SBI Research

In rupee we TRUST!

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Executive Summary

- The days of largesse flows is over as geopolitical uncertainties have taken centerstage… Past trends suggest that during CY07-CY14 net portfolio inflows averaged $162.8 bn, while from CY15-CY25 (*till date) portfolio inflows have been much lower at $87.7 bn…**The abundance of portfolio inflows prior to CY14 was the primary reason for rupee movements…Such a luxury is absent now as geopolitical uncertainties driven by the delay in trade deal has been the single most important reason…India's trade data shows the remarkable resilience in navigating through prolonged uncertainty, more protectionism and labor supply shocks**
  - While the geopolitical risk index has moderated since Apr'25, the current average value of index for Apr-Oct'25 is much greater that its decadal average, which indicate how much pressure global uncertainties is exerting pressure on INR
- Consistent with our empirical analysis, the rupee is currently in a depreciating regime…the Rupee is likely to exit Regime…Thereafter, we believe that the Rupee is likely to bounce back strongly in the second half of next fiscal

The Three phases of Rupee Depreciation…..We are in Phase III now…

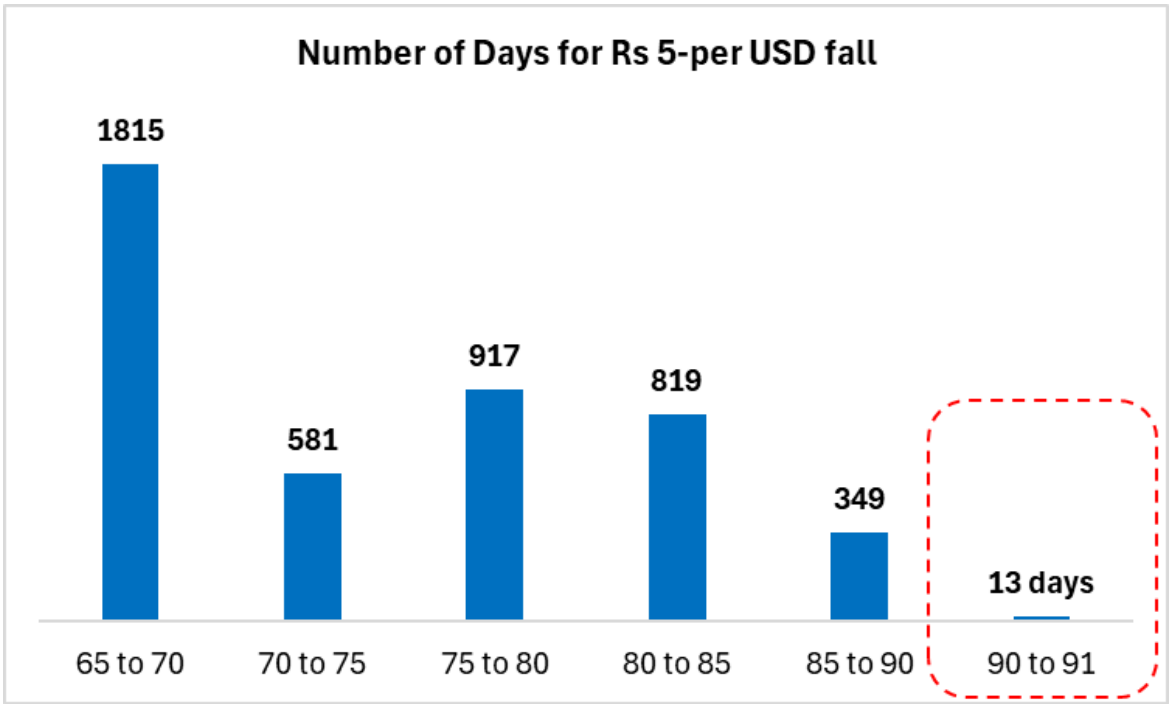
- Rupee movements have primarily gone through three phases

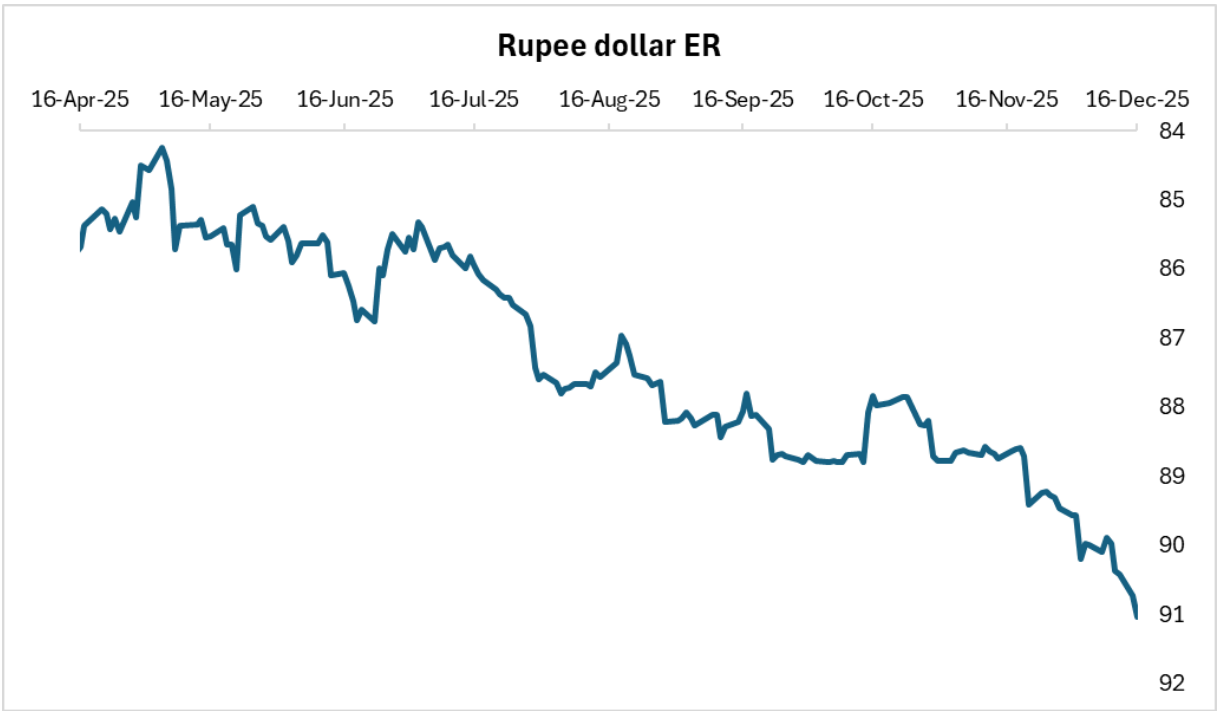
- ***Phase - I: Rupee Depreciation greater than Dollar Appreciation*** : During Jan-08 till May-14 Dollar appreciated by 1.7% on average while Rupee depreciated by 16.3% on average. **This highlights a phase where domestic fundamentals were weak**
- ***Phase – II: Rupee Depreciation equivalent to Dollar Appreciation*** : **During May-14 till Mar-21 Rupee depreciated by 7.9% on average while dollar appreciation during the same period was almost equivalent at 5.1% delineating the synchronous movement of Rupee with Dollar index**
- ***Phase- III: Both Rupee and Dollar Depreciation*** : Between Sep-24 till present, both Dollar and Rupee are depreciating…**This concurrent depreciation marks a distinct phase characterized by heightened geopolitical uncertainty in the present global order**

USD INR Rates & Dollar Index (2008 till current)					
Phases	Period	Depreciation of Rupee	Appreciation of Rupee	Net movement of Rupee	Movement of Dollar index during the period
Phase-I	Jan-08 to Feb-12	-33.5	6.4	-27.1	3.9
	Feb-12 to Oct-12	-13.9	5.3	-8.6	1.0
	Oct-12 to May-14	-20.2	7.0	-13.2	0.3
Phase-II	May-14 to Jan-18	-15.0	6.7	-8.3	13.6
	Jan-18 to Jul-19	-15.7	6.6	-9.1	7.2
	Jul-19 to Mar-21	-10.9	4.5	-6.4	-5.5
	Mar-21 to Sep-24	-15.1	0.4	-14.7	9.8
Phase-III	Sep-24 to 08 Dec25	-8.4	-	-8.4	-2.8
Source: SBI Research,Bloomberg					

Rupee gains smarty after a day of rapid decline

- After breached the psychologically important mark of 90 per US dollar, the rupee in just few days crossed the 91-level yesterday (16 Dec)….**From 90 to 91 per dollar rupee took only 13 days!!..However, the rupee staged a sharp recovery the day after on Dec 17th…**
- The data also indicates that the current fall is the quickest (in terms of number of days) of rupee, scaled to 5 per USD. In less than a year rupee has slid from 85 to 90 per dollar



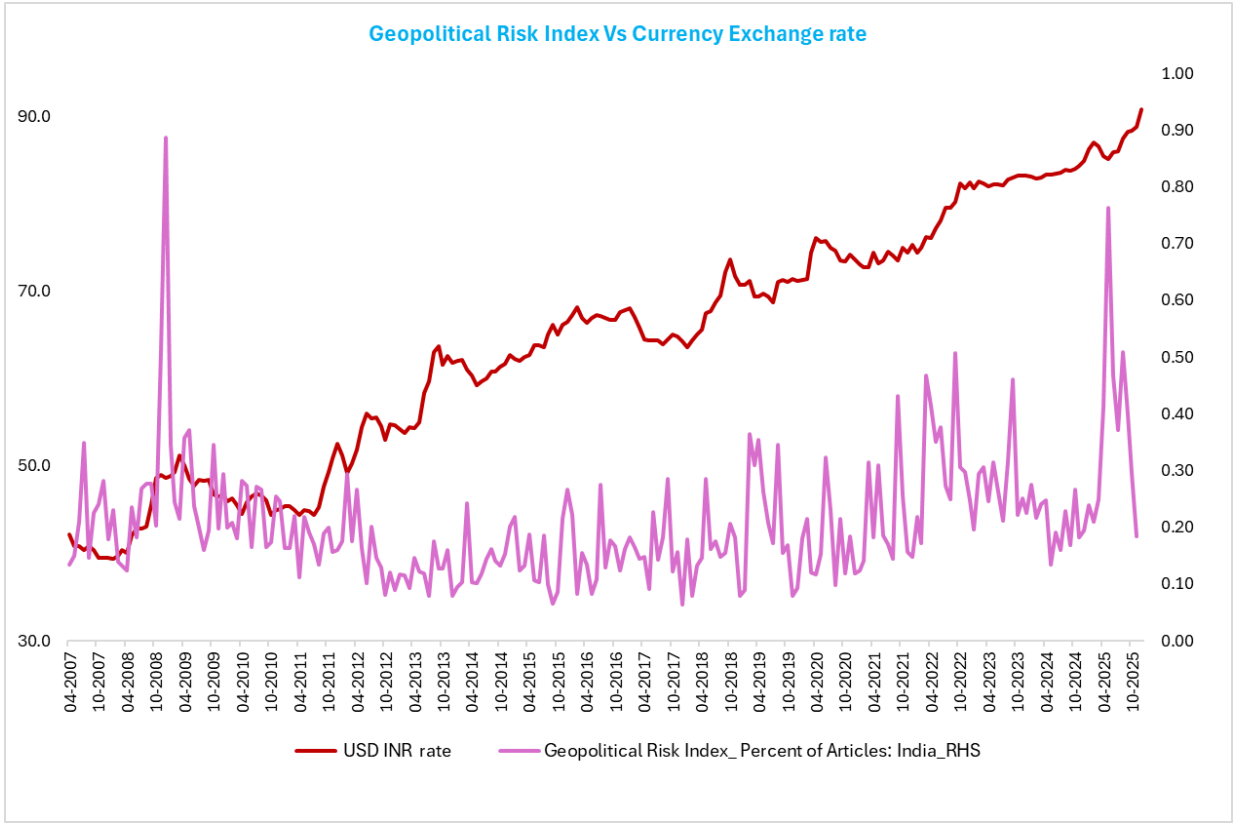


Source: RBI; SBI Research

Why the Rupee has been depreciating?

Unprecedented Geopolitical uncertainties is the prime driver of Rupee Depreciation…1/4

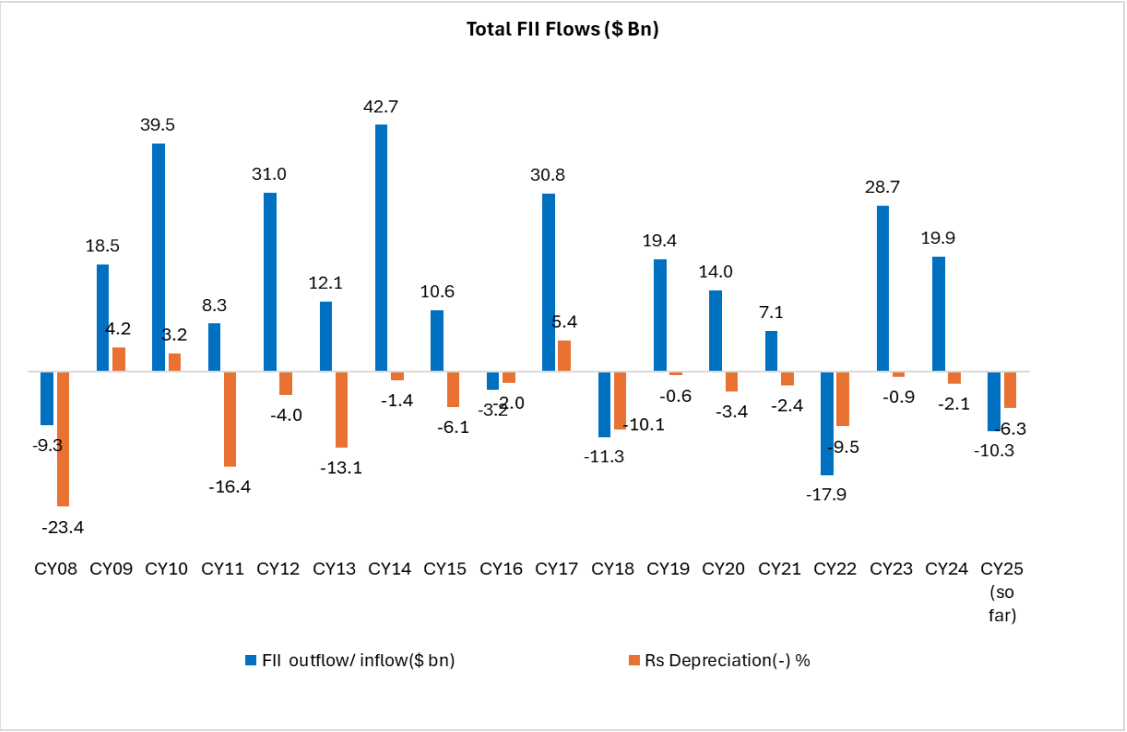
- The Geopolitical Risk Index shows a steep rise in Apr-25 when US imposed a 50% tariff to India and has driven rupee depreciation….
- **While the geopolitical risk index has moderated significantly since Apr'25, the current average value of index for Apr-Oct'25 is much greater that its decadal average, which indicate how much pressure global uncertainties is exerting pressure on INR**



Source: https://www.matteoiacoviello.com/, CEIC, SBI Research

Geopolitical uncertainties exacerbating FII outflows are closely corelated to rupee movements… outflows crossed $10 bn mark in 2025…. 2/4

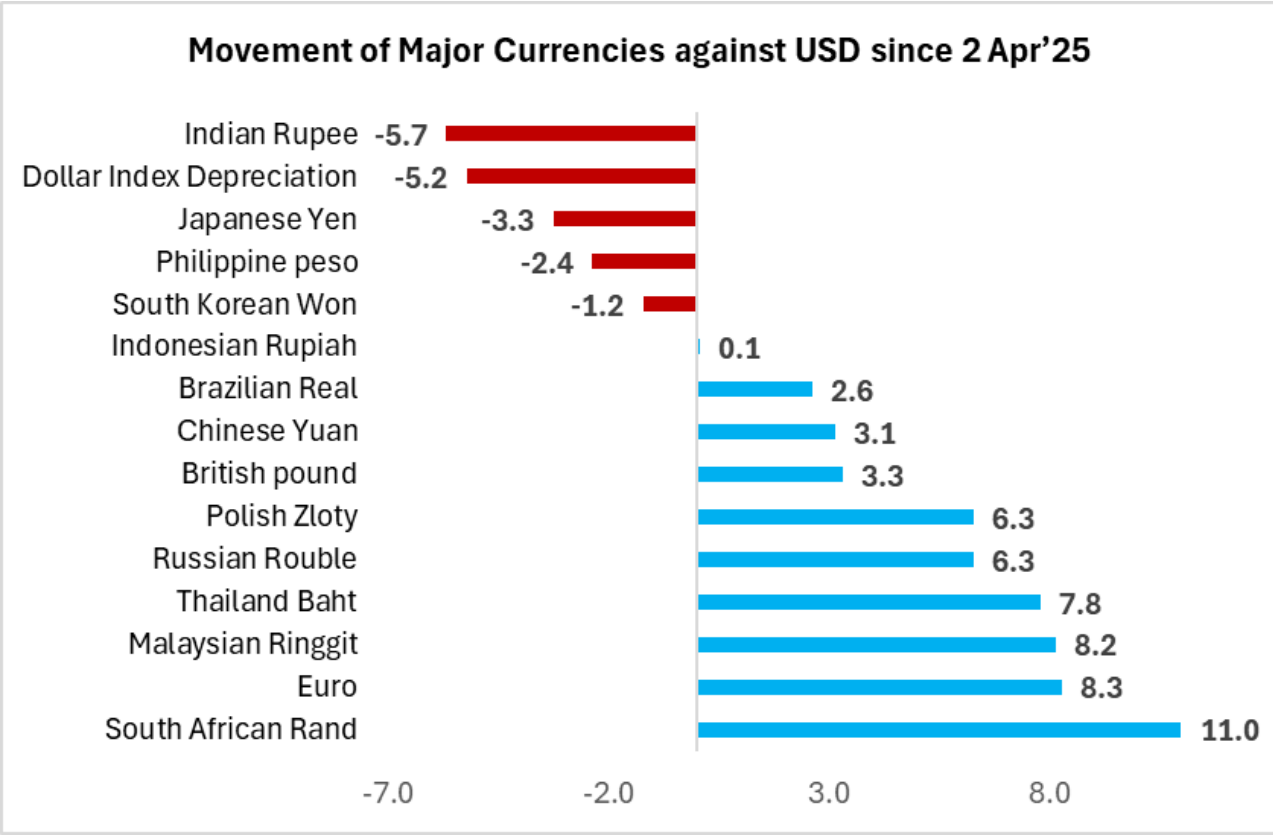
- The current slide appears to be primarily driven by FPI outflows, chiefly equities (after two years of robust inflows) and uncertainty regarding US-India trade deal
- **Past trends suggest that during CY07-CY14 net inflows averaged $162.8 bn, while from CY15-CY25 (*till date) FII inflows have been much lower at $87.7 bn…The largesse of portfolio inflows prior to CY14 was the primary reason for rupee movements.. As geopolitical uncertainties have taken centerstage**



Source: RBI; SBI Research

Continued tariff on India's exports is acting as a drag…..3/4

- Since 02 Apr'25, when US announced sweeping tariff hikes across economies, Indian rupee (INR) has deprecated by 5.7% against USD (most amongst the major economies), notwithstanding sporadic phases of appreciation owing to optimism over US-India trade deal. While INR is the most depreciated currency, it is not the most volatile
- **This clearly indicate that the 50% tariff imposed on India is one of the major factors behind current phase of rupee depreciation**



Source: RBI; SBI Research

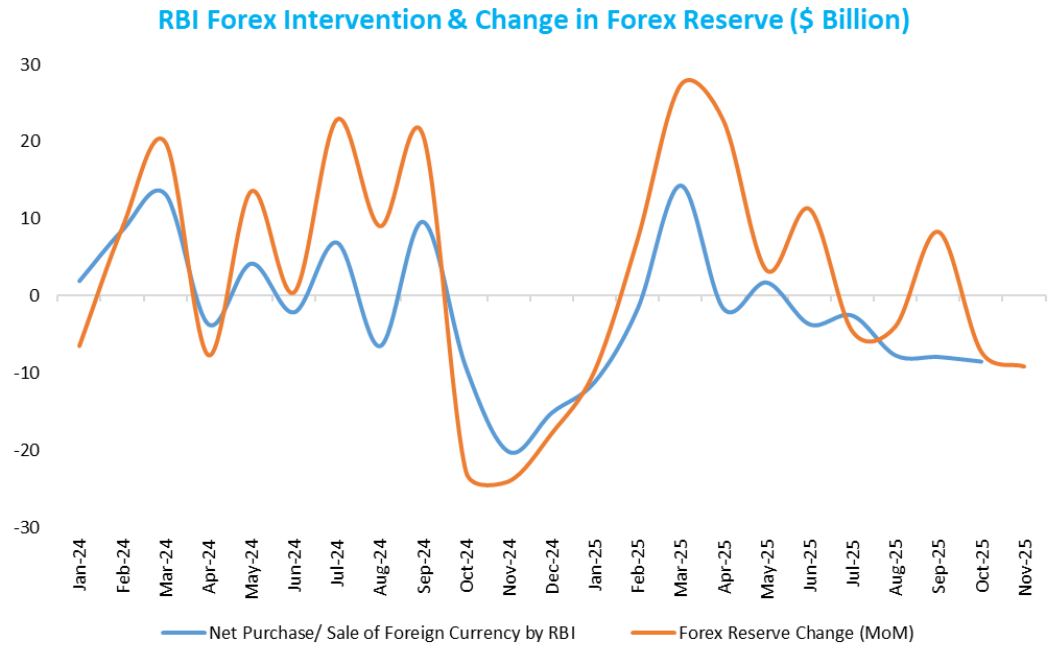
A fallout of prolonged geopolitical uncertainty is significant demand for $ in merchant segment… 4/4

- Since July 2025 the spot excess demand in merchant category was continuously increasing but exhibited substantial fall in Nov'25. However, in the forward merchant market demand has increased significantly.
- Still, the combined excess demand in merchant market was thus $145 billion, which was unprecedented and sought timely intervention

Turnover in Foreign Exchange Market ($ mn)_Excess demand(sale -purchase)								
Month	Merchant			Interbank			Grand Total	IB SWAP Excess Demand
	Forward Excess Demand	Spot Excess Demand	Total Excess Demand	Forward Excess Demand	Spot Excess Demand	Total Excess Demand		
Nov-25	35,268	6,715	41,983	1,880	-15,948	-14,068	27,915	-43,742
Oct-25	23,711	11,134	34,845	-9,232	-17,193	-26,425	8,420	-19,858
Sep-25	21,599	11,635	33,234	-6,109	-17,621	-23,730	9,504	-42,543
Aug-25	16,546	5,251	21,797	-6,990	-6,194	-13,184	8,614	-56,337
Jul-25	7,724	4,907	12,631	5,940	-11,378	-5,438	7,193	-93,381
Jun-25	14,909	-3,625	11,284	3,471	-9,213	-5,742	5,542	-64,931
May-25	17,282	-2,078	15,204	-5,696	-3,718	-9,414	5,790	-55,835
Apr-25	20,446	1,918	22,364	-1,416	-4,233	-5,649	16,715	-46,339
Mar-25	35,125	-12,296	22,829	21,995	-22,121	-126	22,703	-94,706
Feb-25	26,253	1,068	27,321	-964	-39,400	-40,364	-13,043	-45,392
Jan-25	26,256	4,410	30,666	-5,172	-46,154	-51,326	-20,660	-29,805
Dec-24	28,168	-2,638	25,530	1,311	-56,666	-55,355	-29,825	-18,965
Nov-24	18,078	12,828	30,906	-955	-33,559	-34,514	-3,608	-33,668
Source: RBI, SBI Research								

RBI has been intervening sporadically to prevent volatility in markets…

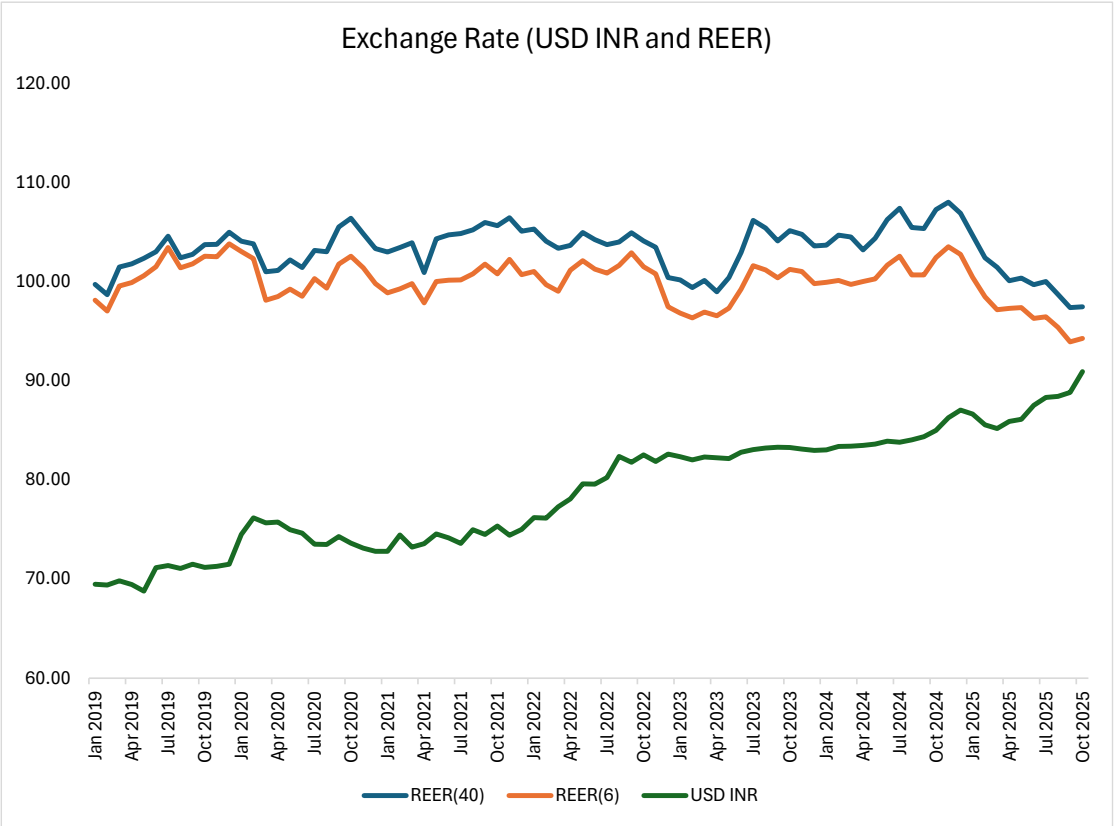
- India's forex reserve reached $703 bn in June 2025 but declined to $687.2 billion for the week ended 05 Dec'2025, which is primarily due to capital outflows and possibly intervention by RBI in the forex market to curb the volatility in the exchange rate. As per the latest available data, **RBI has intervened around $18 billion in the forex market during June-Sept, and we have estimated (by looking at the forward market data) another ~$10 billion in Oct'25. So, the total amount stands at around ~$30 billion, while forex reserves declined by $15 billion during the same period**
- By plotting the change in forex reserve with RBI's intervention in the forex market during Jan'2023 to till now, it indicate a high positive correlation coefficient of 0.80



Source: RBI; SBI Research

Movement of INR against USD and other currencies

- If we look at the movement of trade weighted REER (40 currencies/6 currencies) it remained range bound till Dec'24 even though USD INR has been depreciating. However, this year we can clearly see that REER has been declining (falling below 100) along with depreciating INR against USD. This in turn implies that rupee has been depreciating against other currencies



Source: RBI; SBI Research

Assessing the Persistence of Rupee Depreciation

Depreciation of Rupee as shock absorber?…But till what level?

- It is widely perceived that depreciation of rupee will act as a shock absorber for the high tariffs
- Recent exports data validate this fact…India's goods exports witnessed excellent turnaround recently and in Nov'25 exports grew by whopping 19.4%
- **Question is till what level it will act as shock absorber?**

Indias Goods Export with selected countries (YoY%)									
Country	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Apr- Nov 25
United States	**16.2**	**14.9**	**24.6**	**27.8**	**6.7**	**-11.9**	**-8.6**	**22.6**	**11.4**
UAE	12.9	-7.7	-11.7	20.0	23.0	24.3	-10.2	13.2	6.7
Netherland	-47.5	-6.2	-22.9	-4.9	10.3	-20.2	-22.7	-27.1	-21.9
China	11.1	22.5	15.4	28.2	22.1	33.3	42.3	90.1	32.9
UK	-20.3	-20.0	-9.5	7.8	1.8	11.9	-27.2	15.4	-7.0
Germany	10.5	17.1	4.6	25.6	2.1	11.1	-15.1	24.9	9.3
Singapore	-33.8	8.2	-0.5	-18.0	-8.9	-25.0	-54.8	-8.1	-23.0
Bangladesh	4.8	-7.0	-12.1	21.9	14.9	21.9	-14.1	-12.4	0.9
Saudi Arabia	-9.6	-29.2	-6.3	-1.7	-10.6	14.0	-1.1	-7.0	-7.6
Hong Kong	13.0	3.6	6.3	66.4	62.5	17.7	6.0	35.5	22.4
Brazil	-12.8	-21.2	24.1	51.7	-12.3	25.6	-13.4	21.3	5.1
Italy	-9.9	-14.3	-19.4	9.3	15.7	16.1	-27.7	8.2	-4.3
South Africa	-29.1	-10.5	-22.2	-3.3	19.5	8.4	-2.0	-10.3	-8.1
Australia	14.8	40.5	-48.4	-23.1	-1.8	8.9	-52.4	19.0	-12.9
Nepal	4.8	7.1	-6.2	9.1	14.4	-15.6	-12.6	15.7	1.7
Spain	13.0	5.3	5.8	55.9	9.0	150.8	43.4	181.3	54.5
France	-49.0	11.2	21.2	-13.3	-9.2	-28.2	-14.3	65.7	-10.7
Belgium	-6.5	29.0	-4.3	10.7	-1.3	-4.9	-1.4	30.9	5.0
Vietnam	1.5	2.3	1.0	20.6	11.1	19.0	21.4	36.0	14.7
South Korea	33.3	3.4	10.0	0.3	3.4	8.9	-16.4	-3.4	4.4
India's Total	**-3.8**	**-1.2**	**-1.3**	**13.3**	**5.8**	**6.2**	**-11.8**	**19.4**	**2.6**

Trade in USD BN (Apr- Nov)				
		FY25	FY26	YoY%
Merchandise	Exports	285	292	2.6
	Imports	488	515	5.6
	Trade Deficit	-203	-223	9.7
Services	Exports	249	270	8.6
	Imports	132	136	2.8
	Trade Deficit	116	134	15.3
Total	Exports	533	562	5.4
	Imports	620	651	5.0
	Trade Deficit	-87	-89	2.3

Source: Ministry of Commerce; SBI Research

Assessing the persistence of Rupee Depreciation (1/2)

- To quantify the likelihood and the expected duration of persistence of recent movements in the rupee and quantify the likelihood of further depreciation or reversal, we employ a Markov-switching framework that allows the exchange rate to evolve under distinct latent regimes with probabilistic transitions between them
- Using monthly USD/INR data from June 2021 to December 2025, the estimation explicitly seeks to identify measure the persistence of each regime, and assess the probability of near-term regime reversal, thereby providing a probabilistic characterization of how likely the rupee is to continue depreciating or to transition back to a stronger equilibrium
- The exchange rate E_t is specified as

$$E_t = \mu_{st} + \varepsilon_t$$

where $s_t \in \{1,2\}$ *denotes an unobserved latent regime*
The error term $\varepsilon_t \sim N(0,\sigma^2)$ captures transitory fluctuations around the regime-specific mean.

- Regime evolution follows a first-order Markov process, such that $P(s_t = j \mid s_{t-1}=i) = p_{ij}$, giving rise to a transition probability matrix $\begin{Bmatrix} p_{11} & p_{12} \\ p_{21} & p_{22} \end{Bmatrix}$

where p11 and p22 measure regime persistence and p12=1−p11, p21=1−p22 capture the probability of switching between regimes

Assessing the persistence of Rupee Depreciation….Rupee is currently in regime 2.. (2/2)

- Estimation results reveal two economically and statistically distinct regimes: a lower-exchange-rate regime with mean μ_1=75.8, corresponding to a relatively stronger rupee, and a higher-exchange-rate regime with mean μ_2 =84.2, characterizing a weaker rupee or depreciation regime, with a common conditional volatility of approximately 2.17

- The estimated transition probabilities indicate strong persistence in both regimes. The Rupee is currently in Regime-2 and it is most likely to remain in Regime-2 next month with 84.2% probability

- ***Consistent with this, the expected duration of Regime-2 is 6.3 months post which the Rupee is likely to exit Regime-2. Therefore, we believe that the Rupee is likely to bounce back strongly in the second half of next fiscal***

Markov Regime Switching Estimation			
	Mean	Std. Error	P-value
Regime-1	75.77	0.642	0.000***
Regime-2	84.18	0.363	0.001***
Transition Probabilities			
	Regime-1	Regime-2	
Regime-1	0.9536	0.0464	
Regime-2	0.1574	0.8426	
Note: (State-1 Mild Depreciating/ appreciating regime			
State-2 : Depreciating Regime			
(State-1, State-1) =p11			
(State-1, State-2) = p12			
(State-2, State-1) = p21			
(State -2, State-2)= p22			

Expected Duration of Regime Change

$$= \frac{1}{(1 - p_{22})}$$

…..Past data also corroborate our findings…Most likely scenario is rupee appreciating by at least 6.5% from current level…

- Based on the historical analysis of the months taken for Rupee to move from one regime (appreciation/ depreciation) to another, we have juxtaposed this and formulated two scenarios for both appreciating and depreciating regime
  - **Considering a depreciation rate of ~10% till Feb-25**, Rupee is likely to reach Rs 92 to 92.5 per dollar in 6 months
  - **Considering an appreciation range of ~6.5% , Rupee is likely to bounce back to Rs 87 on average in 2026**

Distribution of USD INR rate and Dollar Index					
Time Period	USD INR average rate	% Change*	Dollar Index	% Change	Months Taken
Jan-08	39.4	-	76.0	-	-
Mar-09	51.3	30.2	86.5	13.8	14
Apr-11	44.4	-13.4	74.7	-13.6	24
Dec-11	52.5	18.4	79.6	6.6	9
Feb-12	49.2	-6.4	79.0	-0.8	2
Jun-12	56.0	13.9	83.0	5.2	3
Oct-12	53.0	-5.3	79.7	-4.0	5
Sep-13	63.8	20.2	81.2	1.8	11
May-14	59.3	-7.0	80.0	-1.5	8
Feb-16	68.2	15.0	97.0	21.4	21
Jan-18	63.7	-6.7	90.8	-6.4	23
Oct-18	73.6	15.7	95.9	5.5	9
Jul-19	68.8	-6.6	97.3	1.6	9
Apr-20	76.2	10.9	99.9	2.6	9
Mar-21	72.8	-4.5	92.0	-7.9	10
Nov-23	83.3	14.4	104.5	13.6	33
Feb-24	83.0	-0.4	104.1	-0.4	3
Sep-24	83.8	1.0	101.0	-2.9	7
1-Dec-25	90.4	7.8	98.4	-2.6	15
Source: SBI Research,*(+)Depreciation and(-)appreciation					

Assessing the traditional perception that rupee acts as a shock absorber

Trade Balance response to Exchange rate movements…

- To evaluate the sensitivity of India's trade balance to exchange rate movements, we conduct a short-run empirical analysis using monthly data for FY24, focusing on the most recent period to capture current structural and market dynamics. Specifically, we estimate the exchange rate elasticities of exports and imports using a log–log specification:

$$\ln(X_t) = \alpha_x + \beta_x \ln(Er_t) + €_t$$
$$\ln(M_t) = \alpha_M + \beta_M \ln(Er_t) + €_t$$

Where X_t and M_t denote nominal Exports and imports and Er_t denotes INR/USD exchange rate

- The coefficients βX and βM are interpreted as elasticities, measuring the responsiveness of exports and imports to exchange rate movements. The estimated elasticities, βX=1.7 and βM=−1.2, indicate that both exports and imports respond to changes in the exchange rate: depreciation of the rupee boosts export volumes, while imports decline in response to higher costs
- ***Although both elasticities are greater than one in absolute terms, their effects largely offset each other when considering the overall trade balance, resulting in minimal net impact.*** **Thus, while rupee depreciation enhances export competitiveness, the structural composition of imports and short-run valuation effects limit any significant improvement in the nominal trade balance, highlighting the relatively low responsiveness of India's trade balance to exchange rate movements in the current period**

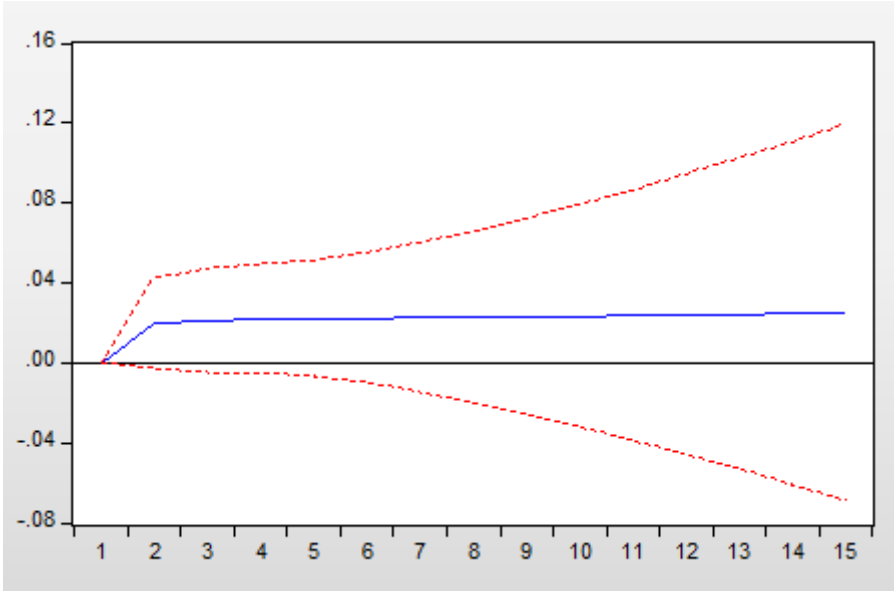
Log-Log Regression Results		
Exports	Coefficient	p value
ER	1.71	0.102*
Imports	Coefficient	p value
ER	-1.23	0.083*

* significant at 10%

Both exports and imports are exchange rate sensitive but cancels overall impact……

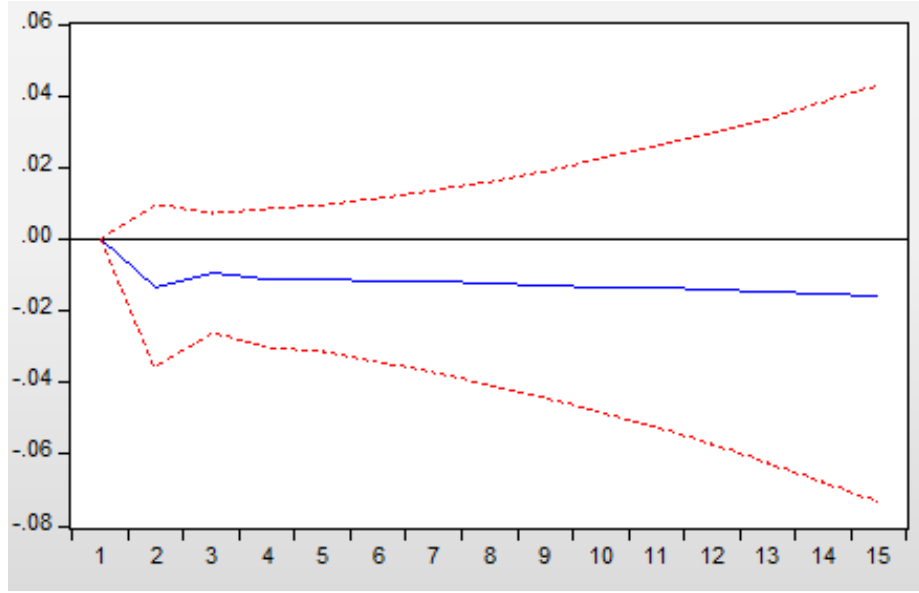
- To examine the dynamic response of trade flows to exchange rate movements, we impulse response functions using a Cholesky decomposition. The impulse responses trace the effect of a one–standard-deviation shock to the exchange rate, interpreted as an exogenous rupee depreciation, on exports and imports over subsequent months while purging contemporaneous correlation across innovations.
- The IRFs indicate that both exports and imports are responsive to exchange rate shocks : exports exhibit positive response to depreciation, while imports display a negative response. The adjustment in both variables occurs rapidly and largely within the first few months following the shock, after which the responses flatten and show limited further accumulation
- **Although the direction and magnitude of the responses suggest that trade volumes are elastic with respect to the exchange rate, the effects on exports and imports are broadly comparable in size and opposite in sign, resulting in a substantial degree of offsetting. Consequently, the implied response of the trade balance remains weak. Overall, the impulse response analysis reinforces the conclusion that, despite measurable short-run sensitivity of both exports and imports to rupee depreciation, the dynamic effects largely cancel out, rendering the trade balance relatively insensitive to exchange rate shocks in the current period.**

Response of Cholesky 1S.D shock to Exports



Time period (Months)

Response of Cholesky 1S.D shock to Imports



Time period (Months)

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