Global financial crisis: aviation industry impact

Abstract

The basic aim behind to conduct a research analysis on the affects of the global financial crisis with specific to the aviation industry. The research will help to actually analyze the after affects of the financial crisis. As we all know that aviation is one of the most important pillars of the global economy of the world. And also this sector provides millions of jobs globally and contributed heavily in the global GDP. This sector is also the most important and the most efficient mode of transportation. It provides the transportation services all over the world. So as the global financial crisis which was born due to the failure of the major financial institutions caused the drastic impacts on the world economy. And as the aviation is the important part it also got affected heavily by the crisis. Due to which this aviation sector which is one the fastest growing industry has to face negative growth rate. Also the aviation sector has to face huge losses. Some aviation companies was able to bare such huge losses but there is a big number of those aviation companies who do have capacity to bare such huge losses so they go bankrupt after the global financial crisis.

CHAPTER 1: Introduction

Introduction

1. 1 Overview

The global financial crisis was triggered in 2007 – 8 mainly in developed countries like United States of America. After that the crisis entered in the European countries and after a few days the crisis just take the whole of the world under its impact. Almost all of the countries in the world got affected

by this financial crisis directly or indirectly. This financial crisis was born due to the failure of the major financial institution of these developed countries. These financial institutions include banks like Lehman Brothers, Bear Steams and etc. These main financial institutions of the United States are the main reason behind the financial crisis. Te global financial crisis caused impacts on almost each and every industry of the world. The key businesses which were showing good positions and were experiencing good growth experienced negative growth because of the financial crisis. Also the consumer wealth faces the billions of dollars loss due to the financial crisis. That is why this global Financial Crisis is thought to be the worst financial crisis after the great Depression of twentieth century.

The main reason behind the failure of the financial institutions was the artificial bubble of the housing sector of U. S. A. This artificial bubble got height in 2006 and suddenly it burst in year 2007 – 8 and caused the values of the securities which were tied to the Americas real estate to massive decline. This caused the miss balance in the financial institutions of U. S. A as around 50% of their advances were given on the housing sector. As the value of the real estate falls and so do the financial institutions. And as result of which these financial institutions has bare losses of around $2. 3 trillion. This is also the main reason that the most strongest financial institutions go bankrupt after baring such huge losses.

As aviation is one of the most important pillars of the global economy of the world. And also this sector provides millions of jobs globally and contributed heavily in the global GDP. This sector is also the most important and the most efficient mode of transportation. It provides the transportation services

all over the world. So as the global financial crisis which was born due to the failure of the major financial institutions caused the drastic impacts on the world economy. And as the aviation is the important part it also got affected heavily by the crisis. Due to which this aviation sector which is one the fastest growing industry has to face negative growth rate. . Also the aviation sector has to face huge losses. Some aviation companies was able to bare such huge losses but there is a big number of those aviation companies who do have capacity to bare such huge losses so they go bankrupt after the global financial crisis.

1. 2 Background Information

The global financial crisis hit the world economy in 2008 and left drastic affects on the world economy, especially the growing industries. The crisis arose first in U. S. A and Europe due to the failures of the main financial institutions. This failure of some financial institutions, lead to the biggest financial crisis after the great depression. The main reason behind the failure of the financial institutions was the artificial bubble of the housing sector of U. S. A. This artificial bubble got height in 2006 and suddenly it burst in year 2007 – 8 and caused the values of the securities which were tied to the Americas real estate to massive decline. This caused the miss balance in the financial institutions of U. S. A as around 50% of their advances were given on the housing sector. As the value of the real estate falls and so do the financial institutions. And as result of which these financial institutions has bare losses of around $2. 3 trillion. This is also the main reason that the most strongest financial institutions go bankrupt after baring such huge losses.

Impact on Aviation sector

As the global economy was disturbed due to this financial crisis of 2008 so Aviation being as one of the main pillars of global economy, it also got affected. As aviation is the main source of transportation throughout the world. The crisis had deeply struck this growing industry. Due to global financial crisis the aviation industry had experienced the negative growth. The impact of the crisis was so huge that a big number of airline companies go bankrupt and those who survived still had to face huge losses.

Importance With Respect To The World

The global financial crisis is of great importance to the global economy as it has caused drastic impacts on the global economy. Most of the economies of the developed nations are heavily affected by the crisis. It causes the negative impact on almost all of the global businesses. The global financial crisis, brewing for a while, really started to show its effects in the middle of 2007 and into 2008. Around the world stock markets have fallen, large financial institutions have collapsed or been bought out, and governments in even the wealthiest nations have had to come up with rescue packages to bail out their financial system

The aviation throughout the world faces the losses in their revenue because of the increasing oil prices and the global financial crisis. Many of the small airlines as well as some big airlines companies go bankrupt.

Importance With Respect To Pakistan

The Pakistani economy is not as badly affected as that of other countries by the global recession of 2007-2008. The global financial crisis that hit the

world very severely has not left many impacts on the economy of Pakistan. Just as the economy has remained safe from getting adverse impacts, the Pakistan International Airline has not been affected that badly either. However, the year 2008 failed to bring any crucial improvements in the overall and financial performance of Pakistan International Airlines. The conundrums, the issues and the problems of the previous year's remained and hindered the progress. These similar problems led to further loss and at the end, the company had to bear a higher net loss than the previous year. A short study of the year 2007 shows that during that year, the company went through several unpleasant experiences. It had to face a number of financial, marketing and operational problems. Operating restrictions which were imposed by the European Union during the first few months of the year, led to great disruption in the Pakistan International Airlines' schedules and also caused great curtailment in the capacity.

During all this, the Pakistan International Airline lost market share. This made the conditions even more difficult for the Pakistan International Airlines. The tremendous increase in the oil prices, which had never been seen before, put adverse effects on the PIA's bottom line. PIA was left with no other choice but to bear the load and burden of paying for the expensive fuel. Moreover, the increase in the salaries if certain categories of personnel and depreciation of the rupee towards the end of the year, both aggravated the situation.

1. 4 Research Question

There are many reasons that I have chosen this topic of Impact assessment of global financial crisi on the aviation industry. First of all since child the air

planes really used to fascinate. It was my dream to become a pilot but I couldn't make to that. But I want to join aviation sector after my studies as I am trying to get admission in Emirates School of Aviation to do MBA in aviation management. That is why I have chosen this specific topic to do research. I think that I have find and learn a lot of new things, facts and figures about aviation industry. So I really want to know about the ups and down in aviation sector.

The scope of the research is basically to focus on how the global financial crisis has cause impacts on aviation industry or how GFC has affected the aviation sector specifically. And also to analyze different factors involve in affecting this fastest growing sector of the world.

Bay basic Research Question is " How the global financial crisis has cause impact on AVIATION INDUSTRY."

CHAPTER 2: Literature Review

Literature Review

The literature review will focus on the issues and the reasons that how the Global financial Crisis has affected the Aviation Industry as a whole, it will mainly be focusing on the different factors involved that affect the aviation.

1

Peter Morrell in his articles " Can long – haul low – cost Airlines be successful" talks about low cost airlines. Author says an important task is to determine if LCC business model which is largely short haul can work over long haul sectors or not. This paper examines the advantages of LCC's

including the cost and it also appraises how far they can be applied to long haul sectors. The author says that it is seen that the cost advantages might be much lower than approximately 50-60% on short hauls. He also says that the factors such as the implementation and acceptance of some LCC features by network airlines and their anticipated response, the limited potential for market stimulation, the need for dense markets and feed traffic all cast doubt on the prevailing establishment of the business model for long-haul fights.

2

Jacob Denaro in his article " Aviation" says that due to the world's energy crisis, there has been as increase in the cost of fuel which has affected U. S. international air carriers adversely. According to the author, the cost of fuel on international air routes increased up to three times than that of domestic jet fuel because it was not under the influence of federal price controls. This aroused the need for subsidies to cover these high fuel bills since Nov, 1973. The airlines position was approved by the Chairman of the Civil Aeronautics Board. While the issue stayed unsettled, Pan Am asked the Board for the right to arbitrate the consolidation of trans-Atlantic services on the basis that the rapidly increasing fuel prices had plunged it into a financial crisis. Pan Am also asked for the permission to discuss with TWA the possible consolidation of operations, coordinated services and sharing of revenues on trans-Atlantic routes. TWA approved of his position before the Board and filed a petition of its own. The Justice Department stated that the proposition would decrease competition and would prove to be detrimental to the public. The Department's Anti-Trust Division mentioned that pooling would not

make the financial impact of the fuel situation any less acute, international air travelers are provided better sevice because of the system of competition which is there, and that the pooling arrangements decrease the incentives to provide both economical and efficient services. These and some other reasons were behind the opposition to the airlines' request.

3

Dr. Geraint Harvey & Professor Turnbull in their report " The Impact of the Financial Crisis on Labor of the Civil Aviation Industry " say that civil Aviation is an important and indispensable part of the world economy. It affects activities from every sphere of life and provides employment to a great number of people. This industry provides 31. 9 million jobs all around the world. At first, the industry suffered greatly at the hands of the attacks of Sept11, 2001 and is now adversely affected because of the global financial crisis. The financial crisis hit the employment in the airline industry as many people have lost their jobs. Managerial authorities believe that it may take years to restore the industry to its normal condition. The study discusses the ways in which the job losses have been taken care of or dealt with.

4

Novie John & Prof. Peter Jones in their article " The Impact of Economic Downturn in the Flight Catering Industry" say that the number of air passengers has greatly decreased which has led to different flights being cancelled. Customers have turned to more economical and cheaper alternatives. So, different companies are compelled to lessen the fares while providing the same standard services. Buying approach has changed. People

now try to find cheaper alternatives and solutions. Some people say that all the sectors are equally affected by the present recession. The number of the business class passengers has reduced which has left a great impact on the scheduled airlines. Effects are felt differently of the current recession in the different parts of the world. American economy and the European economy have suffered the most in the recent crisis. Many people believe that the impact of the crisis will only remain for a short time whereas some believe that it may take as long as 5 years.

5

Markus Franke and Florian John in their article " What Comes Next After Recession? Airline Industry Scenarios and Potential End Games" say that the economic crisis of 2008 has proved to be more severe than that of 2001/2003. Airlines tried their best to minimize their operating costs and operating expenses but still they failed to bypass the effects of the global recession. Also, the process of recovery in profits has been very slow in various airlines.

Although a decrease in demand was expected, the crisis caused many other effects that were not expected by any of the experts. During the recession of 2008, the fuel prices rose dramatically which reduced the profits extensively. This recession led to a huge decline in the demand for air travel. Most airlines around the world reacted immediately in 2008 as they reduced their capacity in the short run. And also many of the small airlines have to close down their operations and also go bankrupt as well.

6

Muhammad Usman in his article " Global Financial Crisis: Its Impact On Developing Countries And Lessons For Pakistan" says that the recession of 2008 was the worst financial crisis ever experienced after the Great Depression of 1930s. This financial crisis arose due to the failure of the major financial institutions of the United States of America including the leading banks like Lehman Brothers. The impact of this financial crisis also caused drastic impacts on the European economy resulting in the downward trends in the stock exchange and also a significant impact on the value of different subprime mortgages at the same time. The recent financial crisis also caused negative impacts on the world economy as a whole. Almost each and every aspect of the global economy got affected by the financial crisis. Economy of Pakistan being part of the global economy also got affected by the global financial crisis. But as Pakistani economy is already facing so many problems do get that much affected by the financial crisis.

7

A Google Book " Aviation Industry Performance" says that the aviation industry had to face many challenges during the year 2008. Many passengers even changed their preferences and demands which worsened the condition. Operating costs also increased due to increase in the fuel prices. Both , the increase in oil prices and the recession led to service terminations and many bankruptcies.

After the recession of 2008, different companies took steps to cope with the situation. They achieved the target of improving the economic conditions by cutting costs and increasing the fares. The number of domestic scheduled

flights was reduced. The airlines that used small air craft's were forced to eradicate them or minimize their number. Soon, reduction in the number of scheduled flights was seen and the companies reduced the fares to increase the demand until new capacity cuts were introduced.

(Elizabeth Tinoco director ILO Sectoral Activities Department) Aviation industry supports 31. 9 million jobs globally.

Markus Frank and Florian John (2010). Before financial crisis Aviation industry had an annual growth rate of 7 % to 9%.

Markus Frank and Florian John (2010). In Oil Crisis of 1979-80 and Asian Financial Crisis the Aviation industry grew at least 2% annually.

Markus Frank and Florian John (2010). Only three times the Aviation industry have seen the negative growth.

Neil Dias Karunaratne (2009) Global financial Crisis deeply effect the Aviation Industry.

Markus Frank and Florian John (2010). Drop of 6. 1%of overall air traffic was recorded in 2009

CHAPTER 3: Methodology

Methodology

The topic of my research is " Impact Assessment Of Global Financial Crisis On Aviation Industry". The methodology will tell us as to what models to apply and on the basis of that results will be formulated and interpreted and the most affecting variable will be verified.

Research Type:

The type of research which I will be conducting is quantitative in nature. As the data of my research is mainly secondary and mostly it's in numbers so qualitative does not suite my research topic. As there are lots of numeric data involved in my research so I have to run different statistical models which are only possible in quantitative type of research.

Data Type and Research Period:

Data used in my research will be secondary in nature. The data could in form of time series data gathered from various databases. The reference period of data used in my research is of five years ranging from 2005 to 2009.

Sources of Data:

Data for my research will be most likely taken from several databases and related websites. The major sources of data collection are the reports, working papers and actual facts of Air Carrier Traffic Statistics, IATA, WDI, ILO, JSTOR etc. data of oil prices will be taken from OPEC web site. Data on tourism will be taken from WDI and data on GDP will also be taken from WDI and different economic surveys. Data on unemployment, less travel demand and couriers will also be gathered.

Theoretical Framework

Operational Definitions:

Aviation: means science and technology of flight through air i. e. airlines

9/11: attack on the world trade centre.

GFC: Global Financial Crisis.

SARS: Severe Acute Respiratory Syndrome.

GDP: Gross Domestic Product.

Financial Markets: is a mechanism that allows people to buy and sell (trade) financial securities (stocks and bonds), commodities (precious metals) and other fungible items of value at low transaction cost.

Asian financial crisis: The Asian Financial Crisis was a period of financial crisis that gripped much of Asia beginning in July 1997, and raised fears of a worldwide economic meltdown due to financial contagion.

RPK: Revenue Passenger kilometer (RPK) is a measure of a passenger traffic for an airline flight, bus, or train calculated by multiplying the total number of revenue-paying passengers aboard the vehicle by the distance traveled measured in miles

Techniques:

The technique to be carried out for research will be Regression analysis. Regression analysis is a statistical technique which is used to determine the relationships between variables. It involves modeling and analyzing variables relationships between one dependent variable and several independent variables.

Data Analysis:

The statistical software's to be employed for research purpose are Minitab, Statgraphics and EViews. Regression for each variable will be run. The research will also use graphs and tables for illustration.

RESEARCH HYPOTHESIS

H0: Global Financial Crisis has not cause significant impacts on Aviation Industry.

HA: Global Financial Crisis cause significant impacts on Aviation Industry.

H0: Crude Oil Prices has not significant effect on Aviation Industry.

HA: Crude Oil Prices have significant effect on Aviation Industry.

H0: GDP growth has not significant effect on Aviation Industry.

HA: GDP growth has any significant effect on Aviation Industry.

H0: Inflation rate has not significant effect on Aviation Industry.

HA: Inflation rate have any significant effect on Aviation Industry.

H0: Unemployment rate has not significant effect on Aviation Industry.

HA: Unemployment rate have any significant effect on Aviation Industry.

CHAPTER 4: Results and Analysis

Results and Analysis

RESULTS

Multiple Regression Analysis

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Dependent variable: Registered Carrier Departures

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Standard T

Parameter Estimate Error Statistic P-Value

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CONSTANT 1. 17957E7 1. 17689E6 10. 0227 0. 0000

Crude Oil Prices 36212. 5 6652. 45 5. 44348 0. 0001

GDP Growth % -50451. 8 93127. 7 -0. 541749 0. 5959

Inflation annual % -541064. 0 104745. 0 -5. 16555 0. 0001

Unemployment % -547932. 0 133271. 0 -4. 11141 0. 0009

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Analysis of Variance

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Source Sum of Squares Df Mean Square F-Ratio P-Value

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Model 2. 10578E13 4 5. 26444E12 22. 98 0. 000

Residual 3. 4357E12 15 2. 29047E11

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Total (Corr.) 2. 44935E13 19

R-squared = 85. 973 percent

R-squared (adjusted for d. f.) = 82. 2325 percent

Standard Error of Est. = 478588. 0

Mean absolute error = 323221. 0

Durbin-Watson statistic = 1. 67531

The StatAdvisor

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The output shows the results of fitting a multiple linear regression model to describe the relationship between Registered Carrier Departures and 4 independent variables. The equation of the fitted model is

Registered Carrier Departures = 1. 17957E7 – 50451. 8*GDP Growth % - 541064. 0*Inflation – 36212. 5*Oil Prices – 547932. 0*Unemployment %

Since the P-value in the ANOVA table is less than 0. 01, there is a statistically significant relationship between the variables at the 99% confidence level.

The R-Squared statistic indicates that the model as fitted explains 85. 973% of the variability in Registered Carrier Departures. The adjusted R-squared statistic, which is more suitable for comparing models with different numbers of independent variables, is 82. 2325%. The standard error of the estimate shows the standard deviation of the residuals to be 478588. 0. This value can be used to construct prediction limits for new observations by selecting the Reports option from the text menu. The mean absolute error (MAE) of 323221. 0 is the average value of the residuals. The Durbin-Watson (DW) statistic tests the residuals to determine if there is any significant correlation

based on the order in which they occur in your data file. Since the DW value is greater than 1. 4, there is probably not any serious autocorrelation in the residuals.

In determining whether the model can be simplified, notice that the highest P-value on the independent variables is 0. 5959, belonging to unemployment. Since the P-value is greater or equal to 0. 10, that term is not statistically significant at the 90% or higher confidence level. Consequently, you should consider removing GDP Growth % from the model.

Regression Analysis

Crude Oil Prices:

H0: $\beta \geq 0$

HA: $\beta \leq 0$

$\hat{\alpha} = 0.\ 01,$

Ç€test statÇ€ > tc

tc = 2. 539

t-stat= 5. 4438 > 2. 539

Sign of t-stat is not the same as expected.

We do not reject Ho as the coefficient of the crude oil prices is not coming out to be significant at 1% level of significance.

GDP Growth %:

H0: $\beta \leq 0$

HA: $\beta \geq 0$

$\hat{\alpha} = 0.01$

tc = 2.539

"test stat" < tc

"0.541749" < 2.539

Sign of GDP Growth % is not the same as expected.

We do not reject H0, as the GDP Growth is not coming out to be significant at 1% level of significance.

Inflation %

H0: $\beta \geq 0$

HA: $\beta \leq 0$

$\hat{\alpha} = 0.01$

tc = 2.539

"test stat" > tc

"-5.16555" > 2.539

Sign of tstat is the same as the expected sign of HA

We reject H0, as annual inflation is coming out to be significant at 1 % level of signifance.

Unemployment

H0: $\beta \geq 0$

HA: β ≠ 0

α = 0. 01

tc = 2. 539

¢€test stat¢€ > tc

¢€-4. 11141¢€ > 2. 539

Sign of tstat is the same as the expected sign of HA

We reject H0 as unemployment rate % is coming out to be significant at 1 % level.

Interpretation of the Variables:

The no of registered carrier departure will be equal to 11795000, if all other independent variables are equal to zero.

The Coefficient of the crude oil prices is coming to be positive, which is not true. This could be because of some unobserved factors that are causing positive biasness in crude oil prices variable.

Crude Oil

If crude oil prices will increase by $1 then the number registered carrier departures will increase by 36212. 5, keeping all other variables constant.

GDP growth %

If GDP growth will go up by 1%, the no. of registered carrier departure will decrease by 504. 518 departures, keeping all other variables constant.

Inflation %

If the inflation in the US economy will increase by 1%, then the number of registered carrier departures will decrease by 5410. 64 number of flights, keeping all other variables constant.

Unemployment rate %

If the unemployment rate in the us economy will increase by 1 % the registered carrier will decrease by 5479. 32 number of flights, keeping all other variables constant.

R square

The simpler commonly used measure of fit is the coefficient of determination, R2. The coefficient of determination is explained sum of squares to the total sum of squares.

R2=

The higher the R2, the closer the closer the estimated regression equation fits the sample data. Measures of this type are called " goodness of fit" measures. The goodness of fit explains the variation of Y around Å¶.

R-squared = 85. 973 percent

R-squared (adjusted for d. f.) = 82. 2325 percent

The R-squares of this regression is 85. 973 percent which is really good.

Conclusion

The global financial crisis was triggered in 2007 – 8 mainly in developed countries like United States of America. After that the crisis entered in the

European countries and after a few days the crisis just take the whole of the world under its impact. Almost all of the countries in the world got affected by this financial crisis directly or indirectly. This financial crisis was born due to the failure of the major financial institution of these developed countries. These financial institutions include banks like Lehman Brothers, Bear Steams and etc. These main financial institutions of the United States are the main reason behind the financial crisis. Te global financial crisis caused impacts on almost each and every industry of the world. The key businesses which were showing good positions and were experiencing good growth experienced negative growth because of the financial crisis. Also the consumer wealth faces the billions of dollars loss due to the financial crisis. That is why this global Financial Crisis is thought to be the worst financial crisis after the great Depression of twentieth century.

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