

Study on Financial Hedging; of Airlines by (CRM) Case Study on Four Airlines Chinese listed

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Abstract
We test the stock market reaction to airline by financial risk management instrument in the Shanghai Stock Exchange for airlines listed. Finance theories suggest that firm's aircraft benefit from hedging due to the reduction of cost and risk and enhance performance return, the mitigation of crisis problems, and the alleviation of information adverse this investigates an important contemporary issue relating to the involvement of hedge cost and fuel in the stock market. We find evidence appropriate with the equity of the hedge fund company and shareholders. the hedging leads to a drop in the cost of by reducing risk and the level of information asymmetry. However, we find evidence to support that hedging reduces the cost of by mitigating agency conflicts. Finally, hedging mitigates the negative effect of a boost in the cost shareholders and firm value; therefore things that hedging promotes firm investment in the airlines company and add value.
Keywords: Hedging Airline, CRM use hedge, Tree hedge

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1. Introduction

Aircraft company use risk management and convene as part of their strategies to lessen the impact of height fuel prices. The important of cost fuel hedging is to decrease a firm's exposure to sudden changes in the rate of fuel. consequently, it is to major understand the implications of cost and fuel hedging on aircraft company for that the airlines industry is highly energy intensive and jet fuel is a major component of airlines' operating costs. As well as the high competitive, aircraft company are incapable to push on the high fuel costs to passengers by taxing ticket higher airlines price, lower operating profit.

On the other hand, some writer expressed their reservation about fuel hedging in the airline industry. They questioned the perceived "benefits" of fuel hedging, noting that there is no clear benefit of fuel hedging other than to signal managerial competency. Based on their empirical findings from a study on US oil and gas producers, concluded that hedging does not necessarily influence the market value of a company. At any rate, the association between firm value and derivatives should be "treated with caution (Siew and Yongtao, 2013). Some airlines like to enter into fuel hedging contracts, airlines hedged to mitigate rising fuel prices and to protect themselves against unexpected fuel price changes. (Delta Airlines, 2013).

An airline companies presently a lot of methods to reduce jet fuel use and increase fuel efficiency. Numerous aircraft firms' renewal fleets and making modifications to airplanes like change the seats, drinks cart with newer and lighter versions and even television monitors. These improvements have not been enough for aircraft companies to keep profitable during times of increased fuel price. Because of this fuel hedging and financial contracts make an important role in fuel cost risk management aviation. Usually airlines use a cross hedge, where the Hedging contracts have commodities that are highly correlated with jet fuel. Aircraft companies are submitted with a little choice commodity options. But the widely used are Brent North Sea oil (Brent) and West Texas Intermediate Sweet Crude (WTI) as well as gas oil and heating oil. (Peter and Siew2015).

1.1 Expand Hedging

There are a lot of airlines have expand hedging programs in a try to limit their exposure to upward rebound in the cost of jet fuel (Miller and Ruane, 2012). Hedge management involves the application of quantitative techniques to improve profits by controlling the prices and availabilities of various products that are produced with scarce resources. Perhaps the best known revenue management application occurs in the airline industry, where the products are tickets (for itineraries) and the resources are seats on flights. In view of many successful applications of revenue management in different areas, this topic has received considerable attention in the past few years both from practitioners and academics (Lijian and Tito2009). More expand of hedge accounting is that firms can post losses or gains from the hedge along with the losses or gains from the hedged asset. For airlines this would mean that they could match their hedging activities with their fuel expenditures. If they do not qualify

for nor does not use hedge accounting, the gains and losses from a hedge are declared as income (Peter and Siew2015).

1.2 Hedging Strategies

Risk management has become a paramount route for investors to manage the peril of their exposure by use Hedging Strategies Futures. Considerable body of workers and researchers has examined hedging within energy markets. In condition of fuel price hedging and effect of contract maturity on the impact of crude oil or jet fuel hedges using a minimum variance way. The result of this study refers to almost month contracts jet fuel rise effectiveness due to the strong correlation between futures and spot John and Jim (2015). Aircraft companies has Strategies hedges, the worth added would be minimum to the extent that the risk being hedged corresponds to a cost price in the stock exchange strongly. The airlines would need to pay an insurance premium for the risk it. This effect would be offset if the firm's minimum crisis in a lower discount rate being applied to its cash flows Paul A. Laux, He and Chi (2014) .

1.3 Operational Cost Hedging

Due the strong market competition. Airlines seeking to increase, expand resource profiteering and use programs develop customer and price difference strategies to increase gain and income. As well as volatile and increasing some costs have been a main obstacle to complete this objective. surprising disruption to jet fuel or oil supply , accounts for a big operating cost in aircraft companies and a wild fluctuation of oil prices may affect airline operations cost for that hedging is an important use in the industry aviation. Siew and Yongtao (2013)

In addition to increased big competition and challenge volatile jet fuel prices airlines further. jet Fuel about for 30% of middle operating costs in 2012, for 20% as well as the fuel cost price volatility ,price level, and a wide crack spread with the implied crude oil add to the airlines' fuel issue. Aviation companies face pressure market that prevents high ticket price in response to the rise fuel oil prices. researches about the airline market offers fuel cost recovery is impossible competitive situation and aircraft companies are unable to rise prices ticket thus put their efforts on hedging activities. Britta and Brian (2014)

In compendium, by not hedging, airlines expose to the different risk , cost fuel price increases and operation cost , by hedging, aircraft company front the prospect of falling fuel prices and incurring financial losses in cost hedging.

The purpose of this paper is to show the levels of fuel price risk exposure in airlines of the world especially in china, furthermore, to uncover the effects of financial and operational hedging on airline fuel price exposure. In general Exposure can be defined as the allergy of airline companies' value by changes price oil of the implied financial peril. The residue of the study is organized as follows: Section 2 reviews the related literature; Section 3 characterizes the study methodology and the detail of the tests conducted; Section 4 presents the study's results; and Section 5 in summary conclusions.

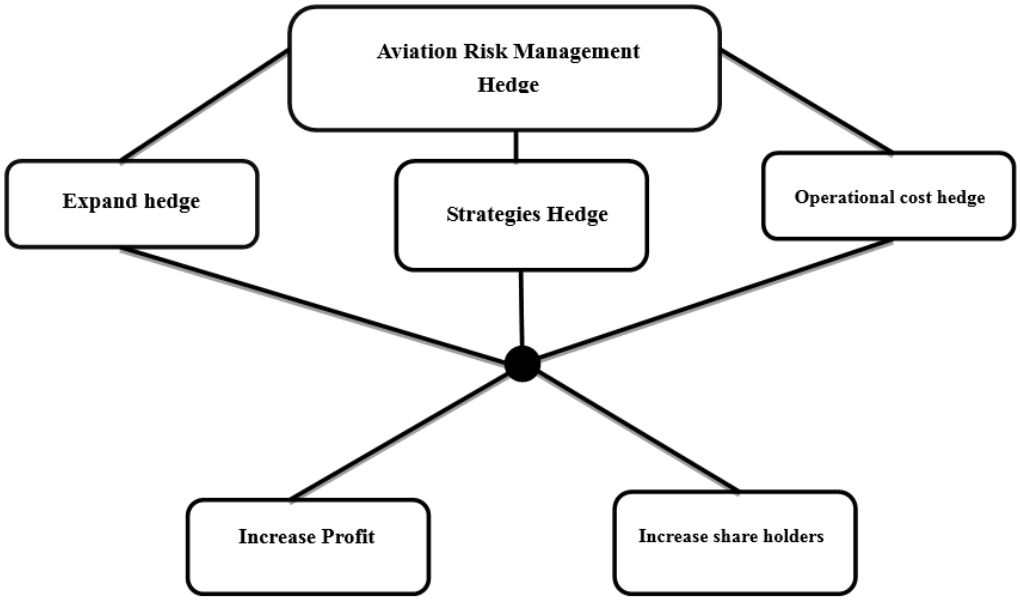


Fig (1) show the tool ACRM hedge

2. Literature Review

Many of the researcher in Aviation risk management identifies value maximizing rationales for hedging

Empirical research in this area focuses on identifying the rationales that are associated with corporate hedging behavior. A lot of writers finding that firms hedge to reduce expected fuel costs and others cost of distress.

Britta and Brian (2014) define hedges as "contracts that reduce an agent's risk". Therefore, hedging is part of the overall corporate risk management strategy further distinguish between hedging, which reduces return volatility, and speculation, which increases .return volatility

Froot et al. (1993) examine the cost of hedging for firms facing financial constraints. Shows that, when the costs of external capital include low fund costs, firms requiring outside financing will underinvest when internal cash flow is sufficiently low. Hedging generates additional cash in this issue

Adam (2002) provides guide proposition that firms with higher expected investment hedge a greater degree of expected investment. he documents that the positive relation between investment and external financing is smaller for hedging firms.

Jin and Jorion (2004) illustrates that hedging has no value effect for of oil and gas companies. as well as might have biased their results against finding a relation between hedging and firm value by study which, by their own admission, investors might prefer firms not to hedge, we analyze hedging by firms that are consumers of oil. Investors are less likely to use airline stocks

Tufano (1998) show that, by adding manager-shareholder costs to the hedging may allow managers to destroy value. He is thinking that managers are able to appropriate an amount in excess of the value created from an investment project. External capital providers know this problem exists and therefore, refuse to provide capital for this project. Managers may hedge to avoid the inability to invest in the project after low cash flow realizations.

Adriano et al (2013) challenge the notion that financial constraints and risk management should be positively correlated theoretically and empirically. The basic theoretical insight is that collateral constraints link the availability of financing and risk management. More specifically, if firms must have sufficient collateral to cover both future payments to financiers and future payments to hedging counterparties, a trade-off emerges between financing and risk management. Commodity price risk management shifts net worth across states, and airlines are effectively risk averse about net worth. When net worth is low and the marginal value of internal resources is high, firms optimally choose to use their limited net worth to finance investment, or downsize less, at the expense of hedging. Carter et al (2004) add the importance of fuel hedging within the aviation industry, the airline firms must concentrate about the fuel hedging strategy.

A lot of Aircraft Company has created fuel hedging programs in a try to limit their exposure to swings in the cost of jet fuel. The question with fuel price is not specifically the cost but the volatility in the cost, because risk does not necessarily depend on the cost of the asset. Airlines often have a difficult time hedging, but this is often a difficult task for an airline that re fuels in many places. The derivative markets were implicated as a risk during the U.S. financial crisis of 2008. To address the regulatory of the huge risk exposures associated with the markets Miller and Ruane, (2012) Due to the industry's competitive nature, airlines have very low profit margins. This means that any sort of external shock to their already narrow profit margins could result in a huge loss for the airlines. If jet fuel costs were constantly rising, then airlines could react appropriately Peter and Siew (2015).

Financial markets have highlighted the need for strategies planning that can address the risks associated with large and unexpected market, given that supply side shocks can arise from any number of diverse and because of recent increases in the volatility of much energy market. This is particularly important for fuel price Efimova and Serletis (2014).

Explored a strategy of hedging crude oil using refined products. They applied a regime switching asymmetric DCC GARCH model and found that heating oil significantly outperformed gasoline in a hedging context. We note however, that within the Oil hedging literature as with the more general hedging literature, Hedging using futures has become an important way for investors to manage the risk of their exposures and a large literature has developed alongside the use of futures, detailing how to estimate an Optimal Hedge Ratio (OHR). This literature has in the main implicitly assumed that investors are infinitely risk averse and that therefore the optimal hedge is one that minimizes risk John and Jim (2015). At the end of the review of previous literature to the subject of hedge energy market for airlines, we must emphasize the Aviation risk management to constantly hedge reserve examination work for facing the energy crisis in light of the expected market volatility and competition with other airlines.

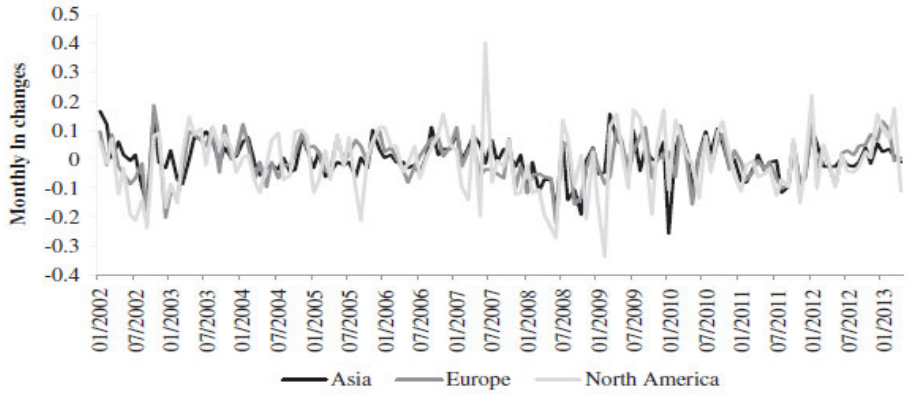


Fig (2) Monthly stock returns for each region that One of the reasons swings in fuel prices by Britta and Brian (2014)

3. Hedging Add Value

Airline must benefit from hedging due to the mitigation of finance risk, reduction agency problems of information asymmetry in this section we show the important relation between Aircraft Company and hedging of fuel price and operating cost due add value. The hedging is associated with a lower cost of crude oil, operating cost comprehensive set of controls and finance specifications. Hedging initiating firms of airline experience a drop in the cost, while suspension firms sustain a jump. We perform an extensive set of robustness tests to address the possible issue of endogeneity, competitive. We further show that hedging leads to a drop in the cost of debt by reducing higher oil price risk and the level of information asymmetry However, hedging mitigates the negative effect of an increase in the cost of shareholders expenditure and airlines value, therefore suggesting that hedging promotes firm investment and creates value.

3.1 Aviation Risk Management Enhance Airline

Firms of funds has an improved comprehension of that non-financial companies must hedging However, a little researches and studies has concentrated on whether hedging achieves sensible economic goal and objectives. Specially, many researchers are interested if hedging top-up form value Allayannis and Weston (2001). Airlines companies such as many industrial companies may face to risks resulting from opposite movements in foreign currency exchange, benefit rates, and goods prices, especially jet fuel prices Daniel (2006). since the terrorist attacks of September 11, 2001 airplanes companies faced more than swing of price oil because fuel is it a large traded in the world commodity, and the weak economic in case of airlines the mean price of jet fuel is around 62.88 cents per gallon. in the end of 1996. Prices jet fuels were volatile, since late 1997. The standard deviation of average monthly fuel prices through 1992-2003 is near 15.5 cents per gallon. aviation Risk management reduces the costs of financial distress, allows firms to better plan and fund profitable investment projects , increases the tax benefits of debate financing and lowers tax payments of firms facing progressive income tax rates .

Hedging also reduces information asymmetries between the firm and its stakeholders, facilitating contracting. For example, demonstrate that managing risk can reduce noise, thus helping outside investors to better identify skilled managers. All these arguments imply that risk management can add airline firm value Karl and Henri (2011).

3.2 Airline Industry and Economic

Aircraft companies are derived strongly from the airline production function, like situation at ticket prices, operators cost and some elements variables specification such as satisfy of passengers and situation in the market competitive.

The large endogeneity and careless variable case could have an effect on our estimates of oil price coefficients .The chain may have being side to costs higher at the time of high oil prices. instead that, it might be the case that when firm's product market positions are stronger they are better able to enact flexibilities to deal with high oil prices, leading to reduced costs for example in fixed the category of the data base, the period business a swing fuel prices might face to be wide at the same time as airlines' capacity is tired with investors Paul and Chi Zhang (2014)

Hedged fuel cost is boosted in fuel price and concave. Hedged fuel cost is rising in jet fuel price, but less credible concave, suggesting that hedging has reduced some big cost .all cost is not related to fuel price, proposition both that fuel price sensibility is substitute in other operational ways, and that there are many other costs besides oil prices. The information reports also that the specific coefficients on gross domestic airlines

product growth in Market ration are more important statistically.

3.3 Airline Hedge and Net Worth

How should measure the meaning of current net worth? Net worth is the total of actual cash flow, the size of capital net of debt, Add the benefit of any potential claims used to hedge ,airline that have low current net worth should be less likely to hedge input costs. moreover, as a given airline company experiences negative shocks to net worth, the airline should become less possible to hedge. The test these forecast using data information we have Adriano and Amir (2014).

We think that a strong correlation exists between airlines' fuel price hedging and net worth. the relationships between a numeral of measures of the range of an airline jet fuel hedging operation and a large used measure of account called "Tobin's Q" proportion.

In summary, this model is the ratio of the airlines market value to its replacement cost-and we used the following easy model: [Market value of equity + liquidation value of preferred

stock + book values - debt and current liabilities - current assets + book value of inventory] divided by total assets.

Input prices like fuel prices affect widely on airlines as possible. This issue must studied in carefully

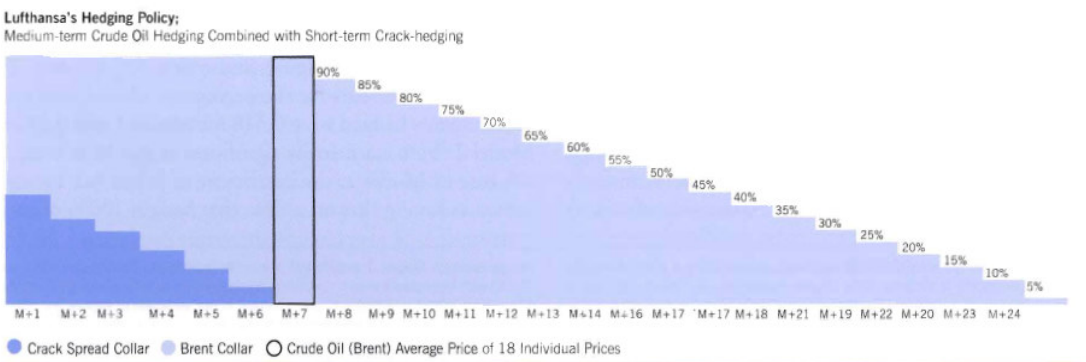
3.4 Hedging Lufthansa for Example

Lufthansa is the airline in Germany that not new to Aviation risk management. The airline company started hedging risk jet fuel price in 1990 that was first of the airlines in the world to do that. in the first half from 1997 German government sold Lufthansa and this company became fully privatized and lists its shares on the stock market. When the government sold remaining stake in the company in 2003 Lufthansa submitted a paper named [Energy Risk and User] by Energy Risk Manager.

In beginning of 2005, jet fuel consumption accounted for around 14% of operating expenses. For example Southwest airline and Lufthansa has also hedged internal revenue service fuel cost risk with options, including collars and differential swaps.

Lufthansa begin hedging about 5% of their need using [Brent Crude Oil price] in month, gradual increasing the grade to 90% one year into the future. the basis reduce risk [between the different of crude oil price and jet fuel price] as well as they have many kinds of hedges by using crack collar spread that involves two use options (buying and selling a pure fuel and the difference in value between crude oil and the products like kerosene refined from it where the hedge about range of prices). Since hedging kerosene for longer periods is expensive, Lufthansa combines the hedging of crude oil with short-term hedging of the crack spread. On the other hand Lufthansa began achievement the crack hedging strategy rate about 7.5% percentages a monthly. The of basis risk is hedged using crack spread collars by the price fuel is using Accounting rules according (International Accounting Standards Board). they are going more towards the U.S. GAAP regulations, it is more hard to stay within the rules, essentially if you want to do more intelligent hedges. In Fig (3) shown below explain it that Lufthansa have hedges around 90% from its planned jet fuel request on a period two years into the future Continuously Dived and Denial (2006).

Example of Lufthansa's Current Hedging Policy:
Medium-term Crude Oil Hedging Combined with Short-Term Crack Spread Hedging[28]



26. Source: "Energy Risk Manager of the Year—End User," *Energy Risk*, Volume 7, No. 12 (March 2003).
27. See "Energy Risk Manager of the Year—End User," previously cited.
28. Source: Lufthansa Investor Relations public documents on hedging and other public sources.

Fig (3) show Lufthansa hedging by Dived and Denial

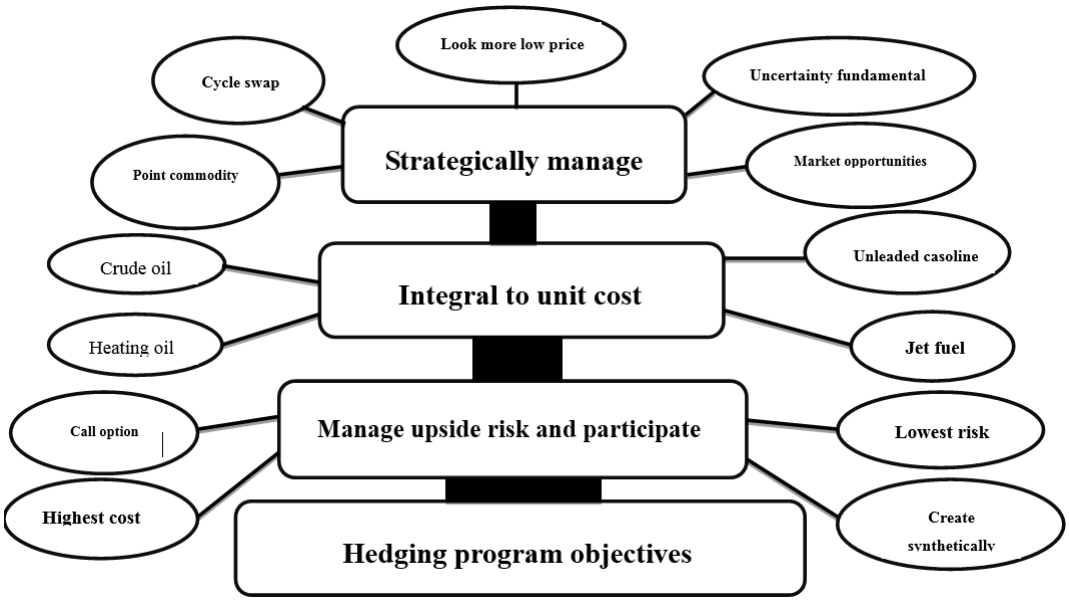


Fig (4) show Hedge tree aviation cost Risk Management

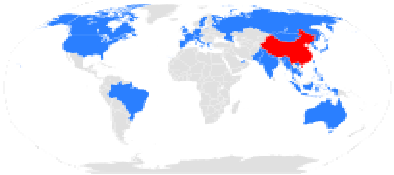
4. Survey Airlines in China

In this section, we will hold brief survey of the four Chinese airlines listed in the exchange market, which we will conduct a research study on the relevance of share prices with fuel prices and the importance of the hedge as one of the costs of risk management tools for the aviation sector is an important part of the economy, whether global or Chinese.

Airlines in china emphasize the risk analysis through extensive use of the risk management system (RMS). and developed the Fatigue Risk Management System (FRMS) and included the parameters into flight scheduling, improved the risk database, completed the B777 new aircraft verification and validation for risk control on new routes, set up an aviation safety and security management system that successfully passed the safety and security audit by CA firms of airlines put safety first and continue to make safety improvement through comprehensive management and prevention.

4.1 Air China

in 1988 Air China was founded and began operations on as a result of the Chinese government's resolution in end 1987 to be shared the operating divisions of Civil Aviation Administration of China In first of 2001, the former Civil Aviation Administration of China (CAAC) ten airlines company agreeing on a union plan, according to which Air China was to acquire China Southwest Airlines to air china. Before the acquisition, Air China firm was the country's 4th biggest local airline companies The federation created a collection with assets of about (56 billion Yuan) and a fleet around 120 airplane. In end of 2002, Air China union with the China Aviation Corporation and China Southwest Airlines and in the 2006, Air China was listed on the shanghai and London Stock Exchanges. In 2006, Air China signed an pact to join the Star Alliance. It became a member of the alliance in end of 2007 alongside Shanghai Airlines. In July 2009, they are acquired (19.3 million US) of shares from its confused subsidiary Air Macau and rising its stake in the carrier near of 51% more than 75%. After One month, Air China spent about (USD $813 million) to raise its stake in Cathay Pacific around 18% to 30% percentage, expand it's in Hong Kong. Finally In mid of 2010, Air China completed the increase of shareholders in Shenzhen Airlines and became the dominant stock holders of Shenzhen Airlines, allowing Air China to further increase its situation in Beijing, Chengdu, and Shanghai and complete a more stable local network.

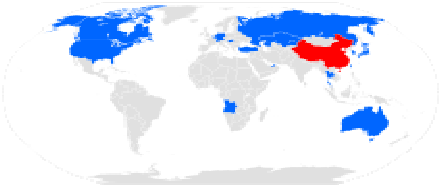


Mainland China
Air China destinations according to www. Air China.com

4.2 Hainan Airlines

In china Hainan Airlines was founded in 1989 in Hainan Province the large specific economic zone in China.

Hainan Airlines and became the first joint-stock air-transport enterprise and began to fly on May 1993. they has founded seven airline bases in Beijing, Taiyuan, Urumqi, Xian Lanzhou, Dalian ,Guangzhou, Shenzhen and an wide network across the China, through Asia, Europe, America and Africa. It serves about 500 local and global routes and flies around 90 cities. In 2000, Hainan Airlines (HNA) was founded and became parent company and in November 30, 2007, a new firm that called (Grand China Airlines Holding Company) becomes setup under the lead of the HNA group's biggest entity. This company planned to combine its operations with HNA Group aviation subsidiaries for that, a new airline called Grand China Air was established. In this result the parent company plan to combine the four airlines former under HNA group, Hainan Airlines, Shanxi Airlines, Chang'an Airlines, and China Xinhua Airlines should be transferred into Grand China. Hainan airline have operates international regular flights to different routes like flights from Beijing to , Toronto, Berlin, , Seattle, , Moscow, , and Boston As well as have destination Beijing to Haikou ,Taipei and Haikou and other. Hainan airline plans to start service in the end of 2013 with the Boeing 787 Dreamliner airplane. In February 2015, HNA announced the creation of Guangxi Airlines. This is a common project between HNA Group Tianjin Airlines, and Guangxi Beibu Gulf Investment Group, with Tianjin Airlines.



Hainan Airlines destinations
China
Hainan Airlines Destinations

4.3 Eastern Airlines

China Eastern Airlines company Limited One of the three main airlines in mainland China have been its headquarter located in Shanghai. They are fly of 500 aircraft long-haul and short-haul with an average age of around seven years, this company submit serves more than 75 million ridership annually and level 5th the world's top company airlines in value of ridership transportation. China Eastern an formal member of Sky Team, it is have network of flight from Shanghai to around 1000 cities in 175 countries by cooperating with other members airlines firms China Eastern has more progress to become a super aviation service integrator to win (shareholders good well ,staff sincerity, customers' allegiance, and credit public). In the end of 2013, they are have been awarded the (Golden Ting Award by China Capital Market Annual ceremony in 2013) and it is recognized as one of the 50 most valuable Chinese brands and been graded among the top ten of riche China firms in 2011. The last three years ago this company gains about 10 billion profits in the year.

On the basis that essence of companies of airlines in china. Eastern Airlines Company. Became the first Chinese airlines firms to be listed on the New York, Hong Kong and Shanghai stock exchange in 1997.

Finally china Eastern airline have been awarded the (Golden Phoenix Award) by shanghai Capital Market Annual ceremony in 2013.

	Shares held	**Shareholding percentage (%)**
A-share	7,022,650,000	71.53
H-share	2,794,917,000	28.47
Total capital	9,817,567,000	100

Table (1) shows the size of the stocks in Eastern airline by company location in end of 2009

4.4 Southern Airline

China Southern is the biggest company of airline in China In terms of fleet size and the number of passengers carried as well as the first number of fleet volume in Asia.

In 2011, China Southern Airlines, number one in Asia and 5th in the world, has a fleet of 353 traveler airplane. China Southern Airlines flies the Air Bus A380 – the largest passenger airplane in the world, the Boeing 787 Dreamliner, ability traveler airplane, becoming the first airline operate in the world .they have an network of passenger routes in China, reaching more than 100 country and serves around 60 domestic and international airports, Southern Airlines has association agreements (aka Codeshare agreements) with a number of other airline alliances, this company of Airlines passengers a global (reach) that is truly proud, at 898 international airport in 169 countries. In 2010, the Airline company was graded as the fourth largest airline

measured in terms of the number of passengers carried, behind only Southwest Airlines , American Airlines and Delta Air Lines in the world China Southern company has 53 offices in the world, comprehensive offices Sydney , Tokyo, Dubai, Seoul, New York, London, Amsterdam, Paris, and Los Angeles. as well as this firm Airlines is the first company on mainland China to join an international [universal] air pact and alliance.

China Southern Airline ridership have enjoy connecting flights, flexible ticket transfers between alliance member carriers and lower air fares Minimum Connecting Times, for a given journey. In addition, ridership score up repeated flyer a lot of miles quicker, since they earn frequent flyer miles on their China Southern Airlines frequent flyer account even when they fly with other member carriers of the Sky Team. the indicated that the Facts China Southern Airlines is a member of Sky Team, the world's next widely airline company alliance and Star Alliance Sky Team member are grouped together in a place shared in Beijing airport.

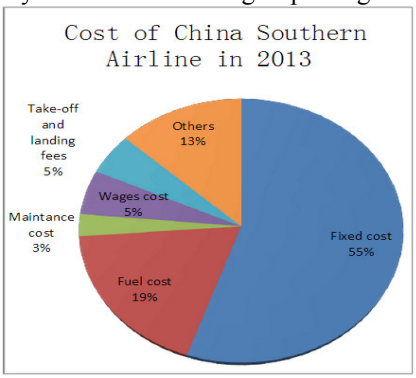


Fig (5) show cost southern airline by www.Csair.cn in 2013

5. Methodology

When Swing world oil prices have an impact on the capital market, including the airline, considering that jet fuel form the largest proportion of operating expenses.

Table (2) shows the fluctuation oil price according to Brent oil spot in 2014 that important in our study that fuel prices constitute a large part of operating expenses in airlines.

On our sample in Shanghai Stock Exchanges include airlines companies of china airlines (China, 601111, Hainan, 600221, Eastern, 600115, Southern, 600029) in 2014 and compare with 2013 to show the fluctuation oil price and shareholders price. This data obtained from(center Brent oil price in London and data finance in china market stock exchange) . There was adequate data-base of in this time to examine the study that swing the fuel prices that impact on companies' airlines stocks price.

Fig (6) indicates a Swing fuel in the world market that impact on stock exchange especially the companies of airlines Brent index record in the month of December of 2014 at 107.46, while the end of the year in the month of January 61.67 The average oil price of 98.58 while the Fig indicates (7) to the price swings in 2013 the registration of 112.98 in the first month of the year and record 109.47 in the last month of the year at an average price 108.69. Comparison table no. (one) with a table number (two) note the difference in fuel prices, of course, subject to market factors, but that concerns us in our study is a reflection of fuel prices on operating costs and then share prices.

We will use Scientific method in this research is (EAR)that measure and assess the airline stocks prices by measuring the change fuel prices to last year with year study with airline stocks prices and reflect that on shareholders. If the result is positive indicates that the gains according to a specific standard, if negative show that the achievement of losses were the result according to a specific level as in the following model:

$$EAR = \alpha + \beta i / \overline{Seca} \qquad (1)$$

Where:

EAR= Evaluate Actual Return;

α i= the alfa coefficient of the regression;

Bi = the beta coefficient of the regression;

Seca =different fuel price between last year and next year;

$$t = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{\left(\frac{(N_1 - 1)s_1^2 + (N_2 - 1)s_2^2}{N_1 + N_2 - 2}\right)\left(\frac{1}{N_1} + \frac{1}{N_2}\right)}}$$

Where: (2)

t = T.test
Xi = open price
X = close price
S= Standard Deviation
N= time

T-test is one of an important statistical metrics that measure the reliability and realism of the sample of study in order to take the right and appropriate decisions for the case study to be examined. X1 is open price and the X2 is the closing price for shares of Chinese airlines listed in the Shanghai market. T-test gives a result of the more specific way to the result was the number one shows the bonding strength between the first and second variable while the result is near of one negative way to indicates the weakness of the interrelationship between the first and second variable.

In brief the mode followed in this study can be as follows. Using the method of assessing the real return to the market shares of airlines from the difference between the average price of fuel last year with average prices the following year, which is the study sample divided by the sum of the coefficient alpha + beta. If the result is positive shows that the stockholders are gaining market power as a result of the difference between fuel prices which will reflect positively on the financial position of the airline and by the positive level.[*1.00 important,**5.00 important,***10.00 important] and vice versa if the result of this measure negative. If the result is close to minus 10.00 market indicators were negative, which calls for hedge degree larger than the other negative levels.

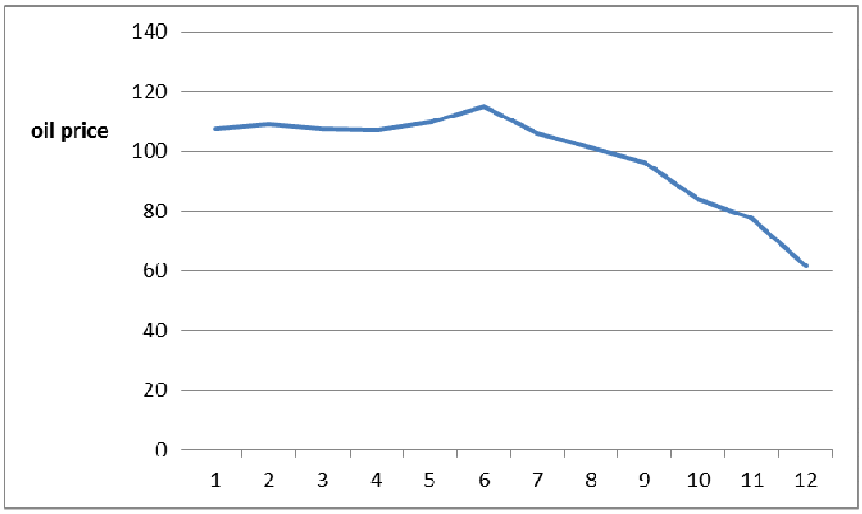


Fig (6) show swings fuel price in 2014 by Brent Market

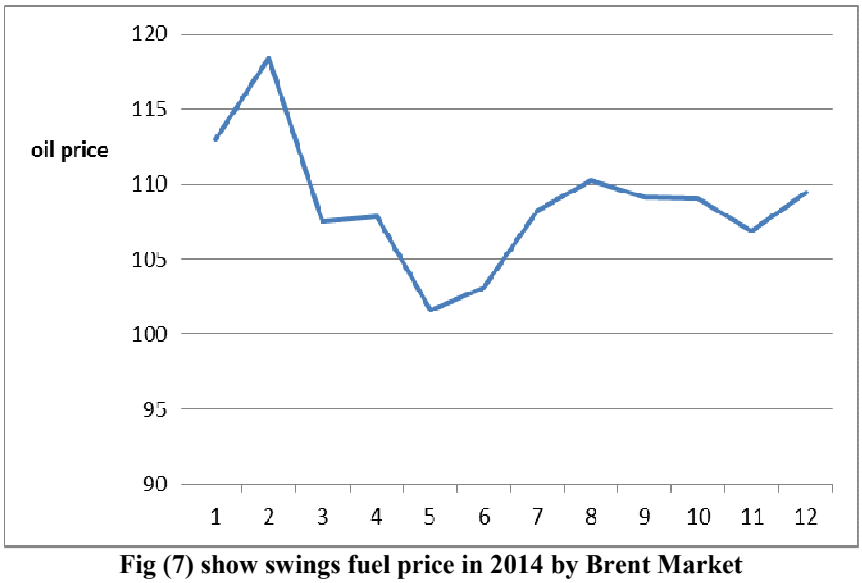


Fig (7) show swings fuel price in 2014 by Brent Market

5.1 Search results

The finding in this examine that four airplane companies listed in stock exchange in china period 2014 -2 using ten days each company for both the evaluate actual return and model market by observation (280). When we test a sample (airlines listed in stock) there is evaluate return in fluctuation on oil price. This results about our study by the significant statistically to analyze and take decision by aviation risk management. Table (2) and Table (3) show the result of this study:

Table (3) show result *T.test* and *EAR*

Code No	Airline	*T.test*	*EAR*
600029	Southern airline	0.555	2.52*
600115	Eastern airline	0.458	5.05**
600221	Hainan airline	0.397	10.11***
601111	air China	0.358	2.52*

***significant at 1.00level, **significant at 5.00 level, ***significant at10.00 levels**

Table (3) shows us the obtained of the use of financial statistical pattern. Southern airline company hasT. test at 0.555, ARE at 2.52 significant* While Eastern company recorded Statistical figures when T.test at 0.458 degree and ARE at5.05significant** Hainan airline added the data base t .test at 0.397, EAR at 10.11significant*** in the finally air China has T.test 0.358 and EAR 2.52 significant*. This studied about airplanes companies listed in china at 2014-2 in ten days.

Table (4) show financial statistical airlines company open and close price

Airline	Mean	Var	Stdev	Max	Min [open price]
Southern airline	2.68	0.001	0.038	2.73	2.61
Eastern airline	2.62	0.003	0.062	2.72	2.51
Hainan airline	1.88	0.001	0.03	1.96	1.84
Air China	3.81	0.003	0.05	3.89	3.71

Airline	Mean	Var	Stdev	Max	Min [close price]
Southern airline	2.59	0.001	0.027	2.72	2.63
Eastern airline	2.64	0.003	0.05	2.74	2.54
Hainan airline	1.9	0.001	0.03	1.97	1.85
Air China	3.84	0.002	0.04	3.9	3.74

Table (5) show financial statistical airlines company by F-test, Correl

Airline	F.Test	Correl
Southern airline	* 0.36	* 0.50
Eastern airline	*0.70	*0.86
Hainan airline	** 0.93	* 0.44
Air China	*0.50	* 0.72

***significant at 0.5 level, **significant 1 level**

Testing and examination of financial statements by statistical methods supply data information can be trusted in order to take suitable decisions about the phenomenon study. for example Hainan airline have statistical results as follows: The arithmetic mean of the opening price 1.88 and the price of closing 1.9, standard deviation of 0.03 at a price of Conquest and The closing price was 0.300 While the company recorded the highest price opened at 1.96 and closed at the price of 1.97 additive for the lowest open price at 1, 84 and less closing price at 1.85. As well as the F-test at a level of 0.93 and the Correl at a level of 0.44 .by through these tests a rate of return and correlation coefficient integrated database to be there in order to take decision uniquely.

5.3 Hedging affecting the stock

Airline stocks affected by different variables as in other listed companies in the stock market, whether financial factors, social or other factors. It is important in our study is the effect of fuel prices on the shares of Chinese airlines listed.

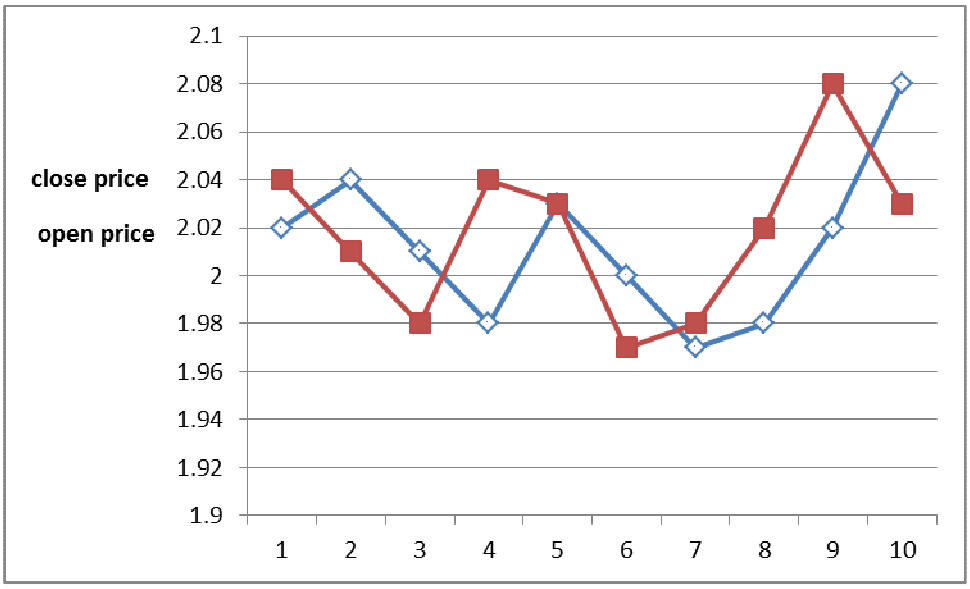


Fig (7) show the price shareholders of Hainan in2013

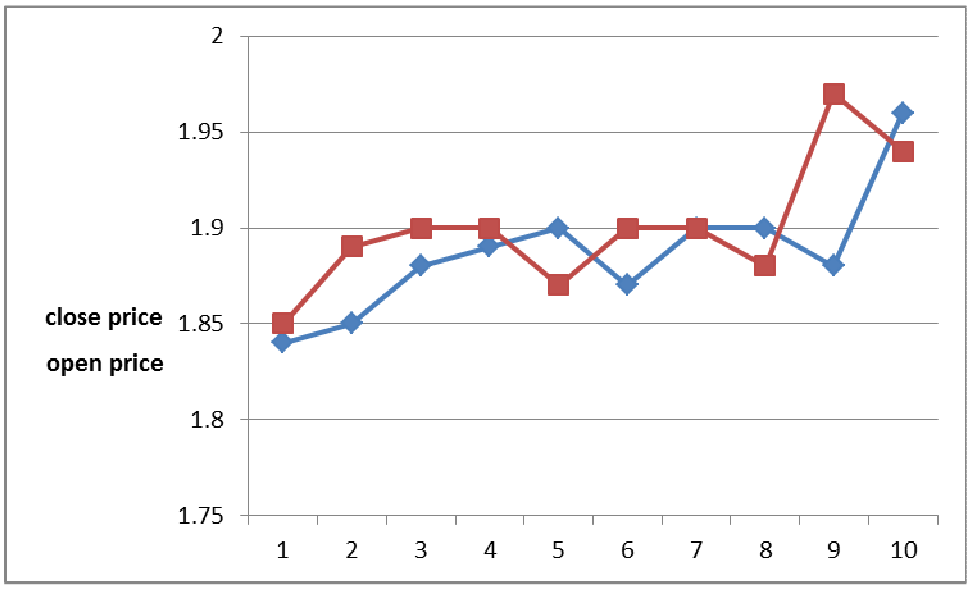


Fig (8) show the price shareholders of Hainan in 2014

When considering in the Hainan Airways. This company's shares prices in the first different periods in 2013-7 ten days observer and the second in 2014-2 ten days also. We Note that the stock prices at the beginning of the month of July have been recorded at the opening price of 2.02 and 2.04, while the price of the company's prices were in 2014 at the beginning of February at a price of 1.84 opening and closing price of 1.85. After studying the reasons for the low stock prices turned out to be one of the factors are instrumental to the loss value 0.18 Yuan to the opening price and 0.19 to The price of closing is the survival of high fuel prices, fuel prices were recorded in July of 2013 at $ 108.23 per barrel and the price of 108.98 in the month of February of the year 2014 per barrel. This rise made investors reluctant to invest in airline stocks for fear of losses as a result of the achievement of this rise in fuel prices, which requires at risk Aviation Administration follow-up hedge reserve of high fuel prices.

While shares of Southern Airlines prices recorded in the same time period at 2.83 to the price of the opening in the seventh month of 2013, in addition to the closure rate at 2.82 at the beginning of the month of February of 2014 was the same airline prices at 2.61 opening price and at 2.63 is the closing price. Shanghai market analysis on the airline listed note down stock prices and why several factors, including swings in fuel prices in the world markets and could be an influential factor on the result of business.

Fig (9) and Fig (10) shows the swing share prices Southern Company for the period in 2013 and 2014 respectively.

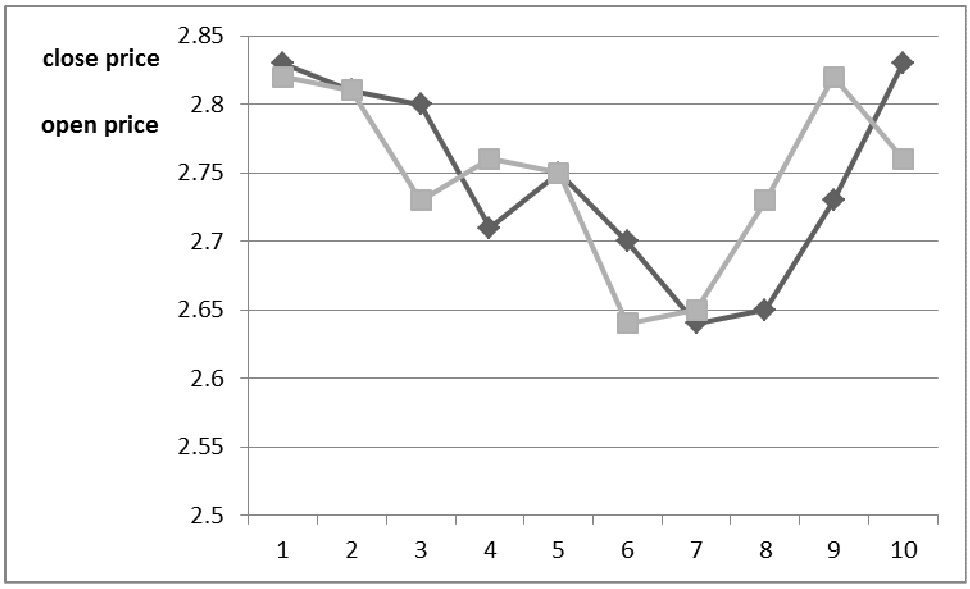


Fig (9) show the price shareholders of Southern in 2013

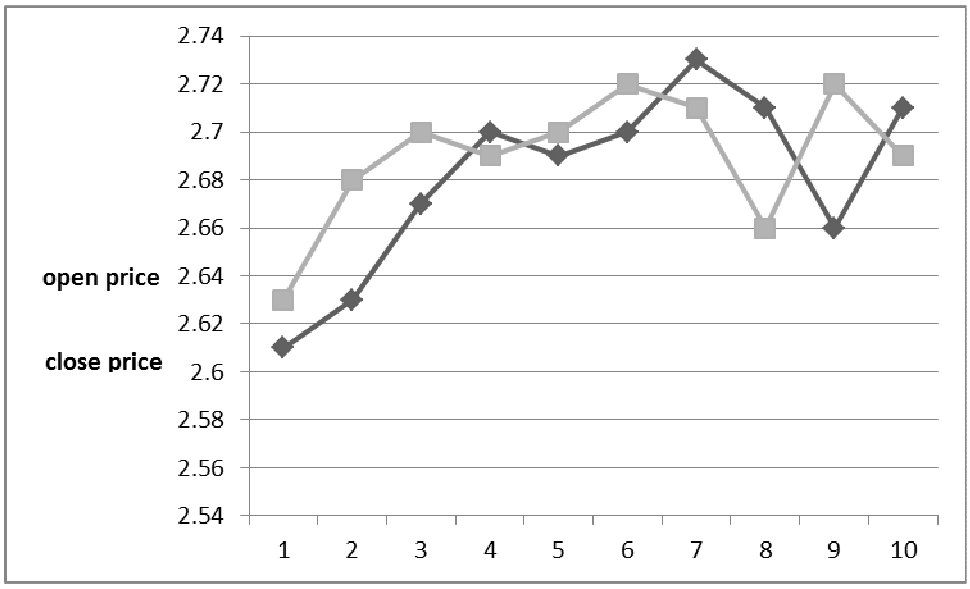


Fig (10) show the price shareholders of Southern in 2014

We are continuing to analyze the prices of airline stocks in Shanghai and market shares show the Eastern Airways prices as follows: Open price of 2.57 and the closing price at 2.57 in July of 2013 while he was the opening price in the month of February of 2014 at 2.51 price and close price at 2.57 respectively. In this case we see the swing is not that significantly and the reason for this is the Eastern airline that publishes financial of positive data. But the fear of swings in fuel prices is still present

Fig (11), Fig (12) shows the shares of the Eastern company for 2013 in month of July and 2014 in month of February respectively.

Fig (11) show the price shareholders of Eastern in 2013

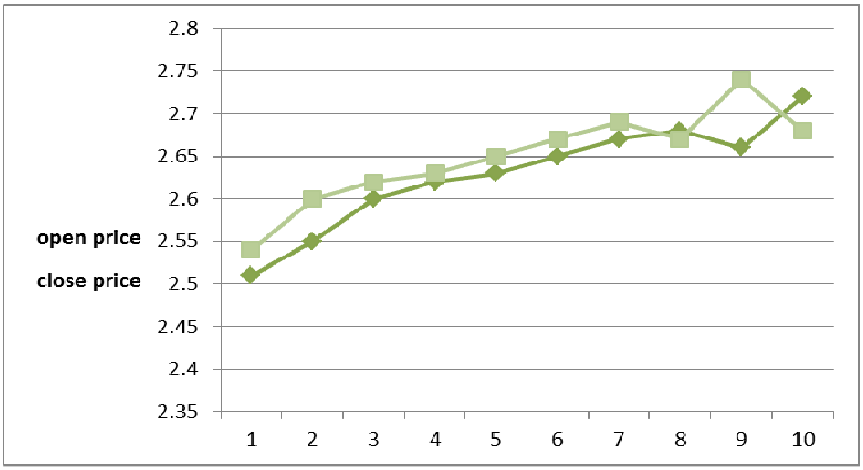


Fig (12) show the price shareholders of Eastern in 2014

Finally Air China shareholders prices in July of 2013 in the opening price at 2.51 and 2.54 in the closing price, on the other hand share prices in the month of February 2014 it was recorded at 3.71 in the opening price and the closing price at 3.74 . When a financial analysis of the Air China we note down the share prices despite enhance to earnings and financial position but the main reason for the decline of high fuel prices in that period, which is a fears among shareholders and owners . Fig 13 shows the swing shareholders price of Air China Company in the month of July 2013 and Fig 14 in the month of February 2014.

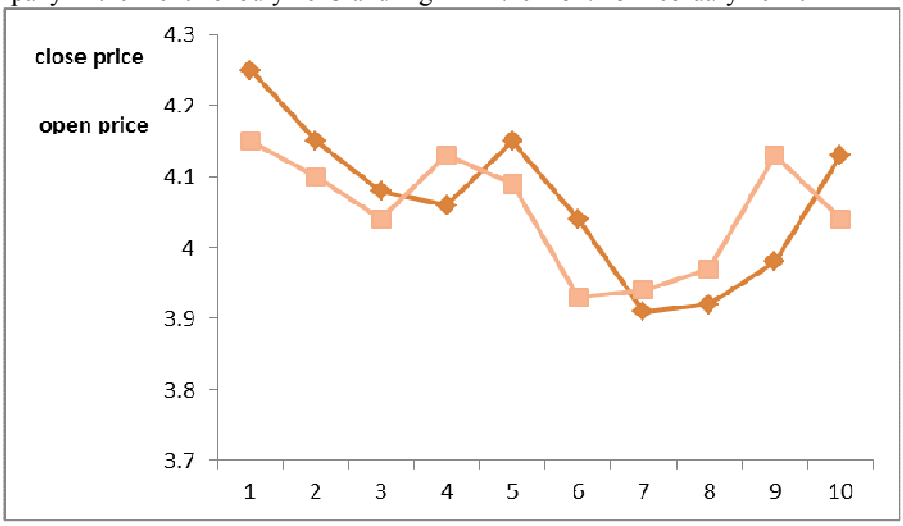


Fig (13) show the price shareholders of Air China in 2013

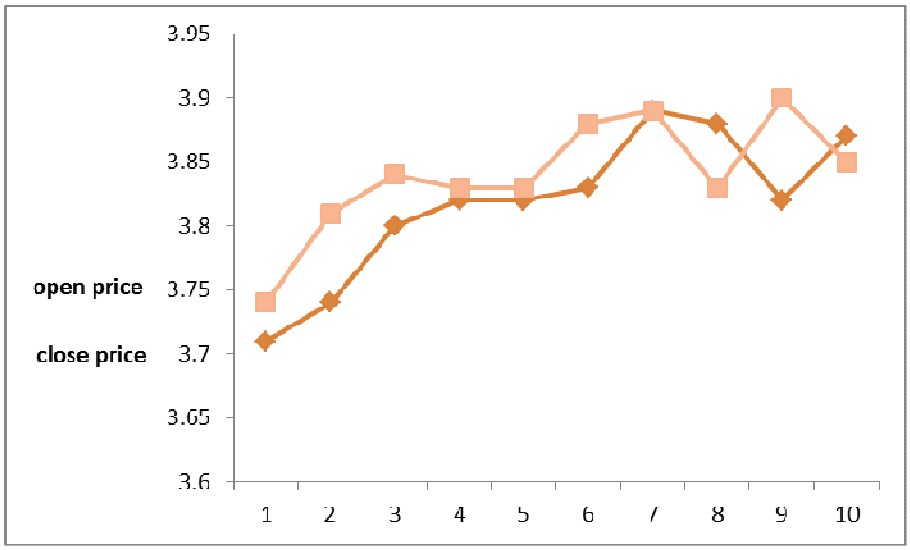


Fig (14) show the price shareholders of Air China in 2014

6. Conclusion

In big country in the world like china. Airline company carriers, have an important loss for 2008 after bad fuel price upset reached to those of 6.2 billion Yuan. Airline company faced cash loss from fuel price was $14.15 million in 2008 in actually. These firms are facing a broad crisis industry. It is expected that the firms of airlines Company will pain important operating losses in the second half of 2008. The government of china is paid about 7 million Yuan into the airline carrier and other carriers, to aid them through the crisis.

In this financial crisis Is thrown important question is that hedge titled large or small to airlines. Aviation Cost Risk management provide a unique model allowing for a main test the value of shareholders in fluctuation price oil and reflection that on airlines stock holders risk management using the hedging that an expect the implications of rise or low jet fuel prices related with cash flows, and finance is positively correlated to the level of costs jet fuel in this kind of industry the reason for that costs expensive operating jet fuel have a huge part of expensive operate airplanes company . The hedge provides a chance to buy assets through finance in low price of oil. This paper provides a pattern that allows to shape a further information to opinion around stock holders of value earring by hedging and education. The big companies have better status to purchase assets more than small airlines.

Aviation risk management by hedging purchases airline fuel allows these companies a fund to administer a good of resources in cash flows in future. we explain in this paper by hedging the shareholders' value and resource investment are boosted, that means the owners and investors have more value in airlines where they anticipate the hedging to defend to financial of investor in hard times with efficiency on the other hand often the price of fuel increases agree with suffering with airline industry. Hedging supply an extra source of money for acquisitions and purchase through these times.

In our analysis of airlines companies listed in china is a necessary to find that firm shareholders value is positively by hedging to avoid large loss financial and Spare the Chinese government pay huge amounts of money to save the airline, as happened in 2008 and paid more than 6 billion Yuan it could be used in other aspect development

We know that airlines don't have magical tool to increase value by hedge. but the airlines optimally select magnitude of fuel hedged well be an appropriate to reflect value of companies to achieve the goals and benefit from hedging. as well as the hedging reserve show the airlines with wide ability to expand and enhanced investment in important projects and economical provide great jobs that correlate with socially and profitable.

Finally the airlines in china must select an optimal hedging reserve that reflect the value airlines and attracting factor investors and invested companies.

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