

Performance of People's Credit Funds in Vietnam: the Case of Mekong River Delta

Tran Thi Thanh Tu*

Faculty Finance and Banking,
VNU University of Economics and Business, Vietnam

Tran Binh Minh

Central Institute for Economics and Management,
Vietnam

Abstract—

People's Credit Fund (PCF) is credit cooperative institution, contributing significantly to the social and economic development in rural areas in Vietnam. Particularly in the Mekong River Delta, PCFs plays a vital role in poverty reduction and improving the living standard for low-income households. This paper aims at evaluating some factors affecting PCF's performance and indicating some implications to improve performance of PCFs in Mekong River Delta in the context of economic and financial sector developments in Vietnam. Based on the regression model and the PEARL analysis, the research results showed that PCFs in Mekong River Delta in Vietnam experiencing a stable financial situation, transparent data and potential for growth. However, number of PCFs that achieve goals in correspondent with PEARLS quantitative indicators is still limited.

Keywords— MFIs, PCFs, PEARL, performance

I. INTRODUCTION

Internationalisation process poses major challenges for financial sector polices, underlining the importance of further progress with financial sector performance. As a vital part of financial institutions, the newly established People's Credit Funds (PCFs) are self-managed and self-financed; yet their success is due to the central bank designing the new system, preparing its regulatory framework, providing training and supervision and enforcing prudential standards, while abstaining from undue interference.

To get in-depth assessment of PCF's operations in Mekong River Delta, this paper applies methodology based on regression model associating with the PEARL analysis. Regression model contains both internal variables and external variables to evaluate comprehensively factors effecting in operational efficiency as well as customer satisfaction with PCF system in Mekong River Delta. Besides, the PEARL analysis identifies problems and supports PCFs to determine solutions for institutional and operational deficiencies.

Many microfinance institutions (MFIs) are currently main financial service providers to local people, and both theoretical and empirical studies agree that the internal and external environment in which they operate is an important factor in their ability to full fill their mission of offering help to the local people (Armendariz & Morduch, 2004). They also argued that MFIs cannot provide effective financial help without a "well-organised regulatory framework" in their structure.

In another study, Ferdousi (2013) cited many impact studies and concluded that MFIs were less profitable where interest rates are higher reflecting the fact that MFIs depend upon the domestic banking system for additional funding. Secondly, MFIs were less profitable where inflation is high, suggesting that MFIs benefit from stability of the formal financial system. Overall, the results showed that the macro-economic environment is crucial to fully understand MFI-performance and that outreach and accordingly impact of MFIs are contingent on financial sector development.

Supporting their views Janda and Turbat (2013) strongly argued that the capital structure as well as lending methodologies strongly influences the general performance of a microfinance institution. They argued that since MFIs support entrepreneurs, their performances are subjected to the finance management ability of these entrepreneurs. Therefore, they suggested that fund with greater levels of customer classification should have more successful entrepreneurs and more sustainable MFIs. They emphasized on four factors that can enhance the financial yield of MFIs: targeting on women, focusing on rural areas, good governance and well-organised capital structure.

In Vietnam, the evaluation activities and the performance of the PCF still apply CAMEL model (State Bank, 2007). Le Thanh Tam (2008) codifies the basic issues of development activities of the rural financial institutions, focusing on two basic criteria are the access (outreach) and sustainability (sustainability: sustainable in operation and financial sustainability OSS FSS). Hence, the activities of the rural financial institutions, including the PCF system is an important component, it is analyzed on this perspective.

Dao Van Hung et al (2010) use OLS regression models, it used simultaneous equations with two endogenous variables are ROA and the average loan value to evaluate the factors that directly impact the reliability sound (via ROA) and exposure (through average loan value) of the PCF. The study conducted on 477 PCFs in the country for 6 years from 2004 to 2009. The results of indicate model: there is a tradeoff between depth-poor approach and sustainable levels of microfinance institutions. However, the organization that provides microfinance services could increase financial sustainability, increased depth approach while expanding financial access to poor people, ie to ensure service goals to

develop. Vietnam PCF model is a good choice for replication to develop micro finance market and contribute to poverty reduction in Vietnam.

The objectives of paper include:

- a. To study the role of PCFs in the financial market in Vietnam;
- b. To evaluate the factors affecting on the overall performance of PCFs in Mekong River Delta in Vietnam; and
- c. To propose some policy implications for enhancing the efficiency of PCFs in Mekong River Delta in Vietnam

The paper consists of five sections. The introduction comes first, following by part 2 on the literature review. Methodology and analysis on the empirical findings are presented in part 3 and 4 of the paper, while the last section proposes some policy implication and concludes.

II. LITERATURE REVIEW

2.1. Overview of PCFs in Vietnam

In responses to the collapse of credit cooperatives established under the centrally-planned economy, the Government of Vietnam set up the PCFs system in 1993, which are communal savings and credit cooperatives, inspired by Desjardins model (Abiad, 1996), to serve the rural poor and disadvantaged people where formal financial institutions are not located. Initially, the PCFs system consists of three levels: the Central Credit Fund serves as an apex organization of the system; the Regional Credit Fund plays the role of coordinating and managing the activities of certain PCFs within their geographical location; and about 1,000 PCFs directly serves their customers (Vu, 1997 and Wolz, 1999). The first reform of PCFs system appeared during 2000-2005 with the removal of Regional Credit Funds and the establishment of PCF Association, aiming at providing technical support for the system. The second movement of PCFs system happened recently, with the transformation of Central Credit Fund to Cooperative Bank.

The approach of PCF system in Vietnam was member-based and member-owned model (Vu, 1997, Wolz, 1999 and Putzeys, 2002). The performance of PCFs has been recognized as an important factor in providing financial resources for low-income households in the rural areas, facilitating the escape from poverty for those people.

2.2. Performance of PCFs

Prior to 2002, the assessment of the financial cooperation/credit funds in the world was mostly based on CAMELS (or CAMEL HIS), with similar criteria to commercial banks, and comprising of Capital Adequacy, Asset Quality, Management, Earnings, Liquidity and Sensitivity to Market Risks.

In 2002, Evans and Branch (2002) developed PEARLS with 44 quantitative indicators for assessing the performance of credit funds and then was widely used by World Council of Credit Unions (WOCCU) for their 51,000 credit institutions member operating in 100 countries all over the world. The benchmark for these quantitative was also based on the assessment of afore-mentioned 51,000 credit institutions of WOCCU (Richardson, 2008). The correlation between the level of financial performance and social performance can be evaluated by using PEARLS indicators (Table 1).

Table 2.1 Financial and Social Performance under Pearls

PEARLS indicators	Financial performance	Social performance
Protection (P-6 indicators)	Measurement complete process of credit operations - Control of bad debts - Provision for credit losses - Written-off Debt - Debt recovery	Provide a safe place for its members savings
Effective Financial Structure (E-9 indicators)	Support for optimizing liquidity, profitability.	Encourage community loans for members, community saving for both rich and poor, increasing equity through retained earnings
Asset Quality (A-3 indicators)	Optimize profitability through reducing non-profitable assets, seeking to financial assets with the non-profit funds.	More pressure on members who have bad debts, must handle their debts. This also limits the acquisition of fixed assets with inconsistent pricing.
Rates of Returns and Costs (R-12 indicators)	Optimizing the combination between portfolio, saving interest, dividends, operating performance and capitalization of net profit	Profits of organizations are limited to cover all costs instead of profit maximization. This helps protect shareholders at the real rate of return on capital contribution.
Liquidity (L-3 indicators)	Optimize level of liquidity to meet the requirements of member' withdrawals. Minimize the possibility of surplus liquidity.	Ensure supply of liquidity, collection of payment for all debt timely.
Signs of growth (S-11 indicators)	Allow comparison of assets, between structure and productivity, try to organize to achieve real growth.	Encourage members to save, promote loans for prestigious members to buy necessary goods and services for life.

Source: Richardson (2008)

2.3. Previous studies on the assessing the performance of PCF

Asantey and Tengey (1986) and Maksimovic (1988) found that the performance of credit funds had been subjected to equity through the intervention on competitive behavior and strategies of firms. Omran (2001) evaluated the operating performance of newly privatized Egyptian state-owned enterprises and gave a look at how fund performance varies across new ownership structure. However, these studies do not distinguish between the types of ownership, this paper provides new insight into the impact that post privatization ownership structure has on firm performance.

Various authors (Kunt (1989), Whalen (1991), Osayameh (1986), Orji (1989), Omolumo (1993), Orji and Osayameh (1986)) argued that non-performing loans had significantly impacted on liquidity and performance of the credit institutions. The reasons for having high rate of non-performing loans included non-existence of a loan policy set out by the banks, non-compliance with such a loan policy analysis of financial data, bad judgement, inadequate project monitoring, and incomplete knowledge of customers' activities.

Another factor that have significant effect on the performance of credit fund was loan maturity (Nguyen, 2004). The "maturity" structure shows how a fund allocated their capital into different targeted customers and their preference of duration to minimize general risks. Credit institutions experienced more short-term loans often had a lower rate of risk in comparison to others; therefore they had a higher possibility to perform better than others (Nguyen, 2014). In addition, by using the data on the development of Chinese banking sector, Bushman and Chen (2013) also found that lending activities of provincial banking sectors were more sensitive to borrowers' past performance and loans maturity.

External factors including macroeconomic performance, institutional factors can also have large impacts on the performance of credit institutions in general and microfinance institutions in particular (Ahlin and Lin, 2006; Vanroose, 2008; Krauss and Walter, 2009; and Ahlin et al. 2010).

III. SAMPLE AND METHODOLOGY

3.1. Data

Data are collected by authors from the Banking Supervision Agency of the State Bank of Vitnam. Database comprise of 155 PCFs located in 13 provinces of the Mekong River Delta in Vietnam, including Long An, Tien Giang, Ben Tre, Tra Vinh, Vinh Long, Dong Thap, An Giang, Kien Giang, Can Tho, Hau Giang, Soc Trang, Bac Lieu and Ca Mau. Ratios collected from these PCFs consists of capital, equity, allocation of capital, net income, maturity, nonperformaing loans, etc

3.2. Methodology

In examining the factors having impacts on PCFs' performance, the paper use traditional regression model based on quantitative indicators of PEARLS.

Table 3.1 Key Pearls Ratios

	P-E-A-R-L-S RATIOS	GOAL (Excellence)
P	Protection	
P2	Net Bad Debt Provisions / Required for Delinquent loans, 1-12 months	Provision to cover 35% of all delinquent loans outstanding for between 1 and 12 months
P6	Solvency	Minimum 111%
E	Effective financial structure	
E1	Net loans / Total Assets	70 - 80% of asset to be out loans
E5	Savings Deposits / Total Assets	70 – 80%
E8	Equity / Total Assets	Equal to or more than 10%
A	Asset Quality	
A1	Total Delinquency / Gross Loan Portfolio	Less than or equal to 5%
R	Rates of Return and Costs	
R9	Operating Expenses / Average Assets	5% or less
R11	Other income / Average Assets	Minimal
R12	Net Income / Average Assets (ROA)	Enough to reach the FSA goal of 10% institutional capital
L	Liquidity	
L1	Liquid Assets – Shorter Payables / Total Deposits	15 – 20%
S	Sign of Growth	
S10	Member growth	Minimum 12%
S11	Total Assets	More than Inflation + 10%

Source: Welsh Assembly Government

Due to heterogeneous sample, the authors decided to choose three variables of equity, non-performing loans and loan maturity for incorporating in the regression model, which is described as:

$$PER = \alpha_0 + \alpha_1 EQU + \alpha_2 NPL + \alpha_3 MAT + \varepsilon$$

of which:

The independent variables:

- EQU: Equity of PCF
- NPL: Non-performing loans of PCF
- MAT: Maturity of PCF

The dependent variable:

PER: Performance of PCFs in Mekong River Delta

IV. EMPIRICAL RESULTS

4.1. Performance under PEARLS

The capital allocation PCFs in the Mekong River Delta is presented in table 4.1 below. It should be noted that a large share of PCFs (78%) had operating capital of more than VND 20 billion, above the average capital of the whole PCFs system. Moreover, the PCFs in Mekong River Delta witnessed positive growth in recent years.

The performance of PCFs system was assessed firstly based on the quantitative PEARLS indicator by WOCCU, (excluding the signs of growth) shown in figures below.

P2 evaluates how adequately PCF made provision for loan losses, allowance for bad debt or loan that may not be repaid. In the sample, 139 PCFs reported that their provision was exceeding 35%. Solvency (P6) measures the degree of protection that a credit union has for the savings of its members in the event of liquidation of assets and liabilities. A total of 74 PCFs are considered as strong and stable organizations, well protected against financial difficulties. To combine the two protection indicators, 65 PCFs were in good conditions of protection (Figure 4.1)

E1 measures the percentage of total assets invested in the loan portfolio. The PEARL target is for 70% to 80% and 128 PCFs achieved. It indicates a high demand for loans in Mekong Delta PCFs. E6 is the ratio of savings to assets. The goal for savings deposits/total assets is ranging from 70 and 80%. E8 is the measure of institutional capital in relation to total assets, and just 61 PCFs accepted. In short, only 33 PCFs in Mekong River Delta have good conditions of effective financial structure, and 122 PCFs are facing these problems (Figure 4.2)

Three groups of asset quality (A1), rate of returns and costs (R12) and liquidity (L1) are achieved by a large number of PCFs (150, 131 and 113 respectively). Moreover, on the scale of PEARLS (5-level scale), 85% PCFs in the Mekong River Delta attains more than 3 point, showing a bright signal for PCFs' performance and potential growth (Figure 4.3).

Table 4.1 The Allocation of Pcf's Total Capital on Mekong Delta Area

Amount of capital	The number of units		Total capital	
	Number	%	VND	%
Over 50 billion VND	44	28,39	4990,80	63,50
20-50 billion VND	77	49,68	2432,32	30,95
10-20 billion VND	21	13,55	338,89	4,31
5-10 billion VND	11	7,10	91,10	1,16
Less than 5 billion VND	02	1,29	6,71	0,09
Total	155	100,00	7859,82	100,00

Source: Economic Studies, No.444, May, 2015

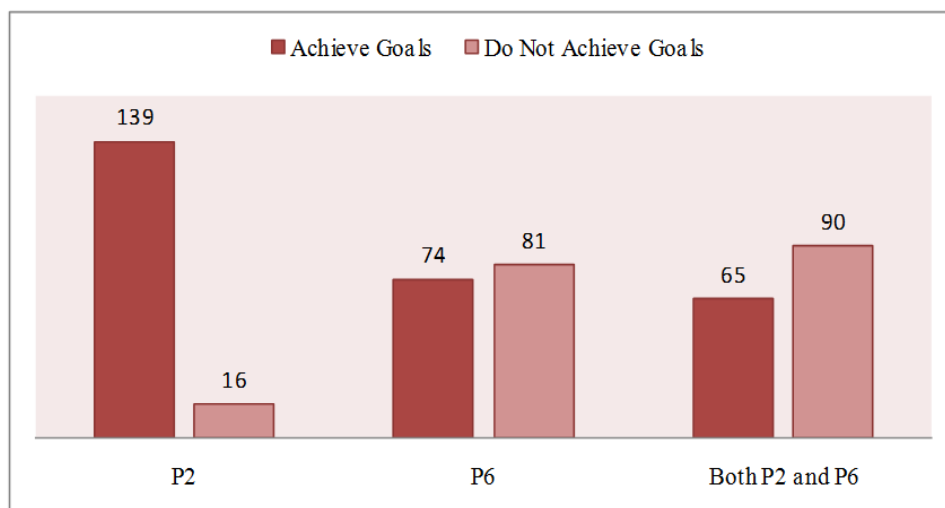


Figure 4.1: Protection

Source: Authors' calculation

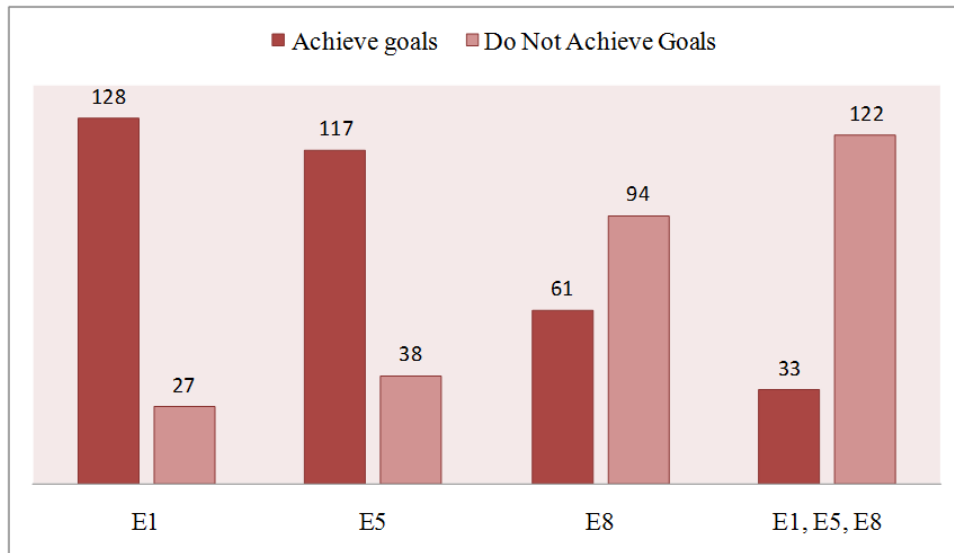


Figure 4.2: Effective financial structure

Source: Authors' calculation

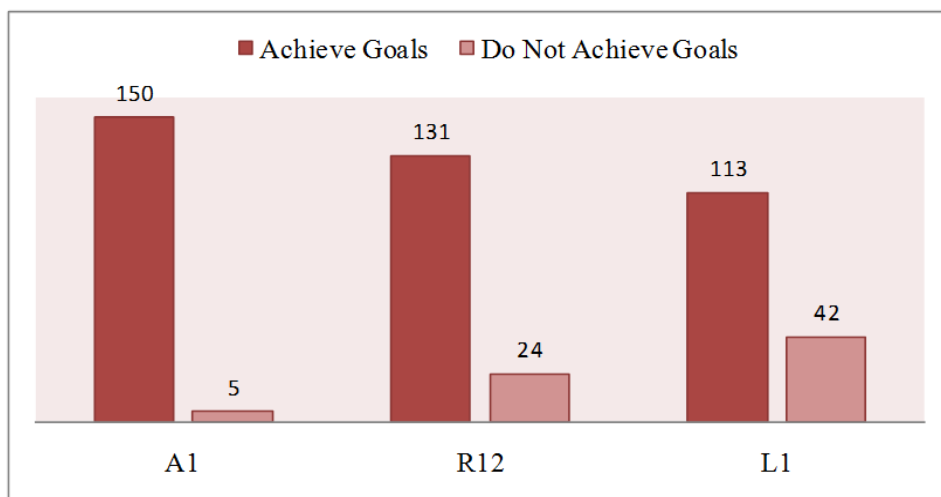


Figure 4.3: Asset Quality, Rates of Return and Costs, Liquidity

Source: Authors' calculation

4.2. Regression analysis and model specification

The regression was based on three independent variables, including equity of PCF(EQU), non-performing loans of PCF(NPL) and maturity of PCF(MAT), and dependent variable of performance of PCFs in Mekong River Delta (PER). Regression result is shown on Table 4.2 below.

The value of adjusted R^2 takes 0.049, implying that independent variables (equity, non-performing loans, and maturity of PCFs) can explain 49% variance of the dependent variable. The Durbin - Watson = 1,556, no correlation between the residuals. Regression model does not violate the independence of error (Table 4.2)

Regression analysis – ANOVA gives F value = 3.642, sig is small enough to prove the suitability of regression model (Table 4.3)

These factors with Sig.<0.05 are eligible to become a part of the regression equation. In the next step, authors do not choose 2 variables of Equity and Maturity (sig EQU = 0.262 and sig MAT = 0.769) and run the regression with just only 1 independent variable: NPL (Table 4.4).

Regression equation with Internal Variables:

$$PER = 3.475 - 0.02 * NPL$$

Hypothesis of NPL affects negatively to performance was tested. And the result showed that: $t = -2.655$ and sig = 0.009, implying that NPL affects negatively to Performance. Partial Correlation is -0.244 and Part Correlation is -0.211 (Table 4.6).

Table 4.2 Regression Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.260a	.067	.49	.8951	1.556

Table 4.3 Regression Result- Anova

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	8.753	3	2.918	3.642	.014b
Residual	120.989	151	.801		
Total	129.742	154			

Table 4.4 Multiple Linear Regression Analysis

MODEL	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Co linearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
CONS	3.394	0.110		30.883	0.000		
EQU	1.186E-5	0.000	0.093	1.125	0.262	.913	1.095
NPL	-0.018	0.007	-0.218	-2.655	0.009	.918	1.089
MAT	0.048	0.163	0.023	.294	0.769	.974	1.027

Table 4.5 Linear Regression Analysis

MODEL	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
CONS	3.475	.074		47.005	.000
NPL	-.020	.006	-.244	-3.112	.002

Table 4.6 The Correlation Between NPL and Performance

Factor	Unstandardised Coefficients		Standardized Coefficients	t	Sig	Correlations	
	B	Std. Error	Beta			Partial	Part
NPL	-.018	.007	-.218	-2.655	.009	-.244	-.211

V. CONCLUSIONS AND RECOMMENDATIONS

The performance of PCFs, under the current assessment gives more positive results. PCFs in Mekong River Delta in Vietnam show the stable financial situation, transparent data and potential for growth. However, number of PCFs that achieve goals in correspondent with PEARLS quantitative indicators is still limited. PCFs in Mekong Delta show stable financial situation, transparent data.

The way of controlling non-performing loans ratio has impact positively on enhancing operational efficiency. Therefore, there is essential need on consistent loan policy set out by the PCFs, the strengthening of enforcement, inadequate monitoring and supervision, and raising the awareness of customers on how to use loan properly.

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