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THE ROLE OF DEBT DERIVATIVE MARKETS IN THE DEVELOPMENT OF INDIA: AN ANALYSIS

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ABSTRACT

Over a decade Indian economy is facing severe financial crisis which becomes a bottleneck for the overall progress of the nation. Hence the Government of India (GOI) has focused on liberalization of monetary policies for the growth of financial market as it has been a key driver for accelerating the economic growth. As risk is an inevitable component in financial market, Debt Derivatives have emerged as an economic tool for the effective and efficient management of risk. Debt Derivative is a security that facilitates the investors to transfer their credit risk to other interested investors without any collateral security. Derivative markets are the recent innovations in financial markets globally and growth of these markets enhances financial stability. Credit Derivatives allow for buying protection on both corporate and sovereign debt and hence considered as a major component for the growth of financial sector. Though financial market innovation and globalization have provided many instruments, tools and strategies to manage risk and enhance returns, still the financial markets have become increasingly complex and competitive. On this backdrop, an attempt has been made to analyze the role of Debt Derivatives in the growth of financial markets in particular and the economy as a whole.

Keywords: Derivatives, Sovereign Debt, Risk Management, Volatility and Innovation

1. **CONCEPTUAL FALLACY**

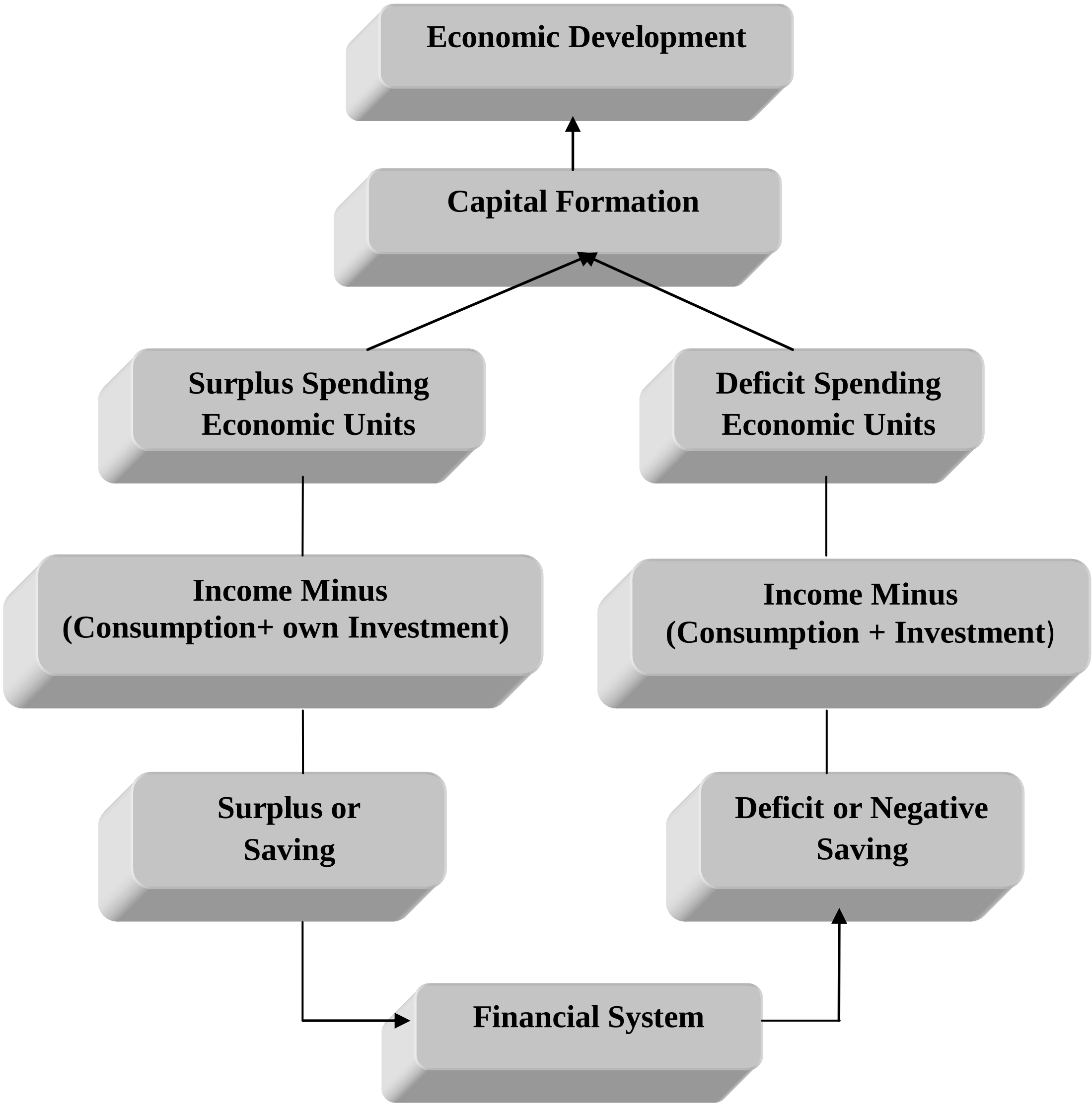
The role of financial system in economic development is crucial and significant as money; credit and finance are the lifeblood of the economic system. The financial system influences the level of national income, employment, standard of living, and social welfare etc. A well developed financial system contributes significantly to the acceleration of economic development through increased capital formation, technical progress and market potential. Many economists believe that economic growth, poverty reduction and stability depend upon an efficient and effective financial system. Schumpeter believed that the services such as mobilizing savings, evaluating projects, managing risk etc. essential for technological innovation and economic development. The ultimate goal of the financial system is to accelerate the rate of economic growth. Financial system comprises financial institutions, instruments, services, practices, procedures and so on. While financial markets may accelerate development by themselves and in turn develops with economic development.

1.1.Financial Development and Economic Development:

The role of financial development in economic development is very significant and there is a symbiotic relationship between them. Financial development induces Economic development and vice versa. Economic development is a wide concept which includes financial development.

Both these concepts are inter-related and inter-dependent which can be shown in the figure below:

Figure 1: Relationship between Financial system and Economic Development



There are three possible patterns of relationship between them.

- The economic progress induces an expansion of the financial system. As the real economy grows, there is more and more demand for financial services. This is called '*Demand-Following or Passive'* financial development.
- The financial development precedes economic development and it is brought about through a conscious, deliberate policy by the authorities. This is known as '*Supply Leading*' financial development.

- The direction of causality between economic development and financial development does not remain the same in all stages of development.

1.2.Development of Debt / Derivative market:

Over the past decade a veritable financial revolution has occurred in India. After the Independence, the Indian Financial System (IFS) has undergone vulnerable changes due to continuous inflation, increasing external and internal deficits, industrialization, urbanization and significant structural transformation. India has witnessed all types of financial innovations in respect of financial institutions, instruments and services. The investor is one of the major and crucial components of financial system and the health and efficiency of the financial system are significantly influenced by the risk-return-liquidity-preferences and confidence of investors. At present India is experiencing increasing volatility or instability. After 1995-96 due to a crisis in the equity markets, the debt markets have emerged as a policy formulation in India. A debt market is one where short-term and long-term debt instruments can be traded especially derivatives. It is crucial as health of financial markets depends on its health and creates an interface between monetary policy and fiscal policy. Development of debt market acts as a double-edged weapon because it can aid as well as hinder the effectiveness of monetary policy through interbank market and repo market.

1.2.1. Benefits of Derivative Market:

The Derivative Market ensures the following benefits:

- Higher capital standards
- Stronger risk management
- International surveillance of financial firms' operations
- Dynamic capital rules

1.3. Derivatives and its types:

Derivatives are key parts of the financial system. They are financial instruments which are derived from underlying items of values and it does play a vital role in the equity markets in many forms with the help of its participants which are Hedgers, Speculators and Arbitrageurs. "*Derivatives are highly leveraged instruments; hence the proposal to create index futures and options should be viewed with great caution*." These also called *Derivative Securities* are the future contracts into a diverse group of financial instruments that apply to every kind of asset, including mortgages, insurance etc. These are also known as "*Deferred Delivery or Deferred Payment Instruments*". These are highly liquid and have low transaction cost. Derivatives are of many types such as: *Futures, Options, Swaps, Warrants, Convertible Bonds, Credit Derivatives, Captions and Swaptions* etc. Of these, Credit Derivative is a new innovation and is developed in 1992 in US to reduce credit risk. It helps banks, finance companies and other investors to manage credit risk by insuring against adverse changes in the quality of borrowers.

a) *Futures:* Futures are contracts to buy or sell an asset on or before a future date at a specified price. These are transferable specific delivery forward contracts between two counterparties that fix the terms of an exchange which will be placed at a future date.
b) *Forwards:* A tailored contract between two parties, where payment takes place at a specific time in the future at pre-determined price.
c) *Options:* These are contracts between option writers (sellers) and buyers, which obligate the former to deliver, and entitle the late without obligation to buy. When the buyers have the right to receive the delivery of assets, they are known as '*Call Options*' and when they have the right to receive the payment by handing over the assets, they are known as '*Put Options*'.
d) *Swaps:* Swaps are agreements between two parties to exchange assets or set of financial obligations or a series of cash flows for a specified period of time at predetermined intervals. They include both spot and forward transactions. Swaps are of many types such as: Interest rate swaps, Bond swaps, Substitution swap, Debt-equity swap etc.
e) *Warrants and Convertibles:* Warrant is a contract entered into by the issuing company giving the holder the right to purchase or subscribe the equity shares of a company within a specified period at predetermined price.
f) *Credit Derivatives:* A Credit derivative is a financial innovation developed to reduce credit risk. There are three types of credit derivatives viz., credit swaps, credit options and credit-linked notes.

2. LITERATURE REVIEW:

The Indian Derivatives market has grown exponentially, with new product innovations and increasingly sophisticated players entering the market. The growth of derivative markets has been accompanied by a commensurate growth in the volume of scientific research.

Dufey & Rehm (2000) defines a Debt Derivative is a new financial product and is a contract between two financial market participants, transfer credit risk from one party to another underlying the features such as strike price, credit event, maturity, protection payment & settlement etc. Sharma (2008) opines that Derivatives are socially constructed and need-driven innovation in the financial economy, with its roots well ingrained in the events and circumstances in the real economy. Brenner (2002) says that the need to control highly increased volatility and fluctuations due to inflation problems, currency problems, debt defaults, and many other factors emerged numerous changes in financial market which necessitated the increased global use of derivatives. Alberts and Poon (2006) view that derivatives are flexible and can be used in many ways, in relation to the price of commodities, interest rates, exchange rates, and prices of equity and they help in stabilizing the economy through the reduction of the enterprises that go under because of the volatility in the market. Dodd (2002) opines that derivatives are also used to protect the efforts of the investors in managing the risk from abuse and fraud.

Avadhani (2000) viewed that a derivative market had become an integral part of modern financial system. The International Monetary Fund (2001) defines derivatives as "financial instruments that are linked to a specific financial instrument or indicator or commodity and through which specific risks can be traded in financial markets in their own right. The value of a financial derivative derives from the price of an underlying item, such as an asset or index. Unlike debt securities, no principal is advanced to be repaid and no investment income accrues." Sahoo (1997) opines that the financial derivatives came into spotlight in post-1970 period due to growing instability in the financial markets. Shapiro (2000) opines that the derivative is one of the categories of risk management tools and Derivatives markets are an integral part of capital markets in developed as well as in emerging market economies.

Ashraf, Altunbus & Goddard (2005) says that Debt Derivatives have been as revolutionary financial innovation allowing credit risk to be transferred to third party without the ownership of underlying asset. Usman Ali, P. (2001) discusses the new applications of debt derivatives such as to hedge currency convertibility risk, hedge dynamic credit risk, create leveraged positions, enhance investment returns, exploit credit arbitrage opportunities and create synthetic assets. Choudhry, M. (2002) views that debt derivatives allow investors to manage the credit risk exposure of their portfolios or asset holdings. Prato, O. (2002) opines that debt derivatives subject to interest rate and exchange risk, operational risks and legal risks and argues that internal risk management systems must be strengthened further so as to prevent those risks.

Giesecke, K. (2009) says that a debt derivative is a financial instrument whose cash flows are linked to the financial losses due to default in a pool of reference credit securities. They facilitate the trading of credit risk, and therefore the allocation of risk among market participants.

Kiff, Elliott, Kazarian, Scarlata and Spackman (2009) describe credit derivative markets followed by an assessment of systemic risk which could be removed if policymakers had access to more detailed information about the transactions. Kumar, A. (2007) says that credit derivatives will enable financial stability by facilitating dispersion of credit risks. Rule (2001) says that the development of derivative markets has clear potential benefits for financial stability because they allow the origination and funding of credit to be separated from the efficient allocation of the credit risk. Kane (2001) explains the mechanics, risks and uses of the different types of credit derivatives and the primary purpose of credit derivatives is to enable efficient transfer and repackaging of credit risk. Kim (2008) says that the credit derivative markets are like a new continent with boundless opportunity. Ayadi and Behr (2009) argue that the combination of self-regulatory initiatives together with strict supervisory action seems to be well suited to help in preventing market participants from misusing credit derivatives. Arora and Sarathi (2010) highlight the benefits of an efficient market for various market participants namely for corporates, financial system and investors and suggest measures to develop corporate bond market; measures include infusion of liquidity, reliable credit rating system and setting up of a trading platform. Sharma and Sinha (2006) explain the main features of the Indian corporate debt market such as its size and importance, private placements and opine that there is a recognized need for compulsory trade reporting to a central authority by all participants, and a structured clearing and settlement system for corporate debt.

3. DATABASE AND METHODOLOGY:

The importance of the study emanates from the rapid growth of derivatives in the global markets and their relevance for financial market development which enables the overall progress of the economy. On the above backdrop, an attempt has been made to have an in-depth knowledge of the Derivative Markets in India and the study is entitled as '*THE ROLE OF DEBT DERIVATIVE MARKETS IN THE DEVELOPMENT OF INDIA: AN ANALYSIS*' with the following specific objectives:

1. To analyze the need for the evolution of Debt Derivatives
2. To evaluate products of derivatives and the functions of derivatives.
3. To analyze the pros and cons of debt derivatives

4. To have an overview of the Indian Derivative Market.
5. To assess risk management tools and its strategies.
6. To analyze the future trends of Debt Derivatives.
7. To evaluate the role of derivative market in the development of financial market in particular and the economy in general

To evaluate the overall position of the entry of derivatives in stock market, mostly secondary data is used which has been collected from Publications of Government of India, Publications of Planning Department, Existing literature and other scholarly works. In order to make the study simple and understandable, the data is presented in tables and figures and analyzed by using simple statistical techniques of analysis viz., percentages etc. Interpretation of data is based on rigorous exercises aiming at the achievement of the study objectives and findings of the existing studies.

4. **RESULTS AND DISCUSSIONS:**

Financial innovations encompass wide range of changes in the financial system that lead to the broadening, deepening, diversification, structural transformation, internationalization and sophistication of financial system. In Nineties, the global economy faced chronic financial crisis due to financial instability, economic instability and monetary instability. The volatility and instability in financial markets have emerged the introduction of the policy of liberalization and globalization not only in India but also globally. The Indian Financial System (IFS) has grown enormously since 1950 in terms of size, innovations, delivery, complexity and sophistication. Derivatives are the widest financial innovation of the last 30 years and their impact on financial markets and operators, investment strategies and risk management, money and fiscal policy are very important for the development of the financial market.

4.1. Influencing Factors for the growth of Financial Derivatives:

The factors generally attributed as the major driving force behind growth of financial derivatives are:

- Increased volatility in asset prices in financial markets.
- Increased integration of financial markets with the international markets.
- Market improvement in facilities of communication and a sharp decline in costs.

- Providing economic agents a wider choice of risk management strategies through development of more sophisticated risk management tools.
- Optimally combining the risks and returns over a large number of financial assets, leading to higher returns, reduces risk as well as transaction cost as compared to individual financial assets by innovations in the derivative markets.

4.2.Functions of Derivative Market:

According to N. D. Vohra & B. R. Bagri, the derivative market performs a number of useful economic functions:

1. *Price Discovery:* The futures and options market serve an important function of price discovery. To take advantage of such information in these markets, the individuals with better information and judgment are inclined to participate. Therefore, these markets indicate what is likely to happen and thus assist in better price discovery.
2. *Risk Transfer:* The derivative instruments do not themselves involve risk; rather they merely distribute the risk between market participants. It provide means to hedge against adversities of unfavourable market movements in return for a premium, providing means and opportunities to those who are prepared to take risks and make money in the process.
3. *Market Completion:* The existence of derivative market adds to the degree of completeness of the market. When the number of independent securities or instruments is equal to the number of all possible alternative future states of economy, it implies a complete market.

4.3. Present Scenario of Indian Debt Market:

The total size of Indian debt market is in the range of $92 billion to $100 billion i.e. approximately 30 percent of Indian GDP. The Indian Derivatives market has grown exponentially, with new product innovations and increasingly sophisticated players entering the market. It offers the full range of derivatives and structured notes across all asset classes, foreign exchange, and fixed income & equity markets. India has a vast debt market and it has begun to receive due attention in research and policy making. The Indian debt market is primarily a public, wholesale, privately placed, primary, long-term investment debt market. The recent survey has revealed that the majority of investors in India are interested to invest in debt securities than equities and units of mutual funds. Debt instruments are an important medium for investment particularly for risk-averse investors and debt is closely related to development finance. About 60-65 percent of an average Indian savings are held in debt instruments.

Indian Debt market ensures:

- Facilitates efficient financial intermediation and transparency by using market mechanism for pricing and allocating funds.
- Prevents financial crisis outside the banks. There is a complimentary and substitutable relationship between banks and debt markets.
- Facilitates availability of long-term funds for infrastructure development.
- Reduces the scope for direct, physical, subsidized allocation of credit which in turn lowers the level of bad debt.
- Serves as an essential tool to determine both current and future prices.
- Reallocates risk from the risk aversion people to the people who have an appetite for risk.
- Controls speculation which results in a more meticulous environment.
- Publicly available derivative prices serves as educated predictions of uncertain future outcomes
- Increases savings and investment in the long run due to augmented activities by derivative Market participant.

4.3.1. Characteristics of Indian Debt Market:

The Indian debt market is characterized by the following components -

- ❖ Indian Debt market has grown recently achieving a 100 percent growth rate per annum in terms of new debt capital. There has been a shift towards ‘Capital Debt Market’ from ‘Bilateral Banks Loan Market’.
- ❖ The growth in debt market is due to the entry and growth of mutual funds and insurance companies, increase in bank investments and sluggishness in the equity market.
- ❖ Over a decade the nature of debt market has changed due to the dematerialization of corporate debt, the growth and improvement in credit rating services, entry of primary dealers and market-related interest etc.
- ❖ The growth of government bond market, the volume of non-government debt in primary and secondary market also induced the growth of debt market.

- ❖ The government debt market has been a wholesale where as the private debt market has been a retail one.
- ❖ Another crucial feature of the Indian debt market is that it is mostly an investment market, but not trading market.
- ❖ Indian debt market constitutes a small part of corporate debt and basically of government securities, which account for 75 percent of the stock and nearly 90 percent of the volumes, traded on the secondary market.
- ❖ The trading of long-term debt instruments has been meager i.e., 4 percent when compared to short-term debt instruments which accounts for 96 percent.
- ❖ The yield curve of the Indian debt market has flattened due to decrease in interest rates.
- ❖ The retail debt market in government securities has remained small and attention needs to be concentrated on its promotion and growth.
- ❖ The health and efficiency of debt market depends upon skills, efficiency and independence of credit rating agencies, accounting and auditing firms, strict disclosure standards, contracts enforcement system, and enabling legal and regulatory framework.

The derivatives market can be divided into two, that for Exchange-Traded (EXT) Derivatives and that for Over-The-Counter (OTC) derivatives.

The Indian market is not ready for derivatives trading and capital markets are safer than derivatives and are correct to some extent because there are no risks such as Investment, Liquidity, Credit, Exchange, Management and Market risks. But now derivatives are used as a tool of risk management and there are no more conflicts in using derivatives in equity markets and other markets, because people today have the exact knowledge that derivatives is not just an underlying value, because they are derived from any asset or commodity but now they know derivative is a financial model and know what derivatives can do to help their corporation and is far more better than capital market. In India, on the equity market, SEBI has made it clear that the development of the derivatives industry should focus on exchange- traded derivatives. In the commodities area also, the development of the last three years in India have centered on exchanges. It is in interest rates and currencies, where Over The Counter (OTC) derivatives presently dominate in India that concerns about fair play and credit risk are more serious.

The government, although aware of the equity derivative market, has not yet made any substantial progress in the IT systems but derivatives markets earlier had its own declined stage and now have its flourishing stage in India that derivatives on its own and in the equity market have pulled almost 79 percent of India's population towards it, and now the booming period has come and everyone is aware that derivatives are making the country's GDP and are directly linked with the disposable income of each and every entity. One major question, as looking forward is concerning institutional participation on the equity derivative market. As with most of the financial sector innovations of the last decade, individuals have displayed intellectual capacity and a speed of exploiting new ideas which has just not been found with finance companies. Globally, mutual funds and banks are key players on the equity derivative market. In India, owing to variety of government and regulatory problems, this has just not materialized. It is clear that 0.79 percent of the NSE derivatives turnover in December 2005 came from institutional users. Most of the legitimate difficulties of mutual funds in terms of regulatory restrictions have been eased out through SEBI governing the mutual funds. Rules governing insurance companies and FIIs have been partly eased. Banks, however, continue to face stringent regulatory hurdles. We can see an enormous increase in liquidity .Hence we say that institutional investors do play a major role for derivatives and equity market which in turn enhance the country's GDP.

5. CONCLUSIONS:

The key elements of financial market regulators are: market integrity, systemic safety and customer protection which are intertwined and inter-related. In the future, Indian markets are expected to become more vibrant and attain a leading position in the global financial system. The derivative market has become multi-trillion dollar markets over the years. Derivatives have become important instruments for many sovereigns to manage the risks related to debt management operations as well as for improving the profile of the debt. The use of these instruments by market participants adds to the liquidity in secondary government securities markets.

The study found that derivatives are vital for the stock market and they are at the booming stage; and every institutional investor would want to use derivative as a tool to maximize its profits. The research deals with basics of derivatives and its evolution in India. Also statistics about the global derivatives market is given and it is heartening to know that India's NSE ranked 20th during 2006 in the global derivative market. It is concluded that the derivatives market will continue to grow, and there is a need to remove the financial instability and volatility. Thus from above it can be concluded that that derivatives are vital and how they are important for each and every institutional investors such as Mutual Funds, Banks, Foreign Institutional Investors (FIIS), All Financial Institutions (FIs), Life and General Insurers. Derivatives play a very important role in the up-bringing of an organization; it plays a major role in the equity market. Today, with the help of derivatives, the Indian stock exchange market has recently rocketed up to become Asia's fourth largest exchange traded derivatives market. In terms of growth of derivative markets and a variety of derivatives users, the Indian market has exceeded or equaled many other Indian markets. The variety of instruments in derivatives instruments available for trading is also expanding. Corporations, private sectors institutions, state-owned and smaller companies are gradually getting into the act. The business growth of NSE started from a mere Rs.1000 million and has reached to 2,50,000 million during Jan- Mar 2006 quarter and is at the booming stage. This shows that the stock market with the help of derivatives have taken for a very good progress in the Indian economy. Hence it can be concluded that the derivative market enables the development of financial market in particular and the economy as a whole.

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