI actively manages rupee volatility through forex interventions, these interventions directly distort domestic liquidity.

For instance, absorbing large capital inflows to prevent a sharp rupee appreciation expands the domestic monetary base, threatening to fuel inflation and push money market rates away from the RBI's target. Conversely, selling dollars to defend a depreciating rupee drains liquidity, risking spikes in domestic borrowing costs that can slow down economic growth.

The Taper Tantrum Shock:

In May 2013, the US Fed signaled a future tapering of quantitative easing, causing massive [Foreign Institutional Investor (FII)] capital outflows from Indian debt and equity markets.

a) Rupee Depreciation & Volatility: The INR lost over 19% of its value between May and August 2013, driven by a wide [Current Account Deficit (CAD)] (reaching 4.9% of GDP in Q1 2013–14) and shifting global risk sentiment (spike in global VIX).
b) Failure of Pure Interest Rate Parity: Standard interest rate differentials failed to halt the slide, as foreign investors pulled out due to heightened global risk aversion rather than nominal yield spreads alone.

RBI Monetary Policy Responses

a. Emergency Monetary Tightening:

The RBI curbed banks' access to overnight liquidity through the [Liquidity Adjustment Facility (LAF)] and spiked the [Marginal Standing Facility (MSF)] rate to make short-term borrowing expensive and penalize currency speculation.

b. Administrative and Forex Measures:

Introduced a special foreign exchange swap window for public sector oil marketing companies (OMCs) to remove daily dollar demand from the open market. Offered a concessional [FCNR(B) Bank Deposit Swap Scheme] and raised bank overseas borrowing limits, attracting roughly $34

billion in foreign currency inflows. Imposed restrictions on gold imports (hiking import duties) to plug the bleeding CAD.

c. **Recalibration**:

As current account pressures eased and global markets stabilized following delayed Fed tapering, the RBI gradually normalized MSF and liquidity measures by late 2013. The events of 2013 yielded several critical insights regarding the transmission of monetary policy through the foreign exchange market.

d. **Limits of Interest Rate Defense**:

The RBI's initial approach—raising the Marginal Standing Facility (MSF) rate to 10.25% to penalize currency speculators—proved to be an overly blunt instrument. While it temporarily slowed the rupee's decline, it caused collateral damage by squeezing domestic liquidity, spiking borrowing costs, and dragging down industrial growth.

e. **The Power of Targeted Capital Mobilization**:

The ultimate stabilization of the economy was achieved not by squeezing the domestic market, but through innovative external engineering. The introduction of the FCNR(B) swap window, which raised over $26–34 billion, demonstrated that actively rebuilding foreign currency buffers is far more effective at anchoring exchange rate expectations than aggressive domestic monetary tightening.

f. **Catalyst for Structural Change**:

The vulnerability of 2013 forced a fundamental rewrite of India's economic playbook. It directly accelerated the shift toward a formalized Flexible Inflation Targeting (FIT) framework (the 4% ± 2% band) and prompted the RBI to aggressively accumulate over-the-counter forex reserves during calm periods to serve as an insulation shield against future global shocks.

Ultimately, 2013 proved that in an interconnected global financial system, domestic monetary policy cannot completely ignore external exchange rate dynamics. True monetary autonomy is maintained not by aggressively fighting the currency market, but by building robust external financial buffers and keeping domestic macroeconomic variables like inflation and fiscal deficits firmly under control**.**

KEY CHALLENGES AND PROBLEMS

- Taper Tantrum & Capital Flight
- Extreme Rupee Depreciation (Historic Lows)
- Unsustainable Current Account Deficit (CAD)
- Severe Domestic Liquidity Squeeze
- Stag factionary Pressures (High Inflation vs. Slow Growth)
- Depletion of Forex Reserves
- Spike in Short-Term Borrowing Costs.

CONCLUSIONS:

This study examines the macroeconomic transmission of the Reserve Bank of India's (RBI) monetary policy through the foreign exchange (forex) market during the turbulent 2013 "Taper Tantrum" crisis.

The Reserve Bank of India endeavored to moderate the expansion of credit and money supply in such a way as to ensure the legitimate requirements of industry and trade and curb the use of credit for speculative and inflationary activities.

To counter this compounding economic instability, the Reserve Bank of India deployed a aggressive mix of policy instruments designed to stem the panic and restore macroeconomic balance. **In the sphere of monetary control, the Reserve Bank of India has used both quantitative and qualitative techniques**.

On the **quantitative front**, the RBI sharply tightened domestic liquidity to make shorting the Rupee prohibitively expensive. It raised the Marginal Standing Facility (MSF) rate by 200 basis points to 10.25%, restricted banks' daily borrowing access under the Liquidity Adjustment Facility (LAF), and actively sold U.S. dollars in the spot and forward currency markets, which effectively drained billions from the domestic banking system.

Simultaneously, the central bank implemented targeted **qualitative and administrative interventions,** to curb speculative behaviour and compress structural dollar demand.

The RBI and the government squeezed gold imports, a primary driver of the widening deficit by introducing the strict 20:80 import rule, restricted resident outward remittances and launched a highly successful subsidized FCNR(B) swap window that successfully attracted over $34 billion in foreign currency deposits.

Triggered by the US Federal Reserve's sudden signals to scale back quantitative easing, India faced severe external shocks characterized by unprecedented capital flight, a historic depreciation of the Indian Rupee (INR), and a blow out of the Current Account Deficit (CAD) to 4.8% of GDP.

This coordinated, multi-pronged transmission strategy successfully anchored the volatile foreign exchange market, stabilized the Rupee, and laid the groundwork for rebuilding India's external forex buffers.

Following the aggressive interventions of 2013, the Indian economy underwent a structural turnaround that laid the foundation for long-term stability. The subsequent recovery phase was marked by a dramatic contraction of external vulnerabilities, a rebuild of financial buffers, and a return to macroeconomic normalcy.

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