Analyzing the Efficacy of Monetary Policy in India: A 15-Year Evaluation

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Abstract: *This paper presents a comprehensive analysis of the effectiveness of monetary policy in India over a period of 15 years. Monetary policy plays a crucial role in shaping economic conditions and fostering sustainable growth. By examining key indicators such as inflation, interest rates, and economic performance, this study evaluates the impact of monetary policy measures implemented in India between 2007 and 2021. The findings shed light on the strengths and limitations of the monetary policy framework and provide insights into its effectiveness in achieving macroeconomic stability and promoting economic growth. The research also explores potential areas of improvement and suggests policy recommendations to enhance the efficacy of monetary policy in India.*

Keywords: Efficacy, India, Monetary policy

I. INTRODUCTION

Monetary policy is how central bank manages liquidity to create economic growth. Liquidity is how much there is in the money supply that includes credit (loans, bonds, and mortgages), cash, cheques and money market mutual funds. There are basically two types of monetary policy i.e. expansionary and contractionary monetary policy. Expansionary monetary policy refers to increase the supply of money to reduce unemployment and avoid recession. On the other hand, contractionary monetary policy refers to decrease the supply of money in order to reduce inflation.

The monetary policy of any country refers to the regulatory policy, whereby the monetary authority maintains its control over the supply of money for the realization of general economic objectives. Monetary policy can be broadly defined as "the deliberate effort by the Central Bank to influence economic activity by variations in the money supply, in availability of credit or in the interest rates consistent with specific national objective." In the context of developing economies like India, monetary policy acquires a wider role and it should be designed to meet the requirements of the economy. It stimulates or discourages spending on goods and services and, thus, influences economic activities and prices by regulating the supply of money, and the cost and availability of credit to producers and consumers in the economy. Households and business units make spending and investment decisions based upon current and expected future monetary policy actions. The various sectors of the economy respond in different ways, depending on the extent to which they are borrowers or lenders and the importance and relative availability of credit to the sector. By affecting the demand side of the economy, monetary policy tries to damp or perhaps even eliminate business.

India's monetary policy since the first plan period was one of 'controlled expansions'- that is, a policy of adequate financing of economic growth ensuring reasonable price stability. Thus, RBI helped the economy to expand via expansion of money and credit and attempted to check rise in prices through monetary and other control measures. The objectives of monetary policy are to achieve price stability by controlling inflation and deflation, to promote and encourage economic growth in the economy, to ensure the economic stability at full employment or potential level of output. Issues connected with monetary policy are: objectives or goals of the policy, instruments of monetary control, its efficacy, implementation, intermediate target of the policy etc.

1.1 DEFINITIONS

Monetary Policy has been defined differently by various economists.

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According to **Paul Einzig**, *"Monetary Policy includes all monetary decisions and measures irrespective of whether their aims are monetary or non-monetary and all non-monetary decisions and measures that aim at affecting the monetary system".*

Harry Johnson defines monetary policy as, *"policy employing central banks control of the supply of money as an instrument for achieving the objectives of general economic policy".*

According to **D. Jha**, *"Monetary Policy is one important segment of an overall financial policy which has to be operated in the overall milieu prevailing in the country".*

Reserve Bank of India considers monetary policy for the use of instruments within the control of central bank to influence the level of aggregate demand for goods and services. Central banking instruments of control operate through varying the cost and availability of credit, those producing desired changes in the asset pattern of credit institutions primarily the commercial banks. Thus, RBI is relatively more explicit in defining the monetary policy.

II. HISTORY OF MONETARY POLICY

Monetary Policy is as old as monetary system or as money itself. It has a long and chequered history since the days of mercantilism. Evidence proves the existence of monetary management in Greece. But before 1914, the whole thinking about monetary policy was based upon the idea of automatic gold exchange system. After World War I, the gold exchange standard collapsed and it is then the modern genesis of monetary policy took place. The 1920s inflation in Germany, and the two international conferences, one in Brussels in 1920 and the other one in Geneva in 1922, compelled the thinking about a new monetary system. The depression of the 1930s provided further stimulus to the thinking of reforms in the field of monetary management. The horizon of monetary policy has greatly widened in the recent past.

The origin of monetary management in India can be traced back to time immemorial. The reference about the Panis, the moneylenders of Southern India, in Rig Veda is an evidence of the developed state of banking or credit system in the vedic age, although the date of the origin of the coins and credit instruments is lost in the midst of antiquity. In the Mauryan era, the system of currency, credit and coinage was fully developed. Kautilya devotes a chapter in his classical book the Arthashastra on rules for mining and credit.

The history of monetary management and policy in terms of central banking practices in India can be traced to as far back as January 1773, when Lord Hastings, the then Governor, and later on, the first Governor General of British India, placed before the Board of Revenue his plan for General Bank in Bengal and Bihar. The Royal Commission on Indian Finance and Currency also known as the Chamberlain Commission was set up in 1913 with J M Keynes as one of the members who prepared a blueprint for the establishment of an Imperial Bank of India. The bank came into existence on January 1921 by amalgamating the three presidency banks as a commercial bank with some of the functions of the central bank also. In August 1925, the Royal Commission on Indian Currency and Finance also referred the Hilton Young Commission was appointed. The Commission observed that India was the only big trading country in which the currency and note issues were under direct government control. It recommended several measures to reform the monetary system. With the recommendations of the Young Commission (1925) and the Central Banking Enquiry Committee (1931), the Reserve Bank of India was established through Reserve Bank of India Act, 1934.

However, with a strong background of monetary changes, the monetary policy assumed importance since the early seventies, when strong inflationary pressures began building up in the economy. In December 1982, a committee under the chairmanship of Sukhamoy Chakravarty was appointed to undertake a review of the working of the monetary system and suggest measures for improving the effectiveness of monetary policy as an instrument for promoting the basic objectives of planned economic development. The committee made a detailed study about monetary management and made path-breaking recommendations. There were further many committees and working groups constituted to study the functioning of the financial sector and to recommend changes. The prominent among them were Narasimham Committee I and II, Tarapore Committee on Capital Account Convertibility, the Verma Committee on Restructuring of Weak Banks and the Advisory Group on Transparency in Monetary and Financial Policies. The committees have changed the way monetary policy functions.

Monetary policy of India is formulated and executed by reserve bank of India to achieve specific objectives. The monetary policy is defined as discretionary act undertaken by the authorities to influence

- Supply of money
- Cost of money or rate of interest
- The availability of money for achieving specific objectives

Monetary policy in India underwent significant changes in the 1990's as the Indian economy becameincreasingly open and financial sector reforms were put in place. In the 1980s monetary policy was geared towards controlling the quantum, cost and directions 'f credit flow in the economy. The quantityvariables dominated as the transmission Channel of monetary policy. Reforms during the 1990s enhanced the sensitivity of price signals from the central bank, making interest rates the increasingly dominant transmission channel of monetary policy in India. The openness of the economy, as measured by the ratio of merchandise trade (exports Plus imports) to GDP rose from about 18% in 1993-94 to about 26% by 2003-04. Including services trade plus invisibles, external transactions as a proportion of GDP rose from 25% to 40% during the same period. Along with the increase in trade asa Percentage of GDP, capital inflows have increased even more sharply, foreign currency assets of thereserve bank of India (RBI) rose from USD15.1 billion in the march 1994 to over USD140 billion by March 15, 2005. These changes have affected liquidity and monetary management. Monetary policy has responded continuously to changes in Domestics and international macro-economic conditions. In this process, the current monetary operating framework has relied more on outright open market operations and daily repo and reserve repo operations than on the use of direct instruments. Rate is now gradually emerging as the principal operating target. The Monetary and Credit Policy is the policy statement, traditionally announced twice a year, through which the Reserve Bank of India seeks to ensure price stability for the economy. These factors include- money supply, interest rates and the inflation.

III.INSTRUMENTS OF MONETARY POLICY

Quantitative Credit Control Methods: They are used to maintain proper quantity of credit ormoney supply in market. Some of the important credit control methods are-

- Bank Rate Policy
- Open Market Operations
- Cash Reserve Ratio
- Statutory Liquidity Ratio
- Repo & Reverse Repo Rate

Qualitative Credit Control Methods: Under Selective Credit Control Credit is provided toselected borrowers for selected purposes. These are:

- Ceiling on Credit
- Margin Requirements
- Discriminatory Interest Rate(DIR)
- Direct Action
- Moral Suasion

Some of the instruments of monetary policy are explained as below:

- **Cash reserve Ratio (CRR)** is the amount of funds that the banks keep with the RBI. If the central bank decides to increase the CRR, the available amount with the banks comes down. The RBI uses the CRR to drain out excessive money from the system. Commercial banks are required to maintain with the RBI an average cash balance, the amount of which shall not be less than 3% of the total of the Net Demand and Time Liabilities (NDTL), on a fortnightly basis and the RBI is empowered to increase the rate of CRR to such higher rate not exceeding20% of the NDTL.
- **Repo Rate** is the rate at which the RBI lends money to commercial banks is called repo rate. It is an instrument of monetary policy. Whenever banks have any shortage of funds they can borrow from the RBI. A reduction in the repo rate helps banks get money at a cheaper rate andvice versa. The repo rate in India is like the discount rate in the US.

- **Reverse Repo rate** is the rate at which the RBI borrows money from commercial banks. Banks are always happy to lend money to the RBI since their money are in safe hands with a good interest. An increase in reverse repo rate can prompt banks to park more funds with the RBI to earn higher returns on idle cash. It is also a tool which can be used by the RBI to drain excess money out of the banking system. Open market operations refer to sale and purchase of securities in the money market by the central bank. When prices are rising and there is need to control them, the central bank sells securities. The reserves of commercial banks are reduced and they are not able to lend more to the business community.

- **Bank rate** is the interest rate at which a nation's central bank lends money to domestic banks, often in the form of very short-term loans. Managing the bank rate is method by which central banks affect economic activity. Lower bank rates can help to expand the economy by lowering the cost of funds for borrowers, and higher bank rates help to reign in the economy when inflation is higher than desired.

- **Statutory Liquidity Ratio (SLR)** refers to the proportion of deposits the commercial bank is required to maintain with them in the form of liquid assets in addition to the cash reserve ratio.

- **Change in margin requirements of loans:** the margin requirements of loans refers to the difference between the current value of the security offered for loans and the value of loans granted.

- **Rationing of credit:** Rationing of credit refers to fixation of credit quotas for different business activities. Rationing of credit is introduced when the flow of credit is to be checked particularly for speculative activities in the economy. The central bank fixes quotas for different business activities. The commercial bank cannot exceed the quotas limits while granting loans.

- **Direct action:** The central bank may initiate direct action against the members in case these do not comply with its directives.

IV. NEED AND SIGNIFICANCE OF THE STUDY

The monetary policy strategy of a Central bank depends on many factors that are unique to the country and the context. Given the policy objectives, any good strategy depends on the macro-economic and the institutional structure of the economy. An important factor in this context is the degree of openness in the economy. The second factor is the stage of development of markets, institutions, and technological development. In such a set-up, where these conditions are satisfactory, it is possible for the Central bank to signal its intention with one single instrument or a combination of instruments. It is important to recognize that all the objectives cannot be effectively pursued by any single arm of economic policy. Hence, there is always the problem of assigning to each instrument the most appropriate target or objective. It is clear from both the theoretical literature and the empirical findings that, among various policy objectives, monetary policy is best suited to achieve the goal of price stability in the economy.

4.1 OBJECTIVES OF THE STUDY

- To show the trend of inflation rate and monetary policy instruments.
- To show the trend of unemployment rate and monetary policy instruments.
- To show the trend of economic growth rate and monetary policy instruments.

V. ANALYSIS AND INTERPRETATION

5.1 INFLATION RATE

Inflation is defined as a sustained increase in the general level of prices for goods and services in a county, and is measured as an annual percentage change. Under conditions of inflation, the prices of things rise over time. Put differently, as inflation rises, every dollar you own buys a smaller percentage of a good or service. When prices rise, and alternatively when the value of money falls you have inflation.

The value of a dollar (or any unit of money) is expressed in terms of its purchasing power, which is the amount of real, tangible goods or actual services that money can buy at a moment in time. When inflation goes up, there is a decline in the purchasing power of money. For example, if the inflation rate is 2% annually, then theoretically a $1 pack of gum will cost $1.02 in a year. After inflation, your dollar does not go as far as it did in the past. This why a pack of gum cost

just \$0.05 in the 1940's – the price has risen, or from a different perspective, the value of the dollar has declined. In recent years,most developed countries have attempted to sustain an inflation rate of 2-3% by using monetary policytools used by central banks. This general form of monetary policy is known as inflation targeting.

Year	Inflation Rate	CRR	Bank Rate	Repo Rate	Reverse Repo Rate
2007	6.4	6.22	6	7.5	6
2008	8.3	7.57	6	7.89	5.5
2009	10.9	5.25	6	5.44	3.94
2010	12	5.56	6	5.5	4.18
2011	8.9	6	6	7.37	6.37
2012	9.5	5	8.16	8.25	7.25
2013	10	4.125	9	7.62	6.62
2014	6.7	4	8.875	7.87	6.87
2015	4.9	4	8.45	7.45	6.45
2016	4.9	4	7.17	6.5	5.83
2017	3.3	4	6.5	6.125	5.83
2018	3.9	4	6.5	6.25	6
2019	3.7	4	6.09	5.84	5.59
2020	6.6	3.5	4.77	4.49	4
2021	5.1	3.5	4.25	4	3.35

Source: Handbook of statistics on Indian Economy 2020-2021and The World Bank

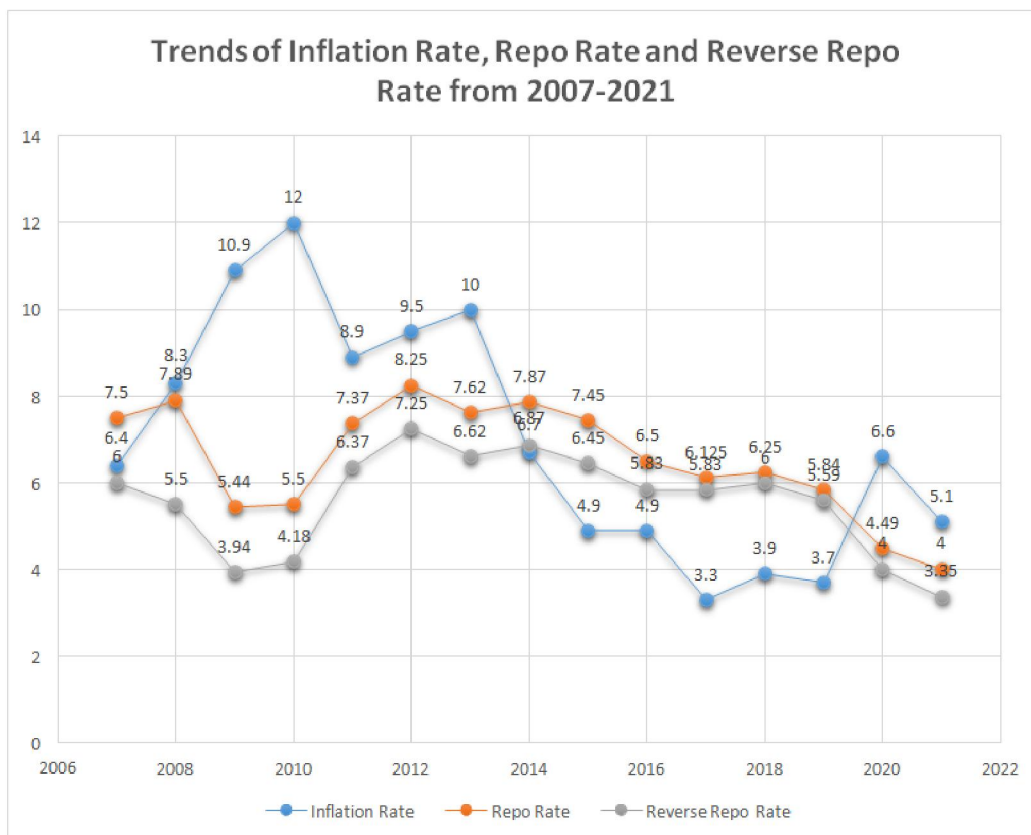**Figure 1:**
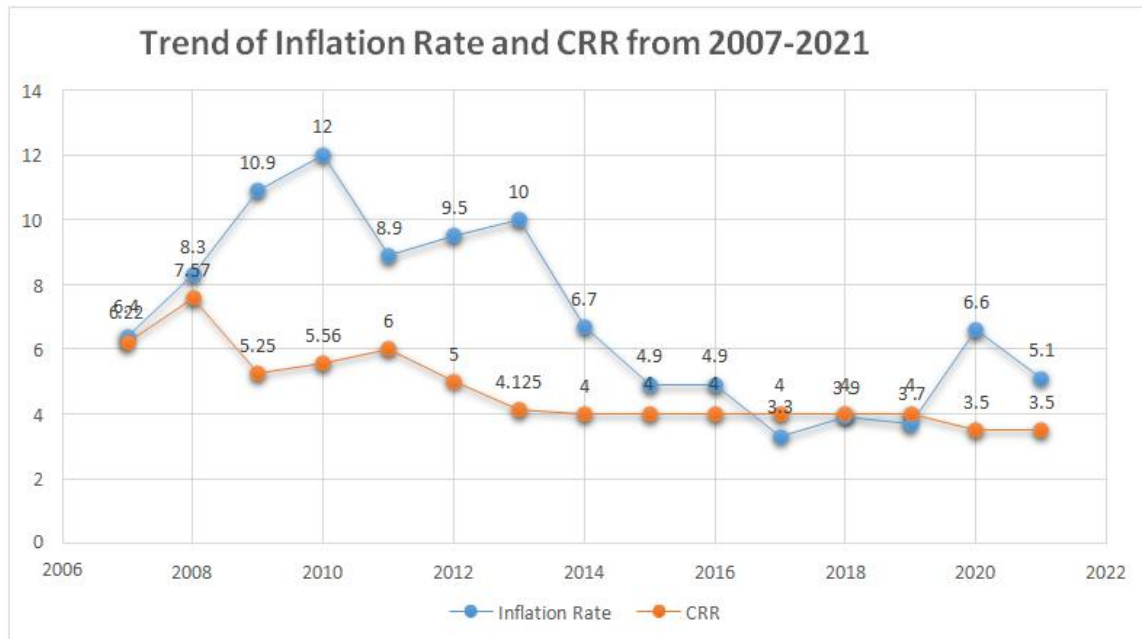
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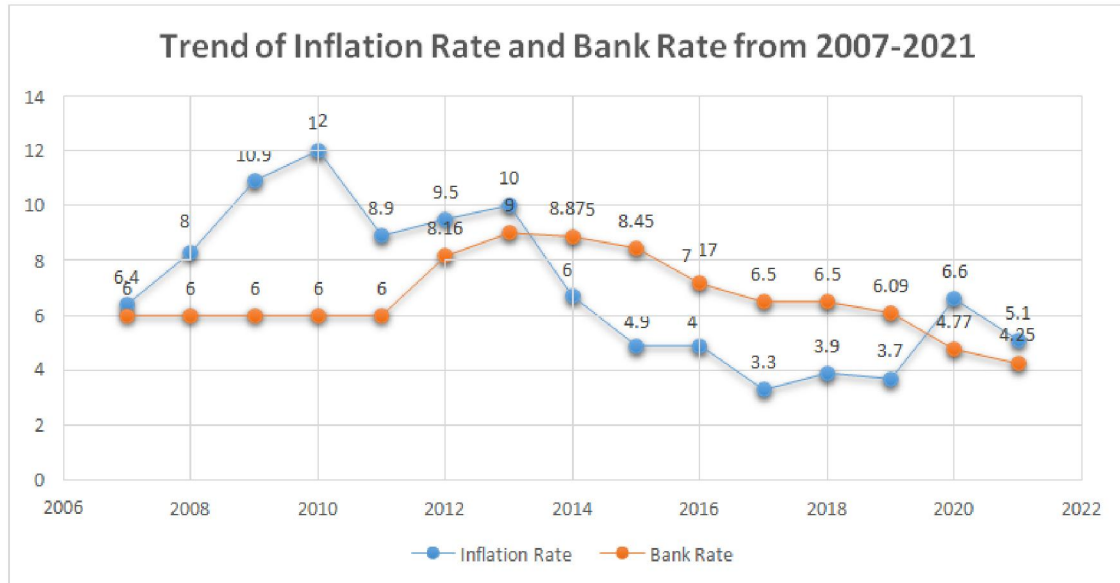
Figure 3:

INTERPRETATION

From the above line charts, it can be interpreted that from 2007 to 2010 inflation is increasing and in 2010 it is maximum till now i.e. 12% after which it starts decreasing. So, during 2010 monetary authority was concerned to combat the inflation. The monetary authority made several changes in themonetary policy in terms of changes in CRR, repo rate and reverse repo rate for combating inflation. From figure 1, it is analysed that there is no significant relationship between Inflation and CRR as when CRR increases then also inflation is increasing. So to combat inflation

repo rate and reverse repo rate increases as shown in figure 3. Thus, it can be concluded that there exists significant variation between changes in repo & reverse repo rate and inflation because when repo rate increases, commercial banks will take less loan from RBI which will reduce the money supply in the economy and leads to reduction in inflation

UNEMPLOYMENT RATE

Unemployment is a phenomenon that occurs when a person who is actively searching for employment is unable to find work. Unemployment is often used as a measure of the health of the economy. The most frequently measure of unemployment is the unemployment rate, which is the number of unemployed people divided by the number of people in the labour force. During periods of recession, an economy usually experiences a relatively high unemployment rate. Unemployment casts some short-term ripples throughout the economy by reducing an individual's contribution in terms of services and taxes. The unemployed also does not possess the power of purchase, thus in effect contributing to bringing down demand of goods in the market and creating more unemployment. This vicious cycle creates a cascading effect throughout the economy and trickles down to different social strata.

Year	Unemployment Rate	CRR	Bank Rate	Repo Rate	Reverse Repo Rate
2007	5.6	6.22	6	7.5	6
2008	5.4	7.57	6	7.89	5.5
2009	5.5	5.25	6	5.44	3.94
2010	5.5	5.56	6	5.5	4.18
2011	5.4	6	6	7.37	6.37
2012	5.4	5	8.16	8.25	7.25
2013	5.4	4.125	9	7.62	6.62
2014	5.4	4	8.875	7.87	6.87
2015	5.4	4	8.45	7.45	6.45
2016	5.4	4	7.17	6.5	5.83
2017	5.4	4	6.5	6.125	5.83
2018	5.3	4	6.5	6.25	6
2019	5.3	4	6.09	5.84	5.59
2020	8	3.5	4.77	4.49	4
2021	6	3.5	4.25	4	3.35

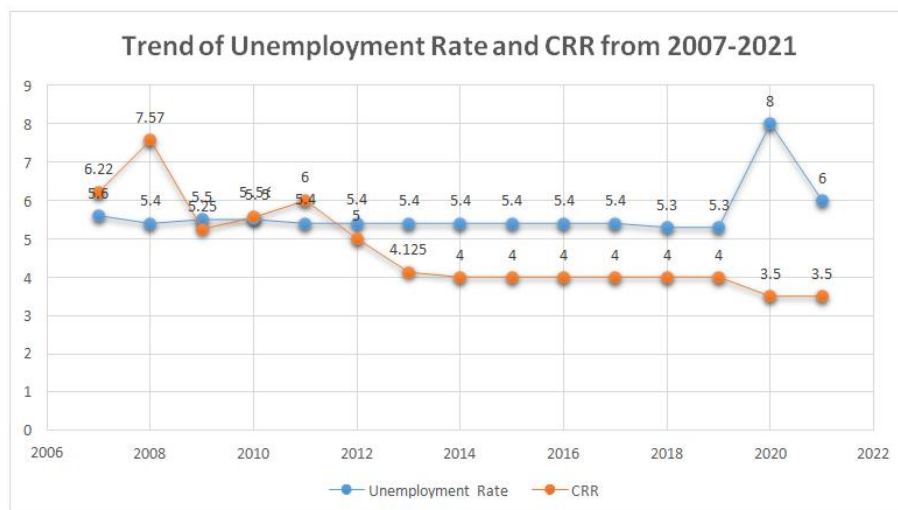*Source: Handbook of statistics on Indian Economy 2020-2021 and The World Bank*

Figure 4:

Trend of Unemployment Rate and CRR from 2007-2021
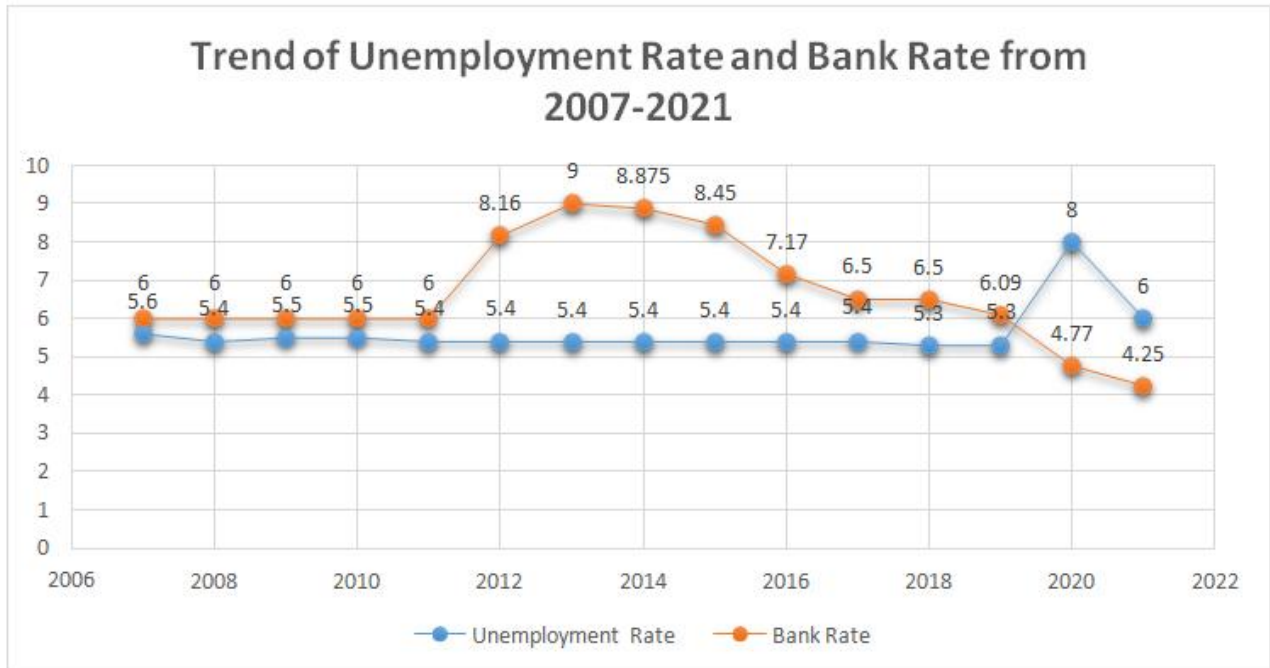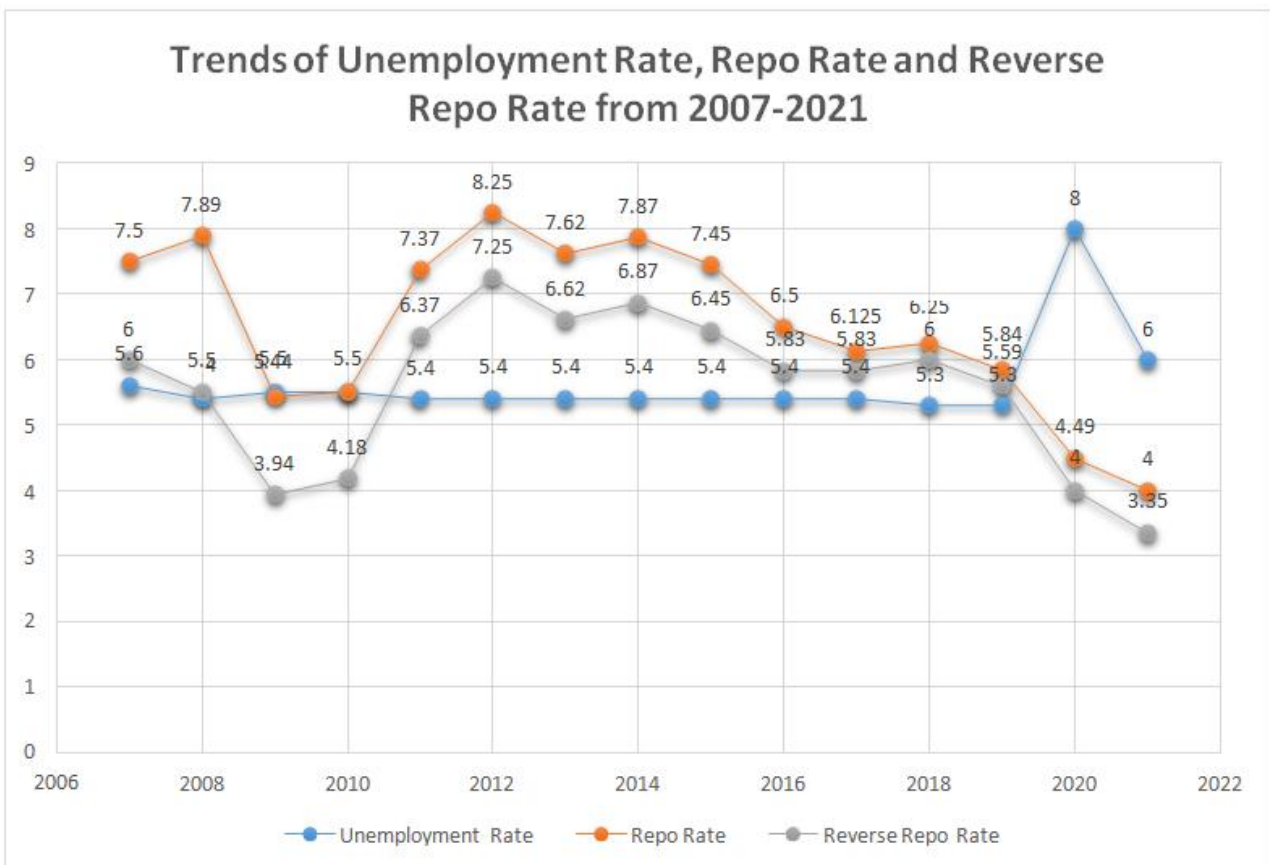
Figure 5:

Figure 6:

INTERPRETATION

The above line charts shows the trend of unemployment rates with CRR, repo rate, reverse repo rate and bank rate and it can be interpreted that unemployment rate is very little affected by changes in above mentioned rates as the CRR was changed, the unemployment rate has only a slight increase or decrease. So, it is analysed that there is no significant relationship between unemployment rate and CRR. With the decrease in CRR, the unemployment rate should also be decreased, but figure 4 does not depict it they have to. From figure 5 and 6, unemployment rates changes very slightly with the change in repo, reverse repo, and bank rates.

That sudden hike in the unemployment rate in the year 2020 is seen because of COVID-19. There was a huge unemployment that was administered at that time. Figure 4, 5 and 6 shows that to tackle the unemployment situation during COVID times these measure were used as CRR, repo rate, reverse repo rate and bank rates were decreased and it impacted a decrease in the unemployment rate.

So, it can be said that monetary policy measures are used to tackle unemployment situation when there is a huge unemployment crises

ECONOMIC GROWTH RATE

Economic growth is the increase in the inflation-adjusted market value of the goods and services produced by an economy over time. It is conventionally measured as the percent rate of increase in real gross domestic product, or real GDP. Growth is usually calculated in real terms - i.e., inflation- adjusted terms – to eliminate the distorting effect of inflation on the price of goods produced. Measurement of economic growth uses national income accounting. Since economic growth is measured as the annual percent change of gross domestic product (GDP), it has all the advantages and drawbacks of that measure. The economic growth rates of nations are commonly compared using the ratio of the GDP to population or per-capita income.

The "rate of economic growth" refers to the geometric annual rate of growth in GDP between the first and the last year over a period. Implicitly, this growth rate is the trend in the average level of GDP over the period, which implicitly ignores the fluctuations in the GDP around this trend. An increase in economic growth caused by more efficient use of inputs (such as labour productivity, physical capital, energy or materials) is referred to as intensive growth. GDP growth caused only by increases in the amount of inputs available for use (increased population, new territory) is called extensive growth

Year	Economic Growth Rate	CRR	Bank Rate	Repo Rate	Reverse Repo Rate
2007	7.7	6.22	6	7.5	6
2008	3.1	7.57	6	7.89	5.5
2009	7.9	5.25	6	5.44	3.94
2010	8.5	5.56	6	5.5	4.18
2011	5.2	6	6	7.37	6.37
2012	5.5	5	8.16	8.25	7.25
2013	6.4	4.125	9	7.62	6.62
2014	7.4	4	8.875	7.87	6.87
2015	8.0	4	8.45	7.45	6.45
2016	8.3	4	7.17	6.5	5.83
2017	6.8	4	6.5	6.125	5.83
2018	6.5	4	6.5	6.25	6
2019	3.7	4	6.09	5.84	5.59
2020	-6.6	3.5	4.77	4.49	4
2021	8.7	3.5	4.25	4	3.35

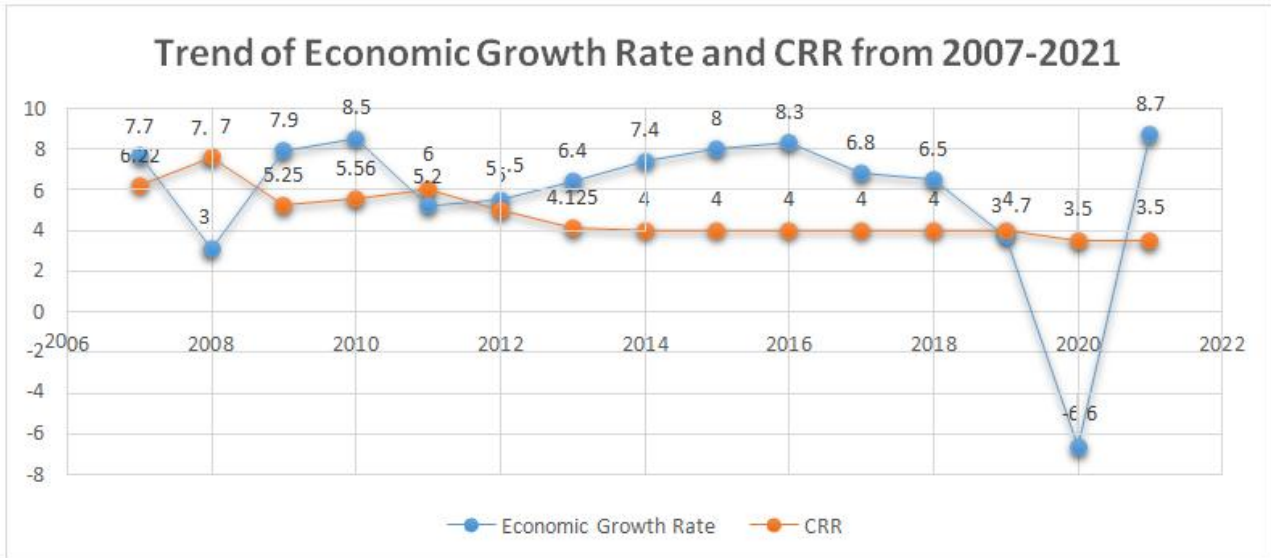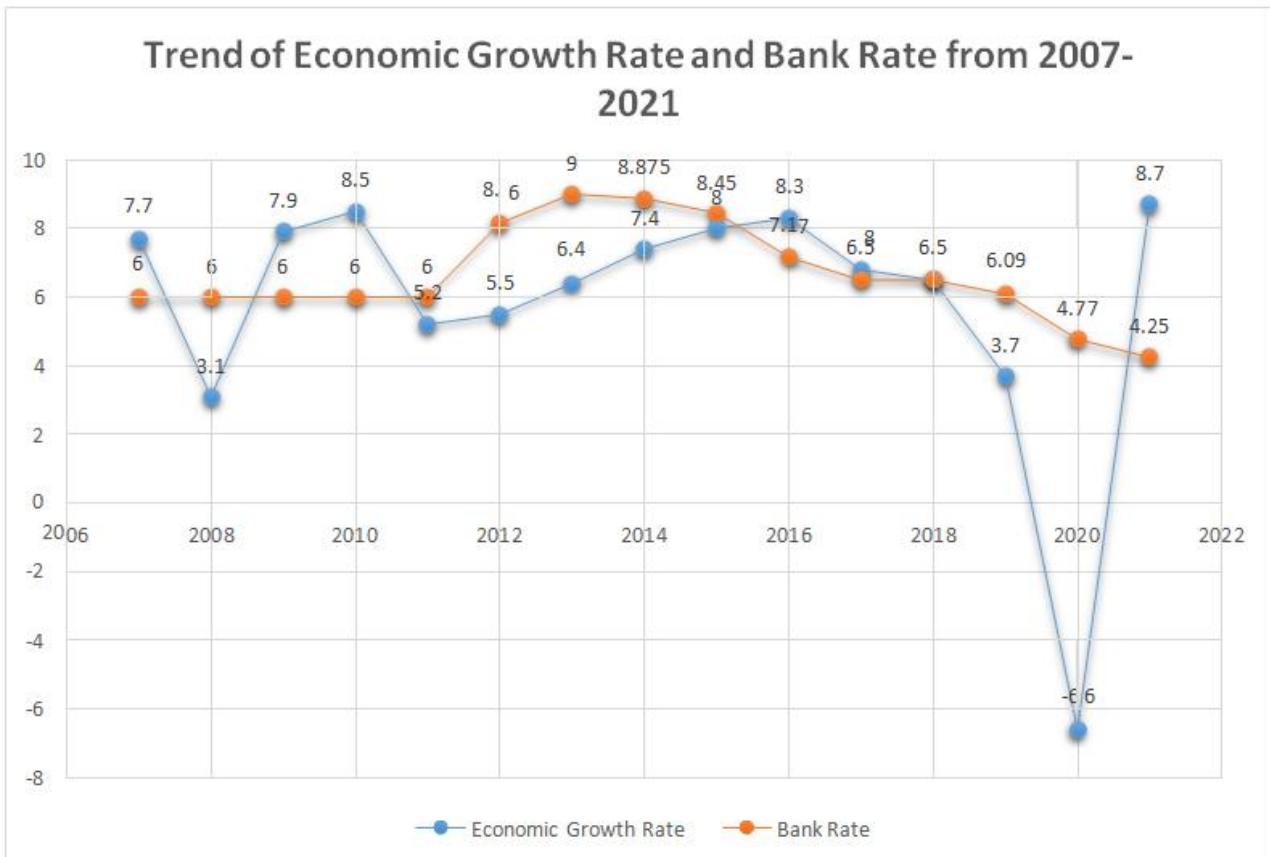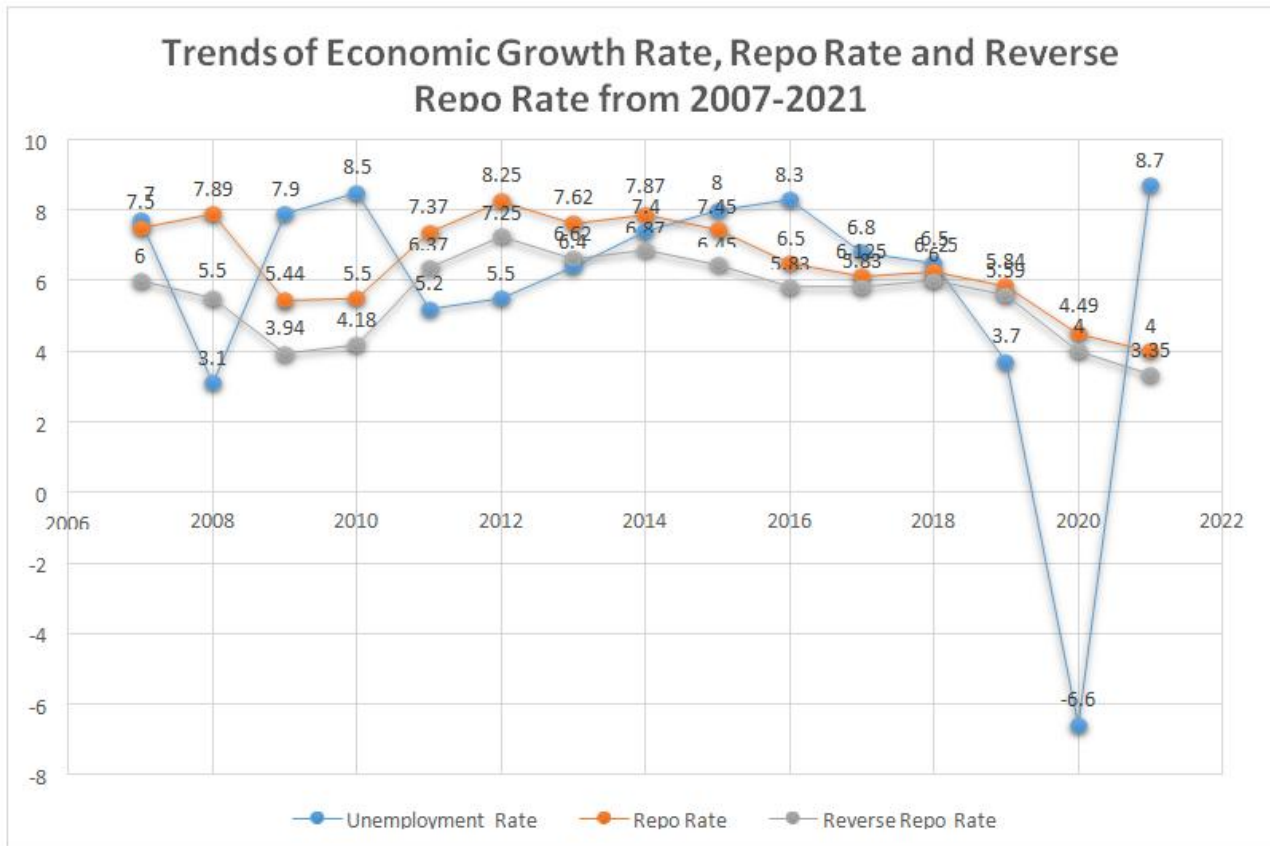*Source: Handbook of statistics on Indian Economy 2020-2021 and OECD Data*

Figure: 7

Figure: 8

Figure: 9

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INTERPRETATION

From the above line charts of growth rate, it is interpreted that there is a significant relation between growth rates and CRR. In 2007-08, CRR increases from 6.22% to 7.57% which leads to decrease in supply of money, so, growth rate decreases at very fast pace i.e. 7.7% to 3.1% as economy is left with low funds for further development. The bank rate and growth rate have a very low significance as bank rate remained constant at 6% from 2007 to 2011 but growth rate changes from 7.7% to 8.5% then decreases to 5.2% than increases and so on. The other interpretation is that the repo and reverse repo rates have significant relation with the economic growth rate. Figure 9 shows that when repo and reverse repo rate are increasing, the economic growth rate is decreasing because taking loans from RBI becomes expensive which contracts the money supply in the economy and ultimately decreases the economic growth and vice-versa.

CURRENT RATES

New Policy Rates by RBI in Indian Banking (as on August 5, 2022):

- CRR: 4.50%
- Repo Rate: 5.40%
- Reverse Repo Rate: 3.35%
- Bank Rate: 5.65%

VI. CONCLUSION

From the above analysis, it can be concluded that monetary policy is ineffective and less reliable. Only some of the monetary policy instruments are affecting macroeconomic variables. In the above interpretations, it can be seen that only repo and reverse repo rates are having a significant impact on inflation rate and economic growth rate. Other monetary policy instruments have a very less significance rather no significant relation between them are seen. It can

also be concluded from the above interpretations, that unemployment rate is not being considered (as far as major unemployment crises occurs) a variable which is affected by monetary policy instruments.

VII. SUGGESTIONS

It can be suggested that to increase the effectiveness of monetary policy, the monetary authority should concentrate on every aspect of monetary policy and changes in the indicators should be made deliberately after taking into consideration the various factors of inflation, unemployment, and economic growth of a country. Further, it can also be suggested that as the monetary policy is focusing only on the inflation and economic growth, it should also concentrate on the aspect of unemployment also.

VIII. LIMITATIONS OF THE STUDY

While conducting the research, we face various limitations and some of these limitations are as follows:
- As the study is based only on the secondary data, so the information cannot be reliable.
- The rates of the indicators are based on different parameters, so correlation and regression analysis cannot be obtained.
- Average annual rate of CRR, bank rate, repo and reverse repo rate are not available, so the averages of these rates had to be calculated manually.

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