"Impact of EXPO 2020 on Dubai Financial Market" – An Event Study on Banks, Investment and Insurance Sectors

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Abstract

This study presents an overview of how stocks react to a particular event of the country. An attempt has been made to analyse carefully the information of Dubai Financial Market stocks reaction towards the announcement of EXPO 2020 in the year 2013 even after. Main focus was only on three sectors i.e Banking, Insurance and Investment. Standard event study methodology and market model approach have been used to calculate the abnormal returns and cumulative abnormal returns of select sectors. The cumulative abnormal return for Banking and Investment observed as very appealing compared to Insurance Sector. There are many variations in the cumulative abnormal returns of Investment Sector, but the trend is increasing for this sector compared to Insurance Sector. This study also shows that there is no overreaction of Dubai Financial Market stocks especially the stocks of finance sector with regard to the event announcement or thereafter.

Keywords: Dubai Financial Market (DFM), potential investors, investors, insurance, index

1. Introduction

Any mega event which is organized by a country has many advantages for the organizing country, not only in economic terms but in other areas. The same fact is applicable for the mega event Expo 2020 which is going to be held in Dubai. Since, the announcement made in November, 2013, excitement has been very extensively spread in UAE. On the other hand, there are various concerns in the minds of people in UAE about this mega event of Expo 2020. This event will bring opportunities and challenges both together in parallel. The fact is this event will have certain impact on various sectors of UAE economy like, Real Estate, Tourism, Hospitality, Finance, Banking and Insurance. Expectation by the investors and potential investors for volatility stock prices due to any special event is very common.

1.1 EXPO 2020

Expo is short form of the word Exposition which means large scale exhibition. In November 2013, the United Arab Emirates won the right to host the World Expo in Dubai in 2020. This will be the first time that the World Expo is staged in the Middle East, North Africa and South Asia (MEASA). Since the first great fair of 1851, World Expos have continued to be one of the largest and most enduring global mega-events. World Expos attract millions of visitors who explore and discover pavilions, exhibits and cultural events staged by hundreds of participants including nations, international organisations and businesses. Dubai's World Expo is held under the theme of *Connecting Minds, Creating the Future*, echoing the powerful spirit of partnership and co-operation that has driven the UAE's success in pioneering new paths of development and innovation. Through this theme, Expo 2020 Dubai will serve as a catalyst, connecting minds from around the world and inspiring participants to mobilise around shared challenges, during a World Expo of unprecedented global scope, under the sub-themes of: Mobility, Sustainability & Opportunity. Expo 2020 Dubai is expected to attract 25 million visits, 70 per cent of which will be from overseas. This will be the first Expo in which the majority of visitors stem from beyond a nation's borders. Running from 20th October 2020 through 10 April 2021, the Expo will launch the country's Golden Jubilee celebrations and serve as a springboard from which to inaugurate a progressive and sustainable vision for the coming decades. (Source: The official website of Expo 2020 Dubai: https://expo2020dubai.ae/)

1.2 Dubai Financial Market (DFM)

Dubai Financial Market is one the three stock exchanges in the UAE, and one of two in Dubai. DFM started its operations in the year 2000 as a government company and in 2006 it had its initial public offering (IPO). There are

over 60 companies listed in DFM and handful of new listings being added each year. Majority of listed companies of DFM are UAE based, only few stocks are from other gulf countries. It is allowed to own up to 49% of foreign investment holding is allowed in DFM. Although it depends on the company, some companies are even allowing people to hold more percentage of foreign investment. Out of the three stock exchanges in the UAE, most of the companies listed in DFM and ADSM and the regulating authority is the Emirates Securities and Commodities Authority (ESCA). There are nine sectors in DFM, like Real Estate, Banking, Insurance, Financial and Investment services, Transportation, Consumer Staples, Services, and Telecommunication. Only three sectors has been taken for the present study analysis those are Banking, Financial and Investment services and Insurance. (Source: dfm.ae)

2. Literature Review

2.1 Mega-events and Reaction of Stock Markets

Mega-events impact on economic growth: study analyses the possible impact of the country's economy of the 2010 world cup and proves that mega events had a clear impact on the economy of country (Antonio J.Moroy Anton, Jan Jose and Gema Saez, 2011). How do stock returns react to special events? (Robert Schweitzer) the stock markets quickly digest all new public information about the firms and transit it rapidly into changes in stock prices. Market Sector Reactions to 9-11: An event study (C.Pat Obi, 2001) explained that how stocks believed to be most vulnerable to the 9-11 attacks reacted. This study proved that negative excess returns in airlines a financials stock are suggestive of a trading pattern that may have been driven by expectation of an impending anomaly. The financial crisis in the US in 2007/2008 due to the sub-prime mortgage lending, resulted not only to an economic turmoil within the nation, but countries across the globe also experienced collapse in their financial market as a consequence (Jones, 2009). Another paper that examined the global impact of the 2008 financial crises is (Neaime ,2012), which particularly examines how the stock markets of the Middle East and North Africa region were affected. According to the author the reason for this could be that the country has a relatively restricted amount of foreign investors and ownership. (Dimpfl, 2011) The impact of US news on the German stock market and found that DAX stock prices (German stock market) tended to change more significantly to news release one hour prior to the opening of the New York Stock Exchange (NYSE). If new information is announced and made available in the market, the price will be reflected instantly (Fama, 1970), and the author found that when NYSE finally opened for trade, the DAX index had already reacted.

2.2 Event Study Methodology

There is plenty of literature and research took place in the area of event study. There are more than 600 published articles on various events available and it is continuous to grow. Some of the popular author's literature on event study has been given below.

Event studies have a long history (A.Craig Mackinlay, 1997). He mentioned in his paper that in accounting and finance research, event studies have been applied to a variety of firm specific and economy wide events. Econometrics of Event Studies (S.P. Kothari & Jerold B. Warner, 2004) beyond financial economics, event studies are useful in related areas. In the accounting literature, the effect of earnings announcements on stock prices has received much attention. In the field of law and economics, event studies are used to examine the effect of regulation, as well as to assess damages in legal liability cases. Major world events impact on stock market prices- An Event Study (Davy Ghanem & David Rosvall) the authors found that stock markets react differently from certain categories of MWE. The only significant occurrence of spill over effects following a MWE was to be found for "positive" and "neutral" political events, and to "negative" economical events. Additionally, the authors provide evidence of that European stock markets follow similar patterns regarding in what extent they are affected when a MWE occurs.(Shiller (2003) investors tend to under- or overreact to new information, a view which also is supported (Bondt and Thaler 1985), were the authors concludes that experimental psychology suggests that people in general tend to "overreact" to events that are dramatic and unanticipated.

3. Need for the Study

Dubai stocks hit a five year high, after announcing the news that Dubai won the bid to host world expo 2020 on November 27, 2013. On the other hand, some results and experts opinion is different. According to the results of survey conducted by CFA Society Emirates, only 56% of the respondents expressed that there may be a positive impact on DFM stock prices due to Expo 2020. History of Expos proves the same, 2010 Expo in Shanghai and 2015 Expo in Milan, do not really show any impact on stock markets. Whether stock prices will go high in DFM in regard to expo 2020? What extent the index can rise? Which sector stocks will react more/less? Is it advisable to invest in DFM stocks for the period of next 5 years? What will be the impact on the companies of Banking, Investment and Insurance Sectors? All these are the apprehensions/questions in the minds of investors and potential investors. This present study is an attempt to find the answers for all these questions/apprehensions and provide useful information to the investors and potential investors of DFM. The purpose of this paper is to investigate the impact of Expo 2020

on stock market (DFM) prices on Banking, Investment and Insurance Sectors and investor reaction. The study uses an exploratory approach and follows questionnaires and interviews in order to obtain deeper insight of the phenomena.

4. Objectives

The objectives of the study as follows:

1. To find the impact of Expo 2020 on stock prices of DFM especially taking Banking, Investment and Insurance sectors.

2. To determine the reaction of DFM stock index in regard to Expo 2020.

3. To provide direction to the investors and potential investors about the investment in DFM stocks for the period of next five years.

5. Methodology

5.1 Hypotheses

Taking into consideration the above objectives of the study, the following hypotheses are formulated for the study. The following are the null hypotheses of the study.

1. There is no impact of Expo 2020 on DFM especially on Banking, Investment and Insurance sectors.

2. There is no relation between Expo 2020 and DFM stock index reactions.

5.2 Scope and Period of the Study

The scope of the study would be limited

a) Only to the event of Expo 2020

b) Only to study the impact of Expo 2020 on Dubai Financial Markets (DFM)

c) Only to the sectors of Banking, Investment and Insurance in DFM.

The selected time period for this study is from November 2011 to October 2014 i.e. Dubai won the Expo 2020 bid on November 27, 2013.

The methodology used to find the impact of Expo 2020 announcement on DFM is event study analysis. Event study is statistical method to assess the impact of an event on the value of stock prices of stock market. Many authors used this popular tool in accounting and finance to find good as well as bad impact of events. In event study all kinds of events, mergers, acquisitions, takeover, changes in management, dividend payment, resignation of CEO can be analysed to see how they affect the values of stock prices. It is a useful tool to make better prediction in the future about whether a similar event will have a positive or negative influence on the stock market.

The following steps are followed to conduct event study in this research.

1. Identification of a calendar day/month of the event taken place or announcement made. In this study the month in which announcement was made has taken as event date point window. Depending on the size and impact of the event, the event window can be a day/month/year. The announcement of Expo 2020 took place in November 2013, as this is one of the mega event organized by country the impact will not last only for a day. This is the reason for fixing event window as monthly.

2. Fixing the length of pre-event period and post event period.

3. Collection of historical prices of shares of select three sectors of DFM. The data files should contain the both estimation and post event periods.

4. Calculate monthly/actual returns of both individual stock price (three sectors, Banking, Investment and Insurance) and market index data (DFM).

5. Calculate the parameters like, Intercept, Slope, R-Square and Standard Error.

6. Calculate the Expected returns by using the parameters and DFM stock actual returns

7. Calculate abnormal returns in event period i.e. the difference between actual and expected returns of the sectors.

8. Calculate Cumulative Abnormal Returns of the sector stocks

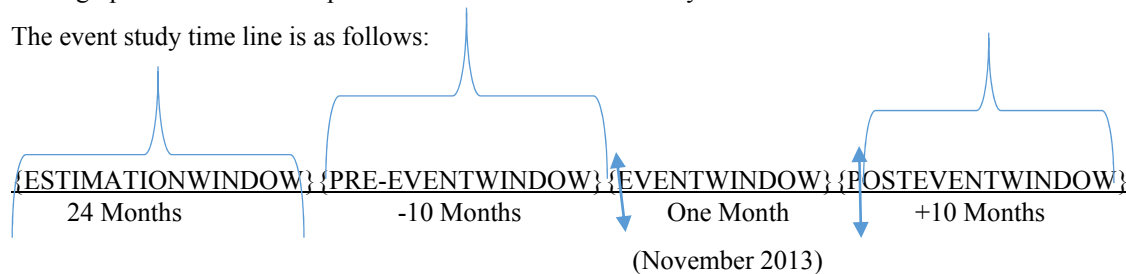9. Do significant test for the event period results.

Sometimes a result value may only be generated by chance. It is better to test the result value and see whether it is statistically significant. This leads to significant test. In this study t-test has been used to test the significance of the

result and to know the variation of samples from population mean. 95% significance level and the accept region is from -1.96 to +1.96 final value is between, then the result value will be called statistically significant.

In this study, Microsoft EXCEL is used to conduct the event study methodology. The historical data used for sector stock prices and DFM General Index is downloaded from Investing.com. Similar to YAHOO finance website, Investing.com also provides information of historical prices of GCC stock Markets. Sector wise indices are also available.

To measure the stock returns of DFM, Banking, Insurance and Investment sectors before and after the announcement of an Expo2020 is taken on monthly basis returns. Model parameters are estimated from the 2012 period prior to the observation period of the study (day t= 12 months i.e 31/1/2012 to 31/12/2012). To avoid confounding events leading up to the observation period are excluded from the analysis.

The event study time line is as follows:

{ESTIMATIONWINDOW}{PRE-EVENTWINDOW}{EVENTWINDOW}{POSTEVENTWINDOW}
    24 Months   -10 Months   One Month   +10 Months

(November 2013)

For Calculation of abnormal returns of three sectors for an event window of -10 months and event month plus post event 10 months from the month of event announcement. Observation window for 24 months before the event window i.e. from 31/01/2011to 31/12/2012. Pre event window of all three sectors started from 1//1/2013 till 31/10/2013 i.e. t = -10 months before the event. Event month is t=1 i.e. November 2013 the announcement declared month about Expo 2020. Post event is from 1/12/2013 till 31/11/2014 i.e. t = +10 months.

Appraisal of the event's impact requires a measure of abnormal returns of select sectors of study. The abnormal return is the actual return of the sector over the event window minus the normal return of the sectors over the event window. The normal return is defined as the expected return without conditioning on the event taking place. Market model return method has been adopted to calculate the normal returns for the selected sectors. The market portfolio is DFM General Index. For the sector í'the market model is

For Calculation of Actual Returns:

$Rit = \alpha + \beta Rmt + \varepsilon it$

Rit stands for returns of sectors for the t period

Rmt stands for returns of Market Portfolio i.e. DFMGI

α β are regression parameters

ε Standard Error for time period t

t stands for time period

For Calculation of Abnormal Returns (AR):

$ARmt=Rit – Re$

Where AR stands for Abnormal Returns

Rit stands for the Actual Returns of the Stock

Re stands for the Expected Returns of the stock

For Calculation of Cumulative Abnormal Returns (CAR):

CAR stand for Cumulative Abnormal Returns which is addition of previous and current returns of the stock.

6. Results and Analysis

The results and analysis of research on the basis of objectives of the study presented with help of tables and graphs.

In order to show the impact of Expo 2020 on DFM, research started right before the months of announcement regarding winning bid to organize the event in Dubai i.e. November 2013. Event study has been conducted to find the impact on stock market and on the three select sectors. Analysis has been made with the help of Cumulative Abnormal Returns (CAR) on the select sectors.

The abnormal return is a term of the market model event study methodology calculated from samples selected for the study. Under the null hypothesis, conditional on the event window market returns the abnormal returns will be jointly normally distributed with a zero conditional mean and conditional variance.
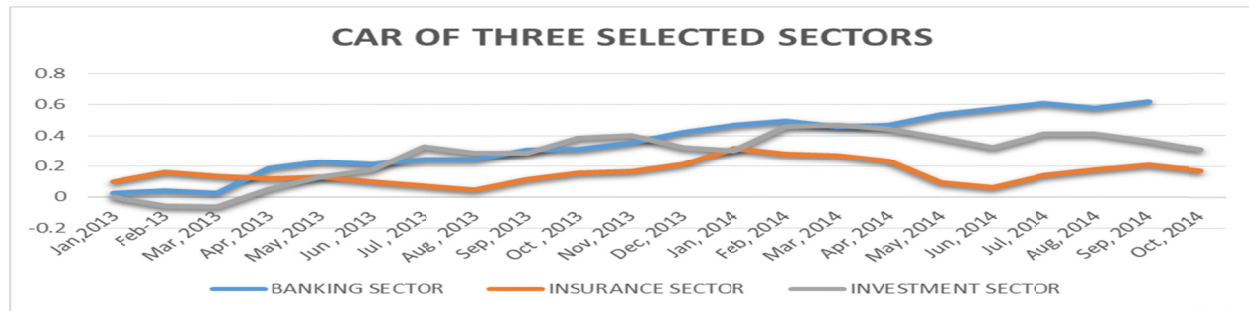

Figure 1. Plot of cumulative abnormal return for earning announcements from the event month -10 to event month 10. The abnormal return is calculated using the market model as the normal return measure

Source: Primary Data

Table 1. Different variables used in calculation of car through excel

	BANKING SECTOR	INVESTMENT SECTOR	INSURANCE SECTOR
INTERCEPT	-0.00939	-0.018828628	0.006824577
SLOPE	0.703986	0.233496125	1.249177632
R-SQUARE	0.714975	0.08793502	0.549135544
STANDARD ERROR	0.020425	0.034555205	0.052012684

A t-statistic is statistically significant at the 5% confidence level if it is greater than 1.96 in absolute value.

Source: Primary Data

Table 2. Cumulative Abnormal Returns (CAR) and t-test of three sectors

EVENT DAY	BANKING SECTOR (n=45)			INVESTMENT SECTOR (n=45)			INSURANCE SECTOR (n=45)	
	CAR	t-TEST		CAR	t-TEST		CAR	t-TEST
-10	0.025	1.228		0.097	-1.607		-0.001	-0.014
-9	0.040	0.731		0.163	1.905		-0.056	-1.068
-8	0.025	-0.722		0.135	-0.809		-0.065	-0.161
-7	0.187	7.937		0.120	-0.426		0.053	2.272
-6	0.227	1.940		0.130	0.279		0.128	1.433
-5	0.212	-0.713		0.099	-0.889		0.174	0.882
-4	0.245	1.570		0.073	-0.747		0.328	2.966
-3	0.244	-0.030		0.046	-0.797		0.286	-0.818
-2	0.305	3.000		0.113	1.944		0.285	-0.003
-1	0.313	0.379		0.156	1.232		0.386	1.928
0	0.352	1.907		0.165	0.271		0.402	0.304
1	0.424	3.519		0.211	1.338		0.324	-1.492
2	0.466	2.057		0.315	3.013		0.303	-0.411
3	0.494	1.375		0.280	-1.023		0.458	2.989
4	0.459	-1.701		0.270	-0.279		0.466	0.153
5	0.468	0.448		0.234	-1.043		0.444	-0.415
6	0.537	3.352		0.095	-4.040		0.383	-1.182
7	0.572	1.740		0.064	-0.878		0.320	-1.208
8	0.608	1.763		0.139	2.151		0.410	1.728
9	0.579	-1.441		0.176	1.094		0.411	0.017
10	0.619	1.992		0.208	0.914		0.366	-0.868

A t-statistic is statistically significant at the 5% confidence level if it is greater than 1.96 in absolute value.

The above Table 2 gives the reaction of stock prices of three selected sectors and Cumulative Abnormal Returns (CAR). The results show that the Banking Sector CAR reported a significant positive throughout the event window. The results shows that Banking Sector produced on an average generous positive CAR continuously increasing every month particularly from day "0" till the day "+10" and "-10". However, there were no significant cumulative abnormal returns immediately or on the day of event (Expo 2020) announcement. Focusing on the announcement month (November, 2013) the sample abnormal returns for the good news about the event by using market model CAR for Banking Sector is 0.352 percent at the given standard error 0.020. The null hypothesis, H0, that the event has no impact on the behaviour of returns of Banking Sector is proved wrong. The results are largely consistent with the existing literature on the information content of earnings.

The Investment sector reported significantly little less impact with CAR than Banking sector CAR. It can be observed that there are variations in CAR, before and after event day. The sample abnormal returns for the good news about the event by using market model CAR for Investment Sector is 0.402 percent at the given standard error 0.034. The null hypothesis, H0, that the event has no impact on the behaviour of returns of Investment Sector is proved wrong. It has been proved that, there is almost 40 percent increase in Cumulative Abnormal Returns. It is observed that CAR of Investment sector is increased immediately after the announcement day, i.e. 0.165 to 0.211 and 0.315 but trend decreased afterwards that means no market reactions were found for this sector. Results did show the variations in CAR even before event day in Investment Sector.

For the Insurance sector, the CAR starts at -0.001 which is equivalent 0.1 % and exceeds to 0.466 which is equivalent to 46.6%. It is a significantly good sign of increase in the CAR of Insurance sector. The graph of Insurance sector shows that the increase in CAR even before and after the event day. The overall results indicate that throughout the whole event period. The main important information to capture from the CAR of Insurance sector is immediately and on the day of event announcement. It can be observed there is no strong evidence of increase in CAR. In fact, it is decreased from 0.402 to 0.324 and further next month 0.303. This is proved that event has no impact on this sector, although, the CAR started rising after three months. The sample cumulative abnormal returns for the good news about the event by using market model CAR for Insurance Sector is 0.169 percent at the given standard error 0.052. The null hypothesis, H0, that the event has no impact on the behaviour of returns of Insurance Sector is not rejected.

7. Findings and Suggestions

- The study found that the Expo 2020 does have a significant impact on stock market prices of three sectors. This can be considered as an evidence, that good news and bad news will always have an impact on stock prices. Depending on importance of event and news the reaction of stock prices may vary.

- Out of the three sectors of study i.e. Banking, Investment and Insurance, CAR for the Banking sector before and after the event is convincing than the other two. This sector is increasing continuously after and before the announcement of the event and even after. The growth of this sector very constant and shows upward trend. This is the best sector under finance category of DFM, to make the investment by investors and potential investors.

- After Banking sector, it is Investment Sector which has highest CAR. Although there are variations in this, but Investment is one area, which plays an important role at the time organising these kinds of mega events like Expo. So, this is also one of right choice for the investment decision.

- One of the results found in the study is that there is no overreaction of stock indices with regard to the event, at the time of announcement or thereafter the announcement. The reason behind it may be the citizens of UAE were prepared for the positive news about winning the event bid well in advance.

- The CAR up to the end of 2014 is very neutral of all three sectors of the study. This is true because any mega event will take certain period of time to give its fruits. Expo of Dubai has a target of 2020. Although it started with a very positive note in UAE, but one can see the real reaction of sectors after few years and especially when it is nearing the event show.

- Based on the above results, it can be advised to the investors and potential investors of UAE, i.e. next five years the best sector out of three sectors of finance is Banking and Investment. It is obvious immediately after any mega event, the organised country economy will slow down. This effect can be seen even on stock prices, so it is advised not to wait and lock with their investment in particular sector for quite a long period of time.

8. Conclusion

The Dubai Financial Market General Index up 0.8% to 2945.9 points at the end of November compared to 2922.2 points at the end of October. At the sectoral level, indices of three out of the nine sectors represented on DFM ended the month in the green, with the Banking sector increasing the most by 3.5%, followed by the Consumer Staples and Financial & Investment services sectors by 2.4%, and 0.3% respectively. The Insurance and Industrial indices have not changed during this month. (Source: DFM monthly bulletin, November, 2013). One of the limitation of this study is, it is limited only to the three sectors which belongs to Finance field. The main important sector of DFM like Real Estate, Tourism and Transportation are not covered in this study. The one sector which showed the highest impact of the event in DFM out of nine sectors was Real Estate. According to this study the main important point of information revealed is the difference between the sectors. The way the Banking sector growth rising is not the same as the other two sectors.
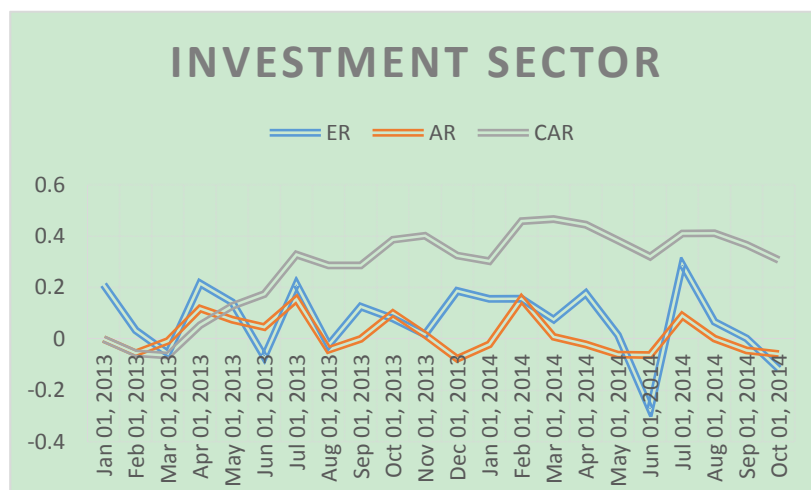
Sector wise graph with Expected Returns (ER), Abnormal Returns (AR) and Cumulative Abnormal Returns (CAR)
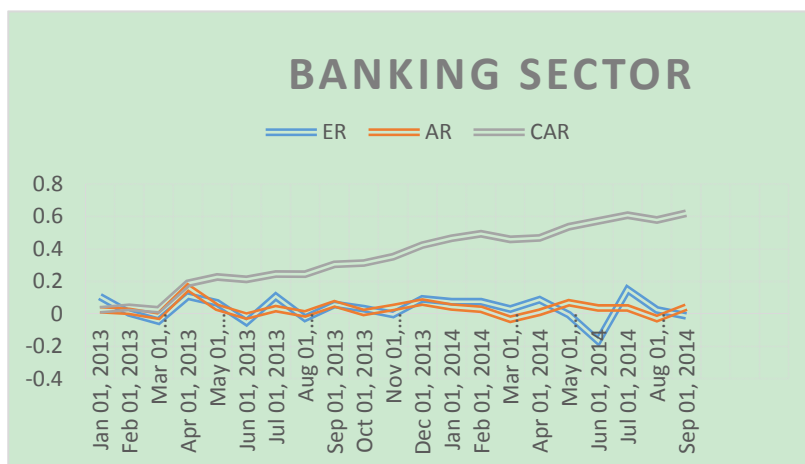
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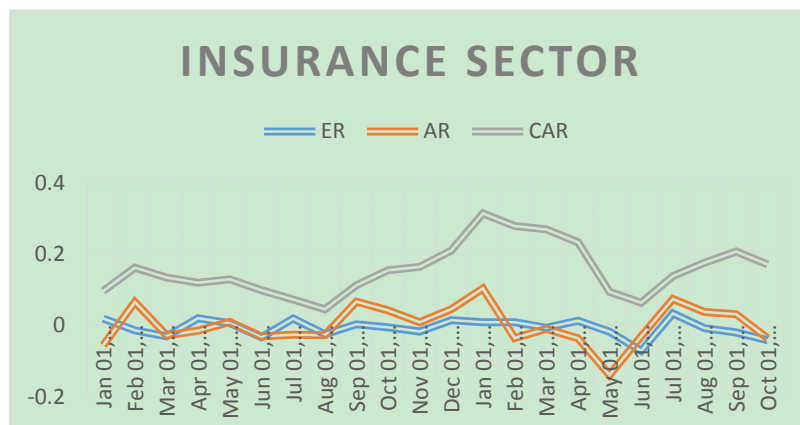
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