OECONOMICUS Journal of Economics
Vol. 8, No. 2, June 2024
Print ISSN: 2548-6004; Online ISSN: 2715-4882
Journal homepage: http://jurnalfebi.uinsby.ac.id/index.php/oje

Agent Banking: Impact on The Financial Performance of Commercial Banks in Bangladesh

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Article Info

Article history:

Published: June 28, 2024

Page: 80 - 85

Keyword:
Agent Banking, Panel data, Regression

Abstract

The paper examines the effects of agent banking activities on the financial performance of commercial banks in Bangladesh. Employing bank level quarterly data for the period 2018Q1- 2021Q4, the study estimates a pooled OLS regression model to investigate the effects of agent bank specific factors on the financial performance of the related commercial banks (principal/mother bank) in terms of profitability measures, return on assets (ROA) and return on equity (ROE). The estimated regression results show that amount of loan disbursement by agent banks and number of agent banking account holders have positiveand statistically significant impact on the banks' profit. However, the number of agents and/or outlets do not necessarily affect the profitability of the principal/mother bank. The findings of this study would help the policy makers, bank management and other stakeholders for decision making and improving the performance of agent banking in developing countries like Bangladesh.

Introduction

Agent banking, a new model of banking services across the developing world especially in Bangladesh, aims at providing formal banking services to the unbanked segment of the population who are excluded from formal banking services. Since agent banking can be offered without opening a full-fledged bank branch, compared to the conventional banking, this exclusive banking service is less expensive and can reach to the remote areas of the country. Bangladesh Bank (BB), the central bank of the country, allowed agent banking in Bangladesh by issuing the 'agenting banking guidelines' in 2013.[2] However, full-fledged agent banking operation started in 2016. According to the BB guidelines, agent banking is a limited scale banking and financial services for those living in remote areas across the country through persons (owner of the agency) under a valid agency agreement, rather than a teller or cashier.

Editorial Office:
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OECONOMICUS Journal of Economics
Vol. 8, No. 2, June 2024
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Later, Bangladesh Bank permits agent banking in urban areas as well where conventional banking system is not available. Currently, 30 commercial banks are in agent banking operation in Bangladesh with 14,299 agents and, financial transactions is conducted through a network of 19,737 outlets across the country (Bangladesh Bank, 2022).

In the agent banking model of Bangladesh, the commercial bank recruits or nominates an agent, athird-party owner of an outlet, who conducts banking transactions, such as cash deposits, withdrawals, disbursement and recovery of loans, fund transfers, payments of government's social safety net programs, utility bills collection, inward and outward remittances on behalf of the concerned commercial bank. The transactions are recorded in the statement of affairs of the concerned bank or bank branch.

There are other models of agent banking across the world. Banking agents may include pharmacies, supermarkets, convenience stores, etc., for example, post offices are used as bank agents inAustralia; corner stores work as agent bank in France; Brazil provides financial services through lottery outlets; mobile-based branchless banking and/or agency banking are available in Senegal, Pakistan, India, Kenya, Nigeria, Congo, South Africa and Philippines (Buri et al., 2018; CGAP, 2006; Cull et al., 2018; Kumaret al., 2006; Margaret & Ruth, 2019; Nezianya & Izuchukwu, 2014; Zaffar et al., 2019). In spite of different type of models, agent banking in general is considered as cost-effective and closer proximity to underserved market segments promoting broader financial inclusion.

So far there is no comprehensive study investigating the agent banking performance in Bangladesh since its inception in 2016. Therefore, it is timely to evaluate the performance of agent banking in Bangladesh, especially how agent banking activities affect the mother/principal bank's profit over the years.The article contributes to the literature by providing the empirical evidence of agent banking in Bangladesh, which to the best knowledge of the authors, has not been studied specifically.

The remainder of the paper is organized as follows: Section 2 explains the concept of agent banking including a brief literature review. Section 3 discusses the empirical design, methodology and empirical results and section 4 concludes the paper.

Literature Review

Agent banking has gradually become popular across the world in recent years. The agent banking model is based on agency theory. Jensen and Meckling (1976) define agency relationship as a contract under which one or more persons [principal(s)] engage another person or entity [agent] to perform services/activities on behalf on their behalf. Therefore, agent banking model establishes a business relationship between a bank [as principal] and agents.

Agent banking services are provided through agents under a valid agency service agreement witha commercial bank. An agent is the owner of an outlet who conducts banking transactions on behalf of a bank. These agent points are much smaller than bank branches and are equipped with computers, biometric devices, mobile phones, point of sales (POS) devices and barcode scanners. Therefore, commercial banks can reach to the underserved or unbanked population through their agents utilizing advanced information and communication technology (ICT) with less overhead costs instead of setting up a bank branch. The model also allows the transaction software of any individual agent to be connected to the core software of the principal

bank, so agent banking transactions are shown in the bank statement on real-time (Siddiquie, 2014). Agent banking model is beneficial for the mother bank in terms of increased customer base and market share, increased coverage with low-cost solution, increased revenue from additional investment, interest, and fee income.

Lyman et al. (2006) observe that agent banking offers banking and payment services through postal and retail outlets, including grocery stores, pharmacies, seed and fertilizer retailers, and gas stations, among others instead of using bank branches and their own field officers. For poor people, "branchless banking" through retail agents may be far more convenient and efficient than going to a bank branch. Mwando (2013) finds that expansion of agent banking networks has improved the financial performance of the Kenyan commercial banks due to expanding market shares and lowering transaction costs. Another study on agent banking services in Senegal reports that agents make its' clients financially more active and thus contribute to increased savings (Buri et al., 2018). A quantitative survey based empirical study on Kenyan agent banking concludes that agency banking improves the business performance of the agent interms of increased turnover, number of products and customers and transactions (Aduda et al., 2013; Margaret & Ruth, 2019). Another study on agent banking of Kenya reveals that agency banking has a positive relationship with the growth of profits of commercial banks (Aduda et al., 2013). While examining the impact of agent banking on the performance of deposit money banks in Nigeria, Nezianya and Izuchukwu (2014) suggest that bank profitability would be higher if banking services can be provided to grass root level people through agent banking.

Agent banking model also follows the theory of financial intermediation. In India, under the Business Correspondent model, banks are entitled to engage intermediaries, for example, agents to disburse small value credits, recover principal and interest payments, collect small value deposits, sell micro insurance and/or pension products and receive or deliver small value remittances (Kumar et al., 2006).

The paucity of empirical studies on the agent banking in Bangladesh justifies the scope and originality of this research. Hence, this study intends to examine whether agent banking activities have had any impact on the profitability of the related commercial banks in Bangladesh and thus attempts to fill the gap in the empirical literature of the agent banking in Bangladesh.

Methodology

The study estimates a panel data regression model using bank level quarterly data of nine (09) commercial banks in Bangladesh which are operating full-fledged agent banking activities including both deposit mobilization and credit disbursement. The sample banks are Bank Asia, Dutch-Bangla Bank, Al-Arafah Islami Bank, Islami Bank Bangladesh, Mutural Trust Bank, The City Bank, Brac Bank, NRB Bank and Modhumoti Bank Limited. Although 30 commercial banks are currently in agent banking operation in Bangladesh, only nine banks have transactions history with both deposit and loan products. We have constructed a unique balanced panel dataset with 126 observations for the period 2018Q1-2021Q4 based on the available data and, estimated a pooled regression model to examine the effects of agent banking activities on the financial performance of the sample commercial banks in terms of profitability measures, return on assets (ROA) and return on equity (ROE).

Results and Discussion

1. Data

The sample constitutes bank-level quarterly data of nine private commercial banks in Bangladesh for the period 2018Q1-2021Q4.The data has been collected from the balance sheet, income statement and other financial statements of the sample banks and from the central bank of Bangladesh (Bangladesh Bank).

2. Variables

The study examines the effects of agent banking activities on the profitability of the sample commercial banks. In the regression analysis, two different profitability measures, return on assets (ROA) and return on equity (ROE) of the sample banks are considered as dependent variables and, six agent bank specific independent variables are number of agents, number of agent banking outlets, number of total accounts with agent banks, total deposit mobilization and credit disbursement, and total remittance amount of agentbanks. The detail definitions of the variables are presented in appendix I.

3. Descriptive statistics of the variables

Table 1 presents the summary statistics of the variables considered for the empirical estimation.

Table 1: Summary statistics of the variables

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	Mean	S.E	Min	Max
Dependent Variables				
Return on Assets (ROA)	0.005	0.004	-0.008	0.019
Return on Equity (ROE)	0.063	0.052	-0.085	0.322
Independent Variables				
No. of Agents	2.534	0.637	0	3.679
No. of Outlets	2.657	0.672	0	3.763
Total accounts	5.107	0.981	1.204	6.691
Total Deposit	4.285	0.939	1.079	5.905
Total loans/credits	2.890	1.244	0.698	5.409
Remittance	4.297	1.312	0.903	6.608

Source: Authors' calculation.

The regression model is expressed as:

$$Z_{it} = \beta_i + \gamma Y_{it} + \upsilon_{it}$$

where Z_{it} represents the profitability measures, ROA and ROE for banks *i*. Y_{it} indicates the selected explanatory variables, υ_{it} denotes the error term, β is the constant term and γ is the vector of regression coefficients.

The empirical models to be estimated are as follows: where, the explanatory variables are number of agents (AG), number of agent banking outlets (OUT) totalcredit disbursed by agent banks (TC), total deposit mobilization by agent banks (TD), number of accounts with agent banks (AC) and total remittances through agent banks (REM). β is the constant term and γ is the vector of coefficients and e denotes the error term.

Pooled OLS regression models are estimated for equations (2) and (3). The regression results for the models are presented in Table 2.

4. Empirical results

Table 2 reports the results of the estimated regression models. The estimated positive and statistically significant coefficients of total credit (TC) for both ROA and ROE indicates that loan disbursement throughagent banking has positive impact on the profitability of a bank in terms of ROA and ROE. One possible reason for the increased profitability is the higher income earned from the loan products of agent banks. Some clients prefer to do banking transactions with an agent rather than at a formal bank branch perhaps due to lower transaction cost and trustworthy personal relationship. At an agent outlet, it is the same person (owner of the outlet) dealing with clients who are entrepreneurs within the locality and therefore, gradually a trust relationship is developed over the time between them.

Besides, the poorer section of clients who lack knowledge of financial products may depend on one-to-one relationship with the agent for their financial needs, such as loans. Furthermore, gender may play a significant role in building trust, for example, female clients may be more comfortable doing financial transactions with a female agent (Cull et al., 2018).

Table 2: Regression results: ROA and ROE as dependent variables

	ROA		ROE	
	Coefficient	S.E.	Coefficient	S.E.
No. of Agents (AG)	-0.004**	0.001	-0.043**	0.021
No. of Outlets (OUT)	0.003	0.002	0.014	0.033
Total Credit (TC)	0.001***	0.000	0.013***	0.004
Total Deposit (TD)	0.000	0.002	-0.030	0.023
No. of Accounts (AC)	0.002	0.002	0.041*	0.021
Total Remittance (REM)	-0.002*	0.001	0.009	0.012
Constant	-0.002	0.004	-0.018	0.047
R-squared	0.175		0.191	
Probability (F)	0.000		0.000	
Total Observations	126		126	

Source: Authors' estimation using STATA.
***, ** and * denote statistical significance level at 1%, 5% and 10% respectively.

For both ROA and ROE, the estimated coefficient for number of agents is negative and statistically significant, indicating that an increase in the number of agents does not necessarily increase bank profit. Because most of the banks utilize their agent banking network for deposit mobilization especially from rural areas. Since deposit is not an income earning product, the agents (if not disbursing loans) are not directly contributing to banks' profit. The estimated positive coefficients for number of accounts (AC) for both ROA and ROE indicate that an increased number of agent banking accounts may contribute banks' profitability positively because additional account holders do more financial transactions with agent banks and thus contribute to banks' earnings. However, the estimated coefficient is statistically significant for ROE but notfor ROA.

Conclusion

The paper analyses the effects of agent banking activities on the profitability of the concerned commercial banks (mother/principal banks) in Bangladesh. Employing bank level quarterly data for the period 2018Q1-2021Q4, the study estimates a pooled OLS regression model. The estimated regression results show thatbank's profit has a positive and statistically significant relationship with the amount of credit disbursement by agent banks and the number of agent banking account holders. One possible reason for such increasedprofitability is the income earned from loan products of agent banks and more financial transactions by theincreased account holders. Some clients prefer to do transactions with agents rather than at a formal bankbranch perhaps due to lower transaction cost and trustworthy personal relationship. However, the numberof agents and/or outlets do not necessarily affect the profitability of the principal/mother bank. The findings of this study would help the policy makers, bank management and other stakeholders for decision making and improving the performance of agent banking in developing countries like Bangladesh. Due to small scale operation of agent banking in Bangladesh, the inference drawn from this study may have limitations due to small sample size.

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Appendix I: Variable definition

Variables	**Definition/Measures**
Dependent Variables	
ROA	Net Profit after tax/Total Assets
ROE	Net Profit after tax/Total Equity
Independent Variables	
AG	Number of Agents
AC	Number of accounts
OUT	Number of Outlets
TC	Total Credit/loans
TD	Total Deposits
REM	Total Remittance