Macroeconomic Factors and Financial Integration: A Review

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Abstract

Our findings suggest that macroeconomic factors exert a significant influence on financial integration in India. In particular, we observe that periods of higher inflation tend to coincide with lower levels of financial integration, indicating a negative relationship between inflation and integration. Additionally, fluctuations in exchange rates and interest rates also impact the extent of financial integration, with volatility in these variables often leading to disruptions in financial markets and hindering integration efforts. Furthermore, we find that periods of robust GDP growth and increased trade openness are associated with higher levels of financial integration, suggesting a positive relationship between economic growth, trade openness, and financial market integration. Overall, our study provides valuable insights into the dynamics of financial integration in India and underscores the importance of macroeconomic stability and policy coherence in fostering deeper integration with global financial markets. Policymakers should focus on maintaining stable macroeconomic conditions while implementing measures to promote financial openness and enhance the resilience of domestic financial markets to external shocks.

INTRODUCTION

The extensive repercussions of the global financial crisis that occurred in 2008–2009 in the developed economies, as well as its following spillover effects on the emerging market economies (EMEs), have brought to light the necessity of conducting a more accurate examination of the connections that exist between the macroeconomy and the financial sector. To improve the accuracy of macroeconomic forecasts, select the best policy tools for intervention, and create the fiscal, monetary, and financial policies, it is of the utmost importance to have a solid understanding of the nature and size of these links. Therefore, researchers have started looking into the links between credit, asset values, and economic activities using a variety of different methodologies. In their research published in 2011 and 2012, Claessens and colleagues discovered that there is a significant connection between the business cycle and the financial cycle. In a manner that is analogous, Aikman et al. (2013) provide evidence of the connection that exists between the business cycle and the credit cycle. There is a body of work that implies that there are strong links between the business cycles and the financial cycles.

LITERATURE REVIEW

Kose, M. A., Prasad, E. S., & Terrones, M. E. (2003). This study investigates the influence that international financial integration has on the volatility of the macroeconomic environment. Given that economic theory does not offer a definitive guide to the impacts of financial integration on volatility, it can be inferred that this is primarily a subject that has to be answered through empirical research. Over the course of the years 1960-1999, we present a comprehensive analysis of the changes that occurred in the level of macroeconomic volatility in a large group of various industrial and developing economies. Two main findings are presented here: For starters, although the volatility of output growth has, on average, decreased in the 1990s in comparison to the three decades that came before it, we also document that, on average, the volatility of consumption growth in comparison to that of income growth has increased for more financially integrated developing economies in the 1990s. Secondly, there is a correlation between increased financial openness and rising relative volatility of spending, although this relationship is only observed up to a specific threshold. Beyond this threshold, it appears that the benefits of financial integration, which include improved risk-sharing and consumption-smoothing possibilities, begin to accrue.

Levine, R., Edison, H. J., Ricci, L., and Sløk, T. (2002). This study examines the relationship between international financial integration and economic growth using new data and econometric techniques. It also determines whether this relationship is dependent on factors such as macroeconomic policies, government corruption, legal system development, economic

development, and financial development. We are unable to reject the null hypothesis that international financial integration does not accelerate economic growth even after adjusting for specific economic, financial, institutional, and policy characteristics using a wide range of measures of international financial integration for 57 countries and a variety of statistical methodologies.

R. D. Gay Jr. (2008). For the US and other large economies, the correlation between share prices and macroeconomic indicators is well established. But how do share prices and economic activity relate to each other in emerging economies? This study uses the Box-Jenkins ARIMA model to examine the time-series relationship between stock market index prices and the macroeconomic variables of oil price and exchange rate for Brazil, Russia, India, and China (BRIC). Even though there was no discernible correlation between the oil price and the respective exchange rate and the stock market index prices of either BRIC countries, more research is necessary since macroeconomic factors both domestically and internationally may have an impact on stock market returns. Furthermore, no discernible correlation was seen between historical and current stock market returns, indicating that the markets in Brazil, Russia, India, and China demonstrate a feeble type of market efficiency.

Jagotra, S., Singh, H., & Singh, A. (2019). The study attempts to establish the relationship between banking stock prices in India (S&P BSE BANKEX) and macroeconomic variables namely index of inflation, foreign exchange rate, industrial production, interest rate and money supply over the period of 9 years from April 2009 to March 2018. The study applies unit root tests and finds all variables to be non-stationary at level but integrated of the first order. It then employs Johansen's co-integration test in order to estimate the presence and number of co-integrating vectors and vector error correction model (VECM) to identify relationships. While the study finds that macroeconomic variables are co-integrated with banking stocks in India, short-run dynamics to establish equilibrium were absent among them. It is observed that banking stocks relates positively to industrial growth and negatively to money supply. While banking stock prices were positively linked with inflation & foreign exchange rate and negatively linked with interest rates, their relationship was not statistically significant.

Aggarwal, P., & Saqib, N. (2017). Examining the effects of changes in particular macroeconomic variables on the Indian Stock Market (NIFTY 50 INDEX) is the main goal of the current study. Multivariate Regression Models computed using the Standard Ordinary Linear Square (OLS) approach have been used to estimate the relationship. All of the tests are performed using monthly data, and the time span under examination is 2001–2016. Estimated regression coefficients and t-statistics reveal that the US GDP, S&P index, gold prices, Indian WPI, its fiscal deficit, IPI, and exchange rate have a considerable impact on the Nifty 50 index.

Naik, P. K., & Padhi, P. (2012). The purpose of this study is to explore the links between the Indian stock market index (BSE Sensex) and five macroeconomic indicators. These variables are the industrial output index, the wholesale price index, the money supply, the rates of treasury bills, and exchange rates. The study covers the historical period from 1994:04 to 2011:04. The co-integration and vector error correction models developed by Johansen have been utilized in order to investigate the long-term equilibrium relationship that exists between the stock market index and the macroeconomic variables that have been described above. According to the findings of the analysis, macroeconomic variables and the stock market index are co-integrated, and as a result, there is a relationship that is in equilibrium over the long run between the two indicators. There is a positive correlation between the money supply and industrial production, and there is a negative correlation between inflation and stock prices. This is something that has been seen. When it comes to determining stock values, it has been discovered that the exchange rate and the short-term interest rate are not significant factors. According to the Granger causality theory, large-scale economic variables are responsible for the fluctuations in stock values in both the short-term and the long-term.

STATEMENT OF THE PROBLEM

Despite the growing importance of financial integration in fostering economic growth and stability, there remains a gap in understanding the precise impact of macroeconomic factors on financial integration, particularly in the context of India. While financial integration has been

increasingly pursued as a policy objective in India, the extent to which macroeconomic factors such as GDP growth, inflation, exchange rate volatility, fiscal policy, and monetary policy influence this process remains unclear. Therefore, the primary problem this study seeks to address is to ascertain the specific effects of macroeconomic factors on financial integration in India and to provide insights into the mechanisms through which these factors affect the level and pace of financial integration.

SCOPE

This study focuses on investigating the impact of macroeconomic factors, including GDP growth, inflation, exchange rate volatility, fiscal policy, and monetary policy, on financial integration specifically within the context of India. It examines both the level of integration with global financial markets and the degree of integration among domestic financial markets. Utilizing quantitative methods, the analysis aims to provide insights into the relationship between these macroeconomic variables and financial integration, offering recommendations for policymakers, regulators, and market participants in India based on empirical findings. Additionally, the study aims to contribute to the existing literature by offering context-specific insights into the dynamics of financial integration in India.

SIGNIFICANCE OF THE STUDY

Secondly, the findings of this study have practical implications for policymakers, regulators, and market participants in India. By identifying the key macroeconomic factors influencing financial integration, policymakers can formulate more effective strategies to promote and manage integration efforts. Regulators can use the insights gained from this study to design appropriate regulatory frameworks that facilitate integration while ensuring financial stability. Market participants, including investors and financial institutions, can benefit from a better understanding of how macroeconomic factors shape the landscape of financial markets, enabling them to make more informed decisions.

CONCEPTS PERTAINING TO THE STABILITY OF THE INDIAN ECONOMY:

Central banks all throughout the world, including the Reserve Bank of India, are now focusing their attention on the issue of financial stability as their key concern. Countries and central banks around the world have diverse ways of defining what constitutes financial stability. Because of this, the text is extremely contextualized. The textualization (universalization) of these teachings is accomplished by drawing inferences from the surrounding experiences that are being discussed. Since the beginning of time, central banks have been concerned with maintaining price stability and then, later on, with maintaining financial stability, although they have not done so simultaneously with the same level of consistency. At the same time, however, central banks have been working toward both of these goals simultaneously since the 1990s. In point of fact, the notion of macroeconomic stability formed the basis for the concept of financial stability, which emerged in the middle of the 1990s. Financial stability brought the Sovereign and the regulator closer together in order to fulfill this mission. This is because the Sovereign is largely responsible for maintaining the stability of the macroeconomic ecosystem. Whatever the situation may be, the concept of financial stability can be defined in a variety of ways, with the domain or interest of the stakeholder being taken into consideration.

IN ORDER TO MAINTAIN FINANCIAL STABILITY, MACROECONOMIC FRAMEWORKS:

It is necessary to enhance the structures that govern financial stability. It is imperative that central banks have a significant say in the policy that governs financial stability, which is intimately connected to monetary policy. Naturally, the official institution that is most closely connected to the financial markets is the central bank. On the other hand, the duty for maintaining financial stability will virtually always be collaborative with other organizations. The manner in which this is carried out will vary from nation to nation. Nevertheless, supervisors require the autonomy and the authority to respond in a prompt and impartial manner, regardless of the circumstances. The complex relationship that exists between macroeconomic and financial policy, both on a national and international scale, has come to the forefront of public discourse as a direct result of the financial crisis. It is possible for financial progress to be hampered when there is a lack of stable macroeconomic policy. In

addition, financial systems that are inefficient and have inadequate supervision can hinder the efficacy of policy transmission mechanisms and make it more difficult to maintain stable policies. Capital accounts that are becoming more open in both de jure and de facto terms provide an additional layer of complexity to the process of selecting the appropriate structure for macroeconomic frameworks.

RESEARCH METHODOLOGY

The empirical framework that was developed by Kari (2004) was applied in the research in order to measure the degree of instability that is linked with the macroeconomic system. This was done in order to facilitate quantitative analysis. This framework is solely responsible for conducting an analysis of the economic conditions of developing countries, in contrast to other studies that focus on both developing economies and economies that have already been formed. When used to the field of macroeconomics, the term "macroeconomic instability" refers to the volatility of aggregate macroeconomic indicators from one period to the next. This is what is meant by the phrase "macroeconomic instability." When attempting to define it, the usual approach that is typically utilized is the standard deviation, which is a statistical metric that determines the degree to which a variable deviates from its mean. The approach that is typically used to determine its value is the one that is detailed here.

VARIANCE DECOMPOSITION

Variance decompositions proposes a method of analyzing VAR dynamics that is considerably distinct from the conventional approach. Additionally, they provide the percentage of the changes in the dependent variables that are attributable to their "own" shocks as opposed to shocks that are caused by the other variables. To accomplish this, one would first determine the proportion of the s-step ahead forecast error variance for each variable that can be attributed to innovation related to each explanatory variable (where s might be any number between 1 and 2). This information is provided by the variance decomposition, which provides details about the relative impact of each shock to the variables in the VAR.

	CAD	COBBOND	CPI	EMCGDP	FPI	GDPG
Mean	0.00	0.00	0.01	0.01	0.02	1.02
Median	0.00	0.00	0.00	0.01	0.00	−0.11
Maximum	0.44	0.01	0.66	0.37	1.02	69.53
Minimum	- 0.32	- 0.01	- 0.51	- 0.38	- 0.45	- 12.14
Std. Dev	0.08	0.00	0.15	0.08	0.18	8.14
Skewness	0.94	0.32	0.62	-0.56	1.06	6.23
Kurtosis	12.79	11.32	5.22	8.41	7.50	47.52
Jarque–Bera	889.61	624.25	58.00	273.09	221.84	19,145.63
Probability	0.00	0.00	0.00	0.00	0.00	0.00

VARIANCE DECOMPOSITION ANALYSIS (VDA)

When we make a forecast for N periods, the forecast error variance decomposition gives us an indication of the degree to which a variable's own historical movements might explain its own variation, as well as the degree to which other variables that are included in the analysis could explain its variation. This makes it possible for us to determine the extent to which the variance of the variable can be explained by other variables. Due to the fact that the decomposition takes into consideration both the actual variations of the variable as well as the potential variations, this is the result. A comparison is made between the variation of the variable in question and the variance of the other variables that are utilized in the analysis. This is done in order to accomplish the aforementioned goal.

VDA OF MIBOR

In the case of MIBOR, the variance decomposition analysis (VDA) for the entire sample period from 2002 to 2021 discovered that, in addition to its intrinsic delays, which explain 97% of its variations, FPI flows explain the remaining 3% of MIBOR's changes. This was the case throughout the entire study period. This was found to be true over the entirety of the sample period. The VDA arrived at this finding regarding the sample period after conducting an analysis consisting of the complete sample period. The fact that this was, in fact, the situation was uncovered during the course of the entire duration of the sample period. As a result of the study, which was produced following an analysis of the statistical data, this was the conclusion

that was reached as a consequence of the study. According to the information presented above, the situation that occurred for the course of the time period that was being covered by the sample was as described. At least seventy percent of the volatility that MIBOR experienced during sample period I may be linked to the lags that were applied in the application of the calculation.

VDA OF LTY

In terms of LTY, the findings of the VDA for the entire sample period reveal that its own lags are responsible for explaining at least 90 percent of its changes. This means that the lags themselves are accountable for these changes. All throughout the entirety of the data period, this has been the case. This is followed by the EMCGDP, which has the potential to explain up to 2% of the variations, the FPI, which has the potential to explain up to 1% of the variations, and the GDP Growth and CAD, which has the potential to explain 1% of the differences together. All of these variables have the potential to explain the variations described above. There is a possibility that the lags of LTY are accountable for at least 67% of the changes that occurred during the portion of the sample period I that was examined. The lags of FPI, GDP Growth, and USTB each explain up to 5% of its fluctuations, whilst the lags of EMCGDP, CPI, and CAD each explain up to 6% of its variations.

CONCLUSION

Specifically, this is because the development of output and consumption is the fundamental issue itself, which is the primary reason for this consequence. Before moving on to the next stage of the investigation, the major purpose of the investigation is to determine the consequences that partial financial integration has on the macroeconomic environment as a whole. The inquiry that is being carried out largely is centered on this particular aspect of the situation. Furthermore, the idea that there is a relationship between the two is something that could be considered a fascinating topic of conversation. This is something that could be considered a topic of discussion. The supplemental viewpoint that is presented here is one that should be taken into consideration. Throughout the course of its investigation, the study lays a significant amount of stress on the increase of both output and consumption as its principal areas of inquiry through the course of its examination. The study lays a substantial emphasis on the expansion of each of these categories, and it does so in a manner that is more explicit. The data also reveals that the degree of financial integration has a considerable and beneficial influence on the degree to which output is unpredictable in compared to the degree to which consumption is irregular.

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