# ANALYTICAL STUDY OF SAVING, INVESTMENT AND BORROWING BEHAVIOUR OF INDIAN HOUSEHOLDS*

BY

**Vartika Bhatia♣**
Research Scholar, Department of Banking and Business Economics, University College of Commerce and Mgmt. Studies, Mohanlal Sukhadia University, Udaipur, Rajasthan.

**Dr Mukesh Mathur♣**
Professor and Head, Department of Banking and Business Economics, University College of Commerce and Mgmt. Studies, Mohanlal Sukhadia University, Udaipur, Rajasthan.

## Abstract
Savings, investments and borrowings are important factors contributing to the growth of an economy. While households are groups of people living together and sharing the same kitchen and other resources. These people need not be necessarily related. There can be single-person households as well. This study is an attempt to analyse the trends and identify the relationships between the savings, investments and borrowing of Indian households. Their growth rate is compared with the growth of Gross Domestic Product (GDP). The period of this study is between the various quarters of the years 2018-19, 2019-20 and 2020-21. The paper first explains the meaning and implications of household savings, investments and borrowings. The secondary data on Financial Assets and Liabilities of Households for this study has been taken from the website of RBI. It has been analysed using correlation analysis. As an outcome of the study, the correlation of the growth rate of investments, growth rates of borrowings and total deposits with the growth of GDP was positive. However, none of them was significant.
**Key words:** Savings, Investments, Borrowings, Indian households.

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♣ Correspondence Author: Vartika Bhatia

## Introduction
With the evolution of technology, access to saving and investment options has been increasing incessantly. An increase in the income of the households has led to an upsurge in the amount of savings as the households tend to save a certain part of their income. They are becoming conscious about saving money for their future needs. The savings are affected by the future expectations of growth in income (Kraay, 2000). Saving refers to keeping money for future use while the investments are made to earn returns on that money (Charkha & Lanjekar, 2018). Due to a lack of social security (Sawrey, 2021) and increasing prices, families are required to plan their savings to meet their future needs (Sawrey, 2021). Indian families majorly save money to plan their retirement, to meet expenses of their child's education or marriage, or to purchase household assets like car, refrigerator, jewellery or property that come under the different price ranges. They also plan to invest their money in property,

gold, the stock markets, and even digital currency these days. Savings on the other side, earn a low amount of return for them. All the three behaviours- saving, investment and borrowing behaviour are associated with the use of money by the households. They are important factors of economic development (Kisaka, 2014). Households provide the stock of capital to the economy through their savings and investments (Umesha & Neelakanta, 2019). People save money to meet their long-term and short-term objectives. Savings are affected by the amount of income that people earn and other indicators. Income and interest rate are the main factors affecting household financial savings (RBI, 2021). Investments are made to bring an increase in the money by earning a return on it. The amount of savings and investments by the households in the economy, eventually lead to economic growth and vice-versa (Jangili, 2011). The share of households in the savings of the country is almost 60% (RBI, 2020), making it a major sector for this dimension. The data regarding the annual savings of households in India is released by the National Statistical Office (RBI, 2020). The savings and investment are linked in the sense that the savings form the basis for investments (Nedorezova, 2020). Some of the schemes like the PMJDY have inculcated the habit of savings among Indian households (Dar & Ahmed, 2020). Steindl (2013). GDP is often used as an indicator of economic growth and shows the overall health of the economy (International Monetary Fund, 2020). The test results by Saxena & Fouzdar (2020) show a causality relationship between savings and investments and economic growth. They found that savings and investment cause economic growth. In developing countries, financial development leads to economic growth. Loan distribution by the banking sector has led to economic growth (Hanafi et al, 2014).

**Savings**

Savings are a part of income that is not used today so that it can be used in the future. The amount of savings determines the amount that people use for their personal consumption (Gup, 2011). They play an important role in the economic development of the country. Savings are calculated as the difference between income and consumption (Gup, 2011). However, there are other ways to measure savings too. The rate of savings varies across the countries. With the increasing access to financial services, even in the rural areas, the amount of savings across the countries has increased. The people now understand the importance of saving and the availability of money when required. Savings in India have always been at a significant level as people are concerned about their future. The two types of saving options available are bank deposits and non-bank deposits. Savings of households, particularly middle-class households play a relevant role in the economic development of the country (Rohatgi, Kavidayal, & Singh, 2019). The savings of the households are determined by numerous factors. Some of the factors include their demographics, attitude, and economic factors (DeVaney, Anong, & Whirl, 2007). Samantaraya & Patra (2014) suggested that factors like income, age of the person, their dependency on others, inflation and the interest rates have a significant impact on the amount of household savings.

**Investments**

With the increasing number of investment avenues, people are searching for all the possible options to invest their money in such a way that they earn maximum returns. Singh & Yadav (2016) identify that the investors should analyse the risks before investing and go through all the options available to them for making investment decisions. Investments are carried out to achieve future goals. By investing, a person can earn on their hard-earned money. The money that is not required shortly, can be invested to grow it and achieve certain goals. The amount of income earned, access to investment avenues, age and other demographics, and the amount of financial literacy affect the investment decisions of the individuals and households. Since households involve several people, the goals of investing will consider the needs of all of them. Everyone wants that their money is invested safely and securely (Ansari & Moid, 2013). For that, they need to analyse the environment to ensure that their investments are safe. All the available options can be analysed to select the most suitable one, keeping in view the risks and returns. The current market has a complex structure and gives investors numerous choices (Mwathi, 2017). The amount of investments by Indian households is now shifting towards mutual funds and investments over the recent few quarters (RBI, 2020).

**Borrowings**

People borrow money to meet their needs when there is a shortage. The shortage of money can occur due to various reasons, professional or personal. With the enhancement of the financial inclusion practices, more households have access to these services. With the expansion of the bank branches, the borrowings in the rural areas have increased (Burgess, Pande & Wong, 2005). The dependence on informal sources has reduced over the years. For borrowing, the households have different sources like financial corporations, non-financial corporations and the government. Household borrowings can have a macro-economic impact. Borrowings of households are affected by any emergency that might take place in the family, for instance, loss of crops, medical emergencies or when they are affected by a natural disaster (Household Finance Committee, 2017). However, due to the lack of proper records, the amount of borrowings by the households become difficult to track.

**Indian households**

Households refer to groups of people who live together and share a kitchen to cook meals together (Government of India, n.d.). They may or may not be related to each other. The number of members in the households can vary. Since India had a joint family system, the households consist of a large number of people. They even manage their business jointly. But with time, the families are now becoming nuclear and the number of joint families has reduced. There are also one-person households in India, but their number is less than those in other parts of the world. The households have varied levels of income which determines their standard of living and the amount spent to meet the expenses. Households are one of the most important sources of finance for the Indian economy (RBI, 2020). As per the data from Census (2001), there are 194 million households in India. The total number of people in them is 1028 million people. Out of these 194 million, 71.13% live in rural areas while the remaining live in urban areas (Census, 2001).

**Objectives**

- To identify the saving, investment and borrowing pattern of Indian households
- To analyse the correlation between savings, investments and borrowings of Indian households
- To identify the correlation of growth rate of saving, investment, borrowing of Indian households with the growth rate of GDP of the country.

**Review of Literature**

As per **Shruthi & Ramu (2018)**, saving is essential for every individual. These savings support an individual whenever there is a need for finance. There are different trends in saving patterns for every individual and every individual has a divergent behaviour. There are many effective benefits obtained from savings. These savings mainly depend on various aspects concerning an individual such as an individual's income and his status and position at the societal level. **Maitra (2017)** recognised that people from poor households use savings to protect themselves against any future contingencies. Saving money induces the capital formation and promotes overall economic growth. The authors adopted the ARDL model for this study. From this research, they did not find any significant relationship between savings and interest rates, while the dependency ratio was found to have a significant impact on the savings. **Lee & Hanna (2015)** identified the saving needs based on Maslow's need hierarchy theory. Their study found that retirement planning was the most common reason for saving, while the self-actualisation need was the last one. People often save money without knowing what they intend to achieve. Households need to be clear about the purpose for which they have been saving. **Umesha & Neelakanta (2019)** identified that in rural India, the number of people who invested in financial assets is high but the total amount invested by them is less. Only a small part of the income is saved. Several factors lead to changes in the financial behaviour of the households. In the study based in Mandya, the authors found that the income did not impact savings as even with an increase in the income, the amount of savings for the households remained the same. Furthermore, the source and the quality of information determines the behaviour of the individuals. The number of saving and investment options in rural areas are limited. Therefore, it becomes necessary to generate awareness among the rural population regarding safe saving and investment avenues. **Agrawal & Dhamija (2020)** analysed the relationship between investments and the GDP of the country. According to the authors, the investments are made out of savings. They applied the Regression, Correlation and Johansan co-integration tests and found a positive relationship between the variables. In a developing country, saving acts as an incentive for investment. The authors identified that the variables savings, investment and GDP are related to each other, however, the GDP and savings were found to have a negative correlation. As per a study by **Sarwary (2021)**, in which the data between the years 2017-18 and 2019-2020 were analysed, the Indian households have to plan their savings and the returns that can be earned through the investments. The government sector, public corporate sector and households are the major contributors to savings in India. Partnerships, trusts as well as sole proprietors are also part of the households. On the other hand, the investments with high risks give high returns and those with low risks give lesser returns, but Indians are risk-averse. According to **Household Finance Committee (2017)**, households take risks by engaging in risky borrowing behaviours. The existence of mortgage markets makes it easier for households to borrow which in turn allows effortless consumption.

## Research Gap

Studies from around the world show that there are a large number of factors that can influence the financial behaviours of Indian households. None of the previous works shows trends between the data of savings, investments and borrowings of the Indian households. Furthermore, the studies do not make a comparison with the GDP.

## Research Methodology

This paper aims to analyse the relationship between the Saving, Investment and borrowing behaviour of Indian households. It is a descriptive study. The data for household savings, investment, borrowings and GDP of the country has been taken from secondary sources like government departments data and the website of the Reserve Bank of India. The data pertains to 2018-19, 2019-20 and 2020-21 every quarter. The financial Assets and Liabilities of Households table by the RBI has been used as a source. The quarterly growth rates of these variables have been calculated. Correlation analysis shows the relationships between the variables and is used widely in business research (Kothari, 2004). It has been used to identify the relationship between the growth rates of these factors.

## Analysis and interpretation

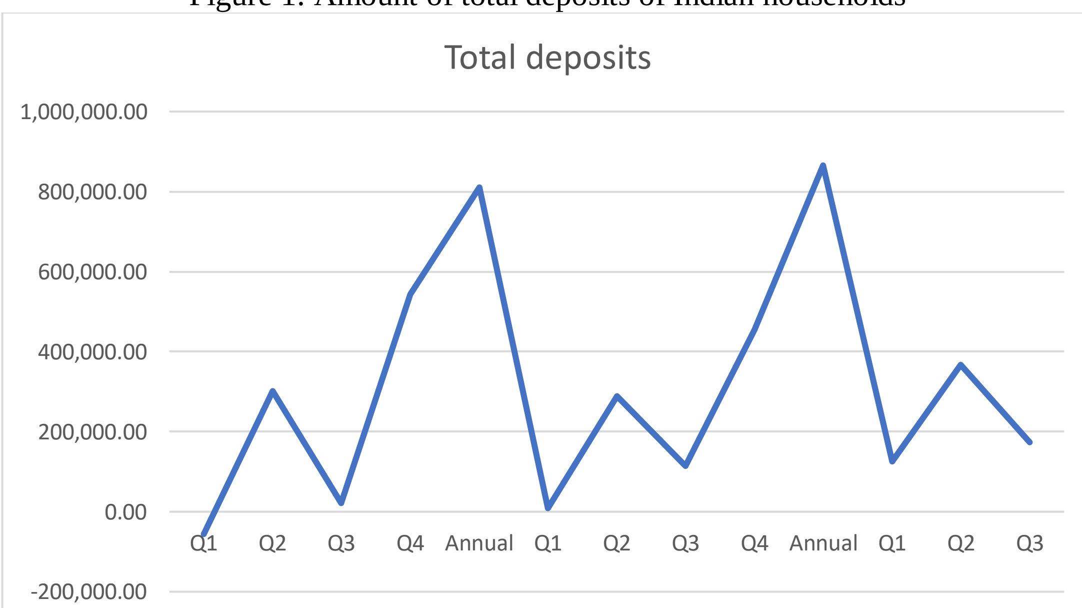
### Total deposits of the Indian households

Table 1: Total deposits of Indian households (₹ Crore)

| **Item** | | Total Bank Deposits (with commercial and co-operative banks) | Non-Bank Deposits | **Total Deposits (Bank + non-bank deposits)** |
|---|---|---|---|---|
| **2018-19** | **Q1** | -65,261.8 | 9,322.4 | **-55,939.4** |
| | **Q2** | 2,92,618.3 | 8,798.7 | **3,01,417.0** |
| | **Q3** | 13,121.4 | 8,763.3 | **21,884.7** |
| | **Q4** | 5,39,472.8 | 3,303.6 | **5,42,776.4** |
| | **Annual** | 7,79,950.6 | 30,188.1 | **8,10,138.7** |
| **2019-20** | **Q1** | -7,074.1 | 14,886.0 | **7,811.9** |
| | **Q2** | 2,78,084.6 | 10,690.4 | **2,88,775.0** |
| | **Q3** | 1,13,314.3 | 125.3 | **1,13,439.5** |
| | **Q4** | 4,52,959.0 | 2,505.1 | **4,55,464.1** |
| | **Annual** | 8,37,283.8 | 28,206.8 | **8,65,490.5** |
| **2020-21** | **Q1** | 1,13,327.7 | 12,521.0 | **1,25,848.6** |
| | **Q2** | 3,62,343.5 | 4,920.7 | **3,67,264.2** |
| | **Q3** | 1,65,665.4 | 7,376.6 | **1,73,042.0** |

Source: Flow of Financial Assets and Liabilities of Households, Reserve Bank of India

Figure 1: Amount of total deposits of Indian households




Source: Reserve Bank of India

The total deposits of the banks consist of the bank and the non-bank deposits. As per Figure 1, mixed trends are seen in the amount of savings during the quarters of the years under consideration. However, annually, the amount of savings by the Indian households have increased between 2018-19 and 2019-20 though by a small proportion. During this period, the total bank deposits were found to be higher than the non-bank deposits. The data shows that the amount of savings in India are high as compared to many of the developing countries.

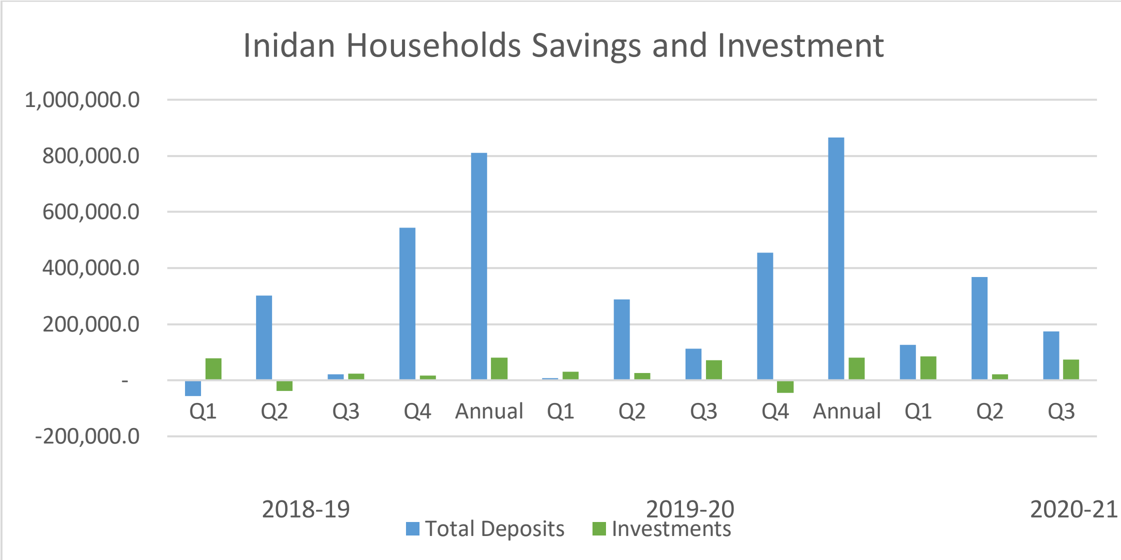
**Investments of Indian households**

Table 2: Investments of Indian households (₹ Crore)

| **Item** | | **Mutual Fund Investments** | **Percentage of total investments** | **Investment in Equity** | **Percentage of total investments** | **Investments** |
|---|---|---|---|---|---|---|
| **2018-19** | **Q1** | 69,897.4 | 89.2 | 2,001.2 | 2.552605915 | **78,397.2** |
| | **Q2** | -46,008.0 | 121.5 | 3,054.4 | -8.068388756 | **-37,856.9** |
| | **Q3** | 21,369.6 | 94.3 | 471.0 | 2.077948188 | **22,664.7** |
| | **Q4** | 12,342.5 | 73.6 | 855.8 | 5.101607373 | **16,774.9** |
| | **Annual** | **57,601.4** | 72.0 | **6,382.4** | 7.979967676 | **79,979.8** |
| **2019-20** | **Q1** | 8,578.0 | 28.9 | 18,644.7 | 62.7702159 | **29,703.1** |
| | **Q2** | 20,198.4 | 82.0 | 2,172.4 | 8.821033398 | **24,627.5** |
| | **Q3** | 67,521.1 | 95.3 | 936.2 | 1.321409315 | **70,848.6** |
| | **Q4** | -51,926.1 | 115.8 | 4,980.4 | -11.10692343 | **-44,840.5** |
| | **Annual** | **44,371.5** | 55.2 | **26,733.7** | 33.27628313 | **80,338.6** |
| **2020-21** | **Q1** | 66,195.3 | 77.1 | 18,599.2 | 21.65389304 | **85,893.1** |
| | **Q2** | 11,909.0 | 56.3 | 8,291.5 | 39.23261822 | **21,134.2** |
| | **Q3** | 65,312.7 | 90.0 | 5,307.1 | 7.313481889 | **72,565.5** |

Source: Flow of Financial Assets and Liabilities of Households, Reserve Bank of India

Figure 2: Total deposits (savings) and investments of Indian households




A correlation of -0.614 was found between the household's total deposits and investments during the period of the study. This shows a negative correlation between the two aspects. The amount of deposits has increased annually, while they do not show a trend during the quarters of the years. As compared to savings, the amount of investments is very less. The higher-income households prefer investing in shares while the low-income households prefer to keep their money in the banks (Das, 2012). Mutual funds have a higher percentage of total investments than equity. This shows that Indian households prefer investing more in mutual funds than in equity. A shift was observed as the mutual fund investments reduced from 72% to 55% while the percentage of equity investments increased from 7% in 2018-19 to 33% in the year 2019-20.

Table: Descriptive statistic: Mean and Standard Deviation

| | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|
| Total Deposits | -55939 | 542776 | 212889.45 | 193638.311 |
| Investments | -44840 | 85893 | 30901.04 | 44135.870 |
| Borrowings | -77678.40 | 294277.98 | 169829.4636 | 111688.00590 |

The mean i.e., the average amount of total deposits is 212889.45 crore, while the average amount of investments is 30901.04 crore for the 11 quarters. The mean amount of borrowings is 169829.4636, which is higher than the amount of investments. This shows that Indian households prefer to keep their money in the form of bank and non-bank deposits rather than investing it. The standard deviation of the data is high, showing that the data deviates from the mean.

**Borrowings of Indian households**

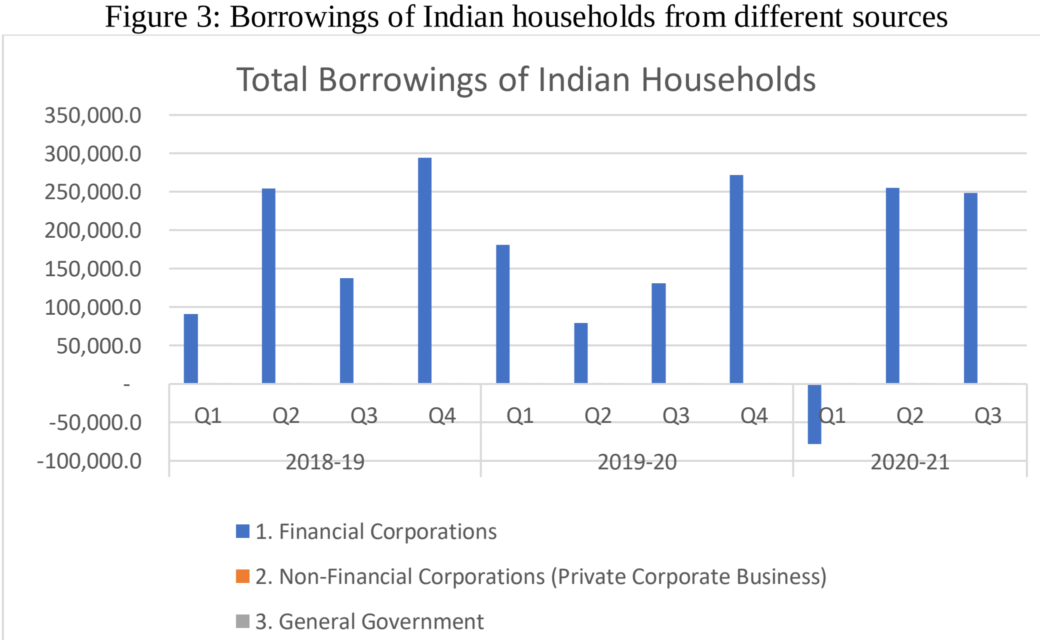
Table 3: Borrowing of Indian households (₹ Crore)

| **Item** | **1. Financial Corporations** | **2. Non-Financial Corporations** | **3. General Government** |
|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| | | | **(Private Corporate Business)** | |
| **2018-19** | **Q1** | 91,217.9 | 49.0 | 137.7 |
| | **Q2** | 2,54,331.7 | 49.0 | 137.7 |
| | **Q3** | 1,37,973.0 | 49.0 | 137.7 |
| | **Q4** | 2,94,091.3 | 49.0 | 137.7 |
| **2019-20** | **Q1** | 1,81,011.8 | 49.0 | 29.9 |
| | **Q2** | 79,760.1 | 49.0 | 29.9 |
| | **Q3** | 1,30,762.0 | 49.0 | 29.9 |
| | **Q4** | 2,72,258.2 | 49.0 | 29.9 |
| **2020-21** | **Q1** | - 77,757.5 | 49.2 | 29.9 |
| | **Q2** | 2,54,836.2 | 49.2 | 29.9 |
| | **Q3** | 2,48,339.7 | 49.2 | 29.9 |

Source: Flow of Financial Assets and Liabilities of Households, Reserve Bank of India

Figure 3: Borrowings of Indian households from different sources



The above table and graph show the amount of borrowings of the Indian households from various sources. There are three major sources of borrowings- Financial corporations, non-finance corporations and the central government. The data clearly shows that the borrowings were highest from the financial corporations, much higher than any other sources. But they were negative during quarter 1 of 2020-21. Financial corporations include banks and other financial institutions. The reason for this might be accredited to the spread of financial facilities and banking institutions. The borrowings from non-financial corporations are almost the same for all quarters. Borrowings from the central government have reduced drastically by 78.28% between 2018-19 quarter 1 and 2020-21 quarter 3.

**GDP of India**

Table 4: Quarter-wise GDP growth of India

| Item | | GDP growth at 2011-12 prices | GDP growth at current prices |
|---|---|---|---|
| 2018-19 | **Q1** | 7.56 | 13.89 |
| | **Q2** | 6.49 | 11.93 |
| | **Q3** | 6.33 | 12.18 |
| | **Q4** | 5.84 | 4.71 |
| | **Annual** | 6.53 | 10.51 |
| 2019-20 | **Q1** | 5.39 | 9.61 |
| | **Q2** | 4.61 | 6.23 |
| | **Q3** | 3.28 | 6.48 |
| | **Q4** | 3.01 | 8.76 |
| | **Annual** | 4.04 | 7.75 |
| 2020-21 | **Q1** | -24.43 | -22.29 |
| | **Q2** | -7.44 | -4.39 |
| | **Q3** | 0.46 | 5.25 |

Source: Ministry of Statistics and Programme Implementation

Table: Correlations between the variables

| **Correlations** | | | | | |
|---|---|---|---|---|---|
| | | GDP | Growth of Total Deposits | Growth of investments | Growth in borrowings |
| GDP | Pearson Correlation | 1 | .186 | -.255 | .799** |
| | Sig. (2-tailed) | | .606 | .476 | .006 |
| | N | 11 | 10 | 10 | 10 |
| Growth of Total Deposits | Pearson Correlation | .186 | 1 | .057 | .023 |
| | Sig. (2-tailed) | .606 | | .875 | .951 |
| | N | 10 | 10 | 10 | 10 |

| | | | | | |
|---|---|---|---|---|---|
| Growth of investments | Pearson Correlation | -.255 | .057 | 1 | .119 |
| | Sig. (2-tailed) | .476 | .875 | | .743 |
| | N | 10 | 10 | 10 | 10 |
| Growth in borrowings | Pearson Correlation | .799** | .023 | .119 | 1 |
| | Sig. (2-tailed) | .006 | .951 | .743 | |
| | N | 10 | 10 | 10 | 10 |
| **. Correlation is significant at the 0.01 level (2-tailed). | | | | | |

The growth rates of GDP at current prices, Time Deposits, Investments and Borrowings between the quarters has been considered. The correlation of GDP growth with the growth rate of borrowings and savings was found to be positive. It was negative with the growth rate of investments. The highest significant correlation was found between GDP and borrowings growth. Since correlation does not show a causal relationship (Ksir & Hart, 2016), it cannot be said what is the cause and what is the effect. Similarly, the correlation between borrowings and investments was also found to be positive.
The correlation between GDP growth at 2011-12 prices and the amount of investments were found to be -0.26847. The current data might not give a true picture as an extreme event like the pandemic hit the economy during this time. It is an event that harmed the economy as a whole, and hence the impacts can be seen from the selected economic indicators. The GDP became negative during the year 2019-20.

**Some important findings**

The important findings from the RBI data on the flow of financial assets and liabilities of the Indian households are as follows:

- In the year 2019-20, the net financial assets of the households were 8% of the GDP. In the year 2018-19, they were 7.2%. this is an increase of 11.11%.
- Between the two years under consideration, the amount in the life insurance funds was reduced by 4.6%. on the other hand, the amount of provident and pension funds increased by 10.33%.
- The amount invested by households in the mutual funds reduced and that in the equity rather increased. While there was a negligible increase in the amount of total investments by the households. This shows that the investment choices are shifting more towards equity, which is considered a riskier alternative than mutual funds.
- The deposits in the commercial banks are 89.94% of the total amount of deposits during the year 2018-19. It was 88.82% in the year 2019-20. This shows that a very large percentage of total deposits are with commercial banks.

**Limitations of the study**

The current study is related to the latest data. However, this is very short time duration. The data between the years 2018-19 and 2019-20 have been taken for this study. During this time, the Covid 19 pandemic was into effect and hence the savings, investments and borrowings have shown large changes. The study is based on the formally available data. There also exists an informal sector where the money can be saved, invested and borrowed from. The informal financial sector also plays a role in the economic development of the country but, it is neglected (Rahman, 1992). The savings, investment and borrowing data about it is not available and hence, not taken into consideration.

**Conclusion**

The amount of savings, investments and borrowings show mixed trends during the quarter. The amount has however been increasing between the years. The borrowings of the Indian households have been highest from the financial institutions, particularly the commercial banks. For analysis, GDP has been used as an indicator of economic growth (Humbatova et al, 2020). The relationship of GDP with growth in investment is negative. However, it was found to be positive with the amount of borrowings and the growth of deposits, showing that the GDP and these two will move in the same direction. The study period is related to 11 quarters between 2018-19 and 2020-21. This is the time when the Covid 19 pandemic occurred and hit the economies around the world. Hence, the economic trends saw unprecedented changes and unrealistic fluctuations, out of which, only some were positive. Apart from the savings through formal products, the households also use informal products. However, the data related to the informal sector is not available, and hence, not considered. the amount of education had an insignificant impact on the mode of saving using a formal or an informal method. Equity was the most preferred investment option for Indian households during the year 2019-2020. While commercial banks held the maximum part of the deposits. This study majorly found a negative correlation between investments and GDP. A significant and positive relationship was observed between the amount of borrowings and the GDP of the country for the given period under consideration. The relation between borrowings and the amount of investments is positive.

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