PAST AND FUTURE TRENDS OF EARNINGS, BANKING BUSINESS OF PRIMARY COOPERATIVE AGRICULTURE DEVELOPMENT BANKS OF PUNJAB.

Sarbjit Kaur

Research Scholar, University School of Financial Studies, Guru Nanak Dev University Amritsar

Abstract

The financial sector is one of the most significant sectors for a country, especially if a country is a developing in nature. Cooperative banks are an important part of the banking system in India. These types of banks mainly operate for the benefit of rural areas; particularly for the agricultural sector. The main objective of the study was to examine the past and future trends of earnings, banking business of Primary Cooperative Agriculture Development banks of Punjab. To achieve the objective, study measured the trends (past and future) of earnings (Interest Income, Other Income & Total Income), Banking business (Investment/Total Assets, Loans & Advances/Total Assets). Trends analysis in business is significant and is used often to make calculation and projections of financial conditions. It is summarized that Primary Cooperative Agriculture Development Banks of Punjab efficient enough in terms of earning of income in positive mode means no negative return was observed during the study period. Among different trend methods of Time Series analysis the Least Square method is most significant and widely used to provide results.

Keywords: - cooperative banks, interest income, earnings, loans and advances

Introduction

The financial sector is one of the most significant sectors for a country, especially if a country is a developing in nature. India is an agricultural-based country and Cooperatives are the lifeblood of the Indian economy. In India structure of the cooperative banking sector is complex. These banks hold a key position in Indian system. They are the main source of institutional credit to farmers. These institutions are only responsible for breaking the monopoly of private money lenders in providing credit to agriculturists. Co-operative banks promote the non-agricultural sector also but their role is very small to develop the non-agricultural sector. Traditionally, due to the absence of institutional lending agencies like the cooperatives and the commercial banks, the farmers and the other realities used to get credit from the private money lenders like Shahukars and Seth's. These private money lenders instead of providing finance or credit facilities to farmers used to exploit them for their selfish ends and through all the procedures of charging manipulated high rate of interest used to usurp their holdings. To come over this evil and to provide financial assistance to the needy villagers, cooperative banking institutions were introduced in India. The whole of the country was covered under the network of cooperative credit institutions to cater to the credit needs of the rural people. Cooperative banks play a significant role in Indian economy by providing institutional credit to the agriculture sector. The cooperative credit structure have been divided into two distinct structures the short term credit structure and the long term credit structure. These institutions provide financial assistance in both rural and urban area. These banks have been commendable in enhancing the inclusiveness of the financial system. The long term

structure in the Punjab state, is a federal structure having state cooperative agriculture development bank as an apex institution with primary cooperative agriculture development banks as its members as on 31st march 2020,there was 89 Primary cooperative agriculture development banks. The Punjab State Co-operative Agriculture Development Bank Limited was established in 1958 with the basic objectiveto eliminates the exploitation of farmers by the money lenders by providing the farmers long-term loans at cheaper rate of interest, repayable in easy installments. Over the period, the Agricultural Development Banks have introduced many schemes and diversified their lending operations and thus there has been continuous change in the focus and working of the banks.

Literature review

Masud&Haq(2016) made an attempt to analyze the financial soundness and trend analysis of selected banks using different financial indicators. Financial indicators of the study were deposits, loans and advances, investment, Income, Return on Assets and return on Equity. This study showed upward trends of financial indicators during the period(2006-2014) of the study. Chodhury & kasifa(2009) have analyzed the development and growth of selected private commercial banks of Bangladesh. The findings of the study that all the selected private commercial banks are able to achieve a growth of branches, employees, deposits, loans and advances, net income, earning per share during the period of study (2002-2006). Rayhan et al(2011), finds the development and growth of state owned commercial banks in Bangladesh. This study revealed that all the state owned commercial banks in Bangladesh were not able to achieve stable growth, net profits, earning per share, return on equity and return on assets. Trend equations had been tested for different activities of the state Owned commercial banks. Square of correlation coefficient(R^2) has also tested for all the trend equations. Rahman&Hasan(2019) have evaluated and compare the financial performance of the six state owned commercial banks in Bangladesh. By analyzing the financial performance, the banks were ranked according to their performance and factors were determined, which were influenced by their performance and were responsible for their better or poor performance. To make an evaluation of the financial performance, Growth rate, Average and different statistical methods were used. Joseph(2014) assessed NPAs trends of scheduled commercial public and private banks, reported various methods to overcome from NPAs burden and stated factors were responsible for non-performing assets. In addition to this, Yadav(2013) has reported that banks should keep NPAs at low level because it adversely affects performance, restrict growth, success and suggested preventive measures to control NPAs in this era with risk management mechanism and credit appraisal system. Moreover, Kumar and Sharma (2012) has studied State Bank of India has registered highest level of NPAs followed by ICICI. Quartey and Afful-Mensah suggested factors like interest rate in nation that need policy intervention to make cost of doing business favourable for banks and discussed some initiatives taken by financial sector that further contribute to non-banking, banking growth in terms of number, innovative products and service. Srivastava and Gupta(2013) investigated that there is improvement in quality of assets as reflected by decline in NPAs percentage but quantum of NPAs is alarming with Public sector banks as compare to foreign, private performance in term of GNPAs and Gross advances. Ayyappan and Sakthivadivel(2012),found that compound growth rate is higher for private sector banks and they making impressive efforts to compete with public banks in certain parameters and suggested recent growth of private Banks can pose a challenge in market and may dominate public banks

in for coming years

Research Gap:

The banking sector acts as the backbone of the economy. The Financial resources are allocated through banks of the country. The banking sector of the country acts as a heart through which money is injected into the economy of a country. The long-term co-operative credit institutions in the Punjab state, as such, have a federal structure having Punjab State Co-operative Agricultural Development Bank as an apex institution with Primary Cooperative Agricultural Development Banks as its members. As on 31st March, 2020, there were 89 PADBs. Although various studies have been conducted from time to time relating to the agricultural and rural credit and banks, but in the light of the role of the primary cooperative Agricultural Development Banks in providing long-term credit to the agriculturists in the state of Punjab, it becomes important to intensively examine the working of these institutions from different aspects in the changing scenario.

Research Objectives:

To examine the past and future trends of earnings, banking business of Primary cooperative Agriculture Development banks of Punjab.

Research Methodology

Research methodology describes the tools and techniques adopted to analyze the data in the study and the pattern of deducing the conclusions. Secondary data has been used for this study which is collected from the annual reports of the bank. The period of the study is 2008-2017. The study includes all 89 Primary cooperative Agricultural Development Banks. To achieve the objective, research measured the trends (past and future) of earnings (Interest Income, Other Income & Total Income), Banking business (Investment/Total Assets, Loans & Advances/Total Assets). Trends analysis in business is significant and is used often to make calculation and projections of financial conditions. It is basically a clue that what has happened in past and give an estimate what will happen in future. Trend analysis is an aspect of technical analysis that assesses future predictions on basis of past events and happenings. It is a "general direction and tendency". It establishes pattern for elements over a period of time and indicates grey areas in related to estimate trends. In addition to this, assess performance over time; comparing one time period and geographical area to another and making future projections. The variable of the study for **Earnings** are Interest Income, Other income, Total Income, for **Banking Business** Investment/Total Assets, Loans & Advances/Total Assets. The past trends of Primary cooperative Agricultural Development Banks were evaluated during (2007-2008 to 2017-18) of selected variables, tested fitness of regression model with linear equation and formulate future trends during (2019-20 to 2029-30).

Analysis

Trends of Primary cooperative Agricultural Development Banks Earnings/Total Assets from 2007-2008 to 2016-17

| Years	Interest Income/ Total Assets	Net Interest Income/ Total Assets	Total Income/ Total Assets
2007-2008	0.07	0.02	0.08
2008-2009	0.15	0.09	0.16
2009-2010	0.08	0.02	0.08
2010-2011	0.08	0.03	0.09
2011-2012	0.08	0.02	0.08
2012-2013	0.08	0.03	0.09
2013-2014	0.08	0.03	0.09
2014-2015	0.08	0.02	0.10
2015-2016	0.07	0.01	0.09
2016-2017	0.08	0.02	0.09

(Source: Statistical Tables relating to primary cooperative Agricultural Development Bank of Punjab (Published Annual Report of state cooperative Agricultural Development Bank of Punjab)

Table no 1.1 described past trends of Primary Cooperative Agriculture Development Banks of Punjab in terms of various earnings i.e. Interest Income, Net interest Income and Total income during 2007-2008 to 2016-2017. As trends of Interest income from period 200-2008 to 2016-2017, 0.07 in 2008, showed variations.0.15 in 2009,0.08 in 2010-2015,declines to 0.07 in 2016 and in 2017 it increases to 0.08.on the other hand it was noticed that the percentage of net interest income is 0.02 in 2008,2010.2012,2015,2017 and show lowest value 0.01 in 2016, maximum value is 0.09 in 2009,afterwards this ratio declines constant from 0.03 to 0.01 during 2014 to 2016 with variations. In 2017 this ratio again increased from 0.01 to 0.02. from table 1.1 the result concluded that the period from 2008 to 2009 both interest and net interest income have increasing trend and interest income show constant trend from 2011 to 2015 afterwards in 2015 it declines in 2016 and in 2017 it increases up to 0.08 and in case of net interest income in 2009 only it increases to 0.0 and in 2017 it will reach up to 0.07.

It is summarized that Primary Cooperative Agriculture Development Banks of Punjab efficient enough in terms of earning of income in positive mode means no negative return was observed during the study period. Among different trend methods of Time Series analysis the Least Square method is most significant and widely used in practice and provides results. The Square of

Correlation of Coefficient (r^2) is called multiple determination is denoted by r. The value of r is rely between 0 to 1. The value of r2 will calculated by dividing sum of first errors by sum of second errors and subtracting the deviation from 1. The higher r2, greater the percentage of variation of Y explained by regression model, that means better the " goodness of fit" of regression model and r2 closed to zero, worse the fit.

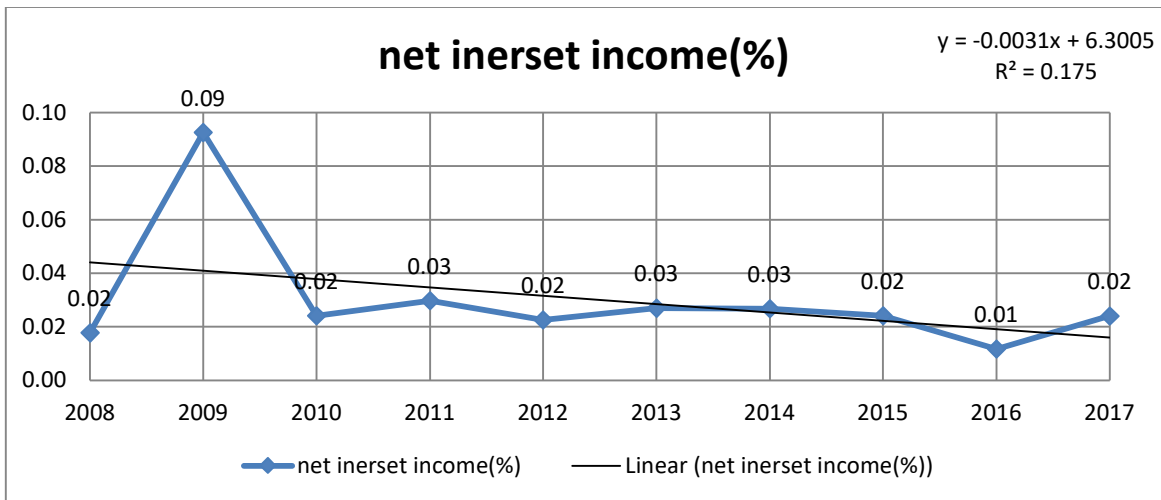**Figure 1** Linear **Trends of Interest Income**
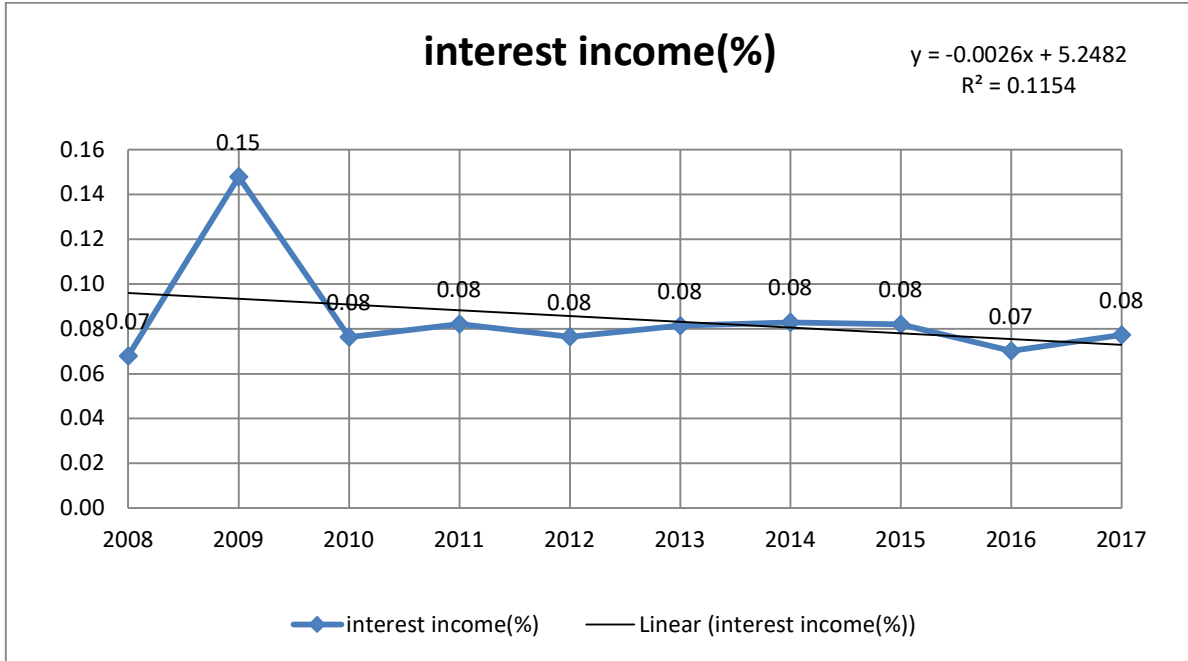
(Source: Published Annual Report of state cooperative Agricultural Development Bank of Punjab) (Statistical tables relating to Banks and Report on Trends and Progress-Various Years)

Interest Income Trends of *primary cooperative Agricultural Development Bank of Punjab* (2007-2008 to 2016-2017)

Figure no 1.1, described linear trend of Primary Cooperative Agriculture Development Banks of Punjab in term of interest income during 2007-2008 to 2016-2017,as observed peak from 2008 to 2009 till constant from 2010 to 2015 and further fall down with minor variations during the study period from 2008 to 2017. During the study period the value of R2 is 0.115 ,it means it fit regression model below better mode.

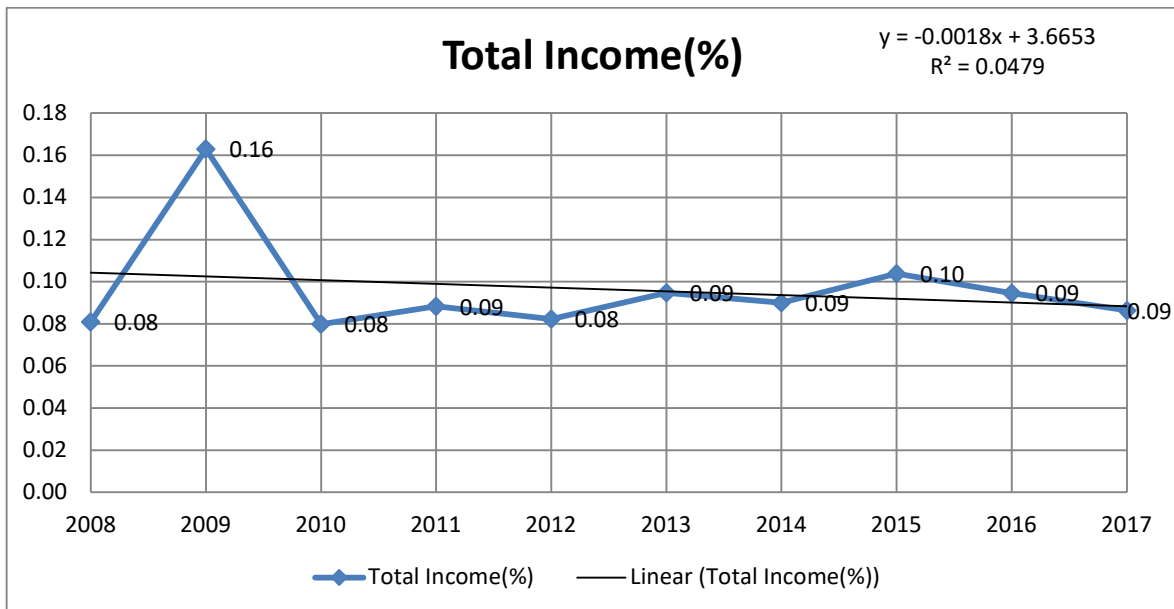**Figure 2 Linear Trends of Net Interest Income**

(Source: Published Annual Report of state cooperative Agricultural Development Bank of Punjab) (Statistical tables relating to Banks and Report on Trends and Progress-Various Years)

Net Interest Income Trends of *primary cooperative Agricultural Development Bank of Punjab* **(2007-2008 to 2016-2017)**

Figure 2 stated past linear trends of Primary cooperative Agricultural Development Bank of Punjab in respect of Net Interest income from 2007-2008 to 2016-2017,it was noticed that throughout period this ratio was varied as during 2010-2016,jumps very high in 2009,fall steep in 2016, in 2017 this ratio again increases. The calculated linear trend equation of this ratio has 0.175 R2, which means it fit regression model below better mode.

Figure 3 Linear Trend of Total Income

(Source: Published Annual Report of state cooperative Agricultural Development Bank of Punjab) (Statistical tables relating to Banks and Report on Trends and Progress-Various Years)
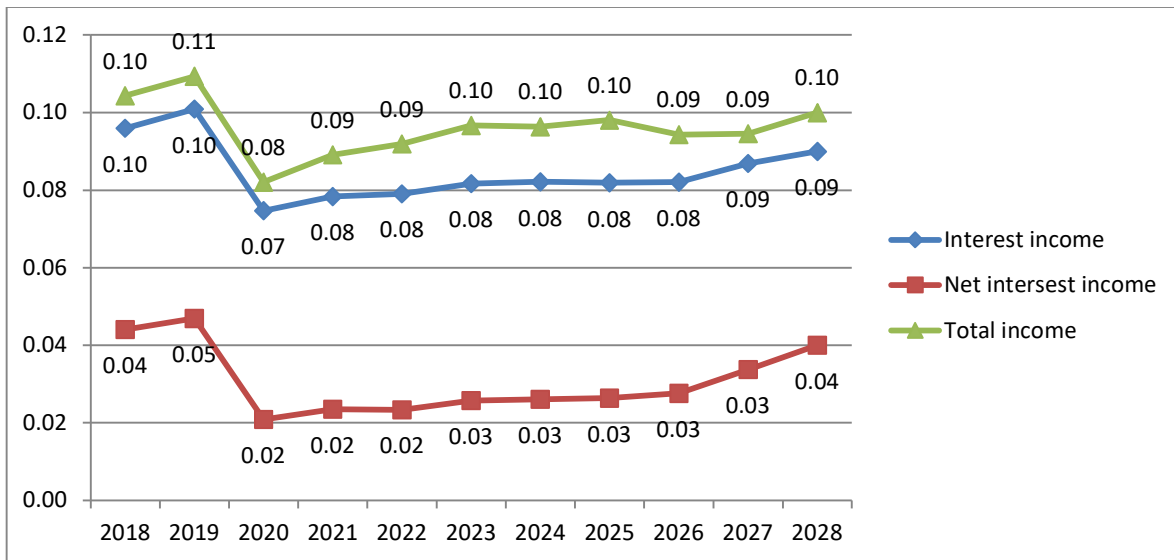
Total Income Trends of *primary cooperative Agricultural Development Bank of Punjab* **(2007-2008 to 2016-2017)**

Figure 3 described primary cooperative Agricultural Development Bank of total income linear trends during 2007-2008 to 2016-2017, it was observed that throughout the study, the past trend of this ration was varied like wave from 2011-2014,in 2009 it was jump very high and in 2010 it fall steep after 2010, it has showed minute ups and downs . The calculated linear trend equation value R^2 is 0.47 which means it fit regression model below better mode.

Table 2. Future Trends of Earnings *Primary cooperative Agricultural Development Bank of Punjab* Earnings/Total Assets Projection from 2017-2018 to 2026-2027

Years	Interest Income out of Total Assets	Net Interest Income to Total Assets	Total Income to Total Assets
2017-2018	0.10	0.04	0.10
2018-2019	0.10	0.05	0.11
2019-2020	0.07	0.02	0.08
2020-2021	0.08	0.02	0.09
2021-2022	0.08	0.02	0.09
2022-2023	0.08	0.03	0.10
2023-2024	0.08	0.03	0.10
2024-2025	0.08	0.03	0.10
2025-2026	0.08	0.03	0.09
2026-2027	0.09	0.03	0.09

(Source: Author's Calculation)

(Source: Author's Calculation)

Figure 4 Earnings Projection of *primary cooperative Agricultural Development Bank of Punjab* **2017-2018 to 2026-2027**

Figure no. 4 stated that during 2018-19 to 2028-29 earnings in term of interest will reveal trend steep fall in starting after that it rising to 0.10, net interest income minor decline-from 0.10 to 0.09 and total income sharp decrease-from 0.04 to 0.02 in 2020 after that it increases upto 0.04.

PAST AND FUTURE TRENDS OF BUSINESS OF *Primary cooperative Agricultural Development Bank of Punjab* **-TABLE PRESENTATION**
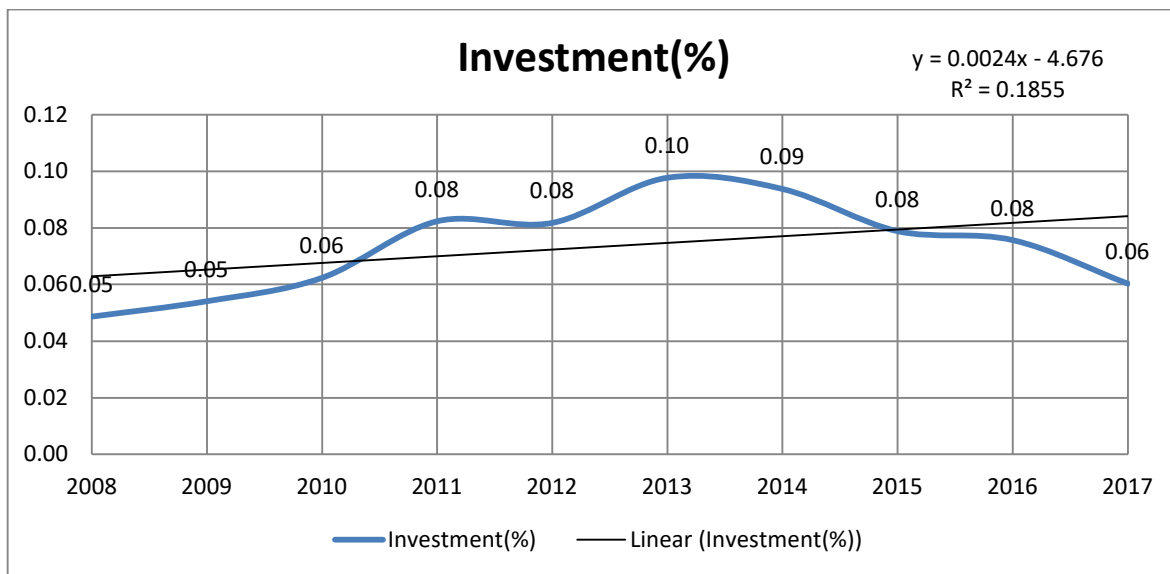
Table 3 Primary cooperative Agricultural Development Bank of Punjab **Investment/Total Assets and loans & advances to total assets Trends from (2007-2008 to 2016-2017)**

Years	Investment to TA	Loans & Advances/ Total Assets
2007-2008	0.05	0.69
2008-2009	0.05	0.67
2009-2010	0.06	0.67
2010-2011	0.08	0.66
2011-2012	0.08	0.65
2012-2013	0.10	0.65
2013-2014	0.09	0.66
2014-2015	0.08	0.66

2015-2016	0.08	0.65
2016-2017	0.06	0.62

Table no.3 revealed primary cooperative agriculture development bank of Punjab has invested out of total assets 0.05 percent in 2008 and 2009 which was rise to 0.06 in 2010, 0.08 in 2011 and 2012 however percentage of investment was increases to 0.10 in 2013. The percentage loans & advances was decline in 2014 to 0.09, however decreases to 0.08 in 2015 and 2016, it was steady fall down in 2017 to 0.06. Their loan and advances during this period has showed minor variation as 0.69 percent in 2008, 0.67 in 2009 and 2010, 0.66 on 2011, 0.65 in 2012 and 2013, increase to 0.66 from 0.65 during 2014 and 2015, fall down to 0.65 in 2016 and again fall to 0.62 in 2017.

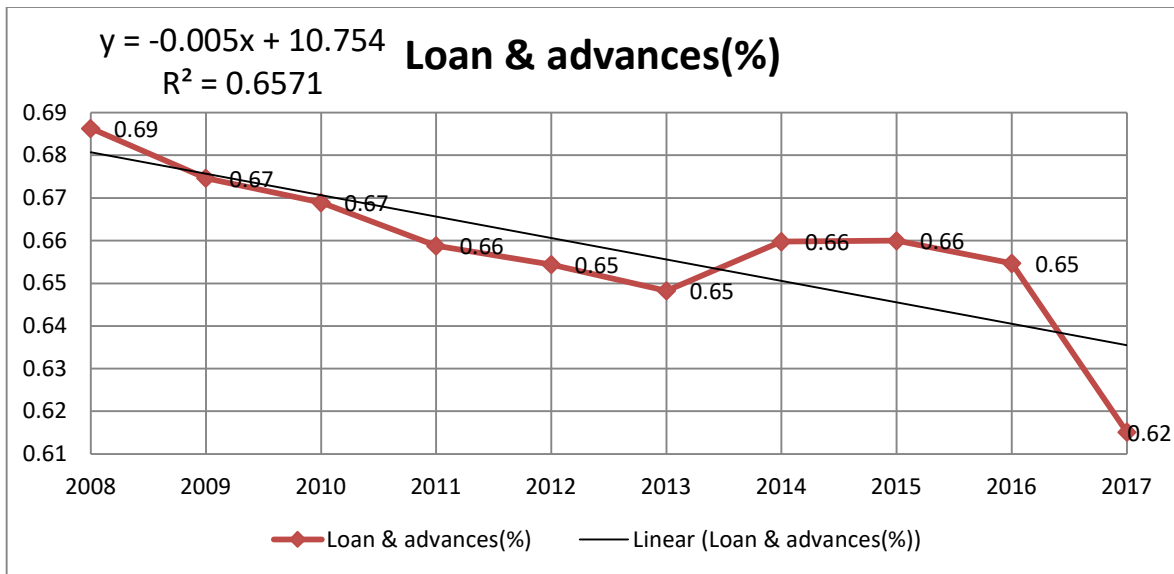**Figure 5 Linear Past Trends of Investment/Total Assets**

(Source: Published Annual Report of state cooperative Agricultural Development Bank of Punjab) (Statistical tables relating to Banks and Report on Trends and Progress-Various Years)

Investment to Total Assets Trend of *primary cooperative Agricultural Development Bank of Punjab* (2007-2008 to 2016-2017)

Figure no. 5 mentioned linear trend of primary cooperative Agricultural Development Bank of Punjab investment throughout study period (2007-2008 to 2016-2017) as increase in 2008 to 2014 fall down in 2015 and 2016 low decline in 2017. Moreover, it was noticed that their investment pattern was 0.05 percent in 2008 and 2009, increase in 2010, turn to steady increase in 2011 and 2012 and jump high in 2013. From period 2013-14 to 2016-2017, it was continuous decreases (slightly) from 2014 to 2016, however sharp fall down during 2016-17 to 0.06 percent. During this period, the calculated value of $R2 = 0.185$ which is fit to regression model.

Figure 6 Linear Past Trends of Loans and Advances/Total Assets

(Source: Published Annual Report of state cooperative Agricultural Development Bank of Punjab) (Statistical tables relating to Banks and Report on Trends and Progress-Various Years)

Loans and Advances to Total Assets Trends *primary cooperative Agricultural Development Bank of Punjab* **(2007-2008 to 2016-2017)**

Figure no 6 during study period trend of financing by *primary cooperative Agricultural Development Bank of Punjab* **(2007-2008 to 2016-2017)** in 2008 (0.69 percent), slightly fall in 2009(0.67 percent), constant in 2010, fall down in 2010, 2011 and 2012 ,and constant in 2013, rise in 2015 and 2016 . Moreover, trend line decline & steep fall in 2017. From past data response, the evaluated value of R2 = 0.657 which are best fit to regression model.

Table 4 Future Trends of Business-table presentation

Years	Investment to TA	Loans & Advances/ Total Assets
2017-2018	0.06	0.68
2018-2019	0.07	0.67
2019-2020	0.08	0.66
2020-2021	0.09	0.65
	0.09	0.65

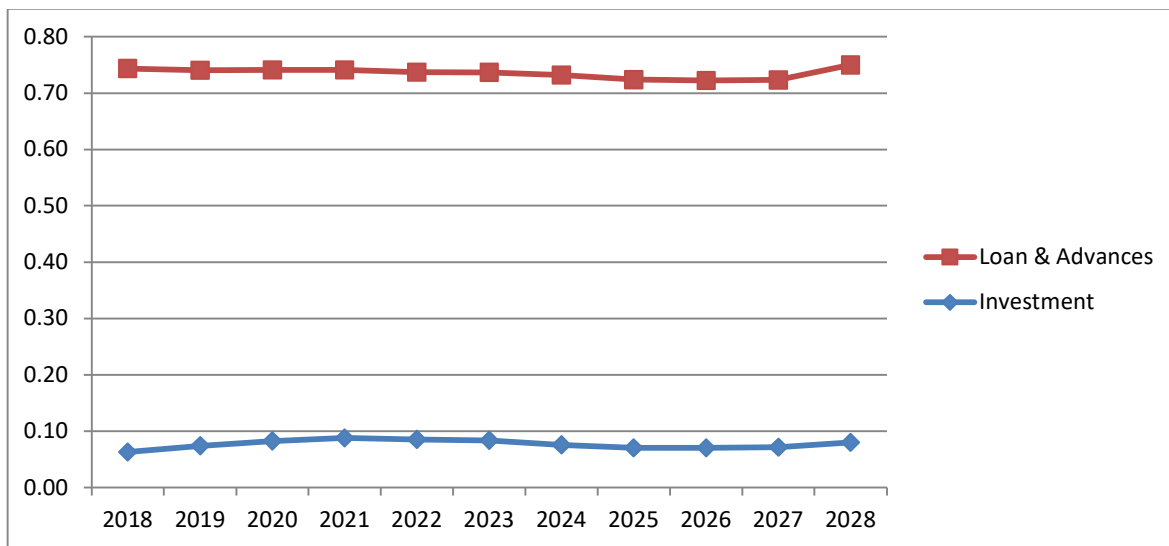| 2021-2022		
2022-2023	0.08	0.65
2023-2024	0.08	0.66
2024-2025	0.07	0.65
2025-2026	0.07	0.65
2026-2027	0.07	0.65

(Source: Author's Calculation)

Figure no.4 described projected data of primary cooperative agriculture development bank of Punjab. Investment and loan and advances to total assets 2017-2018 to 2026-2027. Their projected investment will be 0.06 in 2018, from 2016 to 2022 it steadily increasing 0.07 in 2019, 0.08 in 2020, 0.09 in 2021 and 2022, in 2023 and 2024 it will be 0.08, after that in 2025, 2025, 2026 this ratio fall down to 0.07. On other side of loan and advances during projection 2017-18 to 2026-2027 as 0.67 percent from total assets in 2019, 0.66 in 2020, 0.65 in 2021, 2022and 0.66 in 2024 so on, means with minor fall down to 0.65in 2025 to 2027.

Conclusion

The research has explained that during study primary state cooperative agriculture development bank of Punjab interest income has showed positive direction with variation. Interest income observed peak from 2008 to 2009 till constant from 2010 to 2015 and further fall down with minor variations during the study period from 2008 to 2017.this ratio has varied continuous. In

term of net interest income, it was noticed that throughout period, this ratio was varied as during 2010-2016, jumps very high in 2009, fall steep in 2016; in 2017 this ratio again increases. In terms of total income it was observed that throughout the study, the past trend of this ratio was varied like wave from 2011-2014,in 2009 it was jump very high and in 2010 it fall steep after 2010, it has showed minute ups and downs .During projection period interest income (net) will increase with variation. linear trend of primary cooperative Agricultural Development Bank of Punjab investment throughout study period (2007-2008 to 2016-2017) as increase in 2008 to 2014 fall down in 2015 and 2016 low decline in 2017. Moreover, it was noticed that their investment pattern was 0.05 percent in 2008 and 2009, increase in 2010, turn to steady increase in 2011 and 2012 and jump high in 2013.linear trend of investment throughout study period (2007-2008 to 2016-2017) as increase in 2008 to 2014 fall down in 2015 and 2016 low decline in 2017. Moreover, it was noticed that their investment pattern was 0.05 percent in 2008 and 2009, increase in 2010, turn to steady increase in 2011 and 2012 and jump high in 2013.

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