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ANNOUNCEMENT OF PAYMENT BANKS AND STOCK PERFORMANCE OF COMMERCIAL BANKS IN INDIA

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Abstract

Purpose: To outline the significance of introduction of payment banks in India and to understand its impact on the stock performance of commercial banks in India.

Design/methodology/approach: The stock performance of commercial banks is captured through abnormal returns using market model. Event study technique is employed to understand the performance of stocks around the announcement period. For the present study, we considered daily returns of 39 listed banks in NSE for the period of June 2014 till August 2015.

Findings: The paper provides empirical insights about the impact of introduction of payments banks on the stock performance of Indian commercial banks. It was found that abnormal returns of Indian banking stocks were significantly negative on the date of announcement and negative abnormal returns continued for the next day. This indicates that markets perceived announcement of payment banks as a threat to the growth in the revenues of existing Indian banks.

Research limitations/implications: Present study can be extended to understand the influence of payment banks on the revenues, customer base and market share of existing commercial banks.
Practical implications: The paper includes implications for the banks, investors and regulators to understand the degree of influence of the payments banks on the stock performance of Indian Banks.
Originality/value: This paper fulfills an identified need to study how introduction of payment banks affect the stock performance of Indian commercial banks.

Keywords: **Payment Banks; Event Study; Stock Performance**

JEL Classification: G14; G21; N25

INTRODUCTION

Financial inclusion has been recognized world over as an important development in financial sector and a pre-condition for economic growth and poverty alleviation. Financial inclusion means the delivery of financial services or accessibility and ease of the formal banking services at affordable cost to the low income segment and to sections of disadvantaged group of the society. Financial inclusion is defined as the share of individuals and firms that use financial services (Word Bank 2014). The Nachiket Mor Comittee report highlights the fact that Indian performance on financial inclusion is poor and uneven across the country. The report states that 90 percent of small business does not have links with formal financial institutions and 60 percent of the population does not have operational bank accounts. Hence there is a need to find ways to reach the unbanked sector of the Indian economy.

The report highlighted that the large growth of mobile subscriber base in the rural areas of the countries provides an opportunity to leap frog over the rest of the world in achieving financial inclusion. Counties such as Kenya, Brazil and Africa have been able to transform their payments systems with the use of mobile payment networks providing an example for India to emulate. This led to the introduction of Payment Banks in India to make usage of bank accounts easier. In November 2014 the proposal to launch payment banks was made by Reserve bank of India (RBI) and on 19 August 2015 the RBI gave approval in principle to eleven applicants.

Introduction of payment banks would facilitate easier and cost effective transfer of money quickly. This would pose serious competition to traditional commercial banks which are also into payment services through CASA (Current Account and Savings Account) products. In this paper, we attempt to understand impact of announcement of payment banks on the performance of Indian commercial banking stocks.

Overview of Payment Banks in India

Payment bank is new-stripped down type of banks which are expected to reach the customers through mobile Phones rather than traditional banks branches. Payment Banks can only receive deposits that to up to Rs. 1 lakh and are not authorized to carry out any lending activities like loans and also they cannot issue credit cards. The minimum paid up capital required to open a payment bank is Rs. 100 Crores when compared to commercial bank which is Rs. 500 Crores.

The objectives of setting up of payments banks will be to further financial inclusion by providing.
*   Small savings accounts and
*   Payments/remittance services to migrant labor workforce, low income households, small businesses, other unorganized sector entities and other users.

The guidelines Payment Banks need to follow to attain the eligibility license:
*   Existing non-bank Pre-paid Payment Instrument (PPI) issuers, mobile firms and supermarket chains, among others existing NBFCs and micro finance lenders are promoters who are eligible to set up payment banks.
*   Large public sector enterprises and big industrial houses are not allowed to establish Payment banks.
*   A promoter or promoter group can have a joint venture with an existing scheduled commercial bank to set up a payments bank. But they should have a sound track record of five years period of running businesses.
*   Payment Banks will initially be restricted to holding a maximum balance of 1 lakh rupees per individual customer. It can issue ATM or debit cards but not credit cards.
*   Payment bank cannot undertake lending activities but can distribute the non-risk sharing simple financial products such as mutual fund units and insurance products, etc.
*   These banks also should maintain Cash Reserve Ratio (CRR) with the Reserve Bank, it will be required to invest minimum 75 percent of its demand deposit balances in Statutory Liquidity Ratio (SLR) with maturity up to one year and hold maximum 25 per cent in current and time or fixed deposits with other scheduled commercial banks for operational purposes and liquidity management.
*   The minimum capital for payments banks is 100 crore rupees and it should have a leverage ratio of not less than 3 percent that is its outside liabilities should not exceed 33.33 times its net worth (paid-up capital and reserves).
*   The promoter's minimum initial contribution to the paid-up equity capital for payments bank shall at least be 40 percent for the first five years from the commencement of its business.
*   The foreign shareholding in the payments bank should be as per the Foreign Direct Investment (FDI) policy for private sector banks as amended from time to time.

- The operations of the bank should be fully networked and technology driven from the beginning, conforming to generally accepted standards and norms. It should have a high powered Customer Grievances Cell to handle customer complaints.
- Those who are interested can apply before January 16 for first round of such permits however these guidelines are subjected to periodic review and revision.
- External Advisory Committee (EAC) of RBI will evaluate the applications and decision to issue an in-principle approval for setting up of payment bank will be taken by RBI.
- The validity of the in-principle approval issued by the Reserve Bank will be eighteen months.

Eleven applicants were selected out of 72 applicants for giving Payment Banks licenses. The list of applicants is: Aditya Birla Nuvo, Airtel M Commerce Services, Cholamandalam Distribution Services, Department of Posts, FINO PayTech, National Securities Depository, Reliance Industries, Dilip Shanghvi-Sun Pharmaceuticals, Vijay Shekhar Sharma-PayTM, Tech Mahindra, and Vodafone M-Pesa (Table 1).

Table 1: Journey of Payment Banks.

Journey of Payment Banks	
23-Sep-13	Committee on Comprehensive Financial Services for small business and low income households was setup by RBI to study the aspects of Financial Inclusion in India.
31-Dec-13	Nachiket has submitted its final report which includes major recommendations like wide spread payment network, Committee proposed the setup of payment banks whose main aim to provide payment service to small business and low income households.
10-Jul-14	Finance Minister Arun Jaitley talks about Payment banks in the Union Budget 2014-15. RBI will create framework for licensing small banks and differential banks.
17-Jul-14	Reserve Bank of India releases draft guideline for licensing of small bank and payment bank.
27-Nov-14	RBI releases guidelines for licensing payment banks by considering the feedback and asking for applications for payment banks.
04-Feb-14	RBI releases list of 72 applicant in small finance banks and 41 in payment banks.
19-Aug-15	RBI In-grants "In Principle" approval to 11 applicants for payment banks.
May-16	Tech Mahindra, Cholamandalam Finance and Dilip Shanghvi-IDFC Bank-Telenor JV, have already dropped out
23-Nov-16	Airtel Payments Bank- Launch of First Payment Bank in India
Jan-18	Four payments banks namely Airtel, India Post, PayTM and Fino payment banks are operational

Literature Review and Hypothesis Development

Introduction of new private banks in 1995 changed the landscape of banking in India in terms of customer satisfaction, product offerings, banking technology. Competition from private banks affected the performance of exiting public sector banks and old private sector banks. Market share of public sector banks (PSBs) has come down from 90 % to 70% since introduction of new private banks in India. Sarkar and Das [1] attempted to understand the impact of competition from new private banks on existing banks and found that public sector banks performed poorly in comparison to private sector banks. Sayuri [2] assessed impact of introduction of competition using regression analysis considering return on assets, cost and income for 1993-2000 and concluded that introduction of competition lowered the profitability and cost efficiency of public-sector banks at the initial stage of the reforms, but such a negative impact disappeared once PSBs adjusted to the new environment. Petya [3] examined the industry concentration, cost of financial intermediation and profitability of banks in India during 1991-92 and 2001-02 by analyzing the measures such as percentage share of deposits, operating cost to total assets ratio, spread and concluded that increase in competition lowered the spreads, profitability and level of industry concentration. Banerjee, Cole and Duflo [4] studied impact of banking reforms on lending function of banks by analyzing growth rates in deposits and credits mobilized during 1980-2000 by Public sectors banks and private sector banks and concluded that private banks are more aggressive in mobilizing funds, and setting up new branches since 1990.

Kamble et al. [5] found that private banks are perceived to be superior on the service quality dimensions: effectiveness, access and tangibles whereas, the public sector banks score better on the dimensions of price and reliability. Schaeck and Cihák [6] examined the effect of competition on banking stability and found that competition is stability-enhancing, and that the stability-enhancing effect of competition is greater for healthy banks than for fragile ones. Their results suggested that efficiency is the conduit through which competition contributes to stability and that regulators must condition policy on the health of existing banks.

Mobile technology is revolutionizing the global banking and payment industry. It offers new opportunities for banks to provide added convenience to their existing customers in developed countries, and reach a large population of unbanked customers in emerging markets. However, banks face significant challenges as new players enter these markets and change the ecosystem of the industry [7]. Essadam and Mnasari [8] have studied the impact of terrorism on volatility of stock returns over 17 market indices between 1994 and 2005. Using a volatility event study approach methodology, they found that terrorism has a significant impact on the stock market volatility.

Rani et al. [9] evaluate the impact of mergers and acquisitions on the returns in the short run for Indian companies using detailed event study methodology. They

concluded that market starts reacting prior to the announcement. The moment the announcement information becomes public, investors start reacting and the stock price jumps high, providing positive abnormal returns (ARs) to the investors. However, post-announcement, a strong correction in the market price of the acquiring company takes place and positive ARs do not sustain.

Gomber et al. [10] analysed the dynamics of liquidity in an electronic limit order book using the Exchange Liquidity Measure (XLM), cost of round trip, applying event study methodology to examine how liquidity shocks - large transactions and Bloomberg ticker news - affect the XLM. Their research concludes that resiliency after large transactions is high, i.e., liquidity quickly reverts to 'normal' levels. Large trades are 'timed'; they take place at times when liquidity is unusually high. Bloomberg ticker news items do not have a discernible effect on liquidity. Keele and Susan [11] have used event study method to assess how the stocks of publicly traded companies responded before and after announcing their partnership with the United States Environmental Protection Agency (USEPA) Climate Leaders program. Although the stocks exhibited an average non-significant positive abnormal return of 0.56% on the day of the announcement, the cumulative abnormal returns for the stock prices of the firms for two of the three event windows showed statistically significant negative returns. They suggest that these firms' public announcements of joining the USEPA Climate Leaders partnership did not have a positive impact on stock performance.

Hypothesis

Banking stocks performance measured through abnormal returns using Event Study methodology does not change with the announcement of Payment Banks.

METHODOLOGY AND ANALYSIS

The chart below shows the performance of NSE Banking Index for the period Aug 2015. There has steep fall in the index's return post announcement of the date. This led to the assumption that the announcement had negative impact on the banking stocks. Further to analyze the impact 39 banking stocks were considered for the study (Figure 1).

Figure 1: Performance of Nifty Bank Index during the announcement period.

In examining the impact of Payment Banks license announcement on banking stocks

event study methodology was conducted. Event study is based on the Efficient Market Hypothesis (EMH) developed by Fama [12] and introduced by Brown and Werner [13]. The methodology was extensively used by researchers to examine the behaviour of stock price during announcement of dividend, M&A [14-22]. Typically, the capital asset pricing model (CAPM) is used as a measurement instrument to ascertain the percentage to which Payment Banks announcement is able to create economic value. The 'cumulative abnormal returns' of stock prices are characterized by a higher increase in the stock value around the announcement date than during the preceding period [23,24]. This method offers the necessary elements in determining that a positive return has been created by the M&A [25].

The statistical analysis is intended to accomplish the basic objective to determine whether the Payment Banks announcement has a statistically significant effect on the stock returns of the banking firms. In order to examine the announcement effect on stock prices we considered all the listed banks in NSE Market, totaling 39 banks for the study period. The event date is the announcement date of Payment Banks License by RBI. This approach assumes that the information was first known to the market on the event date itself. The event window is taken as t=-10 to t=+10 relative to the event day t=0. This window will help in studying the stock price behaviour pre and post the event. The estimation window is t=-210 to t=-11 relative to the event day t=0. Estimation window will help in estimating the relationship between a company's returns and the benchmark index. A statistical model called the Market-Return Model was adopted to measure the normal returns of the stocks for the estimation period. The Market Return Model relates the return of any given firm to the returns of the market portfolio.

$$R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_i \tag{1}$$

Where ε_i is the statistical error term with $\Sigma(\varepsilon_i)=0$ and Var $(\varepsilon_i)=\sigma2$ constant through time and R_{mt} is the market return (NSE Nifty fifty) on day t, α_i measures the mean return over the period not explained by the market and β_i measures the sensitivity of Bank$_i$ to the market which is the measure of risk. The β_i was determined by running a regression on 200 stock returns chosen from an estimation period.

The abnormal returns were estimated for the market model for various times t on the event window based on the estimated parameters.

$$AR_{it} = Rt - E(R_{it}) = Rit - (\alpha_i + \beta_i R_{mt}) \tag{2}$$

where α_i and β_i are the parameters of the market model estimates determined by eqn. (1) from the estimation period.

Then, cumulative abnormal returns were calculated (CAR) using event window period (-10,+10) abnormal return.

$$CAR_{it} = \sum_{i=1}^{t} AR_{it} \qquad (3)$$

In order to study the overall impact of the announcement on banking stocks, CAR_{it} was aggregated for all 39 banks to obtain the mean CAR_{it} by dividing the sum of the CAR_s by the total number of banks (Table 2 and Figures 2-4).

$$\overline{CAR} = \frac{1}{N} \sum_{i=1}^{N} CAR_{iN} \qquad (4)$$

Table 2: Average Abnormal Returns (AAR) and Cumulative Average Abnormal Returns (CAAR).

Event Window	All Banks			Public Sector Banks			Private Sector Banks		
	AAR	CAAR	t-stat	AAR	CAAR	t-stat	AAR	CAAR	t-stat
-10	-0.65	-0.65	-4.08	-0.7	-0.7	-3.28	-0.56	-0.56	-2.39
-9	0.29	-0.36	1.27	0.62	-0.08	2	-0.3	-0.86	-1.13
-8	-0.45	-0.81	-2.45	-0.73	-0.81	-3.33	0.04	-0.82	0.13
-7	-0.02	-0.83	-0.08	-0.19	-0.99	-0.59	0.28	-0.53	0.88
-6	-0.46	-1.29	-2.6	-0.6	-1.59	-2.46	-0.23	-0.76	-0.93
-5	-1.18	-2.47	-6.23	-1.25	-2.84	-4.86	-1.06	-1.82	-3.91
-4	-0.64	-3.11	-2.56	-0.98	-3.81	-3.08	-0.04	-1.85	-0.1
-3	1.46	-1.65	4.23	2	-1.81	4.48	0.5	-1.35	1.11
-2	4.11	2.46	6.63	6.13	4.32	9.15	0.51	-0.84	1.65
-1	-0.21	2.25	-0.78	-0.28	4.03	-0.72	-0.08	-0.92	-0.27
0	-1.77	0.48	-8.04	-2.34	1.69	-9.51	-0.76	-1.68	-2.81
1	-2.15	-1.67	-4.1	-2.5	-0.81	-3.97	-1.52	-3.2	-1.62
2	-0.05	-1.72	-0.19	0.06	-0.75	0.14	-0.25	-3.46	-0.65
3	-2.1	-3.82	-4.46	-2.72	-3.48	-4.46	-0.98	-4.44	-1.51
4	-0.15	-3.97	-0.32	-0.67	-4.14	-1.21	0.78	-3.66	1.02
5	0.48	-3.49	1.77	0.75	-3.39	2.33	0	-3.66	-0.01
6	0.3	-3.19	1.21	0.51	-2.88	1.59	-0.09	-3.75	-0.24
7	-1.08	-4.27	-4.05	-1.34	-4.23	-3.64	-0.6	-4.35	-1.91
8	0.65	-3.63	2.44	0.85	-3.37	2.46	0.27	-4.08	0.69
9	-1.05	-4.68	-4.61	-1.05	-4.42	-3.39	-1.07	-5.14	-3.2
10	-0.44	-5.12	-2.01	-0.53	-4.95	-1.58	-0.29	-5.43	-1.75

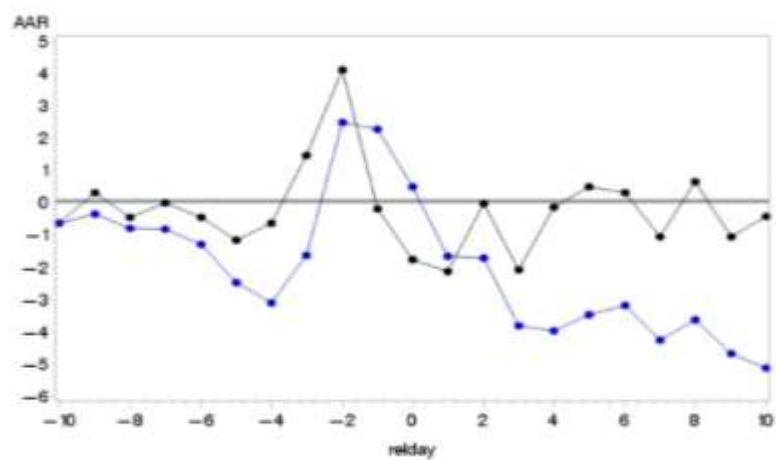**Figure 2:** AAR and CAAR for all banks.

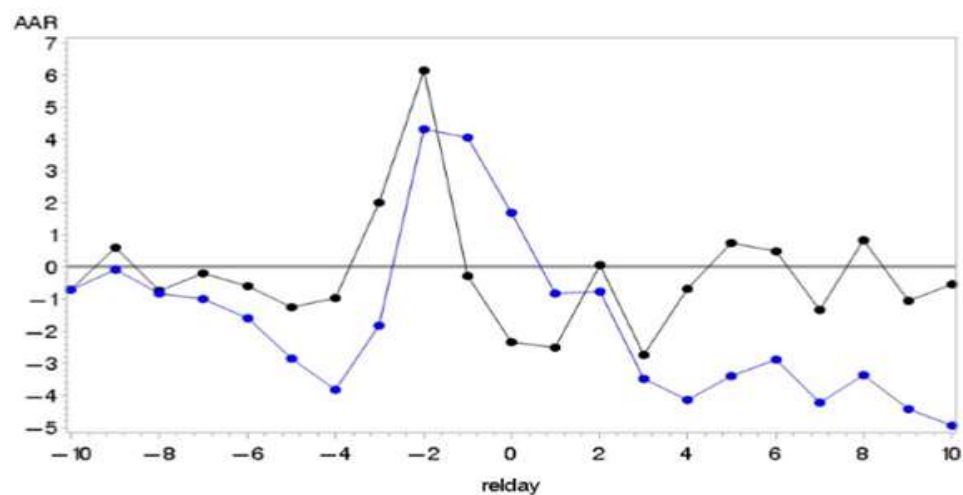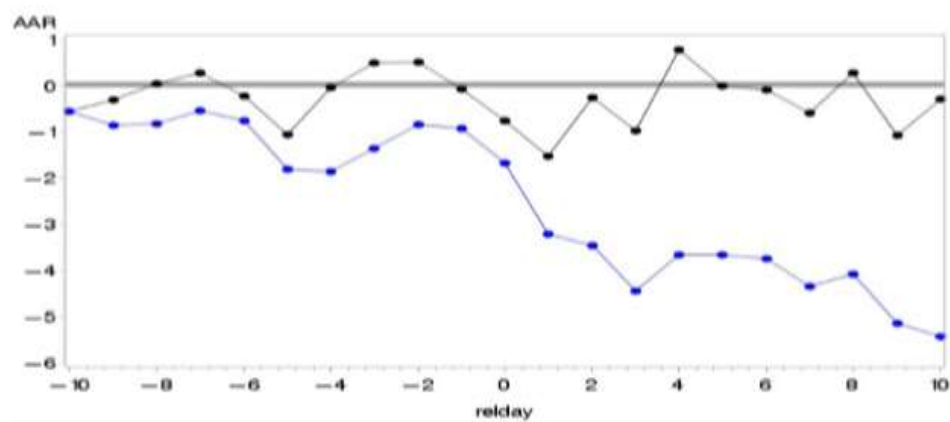**Figure 3:** AAR and CAAR for Public Sector Banks.

Figure 4: AAR and CAAR for Private Sector Banks.

In general, market reaction is instantly known by the share price reaction to Payment Banks license announcements. Investors greet the announcements by increased trading volumes and gain abnormal returns. Otherwise, there would be abnormal loss. Table 1 shows abnormal return (AAR) and cumulative abnormal return (CAAR) for all the listed banks, public sector banks and private sector banks for the window period of -10 to 10. Abnormal return of all the banks stocks were -1.77% (t-stat: 8.04) on event day and -2.15 (t-stat: 4.10) on next day of the announcement. Negative returns and significance of the t-stat indicates that investors consider the announcement as potential disruptive for the commercial banks. In order to further understand the impact of the Payment Banks license announcement on stocks of public sector banks and private sector banks, event study was conducted for 23 listed public sector banks and 14 listed private banks. Public sector stock was reported negative return of 2.34% (t-stat -9.51) on event day and 2.50% (t-stat -3.97) on next day of the event announcement and private sector banking stocks reported negative return of 0.76% (t-stat -2.81) on the event day and 1.52% (t-stat 1.62) on next day of the event announcement. Though, the events impact was negative for the banking stocks. The magnitude of the negativity differs between private sector banking stocks and public sector banking stocks. The payment banks license announcement impacted negatively much more public sector banks than the private sector banks. In essence banking investors considered this as disruptive information rather than constructive one. To understand deterioration of banking investor's wealth, we plotted AAR and CAAR charts for the three categories. Chart 2 shows the AAR and CAAR plots for all the listed banks and Chart 3 for public sector banks and Chart 4 for private banks. The gap between the AAR and CAAR indicates level of wealth minimization of the investors post announcement dates. The gap between AAR and CARR is wider for public sector banks than private sector banks. Hence, it is clear that payment banks announcement has led to deterioration of stock returns of public sector banks more than private sector banks.

CONCLUSION

It is evident from the study that markets perceived announcement of Payment Banks as a serious competition to existing commercial banks in the payment services line of business and deposit mobilization. It is imperative that payment banks would be reaching out to large number of unbanked customers by leveraging technology. Therefore, traditional banks should gear up to adopt new platforms such as UPI for payment services and develop innovative products to mobilize deposits, These implications far reaching for smaller and rural banks as payment banks would initially target unbanked masses in smaller cities and villages.

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