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A STUDY ON TECHNICAL ANALYSIS WITH REFERENCE TO INTERNATIONAL FOREX

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Abstract:

The foreign exchange market (Forex, FX, or currency market) is a global decentralized market for the trading of currencies. The foreign exchange market assists international trade and investments by enabling currency conversion. Our study is to test the technical tools to analyse about the technical impact and its return in the market. For this purpose 13 cross currency pairs were taken as sample size and Jensen's Alpha, Beta, Relative Strength Index, and Buy and Hold Abnormal Return were used as technical tool for analysis and the conclusion is that its not preferred to invest in JPY pairs as the volatility and the return are not up to the mark and its preferred to invest in EURCAD as the return was high when compared to other scripts and the market was moving accordingly to its cross currency pair.

Key Words: Foreign exchange, Abnormal Return & Volatility

Introduction to the Study:

Forex, short for the Global Foreign Exchange Market, is the largest single financial market in the world. JobMonkey includes a section on this topic because Forex trading can be done just about anywhere there's an Internet connection. Many traders are able to earn extra money over and above what their 'real job' provides - working from home. Also called the Currency Exchange, the FOREX is the financial field where currencies from different nations are exchanged for that of another (with the equivalent of over 4 trillion dollars changing hands daily, according to FXStreet). The Forex is not a physical market like the AMEX (American Stock Exchange) or the NYMEX (New York Mercantile Exchange), but more of a global network of interconnected banks, investments firms, hedge funds, currency traders, and other financial and banking entities. Due to the nonexistence of a physical exchange, the FOREX market operates on a full 24-hour period, spanning from one time zone to another in all the major financial centers. There are three main economic zones that comprise the Forex market: Australasia (Australia and Asia), Europe, and North America. This structure enables participants in the Forex market to trade at any time of day.

After a shakeup in the structure of the Forex market in the early 1970s, many financial institutions such banks, hedge funds, and brokerage houses. This era also saw an increase of individual traders enter the Forex market. This led to a structure of power resting in the hands of the economy and not the government and national banks. Today, the factor that drives the Forex market is the economic law of supply and demand.

In the 1980s Forex activity reached roughly one billion dollars daily. Today, in large part due to the free-floating system (a system reliant on international trade and commerce) and the technological progress in the industry, the Forex market currently sees daily transactions exceeding 4 trillion dollars.

Statement of the Problem:

The study is about analyzing the technical factors of currency pairs in different Greenwich mean time. The currency market is otherwise called as curve market because it runs for the whole day ie., 24*5. The movements will be huge at the time of global opening of different countries. But the investors are not aware about the timing and impact of timing in the market.

Objectives of the Study:

- To find out the profit and loss occurred with the market based on the market strength.
- To find out the risk and return involved with the currency pair taken for the study.
- To find out the compound annual growth rate of the currency pairs.
- To suggest about the profit and loss involved with the currency pairs.

Scope of the Study: The study is conducted in a way to calculate the volatility of Forex market for past one year. This will help the investors viz, individuals and the clients of the company to yield them higher return with lesser risk.

Need of the Study: The study is about analyzing the technical factors of Forex market in different GMT'S. The need of the study is to know about the price variations in different timings of the market when the is day shift process accordingly.

Research Methodology:

Research Design: The type of research design is undertaken in analytical design since the pricing movements of Forex markets are analyzed.

Sample Design: For the purpose of this study the daily prices of currency market are included from Global currency trading and their price movements are computed and studied. We will be analyzing the following prices

Pairs taken for the study are as follows

Pairs related with American dollar	USDCHF, USDCAD
Pairs with Japanese Yen	USDJPY, EURJPY, AUDJPY, NZDJPY, GBPJPY, CHFJPY, CADJPY
Pairs With Euro	EURUSD, EURCAD, EURAUD,
Pairs with Great Britain pound	GBPUSD
Pair with Australian Dollar	AUDUSD
Pair with Newzealand Dollar	NZDUSD

Time Duration of the Study: The samples for every pairs taken for the study are taken from 31/4/2017 to 31/3/2018.

Sources of Data:

Secondary Source: International currency prices from MT4 platform, Dollar charts from Windsor brokers, Fundamental data from www.forexfactory.com

Tools Used for Analysis: RSI, Beta, Jensen's alpha and BHAR

Limitations of the Study:

- The sampling time taken for the study is limited to one year.
- The number of pairs taken for the study is limited to 15 pairs.
- There may be a bais in the secondary data collection.

Literature Review:

Benton E. Gup (1973) explains the relationship between stock market indicators and stock prices. Short interest ratio, odd lot ratio and mutual fund cash ratio are three indicators that he has used in the article. The index of standard and poor has been taken for the analysis. Multiple regression tests are also used to test the relationship between the chosen indicators and stock prices. The study was conducted for a period of fifteen years from 1955-1970. It has identified that stock market indicators have some predictive ability.

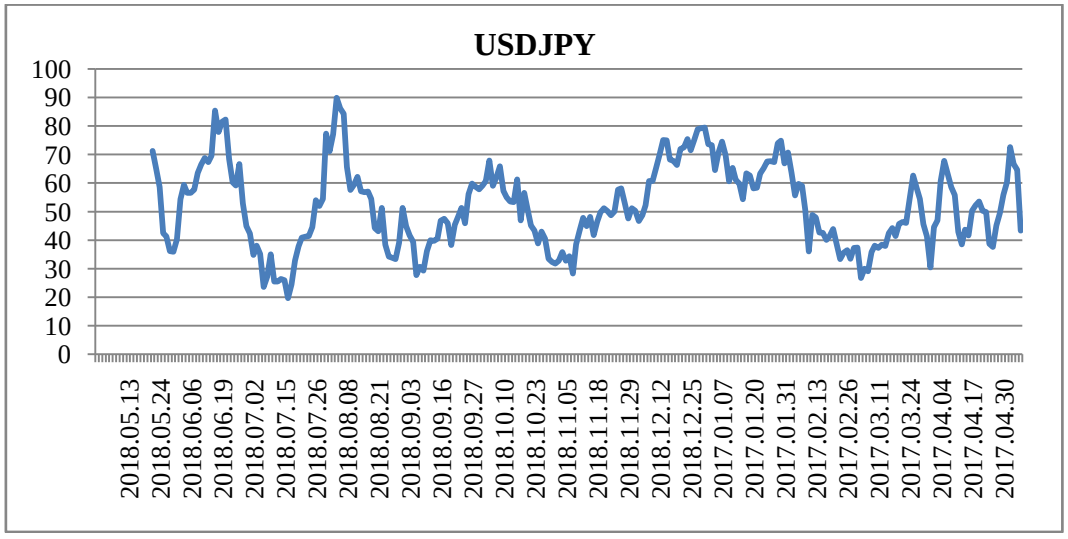
S. Vasantha (2017) attempted to apply technical analysis on five selective stocks of the Information technology sector such as Tata Consultancy Services (TCS), Hindustan Computers Limited Technologies (HCL), Infosys, Wipro and Polaris, which would help the investors to identify the current trends and risks associated with the scrip at par with the market. This study is only based on secondary data which had been collected from NSE website, journals and magazines. The technical indicators have been analyzed by using twelve months share prices of the companies, which was for the period of January - December 2011. The various techniques such as Relative Strength Index, Bollinger Bands, Moving Average Convergence Divergence and Simple Moving Average were used to take a decision on whether to buy or sell the stocks of the IT sector.

Research Gap:

The research gap is that no study has been done with technical analysis describing about the risk and profit and loss occurred due to technical tools with the market.

Analysis and Interpretation:

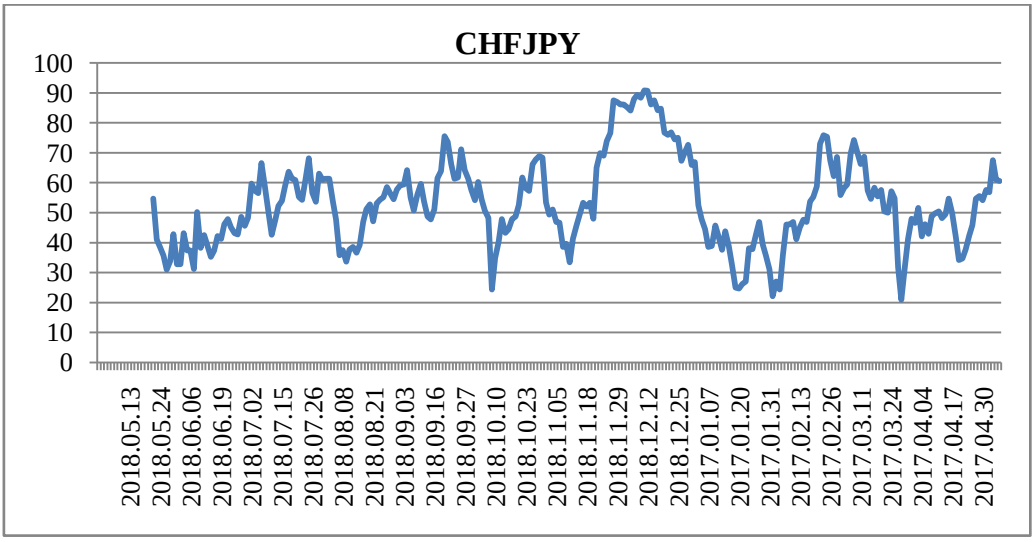
USDJPY:



Interpretation:

The above chart shows about the relative strength index of USDJPY were the first buy was initiated at 97.12$ at 30 level and the target got achieved at 90.59$. The total profit occurred out of the trade was -693 pips. The second short was initiated at 91.89$ and the target got achieved at 90.72$ and the total profit out of the trade was 117 pips. The third trade was initiated as long at 91.04$ and the target was at 92.28$ and the total profit was at 124 pips. The conclusion is that out of all trades the USDJPY occurred a loss due to a huge loss in a single trade and its not preferred to invest in this pair based on RSI.

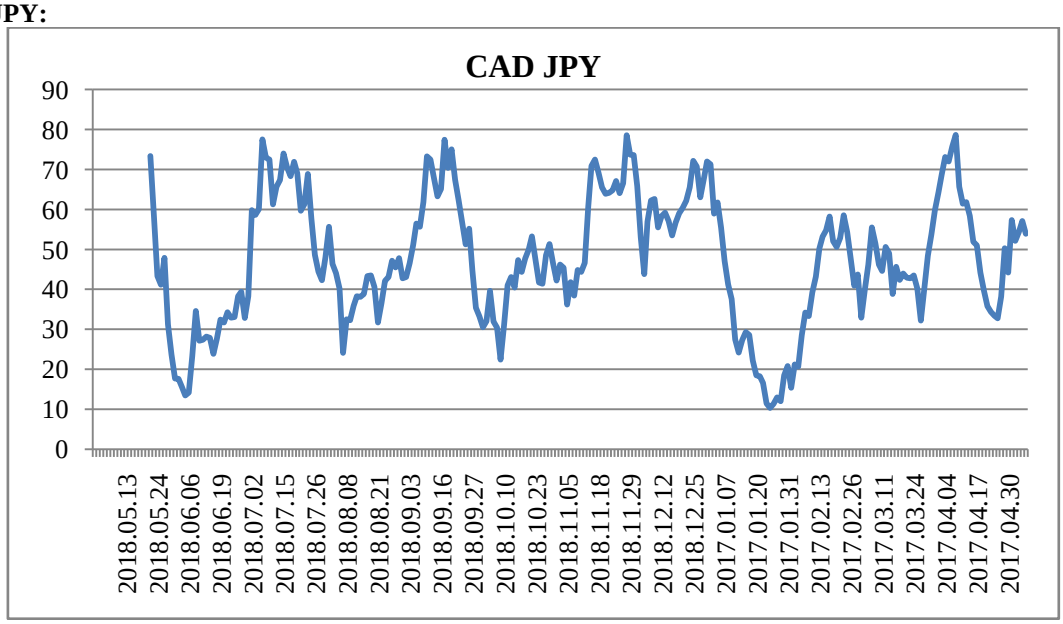
CHFJPY:



Interpretation:

The above chart shows about the relative strength index of CHFJPY were the first buy was initiated at 115.26$ at 30 level and the target got achieved at 115.83$. The total profit occurred out of the trade was 57 pips. The second short was initiated at 117.64$ and the target got achieved at 114.27$ and the total profit out of the trade was 337 pips. The third trade was initiated as long at 112.44$ and the target was at 116.21$ and the total profit was at 377pips. The fourth short was initiated at 116.45$ and the target got achieved at 109.12$ and the total profit out of the trade was 733 pips. The fifth trade was initiated as long at 106.94$ and the target was at 108.09$ and the total profit was at 115pips.The conclusion is that out of all trades the CHFJPY occurred a profit with all the trades initiated and not preferred to invest in this pair based on RSI.

CADJPY:



Interpretation:

The above chart shows about the relative strength index of CADJPY were the first buy was initiated at 97.12$ at 30 level and the target got achieved at 90.59$. The total profit occurred out of the trade was 693 pips. The second short was initiated at 91.89$ and the target got achieved at 90.72$ and the total profit out of the trade was 117 pips. The third trade was initiated as long at 91.04$ and the target was at 92.28$ and the total profit was

at 124 pips. The conclusion is that out of all trades the CADJPY occurred a loss due to a huge loss in a single trade and its not preferred to invest in this pair based on RSI.

BHAR:

NZDJPY:

Market Return	Script Return	BHAR
0.395	0.298	0.097
-3.3	-0.952	-2.348
-1.3	0.363	-1.663
-1.708	0.113	-1.821
0.319	0.26	0.059
-0.745	-0.654	-0.091

The average return was at 0.00 are the return is in positive and the script was more volatile after its being issued. But we cannot invest in this because the value is not more than one.

GBPUSD:

Market Return	Script Return	BHAR
-0.61	0.00218	-0.61218
0.12	-0.00422	0.12422
-0.19	0.00341	-0.19341
-0.01	0.00585	-0.01585
0.38	-0.00511	0.38511
-0.76	0.00859	-0.76859
-0.46	0.00837	-0.46837
-0.11	0.00664	-0.11664
-0.48	0.00892	-0.48892
-0.07	-0.00259	-0.06741
-0.04	-0.00329	-0.03671

The average return was at 0.009 are the return is in positive and the script was more volatile after its being issued. But we can invest in this because the value is more than one.

NZDJPY:

Risk-free Rate (rf)	7.87
Beta	0.06
E(Rp)	7.87
Alpha ratio	7.91

Interpretation:

The above table shows the Jensen's Alpha of NZDJPY for one the beta value was at 0.06. This shows that the value is not moving accordingly to the market and when the market moves one dollar higher the script moves 0.06 cents were no volatility was found in the script. According to the alpha ratio the return out of the investment is at 7.91% per annum which is not lesser than risk free rate of return so it is preferred to invest in this script.

GBPUSD:

Risk-free Rate (rf)	7.87
Beta	-0.56
E(Rp)	7.87
Alpha ratio	7.90

Interpretation:

The above table shows the Jensen's Alpha of GBPUSD for one the beta value was at -0.56. This shows that the value is moving negatively accordingly to the market and when the market moves one dollar higher the script moves -0.56 cents were high volatility was found in the script. According to the alpha ratio the return out of the investment is at 7.90% per annum which is not lesser than risk free rate of return so it is preferred to invest in this script. But its not preferred to invest according to Beta.

GBPJPY:

Risk-free Rate (rf)	7.87
Beta	-0.01
E(Rp)	7.87
Alpha ratio	7.92

Interpretation:

The above table shows the Jensen's Alpha of GBPJPY for one the beta value was at -0.01. This shows that the value is moving negatively accordingly to the market and when the market moves one dollar higher the script moves -0.01 cents were no volatility was found in the script. According to the alpha ratio the return out of

the investment is at 7.92% per annum which is not lesser than risk free rate of return so it is preferred to invest in this script. But its not preferred to invest according to Beta.

EURUSD:

Risk-free Rate (rf)	7.87
Beta	-0.64
E(Rp)	7.87
Alpha ratio	7.89

Interpretation:

The above table shows the Jensen's Alpha of EURUSD for one the beta value was at -0.64. This shows that the value is moving negatively accordingly to the market and when the market moves one dollar higher the script moves -0.64 cents were high volatility was found in the script. According to the alpha ratio the return out of the investment is at 7.89% per annum which is not lesser than risk free rate of return so it is preferred to invest in this script. But its not preferred to invest according to Beta.

EURJPY:

Risk-free Rate (rf)	7.87
Beta	-0.02
E(Rp)	7.87
Alpha ratio	7.91

Interpretation:

The above table shows the Jensen's Alpha of EURJPY for one the beta value was at -0.02. This shows that the value is moving negatively accordingly to the market and when the market moves one dollar higher the script moves -0.02 cents were no volatility was found in the script. According to the alpha ratio the return out of the investment is at 7.91% per annum which is not lesser than risk free rate of return so it is preferred to invest in this script. But its not preferred to invest according to Beta.

EURCAD:

Risk-free Rate (rf)	7.87
Beta	0.50
E(Rp)	7.87
Alpha ratio	7.92

Interpretation:

The above table shows the Jensen's Alpha of EURCAD for one the beta value was at 0.50. This shows that the value is moving positively accordingly to the market and when the market moves one dollar higher the script moves 0.56 cents were high volatility was found in the script. According to the alpha ratio the return out of the investment is at 7.92% per annum which is not lesser than risk free rate of return so it is preferred to invest in this script. It's also preferred to invest according to Beta.

Findings:

- In NZDJPY for one year from the date of issue of the script. The average return was at 0.00 are the return is in positive and the script was more volatile after its being issued. But we cannot invest in this because the value is not more than one.
- In GPUSD for one year from the date of issue of the script. The average return was at 0.009 are the return is in positive and the script was more volatile after its being issued. But we can invest in this because the value is more than one.
- GBPJPY one year from the date of issue of the script. The average return was at 0.048 are the return is in positive and the script was more volatile after its being issued. But we can invest in this because the value is more than one.
- In EURUSD for one year from the date of issue of the script. The average return was at EURSUD are the return is in positive and the script was more volatile after its being issued. But we can invest in this because the value is more than one.
- In EURJPY for one year from the date of issue of the script. The average return was at 0.02 are the return is in positive. But we can invest in this because the value is more than one.
- In EURCAD for one year from the date of issue of the script. The average return was at 0.00 are the return is in normal and the script was not moving accordingly. Its not preferred to invest in this because the value is more than one.
- In EURAUD for one year from the date of issue of the script. The average return was at 0.00 are the return is in normal and the script was not moving accordingly. Its not preferred to invest in this because the value is more than one.

Suggestions:

- Based on BHAR it shows that its not preferred to invest in JPY counters as the volatility of the pairs were low and the in some cross pairs they were moving negatively accordingly to the market. So its

preferred to invest in positive buy and hold abnormal return and we can avoid trading in other Paris which gives loss.

- Based on RSI its not preferred to invest in USDCAD as the loss was too high ad its preferred to invest in USDCHF were it gave a reasonable profit for the investment.
- Based on Beta value the jpy currency pairs were trading negatively according to USDJPY as the cross currency changes accordingly and its not preferred to invest based on USDJPY and other pairs gave a reasonable movement with mixed volatility and it preferred to invest in EURCAD as the pair is moving based on its cross pair comparison.
- Based on Alpha ratio its not preferred to invest in jpy counters as it was giving return less than the risk free rate of return and its preferred to invest in other scripts as the give higher yield than the risk free rate of return.

Conclusion:

The conclusion is that it's not preferred to invest in JPY pairs as the volatility and the return are not up to the mark and its preferred to invest in EURCAD as the return was high when compared to other scripts and the market was moving accordingly to its cross currency pair.

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