Identification of Profitable Segment from Indian Cash and Futures Market

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Abstract
Whenever any rational investor thinks of putting money in any asset or scheme they are concerned about two important aspects. First, will they get the return that was promised or expected by them? And secondly, what is the risk element in receiving such returns? The actual risk and returns can be only of probable values and not determined values because of uncertainty. Even the risk free return giving investments have a small percentage of risk involved. Generally, a Bank fixed deposit is considered as risk free investment but still risk may arise if say losing the deposit receipt documents or some fraud in that branch leading to delay in payments is also a possibility which should not be ignored. The traditional stock market or the cash market and the futures market as a part of derivative market are one such areas where investors find high risk on both interest and capital amount. The paper aims to show the working of both cash and futures market in India and compare and contrast these markets. As most investors in Cash market could mitigate risk and earn superior returns with the knowledge of futures market the comparison is useful for existing cash market investors to consider futures trading. It would be difficult to conclude as to which market is superior as the each market is to an extent dependent on one another and have a lead and lag relationship as both play an important contributory role in attracting investor’s money and the growth of Indian economy. The present paper is a qualitative analysis and secondary data was collected from various sources including journals, magazines, books and various websites.

Keywords: Cash Market, Profitability, Risk, Return, Futures Market, Investors

1. Introduction
Man has always found ways to fulfill his needs. When demand for unavailable things rises and when the need becomes strong and constant, we soon see arrival of such a thing in the market. We generally refer the term market as the place where buyers and sellers meet and if the buyers and sellers get involved in the act of buying and selling it is termed as commerce. Nowadays it is not necessary that the buyers and sellers have to physically meet but they still get into the act of buying and selling through the help of the telephone, websites, apps etc. The best example is, how from the old Barter system of exchange of goods for goods or services was having a strong barrier on growth of market thus the coin money evolved and from the limitations of coin money the paper money evolved. Same is the case of derivative market. The barriers created in the buying and selling of traditional stocks lead to evolution of the derivative market, especially the futures market. The traditional stock market, also called as the Cash market or Spot market is the market where shares of
companies are available for either intraday trading or delivery based trading. Whereas Futures market is a market where the value of the contract is derived from the value of its underlying asset - the cash market stock or index. The futures market is different from forwards market as it is facilitated and guaranteed through the exchange, is standardized and involves obligation of both the parties. Thus we see both segments are in a way dependent on each other where if a person trades in cash market his price anticipations and price movements can be better understood by being aware of the movements in futures market of the same stock or index. Also the futures market trader would not be able to earn riskless profits provided he does not track the cash market well. It is a known phenomenon that individual retail traders of futures market do have superior knowledge of cash market at some point in their trading history. The foundation of futures market was learnt by investing in cash market. Rarely can one see an investor who has never traded in the cash market but is an active derivative trader.

2. Materials and Methods

- **Review of Literature**

The literature pertinent to comparison of cash and futures market on profitability is a little limited as not many direct comparative studies have been found on profitability in cash and futures market in India by using factors like, which market is having more risk and which market has more returns. Most empirical papers have answered three main aspects between cash and futures market. First is the impact of cash on futures market and futures on cash market. Second is the extent of increase in volatility in cash market due to introduction of futures market and third is the study of lead and lag relationship between cash and futures market. The occurrence of Price Discovery is believed to be part of knowing where the informed traders trade first. Schreiber and Schwartz (1986) concluded that Price discovery is a process by which markets try to find their fair prices. If these markets are efficient and frictionless then price discovery should be instant and contemporaneous. Kawaller, Koch and Koch (1987), Stoll and Whaley (1990), Chan (1992), had studied and reported that index futures lead the cash market in US by using one minute trade data of S&P 500 by 20 to 45 minutes and the cash market does not lead the futures market by more than 2 minutes. French and Roll (1986) found that stock prices are volatile in trading hours than non-trading hours which is caused by difference in sharing flow of information. Ross (1989) also found stock volatility to be related to the flow of information. The transfer of volatility from cash market segment to futures market segment and futures to cash leads to price discovery which was established by applying MGARCH framework. The further studies to compute price discovery for securities traded in multiple markets was given by Gonzalo and Granger (1995) and Hasbrouck (1995). Capturing the information content revealed by each market explains the price leadership that each market has over other. The present paper is a qualitative analysis and secondary data was collected from various sources including journals and websites.

- **Importance of The Study**

The Individual Stock Futures (ISF) is a financial contract where the underlying asset is an individual stock. Stock Future contract is an agreement to buy or sell a specified quantity of underlying equity share for a future date at a price agreed upon between the buyer and seller. The contracts have standardized specifications like market lot, expiry day, price quotation, tick size, tick timing and method of settlement. Whereas the cash market is a market for ready buying and selling for intraday or delivery based trading. Here there is no underlying asset as buying of stock is either to earn from the increase in prises or for earning dividend income from the stock. So both of these markets, Cash and Futures Market are of importance to each other and each market contains useful information about the other. The paper compares the Cash and Futures Market and shows the profitability comparison based on risk and return of each market. The paper also acts as a guide to cash market traders who are not trading in futures market as a starting guide and also to new traders who want to jump start with futures market. As technically the investor of cash market who sees a possible risk of fall in prices can secure himself from the risk of share price falling in cash market by selling a future contract of the same stock and the investor who sees the risk of rise in price in future can buy a future contract today. Thus having an exact reverse position in futures market not only reduces the principal risk for cash market participants but also assures of risk free returns.

- **Research Objectives**

i) To study the mechanism of Cash Market in India.

ii) To study the mechanism of Futures market in India.

iii) To compare the Cash and Futures market based on its risk and return.

   a) **Cash Market**

The cash market in India is heavily dominated by the two main exchanges BSE (Bombay Stock
Exchange) and NSE (National Stock Exchange). The trading is conducted by BOLT and NEAT systems on BSE and NSE respectively from Monday to Friday between 9.15 a.m. to 3.30 p.m. normally. The scrips are classified in the Equity segment as ‘A’, ‘B’, ‘C’, ‘T’, ‘Z’, ‘G’ and ‘F’ groups. Where A group stocks are those ordinary shares of companies with large capital base, large shareholder base, good growth record with regular dividends and high trading volume in secondary market, margin trading and day trading is allowed for such stocks. The B group consists of B1 and B2 category, where B1 is ordinary shares of companies having less liquidity but with good management and satisfactory growth prospects, cash trading and day trading is allowed but margin trading is not. The B2 consists of ordinary shares other than A and B1. C is physical shares of companies in A, B1 and B2 category where trading is always delivery based. T is ordinary shares of companies under the watch of BSE surveillance committee, here too trading has to be delivery based. Z is a category where the ordinary shares of companies not conforming to certain requirements of BSE and is always in trade to trade segment where intraday trading is prohibited. F is non-convertible debentures and G is central and state government securities. The three primary types of traders in the cash market are bulls, bears and stags. Bulls buy at present rates anticipating price to rise and sell at higher rates leading to fair growth of stocks and the market. The bear has a negative view on the market thus sells at the present rates and re-buys at a lower rate thus retains stocks at a lower price per share and still makes profits, but this act when becomes a general phenomenon hurts the fair growth of market. The stags are pure Primary traders or IPO investors. They take risk and make applications for the primary issue and selloff on listing dates on achieving sufficient growth in investments. The fundamental of cash market buying is very simple, if you have a tip or call or information or anticipation on price rise or fall of a particular stock you can trade in the given trading hours if you find your target is getting achieved based on the price movements enter into reverse trade and book profits, if you want to hold the stock for more than a day than instead of an intraday trade you can get it on delivery basis where in 2 days from your trading it gets deposited into your demat account of your registered stock broker. The entire settlement takes at least two days in delivery based trading that’s why it’s common to see intraday brokerage is always less than delivery based trading.

b. Futures Market

The main four types of derivatives traded are Forwards, Futures, Options and Swaps. This study is limited on comparison of Cash market with Futures Market only. The Futures market is a part of derivative market. In Financial marketplace some instruments are regarded as Fundamentals like shares (Equity, preference), bonds (debentures) etc. and others are regarded as Derivatives. A derivative is a contract whose value is derived by the value of its underlying asset. The underlying asset can be share, currency, interest rate, index, livestock etc. The term “Derivative” indicates that it has no independent value, i.e. its value is entirely "derived" from the value of the underlying asset. The underlying asset can be securities, commodities, bullion, currency, livestock or anything else. In other words, Derivative means a forward, future, option or any other hybrid contract of pre-determined 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. With Securities Laws (Second Amendment) Act, 1999, Derivatives has been included in the definition of Securities. The term Derivative has been defined in Securities Contracts (Regulations) Act, as:- “A Derivative includes: - a security derived from a debt instrument, share, loan, whether secured or unsecured, risk instrument or contract for differences or any other form of security; and a contract which derives its value from the prices, or index of prices, of underlying securities”.

Thus a futures contract is a standardized contract, traded on a futures exchange, to buy or sell a certain underlying instrument at a certain date in the future, at a specified price. The future date is called the delivery date or final settlement date. The pre-set price is called the futures price. The price of the underlying asset on the delivery date is called the settlement price. A futures contract gives the holder the obligation to buy or sell, which differs from an options contract, which gives the holder the right, but not the obligation. In other words, the owner of an options contract may or may not exercise the contract. Whereas a futures contract, both parties of a "futures contract" must fulfill the contract on the settlement date. In a futures contract the seller delivers the shares/commodity to the buyer, or, if it is a cash-settled future, as in the case of stock futures in India, cash is transferred from the futures trader who sustained a loss to the one who made a profit. To exit or close your position in an existing futures contract prior to the settlement date, the holder of a futures position has to offset his position by either selling a long position or buying back a short position, effectively closing out the futures position and its contract obligations.

The futures market (or futures as it is popularly called) has evolved from the success of forward contracts and as a measure to remove the biggest barrier of forward contracts, Counter Party Risk. The forwards are OTC contracts (Over the counter)
where the lot size, price, delivery terms are customised between the two parties where each party has to rely on the goodwill and faith that the other party will oblige to execute the contract. Whereas the Futures contract is a standardised, exchange issued, exchange backed and exchange traded derivative contract where the lot size is predetermined, the maturity months and the other terms and conditions are standardised and in case of default by any party (which is very rare) the exchange takes guarantee to ensure the other party is not in loss. The exchange traded futures market is able to eliminate the counter party risk because of the mark to market (m2m) system. In m2m system the buyer of a futures contract is supposed to deposit an initial margin of say 20% of the value of the entire contract. Based on the price movement of the underlying and the anticipations for future and other factors the futures contract price would go up or down. If the price increases at the day’s close it is added to the initial margin and if it falls then is deducted from the margin money and thus the net profit and loss are shown at every trading day’s close. If there is a severe fall in the price of the contract and the loss results into the initial margin becoming say only 6% of value of entire contract a margin call is made which is called as maintenance margin where the buyer of futures contract is supposed to top up the margin account again to the level of initial margin.

- **Working of Futures Trading**

  There are three basic categories of futures participants: hedgers, speculators and arbitragers. The hedgers use futures for protection against adverse future price movements in the underlying cash commodity. The rationale of hedging is based upon the demonstrated tendency of cash prices and futures values to move in tandem. Hedgers are very often business houses, or individuals, who at one point or another deal in the underlying cash commodity. Take, for instance, a major food processor who cans corn. If corn prices go up. He must pay the farmer or corn dealer more. For protection against higher corn prices, the processor can "hedge" his risk exposure by buying enough corn futures contracts to cover the amount of corn he expects to buy. Since cash and futures prices do tend to move in tandem, the futures position will profit if corn prices rise up enough to offset cash corn losses.

  Speculators are the second major group of futures players. These participants include independent traders and investors. For speculators, futures have important advantages over other investments: If the trader's judgment is good. He can make more money in the futures market faster because futures prices tend, on average, to change more quickly than real estate or stock prices, for example. On the other hand, bad trading judgment in futures markets can cause greater losses than might be the case with other investments. Futures are highly leveraged investments. The trader puts up a small fraction of the value of the underlying contract (usually 10%-25% and sometimes less) as margin, yet he can ride on the full value of the contract as it moves up and down. The money he puts up is not a down payment on the underlying contract, but a performance bond. The actual value of the contract is only exchanged on those rare occasions when delivery takes place. Moreover the futures investor is not charged interest on the difference between the margin and the full contract value.

  The third types of derivative traders are Arbitragers, they see price mismatch in the two markets and buy from the lower priced market and sell in the higher priced market. Due to the presence of arbitragers the frequent price mismatch that are caused are eliminated and what we see is a

- **Settling Futures Contracts in India**

  Futures contracts are usually not settled with physical delivery. The purchase or sale of an offsetting position can be used to settle an existing position, allowing the speculator or hedger to realize profits or losses from the original contract. At this point the margin balance is returned to the holder along with any additional gains, or the margin balance plus profit as a credit toward the holder's loss. Cash settlement is used for contracts like stock or index futures that obviously cannot result in delivery. The purpose of the delivery option is to insure that the futures price and the cash price of good converge at the expiration date. If this were not true, the good would be available at two different prices at the same time. Traders could then make a risk-free profit by purchasing stocks in the market with the lower price and selling in the futures market with the higher price. That strategy is called arbitrage. It allows some traders to profit from very small differences in price at the time of expiration.

- **Trading Stocks & Index Futures in the Indian Stock Market**

  Futures trading are a business that gives you everything you've ever wanted from a business of your own. Roberts (1991) calls it the world's perfect business. It offers the potential for unlimited earnings and real wealth. You can run it working at your own hours as well as continuing to do whatever you're doing now. You can operate this business entirely on your own, and can start with very little capital. You won't have any employees, so you wouldn't need attorneys, accountants, or bookkeepers. What's more, you'd never have collection problems because you won't have any "customers." and since there is no competition, you won't have to pay the high cost of
advertising. You also won't need office space, warehousing, or a distribution system. All you need is a personal computer and you can conduct your business from anywhere in the world. Futures trading are a form of investment which involves speculating on the price of a security going up or down in the future. A security could be a stock (RIL, TISCO, etc), stock index (NSE Nifty Index), commodity (Gold, Silver, etc), currency, etc. Unlike other kinds of investments, such as stocks and bonds, when you trade futures, you do not actually buy anything or own anything. You are speculating on the future direction of the price in the security you are trading. This is like a bet on future price direction. The terms "buy" and "sell" merely indicate the direction you expect future prices will take. If, for instance, you were speculating on the NSE Nifty Index, you would buy a futures contract if you thought the price would be going up in the future. You would sell a futures contract if you thought the price would go down. For every trade, there is always a buyer and a seller. Neither person has to own anything to participate. He must only deposit sufficient capital with a brokerage firm to insure that he will be able to pay the losses if his trades lose money.

3. Results and Discussion

- **COMPARISON OF CASH AND FUTURES MARKET**

  i) **Benefits of Trading in Futures over Cash Market**

  A futures contract is highly standardized contract with the following details specified: The underlying asset or instrument. This could be anything from a barrel of crude oil, a kilo of Gold or a specific stock or share. The type of settlement, either cash settlement or physical settlement. Currently in India most stock futures are settled in cash. The amount and units of the underlying asset per contract. This can be the weight of a commodity like a kilo of Gold, a fixed number of barrels of oil, units of foreign currency, quantity of shares, etc. The currency in which the futures contract is quoted. The grade of the deliverable. In the case of bonds, this specifies which bonds can be delivered. In the case of physical commodities, this specifies not only the quality of the underlying goods but also the manner and location of delivery, the delivery month, the last trading date. Trading in futures is regulated by the Securities & Exchange Board of India (SEBI). SEBI exists to guard against traders controlling the market in an illegal or unethical manner, and to prevent fraud in the futures market.

- **Single Share Vs. Lot Size**

  When we buy shares, we can buy any number we want, even if it is just one share. In Futures, we need to buy a contract which will have a specific lot size depending on the stock. The lot size is set for each futures contract and it differs from stock to stock.

  Let's say one wants to buy an Infosys Futures contract. This will comprise 100 shares. Or, for buying a HPCL Futures contract it will be a lot of 650 shares. The rule is the valuation of the contract should be Rs. 2 lakh or above, based on which the number of shares in a lot gets decided.

- **Margin Payment**

  When you buy a Futures contract, you don't pay the entire value of the contract but just the margin. This margin amount too is prescribed by the exchange.

  Let's say you buy a HPCL Futures contract. And the price of each HPCL share is Rs 311. This will amount to Rs 2,02,150 (Rs 311 x 650 shares). You don't pay the entire amount of Rs 2,02,150. You only pay 15% to 20% of that amount and this is called the margin amount. The margin depends on what the exchange sets for the day. Based on certain parameters, it declares the margin for each stock. So the margin for Infosys will vary from, say, HPCL. Let's say the margin for the HPCL Futures is 15%. So you end up just paying just Rs 30,322 (not Rs 2,02,150). When you buy shares in the cash segment, you have to make the entire payment to your broker. Let's say you buy 650 HPCL shares for Rs 311 per share. You end up paying Rs 2,02,150. Within two days, you will have to make the full payment to your broker. Thus in Futures, you just pay the margin, not the entire amount.

- **Profit Making And Loss Making In Futures**

  You purchased a HPCL Futures contract and the underlying price is Rs 311 per share. Let's say, the next day it moves to Rs 312. The difference is Rs 1 per share (312-311). You get a credit Rs 650 (Rs 1 per share x 650 shares). The following day, it dips to Rs 310. The difference is Rs 2 per share (312-310). Since the price has dipped, Rs 1,300 (Rs 2 per share x 650 shares) is debited from your account. This will go on till you sell the Futures contract or it expires (last Thursday of the month). So, on a daily basis you make and lose money. In futures trading, it is as easy to sell (also referred to as going short) as it is to buy (also referred to as going long). By choosing correctly, you can make money whether prices go up or down. Therefore, trading in the futures markets offers the opportunity to profit from any potential economic scenario. Regardless of whether we have inflation or deflation, boom or depression,
hurricanes, droughts, famines or freezes, there is always the potential for profit making opportunities.

- **High Leverage**
  The primary attraction, of course, is the potential for large profits in a short period of time. The reason that futures trading can be so profitable is the high leverage. To ‘own’ a futures contract an investor only has to put up a small fraction of the value of the contract (usually around 10-20%) as ‘margin’. In other words, the investor can trade a much larger amount of the security than if he bought it outright, so if he has predicted the market movement correctly, his profits will be multiplied (ten-fold on a 10% deposit). Thus it is an excellent return compared to buying and taking physical delivery in stocks.

- **High Liquidity**
  Most futures markets are very liquid, i.e. there are huge amounts of contracts traded every day. This ensures that market orders can be placed very quickly as there are always buyers and sellers for most contracts. As in many stocks it is commonly seen due to lack of enough buyers or sellers the stock doesn’t have quotes as a daily trader would like but that is not the case in the futures contracts compared to cash market segment.

- **No Delivery Of Shares**
  No delivery. There is no delivery in futures market. When you buy in the cash segment (where investors buy and sell any number of shares and hold them in demat accounts), the shares are delivered to you and sent to your demat account. Over here, there is no delivery so you do not need to wait like settlement of shares in demats account.

- **Lower Brokerage**
  Another advantage of futures trading is much lower relative commissions. Your commission for trading a futures contract is one tenth of a percent (0.10-0.20%). Commissions on individual stocks are typically as much as one percent for both buying and selling.

  For institutional investors and regular investors it can be around 0.03% to 0.05% of the transaction. But the occasional investor may end up paying up to 0.1% as brokerage however In the cash segment, the brokerage will be around 0.25% to 0.75%. Thus transaction cost is lower for intraday trading and highest for delivery based trading in cash market.

- **Effective Short Selling**
  When you sell shares without owning them, it is known as short selling. You would do so if you believe that the price of the stock is going to drop. This way, you sell it at a higher rate and buy it at a lower rate later. With Futures, you do not have to square your transaction at the end of the day. You can square the transaction whenever you want or wait till it expires on the last Thursday of the month. But, in the cash segment, you have to square your transaction by the end of the day, so you can short sell just for a day.

  \[ \text{ii) Downside Of Futures Market} \]
  \[ \text{(Benefits Of Cash Market Over Futures Market)} \]

  - **Price Differential**
    It is worth noting that the price of the shares in the cash segment is mostly lower than the Futures price. So, if it is available for Rs 311 in the Futures segment, you should get it for Rs 308 in the cash segment. Though, on occasions it may even be slightly higher.

  - **Tax**
    In Futures, you pay a tax of 33% on your profit. In equity, it is a flat rate of 10% (short term capital gains) if you sell within a year and no tax if you sell after a year (long term capital gains).

  - **Flexibility in Purchases**
    In the cash segment, you can pick up however many shares you want starting from just one share. In Futures, you cannot buy less than the lot size prescribed. If you want to buy more you can, but they must be in multiples of the lot. So, you can buy one or two contracts.

  - **Basis Risk**
    Like we know the main intention of entering a futures contract is to get assured returns for a future date by entering into the contract today. The riskless profit so earned is the basis of entering into such contract. The basis risk is the risk of such future rate being below its expected future price. Thus it can be said as when the future spot is lower than the future price agreed on the day of entering into the contract.

  - **Risk in Futures is Comparatively Higher**
    If you are an investor who wants to buy shares and hold on to it, you should invest in the cash segment. Since Futures is a trading tool, the risk is also much higher. Let’s say the shares of Infosys are going at Rs 2,700 per share. And, you buy 100 shares in the cash segment. You end up paying Rs 2,70,000. The price dips to Rs 2,200. If you sell the shares at this rate, you make a loss of 18.5%. Now let’s say you purchase an Infosys Futures at the underlying share price being the same. You pay the 20% margin of Rs 54,000. Let’s say the price dips to Rs 2,200. You have to pay out Rs 50,000. Since you invested only Rs 54,000, you have incurred a loss of 92.5%. Hence; your losses can be much higher in Futures. Moreover you have only three trading months for a given stock in futures market, the near month, the next month and the far month. So you need to achieve your expected target in these three
months by rollover or by booking loss in mark to market account. But in case of cash segment there is no such limit till the time the company is not delisted or put on some restrictions from the exchange. Because many times due to the external factors affecting the pricing of stocks an extra available trading day also can make or take away profits.

f) **Not all Stocks are Available for Trading in Futures Segment.**

All stocks are not permitted for trading in derivatives. The respective exchange decides based on the popularity and demands which stock to be included in the F&O segment. To check the current list of stocks available for trading, go onto the National Stock Exchange website. You can also check the Bombay Stock Exchange website. But in both cases of trading in cash or futures one has to approach a broker who is authorised to trade in derivatives.

### 4. Conclusion

Stock market investment is no more a mystery. But still futures market and the derivative segment is for many investors. Few reasons for the same are first, there is less awareness amongst traders and general people about existence and working of such an market, and generally stock broking firms also find promoting demat accounts for traditional cash markets as more attractive than asking the existing cash market participants into derivatives. As for the stock broking companies, generating tips/calls for equity stocks is comparatively easy than guarantying such tips for futures market. Secondly, many cash market investors find derivatives very risky and want to avoid the derivative market just because they feel the possibility of making loss is high as direct support and knowhow is not so easily available and thus such investors find cash market trading more reliable and comfortable. This is one of the reasons why this paper will benefit existing cash market traders to understand futures market and explore a whole new world of opportunities in the derivative segment. As any cash market participant who is stuck in his stock which is also listed on futures exchange can get himself out more efficiently and even in loss making scenario his loss can be reduced in cases where stock is falling further in cash market by selling it in the futures market at available higher rates. Thus the following are the key differentiators of cash market from futures market **Ownership, Dividend, Bonus and Right Shares, Leveraging and ROI, Settlement and Rollover, Basis and M to M, Long Term vs. Short term Returns Market.**

### References


