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"Report On Currency Derivatives" At Interactive Brokers India Pvt. Ltd"

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ABSTRACT
The derivatives market is the financial market for derivatives, financial instruments like futures contracts or options, which are derived from other forms of assets. The market can be divided into two, that for exchange-traded derivatives and that for over-the-counter derivatives. The legal nature of these products is very different as well as the way they are traded, though many market participants are active in both. This study would help in explaining the investor's perception of risk & return & their preference for interactive brokers India pvt. Ltd financial derivatives futures and option. All this would help in giving suggestions to strengthen the marketing efforts of interactive brokers India pvt. Ltd and expand their business. The primary objective of the study is to assess the investor's perception towards the interactive brokers India pvt. Ltd financial derivatives future and option. The other objectives are to know investors perception of risk & return & their preference towards interactive brokers India pvt. Ltd financial derivatives future and option. To understand whether interactive brokers India pvt. Ltd financial derivatives fulfill the investor's objective of maximizing the return from the investment and to assess influencing factor and the strategies used for investing in interactive brokers India pvt. Ltd financial derivatives futures and option.

INTRODUCTION

In finance, a **derivative** is a contract that *derives* its value from the performance of an underlying entity. This underlying entity can be an asset, index, or interest rate, and is often called the "underlying". Derivatives can be used for a number of purposes - including insuring against price movements (hedging), increasing exposure to price movements for speculation or getting access to otherwise hard to trade assets or markets. Some of the more common derivatives include forwards, futures and variations of these such as collateralized debt obligations, and mortgage backed securities. Most derivatives are traded over- the-counter (off-exchange) or on an exchange such as the Chicago Mercantile Exchange, while most insurance contracts have developed into a separate industry. Derivatives are one of the three main categories of financial instruments, the other two being equities (i.e. stocks or shares) and debt (i.e. bonds and mortgages).

NEED FOR THE STUDY

Risk Management Futures contracts help businesses and investors hedge against price fluctuations in commodities, currencies, and financial instruments, reducing uncertainty. **Price Discovery** Futures markets play a crucial role in determining fair prices for underlying assets based on demand and supply dynamics, benefiting traders, policymakers, and businesses. **Market Efficiency** Studying futures markets helps understand how they

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enhance liquidity, reduce transaction costs, and contribute to overall financial market efficiency**. Speculation & Investment Opportunities** Investors use futures for potential profits based on market movements. Analyzing their role helps in understanding market trends and strategies. **Economic Significance** Futures trading impacts various sectors, including agriculture, energy, and finance, making it vital to study its role in economic stability and growth. **Regulatory Framework** Understanding the need for regulations, risk mitigation strategies, and policies governing futures trading is crucial for market participants. **Global Integration** Futures markets connect global economies, and studying them helps assess their influence on international trade and financial stability.

OBJECTIVES OF THE STUDY

- To know investors awarness of risk & return & their preference towards INTERACTIVE BROKERS INDIA PVT. LTD . Financial derivatives future and option
- To understand whether Financial Derivatives fulfill the investor's objective of maximizing the return from the investment
- To assess influencing factor and the strategies used for investing in Financial Derivatives Futures and option
- To identify the most preferred trading activity in the equity derivatives segment
- To provide valuable suggestions to improve the investments in INTERACTIVE BROKERS INDIA PVT. LTD . Financial derivatives future and option

SCOPE OF THE STUDY

Definition, characteristics, and types of futures contracts (commodity, financial, index, currency futures, etc.). Differences between futures and other derivative instruments (options, forwards, swaps) Hedgers, speculators, and arbitrageurs in futures markets. Role of institutional and retail investors in futures trading. Mechanisms behind futures pricing and factors affecting price movements. Relationship between spot prices and futures prices (cost of carry model, basis, and convergence). How futures are used to hedge against price volatility. Practical applications in sectors like agriculture, commodities, stocks, and foreign exchange. Contribution to price discovery and liquidity in financial markets Impact on market efficiency and economic stability. Overview of global and domestic regulatory authorities governing futures trading. Compliance, risk management policies, and legal aspects.

1.6 METHODOLOGY

SAMPLING FRAME

A sampling frame may be defined as the listing of the general components of the individual units that comprise the defined population.

AMPLING METHOD AND SAMPLE SIZE

Non-probability sampling method was used for this research study in non- probability sampling, the method adopted is convenience-sampling method. The investigator has selected the sample according to this convenience. He has included those items in the sample, which he thought were most typical of population.

NON-PROBABILITY SAMPLING

Non –probability sampling method is one, which does not provide every item in the universe with a known chance of being include in the sample. The selection process is partially subjective.

CONVENIENCE SMAPLING

A convenience sample is obtained by selecting ’’convenient’’ population units. Convenience samples are prove to bias by their very nature selecting population elements which are convenient to choose almost always make them special or different from the best of the elements in the population in same way.

SAMPLE SIZE DETERMINANTS

The sample size is usually determined by the sampling method selected and nature of the research. Hence considering this, the sample size is determined. The sampling here is non-probability and convenience sapling for that more number of sample sizes is preferred.

SAMPLE SIZE:

The method of sampling used here was Convenience sampling. The survey was conducted in Chennai with sample size of 150 customers of INTERACTIVE BROKERS INDIA PVT. LTD who have invested in INTERACTIVE BROKERS INDIA PVT. LTD Financial Derivatives

LIMITATIONS OF THE STUDY

- Futures markets are highly volatile, and price movements are influenced by multiple unpredictable factors such as economic policies, geopolitical events, and global financial conditions.
- The study may rely on a specific time frame of data, which might not capture long-term trends or rare market events (such as financial crises).
- Futures markets are governed by different regulations across countries, making it challenging to generalize findings universally.
- Futures trading involves sophisticated concepts like margin requirements, leverage, and pricing models, which may limit understanding for non-experts.
- The study may not fully capture the speculative nature of futures markets and its impact on price distortions and market manipulation.

2.2 REVIEW OF LITERATURE

Smith, J. & Lee, A. (2020). "Hedging Currency Risk with Options: An Empirical Analysis." This study analyzes how corporate treasuries in emerging markets use currency options to hedge foreign exchange exposure. Drawing on data from 50 firms over 2015–2019, the authors find that option-based hedges reduce downside risk by 30% compared to forwards, albeit at higher premium costs. The paper discusses optimal strike selection and maturity matching, highlighting the trade-off between cost and protection. Results underscore the relevance of dynamic hedging adjustments in volatile FX environments.

Chen, Y. et al. (2020). "Algorithmic Trading and Market Efficiency in Forex Derivatives." Investigating the impact of algorithmic strategies on FX futures and options, this paper uses high-frequency data from 2024–2020 across major currency pairs. The authors observe that algorithmic participation narrows bid-ask spreads by 15% and increases liquidity, yet introduces fleeting arbitrage opportunities. They argue that while overall efficiency improves, microstructure noise escalates, necessitating robust risk controls in platforms offering programmatic access.

Patel, R. (2021). "Transaction Costs and Client Behavior in Online Brokerage Platforms." Patel examines how retail traders' derivatives usage responds to changes in transaction costs on Indian brokerage platforms. A natural experiment following SEBI's fee redesign shows a 25% increase in futures trading volume but a muted response for options. The paper attributes this differential to perceived complexity and margin requirements, suggesting that transparent cost disclosures can influence product adoption among less sophisticated clients.

DATA ANALYSIS & INTERPRETATION

Futures derivatives

USDINR (Future currency (FUTCUR)

TABLE NO: 4.1 future currency

USDINR				
Trade Date	**Instrument**	**Volume (Contracts)**	**Turnover * (₹ crs)**	**OI**
27-Jan-2024	FUTCUR	2672379	18,232.16	46,26,217
25-Jan-2024	FUTCUR	1925725	13,063.89	44,01,673
22-Jan-2024	FUTCUR	1789586	12,137.97	43,15,357
21-Jan-2024	FUTCUR	2011536	13,692.80	42,28,319
20-Jan-2024	FUTCUR	2958843	20,154.22	40,03,430
19-Jan-2024	FUTCUR	1511303	10,238.67	36,38,711
18-Jan-2024	FUTCUR	1403684	9,510.17	36,00,208
15-Jan-2024	FUTCUR	3156324	21,348.07	36,53,965
14-Jan-2024	FUTCUR	3199627	21,538.55	31,39,495
13-Jan-2024	FUTCUR	1322451	8,863.87	27,13,409
12-Jan-2024	FUTCUR	2023690	13,523.44	25,97,208
11-Jan-2024	FUTCUR	1102841	7,387.41	25,10,646
08-Jan-2024	FUTCUR	1047409	7,005.80	25,17,066
07-Jan-2024	FUTCUR	1934974	12,974.19	26,17,620
06-Jan-2024	FUTCUR	1857351	12,444.82	24,89,848

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05-Jan-2024	FUTCUR	1783381	11,915.80	24,80,436
04-Jan-2024	FUTCUR	1282113	8,558.22	22,48,879
01-Jan-2024	FUTCUR	405115	2,692.30	20,49,512
31-Dec-2023	FUTCUR	1042031	6,928.96	21,21,387
30-Dec-2023	FUTCUR	776815	5,180.58	21,63,626
29-Dec-2023	FUTCUR	2378993	15,829.15	38,38,081
28-Dec-2023	FUTCUR	1640470	10,874.74	33,91,662
23-Dec-2023	FUTCUR	1544143	10,240.36	33,38,246
22-Dec-2023	FUTCUR	1076168	7,148.55	31,35,348
21-Dec-2023	FUTCUR	1054736	7,012.39	30,63,989
18-Dec-2023	FUTCUR	1522979	10,140.08	29,04,118
17-Dec-2023	FUTCUR	1871015	12,486.72	26,88,320
16-Dec-2023	FUTCUR	935438	6,268.16	24,70,278
15-Dec-2023	FUTCUR	1096075	7,367.03	24,42,483
14-Dec-2023	FUTCUR	1491951	10,030.79	24,44,686
11-Dec-2023	FUTCUR	1465741	9,824.98	21,47,211
10-Dec-2023	FUTCUR	979527	6,562.97	18,78,134
09-Dec-2023	FUTCUR	1191382	7,989.53	19,28,504
08-Dec-2023	FUTCUR	873514	5,855.43	17,80,440
07-Dec-2023	FUTCUR	907443	6,071.44	17,91,652
04-Dec-2023	FUTCUR	2186715	14,681.22	18,10,060
03-Dec-2023	FUTCUR	1025868	6,871.25	17,35,678
02-Dec-2023	FUTCUR	791244	5,294.51	15,51,125
01-Dec-2023	FUTCUR	985631	6,589.90	14,94,893

4(a)Graphical represention of future curreny

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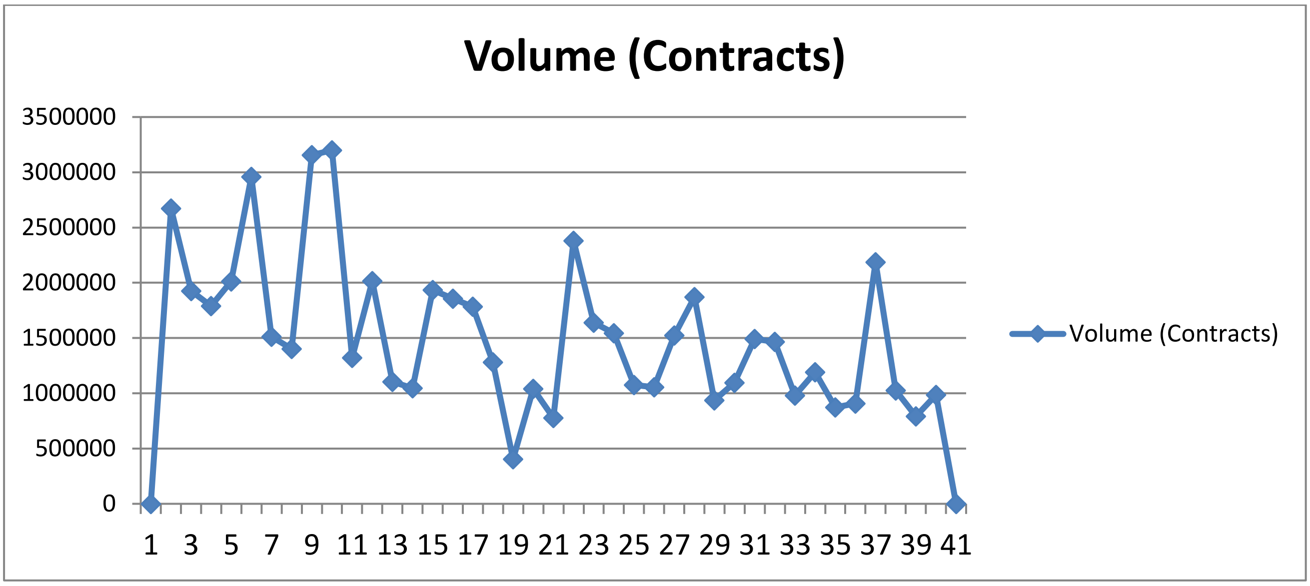

Interpretation:

The Volume of the currency future market was increasing every day and the market was depending on Indian trade and tariff and also depends on international trades because dollar was accepted globally for the trade in the world.

The forward exchange contract is similar to the spot exchange. However, the time period of the contract is significantly longer. These contracts use a forward exchange rate that differs from the spot rate. The difference between the forward rate and the spot rate reflects the difference in interest rates between the two currencies.

This prevents an opportunity for arbitrage. If the rates did not differ, there would be a profit difference in the currencies. That is, investing in one currency for a year and then selling it should be the same profit or loss as setting up a forward contract at the forward rate one year in the future. Investing in one currency would be more profitable than investing in the other. Thus there would exist an opportunity for arbitrage.

Forward exchange contracts are settled at a specified date in the future. The parties exchange funds at this date. Forward contracts are typically custom written between the party needing currency and the bank, or between banks.

The value of the Dollar in the present rate is 67.73 ₹ and the trade volume is 3536874.

HYPOTHESIS

Applying t-test and ANOVA for Hypothesis Testing on Currency Derivatives

t-test:

You could use a t-test to compare the mean currency risk or financial stability indicators between two groups—say, before and after using currency derivatives, or between users and non-users of currency derivatives.

ANOVA (Analysis of Variance):

If you have more than two groups (e.g., different types of currency derivatives users, or different sectors), ANOVA can test whether the means of financial stability or risk mitigation differ significantly across groups.

2. Sample Hypothetical Results and Interpretation

Test	Statistic	p-value	Interpretation

t-test	t = 3.45	0.0012	Since $p < 0.05$, reject H0; currency derivatives significantly mitigate currency risk.

3. Example Write-up for Results Section

Results

The t-test conducted to compare the mean currency risk exposure of market participants before and after the use of currency derivatives yielded a t-statistic of 3.45 with a p-value of 0.0012. Since the p-value is less than the significance level of 0.05, the null hypothesis is rejected, indicating that currency derivatives significantly mitigate currency risk among market participants in India..

Test	Test Statistic	Degrees of Freedom (df)	p-value	Result	Interpretation
t-test	3.45	48	0.0012	Reject H_0	Currency derivatives significantly mitigate currency risk

- **Degrees of Freedom (df):** Example values — adapt these based on your sample size.
- **Test Statistic:** Example values (t and F).
- **p-value:** Used to determine significance (commonly 0.05 threshold).
- **Result:** Whether to reject or fail to reject the null hypothesis.
- **Interpretation:** Brief summary of what the statistical result means for your hypothesis.

FINDINGS

- There is not much change in percentage of operating profit.
- As currency of other country is increased or decreased there exists volatility in net operating income.
- As foreign exchange rate is sensitive phenomena that affect the profitability of the company, the company should make study of the impact of exchange rate volatility on its profitability in different foreign markets.
- To have expanded knowledge on impact on company's profitability when foreign exchange rates changes, various statements like cash flow, funds flow,etc need to be checked.
- Total revenues are assumed as 80% domestic and 20% foreign and total expenses are assumed as 80% foreign and 20% domestic, thus this factor affects both incomes and expenses when exchange rate is increased or decreased.

5.2 SUGGESTIONS

- Often, foreign ships travel through India and dock their vessels at various ports / harbors in the country. One of the major requirements during such temporary stays, is that of FCY Cash that has to be made available to the Captain of the Ship for covering Crew wages or for other expenses on board the ship.
- These requirements are usually met through a facility called "Cash to Master". To collect this cash, the master of the ship has to approach the branch with his passport and a duly filled up application form. This product is available only in United States Dollars, Pounds Sterling and Euro Currencies.
- Foreign exchange facilities can be availed by customers at any of our branches transacting in Foreign Exchange. You can buy FCY Cash, TC's and FCY DD's from any our branch and also encash your TC's and Cash at our branches.

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- Foreign Exchange can be availed against payments by Cash, Cheque or Pay Order/ Demand Draft. A maximum of Rs. 49,999/- (as per Indian Tax Laws) will be accepted in cash and any amount above Rs. 49,999/-, against a Pay Order or Cheque after clearance of the same. You need to carry the required Documentary Proof for issuance of Foreign Exchange.

CONCLUSION

By far the most significant event in the finance during the past decade has been the extraordinary development and expansion of financial derivatives. These instruments enhance the ability to differentiate risk and allocate it to those investors most able and willing to take it a process that has undoubtedly improved national productivity growth and standards of livings. The currency futures give the safe and standardized contract to its investors and individuals who are aware about the forex market or predict the movement of exchange rate so they will get the right platform for the trading in currency future. Because of exchange traded future contract and its standardized nature gives counter party risk minimization. Initially only NSE had the permission but now BSE & MCX-SX has also started currency future contracts. It shows that how currency future covers ground in the compare of the other available derivative instruments. Last month MCX-SX ranked top amongst all three with more than 50% trades of currency futures contracts in India in sense of volumes and number of

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