

The Dominion Effect of Bank Crisis & Exchange Rate

Gaurav Singh¹

Rohan Goyal²

Rakesh Patel³

B.COM (Finance & Accountancy)
Department of Professional Studies
Christ (Deemed to be University)
Bengaluru, India

Ashwin Warriar⁴
Research Analyst, Thomson Reuters

Abstract

A bank is a place that will lend you money if you can prove that you don't need it. This paper aims to establish causality between a banking crisis and a currency crisis and the extent to which both can be correlated. It specifically focuses on the recent Punjab National Bank scam associating it with the downfall in rupee against the USD. The paper initially studies the aforesaid events individually analyzing their footing and later studying them in unison. During the casualty study, we used the USD INR exchange rate and the stock prices of the PNB bank to study the hypothesized relationship between them. We obtained the currency exchange rates of 60 days pre and post the said scam and the stock prices of the PNB (PNBK) for the same period. On utilization of the statistical tools on the collected variables, it is found that there is a significant relationship between the two. As the scam unearthed, the stock prices of the bank fell whereas the exchange rate rose to beat the previous highs by significant margins. There are many other factors which drive the currency rate fluctuations but the banking sector of an economy is arguably at the center of it. It is quite basic to infer that a significant event of such magnitude in one of the leading private sector banks might have an adverse effect on the currency rates as a considerable part of the banks balance sheet constitutes foreign assets and liabilities.

Keywords: *Bank, Bank Crisis, USD, INR, PNB*

I. Introduction

A banking crisis refers to the circumstances in a bank's operations which disrupts the normal functioning of the bank. This crisis may stem from a varied pool of reasons such as accumulating NPA's, faulty banking procedures etc. A banking crisis may be of three types- bank runs which affect a single bank, banking panic which affect multiple banks and systematic banking crisis which tremors the whole financial system. A currency crisis is the reduction in value of the currency of a country. This results in a lower purchasing power when dealing with foreign countries. Currency crisis is mostly the outcome of the mismatch between an investor's sentiment and expectations and the economic viewpoint of a country. Other factors which might be a fuel for currency crisis are excessive borrowing, apprehension over the government policies which affect the investors. The banking debacle under the paper's consideration is one of the largest in the banking history of the country. The PNB scam was unearthed on 14th February, 2018, by PNB, disclosing an 11,000 crore fraud by one of India's leading diamond merchant, Nirav Modi. The heist was pulled off by Modi and his relatives in collusion with Gokulnath Shetty, PNB's deputy general manager of the Foreign exchange

department in one of the Mumbai branch of the bank. As Gokulnath Shetty retired, his successor found the past dealings suspicious and launched an investigation leading to the discovery of the scam. As the scam unfolded publicly, PNB stocks along with few other banking stocks plummeted.

In this paper, we analytically investigate the downfall which the INR has seen since the unearthing of the aforesaid banking scam. There are many ideological reasons to link banking and currency crisis one of which being the inclusion of foreign assets and liabilities in the balance sheets of companies.

II. Review of Literature

(Pol, 2010)

This research paper is about the financial crisis of 2007-08 and causality. A financial crisis is the observable effect E of the excesses which lead to a boon and an inevitable bust. The financial crisis did not occur for one particular cause. The key factors are global saving glut, loose monetary policy and financial innovations, excessive risk-taking and the existence of a “shadow” banking system that developed without enough supervision. In this research paper the financial crisis is identified with the event E, which is sudden stop of the lending process at the end of October 2008. The three facts namely Monetary excesses, sub-prime mortgage, Re-securitization are the preponderant causes of E. The researcher concludes that testing for causality is not an easy task as there is no single definition for causality. The Hicksian methodology also fails while testing this as and when the number of potential cases increases, the analysis becomes complicated.

(Kaufman, 2000)

Many countries are facing banking and currency problems with high costs of increased unemployment and reduced income. The banking and currency crises both involve an actual or potential depreciation in the value of financial claims. This reflects a failure by bank or countries on a semi-fixed exchange rate to keep their promise to redeem or exchange respectively, claims at a given rate. These crisis have plagued most countries causing reduction in GDP and causing sizable transfer payments among domestic sectors. This article argues that lasting solutions to these crises need both to avoid the difficulties from poor implementations and to be incentive compatible, so that policy makers do the right thing.

For currency or exchange rate problems guarantees by either the domestic government or official international organizations that eliminate entirely or even significantly reduce potential losses to creditors if the domestic currency is depreciated have eventually contributed to depreciations and their associated problems as often they have prevented them.

Systematic risk for both banking and exchange rates appears to be more serious in perception than in reality. Common shock contagion occurs more frequently but primarily on a rational, information-based basis.

(Corsetti, Pesenti, & Roubini, 1998)

This research paper explains the view that the Asian currency and financial crises in 1997 and 1998 reflected structural and policy distortions in the countries of the region. It provides an overview of economic fundamentals in Asia on the eve of the crisis, with emphasis on current account imbalances, quantity and quality of financial overloading, banking problems, and composition, maturity and size of capital inflows. The literature has focused on a long list of structural distortions in the pre-crisis Asian financial and banking sectors: lax supervision and weak regulations; low capital adequacy ratios; lack of incentive-compatible. According to this research the crisis occurred because of Imbalances in foreign debt accumulation and management, inflation, political instability and policy uncertainty, real exchange rate appreciation etc.,.

(Blanton, 2012)

The primary goal of this report is to provide insight into the disguises con men use to prepare their standard fraud schemes and to recruit victims who may be retirees, members of the military, unemployed, investors and others. Cloaked in a new disguise, con men appeal to the individual's weak spot: a desperate shortage of money before payday, a need to earn more than the yield on their certificate of deposit, etc. Investments frauds have one thing in common; they sell something- a company, a product, or promised rate of return- that either doesn't exist or will not live up to expectations. This report provides certain tips for avoiding scams such as things like offer of high guaranteed return at no risk are indicators of scam.

(Glick & Hutchison, 1999)

In this paper they have analyzed the incidence and underlying causes of banking and currency crises. They measure the individual and joint occurrence of bank and currency crises and assess the extent to which each type of crisis provides information about the likelihood of the other. They have found that the twin crisis phenomenon is most common in financially liberalized emerging markets. The strong contemporaneous correlation between currency and bank crises in emerging markets is robust, even after controlling for a host of macroeconomics and financial structure variables and possible simultaneity bias. They found robust link between these crises in emerging markets. Analysis also provides evidence that banking crises provide some lending information about the possibility of future foreign instability, though again only for our emerging market group.

(Naranjo, 2014)

The volume and volatility of international capital flows have motivated recent interest in optimal use of capital controls and the communication and coordination among central banks. During 2008 and 2009, the USD nominal rate of return of many countries currencies, developed and emerging alike, was negative. The large and sustained rate-of-return differences across currencies have been associated with the significant capital inflows during 2009-2012. The volume and volatility of international capital flows have fueled the debate on the coordination of monetary policies between developed countries and emerging markets and the importance of communication among their central bankers. Such volume and volatile have also motivated recent work on the optima use of capital controls when flows are volatile.

(Singh, Mishra, & Singh, 2016)

This paper explores the impact of Rupee- Dollar fluctuations. The depreciation of Rupee against Dollar reveals that there has been a significant negative impact of this currency volatility on many sectors. During the year Indian currency got weakened many times and reached to a level of 68.510 for a dollar in Feb 16. A currency's level has a direct impact on merchandise trade, economic growth, inflation, interest rates. Sinking Rupee is danger for economy. Depreciation in value reduces the inflow of foreign capital, rise in the external debt pressure. The positive impact is the stimulation of exports and discouraging imports, this improving the current account deficit. This research says a lot depends on the global economic outlook and the future of Euro zone which will determine the future of INR.

III. Research Design

I) Statement of Problem

In recent times the home currency (INR) has fallen considerably against the foreign currency (USD). The banking scams and NPA's are certainly affecting the growth of the economy. Thus in this paper we try to establish a possible effect of Bank Crisis on the Exchange Rates using the T-Test.

II) Sources of Data

The data has been collected from Secondary Sources. The exchange rate and bank stock prices were taken from

m.investing.com

III) Hypothesis

H_0 – There is no significant effect of Bank Crisis on the Exchange Rate

H_1 – There is significant effect of Bank Crisis on the Exchange Rate

A= 5%

IV) Data Analysis Tools

- SPSS

SPSS is a commonly used statistical analysis program. The descriptive analysis are used to conduct the T-Test.

- T Test

The T Test compares two means and tells you if they are different from each other. The t test also tells you how significant the differences are; In other words it lets you know if those differences could have happened by chance

V) Expected Outcome

It is expected that the test results establish a significant relationship between Bank Crisis and the Exchange Rate (H_1). Even though there are multiple factors that can affect the exchange rate, but the bank crisis is a major factor.

VI) Limitations

- There are multiple factors in an economy that may affect the exchange rate
- The study is based on one particular scam
- Only one method (T-Test) has been conducted to establish the effect of Bank Crisis on Exchange Rate
- The results are based on a sample of only 136 days exchange rates (68 Prior and 68 Post the Scam)

IV. Data Analysis And Interpretation

The study is based on a bi-variate analysis. The variables used are

- Daily Return on PNB Stock Prices [DR]
- Daily Return of INR-USD Exchange rate [DRR]

The period chosen is 68 days prior and 68days post the PNB Scam under consideration.

A normally distributed data of 136 days was taken i.e. 68 days prior and 68 post the PNB Scam. Subsequently the daily return was computed on MS Excel for both the variables, namely- DR for Stock

Return and DRR for Exchange Rate Return. The data was then tested on SPSS Program for dependency through the T-Test. The results of the test are

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	DR - DRR	-0.58932%	3.09458%	0.26536%	-1.11412%	-0.06452%	-2.221	135	.028

The above table shows that there is a .028 significance relation between the two variables. Since this is lower than the 5% α that we had assumed, it tells that there is a effect of the Bank Crisis on the Exchange rate. The PNB Scam brought about a fall in the stock prices of the bank and in due course it affected the exchange rate as well. Therefore a significant effect has been established under Alternate Hypothesis, and reject the Null Hypothesis.

Paired Samples Correlations

	N	Correlation	Sig.
Pair 1 DR & DRR	136	-.093	.279

The above table shows the degree of correlation between the two variables and the significant effect of one variable upon the other.

V. Findings And Suggestions

Through the study it has been found that Bank Crisis impact the Exchange Rate. The PNB Scam and the subsequent failure of the banking sector brought about a fall in the exchange rate. Moreover the effect has been established to a degree of .028 for the given sample data. There is scope for further study on this topic as this was only a sample of one factor and for a limited period. Similar to Banking Crisis, other factors affect the exchange rate and further research can be conducted to test more such factors and their effect on the exchange rate.

VI. Conclusion

The study has produced expected results to establish a significant relationship between the Bank Crisis and Exchange Rate. Summary statistics indicate an association between crises. It is evident from the result and also from the macro-economic indicators that there will be dominion effect between the bank crisis and the exchange rates.

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