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Brief Contents

Trends of Interest Income and Non-Interest Income in Indian Banks after the Global Financial Crisis; with a Special Reference to SBI and ICICI

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Abstract:

This paper, with empirical evidence, examines the trends of interest income and non-interest income in Indian banks before and after the global financial crisis. For this, the leading public sector bank, SBI and private sector bank, ICICI has been studied. The paper takes into account the amount of income earned, in million rupees, through interest and non-interest based activities in both the banks in order to analyse the trend of each of these sources of income over a fifteen year period in SBI & ICICI. The paper also studies the trends of various types of interest income and non-interest income for both banks. The results of the study show that both the sources of income are steadily increasing. However, it is more for SBI and ICICI shows a slight slump in both types of income after the global financial crisis. Before the global financial crisis, "Income on investments" was higher than "Interest/discount earned on advances and bills", for both banks. But, 2007 onwards "Interest/discount earned on advances and bills" has taken over all other types of interest income by a huge margin. Finally, "Commission, exchange and brokerage" constitute the major part of the growing non-interest income for both SBI and ICICI.

Keywords : Interest, NPA, sources of income, global financial crisis, monetary policy

Introduction:

The financial crisis of 2007–2008, also known as the ***global financial crisis*** and the 2008 financial crisis, is considered by many economists to have been the worst financial crisis since the Great Depression of the 1930s.

It began in 2007 with a crisis in the subprime mortgage market in the United States, and developed into a full-blown international banking crisis with the collapse of the investment bank Lehman Brothers on September 15, 2008. Excessive risk-taking by banks such as Lehman Brothers helped to magnify the financial impact globally. Massive bail-outs of financial institutions and other palliative monetary and fiscal policies were employed to prevent a possible collapse of the world financial system. The crisis was nonetheless followed by a global economic downturn, the Great Recession. The European debt crisis, a crisis in the banking system of the European countries using the euro, followed later.

In 2010, the Dodd–Frank Wall Street Reform and Consumer Protection Act were enacted in the US following the crisis to "promote the financial stability of the United States". The Basel III capital and liquidity standards were adopted by countries around the world.

Financial crisis and banks in India

Initially it seemed that due to heavy public ownership and cautious management banks in India were immune to the financial crisis that hit the world. However, due to unwise lending many loans have turned "Bad" in India. According to CARE Ratings, India had the fifth highest NPA ratio in the world, ranking only after Greece, Italy, Portugal and Ireland. India's NPA ratio stands at 9.85%, while major economies such as Britain, the USA, Japan and Germany have ratios less than 2%. According to the latest Financial Stability Report of the Reserve Bank of India (RBI), the NPA ratio is set to deteriorate to 12.2% by March 2019, which would put India in fourth position, overtaking Ireland. As per the RBI, 11 public sector banks are under the prompt corrective action category, which means that the poor quality of balance sheets has to be addressed immediately to avoid potential meltdown.

Net interest income:

Taking deposits and lending money is the most basic function of a bank. Banks usually charge higher interest on the money it lends than the interest it pays on deposits. The difference between interest earned and paid is called a bank's net interest income.

Non-interest income:

Banks provide a number of other services in addition to lending and depositing money. For example, they provide credit and debit cards to their customers. Banks also charge fees for deposit services, processing loans, card services, and other services.

Banks also perform capital market oriented activities such as underwriting, mergers and acquisitions, advisory, market making, research, and a host of other services. For all the services offered, banks charge certain fees. Income earned through fees and other charges is called non-interest income.

Interest vs. non-interest income

The rapid expansion of new forms of off-balance sheet activity means many banks are diversifying, and as a result, non-interest income is an increasingly important source of revenue. An important question facing the world is, whether the diversification implied by the growth of noninterest income has made banks' total income more stable.

This is the main motivation for this study. While most banking systems around the world is shifting focus on non-interest income, many researchers reckon that non-interest income in fact increases banks' revenue volatility and thereby increasing risk.

In this paper my aim is to find out whether Indian banks are increasing their sources of earning through non-interest income. To observe what are the trends in both interest income and non-interest income before and after the global financial crisis in Indian banks.

Literature Review:

De Young et al (2001), find that replacing traditional lending activities with fee-based activities, an ongoing trend, is associated with both higher revenue volatility and higher total leverage, which in this framework implies higher earnings volatility. They explain; the volatility of a bank's earnings is a function of two independent components: its revenue volatility, which is determined largely by market forces exogenous to the bank, and its degree of total leverage, which is determined by the fixity of its production and financing expenses. Applying this theoretical framework to the data set, they find that both components of earnings volatility increase with the share of revenues generated by fee-based activities.

Stiroh K.J. (2004), studies benefits from diversification to non-interest income and finds that at the aggregate level, declining volatility of net operating revenue reflects reduced volatility of net interest income, rather than diversification benefits from noninterest income, which is quite volatile and has become more correlated with net interest income. At the bank level, growth rates of net interest income and non-interest income have also become more correlated in recent years. Finally, greater reliance on non-interest income, particularly trading revenue, is associated with higher risk and lower risk-adjusted profits.

Stiroh K.J. et al (2006), find evidence that diversification benefits exist between financial holding companies, but these gains are offset by the increased exposure to non-interest activities, which are much more volatile but not necessarily more profitable than interest-generating activities. However, marginal increases in revenue diversification are not associated with better performance, while marginal increases in non-interest income are still associated with lower risk-adjusted profits. Therefore, diversification gains are more than offset by the costs of increased exposure to volatile activities.

Gorton G. (2009), says, the current panic involved financial firms "running" on other financial firms by not renewing sale and repurchase agreements (repo) or increasing the repo margin, forcing massive deleveraging, and resulting in the banking system being insolvent. New regulations are required to ensure that this system of banking survives safely.

Williams B. et al (2010), studies the impact on bank risk of portfolio diversification between traditional margin income and fee-based income for banks operating in Australia. This paper documents that fee-based income is riskier than margin income but offers diversification benefits to bank shareholders. While improving bank risk-return tradeoff, these benefits are of second order importance compared to the large negative impact of poor asset quality on shareholders' returns.

Ree J.J.K. (2011), says that even though low income Asian countries are not financially very integrated with the world yet the impact of the crisis on low income countries' banks, particularly the largest ones, were significant.

Brunnermeier M.K. et al (2012), document that banks with higher non-interest income (noncore activities like investment banking, venture capital and trading activities) have a *higher* contribution to systemic risk than traditional banking (deposit taking and lending). After decomposing total non-interest income into two components, trading income and investment banking and venture capital income, we find that both components are roughly equally related to systemic risk. They also find that banks with higher trading income one-year prior to the recession earned lower returns during the recession period. No such significant effect was found for investment banking and venture capital income.

De Young et al (2013), tested whether income from non-traditional banking activities contributed to the failures of hundreds of U.S. commercial banks during the financial crisis. Estimates from a multi-period logit model indicate that the probability of distressed bank failure declined with pure fee-based non-traditional activities such as securities brokerage and insurance sales, but increased with asset-based nontraditional activities such as venture capital, investment banking and asset securitization. Banks that engaged in risky non-traditional activities also tended to take risk in their traditional lines of business, suggesting that deregulation was neither a necessary nor a sufficient condition for bank failure during the crisis.

Kohler (2014) shows that the impact of non-interest income on bank risk differs between retail banks and investment-oriented banks. While retail-oriented banks become significantly more stable if they increase their share of non-interest income, investment-oriented banks become significantly more risky.

Piranha et al (2016), says in order to meet the challenges of global competition, banks have started to restructure their business. They have started to diversify their bank activities in to fee-based activities that earn fee rather interest. The deregulation of interest rates decided by the market forces resulted in a continuous decrease in interest rates. Due to the falling interest rate there was decrease in interest income which led to lower profitability. To overcome this reduction in profit banks started to emphasis more on fee based activity. Banks have continuous increase in income from sources of non-interest income; which attracts the banks to go for fee based activity. There is a mixed trend in the ratio of non-interest income as a percentage of total assets. It has been observed that this ratio was highest during the years 2001-02 to 2003-04 for all the bank groups except foreign banks. It reveals that the ratio shows increase in the year 2007-08 as compared to the previous years.

Singh K.B. et al (2016), observed, the shift towards non-interest income has been perceived, around the world, to reduce the volatility of Bank's revenues and reduce the risks as non-interest income is less dependent on overall business conditions than traditional income. Over the years in general and post financial crisis 2008 in particular, rise in non-interest Income has gained a lot of momentum. They study the result of stress test on the banks when this non-interest income dries up using the sample of banks in India during years 2003 to 2013 and find; Indian Banking Industry is slowly shifting its revenue base from traditional activities to non traditional activities that generate fee income, service charges and other types of non interest income. Non-interest income has high Operating leverage and low switching cost compared to interest income. Commission, Brokerage and exchange are significant part of private banks in India compared to Public sector banks. Reduction in Non –interest income reduces ROE and ROA for the bank. The preliminary results of this study indicate that non-interest income is strongly and positively influenced by return on equity, loan quality, profit per employee, and personalized customer service offered to bank customers. However, they note that as banks continue to develop traditional interest income sources, they tend to diversify less into non-traditional sources of income, and find that banks where employees generate more traditional business report significantly lower non-interest revenue.

Dalaien (2016), uses variables like Bank Share Price, Bank Capital Adequacy, bank Deposit- lending Ratio, Interest Rates, Non-performing Assets, to find out the impact of global financial crisis on banking sector in Jordan and India. The study brings out some contrasting and some similar results for Jordan and India. It indicates that global financial crisis have a negative effect on share price of Jordanian banks because share price decrease after global financial crisis. The study also indicated that global financial crisis have a negative effect on capital adequacy, Deposit - Lending Ratio, and Non-Performing Assets because all of these variables was increase after global financial crisis. However, the study reported that global financial crisis have a positive effect on share price of Indian banks because share price increase after global financial crisis. The study also indicated that global financial crisis have a positive effect on capital adequacy because it increase after global financial crisis, but other indicators which includes Deposit - Lending Ratio, and Non-Performing effect negatively by global financial crisis because all of these variables was increase after global financial crisis.

Kumar N. et al (2018), said, India still faces same problems like poor telecom infrastructure, no strict legal bans, lack of good attitude towards technologies and poor academic syllabus regarding e-commerce, which is a major contributor to non-interest income for banks. The article suggests that a proper step should be taken by the government and private agencies to implement e-commerce based academic syllabus, update legal frameworks, developing infrastructure for sustainable e-commerce and creating awareness amongst the people for effective implementation of e-commerce for sustainable economic growth.

Gaps in Literature:

Different observations have been made when it comes to diversification to non-interest income in order to reduce risk and increase profitability of banks. In some cases diversification and focus on non-interest income has proved beneficial to banks while in some cases it has been observed that diversification in fact, increases revenue volatility.

This paper aims to study how banks in India, both public and private, earned before and after the global financial crisis. It takes into account both interest and non-interest income and also, various types of interest income and non-interest income and their movement over a time period of fifteen years i.e., 2003-2015.

It will be interesting to find out how much India has shifted her focus on diversification of sources of earnings for banks.

Objectives:

- To make a comparative study of interest income and non-interest income in Indian banks and noting their sustainability over time.
- To identify various sources of interest income in Indian banks and study their movement before and after the global financial crisis.
- To observe different sources of non-interest income in Indian banks and study their movement before and after the global financial crisis.

Research Design:

Sources of Data:

For this paper, the total interest income and total non-interest income of both SBI and ICICI is required. The amounts of various types of interest income and non-interest income for both the banks is also required. These data related to the interest income and non-interest income has been collected from indiastat.com and moneycontrol.com.

Sample size:

The leading public sector bank SBI and private bank ICICI have been selected for the study.

ICICI was the leading private sector bank in India till 2017 March.

These banks have been selected because it is assumed that all other banks follow the leaders as far as trends in interest and non-interest income is considered.

Time period:

The study has been conducted over a period of 15 years from 2003-2017. This time span will help us study the trends of various types of income for banks before and after the global financial crisis of 2008.

Tools for study:

Trend analysis has been done using MS Excel, to study the movement of various types of income in both the banks.

Data Analysis:

First of all, we will do a comparative study of the interest income and non-interest income in the banks SBI and ICICI.

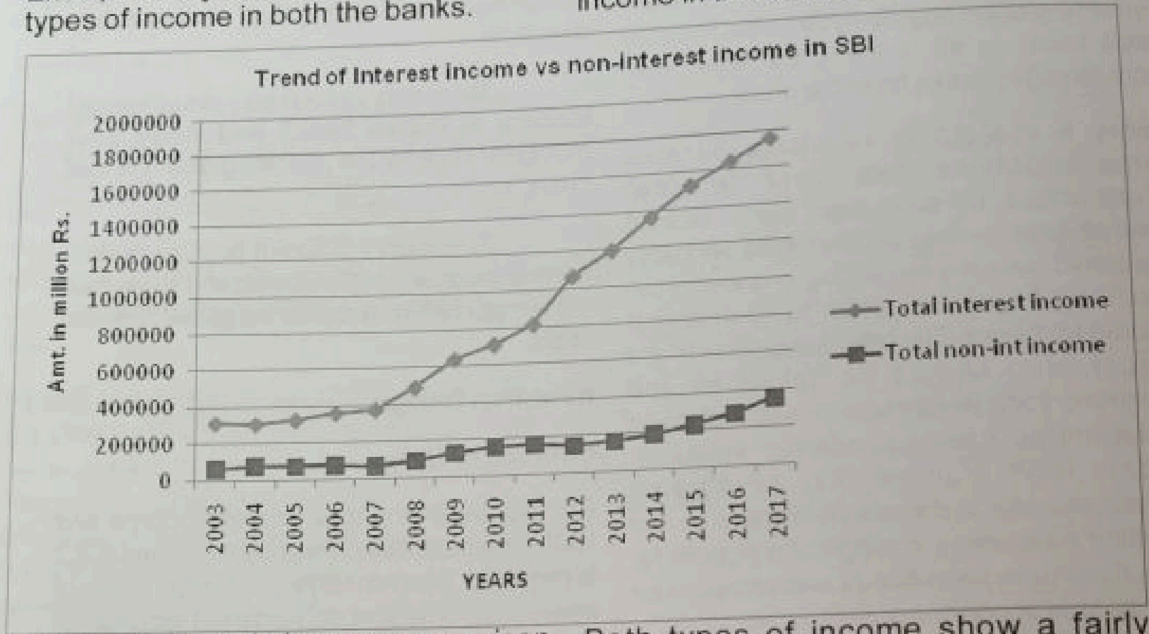

Figure 1: Figure 1 shows a comparison between the interest income and non-interest income in SBI from 2003-2017. Both types of income show a fairly increasing trend but, interest income in SBI increases at a much greater rate than non-interest income in the post global crisis period.

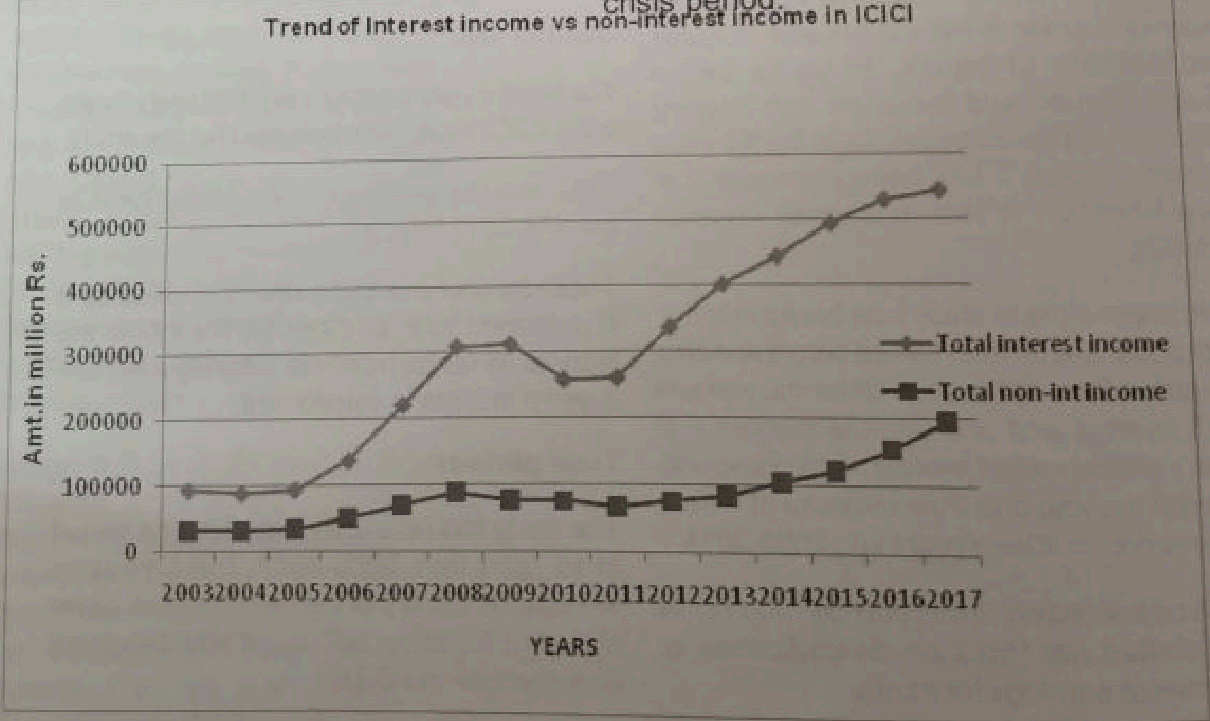

Figure 2 shows a comparison between the interest income and non-interest income in ICICI from 2003-2017.

ICICI shows a slight slump in both types of income after the global financial crisis. However, both interest and non-interest incomes show an increasing trend; with interest income being more than non-interest income.

Since interest income grows at a faster rate as compared to non-interest income it will be interesting to find out which sources of interest income contribute most to the growth in both SBI and ICICI.

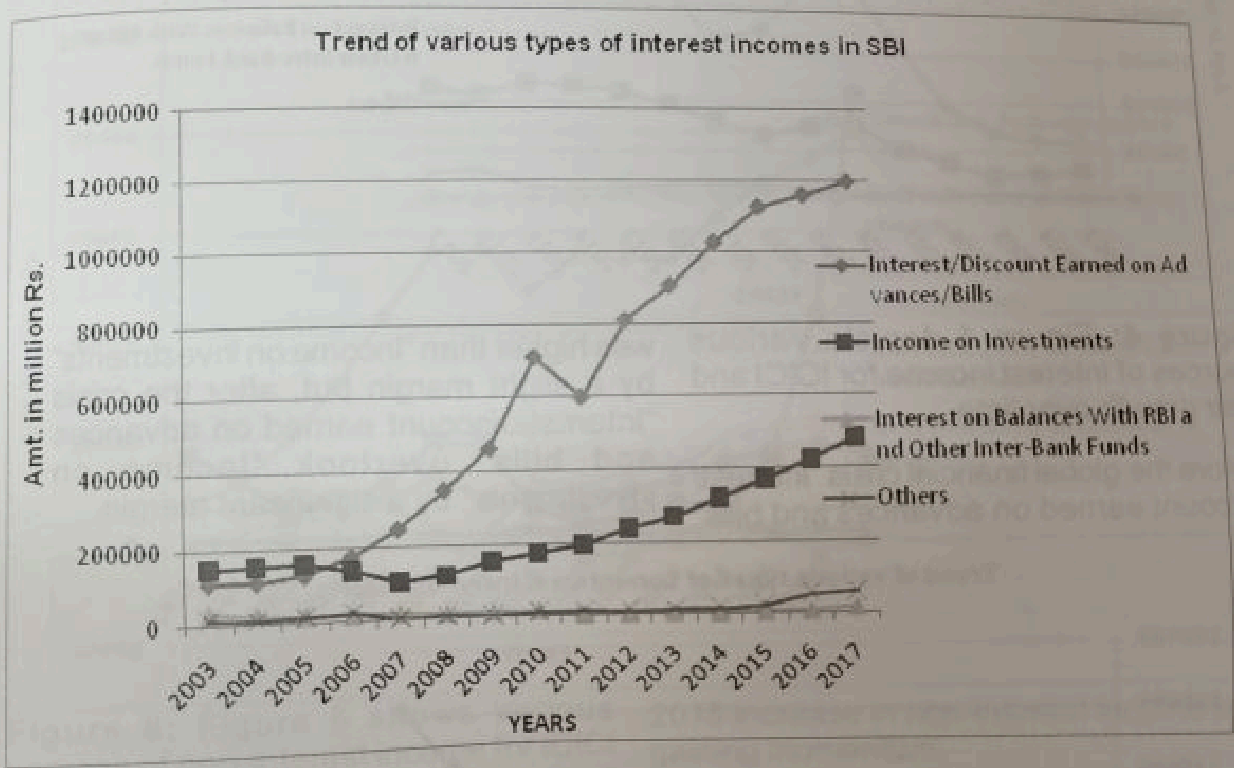

Figure 3: Figure 3 depicts various sources of interest income for SBI and their growth over time.

Before the global financial crisis, "Income on investments" was higher than "Interest/discount earned on advances and bills". But, 2007 onwards "Interest/discount earned on advances and bills" has taken over all other types of interest income by a huge margin.

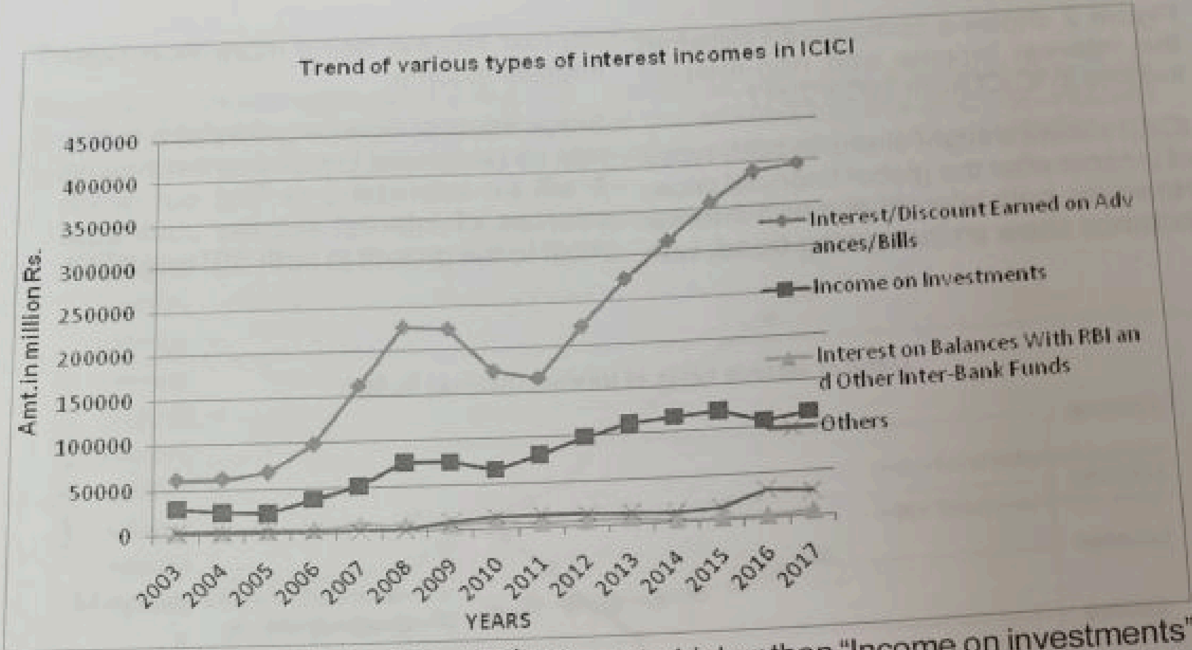

Figure 4: Figure 4 depicts various sources of interest income for ICICI and their growth over time.

Before the global financial crisis "Interest/ discount earned on advances and bills" was higher than "Income on investments" by a slight margin but, after the crisis "Interest/discount earned on advances and bills" overtook "Income on investments" by a significant margin.

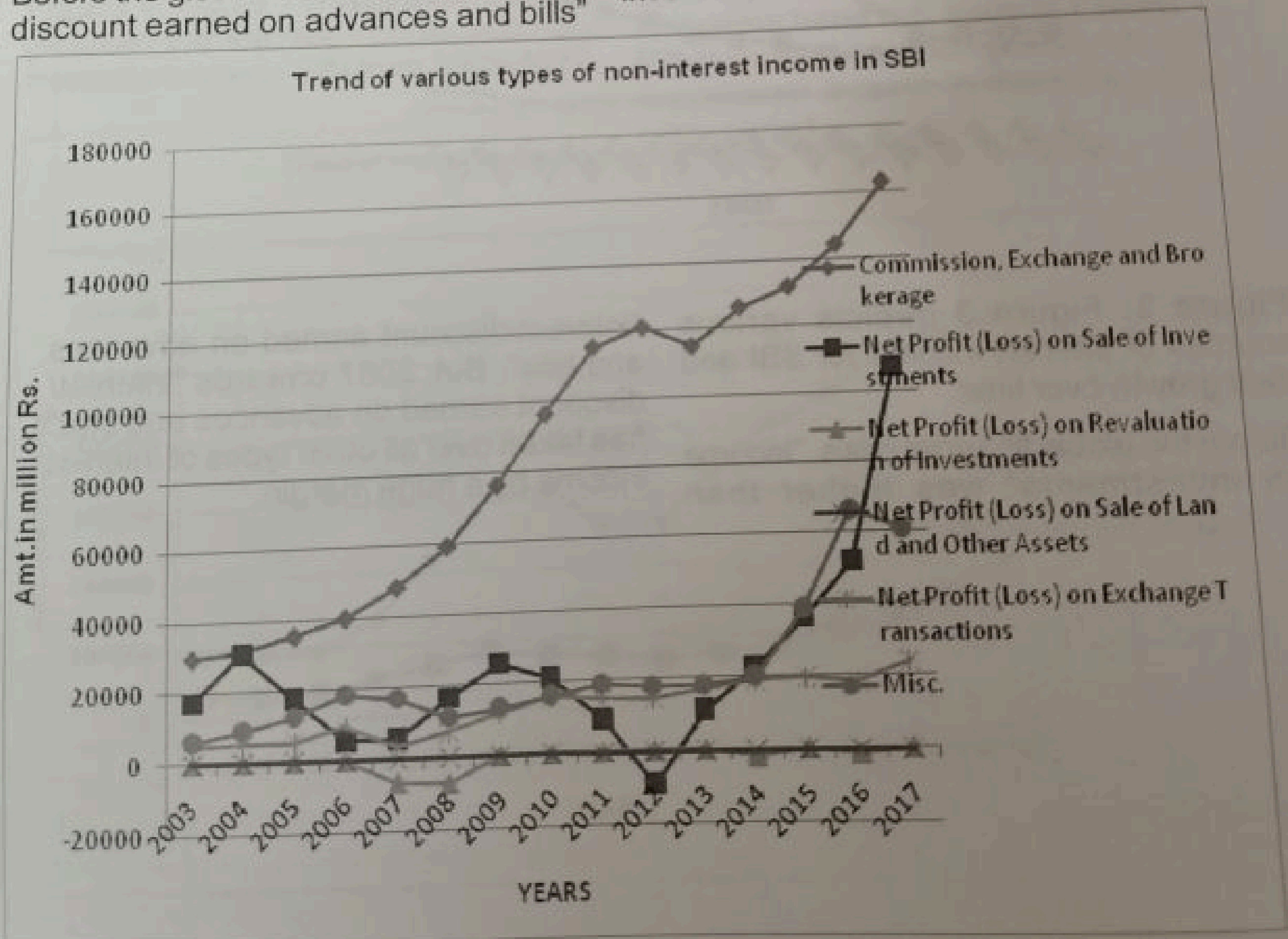

Figure 5 shows various sources of non-interest income for SBI and their growth over time.

"Commission, exchange and brokerage" constitute the major part of the growing non-interest income for SBI followed by "Miscellaneous income". "Exchange transactions" also show a growing trend and income from "Sale of investments" fluctuates a lot over the time period but grows at an increasing rate 2013 onwards.

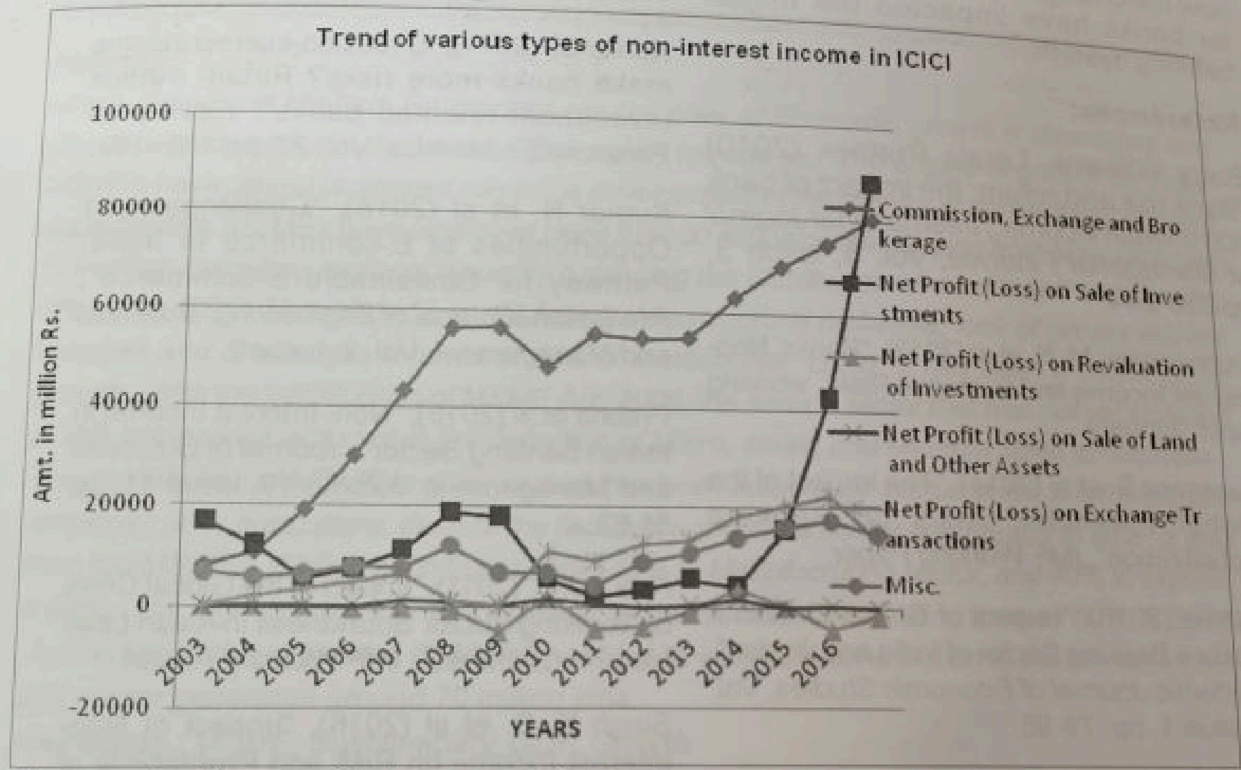

Figure 6: Figure 6 shows various sources of non-interest income for ICICI and their growth over time.

Like SBI, "Commission, exchange and brokerage" constitute the major part of the growing non-interest income for ICICI. It is followed by "Exchange transactions" which experienced a slump during the crisis. "Miscellaneous income" also shows a growing trend and income from "Sale of investments" fluctuates over the time period before finally growing at an increasing rate 2014 onwards.

Conclusions:

This paper helps us to observe that Interest income is much more than non-interest income for both banks but, since 2015 increase in non-interest income is gaining momentum.

For both banks, "Interest/discount earned on advances and bills" and "Income on investments" are the major types of interest income earned. "Interest/discount earned on advances and bills" experienced a slump during 2008-2011.

In case of both banks, "Commission, exchange and brokerage" is the major source of non-interest income. In SBI, only "Sale of investments" suffered from a slump in the crisis period; while all other sources of non-interest income suffered only slightly and recovered very quickly. However, in case of ICICI, most of the sources of non-interest income experienced a slump during the crisis period and recovered slowly from 2012-2014. "Sale of investments" has seen a steady rise since 2014 for both banks.

This paper also provides ample scope for further research. It can be ascertained how the changes in sources of earnings for banks have impacted the Indian banking system.

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