Macroeconomic Activity And Profitability Of Indian Financial Firms During Covid-19

Ram Kripal
Lecturer in Sociology
KRJIC Srurpur
Meerut, U.P., India

Mohd. Tariq Azizy
Assistant Professor
Keshav Mahavidyalaya
Delhi University, New Delhi, India
Email: ch.azizy13@gmail.com

Abstract

This study examines the impact of the macroeconomic activity on the profitability of Indian financial firms. The banking sector index obtained from the National Stock Exchange (NSE) of India has been proposed to measure the profitability of financial firms. Besides, the growth rate of the Industrial Production Index, Inflation (measured by the Consumer Price Index) and Yield of Government bonds are used as the proxies for macroeconomic activity. Data for 19 months starting from December 2019 to June 2022 has been collected from NSE. We approached the ordinary least square (OLS) regression model by taking the profitability (index return) of financial firms as the dependent variable and IIPG, CPIG and Yield as three independent variables. We found that except for the yield rate non-other variable is significant during the study period, showing the less impact of these variables on financial firms' profitability in a short term. The study provides significant implications for policymakers, investors, regulators and academicians.

Keywords

Covid-19, Macroeconomic Activity, Financial Performance, Inflation, CPIG, Yield.

Reference to this paper should be made as follows:

Ram Kripal,
Mohd. Tariq Azizy

Macroeconomic Activity And Profitability Of Indian Financial Firms During Covid-19

RJPP Dec.22,
Vol. XX, Special Issue
pp.54-61
Article No. 9

Similarity Check: 0%

Online available at *:*
https://anubooks.com/journal/rjpp

DOI:
http://doi.org/10.31995/rjpp.2022v20iS.09

Introduction

The impact of the 2008 global financial crisis (GFC) revealed the extent of interconnectedness between the financial markets and real economic activities. During the crisis followed by the economic downturn, financial firms across the globe went through their worst nightmare. In the aftermath of the GFC, both developed and emerging economies have been the focus of extensive research and this has intensified more after the Eurozone crisis of 2011 and the more recent Covid-19 pandemic. The immediate effect of the failure of financial firms during the GFC on the real estate sector shows the vulnerabilities of financial intermediaries' firms during the crisis episodes. However, several steps were taken to strengthen the operation of financial firms and ensure stability in the sector, still, the integrating nature of financial firms across the globe makes this sector more vulnerable to any crisis.

In addition to financial stability, the survival of financial firms also depends upon the overall economic environment. During the growth phase of an economy, more demands for short-term and long-term finance are evident. In India where banks play a prominent role in financing different projects, a healthy financial sector is a prerequisite. For the last two decades, India has emerged as one of the leading economies in terms of GDP growth rate. The increasing growth rate combined with less developed corporate bond markets is putting constant pressure on financial intermediaries. This may lead to more NPAs and affect the overall profitability of these firms. The performances of financial firms are more compromised during financial stress given a hostile economic environment. In the last decade, the Indian financial sector has been volatile and witnessed the crisis of several financial firms for instance the recent YES bank crisis in 2019.

Where a stable financial and economic environment plays a pivotal role in the functioning of business firms, the stress in the economy makes the functioning of business firms more volatile. This study explores the impact of macroeconomic activities on the profitability of Indian financial firms during the ongoing Covid-19. Though there are several studies available on the macroeconomic environment on the banking sector performance, a majority of these studies are focused on developed countries and paid very less attention to emerging ones. The paper economic activities as the independent variable and measure their impact on the profitability of financial firms concerning India. The contribution of the paper can be explained as follows: First, we consider the impact of macroeconomic activities on financial firms' profitability during Covid-19. We propose production price index, inflation and Government bond yield as a measure of macroeconomic activities. Third, the paper

considers a panel regression model for analysing the impact. The studies offer significant implications for policymakers and regulators as the role of financial firms in India is prominent. The data span 31 months starting from December 2019 to June 2022. The remaining section has been organised as follows, section two consists of a brief literature review, section three explains the problem statement, section four includes data and methodology, section five provides the results and discussion, section six is about the implication of the study followed by the conclusion in section seven.

Literature Review

A stressed financial and economic environment affects all sectors across the economy. However, the magnitude varies from sector to sector. Existing literature has attempted to measure financial stress and its transmission through different channels. Some recent studies have also examined the relationship between financial stress and economic activities. This study however considers the financial stress in the form of Covid-19 and measure the impact of macroeconomic activities on the overall profitability of financial firm during the same period.

2.1 Economic Crisis

Before running the analytical model, a better understanding of economic crisis is a priori. Literature provides a bunch of definitions of what constitutes an economic crisis. In reaction to threats to profitable production, firms may be forced to quickly alter or even completely reconfigure their value chains as a result of an economic crisis (defined as an economic downturn due to sudden internal or external shock) that causes unpredictably profound downward adjustments in the amount of demand and the relative costs of inputs (Kogut, 1991). The conundrum is that because the likelihood of such a danger is mostly unknown to the firms, it is challenging to plan for how to set up its existing investments to meet it. According to researchers and policymakers, to compete successfully in markets with such unpredictability, one must have resources, competencies, and tactics that are fundamentally different from those that are likely to be successful in markets with greater stability (Bowman and Hurry, 1993; Kogut and Kulatilaka, 2001). Particularly, a firm that can adapt favourably to unanticipated unfavourable developments in its environment would fare better than one that is committed to a single course of action (Foss, 1998; March 1991).

2.2 Macroeconomic Activities

The stability of the macroeconomic environment is essential for business firms. It does not affect only profitability but also paves the way for future business. Investors perceive macroeconomic factors as the primary indicators for a healthy

investment environment. Recent studies explore the impact of economic activities on the profitability of firms from manufacturing (Demir, F., 2009) to the banking sectors (Gizycki, M. C., & Gizycki, M.,2001). Since financial firms are important intermediaries in financing several economic activities, a fluctuating economic environment makes these firms adjust their activities (Hipper and Hasan, 2015). This relationship shows the importance of identifying the relationship between the real economy and its impact on financial firms.

Problem Statement

The immense demand for infrastructure development in India makes the role of financial firms more prominent. However, the profitability of financial firms is a subject of concern as it is crucial for the future survival of these firms. During the 2008 crisis, financial firms across the globe were highly stressed which transmitted to other sectors as we successful sole operation of these firms is dependent to a certain extent on their profitability which is eventually subject to economic and financial stability. Keeping this relationship into account the need to understand the influence of economic and financial environment on the profitability of financial firms is important from both operational and policy framework perspectives.

Data and Methodology

This study covers the data on the IIP, inflation, bond yield and Profitability of financial firms starting from December 2019 to June 2022. We consider the banking index on National Stock Exchange as a measure of the financial performance of the firms. All the data is collected from CMIE and NSE data sources. The details of the dependent and independent variables along with their measures are given as follows

4.1 Dependent Variable

4.1.1Profitability of Financial Firm

The daily index return is considered a proxy for the profitability of financial firms.

4.2 Independent Variables

4.2.1. Macroeconomic factor (Gross Domestic Product)

The GDP of a country is a standard measure of the economy's health, however, given the availability of data every quarter, we considered the growth rate of the Industrial Production Index as a proxy of GDP.

4.2.2. Inflation

Inflation measures the price level in the economy. The higher price makes the cost of capital higher for business firms leading to lower profitability. We measure inflation by the wholesale price index (WPI) of the country.

4.2.3 Bond Yield

The government bond yield rate explains the economic growth of the country. The higher growth rate is a symbol of the long-term well-being of the country. We take the 10 years government bond yield rate as a measure of the interest rate scenario of the country.

Results and Discussion

Taking the banking index as our dependent variable we run the OLS model to understand the impact of macroeconomic variables on the banking sector profitability during Covid-19. Table 1 presents the descriptive statistics of all four variables including dependent and independent one. We can see that the maximum and minimum values of all the variables have shown some not ordinary spikes or lows. This explains that there have been extraordinary days during the data period. These extraordinary days are nothing but the Covid-19 period's shocks. The same has been confirmed with the non-normal skewness and kurtosis values.

Table 1 Descriptive Statistics

Statistics	IIPG	CPIG	Bond Yield	Banking Index
Mean	0.0144	0.0039	0.0048	0.0068
Median	0.0045	0.0042	0.0047	-0.0054
Maximum	0.5939	0.0135	0.0471	0.2388
Minimum	-0.4733	-0.0092	-0.0366	-0.3432
Standard Deviation	0.1537	0.0060	0.0223	0.1008
Skewness	0.7281	-0.3497	0.1758	-0.8846
Kutosis	10.7194	2.3759	2.3830	6.3968

Note: Table 1 presents the descriptive statistics of the four variables. IIPG presents the growth rate of industrial production, CPIG presents the growth rate of the consumer price index, bond yield is the 10 years government bond yield and the banking index presents the profitability of financial companies listed on the stock exchange.

Table 2 Regression Results

Source	SS	df	MS
Model	.04947572	3	.016491907
Residual	.255304313	27	.009455715
Total	.304780033	30	.010159334

Number of obs	=	31
F (3, 27)	=	1.74
Prob > F	=	0.1817
R-squared	=	0.1623
Adj R-squared	=	0.693
Root MSE	=	.09724

Banking Index	Coef.	Std. Err.	T	P>| t |	[95% Conf.	Interval]
Iip	-.0006215	.0014599	-0.43	0.674	-.0036171	.002374
Cpi	-.002198	.0046141	-0.48	0.638	-.0116662	.0072684
Bondyield	2.084972	.9364429	2.23	0.035	.16355	4.006394
_cons	.3580974	.5477317	0.65	0.519	-.7657552	1.48195

Note: Table 2 explains the results of OLS regression. The dependent variable is the banking index taken from the stock exchange. The independent variables include industrial production growth, consumer price index growth and bond yield.

Coming to the main results, table 2 presents the regression analysis results. As we can see that during the Covid-19 period, except for bond yield, all the variables are insignificant. This is not surprising as it can be explained by the leg effects of these variables. For instance, bond yields react immediately after the shock, however, Inflation, Industrial production do not react immediately to banking profit as banking profit is mostly affected by the immediate change in the interest rates. These interest rate changes can be explained by the change in government bond yield. Our results also present a similar picture.

Figure 1 reflects the trend of banking index, CPI, IIP and bond yield during the Covid-19 period. We can notice that during the initial days of Covid-19 the market reacted significantly as shown by the extraordinary fluctuations of the markets. During the first wave of the pandemic, the banking index and yield witnessed ups and downs, inflation risen and production went down. This shows the impact of the crisis and its magnitude.

Figure 1. The pattern of Market Variables

Note: Figure 1 presents the pattern of the banking sector, bond yield, consumer price index and industrial production index across the Covid-19 period.

Implications of The Study

This study has the following implications for different stakeholders

Financial Firms- In addition to funding various economic activities, financial firms are also concerned about their profitability. Keeping the financial and economic environment into account these firms can adjust their activities to avoid loss in terms of NPAs.

Policymakers- Policymakers are responsible for shaping the economic behaviour of a country. If financial stress has an impact on the profitability of financial firms, precautionary steps can be taken to keep financial firms out of the crisis.

Investors- Investors consider the overall financial and economic environment before making an investment decision. The change in financial stress and economic activities will help them in decision-making.

Conclusion

We measured the impact of the macroeconomic activity on the profitability of Indian financial firms during the Covid-19 period. This study follows a time duration of 19 months starting from December 2019 to January 2022. The profitability (index return) of financial enterprises served as the dependent variable for the ordinary least square (OLS) regression model that we developed. The other three variables—IIPG, CPIG, and Yield—served as the independent variables. We observed that during the duration of the study, except for the yield rate, none of the other variables is significant. This indicates that these variables have less of an impact on the profitability of financial organisations in the short run. The findings of the study have important implications for decision-makers in government, investors, and regulatory agencies, as well as academicians.

References

1. Apostolakis, G., Papadopoulos, A. P. (2015). Financial stress spillovers across the banking, securities and foreign exchange markets. *Journal of Financial Stability*. 19. **Pg. 1-21.**
2. Balakrishnan, R., Danninger, S., Elekdag, S., Tytell, I. (2011). The transmission of financial stress from advanced to emerging economies. *Emerging Markets Finance and Trade*. *47*(sup2). **Pg. 40-68.**
3. Bowman, E.H., Hurry, D. (1993). Strategy through the option lens: An integrated view of resource investments and the incremental-choice process. *Academy of management review.* 18(4). **Pg. 760-782.**

4. Cardarelli, R., Elekdag, S., Lall, S. (2011). Financial stress and economic contractions. *Journal of Financial Stability*. *7*(2). **Pg. 78-97.**
5. Carlson, M.A., King, T., Lewis, K. (2011). Distress in the financial sector and economic activity. *The BE Journal of Economic Analysis & Policy*. *11*(1).
6. Cevik, E.I., Dibooglu, S., Kenc, T. (2016). Financial stress and economic activity in some emerging Asian economies. *Research in International Business and Finance*. 36. **Pg. 127-139.**
7. Demir, F. (2009). Financialization and manufacturing firm profitability under uncertainty and macroeconomic volatility: Evidence from an Emerging Market. *Review of Development Economics*. 13(4). **Pg. 592-609.**
8. Foss, N.J. (1998). The theory of the firm: an introduction to themes and contributions (No. 98-7). *Department of Industrial Economics and Strategy*. Copenhagen Business School.
9. Gizycki, M.C., Gizycki, M. (2001). The effect of Macroeconomic conditions on banks' risk and profitability. Reserve Bank of Australia.
10. Grimaldi, M. (2010). Detecting and interpreting financial stress in the euro area.
11. Hakkio, C.S., Keeton, W.R. (2009). Financial stress: what is it, how can it be measured, and why does it matter? *Economic Review*. *94*(2). **Pg. 5-50.**
12. Kogut, B. (1991). Joint ventures and the option to expand and acquire. Management Science. 37(1). **Pg. 19-33.**
13. Kogut, B., Kulatilaka, N. (2001). Capabilities as real options. *Organization Science.* 12(6). **Pg. 744-758.**
14. Park, C.Y., Mercado, Jr. R.V. (2014). Determinants of financial stress in emerging market economies. *Journal of Banking & Finance*. *45*. **Pg. 199-224.**
15. Sensoy, A., Ozturk, K., Hacihasanoglu, E. (2014). Constructing a financial fragility index for emerging countries. *Finance Research Letters*. *11*(4). **Pg. 410-419.**