The Role of Financial Derivatives in Recent Capital Market Condition of Bangladesh

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Abstract: *Derivatives instruments have been a feature of modern financial markets for several decades. They play a vital role in managing the risk of underlying securities such as bonds, equity, equity indices, currency, and short-term interest rate asset or liability positions. In the commodity markets, they have been around for a great deal longer. This study analyses the significance of introducing Derivatives in the capital market of Bangladesh for economic growth and to hedge risk and create overall liquidity in the stock market and above all to stabilize the Capital Market avoiding its unexpected crash.*

Keywords: Hedge, Liquidity, Option, Swap, Speculator, Arbitrager.

1. INTRODUCTION

Capital market of Bangladesh is growing, albeit at a slower pace than many would like, with market development still at a nascent stage. The market has seen a lot of developments since the inception of the Securities and Exchange Commission (SEC) in 1993. After the bubble burst of 1996, the capital market has attracted a lot more attention, importance and awareness that have led to the infrastructure we have in the market today. But the recent shares scam in 2010 led the country's capital market in the great uncertainty. From each and every corner of the country, some questions arise that why and how that debacles happened again and again. Now-a-days, it is said that still our capital market is underdeveloped. Experts of the capital market emphasizes on the way to find out the right path to create a stable and matured market for our country. Some urges that if Derivatives were introduced in our country, that might be able to protect the market and the market would behave matured and properly.

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2. OBJECTIVES OF THE STUDY

The broad objective of this study is to analyze the implementation of Derivatives in Capital Market of Bangladesh. The specific objectives related to broad objective is -

1. To identify the benefits of Derivatives in Bangladesh.
2. To illustrate the risks activities of these new products in Bangladesh Capital Markets.
3. To find out the opportunities of Derivatives in Capital Markets of Bangladesh with the existing systems.
4. To mitigate the risk of investors against the share scam by introducing Derivatives in Bangladesh.

3. METHODOLOGY

The information for this study has been gathered from secondary sources. Most of the information was collected from different websites and some economic journals. A series discussion and conversation with the members and officials of the Dhaka Stock Exchange Ltd., some teaching professionals of Finance Department of Dhaka University as well as a few experts in the capital market also provided some information about the derivatives. Practical work exposures at different departments and relevant file study in the Dhaka Stock Exchange Ltd. also provided strong base platform for preparing this report. Secondarily, various books and articles regarding Derivatives have been used in designing the report format.

4. LITERATURE REVIEW

The term "Derivative" indicates that it has no independent value, i.e. its value is entirely "derived" from the value of the underlying asset. A Derivative is a contractual relationship established by two (or more) parties where payment is based on (or "derived" from) some agreed upon benchmark. Derivatives are risk-shifting devices. They are most frequently used to reduce exposure to change in foreign exchange rates, interest rates, or stock indices. In other words, Derivative means a forward, future, option or any other hybrid contract of predetermined

fixed duration, linked for the purpose of contract fulfillment to the value of a specified real or financial asset or to an index of securities.

Derivatives are financial contracts, or financial instruments, whose prices are derived from the price of something else (known as the underlying). The underlying price on which a derivative is based can be that of an asset [e.g., commodities, equities (stocks), residential mortgages, commercial real estate, loans, bonds], an index (e.g., interest rates, exchange rates, stock market indices, consumer price index (CPI) — inflation derivatives), or other items. Credit derivatives are based on loans, bonds or other forms of credit. Underlying items used for derivative values can vary greatly. Assets may include: stocks, bonds, loans, residential mortgages, real estate, commodities, etc. Indexes may include: stock markets, consumer price index, currency exchange rates, interest rates, etc. (Lee, 2008)[1].

Derivatives cannot exist without the cash market. It is commonly said that derivatives contribute to the completeness of the financial markets and without them loopholes within the financial industry would continue to exist. (Stulz, 2004)[2].

In a stock market option is the most functional types of derivatives used as an instrument to hedge risk from an underlying asset (Stock). An option which conveys the right to buy something at a specific price is called a call; an option which conveys the right to sell something at a specific price is called a put. The reference price at which the underlying asset may be traded is called the strike price or exercise price. The process of activating an option and thereby trading the underlying asset at the agreed-upon price is referred to as exercising it. Most options have an expiration date. If the option is not exercised by the expiration date, it becomes void and worthless. In return for assuming the obligation, called writing the option, the originator of the option collects a payment, the premium, from the buyer. The writer of an option must make good on delivering (or receiving) the underlying asset or its cash equivalent, if the option is exercised. (Pascucci, 2011)[3].

The option positions used can be long and/or short positions in calls. In finance, a long position in a security, such as a stock or a bond, or equivalently *to be long* in a security, means the holder of the position owns the security and will profit if the price of the security goes up.

Short selling (also known as shorting or going short) is the practice of selling assets, usually securities, that have been borrowed from a third party (usually a broker) with the intention of buying identical assets back at a later date to return to that third party.

Some Strategies are described below from the point of view of investor or traders. If they are combined with other positions, they can also be used in hedging which will reduce the risks of investors.

Long call

A trader who believes that a stock's price will increase might buy the right to purchase the stock (a call option) rather than just purchase the stock itself. He would have no obligation to buy the stock, only the right to do so until the expiration date. If the stock price at expiration is above the exercise price by more than the premium (price) paid, he will profit. If the stock price at expiration is lower than the exercise price, he will let the call contract expire worthless, and only lose the amount of the premium. A trader might buy the option instead of shares, because for the same amount of money, he can control (leverage) a much larger number of shares.

Long put

A trader who believes that a stock's price will decrease can buy the right to sell the stock at a fixed price (a put option). He will be under no obligation to sell the stock, but has the right to do so until the expiration date. If the stock price at expiration is below the exercise price by more than the premium paid, he will profit. If the stock price at expiration is above the exercise price, he will let the put contract expire worthless and only lose the premium paid.

Short call

A trader who believes that a stock price will decrease can sell the stock short or instead sell, or "write," a call. The trader selling a call has an obligation to sell the stock to the call buyer at the buyer's option. If the stock price decreases, the short call position will make a profit in the amount of the premium. If the stock price increases over the exercise price by more than the amount of the premium, the short will lose money with the potential loss unlimited.

Short put

A trader who believes that a stock price will increase can buy the stock or instead of it sells, or "writes", a put. The trader selling a put has an obligation to buy the stock from the put buyer at the put buyer's option. If the stock price at expiration is above the exercise price, the short put position will make a profit in the amount of the premium. If the stock price at expiration is below the exercise price by more than the amount of the premium, the trader will lose money, with the potential loss being up to the full value of the stock.

5. BENEFITS OF DERIVATIVES IN BANGLADESH

Benefits of derivatives are broadly discussed earlier in this research paper. In addition, now we discuss the benefits, prospects and advantages of Derivatives in Bangladesh from different stakeholders view points:

From the Authority's (SEC) Point of View

Securities & Exchange Commission (SEC) is the authority to establish Derivatives Market in Bangladesh. They have complete focus of individual investors, institutions and corporations of Stock Exchange. This put a limitation for different investors to choose investment options. If Derivative Market is introduced beside Stock Exchange, it can provide an option for the investors to get away from incurring losses.

Professionals of stock market also point out that, "The introduction of derivatives will push the liquidity of the equity market. But awareness among investors, journalists and professionals is essential," Referring to Indian experience, they address that the total volume of trade in derivatives is much higher than equity products on the National Stock Exchange of India.

From the Investors point of View

Investors are willing to have more options for their investment. Derivatives Market can be the solution for them. Different aspects regarding this matter are discussed below:

1. Like any one (investor) who invested both in stock exchange and an index market of securities. It's a hedging based on index. So, now the investor may incur loss in share market but he can gain in the hedging for that product market.

2. Countries which have unstable economical condition like Bangladesh Derivatives contract can be useful. Because of unstable economy price fluctuation is common in our country. Future and Forward Market can reduce problems arise due to unpredictable price condition.

3. Derivatives Market is a place for all kinds of investors, who want to take risk (Speculators), who want to avoid risks (Hedgers) and who want to utilize short term price fluctuations (Arbitragers).

From the Macro Economical Point of View for Bangladesh

Mostly investments are based on the Stock Exchange and due to this, it becomes a very sensitive sector, fall of which can create economical disaster. And that is why there should be parallel market which can also help the economy to get heal if there is any economical catastrophe especially because of Stock Market.

In order to allow the economy to grow well, it is essential to spread out different branches to create new investment opportunities. Stock markets and other derivatives market of any country are the indicators which tell the strength of that country's economy. It is also desired for Bangladesh. As the economy is going beside stock exchange the country will also looking for other investment opportunities. This will lead the concept of establishing a Derivatives Market in Bangladesh.

6. OPPORTUNITIES OF DERIVATIVES IN BANGLADESH

Derivatives especially financial derivatives have revolutionized mathematical and practical finance. The 1973 seminal paper of F Black and M Scholes* has created, within a few decades, what is literally a multi-trillion dollar derivatives market (Whaley, Robert (2006)[4].

*__Fischer Sheffey Black__ an American economist, best known as one of the authors of the famous Black–Scholes equation.

Derivatives have vastly expanded the domain of finance and created many new opportunities for economic growth. Derivatives play a key role in optimizing the utilization of assets, minimizing risks and maximizing returns on investments. So, if derivatives are introduced in Bangladesh, a lot of opportunities are there.

To show the relevance of derivatives to a developing country, consider Bangladesh's economy where the textiles is the main industry — and more specifically with the focus being on the manufacturing of garments. The garments sector has a worldwide rate return given by G. The reason Bangladesh has concentrated on producing garments is because, as a country, it has a comparative advantage. In practice, this means that the Bangladeshi garment producers have a rate of return, say G+D that is higher than the world average on garments. The risk that Bangladesh runs is that if the world garments market undergoes a downturn — due to the emergence of new technology or change in the consumer's lifestyle — Bangladesh as a country would face a dire crisis since it cannot fall back on other lines of industry. A fall in the global average rate of return G for the garments would affect the entire country adversely (Baaquie, 2009)[5].

There is a specific financial derivative, namely a swap — where one exchanges two income streams — that can protect Bangladesh from a global downturn in the global garments producers' rate of return. Bangladesh can enter a swap such that the country makes payments at the world average rate from the garments industry, say G and, in exchange, receives payments W at the world average return on all industries (Baaquie, 2009)[5].

By entering the swap, the garment producers exchange payments G for W and thus end up with a return of W+D. Hence, the garment producer gets a minimum return at the world average rate of return W plus D: the garment producer has thus diversified the risk of a global downturn in garments while retaining the comparative advantage D. In sum, this swap ensures that Bangladesh retains its comparative advantage while efficiently diversifying its risks (Baaquie, 2009)[5].

With the advent of derivatives, the traditional role of banks of specializing in the borrowing and lending of money is being transformed. Derivatives can hive off the multifarious risks inherent in a financial

contract and the bank can hedge away all risks except the one it is prepared to manage. A bank can concentrate on credit risk for a loan and hedge away other risks such as liquidity risk, accident risk, interest rate risks and so on. The role of banks in the 21st century will be that of risk management, and in particular, adding value to the economy by their expertise in handling various forms of specific risk (Scholtens and Wensveen, 2003)[6].

The role of derivatives in risk management is essential, since the very concept of hedging ones risk can only be realized if one has derivative instruments that are negatively correlated with the asset that is being hedged. There have been a lot of criticisms on the role of derivatives in contributing to a financial crisis. These criticisms are off the mark. An analysis of the current US economic crisis shows that derivatives by no means created this financial crisis; rather, it is the flawed policies and corporate greed of US financial institutions that are at the root of the financial crises (Baaquie, 2009)[7].

The case of derivatives is similar; they can be used either for hedging and hence reducing risk or for taking higher risks with the purpose of reaping greater profits. One can enter a swap to hedge one's position, as was the case for Bangladesh's garment industries. Or one can enter a swap to speculate on the future global rate of return of the garments sector. The same swap allows for both possibilities. Since the price of a swap is only about 3 percent to 5 percent of the value of the swap, a speculator enjoys tremendous leverage by buying a swap instrument. A swap is bought by a speculator solely for making profit. In contrast, a Bangladeshi garment manufacturer would enter the swap with a very concrete requirement of ensuring a minimum rate of return.

Derivatives expand the financial sphere since they provide instruments that can be used for (a) hedging to reduce risks, or (b) for deriving benefits that come with taking higher risks. Since the drive for profits is relentless, one can expect that economic agents will try and maximize their returns and employ derivatives both for speculation as well as for reducing risk, depending on the circumstances. Hence, derivatives cannot be said to be creating a financial system with lower risks. Instead, by increasing the reach and domain of finance, derivatives further deepen the capital markets and create new opportunities for maximizing the efficient utilization of financial and economic resources and assets. Thus

there are great opportunities for Bangladesh, if derivatives are introduced and used properly in its Capital Market.

7. RISKS OF DERIVATIVES IN BANGLADESH

Starting something for the first time is always needed to face and overcome some obstacles. Certainly there are some drawbacks as well as risks to establish a Derivatives Market in Bangladesh.

As Derivative is a new concept for almost all of the people of our country and there were no such market in Bangladesh there is a few numbers of professionals and expertise we have in this discipline. Lesser number of graduates and researchers we are having regarding this subject from universities and institutions who can work in this kind of project. So in order to establish a Derivatives Market we need to hire professionals and expertise from the overseas countries, which will be expensive.

Secondly, in our country most of the investors are not that much educated who can understand Derivatives Market scenarios and activities. It will take time to get educated or understand the market. At this stage, a group of people might want to enjoy extra benefit which is unwanted. There are some fundamental problems that create negative image of derivatives'.

1. Stories in the press of our country tend to focus on the illegitimate abuse of derivatives rather how they are used legitimately.
2. Investors' misinformed perceptions and uninformed opinions.
3. Improper suitability given an investor's resources and temperament.

Thirdly, for a Derivatives Market we need huge number of investors which we are currently lacking off. As a developing nation, we do not have enough investors who are having bulk amount of monetary reserve. Whereas a Derivatives Market needs a strong number of investors whose investment will run as blood of the market and keep it alive.

Last but not the least, the political instability is another big problem for this kind of trade in our country. Problems arise due to political instability can be a drawback for Derivatives Market. There are many agricultural assets that might get unusable if it is kept for longer time or might be the cost of it increases due to long time preservation or stock.

8. URGES OF DERIVATIVES IN THE RECENT SHARE MARKET CRASH IN BANGLADESH

The introducing of derivatives in Bangladesh would contribute immensely as it is observed earlier that turnover and Market Cap of our neighboring country India grew substantially after introduction of these two markets. Derivates started in India in June 2000 and their daily trade volume was Rs 110 million. Today their average daily trade volume stands at Rs 350,000 million. Instruments like forward and spot trading, derivates, government bonds, share lending and borrowing can be introduced to expand the capital market scope. Investors will be able to diversify their fund and minimize risks (Sarker, 2006)[8].

In the financial markets, stock prices, bond prices, currency rates, interest rates and dividends go up and down, creating risk. Derivative products are financial products which are used to control risk or paradoxically exploit risk. It is also called financial economics. If derivatives are available in our capital market, we maybe control the price fluctuations in the recent market crash.

Another party like retail investors, foreign investments, etc in our capital market can use publicly available derivatives prices as educated predictions of uncertain future outcomes, for example, the likelihood that a corporation will default on its debts.

Our institutional as well as retail investors may use derivatives to –

1. Provide leverage (or gearing), such that a small movement in the underlying value can cause a large difference in the value of the derivative;
2. Speculate and make a profit if the value of the underlying asset moves the way they expect (e.g., moves in a given direction, stays in or out of a specified range, reaches a certain level);
3. Hedge or mitigate risk in the underlying, by entering into a derivative contract whose value moves in the opposite direction to their underlying position and cancels part or all of it out;
4. Obtain exposure to the underlying where it is not possible to trade in the underlying (e.g., weather derivatives);
5. Create option ability where the value of the derivative is linked to a specific condition or event (e.g. the underlying reaching a specific price level).

Derivatives allow risk related to the price of the underlying asset to be transferred from one party to another. Institutional investors in Bangladesh may find a pavement in the recent capital market crash condition by using derivatives.

Hedging also occurs when an individual or institution buys an asset (such as a commodity, a bond that has coupon payments, a stock that pays dividends, and so on) and sells it using a future contract. The individual or institution has access to the asset for a specified amount of time, and can then sell it in the future at a specified price according to the futures contract. Of course, this allows the individual or institution the benefit of holding the asset, while reducing the risk that the future selling price will deviate unexpectedly from the market's current assessment of the future value of the asset. Under the current market condition after recent crash in capital market of Bangladesh, derivatives will help all the market participants to bring back the rhythm of the capital market.

Derivatives can serve legitimate business purposes. For example, a corporation borrows a large sum of money at a specific interest rate. The rate of interest on the loan resets every six months. The corporation is concerned that the rate of interest may be much higher in six months. The corporation could buy a forward rate agreement (FRA), which is a contract to pay a fixed rate of interest six months after purchases on a notional amount of money. If the interest rate after six months is above the contract rate, the seller will pay the difference to the corporation, or FRA buyer. If the rate is lower, the corporation will pay the difference to the seller. The purchase of the FRA serves to reduce the uncertainty, concerning the rate increase and stabilize earnings. If derivatives were present in our market, by managing the interest rate risks our institutional investors might protect the capital market from the recent crash condition seen in Bangladesh in last year.

Derivatives can be used to acquire risk, rather than to insure or hedge against risk. Thus, some individuals and institutions will enter into a derivative contract to speculate on the value of the underlying asset, betting that the party seeking insurance will be wrong about the future value of the underlying asset. Speculators look to buy an asset in the future at a low price according to a derivative contract when the future market price is high, or to sell an asset in the future at a high price according to a derivative contract when the future market price is low.

This unique opportunity of derivatives creates alternative investment scopes that might be helpful for our market.

Individuals and institutions may also look for arbitrage opportunities, as when the current buying price of an asset falls below the price specified in a futures contract to sell the asset. This can be done only when derivatives are performing in the capital market.

The advantages of using derivatives are plenty for our market; few of them are listed below. Derivation if invested wisely is bound to make profit. If the underlying asset changes in the specific direction or stays put on the same value, one can speculate and make some profit if the worth of the asset moves exactly the way one wants.

The second advantage of holding a derivative is that the risk gets transferred from one party to some other party. Both the parties involved will have a reduced risk to handle.

Importance of derivatives is coming forward in the recent share scam. Reasons behind for the urges of derivatives are following:

1. The Increased volatility in the asset prices in the recent market conditions lead to urgency of derivatives after the market crash in 2010.
2. There is increased integration of the global financial market and it drives to the necessity of introducing derivatives in our capital market.
3. When there is marked improvement in the communication facilities and very sharp decline in the costs also tends to drive the introduction of financial derivatives after the market crash in last year.
4. There is development of the best risk management tools; the same provides the economic agents to have a wider choice in the strategies of the risk management and the same leads to the growth of importance of derivatives in Bangladesh capital market.
5. There is potential of derivatives when there is innovation in the markets which will optimally add up the returns and the risks over a huge amount of financial assets. This will lead to high returns,

reduced risk and reduced transaction cost as compared to the individual financial asset. Thus derivatives will help our market in the recent crash condition.

With the opening of the economy to multinationals and the adoption of the liberalized economic policies, the economy is driven more towards the free market economy. The complex nature of financial structuring itself involves the utilization of multi currency transactions. It exposes the clients, particularly corporate clients to various risks such as exchange rate risk, interest rate risk, economic risk and political risk.

9. A FEW EXAMPLES OF OPTION TRADING STRATEGIES

Example 1: Let's consider ABC stock is 100TK a share now. If an investor wants protection against the price going down over the next 6 months, he/she would buy a 6-month ABC 100TK *put* (cost: say 7.50TK per share). If the investor hasn't got an ABC position, he/she is speculating. If the investor has already bought ABC and is seeking protection, then the investor is buying insurance.

To continue, if the price of ABC falls to 80TK during the next 6 months, that investor protected at 100TK since he/she is allowed to put the ABC stock to the option grantor and receive 100TK a share. It did cost 7.50TK per share for the insurance, though, the investor has lost that, but he/she protected him/herself against a 20TK drop.

Example 2: ABC stock is 100TK a share now. If the investor want protection against the price going up over the next 6 months, he/she would buy a 6-month ABC 100TK *call* (cost: say 9.20TK per share). The investor might want to own ABC stock, but he/she haven't yet done so and are afraid the market may get away from him/her. This call gives the investor the choice during the next 6 months of buying ABC stock from the option grantor for 100TK a share no matter what price it is trading for at that time.

10. FINDINGS

With the integration of the financial markets and free mobility of capital, risks also multiplied. For instance, when countries like Bangladesh adopt floating exchange rates, they have to face risks due to fluctuations in the

exchange rates. Deregulation of interest rate cause interest risks. Again, securitization has brought with it the risk of default or counter party risk. It may be due to certain inherent factors and external factors like the market condition, government's policy, economic and political condition prevailing in the country and so on.

In the present state of the economy, there is an imperative need of the corporate clients to protect their operating profits by shifting some of the uncontrollable financial risks to those who are able to bear and manage them. Thus, risk management becomes a must for survival since there is a high volatility in the present financial markets.

In this context, derivatives occupy an important place as risk reducing machinery. Derivatives are useful to reduce many of the risks discussed above. In fact, the financial service companies can play a very dynamic role in dealing with such risks. They can ensure that the above risks are hedged by using derivatives like forwards, future, options, swaps etc. Derivatives, thus, enable the clients to transfer their financial risks to the financial service companies. This really protects the clients from unforeseen risks and helps them to get there due operating profits or to keep the project well within the budget costs. To hedge the various risks that one faces in the financial market today, derivatives are absolutely essential.

11. CONCLUSION

The forces of globalization, technology, new forms of competition have noticeably transformed capital market worldwide. Today many established capital markets as well as our neighboring countries like India; Pakistan already introduced the derivatives products and takes the full advantages of derivatives. So therefore derivatives are a must for our capital market in the context of recent share scam. Because only a vibrant and well-regulated capital market can bring sustainable economic development in the country through making the real sector capable of meeting the challenges of the competitive global economic realities. If we introduce derivatives as early as possible that may provide us a useful platform to reform our capital market against the recent share market scam.

12. RECOMMENDATION

Derivatives are very useful for managing various risks; there are certain inhibiting factors which stand in their way. The authorities may practice the following recommendations while implementing the derivatives contracts which are purely new concept in Bangladesh Capital Market, they are as follows:

Misconception of Derivatives

There is a wrong feeling that derivatives would bring in financial collapse. There is an enormous negative publicity in the wake of incidents of financial misadventure. Derivatives are not the root cause for all these troubles. Derivatives themselves cannot cause such mishaps. But the improper handling of these instruments is the main cause for this and one cannot simply blame derivatives for all these miss happenings.

Leveraging

One of the important characteristic features of derivatives is that they lend themselves to leveraging. That is, they are high risk - high reward vehicles. There is a prospect of either high return or huge loss in all-derivative instruments. So, there is a feeling that only a few can play this game. There is no doubt that derivatives create leverage and leverage creates increased risk or return. At the same time, one should keep in mind that the very same derivatives, if properly handled, could be used as an efficient tool to minimize risks. Thus cautions should be taken to properly use of derivatives.

Off Balance Sheet Items

Invariably, derivatives are off balance sheet items. For instance, swap agreements for substituting fixed interest rate bonds by floating rate bonds or for substituting fixed rate interest bearing asset by floating rate interest paying liability. Hence, accountants, regulators and other look down upon derivatives very carefully.

Absence of Proper Accounting System:

To achieve the desired results, derivative must be strongly supported by proper accounting systems, efficient internal control and strict supervision. Unfortunately, they are all at infancy level as far as derivatives are concerned. The policy makers might impose strong views in this regard.

Inbuilt Speculative Mechanism

In fact all derivative contracts are structured basically on the basis of the future price movements. Indirectly, derivatives make one accept the fact that speculation is beneficial. It may not be so always. Thus, derivatives possess an inbuilt speculative mechanism which should be handling in proper ways.

Absence of Proper Infrastructure

An important requirement for using derivative instrument like, options, futures etc. is the existence of proper infrastructure. Hence, the institutional infrastructure has to be developed. There has to be effective surveillance, price dissemination and regulation of derivative transactions. The term of the derivative contracts has to be uniform and standardized.

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