

High Powered Money in India-an Empirical Analysis

Dr. Prakash Seervi

Associate Professor in Economics SPC Government College AJMER (Rajasthan)

Abstract:

High powered money is the sum of commercial bank reserves and currency (notes and coins) held by Public. High powered money is the base for the expansion of bank deposit and creation of money supply. Thus high powered money $H=C+RR+ER$. Where C represents currency with the public, RR the required reserves in the commercial banks and ER the excess reserves with banks. High powered money also known as the monetary base. In India the Reserve Bank of India is responsible for regulatory and controlling the monetary base. It is important to note that the composition and dynamics of high powered money in India can change over time due to shifts in monetary policy, economic conditions, and changes in banking regulations.

High powered money plays a fundamental role in monetary system. It serves as the base upon which the broader money supply (M_1 , M_2 etc) is created through the process of fractional reserve banking. When banks make loans, they create deposits, effectively increasing the broader money supply. The RBI uses various tools, such as open market operations and reserve requirement, to control the growth of high powered money and, consequently the money supply to achieve its monetary policy objectives, such as controlling inflation and promoting economic growth.

Keywords: Reserve requirement, Money supply, Deposits, Monetary policy, Bank reserves, Base money.

Introduction:

High powered money represents the total amount of money in an economy that serves as the foundation for broader money supply. High powered money consists of two main components :

1. Currency in circulation with public. This includes all physical money in the form of bank notes and coins that is held by public and not deposited in banks. It is the most liquid form of money, readily available for transactions.
2. Reserves held by banks at the Central Bank : Commercial banks are required to hold a portion of their deposits as reserves with the Central Bank (RBI). These reserves serve as a net for the banking system and are used to settle interbank transactions.

High powered money is called high powered because it has a powerful impact on the money supply in economy. The central bank, through its monetary policy tools, can influence the growth of high powered money. High powered money is the base upon which the entire money supply of an economy built. Understanding its dynamic and the central bank's control over it is a crucial for comprehending how changes in the money supply can affect economic activity, inflation and the interest rates.

Objective of the study:

1. To understand the concept of high powered money.
2. To study the changes in hpm over 20 years.
3. To study the components of hpm.
4. To study the process of credit creation, how high powered money serves as base money and leads to change in money supply.

Data collection and study period:

Secondary data has been used to conduct the research paper. Data was collected from various magazines, journals, newspapers and internet. The study was collected from RBI bulletin and RBI website the study period is 20 years from 2002-03 to 2021-2022.

Literature Review:

Lothian R James (1976) in his paper shows however, is that the choice is not nearly so simple, empirical analysis is often circumscribed by lack of data on money of the variables theory suggests can affect the demand for money. The rationale is that since high powered money is of relatively constant quality over time and space, such specification errors are likely to be less important for high powered money than for deposit inclusive totals.

Kanotor Brian (2022) in his research paper that the recent achievements of stabilization policy of South Africa give little cause for satisfaction. An unstable world economy and financial profligacy of politicians and civil servants have played their part.

Arato Hiroki (2020) in his research paper builds a model which allows an equilibrium nominal interest rate on reserve deposit below zero and examines the effect of high powered money and reserve rate policy. In this model, bank holds cash and reserve deposits for money creation and interbank settlement, but cash can be used only for money creation.

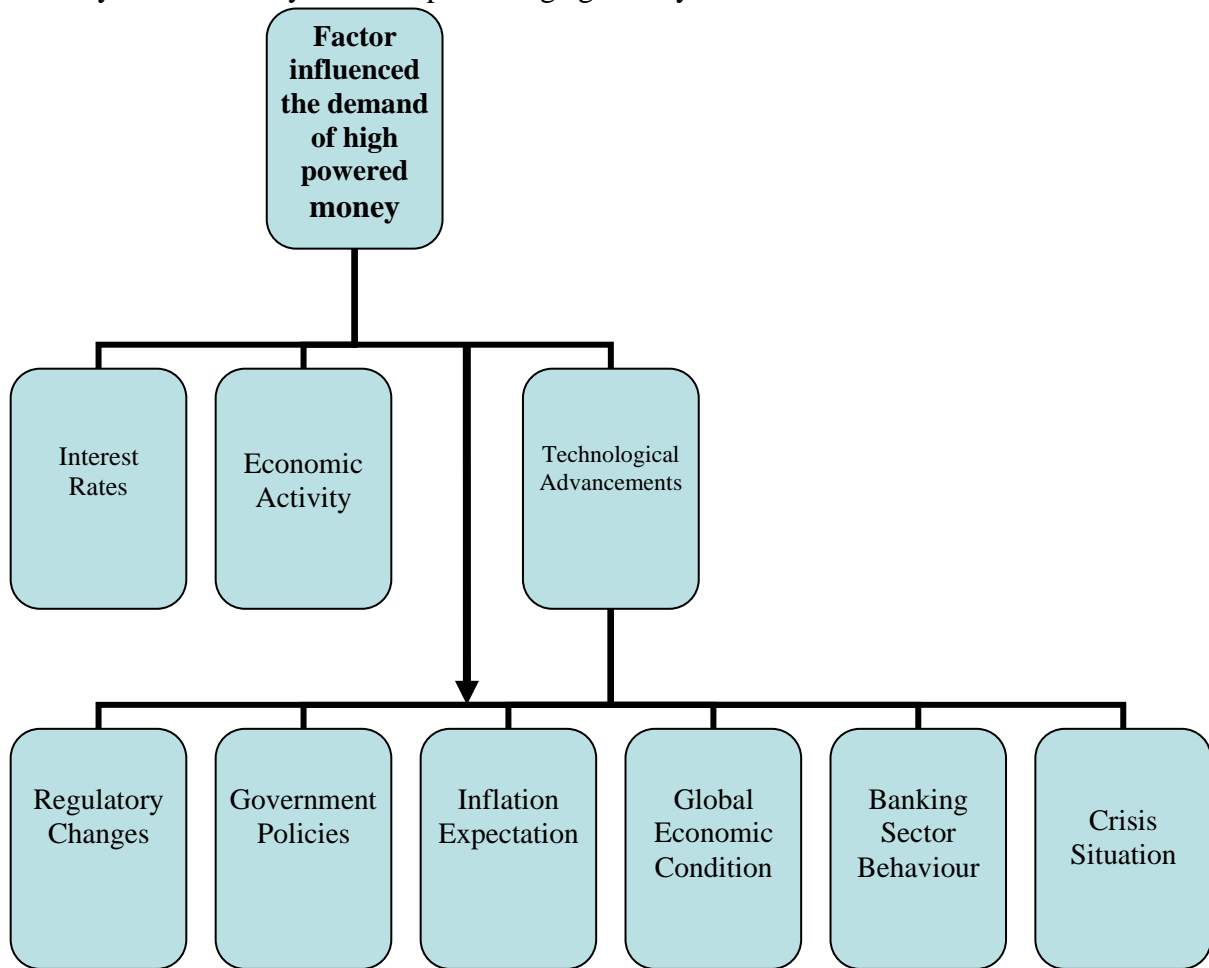
He find that the long run effect of a higher growth of high powered money on output is negative, but the sign of the effect of a lower reserve rate on output depends on the household's labour disutility parameter and firm's productivity.

Importance of High Powered Money:

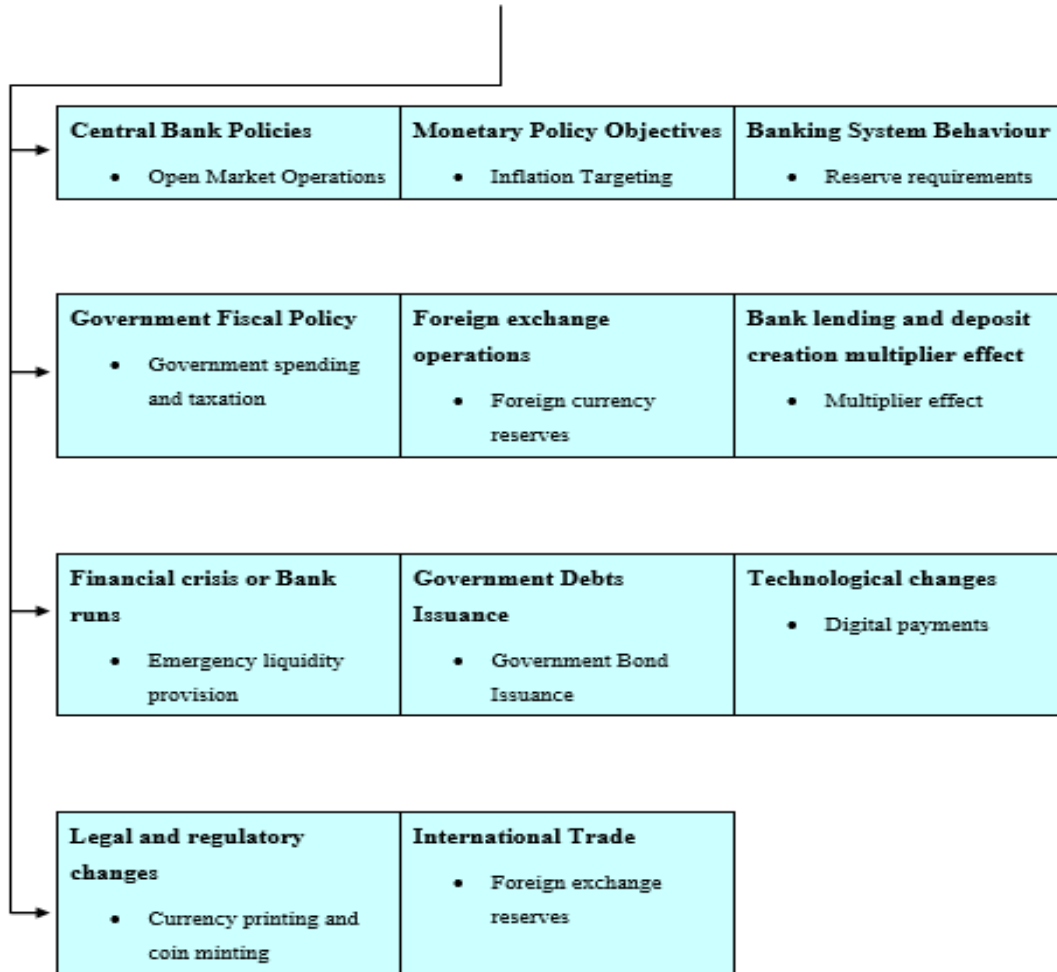
High powered money is of significant importance in India for several key reasons :-

1. High powered money is crucial tool for the RBI to implement monetary policy. RBI can influence the money supply and interest rate which are vital for achieving the central bank objectives, including price stability and economic growth.
2. Reserves held by commercial banks at RBI, which form part of high power money, serve as a source of stability and confidence in the banking system.
3. Managing high power money is instrumental in controlling inflation. RBI can influence the money supply, which in turn affects inflationary pressures in economy.
4. The RBI may use its foreign exchange reserves a component of monetary base, to stabilize or manage the value of the Indian rupee in international currency markets.
5. High powered money contribution to overall economic stability by ensuring the availability of liquid assets for transactions and maintaining confidence in Indian banking and financial system. Economic stability is essential for attracting investments and fostering economic growth.

6. The RBI conducts open market operations to influence the level of high powered money in the economy these operations have direct impact on liquidity conditions in financial markets and can effect short term interest rates.
7. High powered money can indirectly impact government financing. When the RBI buys the government securities in open market that can be used to finance public spending.
8. Monitoring high powered money is essential for macro prudential regulation, ensuring the stability of financial system and protecting against systemic risks.



FACTOR INFLUENCING THE SUPPLY OF HIGH POWERED MONEY



Empirical Analysis of High Powered Money:

Table-1 Components of money stock (Rupees in Crore)

Year	Currency in circulation	Other deposits with the RBI	Bankers deposits with the RBI	Reserve Money (HPM)	Broad Money	Money Multiplier (M ₃)
2002-03	282473	3219	83346	369038	1717936	4.655174
2003-04	327028	5097	104365	436490	2005654	4.59496
2004-05	368661	6454	113996	498111	2245653	4.508339
2005-06	429578	6843	135511	571932	2719493	4.754924
2006-07	504099	7467	197295	708861	3310038	4.669516
2007-08	590801	9027	328447	928275	4017855	4.328302
2008-09	691153	5533	291275	987961	4794775	4.853203
2008-10	799549	3806	352299	1155653	5602698	4.84808
2010-11	949659	3653	423509	1376821	6504116	4.72401
2011-12	1067230	2822	356291	1426344	7384831	5.177454

2012-13	1190975	3240	320671	1514886	8389919	5.538317
2013-14	1301074	1965	429703	1732742	9517386	5.492673
2014-15	1448312	14590	465561	1928463	10550168	5.470765
2015-16	1663463	15451	501826	2180740	11617615	5.327373
2016-17	1335266	21091	544127	1900485	12791940	6.730882
2017-18	1829348	23907	565525	2418779	13962587	5.772577
2018-19	2136770	31742	601969	2770481	15432067	5.570176
2019-20	2447312	38507	543888	3029707	16799963	5.545078
2020-21	2853763	47351	698867	3599981	18844578	5.234633
2021-22	3133716	58444	876726	4068887	20493729	5.036692

Source : RBI Bulletin, 2023

Column 1 :- In above table-1 and column 1 shows the study period of empirical analysis of high powered money. Which is 2002-03 to 2021-22.

Column-2 :- In above table-1 shows that the component currency in circulation has continuously increased from 282473 crore (Rupees) in 2002-03 to 3133716 crore in 2021-22 with exceptional was decline in 2016-17 where it stood 1335266 crore. The other component which is though very small portion of total money supply and high powered money observed fluctuating trend.

Column 3- The second component of high powered money is other deposit with the RBI shows fluctuating trends through out 2002-03 to 2021-22.

Column 4- The third component i.e. Bankers deposit with the RBI or reserves which serves as base for credit creation shows an increasing trend, but some times it's fluctuate.

Column 5- Reserve money also known as High Powered Money (HPM) continuously increased from 369038 crores in 2002-23 to 4068887 crores in 2021-22 with exceptional was decline in 2016-17 where it stood 1900485 crores.

Column 6 – In above table broad money is most flexible method for measuring the economic activities. It's also shows as increasing trend. continuously increased 1717936 crores in 2002-03 to 20493729 crores in 2021-22.

Column 7- In this column we calculate money multiplier (broad money divided by reserve money) and value obtain was 4.65 in 2002-03 and it's continuously fluctuate and in 2021-22 it has been 5.03.

If money multiplier value is known the price stability in economy can be achieved. The money supply i.e. the purchasing power should be equivalent to production or output in the economy. Hence if multiplier value is known then that times reserve money can be generated which will be equal to output level to achieve price stability. This shows as important role the money multiplier plays.

Limitation:

- Limited control over currency in circulation.
- Dependence on Foreign Exchange Reserves.
- Limited Transmission Mechanism
- Informal Economy
- Structural Issues (NPAs)
- Liquidity Management
- Global Economic Factors.

- Data Challenges.

These limitation highlight the complexity of managing high powered money in Indian context. To address these challenges, the RBI employs various tools and strategies to conduct effective monetary policy and maintain financial stability, including open market operations, reserve requirements and policy rate adjustments. Additionally ongoing financial sector reforms and efforts to promote digital payments aim to reduce the reliance on physical cash in economy.

Conclusion:

High powered money is cornerstone of a country's monetary system, allowing central bank to control the money supply, influence interest rates, manage inflation and promote economic stability. Its proper management is crucial for stability of an economy. High powered money from the basis for the money multiplier effect, plays a significant role in the monetary system and economic management. HPM also plays a vital role in maintaining the stability of Indian banking system.

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