

Price Discovery and Volatility in NSE

Dr. Stalin^{1*} D. Mahesh²

¹ Assistant Professor, Dhanalakshmi Srinivasan College of Arts and Science for Women,
Perambalur, Tamil Nadu, India

² Assistant Professor, Dhanalakshmi Srinivasan College of Arts and Science for Women,
Perambalur, Tamil Nadu, India

ABSTRACT

Derivatives markets in India were introduced about seven years ago and futures & Options markets have become an extremely important trading instrument throughout world financial sectors. In our country, India, a Futures & Options Market is playing a very important role for various categories of investors' right from retail to institutional investors. In this thesis I discuss the role of derivatives markets in terms of price discovery and volatility over a cash market. Paper outlines legal, financial, and structural framework of Index futures contract trading on the National Stock Exchange of India (NSE). I offer a summary for price discovery and volatility in NSE CNX Nifty Index and Nifty Index futures markets. Any study on Index futures trading must include a discussion of the theoretical framework of futures markets institutions, operation mechanisms, and other features of a well organized futures market must also be analyzed. Benchmark indexes require special attention. As they represent the underlying assets of overall markets. I review the techniques of price discovery and volatility and the various factors that influence it. I operate on the assumption that Indexes are suitable instruments for serving as a foundation of futures contracts. I explain specification and pricing techniques of Index futures and argue that they may indeed represent a good alternative for managing stock market risk.

Keywords – Futures Markets, Stock Exchange

INTRODUCTION

Overview

Derivatives are financial contracts whose price is extracted from that of an underlying commodity such as a commodity. Hey. Security. Tariff. Index or incidence. The advent of the derivative contract market stems from the need of risk-averse economic agents to protect against risks resulting from asset price fluctuations. By locking in asset prices, derivatives products mitigate the effect of asset price volatility on the profitability and cash situation of risk-averse investors at present.

Initially, derivatives products originated as hedging devices against volatility in commodity prices and, for nearly three hundred years, commodity-linked derivatives remained the sole type

of such products globally. Products of derivatives offer some major economic advantages, such as risk management or risk allocation, away from risk-averse investors to those who are more willing and risk-bearing. Derivatives also assist in finding prices. That is, the mechanism by which the price level of any asset is calculated based on supply and demand. These derivative functions contribute to the efficient allocation of capital in the economy and, at the same time, their misuse often poses a challenge to the stability of the financial sector and the economy as a whole. India began reviving the exchange traded commodity derivatives market in the mid-1990s and added a number of teachers to the foreign exchange derivatives market. Although financial derivatives exchanged on the exchange were introduced in 2001. That was the beginning of the demand for equity derivatives. Centered on India's background of informal trading of derivatives. Exchange-traded derivatives rapidly picked up large amounts. Regulators have been and continue to be involved in the temporal relationship between the F&O (Futures & Options) market and the Spot Market. For a variety of factors, such as market efficiency, uncertainty and arbitrage, academicians and practitioners alike. Profitable arbitrage does not occur in perfectly effective markets as rates adapt to new knowledge instantaneously and entirely.

Therefore. New market-disseminating information should be instantly reflected in spot and futures prices by simultaneously activating trading activity in either or both markets so that no systemic lagging responses should be given. Nevertheless, There is another explanation why futures markets might potentially have a significant price discovery mechanism to help increase the market's performance. If so. Future prices and their movements can then provide valuable knowledge on subsequent spot prices beyond what is already contained in the current spot price. One of the aims of this study is to analyse price findings between the S&P CNX Nifty (NSE Benchmark) and its corresponding futures using co-integration analysis since the beginning of the NSE index futures, which provides many advantages. Uh, first. Co integration analysis tests the degree to which long-term equilibrium has been reached between two markets. Another distinct benefit of the methodology of co integration is that it specifically allows for variations in the short run from equilibrium. The question about how futures contract trading influences the underlying asset spot market has been an important topic for investors.

Academicians, regulators and exchanges. Antoniou and Holmes (1995) found that, while there was no major improvement in volatility in the long run, the introduction of stock index futures triggered a rise in spot market volatility in the short run. The apparent rise in volatility has been attributed to increased market knowledge now through the futures trading channel. Uh, on the other hand. No increase in spot market volatility observed due to the implementation of futures indicates that the variance of position shift must be equal to the variance of information/low under conditions of no arbitrage variance. This means that as the knowledge rate now rises, the volatility of the asset price will increase. Thus it follows.

That if futures lift that! The volatility of the spot price must adjust and therefore increase in volatility in the absence of arbitrage opportunities. Because there is theoretical controversy as to whether futures trading increases or decreases spot price volatility, the problem remains to be examined empirically and India's policymakers would also want to know its effect so that potential policy changes can be enforced. Another aim of this analysis is to analyse the effects on the underlying spot market of the implementation of S&P CNX Nifty Index futures.

OBJECTIVE

1. To study the impact of derivatives on Index volatility. mechanics of futures trading and price discovery between NSE S&P Nifty Index and NSE Nifty Index Futures markets.
2. To study price discovery between NSE S&P Nifty Index and NSE Nifty Index Futures markets and in providing hedge against price risk in the underlying securities.

History of Futures Markets

As a consequence of the need to minimize price risk in commodity markets, futures markets exist. In 173053, the U.S. Chicago Board of ~ ~ Trade (CBOT) was founded in 18-18. The earliest type of futures contracts known to have formed were the agricultural futures contracts on rice in Osaka. The first future form contract, known as a "to-arrive" contract, was established within a few years, and quickly became an alternative to grain trading itself. The Chicago Produce Exchange was set up in 18N to establish a market for crewing agricultural products. Butter and egg distributors withdrew from the market in 1898 and formed the Chicago Butter and Egg Board. It was later reorganized and renamed the Chicago Mercantile Exchange (CME) in 19194 for futures trading. The International Monetary Market (IMM), which was initially funded as a division of the Chicago Mercantile Exchange in 1972, launched currency futures contracts as the first financial futures contracts. Just later. The IMM started trading Treasury Bill FuturesS in 1976. The Chicago Board of Trade began to trade the first interest-rate futures contracts and futures on mortgage backed securities in 1975. In 198i, the Kansas City Board of Trade launched a potential deal on the 500 stock index of Standard & Poor's. The rapid growth of financial futures markets spread overseas in the 1980s: the London International Financial Futures Market (LIFFE) was founded in 1982, the Sydney Futures Market in 1980, the 198-1 Singapore International Monetary Exchange, the 1989 Tokyo International Financial Futures Exchange, the 1988 Swiss Options and Financial Futures Exchange, the 19-1 Matif in Paris.

History of options markets

A group of companies set up what was known as the Put and Call Brokers and Dealers Association in the early 1900s. However, it did not give the purchaser of an option the right to sell it before expiry to another party and there was no mechanism to guarantee that the option's writer would honour the contract. The Chicago Board of Trade founded a new exchange, the Chicago Board of Options Exchange, in April in 1973, primarily for the purpose of trading stock options. Option markets have become increasingly popular with investors ever since then.

In 1975, the American Stock Exchange and the Philadelphia Stock Exchange started to trade options. The volume of trading had risen so exponentially by the early 1980s that the amount of shares underlying option contracts sold per day surpassed the daily volume of New York Stock Exchange traded shares. In the 1980s, markets formed for foreign exchange options, stock-index options, and futures contract options. The Philadelphia Stock Exchange is the leading exchange for foreign exchange options trading. On the S&P 100, III d of the S&P 500 stock indices, the Chicago Board Options Exchange trades options and on the Big Market Stock Index the American Stock Exchange trades options and on the NYSE Index the New York Stock Exchange trades options. On these futures contracts, several exchanges selling futures contracts now also

sell options. The Chicago Board of Trade's therefore offers corn futures options, the Chicago Mercantile Exchange offers live cattle futures options, and the International Monetary Market offers global cattle futures options, and so on.

Emergence of financial Derivative Products

The rise of the financial products market, in particular Futures and Options, can be traced back to the ability of risk-averse investors to protect against risks resulting from asset price changes. By using derivative goods, price risks can be partially or entirely transferred by locking in asset prices. Derivative goods originally originated as hedging instruments against commodity price fluctuations. Commodity-linked derivatives have, for almost three hundred years, remained the sole form of such goods. The emergence of modern derivative contracts can be attributed to the need for farmers to cover their goods from any drop in their crop prices. For instance, if a farmer decided to save his produce due to natural calamities or any loss of output against any decrease in prices. He will enter into a future agreement with the buyer in which, at a future date, he will set the price at which he will sell the product.

The farmer is therefore hedged against any danger to which it may have been exposed in the future. In the same way, insurance policies are similar to options, whereby the insured pays a fee to cover his estate. The buyer of the option pays a small amount, which is the premium, by purchasing a put option to insure his stock prices against any decline in the underlying price. The financial derivatives came into spotlight post-1970 due to growing volatility in the financial markets. The Value line contract, launched in the USA by the Kansas City Board of Trade in 1982, was the first stock index futures contract introduced in the world. Since then, we have seen various markets launch new derivative contracts every year around the world.

The financial derivatives market has expanded tremendously in recent years, both in terms of the variety of instruments available, their complexity and their turnover. The introduction of futures and options in stock indexes has fundamentally changed the essence of stock exchange trading. An fascinating topic for investors, market makers, was the concern about how trading in futures contracts impacts the spot market for underlying assets. Academics, partners and regulators alike. These markets allow investors flexibility to adjust the structure of their portfolios and to plan their transactions. Future markets also present opportunities for hedging the risks involved in maintaining diversified portfolios of equity. As a result, critical cash market equity trades worth \$1 billion are related to the market operation of futures and options. Initially, derivative products originated as hedging devices against fluctuations in commodity pricing and for nearly three hundred years, commodity-linked derivatives remained the sole form of such products. In the post-1970 era, financial derivatives came into the spotlight due to growing volatility in financial markets. However, these products have become very popular since their emergence, and by the 1990s they accounted for about two-thirds of total transactions in derivative products. The financial derivatives market has expanded exponentially in recent years in terms of the range of available instruments, their size and also their turnover. Futures and options on stock indexes have gained more popularity in the class of equity derivatives worldwide than on individual stocks. Also small investors find these useful due to the high correlation of common indexes with different portfolios and the ease of use, the lower costs associated with index derivatives vis-à-vis derivative products based on individual securities is another reason for their increasing use. In particular, among institutional investors, who are major users of index-linked derivatives?

ECONOMIC BENEFITS AND RISKS OF DERIVATIVE SECURITIES

Economic Benefits of Derivatives Securities

For the global economy and its capital markets, future markets are of vital importance. Instability of rates of interest. Values of CUITenz. For financial planners and forecasters, bond market rates and stock index prices pose great headaches. Futures trading acts as a method to minimize the chance of turbulence in this market. Futures are used by financial managers as risk control instruments, which are typically effective in dramatically minimizing the potential for dramatic losses in cash positions. In addition, more. For any other financial instilments, the degree of leverage offered by futures is not available, underlining their singular significance. Speculators are capable of creatively designing portfolios of futures for which the risk level is reduced. Promoting healthy competition, capital formation, and new product creation is the core aim of futures trading. Futures help safeguard and boost the general competitiveness of the economy by reducing barriers to competition. Future exchanges are organizations that are highly efficient markets that reflect a great equality of opportunity through access to enhanced fowls of information. By providing well-built, secure, and stable commercial banking, investment banking, and brokerage industries, futures trading enhance investment levels and saving tows.

Finally, futures markets promote the mobilization of savings and offer a wide range of risk repackaging services by providing a broad range of new savings instruments. Increasing the current level of funding between investors and savers, and simulating the development of financial intermediation services. Nonetheless, the main economic roles of futures are still concentrated in the areas of competitive market discovery and price risk hedging. Future markets provide information on the prices of the underlying markets and serve to represent consumer expectations accurately. The task of price discovery for futures markets has been assigned. The arc of future prices was formed by free and competitive trading on the exchange floor. Prices represent what, at some particular future date, is estimated to be the underlying supply and demand of an asset. These prices are information that is public, global. This mechanism makes prices transparent and open to all and provides a balance between real and planned cash prices.

The shifting of risk by hedging is another significant feature of futures markets. Future markets differentiate price risk from other business risks and allow price risk to be passed from traders who wish to escape it to speculators who are prepared to expect it. Therefore, futures help traders mitigate or regulate risk exposure, the consequences of unfavorable market fluctuations. At first sight, since derivatives are zero-sum monetary games, the economic advantages of derivatives might not be apparent: the amount invested by one side of the deal is the amount earned by the other side. If the contract ends or is exercised, the profits and losses fully balance each OTCR. But while derivatives represent zero-sum monetary games, zero-sum economic games need not be represented. In order to hedge, speculate, or engage in arbitrage, individuals and companies that use derivative instruments may do so. They continue to use these contracts as a kind of protection against a poor future outcome when individuals or[inns hedge risks with derivatives. In addition to efficient risk distribution, derivatives provide another significant advantage: they can provide opportunities for investors that would otherwise be inaccessible to them at any price. In other words, derivatives may include payoffs that are simply not possible to obtain from other current assets.

CONCLUSION

The 1991 Economic Reform Process altered the face of the Indian Financial Market. The growth of this pattern has accelerated with the establishment of institutions such as the Stock Market Regulatory Authority, SEBI (Securities & Exchange Board of India) and the largest Indian Stock Exchange, NSE (National Stock Exchange of India). With these financial sector developments, the need for greater market diversification and the production of more highly sophisticated instruments has emerged. On the other hand, some domestic and foreign investors have refused to enter Indian capital markets due to the extremely volatile nature of Indian stock markets due to violent market fluctuations such as 1992 (Hawala scam), 2000 (Technology bubble), etc. In response to the need for new risk management tools for domestic and foreign investors, the National Stock Exchange Futures and Options Market was established. The goal of this study was to discuss price discovery and volatility in the futures markets of the NSE Nifty Index and the Nifty Index. The theoretical framework for futures, as well as the processes and market structure for futures trading, including the relationship between regulatory authorities, the exchange and its members, have already been discussed. Future markets are highly competitive markets, promoting general competition, inflation money, and the production of new goods. Price discovery and hedging, the two key roles of the futures market, are extremely important for market performance. Future markets, at different points in the future, have values for underlying properties.

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