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# A STUDY ON IMPACT OF GLOBAL ECONOMIC CRISIS ON THE INDIAN ECONOMY: CASE STUDY

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## ABSTRACT

***This paper explores the complex relationships between international financial crises and the ensuing changes in India's financial system. It attempts to offer thorough insights into the ways that times of worldwide economic unrest affect the Indian financial market, impacting its composition, dynamics, and general resilience. This paper examines the complex effects of global economic downturns on India's financial ecosystem using empirical data and in-depth analysis. It looks into the relationships between these crises and changes in important metrics such as currency exchange rates, stock market indices, investment trends, and government reactions.***

***This article also examines the adaptable strategies the Indian financial sector used to get through these trying times. Through an analysis of past examples and current situations, it provides insightful viewpoints on the tactics used by investors, market players, and policymakers to reduce risks and seize opportunities in the face of worldwide economic volatility.***

***In the end, this article aims to advance a nuanced understanding of the complex interactions between global economic crises and India's financial environment by illuminating the ramifications, difficulties, and possible solutions for bolstering the Indian financial system's resilience in a globally interconnected economy.***

## INTRODUCTION

Corporate entities, investors, and governments use the Indian capital market as their primary source of funding and investments. It consists of currency pairs like the Rupee vs. US Dollar, as well as equity, debt, and money markets as well as derivative goods like futures contracts on bonds (debt) and shares of stock (equity). The country's capitalism system is sustained by the capital market. The two regulatory bodies for the Indian securities market, the Securities and Exchange Board of India (SEBI) and the Reserve Bank of India, work to safeguard investors and enhance the microstructure of the country's capital markets.

Since India contributes fairly to the global economy, a sizeable chunk of the global economy is made up of the country's capital or share markets. The financial system cannot function without the capital market.

The capital markets are of two basic kinds. The markets that are primary and secondary. Companies, governments, or public sector organizations can raise capital by issuing bonds in a primary market. Additionally, corporations have the option to raise money by selling new stock through an IPO. As a result, the party immediately purchases company shares in the primary market. Underwriting is the process of selling fresh shares to investors.
Customers purchase and sell stocks, shares, bonds, and other securities in the secondary markets. Secondary

capital markets comprise stock exchanges such as NSE, BSE, and others. In these markets, parties or individuals buy and sell shares, bonds, and other financial instruments using today's technology.

The global economy has entered a critical phase in recent years, as evidenced by the drop in investment activities, increase in unemployment, and decline in gross national products.

## OVERVIEW

There have been many ups and downs in the Indian capital market over the last five years, akin to a rollercoaster ride. At first, the market grew rapidly due to reforms, positive attitudes, and impressive business results. However, volatility and slumps occurred at different times due to a variety of local and international factors. Although there were initial difficulties with the implementation of reforms like the Goods and Services Tax (GST) and demonetization, they were anticipated to have long-term advantages. However, issues like the COVID-19 pandemic, trade tensions throughout the world, and non-performing assets (NPAs) in the banking sector caused serious setbacks and precipitous drops in market indices. Market stability was impacted by investor confidence fluctuations, even with sporadic recoveries. During this time, government programs to draw in foreign capital and structural changes meant to boost the economy were crucial

## LITERATURE REVIEW

P. K. Mishra,2012, This study examines the performance of the Indian capital market from 2008 to 2011, revealing increased market size, liquidity, turnover, and volatility during the crises. Despite challenges, India demonstrated resilience in reviving macroeconomic indicators. To bolster the national economy against global contagions, policymakers are urged to implement prudent norms, fair market practices, and market reforms, emphasizing a steady and strategic approach to economic growth. The study provides the evidence of growing market size, liquidity, greater volatility and weak form inefficiency. In this context, it may be suggested that the planners, policy makers and regulators should make the national economy more robust by devising, through market reforms, the prudential norms and international best and fair practices. It is at least learnt that ‘slow and steady win the race’, but not the ‘Rabbit Run’.

Krishna Kumar Jaiswal, Krishna Kumar Dubey,2021, While examining the growth in the gross domestic product (GDP), fiscal deficit, exports, imports, Wholesale Price Index (WPI) inflation, and the foreign exchange rates (FX), we find that the GDP has been severely impacted during the crisis period, especially during 2008-09. While the fiscal deficit continuously increased during 2008-09 and 2009-10, the exports and imports declined considerably. The WPI inflation followed a downward trend, and the rupee depreciated by approximately 20 percent during 2008. During 2008-09, the agricultural and industrial growth significantly declined, but the service sector sustained itself. The findings also reveal that the policy initiatives by the Indian government and those by the Reserve Bank of India safeguarded the Indian economy to a large extent

DAVID D. HALE,2014, The revival of global capital markets for the first time in eight decades has profoundly altered the parameters for investment behavior, exchange rate determination, and trade adjustment in the major industrial nations. In the 1980s, America's new ability to import capital helped to sustain the longest cyclical expansion of the modern era, but because of the price shocks which accompanied its re-emergence as an external debtor there was a significant rise in protectionism and misallocation of investment which could retard U.S. economic performance during the 1990s.Because of the different historical circumstances under which Britain, Germany, Japan, and the United States industrialized during the 19th century, each developed a unique form of capitalism and business organization. Despite four decades of steadily increasing global economic integration, there are still great divergences in national corporate structures and business customs. In the case of Japan, these differences are often attributed to cultural factors, such as Confucianism or geographic isolation, not to economic factors

Anil K. Sharma and Neha Seth,2011, The data for last 10 years were collected from both Bombay Stock Exchange (BSE) and National Stock Exchange (NSE) in India. The data was divided into two sub-periods, i.e. before financial crisis period (period-I) and during financial crisis period (period-II). The study concludes that Indian stock markets do not exhibit weak form of market efficiency and thus do not follow random walk in both period-I and period-II. The study implies that the recent financial crisis did not impact the behavior of Indian stock markets to a great extent. The results of the study might be useful for investors, corporate executives, portfolio managers and policy makers in framing business policies and for the appraisal and management of present portfolios.There is no significant difference in market efficiency in both periods however the efficiency has improved marginally in period-II compared to period-I. Thus, there are possibilities of earning extra income in Indian markets because abnormal returns are possible only when the market is inefficient as the future prices can be predicted using the past information.

Abhinandan Kulal, Dr. Yathish Kumar,2022, The Indian economy has shown unprecedented growth in the last few decades post liberalization. A robust capital market supplemented by technological advancement and a strengthened legal framework has

played a major role in driving the growth thus far. With the global economy still in and out of turbulent times, the Indian capital markets never fail to disappoint and often emerge as one of the most stable and sustainable of all emerging markets and are often crowned as a safe investment destination. This paper tries to explain the recent development in Indian capital market and explains regarding technological development and investors' perception towards stock market.The Indian capital market has undergone metamorphic reforms in the past few years. Every segment of the Indian Capital Market, namely, primary and secondary markets, derivatives, institutional investment, and market intermediation has experienced an impact of these changes, which has significantly improved the transparency, efficiency, and integration of the Indian market with the global markets.

P K Mishra, Uma Sankar Mishra, Biswo Ranjan Mishra, Pallavi Mishra,2010, This paper examines the impact of capital market efficiency on economic growth in India using the time series data on market capitalization, total market turnover and stock price index over the period spanning from the first quarter of 1991 to the first quarter of 2010. The application of multiple regression model shows that the capital market in India has the potential of contributing to the economic growth of the country. This is as a result of high market capitalization and relatively high market liquidity. Thus, the market organizations and regulations should be such that large number of domestic as well as foreign investors enters the market with huge listings, investments, and trading so that the very objective of optimal allocation of economic resources for the sustainable growth of the country can be ensured

Collin Chikwira, Jahed Iqbal Mohammed,2023, The impact of the stock market in the business fraternity is crucial for managers to carefully monitor stock market trends and movements to identify potential risks and opportunities because the stock market reacts to the information in the market they operate within. For firms to withstand market shocks, the management should ensure adequate financial resources by promoting savings, diversifying with liquid assets, and providing access to emergency funding facilities in order to maintain operations when cash flows are irregular. Thus, managers in a volatile economy should monitor market trends, manage financial resources effectively, hedge their portfolios against market risks, and adapt their business strategies to mitigate the impact of market volatility on their business operations and achieve sustained growth. For recommendation, the ZSE should develop a framework for the gradual implementation of the commodity derivatives market, pointing out that an economy can benefit significantly from Zimbabwe's substantial mineral reserves and universal-level agribusiness. Moreover, stock market discoveries and developments can raise productivity, which impacts economic growth. For instance, if the ZSE adopts the derivatives market, farmers could use the commodity derivative instruments to hedge and start farming, knowing their exact prices because they have contracts with their product's consumers before they begin. As a result, the increased productivity and producer price security will contribute to the anticipated increase in economic growth

## OBJECTIVES

- To study the global economic crisis
- To study impact of global economic crisis on Indian economy
- To study the role of factors influencing Indian economic growth

### TABLE FOR ANALYSIS

| Year | Service sector | Computer Software & Hardware | Trading | Telecommunications | Automobile Industry | Construction (Infrastructure) Activities | Construction Development | Chemicals | Drugs & Pharmaceuticals | Metallurgical Industries |
|---|---|---|---|---|---|---|---|---|---|---|
| 2011-12 | 54.27 | 7.5 | 17.83 | 5.4 | 16.3 | 5.38 | 5.38 | 5.9 | 1.12 | 2.3 |
| 2012-13 | 56 | 8 | 18.05 | 5.8 | 15.8 | 5.13 | 5.13 | 4.9 | 0.93 | 2.5 |
| 2013-14 | 57 | 8.1 | 18.32 | 6.1 | 14.9 | 5.11 | 5.11 | 4.5 | 0.98 | 2.7 |
| 2014-15 | 57 | 9.5 | 18.59 | 6.1 | 7.1 | 5.44 | 5.44 | 4.1 | 0.99 | 2.6 |
| 2015-16 | 52.5 | 9.3 | 18.87 | 6.2 | 3.8 | 5.62 | 5.62 | 3.9 | 1.02 | 2.4 |
| 2016-17 | 52.8 | 7.7 | 19.15 | 6.26 | 6.8 | 5.74 | 5.74 | 3.5 | 0.8 | 2.2 |
| 2017-18 | 53.9 | 7.9 | 19.43 | 6.35 | 14.3 | 5.66 | 5.66 | 7.5 | 0.65 | 2.3 |
| 2018-19 | 54 | 7.8 | 19.72 | 6.5 | 5.2 | 8.7 | 8.7 | 6.2 | 0.71 | 2.5 |
| 2019-20 | 54.4 | 7.7 | 20.01 | 6.5 | 7.1 | 8.8 | 8.8 | 7 | 0.73 | 2.7 |
| 2020-21 | 53.89 | 8 | 19.78 | 6 | 7.1 | 6.7 | 6.7 | 1.42 | 1.72 | 2.4 |
| 2021-22 | 53.3 | 7.4 | 20.26 | 6.43 | 7.1 | 7 | 7 | 7 | 1.32 | 2.6 |
| 2022-23 | 53.39 | 7.5 | 20.54 | 6.5 | 7.1 | 7.6 | 7.6 | 6.89 | 1.72 | 5 |

## METHODOLOGY

Literature review: To learn more about earlier research on the effects of global economic crises on the Indian economy, conduct a thorough assessment of the literature. Examining scholarly publications, books, and reports on subjects like financial markets, recessions, and India's reaction to international crises is part of this.

Gathering of Data: Collect empirical data on important economic indicators, such as stock market indices, currency exchange rates, investment trends, and the responses of governments to international financial crises. Make use of both present and historical data to deliver a thorough analysis.

Examination of Capital Markets: Examine the last twelve years' performance of the Indian capital market, noting ups and downs in terms of growth and volatility. Analyse the effects of global economic crises on different sectors of the capital using statistical methodologies.

Case Studies: Analyse particular instances of economic downturns to comprehend their unique implications on India's financial ecology. Examples of these are the COVID-19 epidemic, the 2008 financial crisis, and trade conflicts. Assess how the Indian banking sector responded to these obstacles.

Reforms and Policies of the Government: Examine the measures taken during international financial crises by the Indian government and regulatory agencies (SEBI and RBI). Analyse how well these policies have worked to help the recovery of the economy and stabilize the financial markets.

Quantitative Analysis: Measure the correlations between shifts in the Indian financial market and global economic indices using statistical techniques. Regression analysis, correlation research, Descriptive analysis and other quantitative methods.

## ANALYSIS AND DISCUSSION

**Arch Model (Table 1)**

| Dependent Variable: WPC | | | | |
|---|---|---|---|---|
| Method: ML ARCH - Normal distribution (BFGS / Marquardt steps) | | | | |
| Sample (adjusted): 3 91 | | | | |
| Included observations: 89 after adjustments | | | | |
| Failure to improve likelihood (non-zero gradients) after 45 iterations | | | | |
| Coefficient covariance computed using outer product of gradients | | | | |
| Pre sample variance: back cast (parameter = 0.7) | | | | |
| GARCH = C(3) + C(4)*RESID(-1)^2 | | | | |
| **Variable** | **Coefficient** | **Std. Error** | **z-Statistic** | **Prob.** |
| C | 59.97220 | 5.127073 | 11.69716 | 0.0000 |
| WPC(-1) | 0.931752 | 0.005866 | 158.8516 | 0.0000 |
| | Variance Equation | | | |
| C | 126.9263 | 11.86008 | 10.70197 | 0.0000 |
| RESID(-1)^2 | -0.043144 | 0.104616 | -0.412398 | 0.6800 |
| R-squared | 0.907214 | Mean dependent var | | 869.8326 |
| Adjusted R-squared | 0.906148 | S.D. dependent var | | 43.65328 |
| S.E. of regression | 13.37331 | Akaike info criterion | | 8.072295 |
| Sum squared resid | 15559.56 | Schwarz criterion | | 8.184144 |
| Log likelihood | -355.2171 | Hannan-Quinn criter. | | 8.117378 |
| Durbin-Watson stat | 1.980900 | | | |

As per table 1 inference

1. Dependent Variable (WPC):
   The ARCH model's dependent variable, WPC, is a relevant economic variable. The model's coefficient of 0.931752 shows that the previous value of WPC—which was one period behind the present value—significantly influences the current value. Persistence in the economic variable is indicated by the positive coefficient, which points to a positive link.
2. The GARCH Mode:
   According to the GARCH model, the squared lagged residual (RESID(-1)^2) and a constant term (C) both affect the variance of WPC. With a value of 126.9263, the constant term (C) makes a large contribution to the variance. Although the coefficient for RESID(-1)^2 is -0.043144, the p-value of 0.6800 indicates that it is not statistically significant. This suggests that there might not be a substantial relationship between the volatility and the squared-lagged residual.
3. Coefficient Interpretation:
   The regression statistics' intercept (C), which is 59.97220, indicates the baseline value of WPC when all other variables are zero. WPC(-1) has a coefficient of 0.931752, which shows how the lag value affects the present WPC. With p-values of 0.0000, both coefficients are statistically significant.

**Regression Statistics (Table 2)**

| ***Regression Statistics*** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Multiple R | | 0.997369011 | | | | | | |
| R Square | | 0.994744944 | | | | | | |
| Adjusted R Square | | 0.994088062 | | | | | | |
| Standard Error | | 2.797252492 | | | | | | |
| Observations | | 10 | | | | | | |
| **ANOVA** | | | | | | | | |
| | ***df*** | | ***df*** | | ***df*** | | | |
| Regression | 1 | Regression | 1 | Regression | 1 | | | |
| Residual | 8 | Residual | 8 | Residual | 8 | | | |
| Total | 9 | Total | 9 | Total | 9 | | | |
| | ***Coefficients*** | | ***Coefficients*** | | ***Coefficients*** | | ***Coefficients*** | |
| Intercept | 1.475166823 | Intercept | 1.475166823 | Intercept | 1.475166823 | Intercept | 1.475166823 | Intercept |
| X Variable 1 | 1.02376119 | X Variable 1 | 1.02376119 | X Variable 1 | 1.02376119 | X Variable 1 | 1.02376119 | X Variable 1 |

| | |
|---|---|
| Mean | 0.176806816 |
| Standard Error | 0.105695599 |
| Median | 0.11 |
| Mode | 0.02 |
| Standard Deviation | 0.211391197 |
| Sample Variance | 0.044686238 |
| Kurtosis | 0.394118519 |
| Skewness | 1.185402302 |
| Range | 0.447227262 |
| Minimum | 0.02 |
| Maximum | 0.467227262 |
| Sum | 0.707227262 |
| Count | 4 |

As per table 2 inference

1. Regression Statistics

With an R-squared value of 0.9947, the regression statistics demonstrate a high degree of fit and suggest that the model accounts for nearly 99.5% of the variability in WPC. At 0.9941, the adjusted R-squared is likewise high. With a standard error of just 2.797, the model appears to have an excellent fit on the data.

2. ANOVA

The regression's significance is indicated in the ANOVA table. Given that the regression's p-value is 0.0000, the regression model as a whole is considered statistically significant. This lends credence to the theory that WPC's current value is heavily influenced by its lag value.

3. Descriptive Statistics:

WPC's characteristics indicate a mean of 0.1768 and a standard deviation of 0.2114. With a kurtosis of 0.3941, the distribution appears to be somewhat typical. The data appear to be quite variable, as indicated by the range of 0.4472 and the skewness of 1.1854, which both point to a positive skew.

## CONCLUSION

The study delves deeply into the complex relationship between the Indian financial system and worldwide economic crises, illuminating the dynamism, adaptability, and resiliency of the Indian financial industry. Examining actual data spanning more than ten years, the study focuses on important measures such as stock market indices, currency exchange rates, investment trends, and government responses. The analysis, which makes use of sophisticated statistical techniques such as the ARCH model, indicates that the lagged value of the economic variable WPC has a major influence on its current state. The WPC variance is further examined via the GARCH model, which emphasizes the impact of a constant factor on volatility.

Regression statistics show an exceptionally good degree of fit, with the model accounting for about 99.5% of WPC variability. The regression's overall statistical significance is validated by the ANOVA analysis. The distribution properties of WPC are elucidated by descriptive statistics, which highlight its positive skew and variability. To sum up, our study

contributes to a deeper comprehension of the intricate relationship between the resilience of the Indian financial system and global economic crises. Policymakers, investors, and market participants can benefit from its insightful information, which adds to the current conversation about overcoming financial obstacles in an international economy.

## LIMITATIONS

There are some restrictions on the research article. First off, by concentrating mostly on the WPC variable and its connection to international economic crises, the study may have neglected a wider range of economic indicators. Furthermore, because the analysis is based on historical data, it's possible that the conclusions understate the changing dynamics of the Indian financial industry. The study's lack of a thorough consideration of many economic sectors may restrict its generalizability. Furthermore, the paper only offers a limited picture of the intricate relationships in India's financial environment because it does not thoroughly examine qualitative issues, such as the qualitative effects of government policies and investor attitude during economic crises.

## SCOPE FOR FUTURE RESEARCH

Using an ARCH model and regression statistics, this study offers a thorough investigation of how global economic crises affect the Indian banking sector. The following directions can be further investigated in future research:

Dynamic Modelling: To reflect changing economic conditions and policy responses, extend the study by adding time-varying elements.

Sectoral Analysis: Building on the table of economic data supplied, investigate how different sectors are affected by crises.

Qualitative Observations: Add qualitative evaluations to quantitative results by using case studies and interviews to gain a better knowledge of market dynamics.

Policy Evaluation: Provide evidence-based policy recommendations by evaluating the efficacy of particular government programs and regulatory measures in times of crisis.

International Comparisons: Carry out comparative analyses with other developing nations to pinpoint shared trends and distinctive reactions to global economic challenges.

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