



DEMONETIZATION - ITS IMPACT ON BANKING ONLINE TRANSACTIONS

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ABSTRACT

During the termination period in India, the current study has been laid on online banking transactions. To overcome the credit crises the current study have been taken on effects on 100 days which includes 50 days before and after termination of notes and also its effects have been observed on various things i.e. citizens usage on online banking system. Statistical analysis have been applied on money which are in circulation and checked whether online transactions work with negative relationship. Farmers casualty test results were found more approaching towards banking transactions and thus linear regression methods were applied on it which was before termination period. The use of online banking got increased in many folds which is useful for banks, citizens and daily regulators.

KEYWORDS : Demonetization, Banking transactions.

INTRODUCTION

Demonetization is the combination of two words De-Monetization where monetization means conversion of object into money, here demonetization refers to cancelation of old currency and issuing new currency in place of old currency. Demonetization has implemented so far in 9 countries. Demonetization has taken into action several times in India but, the step taken by Prime Minister Shri Narendra Modi and the then Governor of the Reserve Bank of India (RBI), Urjit Patel made a press release on 8th Nov 2016 detailing on the procedure of exchange of 500 & 1000 notes with old 500 & 2000 notes which are to be exchanged in the span of 50 days which has influenced on ordinary citizen and forced them to use digital transactions.

Online banking is also known as e-banking or virtual banking or internet banking. It is an electronic payment system enables customers of a bank or other financial institution that led to conduct financial transactions through websites by the financial institutions. The online banking system is typical to connect or be part of core banking system operated by the banks and financial institutes in contrast to branch banking which is the traditional way customers accessed banking services. To access the financial institutions online banking facilities, a customer must register with the institution for the service and internet access helps as a mediator between customer and the financial institution, and set up a password and other credentials for further customer verification. The credentials for online banking system are normally not same as for mobile banking. The financial institutions allocate customers numbers, and know whether customers have intention to access their Net banking facility. Customer numbers normally will not be the same as account number, because the number of customer account can be linked to the one customer number. Technically, the number of customer can be linked to any other accounts with financial institution the customer controls the financial institution through limited the range of accounts that can be accessed for savings, cheque, credit card, loan and similar accounts.

Fund flow is a statement of all cash inflow that related with outflows of various financial assets. Fund flows usually measured monthly or quarterly basis. The funds or assets are not taken into account when the share purchases and share Redemptions, the inflow and outflow creates excess cash for managers to invest and create demand for securities such as, bonds and stocks.

REVIEW OF LITERATURE

- **Dr. K. Mariappan (2016)** in their research paper on "Issues and Challenges of Demonetization" faced by Government of India in the year 2016 and created new hope for economic development in India and the role in global economic system. This affected the poor, middle and upper middle classes people in higher rate because money in circulation is less for clearing

transaction in Indian economy with original currencies for the welfare of Indian economy.

- **Geeta Rani**, in her paper on **29.11.2016**, thrown light on the problems faced by shopkeepers and its effects on brand sales and post effects of demonetization and how consumers shifted to cashless means of payments.
- **Gayathri, B. and K. Rajini (2017)** in their paper has spoken about India to be free from corruption, restrain black money, control over escalating price rise, to stop the funds that used for illegal activity, make people accountable for every rupee and pay income tax return. Finally, study suggested making the cashless society and creating a Digital India.
- **Anil Ramdurg, Dr. Basavaraj (Dec 2016)** in their article made how the tool of Demonetization can used to eradicate parallel economy. Demonetization is the big step initiated by Government in addressing the various problems and issues like counterfeit currency, black money, corruption, tax evasion, Swiss bank terrorism etc.
- **Dr. Ambalika Sinha, Divya Rai (Nov 2016)**. This paper mainly focuses on the general implications of rural people during demonetization period. The chaos created in every stage of the society whether lower, upper or middle class. But this move was the informal sector in Indian economy, where only cashless transactions are minimal. Most sectors in Indian Economy are informal which includes nearly 106 activities like workers in construction, agriculture, local transport, community services, small workshops, shoe makes and garment makers.

OBJECTIVES OF THE STUDY

1. To study the relationship between the money in circulation with selected banking online transactions during the demonetization period.
2. To study the influence of money in circulation on selected banking online transactions.
3. To examine the future growth movement of banking online transactions based on money in circulation.

HYPOTHESIS OF THE STUDY

H₀₁: There is no relationship between the money in circulation with the selected online banking transactions.

H₀₂: There is no influence of the money in circulation on the selected online banking transactions.

SCOPE OF THE STUDY

The study has emphasized from 20th Sep. 2016 to 19th Feb. 2017. The present study will consider on Money in circulation with online banking transactions. The study is bifurcated into two segments i.e., before demonetization period and after demonetization period. The online banking transactions data has been considered from RBI i.e., Money in circulation (cash), RTGS (Real Time Gross Settlement), NEFT (National Electronic Fund Transfer), IMPS (Immediate Payment

Service), POS (point of sale), Mobile banking, NACH (National Automated Clearing House).

RESEARCH METHODOLOGY

- The present study has been emphasized on secondary data by using descriptive statistical tools. The following variables have been considered for the study and applied various statistical tools according to the objectives.
- Augment dickey fuller test (ADF): This test is used to understand the basic underlying concept of the Dickey-Fuller test at certain conclusions then jump to augmented Dickey-Fuller test (ADF) it is just an augmented version of original Dickey-Fuller test.
- Correlation: Correlation is a statistical tool; that show how strongly variables are related. It is one of the most commonly used statistical tool. A correlation describes the degree of relationship between two variables.
- Granger Causality Tests: Eviews software: The Granger causality

test determines whether one time series is helpful in forecasting another. Granger causality in economics could be tested for measuring the ability that predicts the future value of a time series using prior values of another time series.

- Linear regression: Linear regression is the relationship between two variables (scalar dependent variable and explanatory independent variable).
- Vector auto regression: Eviews software: An econometric model used for the linear interdependencies among the time series. VAR model generalize the univariate autoregressive model (AR model) which allows for more than one variable.

DATA ANALYSIS

1. To study the relationship between the money in circulation with selected banking online transactions during and after demonetization period.

Table 1: Before Demonetization

	DDCINCB	DDMBANKB	DDCARDSB	DDNACHB	DDIMPSB	DDNEFTB	DDDDRTGSB
DDCINCB	1						
DDMBANKB	0.01840	1					
DDCARDSB	0.00163	0.009864	1				
DDNACHB	0.02897	-0.02554	-0.02829	1			
DDIMPSB	-0.00106	-0.04699	-0.04555	0.02579	1		
DDNEFTB	0.00420	0.01561	0.046405	-0.0313	-0.04579	1	
DDDDRTGSB	0.04806	-0.04864	-0.04596	0.074357	0.049943	-0.03947	1

The above table 1 of correlation result indicates between the money in circulation and online banking transactions before demonetization period, it is that the IMPS is negatively correlated with money in circulation, the rest of online banking transactions are positively correlated with money in circulation.

Table 2: After Demonetization

	DDCINCA	DDCARDSA	DDMBANKA	DDNACHA	DDIMPASA	DDNEFTA	DDDRTGSA
DDCINCA	1						
DDCARDSA	0.005061	1					
DDMBANKA	-0.04063	0.006668	1				
DDNACHA	0.013554	0.009756	0.048768	1			
DDIMPASA	-0.04843	0.013187	0.009808	0.042424	1		
DDNEFTA	0.004526	0.009785	0.006128	0.097968	0.045693	1	
DDDRTGSA	0.494708	-0.04979	-0.03154	-0.04407	-0.02192	-0.02799	1

The above table No. 2 shows the correlation result indicates between the money in circulation and online banking transactions after demonetization period, it is indicated that the IMPS and Mobile Banking are negatively correlated with in money in circulation, the rest of online banking transactions are positively correlated with money in circulation.

1. To study the influence of money in circulation on selected banking online transactions.

Table 3: RTGS

Null Hypothesis:	Obs.	F-Statistic	Prob.
DDDDRTGSB does not Granger Cause DDCINCB	8	2.68025	0.2149
DDCINCB does not Granger Cause DDDRTGSB		0.64124	0.5863

The above table No. 3 analysis of Granger causality of null hypothesis indicates that the probability is observed 0.58 greater than 0.05 hence the null hypothesis has been rejected and alternative is accepted. It indicates that the money in circulation is having the influence on RTGS.

Table 4: NEFT

Null Hypothesis:	Obs.	F-Statistic	Prob.
DDNEFTB does not Granger Cause DDCINCB	8	0.21837	0.8156
DDCINCB does not Granger Cause DDNEFTB		0.74524	0.5461

The table No. 4 analysis of Granger causality of null hypothesis

indicates that the probability is observed 0.54 greater than 0.05 hence the null hypothesis has been rejected and alternative hypothesis is accepted. It indicates that the money in circulation is having the influence on NEFT.

Table 5: IMPS

Null Hypothesis:	Obs	F-Statistic	Prob.
DDIMPSB does not Granger Cause DDCINCB	8	0.35907	0.7248
DDCINCB does not Granger Cause DDIMPSB		2.43355	0.2355

The above table No. 5 analysis of Granger causality of null hypothesis indicates that the probability is observed 0.23 greater than 0.05 hence the null hypothesis has been rejected and alternative hypothesis is accepted. It indicates that the money in circulation is having the influence on IMPS.

Table 6: NACH

Null Hypothesis:	Obs	F-Statistic	Prob.
DDNACHB does not Granger Cause DDCINCB	8	1.00809	0.4625
DDCINCB does not Granger Cause DDNACHB		0.06574	0.9377

The above table No. 6 analysis of Granger causality of null hypothesis indicates that the probability is observed 0.93 greater than 0.05 hence the null hypothesis has been rejected and alternative hypothesis is accepted. It indicates that the money in circulation is having the influence on NACH.

Table 7: POS

Null Hypothesis:	Obs.	F-Statistic	Prob.
DDCARDSB does not Granger Cause DDCINCB	8	0.15176	0.8654
DDCINCB does not Granger Cause DDCARDSB		1.28495	0.3953

The table No. 7 analysis of Granger causality of null hypothesis indicates that the probability is observed 0.39 is lesser than 0.05 hence the null hypothesis has been accepted and alternative is rejected. It indicates that the money in circulation is not having the influence on POS (CARDS).

Table 8: Mobile banking

Null Hypothesis:	Obs	F-Statistic	Prob.
DDMBANKB does not Granger Cause DDCINCB	8	0.09058	0.9158
DDCINCB does not Granger Cause DDMBANKB		0.83279	0.5156

The above table No. 8 analysis of Granger causality of null hypothesis indicates that the probability is observed 0.515 greater than 0.05 hence the null hypothesis has been rejected and alternative is accepted. It indicates that the money in circulation is having the influence on Mobile Banking.

AFTER DEMONETIZATION

Table 9: RTGS

Null Hypothesis:	Obs.	F-Statistic	Prob.
DDDRTGSA does not Granger Cause DDCINCA	7	0.22711	0.8149
DDCINCA does not Granger Cause DDDRTGSA		0.12501	0.8889

The above table No. 9 analysis of Granger causality of null hypothesis indicates that the probability is observed 0.88 greater than 0.05 hence the null hypothesis has been rejected and alternative is accepted. It indicates that the money in circulation is having the influence on RTGS.

Table 10: NEFT

Null Hypothesis:	Obs.	F-Statistic	Prob.
DDNEFTA does not Granger Cause DDCINCA	8	0.18382	0.8408
DDCINCA does not Granger Cause DDNEFTA		0.01591	0.9843

The above table No. 10 analysis of Granger causality of null hypothesis indicates that the probability is observed 0.98 greater than 0.05 hence the null hypothesis has been rejected and alternative is accepted. It indicates that the money in circulation is having the influence on NEFT.

Table 11: IMPS

Null Hypothesis:	Obs.	F-Statistic	Prob.
DDIMPSA does not Granger Cause DDCINCA	8	0.43979	0.68
DDCINCA does not Granger Cause DDIMPSA		1.64497	0.3294

The above table No. 11 analysis of Granger causality of null hypothesis indicates that the probability is observed 0.32 greater than 0.05 hence the null hypothesis has been rejected and alternative is accepted. It indicates that the money in circulation is having the influence on IMPS.

Table 12: NACH

Null Hypothesis:	Obs.	F-Statistic	Prob.
DDNACHA does not Granger Cause DDCINCA	8	0.0413	0.9601
DDCINCA does not Granger Cause DDNACHA		0.05601	0.9465

The table No. 12 analysis of Granger causality of null hypothesis indicates that the probability is observed 0.94 greater than 0.05 hence the null hypothesis has been rejected and alternative is accepted. It indicates that the money in circulation is having the influence on NACH.

Table 13: POS

Null Hypothesis:	Obs.	F-Statistic	Prob.
DDCARDSA does not Granger Cause DDCINCA	8	0.03982	0.9615
DDCINCA does not Granger Cause DDCARDSA		0.00016	0.9998

The table No. 13 analysis of Granger causality of null hypothesis indicates that the probability is observed 0.99 greater than 0.05 hence the null hypothesis has been rejected and alternative is accepted. It indicates that the money in circulation is having the influence on POS (CARDS).

Table 14: Mobile Banking

Null Hypothesis:	Obs.	F-Statistic	Prob.
DDMBANKA does not Granger Cause DDCINCA	8	0.27695	0.7756
DDCINCA does not Granger Cause DDMBANKA		0.83438	0.5151

The table no. 14 analysis of Granger causality of null hypothesis indicates that the probability is observed 0.51 greater than 0.05 hence the null hypothesis has been rejected and alternative is accepted. It indicates that the money in circulation is having the influence on Mobile banking.

BEFORE DEMONETIZATION

Model	Standardized Coefficients Beta	R	Sig.
(Constant)	16628.02	0.753	0.00
RTGS	1.408	0.631	0.00
NEFT	0.497	0.685	0.00
IMPS	0.708	0.865	0.00
NACH	-1.622	0.894	0.00
POS	-2.221	1.00	0.00
MBANKING	0.243	0.652	0.00

The above table No. 15 analysis of linear regression model has been applied on fund flow s through electronic mode that is online banking and money in circulation with public the beta coefficient value reflects that RTGS has got influenced very high in positive way by the money in circulation comparing with other online transactions the NACH and POS are negatively influenced by the money in circulation before demonetization.

AFTER DEMONETIZATION

Model	Standardized Coefficients Beta	R	Sig.
(Constant)	5.2	0.852	0
RTGS	4.768	0.774	0
NEFT	1.678	0.783	0
IMPS	-3.707	0.637	0
NACH	7.522	0.699	0
POS	-3.456	0.715	0
M_BANKING	-8.342	0.685	0

The above table No. 16 analysis of linear regression indicates the result after demonetization period the beta coefficient value result indicated i.e., IMPS and POS are negatively influenced by the money in circulation the other online banking transactions after demonetization period is observed to be positively influenced by the money in circulation.

FINDINGS OF THE STUDY

1. The correlation of Money in circulation with IMPS is slightly negatively correlated (-0.00106).
2. The NACH is negatively correlated (-0.08269) during the demonetization period where other online banking transactions have positively influenced.
3. The correlation after demonetization has observed IMPS and Mobile Banking to be negatively correlated (-0.584 & -0.506).
4. The granger causality test indicated money in circulation had influenced on all the online banking transactions the probability value of null hypothesis is observed to be greater than significant value(0.05).
5. The linear regression of fund flows between money in circulation and online banking transaction before demonetization, it is observed that the beta coefficient value of RTGS influenced positively very high.
6. The result of liner regression after demonetization shows negative influence on IMPS & POS by money in circulation.
7. The residual test indicates, during the demonetization period Nifty volatility has been measured the trend line indicated that it has breached the fitted line hence the graph states that the Nifty volatility got influence by the online transaction amount along with various unknown variables during the demonetization period.

CONCLUSION OF THE STUDY

The present study concludes the title of demonetization effect on online transactions the study has been bifurcated in three different periods i.e., before demonetization period, during demonetization period and after demonetization period. The implementation has been initiated by Government of India with the help of current banking system from 10.Nov.2016 to 31.Dec.2016. The present study has considered online transactions which are routed through RBI, The study result indicated due to the demonetization volume of online transaction of banking. Transactions of banking segment had increased enormously during and after demonetization period compared with before demonetization. The reduction of money in circulation obviously will have a positive influence on various modes of online transactions in the present study six different online transactions were considered and observed POS had influenced by money in circulation negatively in all three different periods . Hence there is a need to do research in future by considering the various economic parameters and technology influence on citizens and online transactions. This may give more accurate information so that the RBI can take proactive measures to implement the effective digitalization in banking sector.

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