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126% RUPEE WEAKNESS and DAMPENING OF INVESTMENTS: POSSIBLE UNINTENDED CONSEQUENCES OF RBI'S EXCHANGE RATE POLICY

Or, how India/RBI's policy of weakening the Rupee to promote Exports does not work and can actually harm Investments, Exports and Growth.
Also, the global markets are presenting us with a unique opportunity. We should take it.

26-Jun-20, USDNR @ 75.63

Executive Summary

India/RBI has long followed a policy of weakening the Rupee, ostensibly in an attempt to promote Indian exports and thereby reduce the country's chronic trade deficit (hereinafter referred to as "the policy"). [Ref I, II].

Several studies have conceded that a weakening currency does very little to promote exports growth, yet we persist with the policy. Alarmingly, not only has this policy not delivered export growth, it now threatens to severely damage India's ability to raise foreign capital that is so vital for the massive investments that the country needs.

Further, since August 2019, the RBI is actively creating a one-way-street in the forex market, where only Rupee depreciation is allowed, not Rupee appreciation. This can have disastrous results in that, if pushed beyond a point (which is very close by), the Rupee could weaken by 126% over the next decade. The situation is dire and there is very little room for policy error here. The RBI would do well to forthwith abandon its old policy of weakening the Rupee in a one-way manner and leave the exchange rate to its own devices, else it could be courting disastrous consequences.

Ironically, the global market conditions are currently presenting India with a unique never-again opportunity to enter into a virtuous cycle of strong/ stable currency – higher investments – higher exports – higher growth, all with lower inflation and lower interest rates. This can either be capitalized on by leaving the exchange rate alone, or it can be frittered away by engineering perpetual Rupee weakness, with disastrous consequences.

Contents

Section A: Evidence Refutes Policy
I. FX Rate does not influence Exports, nor does it impact Imports
II. Exports respond to Investments, rather than to the Rupee
III. IIP and FX Reserves – another albatross around the Rupee's next

Section B: The Policy Side Effects
IV. Rupee weakness can impede Investments – warning from the Sensex
V. Impairing the market's shock absorbing capacity

Section C: The Future Outlook
VI. Opportunity presenting itself – should be capitalized on
VII. A bright future is possible. Please do not commit Hara-kiri.
VIII. Progression or Regression – two possibilities

APPENDIX: China and Japan: Currency and Exports have weak correlation
References and Data Sources

Ref I. Yin-Wong Cheung and Rajeswari Sengupta: It is perceived that the Reserve Bank of India adopts an asymmetric intervention policy that stems a currency appreciation whereas allows a reasonable amount of depreciation.

Ref II C. Rangarajan & R. Kannan: The stated policy of the Reserve Bank is that it has no specific target and that it intervenes only to reduce volatility. This is only partially true.

SECTION A – EVIDENCE REFUTES POLICY

I. FX Rate does not influence Exports, nor does it impact Imports

Contrary to popular belief that a weakening currency leads to exports growth, data and research [Ref I, III] show that this is not so. Rather, the opposite correlation seems to hold truer in India since 2000.

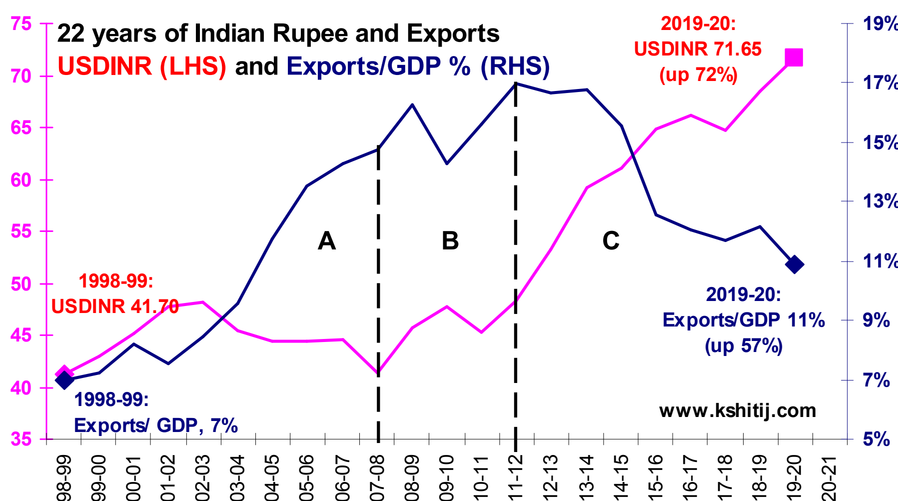


Fig 1: 22 years of USDINR and Exports/ GDP

The **USDINR (**left axis) has weakened 72% from 41.70 in 1998-99 to 71.65 (average) in 2019-20.

In this period, **Exports/ GDP** (right axis) has risen only 57% from 7% in 1998-99 to 11% in 2019-20. This period can be divided into sub-periods A, B and C. ***Periods A and C show that the policy in question does not work.*** These are examined below.

Table 1: USDINR and Exports/GDP movement in India

	From			To			Observation	
Period	Year	USDINR	Exports/GDP	Year	USDINR	Exports/GDP	Rate Movement	Exports Movement
A	2001-02	47.72	8%	2007-08	41.44	15%	Rupee gained 13%	Exports rose 88%
B	2008	41.44	15%	2011	48.40	17%	Rupee weakened 17%	Exports rose 13%
C	2011-12	48.40	17%	2019-20	71.65	11%	Rupee weakened 47%	Exports fell 35%

It is only in Period B (a short interlude of 3 years from 2008 to 2011) that the theory seems to work. In the longer timeframe of Period A (8 years) and Period C (9 years), ***export performance is actually seen to be contrary to what might be expected if the theory were correct***.

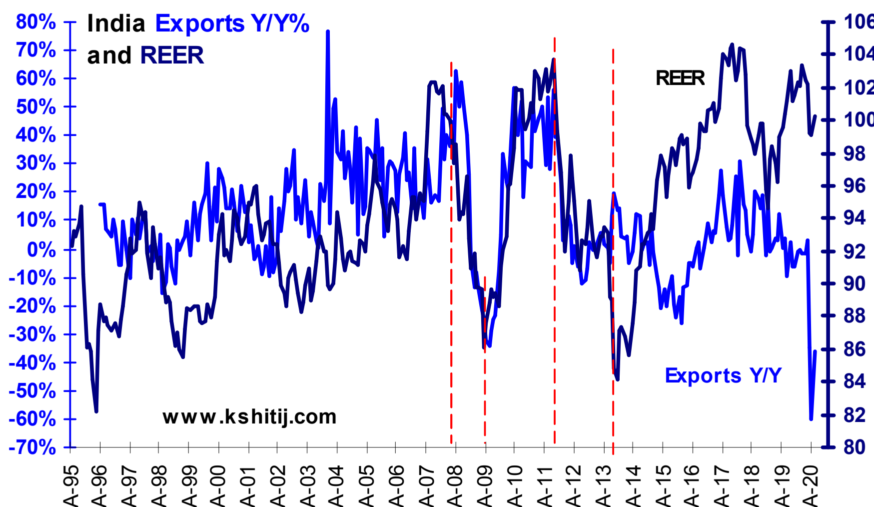


Fig 2: REER also does not work
India's annual Exports growth (left axis) showed steady improvement since 1996, more so after 2000. During the period, the Real Effective Exchange Rate (REER, right axis) went from an undervalued level of 82 to an overvalued level of 102. Later, even as the REER became undervalued, exports fell and again thereafter, even though the REER became overvalued, exports rose. If anything, ***the REER and Exports correlation is opposite to that expected as per theory.*** [Ref I]

Ref I. Yin-Wong Cheung and Rajeswari Sengupta: …starting from 1993-94 onwards, the expected relationship seems to have been reversed… Indian exports grew rapidly since 2000 despite the REER appreciation…

Ref III. Spyros Roukanas, Persefoni Polychronidou, Anastasios Karasavvoglou: Statistical data on real effective exchange rate and aggregated data of Serbian exports indicate that the ambience of overvalued national currency did not harm export performance.

One might think that perhaps the exchange rate policy is expected to curb the trade deficit by curbing Imports. After all, a stronger Rupee (2001-08) was accompanied by higher Imports and later a weaker Rupee (2011-20) saw a fall in Imports. However, this behaviour of Imports is because it has a symbiotic relationship with Exports, as seen below. [IV]

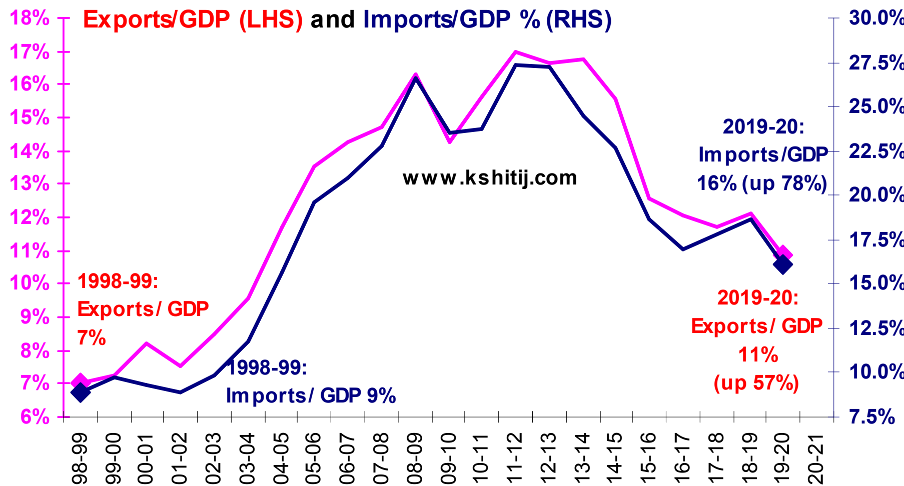


Fig 3. Exports and Imports move together

Exports and Imports move up and down together closely. This is because ***(a)*** over the years, ***the import content of India's exports has risen and (b)*** both exports and imports are ***impacted more by the global trade climate than by the exchange rate***. **[Ref II]**

This relationship between export-import is observed in China and Japan also.

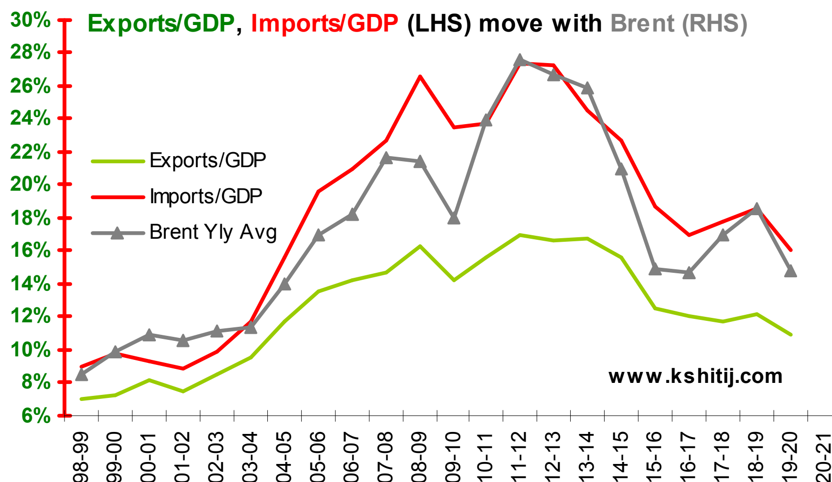


Fig 4. Exports and Imports move with Brent prices

We just saw how Exports and Imports move together. Here, we see that, As might be expected, India's Imports and Brent Crude prices increase/ decrease together.

Therefore, ***India's Exports, Imports and Brent Crude prices all move together***.

This is because Crude prices can be taken as a barometer of global trade and GDP growth and it is this which impacts Indian exports/ imports more rather than the Dollar-Rupee exchange rate. **[Ref II]**

From the evidence so far, we can surmise that the policy of weakening the Rupee to promote Indian exports and narrow the trade deficit has not worked.

Ref II: C. Rangarajan & R. Kannan: The import content of India's exports has risen from 9.4% in 1995 to 24% in 2011; we find that World Exports has a more powerful effect in influencing exports than REER. World Exports account for 83% of the variability as against 17% of REER

II. Exports respond to Investments, rather than to the Rupee

It is well known that Exports are positively impacted by investments in infrastructure (ports, roads, power et al) and production capacities (large scale factories), because these go much further in enhancing a country's export competitiveness in the world market rather than a weakening currency. The data bears this out.

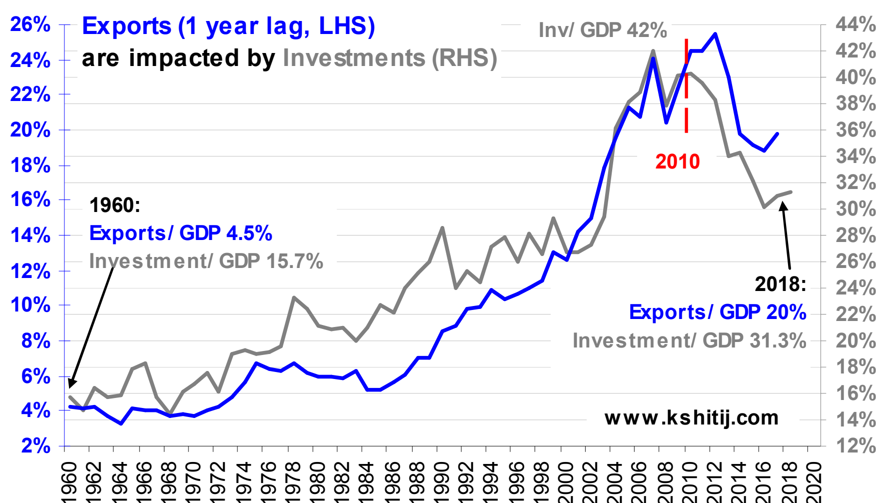


Fig 5. Exports are related to Investments

As Investment/ GDP grew from 15.7% in 1960 to 42% in 2007, Exports/ GDP also rose from 4.5% to 21%.

In this period also, investments grew faster from 1984 to 2007 as compared to earlier, and exports also picked up speed in line with investments.

After 2010, the Inv/GDP ratio fell to 31.3% and along with it, Exports/ GDP also fell to 20%.

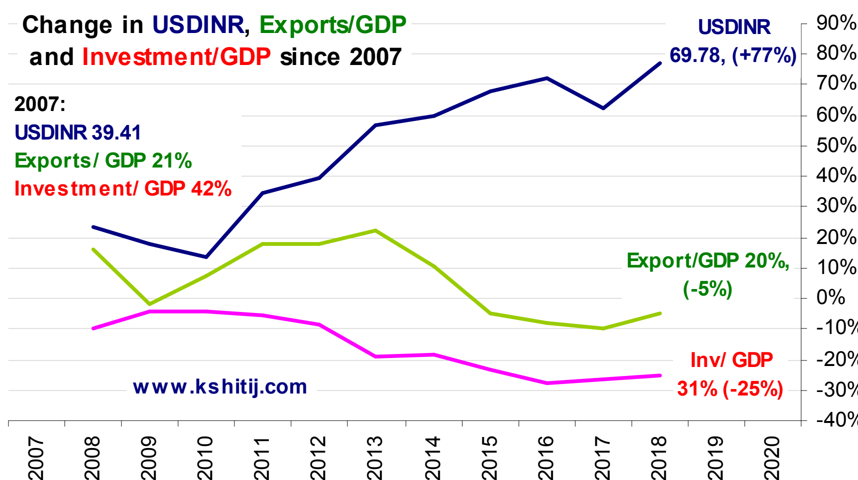


Fig 6. Rupee weakened 77%, yet Exports fell 5%

This chart zooms into the period after 2007.

We find that by 2018, the Rupee had weakened 77% compared to 2007. Yet, in this period, Exports fell by 5%. This again ***clearly shows that the exchange rate has no impact on Exports.***

Rather, Exports fell in line with the 25% decline in the Investment/ GDP ratio.

Exports competitiveness and growth in the world market is a complex thing. It depends on a number of factors including infrastructure, quality, global demand, marketing, research and development, enabling legal system, labour productivity, economies of scale and so on. It is simplistic to think that Export growth can be increased by weakening the currency. If anything, ***it is better to aim to promote Investments as a means to achieve Exports growth***. **[Ref II]**

We should be warned that weakening the Rupee in pursuit of an empty theory can jeopardize Investments, the single most important factor contributing to higher exports and GDP growth. The exchange rate may be left to its own devices.

Ref II: C. Rangarajan & R. Kannan: Truly speaking, the critical factor is not so much exchange rate as competitiveness… the exchange rate variable represents more than the pure exchange rate. It really stands for the degree of competitiveness of Indian exports… The crucial factor is not so much exchange rate as competitiveness. The whole gamut of policy measures government introduces from time to time are aimed at this objective. **We have not been able to take into account explicitly this factor**. Exchange rate is one element in this basket of measures." ***[Author's observation: inability to measure the competitiveness of Exports and positioning the exchange rate as a proxy for it is leading to a grave policy error, which should be stopped forthwith].***

III. IIP and FX Reserves – another albatross around the Rupee's next

Another argument put forth to support the policy of weakening the Rupee is that the RBI needs to build its FX Reserves as a counterbalance to India's Net International Investment Position.

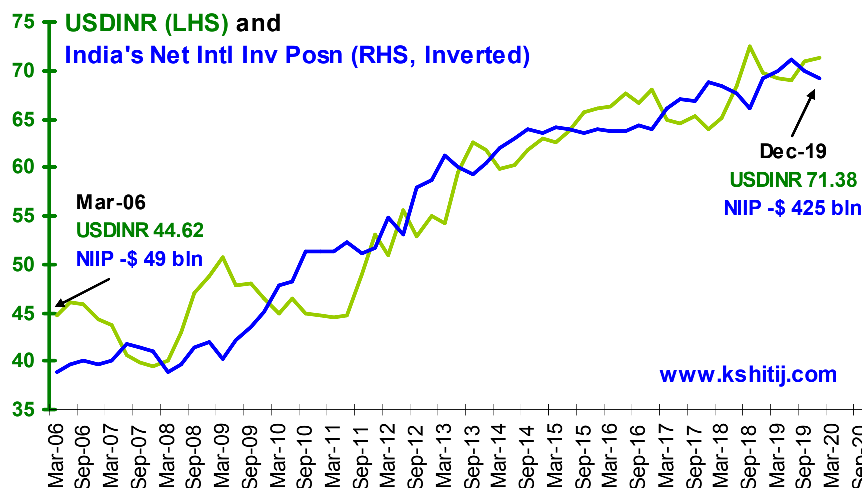


Fig 7. Weakening the Rupee with NIIP

India's **Net International Investment Position (NIIP, right hand axis**, inverted) has "deteriorated" since 2008 as India's economy has been increasingly opened to international capital flows. As can be seen, the **Rupee** has weakened alongside.

In a manner, a deteriorating NIIP can be seen as a "risk" and a cause for concern. However, ***it is a given that the NIIP will continue to "deteriorate" over time, as India's need for foreign capital will only keep on increasing and that FX Reserves will never catch up or limit the growth of the NIIP. If the RBI continues to buy Dollars to increase FX Reserves "war chest", then the Rupee can weaken into perpetuity***.

Increased Dollar buying since Aug-2019. Why?

The RBI has significantly increased its Dollar purchases since August 2019 **[See Section B-V]**, forcibly preventing Rupee gains even in the face of robust capital inflows. While RBI purchasing Dollars is not new, what we now see is that the RBI is intervening not to smoothen out volatility but to actively prevent Rupee appreciation. ***This is a new phenomenon*** and seems to be somehow linked to the adoption of the new Economic Capital Framework (ECF) after Aug-2019, although we do not clearly understand how and why.

FX Reserves form 73% of the RBI's balance sheet. To quote from the August 2019 report of the Expert Committee to review the extant ECF, "… ***the RBI suffers losses when the rupee appreciates against the USD and/ or the other currencies in its forex portfolio and it gains when the rupee depreciates against them. Thus, counter-intuitively, the RBI suffers valuation losses during times when the economy is witnessing strong growth and large capital inflows which normally are associated with rupee appreciation."***

The accumulated revaluation profits over the years makes up the Revaluation Reserves of the RBI. By including this in the Contingent Risk Buffer (CRB) of the RBI, the CRB stood at 26.8% of the RBI's balance sheet (on 30-Jun-18), well in excess of the 6.5% level recommended to meet various risks faced by the RBI. Excluding the Revaluation Reserves, the CRB stood at 7.2%, still in excess of recommended 6.5%.

The Expert Committee to review the extant ECF has recommended that the ***Revaluation Reserves should be retained with the RBI and should not be alternatively deployed or distributed (say by way of dividend to the Government). It is perplexing then, as to why the RBI is continuing to increase its Reserves***.

The only explanation seems to be that apart from the possibility that it ***wants to avoid revaluation losses due to Rupee appreciation (?)***, it also seems that it is ***acutely sensitive to "financial stability risks"***, especially after the GFC. In the words of the Expert Committee, "financial stability risks are those ***rarest of the rare, fat tail risks*** whose likelihood can never be ruled out and whose impact can be potentially devastating."

The question that arises is, ***could the dogged building up of Reserves as a foil against such risks actually end up inviting the far away risk closer, so close that it actually materializes?*** The danger is that Rupee weakness beyond a crucial tipping point can set the Rupee on a path of 126% depreciation over the next decade. **[See Section C-VII].** If so, it will severely disincentive foreign capital inflow, handicap India's infrastructure investments programme, and thereby cripple overall investments, exports and GDP growth.

SECTION B – THE POLICY SIDE EFFECTS

IV. Rupee weakness can impede Investments – warning from the Sensex

There is a dangerous side effect of the policy of pursuing Rupee weakness. A perpetually weakening currency can be a disincentive for foreigners investing in India and can make overseas borrowings extremely costly for Indian businesses. Both are detrimental to investments and capital formation. A warning of this comes from the Indian stock market. [Ref II]

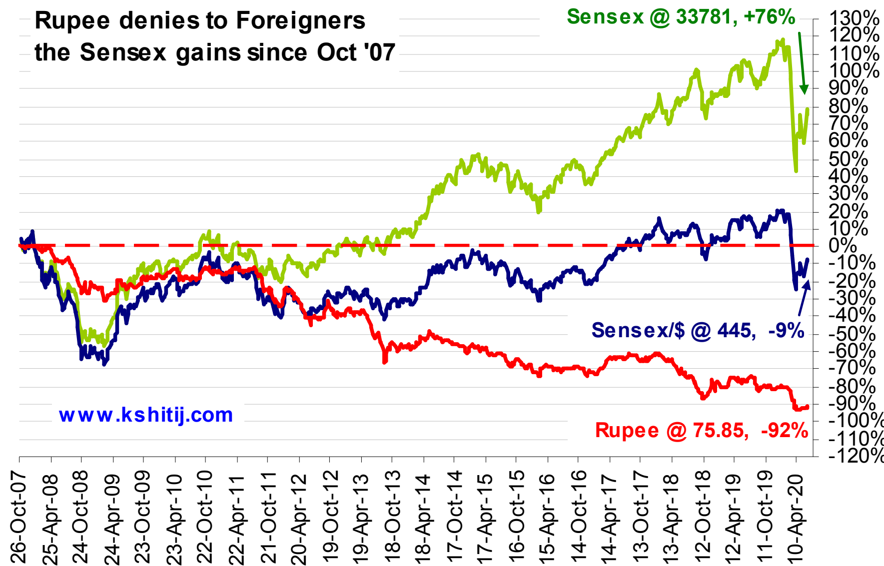


Fig 8. Rupee weakness robs FPIs of Sensex gains

Since Oct-07, while the Sensex has risen 76%, the Rupee has weakened 92% and the Sensex in Dollar terms is down 9%. ***Thus, the Rupee has penalized the FPI for investing in India***.

Unchecked, this can kill foreign appetite for Indian investments, something we cannot afford.

That resident Indian individuals are also now actively investing in global stocks as a means of currency diversification should come as a warning to us.

Fig 9. A Sensex/ $ fall below 350 to be avoided

The Sensex/USDINR has a crucial Support at 350, just 21% below current level of 445. If this is broken, the whole uptrend from 2001 will be broken and in that case selling by foreign investors will intensify and it will be difficult for India to regain favour among global investors.

India should not court terminal danger by exacerbating potential stock market weakness through policy induced Rupee weakness.

Although the recent FDI into Reliance JIO, or into e-commerce giants and internet startups through 2019, might make us think that "all will remain well forever" regarding FDI, the stock market is warning us that any kind of foreign investment (whether FPI or FDI) should not be taken for granted. Of course, there are several regulatory factors that can impede or encourage foreign investments into the country, but clearly ***policy induced currency weakness is in no manner an encouragement for investments***.

Ref II: C. Rangarajan & R. Kannan: We also need to take note of the fact that nominal depreciation of the currency has an effect on capital flows. Foreign investors would want the return to be much higher if the currency of the country in which they are investing is depreciating. Thus one must be conscious of the implications of exchange rate depreciation on various forms of capital flows…

V. Impairing the market's shock absorbing capacity

The general perception is that the Rupee is a weak currency. A part of this perception stems from the fact that the RBI has not allowed the Rupee to strengthen when it could have. ***The RBI's policy not only weakens the currency, but it also weakens the currency market structure***. A robust market lends shock-absorbing capacity to the economy and is the first line of defence against global crises. Co-opting the market is better policy than disdaining it. Weakening the market structure is a systemic risk promoted by RBI action.

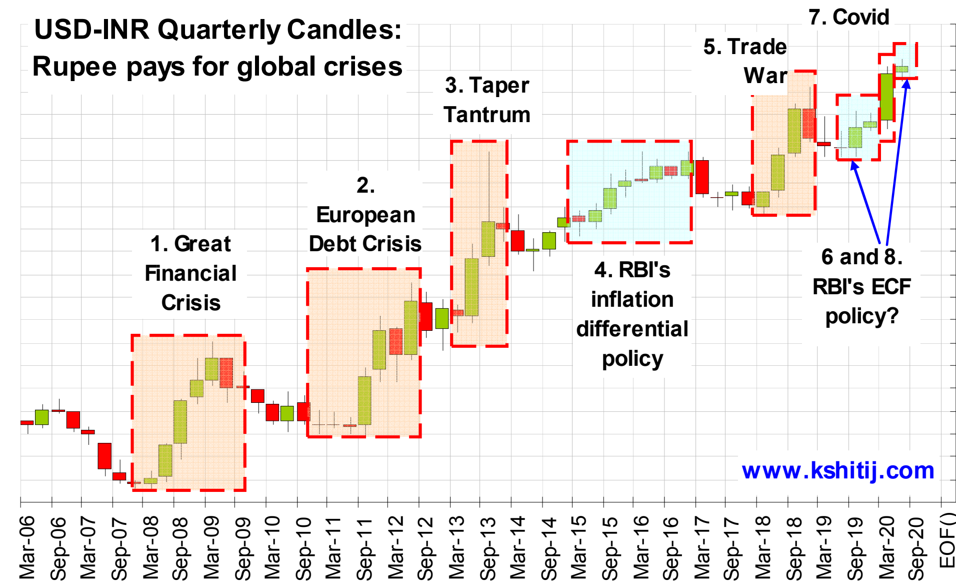


Fig 10. Rupee weakens on foreign crises.

Since 2008, all the episodes in which the Rupee has weakened have been triggered by foreign crises except the recent Covid crisis.

It is true that capital outflow during such crises has made the Rupee fall.

At the same time, it is also true that had the RBI allowed the Rupee to gain during times of capital inflows, the net Rupee depreciation at the time of subsequent capital outflows would have been lesser.

For instance, in 2015-16 the RBI actively prevented Rupee strength in pursuit of the policy of making the Rupee depreciate in line with the Indo-US Inflation differential (see Box 4 above). If it had allowed Rupee appreciation during this time, or even engineered Rupee stability rather than Rupee weakness, the subsequent Rupee weakness during the US-China trade war (Box 5 above) would have been lesser.

Since August 2019, the RBI has overriden its own stated policy of "not targeting any particular level and intervening only to smoothen out volatility" and has assiduously bought Dollars from Aug-19 till Feb-20 and again through May and June 2020 (see Boxes 6 and 8 above).

Rise in USDINR due to Covid				
Date	Position	Rate	Month	Could have allowed
13-Jan-20	Low	70.7400	Oct-19	69.5000
22-Apr-20	High	76.9050	Jan-20	70.0000
	Rise	**6.1650**		**69.7500**
Alternate possible Resultant High for USDINR				**75.9150**
Extra Rupee depreciation				**1.30%**

Table 2. Extra Rupee depreciation due to RBI action

The box alongside illustrates how the RBI's action from Oct-19 to Jan-20, (wherein it prevented Rupee strength to 69.50 or at least 70.00), resulted in an extra 1.3% Rupee depreciation during the Covid period from 13-Jan to 22-Apr.

More recently, the RBI actively prevented Rupee appreciation to 75-74 in May-June 2020, causing more than warranted Rupee weakness in the wake of the developments in the Indo-China confrontation. ***Such action weakens the natural shock-absorbing capacity of the market, and makes it a one-way street for Rupee weakness.*** It is to be remembered that the volumes in the NDF market now exceed the volumes in the onshore market. The danger is that if the market comes to understand that the RBI wants only Rupee weakness, hereafter whenever there will be an international crisis and a "risk-off" sentiment in the global markets, ***the Rupee can tend to depreciate in an exaggerated manner, which the RBI might not be able to control.***

SECTION C – THE FUTURE POSSIBILITIES

VI. Opportunity presenting itself – should be capitalized on

The good news is, the global market conditions are aligning to present India with a never-again opportunity to enter into a virtuous cycle of a strong/ stable currency, higher investments, higher exports and higher growth, all with lower inflation and lower interest rates. This can be capitalized on by leaving the exchange rate alone.

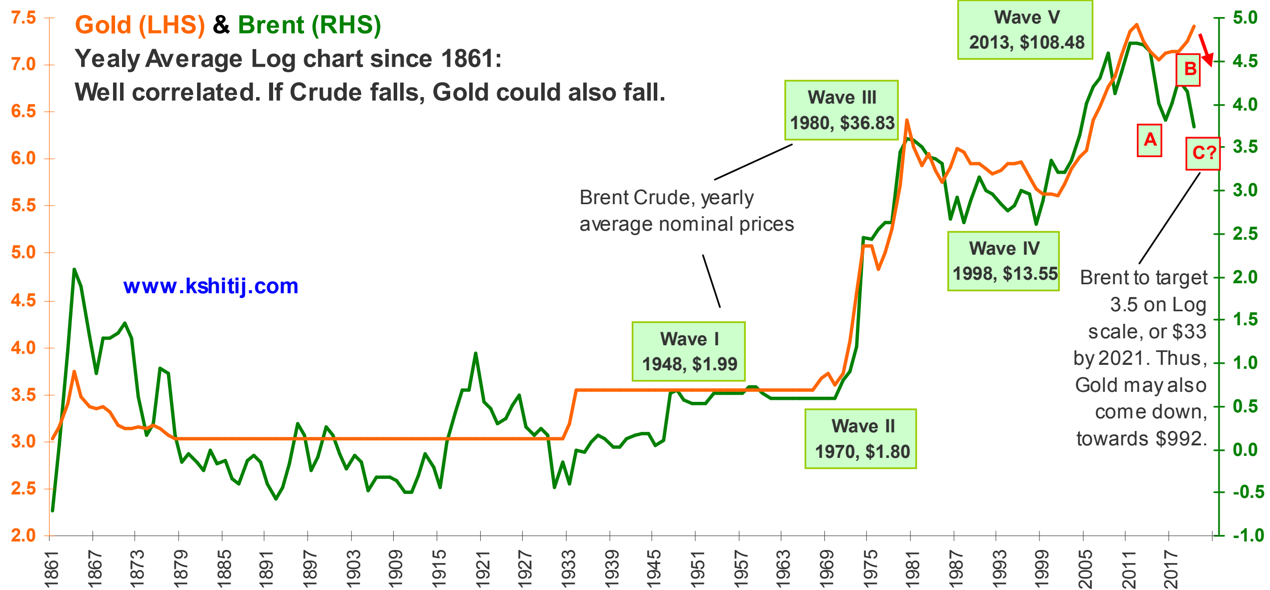


Fig 11: Gold and Crude can come down together: The 160-year chart above tracks the Log values of Gold (left axis) and Brent (right axis) since 1861. There is a very close correlation between the two, especially since the 1950s. Both of these are large components of India's total imports and even exports. Going forward, there are 70-80% chances that the yearly average for Brent, which has already come down sharply in 2020 (in line with our forecasts since April 2019) can remain well below $70 and ***can target $33 (if not lower) in 2021***, as compared to the current average of $42. If that happens and if the Gold-Brent correlation remains intact, then ***Gold can also come down towards $992 over the next couple of years.***

If so, the ***Indian CPI*** (which has averaged 4.29% since Jan-15, down from average of 8.76% in the Mar-11 to Dec-14 period) ***can continue to trend lower***. It would also mean that ***the Indian trade deficit could reduce on a structural basis. Both of these can provide positive tailwinds for India. Capitalizing on it, and allowing Rupee strength can make it easier to attract investments, and thereby promote exports and growth.***

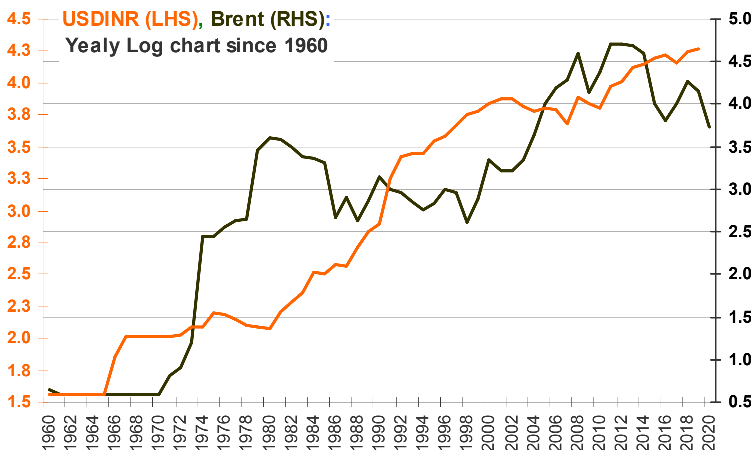


Fig 12: Crude weakness, Rupee strength?

This chart shows that since 1965, as Crude prices have risen globally, the Rupee has weakened alongside (although not in a well correlated manner). The causation has been that the trade deficit has risen with rising Crude prices and therefore India has leaned towards Rupee weakness.

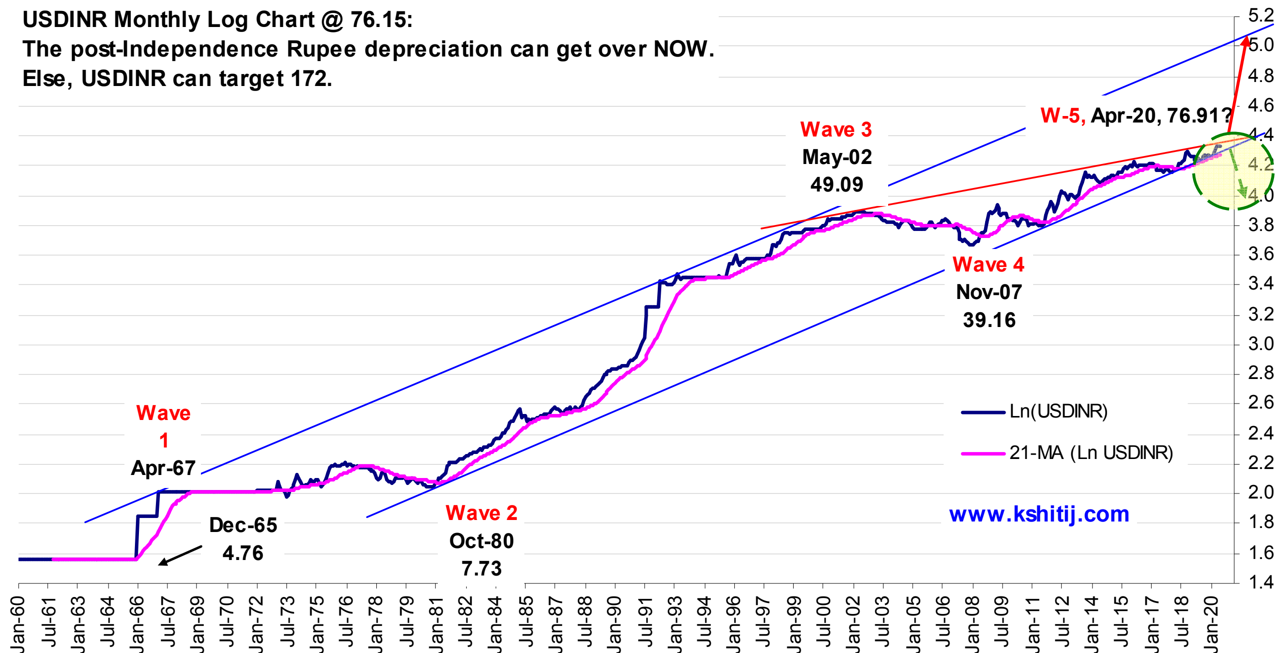
Since Crude and CPI can fall over the next couple of years, the RBI can allow Rupee strength and lower the interest rate, thereby encouraging Investments and leading to increase in Exports and GDP.

VII. A bright future is possible. Please do not commit Hara-kiri.

Given its mandate, the RBI is justifiably wary of fat tail risks and wants to guard against them. Ironically, there is one such possible fat tail risk that it could be unknowingly inviting by its own policy action.

Fig 13. Do not push Dollar-Rupee past 77. Else be prepared for 172

If pushed beyond a point, the Rupee could enter a zone of perpetual weakness from which it might never recover. That is a fat tail risk that the RBI seems to be either unaware of or is overlooking. If it materializes, it can severely cripple India's ability to raise investment capital, to increase exports and to grow the economy. It could push India into being a low-income-economy forever.



The above chart should be seen together with the multi-decade charts on Crude and Gold (Figs 11, 12) featured earlier. As pointed out, there are good chances that both Crude and Gold can weaken in the coming years, leading to narrowing of India's trade deficit. On top of that, if the long-term uptrend in the Sensex (Fig 9) persists (there is no natural market reason it should not so persist), there can be robust capital inflows into the country. All these factors together can lead to strengthening of the Rupee. If this is allowed to happen, India can get into a virtuous cycle of investments-exports-growth.

This possibility is also borne out by technical analysis (above) which suggests that ***the post-Independence weakness of the Rupee could be a 5-wave Elliot Wave sequence, which can be terminated below 77 just now and the Rupee can strengthen from here, as pointed out in the green shaded circle.***

However, the fat tail risk is that if Rupee strength continues to be actively prevented, the alternate path on the chart above would start pointing to 172 for Dollar-Rupee, a 126% depreciation over the next decade (see the red arrow). Should that be made to happen, then Figs 8 and 9 (on page 6) warn us that we would be putting in place an insurmountable disincentive for foreign capital to come into India. We would then enter into a vicious cycle of lack of investments, weak exports and anemic growth. ***Due to the policy actions of the RBI this bleak future is also a very real possibility.***

By themselves, the natural forces of economics and the market say that the time is opportune for India to get onto the virtuous cycle. The tide should be taken at the flood. We should not make the grievous error of committing hara-kiri in pursuit of a false theory (that currency weakness lead to exports growth) or in avoidance of fat-tail risk (which might not materialize by itself, but which we can bring on ourselves by our policy actions).

VIII. Progression. Or Regression. Two possibilities

We have presented a 160 year chart on Brent and Gold (Fig 11) and a 60 year chart on Dollar-Rupee (Fig 13). These together tell us of two possible futures ahead of us. The global market wants to present us with a bright future. It seems we are unwittingly choosing to opt for the dark one.

Choosing Progression, the Bright Future

As mentioned earlier, there are 70-80% chances that Crude prices can decline in the next couple of years while global growth is slow due to the aftermaths of the Covid pandemic and the US-China trade war. Together with this, we have a situation where the world is not too happy with China just now. Further, Indian fiscal policy action has been much restrained than that of the advanced economies. We also have a situation where India has announced lower income taxes for new investments. At the same time, the world is awash with liquidity.

These developments together create a positive enabling environment that can and should be capitalized on to attract investments in the next couple of years and thereby push for exports and GDP growth over the next 2-5 years. It is known that most of the policy initiatives in this regard fall in the domain of the government.

The RBI can help by allowing the Rupee to appreciate if it will. The prospect of strong/ stable Rupee, falling Crude prices and a world awash with liquidity creates a positive enabling condition of lower inflation and lower interest rates which can attract investments. This can in turn lead to higher exports and higher growth.

This can be a virtuous cycle.

Or Regression, the Dark Future

The other possibility is that given that the RBI has reduced the Rupee market into a one-way-street for Rupee weakness, if there is some wobble in the global markets, Dollar-Rupee can break above 77. We have to remind ourselves that volumes in the NDF market for the Rupee are now bigger than the volumes in the onshore OTC market. ***If the market gets it into its head that it wants to gun for Rupee weakness and takes the bit in its mouth and runs, it might become very difficult for the RBI to tame the market even if it expends its FX Reserves hand over fist.***

Such a scenario could trigger India specific capital outflows by foreign investors. Foreign currency loans could suddenly become prohibitively expensive, funding could dry up and serving existing ECBs could become difficult. Indian businesses might move to hedge unhedged foreign currency loans, exacerbating the Rupee's weakness.

Together with this, we may have the prospect of Indians exporting capital from India. To counter this, the RBI might be forced to impose capital controls, which would be a regressive step in itself, further leading to aversion within global investors.

All these together paint the picture of vicious cycle, whose end result can be 126% depreciation of the Rupee towards 172 on Dollar-Rupee over the next decade, together with crippling of India's capital investment programme. Exports growth will also not be forthcoming as India would not be able to compete with even Vietnam without an investment push. GDP growth itself could get compromised. Thus, we could get pushed into a low-income-country status for the next several decades.

This is not scare mongering. Although very dark, this is a real possibility, given that the RBI is pushing the Rupee towards the crucial tipping point.

A Simple Choice

However, the dark possibility is neither the necessary one, nor even naturally the more probable one. ***The bright future is the more natural and probable possibility, if the RBI does not prevent Rupee appreciation.***

It is a simple choice. It should be made.

Summary and Conclusion:

- The exchange rate has a minimal (if any) positive impact on Exports, especially in the case of India.
- Exports have a closer relationship with Investments than with the exchange rate.
- Building up Investments is a surer way of promoting Exports than weakening the currency.
- Perpetual currency weakness can be a disincentive for foreign capital inflows into India.
- With chances that Brent and Gold may weaken, the natural market forces are aligning towards presenting India with a historic opportunity to enter into a virtuous cycle by enabling and allowing Rupee strength, leading to greater investments, exports and higher growth.
- Current exchange rate policy (in pursuit of a false theory or in avoidance of a fat tail risk) can push Rupee weakness beyond a point, which could be a suicidal error, as beyond that point the market forces could take the bit in its mouth and run away, weakening the Rupee so much that neither will the RBI be able to control it nor would anyone want to invest in India.
- If that is allowed to happen, we will not only miss the opportunity to enter into a virtuous, we would by our own action enter into a vicious cycle of low investments, low exports and weak growth, condemning ourselves to remain a low income economy for the next several decades.

Policy Suggestion

The RBI has long struggled with the morals of the Impossible Trilemma. The market forces are aligning to present India with an opportunity towards investment led growth. Perhaps it is time for the RBI to leave the exchange rate to its own devices. The market and the economy are robust enough to absorb risks.

The Government too should leave the RBI's capital and reserves alone and look to raise resources by attracting investments and growing the economy by more meaningfully promoting Ease of Doing Business.

Exporters, export organizations and business chambers should clamour for infrastructure investments, for more land-labour-capital reforms, for real Ease of Doing Business and lower interest rates, rather than look for ineffectual sops like currency weakness.

APPENDIX: China and Japan: Currency and Exports have weak relation

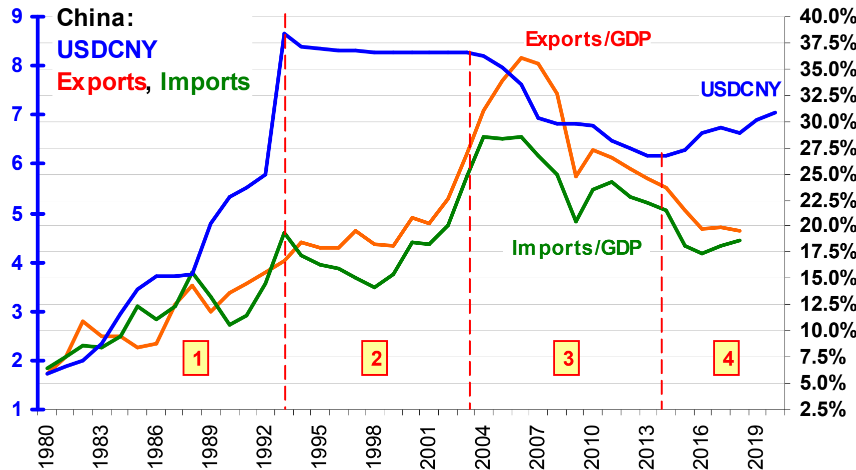


Fig A1: Mixed Results in China

Chinese data since 1980 shows four phases:

1) Currency weakness + growth in exports and imports
2) Currency stability + growth in exports and imports
3) Currency strength + fall in exports and imports
4) Currency weakness + fall in exports and imports

This experience, on balance, would seem to support the theory that currency weakness/ strength leads to rising/ falling exports. But not always, as the weakening Yuan since 2014 (phase 4) has not been able to prevent a decline in exports.

Further, we see that Chinese Imports have also increased/ decreased along with exports. So, currency weakness has not led to curtailment of imports, nor has currency strength induced an increase in imports.

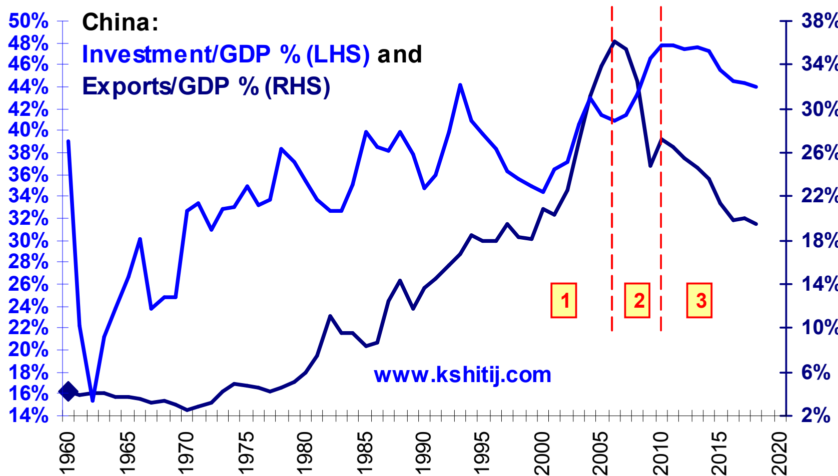


Fig A2: Chinese Exports also have better relation with Investments

In the first phase in the chart alongside, both Investments and Exports rose for a long period of time. Then in Phase Two, Exports fell even though Investments continued to rise. In the third and last phase we find that both Investments and Exports are falling.

Thus, as in the case with India, we find that in China, ***Exports is better correlated with Investments, than with the exchange rate.***

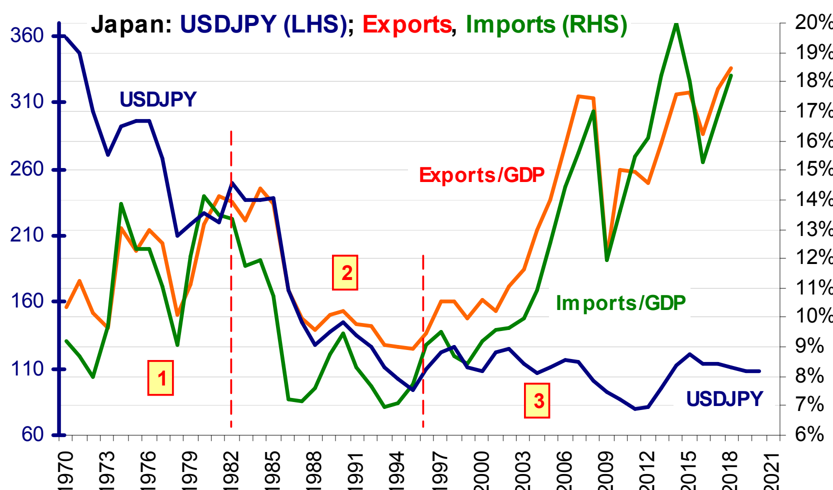


Fig A3: Japan also shows little impact of exchange rate

The experience of Japan, the original exporter country, also shows that the ***exchange rate has little impact on the growth of Exports and Imports***. Incidentally, in the case of Japan also both moved together, as in the case of India and China.

Only in Phase 2 in the chart alongside did exports (and also imports) fall when the Yen strengthened. Other than that, ***in phases 1 and 3, the strength in the Yen did not prevent exports (or imports) from growing.***

REFERENCES: Related research and writings

Given below are some excerpts from research both in India and across the world that support the data evidenced above that (A) the exchange rate has little effect on export performance and that (B) the RBI has a policy of engineering Rupee weakness.

I

Yin-Wong Cheung and Rajeswari Sengupta find that, "***Anecdotal evidence suggests that while until 1993-94, the relationship between REER and total exports is exactly what the textbook prescribes; that is, exchange rate depreciation having a positive effect on exports, but starting from 1993-94 onwards, the expected relationship seems to have been reversed***. However, as pointed out by Veeramani (2008), the observation that ***Indian exports grew rapidly since 2000 despite the REER appreciation*** need not imply that the latter had no adverse impact on the former – the actual growth of exports could have been larger had the REER not appreciated. The trade effect of exchange rate volatility has been an intensely debated issue since the breakdown of the Bretton-Woods system."

Interestingly, they also say that ***"It is perceived that the Reserve Bank of India adopts an asymmetric intervention policy that stems a currency appreciation whereas allows a reasonable amount of depreciation."***

Impact of Exchange Rate Movements on Exports: An Analysis of Indian Non-Financial Sector Firms
Yin-Wong Cheung* City University of Hong Kong, Hong Kong and
Rajeswari Sengupta* Institute for Financial Management and Research, India
https://macrofinance.nipfp.org.in/PDF/JIMFPR_Cheung-Sengupta_201212Final.pdf

II

C. Rangarajan & R. Kannan, both of the Chennai School of Economics, write that,
"… Truly speaking, the critical factor is not so much exchange rate as competitiveness … In this context, maintaining domestic price stability and improving the productivity, particularly of the traded goods sector are equally important.

… On the role of exchange rate, there are some who hold strongly the view that the rupee should be kept under-valued…

…The impact of exchange rate also depends on the import content of exports. As this share goes up, the impact will go down. The import content of India's exports has risen from 9.4% in 1995 to 24% in 2011

… we find that ***World Exports has a more powerful effect in influencing exports than REER. World Exports account for 83% of the variability as against 17% of REER***.

… the exchange rate variable represents more than the pure exchange rate. It really stands for the degree of competitiveness of Indian exports …

… ***The stated policy of the Reserve Bank is that it has no specific target and that it intervenes only to reduce volatility. This is only partially true***….

… Should the appreciation of currency really matter? Raghuram (2016) says: "So offsetting any rise in the real exchange rate is any productivity differential we enjoy with respect to the rest of the world. Assuming conservatively that this is about 2% a year, much of the real appreciation that economists complain about is offset by productivity differentials". Using the Balassa–Samuelson theory of the impact of productivity on price rise, ***some have come to the conclusion that the rupee is undervalued*** Balassa (1964); Samuelson (1964)…

… ***We also need to take note of the fact that nominal depreciation of the currency has an effect on capital flows***. Foreign investors would want the return to be much higher if the currency of the country in which they are investing is depreciating. ***Thus one must be conscious of the implications of exchange rate depreciation on various forms of capital flows***…

… ***The crucial factor is not so much exchange rate as competitiveness***. The whole gamut of policy measures government introduces from time to time are aimed at this objective. ***We have not been able to take into account explicitly this factor***. Exchange rate is one element in this basket of measures.” ***[Author's observation: inability to measure the competitiveness of Exports and positioning the exchange rate as a proxy for it is leading to grave policy error, which should be stopped forthwith].***

Determinants of India's Exports
C. Rangarajan & R. Kannan (both Chennai School of Economics)
Journal of Quantitative Economics **volume 15**, pages 629–646 (2017)
https://link.springer.com/article/10.1007/s40953-017-0102-7

III

Spyros Roukanas, Persefoni Polychronidou, Anastasios Karasavvoglou find that, “Statistical data on real effective exchange rate and aggregated data of Serbian exports indicate that ***the ambience of overvalued national currency did not harm export performance.”***

Exchange Rate and Export Performance: Evidence from Serbia
The Political Economy of Development in Southeastern Europe pp 51-67
https://link.springer.com/book/10.1007/978-3-319-93452-5

IV

Stephen Hall, George Hondroyiannis, A.V.B.Swamy, George Tavlas, Michael Ulan find that, “***Our results for the EMEs do not show a negative and significant effect of exchange-rate volatility on the exports of the countries considered***. Our findings suggest that the open capital markets of EMEs may have reduced the effects of exchange-rate fluctuations on exports.”

Exchange-rate volatility and export performance: Do emerging market economies resemble industrial countries or other developing countries?
Stephen Hall, George Hondroyiannis, A.V.B.Swamy, George Tavlas, Michael Ulan[e1]
https://www.sciencedirect.com/science/article/abs/pii/S0264999310000155

V

Recent news reports saying RBI bought Dollars in the market to prevent Rupee appreciation. More such are available in earlier episodes/ years as well.

30-Dec-19
“…The Reserve Bank of India stepped up its dollar buying by 14 percent in 2019 helping make the Indian rupee an underperformer despite portfolio investors pumping in $14 billion into the Indian market. The rupee is the second worst performing Asian currency this year, losing 2.22 percent against the dollar…”

https://economictimes.indiatimes.com/markets/forex/how-rbis-dollar-buying-impacts-rupee/articleshow/73025295.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst

12-Jun-20
India's forex reserves near $500 bn, but RBI won't let rupee rise: Experts
https://www.business-standard.com/article/economy-policy/india-s-forex-reserves-near-500-bn-but-rbi-won-t-let-rupee-rise-experts-120061200085_1.html

Data sources for the charts

Figure	Name and data source	Figure	Name and data source
1	**22 years of USDINR and Exports/ GDP** https://commerce.gov.in/ http://www.mospi.gov.in/ Kshitij Historic Data	2	**REER also does not work** https://commerce.gov.in/ https://www.bis.org/statistics/eer.htm
3	**Exports and Imports move together** https://commerce.gov.in/ http://www.mospi.gov.in/ Kshitij Historic Data	4	**Exports, Imports move with Brent prices** https://commerce.gov.in/ http://www.mospi.gov.in/ Kshitij Historic Data
5	**Exports are related to Investments** https://www.theglobaleconomy.com https://commerce.gov.in/	6	**Rupee weakened 77%, yet Exports fell 5%** https://www.rbi.org.in https://commerce.gov.in/ http://www.mospi.gov.in/ Kshitij Historic Data
7	**Weakening the Rupee with IIP** https://www.rbi.org.in Kshitij Historic Data	8	**Rupee weakness robs FPIs of Sensex gains** Kshitij Historic Data
9	**Sensex/ $ fall below 350 to be avoided** Kshitij Historic Data	10	**Rupee weakens on foreign crises** Kshitij Historic Data
11	**Gold and Crude can fall together** https://www.measuringworth.com https://www.quandl.com Kshitij Historic Data	12	**Crude weakness, Rupee strength?** Kshitij Historic Data
13	**Do not push Dollar-Rupee past 77. Else be prepared for 172** Kshitij Historic Data		
A1	**Mixed Results in China** https://www.macrotrends.net Kshitij Historic Data	A2	**Exports have better relation with Investments** https://www.theglobaleconomy.com https://www.macrotrends.net
A3	**Japan also shows little impact of exchange rate** https://www.macrotrends.net Kshitij Historic Data		

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