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A Comparative and Competitive Analysis of the Virgin Blue Business Model

A dissertation submitted in partial fulfilment of the requirements
for the Degree of Master of Professional Studies in Transport
Management

At

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by

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ABSTRACT

Abstract of a Dissertation submitted in partial fulfilment of the requirements for the Degree of M. Prof. Studs in Transport Management

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by

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Many papers have been written which investigate and compare individual specific airline performance measurement criteria. Few, if any, combine a number of these criteria simultaneously across a number of airlines. Such an approach is required of the management teams and Board members when making important strategic decisions which directly effect the airline's success in the future. The author has a specific interest in developing a long term resource based competitive strategy for Virgin Blue.

Such an undertaking is a huge task and it is very difficult to capture an instant snap shot across a number of airlines simultaneously. Each airline's operations are continuously changing in order to react to changes in the market place. The author has attempted to limit the depth of investigation across the various measurement criteria due to the size of the task. Resulting from this approach is a possible framework from which further investigation and comparative analysis can be staged in a controlled manner.

Due to the time taken to investigate the various criteria, not all of the dates align with each other but they are considered to be satisfactory to be used as a high level comparison. The airline industry moves and changes so quickly.

Air New Zealand and Qantas have been selected because they are both in direct competition with Virgin Blue. Easy Jet, otherwise known and registered under the trade name 'easyJet', has been selected because it is a very successful low cost airline and its website gives the perception that it operates the complete door to door supply chain. The successful Easy Jet low cost business model serves as a good baseline from which to measure the performance of the Virgin Blue airline. The four airlines have been evaluated using select criteria and then compared with each other. The hope was that both successful and unsuccessful strategic trends would appear during the comparative process.

The comparative analysis has highlighted significant trends in the airline networks, financial management and business strategies. Virgin Blue can use these trends to help develop its long term resource based competitive strategy. The two national airlines, Air New Zealand and Qantas, have ageing average fleet ages which could prove to have a book value which is somewhat higher than the actual market value. Virgin Blue has a younger average fleet age but needs to plan to replace its older aircraft if it wishes to maintain its current winning image.

Unlike Air New Zealand and Qantas, Virgin Blue competes on the majority of its point to point sectors whilst Air New Zealand remains relatively unchallenged in the New Zealand domestic sectors. If Virgin Blue was to compete in the domestic market with smaller aircraft then the effect on Air New Zealand and the New Zealand economy could be devastating as the frequent services, previously offered by the national carrier, could be lost. The New Zealand Government may feel obliged to step in and protect the frequent services which support the national businesses. Virgin Blue could be left in an over committed position.

There is no single financial tool which measures the potential success of an airline. What is clear is that share values are not a good measure of a young low cost airline. Financial leverage figures for the larger mature flagship airlines can be misleading. Dividends paid, capital reinvestment and the issue of new shares to raise capital can create a misleading perception of an airline's health.

The airline industry is a high investment and high risk business in which the maximum returns are made by flying aircraft as effectively and efficiently as possible. The concept of owning and operating a complete door to door supply chain could be perceived as a less efficient use of resources. Like the mature flagship airlines, a low cost airline which has almost exhausted its growth options can look to operate its own support services. An airline would need to own and operate its own stable main hub airport facility if it was to have a sensible chance of owning and managing the entire door to door supply chain. Both Ryanair and Richard Branson have shown interest in this area of potential growth.

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LIST OF ABBREVIATIONS

ARC	Accounting Regulatory Committee
ASK	Available Seat Kilometres
ASX	Australian Stock Exchange
CAPM	Capital Asset Pricing Model
DFL	Degree of Financial Leverage
DPS	Dividend Per Share
DRP	Dividend Reinvestment Plan
EBIT	Earnings Before Interest and Tax
EPS	Earnings Per Share
FLM	Financial Leverage Multiplier
IASB	International Accounting Standards Board
IFRS	International Financial Reporting Standards
LSE	London Stock Exchange
NPM	Net Profit Margin
NZX	New Zealand Stock Exchange
OTP	On time performance
ROA	Return on Total Assets
ROE	Return On Common Equity
RPK	Revenue Passenger Kilometres
TA	Total Assets
TAT	Total Asset Turnover
TEAL	Tasman Empire Airways Limited
VBA	Value Based Airline
WACC	Weighted Average Cost of Capital

1. INTRODUCTION

The Author's background of experience is mainly in engineering and project management. At the time of writing this report, the author was the Maintenance Manager for Pacific Tech, part of Virgin Tech in New Zealand. Virgin Tech is the shared engineering service for Virgin Blue's various airlines throughout Australasia. The author's area of responsibility is New Zealand and the Pacific Islands. He has taken this opportunity as he has always been keen to promote a competitive airline in to the New Zealand market. It is a daring move by the Virgin Blue airline, but is proving to be successful under the present strategy.

Whilst writing this report the author had a personal agenda, which was to see the Virgin Blue airline succeed in its new market place and further grow into a well established *Australasian flagship airline*, representing the national flag carrier for both New Zealand and Australia together.

This paper covers a vast and almost unrealistic area and therefore the depth of research has been kept to a minimum. It is intended that this paper could be used as a template for continued and more detailed research into the specific areas of the airline business such as scheduled services, chartered services and freight . Due to the time taken to investigate the various criteria, not all of the dates align with each other but they are considered to be satisfactory to be used as a high level comparison. The airline industry moves and changes so quickly.

This dissertation topic has been made possible by the progressive deregulation of both the national and domestic aviation transport sectors in Australia and New Zealand. The national flag carrier airlines are no longer protected now that their National Governments are focussing more on the economic development of their countries rather than the sustainability of their national airlines. The monopolies once enjoyed by the major national airlines are being dissolved in favour of reducing air fares and increasing the number of potential travellers.

The single aviation market between New Zealand and Australia, first negotiated in 1992 and finally agreed to in 2000, has led to an increase in competition in the Trans-Tasman market and has subsequently made it one of the most competitive routes in global aviation. This relatively recent change has had a major effect on airline competition, market growth, and fare changes, especially since the 'full open skies' agreement came into effect.

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My father John West FCIMA FCIS, with his many years of experience in managerial finance, for spending literally hours reviewing and discussing the financial analysis and its implications with me.

1.2 An Overview

Commercial aviation has grown from the first man controlled flight to the advanced designs and competitive strategies of today in approximately 95 years, less years than some people live in a lifetime. Information Technology is rapidly advancing at a faster rate than ever before with the introduction of nanotechnology and more successful space projects.

The Australasian *low cost* and *flagship* airline strategies are converging. Virgin Blue needs to develop a new long term strategy in order to maintain or increase profitability in the long term future.

The larger 'flagship' airlines, such as Air New Zealand and Qantas, are looking to the 'low cost' carrier role models and incorporating them into their strategies. This proposed change in strategy and the decision by low cost airlines to grow into the long haul market means that the competing airline strategies are converging. This convergence of strategies reduces low cost airlines' competitive advantage.

Air New Zealand's determination to differentiate itself by its 'Ultimate Kiwi Experience' approach and its perceived higher level of performance to the public is not a sustainable long term resource based strategy. Ultimately the end user will always balance the combination of best service and the most competitive price depending on their personal circumstances.

The convergence of the strategies used by 'flagship' and 'low cost' airlines means that sooner rather than later low cost airlines, such as Virgin Blue, need to develop their next new long term sustainable competitive strategies which will give them the long term competitive advantage in the international and domestic markets. In this case Australia and New Zealand are of specific interest. This could mean a paradigm change in the aviation world, especially when other issues such as the forecast peak fuel limitations, the degrading environment and security are also taken into account. This new strategic approach needs to be developed over the next two years if Virgin Blue wish to confidently beat off the effects of Air New Zealand converging on the low cost successful strategy within the same market place.

The identification and effective ownership of the entire supply chain from door to door is of specific interest. This approach has been successfully adopted in the shipping industry and has therefore allowed the supply chain owner to balance the overall costs along the entire supply chain. In addition to this, the supply chain owner attracts a greater number of customers across the network.

The customers benefit from reduced costs as there are no middle men and there is only one supply chain business wanting to make a profit. The customers benefit from this for as long as a monopoly situation does not emerge. Although Air New Zealand does not own the door to door supply chain, it does monopolise the vast majority of the New Zealand domestic market. The story is somewhat different in Australia with several airlines competing for their share of the market place.

If a competing low cost airline was to own the entire door to door supply chain then it too could have the same advantages as the shipping industry and may even potentially move towards a monopoly situation if taken to the extreme. Identifying the complete door to door supply chain and determining if it is a realistic option is the challenge.

1.3 Objectives

To develop the next best strategy to be adopted by the competing low cost airline, Virgin Blue, in the Australasian international and domestic markets by fulfilling the following two objectives:

1. Develop and maintain a flexible company strategy able to move quickly with ever changing circumstances based on a long term and lean resource based competitive strategy.
2. Develop, manage and operate the entire door to door supply chain similar to the strategy which has emerged in the coastal and international shipping industry.

1.4 Structure

Before an airline can develop a competitive strategy, a good understanding of each of the competing airlines operations and circumstances needs to be developed. The *Sections 7 to 10* evaluate and analyse each of the four airlines in alphabetical order and pay specific attention to the following areas:

- Airline business and operations
- Network analysis
- Financial management

The individual airline evaluation and analysis has been accommodated in the later sections of the report in order to allow the reader to make reference to them as and when required.

Section 3 then combines the four evaluations and makes a direct and systematic comparison of the four airlines whilst starting to look for potential performance signals and trends. Conclusions are drawn from the comparative analysis in *Section 5*.

1.5 Selection of Airlines

The selection of the airlines is based on the following criteria:

- Domestic operations

- International operations
- Low cost airlines
- Flagship airlines*
- Geographic location
- Long-haul
- Short-haul

* A flagship airline is an airline which represents its country of origin and is usually commercially protected and subsidised by the Government in order to preserve its status in the market and protect it from a competitive buy out on the stock exchange.

1.6 Selected Airlines

The following airlines have been selected based broadly on geographical location and personal interest. The author is keen to develop an understanding of the Virgin Blue Airline's strategic competitive position and to spring some light on the future opportunities which lie ahead. Having said that, Easy Jet has been selected as it has developed a more flamboyant approach to strategy. The more specific reasons for airline selection are outlined in the following four paragraphs.

Air New Zealand

Air New Zealand is the dominant flagship airline in New Zealand. At present the airline more or less controls the majority of the New Zealand domestic market and is possibly beginning to lose its hold on the main trunk domestic and trans-Tasman routes. The airline also operates on several global international routes.

Easy Jet

The Easy Jet Airline Company Ltd, otherwise known and registered under the trade name 'easyJet', is a relatively young and growing low cost airline which operates in the northern hemisphere well away from the competition from the other chosen airlines. This airline has been selected because it would appear to be a very successful airline and its website gives the impression that the airline is beginning to move towards the concept of total supply chain ownership. The very successful Easy Jet low cost business model serves as a good benchmark with which to compare the Virgin Blue low cost airline.

Qantas

Qantas plays a similar role to Air New Zealand but is based in Australia as the country's flagship airline. Qantas is probably the largest business or group of consolidated businesses out of the selected airlines.

Virgin Blue

The author has a specific interest in the Virgin Blue airline and this is not just because he works as part of the team. Virgin Blue is one low cost airline beginning to directly compete with the two well established flagship airlines, Air New Zealand and Qantas, both on their own home and well established territories. To survive in this ruthless competitive environment requires good planning and a flexible strategy ready to change with little notice. Virgin Blue no longer describes itself as a 'low cost' airline but as the 'New World Carrier'.

The low cost airlines tend to focus on the tourist or recreational travellers whilst the flagship airlines offer frequent daily flights and attempt to cover the entire geographical network within the country of origin. The flagship and low cost airlines often compete in the international arena.

More importantly though, Qantas, Air New Zealand and Virgin Blue are all competing on the Trans-Tasman routes whilst Virgin Blue is competing with both Air New Zealand and Qantas on their respective home based domestic routes. All three airlines are now operating 'long-haul' global flights without directly competing against each other in the majority of cases.

2. AIRLINE EVALUATION METHODOLOGY

The success of an airline is not just reliant on developing and maintaining high passenger numbers or load factors through the development of competitive strategies. The resulting cash flow and revenue has to be carefully and cleverly managed in order to support both the short and long term cleverly raised debt which is then used to raise the capital. In other words, the success of both the business and financial strategies is key to the long term survival of an airline.

The following subsections outline the criteria which are used as a framework to identify and evaluate the business and financial strategies of the selected airlines.

2.1 Business and Operations

Brief descriptions of the airline's history, associated companies, operating fleets and operating networks are given.

2.2 Network Analysis

Using the data provided by the Seabury Airline planning Group (Seabury. 2008), a comparison is made of the airline network capacities, the alliance networks and the network sectors operated by the chosen airlines. The comparison of network sectors pays specific attention to the three competing Australasian airlines, Air New Zealand, Qantas and Virgin Blue.

2.3 Financial Management

The airline industry is extremely competitive, volatile and variable. Airlines adopt many ever changing and different strategic financial models and therefore it is of little value to use benchmarking and cross sectional ratio analysis to evaluate the performance of the company. The adoption of the 'Time Series Analysis' approach as opposed to ratio analysis will provide a more useful picture of the past and current financial trends.

Each country's economic zone and stock exchange has different reporting standards and requirements. In addition to this the company laws and tax laws may differ. No effort has been made to evaluate and compare these differences for this exercise. The information

used has been obtained from the respective Company Financial Reports and the relevant stock exchanges. This needs to be recognised so that the reader is aware of the level of accuracy which can be portrayed by the following high level financial analysis.

Two of the four airlines, Qantas and Virgin Blue, are based in Australia and are controlled by the same regulations. The third airline, Air New Zealand, is subject to similar regulations in New Zealand. Three of the four airlines, Air New Zealand, Qantas and Virgin Blue, are registered on the Australian Stock Exchange (ASX). The fourth airline, Easy Jet is subject to UK regulations but is mainly being compared as a role model from the Northern Hemisphere.

Irrespective of the perceived accuracy of the financial data taken from the Financial Reports, this evaluation process will hopefully assist in the development of an effective comparative analysis technique.

The financial data used to evaluate and compare the airlines has been taken up to and including the financial year 2007. With exception of the share price data, this is all that has been released to enable a financial comparison of the selected airlines at the time the research was carried out. As the author is mainly interested in the long term trend analysis, it is more important to cover a period of approximately five consecutive years. Specific focus is given to the following company attributes:

Profitability of Current Investments

- Operating income made by the airline
- Net income made by the airline
- Company profitability, efficiency and Liquidity Ratios
- Current Ratio Analysis (Liquidity Ratio)
- DuPont System Analysis

The DuPont System Analysis has the following advantages over other well known methods of evaluating a company's financial statements. It allows the company to break its return on equity into:

- *a profit-on-sales component (net profit margin);*
- *an efficiency of asset use (total asset turnover); and*
- *enables the use of the financial leverage component (financial leverage multiplier)*

2.3.1 Risk and Return Analysis

This analysis is based on the Capital Asset Pricing Model (CAPM) which uses historic figures. Sudden spikes and abnormal market conditions may render the results as valueless. Ultimately, the analyst needs to accept that this process measures the past and that experienced 'gut feel' and other economic indicators can easily be of more value.

In order to generate a risk profile, a regression of returns analysis on the company's stock is carried out against the market index using as close to sixty months historic data as is available to date. For this exercise the time period used is fifty-four months from the 8th

December 2003 to 1st May 2008 inclusive. This period was limited to fifty-four months for each of the airlines in order to make a fair comparison with the Virgin Blue stock data which was only available from the 8th December 2003 as it is the youngest airline.

The slope of regression *beta* is calculated using historical data and therefore it should be noted that the past performance of the stock value relative to the market average may not accurately predict the future performance. It should also be noted that *beta* calculated using monthly historic stock values can easily differ from the same period calculated using daily historic stock values.

Standard deviation measures the dispersion around the expected stock value or the likelihood of achieving that expected value. The variance of the stock is higher risk than the variance of the market and the unsystematic (diversifiable) variance is higher risk than the systematic (non-diversifiable) variance. In summary, the higher risk of the stock variance is likely to be due to the higher *diversifiable* variance risk.

Capital Asset Pricing Model (CAPM)

The Capital Asset Pricing Model (CAPM) technique is used in the assessment of the risk profile of the company as it links the non-diversifiable risk and return for all assets.

The CAPM formula usually uses a yearly interest rate because *beta* calculations and market risk Premiums are usually carried out over yearly cycles.

Stocks with high beta values react strongly to variations in the market, and stocks with low beta values are less affected by market variations.

If the *Slope of Regression Beta* is 1, then the stock has the same volatility as the market and is either growing or declining at the same rate. If Beta is higher than 1, the stock is more volatile. A stock with a beta of 1.25 will probably move 25% more than the market. If the market is in an up trend, then the security will gain 25% more than the general market. If *beta* is less than 1, the stock is less volatile. A beta of 0.5 will probably move at only 50% of the market rate. If the market is in a downward trend, it will only lose 50% of what the general market loses. A beta value of less than 0 means that the stock is moving in a reverse pattern to the index. When the index moves up the stock declines and vice versa.

Asset pricing models, like the CAPM are equilibrium models that rely on long holding periods in order to ensure, as far as is possible, an accurate return expectation. The shorter the prediction time period, the less accurate the prediction will be. In other words, the shorter the time period being reviewed, the higher the deviation around the resulting expectation is going to be and the less value the result adds to the exercise.

For the calculation of *beta*, we only require the current risk free rate. In order to calculate the regression statistics the following specific data is required and it is described in the following three paragraphs:

- Current Risk Free Rate
- Current and Historical Stock Price Data
- Market Risk Premium for Stocks

Current Risk Free Rate

The current risk free rate is normally obtained from the respective Reserve Bank Treasury Fixed Coupon Bond Yield Rates.

Current and Historical Stock Price Data

A period of approximately sixty months of historical stock price data for the *beta coefficient (b)* calculation is obtained from Yahoo! Finance where possible. (Yahoo! Finance. 2008.)

Market Risk Premium for Stocks

The Australian *Market Risk Premium*, otherwise known as the *Risk Premium for Stocks*, is recorded as 6.2%. This risk premium value will be used to calculate the *beta coefficient* for the Australian registered airlines. (Lally, M. 2000).

The United Kingdom *Market Risk Premium* is recorded as 3.75%. This risk premium value will be used to calculate the *beta coefficient* for the UK registered airline Easy Jet. (Barnett Waddington. 2008).

Financial Leverage

The degree of financial leverage summarises the effect a particular amount of financial leverage has on the company's earnings per share (EPS). The higher the financial leverage, the more volatile the earnings per share will be.

$$DFL = \frac{\% \text{ Change in EPS}}{\% \text{ Change in EBIT}}$$

Performance Profile on an Investment in an Airline

The slope term, beta (*b*) is calculated and indicates the performance of the airline's stock value when compared to the market performance. The stock can lead or lag against the market rate of change.

R-square

R-square shows the proportion of variation in the stock returns that are explained by the variation in the market returns.

Expected Return

The Expected Return gives an indication as to the return that is expected to be achieved on a given asset over time. A comparison of the four airlines expected returns is made in *Section 3.3.1 Comparison of Airline Risk and Returns Analysis*.

Equity Risk

Equity risk is the risk that the investments will depreciate due to the stock market behaviour causing the stock holder to lose money. The measure of risk used in the equity market is typically the standard deviation of a security's price over a number of periods. The standard deviation will outline the expected fluctuations of the stock value above and below the average. Stock value fluctuations above the mean are not always considered as risk.

Debt Risk

Most companies that have been driven into bankruptcy have suffered the consequences not of taking on too much debt as opposed to creative accounting as is often in the headlines today. Although a debt ratio tells us little about an airline's growth prospects or earning performance, the ratio is a vital tool for gauging the strength of the balance sheet. As the world is fearing a major recession looming, especially in the aviation sector, the strength of the balance sheet becomes more important for investors. It can determine whether a company has a strong enough financial position to survive through a tough period.

Although not conclusive, debt ratios are a good method for assessing a company's financial health. Debt ratios can highlight growing debt problems. Identifying existing or potential debt problems can save investors a great deal of money. The 'debt to equity' ratio is a sound way in which to do this. The debt to equity ratio is a measure of a company's financial leverage calculated by dividing its total liabilities by the stockholders' equity. It indicates what proportion of equity and debt the company is using to finance its assets.

2.3.2 Cost of Capital

The Weighted Average Cost of Capital (WACC) technique is used to calculate the cost of capital for the airline's. WACC is the rate that the company is expected to pay to finance its assets. WACC is the minimum return that a company must earn on its existing asset base to satisfy its creditors, owners, and other providers of capital. The WACC is calculated using the following formula:

$$\text{WACC} = (\text{weight of preferred equity} \times \text{cost of preferred equity}) + (\text{weight of common equity} \times \text{cost of common equity}) + [\text{weight of debt} \times \text{cost of debt} \times (1 - \text{tax rate})]$$

The Market Value for Equity

The market value for equity for a publicly traded company is simply the price per share multiplied by the number of shares outstanding, and tends to be the easiest component to find.

The Market Value of the Debt

As the market value of the debt tends to be pretty close to the book value, the book value of debt will be used in the WACC formula.

The Cost of Common and Preferred Equity

The cost of common and preferred equity is the annual rate of return that an investor expects to earn when investing in shares of a company. The return is composed of any dividends paid on the stock and any increase or decrease in the market value of the stock.

The cost of common and preferred equity is determined using the capital asset pricing model, more specifically, the slope of regression, *beta*. Beta is effected by the market value of the stock, which in some cases does not reflect the true performance of the airline.

The Cost of Debt

The Cost of Debt is the rate of interest charged by the lenders for:

- Recent and current loans
- Outstanding bonds
- Standby letters of credit
- Bank guarantees
- Aeronautic finance facilities

The company can write off taxes on the interest it pays on the debt, however, the cost of debt is further reduced by the tax rate that the company is subject to. The cost of debt for the company is therefore:

(interest on loans) × (1 – tax rate). The tax deduction is included in the formula for WACC.

Weight of Common Equity

The "weight" of a source of financing is the market value of that piece divided by the sum of the values of all the pieces.

Therefore the Weight of Common Equity is calculated as follows:

Market value of common equity

(Market value of common equity + Market value of debt + Market value of preferred equity)

Weight of Debt

The Weight of Debt is calculated as follows:

Market value of Debt

(Market value of common equity + Market value of debt + Market value of preferred equity)

2.3.3 Analysing the Capital Structure – Current Financing*The Advantages from Using Debt*

The main advantage of using debt financing is that it allows the cofounders to maintain ownership and control of the airline. Unlike equity financing, there is more ability for the management team to make key strategic decisions and reinvest higher levels of airline profits.

The lender has no further hold on the airline once the debt has been paid off. In addition to this, if the debts are paid on time, the airline's credit rating can increase and make it easier to obtain additional financing in the future. Debt financing is also easy to manage and administer as it does not require the same level of reporting as that which is required from equity financing. Depending on the country's tax rules, debt financing can qualify for a corporate tax rebate which for Australia is 30%, and which corresponds to the respective marginal tax rate. This generally means that the use of debt to fund the business growth is cheaper than the use of equity. The marginal tax rate in New Zealand is currently 33%.

The Disadvantages from Using Debt

The main disadvantage of debt financing is that it requires the airline to make regular payments of principal and interest. Young airlines can experience shortages in cash flow which can make these regular payments difficult and very risky as the interest rates and exchange rates fluctuate. Lenders often utilize severe penalties for late or missed payments, which include charging additional fees, taking possession of collateral, or calling the loan in early. Failure to make the payments will adversely affect the airline's credit rating and its ability to obtain future financing, especially if the media get hold of it. The amount of money an airline can obtain via debt financing will be limited depending on the debt and equity to asset ratio.

The Qualitative Trade-off of Too Much or Too Little Debt

A high debt to equity ratio is the least costly way to finance an airline's growth but at an increased risk. If the airline fails to win good market share and fails to sell seats during the up and coming hard times, then the ride into the future is most likely to be a rough one.

Airline's Growth Cycle

A young airline is aiming to grow and therefore, if successful, it should be relatively easy to achieve a good annual percent revenue and profit increase. A large and mature flagship airline, usually with a monopoly share of the market, will be looking to defend and maintain its share of the market whilst also looking for expansion opportunities. Strategically, it is much more difficult to hold onto existing market share than it is to develop and gain new market share using a new lean business strategy and starting from a clean business slate. The mature airline has to keep reinventing itself in order to remain competitive in the market.

2.3.4 Analysing the Dividend Policy

An analysis of an airline's dividend policy can give an insight towards the intentions of the board and insider share holders. This can be carried out by looking at the following key areas:

- Current and Past Cash Returned to Stockholders
- Recommended Cash Return to Stockholders
- Available Cash to Return to Stockholders
- The dividend policy

2.4 Airline Strategy and Competitive position

The airline strategy and competitive position is evaluated by comparing the airlines visions and guiding principles. An industry analysis is carried out using Vermeulen's Research Approach Technique (Lincoln University. 2007.).

The industry analysis includes a competitor analysis which uses the framework provided by Porter's Five Forces of Competition (Grant. R. M. 2008) which outlines the competitive threats which an airline needs to understand and evaluate before developing its corporate strategy. The framework is outlined in *Figure 1. Porter's Five Forces of Competition Framework*.

3. COMPARATIVE ANALYSIS

From the author's perspective this is the worrying time when we compare the models of the four variable airlines and fear that little in the way of significant findings come to light. If nothing else, a better understanding of the airlines and the competitive environment in which they operate will be gained.

Whilst travelling through the comparative analysis process the author will be:

- Investigating current operations and trends for the chosen airlines
- Evaluating the causes and effects, and
- Looking for possible successful business models

3.1 Comparison of Business and Operations

Table 1. A Comparison of Airline Operations, indicates that each of the four airline companies offers international, domestic and freight services. In some areas of the business, Air New Zealand, Qantas and Virgin Blue are in direct competition with each other.

A Comparison of Airline Operations

	Air New Zealand	Easy Jet	Qantas	Virgin Blue
International Airline	→	→	→	→
Domestic Airline	→	→	→	→
Freight	→	→	→	→

Table 1. A Comparison of Airline Operations

Air New Zealand and Qantas are both flagship airlines which carry the image as their respective country's corporate carriers which in turn portrays a specific clinical culture to the business and independent travellers. They carry the burden of being seen as the corporate high cost airline and constantly need to find the balance between securing the corporate reputation whilst competing with the other airlines. Today Air New Zealand and Qantas both have to compete against serious competition in the international and domestic market places.

Easy Jet portrays itself as a low cost carrier in all areas of the market place and is proud of its growing success brought about by its specific culture. This specific and limited approach can be afforded due to the large potential customer base across the United Kingdom and Europe.

Virgin Blue has a potentially smaller and more contained population of travellers to attract although this will be somewhat relieved by the new VAustralia operation into the United States of America. Virgin Blue has positioned itself as a 'low cost corporate carrier' in order to ensure that it can attract both the 'backpackers and the business travellers'. So much so that if a flight is to be cancelled careful consideration is given to the type of passenger which

is expected to be on board. Frequent business travellers will normally be given priority if a decision must be made. The aim is to keep costs low whilst ensuring that the business traveller is not ashamed to walk into an important meeting with the 'Virgin Blue' luggage label on his or her brief case.

The topography and geographical locations of the domestic destinations make it very difficult for other modes of transport to compete for the same potential customers in New Zealand and Australia. This is not always the case in the United Kingdom and Europe.

3.1.1 Comparison of Companies and Associate Companies

Despite the variation in size of the airlines in question, the majority of each of the airlines assets are tied up in, or closely associated to, the air transport industry and are therefore exposed to a high level of risk associated with natural global disasters, terrorism and escalating fuel prices. There are some other interesting points which should be acknowledged.

- Air New Zealand is majority owned by Her Majesty the Queen in Right of New Zealand. This is an important factor when considering competitive advantage within and around the New Zealand operating environment.
- The Australian Government has made it law that Qantas must be at least 51% owned by Australia.
- Unlike the flagship airlines, the Virgin Blue airline is just a small part of an enormous and versatile Virgin Group of over 300 independent and relatively small limited companies. A number of these companies are in various modes of the transportation sector. The Virgin brand name is successfully recognised globally in a diverse range of successful and unrelated businesses.
- Easy Jet's businesses are more strongly linked to the airline industry than each of the other three airlines. Easy Jet's other businesses are mainly associated with the financing of the airline.

Compared to Air New Zealand, Qantas is a very large airline with a high level of assets and market power. The flagship airlines are fighting to retain their market share whilst the 'underdogs' are creating new markets as well as nibbling away at the existing market volumes.

3.1.2 Comparison of Operating Fleets

Air New Zealand, Qantas and Easy Jet are going through the process of renewing their fleets. This creates a better public image hopefully with matching revenue increase and would normally reduce the operating costs through improved reliability and greater efficiency. For this reason the average fleet age is of specific interest. Virgin Blue is expanding its fleet with the new additional shorter range Embraer. Easy Jet is also expanding its Airbus fleet to support the airline's future expansion plans. Easy Jet supports the single fleet manufacturer type philosophy.

The process of phasing out old aircraft types and phasing in new aircraft types is a slow and costly process. There is almost certainly a requirement to operate the two old and new aircraft types for the same role for at least a year or more.

Operating a varied fleet for short periods due to fleet changes or for longer periods due to operational or strategic requirements comes at an increased operating cost due to the following additional operational requirements:

- Type training
- Fleet management
- Support equipment
- Spares
- Configuration management
- Performance management
- Reduction of interchangeable resources in relation to total fleet size

The advantage for an airline which operates a varied fleet with similar performance characteristics is that the risk of a serious fleet type specific technical defect grounding the entire airline is minimised. Until recently, Virgin Blue's fleet consisted entirely of B737 New Generation aircraft. The level of risk associated with having a single type fleet has been reduced over the years by the general increase in reliability brought about by better management and improved designs.

It is for these reasons that the variation in fleet types and the average fleet age is of specific interest when carrying out a comparison of the four airlines.

Comparison of Operating Fleets

Airline	No. In Fleet	Average Fleet Age (Years)	Date
Air New Zealand	99	6.6	July 08
Easy Jet	164	3.3	July 08
Qantas	230	9.3	Sep 08
Virgin Blue	63	4.6	Sep 08

Table 2. Comparison of Operating Fleet Size and Average Age

Table 2. Comparison of Operating Fleet Size and Average Age, outlines the following points:

- Qantas has by far the largest fleet but also has the oldest average fleet age
- Air New Zealand has a relatively small fleet, second to Virgin Blue, with the second oldest average fleet age.
- Easy Jet has the second largest fleet with the youngest fleet age
- Virgin Blue has the smallest fleet with the second youngest fleet age

Based on the above points, the following assumptions can be made:

- Qantas needs to fund a major investment in replacement aircraft
- Air New Zealand will need to fund a major reinvestment in replacement aircraft

- All things being equal, Easy Jet is in a strong position based on its fleet age and size
- Virgin Blue needs to start planning for a major investment in replacement aircraft

Isn't it lucky that Easy Jet is operating in the Northern Hemisphere!

3.2 Comparison of Airline Networks

This section looks at the airline network capacities, the alliance networks and the network sectors. The comparison of network sectors pays specific attention to the three competing Australasian airlines, Air New Zealand, Qantas and Virgin Blue.

3.2.1 Comparing Capacity

The data listed in *Table 3. Comparison of Airline Network Capacities* has been recorded from the Seabury Airline planning Group (Seabury. 2008).

Airline Network Capacity						
Data loaded 16 October 08 for one week						
Airline	Alliance	Sector KMs	Seats	Block Mins	Tot Flts/Wk	Tot Seats/Week
Air New Zealand	STAR	1,445,738	123,221	151,868	4,052	322,557
Easy Jet	LCCS	3,089,865	406,698	335,429	6,250	970,210
Qantas	ONEW	2,932,996	261,965	264,404	4,812	752,548
Virgin Blue	LCCS	839,706	95,742	83,629	3,035	444,562

Table 3. Comparison of Airline Network Capacities (Seabury. 2008)

The comparative observations are:

- Air New Zealand and Qantas are members of alliance groups
- Easy Jet and Qantas cover similar and the higher total sector distances (Kms)
- Easy Jet has operated by far the highest weekly seat capacity
- Virgin Blue has operated by far the lowest overall sector seat capacity but does not have the lowest weekly seat capacity
- Virgin Blue operates the lowest number of flights per week but does not have the lowest number of seats per week
- Easy Jet operates the highest number of flights per week

The fact that Virgin Blue has the lowest sector seat capacity, but does not have the lowest weekly seat capacity, is an indication that their aircraft utilisation is higher than the competition. Also noted is that Virgin Blue do not have the lowest number of seats per week despite the fact that the airline operates the lowest number of flights per week. This indicates that the seating capacity of the aircraft is high when compared to the aircraft operated by the competition. Air New Zealand and Qantas operate shorter and smaller domestic routes which require smaller and more efficient aircraft.

3.2.2 Comparing Alliance Networks

Unlike Easy Jet and Virgin Blue, both Air New Zealand and Qantas are members of an alliance group. Air New Zealand is a member of the Star Alliance Group and Qantas is a member of the One World alliance group. The alliance groups enable the airlines to attract additional travellers from across other airline networks and also enables them to offer consolidated and efficient service across a much larger network which is a further incentive to travellers. However, they also have potential to make it difficult for member airlines to expand onto competing routes. The Star Alliance and One World alliance groups are compared in *Table 4. Comparison Between Star Alliance and One World*.



Comparison Between Star Alliance and One World					
Star Alliance			One World		
					
Launch date		14 May 1997	Launch date		1 Feb 1999
Members	Full	21	Members	Full	10
	Non-voting	3		Non-voting	17 affiliates
	Pending	5		Pending	2
Destinations	Airports	912	Destinations	Airports	673
	Countries	159		Countries	134
Annual passengers (m)		499.9	Annual passengers (m)		328.63
Annual RPK (G)		990.24	Annual RPK (G)		738.90
Fleet size		3,325	Fleet size		2,356

Table 4. Comparison Between Star Alliance and One World

It is quite clear that Star Alliance has the larger network but less members. It could be argued that whilst the Star Alliance members have access to a larger fleet and network they could possibly be more restricted with their personal growth opportunities as a result of the joint agreements.

In January 2007 the airline Varig was ejected from the Star Alliance network due to its inability to continue operating to the requirements laid down by the alliance. There is considerable pressure on alliances to maintain consistent service standards. In years gone by the alliances have been under pressure as partnering airlines attempt to expand into one another's territory. For example, Aer Lingus left the Oneworld alliance a few years ago in order to overcome the restraints put on them by the alliance.

As can be seen from *Table 5. Influential Star and Oneworld Alliance Members*, Air New Zealand belongs to a larger alliance team which could possibly attract more travellers but could also restrict their growth into other international markets.

Influential Star and Oneworld Alliance Members

Influential Star Alliance Members		Influential Oneworld Members
Adria Airways,	Scandinavian Airlines System	American Airlines
Air Canada, Lufthansa	Shanghai Airlines	British Airways
Air China	Singapore Airlines,	Canadian Airlines
Air New Zealand	South African Airways	Cathay Pacific
All Nippon Airways	Spanair	Qantas Airways
America West Airlines	Swiss International Airlines	Finnair
Asiana Airlines,	TAP Portugal	Iberia
Austrian Airlines Group	Thai Airways International	LanChile (LAN Airlines)
BMI,	Turkish Airlines	Royal Jordanian
Croatia Airlines,	United Airlines	Malév
EgyptAir	US Airways	Japan Airlines
LOT Polish Airlines	Varig	Mexicana

Table 5. Influential Star and Oneworld Alliance Members

Although Virgin Blue does not belong to an alliance as such, the airline does have partnership agreements with the following airlines:

- Regional Express
- Hawaiian Airlines
- Air Mauritius
- Malaysia Airlines
- United Airlines
- Virgin Atlantic

The Virgin Blue network benefits from these partnerships in much the same way as an alliance but the airline maintains better control over their own destiny by managing their own partnership agreements which are customised to the requirements of both parties.

3.2.3 Comparing Network Sectors

In this subsection the author has chosen to disregard Easy Jet and include only the directly competing Australasian airlines, Air New Zealand, Qantas and Virgin Blue. The same data (Seabury. 2008) that was supplied and used in sub section 3.2.1 *Comparing Capacity* has been used to gain a better understanding of the level of competition on the Australasian network. The author has sorted through 3777 flight sectors which were downloaded from the source website (Seabury. 2008) on the 16 October 2008 and represent one week of flying for the three airlines.

For each airline the sectors were separated into those which were solely operated by themselves (monopoly sector) and the others which were also operated by one of the other two airlines (competing sectors). The 'sector' refers to a passage between two nodes such as CHC to AKL irrespective of the day of the week or the time of day. No allowance has been made for the number of same sectors operated by each airline during the selected week. The results obtained are outlined in *Table 5. Competition on the Australasian Network – Oct 08*.

Competition on the Australasian Network – Oct 08

Airline	No. of Different Monopoly Sectors		No. of Different Competing Sectors		Total No. of Different Sectors
Air New Zealand	157	78%	45	22%	202
Qantas	160	65%	88	35%	248
Virgin Blue	54	38%	88	62%	142

Table 5. Competition on the Australasian Network – Oct 08

It is quite clear that Virgin Blue is struggling to find new sectors as Air New Zealand and Qantas have had many years to develop and occupy most of the existing sectors. Virgin Blue is an Australian based airline which is openly competing in the domestic market which is clearly indicated by Qantas's higher 'Competing Sectors' of 35% when compared to Air New Zealand's 22%. The majority of Air New Zealand's monopoly sectors are in the New Zealand domestic market which could soon be threatened by Pacific Blue, the Virgin Blue subsidiary airline registered and based in New Zealand. Pacific Blue would need to operate smaller aircraft than the currently operated 180 seat B737NG's if it wished to compete on some of the Air New Zealand 'Monopoly Sectors'.

3.3 Comparison of Airline Financial Management

Each country, economic zone and stock exchange has different reporting standards and requirements. In addition to this the company laws and tax laws may differ. No effort has been made to evaluate and compare these differences for this exercise. The information used has been obtained from the respective Company Financial Reports and the relevant stock exchanges. This needs to be recognised so that the reader is aware of the level of accuracy which can be portrayed by the following high level financial analysis.

Two of the four airlines, Qantas and Virgin Blue, are based in Australia and are controlled by the same regulations. The third airline, Air New Zealand, is subject to similar regulations in New Zealand. Three of the four airlines, Air New Zealand, Qantas and Virgin Blue, are registered on the Australian Stock Exchange (ASX). The fourth airline, Easy Jet is subject to UK regulations but is mainly being compared as a role model from the Northern Hemisphere.

However it should be noted that all four airlines are registered in countries which are required or permitted to follow the International Financial Reporting Standards (IFRS) developed by the International Accounting Standards Board (IASB). (IASB. 2009.)

Australia adopted the A-IFRS on the 1st January 2005 and New Zealand adopted the NZ IFRS on the 1st July 2007. European Union (EU) adopted the IFRS on the 1st January 2005. In order to be approved for use in the EU, the IFRS had to be endorsed by the Accounting Regulatory Committee (ARC) and as a result the EU IFRS may differ from that used elsewhere.

Reporting Periods

The reporting period for the Northern Hemisphere based airline, Easy Jet, runs for twelve months from 1st October to the 30th September. The reporting periods for the remaining three Southern Hemisphere based airlines are twelve months from the 1st July to the 30th June. It should be noted that Virgin Blue deviated from this pattern in FY04/05 and FY05/06 as it is a legal requirement for a subsidiary company to follow the same reporting periods as the parent company. Despite the nine month reporting period in FY05/06, the Virgin Group paid out its highest ever dividends of AUS\$259.8 million.

Current Ratio Analysis (Liquidity Ratio)

As shown below, the Liquidity Ratio is the ratio between Current Assets to Current Liabilities.

$$\text{Liquidity Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

The Liquidity Ratio, otherwise known as the Current Ratio, is an indication of the airline's working capital or cash flow and is a good measure of its ability to service debt. A company with a high level of debt needs to ensure a healthy cash flow with which to service it.

The average liquidity ratios over the five years from FY02/03 to FY06/07 for the four airlines are listed in *Table 6. The Liquidity Ratios for FY02/03 to FY06/07.*

Liquidity Ratios for FY02/03 to FY06/07

Financial Year	Air New Zealand	Easy Jet	Qantas	Virgin Blue
02/03	1.21	1.82	0.83	0.78
03/04	1.43	2.18	0.64	1.62
04/05	1.34	2.15	0.80	1.61
05/06	1.09	2.11	0.93	1.19
06/07	1.32	1.88	0.87	1.10
Average Ratio	1.28	2.03	0.81	1.26

Table 6. Liquidity Ratios for FY02/03 to FY06/07

The comparative observations are:

- The liquidity ratios over the five years for all four airlines have been reasonably stable
- Easy Jet has by far the highest five year average Liquidity Ratio of the four airlines

- Air New Zealand and Virgin Blue have very similar five year average Liquidity Ratios which lie between the highest and lowest ratios displayed by Easy Jet and Qantas
- Qantas has by far the lowest five year average Liquidity Ratio of the four airlines

It is important to note that the current liabilities only include a small proportion of the total financial loans to the airlines. The vast majority of the loans are recorded under the long term 'non-current' liabilities which means that they are not included in the Liquidity Ratio calculations. Similarly the aircraft leases are not included as part of either the Current Liabilities or the Non-Current Liabilities.

Easy Jet's higher current ratio means higher liquidity which means that the company is better able to meet its obligations as they come due. A comparison of the liquidity ratios against the longer term debt to equity ratios will provide some insight to the possible current financial issues facing the airlines.

DuPont System Analysis

Table 7. *DuPont System Analysis – Five Year Averages*, lists the averages for five years DuPont System Analysis from FY02/03 to FY06/07 for the four airlines. The average figures are advantageous for the analysis process as each airline is potentially in a different strategic phase and each year new strategic decisions are made. The five year average gives a good reflection of the overall expertise and success of the respective company Boards.

DuPont System Analysis – Five Year Averages

	Air New Zealand	Easy Jet	Qantas	Virgin Blue
Income Statement				
Net Profit Margin (NPM)	4.38%	4.54%	4.56%	9.2%
Balance Sheet				
Total Asset Turnover (TAT)	0.89	0.78	0.70	1.07
Financial Leverage Multiplier (FLM)	3.04	1.90	3.07	2.94
Return on Total Assets (ROA)	3.94%	3.46%	3.19%	10.1%
Return on Common Equity (ROE)	12.0%	6.78%	9.71%	29.53%

Table 7. *DuPont System Analysis – Five Year Averages*

The comparative observations are:

- The five year average NPM for Virgin Blue is over twice that of each of the other three airlines
- Virgin Blue has a considerably higher TAT than the other three airlines
- The two flagship airlines, Air New Zealand and Qantas, have the highest FLM
- Easy Jet has the lowest FLM followed by Virgin Blue.
- Virgin Blue has over twice the ROA of each of the other three airlines
- Virgin Blue has over twice the ROE of each of the other three airlines

- Easy Jet's ROE is approximately twice that of its ROA whilst the other three airline's have an ROE of approximately three times their respective ROA

The Total Asset Turnover (TAT) compares sales against assets which would indicate that Virgin Blue is using its assets more effectively than the other three airlines. This is also supported by Virgin Blue's considerably greater Return on Total Assets (ROA) and Return on Common Equity (ROE). It is important to recognise that the total book value of the assets may differ from the true market value if inadequate allowances for this have been made in the financial reporting process. For the calculation of the FLM the total assets include the total liabilities and the total assets which include capital investments which are supported by debt. In other words, some of the assets are liabilities.

Despite a similar NPM to Air New Zealand and Qantas, Easy Jet has the lowest Financial Leverage Multiplier (FLM) and therefore has a low ratio of total assets to stockholder equity (Net Assets). This indicates that Easy Jet has managed to achieve a similar NPM to Air New Zealand and Qantas with less financial risk. Easy Jet also has one of the lowest ROA and by far the lowest ROE despite the announcement by the Board that ROE is to be its key financial measure for the benefit of the shareholders. This is possibly due to new capital investments such as the purchase of additional new aircraft. Aircraft are the primary assets which are required to create cash flow and an improved NPM. Different financial reporting standards could also play a part in this variation.

It is possible that Easy Jet's total asset to stockholder equity ratio is low due to a number of leased aircraft which are not classed as assets. These leased aircraft were being returned off lease from 2006 onwards. Easy Jet's Board has declared that no dividends will be paid and that all profits will be reserved for reinvestment. Easy Jet is now purchasing its aircraft.

Despite the relatively similar FLM, Virgin Blue has managed to achieve by far the greatest ROE and ROA of all four airlines. Virgin Blue's Total Asset Turnover (TAT) is approximately 20% greater than the other airlines and its NPM is twice that of the other airlines. This is possibly due to lower operating costs, high load factors and the use of cash or debt to finance its ongoing operating assets to support the airline's expansion.

3.3.1 Comparison of Airline Risk and Return Analysis

Air New Zealand and Qantas are both flagship airlines and well entrenched as their respective country's primary airlines. The low cost airlines, Easy Jet and Virgin Blue, are initially perceived as the 'under dogs' which generally means that the competition will not see them as a competitive threat. Both Easy Jet and Virgin Blue have started with 'clean slates' which has enabled them to customise their strategies and operations to the current market.

Comparison of Capital Asset Pricing Models (CAPM)

The Intercept of Regression (*Alpha*) measures the price volatility. The difference in return of stock that exceeds or lags beyond its Slope of Regression (*beta*) is the Intercept of Regression (*Alpha*). *Alpha* is the excess return above what would be predicted by its *beta*.

R-Square is the square of the *correlation coefficient* and is the proportion of the variability in one series that can be explained by the variability of one or more other series of a *regression* model. It provides a measure of the quality of fit. 100% R-square means perfect predictability. (Financial Dictionary. 2009).

The *Correlation Coefficient* is the standardized statistical measure of the dependence of two random variables, defined as the covariance divided by the product of the standard deviations of the two variables. (Financial Dictionary. 2009).

Regression is a mathematical technique used to explain or predict. The general form is $Y = a + bX + u$, where Y is the variable that we are trying to predict; X is the variable that we are using to predict Y, a is the intercept; b is the slope, and u is the regression residual. The a and b are chosen in a way to minimize the squared sum of the *residuals*. The ability to fit or explain is measured by the R-square. (Financial Dictionary. 2009).

Residuals are (1) Part of stock returns not explained by the explanatory variable (the market index return). Residuals measure the impact of firm-specific events during a particular period. (2) Remainder cash flows generated by pool collateral and those needed to fund bonds supported by the collateral. (Financial Dictionary. 2009).

Expected Return is the return that is expected to be earned on a given asset each period over an infinite time horizon. (Gitman. L. J. 2007). An investor would be expecting the expected return to be at least equal to the required return. If this is not the case then a price adjustment will occur.

Table 8. Comparison of Airline Capital Asset Pricing Models (CAPM), records the results of the regression of returns analysis of airline stocks against the market index using fifty-four months of observations up to May 2008.

Comparison of Airline Capital Asset Pricing Models (CAPM)

	Air New Zealand	Easy Jet	Qantas	Virgin Blue
Expected Return	10.34%	9.19%	12.82%	15.23%
Intercept of Regression (<i>Alpha</i>)	5.95%	0.03%	-0.71%	-2.90%
Slope of Regression (<i>beta</i>)	0.56	1.25	0.96	1.35
R-Square	0.10%	7.48%	18.52%	18.7%

Table 8. Comparison of Airline Capital Asset Pricing Models (CAPM)

The comparative observations are:

- The Expected Returns for the four airlines steadily rises in the following order: Easy Jet, Air New Zealand, Qantas and Virgin Blue from a low of 9.19% to 15.23%

- The Air New Zealand share has earned more than would have been predicted by the CAPM
- The Easy Jet share has earned *slightly* more than would have been predicted by the CAPM
- The Qantas share has earned *slightly* less than would have been predicted by the CAPM
- The Virgin Blue share has earned less than would have been predicted by CAPM
- Air New Zealand's April 2008 stock value is 5.95% higher than predicted by the CAPM
- Virgin Blue's April 2008 stock value is 2.90% lower than predicted by the CAPM
- Easy Jet and Qantas April 2008 stock values are very similar to the CAPM prediction
- Both of the flagship airlines are less volatile than the general market (lower risk)
- Both Easy Jet and Virgin Blue are more volatile than the general market (higher risk)
- For all four airlines the vast majority of the stock risk is most likely to be specific to the company's operating environment (business factors) or financial leverage
 - Air New Zealand is most susceptible to this and is followed closely by Easy Jet

Air New Zealand and Qantas are both mature flagship airlines which, in their earlier operating days, had the free run of the airline market within their own national and international environments. To the investor, these mature companies are more likely to be judged by their respective movement in share values. Both airlines enjoy a certain level of Government support which creates the perception that they are a safer investment. Both flagship airlines are now struggling to maintain their market share and react to the market changes in their own way. It could therefore be expected that the Government supported flagship airlines would be less affected by the performance of the general market due to the shareholder perception of a safer investment.

Virgin Blue and Easy Jet are relatively younger airlines with a low cost model which they have been able to mould to the required shape as they have grown. They have been able to 'cherry pick' existing profitable routes and develop new routes which encourage new travellers with reasonable confidence and less risk due to a strong competitive position brought about by lower operating costs. The share values of these young airlines will reflect changes brought about by initial financing of capital through debt, media speculation and rapid growth. A small strategic change to a flagship airline is a comparatively large change to such a new low cost airline.

The Expected Return calculated for Virgin Blue shows that the investor needs to see a return of 15.23% which is greater than that which is required for the other three airlines. The share prices for Virgin Blue do not necessarily reflect the true market value as the vast majority of the shares have not been able to transfer by sale and purchase to new owners and therefore have not been exposed to the competitive forces of the general market. Virgin Blue has also been subjected to negative press with claims that the airline would not be able to flourish. The shareholders were rewarded with major dividends in FY05/06 and a much smaller payout in FY06/07. There have been little other incentives for potential major outsider shareholders to invest in such a high risk airline even if the shares were to become available on the market.

The calculations for the *Expected Returns* for Air New Zealand, Qantas and Virgin Blue have used the same *Risk Free Rate* of 6.87% and *Risk Premium* value of 6.2%. Due to the different financial market, Easy Jet's calculations used a *Risk Free Rate* of 4.5% and *Risk Premium* value of 3.75% which makes it difficult to compare its *Expected Return* with the other three airlines. For the three comparable airlines it is clear that the *Slope of Regression (beta)* has been the controlling factor for the cause of any differences between the *Expected Returns*.

Unlike Easy Jet and Virgin Blue the stocks for both Air New Zealand and Qantas have under performed the general market but despite this the expected returns for the two flagship airlines are higher than that which is expected for Easy Jet. This is due to the lower *Risk Free Rate* and *Risk Premium* used in the Easy Jet calculations.

The lowest R-Square value indicates that Air New Zealand is the airline most susceptible to diversifiable risk. This could quite possibly have been driven by the substantial capital injection from the New Zealand Government into Air New Zealand in January 2002. Such an event would artificially raise the share value for a period of time.

The majority of Virgin Blue's shares were owned by just a few insiders. For a share value to rise or fall on the market a volume of shares needs to change ownership. The majority insider shareholders had no intention of selling their shares for two reasons. The first was to ensure that they maintained ownership of the majority controlling shares and the second was to recover their investment in the form of dividends.

The proportion of the Virgin Blue stock performance exposed to systematic or non-diversifiable risk is the highest of the four airlines. This is also likely to have been caused by the reluctance for shares to change hands and that the gains achieved by unsystematic or diversifiable risk were distributed to the shareholders in the form of dividends. It is for these reasons that the Virgin Blue shares have not had a realistic trading market in order to allow effective risk evaluation using the CAPM.

Due to the high ratio of diversifiable to non-diversifiable risk the airlines need to have the ability to react quickly to the changes if they are to compete in an equal opportunity market. Although a useful evaluation tool, it would be fair to say that the use of the CAPM by itself is not necessarily an accurate means by which to measure the performance risk of an airline.

Table 9. Market and Stock Variance Statistics – Standard Deviation, makes a comparison of the levels of stock, market, systematic and unsystematic variance. Standard deviation measures the dispersion around the expected stock value or the likelihood of achieving that expected value.

Market and Stock Variance Statistics - Standard Deviation

Variance	Air New Zealand	Easy Jet	Qantas	Virgin Blue
Variance of the stock	53.28%	12.32%	6.72%	9.41%
Variance of the market	3.02%	2.7%	3.02%	3.02%
Systematic variance	1.69%	3.37%	2.89%	4.07%
Unsystematic variance	53.25%	11.85%	6.07%	8.48%
R squared	0.10%	7.48%	18.52%	18.7%

Table 9. Market and Stock Variance Statistics – Standard Deviation

The comparative observations are:

- For all four airlines the higher risk of the stock variance is likely to be due to the higher *diversifiable (unsystematic)* variance risk.
- Air New Zealand has by far the greatest *variance of stock*
- Virgin Blue and Qantas have relatively low *variances of stock*
- Although the Northern Hemisphere is subjected to a little less *market variance*, there is little difference between the Northern and Southern Hemispheres
- The two low cost airlines Easy Jet and Virgin Blue have the higher *systematic variances*
- Air New Zealand has by the far the highest *unsystematic variance*
- Virgin Blue and Qantas have relatively low *unsystematic variance*

The standard deviation indicates the expected fluctuations of the stock value above and below the average. *Table 9. Market and Stock Variance Statistics – Standard Deviation*, showed that Air New Zealand had a high variance of stock standard deviation. It also showed that Air New Zealand had a high unsystematic variance standard deviation. This means that not only does the stock price look to be very high risk compared to the general market and the other three airlines but also the unsystematic variance or diversifiable risk which is directly managed by the airline is also extremely high risk when compared to the other three airlines. The variance of stock and the diversifiable risk appear to be directly linked.

Again the substantial capital injection from the New Zealand Government into Air New Zealand in January 2002 could have had a considerable effect on the stock variance statistics. We should also remember that these results are purely based on the stock prices and therefore they may not necessarily reflect the true status of the airline's risk levels.

Financial Leverage

At this stage the key message is that the higher the airline Degree of Financial Leverage (DFL) the greater is the risk of gain or loss. Greater Financial Leverage creates greater potential returns to the investor than would have otherwise been available but the potential to make lower returns to the business is also greater. If the investment fails both the loan principle and interest accrued has to be repaid.

Table 10. Comparing the Degree of Financial Leverage, compares the Degree of Financial Leverage for the three years with a calculated average for each of the four airlines.

Comparing the Degree of Financial Leverage
FY 04/05 – 06/07

Financial Year	Air New Zealand	Easy Jet	Qantas	Virgin Blue
2004/05	1.03	(0.86)	1.43	(0.63)
2005/06	2.40	0.92	0.87	1.14
2006/07	2.72	1.16	1.15	1.03
3 Year Average	2.05	0.41	1.15	0.51

Table 10. Comparing the Degree of Financial Leverage

The Degree of Financial Leverage explores the relationship between the change in Earnings Before Interest and Tax (EBIT) and the Earnings Per Share (EPS). In other words, how much does the shareholder benefit from a percentage rise in the EBIT. All being equal the difference in returns could be explained as having been lost in operating costs or possibly due to poor levels of efficiency and tighter profit margins. Put simply, the lower the DFL then the higher the possibility of inefficient operating costs or tighter profit margins brought about by an uneconomic pricing policy. This is not quite the case though as we need to take into account other returns such as dividends paid and how any additional capital has been raised. The release of more shares to the market could potentially have an effect on the DFL.

The comparative observations are:

- The DFL for Air New Zealand has steadily risen over the three years
- The DFL for Easy Jet has steadily risen over the three years
- The younger low cost airlines Easy Jet and Virgin Blue have a considerably lower average DFL for the three years

Further observations are made in the following subsection *Financial Leverage Multiplier Versus Degree of Financial Leverage*.

As mentioned before and as a reminder, a low Degree of Financial Leverage (DFL) indicates that the majority of the stock risk is most likely to be due to the company's operating environment. Therefore the success of the airline is mainly attributed to the management and the resulting strategy used to compete in the market. However, this assumes that the Board are concerned with the level of earnings per share as a key indicator.

Financial Leverage Multiplier Versus Degree of Financial Leverage

Table 11. *Financial Leverage Multiplier Versus Degree of Financial Leverage for FY04/05 – 06/07*, compares the Financial Leverage Multiplier (FLM), as calculated in Section 7.3 *Comparison of Airline Financial Management*, against the Degree of Financial Leverage (DFL).

The DFL captures the relationship between EBIT and EPS. DFL is defined as the percentage change in EPS for a given percentage change in EBIT.

$$\text{Degree of Financial Leverage (DFL)} = \frac{\% \text{ Change in EPS}}{\% \text{ Change in EBIT}}$$

The Financial Leverage Multiplier, other wise known as *Gearing and DuPont Analysis* is defined in the formula below:

$$\text{Financial Leverage Multiplier (FLM)} = \frac{\text{Total Assets}}{\text{Stockholder Equity (Net Assets)}}$$

Where:

Total Assets = Total Liabilities + Stockholder equity

Stockholder Equity = Total Assets – Total Liabilities

Financial Leverage Multiplier Versus Degree of Financial Leverage FY04/05 – 06/07

Financial Leverage	Air New Zealand	Easy Jet	Qantas	Virgin Blue
Financial Leverage Multiplier (FLM)	2.83	2.11	3.04	2.99
Degree of Financial Leverage (DFL)	2.05	0.41	1.15	0.51

Table 11. Financial Leverage Multiplier Versus Degree of Financial Leverage

The comparative observations are:

- Easy Jet and Virgin Blue have considerably lower DFL's than the flagship airlines
- Easy Jet has a noticeably lower FLM than the other three airlines
- Easy Jet has the lowest FLM and DFL
- Air New Zealand, Qantas and Virgin Blue have similar FLM's.

Like the Liquidity Ratio, the DFL uses 'current' short term evaluation methodology. The level of EPS is affected by tax and varying interest rates and the level of success of the various hedging facilities which may be in place. The change in EPS relies heavily on the number of shares issued and therefore measuring the DFL is probably not the preferred method for comparing the airline performance. It is a good indicator for existing and potential shareholders. The FLM is similar to the liquidity ratio only it includes the 'long term' total assets and net assets. This is a much better indication of the long term health of the airline. An airline who's Liquidity Ratio indicates a poor short term 'current' performance could also have an FLM which indicates a strong long term financial health.

The fact that Easy Jet has the lowest FLM indicates that the airline is likely to be comparatively less exposed to the risks of debt than the other airlines. Both of the low cost airlines Easy Jet and Virgin Blue have comparatively low DFL's which is likely to be due to the higher level of reinvestment of the profits back into the respective businesses. Although the ratio of percentage change in EPS to EBIT is lower the airlines could actually be in a healthier and stronger position due to the reinvestment of profits into the business. This is likely to be the reason that Easy Jet's Board has decided that Return On Equity (ROE) is to be the airline's primary financial measure as this is the best way to reflect the returns attributable to the equity shareholders.

Virgin Blue, like Qantas, has a high Debt to Equity Ratio which could mean that Virgin Blue is more susceptible to the varying interest rates which in turn could possibly suggest that Virgin Blue's low DFL might be due to increasing interest rates and not solely due to the level of reinvestment in the business.

Debt and Equity Risk

A comparison of the airlines consolidated debt to equity ratio is made in *Table 12. Airline Consolidated Debt to Equity Ratio FY06/07*, below.

Although the debt to equity ratio tells us little about an airline's growth prospects or earning performance it is an effective tool for assessing the strength of the balance sheet. It can determine whether a company has a strong enough financial position to survive through a tough period.

Airline Consolidated Debt to Equity Ratio – FY06/07

Airline	Debt to Equity Ratio
Air New Zealand	1.83
Easy Jet	1.69
Qantas	2.16
Virgin Blue	2.10

Table 12. Airline Consolidated Debt to Equity Ratio – FY06/07

The comparative observations are:

- The airline industry generally has a higher debt to equity ratio than most other industries
- Virgin Blue and Qantas have noticeably higher debt to equity ratios
- Air New Zealand and Easy Jet have noticeably lower debt to equity ratios

The high debt to equity ratio or high leverage of the airline industry means that the business is generally high risk to the investor when compared to other types of businesses. The level of cash flow then becomes critical as it is required to service the high level of debt. However, the gains or returns on equity are potentially a great deal higher for the investor.

Virgin Blue and Qantas have the higher leverage and in theory are not as well positioned for tough economic times as the other two airlines, Air New Zealand and Easy Jet. This conclusion cannot be drawn with certainty until the levels of cash flow and future cash flow projections are understood.

High leverage comes with other increased risks such as varying exchange rates and interest rates depending on how the debt has been raised. The airlines have attempted to hedge against these risks but to gain a clear understanding of the overall most effective hedging methods can only be decided after the event.

As mentioned before, *Table 9. Market and Stock Variance Statistics – Standard Deviation*, showed that Air New Zealand's stock price looks to be very high risk compared to the general market and the other three airlines. Air New Zealand's unsystematic variance or diversifiable risk which is directly managed by the airline is also extremely high risk when compared to the other three airlines.

3.3.2 Comparison of Airline Cost of Capital

Regarding the determination of the cost of capital the study shows homogenous results. 86% of all airlines use the WACC and 71% determine the costs of equity based on the Capital Asset Pricing Model (CAPM). 71 % of the airlines determine the costs of debt by looking at the interest rates of their long-term bank loans. (Homburg. C, Theissen. A, Knigge. A. 2007)

Table 13. WACC Comparison for FY06/07, compares the calculated Weighted Average Cost of Capital for the four airlines. A more detailed analysis of the debt disclosures needs to be carried out. Lease deals may be classed as either debt or an asset depending on how they have been presented. This could potentially have a considerable effect on the calculated WACC for each airline.

Airline	WACC %	FY
Air New Zealand	7.4	06/07
Easy Jet	8.0	06/07
Qantas	9.91	06/07
Virgin Blue	10.33	06/07

Table 13. WACC Comparison for FY 06/07

The comparative observations are:

- Virgin Blue has the highest WACC
- Air New Zealand has the lowest WACC
- Air New Zealand and Easy Jet have reasonably similar lower WACC
- Qantas and Virgin Blue have reasonably similar higher WACC

According to the calculations Virgin Blue is expected to pay the highest rate to finance its assets. Virgin Blue needs to earn a minimum return of 10.33% on its existing asset base to satisfy its creditors, owners and other providers of capital. As shown earlier, Virgin Blue has

by far the highest NPM, TAT, ROA and ROE. Virgin Blue's Debt to Equity ratio is one of the highest of the four airlines and when combined with the higher cost of capital means that the airline must ensure a relatively higher level of cash flow to service the debt.

Virgin Blue has one of the lower liquidity ratios for FY06/07 when compared to the other three airlines. Generally speaking Virgin Blue is reasonably well situated to service its costly debt and in doing so it creates greater opportunity for a higher NPM assuming that it can maintain low operating costs and continue with a competitive pricing model which results in a healthy yield.

Air New Zealand is expected to pay the lowest rate to finance its assets but it also has one of the lowest NPM for FY06/07. Air New Zealand has one of the lower debt to equity ratios and one of the higher liquidity ratios. With reduced exposure to debt the airline is potentially in a safer position than the other airlines but it also has less potential to make profit which is indicated by its low NPM.

Easy Jet and Qantas have comparatively average WACC values when compared to each other and the other two airlines. Easy Jet has a high NPM whilst Qantas has a considerably lower NPM. Easy Jet has the highest liquidity ratio and Qantas has the lowest of the four airlines. Easy Jet has the lowest debt to equity ratio and Qantas has the highest.

In summary, Virgin Blue is a higher risk business model but has benefited from the greatest NPM. Air New Zealand has a safe low risk business model but has recorded the lowest NPM as a result. Easy Jet has a safe low risk business model whilst achieving the second highest NPM close to that of Virgin Blue. Qantas has the lowest liquidity ratio, highest debt to equity ratio and the lowest NPM, not a healthy competitive position.

3.3.3 Comparison of Airline Capital Structure

Debt is the cheaper option to raise capital but comes with a higher risk attached to it. The airline needs to ensure that a suitable level of cash flow exists in order to maintain the interest payments. The risk of variable interest rates and currency exchanges can be reduced by hedging. If times begin to get hard then the advantages of high equity and cash will begin to become obvious.

Comparison of Current Financing

The airline industry is a high risk proposition for investors but can yield high gains as a result. Due to the nature of the infrastructure required for an airline to operate the level of financial investment and the quantity of cash flow required to operate is very high when compared to most other industries.

Debt

The comparative observations are:

- Air New Zealand's debt is made up from a combination of bank overdrafts, borrowings, finance lease liabilities and convertible notes issued to Qantas which have more recently been converted to new ordinary shares

- Easy Jet's debt is made up from a combination of bank loans, finance leases and operating leases
- Qantas's debt is made up from a combination of various loans, finance leases and hire purchase agreements
- Virgin Blue's debt is made up from a combination of letters of credit, bank guarantees and aeronautical finance facilities made available

With exception of Qantas, which requires further investigation, the majority if not all of the debt raised is asset related which reflects the intensive nature of the airline industry and the attractiveness of aircraft as security to the lenders and investors. Both Easy Jet and Virgin Blue have a young average fleet age and the aircraft/equipment has a good market value because it boasts modern technology and efficiency which is favoured in today's competitive times.

Some of the loans relate to the specific financing of the aircraft and equipment but in other cases they relate investment towards growth in infrastructure or to increase available cash in order to ensure the required cash flow through difficult economic times.

Equity

The comparative observations are:

- Virgin Blue and Qantas have a comparatively high debt to equity ratio which is the cheaper way to finance the company's growth but at an increased risk
- Air New Zealand and Easy Jet have a comparatively lower debt to equity ratio which means that the financing is most likely to be made up from a higher ratio of contributed equity or common stock which is lower risk
- Due to its reliable reputation, Air New Zealand has been able to issue \$105 million of additional shares
- Each airline's contributed equity is made up primarily from common stock
- Virgin Blue's total consolidated equity consists of approximately 50% contributed equity (common stock), a small negative reserve and the remainder in retained profits
- Virgin Blue's contributed equity is made up from common stock but with the present make up of the ownership and an 'uncommitted dividend policy' the profits can be removed from the airline quite easily
- The vast majority of Air New Zealand's equity is issued capital
- Easy Jet's Board set return on equity as its key financial measure for the benefit of the shareholders
- Easy Jet's total equity consists mainly of share premium and retained earnings
- Qantas's equity is mainly made up of issued capital

Whilst both Virgin Blue and Qantas have relatively high debt to equity ratios, Virgin Blue has a relatively young fleet. Whilst Virgin Blue has the advantage of a young fleet, Air New Zealand has a lower debt to equity ratio. Lets not forget that this debt to equity ratio may not take into account the true market value of the fleet. Air New Zealand has an older average fleet age which would suggest that Virgin Blue could possibly be in a stronger position. Easy Jet would appear to be in the strongest position as it has both a young fleet and a low debt to equity ratio. The suggested order of airline capital structure health is as follows:

- 1st. Easy Jet with the lowest debt to equity ratio and a youngest average fleet age
- 2nd. Virgin Blue with a higher debt to equity ratio but a younger fleet age
- 3rd. Air New Zealand with a lower debt to equity ratio but an older average fleet age
- 4th. Qantas with the highest debt to equity ratio and the oldest average fleet age

Leases

The classification of leases as *finance leases* is important. With a finance lease assets must be shown on the balance sheet of the lessee and the amounts due on the lease also shown on the balance sheet as liabilities. This is in order to prevent the use of lease finance to keep the lease liabilities off the balance sheet.

The key IFRS requirements are:

1. If "substantially all the risks and rewards" of ownership are transferred to the lessee then it is a *finance lease*.
2. If it is not a finance lease then it is an *operating lease*.

The comparative observations are:

- All four airlines have a number of finance and operating leases mainly for aircraft, engines and aeronautical equipment as well as buildings and real-estate
- Qantas also uses hire purchase agreements in addition to the finance leases

Comparison of Airline Growth Cycles

The comparative observations are:

- Easy Jet and Virgin Blue are in their early growth stages and are focussing on gaining market share
- Air New Zealand and Qantas are both mature flagship airlines with a focus on holding onto their existing market share

3.3.4 Comparison of Airline Dividend Policies

Air New Zealand

Air New Zealand's dividend policy is structured towards supporting the business through hard times and it is transparent with clear intentions to the stockholders as is outlined below:

- The Board is committed to the development of a consistent dividend stream to shareholders
- Dividend declarations will take into account:
 - Current earnings,
 - Medium term trading outlook,
 - Long term capital structure and
 - Requirements for investment in value creating projects
- The capital structure is maintained to 45 to 55 percent
- Consistent growing dividend stream of 25 to 50 percent of net profit after tax
- A Dividend Reinvestment Plan is available to shareholders

Easy Jet

As mentioned earlier, Easy Jet does not have a formal communicated dividend policy. Easy Jet has never paid any cash dividends on Ordinary Shares and does not anticipate paying cash dividends in the foreseeable future. Easy Jet's intention is to reinvest all profits towards the purchase of aircraft in order to pave the way for further expansion and an increase in assets.

Qantas

Qantas has a relatively clear, detailed and well communicated dividend policy. The key points to note surrounding the Qantas dividend and share policies are as follows:

- Foreign ownership is limited
- The company reserves the right to buy back shares
- Directors may declare and authorise payment of dividends
- Dividend Reinvestment Plans have previously been available but are suspended for the time being

Virgin Blue

When compared to the other airline's, Virgin Blue has a different approach to rewarding the shareholders and raising future capital for growth. The major points of interest are listed below:

- The dividend policy is not transparent to the outsider or institutional shareholder
- The major insider shareholders such as Toll (up until 2008) and Virgin Blue Holdings control the board and therefore control the dividend payments in their favour
- To the minority outsider shareholder, the future possible dividend payout policy is not communicated

Dividend Policy Comparison Summary

When comparing the four dividend policies the following observations are made:

- The two flagship airlines and Easy Jet have well communicated policies whilst Virgin Blue does not make its plans and intentions clear
- Only Qantas openly limits the level of foreign ownership and retains the right to buy back shares
- Easy Jet has made it clear that it will not be paying out dividends
- Only Air New Zealand clearly defines how the allowable level of dividend payout is calculated
- Both flagship airlines, Air New Zealand and Qantas, have Dividend Reinvestment Plans although Qantas has suspended its plans for the time being

If a company is going to need additional capital in the future, it is cheaper to keep the cash inside the firm than to pay dividends. It is also easier to increase dividends than to have to decrease them once they are established. The market looks at a decrease in dividends as a negative signal that the firm is in trouble. This is possibly why Easy Jet will not pay dividends and may also be one of the reasons why Virgin Blue has not declared a clear policy in its annual report.

Even though Air New Zealand does not limit the level of foreign ownership, the New Zealand Government is the majority “Kiwi shareholder” who has the ability to veto any share purchases by a large shareholder, particularly a foreign owner.

Table 14. Airline Ratio of Retained Profits to Dividends for 2003 to 2007, shows that Virgin Blue has paid out by far the greatest ratio of dividends to retained earnings over the five years.

Retained Earnings are the portion of the airline's profits which are held back to reinvest in the business or pay off debt, rather than paying them out as dividends to its shareholders. Retained earnings are a part of the airline's net worth and increases the supply of cash that is available for capital reinvestment, repurchase of outstanding shares, or other investments which the Board sees fit.

Smaller and faster-growing airlines such as Easy Jet and Virgin Blue would tend to have a high ratio of retained earnings to invest in the expansion of the business. Mature firms such as Air New Zealand and Qantas tend to pay out a higher percentage of their profits as dividends.

Airline Ratio of Retained Profits to Dividends for 2003 - 2007

Airline	Air New Zealand	Easy Jet	Qantas	Virgin Blue
Retained Profits NZ/£/AUS \$million	3,152.2	378.8	8,386.1	1,303.0
Dividend Payouts NZ/£/AUS \$million	237.0	0	1,135.5	280.8
Ratio of Retained Profits to Dividends	13:1	N/A	7:1	5:1

Table 14. Airline Ratio of Retained Profits to Dividends for 2003 to 2007

The retained profits to dividend ratio of 5:1 is probably not a fair indication of Virgin Blue's somewhat discrete dividend policy as it would appear that the large FY 05/06 dividend payment of AUS \$259 million was to repay the investment made by the majority share holding insider investors post operation start up.

If we were to assume that Virgin Blue made consistent payments for the two FY 05/06 and FY 06/07 of AUS \$21 million then the ratio of profits awarded in dividends over the five years would be approximately 30:1. This is more in line with Easy Jet's approach of paying no dividends and reinvesting the profits back into the business.

4. STRATEGY AND COMPETITIVE POSITION

Understanding the strategy and competitive position of your airline and other competing airlines is a major part of ensuring a successful business model. The best competitive strategy for most businesses to adopt would be a '*long term resource based strategy*'. A purely financial strategy is likely to fail. This section takes a closer look at the underlying visions and principles of each of the four airlines.

4.1 The Vision and Guiding Principles

An airline's vision and guiding principles sometimes give an indication as to the culture and priorities which lie within the organisation and that which is driven down through the airline by the Board and executive management team. A comparison of the publicised vision and guiding principles with the actual culture experienced within the organisation is a good indicator as to the level of control which the management team have over the business. The following paragraphs contain the visions and guiding principles for the four airlines:

Air New Zealand's Vision Statement and Guiding Principles

We will strive to be number one in every market we serve by creating a workplace where teams are committed to our customers in a distinctively New Zealand way, resulting in superior industry returns.

- *We will be the customers' airline of choice when travelling to, from and within New Zealand.*
- *We will build competitive advantage in all of our businesses through the creativity and innovation of our people.*
- *We will champion and promote New Zealand and its people, culture and business at home and overseas.*
- *We will work together as a great team committed to the growth and vitality of our company and New Zealand.*
- *Our workplaces will be fun, energising and where everyone can make a difference*

(Air New Zealand. 2007.)

Easy Jet Mission Statement

To provide our customers with safe, good value, point-to-point air services. To effect and to offer a consistent and reliable product and fares appealing to leisure and business markets on a range of European routes. To achieve this we will develop our people and establish lasting relationships with our suppliers. (Easy Jet. 2008.)

Qantas Vision and Mission Statements

Qantas does not appear to have a publicly advertised mission statement or list of guiding principles. Reading through Board Reports, staff briefings, press releases and other internet based documents the following separated statements can be found:

Possible Mission Statements

- Shareholders - Provide a good return on investment for shareholders
- Employees - To encourage and nurture its employees
- Customers - To provide the best possible travel experience

Possible Vision Statements

- Strategic Goals - To maintain and expand its current market share (eg: 70% domestic -> aim is 80%)
- How - To explore new markets (eg: Asia)
- When – In the near future

The following are quoted from the Qantas Annual Reports:

“Our goal is to give each customer the best possible travel experience, from the time they choose to fly with us to when they arrive at their ultimate destination.”

Organisational values

“Our Customers: Customers are at the centre of everything we do”

“Our Brand: Our brand takes the spirit of Australia to the world”

“Our Priority: There is no greater priority than safety and security”

“Our Future: Investment and innovation help shape our future”

“Our Business: Being a good business is as important as being a great airline inaction”

In summary there is no clearly defined and communicated company Vision Statement or Guiding Principle Statement for the Qantas employees or shareholders.

Virgin Blue

In some ways similar to Qantas, Virgin Blue does not have a well communicated vision or mission statement. Virgin Blue defines itself as The New World Carrier with its promise to ‘keep the air fair’.

Our focus is on offering a range of innovative products, services and features that better meet the needs of all Guests, particularly corporate and government travellers, whilst maintaining the significant cost advantage of a low-cost carrier. Unlike traditional ‘no frills’ low-cost carriers, Virgin Blue’s approach is to offer consistently affordable fares, outstanding service and a host of other options available on a pay-for use basis such as in-flight meals and snacks, Premium Economy and Blue Zone seating, Corporate Plus and Fully Flexible fares, live2air in-flight television, airport lounge facilities and carbon off-setting options. (Virgin Blue. 2008.)

Although Virgin Blue does not clearly communicate a vision or mission statement to the employees or the shareholders, the Virgin brand delivers a much more powerful message to the world. Each of the many Virgin Branded companies have to deliver on these globally recognised values. Below is the Virgin Group statement to which all Virgin companies must deliver in order to protect the ‘brand’.

We believe in making a difference. In our customers' eyes, Virgin stands for value for money, quality, innovation, fun and a sense of competitive challenge. We deliver a quality service by empowering our employees and we facilitate and monitor customer feedback to continually improve the customer's experience through innovation. (Virgin Group. 2008.)

In summary, Air New Zealand offers a passionate vision and mission statement which centres around being number one with exceptional service through the ultimate ‘*Kiwi Experience*’. Easy Jet displays itself as a very factual and reliable business which looks to guarantee its performance through investment in its people and suppliers. Qantas does not have a clear vision and mission statement to pass onto its employees and shareholders. Virgin Blue enjoys the reputation of the Virgin Group branding whilst committing to being

customer focussed and offering a quality product to corporate businesses and holiday makers at low cost airline rates.

4.2 Oh for a 'Clean Slate'!

Both of the flagship airlines, Air New Zealand and Qantas, have a long standing history which brings with it an embedded unionised culture which is very difficult and slow to change. More often than not, any management proposed organisational or process changes are opposed in a determined manner by the unions and the workers.

The younger low cost airlines Easy Jet and Virgin Blue have had the opportunity to develop their culture to suit the competitive environment. It is important that these two airlines remain flexible and able to quickly change in order to remain competitive in the ever changing market. It would be very easy for them to become entrenched and fall into the same trap as the more mature flagship airlines. If this were to happen then the low cost airlines would lose their main competitive advantage which they have against the mature flagship airlines.

4.3 Industry Analysis

A brief outline and comparison of the business and operations of the four airlines is given in later sections of this paper. Using work sheets based on Vermeulen's Research Approach Technique (Lincoln University, 2007.) an industry analysis is carried out. The analysis is broken down to three sections:

- Market Analysis
- Competitor Analysis
- Strategic Group Analysis

The majority of this section will focus on the three Southern Hemisphere airlines as they are potentially in direct competition with one another. Easy Jet will be referred to for comparison purposes.

4.3.1 Market Analysis

In order to analyse the airline market it is best to look at the following key dimensions:

- Market Size
- Market Trends
- Market Segmentation
- Market Profitability

Market Size

As previously mentioned, it has been suggested that, due to the falling economy and the number of airlines and aircraft operating in and around New Zealand and Australia, the Australasian airline industry is 30% over capacity. To an extent the existing market size can be evaluated with the help of various sources such as and not limited to government data, historical records and customer surveys. With this information the airlines can start to determine the potential sales for a particular sector if its frequency were to be increased. The

existing market size can be estimated by measuring the total volume of all sales in the market.

Market Push and *Market Pull* are the two areas to consider. In the case of *Market Pull* it is quite simple for an airline to evaluate whether or not there is a requirement for more capacity on certain sectors or network routes by looking at the passenger loads and to understand the passenger departure and destination nodes. Both low cost and flagship airlines adopt this approach as one way to plan their growth strategies and to better utilise their fleets.

Market Push is a great deal more complex and this is where the low cost airlines like Easy Jet, Jetstar and Virgin Blue play a major part. Due to the low cost fares being affordable to a larger volume of the population more people are flying than have done so before. In some cases the airline decides that it will take a calculated risk and advertise a new route in the hope that it too will attract new passengers and in most cases this new route will aim to draw more travellers through the existing network.

Both Qantas and Air New Zealand have in the past offered frequent schedules to many regional and international destinations with comparatively little competition. In more recent years the younger and smaller low cost airlines have been nibbling away at specific existing routes already operated by the longstanding flagship airlines. In doing so they do not just remove existing passengers from the flagship airlines, they also induce new passengers into the market with their new low cost fares.

With the combined effects of both *Market Push* and *Market Pull* it is quite easy to see that there is considerably more opportunity for the newer and smaller low cost airlines to grow in to the existing market whilst generating additional new passengers. For the flagship airlines it is a battle to maintain their existing market let alone create a new one.

Market Trends

Market trends help the airlines to determine new opportunities and threats. Some examples of useful trends are price sensitivity, demand for innovation and improvements, and quality emphasis. The airline market is affected by numerous external forces such as, but not limited to, the following:

- The economy
- Terrorism
- The weather
- Environmental issues
- Natural disasters
- Diseases
- Political Unrest
- Technology
- Globalisation
- Competition

The majority of these drivers are out of the control of the airline industry and can take effect within days or even hours. Predicting such trends is almost impossible for any of the four airlines taking part in this comparison process. What they can do is try to mitigate against the

risks by ensuring careful strategic planning of their businesses. It is worth mentioning that Easy Jet is less likely to be affected by the same issues at the same time as the three Southern Hemisphere airlines due to its location. The global economy will obviously have a similar effect across the four airlines. It is quite possible that a point to point network could be exposed to less risk than a hub and spoke network. If the hub was seriously affected by a disaster then the majority of the hub and spoke network could be at risk.

Even though the airlines are all exposed to similar market trends, careful strategic planning and risk mitigation can put an airline in an advantageous position when compared to the competition.

Market Segmentation

Market segmentation is the process of dividing the market into sectors which differ from one another, while individuals exhibiting similar traits fall under one group. With the help of segmentation airlines can anticipate the needs of its potential customers to a greater extent, by determining the group of people best suited for a particular service offering. Each of the four airlines operate regionally and nationally in both the passenger and freight markets. Each of the airlines targets both the holiday and business travellers.

Air New Zealand considers its long-haul business as its core product in the market place. Approximately 70% of its passengers are inbound passengers who are dependant on offshore distribution and flight connections. Air New Zealand offers a regular high frequency hub and spoke international and domestic service. Air New Zealand has always been seen as the preferred carrier for the business sector and 'Kiwi traditionalists' although this segment of the market will come under pressure during tighter economic times. Businesses will start to look to prevent unnecessary travel and towards cheaper fares for the remaining trips. 'Kiwi traditionalists' will lower their heads and save money on the lower cost airlines. At present Air New Zealand operates a monopoly service with little to no competition to all domestic non main trunk routes.

Easy Jet is Europe's leading low cost airline which builds its network on a point to point principle instead of the hub and spoke principle often adopted by the flagship airlines. Easy Jet does also fly to some primary airports which deviate from the truly point to point principle of operation.

Qantas's market segment is similar in principle to that of Air New Zealand's although it is mainly centred around Australia. Qantas has a larger population of travellers to attract but also has a greater number of growing competitors in the market place. Unlike Air New Zealand, Qantas no longer has the monopoly on the domestic routes.

Virgin Blue has attempted to capture passengers from all sectors by positioning itself as the 'New World Carrier'. The aim is to develop its reputation as a high level service provider at affordable prices. The holiday maker will be attracted by low cost fares whilst the business people need to be happy to walk into a high powered meeting with a Virgin Blue luggage label attached to their bags. The young average fleet age brings with it a high level of on time performance and a high quality appearance which helps to attract the business travellers. Whilst the flagship carriers, Air New Zealand and Qantas, are bound to fulfil their national

roles, Virgin Blue is well positioned to be the Australasian airline of the future. With the effects of globalisation and the need for higher levels of efficiency is there a need to continue with two independent national airlines?

Market Profitability

Each airline has a different level of profitability, the average profit potential for a market can be used as a guideline for knowing how difficult it is to make money in the market. The next section, 4.3.2 *Competitor Analysis*, uses the framework of Porter's Five Forces of Competition (Grant. R. M. 2008) to evaluate the potential competitive threats which may effect the level of profits.

Table 7. DuPont System Analysis – Five Year Averages shows that the five year average NPM for Virgin Blue is over twice that of each of the other three airlines.

4.3.2 Competitor Analysis

Competitor analysis uses the framework of Porter's Five Forces of Competition (Grant. R. M. 2008) to outline the competitive threats which an airline needs to understand and evaluate before developing its corporate strategy. The framework is outlined in *Figure 1. Porter's Five Forces of Competition Framework*.

Porter's Five Forces of Competition Framework

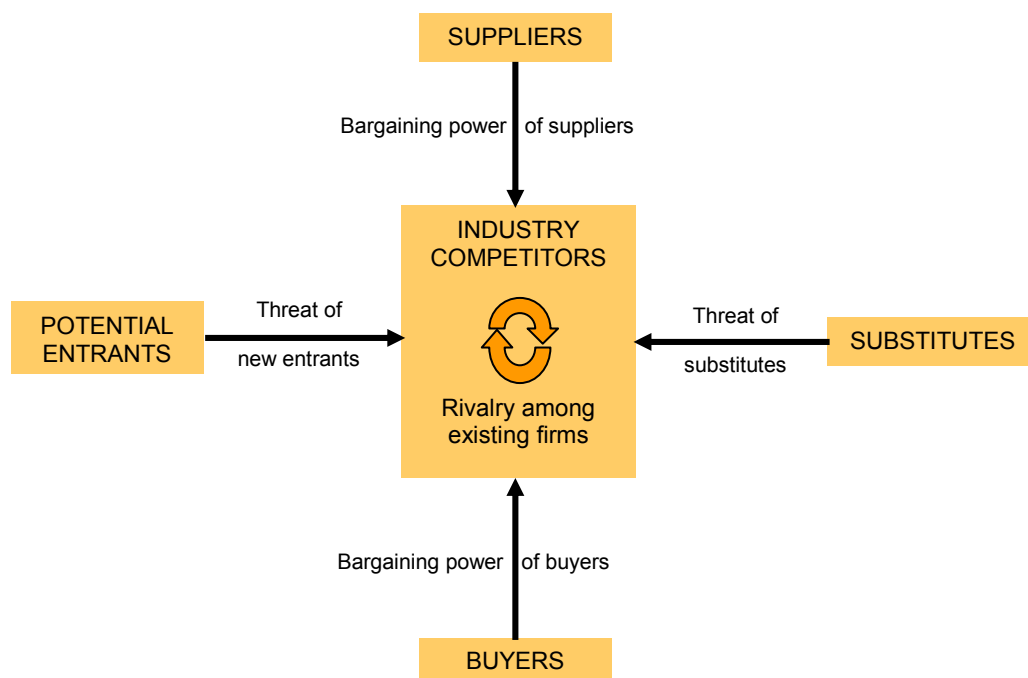


Figure 1. Porter's Five Forces of Competition Framework

Industry Competitors (rivalry amongst existing airlines)

Below is a statement which was made by Air New Zealand's CEO Rob Fyfe before demise of Ansett Australia which offered great potential growth opportunities to Virgin Blue.

Qantas was always going to be a survivor. The question was who would survive between Virgin Blue and Ansett Australia. However, Air New Zealand had a fleet of about 60 regional aircraft.

"So for anyone to mount a substantive challenge to Air New Zealand on a long-term basis ... then you have got to put a lot of capacity into this market. And I would be very surprised if there is a big enough prize here to motivate anyone to want to do that," (Mole. 2007).

The main international competitors include Air NZ, Emirates, Singapore Airlines, Air Vanuatu, Cathay Pacific, Thai Airways, Japan Airlines and Virgin Blue (Pacific Blue). For freight services other handlers like QAN, Australian Air Express, DHL, UPS, FedEx and various other customs brokers are competing.

Air New Zealand once had the monopoly on the regional routes within New Zealand and also held a fair portion of the market across the Tasman between New Zealand and Australia. New Zealand based airline Pacific Blue backed by its large parent company, Virgin Blue in Australia, has started to directly challenge Air New Zealand on some of these routes. Air New Zealand recently announced seating changes on domestic routes in a strategy aimed at competing with the Virgin Group subsidiary Pacific Blue.

Air New Zealand is currently the major regional carrier in New Zealand offering a frequent and unchallenged schedule to and from all the smaller regional ports around New Zealand. To date Air New Zealand's only regional competition is from Pacific Blue on the Auckland, Wellington, Christchurch and Dunedin routes.

Pacific Blue is competing on the Trans-Tasman routes whilst Virgin Blue competing with the Qantas and Tiger Airways at home in Australia. Virgin Blue is also soon to be flying between Australia and the US and will no doubt put further pressure on Qantas's and Air New Zealand's profits with the new low fare ticket prices now on offer.

Due to the popularity of these routes, Virgin's competition is likely to have cost Air New Zealand \$15 million in reduced net profits over the last financial year. In 2009 the outcome could be greater, with an expected \$277 million falling to \$244 million.

Jetconnect and JetStar are low cost airlines backed by Qantas in Australia. They offer direct competition on the Trans-Tasman routes and also fly direct to some of the smaller nodes in the South Island. The direct flights to some of the smaller nodes have a slight effect on the Air New Zealand regional network. However, the Trans-Tasman competition is somewhat more competitive.

The Pacific has historically been the most profitable arena for the airlines with Virgin Blue currently holding approximately a third of the market share and Qantas holding approximately half. Until recently there have been three major airlines competing in this market but shortly we may see a fourth, Tiger Airways.

The large internationally focussed Emirates Airlines competes on the Trans-Tasman routes but its prime aim is not necessarily to attract a share of the market as part of their strategy. Emirates can actually save costs by parking their aircraft in New Zealand and can therefore offer vastly reduced fares to potential passengers wishing to cross the Tasman.

Air New Zealand had previously shut down its low cost subsidiary airline, Freedom Air. This decision was made because competition on the routes to and from Australia had forced fare prices down so much that there was little difference between the mainstream Air New Zealand and its subsidiary Freedom Air. The Freedom Air passengers were mainly holiday makers.

In the Australian domestic market the main competitors are Qantas, Jetstar and Virgin Blue but also regional airlines like Rex, Airnorth and Skywest. Smaller, younger and leaner airlines are in a good position to expand into the larger flagship airline's market in a cleverly planned, calculated and controlled manner. The flagship airlines can only try to compete by restructuring and clever marketing, all of which come at a cost. The flagship airlines do often have the support of their Government to see them through the hard times.

Easy Jet's main competitor is Ryanair. Both airlines have a similar number of routes whilst Easy Jet carries more passengers.

Potential Threat of New Entrants

In more recent times with the growing competition the Pacific airline industry has seen an estimated 30% growth in capacity. Sadly to compound the problem, the current economic climate has seen a down turn in the number of passengers wishing to travel.

Air New Zealand, Emirates, Virgin Blue, Pacific Blue, Singapore Airlines, Qantas, Jetconnect and JetStar are just some of the existing airlines competing in the regional, national and international market place. They offer the threat of competition to the operations on all new routes. Unlike the earlier message communicated by Air New Zealand's CEO Rob Fyfe, never rule out a new airline attempting to enter the market place.

Tiger Airways have recently entered the Pacific market and have the other competing airlines extremely worried with the anticipation of what the new airline will do next.

Potential Threat of Substitutes

Due to the nature of aviation and the topography, specifically in New Zealand and Australia, it is unlikely that a substitute to the aeroplane should be a threat. However, with the rate of development in technology rapidly increasing, the threat of peak fuel and global warming, it would be wise for the airlines to 'keep an eye open'.

National Governments are promising to increase the investment in coastal shipping which may have an effect on the airline freight industry. Coastal shipping is understood to be one of the most economical modes by which to transport freight nationally. In Europe the coastal shipping industry has been resurrected for this very reason.

Bargaining Power of Suppliers

In some areas of the airline business, critical and specialised products or services are required and may only be obtained from specific approved sources. These sources are often themselves governed by their own regulatory requirements. Such services and products come at a high cost to the airline and are also vulnerable to erratic changes in cost. It is important to the airline that a supplier is not able to monopolise in its specific sector and a great deal of management and foresight in the procurement departments aims to protect the business from the threat of the bargaining power of the supplier.

Bargaining Power of Buyers – the passengers

Economy class travellers will no doubt be happy to pay one-way fares as low as \$39 and more likely between \$59 and \$69 on a regular basis. Air New Zealand and Qantas may well benefit from a switch of commuters and higher-earners who see little attraction and benefit to flying on the cheap with low cost airlines. This is why Virgin Blue are attempting to re-class themselves as the 'New World Carrier' with its promise to 'keep the air fair'. The aim is to ensure that business travellers are not ashamed to walk into a board meeting with a Virgin Blue luggage label on their bag.

With the increase in capacity and the decrease in demand the low cost carriers are expecting to see some frequent national flagship carrier passengers drift onto their flights. Companies in all sectors are constantly seeking ways in which to cut costs. Virgin Blue has positioned itself well for such a transition and also has the advantage of the Virgin Brand name which has a global reputation for confidently delivering a low cost good quality product as promised.

4.3.3 Strategic Group Analysis

In this section we look for key organisational groupings with two or three similar strategic characteristics under the following headings:

- Extent of geographical coverage
- Number of market segments served
- Extent of branding
- Service quality and pricing policy
- Utilisation of capacity
- Ownership structure (separate company or relationship with parent)
- Relationship to influence groups (e.g. Government, City etc)
- Size of organisation

Extent of Geographical Coverage

It is difficult to capture the exact geographical coverage of the four airlines as they will be constantly changing their flight destinations in an attempt to better serve the market and to maximise profits. *Table 15. Comparison of Geographical Coverage* compares the geographic coverage of the four airlines which was advertised at the time of writing this paper. The various code share agreements with connecting airlines creates secondary operational networks which are not evaluated in this paper.

Air New Zealand understandably focuses on Oceania with some further spread into Asia, North America and the United Kingdom. Easy Jet has a very substantial presence in many European and United Kingdom countries and has also spread into Africa. Qantas, whilst also joining Easy Jet in Africa, has a very strong presence in Asia and its home country Australia. Virgin Blue has focussed mainly on Oceania and one destination in Asia. It would appear that Virgin Blue, although smaller, is directly competing with the Air New Zealand international destinations more than those served by Qantas. Air New Zealand, Qantas and Virgin Blue all have an interest in the United States and Asia but Qantas has a major presence in Asia when compared to the other two airlines.

Number of Market Segments Served

The airline industry at present is generally split into two sectors. The national flag carrying airlines and the value based low cost airlines. At present the low cost airlines are hurting the flag carriers on the international and domestic routes. In an attempt to reduce the losses being incurred by this competition, national flag carrier airlines are attempting to converge on the low cost strategies and neutralise the competition. Sadly, the national flag carriers usually have not started with a clean slate and generally carry higher overheads due to reduced efficiency and costly infrastructures brought about by their long and varied unionised histories.

Comparison of Geographical Coverage				
Destinations	Air New Zealand	Easy Jet	Qantas	Virgin Blue
Asia	→		→	→
China	→		→	
Japan	→		→	
India			→	
Indonesia			→	→
Philippines			→	
Singapore			→	
Thailand			→	
Africa		→	→	
Egypt		→		
Morocco		→		
South Africa			→	
Europe		→	→	
Austria		→		
Belgium		→		
Bulgaria		→		
Croatia		→		
Cyprus		→		
Czech Republic		→		
Denmark		→		
Estonia		→		
Finland		→		
Continued overleaf				

Continued from previous page				
Destinations	Air New Zealand	Easy Jet	Qantas	Virgin Blue
France		→		
Germany		→	→	
Greece		→		
Hungary		→		
Italy		→		
Latvia		→		
Malta		→		
Netherlands		→		
Poland		→		
Portugal		→		
Romania		→		
Slovenia		→		
Spain		→		
Sweden		→		
Switzerland		→		
Turkey		→		
North America	→		→	→
Canada	→			
United States	→		→	→
Oceania	→		→	→
Australia	→		→	→
Cook Islands	→			→
Fiji	→			→
Vanuatu	→			
French Polynesia	→			
New Caledonia	→		→	
New Zealand	→		→	→
Niue	→			
Rarotonga				→
Samoa	→			→
Solomon Islands				→
Tonga	→			→
Vanuatu				→
South America			→	
Argentina			→	
United Kingdom	→	→	→	
England		→	→	
Gibraltar		→		
Jersey		→		
Northern Ireland		→		
Scotland		→		

Table 15. Comparison of Geographical Coverage

Extent of Branding

Virgin Blue has the strongest global brand with a successful reputation which boasts value for money and high standards in many business sectors. Air New Zealand and Qantas fly the flags of their respective nations and are obliged to continue with their branding as it is expected by the national people and Governments.

Service Quality and Pricing Policy

Air New Zealand and Qantas both offer an all inclusive service to its customers whilst the low cost airlines Virgin Blue and Easy Jet charge their customers for all extras such as food and water. Virgin Blue and Easy Jet have the lower average fleet age and therefore generally offer their customers a newer product with the latest technology. Both Air New Zealand and Qantas have invested in new aircraft for some of the more competitive routes.

Utilisation of Capacity

Air New Zealand and Qantas both have large capacity in their respective countries and will therefore possibly feel more pain as they try to continue to operate their frequent schedules with lower load factors. Virgin Blue and Easy Jet offer less frequency but still serve a large variety of point to point destinations. With the expected drift of passengers from the larger and more expensive flagship airlines Virgin Blue and Easy Jet may be less effected by an economic downturn.

The airline industry has two useful measures which indicate the level of utilisation of its capacity:

- Revenue Passenger Kilometres (RPK's) – number of paying passengers carried, multiplied by number of kilometres flown
- Available Seat Kilometres (ASK's) – number of seats available for passengers, multiplied by number of kilometres flown

By comparing the RPK against the ASK for an airline it is possible to evaluate the level of utilisation of capacity.

Comparison of Airline ASK against RPK for FY2007

Airline	ASK (M)	RPK (M)	Passengers (000)	Data Source
Air New Zealand	35,113	26,874	12,480	Financial results 2007 p41
Easy Jet	43,501	36,976	37,200	Annual report and accounts 2007 page 13 Annual report 2007 page 50.
Qantas	122,119	97,622	36,449	Qantas Fact File. Qantas at a Glance http://www.qantas.com.au/infodetail/about/FactFiles.pdf
Virgin Blue	21,642	17,563	15,262	Annual Report 2007, p5.

Table 16. Comparison of Airline ASK against RPK for FY2007

According to the data supplied in *Table 16. Comparison of Airline ASK against RPK for FY2007*, the four airline capacity utilisation factors for the FY2007 are:

- Air New Zealand 77%
- Easy Jet 85%
- Qantas 80%
- Virgin Blue 81%

Although Qantas has shown to be competitive, it is clear that the point to point low cost carriers are more successful at filling the seats on the aircraft. For these two airlines it does not mean that the profits will be higher, it is the higher level of yield and the lower operating costs that decides the winner.

Comparison of Airline Fleet Utilisation

Airline	Utilisation hrs/day	Date Obtained	Data Source
Air New Zealand	9.37	31 Mar 09	http://www.airnewzealand.co.nz/aboutus/fleet/
Easy Jet	9.0	30 Jun 07	http://2008annualreport.easyjet.com/action/search/?id=23538&query=fleet+utilisation
Qantas (Domestic)	8.7	30 Mar 09	Virgin Blue Connectivity Analysis
Virgin Blue (Group)	10.1	30 Mar 09	Virgin Blue Sabre Tracking System

Table 17. Comparison of Airline Fleet Utilisation

Unfortunately it is difficult to gain access to airline fleet utilisation levels and so the figures recorded the four airlines in *Table 17. Comparison of Airline Fleet Utilisation* are not all from the same financial year but they do give an idea as to how well the operators manage their fleets. Allowance also has to be made for the percentage of the fleet which operates on long haul sectors. For example, both Air New Zealand and Qantas operate rotating long haul twelve hour sectors to the United Kingdom and Europe via the United States or Asia. This would greatly increase the fleet utilisation levels.

Considering the figure supplied for Qantas is for the domestic services only and that the Virgin Blue figure includes all international travel, it is fair to say that Qantas's fleet utilisation could be one of the highest.

Ownership Structure and Relationship to Influence Groups

In simple terms, the national flag carrying airlines Air New Zealand and Qantas are stand alone companies which are heavily supported by their respective Governments. The New Zealand Government now owns approximately 80% of the Air New Zealand Group shares since the bail out in 2002. Qantas is owned primarily by Australian businesses and is protected by the Government enforced *Limit of Foreign Ownership* which is outlined below.

Qantas Limit of Foreign Ownership

- *The company reserves the right to buy back shares.*

- At no time can any one foreign person have a Relevant Interest in shares above 25% of the issued share capital of Qantas.
- At no time can Foreign Persons have Relevant Interests in shares in Qantas which, in aggregate, exceed 49% of the issued share capital of Qantas.
- At no time can Foreign Airlines have Relevant Interests in shares in Qantas which, in aggregate, exceed 35% of the issued share capital of Qantas. (Qantas. 2003 – 2007)

Virgin Blue is a privately owned Australian based airline which until recently was controlled by the majority shareholder Toll Holdings Limited. Toll has now given its shares to its own shareholders making the Virgin Group Swiss investment company Cricket SA the major share holder. Although owned by a number of major businesses, Virgin Blue benefits a great deal from the Virgin brand name and all that it represents.

Easy Jet's ownership is unique compared to the other airlines. Sir Stelios Haji-Ioannou and his family are the major shareholders in Easy Jet PLC . Sir Stelios separately owns easyGroup IP licensing Ltd which is the company that owns the 'easy' brand and licenses it to the airline and other companies. Over the years the 'easy' brand has grown to have a healthy and well respected reputation.

Size of Organisation

Table 18. Comparing the Size of the Airlines – FY2007 makes a comparison between the approximate number of employees, number of aircraft and the operating profits. Virgin Blue has the least number of employees and aircraft but has returned the second largest operating profit.

Comparing the Size of the Airlines - FY07/08

Airline	No. of employees	No. of Aircraft	Operating Profit EBIT (M)
Air New Zealand	10,713	99	NZ\$283.0
Easy Jet	5,674	164	£172.0
Qantas	34,267	230	AUS\$1,032.1
Virgin Blue	4,000	63	AUS\$324.3

Table 18. Comparing the Size of the Airlines – FY2007

The ratios of employees to aircraft are as follows:

- Air New Zealand 108:1
- Easy Jet 36:1
- Qantas 149:1
- Virgin Blue 63:1

Both Easy Jet and Virgin Blue outsource the majority of their support services and heavy maintenance and therefore the staff numbers to aircraft ratios can be expected to be a great deal lower than the two flagship airlines, Air New Zealand and Qantas. By comparing the Easy Jet and Virgin Blue ratios it can be suggested that Virgin Blue is over staffed and has

potential to reduce operating costs. Easy Jet prides its self on developing its IT services to be as efficient as possible and consequently removes the requirement to employ more people. Approximately 95% of all Easy Jet bookings are via the internet. Approximately 90% of Virgin Blue's bookings are also via the internet.

Air New Zealand and Qantas have a long standing history which brings with it an embedded culture which is very difficult and slow to change. More often than not, any management proposed organisational or process changes are opposed in a determined manner by the unions and the workers irrespective of the effect on the business's success.

4.3.4 Sizeable and Sustainable Competitive Advantage

"A firm is said to have a sustained competitive advantage when it is implementing a value creating strategy not simultaneously being implemented by any current or potential competitors and when these other firms are unable to duplicate the benefits of this strategy." (Barney. 1991)

Generally speaking there are three major strategies which an airline can adopt in order to gain the competitive advantage over its rivals.

The first is cost leadership through *cost cutting*. The airline aims to offer the lowest cost fares at a high volume. If a firm can maintain prices below those of its competitors, and still make profits without sacrificing its expected quality of service, then it has a strong competitive advantage.

If you are at the top you can win a price war. But be active, not re-active. Be the price breaker, the ball buster, the Iron fist. Move to make the first blow, so deep, so hard, without falter and be ready to move, and adapt with the battle. Take what is yours because you are at the top of the game. Be ready to make unexpected moves at a split second and fire blow after blow.

Be ready to break Industry norms, forget the rules, the perception of the Industry, disregard its experts, its leadership, its foundation. If you want to run at redline in a race with cars that go all the same speed and use only part of the track then go ahead. But this team and teams like it in various Industries all over will beat you. Because the first thing they teach us at race car driving school is use the whole track. (Winslow. 2007).

The second is *differentiation*. The airline seeks to offer a uniquely different service which is difficult to copy by another airline. Such differentiation needs to be attractive to the customer and sustainable for the long term

The third and the most risky focuses on targeting a certain *market sector*. This is seen to be high risk because a specific market sector can be reduced or even eliminated by external forces which are out of the airline's control. In such an event the airline has no likely source of revenue unless it very quickly refocuses on a new market sector or sectors.

In previous years low cost airlines targeted the holiday or low budget travellers but as competition increases some low cost airlines strive to gain a larger share of the market by repositioning themselves towards both the low budget and business sectors combined.

Directly opposing this move is the larger flagship airlines development of their own low cost airline. Air New Zealand previously operated as Freedom Air but later changed to a less visible model under the trading name Zeal. The new A320 aircraft are now operated under Zeal and unlike the Freedom Air fleet the aircraft bear the Air New Zealand livery. Clearly Zeal potentially has all the gains of a low cost airline with respect to lower paid staff and lower operating costs but all the gains brought about by the image of being the national carrier.

Following the collapse of Ansett Australia, Qantas had a 90% share of the Australian domestic market which left Virgin Blue with the remaining 10%. Shortly after, Virgin Blue expanded and eventually reduced the Qantas market share to 60%. In 2006 Qantas failed to obtain regulatory approval to purchase a larger stake in Air New Zealand. Qantas then announced the formal termination of its Strategic Alliance Agreement and Tasman Network Agreement with Air New Zealand, as the Australian Competition and Consumer Commission's draft determination refused approval of the Agreement in November 2006. Subsequently Qantas stepped up competition on the trans-Tasman routes by introducing its new low cost airline, JetStar, into New Zealand under its own JetStar livery. To the majority of the public the airline shows no direct link to Qantas and may therefore struggle to attract the business travellers alongside the holiday makers.

Virgin Blue with the help of its globally recognised and respected brand name originally set out to reduce the cost of flying to the public and in doing so was widely known as a low cost airline and theoretically grouped with airlines like Ryanair and Easy Jet. More recently Virgin Blue has been repositioning itself as the 'New World Carrier' with a lean towards being a low cost corporate carrier which offers a high standard for the lowest price.

A quick look at Easy Jet's website makes it clear that the airline is not making a serious attempt to capture the corporate business travellers but instead it has positioned itself as the one stop shop for holiday makers with quick links to tour guides, insurance, hostels, villas, hotels and apartments, car rental and airport parking. It does clearly differ from the image of a real budget no frills airline such as Ryanair. Ryanair's deliberate and well advertised extremely basic service, including the proposal to charge for the use of the toilets, helps to position Easy Jet into a similar position as Virgin Blue despite not focusing on the business travellers.

The younger and smaller low cost airlines are well positioned to manage and change the structure of their businesses in order to meet the requirements of the ever changing market place. The more recent challenges and events taking place around the world were certainly not allowed for in the past development of the older entrenched flagship airlines.

When growth starts from humble beginnings and from an underdog, promotes contagious excitement. Employee opportunities and advancements depend on growth.
(Hartley. 2003).

Air New Zealand and Qantas are both back by their respective Governments. Air New Zealand had a rescue package put together by the New Zealand Government in 2002. What is the likelihood of a repeat Government funding offer if Air New Zealand falls into financial difficulties during this increasingly competitive market further exaggerated by the less than healthy economic climate?

A report in the Sydney Morning Herald says that bar Ansett, no other mainstream airline in the Pacific has experienced as turbulent a time recently as Air New Zealand has, with competition across the Tasman and on its international routes remaining as tough as ever, and the days of a cosy alliance with Qantas appear long gone. (Mole. 2007).

It is crucial that Porter's five forces (Grant. R. M., 2008) are monitored and managed in a way that ensures stability for the long term future. The threat of *potential new entrants*, increased bargaining power of *suppliers* and *buyers*, or the increasing threat of *possible substitutes* will all reduce the possibility of sustainable long term competitive advantage.

The existing industry competitors may adopt new more efficient strategies which will further reduce the chances of continued sustainable competitive advantage. To confidently introduce price cuts and potentially induce a price war means that the firm must be absolutely sure that the potential threats outlined by Porter's five forces are not going to considerably reduce their existing competitive advantage. Alternatively, a good bluff is an option but very risky!

If the competition is seen to be in a weak position then it is understandable to assume that they are less likely to be able to sustain a price war. In nature this strategy is a part of the natural food chain. The weakest animal is always the one which gets caught and eaten.

To summarise, Air New Zealand and Qantas are losing market share to the underdogs whilst being entrenched in high overheads and with a low ability to make rapid change. In isolation this could well mean that price cuts and a price war are likely to succeed for the low cost airlines if such a move can be financially sustained. However, if supported by government funds then even a poorly performing airline may be repeatedly rescued. Which is it to be?

4.3.5 Differentiation

Airlines around the world are working hard to differentiate their businesses in an attempt to increase their market share or even maintain their existing market share. The use of different aircraft types and different levels of customisation in services and products are popular methods employed by most airlines. The four senses, touch, smell, sound and sight are key drivers when designing for differentiation. The touch, sound and smell of an aircraft interior were determined to contribute to the delivery of a differentiated market offering.

Another method of creating market differentiation which is adopted by the competing airlines is capitalising on the availability of new routes. It's similar to seismic testing for new oil fields

by the multinational oil companies. Analysts are continually looking for profitable levels of passenger demand between two destinations of which one or both destinations may be new and have not been operated before.

Air New Zealand

Air New Zealand identified that the vast majority of its core business is international passengers from outside of New Zealand. Air New Zealand has to compete with other international airlines such as Emirates, Singapore Airlines and Qantas and so needs to differentiate its service from the others to create competitive advantage. Each of these airlines has access to similar aircraft types with matching performance levels and so competitive advantage for Air New Zealand had to be developed by other means. One attempt made by the airline was to join the Star Alliance Group and attract customers by being able to offer connecting flights on other alliance member airlines.

Air New Zealand's name is a very useful and non-tangible asset which can be put to good use when trying to produce differentiation in a competitive market place. Market research concluded that passengers who did not intend to use a value based airline (VBA) had higher expectations. Air New Zealand decided to build stronger brand differentiation into their product and service.

In order to achieve maximum differentiation, Air New Zealand decided that this difference had to be powered by a big idea, an idea built with this target market in mind and based on a strategy of telling the 'origin' story. It had to be simple enough for everyone to relate to, including both staff and partners and, ultimately, it had to act as the core driver of the brand. 'Inspiring Journeys' and the 'Kiwi Experience' was the result. (Better by Design. 2007).

Low-cost model – Easy Jet and Virgin Blue

Southwest airlines was the first low cost carrier to take on the major carriers. The low cost model offered the following attributes:

- low fares
- high frequency flights
- point to point service
- no free meals or drinks on board
- no seat assignment
- short flights
- flights to secondary airports

There have been a number of low cost carriers across the world and not all have been successful. Like Southwest in the United States, Easy Jet and Ryanair have succeeded in Europe and the United Kingdom. Others such as Debonair and Buzz have not been so successful.

The strategy adopted by Ryanair is the closest to the original Southwest model. The airline offers a point-to-point service and has absolutely no frills (meals, seat allocation or frequent flyer program). It aims to turn flights around inside 25 minutes and its routes are generally the shortest of all the low cost carriers. Ryanair is one of the most profitable low cost airlines in the market.

Easy Jet is similar to Ryanair as it does not offer any frills and is also one of the most profitable airlines in Europe. The airline bypasses the travel agent mode of distribution altogether and offers a similar point-to-point service. Unlike Ryanair, Easy Jet does travel to a select few primary airports.

As a comparison, Virgin Express implemented a different strategy in order to gain a competitive edge. The airline occasionally offers business class seating, its utilization rates are lower than most other low cost carriers and it almost always flies to prime airports across Europe. Virgin Express produced one of the lowest low cost carrier end of year profits in 2001.

Spirit is another low cost carrier with a differentiation strategy. The airline adopted a “with frills” option under the name of SpiritPlus. It operates the longest flights among the low cost carriers and does not relate to the early Southwest operational model in any way. Like Virgin Express, Spirit was one of the poorest profit-makers in 2001.

Now the twist! Southwest has changed its strategy over more recent years. The airline now offers free soft drinks, has introduced a frequent flyer program, and now flies transcontinental. Its profit margin was not as strong as Ryanair's in 2001 but it is still one of the most successful low cost carriers.

Based on the trend displayed above it would appear that as a successful low cost carrier grows it reaches a point at which it needs to merge with the strategies adopted by the age old flagship airlines. The difference is that they have been able to develop their company culture and control their operating costs more easily. Although Governments protect the national flag carriers to a certain extent, are they in their own way preventing the airline from progressing and maintaining a strong position in the competitive market? Is this why British Airways had to be privatised?

Despite this, Virgin Blue's long term strategy is towards the "New World Carrier". Moving up market in order to allow it to share the rewards of its main competitor, Qantas, in the Australian market. The introduction of smaller jets to allow it to provide frequency in key business markets and the addition of B777s to compete on the US business routes forms a major part of the strategy. The Virgin brand name should not be taken lightly. The Virgin brand name is spread globally and successfully throughout Africa, Asia, Australia, Canada, Europe, United Kingdom and the United States.

Qantas is by far the largest airline of the four being compared. The airline's main forms of differentiation are that it is Australia's national carrier, one of the largest airlines in the world and possibly the airline with the most history. Qantas is protected from majority share ownership outside of Australia but is this enough in order to compete and survive especially with the growing 'open skies' agreements between Australia and its neighbouring countries?

5. CONCLUSIONS – COMPARATIVE DISCUSSION

The conclusions are recorded under two objective headers, *Objective No.1* and *Objective No. 2*. They are written with the aim of determining the Most Effective and Competitive Business Strategy for the Virgin Blue airline.

5.1 Objective No.1 - Conclusions

Objective - Develop and maintain a flexible company strategy able to move quickly with ever changing circumstances based on a long term and lean resource based competitive strategy.

5.1.1 Business and Operations

1. Air New Zealand and Qantas have an older average fleet age and are working towards replacing some aircraft in order to recover this situation. Although Virgin Blue has a young average fleet age it should not wait too long before replacing its older aircraft. The older aircraft have a negative effect on fleet OTP, operating costs and create a poor image to the customer. The older aircraft design is always at risk of reaching a low to zero capital value status depending on the market demand, irrespective of the recorded book value. When evaluating the value of an airline it is important to understand the present and future 'true' market value of the aircraft which are owned by that airline.

5.1.2 Airline Network

2. In some areas of the network, Air New Zealand, Qantas and Virgin Blue are in direct competition with each other and therefore the requirement for generating effective and sustainable competitive advantage through product differentiation and cost cutting is the key to survival for Virgin Blue. Unlike Air New Zealand and Qantas, Virgin Blue competes on a high percentage of its network. It is for this reason that Virgin Blue must be able to adapt to the changing market quickly as new opportunities arise and existing routes become less profitable.
3. Although alliance groups may create new opportunities for their members, Alliance Groups such as Star Alliance and One World commit an airline to a specific network, to operate to set rules, and therefore can limit the opportunities for growth.
4. Opportunities for further growth for a low cost airline exist within the New Zealand domestic market. Approximately 78% of Air New Zealand's different sectors have no competition and the majority of these sectors are New Zealand domestic services. Pacific Blue would need to operate smaller aircraft than the currently operated 180 seat B737NG's if it wished to compete on some of the Air New Zealand 'Monopoly Sectors'.

5.1.3 Financial Management

5. Air New Zealand, Qantas and Virgin Blue operate with similar current ratios (liquidity). Easy Jet sets an example by operating with a noticeably higher liquidity ratio which, indicates that more of the existing capital could possibly be reinvested. Easy Jet's business is possibly a safer model to adopt during times of considerable economic pressure.
6. The Total Asset Turnover (TAT) indicates that Virgin Blue is using its assets more effectively than the other three airlines. This is also supported by Virgin Blue's considerably greater Return on Total Assets (ROA) and Return on Common Equity (ROE).
7. Despite a similar NPM to Air New Zealand and Qantas, Easy Jet has the lowest ratio of total assets to stockholder equity (Net Assets). This indicates that Easy Jet has managed to achieve a similar NPM to Air New Zealand and Qantas with less financial risk. This is most likely to be due to Easy Jet's reluctance to pay dividends to the shareholders but to reinvest the profits back into the business. Virgin may wish to follow Easy Jet's lead.
8. Despite the relatively similar FLM, Virgin Blue has managed to achieve by far the greatest ROE and ROA of all four airlines. Virgin Blue's Total Asset Turnover (TAT) is approximately 20% greater than the other airlines and its NPM is twice that of the other airlines. This is possibly due to lower operating costs, high load factors and the use of cash or debt in preference to equity to finance its ongoing operating assets in order to support the airline's expansion. The use of debt comes with higher risk due to the need to ensure the required cash flow to service the debt and the possibility of fluctuating interest rates.
9. The airline industry has a high ratio of diversifiable to non-diversifiable risk and the shares are not always in a fair and active trading market due to the make up of the majority and insider shareholders. It would, therefore, be fair to say that the use of the CAPM by itself is not necessarily an accurate means by which to measure the performance risk of an airline, especially the younger low cost airlines which are not supported by their respective National Governments and are therefore more likely to be at the mercy of the financial reporters and critics.
10. Virgin Blue and Easy Jet both have comparatively low DFL's. This is misleading because in theory the lower the DFL then the higher is the possibility of inefficient operating costs or tighter profit margins brought about by an uneconomic pricing policy. This is not quite the case as we need to take into account other returns such as dividends paid and the possibility of the release of more shares to the market. This suggests that the level of earnings per share is not necessarily a key performance indicator to the shareholder. Easy Jet's Board has decided that Return On Equity (ROE) is to be the airline's primary financial measure as this is the best way to reflect the returns attributable to the equity shareholders. Virgin Blue could adopt this approach.

11. The FLM is similar in theory to the liquidity ratio only it includes the 'long term' total assets and net assets. This is a much better indication of the long term health of the airline. An airline whose Liquidity Ratio indicates a poor short term (current) performance could also have an FLM which indicates a strong long term financial health.
12. The high risk high debt to equity financial model displayed by Virgin Blue is possibly the better or only way for a young airline to grow. For this reason the airline must put huge emphasis on being able to *move and change quickly* in order to gain a maximum return on its assets and equity.
13. If an airline is going to need additional capital in the future, it is more economical to keep the cash inside the firm rather than to pay dividends. The market looks at a decrease in dividends as a negative signal that the firm is in trouble. Easy Jet will not pay dividends and Virgin Blue has not declared a clear policy in its annual report. This suggests that when raising capital with debt it is prudent not to pay dividends.

5.1.4 Strategy and Competitive Position

The airline industry is a volatile market for investors to play in, with high potential gains and losses. It is important to understand the experience and capabilities of the board and the management team. A long term flexible resource based competitive strategy is the key to success.

14. Virgin Blue does not clearly communicate a vision or mission statement to the employees or the shareholders but the Virgin brand delivers a much more powerful message to the world. A more localised vision statement could be communicated to the company and customers which closely links to the reputation of the Virgin brand.
15. The younger low cost airlines, Easy Jet and Virgin Blue, must maintain the opportunity to develop their culture to suit the competitive environment. It is important that these two airlines remain flexible and able to change quickly in order to remain competitive in the ever changing market.
16. The global economy will obviously have a similar effect across the four airlines. It is quite possible that a point-to-point network could be exposed to less risk than a hub and spoke network. If the hub was affected by a major disaster then the majority of the hub and spoke network could be at risk. Therefore, planning and risk mitigation in terms of network design can put an airline in an advantageous position.
17. Due to the nature of aviation and the topography, specifically in New Zealand and Australia, it is unlikely that a substitute to the aeroplane will be a threat. National Governments are promising to increase the investment in coastal shipping which may have an effect on the airline freight industry.

18. It is clear that the point-to-point low cost carriers are more successful at filling the seats on the aircraft. For these airlines it does not mean that the profits will be higher, it is the higher level of yield and the lower operating costs that decides the winner. Virgin Blue should therefore focus on the point-to-point philosophy, reliability, OTP and demand. Leave the high frequency services to the flagship airlines.
19. Air New Zealand is relatively unchallenged on the majority of the domestic sectors in New Zealand. If Virgin Blue (Pacific Blue) were to make a sustained challenge on those sectors, the airline would need to obtain smaller capacity aircraft in order to ensure that the operation was both operationally and economically viable .
20. Air New Zealand withdrawing from its frequent services on many of the domestic routes could have a devastating effect on the New Zealand economy if such services were not replaced by another airline. This risk to the country's economy would encourage the New Zealand Government to bail out its national flagship airline again! If a low cost airline stepped in, the low cost airline would have to change its point to point operating philosophy.
21. When compared to Easy Jet, Virgin Blue has a high employee to aircraft ratio. This may result from Easy Jet's more efficient procedures and focus on the development and use of effective IT systems. Poorly developed and managed IT systems can easily double an airline department's resource requirements.
22. Of the four airlines, Virgin Blue has the highest level of fleet utilisation but the ratio of ASK to RPK is not as high as that of Easy Jet. This could stem from operating the less rewarding sectors or maybe that the level of population being served in New Zealand and Australia does not support the need for aircraft with a capacity as high as 180 seats.
23. A low cost airline needs growth just as an economy does. As we see an increase in network size and company resources the low cost airline strategy has to change in order to continue to allow growth due the existing market becoming saturated. Although profit can continue to increase, the ratio of investments to returns starts to reduce. The low cost airline strategy starts to merge with that of the larger and older flagship airline, and maybe one day a new low cost airline will start to compete as before and the cycle goes on. Careful strategic planning is required to ensure that the low cost airline does not become part of this cyclic scenario and to maintain a competitive differentiation from the flagship airline.
24. Although Governments protect the national flag carriers to a certain extent, they may be preventing the airline from progressing and maintaining a strong position in the competitive market. This is quite possibly the reason why British Airways had to be privatised.
25. Although one aircraft size cannot fulfil all operational requirements, multiple fleet types induce the requirement for additional support, management and increased operating costs. Virgin Blue should avoid this multiple fleet type situation if possible.

When compared to earlier fleet types, the possibility of a entire modern fleet type being grounded is far less likely. This is due to the high level of reliability associated with today's modern design techniques and technology.

26. Fleet structure, route network and company policies on remuneration and work rules are the key factors affecting indirect operating costs. These criteria determine the total cost differences between airlines. Particularly for the smaller airlines, focussing on either short haul, medium haul or long haul operations can produce major cost savings. Airlines growing within an unsaturated market benefit from a same type fleet and a flexible work culture.

5.2 Objective No.2 - Conclusions

Objective - Develop, manage and operate the entire door to door supply chain similar to the strategy which has emerged in the coastal and international shipping industry.

Easy Jet was selected as one of the airlines to be compared because it is a very successful business and, from its website, it appeared to own and operate the majority of its supply chain. Later analysis clearly showed that this was not the case. The outsourcing of these services has enabled Easy Jet to maintain a low number of employees and given it the ability to change and react quickly.

Although it is clear that there are advantages to owning a complete supply chain we have seen throughout this paper that an airline is required to move and react quickly to match its ever changing market place. To own and manage the entire supply chain would be an almost impossible task. Could you imagine having to move or even create your own land transport system as you move to new more profitable destinations.

The shipping industry transports bulk cargo and containers and also, in some cases, manages the entire door to door supply chain. Conceptually we could ask why this is not possible with people cargo? One major issue is that people will not be willing to be held up in holding depots around the world. An airport and one modal change of transport is about all the average human cargo will accept.

Richard Branson's Virgin Group and Ryanair have both more recently shown an interest in buying their own airports in an attempt to gain control over their own operating hubs and to break the monopoly currently enjoyed by the British Airport Authority (BAA) in the UK. If they were to succeed, the airport operations would be a business in their own right but would undoubtedly offer some savings to the owner/operator which would hopefully be passed onto the end user.

Richard Branson's Virgin Atlantic airline provided executive Range Rovers and motorbikes to enable business people to transit from their offices to the airport express check in facilities. This was never a serious stand alone business proposition but a very good marketing stunt.

Operating an airline is a high risk and high investment business with potential high losses or gains. The profit which an airline can make in a week can easily exceed that which is made by a taxi firm in an entire year. A young growing low cost airline focuses all its attention and resources on achieving these gains. Once an airline has grown into its market it then looks at providing its own support services with the intention of reducing risks and operating costs. This is about the stage when a mature airline starts to lose flexibility and the ability to move quickly. A pure low cost airline needs to remain focused on its core business and maintain a somewhat mercenary approach to the market and its supply chain.

To summarise, an airline cannot afford to commit itself to the ownership of the entire supply chain unless it can own the airport. For such an investment, the airport would need to be a well frequented major hub with a long term strategic future.

6. EVALUATING AIR NEW ZEALAND

Air New Zealand's history dates back to 1940 when it was known as Tasman Empire Airways Limited (TEAL). The first trans-Tasman services were operated with flying boats. Today, Air New Zealand focuses its more modern fleet towards growing new markets with international routes to the Far East, United States, Australia, Pacific and Europe whilst being determined to maintain its dominance in the New Zealand domestic market. *Table 19. Brief Record of Air New Zealand's History*, below outlines Air New Zealand's major events to date.

Brief Record of Air New Zealand's History

1940	Tasman Empire Airways Limited (TEAL) was incorporated and began its first trans-Tasman services with flying boats.
1947	The New Zealand Government established NZ National Airways Corporation (NAC).
1951	A flying boat service from Auckland via Fiji and the Cook Islands to Tahiti began – it was known as the "Coral Route".
1953	TEAL became jointly owned by the New Zealand and Australian Governments.
1961	The New Zealand Government assumed full ownership.
1965	TEAL was renamed Air New Zealand Limited, and continued operating solely international services.
1965	The beginning of the jet era for Air New Zealand, with the arrival in July of the first DC-8 jet aircraft. The new jets meant that Air New Zealand could expand operations to North America and Asia.
1973	Air New Zealand also introduced the larger DC-10.
1978	Air New Zealand and NAC merged, forming the first New Zealand carrier to offer international and domestic services.
1981	The larger Boeing 747 began to replace the older jets.
1989	The New Zealand Government privatisation of Air New Zealand was completed.
1996	Air New Zealand purchased 50% of Ansett Holdings for a total outlay of A\$475 million. Ansett Holdings owned 100% of Ansett Australia (the domestic airline) and 49% of Ansett International.
1999	Air New Zealand became a full member of the Star Alliance group.
2000	Air New Zealand announced the conditional purchase of the remaining 50% of Ansett Holdings Limited.
2001	Ansett was placed into Voluntary Administration.
2001	New Zealand Government announced a new proposal which provided a substantial capital injection from the New Zealand Government into Air New Zealand. Air New Zealand was recapitalised in January 2002.
2002	Air New Zealand began a fleet renewal programme and confirmed an order for 14 new Airbus A320's.

Continued overleaf

2002	The airline remodelled its business to offer substantially lower fares, simplified booking rules, a focus on internet sales and ease of booking, additional seat availability and improved loyalty benefits for frequent flyers.
2003	The concept was extended to Tasman travel. With the move, Air New Zealand became the first airline to introduce everyday, low-cost travel across the Tasman and continued its efforts to encourage more people to travel more often.
2004	Pacific routes followed.
2004	Direct services between Auckland and San Francisco were launched, with services from Wellington to Fiji and Christchurch to the Cook Islands beginning in late 2004.
2004	The airline announced an upgrade to the turbo-prop fleet, with an agreement to acquire 17 new Bombardier 50 seat Q300 turbo-prop aircraft, and options to purchase a further 10 Q300 and 13 Q400 aircraft.
2004	Air New Zealand's loyalty programme, Airpoints, was re-launched in as Airpoints Dollars.
2005	Boeing deal, worth more than \$1 billion, will see Air New Zealand acquiring eight new Boeing 777-200ER and four Boeing 7E7 aircraft, as well as rights to acquire a further 46 long-haul aircraft.
2005	Services between Auckland and Niue launched
2006	Services between Auckland and Adelaide launched
2007	Focus on growing potential markets and earlier this year opened a sales office in Beijing, China. Direct flights between Auckland and Shanghai are also planned once the necessary regulatory approvals are received.

Table 19. Brief Record of Air New Zealand's History

6.1 Air New Zealand's Business and Operations

The principal activity of the Air New Zealand Group is the operation of domestic and international passenger transport and cargo.

Air New Zealand is an international and domestic airline group which provides air passenger and cargo transport services within New Zealand, as well as to and from Australia, the South West Pacific, Asia, North America and the United Kingdom.

Air New Zealand also encompasses business units providing engineering and ground handling services. Subsidiaries extend to booking systems, travel wholesaling and retailing services.

The airline has two main strategic bases in New Zealand. The main hub of the business is close to Auckland Airport on the North Island and a 'sub hub' is positioned close to Christchurch Airport on the South Island. Historically, Air New Zealand has been one of the best payers for existing and potential employees and was also, until recently, the only international airline employing large numbers of people in New Zealand. However, employees expectations have risen alongside other related and non-related growing industries.

6.1.1 Companies and Associate Companies

Table 20. Air New Zealand Companies and Significant Associate Companies, gives an overview of the comprehensive range of businesses in their portfolio. They are firmly

associated with air transport industry which is an important observation when looking at risk analysis and contemplating the effects of terrorism or a world disaster.

There are numerous other subsidiary companies owned by Air New Zealand including finance and insurance disciplines. Her Majesty the Queen in Right of New Zealand owns 76.47% of Air New Zealand shares. (Air New Zealand. 2007).

6.1.2 Operating Fleets

Air New Zealand has varied but versatile fleets of aircraft types which are outlined in *Table 21. Air New Zealand's Operating Fleet as at 31 July 2008*. The variation is brought about mainly from the differing operating environments. In addition to this, aging fleets such as the 747-400's and the B737-300's are being gradually phased out and replaced by newer and more efficient aircraft types such as the B777-200ER, B787 and the A320.

Air New Zealand Companies and Significant Associate Companies

Company Name	% Owned	Principle Activity	Country of Incorporation
Air New Zealand Holidays Limited	100	Hotel reservations and events marketing	New Zealand
Air New Zealand Aircraft holdings Ltd	100	Aircraft leasing and financing	New Zealand
Blue Pacific Tours Co Limited	100	Travel wholesaling	Japan
Eagle Airways Limited	100	Aviation	New Zealand
Zeal 320 Limited	100	Aviation	New Zealand
Mount Cook Airline Limited	100	Aviation	New Zealand
Air Nelson	100	Aviation	New Zealand
Safe Air Limited	100	Engineering services	New Zealand
Tasman Aviation Enterprises (Queensland) Pty Ltd	100	Engineering services	Australia
Tasman Aviation Enterprises (Richmond) Pty Ltd	100	Engineering services	Australia
Christchurch Engine Centre (CEC)	49	Engineering services	New Zealand
Travel Software Solutions Pty Limited	50	Airline reservation systems	Australia

Table 20. Air New Zealand Companies and Significant Associate Companies.

(Air New Zealand Financial Results. 2007).

The process of phasing out old aircraft types and gradually introducing new aircraft types is slow and usually introduces the requirement to operate the two aircraft types for the same role for at least a year or more. This varied fleet comes at an additional operating cost as the training, ground equipment and spares must be maintained for each additional type of aircraft.

Air New Zealand's Operating Fleet as at 31 July 2008

Aircraft	Owned	Leased	On Order	Average Age (years)
B747-400	4	4	-	14.3
B777-200ER	4	4	-	2.3
B777-300ER	-	-	4	-
B787	-	-	8	-
B767-300ER	5	-	-	12.8
Airbus A320	2	10	-	4.0
B737-300	5	11	-	10.6
ATR72-500	3	8	-	7.6
Q300	21	-	2	1.7
Saab 340A	3	-	-	19.3
Beech 1900D	18	-	-	6.5
Totals	62	37	14	6.6

Table 21. Air New Zealand's Operating Fleet as at 31 July 2008
(Air New Zealand. 2008)

6.2 Air New Zealand's Financial Management

Note: All figures are taken from the Annual Report Financial Statement Balance Sheets 2003 to 2007 inclusive (Air New Zealand. 2003 – 2008). All current analysis refers to the end of financial year 2007.

The financial reporting periods are outlined in *Table 22. Air New Zealand Financial Reporting Periods*. The reporting periods are evenly spaced over the twelve month intervals.

Reporting Period	Financial Year	Elapsed Time (Months)
01 Jul 2002 to 30 Jun 2003	02/03	12
01 Jul 2003 to 30 Jun 2004	03/04	12
01 Jul 2004 to 30 Jun 2005	04/05	12
01 Jul 2005 to 30 Jun 2006	05/06	12
01 Jul 2006 to 30 Jun 2007	06/07	12

Table 22. Air New Zealand - Financial Reporting Periods

Current Ratio Analysis (Liquidity Ratio)

For Air New Zealand, the consolidated current ratios for the last five financial periods are displayed in *Table 23. Consolidated Ratio Analysis for the Air New Zealand Group*.

Generally speaking, the trend displayed appears to be reasonably healthy as the assets exceed the liabilities for the reporting periods 03/04 to date.

Air New Zealand Group – Consolidated Ratio Analysis

(NZ\$ Million)

Financial Year	Current Asset Value (a)	Current Liability Value (b)	Current Ratio (a)/(b)
02/03	1,370.845	1,136.660	1.21
03/04	1,599.942	1,120.232	1.43
04/05	1,632	1,220	1.34
05/06	1,721	1,581	1.09
06/07	1,811	1,371	1.32

Table 23. Consolidated Ratio Analysis for the Air New Zealand Group

DuPont System Analysis

Table 24. Air New Zealand Group – DuPont System Analysis, is a DuPont system analysis of the Company's last five years. It is clear that the performance has been decreasing between FY02/3 to 05/06 when the current asset to liability ratio was at an all time low.

Air New Zealand Group – DuPont System Analysis

Consolidated (NZ\$ Million)

Financial Year	02\03	03\04	04\05	05\06	06\07
Income Statement					
Earnings Available for Common Stock Holders (a)	165.7	166.163	180.0	96.0	214.0
Sales (b)	3,616.629	3,497.860	3,616.0	3,805.0	4,297.0
Net Profit Margin (NPM) (a)/(b) %	4.6%	4.8%	5.0%	2.5%	5.0%
Balance Sheet					
Sales (b)	3,616.629	3,497.860	3,616.0	3,805.0	4,297.0
Total Assets (c) (see TA below)	3,699.607	3,818.396	4,092.0	4,785.0	4,944.0
Total Asset Turnover (TAT) (b)/(c)	0.98	0.92	0.88	0.80	0.87
Total Liabilities (d)	2,667.881	2,603.848	2,551.0	3,191.0	3,196.0
Stockholders Equity (e)	1,031.726	1,214.548	1,541.0	1,594.0	1,748.0
Total Assets (TA) (d)+(e)	3,699.607	3,818.396	4,092.0	4,785.0	4,944.0
Common Stock Equity (f)	1,031.726	1,214.548	1,541.0	1,594.0	1,748.0
Financial Leverage Multiplier (FLM) TA/(f)	3.59	3.14	2.66	3.00	2.83
Return on Total Assets (ROA) % (NPM x TAT)	4.5%	4.4%	4.4%	2.0%	4.4%
Return on Common Equity (ROE) % (ROA x FLM)	16.2%	13.8%	11.7%	6.0%	12.5%

Table 24. Air New Zealand Group – DuPont System Analysis

Despite the lower financial leverage in FY06/07 when compared to that of FY05/06, the Return on Common Equity (ROE) for FY06/07 has over doubled from 6.0% to 12.5%. Although the FY05/06 sales increased, the net profit margin percent was at an all time low

which indicates that the operating costs may have increased considerably and are probably due to increasing interest rates and fuel/oil costs.

The Return on Common Equity (ROE) has been very erratic over the last five financial reporting periods. This too could have been affected by interest rates and fuel/oil charges.

6.2.1 Air New Zealand's Risk and Return Analysis

The Risk Profile of Air New Zealand

A regression of returns on Air New Zealand's stock has been carried out against the market index using fifty-four months of observations up to May 2008.

Air New Zealand is a mature company and would normally be considered to be at the top of its game. Aviation is an extremely competitive business and although the airline is the national carrier for New Zealand, it needs to repeatedly reinvent itself in order to stay attractive to the end users in the market areas where the competition exists.

Capital Asset Pricing Model (CAPM)

The annualised dividend per share (DPS) of \$0.18 was extracted from the Air New Zealand Financial Results. This comprised of an interim and final dividend per share of \$0.08 and a special dividend of \$0.10. (Air New Zealand Financial Results. 2007. p2.)

Table 24. Air New Zealand's Regression Statistics and Risk Parameters, lists the calculated results taken from the spreadsheet in *Appendix G. Regression of Returns of Air New Zealand's Stock*.

Current Risk Free Rate

Air New Zealand is listed on both the New Zealand NZX and Australian ASX stock exchanges. The ASX stock data has been used in order to compare the three selected airlines, Air New Zealand, Qantas and Virgin Blue, in the Southern hemisphere more fairly.

The current risk free rate has been obtained from the Australian Reserve Bank Treasury Fixed Coupon Bond Yield Rates as indicated in *Figure 2. Australian Reserve Bank Treasury Fixed Coupon Bond Yield Rates*. The Current Risk Free Rate used is 6.87%. (Reserve Bank. 2008.)

However, it should be noted that the one year borrowing rate for the same period was at 6.53% and that the longer term rates are currently lower than the shorter term rates. In other words, the yield curve is inverted. (Bloomberg.com. 2008.)

Treasury Fixed Coupon Bonds		
Coupon	Maturity	Yield (% p.a.)
8.75%	Aug 2008	6.865
7.50%	Sep 2009	6.540
5.25%	Aug 2010	6.475
5.75%	Jun 2011	6.345
5.75%	Apr 2012	6.300
6.50%	May 2013	6.210
6.25%	Apr 2015	6.310
6.00%	Feb 2017	6.320
5.25%	Mar 2019	6.330
5.75%	May 2021	6.340

Figure 2. Australian Reserve Bank Treasury Fixed Coupon Bond Yield Rates
(Reserve Bank. 2008)

Current and Historical Stock Price Data

The fifty-four months of historical stock price data for the *beta coefficient* (b) calculation has been obtained from Yahoo! Finance and is outlined in *Appendix C. AIZ.AX: Historical Prices for Air New Zealand* (Yahoo! Finance. 2008.). The current stock price of \$1.06 as of 01 May 2008 has been used.

Market Risk Premium for Stocks

The Australian *Market Risk Premium*, otherwise known as the *Risk Premium for Stocks*, is recorded as 6.2%. This risk premium value will be used to calculate the *beta coefficient* for Air New Zealand. (Lally, M. 2000).

Intercept of the Regression

Table 25. Air New Zealand - Regression Statistics and Risk Parameters, records the calculated Intercept *Alpha* in this case as 5.95%. This positive value indicates that the stock has out performed the market by 5.95%. During this period there were no major stock price shifts due to systematic or non-systematic forces on the market. The Air New Zealand share has earned more than would have been predicted by the CAPM.

Slope of the Regression

Table 25. Air New Zealand - Regression Statistics and Risk Parameters, records the slope of regression, *beta*, as 0.559695092. This means that when the market return increases by 1%, on average, the Air New Zealand returns will increase by approximately 0.56%. Air New Zealand's rate of change of stock value is less volatile than the general market.

R-square

Table 25. *Air New Zealand - Regression Statistics and Risk Parameters*, records the R-square value as 0.10%. This indicates that 0.10% of the Air New Zealand stock risk is linked to market (*systematic or non-diversifiable*) risk whilst the remaining 99.90% is unexplained (*non-systematic or diversifiable*) risk. In other words, the vast majority of the stock risk is most likely to be specific to the company's operating environment (business factors) or financial leverage.

The fact that the vast majority of the risk is non-systematic and not directly linked to the market means that there is plenty of scope to increase the share value and that this depends on how the company is managed by the board. The stock value is also heavily reliant on other external natural, commercial and strategic forces linked to the performance of the business.

Table 26. *Air New Zealand Stock Variance Statistics*, shows the standard deviation of the variation statistics.

Standard deviation measures the dispersion around the expected stock value or the likelihood of achieving that expected value. The variance of the stock is higher risk than the variance of the market and the unsystematic (diversifiable) variance is higher risk than the systematic (non-diversifiable) variance. In summary, the higher risk of the stock variance is likely to be due to the higher *diversifiable* variance risk.

Air New Zealand's Regression Statistics and Risk Parameters

USING BETA

In estimating expected returns:		RISK AND PERFORMANCE MEASURES	
Risk free Rate	6.87%	Intercept (Alpha)	5.95%
Historical return premium	6.20%	Slope (Beta)	0.559695092
Expected return	10.34%		

In forecasting prices:		VARIANCE STATISTICS	
Current price	\$1.06	Variance of the stock	0.283890925
Annualized DPS	\$0.18	Variance of the market	0.000910283
		Systematic variance	0.000285154
		Unsystematic variance	0.283605771
		R squared	0.10%

Table 25. Air New Zealand's Regression Statistics and Risk Parameters

VARIANCE STATISTICS		STANDARD DEVIATION (square root) x 100%	
Variance of the stock	0.283890925	0.532814156	53.28%
Variance of the market	0.000910283	0.030170896	3.02%
Systematic variance	0.000285154	0.016886503	1.69%
Unsystematic variance	0.283605771	0.532546496	53.25%
R squared	0.10%		

Table 26. Air New Zealand Stock Variance Statistics

Financial Leverage

For Air New Zealand, the Degree of Financial Leverage (DFL) for the financial year 2007 is calculated below using the figures taken from the current Income Statements. (Air New Zealand Financial Results. 2007).

$$DFL = \frac{\% \text{ Change in EPS}}{\% \text{ Change in EBIT}}$$

$$\% \text{ Change in EPS} = (20.9 - 9.6)/20.9 = 0.541$$

$$\% \text{ Change in EBIT} = (860 - 689)/860 = 0.1988372$$

$$\text{Degree of Financial Leverage (DFL)} = 0.541/0.1988372 = 2.7191581 \text{ or } 2.72$$

Therefore a 100% increase in EBIT would result in a 272% increase in the earnings per share. If no debt were used, the degree of financial leverage would be 1.0, so a 100 percent increase in EBIT would produce exactly a 100 percent increase in EPS. This would suggest that Air New Zealand has a relatively high financial leverage and therefore more volatile earnings per share possibly caused by debt.

Financial Year	Degree of Financial Leverage
2004/05	1.03
2005/06	2.40
2006/07	2.72

Table 27. Air New Zealand's Degree of Financial Leverage from 2004 to 2007

Table 27. Air New Zealand's Degree of Financial Leverage from 2004 to 2007, shows a steady increase in the DFL. The data used to calculate the DFL was obtained from the respective annual financial reports (Air New Zealand. 2003 - 2008).

Performance Profile on an Investment in Air New Zealand

The stock has varied between a low of \$0.34 to a high of \$2.64. This is most likely due to the price of jet fuel which has risen to USD\$160 per barrel and that the competition in the market place has increased.

The slope term, *beta (b)*, shows that when the market return increases by 1%, on average, the Air New Zealand returns will increase by approximately 0.56% which is under performing in a 'rising' general market.

Although high when compared to the other airlines, the Degree of Financial Leverage (DFL) indicates that the majority of the stock risk is most likely to be due to the company's operating environment. This indicates that the majority of Air New Zealand's performance is attributed to the management and the resulting strategy used to compete in the market.

Air New Zealand's Equity Risk

Table 26. Air New Zealand's Stock Variance Statistics, shows the standard deviation of the stock over the fifty-four month period to be 53.28%. This statistical value is somewhat subjective and is based on past performance. Although the competitive airline market is volatile, Air New Zealand is a mature airline with some diversified assets.

Air New Zealand's Debt Risk

The consolidated debt to equity ratio is calculated in *Table 28. Consolidated Debt to Equity Ratio for Air New Zealand*, below.

Consolidated Debt to Equity Ratio for Air New Zealand - 2007

Debt and Equity	NZ\$ million
Total consolidated liabilities (a)	3,196.0
Total consolidated equity (b)	1,748.0
Debt to Equity Ratio (a)/(b)	1.83

Table 28. Consolidated Debt to Equity Ratio for Air New Zealand - 2007

Air New Zealand's borrowings are secured over aircraft or aircraft related assets, and are subject to floating interest rates. The fixed interest rates varied from 1.2 to 5.1 percent in the year 2007.

The fluctuating interest rates, as a result of the long term borrowing, are a risk to the company. The contract amounts of interest rate contracts outstanding at the end of the financial year 06/07 were USD 345 million which does not include any assets and liabilities that are not subjected to floating interest rates. There is no evidence of hedging against interest rate risk.

6.2.2 Air New Zealand's Cost of Capital – 2007

As before, the WACC is calculated using the following formula:

WACC = (weight of preferred equity × cost of preferred equity) + (weight of common equity × cost of common equity) + [weight of debt × cost of debt × (1 – tax rate)]

Market Value for Equity

The consolidated weighted average number of ordinary shares for Air New Zealand is 1,022 million. (Air New Zealand Financial Results. 2007, p40.)

The current NZX price (1st May 2008) per share is NZ\$ 1.26. (Yahoo Finance. 2008.)

Therefore the *market value for equity* = 1,022,000,000 x 1.26 = NZ\$1,287,720,000

Market Value of the Debt

The company does have letters of credit and performance bonds (Air New Zealand Financial Results. 2007, p32, Note 23.) The company also has a significant amount of bank loans, whose market value is not easily found. As the market value of the debt tends to be pretty close to the book value, the book value of debt will be used in the WACC formula.

The consolidated book value of long term debt (Non current interest bearing liabilities or Net Debt) for Air New Zealand is NZ\$1,269 million. Some additional long term liabilities exist but due to their size, they will make little difference to the calculation of the WACC. (Air New Zealand Financial Results. 2007, p39.)

Cost of Preferred Equity

There is no preferred equity, where the holder is entitled to fixed payments forever.

Cost of Common Equity

Beta is effected by the market value of the stock. The cost of common equity, otherwise known as the *expected return*, is 10.34% as calculated in *Table 25, Air New Zealand's Regression Statistics and Risk Parameters*. and has been calculated using Australian stock market results. This enables a better comparison with the other two Southern hemisphere airlines, Qantas and Virgin Blue.

Cost of Debt

Air New Zealand has contingent liabilities including letters of credit and performance bonds to the sum of NZ\$18 million. There is no indication that these have been utilised or drawn down. (Air New Zealand Financial Results. 2007, p32, para 23.)

The long term debt is shared over borrowings and finance lease liabilities. A borrowing of NZ\$506 million at an effective interest rate of 5.91% and finance lease liabilities of NZ\$716 million at an effective interest rate of 7.67%. The average interest rate and cost of debt has been estimated to be 6.63% (Air New Zealand Financial Results. 2007, p28, para 18.)

Weighted Average Cost of Capital (WACC)

Weight of Common Equity

Market value of common equity

(Market value of common equity + Market value of debt + Market value of preferred equity)

Since the company does not have preferred equity the weight of common equity is:

$$\frac{1,287,720,000}{(1,287,720,000 + 1,269 \text{ million})} = 0.504$$

Weight of Debt

Market value of Debt

(Market value of common equity + Market value of debt + Market value of preferred equity)

$$\frac{1,269 \text{ million}}{(1,287,720,000 + 1,269 \text{ million})} = 0.496$$

Weighted Average Cost of Capital

WACC = (weight of preferred equity × cost of preferred equity) + (weight of common equity × cost of common equity) + [weight of debt × cost of debt × (1 – tax rate)]

Tax Rate = 33% (Air New Zealand Financial Results. 2007, p11, para 3.)

The New Zealand corporate income tax rate will reduce to 30% from the commencement of the 2009 income year.

$$\begin{aligned} \text{WACC} &= (0.504 \times 0.1034) + [0.496 \times 0.0663 \times (1 - 0.33)] \\ \text{WACC} &= 0.0521 + 0.0220 = 0.0741 \end{aligned}$$

The Weighted Average Cost of Capital (WACC) for Air New Zealand is 7.4%

Therefore, it costs Air New Zealand **7.4%** to finance its assets. This is the minimum return that a company must earn on its existing asset base to satisfy its creditors, owners, and other providers of capital.

6.2.3 Analysing Air New Zealand's Capital structure

Current Financing of Air New Zealand

The financing of Air New Zealand is through the use of debt, equity and lease agreements as will be explained below.

Debt

The company has had a combination of bank overdrafts, borrowings, finance lease liabilities and convertible notes.

Bank Overdrafts

By the end of the financial year 06/07 the bank overdrafts and short term borrowings amounted to NZ\$1 million and are subjected to an effective interest rate of 9 percent.

Borrowings

All borrowings are secured over aircraft or aircraft related assets with floating interest rates. The total borrowing at the end of the financial year 06/07 amounted to NZ\$506 million of which NZ\$66 million are secured current borrowings and NZ\$440 million are secured non-current borrowings.

Finance Lease Liabilities

The finance lease liabilities are all secured over aircraft and are subject to interest rates ranging from 1.2 percent to 5.1 percent in 2007. The total finance lease liabilities at the end of the financial year 06/07 amounted to NZ\$878 million of which NZ\$49 million are secured current finance lease liabilities and NZ\$829 million are secured non-current finance lease liabilities.

Convertible Notes

On the 31st December 2002, 220,763,477 Redeemable Convertible Notes were issued to Qantas Investments (NZ) Limited at an issue price of 44.5 cents each as part of the agreement for a proposed alliance. On the 14th February 2007, all of the convertible notes were converted into 44,152,695 new ordinary shares in Air New Zealand, equivalent to approximately 4.2% of reported capital at the conversion date. The impact of the conversion was to increase the issued capital by \$98 million and reduce total non-current liabilities by the same amount.

Equity

Figure 3. Air New Zealand's Total Equity for FY 06/07, shows that Air New Zealand's total equity for FY 06/07 amounts to NZ\$1,748 million for the group. The vast majority of this equity is issued capital. Figure 4. Air New Zealand's Statement of Movements in Equity, shows that of the NZ\$214 million which was attributable to the shareholders, NZ\$162 million was paid out in dividends to the shareholders. However, with the helpful boost of the NZ\$105 million raised through the issue of shares, the overall change in equity for the year is an increase of NZ\$154 million.

Equity		
Issued capital	16	2,213
Asset revaluation reserve		9
Revenue reserves	17	(474)
Total Equity		1,748

Figure 3. Air New Zealand's Total Equity for FY 06/07

(Air New Zealand Financial Results. 2007, p 4.)

STATEMENT OF MOVEMENTS IN EQUITY					
FOR THE YEAR TO 30 JUNE 2007					
	NOTES	GROUP 2007 \$M	GROUP 2006 \$M	COMPANY 2007 \$M	COMPANY 2006 \$M
Net surplus attributable to shareholders		214	96	9	137
Translation (loss)/gain in foreign currency translation reserve	17	(3)	4	(22)	14
Total Recognised Revenues and Expenses		211	100	(13)	151
Shares issued	16	105	3	104	3
Dividend on Ordinary Shares	14	(162)	(50)	(162)	(50)
Movements in Equity for the Year		154	53	(71)	104
Equity at the Beginning of the Year		1,594	1,541	967	863
Equity at the End of the Year		1,748	1,594	896	967

Figure 4. Air New Zealand's Statement of Movements in Equity – 2007

(Air New Zealand Financial Results. 2007, p 3.)

Air New Zealand's Growth Cycle

Like Qantas, Air New Zealand is a mature Airline which has to reinvent itself and readapt its mature resources to meet the ever changing demands on the airline created by the effects of globalisation, world disasters, varying economies and new competition.

Unlike the younger and newer Virgin Blue airline which has grown with an equally new fleet, Air New Zealand has to renew its fleet and support equipment in order to remain attractive to the potential passengers and therefore remain competitive in the general market.

Air New Zealand has to maintain its market share against at least two competing airlines. All things being equal, it can be a great deal easier to chip away at an existing mature competitor's market share than it is to protect a majority market share from the new competition.

6.2.4 Analysing Air New Zealand's Dividend Policy

Current and Past Cash Returned to Stockholders

Table 29. *Air New Zealand – Consequences of Performance on Shareholder Wealth*, lists the company's dividend payments from financial years 2003 to 2007 inclusive. Air New Zealand has returned cash to its owners by the payment of increasing dividends and also by the increasing share price value. The ratio of dividends paid to net profit after tax has also slowly increased in the last few years.

Air New Zealand – Consequences of Performance on Shareholder Wealth

Financial year	06/07	05/06	04/05	03/04	02/03
Net profit after tax- NZ\$ Million	214	96	180	166	166
Dividends paid- NZ\$ Million	162	50	25	0	0
NZX Share price at year end – NZ\$*	2.67	1.16	1.30	0.40	0.48

* (Yahoo finance. 2008) (Air New Zealand. 2003 – 2008)

Table 29. Air New Zealand – Consequences of Performance on Shareholder Wealth

Recommended Cash Return to Stockholders

As the market is volatile for the airline industry, one less risky way for a mature 'flagship airline' to raise capital is to introduce more shares into the market place. In order to attract buyers the shares need to be seen to have potential to increase in value and to more or less guarantee future dividend payments.

In some respects it is less risky to raise capital by introducing more shares into the market than to increase borrowings. However, for this to work effectively a good number of the shares need to be with the general public and institutions. The problem with increasing the number of shares and shareholders is that there is potential to lose the controlling share of the company. In Air New Zealand's case, the New Zealand Government owns approximately 80% of the shares so the danger of the controlling share going to a competitor without Government approval is minimal.

Air New Zealand has used this method of raising capital successfully as the remaining 20% of 'outsider' shares are enough to keep the market moving and create the potential to issue more shares. The majority share holder, the New Zealand Government, receives a sizable payment in dividends under this model. Of course there is always the option for Air New Zealand to buy back the shares at a later date.

Available Cash to Return to Stockholders

Table 30. Air New Zealand - Retained Profits and Dividend Payments 2003 – 2007, clearly shows that the retained profits have steadily reduced whilst the dividend payouts have increased at a faster rate.

Air New Zealand Retained Profits and Dividend Payments 2003 - 2007

Year	2007	2006	2005	2004	2003
Retained Profits NZ \$million	474.0	523.0	573.0	715.0	867.2
Dividend Payouts NZ \$million	162.0	50.0	25	0	0

Table 30. Air New Zealand - Retained Profits and Dividend Payments 2003 - 2007

Given the clarity of the dividend policy in comparison to other airlines, and the increasing dividend payments, it is clear that the board concerns itself with the popularity and reputation with the finance critics. It is naturally concerned with the airline's reputation with potential and existing customers and that the airline performs well enough to give the banks confidence for future lending.

Air New Zealand's Dividend Policy

Below is an extract from Air New Zealand's current dividend policy statement.

Policy Statement

The Board of Air New Zealand is committed to a Dividend Policy geared towards the development of a consistent dividend stream to shareholders.

Policy guidelines

The following policy guidelines form Air New Zealand's Dividend Policy:

- *Dividend declarations will take into account current earnings, medium term trading outlook, long term capital structure and requirements for investment in value creating projects.*
- *Target capital structure (including capitalised aircraft operating leases as debt) is within the range of 45 to 55 percent.*
- *Other relevant economic factors impacting on the Air New Zealand Group.*

Target dividend pay out

The nature of the airline industry means that the Company's earnings can be volatile. The Board seeks to maintain a consistent and growing dividend stream, in the normal course of events, and this is expected to be between 25 to 50 percent of net profit after tax.

Distributions to shareholders

The Board recognises that distributions to shareholders by way of fully imputed dividends represent the optimal way in which to return funds to shareholders. This is dependent on the level of imputation credits available to be attached to dividends.

Dividend Reinvestment Plan

Shareholders have the option under a Dividend Reinvestment Plan (DRP) to choose to automatically have their dividends reinvested in Air New Zealand or to continue to receive cash dividends. DRPs provide economic benefits to shareholders as they can purchase additional shares in Air New Zealand at regular intervals for little or no brokerage and often in quantities that would otherwise not be cost effective. (Air New Zealand. 2007)

7. EVALUATING EASY JET

The Easy Jet Airline Company Ltd, otherwise known as 'easyJet', has been rapidly expanding since it was formed in 1995 and has continually grown through new acquisitions and new base openings. The growth was encouraged mainly by market pull created by the consumer demand for low-cost air travel. Easy Jet's founder was Stelios Haji-loannou who is well known for his flamboyant character as were the founders of the Virgin Group and

Southwest Airlines. *Table 31. Brief Record of Easy Jet's History*, outlines the key milestones since the start up of the Easy Jet airline and operations.

Brief Record of Easy Jet's History	
Nov 95	Easy Jet started operations from London's Luton airport.
Mar 98	Easy Jet purchased a 40% stake in Swiss charter airline TEA Basle.
Apr 98	Easy Jet commissioned Tableau to partner with them develop an e-commerce website capable of offering real-time online booking — the first low cost carrier to do so in Europe.
Apr 99	TEA Basle was renamed Easy Jet Switzerland and commenced franchise services.
Oct 00	Easy Jet was launched on the LSE (FTSE 250 Index).
Yr 01	Easy Jet opened its base at London Gatwick Airport.
May 02	Easy Jet announced its intention to purchase rival airline, London Stansted based Go for £374 million.
Oct 02	Easy Jet broke its previous philosophy of operating just one aircraft type (a strategy popularised by Southwest Airlines)
Dec 02	Easy Jet signed a deal with Airbus to deliver 120 aircraft to the airline from September 2003 over five years, with 'price protection' on a further 120 Airbus A319 aircraft until 2012.
Yr 03-07	Easy Jet opened bases in Germany, France, Italy and Spain, establishing a sizeable presence in continental Europe.
Oct 03	Easy Jet's Airbus A319 aircraft were first introduced to Easy Jet's Geneva base.
Dec 04	Easy Jet and Hotelopia, a subsidiary of First Choice Holidays, launched the co-branded Easy Jet Hotels accommodation booking service.
Apr 06	Easy Jet was prevented from launching its Milan Malpensa-Olbia route by the Italian aviation authorities.
Dec 06	Easy Jet started to return the Boeing 737-700 aircraft to their lessors.
Jun 07	Easy Jet announced it would expand its relationship with Hotelopia by launching Easy Jet Holidays, which offers Travel Trust Association protected package holidays made up of Easy Jet flights and Hotelopia accommodation products.
Oct 07	April 06 ruling overturned and Easy Jet commenced flights from Milan Malpensa to Olbia and also to the Sardinian capital Cagliari.
Oct 07	Easy Jet announced that it had agreed to purchase the entire share capital of GB Airways Ltd from the Bland Group. The deal was worth £103.5 million and was used to expand Easy Jet operations at London Gatwick Airport.
Mar 08	Established a base at Manchester Airport.
May 08	Announced new destinations for 2008 are - Ajaccio, Bastia {Corsica}, Corfu, Crete, Cyprus, Dalaman, Gibraltar, Hurghada, Malta, Manchester, Montpellier, Mykonos, Nantes, Rhodes, Sharm el Sheikh and Tenerife South.

Table 31. Brief Record of Easy Jet's History

7.1 Easy Jet's Business and Operations

Easy Jet is a UK low cost airline based at Luton Airport. It is one of the largest low-cost airlines in Europe and operates domestic and international scheduled services on close to 400 routes between more than 100 European and north African airports in 27 countries. The airline's largest base is at London Gatwick which itself offers approximately 63 destinations.

Shortly after its launch, Easy Jet was quickly regarded as the 'model low-cost airline' in Europe and was a serious threat to flagship airlines. The airline has the following distinct operating and marketing characteristics:

- one type of aircraft,
- point-to-point short-haul travel,
- no in-flight meals,
- rapid turnaround time,
- very high aircraft utilization,
- direct sales,
- cost-conscious customer segments; and
- extensive sub-contracting.

Eventually, as we will see, Easy Jet is moving towards managing the entire door to door supply chain. For example from the Easy Jet website travellers can book the following options:

- Flights
- Hotels
- Buses
- Taxis
- Travel Insurance
- Airport Parking
- Transport to and from Airport
- Lounges

7.1.1 Companies and Associate Companies

Table 32. Easy Jet Companies and Significant Associate Companies, gives an overview of the companies owned by Easy Jet. Again, these companies are purely associated with the air transport industry and is a serious business risk when contemplating the effects of terrorism or a world disaster. Unlike the other airlines, Easy Jet's businesses are mainly associated with the financing of the airline. A brief look at the Easy Jet website gives the misleading impression that they own a large proportion of the supply chain.

7.1.2 Operating Fleets

Easy Jet started out by operating a standard fleet of Boeing 737 aircraft. The idea was that the fleet and its supporting resources needed to be totally flexible and interchangeable across the entire operation. This was similar to the approach used by the successful low-cost model Southwest Airlines based in the United States. In more recent years, Easy Jet has started to increase its fleet size by introducing the very different Airbus Fleet and is gradually handing back its Boeing 737 fleet to the lessors.

Easy Jet Companies and Significant Associate Companies

Company Name	% Owned	Principle Activity	Country of Incorporation
Easy Jet Airline Company Limited	100	Airline	England and Wales
Easy Jet Switzerland SA	49	Airline	Switzerland
Easy Jet Aircraft Company Limited	100	Aircraft trading and leasing	Cayman Islands
Easy Jet Sterling Limited	100	Aircraft trading and leasing	Cayman Islands
Easy Jet Leasing Limited	100	Aircraft trading and leasing	Cayman Islands
Easy Jet Malta Limited	100	Aircraft trading and leasing	Malta
Aero Invest (Jersey) LP	100	Investment activities	Jersey

Table 32. Easy Jet Companies and Significant Associate Companies.

(Easy Jet. 2007, p87).

Easy Jet is the largest operator of the Airbus A319 type aircraft in the world and as at July 2008, had an average fleet age of 3.3 years. *Table 33. Easy Jet's Operating Fleet as at July 2008*, lists the aircraft types and numbers of aircraft currently operating under Easy Jet.

Easy Jet's Operating Fleet as at July 2008

Aircraft	In Service	On Order	Passengers
Airbus A319-100	118*	107	156
Airbus A320-200	9	0	174
Airbus A321-200	7	2	210
Boeing 737-700	30	0	149

*Includes 12 aircraft placed with Easy Jet Switzerland

Table 33. Easy Jet's Operating Fleet as at July 2008. (Wikipedia. 2008)

This new varied fleet comes with additional operating costs as the training, ground equipment and spares must be maintained for each additional type of aircraft. The majority of the Airbus training and equipment is designed to be common as it is advertised as a major selling point to potential purchasers who may wish to expand and vary their fleets in the future.

Although the Airbus is the larger and approximately 4 tonnes heavier when compared to the Boeing, it is also approximately 14 inches wider. Easy Jet suggests that this additional width will allow cabin crew and passengers to move around more easily and help to reduce turnaround times to the minimum possible. When compared to the B737 fleet, the A319 has an extra seven seats which means that an additional member of crew is required. Although Easy Jet's business model is centred around maximum aircraft utilisation which requires efficient and fast turnaround times, it is questionable whether the increased operational costs

will be met or exceeded by the increased revenue. Four tonnes of extra weight for a potential increase of seven passengers is a big gamble when we look at the fuel costs to date. Somebody must have done their figures!

7.2 Easy Jet's Financial Management

Note: All figures are taken from the Easy Jet Annual Report Financial Statement Balance Sheets 2003 to 2007 inclusive. (Easy Jet. 2003 - 2007). All current analysis refers to the end of financial year 2007. The financial reporting periods are outlined in Table 34. Easy Jet Financial Reporting Periods. The reporting periods are evenly spaced over the twelve month intervals.

Reporting Period	Financial Year	Elapsed Time (Months)
01 Oct 2002 to 30 Sep 2003	02/03	12
01 Oct 2003 to 30 Sep 2004	03/04	12
01 Oct 2004 to 30 Sep 2005	04/05	12
01 Oct 2005 to 30 Sep 2006	05/06	12
01 Oct 2006 to 30 Sep 2007	06/07	12

Table 34. Easy Jet - Financial Reporting Periods

Current Ratio Analysis (Liquidity Ratio)

For the Easy Jet Airline Company Ltd, the consolidated current ratios for the last five financial periods are displayed in *Table 35. Consolidated Ratio Analysis for Easy Jet Airline Company Ltd.*

The overall trend displayed appears to be reasonably healthy as the assets exceed the liabilities for the reporting periods from financial years 02/03 to 06/07. It is expected that the Current Ratio in the start up years could be low due to the large financial investment required to set up an airline but the down turn in financial year 06/07 may be an indication of further investment for growth or alternatively a down turn in the overall performance. A more detailed analysis of the financial report is required in order to clarify the cause of the deteriorating Current Ratio for the financial year 06/07.

Easy Jet – Consolidated Ratio Analysis (£ million)

Financial Year	Current Asset Value (a)	Current Liability Value (b)	Current Ratio (a)/(b)
02/03	477.0	260.9	1.82
03/04	684.7	314.7	2.18
04/05	890.9	414.5	2.15
05/06	1101.1	522.9	2.11
06/07	1166.4	621.3	1.88

Table 35. Consolidated Ratio Analysis for Easy Jet Airline Company Ltd (Easy Jet. 2007, p90)

DuPont System Analysis

Table 36. *Easy Jet – DuPont System Analysis*, is a DuPont system analysis of the Company's last five years up to and including the financial year 2007. As previously mentioned, the spread of five years allows for a reasonable attempt at a *Time Series Analysis* to be carried out. It should be noted that the Financial statements for the five years varied in format and terminology which made the location of annual data quite difficult to the average person with limited financial knowledge and know how.

Easy Jet has steadily continued to increase its assets whilst also maintaining a steady rise in Net Profit Margin (NPM), Return on Total Assets (ROA) and Return on Common Equity (ROE). This is a sign of a reasonably healthy airline. A comparison of these figures against the other airlines will be made later in this document.

Easy Jet – DuPont System Analysis

Financial Year	Consolidated (£ million)				
	02\03	03\04	04\05	05\06	06\07
Income Statement					
Earnings Available for Common Stock Holders (a)	30.8	31.3	50.3	73.8	148.1
Sales (b)	931.8	1,091.0	1,341.4	1,619.7	1,797.2
Net Profit Margin (NPM) (a)/(b) %	3.3%	2.9%	3.7%	4.6%	8.2%
Balance Sheet					
Sales (b)	931.8	1,091.0	1,341.4	1,619.7	1,797.2
Total Assets (c) (see TA below)	1,127.6	1,324.9	1,629.8	2,189.4	2,516.4
Total Asset Turnover (TAT) (b)/(c)	0.83	0.82	0.82	0.74	0.71
Total Liabilities (d)	369.1	535.5	766.4	1,206.5	1,364.0
Stockholders Equity (e)	758.5	789.4	839.7	982.9	1152.4
Total Assets (TA) (d)+(e)	1,127.6	1,324.9	1,629.8	2,189.4	2,516.4
Common Stock Equity (f)	758.5	789.4	839.7	982.9	1152.4
Financial Leverage Multiplier (FLM) TA/(f)	1.49	1.68	1.94	2.22	2.18
Return on Total Assets (ROA) % (NPM x TAT)	2.7%	2.4%	3.0%	3.4%	5.8%
Return on Common Equity (ROE) % (ROA x FLM)	4.0%	4.0%	5.8%	7.5%	12.6%

Table 36. Easy Jet – DuPont System Analysis

7.2.1 Easy Jet's Risk and Return Analysis

Easy Jet plc, is listed on the London Stock Exchange (LSE) under the code LSE:EZJ.L . Easy Jet plc is a constituent of the FTSE 250 Index.

Risk Profile of Easy Jet

A regression of returns on Easy Jet's stock has been carried out against the market index using fifty-four months of observations up to May 2008. When compared to a flagship airline,

Easy Jet is relatively young and, although successful and maturing, has room to grow especially if it continues with the current network strategy.

Capital Asset Pricing Model (CAPM)

Easy Jet does not pay dividends as company policy (Easy Jet. 2007. p79, Note 19.).

Table 37. Easy Jet's Regression Statistics and Risk Parameters, lists the calculated results taken from the spreadsheet in *Appendix H. Regression of Returns of Easy Jet's Stock*.

Current Risk Free Rate

The current risk free rate has been obtained from the United Kingdom Government Bond yield rates. The Current Risk Free Rate used is 4.50%. (FT.com. 2008.)

Current and Historical Stock Price Data

The fifty-four months of historical stock price data for the *beta coefficient (b)* calculation has been obtained from Yahoo! Finance and is outlined in *Appendix D .EZJ.L Historical Prices for Easy Jet*. The current stock price of £3.10 as of 01 May 2008 has been used. (Yahoo! Finance. 2008.)

Market Risk Premium for Stocks

The United Kingdom *Market Risk Premium*, otherwise known as the *Risk Premium for Stocks*, is recorded as 3.75%. This risk premium value will be used to calculate the *beta coefficient* for Easy Jet. (Barnett Waddington. 2008).

Intercept of the Regression

Table 37. Easy Jet's Regression Statistics and Risk Parameters, records the calculated *Intercept Alpha* in this case as 0.03%. This positive value indicates that the stock has outperformed the market by 0.03%. During this period there were no major stock price shifts due to systematic or non-systematic forces on the market. This alpha means that the share has earned almost exactly what it would be expected to earn given the CAPM model which has been used.

Slope of the Regression

Table 37. Easy Jet's Regression Statistics and Risk Parameters, records the slope of regression, *beta*, as 1.249385376. This means that when the market return increases by 1%, on average, the Easy Jet returns will increase by approximately 1.25%. Easy Jet's rate of change of stock value is more volatile than the general market.

R-square

Table 37. Easy Jet's Regression Statistics and Risk Parameters, records the R-square value as 7.48%. This indicates that 7.48% of the Easy Jet stock risk is linked to market (*systematic or non-diversifiable*) risk whilst the remaining 92.58% is unexplained (*non-systematic or diversifiable*) risk. In other words, the vast majority of the stock risk is most likely to be specific to the company's operating environment (business factors) or financial leverage.

As the majority of the risk is non-systematic and not directly linked to the market, there is plenty of scope to increase the share value. The success depends greatly on how the

company is managed by the board and its management team. The stock value is also heavily reliant on other external natural, commercial and strategic forces linked to the performance of the business. As with the other airlines, the business model is high risk but with potential to reach high financial gains or devastating financial losses.

Table 38. Easy Jet's Stock Variance Statistics, shows the standard deviation of the variation statistics.

Easy Jet's Regression Statistics and Risk Parameters

USING BETA

In estimating expected returns:	
Risk free Rate	4.50%
Historical return premium	3.75%
Expected return	9.19%

RISK AND PERFORMANCE MEASURES	
Intercept (Alpha)	0.03%
Slope (Beta)	1.249385376

In forecasting prices:	
Current price	£3.10
Annualized DPS	£0.00

VARIANCE STATISTICS	
Variance of the stock	0.015175639
Variance of the market	0.000726867
Systematic variance	0.001134613
Unsystematic variance	0.014041026
R squared	7.48%

Table 37. Easy Jet's Regression Statistics and Risk Parameters

The variance of Easy Jet's stock is higher risk than the variance of the market and the unsystematic (diversifiable) variance is higher risk than the systematic (non-diversifiable) variance. As with other airline, the higher risk of the stock variance is likely to be due to the higher *diversifiable* variance risk.

VARIANCE STATISTICS		STANDARD DEVIATION (square root) x 100%	
Variance of the stock	0.015175639	0.123189443	12.32%
Variance of the market	0.000726867	0.026960471	2.7%
Systematic variance	0.001134613	0.033684016	3.37%
Unsystematic variance	0.014041026	0.118494835	11.85%
R squared	7.48%		

Table 38. Easy Jet's Stock Variance Statistics

Financial Leverage

For Easy Jet, the Degree of Financial Leverage (DFL) for the financial year 2007 is calculated below using the figures taken from the 2007 Income Statement. (Easy Jet. 2007. p58.)

$$DFL = \frac{\% \text{ Change in EPS}}{\% \text{ Change in EBIT}}$$

$$\% \text{ Change in EPS} = (36.62 - 23.18)/36.62 = 0.3670125$$

$$\% \text{ Change in EBIT} = (172.0 - 117.8)/172.0 = 0.3151163$$

$$\text{Degree of Financial Leverage (DFL)} = 0.3670125/0.3151163 = 1.1646890 \text{ or } 1.16$$

Therefore, a 100% increase in EBIT would result in a 116% increase in the earnings per share. If no debt were used, the degree of financial leverage would be 1.0, so a 100 percent increase in EBIT would produce exactly a 100 percent increase in EPS. This would suggest that Easy Jet has a relatively low financial leverage and therefore less volatile earnings per share caused by debt.

The low Degree of Financial Leverage (DFL) indicates that the majority of the stock risk is most likely to be due to the company's operating environment. Easy Jet is a relatively young airline with room to grow, a quick calculation for the financial year 2005/06 shows the DFL to be lower than that calculated for 2006/07. *Table 39. Easy Jet's Degree of Financial Leverage from 2004 to 2007*, shows a steady climb in the DFL with increasing borrowing. In the financial year 2004/05, the financial leverage was negative but despite this the earnings per share continued to rise in line with the trend.

Financial Year	Degree of Financial Leverage
2004/05	(0.86)
2005/06	0.92
2006/07	1.16

Table 39. Easy Jet's Degree of Financial Leverage from 2004 to 2007

Performance Profile on an Investment in Easy Jet

In the short term the stock value has slumped to a low of £3.10. As with the other airlines, this is likely to have been caused by global pressures such as the price of jet fuel which rose to USD\$160 per barrel.

The slope of regression, *beta*, shows that when the market return increases by 1%, on average, the Easy Jet returns will increase by approximately 1.25%. which is over performing when compared to the general market. The Easy Jet share has earned slightly more than would have been predicted by the CAPM.

The low Degree of Financial Leverage (DFL) indicates that the majority of the stock risk is most likely to be due to the company's operating environment. This indicates that the majority of Easy Jet's performance is attributed to its management. This is further reinforced by the evidence of higher diversifiable risk.

Easy Jet's Equity Risk

Table 38. *Easy Jet's Stock Variance Statistics*, shows the standard deviation of the stock over the fifty-four month period to be 12.32%. This statistical value is based on past performance and is therefore not necessarily a reliable indication for the future. The airline business is very competitive and volatile and Easy Jet is not a government secured (flagship) airline with little to no diversified assets.

Easy Jet does not have any outstanding bonds to be found within the financial statements.

Easy Jet's Debt Risk

The consolidated debt to equity ratio is calculated in Table 40. *Consolidated Debt to Equity (Net Assets) Ratio for Easy Jet*, below.

Consolidated Debt to Equity Ratio for Easy Jet - 2007

Debt and Equity	£ million
Total consolidated liabilities (a)	1364.0
Total consolidated equity (b)	806.9
Debt to Equity Ratio (a)/(b)	1.69

Table 40. Consolidated Debt to Equity Ratio for Easy Jet - 2007

This debt to equity ratio indicates that Easy Jet has been aggressive in financing its growth with debt. This could potentially result in volatile earnings as a result of the additional interest and exchange rate charges. Easy Jet has hedged against this risk for the short term.

7.2.2 Easy Jet's Cost of Capital

As before, the WACC is calculated using the following formula:

$$\text{WACC} = (\text{weight of preferred equity} \times \text{cost of preferred equity}) + (\text{weight of common equity} \times \text{cost of common equity}) + [\text{weight of debt} \times \text{cost of debt} \times (1 - \text{tax rate})]$$

Market Value for Equity

The consolidated weighted average number of ordinary shares for Easy Jet is 416 million. (Easy Jet. 2007, p70, Note 6.)

The current price per share is £3.10. (Appendix D. EZJ.L Historical Prices for Easy Jet)

Therefore, the *market value for equity* = 416 million x 3.10 = £1289.6 million

Market Value of the Debt

The company does not have publicly traded bonds. The company does have a significant amount of bank loans, whose market value is not easily found. As market value of the debt tends to be close to the book value, the book value of debt will be used in the WACC formula.

The consolidated book value of long term debt (Interest bearing liabilities) for Easy Jet is £478.6 million. Some additional derivative financial instruments exist but due to their size, they will make little difference to the calculation of the WACC. (Easy Jet. 2007, Consolidated Income Statement, p59.)

Cost of Preferred Equity

There is no preferred equity, where the holder is entitled to fixed payments forever.

Cost of Common Equity

The cost of common equity, otherwise known as the *expected return*, is 9.19% as calculated in *Table 37. Easy Jet's Regression Statistics and Risk Parameters*.

Cost of Debt

Easy Jet does not have any outstanding bonds.

Easy Jet's interest bearing liabilities are spread across bank loans, lease agreements and letters of credit. For the bank loans of £427.5 million the borrowing costs have been capitalised using the effective interest rate of 6.85% (Easy Jet. 2007. p75, Note 15.).

The lease agreements of £91.6 million are subject to an effective interest rate of 5.40%

Weighted Average Cost of Capital (WACC)

Weight of Common Equity

Market value of common equity

(Market value of common equity + Market value of debt + Market value of preferred equity)

Since the company does not have preferred equity the weight of common equity is:

$$\frac{\underline{\pounds 1289.6 \text{ million}}}{(\pounds 1289.6 \text{ million} + \pounds 478.6 \text{ million})} = 0.729$$

Weight of Debt

Market value of Debt

(Market value of common equity + Market value of debt + Market value of preferred equity)

$$\frac{\underline{\pounds 478.6 \text{ million}}}{(\pounds 1289.6 \text{ million} + \pounds 478.6 \text{ million})} = 0.271$$

Weighted Average Cost of Capital

WACC = (weight of preferred equity × cost of preferred equity) + (weight of common equity × cost of common equity) + [weight of debt × cost of debt × (1 – tax rate)]

Tax Rate = 30% (Easy Jet. 2007, p69, Note 4.)

WACC = (0.729 × 0.0919) + [0.271 × 0.0685 × (1 – 0.3)]

WACC = 0.0669951 + 0.01299445 = 0.07998955

The Weighted Average Cost of Capital (WACC) for Easy Jet is 8.0%.

Therefore, it costs Easy Jet **8.0%** to finance its assets. This is the minimum return that a company must earn on its existing asset base to satisfy its creditors, owners, and other providers of capital.

7.2.3 Analysing Easy Jet's Capital structure

Current Financing of Easy Jet

As for the majority of airlines, the financing of Easy Jet is through the use of debt, equity and lease agreements as will be explained below.

Debt

The Easy Jet Group's debt is asset related and reflects the capital focussed nature of the airline industry. Aircraft are used as security to lenders and other finance companies. For example, during the year 2007 ten aircraft were purchased with cash and in addition to these 11 of the 49 Airbus aircraft to be delivered through to 2009 have committed financing in place at 30 September 2007.

As of 30 September 2007 the following debt criteria applied to Easy Jet's finance model:

- All Group loans are at floating interest rates which are reviewed every three to six months.
- A minimum of 40% of operating lease rentals were based on fixed interest rates at the time of aircraft delivery.
- Approximately 54% of lease payments were based on fixed interest rates.
- Approximately 46% of lease payments were based on floating interest rates.
- The effective interest rate on bank loans was 6.85%.
- The effective interest rate on finance leases was 5.40%.

Equity

Easy Jet's Board set return on equity as its key financial measure for the benefit of the shareholders.

Section 7.2.1 Easy Jet's Risk and Return Analysis, showed that the company has a high debt to equity ratio when compared to other industries which is the more economic way to finance

the company's growth but at an increased risk. Easy Jet needs to maintain a good market share and high load factors with profitable fares during the up and coming hard times.

Easy Jet's total equity at September 2006 consists of share capital of £102.6 million, share premium of £591.4 million and retained earnings of £298.4 million. Allowing for a hedging reserve of £9.5 million, this gives a total equity value of £982.9 million. (Easy Jet. 2003 – 2007, p 80.)

Leases

Easy Jet has a number of leases mainly for aircraft, engines and aeronautical equipment. The leases fall under two categories, Finance Leases and Operating Leases.

Finance Leases

In September 2007 Easy Jet had six aircraft under finance leases each with ten year lease periods. These finance leases are secured against other aircraft owned and operated by the Group, and the interest rates are part variable and part fixed. Their fair value of finance leases in 2007 was £87.8 million.

Operating Leases

In September 2007 Easy Jet had 76 aircraft under operating leases, with lease periods ranging from seven to ten years. Again, some of these lease payments were based on fixed interest rates and others on floating interest rates.

Easy Jet enters into sale and leaseback agreements. It sells to a third party the rights to acquire aircraft and then Easy Jet subsequently leases the aircraft back in the form of an operating lease. The purchase rights, which are the amount of pre-delivery deposits paid for the aircraft that are to be sold and leased back, are considered to be monetary assets. This does however assume that the aircraft remain to be in demand by other operators.

Easy Jet's Growth Cycle

Although Easy Jet is not an age old airline like so many of the mature flagship carriers of the world, it is a reasonably mature carrier in its own right and advertises its continued success to the market. This of course is extremely important for the shareholders.

Figure 5. Easy Jet's Profitability, indicates that the company's return on equity and earnings per share have continued to increase in a uniform and controlled trend. Return on equity is Easy Jet's key financial measure as it represents the return attributable to the equity shareholders. This makes the airline look strong to other investors and lenders and brings with it demand for shares and possible lower interest rates for debt.

7.2.4 Analysing Easy Jet's Dividend Policy

Easy Jet's Board has decided that Return On Equity (ROE) is to be the airline's primary financial measure as this is the best way to reflect the returns attributable to the equity shareholders.

The airline has stated that it aims to grow capacity at an annual rate of 15% with improved operating margins and return on equity.

Easy Jet's Profitability

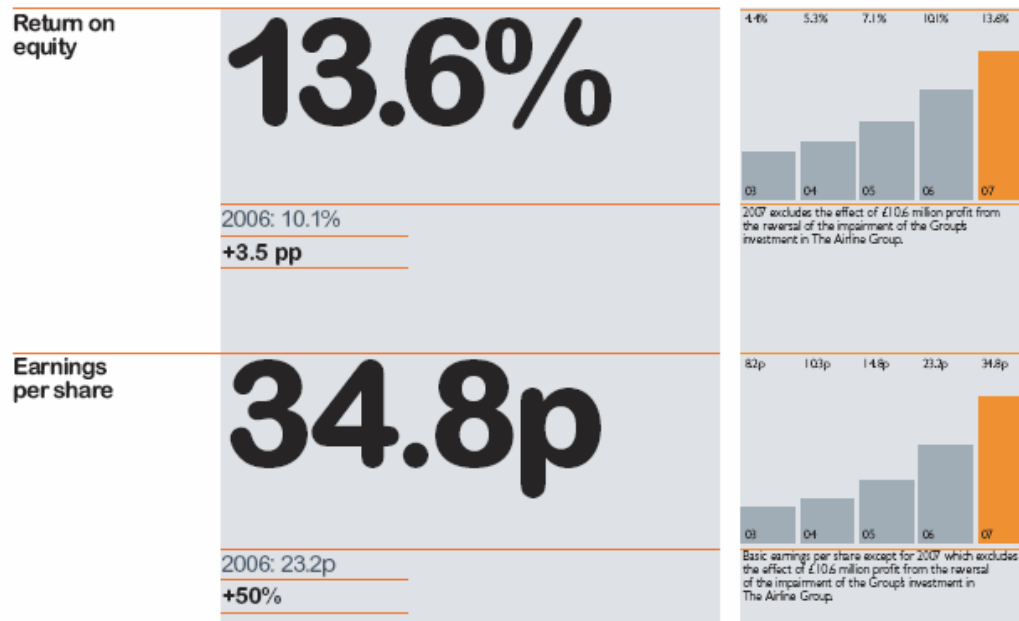


Figure 5. Easy Jet's Profitability (Easy Jet. 2007, p 4.)

Current and Past Cash Returned to Stockholders

The only way in which the company has returned cash to its owners is by Return on Equity. The stock value has fluctuated a little but overall it has steadily risen. The company has not bought back stock or sold off any assets since its date of listing in October 2000. This would not be expected behaviour by Easy Jet as the airline remains to be in the strong growth stage of its life.

Table 41. Easy Jet – Consequences of Performance on Shareholder Wealth, lists the company's dividend payments from the FY02/03 to 06/07.

The rate of increase in net profit after tax does not match the rate of increase in share price. The cause of this difference in the rate of increase is most likely to be due to the reinvestment of funds into the airline and the health of the general stock market supported by a general nervousness by potential buyers brought about by the current perceived risks in aviation.

Easy Jet – Consequences of Performance on Shareholder Wealth

Financial year	06/07	05/06	04/05	03/04	02/03
Net profit after tax - £ Million	148.1	73.8	48.0	22.3	26.9
Dividends paid - £ Million	0	0	0	0	0
LSE Share price at FY year end – £*	5.24	4.86	2.92	1.27	2.20

* (Yahoo Finance. 2008)

Table 41. Easy Jet - Consequences of Performance on Shareholder Wealth (Easy Jet. 2003 – 2007)

Available Cash to Return to Stockholders

According to the 2006 and 2007 Cash Flow Statements and Balance Sheets, Easy Jet had a strong cash flow to equity ratio and therefore there is no reason to have questioned its ability to buy back stock or pay dividends. However, for the foreseeable future, the Directors intend to retain earnings for reinvestment in Easy Jet's business.

Table 42. Easy Jet - Comparison of Retained Profits and Dividend Payments 2003 – 2007, clearly shows that despite the steady and healthy increase in retained profits over the last five years, no dividend payments have been made.

Easy Jet - Retained Profits and Dividend Payments 2003 - 2007

Year	2007	2006	2005	2004	2003
Retained Profits £million	152.3	94.1	59.0	41.1	32.3
Dividend Payouts	0	0	0	0	0

Table 42. Easy Jet - Retained Profits and Dividend Payments 2003 - 2007

The clear communication from the Board that the primary financial measure will be the return on equity (ROE) and that the planned growth is 15% per year is a healthy indicator to the investor and generates a level of confidence amongst the lenders when looking to raise more funds.

Easy Jet's Dividend Policy

Easy Jet does not have a formal communicated dividend policy. Easy Jet has never paid any cash dividends on Ordinary Shares and does not anticipate paying cash dividends in the foreseeable future.

8. EVALUATING QANTAS

The Qantas airline is Australia's largest airline and, next to KLM, is the world's second oldest continuously operating airline. The airline is based in Sydney with its main operating hub at Sydney airport. Qantas currently operates into approximately 81 destinations in 5 different continents. One of the most recent additions has been the non-stop 747-400 flights from

Sydney to Buenos Aires. *Table 43. A Brief Record of Qantas's History*, shows the progressive growth of the airline since the early 1900's.

Brief Record of Qantas's History

1920	Qantas was founded in Winton, Queensland as Queensland and Northern Territory Aerial Services Limited
1927	Qantas built seven De Havilland DH.50s and a single DH.9 under license in its Longreach hangar.
1928	A chartered Qantas aircraft conducted the inaugural flight of the Royal Flying Doctor Service of Australia.
1934	QANTAS Limited and Britain's Imperial Airways (the forerunner of British Airways) formed a new company, Qantas Empire Airways Limited. The new airline commenced operations between Brisbane and Darwin using old fashioned DH.50 and DH.61 biplanes.
1935	QEA flew internationally when the service from Darwin was extended to Singapore using newer de Havilland DH.86 Commonwealth Airliners. This service lasted through until Singapore fell in February 1942.
1943	Flying boat services were resumed with American built PBY Catalinas, with flights between Perth and Ceylon (now Sri Lanka). These flights continued until July 1945.
1945	After World War II, QEA was nationalised.
1947	The airline took delivery of Lockheed L.049 Constellations.
1952	Qantas expanded across the Indian Ocean to Johannesburg via Perth, Cocos Islands and Mauritius, calling this the Wallaby Route.
1954	The network was expanded across the Pacific to Vancouver via Auckland, Nadi, Honolulu and San Francisco.
1956	Qantas ordered the Boeing 707 jet airliner.
1958	Qantas became one of the very few round-the-world airlines, operating services from Australia to London via Asia and the Middle East (Kangaroo route) and via the Southern Cross route with Super Constellations.
1959	It took delivery of new turboprop Lockheed Electra aircraft.
1959	The Boeing 707-138 was a shorter version of the Boeing 707 that was operated only by Qantas. The first jet service operated by Qantas was from Sydney to San Francisco via Nadi and Honolulu.
1959	Qantas became the third airline to fly jets across the Atlantic.
1966	The airline diversified its business by opening the 450 room Wentworth Hotel in Sydney. Also another around-the-world route was opened.
1967	The airline placed orders for the Boeing 747.
1967	Qantas Empire Airways changed its name to Qantas Airways, the name of the airline today.
1979	Qantas operated its final Boeing 707 flight from Auckland to Sydney, and became the only airline in the world to have a fleet that consisted of Boeing 747s only. That same year Qantas introduced Business class — the first airline in the world to do so.
1985	The Boeing 767-200 was introduced for New Zealand, Asia and Pacific routes.
1985	The Boeing 747-300 was introduced
1989	The Boeing 747 fleet was upgraded with the arrival of the new Boeing 747-400 series.
1989	The delivery flight of the first aircraft VH-OJA was a world record, flying the 18,001km from London to Sydney non-stop.
1990	Qantas established Australia Asia Airlines to operate services to Taiwan.
1992	The Australian Government sold the domestic carrier Australian Airlines to Qantas in giving it access to the national domestic market for the first time in its history.
1993	Qantas was privatised in March 1993, with British Airways taking a 25% stake in the airline for A\$665m.
1995	After a number of delays, the remainder of the Qantas float proceeded.
1998	Qantas co-founded the Oneworld alliance with American Airlines, British Airways, Canadian Airlines, and Cathay Pacific.

Continued overleaf

2000	Qantas ordered twelve Airbus A380-800, with options for twelve more. Eight of these options were exercised, bringing firm orders to twenty.
2001	The main domestic competitor to Qantas, Ansett Australia, collapsed. Market share for Qantas immediately neared 90%, with the relatively new budget airline Virgin Blue holding the remainder.
2001	At the same time, Virgin Blue announced a major expansion which was successful in eventually pushing the Qantas domestic market share back to 60%. To prevent any further loss of market share, Qantas responded by creating a new cut-price subsidiary airline Jetstar. This has been successful in keeping the status quo at around 65% for Qantas group and 30% for Virgin Blue with other regional airlines accounting for the rest of the market.
2003	Qantas attempted and failed to obtain regulatory approval to purchase a larger (but still minority) stake in Air New Zealand. Subsequently Qantas stepped up competition on the trans-Tasman routes, recently introducing Jetstar to New Zealand.
2004	The first flight of Jetstar Asia Airways took off from its Singapore hub to Hong Kong, marking Qantas' entry into the Asian cut-price market.
2005	Qantas announced an order for 115 Boeing 787-8 and 787-9 aircraft (45 firm orders, 20 options and 50 purchase rights).
2006	Launch of international services (in addition to existing trans-Tasman and Jetstar Asia flights) to leisure destinations such as Bali, Ho Chi Minh City, Osaka and Honolulu.
2008	The first Qantas Airbus A380 was registered in Australia.
2008	The airline will use its first A380 on the route from Melbourne Airport to Los Angeles International Airport twice a week, and Sydney Airport to Los Angeles once a week.

Table 43. Brief Record of Qantas's History. (Qantas. 2008).

8.1 Qantas's Business and Operations

Qantas operates internationally out of Brisbane, Perth, Singapore Changi, Los Angeles International and London Heathrow airports. The two main international hubs are Sydney Airport and Melbourne Airport. The domestic hubs are predominantly the airports at Sydney, Melbourne, Brisbane and Perth with some further activity at the Adelaide, Cairns and Canberra airports.

Although the majority of Qantas's business is in the travel industry, it also has a stake in the air and land freight sectors. The business also has an involvement in catering for both airline and other non airline customers. The following section, Qantas's Companies and Associate Companies covers this in more detail.

Qantas has more recently been one of the most profitable airlines across the world. The Australian Government has made it law that Qantas must be at least 51% owned by Australia. The level of foreign ownership is constantly monitored and controlled accordingly.

8.1.1 Qantas's Companies and Associate Companies

Table 44. Qantas Companies and Significant Associate Companies, gives an overview of the range of businesses in Qantas's portfolio. They are mainly associated with the air transport industry which is an important observation when looking at risk analysis and contemplating

the effects of terrorism or a world disaster. However, there is some diversification with non-aviation catering and government military engineering support services.

Qantas Companies and Significant Associate Companies

Company Name	% Owned	Principle Activity	Country of Incorporation
QantasLink	100	Airline	Australia
Q Catering	100	Catering – aviation and non-aviation	Australia
JetConnect	100	Airline	Australia
Express Freighters Australia	100	Aviation - Freight	Australia
Qantas Freight	100	Aviation - Freight	Australia
Express Ground Handling	100	Aviation	Australia
Qantas Holidays	100	Travel wholesaling	Australia
Jetstar - Australia	100	Airline	Australia
Jetstar - Asia	49	Airline	Singapore
Qantas Defence Services	100	Engineering services	Australia
Air Pacific	49	Airline	Fiji
Australian Air Express	50	Aviation - Freight	Australia
Star Track Express	50	Road Freight	Australia
Air Pacific Limited	46.3	Air transport	Fiji
Fiji Resorts Limited	20.6	Resort accommodation	Fiji
Hallmark Aviation Services LP	49.0	Passenger handling services	USA
HT & T Travel Philippines Inc.	28.1	Tours and travel	Philippines
Holiday Tours and Travel (Thailand) Ltd.	36.8	Tours and travel	Thailand
Holiday Tours and Travel, Vietnam Joint Venture Company	36.8	Tours and travel	Vietnam
Jupiter Air Oceania Limited	47.6	Freight services	Australia
Tour East (TET) Ltd.	36.8	Tours and travel	Thailand
Travel Software Solutions Pty Limited	50.0	Reservations systems	Australia

Table 44. Qantas Companies and Significant Associate Companies. (Qantas. 2008).

8.1.2 Operating Fleets

As last counted in September 2008, Qantas and its two subsidiary airlines operated approximately 230 aircraft which included 37 aircraft operated by Jetstar Airways and 46 operated by the QantasLink airlines. This large fleet of aircraft is continuously changing in an

attempt to improve reliability and efficiency. An idea of the specific fleet types and their distribution is given below.

‘Qantas’

As of September 2008, Qantas had an average fleet age of approximately 9.3 years. The Qantas fleet numbered 135 aircraft. *Table 45. Qantas and Subsidiary Fleets of Aircraft as at September 2008*, outlines the operating fleet which includes all Qantas-owned subsidiaries except Jetstar and QantasLink which are also further outlined in the tables below.

Qantas and Subsidiary Fleets of Aircraft – September 2008

Aircraft	Total	Notes
Airbus A330-200	5 (1 order)	Replacing 747-300 by September 2008
Airbus A330-300	10	
Airbus A380-800	1 (19 orders)	Entry into service: 20 October 2008 (Melbourne-Los Angeles)
Boeing 737-300	5	Replacement aircraft: Boeing 737-800 (Operated by Jetconnect)
	4	Operated by Express Freighters Australia
Boeing 737-400	24	Replacement aircraft: Boeing 737-800 (3 Operated by Jetconnect)
Boeing 737-800	38 (31 orders)	Replacing: Boeing 737-400
Boeing 747-300	4	Retired progressively from July 1, 2008, replaced by A330-200
Boeing 747-400	24	
Boeing 747-400ER	6	Launch customer
Boeing 767-300ER	29	Increased presence on Sydney/Melbourne to Perth flights after retirement of 747-300
Boeing 787-9	(50 orders)	20 options and 30 rights.

Table 45. Qantas and Subsidiary Fleets of Aircraft as at September 2008 (Qantas. 2008).

‘Jetstar’ Airways

Jetstar is a low-cost airline and is based in Melbourne, Australia. Its main purpose is to compete against the low-cost airline Virgin Blue. Jetstar operates both domestically and internationally. Jetstar also owns part of Jetstar Asia (Valuair) in Singapore and Jetstar Pacific Airlines in Vietnam. *Table 46. Jetstar Airways Operating Fleet as at February 2008*, outlines the smaller fleet operated by Jetstar. As of February 2008 the average age of the Jetstar fleet of aircraft was approximately 2.7 years.

Jetstar Operating Fleet as at February 2008

Aircraft	Total	Notes
Airbus A320-200	29 (54 on order)	Jetstar has also 40 options and purchase rights. Some of the aircraft are flying the Sydney/Brisbane/Melbourne/Gold Coast-Christchurch International Route. 1 aircraft is flying the Cairns-Darwin-Singapore route (code share with Jetstar Asia).
Airbus A321-200	2 (16 on order)	Used on Australian Domestic (Cairns - Melbourne), Long Haul (Darwin, Perth to Asia).
Airbus A330-200	6	Two of the Aircraft are currently flying the 10 times weekly Cairns-Osaka-Nagoya Route.
Boeing 787-8	(15 on order)	To be used on Australian Domestic, Long Haul Routes (Europe, US West Coast Expansion).

Table 46. Jetstar Airways Operating Fleet as at February 2008 (Jetstar Airways. 2008)

'QantasLink'

QantasLink combines various regional subsidiary airlines under one brand. QantasLink encompasses the regional airlines Airlink, Sunstate, Eastern Australia Airlines, and Southern Australia Airlines. *Table 47. QantasLink's Operating Fleet as at September 2007*, outlines the fleet of aircraft operated by QantasLink within Australia.

Again as mentioned before, such varied fleets of aircraft come at additional operating cost as the training, ground equipment and spares must be maintained for each individual type of aircraft.

8.2 Qantas's Financial Management

Note: All figures are taken from the Annual Report Financial Statement Balance Sheets 2003 to 2007. (Qantas. 2003 – 2007). All current analysis refers to the end of financial year 2007.

The financial reporting periods are outlined in *Table 48. Qantas - Financial Reporting Periods*. The reporting periods are evenly spaced over the twelve month intervals.

Current Ratio Analysis (Liquidity Ratio)

For the Qantas Group, the consolidated current ratios for the last five financial periods are displayed in *Table 49. Consolidated Ratio Analysis for the Qantas Group*. At a glance the overall trend displayed appears to be reasonably less than healthy as the current liabilities exceed the assets for the reporting periods 03/04 to 06/07 inclusive. Before judgment is passed, we need to understand exactly what the current assets and liabilities are and whether or not the other airlines have reported using the same criteria.

QantasLink Fleet as at September 2007

Aircraft	Total	Notes
de Havilland Canada Dash 8 Series 100	6	Used within various routes of Qantaslink network. (To be retired by August 2008.)
de Havilland Canada Dash 8 Series 200	5	Used within various routes of Qantaslink network.
de Havilland Canada Dash 8 Series 300	16	8 used by Sunstate whilst 8 are used by Eastern Australia.
de Havilland Canada Dash 8 Series 400	9 (12 Orders)	All 8 are currently used by Sunstate, Eastern Australia use of the Q400 is pending. As of 30/10/07, 12 Q400's have been ordered with 24 options.
Boeing 717-200	14	11 are operated by National Jet Systems flying to destinations in Western Australia, Northern Territory & Queensland. The other 3 are currently in storage for unknown reasons at Adelaide Airport.
Fokker 50	1	This aircraft is operated by Alliance Airlines between Adelaide Airport and Olympic Dam Airport in South Australia.
Fokker 100	2	These aircraft are operated by Alliance Airlines between Perth Airport, Karratha Airport and Port Hedland International Airport in Western Australia, and between Brisbane Airport and Mackay Airport.

Table 47. QantasLink's Operating Fleet as at September 2007 (QantasLink. 2007)

Reporting Period	Financial Year	Elapsed Time (Months)
01 Jul 2002 to 30 Jun 2003	02/03	12
01 Jul 2003 to 30 Jun 2004	03/04	12
01 Jul 2004 to 30 Jun 2005	04/05	12
01 Jul 2005 to 30 Jun 2006	05/06	12
01 Jul 2006 to 30 Jun 2007	06/07	12

Table 48. Qantas - Financial Reporting Periods

Qantas Group – Consolidated Ratio Analysis

(AUS\$ Million)

Financial Year	Current Asset Value (a)	Current Liability Value (b)	Current Ratio (a)/(b)
02/03	3,954.4	4,767.0	0.83
03/04	3,322.0	5,190.2	0.64
04/05	3,709.9	4,635.0	0.80
05/06	5,052.8	5,429.7	0.93
06/07	5,634.0	6,504.0	0.87

Table 49. Consolidated Ratio Analysis for the Qantas Group

DuPont System Analysis

Table 50. Qantas Group – DuPont System Analysis, is a DuPont system analysis of the Company's last five years. It is clear that the performance has been erratic with the FY02/3 and 05/06 having the considerably lower net profit margins.

Although the FY05/06 sales increased, the net profit margin percent was at an all time low which indicates that the operating costs may have increased considerably and are probably due to increasing interest rates and fuel/oil costs. A similar trend can be seen for the FY06/07.

The Return on Common Equity (ROE) has been very erratic over the last five financial reporting periods. For the FY06/07 the Net Profit Margin (NPM) was low whilst the return on common equity is high which was probably assisted by the higher Financial Leverage Multiplier (FLM). The Common Stock Equity has been increased by the Dividend Reinvestment Plan (DRP) which has now been suspended. The ROE also could have been affected by interest rates and fuel/oil charges reducing the NPM.

Qantas Group – DuPont System Analysis

Consolidated (AUS\$ Million)

Financial Year	02\03	03\04	04\05	05\06	06\07
Income Statement					
Earnings Available for Common Stock Holders (a)	337.5	648.8	761.0	480.0	719.6
Sales (b)	11,374.9	11,353.7	12,648.8	13,646.7	15,165.7
Net Profit Margin (NPM) (a)/(b) %	2.9%	5.7%	6.0%	3.5%	4.7%
Balance Sheet					
Sales (b)	11,374.9	11,353.7	12,648.8	13,646.7	15,165.7
Total Assets (c) (see TA below)	16,973.8	17,574.2	18,134.4	19,183.3	19,605.7
Total Asset Turnover (TAT) (b)/(c)	0.67	0.65	0.70	0.71	0.77
Total Liabilities (d)	11,711.7	11,733.9	11,707.5	13,102.2	13,410.7
Stockholders Equity (e)	5,262.1	5,840.3	6,426.9	6,081.1	6,195.0
Total Assets (TA) (d)+(e)	16,973.8	17,574.2	18,134.4	19,183.3	19,605.7
Common Stock Equity (f)	5,262.1	5,840.3	6,426.9	6,081.1	6195.0
Financial Leverage Multiplier (FLM) TA/(f)	3.23	3.01	2.82	3.15	3.16
Return on Total Assets (ROA) % (NPM x TAT)	1.94%	3.71%	4.20%	2.49%	3.62%
Return on Common Equity (ROE) % (ROA x FLM)	6.27%	11.17%	11.84%	7.84%	11.44%

Table 50. Qantas Group – DuPont System Analysis

8.2.1 Qantas's Risk and Return Analysis

Risk Profile of Qantas

A regression of returns on Qantas's stock has been carried out against the market index using fifty-four months of observations up to May 2008.

Like Air New Zealand, Qantas is a mature company and although the airline is the national carrier for Australia, it needs to repeatedly reinvent itself in order to remain competitive and hold on to its market share.

Capital Asset Pricing Model (CAPM)

The annualised dividend per share (DPS) of AUS\$0.30 was extracted from the Qantas financial statement. (Qantas. 2007. p72.)

Table 51. Qantas's Regression Statistics and Risk Parameters, lists the calculated results taken from the spreadsheet in *Appendix I. Regression of Returns of Qantas's Stock*.

Current Risk Free Rate

The current risk free rate has been obtained from the Australian Reserve Bank Treasury Fixed Coupon Bond Yield Rates as indicated in *Figure 2. Australian Reserve Bank Treasury Fixed Coupon Bond Yield Rates*. The Current Risk Free Rate used is 6.87%. (Reserve Bank. 2008.)

Current and Historical Stock Price Data

The fifty-four months of historical stock price data for the *beta coefficient (b)* calculation has been obtained from Yahoo! Finance and is outlined in *Appendix E. QAN.AX: Historical Prices for Qantas*. (Yahoo! Finance. 2008.) The current stock price of AUS\$3.44 as of 01 May 2008 has been used.

Market Risk Premium for Stocks

As before, the Australian *Market Risk Premium*, otherwise known as the *Risk Premium for Stocks*, is recorded as 6.2%. This risk premium value will be used to calculate the *beta coefficient* for Virgin Blue Holdings Limited. (Lally, M. 2000).

Intercept of the Regression

Table 51. Qantas's Regression Statistics and Risk Parameters, records the calculated *Intercept Alpha* in this case as -0.71%. This negative value indicates that the stock has underperformed the market by 0.71%. During this period there were no major stock price shifts due to systematic or non-systematic forces on the market.

Slope of the Regression

Table 51. Qantas's Regression Statistics and Risk Parameters, records the slope of regression, *beta*, as 0.959091472. This means that when the market return increases by 1%, on average, the Qantas returns will increase by approximately 0.96%. Qantas's rate of change of stock value is less volatile than the general market.

R-square

Table 51. *Qantas's Regression Statistics and Risk Parameters*, records the R-square value as 18.52%. This indicates that 18.52% of the Qantas stock risk is linked to market (*systematic or non-diversifiable*) risk whilst the remaining 81.48% is unexplained (*non-systematic or diversifiable*) risk. In other words, the vast majority of the stock risk is most likely to be specific to the company's operating environment (business factors) or financial leverage.

As with the other airlines, the majority of the risk is non-systematic and not directly linked to the market which means that Qantas's future level of success lies strongly with its management team and its adopted strategies. The stock value is also heavily reliant on other external natural, commercial and strategic forces linked to the performance of the business.

Qantas's Regression Statistics and Risk Parameters

USING BETA		RISK AND PERFORMANCE MEASURES	
<i>In estimating expected returns:</i>		<i>RISK AND PERFORMANCE MEASURES</i>	
Risk free Rate	6.87%	Intercept (Alpha)	-0.71%
Historical return premium	6.20%	Slope (Beta)	0.959091472
Expected return	12.82%		
<i>In forecasting prices:</i>		<i>VARIANCE STATISTICS</i>	
Current price	\$3.44	Variance of the stock	0.00452222
Annualized DPS	\$0.30	Variance of the market	0.000910283
		Systematic variance	0.00083733
		Unsystematic variance	0.003684891
		R squared	18.52%

Table 51. Qantas's Regression Statistics and Risk Parameters

Table 52. *Qantas Stock Variance Statistics*, shows the standard deviation of the variation statistics.

VARIANCE STATISTICS		STANDARD DEVIATION (square root) x 100%	
Variance of the stock	0.00452222	0.067247453	6.72%
Variance of the market	0.000910283	0.030170896	3.02%
Systematic variance	0.00083733	0.028936654	2.89%
Unsystematic variance	0.003684891	0.060703303	6.07%
R squared	18.52%		

Table 52. Qantas Stock Variance Statistics

Financial Leverage

For Qantas, the Degree of Financial Leverage (DFL) for the financial year 2007 is calculated below using the figures taken from the 2007 Income Statement. (Qantas. 2007. p72.)

$$DFL = \frac{\% \text{ Change in EPS}}{\% \text{ Change in EBIT}}$$

$$\% \text{ Change in EPS} = (36.4 - 24.9)/36.4 = 0.3159341$$

$$\% \text{ Change in EBIT} = (1047.0 - 758.8)/1047.0 = 0.2752627$$

$$\text{Degree of Financial Leverage (DFL)} = 0.3159341/0.2752627 = 1.1477547 \text{ or } 1.15$$

Therefore, a 100% increase in EBIT would result in a 115% increase in the earnings per share. If no debt were used, the degree of financial leverage would be 1.0, so a 100 percent increase in EBIT would produce exactly a 100 percent increase in EPS. This would suggest that Qantas has a relatively low financial leverage and therefore less volatile earnings per share caused by debt.

As with the calculated R-square value, the low Degree of Financial Leverage (DFL) indicates that the majority of the stock risk is most likely to be due to the company's operating environment. *Table 53. Qantas's Degree of Financial Leverage from 2004 to 2007*, shows relatively small variation in the DFL despite a decrease in borrowing.

Financial Year	Degree of Financial Leverage
2004/05	1.43
2005/06	0.87
2006/07	1.15

Table 53. Qantas's Degree of Financial Leverage from 2004 to 2007

Financial Leverage affects the earnings per share (EPS) of the airline. If the economic conditions are favourable and EBIT is increasing, a higher financial leverage has a positive impact on the EPS. Despite a decrease in borrowing for the FY2007 and a subsequent decrease in gearing ratio the DFL for the same year has risen from 0.87 to 1.15.

Performance Profile on an Investment in Qantas

In the short term the stock value has dropped to an all time low of \$3.42. This is most likely due to the price of jet fuel which has risen to approximately USD\$160 per barrel and that the global media has widely reported that the aviation industry is expected to be under considerable pressure even to survive in some cases. The Qantas share has earned slightly less than would have been predicted by the CAPM.

The slope term, *beta (b)*, shows that when the market return increases by 1%, on average, the Qantas returns will increase by approximately 0.95% which is under performing in the market.

As mentioned earlier, the low Degree of Financial Leverage (DFL) indicates that the majority of the stock risk is most likely to be due to the company's operating environment. This indicates that the majority of Qantas's performance is attributed to the management. As with the other airlines, this theory is further reinforced by the evidence of higher diversifiable risk.

Qantas's Equity Risk

Table 52. Qantas's Stock Variance Statistics, shows the standard deviation of the stock over the fifty-four month period to be 6.72%. This statistical value is somewhat subjective and is based on past performance but does possibly indicate to the investor that Qantas is a relatively lower risk investment than some other airlines.

Qantas does not have any outstanding bonds that can be found within the financial statements.

Qantas's Debt Risk

The consolidated debt to equity ratio is calculated in *Table 54. Qantas - Consolidated Debt to Equity Ratio for 2007*, below.

Consolidated Debt to Equity Ratio for Qantas - 2007

Debt and Equity	AUS\$ million
Total consolidated liabilities (a)	13,410.7
Total consolidated equity (b)	6,195.0
Debt to Equity Ratio (a)/(b)	2.16

Table 54. Qantas - Consolidated Debt to Equity Ratio for 2007

This ratio uses both short-term and long-term liabilities, and all owner's equity (both invested capital and retained earnings).

The Qantas Annual Report 2007 quotes the Qantas Group gearing (including off Balance Sheet debt) at 30 June 2007 was 39:61 compared to 45:55 at 30 June 2006. The gearing ratio has decreased due to higher cash balances and a decrease in borrowings as a result of

repayments and revaluations. (Qantas. 2007, p51.)

Gearing is the ratio of the book value of the Qantas Group's net debt (short and long-term plus non-cancellable operating leases less the fair value of hedges relating to debt and cash and cash equivalents) to the book value of total equity. (Qantas. 2007, p51.)

8.2.2 Qantas's Cost of Capital

As before, the WACC is calculated using the following formula:

WACC = (weight of preferred equity × cost of preferred equity) + (weight of common equity × cost of common equity) + [weight of debt × cost of debt × (1 – tax rate)]

Market Value for Equity

The total number of ordinary shares for Qantas is 1,984,990,348. (Qantas. 2007, p134.)

The current price per share (1st May 2008) is AUS\$ 3.44 as is detailed in *Appendix E. QAN.AX: Historical Prices for Qantas.*

Therefore the *market value for equity* = 1,984,990,348 x 3.44 = AUS\$6,828,366,797.00

Market Value of the Debt

As with the other airlines, the airline does not appear to have publicly traded bonds. However, the company does have a significant amount of bank loans, lease and hire purchase agreements. As the market value of the debt tends to be pretty close to the book value, the book value of debt will be used in the WACC formula.

The consolidated book value of long term debt (Interest bearing liabilities) for Qantas is AUS\$4210.9 million. (Qantas. 2007, Balance Sheet, p73.)

Cost of Preferred Equity

There is no preferred equity where the holder is entitled to fixed payments forever.

Cost of Common Equity

The cost of common equity, otherwise known as the *expected return*, is 12.82% as calculated in *Table 51. Qantas's Regression Statistics and Risk Parameters.*

Cost of Debt

Qantas does not have any outstanding bonds.

Qantas's interest bearing liabilities are spread across bank loans, other loans, lease agreements and hire purchase agreements. Where funds are borrowed the borrowing costs have been capitalised using the average interest rate applicable to the Qantas Group's debt facilities of 7.4%. (Qantas. 2007. p84 para (Y)).

Weighted Average Cost of Capital (WACC)

Weight of Common Equity

Market value of common equity

(Market value of common equity + Market value of debt + Market value of preferred equity)

Since the company does not have preferred equity the weight of common equity is:

$$\frac{6,828.4 \text{ million}}{(6,828.4 \text{ million} + 4210.9 \text{ million})} = 0.619$$

Weight of Debt

Market value of Debt

(Market value of common equity + Market value of debt + Market value of preferred equity)

$$\frac{4210.9 \text{ million}}{(6,828.4 \text{ million} + 4210.9 \text{ million})} = 0.381$$

Weighted Average Cost of Capital

WACC = (weight of preferred equity × cost of preferred equity) + (weight of common equity × cost of common equity) + [weight of debt × cost of debt × (1 – tax rate)]

Tax Rate = 30% (Qantas. 2007. Note 4, p86.)

$$\text{WACC} = (0.619 \times 0.1282) + [0.381 \times 0.0740 \times (1 - 0.3)]$$

$$\text{WACC} = 0.07936 + 0.01974 = 0.0991$$

The Weighted Average Cost of Capital (WACC) for Qantas is 9.91%.

Therefore, it costs Qantas **9.91%** to finance its assets. This is the minimum return that the company must earn on its existing asset base to satisfy its creditors, owners, and other providers of capital.

8.2.3 Analysing Qantas's Capital Structure

Current Financing of Qantas

The financing of Qantas is through the use of debt, equity and lease/hire purchase agreements as will be explained below.

Debt

The company has had a combination of loans, finance lease liabilities and hire purchase agreements which total AUS\$5,074.6 million.

Bank and Other Loans – current and non-current

A total of AUS\$4,016.1 million in secured and unsecured loans has been identified in the financial report for the financial year ending 2007. Some of the loans relate to specific financings of aircraft and engines are secured by the aircraft to which they relate.

Finance Lease and Hire Purchase Liabilities – current and non-current

Qantas has a total of AUS\$1,058.5 million reported as outstanding against finance leases and hire purchase agreements. The company bears all the risks and benefits associated with the finance leases. Qantas also has a number of operating leases which may be cancelled if the need arises.

Equity

Figure 6. Qantas Group's Total Equity for FY 06/07, shows that Qantas's total equity for FY 06/07 amounts to AUS\$6,195 million for the group. The vast majority of this equity is issued capital.

Qantas Group's Total Equity for FY 06/07

Equity					
Issued capital	17	4,481.2	4,382.2	4,481.2	4,382.2
Treasury shares		(32.6)	(23.8)	(32.6)	(23.8)
Reserves	18	148.2	329.3	148.6	355.9
Retained earnings		1,592.3	1,388.5	616.2	672.2
Equity attributable to members of Qantas		6,189.1	6,076.2	5,213.4	5,386.5
Minority interest		5.9	4.9	–	–
Total equity		6,195.0	6,081.1	5,213.4	5,386.5

Figure 6. Qantas Group's Total Equity for FY 06/07 (Qantas. 2007, p 73.)

The issued capital for FY 06/07 increased by AUS\$99 million which was mainly due to the participation in the Dividend Reinvestment Plan (DRP) for the 2006 final dividend. The reserves also decreased by approximately \$181 million which was mostly due to a decrease in the hedge reserve caused by changes to the fair value of fuel and foreign exchange derivatives.

Qantas's Growth Cycle

Like Air New Zealand and as mentioned before, Qantas is a mature flagship Airline which has to reinvent itself and readapt its mature resources to meet the ever changing demands on the airline created by the effects of globalisation, world disasters, varying economies and new competition.

Unlike the younger and newer Virgin Blue airline which has grown with an equally new fleet, Qantas, like Air New Zealand, has to renew its fleet and support equipment in order to remain attractive to the potential passengers and therefore remain competitive in the general market.

Qantas has to maintain its market share against a number of competing airlines. Again and as mentioned earlier with Air New Zealand, it can be a great deal easier to chip away at an existing mature competitor's market share than it is to protect a majority market share from the new and growing competition which has started with a *clean slate*.

8.2.4 Analysing Qantas's Dividend Policy

Current and Past Cash Returned to Stockholders

Table 55. Qantas - Consequences of Performance on Shareholder Wealth, compares the level of dividends paid and the share price increase against the net profits paid for the FY2003 to 2007.

Qantas has returned cash to its owners by the payment of dividends and an increase in share value. The airline has also announced that it intends to plan to buy back up to 10% of the Qantas shares which is anticipated to amount to a reduction of capital of over \$1 billion.

Qantas – Consequences of Performance on Shareholder Wealth

Financial year	06/07	05/06	04/05	03/04	02/03
Net profit after tax- AUS\$ Million	719.6	480.0	763.6	648.4	343.5
Dividends paid- AUS\$ Million	414.7	212.1	175.0	161.4	172.3
ASX Share price at year end – AUS\$*	5.74	3.05	3.32	3.49	3.19

* (Yahoo finance. 2008)

Table 55. Qantas - Consequences of Performance on Shareholder Wealth (Qantas. 2003 – 2008)

As with the other matured flagship airline Air New Zealand, Qantas's dividend policy is reasonably well defined and publicised. The increasing dividend payments indicate that the board concerns itself with the airline's popularity and reputation with the finance critics. It is naturally concerned with the airline's reputation with potential and existing customers and shareholders. The airline needs to show that it performs well enough to give the banks confidence for future lending.

Available Cash to Return to Stockholders

According to the 2006 and 2007 Cash Flow Statements and Balance Sheets, Qantas had a strong cash flow to equity ratio and, therefore, there is no reason to have questioned its ability to buy back stock or pay the dividends.

Table 56. Qantas - Retained Profits and Dividend Payments 2003 – 2007, shows the comparison between retained profits and dividend payouts over the years 2003 to 2007. The retained profits rose to a peak in FY2005 but since then have struggled to reach anywhere close to the same high again. On the other hand, with the exception of FY2004, the dividend payouts have continuously risen by a healthy amount.

Qantas - Retained Profits and Dividend Payments 2003 - 2007

Year	2007	2006	2005	2004	2003
Retained Profits \$million	1,592.3	1,388.5	2,193.1	1,776.3	1,435.9
Dividend Payouts	414.7	212.1	175.0	161.4	172.3

Table 56. Qantas - Retained Profits and Dividend Payments 2003 - 2007

Qantas's Dividend Policy

The Qantas Company Constitution (Qantas. 2005. Parts 2, 2A, 9.1 and 9.4) outlines the dividend policy. The policy is reasonably detailed when compared to a great deal of other airlines.

The key points to note surrounding the Qantas dividend and share policies are as follows:

Limit of Foreign Ownership

- The company reserves the right to buy back shares.
- At no time can any one foreign person have a Relevant Interest in shares above 25% of the issued share capital of Qantas.
- At no time can Foreign Persons have Relevant Interests in shares in Qantas which, in aggregate, exceed 49% of the issued share capital of Qantas.
- At no time can Foreign Airlines have Relevant Interests in shares in Qantas which, in aggregate, exceed 35% of the issued share capital of Qantas.

Preference Shares

- Subject to the Corporations Act, the Directors may issue preference shares.

Dividends

- Subject to the rights of persons entitled to shares with special rights to dividends, the Directors may declare and authorise the payment by Qantas of a dividend in such a way as they consider appropriate.

Dividend Reinvestment Plans

- Under the Qantas Dividend Reinvestment Plan (DRP), dividends payable on Qantas shares participating in the DRP are reinvested (at no additional cost to the shareholder) in new shares at a 2.5% discount to the prevailing market price.
- Effective February 2007, the Dividend Reinvestment Plan has been suspended until further notice.

9. EVALUATING VIRGIN BLUE

Virgin Blue Holdings Limited owns and operates the following airlines:

- Virgin Blue;
- V Australia;
- Pacific Blue; and
- Polynesian Blue.

Each airline has its specific role but between them they operate domestic routes in Australia and New Zealand. They also operate internationally in and out of Australia, New Zealand, South Pacific Islands and very soon the United States. *Table 57. A brief Record of Virgin Blue's History* below, outlines Virgin Blue's major events to date.

Virgin Blue has been the major driver behind the halving of the cost of airfares in Australia and New Zealand. The company has a strong commitment to being the best in the business and considering the young age of the airline, it has done well to win many awards for its services.

Brief Record of Virgin Blue's History

1999	Brett Godfrey and Rob Sherrard established the Virgin Blue Airline (VBA). With US\$10M in seed capital from Richard Branson's Virgin Group, the pair modelled the airline on European and US low-cost carriers.
2000	Virgin Blue was formed as a wholly owned subsidiary of the Virgin Group and began operating.
2001	The then Air New Zealand owned Ansett Australia made a buyout offer of \$250 million which, in his typically flamboyant style, was publicly rejected by Richard Branson.
2002	Virgin came to an agreement with Patrick Corporation to invest in the airline, to allow it to grow into a national airline, filling the void left by the demise of Ansett Australia.
2003	Virgin Blue Holdings Limited was floated on the Australian Securities Exchange as Virgin Group sought to sell down its holdings.
2004	The airline launched Pacific Blue, its New Zealand based leisure focused international airline which offers flights between Australia, New Zealand, the Cook Islands, Fiji, Tonga and Vanuatu.
2005	Virgin Blue joined with the Government of Samoa to launch 'Polynesian Blue', an innovative joint venture airline that provides essential and affordable air services between Samoa, New Zealand and Australia.
2006	Virgin Blue placed an order for nine Boeing 737-800s by exercising the purchase rights it held.
2006	Virgin Blue announced plans to purchase 11 Embraer ERJ-190 and three Embraer ERJ-170 aircraft with options for six more E-Jets, which later became orders for three ERJ-170s and three ERJ-190s. These options are now exercised, taking the total firm orders to 14 E-190s and six E-170s.
2007	Virgin Blue confirmed its intentions to start a new international airline for Australia, V Australia, with the signing of an order for six Boeing 777-300ER aircraft. V Australia will launch direct services between Sydney and LA from 15 December 2008 and Brisbane and LA from 1 March 2009 subject to government approvals.
2008	Toll's takeover of Patrick gave it control of VBA, but in Jul-08 it decided to divest its VBA stake via an in specie distribution to Toll shareholders.

Table 57. Brief Record of Virgin Blue's History

9.1 Virgin Blue's Business and Operations

The Virgin Blue airline directly competes on all of Qantas's key domestic routes in Australia and has approximately 30 to 40% market share. Virgin Blue, under various subsidiary airline businesses, now operates internationally from Australia to the Vanuatu, Cook Islands, New Zealand and soon the United States. Virgin Blue also operates domestic flights within New Zealand. The Virgin brand is not allowed to be used within New Zealand due to contractual

issues with Singapore Airlines, which owns a minority share of Virgin Atlantic in the United Kingdom.

Pacific Blue is the New Zealand based leisure focussed international airline which offers flights between Australia, New Zealand, the Cook Islands, Fiji, Tonga and Vanuatu.

Polynesian Blue, is a joint venture airline between Virgin Blue and the Government of Samoa and operates services between Samoa, New Zealand and Australia. V Australia is the new international airline for Australia and will be operating services between Sydney and LA from 15 December 2008 and Brisbane and LA from 1 March 2009.

Virgin Blue has a modern fleet of Next Generation Boeing 737-700 and 800 series and Embraer E-190 and E-170 aircraft, and operates over 2100 flights a week to 24 Australian cities and centres and eight international destinations. Virgin Blue's total annual passenger numbers exceeds 15-million travellers.

Today, Virgin Blue Holdings is owned by majority shareholder Virgin Group, co-founder CEO Brett Godfrey, Virgin Blue staff and a number of other minority shareholders. A great number of these minority share holders are likely to be the Toll Holdings share holders following Toll's in specie distribution of its Virgin Blue shares.

9.1.1 Companies and Associate Companies

Table 58. Virgin Blue Holdings Companies and Significant Associate Companies, gives an overview of the range of businesses in their portfolio. As with other airlines, they are firmly associated with the air transport industry which is, as mentioned before, an important observation when looking at risk analysis and contemplating the effects of terrorism or a world disaster.

Company Name	% Owned	Country of Incorporation
Virgin Blue Airline	100	Australia
Pacific Blue (New Zealand) Airline	100	New Zealand
Pacific Blue (Australia) Airline	100	Australia
Polynesian Blue Airline	49	Polynesia
V Australia Airline	100	Australia
Virgin Tech Engineering	100	Australia
Pacific Tech Engineering	100	New Zealand
NATS (National Air Traffic Services)	6*	U.S Virgin Islands

* Virgin Atlantic is part of 'The Airline Group' which is a consortium of seven airlines and owns 42% of NATS.

Table 58. Virgin Blue Holdings Companies and Significant Associate Companies.

Although Virgin Blue is a young airline when compared to the flagship airlines such as Air New Zealand and Qantas, it does have its assets spread across a number of different registered airline companies in New Zealand and Australia. These companies are not as diverse as those of the flagship competition but the Virgin brand name should not be taken lightly. The Virgin brand name is successfully spread globally through Africa, Asia, Australia, Canada, Europe, United Kingdom and the United States in a diverse number of successful businesses.

The Virgin Group is an internationally recognised brand name which has been organised into over 300 limited companies. The Virgin Group is the largest group of private companies in Europe but each company is relatively small in its sector and, therefore, enjoys the advantage of being the 'nimble' underdog. (Branson, R. 2008.)

Table 59. Virgin Brand in Australia, lists the registered Virgin Companies in Australia alone.

Virgin Brand in Australia

Company Name	% Owned	Principle Activity
Virgin Atlantic	100	Travel and Tourism
Virgin Blue Airline	100	Travel and Tourism
Virgin Blue Holdings	100	Travel and Tourism
Virgin Limited Edition	100	Travel and Tourism
V Festival Australia	100	Leisure and Pleasure
Virgin Drinks	100	Food and Beverage
Virgin Broadband	100	Media and Communications
Virgin Mobile Australia	100	Media and Communications
Virgin Money Australia	100	Finance and Money
Virgin Earth	100	Social and Environmental
Virgin Unite	100	Social and Environmental

Table 59. The Virgin Brand in Australia (Virgin. 2008.)

9.1.2 Operating Fleets

As indicated in *Table 60. Virgin Blue's Operating Fleet as at September 2008*, Virgin Blue and its international airlines Pacific Blue and Polynesian Blue operate a rapidly growing fleet of approximately 63 Boeing 737 New Generation (NG) and Embraer E170 and E190 E-Jet aircraft. The aim is to have 20 E-Jets flying within Australia by the end of 2008. Depending on the airline's performance and the consumer demand, more will follow in 2009.

Virgin Blue has also launched the new Australian international airline, V Australia. V Australia will operate flights between Australia and the West Coast of the USA from late 2008 using the new B777-300ER aircraft.

As of September 2008, the average age of the Virgin Blue fleet was 4.6 years. This young average fleet age should be maintained or even reduced with the planned introduction of additional new aircraft.

In the early days Virgin Blue leased its aircraft but the more recent additions to the fleet have been purchased. Virgin Blue placed an initial order for nine Boeing 737-800s in June 2006. Even more recently Virgin Blue has purchased 11 Embraer ERJ-190 and three Embraer ERJ-170 aircraft with further orders for three ERJ-170s and three ERJ-190s. Virgin Blue currently has three options and 17 purchase rights on E-Jets. If these options and rights were to be exercised there would be a total of 40 E-jets in the Virgin Blue fleet. (Wikipedia. 2008).

Virgin Blue's Operating Fleet as at Sep 2008

Aircraft	Total	Notes
Boeing 737-700	22	Premium Economy convertible
Boeing 737-800	37	Premium Economy convertible
Embraer 170	3 (3 orders)	Premium Economy seats not convertible
Embraer 190	1 (13 orders)	Premium Economy seats not convertible
Boeing 777-300ER	(7 orders)	TBA (one delivered to V Australia)
Total Aircraft	63	

Table 60. Virgin Blue's Operating Fleet as at September 2008

9.2 Virgin Blue's Financial Management

Note: All figures are taken from the Annual Report Financial Statement Balance Sheets 2003 to 2007. (Virgin Blue. 2008). All current analysis refers to the end of financial year 2007.

The financial reporting periods are outlined in *Table 61. Virgin Blue Holdings Ltd Financial Reporting Periods*. Unlike the other airlines, the reporting periods are not evenly spaced over the twelve month intervals.

Reporting Period	Financial Year	Elapsed Time (Months)
01 Apr 2002 to 31 Mar 2003	02/03	12
01 Apr 2003 to 31 Mar 2004	03/04	12
01 Apr 2004 to 30 Sep 2005	04/05	18
01 Oct 2005 to 30 Jun 2006	05/06	9
01 Jul 2006 to 30 June 2007	06/07	12

Table 61. Virgin Blue Holdings Ltd - Financial Reporting Periods (Virgin Blue. 2008)

It is a legal requirement that subsidiary companies must align their annual reporting with their parent companies. This is the reason for the irregular annual reporting periods displayed by Virgin Blue Holdings for the financial periods 04/05 and 05/06.

Current Ratio Analysis (Liquidity Ratio)

For Virgin Blue Holdings Ltd, the consolidated current ratios for the last five financial periods are displayed in *Table 62. Consolidated Ratio Analysis for Virgin Blue Holdings Ltd.*

Overall, the trend displayed appears to be reasonably healthy as the assets exceed the liabilities for the reporting periods 03/04 to date.

Virgin Blue Holdings Ltd – Consolidated Ratio Analysis

(AUS\$ Million)

Financial Year	Current Asset Value (a)	Current Liability Value (b)	Current Ratio (a)/(b)
02/03	305.767	392.212	0.78
03/04	702.248	434.102	1.62
04/05	872.910	540.828	1.61
05/06	647.800	542.800	1.19
06/07	805.100	731.800	1.10

Table 62. Consolidated Ratio Analysis for Virgin Blue Holdings Ltd

DuPont System Analysis

Table 63. Virgin Blue Holdings Ltd – DuPont System Analysis, is a DuPont system analysis of the Company's last five years up to and including the financial year 2007. This spread of five years allows for a reasonable attempt at a *Time Series Analysis* to be carried out.

Even though the 05/06 reporting period is for a shorter period of nine months as is shown in *Table 61. Virgin Blue Holdings Ltd Financial Reporting Periods*, it is clear that the performance has reduced somewhat. This is possibly due to the increasing interest rates on the increasing loans as the company expands and grows.

The sudden rise in the Total Assets for FY 06/07 is further supported by the more than double cash flow rise indicated on the Cash Flow Statement under the heading, Payments for Property, plant and equipment (Virgin Blue Financial Statement 2007, p16.)

In the short term (current) , the company can meet its commitments, however, it should be noted that the higher the financial leverage, the more risk the shareholders take. The shareholder does potentially stand to make more gains with this higher risk. This is supported by the 28.83% Return on Common Equity (ROE) which is double that which was recorded in the financial nine months of 05/06.

This increased risk needs to be mitigated in some way and this may be why the board have decided to use debt to finance the business. The shareholders are awarded dividends and thereby reduce the risk of potential major personal losses. It should be noted that the dividends paid in 06/07 were one twelve of those paid out in 05/06.

In the long term (non-current) this business model relies on carefully planned and organised loans to the company. The non-current debts could possibly be paid off over the next three to four years but this could easily change with additional planned growth and the supporting additional debt. Interest and exchange rate changes can play a major part in these calculations also. As the airline expands and the competing airline strategies converge, the potential net profits could easily be lost. Keeping the operating costs down will alleviate this risk.

Virgin Blue Holdings Ltd – DuPont System Analysis

Consolidated (AUS\$ Million)

Financial Year	02\03	03\04	04\05	05\06	06\07
Income Statement					
Earnings Available for Common Stock Holders (a)	107.799	158.519	168.167	84.500	215.800
Sales (b)	914.572	1,362.316	2,543.025	1,392.500	2,169.100
Net Profit Margin (NPM) (a)/(b) %	11.8%	11.6%	6.6%	6.1%	9.9%
Balance Sheet					
Sales (b)	914.572	1,362.316	2,543.025	1,392.500	2,169.100
Total Assets (c) (see TA below)	609.708	1,456.915	2,084.420	1,915.800	2,305.700
Total Asset Turnover (TAT) (b)/(c)	1.50	0.94	1.22	0.73	0.94
Total Liabilities (d)	425.690	855.445	1,314.618	1309.600	1562.200
Stockholders Equity (e)	184.018	601.470	769.802	606.200	743.500
Total Assets (TA) (d)+(e)	609.708	1,456.915	2,084.420	1,915.800	2,305.700
Common Stock Equity (f)	184.018	601.470	769.802	606.200	743.500
Financial Leverage Multiplier (FLM) TA/(f)	3.31	2.42	2.71	3.16	3.10
Return on Total Assets (ROA) % (NPM x TAT)	17.7%	10.9%	8.1%	4.5%	9.3%
Return on Common Equity (ROE) % (ROA x FLM)	58.6%	24.0%	22.0%	14.2%	28.83%
Note: FY 04/05 was from 01 Apr 2004 to 30 Sep 2005 (18 months) and FY 05/06 was from 01 Oct 2005 to 30 Jun 2006 (9 months).					

Table 63. Virgin Blue Holdings Ltd – DuPont System Analysis

Increased fuel and oil costs along have affected the 05/06 operating costs whilst inflation for wages has affected the 06/07 operating costs.

The Return on Common Equity (ROE) has been very erratic over the last five financial reporting periods. This too could have been affected by interest rates and fuel/oil charges.

Whilst the 'Time Series Analysis' approach used here has identified the financial trends for Virgin Blue Holdings Ltd, a comparative analysis with another more successful airline could be advantageous.

9.2.1 Virgin Blue's Risk and Return Analysis

A company considered to be at the top of its game normally has to invest a great deal of resources into research and development in order to stay there. If a company is young and not at the top of the market then it has room to grow. Virgin Blue is the latter as it is looking to grow.

Risk Profile of Virgin Blue Holdings Limited

A regression of returns on Virgin Blue Holdings stock has been carried out against the market index using fifty-four months of observations up to May 2008.

Capital Asset Pricing Model (CAPM)

The annualised dividend per share (DPS) of \$0.02 was extracted from the Virgin Blue Holdings financial statement. (Virgin Blue Financial Statement. 2007. p4 para (d).)

Table 64. Virgin Blue's Regression Statistics and Risk Parameters, lists the calculated results taken from the spreadsheet in *Appendix J. Regression of Returns of Virgin Blue's Stock*.

Current Risk Free Rate

As before, the current risk free rate has been obtained from the Australian Reserve Bank Treasury Fixed Coupon Bond Yield Rates as indicated in *Figure 2. Australian Reserve Bank Treasury Fixed Coupon Bond Yield Rates*. The Current Risk Free Rate used is 6.87%. (Reserve Bank. 2008.)

Current and Historical Stock Price Data

The fifty-four months of historical stock price data for the *beta coefficient (b)* calculation has been obtained from Yahoo! Finance and is outlined in *Appendix F. VBA.AX: Historical Prices for Virgin Blue Holdings*. (Yahoo! Finance. 2008.) The current stock price of \$0.84 as of 01 May 2008 has been used.

Market Risk Premium for Stocks

The Australian *Market Risk Premium*, otherwise known as the *Risk Premium for Stocks*, is recorded as 6.2%. This risk premium value will be used to calculate the *beta coefficient* for Virgin Blue Holdings Limited. (Lally, M. 2000).

Intercept of the Regression

Table 64. Virgin Blue's Regression Statistics and Risk Parameters, records the calculated *Intercept Alpha* in this case as -2.90%. This negative value indicates that the stock has underperformed the market by 2.90%. During this period there were no major stock price shifts due to systematic or non-systematic forces on the market.

Slope of the Regression

Table 64. *Virgin Blue's Regression Statistics and Risk Parameters*, records the slope of regression, *beta*, as 1.348497263. This means that when the market return increases by 1%, on average, the Virgin Blue Holdings returns will increase by approximately 1.35%. It also means that if the market drops by 1% then Virgin Blue's stock also reduces by 1.35% or 35% more. In other words, the rate of change of stock is more volatile than the general market.

Virgin Blue's *beta* value has been affected by the performance of the stock values in the last few months. The company made record profits in the last year but the critics and media are damning in their prediction of the future for Virgin Blue. Approximately 90% of stock was owned by two key stakeholders and therefore, without movement of stock, an artificial market place is the result. Virgin Blue is a young company and has not been able to diversify its business to the extent that its competitors have. It has one advantage, and that is that it has started with a clean sheet of paper and can build its business to suit the changing environment. A long term *flexible* resource based competitive strategy is the answer.

R-square

Table 64. *Virgin Blue's Regression Statistics and Risk Parameters*, records the R-square value as 18.7%. This indicates that 18.7% of the Virgin Blue Holdings stock risk is linked to market (*systematic or non-diversifiable*) risk whilst the remaining 81.3% is unexplained (*non-systematic or diversifiable*) risk. In other words, the vast majority of the stock risk is most likely to be specific to the company's operating environment (business factors) or financial leverage.

Virgin Blue's Regression Statistics and Risk Parameters

USING BETA		RISK AND PERFORMANCE MEASURES	
In estimating expected returns:		RISK AND PERFORMANCE MEASURES	
Risk free Rate	6.87%	Intercept (Alpha)	-2.9%
Historical return premium	6.20%	Slope (Beta)	1.348497263
Expected Return	15.23%		
In forecasting prices:		VARIANCE STATISTICS	
Current price	\$0.82	Variance of the stock	0.008853462
Annualized DPS	\$0.02	Variance of the market	0.000910283
		Systematic variance	0.001655299
		Unsystematic variance	0.007198163
		R squared	18.7%

Table 64. *Virgin Blue's Regression Statistics and Risk Parameters*

Again, the vast majority of the risk is non-systematic and not directly linked to the market means that there is plenty of scope to increase the share value and depends a great deal on how the company is managed by the board. As mentioned before, the stock value is also heavily reliant on other external natural, commercial and strategic forces linked to the performance of the business. Essentially the Virgin Blue Holdings business model is high risk but with potentially high financial gains or losses. Other competing airlines will probably be exposed to similar risks which have to be managed accordingly and depending on the internally assessed level of importance assigned to each risk.

Table 65. *Virgin Blue Holdings Stock Variance Statistics*, shows the standard deviation of the variation statistics.

VARIANCE STATISTICS		STANDARD DEVIATION (square root) x 100%	
Variance of the stock	0.008853462	0.094092837	9.41%
Variance of the market	0.000910283	0.030170896	3.02%
Systematic variance	0.001655299	0.040685365	4.07%
Unsystematic variance	0.007198163	0.084841988	8.48%
R squared	18.7%		

Table 65. Virgin Blue Holdings Stock Variance Statistics

Again, the variance of the stock is higher risk than the variance of the market and the unsystematic (diversifiable) variance is higher risk than the systematic (non-diversifiable) variance. In summary, the higher risk of the stock variance is likely to be due to the higher *diversifiable* variance risk.

Financial Leverage

For Virgin Blue Holdings Ltd, the Degree of Financial Leverage (DFL) for the financial year 2007 is calculated below using the figures taken from the current Income Statements. (Virgin Blue Financial Statement. 2007. p 13)

$$DFL = \frac{\% \text{ Change in EPS}}{\% \text{ Change in EBIT}}$$

$$\% \text{ Change in EPS} = (20.6 - 8.1)/20.6 = 0.6067961$$

$$\% \text{ Change in EBIT} = (324.3 - 132.5)/324.3 = 0.5914276$$

$$\text{Degree of Financial Leverage (DFL)} = 0.6067961/0.5914276 = 1.0259854 \text{ or } 1.03$$

Therefore, a 100% increase in EBIT would result in a 103% increase in the earnings per share. If no debt were used, the degree of financial leverage would be 1.0, so

a 100 percent increase in EBIT would produce exactly a 100 percent increase in EPS. This would suggest that Virgin Blue Holdings Ltd has a relatively low financial leverage and therefore less volatile earnings per share caused by debt.

The low Degree of Financial Leverage (DFL) indicates that the majority of the stock risk is most likely to be due to the company's operating environment. As the company is young and in its early years, a quick calculation for the financial year 2005/06 shows the DFL to be higher than that calculated for 2006/07. *Table 66. Virgin Blue's Degree of Financial Leverage from 2004 to 2007*, shows relatively small variation in the DFL despite increased borrowing. In the financial year 2004/05, even though the earnings per share were comparatively good, the DFL is negative by a comparatively large amount.

Financial Year	Degree of Financial Leverage
2004/05	(0.63)
2005/06	1.14
2006/07	1.03

Table 66. Virgin Blue's Degree of Financial Leverage from 2004 to 2007

It should be noted that the EPS and EBIT financial year reporting intervals are not equal as is indicated in *Table 67. Virgin Blue Holdings Ltd - Financial Reporting Periods*.

Reporting Period	Financial Year	Elapsed Time (Months)
01 Apr 2004 to 30 Sep 2005	04/05	18
01 Oct 2005 to 30 Jun 2006	05/06	9
01 Jul 2006 to 30 June 2007	06/07	12

Table 67. Virgin Blue Holdings Ltd - Financial Reporting Periods

As mentioned earlier, the Virgin Blue Holdings business model has higher unexplained (*non-systematic or diversifiable*) risk but with potentially high financial gains or losses. Other competing airlines will probably be exposed to similar risks which have to be managed accordingly and depending on the internally assessed level of importance assigned to each risk. This risk profile will not change a great deal due to the nature and competitiveness of the airline industry.

Performance Profile on an Investment in Virgin Blue

More recently, the stock value has slumped to an all time low of 82 cents. This is most likely due to the price of jet fuel which has risen to USD\$160 per barrel and that the New Zealand media has widely reported one analyst's incorrect view that Pacific Blue would soon exit New Zealand. The Federal Budget has not helped the situation either. The Virgin Blue share has earned less than that was predicted by CAPM.

The slope term, *beta* (*b*), shows that when the market return increases by 1%, on average, the Virgin Blue Holdings returns will increase by approximately 1.35% which is over performing in the market. As mentioned earlier, Virgin Blue stock is more volatile than the general market and is, therefore, a higher risk with potential for higher gains or losses.

As mentioned earlier, the low Degree of Financial Leverage (DFL) indicates that the majority of the stock risk is most likely to be due to the company's operating environment. This indicates that the majority of Virgin Blue's performance is attributed to the management. This theory is further reinforced by the evidence of higher diversifiable risk.

Virgin Blue's Equity Risk

Table 65. *Virgin Blue Holdings Stock Variance Statistics*, shows the standard deviation of the stock over the fifty-four month period to be 9.41%. This statistical value is somewhat subjective and is based on past performance. The airline market is volatile and Virgin Blue is a young company with little to no diversified assets.

Virgin Blue Holdings does not have any outstanding bonds that can be found within the financial statements.

Virgin Blue's Debt Risk

The consolidated debt to equity ratio is calculated in Table 68. *Consolidated Debt to Equity Ratio for Virgin Blue Holdings Ltd*, below.

Consolidated Debt to Equity Ratio for Virgin Blue Holdings Ltd - 2007

Debt and Equity	AUS\$ million
Total consolidated liabilities (a)	1562.2
Total consolidated equity (b)	743.5
Debt to Equity Ratio (a)/(b)	2.10

Table 68. Consolidated Debt to Equity Ratio for Virgin Blue Holdings Ltd - 2007

This ratio uses all liabilities (short-term and long-term), and all owner's equity (both invested capital and retained earnings).

The Virgin Blue Annual Report 2007 quotes the 'Gearing Adjusted Net Debt/Adjusted Net Debt Plus Equity' as 57.5% (Virgin Blue Annual Report. 2007, p5.). As with the other airlines the fluctuating interest rates and exchange rates, as a result of the long term borrowing, are a risk to the company. Virgin Blue has hedged against interest rate and exchange rate risks.

9.2.2 Virgin Blue's Cost of Capital

As before, the WACC is calculated using the following formula:

WACC = (weight of preferred equity × cost of preferred equity) + (weight of common equity × cost of common equity) + [weight of debt × cost of debt × (1 – tax rate)]

Market Value for Equity

The consolidated weighted average number of ordinary shares for Virgin Blue Holdings Ltd is 1,049,783,124. (Virgin Blue Financial Statement. 2007 p24 Note 10.)

The current price per share on the 01st May 2008 was AUS 84 cents. (Attachment 1. VBA.AX: Historical Prices for Virgin Blue Holdings)

Therefore, the *market value for equity* = 1,049,783,124 x 0.84 = AUS\$881,817,824.2

Market Value of the Debt

The company does not have publicly traded bonds. However, the company does have a significant amount of bank loans, whose market value is not easily found. As the market value of the debt tends to be pretty close to the book value, the book value of debt will be used in the WACC formula. It should be noted, however, that Virgin Blue Holdings may experience some negative changes in their credit rating due to the publicity issues caused by analysts.

The consolidated book value of long term debt (Interest bearing liabilities) for Virgin Blue Holdings Ltd = AUS\$759.7 million. Some additional long term liabilities exist but due to their size, they will make little difference to the calculation of the WACC. (Virgin Blue Financial Statement. 2007, Balance Sheet, p14.)

Cost of Preferred Equity

There is no preferred equity, where the holder is entitled to fixed payments forever.

Cost of Common Equity

Beta is effected by the market value of the stock, which in this case does not reflect the true performance of the company. The cost of common equity, otherwise known as the *expected return*, is 15.23% as calculated in *Table 64. Virgin Blue's Regression Statistics and Risk Parameters*. Although not conclusive, it is possibly not the best indication as to the cost of common equity.

Cost of Debt

Virgin Blue does not have any outstanding bonds.

Standby letters of credit

The standby letter of credit facility is a committed facility, available to be drawn down over the next year. The standby letters of credit are secured over deposits of an equivalent amount. The current interest rate on the facility is **6.20%** (30 June 2006: 5.70%). (Virgin Blue Financial Statement. 2007, Note 21, p28.)

Bank guarantees

The guarantees are secured over deposits of an equivalent amount. The amount of the standby letters of credit and bank guarantee facilities can be increased by the provision of

additional security. The current interest rate on the facility is **6.20%** (30 June 2006: 5.70%). (Virgin Blue Financial Statement. 2007, Note 21, p28.)

Aeronautic finance facilities

These facilities are available to assist the consolidated entity to finance purchases of aeronautical assets. The facilities are secured over assets purchased and issued capital of VBNC1 Pty Limited, VBNC2 Pty Limited, VBNC3 Pty Limited, VBNC4 Pty Limited and VBNC5 Pty Limited. The weighted average interest rate on these facilities is **6.63%** (30 June 2006: 5.99%). (Virgin Blue Financial Statement. 2007, Note 21, p28.)

Weighted Average Cost of Capital (WACC)

Weight of Common Equity

Market value of common equity

(Market value of common equity + Market value of debt + Market value of preferred equity)

Since the company does not have preferred equity the weight of common equity is:

$$\frac{881,817,824.2}{(881,817,824.2 + 759.7 \text{ million})} = 0.537$$

Weight of Debt

Market value of Debt

(Market value of common equity + Market value of debt + Market value of preferred equity)

$$\frac{759.7 \text{ million}}{(881,817,824.2 + 759.7 \text{ million})} = 0.463$$

Weighted Average Cost of Capital

WACC = (weight of preferred equity × cost of preferred equity) + (weight of common equity × cost of common equity) + [weight of debt × cost of debt × (1 – tax rate)]

Tax Rate = 30% (Virgin Blue Financial Statement. 2007, Note 9, p23.)

$$\text{WACC} = (0.537 \times 0.1523) + [0.463 \times 0.0663 \times (1 - 0.3)]$$

$$\text{WACC} = 0.0817851 + 0.02148783 = 0.10327293$$

The Weighted Average Cost of Capital (WACC) for Virgin Blue Holdings Ltd is 10.33%.

Therefore, it costs Virgin Blue Holdings Ltd **10.33%** to finance its assets. This is the minimum return that a company must earn on its existing asset base to satisfy its creditors, owners, and other providers of capital.

9.2.3 Analysing Virgin Blue's Capital structure

Current Financing of Virgin Blue

The financing of Virgin Blue is through the use of debt, equity and lease agreements as will be explained below.

Debt

The company has had a combination of letters of credit, bank guarantees and aeronautical finance facilities made available. According to the data shown in *Figure 7. Virgin Blue Financing Arrangements 2006 & 2007*, in 2007 these resources were all drawn down. Presumably the increased assets, such as aircraft and equipment, will in themselves create more potential borrowing power.

Virgin Blue Financing Arrangements 2006 & 2007 (AUS\$ million)

Unrestricted access was available at balance date to the following lines of credit:		
	2007	2006
<i>Total facilities available:</i>		
Standby letters of credit	2.9	5.8
Bank guarantees	17.1	15.4
Aeronautic finance facilities	846.4	965.1
	866.4	986.3
<i>Facilities utilised at balance date:</i>		
Standby letters of credit	2.9	5.8
Bank guarantees	17.1	15.4
Aeronautic finance facilities	846.4	804.9
	866.4	826.1
<i>Facilities not utilised at balance date:</i>		
Standby letters of credit	–	–
Bank guarantees	–	–
Aeronautic finance facilities	–	160.2
	–	160.2

Figure 7. Virgin Blue Financing Arrangements 2006 & 2007
(Virgin Blue Financial Statement. 2007, Note 21, p 28.)

Fortunately, the aircraft and equipment acquired by Virgin Blue are all new and currently highly sought after. There is a danger with old equipment that it may become obsolete and valueless in just a few years. As things are at present, one of the main competitors, Air New Zealand, is leasing some older aircraft in order to get by for the time being as the newer aircraft are not readily available. Consequently the market value of Virgin Blue's aircraft should be high. Virgin Blue has one of the youngest combined fleets in the world.

Aircraft and the associated equipment are high cost items which can attract high returns but only when good competitive strategy is adopted.

Equity

Section 9.2.1 Virgin Blue's Risk and Return Analysis, showed that the company has a high debt to equity ratio which is the cheaper way to finance the company's growth but at an

increased risk. If the company cannot win good market share and maintain high load factors with profitable fares during the up and coming hard times, then the ride into the future could be a rough one.

Virgin Blue's total consolidated equity for 2007 consists of a contributed equity of AUS\$405.3 million, a negative reserve of AUS\$49.1 million and retained profits of AUS\$387.3 million. This gives a total equity value of AUS\$743.5 million. (Virgin Blue Financial Statement. 2007, p 14.)

The contributed equity is made up from common stock which is low risk to the business, but with the present make up of the ownership and an 'uncommitted dividend policy' as will both be mentioned later, the profits can be removed from the company quite easily.

Leases

Virgin Blue has a number of leases mainly for aircraft, engines and aeronautical equipment as well as buildings and real-estate. The leases fall under two categories, Finance Leases and Operating Leases. For Finance Leases, the company assumes substantially all the risks and benefits of ownership and are therefore *capitalised*. The remainder are classified as Operating Leases. Below is an extract from the Financial Statement which outlines the lease structure and *Figure 8. Virgin Blue Operating Leases* indicates the size of the leases.

Finance leases

Finance leases are capitalised. Upon initial recognition the leased asset is measured at an amount equal to the lower of its fair value and the present value of the minimum lease payments. Capitalised lease assets are amortised over the term of the relevant lease, or where it is likely the consolidated entity will obtain ownership of the asset, the life of the asset. Repayments of principal reduce lease liabilities. The interest component of finance lease payments is expensed.

Operating leases

Payments made under operating leases (net of any incentives received from the lessor) are expensed on a straight line basis over the term of the lease, except where an alternative basis is more representative of the pattern of benefits to be derived from the leased property.

(c) Operating lease rentals

Aircraft operating lease rentals:

– minimum lease payments	119.3	97.1	–	–
– maintenance reserves payments	38.5	31.1	–	–
Other operating lease rentals	37.7	29.0	–	–
Total operating lease rentals	195.5	157.2	–	–

Figure 8. Virgin Blue Operating Leases (Virgin Blue Financial Statement. 2007, Note 8, p 23.)

Virgin Blue's Growth Cycle

As mentioned in *Section 9.2.1 Virgin Blue's Risk and Return Analysis*, Virgin Blue is in its early growth stages when compared to other low cost airlines such as Ryanair and

Southwest Airlines. However, the room for growth within the Australian domestic market is limited which is why they are looking towards the United States and New Zealand.

Although the company is relatively young, it has been able to secure a reasonable amount of debt. The use of debt is the cheaper option for the company but exposes the company to higher risk as it needs to ensure a suitable cash flow in order to maintain the payments. When the going gets tough over the next few years due to increasing fuel prices and interest rates, the advantages of high equity and cash will begin to be obvious.

Figure 9. Virgin Blue's Profitability, indicates that initially the company's revenue and profit have increased quickly, with the exception of the results for 2006. The financial year 2006 reporting period was for nine months only and also a relatively huge dividend payment of almost AUS\$260 million was paid out and included on the cash flow statement.

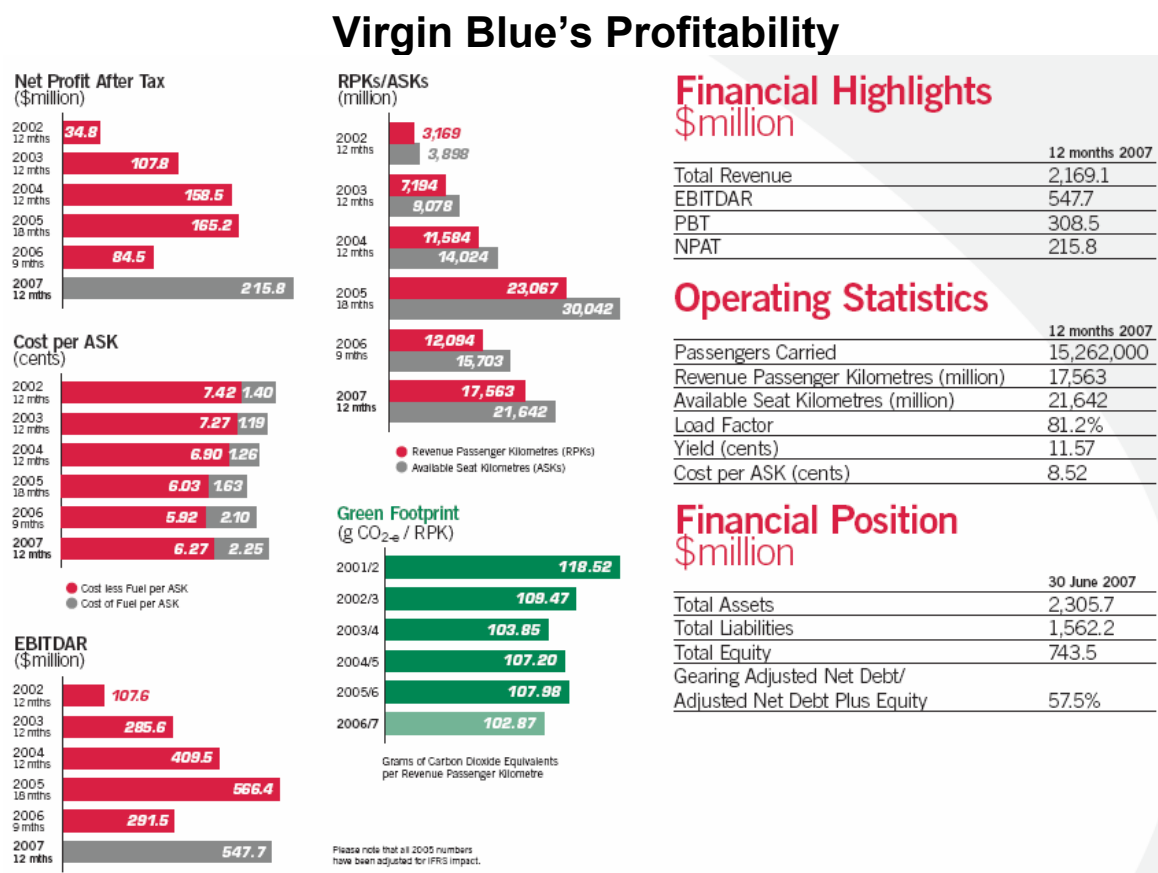


Figure 9. Virgin Blue's Profitability (Virgin Blue Annual Report. 2007, p 5.)

9.2.4 Analysing Virgin Blue's Dividend Policy

Current and Past Cash Returned to Stockholders

The only way in which the company has returned cash to its owners is by the payment of dividends. The stock value has fluctuated a little but overall, has decreased. The company

has not bought back stock or spun off any assets since its date of listing on the 8th December 2003 . This would not be expected behaviour by Virgin Blue Holdings Ltd as the company is in the growth stage of its life.

Table 69. Virgin Blue - Consequences of Performance on Shareholder Wealth, lists the company's dividend payments from the date of listing to 30 June 2007. It should be noted that the financial effect of the 2007 dividend payment has not been brought into account for the financial statements for the 12 month period ended 30 June 2007. The directors have declared that the dividends subsequent to 30th June 2007 will be fully franked based on tax paid at 30%.

Virgin Blue – Consequences of Performance on Shareholder Wealth

Financial year	06/07	05/06	04/05	03/04	02/03
Net profit after tax - AUS\$ Million	215.8	84.5	168.2	158.5	107.8
Dividends paid- AUS\$ Million	21.0	259.8	0	0	0
ASX Share price at year end – AUS\$*	2.33	1.66	1.50	2.23	2.38**

* (Yahoo Finance. 2008) **Virgin Blue was listed on 8 Dec 2003. Refer to Table 61 for end of year periods.

Table 69. Virgin Blue - Consequences of Performance on Shareholder Wealth (Virgin Blue. 2003 – 2008)

Note: Virgin Blue Holdings Limited was listed on 8 December 2003, at a price of AUS\$2.25 per share.

Available Cash to Return to Stockholders

According to the 2006 and 2007 Cash Flow Statements and Balance Sheets, Virgin Blue had a strong cash flow to equity ratio and, therefore, there is no reason to have questioned its ability to buy back stock or pay the dividends.

Virgin Blue is a young company which has had some very good performance results in its early years. Although it did not pay any dividends out in the first few years, the payments of almost \$260 million and \$21 million in the following two years to date are far in excess of the zero dividend payouts made by Ryanair who's performance is greater than that of Virgin Blue.

It should be noted that Patrick invested \$AU260 million in return for a 50% share of the company. *Table 70. Virgin Blue - Comparison of Retained Profits and Dividend Payments 2003 – 2007*, clearly shows the erratic dividend payments and points strongly towards the insider shareholders demanding their investment returns in the year 2006.

Virgin Blue Retained Profits and Dividend Payments 2003 - 2007

Year	2007	2006	2005	2004	2003
Retained Profits AUS \$million	387.3	192.4	376.6	208.5	138.2
Dividend Payouts AUS \$	21	259.8	0	0	0

Table 70. Virgin Blue - Retained Profits and Dividend Payments 2003 - 2007

Given the low transparency of Virgin Blue's dividend policy in comparison to other airlines, the size of the dividend payment made in 2006 and that the stock value is underperforming the market rates, it is clear that the board is not too concerned with their popularity or reputation with the finance analysts. It is naturally concerned with their customer reputation and that they perform well enough to give the banks confidence for future lending.

Virgin Blue's Dividend Policy

The Virgin Blue Company Constitution (Virgin Blue Company Constitution. 2003. Sections 64 – 68, p 27) outlines the dividend policy. The policy gives full scope to the Directors to allow their full control as to if, how much, what, where from and when a dividend should be paid.

The paragraph below gives an idea as to how the directors judge their responsibilities to the stakeholders.

Dividend

The Directors have resolved to adopt a Company dividend policy as follows:

"It is the Company's intention to pay a substantial proportion of its after tax earnings as a dividend each year, subject to the need to retain funds for identified investment opportunities and taking into account any other factors the Directors may deem relevant at the time."

(News and Press Release. 2005)

Table 69. Virgin Blue - Consequences of Performance on Shareholder Wealth, shows that a large payment was made to the shareholders in June 2006. This was the first payment and was possibly an expectation of the major players such as Toll and Virgin Blue Holdings Ltd who put up the funds at the outset. This is possibly not the best option for the business as it needs some security as it moves into harder times due to competition, growth and high risk. This high dividend payment sends a worrying message to the market place as clearly the major shareholders are keen to get their money back to invest elsewhere. This could be perceived as a lack of confidence by onlookers.

As the stock price does not follow the same rate of change as the market, the dividend payout is the only way that the company can signal good performance to the market place. Care has to be taken to understand whether the surplus cash due to high profits has been generated by 'window dressing'. Outstanding debts can be chased up whilst creditors are held back.

Toll Holdings has interests in other transport markets which could potentially compete with aviation. It is a concern that Toll Holdings may require its returned funds to finance a competing business or other activities to the detriment of Virgin's future. More recently, Toll has announced its plans to gift its shares in Virgin Blue Holdings to Toll's existing share holders in the form of a special dividend.

If the firm's growth was to be the main priority for the major shareholders, then stock buy back or reinvestment would have been a better use of the surplus funds. Surplus profits can be 'hidden' in the form of 'provisions for stock items' such as spares. This provision can then

be released at a later date should the need arise due to low cash flow. This creates a 'smoothing effect' in the profit flow.

10. GLOSSARY OF TERMS

Accounting Regulatory Committee

The Accounting Regulatory Committee (ARC) is composed of representatives from Member States and chaired by the Commission. The function of the Committee is a regulatory one and assists in providing an opinion on Commission proposals to adopt (endorse) an international accounting standard as envisaged under Article 3 of the International Accounting Standards (IAS) Regulation.

Available Seat Kilometres (ASK's)

The number of seats available for passengers, multiplied by number of kilometres flown.

Capital Asset Pricing Model (CAPM)

The Capital Asset Pricing Model (CAPM) technique is used to assess the risk profile of the company as it links the non-diversifiable risk and return for all assets.

Current Ratio Analysis (Liquidity Ratio)

Current Ratio Analysis is a measure of the current liquidity of the company and indicates its ability to meet its short term obligations.

Current Risk Free Rate

The current risk free rate is usually obtained from the respective Reserve Bank Treasury Fixed Coupon Bond Yield Rates.

Debt Risk

Most companies that have been driven into bankruptcy have suffered the consequences not of taking on too much debt as opposed to creative accounting as is often in the headlines today. Although not conclusive, debt ratios are a good method for assessing a company's financial health. Debt ratios can highlight growing debt problems. Identifying existing or potential debt problems can save investors a great deal of money. The 'debt to equity' ratio is a sound way in which to do this.

Debt to Equity Ratio

The debt to equity ratio is a measure of a company's financial leverage calculated by dividing its total liabilities by the stockholders' equity. It indicates what proportion of equity and debt the company is using to finance its assets. This ratio uses all liabilities (short-term and long-term), and all owner's equity (both invested capital and retained earnings).

Degree of Financial Leverage (DFL)

The Degree of Financial Leverage (DFL) summarises the affect a particular amount of financial leverage has on the company's earnings per share (EPS). It involves using fixed costs to finance the firm, and includes higher expenses before interest and taxes (EBIT). The higher the financial leverage, the more volatile the earnings per share will be.

$$DFL = \frac{\% \text{ Change in EPS}}{\% \text{ Change in EBIT}}$$

Diversifiable Risk (unsystematic)

The risk of price change due to the unique circumstances of a specific security, as opposed to the overall market. This risk can be virtually eliminated from a portfolio through diversification. Also referred to as unsystematic risk.

Dividend Per Share

The the sum of declared dividends for every ordinary share issued. Dividend per share (DPS) is the total dividends paid out over an entire year (including interim dividends but not including special dividends) divided by the number of outstanding ordinary shares issued.

Dividend Reinvestment Plan

A dividend reinvestment plan (DRIP) is an equity investment option offered directly from the underlying company. The investor does not receive quarterly dividends directly as cash; instead, the investor's dividends are directly reinvested in the underlying equity. This allows the investment return from dividends to be immediately invested for the purpose of price appreciation and compounding, without incurring brokerage fees or waiting to accumulate enough cash for a full share of stock. Some DRIP's are free of charge for participants while others do charge fees and/or proportional commissions.

DuPont System Analysis

The DuPont System Analysis is a method of evaluating a company's financial statements. It allows the company to break its return on equity into:

- a profit-on-sales component (net profit margin);
- an efficiency of asset use (total asset turnover); and
- enables the use of the financial leverage component (financial leverage multiplier)

Earnings Before Interest and Tax (EBIT)

EBIT is an indicator of a company's profitability, calculated as revenue minus expenses, excluding tax and interest. EBIT is also referred to as "operating earnings", "operating profit" and "operating income".

Earnings Per Share (EPS)

The portion of a company's profit allocated to each outstanding share of common stock. Earnings per share serves as an indicator of a company's profitability.

Calculated as:

$$= \frac{\text{Net Income} - \text{Dividends on Preferred Stock}}{\text{Average Outstanding Shares}}$$

Easy Jet

The Easy Jet Airline Company Ltd is otherwise known and registered under the trade name 'Easy Jet'.

Equity Risk

Equity risk is the risk that the investments will depreciate due to the stock market behaviour causing the stock holder to lose money. The measure of risk used in the equity market is

typically the standard deviation of a security's price over a number of periods. The standard deviation will outline the expected fluctuations of the stock value above and below the average. Stock value fluctuations above the mean are not always considered as risk.

Expected Return

The Expected Return gives an indication as to the return that is expected to be achieved on a given asset over time.

Financial Leverage Multiplier (FLM)

The FLM is the relationship between a company's total assets and its stockholder equity (net assets).

$$\text{Financial Leverage Multiplier (FLM)} = \frac{\text{Total Assets}}{\text{Stockholder Equity (Net Assets)}}$$

Where: Total Assets = Total Liabilities + Stockholder equity

Flagship Airline

A Flagship airline is an airline which represents its country of origin and is usually commercially protected and subsidised by the government in order to preserve its status in the market and protect it from a competitive buy out on the stock exchange.

International Accounting Standards Board (IASB)

The International Accounting Standards Board (IASB) is the successor of the International Accounting Standards Committee (IASC) in London. It is responsible for developing the International Financial Reporting Standards (new name for the International Accounting Standards issued after 2001), and promoting the use and application of these standards. The International Accounting Standards Board is an independent, privately-funded accounting standard-setter based in London, UK.

International Financial Reporting Standards (IFRS)

International Financial Reporting Standards (IFRS) are Standards, Interpretations and the Framework adopted by the International Accounting Standards Board (IASB).

Net Profit Margin

Net profit divided by net revenues, often expressed as a percentage. This number is an indication of how effective a company is at cost control. The higher the net profit margin is, the more effective the company is at converting revenue into actual profit. The net profit margin is a good way of comparing companies in the same industry, since such companies are generally subject to similar business conditions. However, the net profit margins are also a good way to compare companies in different industries in order to gauge which industries are relatively more profitable.

Market Risk Premium for Stocks

The difference between the expected return on a market portfolio and the risk-free rate.

Operated Aircraft Utilisation

Average number of block hours per day per aircraft.

Revenue

The sum of revenue for ticket sales and ancillary revenue.

Revenue Passenger Kilometres (RPK's)

The number of paying passengers carried, multiplied by number of kilometres flown.

R-square

R-square shows the proportion of variation in the stock returns that are explained by the variation in the market returns.

Weighted Average Cost of Capital (WACC)

The Weighted Average Cost of Capital (WACC) technique is used to calculate the cost of capital for a company. WACC is the rate that the company is expected to pay to finance its assets. WACC is the minimum return that a company must earn on its existing asset base to satisfy its creditors, owners, and other providers of capital.

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12. APPENDICES

Appendix A. Australia ASX All Ordinaries

Date	Open	High	Low	Close	Volume	Adj Close
12/8/2003	3232.5	3307	3190.4	3306	4.38E+08	3306
1/2/2004	3305.3	3357.1	3271.2	3283.6	5.41E+08	3283.6
2/2/2004	3284.9	3372.7	3266.8	3372.5	5.6E+08	3372.5
3/1/2004	3376.5	3448.5	3375.8	3416.4	6.14E+08	3416.4
4/1/2004	3419.4	3472.5	3386.7	3407.7	6.04E+08	3407.7
5/3/2004	3406	3462.2	3346.8	3456.9	5.89E+08	3456.9
6/1/2004	3456.2	3549	3451.2	3530.3	6.36E+08	3530.3
7/1/2004	3532.4	3563.1	3488.9	3546.1	5.88E+08	3546.1
8/2/2004	3544.8	3576.4	3479.3	3561.9	5.42E+08	3561.9
9/1/2004	3563.3	3683.1	3563.3	3674.7	5.94E+08	3674.7
10/1/2004	3674.6	3787.6	3663.5	3786.3	7.75E+08	3786.3
11/1/2004	3788.2	3953.3	3783.7	3942.8	6.45E+08	3942.8
12/1/2004	3943.5	4057.1	3889.3	4053.1	5.06E+08	4053.1
1/4/2005	4051.1	4114.3	4030.3	4106.7	5.3E+08	4106.7
2/1/2005	4112	4188.8	4086.7	4156.5	6.46E+08	4156.5
3/1/2005	4156.9	4255.8	4051.5	4100.6	6.42E+08	4100.6
4/1/2005	4108	4148.5	3930.4	3943.1	6.11E+08	3943.1
5/2/2005	3949.9	4098.8	3886	4070.4	5.93E+08	4070.4
6/1/2005	4069.4	4275.6	4061.4	4229.9	5.88E+08	4229.9
7/1/2005	4225.9	4357.4	4179.8	4346.7	5.97E+08	4346.7
8/1/2005	4346.8	4465.9	4317.3	4413.5	6.53E+08	4413.5
9/1/2005	4419.7	4625.3	4405.9	4592.6	6.78E+08	4592.6
10/3/2005	4593.6	4601.5	4277	4412.7	5.98E+08	4412.7
11/1/2005	4416.6	4621.9	4395.1	4583.6	6.28E+08	4583.6
12/1/2005	4575.5	4718.3	4506.3	4708.8	5.51E+08	4708.8
1/3/2006	4707.8	4912.8	4698.2	4880.2	5.83E+08	4880.2
2/1/2006	4887	4926.8	4739.9	4878.4	6.74E+08	4878.4
3/1/2006	4871.6	5095.5	4810.8	5087.2	7.21E+08	5087.2
4/3/2006	5085.2	5280	5080.2	5207	7.12E+08	5207
5/1/2006	5219.7	5352.1	4939.4	4972.3	7.22E+08	4972.3
6/1/2006	4986.6	5082.2	4726	5034	7.18E+08	5034
7/3/2006	5035.4	5104.9	4878.1	4957.1	5.92E+08	4957.1
8/1/2006	4953.6	5079.8	4897.3	5079.8	6.79E+08	5079.8
9/1/2006	5078.7	5125.6	4927.8	5113	7.44E+08	5113
10/2/2006	5112.3	5376.7	5101.5	5352.9	6.94E+08	5352.9
11/1/2006	5358.1	5466.6	5303.4	5461.6	6.61E+08	5461.6
12/1/2006	5464.9	5657.4	5400.1	5644.3	7.23E+08	5644.3
1/2/2007	5646.9	5808.2	5482.1	5757.7	7.32E+08	5757.7
2/1/2007	5765.7	6024.7	5765	5816.5	8.87E+08	5816.5
3/1/2007	5823.9	5980.7	5626.9	5978.8	8.06E+08	5978.8
4/2/2007	5978.2	6240.8	5908.2	6158.3	8.56E+08	6158.3
5/1/2007	6155.6	6390.3	6129.8	6341.8	9.15E+08	6341.8
6/1/2007	6348.3	6435.7	6200.1	6310.6	1.1E+09	6310.6
7/2/2007	6316.4	6469.2	6086.9	6187.5	9.18E+08	6187.5
8/1/2007	6181.6	6248.3	5490.8	6248.3	8.92E+08	6248.3
9/3/2007	6254.5	6601	6168.3	6580.9	8.98E+08	6580.9
10/1/2007	6581.2	6810.8	6559.6	6779.1	8.96E+08	6779.1
11/1/2007	6799.5	6873.2	6373.4	6593.6	8.85E+08	6593.6
12/3/2007	6595.4	6741.4	6168.3	6421	8.53E+08	6421
1/2/2008	6418.6	6462.8	5222	5697	1.03E+09	5697
2/1/2008	5717.2	6057.8	5577.3	5674.7	9.67E+08	5674.7
3/3/2008	5639.3	5640	5130.1	5409.7	1.17E+09	5409.7
4/1/2008	5416.1	5735.8	5359.3	5657	8.58E+08	5657
5/1/2008	5654.2	5655.4	5605.1	5652.7	1.72E+09	5652.7

Appendix B. UK FTSE All-share Index

Date	Open	High	Low	Close	Volume	Adj Close
12/9/2007	2160.4	2213.56	0	2207.38	0	2207.38
1/2/2008	0	2249.55	0	2187.1	0	2187.1
2/3/2008	2187.08	2272.03	2175.62	2243.41	0	2243.41
3/2/2008	2243.45	2278.46	2152.05	2196.97	0	2196.97
4/2/2008	2197.01	2291.22	0	2237.34	0	2237.34
5/4/2008	0	2272.11	0	2201.81	0	2201.81
6/2/2008	2201.84	2255.66	2188.49	2228.67	0	2228.67
7/2/2008	2228.71	2239.11	2133.99	2192.22	0	2192.22
8/3/2008	2192.23	2226.8	0	2214.19	0	2214.19
9/2/2008	2214.24	2297.45	2214.24	2271.67	0	2271.67
10/2/2008	2271.69	2346.03	2263.13	2297.66	0	2297.66
11/2/2008	2297.68	2394.25	2297.68	2345.21	0	2345.21
12/2/2008	2345.14	2414.39	0	2410.75	0	2410.75
1/4/2009	0	2449.86	0	2441.22	0	2441.22
2/2/2009	2441.27	2543.48	2441.27	2495.46	0	2495.46
3/2/2009	2495.93	2529.16	0	2457.73	0	2457.73
4/2/2009	2464.34	2504.8	2385.71	2397.05	0	2397.05
5/4/2009	2397.13	2497.51	2397.13	2483.35	0	2483.35
6/2/2009	2483.35	2570	2483.35	2560.17	0	2560.17
7/2/2009	2560.13	2654.78	2515.55	2644.75	0	2644.75
8/2/2009	2652.25	2694.38	2627.58	2659.21	0	2659.21
9/2/2009	2659.22	2758.68	2659.22	2745.79	0	2745.79
10/4/2009	2745.79	2762.33	2572.79	2664.4	0	2664.4
11/2/2009	2664.4	2796.84	2659.11	2741.05	0	2741.05
12/2/2009	2741.05	2857.97	2741.05	2847.02	0	2847.02
1/4/2010	2847.02	2944.08	2847.02	2928.56	0	2928.56
2/2/2010	2928.56	3000.14	2894.68	2956.12	0	2956.12
3/2/2010	2956.12	3086.85	2950.86	3047.96	0	3047.96
4/4/2010	3047.96	3126.03	3046.2	3074.26	0	3074.26
5/3/2010	3074.26	3133.09	2805.25	2916.85	0	2916.85
6/2/2010	2916.85	2981.32	2777.45	2967.58	0	2967.58
7/4/2010	2967.58	3026.7	2872.9	3004.28	0	3004.28
8/2/2010	3004.28	3022.66	2922.05	3007.51	0	3007.51
9/2/2010	3007.51	3069.14	2960.23	3050.44	0	3050.44
10/3/2010	3050.44	3194.26	3020.75	3140.47	0	3140.47
11/2/2010	3140.47	3216.87	3095.21	3119.85	0	3119.85
12/2/2010	3119.85	3236.11	3094.5	3221.42	0	3221.42
1/3/2011	3221.42	3272.37	3175.83	3211.84	0	3211.84
2/2/2011	3211.84	3342.78	3189.04	3198.28	0	3198.28
3/2/2011	3198.28	3305.14	3102.36	3283.21	0	3283.21
4/3/2011	3283.21	3387.61	3275.61	3355.6	0	3355.6
5/2/2011	3355.6	3465.95	3330.98	3438.7	0	3438.7
6/5/2011	3466.51	3490.17	3335.69	3404.14	0	3404.14
7/3/2011	3404.14	3483.34	3198.87	3289.12	0	3289.12
8/2/2011	3289.12	3313.96	3014.01	3260.48	0	3260.48
9/4/2011	3260.48	3343	3167.72	3316.89	0	3316.89
10/2/2011	3316.89	3463.69	3295.74	3454.12	0	3454.12
11/2/2011	3454.12	3455.66	3081.99	3280.87	0	3280.87
12/4/2011	3280.87	3352.47	3175	3286.67	0	3286.67
1/3/2012	3286.67	3315.46	2728.7	3000.1	0	3000.1
2/2/2012	3000.1	3121.45	2909.07	3013.02	0	3013.02
3/4/2012	3013.02	3013.02	2777.55	2927.05	0	2927.05
4/2/2012	2927.04	3121.75	2910.38	3099.94	0	3099.94
5/2/2012	3099.94	3112.77	3088.28	3098.13	0	3098.13

Appendix C. AIZ.AX: Historical Prices for Air New Zealand

Date	Open	High	Low	Close	Volume	Adj Close
5/1/2008	1.06	1.07	1.04	1.06	233400	1.06
4/1/2008	1.12	1.22	0.95	1.04	318100	1.04
3/3/2008	1.39	1.39	1.12	1.12	611100	1.12
2/1/2008	1.58	1.62	1.4	1.45	58300	1.45
1/2/2008	1.65	1.67	1.4	1.57	373900	1.57
12/3/2007	1.6	1.8	1.55	1.7	58600	1.7
11/1/2007	1.75	1.8	1.59	1.59	180400	1.59
10/1/2007	2.11	2.15	1.73	1.75	108800	1.75
9/3/2007	1.8	2.11	1.7	2.1	144300	2.1
8/1/2007	2.39	2.43	1.69	1.75	170200	1.75
7/2/2007	2.4	2.45	2.18	2.4	161800	2.4
6/4/2007	2.8	2.8	2.31	2.39	270000	2.39
5/1/2007	2.5	2.64	2.4	2.64	138900	2.64
4/2/2007	2.07	2.6	2.02	2.52	95300	2.52
3/1/2007	2.06	2.08	1.76	2.06	442100	2.06
2/1/2007	1.76	2.06	1.76	2.06	256000	2.06
1/2/2007	1.64	1.84	1.65	1.76	64500	1.76
12/1/2006	1.43	1.68	1.4	1.63	121600	1.63
11/1/2006	1.26	1.45	1.18	1.43	235200	1.43
10/2/2006	1.16	1.34	1.16	1.26	220800	1.26
9/1/2006	0.98	1.18	0.94	1.16	407100	1.16
8/1/2006	0.93	0.98	0.9	0.98	25600	0.98
7/3/2006	0.98	1	0.92	0.93	40000	0.93
6/1/2006	1.01	1.03	0.91	0.96	63400	0.96
5/1/2006	1.06	1.1	1	1.02	38400	1.02
4/3/2006	1.18	1.19	1.03	1.06	24000	1.06
3/1/2006	1.15	1.2	1.12	1.18	28000	1.18
2/1/2006	1.16	1.18	1.13	1.13	17200	1.13
1/2/2006	1.14	1.26	1.13	1.18	52100	1.18
12/1/2005	1.13	1.2	1.09	1.14	157600	1.14
11/1/2005	1	1.15	1	1.13	36800	1.13
10/3/2005	1.04	1.05	0.99	1.03	46300	1.03
9/1/2005	1.14	1.14	1	1.06	20500	1.06
8/1/2005	1.16	1.18	1.09	1.13	35900	1.13
7/1/2005	1.3	1.3	1.12	1.17	78700	1.17
6/1/2005	1.36	1.36	1.26	1.32	88900	1.32
5/2/2005	1.3	1.42	1.23	1.36	62600	1.36
4/1/2005	1.4	1.4	1.27	1.27	29500	1.27
3/1/2005	1.5	1.52	1.35	1.41	27400	1.38
2/1/2005	1.49	1.56	1.47	1.5	171800	1.47
1/3/2005	1.47	1.52	1.47	1.49	26000	1.46
12/1/2004	1.47	1.6	1.47	1.47	47000	1.44
11/1/2004	1.41	1.53	1.38	1.46	102300	1.43
10/1/2004	1.56	1.59	1.41	1.43	94200	1.4
9/1/2004	1.76	1.83	1.57	1.58	41600	1.55
8/2/2004	0.38	1.76	0.01	1.76	653900	1.73
7/1/2004	0.37	0.38	0.35	0.37	239100	0.36
6/1/2004	0.35	0.38	0.35	0.37	386000	0.36
5/3/2004	0.35	0.38	0.34	0.35	181400	0.34
4/1/2004	0.34	0.38	0.34	0.37	284200	0.36
3/1/2004	0.37	0.37	0.33	0.34	360600	0.34
2/2/2004	0.38	0.38	0.35	0.37	781800	0.36
1/1/2004	0.41	0.44	0.37	0.38	1141800	0.37
12/8/2003	0.4	0.41	0.4	0.41	77200	0.4

Appendix D. EZJ.L Historical Prices for Easy Jet

Date	Open	High	Low	Close	Volume	Adj Close
12/8/2003	279	304	265.5	293	727300	293
1/1/2004	293	388	288	338.5	2623500	338.5
2/2/2004	348	371	315	334	2003900	334
3/1/2004	338.5	345.25	294.5	307	1902300	307
4/1/2004	313	316	279	295.75	1763800	295.75
5/3/2004	295.75	299.75	197.25	198.5	3868800	198.5
6/1/2004	201.5	205	152	159.5	3954700	159.5
7/1/2004	162.25	162.25	140.25	148	2729900	148
8/2/2004	147.5	158.25	130.75	146	1666800	146
9/1/2004	152	153.75	116.5	127	2462300	127
10/1/2004	123	162	119.75	157.5	6103600	157.5
11/1/2004	158.5	194	156.25	186.25	2953700	186.25
12/1/2004	187.5	188.25	172.75	187.75	1572200	187.75
1/3/2005	187.75	230	186.5	220	2469600	220
2/1/2005	219.75	248.75	215.25	232.5	1932400	232.5
3/1/2005	231.25	236.75	198	215.75	2131400	215.75
4/1/2005	214.5	240	205.25	216.75	2396800	216.75
5/2/2005	216.75	253.5	214	225.75	2618300	225.75
6/1/2005	228	259	220.75	245	2623800	245
7/1/2005	244.75	273.75	238.75	240.75	4906700	240.75
8/1/2005	242.5	315	237.5	291.75	5281900	291.75
9/1/2005	292.75	302	276.75	292	3680700	292
10/3/2005	292	308.75	261.25	297.75	5453300	297.75
11/1/2005	298.75	343.25	295	330	3773200	330
12/1/2005	333.5	381.75	332.25	378	1713000	378
1/2/2006	378	411	369.75	376	2604800	376
2/1/2006	374	399.25	360	371	2429200	371
3/1/2006	368.5	393.75	345	351	2828800	351
4/3/2006	351	369.5	302	317	14437600	317
5/1/2006	317	360	312	349	7693400	349
6/1/2006	354	405.4	342	386.25	5818600	386.25
7/3/2006	385	460.75	376.5	445.5	4458000	445.5
8/1/2006	450	470	400	463.75	3493700	463.75
9/1/2006	465.5	488.75	438.75	486	3184600	486
10/2/2006	486.25	534.75	469.5	527	2549800	527
11/1/2006	528	625	523.5	595	3853000	595
12/1/2006	599.75	646.5	588.25	613	2224500	613
1/2/2007	627.5	674	617.5	653	2852500	653
2/1/2007	653.5	730	624	662	3412600	662
3/1/2007	666.5	725	623	694	2546900	694
4/2/2007	695.5	741.5	686.5	711.5	2550900	711.5
5/1/2007	715	736	550.5	568.5	6169200	568.5
6/4/2007	586.5	586.5	505	525	10390100	525
7/2/2007	517	558	450	511.5	11572900	511.5
8/1/2007	495	596	484.25	577	6952200	577
9/3/2007	573	585.5	497.75	524.5	3464700	524.5
10/1/2007	512	663.5	512	663	5282500	663
11/1/2007	665	686	529	563	3963700	563
12/3/2007	566.5	629.5	523.5	613.5	2348500	613.5
1/2/2008	609.5	621	372	465.5	7214900	465.5
2/1/2008	472.5	486.75	394.25	409.5	6139300	409.5
3/3/2008	414	432.75	310.75	371.25	7281400	371.25
4/1/2008	368.5	398.5	274	308.75	4956600	308.75
5/1/2008	308.5	315.5	302.75	310	7661200	310

Appendix E. QAN.AX: Historical Prices for Qantas

Date	Open	High	Low	Close	Volume	Adj Close
8/12/2003	3.46	3.49	3.26	3.29	6734000	3.29
1/1/2004	3.29	3.62	3.28	3.46	9687400	3.46
2/2/2004	3.45	3.81	3.4	3.71	11096100	3.71
1/3/2004	3.73	3.81	3.37	3.41	8891500	3.41
1/4/2004	3.42	3.6	3.33	3.35	7268900	3.35
3/5/2004	3.35	3.44	3.25	3.39	7126400	3.39
1/6/2004	3.39	3.55	3.36	3.52	8302700	3.52
1/7/2004	3.51	3.58	3.37	3.49	7263400	3.49
2/8/2004	3.47	3.5	3.13	3.41	11136700	3.41
1/9/2004	3.41	3.47	3.31	3.45	29259000	3.45
1/10/2004	3.44	3.46	3.27	3.32	11426600	3.32
1/11/2004	3.32	3.6	3.29	3.58	14708800	3.58
1/12/2004	3.56	3.74	3.52	3.71	7031000	3.71
3/1/2005	3.71	3.73	3.47	3.56	7564200	3.56
1/2/2005	3.55	3.73	3.44	3.63	10895500	3.63
1/3/2005	3.63	3.69	3.45	3.55	7632100	3.55
1/4/2005	3.55	3.56	3.2	3.22	7238300	3.22
2/5/2005	3.25	3.34	3.1	3.22	7622700	3.22
1/6/2005	3.24	3.37	3.19	3.37	8027800	3.37
1/7/2005	3.37	3.37	3.18	3.32	6957200	3.32
1/8/2005	3.3	3.41	3.19	3.21	8602600	3.21
1/9/2005	3.22	3.44	3.2	3.37	8127100	3.37
3/10/2005	3.33	3.49	3.32	3.42	5728200	3.42
1/11/2005	3.43	3.83	3.41	3.77	9379600	3.77
1/12/2005	3.73	4.04	3.67	4.04	6992200	4.04
2/1/2006	4.04	4.17	3.8	4.13	8598600	4.13
1/2/2006	4.13	4.29	3.94	4.1	11755900	4.1
1/3/2006	4.11	4.11	3.53	3.54	16043400	3.54
3/4/2006	3.55	3.65	3.36	3.46	11532000	3.46
1/5/2006	3.47	3.49	3.15	3.15	9994100	3.15
1/6/2006	3.2	3.32	2.91	2.96	16168300	2.96
3/7/2006	2.99	3.13	2.91	3.05	8408400	3.05
1/8/2006	3.05	3.58	3.01	3.44	16273900	3.44
1/9/2006	3.4	3.98	3.39	3.91	15409000	3.91
2/10/2006	3.91	4.31	3.88	4.24	14692700	4.24
1/11/2006	4.24	5.25	4.16	4.95	14685200	4.95
1/12/2006	4.95	5.37	4.93	5.22	20133500	5.22
1/1/2007	5.22	5.4	5.2	5.39	31033100	5.39
1/2/2007	5.39	5.4	5.12	5.15	21066400	5.15
1/3/2007	5.15	5.33	4.89	5.25	40325600	5.25
2/4/2007	5.21	5.41	5.15	5.32	22433400	5.32
1/5/2007	5.33	5.81	5.13	5.7	60890100	5.7
1/6/2007	5.69	5.84	5.48	5.6	20231200	5.6
2/7/2007	5.6	5.85	5.38	5.74	16086700	5.74
1/8/2007	5.69	5.7	4.92	5.58	14422800	5.58
3/9/2007	5.64	5.7	5.53	5.58	10611800	5.58
1/10/2007	5.58	6.06	5.54	5.91	10890100	5.91
1/11/2007	6	6.05	5.66	5.85	7901600	5.85
3/12/2007	5.78	6.06	5.41	5.44	7826800	5.44
1/1/2008	5.44	5.48	4.21	4.67	9728300	4.67
1/2/2008	4.75	4.89	4.21	4.22	10430800	4.22
3/3/2008	4.1	4.32	3.6	3.93	12712000	3.93
1/4/2008	3.93	4.19	3.33	3.4	16876900	3.4
1/5/2008	3.41	3.48	3.39	3.44	32666400	3.44

Appendix F. VBA.AX: Historical Prices for Virgin Blue Holdings

Date	Open	High	Low	Close	Volume	Adj Close
12/8/2003	2.4	2.53	2.27	2.38	14205500	2.38
1/1/2004	2.38	2.61	2.32	2.45	2763400	2.45
2/2/2004	2.43	2.62	2.36	2.54	2848100	2.54
3/1/2004	2.55	2.61	2.31	2.36	1718200	2.36
4/1/2004	2.36	2.44	2.15	2.23	2373300	2.23
5/3/2004	2.24	2.28	1.87	1.93	3751000	1.93
6/1/2004	1.94	2.07	1.89	2.01	4617200	2.01
7/1/2004	2.02	2.13	1.96	2.04	1474400	2.04
8/2/2004	2.04	2.05	1.64	1.79	3752600	1.79
9/1/2004	1.79	1.88	1.76	1.77	1565500	1.77
10/1/2004	1.76	1.83	1.65	1.81	2182200	1.81
11/1/2004	1.81	2.13	1.78	2.06	3335200	2.06
12/1/2004	2.05	2.13	1.83	1.86	4517600	1.86
1/3/2005	1.86	2.15	1.6	2.11	11223300	2.11
2/1/2005	2.11	2.13	1.99	2.03	5077800	2.03
3/1/2005	2.04	2.04	1.88	1.91	5095900	1.91
4/1/2005	1.9	2.1	1.65	1.66	1483800	1.66
5/2/2005	1.65	1.74	1.63	1.68	425500	1.68
6/1/2005	1.67	1.75	1.66	1.66	203500	1.66
7/1/2005	1.67	1.68	1.64	1.66	143100	1.66
8/1/2005	1.65	1.73	1.54	1.55	307300	1.55
9/1/2005	1.55	1.62	1.54	1.57	104300	1.57
10/3/2005	1.57	1.6	1.47	1.5	104600	1.5
11/1/2005	1.5	1.94	1.48	1.57	627200	1.57
12/1/2005	1.57	1.6	1.53	1.58	86000	1.58
1/2/2006	1.58	1.75	1.52	1.68	186400	1.68
2/1/2006	1.68	1.73	1.65	1.7	231100	1.7
3/1/2006	1.68	1.94	1.66	1.9	305300	1.9
4/3/2006	1.9	1.93	1.72	1.77	104100	1.77
5/1/2006	1.78	1.83	1.59	1.63	93200	1.63
6/1/2006	1.63	1.65	1.5	1.5	91600	1.5
7/3/2006	1.5	1.67	1.5	1.66	50000	1.66
8/1/2006	1.66	1.66	1.5	1.57	55700	1.57
9/1/2006	1.57	1.76	1.55	1.74	105100	1.74
10/2/2006	1.74	1.87	1.69	1.83	98500	1.83
11/1/2006	1.83	2.16	1.76	2.12	214300	2.12
12/1/2006	2.12	2.4	2.14	2.29	282000	2.29
1/2/2007	2.29	2.65	2.17	2.54	211300	2.54
2/1/2007	2.54	2.85	2.32	2.63	554200	2.63
3/1/2007	2.63	2.72	2.53	2.58	402900	2.58
4/2/2007	2.57	2.75	2.5	2.7	304600	2.7
5/1/2007	2.7	2.7	2.52	2.63	517000	2.63
6/4/2007	2.62	2.62	2.33	2.46	947900	2.46
7/2/2007	2.46	2.47	2.18	2.33	325300	2.33
8/1/2007	2.3	2.34	1.84	2.1	582800	2.1
9/3/2007	2.11	2.5	2.06	2.27	753500	2.27
10/1/2007	2.26	2.32	2.12	2.2	437700	2.2
11/1/2007	2.23	2.33	2.11	2.21	367900	2.21
12/3/2007	2.23	2.26	1.94	2.1	195400	2.1
1/2/2008	2.09	2.12	1.35	1.49	349400	1.49
2/1/2008	1.49	1.57	1.24	1.34	599000	1.34
3/3/2008	1.33	1.33	1.16	1.24	287700	1.24
4/1/2008	1.25	1.27	0.83	0.83	805100	0.83
5/1/2008	0.84	0.85	0.83	0.84	1849200	0.84

Appendix G. Regression of Returns of Air New Zealand's Stock

Current risk free rate =	6.87%
Number of periods of data=	54

Risk premium for stocks=	6.20%
Risk free rate during period =	6.87%

Current stock price=	\$1.06
Current Annual DPS =	\$0.18

Time period	Index	Price(Stock)	DPS(Stock)	Split Factor	Index Level	Return(Stock)	Return(Mkt)	$(R(jt)-R(j))^2$	$(R(mt)-R(m))^2$	$(R(jt)-R(j))$	Date
1	1	0.4		1	3306					$(R(mt)-R(m))$	12/8/2003
2	1	0.37		1	3283.6	-7.50%	-0.68%	0.019736818	0.00030292	0.002445135	1/1/2004
3	1	0.36	\$0.00	1	3372.5	-2.70%	2.71%	0.008558991	0.000270435	-0.001521396	2/2/2004
4	1	0.34		1	3416.4	-5.56%	1.30%	0.01465149	5.70255E-06	-0.000289052	3/1/2004
5	1	0.36		1	3407.7	5.88%	-0.25%	4.44123E-05	0.000173596	8.78055E-05	4/1/2004
6	1	0.34	\$0.00	1	3456.9	-5.56%	1.44%	0.01465149	1.45073E-05	-0.000461035	5/3/2004
7	1	0.36		1	3530.3	5.88%	2.12%	4.44123E-05	0.000112442	-7.06668E-05	6/1/2004
8	1	0.36		1	3546.1	0.00%	0.45%	0.00428865	3.78657E-05	0.00040298	7/1/2004
9	1	1.73	\$0.00	1	3561.9	380.56%	0.45%	13.98810693	3.81115E-05	-0.023089122	8/2/2004
10	1	1.55		1	3674.7	-10.40%	3.17%	0.028741787	0.000442658	-0.003566901	9/1/2004
11	1	1.4		1	3786.3	-9.68%	3.04%	0.02632895	0.000389698	-0.003203178	10/1/2004
12	1	1.43	\$0.00	1	3942.8	2.14%	4.13%	0.001941214	0.000942747	-0.001352802	11/1/2004
13	1	1.44		1	4053.1	0.70%	2.80%	0.003421639	0.000300884	-0.00101465	12/1/2004
14	1	1.46		1	4106.7	1.39%	1.32%	0.002662446	6.73608E-06	-0.00013392	1/3/2005
15	1	1.47	\$0.00	1	4156.5	0.68%	1.21%	0.00343847	2.24243E-06	-8.78097E-05	2/1/2005
16	1	1.38		1	4100.6	-6.12%	-1.34%	0.016056001	0.000579744	0.003050961	3/1/2005
17	1	1.27		1	3943.1	-7.97%	-3.84%	0.021082439	0.002404732	0.007120225	4/1/2005
18	1	1.36	\$0.00	1	4070.4	7.09%	3.23%	2.89267E-05	0.000468947	0.000116469	5/2/2005
19	1	1.32		1	4229.9	-2.94%	3.92%	0.009005925	0.000815462	-0.002709979	6/1/2005
20	1	1.17		1	4346.7	-11.36%	2.76%	0.032085461	0.000288453	-0.003042226	7/1/2005
21	1	1.13	\$0.00	1	4413.5	-3.42%	1.54%	0.009935269	2.24575E-05	-0.000472357	8/1/2005
22	1	1.06		1	4592.6	-6.19%	4.06%	0.0162396	0.000897062	-0.003816795	9/1/2005
23	1	1.03		1	4412.7	-2.83%	-3.92%	0.008796503	0.002480116	0.004670797	10/3/2005
24	1	1.13	\$0.00	1	4583.6	9.71%	3.87%	0.000998534	0.000789614	0.000887951	11/1/2005
25	1	1.14		1	4708.8	0.88%	2.73%	0.003207889	0.000278413	-0.00094505	12/1/2005
26	1	1.18		1	4880.2	3.51%	3.64%	0.000924164	0.000664138	-0.000783437	1/2/2006
27	1	1.13	\$0.00	1	4878.4	-4.24%	-0.04%	0.011633923	0.000120954	0.001186239	2/1/2006

28	1	1.18		1	5087.2	4.42%	4.28%	0.000451138	0.001035029	-0.00068333	3/1/2006
29	1	1.06		1	5207	-10.17%	2.35%	0.027950055	0.000166933	-0.002160042	4/3/2006
30	1	1.02	\$0.00	1	4972.3	-3.77%	-4.51%	0.010655119	0.003102823	0.005749865	5/1/2006
31	1	0.96		1	5034	-5.88%	1.24%	0.015453303	3.16731E-06	-0.000221236	6/1/2006
32	1	0.93		1	4957.1	-3.12%	-1.53%	0.009358199	0.000671078	0.002506009	7/3/2006
33	1	0.98	\$0.00	1	5079.8	5.38%	2.48%	0.00013746	0.000199468	-0.000165587	8/1/2006
34	1	1.16		1	5113	18.37%	0.65%	0.013967856	1.67556E-05	-0.000483776	9/1/2006
35	1	1.26		1	5352.9	8.62%	4.69%	0.000429282	0.001317005	0.000751908	10/2/2006
36	1	1.43	\$0.00	1	5461.6	13.49%	2.03%	0.004820921	9.36579E-05	0.00067195	11/1/2006
37	1	1.63		1	5644.3	13.99%	3.35%	0.005531247	0.000520875	0.001697377	12/1/2006
38	1	1.76		1	5757.7	7.98%	2.01%	0.000203542	8.95297E-05	0.000134993	1/2/2007
39	1	2.06	\$0.00	1	5816.5	17.05%	1.02%	0.011018021	1.73587E-07	-4.37332E-05	2/1/2007
40	1	2.06		1	5978.8	0.00%	2.79%	0.00428865	0.000298402	-0.001131258	3/1/2007
41	1	2.52		1	6158.3	22.33%	3.00%	0.024905002	0.000376116	0.003060581	4/2/2007
42	1	2.64	\$0.00	1	6341.8	4.76%	2.98%	0.000319292	0.000367417	-0.00034251	5/1/2007
43	1	2.39		1	6310.6	-9.47%	-0.49%	0.025659156	0.000241765	0.002490679	6/4/2007
44	1	2.4		1	6187.5	0.42%	-1.95%	0.003758142	0.000908173	0.001847442	7/2/2007
45	1	1.75	\$0.00	1	6248.3	-27.08%	0.98%	0.113111895	6.44466E-07	0.000269994	8/1/2007
46	1	2.1		1	6580.9	20.00%	5.32%	0.018093536	0.001814882	0.005730413	9/3/2007
47	1	1.75		1	6779.1	-16.67%	3.01%	0.05389569	0.000379798	-0.004524322	10/1/2007
48	1	1.59	\$0.00	1	6593.6	-9.14%	-2.74%	0.024622743	0.001443435	0.005961655	11/1/2007
49	1	1.7		1	6421	6.92%	-2.62%	1.36501E-05	0.001354678	-0.000135983	12/3/2007
50	1	1.57		1	5697	-7.65%	-11.28%	0.02015218	0.015223629	0.017515402	1/2/2008
51	1	1.45	\$0.00	1	5674.7	-7.64%	-0.39%	0.020141544	0.00021151	0.002064011	2/1/2008
52	1	1.12		1	5409.7	-22.76%	-4.67%	0.085892365	0.003286448	0.016801215	3/3/2008
53	1	1.04		1	5657	-7.14%	4.57%	0.018746089	0.001230966	-0.004803728	4/1/2008
54	1	1.06	\$0.00	1	5652.7	1.92%	-0.08%	0.002139712	0.000129713	0.000526829	5/1/2008

Appendix H. Regression of Returns of Easy Jet's Stock

Current risk free rate =	4.50%
Number of periods of data=	54

Risk premium for stocks=	3.75%
Risk free rate during period =	4.50%

Current stock price=	3.10	GB Pounds
Current Annual DPS =	0.00	

Time period	Index	Price(Stock)	DPS(Stock)	Split Factor	Index Level	Return(Stock)	Return(Mkt)	$(R(jt)-R(j))^2$	$(R(mt)-R(m))^2$	$(R(jt)-R(j))$	Date
1	1	2.93		1	2207.38					$(R(mt)-R(m))$	12/8/2003
2	1	3.385		1	2187.1	15.53%	-0.92%	0.021464746	0.00025489	-0.002339048	1/1/2004
3	1	3.34	\$0.00	1	2243.41	-1.33%	2.57%	0.000487329	0.000359805	-0.00041874	2/2/2004
4	1	3.07		1	2196.97	-8.08%	-2.07%	0.008031728	0.00075507	0.002462624	3/1/2004
5	1	2.9575		1	2237.34	-3.66%	1.84%	0.00206357	0.0001345	-0.00052683	4/1/2004
6	1	1.985	\$0.00	1	2201.81	-32.88%	-1.59%	0.11397822	0.000513402	0.007649615	5/3/2004
7	1	1.595		1	2228.67	-19.65%	1.22%	0.042129671	2.93889E-05	-0.001112719	6/1/2004
8	1	1.48		1	2192.22	-7.21%	-1.64%	0.006541881	0.000535133	0.001871037	7/1/2004
9	1	1.46	\$0.00	1	2214.19	-1.35%	1.00%	0.000497071	1.05229E-05	-7.23231E-05	8/2/2004
10	1	1.27		1	2271.67	-13.01%	2.60%	0.019298369	0.000367946	-0.002664726	9/1/2004
11	1	1.575		1	2297.66	24.02%	1.14%	0.053534805	2.17437E-05	0.00107891	10/1/2004
12	1	1.8625	\$0.00	1	2345.21	18.25%	2.07%	0.030191877	0.000193685	0.002418203	11/1/2004
13	1	1.8775		1	2410.75	0.81%	2.79%	5.29828E-07	0.000448102	-1.54083E-05	12/1/2004
14	1	2.2		1	2441.22	17.18%	1.26%	0.02656554	3.4355E-05	0.000955332	1/3/2005
15	1	2.325	\$0.00	1	2495.46	5.68%	2.22%	0.002307515	0.000238409	0.000741709	2/1/2005
16	1	2.1575		1	2457.73	-7.20%	-1.51%	0.006532615	0.000479494	0.001769845	3/1/2005
17	1	2.1675		1	2397.05	0.46%	-2.47%	1.71942E-05	0.000990194	0.000130482	4/1/2005
18	1	2.2575	\$0.00	1	2483.35	4.15%	3.60%	0.001071967	0.000854082	0.000956843	5/2/2005
19	1	2.45		1	2560.17	8.53%	3.09%	0.005850679	0.000583518	0.001847695	6/1/2005
20	1	2.4075		1	2644.75	-1.73%	3.30%	0.0006827	0.000689533	-0.000686108	7/1/2005
21	1	2.9175	\$0.00	1	2659.21	21.18%	0.55%	0.04123191	1.71733E-06	-0.000266099	8/1/2005
22	1	2.92		1	2745.79	0.09%	3.26%	6.28007E-05	0.000664641	-0.000204303	9/1/2005
23	1	2.9775		1	2664.4	1.97%	-2.96%	0.000119032	0.001326391	-0.000397345	10/3/2005
24	1	3.3	\$0.00	1	2741.05	10.83%	2.88%	0.009906372	0.000483573	0.002188711	11/1/2005
25	1	3.78		1	2847.02	14.55%	3.87%	0.018679498	0.001016491	0.004357471	12/1/2005
26	1	3.76		1	2928.56	-0.53%	2.86%	0.000198038	0.000477972	-0.000307663	1/2/2006
27	1	3.71	\$0.00	1	2956.12	-1.33%	0.94%	0.000487502	6.93197E-06	-5.81322E-05	2/1/2006

28	1	3.51		1	3047.96	-5.39%	3.11%	0.003930029	0.000589997	-0.001522729	3/1/2006
29	1	3.17		1	3074.26	-9.69%	0.86%	0.011161433	3.42553E-06	-0.000195535	4/3/2006
30	1	3.49	\$0.00	1	2916.85	10.09%	-5.12%	0.008494348	0.003361735	-0.005343758	5/1/2006
31	1	3.8625		1	2967.58	10.67%	1.74%	0.009594583	0.00011266	0.001039676	6/1/2006
32	1	4.455		1	3004.28	15.34%	1.24%	0.020913925	3.12378E-05	0.000808272	7/3/2006
33	1	4.6375	\$0.00	1	3007.51	4.10%	0.11%	0.001035786	3.25216E-05	-0.000183536	8/1/2006
34	1	4.86		1	3050.44	4.80%	1.43%	0.001536393	5.61955E-05	0.000293834	9/1/2006
35	1	5.27		1	3140.47	8.44%	2.95%	0.00571242	0.00051692	0.00171839	10/2/2006
36	1	5.95	\$0.00	1	3119.85	12.90%	-0.66%	0.014460225	0.000178057	-0.001604601	11/1/2006
37	1	6.13		1	3221.42	3.03%	3.26%	0.000460983	0.000664513	0.00055347	12/1/2006
38	1	6.53		1	3211.84	6.53%	-0.30%	0.003189004	9.50966E-05	-0.000550694	1/2/2007
39	1	6.62	\$0.00	1	3198.28	1.38%	-0.42%	2.50096E-05	0.000120995	-5.50095E-05	2/1/2007
40	1	6.94		1	3283.21	4.83%	2.66%	0.001564739	0.000391129	0.000782314	3/1/2007
41	1	7.115		1	3355.6	2.52%	2.20%	0.000270095	0.000233192	0.000250966	4/2/2007
42	1	5.685	\$0.00	1	3438.7	-20.10%	2.48%	0.044001532	0.00032352	-0.003772981	5/1/2007
43	1	5.25		1	3404.14	-7.65%	-1.01%	0.007275874	0.000283189	0.001435425	6/4/2007
44	1	5.115		1	3289.12	-2.57%	-3.38%	0.001189965	0.001645614	0.001399365	7/2/2007
45	1	5.77	\$0.00	1	3260.48	12.81%	-0.87%	0.014226086	0.000239798	-0.001846993	8/1/2007
46	1	5.245		1	3316.89	-9.10%	1.73%	0.009953944	0.000110738	-0.001049897	9/3/2007
47	1	6.63		1	3454.12	26.41%	4.14%	0.065167585	0.001196827	0.00883144	10/1/2007
48	1	5.63	\$0.00	1	3280.87	-15.08%	-5.02%	0.025475718	0.003241639	0.009087524	11/1/2007
49	1	6.135		1	3286.67	8.97%	0.18%	0.006547474	2.51009E-05	-0.000405398	12/3/2007
50	1	4.655		1	3000.1	-24.12%	-8.72%	0.06251019	0.008830267	0.02349429	1/2/2008
51	1	4.095	\$0.00	1	3013.02	-12.03%	0.43%	0.01666225	6.10772E-06	0.000319012	2/1/2008
52	1	3.7125		1	2927.05	-9.34%	-2.85%	0.010442424	0.001246848	0.00360834	3/3/2008
53	1	3.0875		1	3099.94	-16.84%	5.91%	0.031375658	0.002734076	-0.009261934	4/1/2008
54	1	3.1	\$0.00	1	3098.13	0.40%	-0.06%	2.24013E-05	5.41959E-05	3.48433E-05	5/1/2008

Appendix I. Regression of Returns of Qantas's Stock

Current risk free rate =	6.87%
Number of periods of data=	54

Risk premium for stocks=	6.20%
Risk free rate during period =	6.87%

Current stock price=	\$3.44
Current Annual DPS =	\$0.30

Time period	Index	Price(Stock)	DPS(Stock)	Split Factor	Index Level	Return(Stock)	Return(Mkt)	$(R(jt)-R(j))^2$	$(R(mt)-R(m))^2$	$(R(jt)-R(j))$	Date
1	1	3.29		1	3306					$(R(mt)-R(m))$	12/8/2003
2	1	3.46		1	3283.6	5.17%	-0.68%	0.002362195	0.00030292	-0.000845906	1/1/2004
3	1	3.71	\$0.00	1	3372.5	7.23%	2.71%	0.004786567	0.000270435	0.00113774	2/2/2004
4	1	3.41		1	3416.4	-8.09%	1.30%	0.007044555	5.70255E-06	-0.000200429	3/1/2004
5	1	3.35		1	3407.7	-1.76%	-0.25%	0.000427027	0.000173596	0.000272269	4/1/2004
6	1	3.39	\$0.00	1	3456.9	1.19%	1.44%	7.86943E-05	1.45073E-05	3.37882E-05	5/3/2004
7	1	3.52		1	3530.3	3.83%	2.12%	0.001244591	0.000112442	0.000374091	6/1/2004
8	1	3.49		1	3546.1	-0.85%	0.45%	0.000134375	3.78657E-05	7.13317E-05	7/1/2004
9	1	3.41	\$0.00	1	3561.9	-2.29%	0.45%	0.000675582	3.81115E-05	0.00016046	8/2/2004
10	1	3.45		1	3674.7	1.17%	3.17%	7.5011E-05	0.000442658	0.00018222	9/1/2004
11	1	3.32		1	3786.3	-3.77%	3.04%	0.001660601	0.000389698	-0.000804446	10/1/2004
12	1	3.58	\$0.00	1	3942.8	7.83%	4.13%	0.00566165	0.000942747	0.002310303	11/1/2004
13	1	3.71		1	4053.1	3.63%	2.80%	0.001105133	0.000300884	0.000576642	12/1/2004
14	1	3.56		1	4106.7	-4.04%	1.32%	0.001892301	6.73608E-06	-0.000112901	1/3/2005
15	1	3.63	\$0.00	1	4156.5	1.97%	1.21%	0.000275348	2.24243E-06	2.48485E-05	2/1/2005
16	1	3.55		1	4100.6	-2.20%	-1.34%	0.000630406	0.000579744	0.000604544	3/1/2005
17	1	3.22		1	3943.1	-9.30%	-3.84%	0.009221197	0.002404732	0.004708981	4/1/2005
18	1	3.22	\$0.00	1	4070.4	0.00%	3.23%	9.4207E-06	0.000468947	-6.64666E-05	5/2/2005
19	1	3.37		1	4229.9	4.66%	3.92%	0.001893515	0.000815462	0.001242614	6/1/2005
20	1	3.32		1	4346.7	-1.48%	2.76%	0.000320629	0.000288453	-0.000304116	7/1/2005
21	1	3.21	\$0.00	1	4413.5	-3.31%	1.54%	0.001310574	2.24575E-05	-0.000171558	8/1/2005
22	1	3.37		1	4592.6	4.98%	4.06%	0.002187893	0.000897062	0.001400955	9/1/2005
23	1	3.42		1	4412.7	1.48%	-3.92%	0.000138474	0.002480116	-0.000586029	10/3/2005
24	1	3.77	\$0.00	1	4583.6	10.23%	3.87%	0.009854506	0.000789614	0.002789491	11/1/2005
25	1	4.04		1	4708.8	7.16%	2.73%	0.004698927	0.000278413	0.001143785	12/1/2005
26	1	4.13		1	4880.2	2.23%	3.64%	0.000368944	0.000664138	0.000495005	1/2/2006
27	1	4.1	\$0.00	1	4878.4	-0.73%	-0.04%	0.000106776	0.000120954	0.000113644	2/1/2006

28	1	3.54		1	5087.2	-13.66%	4.28%	0.01950343	0.001035029	-0.004492952	3/1/2006
29	1	3.46		1	5207	-2.26%	2.35%	0.000658856	0.000166933	-0.000331639	4/3/2006
30	1	3.15	\$0.00	1	4972.3	-8.96%	-4.51%	0.008586745	0.003102823	0.0051617	5/1/2006
31	1	2.96		1	5034	-6.03%	1.24%	0.004017883	3.16731E-06	-0.000112809	6/1/2006
32	1	3.05		1	4957.1	3.04%	-1.53%	0.000747262	0.000671078	-0.000708146	7/3/2006
33	1	3.44	\$0.00	1	5079.8	12.79%	2.48%	0.015574924	0.000199468	0.001762585	8/1/2006
34	1	3.91		1	5113	13.66%	0.65%	0.017837897	1.67556E-05	-0.000546703	9/1/2006
35	1	4.24		1	5352.9	8.44%	4.69%	0.006614514	0.001317005	0.0029515	10/2/2006
36	1	4.95	\$0.00	1	5461.6	16.75%	2.03%	0.02702194	9.36579E-05	0.001590854	11/1/2006
37	1	5.22		1	5644.3	5.45%	3.35%	0.002649793	0.000520875	0.001174824	12/1/2006
38	1	5.39		1	5757.7	3.26%	2.01%	0.000870116	8.95297E-05	0.000279108	1/2/2007
39	1	5.15	\$0.00	1	5816.5	-4.45%	1.02%	0.0022654	1.73587E-07	1.98304E-05	2/1/2007
40	1	5.25		1	5978.8	1.94%	2.79%	0.000267262	0.000298402	0.000282403	3/1/2007
41	1	5.32		1	6158.3	1.33%	3.00%	0.00010535	0.000376116	0.000199057	4/2/2007
42	1	5.7	\$0.00	1	6341.8	7.14%	2.98%	0.004672988	0.000367417	0.001310319	5/1/2007
43	1	5.6		1	6310.6	-1.75%	-0.49%	0.000424903	0.000241765	0.00032051	6/4/2007
44	1	5.74		1	6187.5	2.50%	-1.95%	0.000480955	0.000908173	-0.000660901	7/2/2007
45	1	5.58	\$0.00	1	6248.3	-2.79%	0.98%	0.000957524	6.44466E-07	2.48413E-05	8/1/2007
46	1	5.58		1	6580.9	0.00%	5.32%	9.4207E-06	0.001814882	-0.000130757	9/3/2007
47	1	5.91		1	6779.1	5.91%	3.01%	0.003143898	0.000379798	0.001092724	10/1/2007
48	1	5.85	\$0.00	1	6593.6	-1.02%	-2.74%	0.000174811	0.001443435	0.000502322	11/1/2007
49	1	5.44		1	6421	-7.01%	-2.62%	0.005351623	0.001354678	0.002692531	12/3/2007
50	1	4.67		1	5697	-14.15%	-11.28%	0.020913045	0.015223629	0.017842994	1/2/2008
51	1	4.22	\$0.00	1	5674.7	-9.64%	-0.39%	0.009886138	0.00021151	0.001446036	2/1/2008
52	1	3.93		1	5409.7	-6.87%	-4.67%	0.00515376	0.003286448	0.004115528	3/3/2008
53	1	3.4		1	5657	-13.49%	4.57%	0.01902451	0.001230966	-0.00483927	4/1/2008
54	1	3.44	\$0.00	1	5652.7	1.18%	-0.08%	7.56098E-05	0.000129713	-9.90333E-05	5/1/2008

Appendix J. Regression of Returns of Virgin Blue's Stock

Current risk free rate =	6.87%
Number of periods of data=	54

Risk premium for stocks=	6.20%
Risk free rate during period =	6.87%

Current stock price=	\$0.82
Current Annual DPS =	\$0.02

Time period	Index	Price(Stock)	DPS(Stock)	Split Factor	Index Level	Return(Stock)	Return(Mkt)	$(R(jt)-R(j))^2$	$(R(mt)-R(m))^2$	$(R(jt)-R(j))$	Date
1	1	2.38		1	3306					$(R(mt)-R(m))$	12/8/2003
2	1	2.45		1	3283.6	2.94%	-0.68%	0.00194592	0.00030292	-0.000767762	1/1/2004
3	1	2.54	\$0.00	1	3372.5	3.67%	2.71%	0.002645612	0.000270435	0.000845852	2/2/2004
4	1	2.36		1	3416.4	-7.09%	1.30%	0.003154543	5.70255E-06	-0.000134123	3/1/2004
5	1	2.23		1	3407.7	-5.51%	-0.25%	0.001630862	0.000173596	0.000532082	4/1/2004
6	1	1.93	\$0.00	1	3456.9	-13.45%	1.44%	0.014358828	1.45073E-05	-0.000456407	5/3/2004
7	1	2.01		1	3530.3	4.15%	2.12%	0.003153002	0.000112442	0.000595423	6/1/2004
8	1	2.04		1	3546.1	1.49%	0.45%	0.000877711	3.78657E-05	-0.000182305	7/1/2004
9	1	1.79	\$0.00	1	3561.9	-12.25%	0.45%	0.011631234	3.81115E-05	0.000665795	8/2/2004
10	1	1.77		1	3674.7	-1.12%	3.17%	1.24442E-05	0.000442658	7.42195E-05	9/1/2004
11	1	1.81		1	3786.3	2.26%	3.04%	0.001391267	0.000389698	0.000736325	10/1/2004
12	1	2.06	\$0.00	1	3942.8	13.81%	4.13%	0.023354676	0.000942747	0.004692285	11/1/2004
13	1	1.86		1	4053.1	-9.71%	2.80%	0.006787545	0.000300884	-0.001429077	12/1/2004
14	1	2.11		1	4106.7	13.44%	1.32%	0.02223362	6.73608E-06	0.000386998	1/3/2005
15	1	2.03	\$0.00	1	4156.5	-3.79%	1.21%	0.000538884	2.24243E-06	-3.47622E-05	2/1/2005
16	1	1.91		1	4100.6	-5.91%	-1.34%	0.001972468	0.000579744	0.001069358	3/1/2005
17	1	1.66		1	3943.1	-13.09%	-3.84%	0.013499938	0.002404732	0.005697695	4/1/2005
18	1	1.68	\$0.00	1	4070.4	1.20%	3.23%	0.00071551	0.000468947	0.000579255	5/2/2005
19	1	1.66		1	4229.9	-1.19%	3.92%	7.81794E-06	0.000815462	7.9845E-05	6/1/2005
20	1	1.66		1	4346.7	0.00%	2.76%	0.000216114	0.000288453	0.000249677	7/1/2005
21	1	1.55	\$0.00	1	4413.5	-6.63%	1.54%	0.002658871	2.24575E-05	-0.000244359	8/1/2005
22	1	1.57		1	4592.6	1.29%	4.06%	0.000761983	0.000897062	0.000826768	9/1/2005
23	1	1.5		1	4412.7	-4.46%	-3.92%	0.000893123	0.002480116	0.001488304	10/3/2005
24	1	1.57	\$0.00	1	4583.6	4.67%	3.87%	0.003765968	0.000789614	0.001724431	11/1/2005
25	1	1.58		1	4708.8	0.64%	2.73%	0.000443955	0.000278413	0.000351572	12/1/2005
26	1	1.68		1	4880.2	6.33%	3.64%	0.006082746	0.000664138	0.002009922	1/2/2006
27	1	1.7	\$0.00	1	4878.4	1.19%	-0.04%	0.000707857	0.000120954	-0.000292605	2/1/2006

28	1	1.9		1	5087.2	11.76%	4.28%	0.017515961	0.001035029	0.004257879	3/1/2006
29	1	1.77		1	5207	-6.84%	2.35%	0.002885863	0.000166933	-0.000694079	4/3/2006
30	1	1.63	\$0.00	1	4972.3	-7.91%	-4.51%	0.004146745	0.003102823	0.003587007	5/1/2006
31	1	1.5		1	5034	-7.98%	1.24%	0.004231995	3.16731E-06	-0.000115776	6/1/2006
32	1	1.66		1	4957.1	10.67%	-1.53%	0.014730067	0.000671078	-0.003144046	7/3/2006
33	1	1.57	\$0.00	1	5079.8	-5.42%	2.48%	0.001561518	0.000199468	-0.000558098	8/1/2006
34	1	1.74		1	5113	10.83%	0.65%	0.015124345	1.67556E-05	-0.000503406	9/1/2006
35	1	1.83		1	5352.9	5.17%	4.69%	0.004412275	0.001317005	0.002410599	10/2/2006
36	1	2.12	\$0.00	1	5461.6	15.85%	2.03%	0.029988114	9.36579E-05	0.001675895	11/1/2006
37	1	2.29		1	5644.3	8.02%	3.35%	0.009004017	0.000520875	0.002165633	12/1/2006
38	1	2.54		1	5757.7	10.92%	2.01%	0.015344056	8.95297E-05	0.001172071	1/2/2007
39	1	2.63	\$0.00	1	5816.5	3.54%	1.02%	0.002513407	1.73587E-07	-2.08877E-05	2/1/2007
40	1	2.58		1	5978.8	-1.90%	2.79%	1.85812E-05	0.000298402	-7.44625E-05	3/1/2007
41	1	2.7		1	6158.3	4.65%	3.00%	0.003746964	0.000376116	0.001187136	4/2/2007
42	1	2.63	\$0.00	1	6341.8	-2.59%	2.98%	0.000126003	0.000367417	-0.000215164	5/1/2007
43	1	2.46		1	6310.6	-6.46%	-0.49%	0.0024938	0.000241765	0.000776475	6/4/2007
44	1	2.33		1	6187.5	-5.28%	-1.95%	0.001455019	0.000908173	0.001149526	7/2/2007
45	1	2.1	\$0.00	1	6248.3	-9.87%	0.98%	0.007057953	6.44466E-07	6.74434E-05	8/1/2007
46	1	2.27		1	6580.9	8.10%	5.32%	0.009149535	0.001814882	0.004074963	9/3/2007
47	1	2.2		1	6779.1	-3.08%	3.01%	0.000260376	0.000379798	-0.000314469	10/1/2007
48	1	2.21	\$0.00	1	6593.6	0.45%	-2.74%	0.000370419	0.001443435	-0.000731215	11/1/2007
49	1	2.1		1	6421	-4.98%	-2.62%	0.001230111	0.001354678	0.001290893	12/3/2007
50	1	1.49		1	5697	-29.05%	-11.28%	0.076052055	0.015223629	0.034026288	1/2/2008
51	1	1.34	\$0.00	1	5674.7	-10.07%	-0.39%	0.007390896	0.00021151	0.0012503	2/1/2008
52	1	1.24		1	5409.7	-7.46%	-4.67%	0.003591131	0.003286448	0.003435414	3/3/2008
53	1	0.83		1	5657	-33.06%	4.57%	0.099820827	0.001230966	-0.011084949	4/1/2008
54	1	0.84	\$0.00	1	5652.7	1.20%	-0.08%	0.00071551	0.000129713	-0.000304649	5/1/2008