

Chapter 1

CHAPTER 1

INTRODUCTION TO THE RESEARCH

1.1 DERIVATIVES

Hull, J. C. (2019) “A derivative can be defined as a financial instrument whose value depends on or derives from the value of other, more basic, underlying variables. Very often, the variables underlying derivatives are the prices of traded assets. A stock option, for example is a derivative whose value is dependent on the price of a stock”.

Volatility is the innate nature of the financial markets. The market for derivative products like forwards, futures and options emerged to benefit the risk averse investors by protecting them against the risk arising out of future uncertainty in the asset prices.

The wide range of underlying assets includes the following:

- Stock of public limited companies like Wipro, Infosys, TCS, etc.
- Market index such as Nifty, Sensex, Bank Nifty, etc.
- Foreign exchanges such as EUR-USD, GBP-USD, USD-JPY, etc.
- Precious metals such as Gold, Silver, etc.
- Base metals like Lead, Copper, Aluminium, Zinc, etc.
- Agro commodities like Pepper, Cardamom, Pulses, etc.
- Energy sources like Crude oil, Natural gas, Electricity, etc.

For example, a banana farmer who is concerned about the risk of future price fluctuations of bananas at the time of harvest can avoid the risk by entering into a forward contract. The forward price is derived from the spot price of bananas which is the underlying asset. Similarly, if a gold jewellery manufacturer anticipates future rise in the price of gold which would affect his production cost, he can avoid or mitigate the risk by entering into a derivative contract and locking in the future price.

1.2 EQUITY DERIVATIVES

Equity refers to the share of a specific company held by an investor, which permits him/her as an owner to take part in the profits and losses of the company. Equity shares can also be the underlying assets that give value to financial instruments called derivatives.

Equity derivative is a financial instrument whose price is derived from the value of one or more underlying equity assets like stocks, equity indices like Nifty, Sensex, etc.

The most commonly traded derivative products in the Indian equity exchanges are Futures and Options. Generally, the financial markets are well-known for its very high degree of volatility. With the use of derivative products, it is possible to reduce the price risks by deciding the transaction prices well in advance.

1.3 FACTORS DRIVING THE GROWTH OF DERIVATIVES

The derivatives market around the world has witnessed a remarkable development over the past thirty years. Different types of derivative contracts have been introduced in exchanges globally. Factors that drive the growth of derivatives market across the world are as follows:

- The surge in the volatility of asset prices traded in the financial markets
- Globalisation and the ripple effects in the financial markets across the world
- The extraordinary developments in ICT (Information and Communications Technology) resulting in reduction of transaction costs
- Availability of widespread choice of sophisticated tools for managing risk in the financial markets
- Rapid improvements and launch of new derivative products in the market

1.4 ECONOMIC FUNCTIONS OF THE DERIVATIVES MARKET

The following are the economic functions of the derivative market:

- Derivatives aid Price Discovery – A well organised derivatives market reveals the future outlook of the participants about the market direction and directs the underlying price to the anticipated level. On the date of expiry, the price of the derivative and the underlying asset merge together.
- Derivatives assist in transferring the price risk – Using derivatives, hedgers who are risk averse transfer the future uncertainty in prices to speculators or traders who are willing to take that risk.
- Better performance of the cash market – The underlying cash market witnessed increased trading volumes with the launch of derivative contracts. This could be because of more participants entering the market who otherwise would not have entered due to the lack of financial instruments to transfer risk.
- Better controlled environment for speculation – In the absence of a structured derivatives market, speculators used to trade in the underlying cash market. With improved market surveillance, risk management and better leverage, speculators generally move to the derivatives market.

1.5 GLOBAL HISTORY AND EVOLUTION OF DERIVATIVES

Derivative products were initially used as a hedging instrument against variations in the future price of commodities. Commodity based derivatives continued to be the only type of such products for approximately three centuries. It was in Greece where, the very first evidence of the use of derivative contracts was found. It was farmers who first started entering into derivative transactions to protect themselves against the fall in crop prices at the time of their harvest due to various economic and environmental factors. Thus, derivatives contracts initially developed in commodities.

The timeline of derivatives history is tabulated below:

Table 1.5.1 - History of Derivatives

1634 - 1637	Tulip bulb bubble in Holland: Excessive speculation and use of derivatives drove the price of tulips to extreme levels leading to the most popular crash of all time.
17th Century	At Osaka in Japan, a futures market for rice was established to safeguard the rice farmers from poor weather conditions.
1848	To enable trading of forward contracts in several commodities, the Chicago Board of Trade (CBOT) was established.
1865	The first exchange traded futures contract was listed in the CBOT in the US.
1919	Chicago Butter and Egg Board, a spin-off of CBOT, was reorganized to allow futures trading. Later it became the Chicago Mercantile Exchange (CME).
1972	CME allowed trading in currency futures.
1973	Chicago Board Options Exchange (CBOE) became the first marketplace for trading listed options.
1975	T-Bills futures contract was introduced in CBOT.
1977	T-bond futures contract was introduced in CBOT
1982	Kansas City Board of Trade launched the first stock index futures.
1983	Options on equity indices the S&P 100 and S&P 500 were introduced in CBOE.

Other recognized global exchanges that deal with derivatives are The London International Financial Futures Exchange (LIFFE) in England, Deutsche TerminBorse (DTB) in Germany, Singapore Exchange Limited (SGX), Tokyo Financial Exchange (TIFFE) in Japan, MATIF in France, etc.

1.6 ORIGIN OF THE DERIVATIVES MARKET IN INDIA

The derivatives market has been in existence in India for more than a century. In fact, in the early 1900's India was one of the most active commodity derivative markets in the world. The first evidence of organised future contract can be traced back to 1875 at the Cotton Trade Association. Following cotton, derivative contracts on other

commodities like oil seed, jute and bullion also emerged. After independence, the Forward Contracts (Regulation) Act, 1952 was passed in the Parliament. The act regulated forward contracts in commodities all over India. The commodity derivatives markets witnessed a huge slump when the Act prohibited unauthorised participants (associations/exchanges) from conducting forward trading in regulated commodities. In the year 2000, the prohibition was waived and futures contracts in commodities were traded in National Electronics Commodity Exchange.

In the equity market, forward contracts in the name of Badla trading were there in existence for decades. Unlike the current future contracts, Badla trades were not standardized contracts and had no specific expiry date and were allowed to carry forward positions for unlimited time periods. In the year 2001, SEBI eventually banned such trades in the Indian stock exchanges as it led to a lot of undesirable practices. Between 1993 and 1996, The Indian stock market witnessed continuous reforms which paved the way for the drastic growth of the exchange traded equity derivatives market. NSE, an automated screen-based trading exchange was established in 1993. The real-time price dissemination in NSE led to improved efficiency and transparency. In 1996, the NSE proposed SEBI for listing exchange-traded equity derivatives. As per the recommendations of the L.C. Gupta committee and J. R. Varma Committee, SEBI allowed introduction of derivative products in a phased manner with bi-level regulations.

In 1999, the Securities Contracts (Regulation) Act of 1956, or SC(R)A, was amended to include derivatives as “securities.” The Act made it clear that only exchange traded derivative transactions are legal and valid. So, only after 2000, derivatives trading originated in its present form.

The CNX Nifty index futures based on CNX Nifty 50 index as the underlying asset was the first derivative product launched on June 12, 2000 by NSE. A year later the exchange introduced Index options again based on the Nifty 50 index as the underlying. Later in July 2001, stock options were introduced and in November 2001, single stock futures were launched. Currently, futures and options on individual securities are available for trading on 136 securities identified by SEBI. The Exchange has also started trading derivative products based on sectoral indices like Nifty Bank, Nifty IT, Nifty

Midcap 50, Nifty PSE, Nifty CPSE and Nifty Infrastructure indices. Among these Nifty Bank F&O contracts are traded in huge volume and are highly liquid and also have weekly expiry. NSE's equity derivatives segment is called the Futures & Options Segment or F&O Segment. Currently NSE also offers currency and interest rate derivative products under a different segment.

Gautam, I., & Kavidayal, P. C. (2016) studied the perception of BSE/ NSE members on the implication of derivatives trading in the Indian capital market. Their results revealed that the derivative trading has impacted the capital market in a positive way by increasing the volume and bringing down the volatility and also aiding price discovery.

1.7 PRODUCTS TRADED IN THE INDIAN EQUITY DERIVATIVES MARKET

At present, the following products are available for trading in the equity derivative segment of exchanges in India.

Table 1.7.1 Products in the Indian Equity Derivate Market

Products	Settlement type
Index Futures	Cash Settled
Index Options	Cash Settled (European style)
Stock Futures	Cash/Physical Settled
Stock Options	Cash/Physical Settled (European style)

Futures: Futures are standardised forward contracts traded on recognised exchange platforms. It is an agreement between two parties to buy or sell a commodity or a financial asset at a predetermined price on a future date. A trader who buys a future contract is said to have taken a long position and the one, who sells futures, is said to have taken a short position. Unlike forward contracts, the future contract has no counterparty risk. The clearing corporation of the exchange, assures settlement of the trades, by collecting a certain sum as upfront margin at the time of entering the contract from both the parties involved in the transaction. The margin is determined based on the volatility of the underlying asset. Highly volatile assets indicate more risk and therefore

attract more margins. While the equity F&O contracts expire only on last Thursday of the month, profits and losses are settled on a daily basis and this is called a mark to market settlement. These margins are collected from the loss-making participants and paid to the profitable participants on a daily basis.

Options: Options emerged as financial instruments that enable the holder of the option to enjoy unlimited profits if his/her anticipation about the future price movement of the underlying is correct and at the same time limit the losses in case the anticipation goes wrong.

An option contract gives the buyer of the option the right but not the obligation to fulfil the contract. In return, the option buyer pays a certain amount called as premium to the seller of the option while entering into the transaction. Options are of two types:

- Call Option – It gives the buyer of the option the right but not the obligation to **buy** the underlying asset.
- Put Option – It gives the buyer of the option the right but not the obligation to **sell** the underlying asset.

European style options are traded in the Indian market, where the option can be exercised only on the date of expiry. Option trading is attractive among participants in the market because of the financial leverage that it offers. The buyer of the option contract pays a reasonably lesser premium for market exposure in relation to the total contract value. Leverage is again like a double-edge sword, it also has a disadvantage. If the price of the underlying asset does not rise/fall as per the anticipation before expiry, then the option buyer might end up losing his entire premium. Though out of the money options always appear cheap and attractive, it loses its value very quickly because of the time decay.

A seller of an option contract receives a premium from the option buyer. If the loss for an option buyer is limited to the premium paid, then the profit for the option seller is limited to the premium received, but his loss is unlimited if the market movement favours the option buyer.

SEBI Discussion Paper (2017) stated that index and stock options account for 83.61% of total trading in equity F&O segment. Low transaction cost (unlike futures where the STT is chargeable on the total notional value of the contract in options it is charged only the premium) could be the possible motive for superior trading interest in the options. Also trading in options allows market participants to set up different trading strategies to receive upfront premium that may be used to off-set losses or increase profits in their trading position in the underlying or futures market.

1.8 PARTICIPANTS IN THE INDIAN DERIVATIVES MARKET

Hedgers, Speculators and Arbitrageurs are the three broad categories of participants who trade in the derivatives market.

Hedgers: Hedgers are investors in the market who are risk averse. They participate in the derivatives market to transfer the risk of future price uncertainties to speculators. Hedging is more or less like insurance. Hedgers generally take opposite positions in the F&O market to what they have in the underlying cash market/spot market. A person wanting to buy the underlying asset on a future date would enter into a long hedge. A long hedge involves holding a long position (buying) in the futures market or buying a call option.

An investor who already is holding a position in the underlying market (having equity shares in his portfolio) might be anxious about the future fall in the price of the asset. In order to protect himself from this risk he would enter into a short hedge. A short hedge involves holding a long position in the spot market and a short position in the futures market or buying a put option. For instance, an investor holding shares of TCS may be concerned about a fall in the share price of TCS in the near future and may want to hedge his position. Hedging can be done by selling TCS futures or buying TCS put options. In case the price of TCS shares decrease, the investor will make losses in the underlying cash market but profit in the derivatives market.

Speculators: A speculator or trader is a person who doesn't hold any position in the underlying market but takes naked positions in the F&O market. They try to anticipate the future price movement of the underlying asset and take positions accordingly in the derivatives market. If they expect the price of the underlying asset to rise in the future, they would take up a long position in the future market or buy call options. If they anticipate

the price of the underlying asset to fall in the future then they would end up taking a short position in the futures market or buy put option. If their anticipation goes right, they make huge profits in the short time but, if the anticipation goes wrong, the losses can also be colossal. When compared to hedgers, they usually have smaller holding time for their positions.

Market outsiders often get confused between speculation and gambling. Gamblers usually play their luck in the market; they trade purely based on their instincts or gut feelings. They enjoy the adrenaline rush that comes with trading. Speculators are traders who take calculated risk. They place their trades based on market research and rely on technical charts and indicators to buy, sell or hold assets. It takes a lot of effort to be a successful speculator, but with appropriate strategies and emotional control, it is possible to gain a consistent edge in the marketplace.

Speculators are very important players in the market as they are the risk takers and bring in a lot of liquidity to the market. On the other side excessive speculation is also harmful to the markets as it may lead the asset's price to unmanageable levels resulting in a speculative bubble. Thus, a successful derivative market should have an appropriate balance of hedgers and speculators.

Arbitrageurs: Arbitrageurs are participants in the market who try to make risk-free profits. They look out for pricing inefficiencies and take simultaneous positions in the underlying and derivatives market. For instance, if the future contract is trading more than its fair value, the arbitrageur would take a long position in the underlying market and a short position in the futures market at the same time and hold on to both the trades till the expiration date and make profit without any risk. As more participants in the market try to make use of this opportunity, soon there will be equilibrium between the market price and fair price.

1.9 TRADERS' SUCCESS IN THE STOCK MARKET

The dictionary definition of success is “The accomplishment of an aim or purpose”. With regard to trading, success is articulated in numerous forms and will be trader dependent. An example of a genuine and possible goal in trading is achieving a positive return on investment (ROI) each year.

Unless a trader is proficient in making consistent profit, he/she cannot declare to have become a successful trader. According to Berkeley, 87% of all retail day traders will not make it through year 3 of their day trading profession. This doesn't mean that the trader is using his credit cards, taking second mortgages and borrowing money to stay in the game. It means that the trader uses the same money he started with and has been able to grow the account, take out cash on a regular basis and pay taxes.

A trader's success can be objectively measured using his/her Net annual returns generated from F&O trades. Win-rate or win/loss ratio is another way of measuring success in trading. It is extremely difficult for a trader to win each and every trade that he enters. The charm is in ultimately attaining that juncture where almost all the trades are successful. A win rate is simply but the number of winning trades out of total trades made. For example, if a trader enters into four trades a day and wins two, his daily win rate is 2/4 or 50%. If there are 20 trading days in the month, and he wins 60 out of 100 trades, his monthly win rate is 60%. There is no use if the winning trades are more but the size of winning trades are lesser than the size of few big losing trades. To achieve a greater win/loss ratio the trader should be competent enough in closing the losing traders earlier and letting the profitable trades run for long and should be able to consistently make profits over a long period of time. Eventually, what is more important is that the trader should be happy with the returns that he/she generates from trading equity F&O products.

Van K. Tharp says that an ultimate performing trader is absolutely devoted to being the best and doing whatever it takes to be the best. He feels entirely accountable for whatever occurs and thus can pick up from his mistakes. These traders usually have a working business plan for trading since they treat trading as a business.

Success also means that the trader no longer craves the thrill. Once a trader no longer associates the adrenaline rush with trading, he has just crossed over from the gambling territory into the business realm. This doesn't mean that the trader can't be excited about trading and achieving his life dream. He just can't be excited about making quick money. Trading is a serious business, be it a part-time venture or as one's full-time livelihood. Effective traders look at trading as a business, with comprehensive strategies, strong money management and stringent risk control.

“90% of all traders fail” is the most repeatedly used trading related fact around the internet. But no research papers exist to confirm this number right. It is impossible for a trader to have all the trades profitable all the time. Even most successful day traders will have losing trades every day. The key is to ensure that the winning trades are more than the losing trades consistently.

In a highly volatile and information ambiguous environment, successful derivative traders are not just defined by their knowledge and technical skills but by various other qualities that will help them to tackle the pressure. Traders also require high emotional intelligence, risk managing skills, social skills, strong personal habits, etc. It is impossible for a trader to control the market but it is very much possible for him to control his/her actions and reactions. Determining what influences trading success has been an elusive quest.

D K Agarwal in an article with Economic Times stated that stock traders are a community who differ from regular investors in the marketplace. They are involved in the market aggressively, using strategies to profit from rapid price changes in stocks. A comprehensive understanding of the markets and behavioural finance along with focus and personal discipline is what is required for success in trading. In other words, education, dedication, discipline and experience are the key constituents to prosper in stock trading.

Jack D. Schwager after interviewing many successful traders in the market for his book “Market wizards” commented that although the methodologies and trading style employed by the traders were different there were many commonalities observed. All those interviewed had a burning desire to become successful traders and were confident that they could continue to win over the long run. Almost everyone stressed upon discipline, patience and rigid risk control. Most traders spent a significant portion of their waking hours to market analysis and trading strategy. The importance of acting independent of the crowd was a frequently emphasised point. Each trader found a methodology that worked for him and remained true to it.

Turner, T. (2007) in her popular book “A beginner’s guide to day trading” described that the day trader enjoys the following benefits such as flexible work time, place and dress code, lesser investment and the freedom of being one’s own boss.

Successful traders are the ones who considers day trading as serious business, remain committed, able to multitask and stay ahead of the crowd.

Penfold, B. (2015) It is impossible for a trader to be 100 percent profitable in all his trades. Even the best traders who are successful also lose a lot of their trades. Regardless of the professed glamour, it is an intolerable fact that, fewer than 10% of the active traders are consistently profitable over the long run. Methodology, Psychology and Money Management are the three important areas that demand attention to be a successful trader. Methodologies refer to the analysis and trading plan behind the buy and sell decisions. Trading methodology should be simple enough that even a teenager should be able to trade it. Psychology refers to the discipline required to strictly follow the trading plan and money management refers to the amount of money that is committed to trades.

The common mistakes that traders make in the first year of their trading journey includes: trading based on tips, ignoring stop loss, asking others for opinion, failing to have a trading plan and trading for excitement. In their second year of trading, they generally commit mistakes such as getting addicted to the market, over-trading, trusting what is heard and read, etc... In their third year of trading, they commit mistakes such as failing to unlearn and validate methodologies, focusing on profits and not on the process and finally giving up on the market.

Generally, traders are classified into three categories: Flexible (Discretionary) traders, Systematic (Mechanical) traders and the last one is hybrid (Discretionary and Mechanical) traders. Discretionary traders have a flexible trading plan and constantly have to make decisions whereas Mechanical traders strictly adhere to their rules. They have no decision to make when they trade. They update their charts, follow the rules and place the order if they see a signal. There is no room for emotions. Being a discretionary trader is emotionally more draining than the mechanical trader. In general novice traders' start as discretionary traders and over time, through experience and frustration, they prefer to become more streamlined and organised in their trades. New traders are recommended to consider mechanical trading style from the start as it is usually easier to design and test with the plethora of software packages available these days.

1.10 FACTORS THAT INFLUENCE TRADERS' SUCCESS

There are various factors that influence the traders' success in equity F&O trading. Some of the most essential factors are listed below:

Personal habits and lifestyle: Success in trading is a part of a balanced life. It is so much more than being a profitable trader. One cannot neglect: health, lifestyle, family, spirituality, etc. The best trader strives to strike a right balance between these. They know that aiming on only one of these does not lead to success. Maxfield D. (2021) "The early bird gets the worm". This is particularly true when it comes to trading. The market opens at 9:15 AM. A trader has to wake up even earlier to understand premarket action, news, economic events and international markets. This will allow him to fine-tune his/her trading plan and set goals.

Trading Behaviour: Prosperous traders generally have a clear view about their trading objectives. Their trading goals are not always just related to making profits. It could also be like exploring new trading strategies, learning a stock market term every day, etc. "Failing to plan is planning to fail" – Allen Lakein. The most crucial trait for a trader is to plan his trades effectively. A trader is likely to make more mistakes if he doesn't have a plan. He might tend to give in to his emotions and lose discipline. It is vital for a trader to keep track of all the trades, research and ideas in a trading journal and reflect over it on a daily basis. Doing so will help him to identify his strengths and weaknesses and monitor his growth. The journal can be as simple as a notebook and pen or as advanced as a profit and loss graphed Excel sheet. The more organized a trader is, the higher the chances of success.

The best traders never trade on emotions, tips and whatever catches their attention, because they know it does not work in the long run. The best and consistently profitable traders strictly stick to their trading plans.

Winning traders are aware of, and accept the fact that the market is eventually unpredictable, that there is no 100% assured market analysis technique/strategy that will faultlessly predict price movements. Since they are clearly mindful of this fact, they lookout for signs that their analysis is mistaken, and if they see such signs, they quickly adjust their trading position. In contrast, losing traders, once they have put a trade on,

tend to only look for market action, and minimise or rationalise away any market action that seems to contradict their analysis. Thus, they end up staying in losing trades too long and taking unnecessary losses.

What makes a trade a worthy trade is not whether it gains or loses – a trade is a worthy one as long as it offers a bigger possible return than risk, and the odds or probabilities of it being successful are in trader’s favour, regardless of how it turns out. Losing traders mistakenly recognise any trade that loses money as a “bad trade” and any trade that gains money as a “good trade”.

Winning traders appreciate that trade management is essentially a more imperative skill than market analysis. What determines profits and losses is often not so much a matter of how or when the trade was entered, but much more a matter of how the trade is managed when the trader is in it.

Knowledge and Emotional Intelligence: More often than not trading decisions are not based on sound research or tested trading methods, but on emotions and the desire for quick money. What traders constantly overlook is that trading is a vocation and needs expertise that needs to be refined over years. Studies have revealed that an increase in search frequency [in a specific instrument] predicts higher returns in the following two weeks of trade.

Traders need the self-control to do nothing when there are no prospects present but must still stay attentive for possible opportunities. Once in a trade, traders need discipline to adhere to their trade plans. Patience is another crucial trait required for a trader. The biggest downfall of unsuccessful traders is being impatient and trying to get rich quick.

The best traders take total accountability for every single action they take, every judgment they make. They never blame someone else or something else for the consequence of their failure instead they try to learn from them.

They are neither extremely excited about their winning trades nor extremely depressed about their losing trades. Winning traders are not hasty gamblers. They prudently calculate potential risk against potential reward before entering any trade.

Losing traders mistakenly believe that the market itself is the key to winning. They fail to face the reality that the market can't be mastered. One cannot control the market. What one can do is to control oneself in relation to the market's action. Winning traders realise this fact and put greater effort into mastering themselves and their trading actions. Losing trades are simply a part of the trading game, so people with low-risk tolerance who cannot accept losing trades, cannot become successful traders. Winning traders have the emotional ability to accept the uncertainty that is integral in trading.

(“What is the Mind-set of a trader?” n.d.) Self-confidence is one personal characteristic that is shared by almost all endearing traders. In contrast, numerous losing traders have distressing self-doubt. Traders with self-doubt, often miss good trading opportunities as they waver upon initiating trades. They also, incline towards cutting their returns short, excessively fearing that the market will turn contrary to them at any second.

Michael Cook, who won the real-money robbin's world cup championship of future trading with 250 percent return in the year 2007, advise the new traders to start small. Trading small early on is not going to make the trader profitable but it will let him stay long enough in the market to be able to learn all the lessons that will allow him to become profitable in the long run. Warren Buffett says that Success in investing doesn't correlate with IQ once an investor has crossed above the level of 25.

Risk Management Skills: It is easy to get in the habit of thinking only about returns and not losses. Successful traders think in percentages and probabilities. They are keener about preserving their capital. A trader always has to keep in mind that the reward needs to outweigh the risk and he needs to be prepared for the worst. Maxfield D. (2021) Traders who don't manage risk can't be traders for very long. They give-up very soon or become desperate gamblers burning their pay checks.

A novice trader should never trade with borrowed money. It also should go without saying that the money in one's trading account should not be allocated for paying the loans, bills or other important obligations. A trader must be prepared to lose all the money allocated to your trading account.

The best advice that Marty Schwartz gives to the ordinary guy trying to become a better trader is that to learn to take losses and never let losses get out of hand and also not

to increase the position size, until the trader has doubled or tripled his capital. Most novice traders in the market make a grave mistake of increasing their bets as soon as they start making money. That is a hasty way to get smeared out.

Technology: Viraj Bhagat (2019) The simplicity of technology, support of robust systems, and convenient accessibility globally, has taken trading to even individuals. This has led to an upsurge of Independent Algo traders. They are fast becoming the future of financial evolution.

Technological advancement has completely changed the way in which financial assets are traded. Every step of the trading process, right from order entry and execution to trading location to back-office operations, is highly automated. To keep up with changing times, it has become essential for traders to accelerate the speed of execution using modern-day technological tools. Using computer algorithms to automatically identify trading opportunities and executing them without manual intervention based on predefined conditions is called Algo Trading.

Algorithmic Trading (AT) in India has picked up in leaps and bounds. Nearly 50% of trading volume in India is from algo traders. Each time an order is placed in the stock exchange; there is a 50% chance that a machine would make the other side of the order decision. AT allows to back-test the strategy and check its viability by simulating it on the historical market data before risking capital in live trade. Using algorithms to trade, maintain discipline even in volatile markets as the trade rules are recognized and executed automatically. Since computers react instantaneously to varying conditions of the market, automated systems are able to make or hit quotes as quickly as trade conditions are met. Executing buy or sell orders a few seconds earlier than the rest of others, can make a huge variation in the trade's effect. Automated trading systems allow the client to trade with various accounts or diverse strategies at one time. This enables traders to spread risk over a range of instruments while creating a hedge against losing positions. What would be extremely difficult for a human to achieve is executed efficiently by a computer in milliseconds. Therefore, it is crucial for a trader to be tech savvy.

Social Interaction: One of the easiest ways to learn anything new is by participating in discussions. The same rule applies to trading or investing. There are plenty of online discussion forums like Traderji, Stock Adda, Bse2Nse, Trading Q&A, ValuePickr, etc. for the community of enthusiastic stock market investors and traders who are willing to learn, ask, and share their skills, thoughts, and knowledge. On all these forums, one can find active discussions on stock market investing, trading, investing strategies, stock picks, IPOs, mutual funds, derivatives, forex, commodity, algo trading, etc. Many traders also actively share and discuss their opinions with like-minded people on social media platforms like Facebook, Twitter, Telegram, Quora, etc. They also participate in workshops, symposiums and seminars to discuss and deliberate on trading strategies and ideas. Social Trading is very popular abroad and very slowly catching up in India in different forms. The Copy Trading features in social trading platforms help investors or traders with very less experience and poor trading performance in the market to imitate the trading strategies of successful well experienced traders so that they can also be so.

1.11 VARIOUS RISKS FACED BY PARTICIPANTS IN THE INDIAN DERIVATIVES MARKET

Participants in the derivatives market should realise that futures and options are leveraged instruments and attract a lot of risk like counterparty or default risk, liquidity risk (usually in out of the money option contracts, participants might not be able to exit from their positions at their desired time), regulatory risk, operational risk (improper execution of trades) and price risk. Derivatives market is not an appropriate place for a person with limited financial resources, trading experience and low risk tolerance. Therefore, the participants in the derivatives market should consider the above constraints and carefully think whether such a market will be a suitable place for them to transact and make money.

NISM Equity Derivatives VIII (2020) insists all the prospective participants in the derivatives/ cash market to read and thoroughly understand all that is given in the model risk disclosure document provided by the stock broker to the client at the time of signing the contract.

1.12 INDIA: THE MOST SPECULATIVE EQUITY DERIVATIVES MARKET IN THE WORLD

Indian equity derivatives market is considered as one of the most speculative markets in the world. Currently, on a cash market turnover to derivative market turnover ratio basis, Dalal Street has the highest level in the world.

Figure 1.12.1: Ratio of Turnover between Equity Derivatives and Cash Segment on NSE

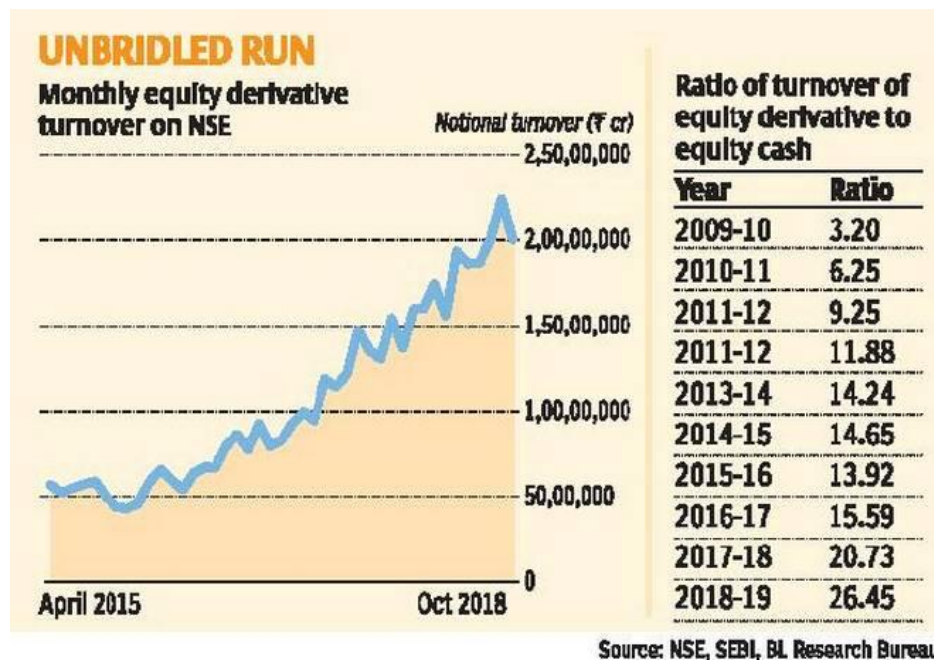


Image Source: The Hindu Business Line, October 28, 2018

From the above Figure 1.12.1, it is clear that the ratio of the notional turnover in the equity derivatives segment to the turnover in the cash segment had risen drastically from 3.20 times in 2009-10 to 26.45 times in 2018-19.

Lokeshwari S K (2019) “This huge difference in turnover ratio between the derivatives and cash segment is considered unhealthy as the main purpose of derivatives is to provide a channel for hedging risk. An unusually high ratio could indicate disproportionate trading and speculation.”

This massive difference in the turnover between the cash and derivatives segment could be because of the short selling restrictions in the cash segment. Moreover, stock brokers give enormous financial leverage for traders in the derivatives segment allowing

them to take large positions. The securities transaction tax (STT) charged in the cash segment is very high (10 times more) when compared to the derivatives segment. This encourages a lot of individual traders to use complicated F&O strategies to create a position similar to equity market exposure.

Sharma T. (2018) “The discussion paper on the development of equity derivatives had recently raised concern over the high ratio of derivatives to cash following which SEBI had proposed introduction of physical delivery for single stock futures and options in a phased manner. SEBI also recently tightened margin requirements for trades in the futures and options segment. Brokers say these measures will help curb speculation in the derivatives market, particularly by retail investors with little or no understanding of the product. When retail investors lose a lot of money, the majority of them never come back, and that also hurts the economy in some way. SEBI also considers that the derivatives market is for knowledgeable investors and not for retail traders with networth of less than Rs.2 lakh. To ensure those with lesser net worth do not participate in the derivatives market, the regulator made it compulsory for anyone wanting to trade in the derivatives market to provide a bank statement for six months”.

Jain, A., et. al. (2016) examined the effect of the retail investor’s entry in the derivatives market when SEBI introduced new rules governing equity derivatives lot size in order to restrict retail participation. The results of their study reveal that small investor’s participation has impacted the derivatives market positively in terms volume, volatility and price efficiency. There is also no significant sign of retail participants exiting the market after the implementation of new rule on lot size by SEBI.

1.13 PREFERENCE OF DERIVATIVES MARKET OVER CASH SEGMENT BY TRADERS

The derivatives market (futures and options) serves all significant functions of price discovery. The individual informed traders with better data and judgement take part in these markets to take advantage of such information. Derivatives markets are usually the first ones to react as the transaction cost is much lower in these markets than in the spot market. Therefore, these markets point out what is about to ensue and thus aid better price discovery.

Black (1975) Traders would prefer the derivatives market over the cash segment because of the lesser requirement of capital, reduced transaction cost, absence of short selling restrictions and limited downside risk. Back (1993) and Cherian (1993) point out that the options market is the only place where traders can bet on volatility.

Driessen J. et al. (2012) contributed to the literature by providing conclusive evidence that the options trading can predict excess stock returns because informed investors choose the options market to trade on their private information about upcoming analyst-related and earnings-related corporate events, namely the analyst recommendation change, the analyst forecast revision, and the earnings announcement. Using both the IV spread and the IV skew as informed options trading measures, they document economically large and statistically significant predictive power of informed options trading on all three informational corporate events. The results are more pronounced when the options market is more liquid. They also show that the short-sale constraint plays an important role when informed investors choose the options market to capitalize on their private information.

Patel (2020) documented that the options market contributes about one third (33.20%) of the price discovery in US stocks and ETFs during the past decade. They also find evidence that when a relatively high share of informed trading occurs in the options market (high options market price discovery share), bid-ask spread in the options market tends to be wide compared to those in the stock market, consistent with relatively high adverse selection risks in the options market. Finally, their results indicate that the leverage offered by options is also a key driver of price discovery in the options market.

1.14 NEED FOR THE RESEARCH

The usage and popularity of equity derivatives is gaining a huge momentum in the Indian market. Economic Times (Jan 21, 2021), reported that the National Stock Exchange (NSE) of India is ranked No.1 in the world in terms of total contracts traded (volume) for the past two consecutive years beating the CME group Inc. of the USA and the Korean exchange. According to the SEBI Discussion Paper (2017), 95% of equity derivative trading in India happens on the NSE.

Vishnoi A & Joshi A. (2020) “According to the Futures Industry Association’s website, the volume on the Indian exchange grew 58% to about 6 billion derivative contracts in 2019, surpassing CME’s 4.83 billion.” Mr. Deven Choksey, the head of research at K.R. Choksey Shares and Securities Pvt. Ltd. commented that, though it is a great milestone for NSE and India the statistics highlights the increasing speculative activity in India.

Derivative contracts are a probabilistic gamble on forthcoming events. Derivatives can be used to hedge risk but they also offer attractive means for speculation that is extremely risky. The societal concern of derivatives trading mainly depends on whether the market is controlled by hedgers or speculators.

Burugula P. (2018) reported that the individual investor’s participation in the equity derivatives market soared very high, the average daily turnover of individual investors had nearly doubled from Rs 4.7 lakh crore to Rs 9 lakh crore during the year 2017. The market regulator SEBI is concerned about this increasing popularity of derivatives among individual traders. The regulator is alarmed that innocent traders are being falsely sold these derivatives products by intermediaries and thus exposing them to capital risk. SEBI is afraid that the innocent investors are experimenting their hands in highly risky financial instruments unaware of the adverse financial consequences.

AxisDirect-O-Nomics (2017) argue that the majority of the individual participants in the equity derivatives market are speculators and not hedgers. The argument is supported by the following fact. Institutional investors (DII and FII) hold around 65% of the non-promoter shares of the public limited companies in India, while individual investors hold around 16% of the shares. However, institutional participation contributes to only one tenth of the derivatives trading in India while the individual or proprietary participants who actually don’t own many shares account for 90% of the total derivative transactions.

Many research reports from Korea and Taiwan stock market highlight the fact that the retail participants in the equity market are mostly unsuccessful. However, there are no research findings in India regarding the same. Just like the Korean regulator, SEBI in India has taken steps to curb the retail participation in the equity derivatives market by increasing the minimum contract size from 2 to 5 lakhs.

In fact, it is not easy to make consistent profits in the long run and be a successful derivatives trader. It is rare for the brokerage industry to publish the failure rates of their clients as they are concerned that the truth will hinder them from getting new clients. In reality, unofficial estimates suggest that 90% of the day traders fail. However, no research paper exists that validates this number. Therefore, it is the need of the hour to study whether the individual traders in the Indian equity derivatives market are really successful.

Rather than trying to curb participation in the market it is better to educate and train them with required skill sets and traits so that more people can be successful in the long run. There are hardly any empirical studies in the Indian market that explore the characteristics of the winning traders. Tharp, V. K. (2021, P.22) stated that “*As an NLP devotee, I’ve always believed that if someone can do something well, that skill can be taught to anyone else*”. Therefore, it is important to study the factors that drive successful trading in the Indian equity F&O market so that other traders in the market who are looking out to be successful, can emulate the characteristics of the prosperous traders.

1.15 PROBLEM STATEMENT

A detailed study on the success of individual derivative traders is important for several reasons. First, retail traders are fond of trading derivative products as it is often considered as a tool to make quick money. Second, there are conflicting claims about the success of individual derivative traders in the Indian equity market. Hindu Business Line (2019, April 03) stated that the market regulator SEBI is worried that the majority of inexperienced individual derivative traders indulge in excessive speculation and suffer huge losses but, the National Stock Exchange assert that most of the derivative traders in the market are professionals and are successful after an initial learning period. Neither of them has adequate proof backing their claims. Third, other countries that face similar issues have resorted to curbing retail participation in the equity F&O market. Instead of following the footsteps of other countries, in India, it is better to understand what drives success in trading and educate the participants in the market so that it will be win-win situation for all the stakeholders.

1.16 SIGNIFICANCE OF THE STUDY

The findings of this study will give tremendous insights for the retail/individual traders in the equity derivatives market about the traits that are required to be successful in trading derivatives and thus enable them to work upon honing the required traits. The outcome of the study will also be helpful for the market regulator SEBI and the stock exchanges in framing their regulations and designing training/education programmes with regard to individual traders in the Indian equity derivatives market.

1.17 OBJECTIVES OF THE STUDY

- To understand the demographic and trading profile of equity derivative traders.
- To explore the relationship between demographic and trading profile of the traders and their trading success.
- To identify and condense the variables that influence trading success in equity derivatives into few components or factors.
- To construct and test a research model that explains the amount of influence of each factor in determining the success of a trader.

1.18 SCOPE OF THE STUDY

The scope of study is limited to understanding the demographic and trading characteristics of active equity derivative traders in Bengaluru city and importantly investigate the factors that directly influence trading success.

1.19 LIMITATIONS OF THE STUDY

- This study has been conducted between 2019 and 2020. Similar pattern of study, if conducted after 2020 (outbreak of pandemic) may produce different results.
- The validity and reliability of the study is based on the genuineness of the responses given by the traders.
- The exact population size is not clear as there is no published information about the same.