A STUDY ON DERIVATIVES (FUTURES AND OPTIONS)

P.SAILAKSHMI
Master's Of Business Administration (Finance)
Marri Laxman Reddy Institute Of Technology And Management
Dundigal Hyderabad Telangana

K.S.G.CHANDRAVATHI
Department Of Management Studies
Marri Laxman Reddy Institute Of Technology And Management
Dundigal Hyderabad Telangana

Dr.K. VEERAIAH
Head Of The Department Of Management Studies
Marri Laxman Reddy Institute Of Technology And Management

ABSTRACT:

Risk is a attribute characteristic of most commodity and capital markets. Variations in the expenses of agricultural and non-agricultural commodities are induced, over time, through demand-supply dynamics. The final two many years have witnessed many-fold make bigger in the quantity of global alternate and enterprise due to the wave of globalization and liberalization sweeping throughout the world. This has led to fast and unpredictable editions in economic property prices, pastime costs and trade rates, and subsequently, to exposing the company world to an unwieldy economic risk. In the existing surprisingly unsure enterprise scenario, the significance of hazard administration is an awful lot increased than ever before. The emergence of derivatives market is an ingenious feat of monetary engineering that offers an high-quality and much less steeply-priced answer to the hassle of chance that is embedded in the rate unpredictability of the underlying asset. In India, the emergence and increase of derivatives market is surprisingly a current phenomenon. Since its inception in June 2000, derivatives market has exhibited exponential increase each in phrases of quantity and variety of traded contracts. The market turn-over has grown from Rs.2365 crore in 2000-2001 to Rs. 11010482.20 crore in 2008-2009. Within a quick span of eight years, derivatives buying and selling in India has surpassed money section in phrases of turnover and range of traded contracts. The existing find out about encompasses in its scope an evaluation of historic roots of spinoff trading, sorts of spinoff products, legislation and coverage developments, vogue and growth, future potentialities and challenges of by-product market in India. Some area is dedicated additionally to a quick dialogue of the popularity of world derivatives markets vis-a–vis the Indian derivatives market

Keywords: *Forward, Futures, Options, Financial Derivatives, Risk Management, Exchange rates*

INTRODUCTION:

Risk is a attribute characteristic of all commodity and capital markets. Over time, editions in the expenditures of agricultural and non-agricultural commodities happen as a end result of interplay of demand and grant forces. The final two many years have witnessed a many-fold extend in the extent of global alternate and enterprise due to the ever developing wave of globalization and liberalization sweeping throughout the world. As a result, monetary markets have skilled speedy variants in hobby and alternate rates, inventory market costs for this reason exposing the company world to a nation of developing monetary risk.

Increased economic chance reasons losses to an in any other case worthwhile organisation. This underlines the significance of chance administration to hedge in opposition to uncertainty. Derivatives grant an fine answer to the hassle of threat induced by way of uncertainty and volatility in underlying asset. Derivatives are threat administration equipment that assist an organization to efficiently switch risk. Derivatives are units which have no impartial value. Their cost relies upon upon the underlying asset. The underlying asset may also be economic or non-financial.

The current find out about tries to discuss the genesis of derivatives buying and selling by way of tracing its historic development, kinds of traded derivatives products, rules and coverage developments, style and growth, future possibilities and challenges of spinoff market in India. The find out about is organised into 4 sections. Section I offers with the concept, definition, elements and sorts of monetary derivatives. Section II has been dedicated to a dialogue of the increase of derivatives market, and rules and coverage development. Section III discusses repute of world derivatives market vis-a-vis Indian derivatives market. The closing part specifies precis and concluding remarks.

REVIEW OF LITERATURE:

Concept of Derivatives :

The time period ‘derivatives, refers to a vast category of economic contraptions which on the whole encompass preferences and futures. These gadgets derive their price from the charge and different associated variables of the underlying asset. They do now not have well worth of their personal and derive their fee from the declare they supply to their proprietors to very own some different economic property or security. A easy instance of spinoff is butter, which is by-product of milk. The fee of butter relies upon upon fee of milk, which in flip relies upon upon the demand and provide of milk. The regular definition of derivatives capacity to derive something from something else. Some different meanings of phrase derivatives are:

A derived function: the end result of mathematical differentiation; the instant alternate of one volume relative to another; df(x)/dx,

B derivative instrument: a economic instrument whose price is based totally on some other security, (linguistics) a phrase that is derived from any other word; "`electricity' is a by-product of ‘electric’.

The asset underlying a spinoff may additionally be commodity or a monetary asset. Derivatives are these monetary contraptions that derive their cost from the different assets. For example, the rate of gold to be delivered after two months will depend, amongst so many things, on the current and anticipated rate of this commodity.

1.1. Definition of Financial Derivatives

Section 2(ac) of Securities Contract Regulation Act (SCRA) 1956 defines Derivative as

a) “a protection derived from a debt instrument, share, mortgage whether or not secured or unsecured, danger instrument or contract for variations or any different structure of security;

“a contract which derives its cost from the prices, or index of prices, of underlying securities”.

Underlying Asset in a Derivatives Contract

As described above, the cost of a spinoff instrument relies upon upon the underlying asset. The underlying asset can also count on many forms:

i. Commodities inclusive of grain, espresso beans, orange juice;

ii. Precious metals like gold and silver; iii. Foreign trade charges or currencies;

iv. Bonds of distinctive types, consisting of medium to lengthy time period negotiable debt securities issued by using governments, companies, etc.

v. Shares and share warrants of groups traded on identified inventory exchanges and Stock Index vi. Short time period securities such as T-bills; and vii. Over- the Counter (OTC) cash market merchandise such as loans or deposits.

1.3 **Participants in Derivatives Market**

1. Hedgers: They use derivatives markets to minimize or remove the danger related with fee of an asset. Majority of the members in derivatives market belongs to this category.

2. Speculators: They transact futures and preferences contracts to get more leverage in making a bet on future moves in the charge of an asset. They can amplify each the achievable features and plausible losses by means of utilization of derivatives in a speculative venture.

3. Arbitrageurs: Their behaviour is guided with the aid of the wish to take benefit of a discrepancy between fees of greater or much less the identical belongings or competing belongings in extraordinary markets. If, for example, they see the futures rate of an asset getting out of line with the money price, they will take offsetting positions in the two markets to lock in a profit.

Derivative : Forward , futures , options, swaps

Futures:

Futures is a standardized ahead contact to purchase (long) or promote (short) the underlying asset at a particular rate at a special future date thru a unique exchange. Futures contracts are traded on exchanges that work as a client or vendor for the counterparty. Exchange units the standardized phrases in time period of Quality, quantity, Price quotation, Date and Delivery area (in case of commodity).The elements of a futures contract may also be exact as follows:

i These are traded on an organised alternate like IMM, LIFFE, NSE, BSE, CBOT etc. ii These contain standardized contract phrases viz. the underlying asset, the time of maturity and the manner of maturity etc.

iii These are related with a clearing residence to make sure easy functioning of the market.

Iv There are margin necessities and day by day agreement to act as in addition safeguard. v These supply for supervision and monitoring of contract via a regulatory authority. vi Almost ninety percentage future contracts are settled by means of money agreement as an alternative of true transport of underlying asset.

Futures contracts being traded on equipped exchanges impart liquidity to the transaction. The clearinghouse, being the counter birthday celebration to each facets of a transaction, offers a mechanism that ensures the honouring of the contract and making sure very low degree of default (Hirani, 2007).

Following are the essential kinds of economic futures contract:- i Stock Future or fairness futures, ii Stock Index futures, iii Currency futures, and iv Interest Rate bearing securities like Bonds, T- Bill Futures.

To supply an instance of a futures contract, think on November 2007 Ramesh holds one thousand shares of ABC Ltd. Current (spot) rate of ABC Ltd shares is Rs a hundred and fifteen at National Stock Exchange (NSE). Ramesh entertains the concern that the share charge of ABC Ltd may also fall in subsequent two months ensuing in a significant loss to him. Ramesh decides to enter into futures market to defend his role at Rs a hundred and fifteen per share for shipping in January 2008. Each contract in futures market is of one hundred Shares. This is an instance of fairness future in which Ramesh takes quick role on ABC Ltd. Shares by way of promoting a thousand shares at Rs one hundred fifteen and locks into future price.

Options:

In case of futures contact, each events are beneath duty to operate their respective responsibilities out of a contract. But an picks contract, as the title suggests, is in some sense, an optionally available contract. An alternative is the right, however now not the obligation, to purchase or promote some thing at a cited date at a referred to price. A “call option” offers one the proper to buy; a “put option” offers one the proper to sell. Options are the standardized monetary contract that permits the consumer (holder) of the option, i.e. the proper at the value of choice premium, now not the obligation, to purchase (call options) or promote (put options) a precise asset at a set fee on or earlier than a exact date thru exchanges.

Options contracts are of two types: name alternatives and put options. Apart from this, preferences can additionally be categorized as OTC (Over the Counter) preferences and trade traded options. In case of change traded preferences contract, contracts are standardized and traded on identified exchanges, whereas OTC selections are personalized contracts traded privately between the parties. A name selections offers the holder (buyer/one who is lengthy call), the proper to purchase distinctive extent of the underlying asset at the strike charge on or earlier than expiration date. The seller (one who is brief call) however, has the duty to promote the underlying asset if the purchaser of the name choice decides to workout his alternative to buy.

Suppose an investor buys One European name choices on Infosys at the strike charge of Rs. 3500 at a top rate of Rs. a hundred Apparently, if the market charge of Infosys on the day of expiry is greater than Rs. 3500, the preferences will be exercised. In contrast, a put choices offers the holder (buyer/ one who is lengthy put), the proper to promote specific extent of the underlying asset at the strike fee on or earlier than an expiry date. The vendor of the put selections (one who is quick put) however, has the duty to purchase the underlying asset at the strike rate if the customer decides to workout his choice to sell. Right to promote is referred to as a Put Options. Suppose X has a hundred shares of Bajaj Auto Limited. Current charge (March) of Bajaj auto shares is Rs seven hundred per share. X wishes cash to finance its necessities after two months which he will realise after promoting a hundred shares after two months. But he is of the worry that with the aid of subsequent two months fee of share will decline. He decides to enter into choice market by way of shopping for Put Option (Right to Sell) with an expiration date in May at a strike fee of Rs 685 per share and a top rate of Rs 15 per share

OBJECTIVES OF THE STUDY:

1 . .To find out about the operation of futures and options.

2. To learn about several traits in the derivatives market.

3. To find out about in element the position of futures and alternatives

4. To learn about risk manipulate with the aid of derivatives.

5. To find out about the profit/loss characteristic of the decision creator and choice holder.

RESEARCH METHODOLOGY

Data has been amassed in two methods they are

Primary data: major information are turning into to be gathered by means of the non-public discussions with the assistant supervisor and greater than one any other employee

Secondary data: the secondary data are turning into to be accumulated by using the ability of

- Various portal
- www.NSeindia.com
- Financial newspapers, Economics times

HYPOTHESIS

A speculation is a tentative announcement that proposes a feasible rationalization for some phenomenon or event. A beneficial speculation is a testable announcement which may also encompass a prediction.

• Null Hypothesis (H01): there is no volatility or fee fluctuation in the Indian inventory market all through the duration 1st April, 1997 to thirty first March, 2014.

• Alternative Hypothesis (HA1): there is an existence of volatility or rate fluctuation in the Indian inventory market at some stage in the length 1st April, 1997 to thirty first March, 2014.

• Null Hypothesis (H02): there is no relationship between derivatives market and money inventory market.

• Alternative Hypothesis (HA2): there is a relationship between derivatives market and money inventory market.

• Null Hypothesis (H03): there is no influence of derivatives buying and selling on inventory market volatility after their introduction.

• Alternative Hypothesis (HA3): there is an influence of derivatives buying and selling on inventory marker volatility after their introduction.

THEORETICAL CONCEPTS:

A by-product is a contract between two or greater events whose price is primarily based on an agreed-upon underlying monetary asset (like a security) or set of property (like an index). Common underlying devices consist of bonds, commodities, currencies, hobby rates, market indexes, and stock

DATA ANALYSIS AND INTERPRETATION

Table 3: Products Traded in F&O Segment of NSE

S.no	Product Traded with underlying asset	Introduction Date
1	Index Futures- S&P CNX Nifty	June 12,2000
2	Index Options- S&P CNX Nifty	June 4,2001
3	Stock Option on 233 Stocks	July 2, 2001
4	Stock futures on 233 Stocks	November 9,2001
5	Interest Rate Futures- T – Bills and 10 Years Bond	June 23,2003
6	CNX IT Futures & Options	August 29,2003
7	Bank Nifty Futures & Options	June 13,2005
8	CNX Nifty Junior Futures & Options	June 1,2007
9	CNX 100 Futures & Options	June 1,2007
10	Nifty Midcap 50 Futures & Options	October 5,2007
11	Mini index Futures & Options - S&P CNX Nifty index	January 1, 2008
12	long Term Option contracts on S&P CNX Nifty Index	March 3,2008
13	Currency Futures on US Dollar Rupee	August 29,2008
14	S& P CNX Defty Futures & Options	December 10, 2008

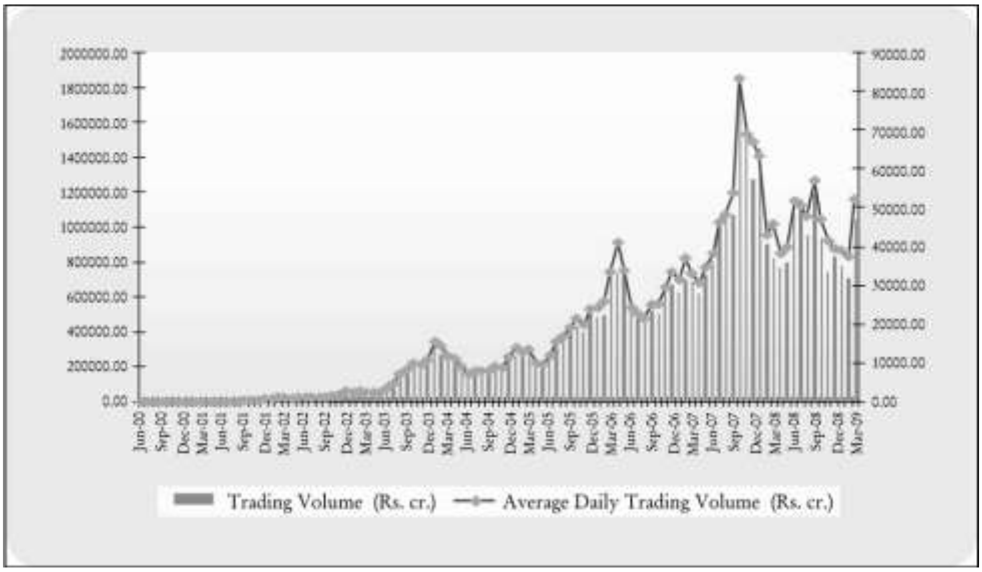
Source: Complied from NSE website

2.3. Growth of Derivatives Market in India

Equity derivatives market in India has registered an "explosive growth" (see Fig. 2) and is predicted to proceed the identical in the years to come. Introduced in 2000, economic derivatives market in India has proven a splendid boom each in phrases of volumes and numbers of traded contracts. NSE by myself bills for ninety nine percentage of the derivatives buying and selling in Indian markets. The introduction of derivatives has been properly obtained by way of inventory market players. Trading in derivatives won recognition quickly after its introduction. In due course, the turnover of the NSE derivatives market surpassed the turnover of the NSE money market. For example, in 2008, the cost of the NSE derivatives markets used to be Rs. 130, 90,477.75 Cr. whereas the price of the NSE cash markets used to be solely Rs. 3,551,038 Cr. (see Table four thru Table 7). If we evaluate the buying and selling figures of NSE and BSE, overall performance of BSE is now not encouraging each in phrases of volumes and numbers of contracts traded in all product classes (see Table eight via Table 10).

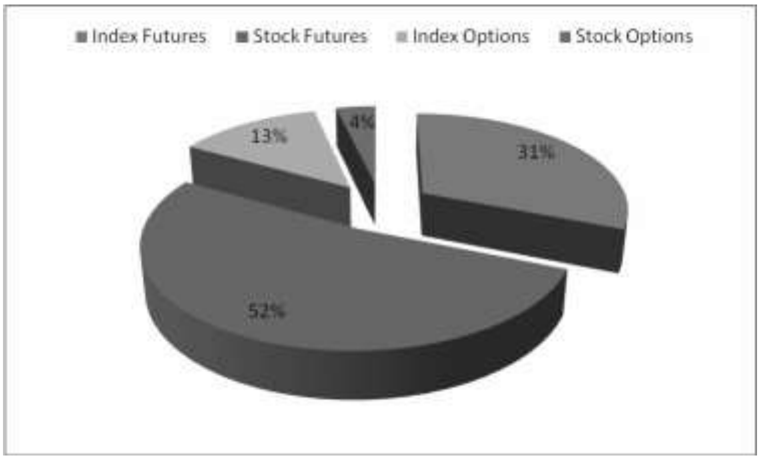
Among all the merchandise traded on NSE in F& O segment, single inventory futures additionally acknowledged as fairness futures, are most famous in phrases of volumes and wide variety of contract traded, observed with the aid of index futures with turnover shares of fifty two percentage and 31 percent, respectively (Fig. 3). In case of BSE, index futures outperform inventory futures. An essential characteristic of the by-product section of NSE which can also be determined from Table 6 and Table 7 is the big hole between common every day transactions of its derivatives section and money segment. In sharp distinction to NSE, the state of affairs at BSE is simply the opposite: its money phase outperforms the derivatives section as can be considered from Table 10.

Figure 2: Business Growth of Derivatives at NSE from 2000-2009



Source: NSE fact book 2008 issue

Figure 3: Product wise Turnover of F&O at NSE from 2000-2008



Source: Author's calculation based on data complied from NSE

Table 4: NSE Derivatives Segment Turnover
(Rs. Cr.)

Year	Index Futures	Stock Futures	Index Options	Stock Options	Interest Rate Futures	Total	Average Daily Turnover
2008-09	2583617.92	2558863.55	2358916.90	149498.40	0.00	7650896.80	46938.02
2007-08	3820667.27	7548563.23	1362110.88	359136.55	0.00	13090477.75	52153.30
2006-07	2539574	3830967	791906	193795	0	7356242	29543
2005-06	1513755	2791697	338469	180253	0	4824174	19220
2004-05	772147	1484056	121943	168836	0	2546982	10107
2003-04	554446	1305939	52816	217207	202	2130610	8388
2002-03	43952	286533	9246	100131	-	439862	1752
2001-02	21483	51515	3765	25163	-	101926	410
2000-01	2365	-	-	-	-	2365	11

Source: Complied from NSE website

Table 5: NSE Cash & Derivatives Segment Turnover
(Rs. in Cr.)

Year	Cash Segment	Derivatives Segment
2007-08	3,551,038	13090477.75
2006-07	1,945,285	7356242
2005-06	1,569,556	4824174
2004-05	1,140,071	2546982
2003-04	1,099,535	2130610
2002-03	617,989	439862
2001-02	513,167	101926
2000-01	1,339,510	2365

Source: Complied from NSE website

Table 6: Number of contract Traded at NSE Derivatives Segment

Year	Index Futures	Stock Futures	Index Options	Stock Options	Interest Rate Futures	Total
2008-09	136476747	149159997	116790708	7826231	0	410253683
2007-08	156598579	203587952	55366038	9460631	0	425013200
2006-07	81487424	104955401	25157438	5283310	0	216883573
2005-06	58537886	80905493	12935116	5240776	0	157619271
2004-05	21635449	47043066	3293558	5045112	0	77017185
2003-04	17191668	32368842	1732414	5583071	10781	56886776
2002-03	2126763	10676843	442241	3523062	-	16768909
2001-02	1025588	1957856	175900	1037529	-	4196873
2000-01	90580	-	-	-	-	90580

Source: complied from NSE website

Table 7: Average Daily Transaction at NSE in Derivatives and Cash Segment

Year	Derivatives Segment	Cash Segment
2007-08	52153.30	14,148
2006-07	29543	7,812
2005-06	19220	6,253
2004-05	10107	4,506
2003-04	8388	4,328
2002-03	1752	2,462
2001-02	410	2,078
2000-01	11	5,337

Source: Complied from NSE website and NSE fact book 2008

Table 8: BSE Derivatives Segment Turnover

Year	Index Futures	Stock Futures	Index Options		Stock Options		Total
			Call	Put	Call	Put	
2007-08	234660	7609	31	8	0	0	242309
2006-07	55491	3515	0	0	0	0	59006
2005-06	5	1	3	0	0	0	9
2004-05	13600	213	1471	827	2	0	16112
2003-04	6572	5171	0	0	174	157	12452
2002-03	1811	644	1	0	21	0	2478
2001-02	1276	452	39	45	79	35	1922
2000-01	1673	-	-	-	-	-	1673

Source: Complied from BSE website & various issues of SEBI bulletins

Table 9: Number of Contract Traded at BSE Derivatives Segment

Year	Index Futures	Stock Futures	Index Options		Stock Options		Total
			Call	Put	Call	Put	
2007-08	7157078	295117	951	210	9	6	7453371
2006-07	1638779	142433	2	2	0	1	1545169
2005-06	89	12	100	0	2	0	03
2004-05	449630	6725	48065	27210	72	17	531719
2003-04	246443	128193	1	0	4391	3230	382258
2002-03	111324	25842	41	2	783	19	138037
2001-02	79552	17951	1139	1276	3605	1500	105527
2000-01	77743	-	-	-	-	-	77743

Source: Complied from BSE website & SEBI bulletin

Table 10: BSE Cash & Derivatives Segment Turnover
(Rs. in Cr.)

Year	Cash Segment	Derivatives Segment
2007-08	1578857	242309
2006-07	956185	59006
2005-06	816074	9
2004-05	518715	16112
2003-04	503053	12452
2002-03	314073	2478
2001-02	307292	1922
2000-01	1000032	1673

Source: Complied from BSE website & SEBI bulletin

Findings:

1.The prolonged run rate of BHEL, ONGC is moving along side the market price

2. If the buying rate of the long run might also be a smaller quantity than the settlement charge, than the consumer of a future gets profit.

3. If the advertising price of the long run may be a smaller quantity than the contract fee, than the vendor incur losses.

4. As above BHEL,ONGC given losses ,given profits

5. Cost of carry version and price of interest parity model are beneficial gear to seek out out preferred future charge and additionally useful for comparing fashionable with actual destiny fee. And it’s additionally a completely help full in Arbitraging.

SUGGESTIONS:

1.The derivative market is newly commenced in India and it is not known by every investor, so SEBI possesses to require steps to shape awareness a number of the investors about the spinoff section.

2. So on increase the derivatives market in India, SEBI want to revise style of their rules like agreement size, participation of FII in the derivatives marketplace.

3. Contract size want to be minimized due to the fact small investors can't afford this heaps of giant premiums.

4. SEBI possesses to require in addition steps inside the danger control mechanism.

5. SEBI possesses to require measures to use efficaciously the derivatives phase as a tool of hedging

CONCLUSION

1. In bullish market the choice alternative creator incurs more losses therefore the investor is generally recommended to travel for a call option to hold, the place due to the fact the put choice holder suffers in the course of a bullish market, so he's recommended to jot down down down a put choice.

2. In bearish marketplace the selection option holder will incur more losses consequently the investor is normally encouraged to tour for a call option to write, the place due to the fact the put choice writer will get extra losses, so he is recommended to preserve a put option.

3. in the above analysis the market rate of BHEL, ONGC has excessive volatility, consequently the selection option writer enjoys greater losses to holders.

REFERENCE:

[1] *Trading statistics of Derivatives segment at BSE', available at: www. bseindia.com(accessed on May 30,2009)*

[2] *Bodla, B. S. and Jindal, K. (2008), 'Equity Derivatives in India: Growth Pattern and Trading Volume Effects', The Icfai Journal of Derivatives Markets, Vol. V, No. 1, pp.62-82.*

[3] *Growth of Derivatives Market In india, available at: http://www.valuenotes.com/njain/nj_derivatives_15sep03.asp?ArtCd=33178&Cat=T&Id=10 (accessed on May 30, 2008).*

[4] *Harish, A. S. (2001) 'Potential of Derivatives Market in India', The ICFAI Journal of Applied Finance, Vol. 7, No.5, pp 1-24.*

[5] *Hirani, Kapil (2007), 'Understanding Derivatives', available at: http://kapilhirani.com/News5.php (accessed on May 20,2009)*

[6] *http://www.indiainfoline.com/news/showleader.asp?lmn=1&storyId=344(accessed on May 20,2009)*

[7] *http://www.valuenotes.com/njain/nj_derivatives_15sep03.asp?ArtCd=33178&Cat=T&Id=10 (accessed on May 28,2009)*

[8] *'Indian Securities market, A Review' (ISMR)-2008 available at: http://www.nseindia.com.(accessed on May 27, 2009)*

[9] *'International Options Market Association (IOMA) Derivatives Market Survey' 2007, available at: http://www.world-exchanges.org/ioma (accessed on May 30, 2009).*

[10] *'Introduction to derivatives in India', available at: http://business.mapsofindia.com/investmentindustry/introduction-to-derivatives.html (accessed on May 27, 2009).*