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ARBITRAGE TRADE ANALYSIS OF STOCK TRADING IN BSE & NSE IIFL

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ABSTRACT

The security market is the place where suppliers and users of capital, meet to share each other vision and aspiration. The issued shares are traded hence it is called as secondary market. The individuals in market transfer the funds from non-profitable investment to profitable investment. This transfer of funds from low return share to high return shares forces the firms to improve their performance to increases the intrinsic value of shares.

The arbitrage is the deviation or difference between the market prices of a share. The arbitrage is gained when there is a difference in the price a share in two markets. The arbitrage provides some profits to the individuals in the market.

The arbitrage is the return for the invested amount and it is also for the skills used to get the deviation between the prices. The investors purchase the security from where the price is low and sell it in the market where the prices are high.

In these days, due to online trading the deviations in the market prices are occurring in rare. So it may be a difficult task to search for an opportunity of getting arbitrage.

INTRODUCTION

The securities market is a place where is a place suppliers and user of capital meet to share each other's vision and aspirations and now here a balance is sought to be achieved between the diverse interest of market participations. Securities couple individual acts of saving to occur without a concomitant investment .moreover, availability of yield bearing securities makes present consumption, including people to save more. The composition of saving changes, with less saving held in the form of idle money or unproductive assets simply because more divisible and liquid assets are available.

The securities market avoids allocation of savings to low yielding enterprises and hence forces them to improve performance. It continuo monitors their performance through movement of their share price in the market and the threat of takeover. the improves efficiency of resources use and thereby significantly increases the return on investment .as a result, savers and investors are constrained not by individual abilities but by the economy's ability to invest and save, which in evitable enhances savings and investment in the economy. Thus the securities market converts a given stock of ingestible resources into a large flow of goods and services and promotes economic growth

OBJECTIVES OF THE STUDY

- To Study about the difference of share price traded in NSE & BSE Sensex.
- To study about the Return and risk of investment in select 3 scripts traded in NSE & BSE sensex.
- To identify the chance of arbitrage, thus measuring the volatility in returns.
- To identify the best script this gives maximum returns.
- To measure the share prices performance for (May 2024 to July 2024)

NEED FOR THE STUDY

The present study to review "Arbitrage" trading is simply the trading of securities when the opportunity exists during the trading day to take advantage of differences in value between the markets the trades are made within. Arbitrage trading takes place all day long on most days that the markets are active. Arbitrage is legally allowed. In fact arbitrage is responsible for a large part of the daily volumes on the NSE & BSE exchanges.

RESEARCH METHODOLOGY

Research design or research methodology is the procedure of collecting, Analyzing and interpreting the data to diagnose the problem and react to the Opportunity is such a way where the cost can be minimized and the desire Level of accuracy can be achieved to arrive at a particular conclusion.

The methodology used in the study for the completion of the project and the fulfillment of the project objectives, is follows

SOURCE OF THE DATA

PRIMARY DATA:

The primary data information is gathered in India Infoline Ltd

SECONDARY DATA:

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The secondary data is collected from various financial books, magazines and from stock lists of various newspapers as part of the class undertaken for project.

TIME PERIOD

I collected daily stock price of 3 selected companies traded in BSE &NSE for the period March 2024 to May 2024

LIMITATIONS OF THE STUDY

- The data collected was basically confined to secondary sources with very little amount of primary data associated with the project.
- The detailed study of the topic way not possible due to the limited size of the project.
- The availability of information in the form reports and price fluctuations of the company was a big constraint to the study.
- The number of funds considered is 3 that is share prices traded in BSE and NSE sensex.
- The time period taken for doing the data analysis has been taken March 2024 To May 2024.

REVIEW OF LITERATURE

STOCK MARKET

Stock market represents the secondary market where existing securities shares and debentures are traded. Stock exchange provides an organized mechanism for purchases and sale of securities. by the end of 2006 there 23 stock exchange in our country. The investors want liquidity for their investments. Stock exchange provides a place where securities of different companies can be purchased and sold.

Stock exchange is a body of persons, whether in corporate or not, formed with a view to help, regulate and control the business of buying and selling of securities.

CHARACTERSICES OF STOCK EXCHANGE

- It is a place where securities are purchased and sold.
- A stock exchange is an association of persons whether incorporated or not.
- The trading is strictly regulated with rules and regulation prescribed.
- Both genuine investors and speculator buy and sell shares.
- The securities of corporations, trusts, governments, municipal corporations are allowed to be dealt at stock exchanges.

BOMBAY STOCK EXCHANGE

The Bombay Stock Exchange Limited, (formerly, the Stock Exchange, Mumbai; popularly called as BSE) is the oldest Stock Exchange in Asia with a rich heritage. It is located at Dalal Street, Mumbai, India.

BSE was established in 1875 as “The Native Share & Stock Brokers”. It was the first Stock Exchange in the country to obtain permanent recognition in 1956 from The Government of India under The Securities Contracts (Regulation) Act 1956. There are around 3500 Indian companies listed with Stock Exchange and has a significant trading volume.

The Exchange is professionally managed under the over all direction of the Board of Directors. The Board comprises eminent professional, representative of Trading Members and the Managing Directors of the Exchange. The Board is inclusive & is designed to benefit from the participation of market intermediaries.

FUNCTIONS BSE

The Stock Market is a pivotal institution in the financial system. A well-ordered stock market performs several economic functions:

- It ensures the measure of safety and fair dealing
- It performs an ‘act of magic’ by translating short-term investments into long-term funds for companies.
- It directs the flow of capital in the most profitable channels.
- It induces companies to raise their standard of performance.
- It offers guidance to management about the cost of capital.

NATIONAL STOCK EXCHANGE

The national stock exchange of India was established in 1994 by financial institutions and banks with IDBI as a nodel agency.

The NSE has been conceived as a model exchange with a nation wide electronic screen bases scrip less and “floorless” trading systems in securities, which is both efficient and transparent and offer equal and nation wide access to investors.

Features of NSE

- NSE employs a fully automated screen based trading system.
- it has two segments
    - capital market segment covers equities, convertible debentures
    - whole sale debt market segment

- The NSE market fully automated screen based environment. There is no trading floor as is prevalent in the traditional stock exchanges.
- The market operates with all participants stationed at their offices and making use of their computer terminals.
- The trading members in the capital market segment are connected to the central computer in Bombay through a satellite link-up using VSATs (very small aperatur terminals.)
- the trading member in wholesale debt market segment are linked through dedicated high speed lines, to the central computer at Bombay
- The NSE has opted for order driven system. A trading member can place various conditions on the order in terms of prices, timer or size.
- when trade takes place, a trade confirmation slip is printed at the trading member's workstation
- The identity of the trading member is not revealed to others when he places an order or when his pending orders are delayed.

Participants and functions derivatives

Derivatives instruments such as futures and options serve various purposed for various market participants. The following are the three broad categories of participants.

HEDGERS :

The hedgers face risk associated with price of an asset. They use futures or options markets to reduces or eliminate the risk.

SPECULATORS:

The speculators wish to bet on future movements in the price of an asst, future and options contracts can give them an extra leverage that they can increases both potential gainers and potential losses in a speculative ventures.

ARBITRAGEURS:

These are in business to take advantage of a discrepancy between prices in two different markets. If, for example, they see the futures price of asset getting out of line with the cash price, they will take off setting positions in the two markets to lock in a profit.

INTRODUCTION

A central idea in modern finance is the *law of one price*. This states that in a competitive market, if two assets are equivalent from the point of view of risk and return, they should sell at the same Price. If the price of the same asset is different in two markets, there will be operators who will buying the market where the asset sells cheap and sell in the market where it is costly. This activity termed as *arbitrage*, involves the simultaneous purchase and sale of the same or essentially similar security in two different markets for advantageously different prices (Sharpe & Alexander 1990). The buying cheap and selling expensive continues till prices in the two markets reach equilibrium. Hence, arbitrage helps to equalize prices and restore market efficiency. Theoretical arbitrage requires no capital, entails no risk and appears to be an easy way of earning Profits. However, real–world arbitrage calls for large outlay of capital, entails some risk and is a lot more complex than the textbook definition suggests. A major weak link in India's financial sector today is inadequate knowledge about arbitrage. This explains the low levels of financial capital deployed in it. In this chapter we begin with a discussion on the theoretical concept of arbitrage. We then go on to discuss some existing arbitrage opportunities in India. We particularly focus on arbitrage across the spot and derivatives market and explain how these opportunities can be translated into profits. We also look at markets which could present potential arbitrage opportunities in the future. Finally we identify the risks associated with arbitrage and the factors which act as impediments to arbitrage in India.

The science of arbitrage

Arbitrage pricing is one of the most important concepts in modern finance. The origins of this lie-in the efficient market hypothesis. In this section we take a look at some literature on arbitrage and discuss the theory, operational aspects and impediments to arbitrage.

Efficient markets hypothesis

Efficient markets hypothesis states that the price of a security must be equal to the expected present value of the future cash flows on that security. In other words, it states that the price of a security must be equal to its fundamental value. The two central assumptions of the efficient market hypothesis are:

- Investors hold rational expectations
- Arbitrage brings prices towards fundamentals

In an efficient market there are no profitable arbitrage opportunities. Proponents of the *efficient Markets hypothesis*, like Fama (1965) and Ross (2001) maintain that rational arbitrageurs will undo any mispricings in the market. By buying under priced securities and selling overpriced ones, Arbitrageurs ensure that security prices converge to their fundamental values thereby restoring market efficiency. However, the efficient market hypothesis assumes that arbitrage strategies are risk less and do not involve capital outlay. Hence professional arbitrageurs are willing to take unbounded positions in the market. In reality however, arbitrage involves risk. An arbitrage strategy is risky even if rational traders care only about the final payoff of the arbitrage strategy. In other words, an arbitrage trade is risk less only if a perfect substitute for the mispriced asset exists. Arbitrageurs can rarely fully hedge their arbitrage strategies. Recent literature on the limits to arbitrage has identified two broad categories of risk: *fundamental risk* and *noise trade risk.*

An arbitrage strategy can be risky because the fundamental value of a partially hedged portfolio might change over time. Besides, the arbitrageur's model may often not coincide with the true data–generating

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process. Thus, arbitrageurs have to bear *fundamental risk* even if they can sustain the arbitrage strategy until the final payoff is realized. In addition to this, the activity of behavioral noise traders might lead to temporary price movements. These price changes temporarily reduce the value of the arbitrage portfolio as prices move even further from fundamental values. If arbitrageurs are compelled to liquidate their positions in the intermediate term, then they are forced to take losses when the arbitrage opportunity is greatest. This is called the *noise trader risk*. In Shleifer & Vishny(1997), fund managers limit their arbitrage out of fear of a drawdown. Fund managers are afraid that their investors will withdraw their money if they suffer intermediate short–term losses even though the arbitrage provides a risk less positive payoff in the long–run. This paper builds on the insight that distorted prices might become even more distorted in the short run before eventually returning to their Normal long run values.

DATA ANALYSIS
&
INTERPRETATION

ARBITRAGE PRICING OF WIPRO PRICES TRADED IN BSE AND NSE IN THE MONTH OF MARCH 24.

Date	series	ltp	PREV. CLOSE	Returns
1-Mar-24	EQ	519.25	518.6	0.650
2-Mar-24	EQ	523	519.1	3.900
4-Mar-24	EQ	520.45	522.85	-2.400
5-Mar-24	EQ	512.95	520.5	-7.550
6-Mar-24	EQ	513.7	513.3	0.400
7-Mar-24	EQ	514.4	513.15	1.250
11-Mar-24	EQ	513.35	515.5	-2.150
12-Mar-24	EQ	510.35	514.55	-4.200
13-Mar-24	EQ	503.3	510.85	-7.550
14-Mar-24	EQ	516.7	504.4	12.300
15-Mar-24	EQ	515.05	517.95	-2.900
18-Mar-24	EQ	510	517	-7.000
19-Mar-24	EQ	494.05	510.2	-16.150
20-Mar-24	EQ	494.1	494.85	-0.750
21-Mar-24	EQ	501	493.5	7.500
22-Mar-24	EQ	488.15	500.45	-12.300
26-Mar-24	EQ	479.9	487.1	-7.200
27-Mar-24	EQ	472	479.85	-7.850
28-Mar-24	EQ	480	472.3	7.700

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BSE RETURNS

Date	series	ltp	PREV. CLOSE	Returns
1-Mar-24	EQ	519.35	518.6	0.75
2-Mar-24	EQ	524	519.1	4.9
4-Mar-24	EQ	520.55	522.85	-2.3
5-Mar-24	EQ	512	520.5	-8.5
6-Mar-24	EQ	513.75	513.3	0.45
7-Mar-24	EQ	514.45	513.15	1.3
11-Mar-24	EQ	513.45	515.5	-2.05
12-Mar-24	EQ	510.35	514.55	-4.2
13-Mar-24	EQ	503.3	510.85	-7.55
14-Mar-24	EQ	516.7	504.4	12.3
15-Mar-24	EQ	515.25	517.95	-2.7
18-Mar-24	EQ	510	517	-7
19-Mar-24	EQ	495.05	510.2	-15.15
20-Mar-24	EQ	494.25	494.85	-0.6
21-Mar-24	EQ	502	493.5	8.5
22-Mar-24	EQ	488.25	500.45	-12.2
26-Mar-24	EQ	479.95	487.1	-7.15
27-Mar-24	EQ	473	479.85	-6.85
28-Mar-24	EQ	481	472.3	8.7

DESCRIPTIVE STATISTICS OF DIFFERNCE BETWEEN PRICES TRADED IN BSE AND NSE.

The above table shows the difference of WIPRO stock price traded of in BSE and NSE here the scope for arbitrage is not possible. All difference of stock price are less than 5%, thus the scope for arbitrage is less in this particular month thus. We can say that market was efficient in this month.

SUMMARY OF STATISTICAL

	BSE	NSE
mean	462.119	462.0952
max	2.226878	2.195841
min	-1.85195	-89.9538
s.d	0.4859	-18.002

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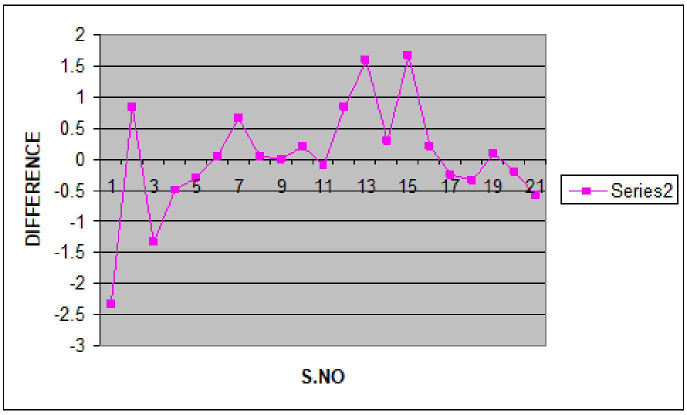

In the above graph most of the values exist below the normal line thus the scope for arbitrage is less in this month the basic reason might be take of strong correlation. Here out of 21 days trading 8 days have negative returns while 12 have positive returns. Thus the scope for arbitrage exists.

ARBITRAGE PRICING OF WIPRO PRICES TRADED IN BSE AND NSE IN THE MONTH OF APRIL 24

Date	series	ltp	PREV. CLOSE	Returns
30-Apr-24	EQ	462.4	462.95	-0.55
1-Apr-24	EQ	485.1	480.1	5.000
2-Apr-24	EQ	481.65	484.95	-3.300
3-Apr-24	EQ	483.75	481.2	2.550
4-Apr-24	EQ	489	483.2	5.800
5-Apr-24	EQ	485	487.4	-2.400
8-Apr-24	EQ	480.25	485.05	-4.800
9-Apr-24	EQ	476.2	479.9	-3.700
10-Apr-24	EQ	477.7	475.8	1.900
12-Apr-24	EQ	471.2	477.3	-6.100
15-Apr-24	EQ	458.5	470.75	-12.250
16-Apr-24	EQ	449	459.35	-10.350
18-Apr-24	EQ	445.2	448.35	-3.150
19-Apr-24	EQ	452.1	444.35	7.750
22-Apr-24	EQ	461.95	452.75	9.200
23-Apr-24	EQ	461.5	462	-0.500
24-Apr-24	EQ	460.95	462.1	-1.150
25-Apr-24	EQ	461.65	459.9	1.750
26-Apr-24	EQ	465.15	461	4.150
29-Apr-24	EQ	463.3	464.6	-1.300

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BSE RETURNS

Date	series	ltp	PREV. CLOSE	Returns
30-Apr-24	EQ	462.5	462.95	-0.45
1-Apr-24	EQ	485.15	480.1	5.050
2-Apr-24	EQ	481.65	484.95	-3.300
3-Apr-24	EQ	483.74	481.2	2.540
4-Apr-24	EQ	489.2	483.2	6.000
5-Apr-24	EQ	485.1	487.5	-2.400
8-Apr-24	EQ	480.25	485.15	-4.900
9-Apr-24	EQ	476.2	479.12	-2.920
10-Apr-24	EQ	477.8	475.8	2.000
12-Apr-24	EQ	471.2	477.3	-6.100
15-Apr-24	EQ	458.5	470.75	-12.250
16-Apr-24	EQ	449	459.35	-10.350
18-Apr-24	EQ	445.2	448.35	-3.150
19-Apr-24	EQ	452.1	444.35	7.750
22-Apr-24	EQ	461.95	452.75	9.200
23-Apr-24	EQ	461.5	462	-0.500
24-Apr-24	EQ	460.95	462.1	-1.150
25-Apr-24	EQ	461.65	459.9	1.750
26-Apr-24	EQ	465.15	461	4.150
29-Apr-24	EQ	463.3	464.6	-1.300

DESCRIPTIVE STATISTICS OF DIFFERNCE BETWEEN PRICES TRADED IN BSE AND NSE.

The above table shows the difference of WIPRO stock price traded of in BSE and NSE here the scope for arbitrage is not possible. All difference of stock price are less than 5%, thus the scope for arbitrage is less in this particular month thus. We can say that market was efficient in this month.

FINDINGS
SUGGESTIONS
CONCLUSIONS

FINDINGS

The arbitrage is gained when there is a difference in the prices of a share in two different markets.

All difference of stock prices are less than 5% thus the scope for arbitrage is less in this particular month. Thus we can say that market was efficient in this month.

The values exits below the normal lines thus the scope for arbitrage is less in this month the basic reasons might be lack of strong correlation.

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SUGGESTIONS

- In the 3 scrip the share values increases and increasing of the company .so suggest the company should buy the share of WIPRO share getting more profit than other company. Overall the ICICI should be in the Pay Out to clients. The Wipro and TCS Company should be Pay In clients
- Commitment should be equalized for every person.
- Provide the facility of free demonstrations for all.
- There should be a limited number of clients under the relationship manger. So that he can handle new as well as old customer properly.
- Some promotional activities are required for the awareness of the customer
- People at young age should be encouraged to invest in stock market.
- Seminars should be held for providing information to prospective and present customers

CONCLUSIONS

The study shows that none of the studied ten scripts give any scope for arbitrage .the reasons is explained below. The scripts are studied for arbitration foe a period of three months "March-24, April-24 and May-24".

Studied above five scripts arbitrage is not possible in any time. Thus it indicates Arbitrage is imperfection and arbitrage is possible, it indicates market is perfection

If we want to enter in to the arbitrage trading that trader has trough knowledge
About share market, fundamental and technical analysis knowledge

If any case broker wants to do this trading first analysis of all fundamental and technical analysis tools the scope for arbitrage exits only when there is 5% profit in difference in the price of share traded in BSE&NSE.

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