(e) agreed the 2002 unit costs provided to management reporting systems for either airline.

63. The unit costs applied within the modelling for each airline are shown in the table below (shown in NZD). **[CONFIDENTIAL]**

64. **[CONFIDENTIAL]**

65. **[CONFIDENTIAL]**

66. **[CONFIDENTIAL]**

[CONFIDENTIAL TABLE]

67. Both airlines consider that the 2002 financial results as recorded best reflect cost expectations for the future.

68. Comparison to costs before 2001 is not possible due to changes in systems (reporting formats since that time). We have, however, compared the 2002 costs to the prior year.

69. The results of this analysis are summarised at Appendix 3. While we have observed a number of large movements in individual account lines between the two years, our analysis suggests that these primarily occur on routes or aircraft with a limited number of departures or which have experienced a significant increase or decrease in capacity. Further, Air New Zealand also advised that some variances will also be attributable to changes in reporting systems and structures.

70. We have also substituted 2001 unit costs into the Model, holding other inputs constant to determine the impact on key outputs. The net benefits under this scenario are shown at Appendix 4 and are not materially different to those results forecast assuming a 2002 cost base.

Comparison of Air New Zealand and Qantas Unit Costs

71. We have also compared historical unit costs between the Alliance parties. We have restricted our analysis to the Tasman, Domestic and Long Haul Pacific routes as these represent the routes Qantas has historically provided services to.

72. We have discussed with representatives of both airlines the material unit cost differences we have identified. The following items were identified as major areas contributing to cost differentials between the airlines:

(a) Labour rates for flight crew, cabin crew and ground staff are higher for Qantas than Air New Zealand, which is consistent with general wage trends between Australia and New Zealand;

(b) Engineering and maintenance costs are dependent on aircraft age. Air New Zealand operates a fleet that is, on average, younger than the Qantas fleet. Additionally, both airlines allocate their maintenance costs pools based on different drivers, although both approaches adopted are reasonable;

(c) Qantas has significantly higher distribution costs than Air New Zealand. During the 2002 year Air New Zealand introduced new commission structures which are lower than those paid by Qantas and in some cases (eg. Domestic New Zealand) there are zero commissions; and

(d) Allocation of costs within multi-sector flights such as Auckland – Sydney – Los Angeles. Both airlines have attempted to split costs consistently to the appropriate sector, but there may be some offsetting differences between the two.

Impact of September 11 2001 Terrorist Attacks on Historical Results

73. As a further test of the use of the 2002 cost information for the base year inputs, we discussed with both airlines the September 11 terrorist attacks and attempted to quantify if there was any impact on financial performance.

74. Typically for both airlines, the second and third quarters (October – March) are similar in performance terms and the strongest quarters of the year. Following September 11, both airlines observed significant reductions in revenue levels and passenger numbers during the second quarter of 2002. This impact was, however, significantly less pronounced than that felt by some European and North American carriers. With costs such as crew and landing rights being negotiated several months in advance, cost reductions in all areas could not be immediately implemented to offset declining revenues, although certain rationalisations were made.

75. Third quarter results were, however, strong as a portion of traffic displaced in the later half of 2001 travelled in early 2002. Additionally, fuel prices dropped in the second half of the 2002 financial year, reflecting price reductions because of a decline in global demand as airlines worldwide reduced services.

76. Following our discussions with both airlines we obtained quarterly results for Air New Zealand for the 2002 year and substituted third quarter results with those reported for the second quarter. We also examined 2001 quarterly results provided by Air New Zealand on a route group basis and observed similar performance levels across the two quarters. Therefore, we consider it reasonable to adjust the reported 2002 results as described above.

[CONFIDENTIAL TABLE]

77. The table above details the adjusted Air New Zealand unit costs. On comparison with the unadjusted 2002 costs, there appears to be only marginal impacts resulting from September 11. We, therefore, are of the opinion that the 2002 actual costs provide a reasonable basis for net benefit quantification.

78. Additionally, as part of our analysis we reviewed the appropriateness of the allocation of individual cost lines against the passenger, block hour and departure drivers. We obtained allocation methodologies documentation from both airlines and overall these were consistent with the allocations adopted for modelling purposes. While some costs have mixed cost drivers, the allocations utilised by NECG form a reasonable basis to utilise in deriving costs on a "bottom up" basis.

Average Passenger Revenue

79. Average passenger revenue is a key input to the Cournot calculation and directly influences the Model outputs and each market airlines' marginal cost function.

80. For the purposes of the modelling undertaken by NECG, average passenger revenue has been calculated on a city pair basis from 2002 passenger and revenue data supplied by both airlines. This does not reflect the average city pair fare as it is not feasible to obtain revenue data for all competing airlines on each route. However, on a substantial number of routes, Air New Zealand and Qantas combined command a majority market share position.

81. Each city pair passenger fare has been calculated as a passenger weighted average of both airlines average 2002 year fare. In the case of domestic New Zealand city pairs, a discount of 20% has been applied to the average fare, reflecting the current fare structure marketed by Air New Zealand's VBA+ offering NZ Express and matched by Qantas NZ. In light of the threat of VBA entry on domestic and Tasman routes we consider the discount applied to be reasonable.

82. Overall, given the volatile and uncertain nature of the aviation industry it appears reasonable to assume recent price levels are probably as good a benchmark as any for modelling purposes. Additionally, the majority of market commentary suggests that with the potential for VBA entry, FSAs are likely to ensure they maintain competitive pricing structures. Sensitivities we have performed surrounding price are included in Section VI.

VBA Cost Differential

83. NECG assumes that under the factual scenario, VBA entry occurs on both the Tasman and domestic New Zealand routes. More specifically, under the factual scenario VBA entry is expected to occur on the Tasman in the first year. For domestic New Zealand, it is assumed that VBA entry occurs in the second year of the Alliance.

84. Under the counterfactual scenario, NECG have assumed that VBA entry would only occur on the Tasman. This commences in year 1, with entry forecast to be at a lower level than expected under the factual scenario. Variations to these VBA assumptions have been considered by NECG as sensitivity tests, which we have not examined.

85. Typically, VBAs have been able to enter aviation markets with substantially lower cost structures than their full service counterparts. Analysis, including that undertaken by NECG and both alliance airlines, suggests that VBAs are capable of producing a significantly lower cost base by:

    (a) operating a single model aircraft fleet;

    (b) operating a single cabin class;

    (c) reducing passenger in-flight services and eliminating passenger lounges;

    (d) avoiding the legacy of industrial relations agreements that affect incumbent airlines, focusing on short-haul routes (with potentially low turnaround times);

    (e) offering a more limited range of fare options; and

    (f) using ticket-less booking systems.

86. The VBA schedules were determined though consultation with both airlines at the time the counterfactual and factual schedules were developed. In these discussions, the recent statements made by Virgin Blue with regard to their expansion onto the Tasman and domestic New Zealand routes was considered. It is assumed that the VBA would operate a single aircraft type (Boeing 737), consistent with the current VBA business models.

87. It is difficult to determine (and little empirical evidence exists) the exact cost savings a VBA may achieve when compared to a FSA. Aircraft seat configurations and sector lengths differ and VBAs generally only offer single route, rather than network services. Market observers believe the cost differential between VBA airlines and FSAs may be anywhere between 10% and 40% dependent on the airlines being compared. In light of the available information and following discussions with the respective Alliance parties, NECG has assumed a VBA entrant is likely to have unit costs 20% lower than those of Air New Zealand and Qantas.

88. Utilising the 20% cost differential and the forecast VBA schedules, the NECG modelling forecasts that it is likely to prove profitable for a VBA entrant to expand onto the Tasman and domestic New Zealand routes under both scenarios.

89. We consider the assumption that a VBA entrant will likely face significantly lower unit costs than existing FSA operators is valid for a number of reasons. Firstly, history has shown that VBA entrants target only the most profitable routes when entering a new market. Both Alliance airlines provide a comprehensive network service and consequently operate a far more diverse fleet to manage network demands. This brings added maintenance and other costs that are unlikely to be incurred by a VBA. Further, servicing only a narrow range of city pairs requires lower levels of investment in infrastructure.

90. Secondly, NECG has been provided with schedules by both airlines that a VBA entrant would operate all routes with a Boeing 737 aircraft with a capacity of 180 seats on Tasman flights and 144 seats on domestic New Zealand flights. This contrasts to Air New Zealand which currently operates Boeing 737-300 aircraft on the Tasman with a capacity of 114 seats. This assumption appears reasonable in that Virgin Blue, the most likely VBA entrant, currently operates a mixed fleet in the domestic Australian market dominated by the Boeing 737-800, capable of carrying 189 passengers in a one class seating configuration.

91. Thirdly, the VBA is assumed to have a higher seat capacity than Air New Zealand's full service operation.

92. As a result, the NECG models assume that the average cost per seat operated by a VBA will be significantly below the average cost per seat operated by Air New Zealand. The VBA entrant's unit costs are estimated using Air New Zealand's 2002 unit costs reduced by a discount factor of 20%.

93. Air New Zealand has some limited financial information which suggests that it has achieved a 7.5% reduction of its cost base through its recent move to a VBA+ structure in the New Zealand domestic market. This is taken up in NECG's modeling and forecasts.

94. We consider that the 20% cost differential applied is reasonable based on the evidence available. Each market and carrier has unique characteristics which make it difficult to ascertain what a general VBA / FSA unit cost differential is. We note that it is generally accepted in the industry that VBAs operate with a lower average unit cost than an FSA and the estimate utilised by NECG lies in the middle of the range put forward by the Alliance parties. Further, as our sensitivity analysis (below) indicates that the effect of the VBA cost differential does not materially impact the key outputs of the Model, this factor does not warrant further consideration.

Elasticities – Capacity & Demand

95. A fundamental assumption underlying the Cournot model is that competing firms use output rather than price as their main strategic variable. Two key inputs influencing the outputs derived by the Cournot model are:

(a) capacity elasticity of demand; and

(b) price elasticity of demand.

Capacity Elasticity of Demand

96. Capacity elasticity of demand measures the responsiveness of quantity demanded to a change in capacity.

97. Base case passenger volumes, for each city pair operated by the Alliance, were calculated by taking the average load factors recorded in the 2002 financial year applied to 2002 northern winter operating schedules.

98. NECG then incorporated a capacity elasticity of demand function into the Cournot model to determine the effect of an increase in capacity alone. Based on available research, NECG estimated capacity elasticity of demand at 0.125, i.e. under both the factual and counterfactual scenarios, a 10.00% change in capacity is anticipated to alter base case passenger volumes by 1.25%.

99. NECG has applied an average of the range presented by Gillen, Harris and Oum in their 1997 report titled "Assessing the benefits and costs of international air transport liberalisation." This report is one of the pre-eminent studies on the relationship between capacity changes and the passenger reactions. In the absence of any specific research into capacity elasticity of demand in the local markets, we consider NECG's approach to be reasonable and analogous to that which we would use in similar circumstances.

Price Elasticity of Demand

100. Price elasticity of demand is a measure of the responsiveness of passenger demand to a change in price, with all other factors held constant.

101. As noted by NECG, one of the limitations of the Cournot model is that for each city pair a single average retail price is derived. In reality, the pricing of airline tickets is complex, with airline pricing strategies producing a wide range of fare structures for any flight which reflect a range of competing objectives.

102. Following discussions with both airlines, NECG adopted the price elasticity of demand of – 0.70 for business customers and –1.65 for leisure customers. Business price elasticity is relatively inelastic compared to estimated price elasticity for leisure passengers and in both cases a price increase will cause a corresponding decline in passenger volume.

103. NECG then calculated a single price elasticity estimate, weighting the business and leisure estimates by the relative passenger share split. The resulting single elasticities by city pair range between –1.0 and –1.6. A weighted average elasticity approach appears reasonable based on the structure of the Cournot model, where the type of passenger and fare is not differentiated on each city pair.

Price Elasticities

104. Air New Zealand applies the same factors for internal purposes as those applied by NECG. Qantas, in turn, applies a single elasticity factor for Tasman and domestic New Zealand ranging between –1.2 and –1.4. On Auckland/Los Angeles an elasticity of –1.6 is used as this particular route is almost entirely leisure travellers and for this reason Qantas will only operate a two class service commencing 2003.

105. Neither airline could provide any empirical evidence to support the 'price elasticities' used.

106. We therefore examined the information publicly available from the Australian Bureau of Transport and Regional Economics ("BTRE"). The BTRE operates within the Australian Department of Transport and Regional Services and provides transport information and analysis to the Government and community. The BTRE maintains a Transport Elasticities Database ("the Database") that documents elasticities (as a result of their own research and that of others) for all types of transport. Some of the findings on the Database which appear relevant are:

Source: BTE (1986, table 4.2, page 35)	**Price Elasticity**
Australia Domestic Air Routes:	
Short Haul (<800km)	-0.55
Medium Haul (800 – 1700km)	-0.73
Long Haul (>1700km)	-0.82
'Summer Holiday'	-1.45
'Winter Holiday'	-2.37

Source: Nairn & Hooper (1992, pg 59)	**Price Elasticity**
Australia:	
Regional	-0.1 to –1.3
Leisure	-2.3

Source: BTCE (1988, pg 88)	**Price Elasticity**
New Zealand Leisure Travellers (to Australia)	-1.33
New Zealand Business Travellers (to Australia)	-0.56

107. We have also reviewed research and other material providing price elasticity estimates in the United Kingdom ("UK") and United States of America ("US") Results of some of these studies are detailed below:

Source: CAA recommendations to the Competition Commission, 2002, Annex pg 7	**Price Elasticity**
Vacation Travellers	-1.2
Non-vacation Travellers	-0.2

Source: Oum (1990, pg 14)	Price Elasticity (mid point forecast likely range)	Price Elasticity
Most Likely Range:		
Vacation Travellers	-1.9	-1.10 to – 2.70
Non Vacation Travellers	-0.8	-0.40 to – 1.20

108. The various studies and reports we have reviewed provide a wide range of price elasticity estimates. This diversity reflects a number of factors, including:

(a) the characteristics of the market being studied;

(b) the time period reviewed; and

(c) the definition of the variables used.

109. Further, many of the studies are quite old.

110. Studies reviewing the impact of the entrance of VBAs such as PeoplExpress in the 1980's and in more recent times Southwest Airlines indicate that the introduction of deeply discounted fares can be very price elastic.

111. We have insufficient hard data to form a definitive view on the appropriate level of price elasticity of demand for present purposes. However, the CAA recommendations to the UK Commerce Commission:

(a) represent the most recent available conclusions; and

(b) were based on a number of different studies (although we recognise that they were probably not studies of the Australian/New Zealand markets);

and we would tend to weight any judgment of appropriateness of elasticities towards the levels recommended by the CAA.

112. Accordingly, and based on the information available to us as discussed above, the price elasticities which NECG applied appear to fall within a reasonable range. We have, however, extended the sensitivity tests to cover a wider range of sensitivities as the variation of ± 0.2% applied by NECG appears small considering the range of possible outcomes.

113. Our sensitivity analysis is detailed in Section VI of this report.

Business/Leisure split

114. Where available, NECG has applied business/leisure splits for each city pair based on Air New Zealand's own historical records for each city pair for the 2002 year. Qantas has confirmed that they have undertaken passenger surveys on trans Tasman routes indicating that on average between 25% and 29% of passengers are travelling for business related purposes. Where no data was available, for a city pair, NECG assumed the split to be 85% leisure and 15% business.

115. A comparison of Air New Zealand's International Statistics with arrival card statistics for New Zealand and Australia is:

	Air NZ Historical Splits %	Splits from Arrival Cards	
		NZ %	Australia %
Business	15 – 39	13	18
Leisure	61 - 85	87	82

116. Given the above, we have no reason to doubt the reasonableness of the Air NZ information used.

Natural Market Growth

117. NECG have assumed that there will be no change in the number of airlines that currently operate on routes affected by the proposed Alliance, excluding a VBA entrant. It is assumed that level of capacity operated by these airlines will increase at the same rate as natural market growth.

118. Natural market growth is assumed in the Model to occur at the following annual rates during the five year period:

Natural Passenger Market Growth	Annual Growth Rate
Tasman	4.4%
Short-Haul Pacific	5.0%
Long-Haul Pacific	4.0%
Atlantic	4.0%
Asia (including Japan)	8.0%
Domestic	3.4%

119. Annual natural growth factors were taken from a recent Tourism Forecasting Analysis undertaken by Covec Limited on behalf of the Tourism Research Council of New Zealand. This piece of research uses standard econometric forecasting to model the future number of international visitor arrivals from New Zealand's 22 largest inbound markets.

120. We have reviewed this report and consider the natural growth factors taken from it and utilised by NECG represent the most reliable estimate of future passenger growth in the New Zealand aviation market.

121. The natural growth factors are applied to both the factual and counterfactual scenarios. NECG has tested the sensitivity of model outputs to a ± 2% change in growth rates.

Capacity/Market Share Assumptions

122. As described earlier, each airline had provided to NECG a counterfactual schedule representing their forecast flight schedule in the absence of an alliance. The counterfactual schedule used by NECG assumes other airlines will continue to operate existing city pairs.

123. We have been advised by both airlines that the counterfactuals presented by them represent existing operations adjusted in response to increased and more extensive competition, which is often reflected by large increases in capacity, and to minimise losses associated with operating a global network.

124. The factual schedule provided to NECG represents the combined operations of the two airlines in the situation where an alliance eventuates. This schedule assumes co-ordination of flight operations including scheduling and pricing.

125. For Cournot modelling purposes the following assumptions are made:

(a) Each airline's market share is equivalent to its relative capacity share; and

(b) Local factors across competing airlines are equal.

126. As a reasonableness check of the schedules provided, we have compared the average daily block hours flown by aircraft class for each airline's fleet. The following tables detail the comparison and indicate that based on flying hours the schedules appear reasonable and largely consistent between the two.

[CONFIDENTIAL TABLE]

127. Additionally, we have compared profitability based on Cournot outputs of each airline under both scenarios prior to benefit sharing and compared these to independent forecasts prepared by each airline. Recognising the Cournot model is not structured to capture and model profitability the comparisons undertaken do not suggest inconsistencies.

128. Overall, we consider the flight schedules represent a reasonable estimate of forecast operations given the fleet assumptions, although we recognise that schedules will constantly change to reflect market demand and we consider the impact of change in capacity within our sensitivity analysis.

Tourism Spend

129. A key driver of total tourism benefits is the assumed tourist spend per additional passenger.

130. TFI on behalf of the applicants has calculated the forecast tourist spend for visitors to Australia and New Zealand based on forecasts prepared on behalf of Tourism Research Council New Zealand and the Australian Bureau of Tourism Research, with the exception of New Zealand travellers to foreign destinations.

131. This value has been based on the relative spend of inbound vs outbound Australian travellers applied to the forecast spend of inbound travellers to New Zealand. This approach appears reasonable in the absence of reliable historical or forecast data.

132. As the estimates provided to NECG have been prepared in 2002 by tourism experts, our review has been limited to confirmation of the forecasts and we have no reason to consider that the estimates are unreasonable. We have considered the impact of changes in tourist spend within our sensitivity analysis.

Time Valuation

133. A significant benefit likely to result under the proposed Alliance is for schedule changes. The rationalisation of services and co-ordination of flight schedules is forecast to achieve benefits as a result of:

(a) improved flight frequency;

(b) enhanced connectivity; and

(c) new direct flights on four city pairs.

134. These benefits have been determined by calculating the time savings associated on a city pair basis, associated with the improved services and valuing this time benefit.

135. This approach is consistent with methods usually adopted in transportation planning.

136. NECG has estimated the value of time as NZ$23 per hour for leisure passengers and NZ$115 per hour for business passengers. We have reviewed several international studies which indicate that, adjusting for foreign exchange differences, the time values applied by NECG lie within a reasonable range.

V Model Testing

137. We received the following five final economic analysis models on 11 December 2002:

    (a) '021209 Vanilla Model – Year 1.xls';

    (b) '021209 Vanilla Model – Year 2.xls';

    (c) '021209 Vanilla Model – Year 3.xls';

    (d) '021209 Vanilla Model – Year 4.xls'; and

    (e) '021209 Vanilla Model – Year 5.xls'.

138. We have performed the following in respect of each model received, with particular focus on the Year 1 model as we have been advised by NECG that calculations and formulas within each model are based on a generic template:

    (a) checked sheets in the Model for consistent formula repetition, where appropriate, across columns and down rows;

    (b) identified hard coded entries in cells not clearly identified as input cells, and determined their purpose and effect;

    (c) reviewed the Cournot model calculations contained in the Model and traced the base assumptions; and

    (d) reviewed the construction and logic of the worksheets.

139. During our review we have performed a check of each of the key inputs within the Model, a sample check of the internal calculations of the Model and reviewed the reasonableness of the outputs. Further, we have performed sensitivity analysis on the key drivers of the Model. This analysis is documented in section VI.

140. In our review, we have examined all available historical information provided by both airlines. Where historical results have been directly used in the Model, we have examined historical trends and discussed our observations and the comparability and suitability of historical performance with personnel from the respective airlines.

141. Each of the inputs relied upon within the Model or the Alliance net benefit analysis has been traced to source documents where possible. These have largely been provided by Air New Zealand and Qantas.

142. Where possible all other input data has been verified against external sources.

143. Additionally, we have stress tested key inputs within the Model by substituting these for extreme values. We did not note any exceptions during this testing.

VI Model Outputs

144. The key benefits of the Model are summarised in the table below. The net benefits shown have been discounted post year 1 at a rate of 6%.

	Benefits (NZD)						Detriments (NZD)		Net Benefit
	Cost Savings	Scheduling	Direct Flights	Tourism	Engineering	Freight	Dead Weight Loss	Net Transfer	(NZD)
Year 1	$6	$22	$0	$100	$39	$2	$78	-$14	$105
Year 2	$154	$9	$14	$221	$37	$0	$28	$1	$406
Year 3	$289	$4	$16	$217	$35	$5	$49	-$19	$536
Year 4	$272	$4	$15	$203	$33	$5	$48	-$27	$510
Year 5	$257	$3	$15	$189	$31	$5	$47	-$26	$478
Total	**$978**	**$41**	**$60**	**$931**	**$174**	**$15**	**$250**	**-$84**	**$2,035**

Discrepancies in figures due solely to rounding issues

145. The critical outputs from the Cournot model are price and passenger levels for each city pair. On a route group basis, these are shown in the following table for the counterfactual and factual scenarios. The price for each route group is a passenger weighted average of each of the city pairs.

	Counterfactual Scenario					Factual Scenario					Variance				
Route	Year 1	Year 2	Year 3	Year 4	Year 5	Year 1	Year 2	Year 3	Year 4	Year 5	Year 1	Year 2	Year 3	Year 4	Year 5
	Average Fare (NZD)					Average Fare (NZD)					Average Fare (NZD)				
Tasman	$292	$279	$286	$287	$288	$291	$288	$296	$296	$299	-0.3%	3.3%	3.2%	3.2%	3.8%
Domestic	$132	$132	$131	$131	$132	$141	$128	$126	$128	$130	6.3%	-2.8%	-3.7%	-2.5%	-1.1%
Short Haul Pacific	$284	$283	$281	$284	$288	$288	$289	$288	$290	$291	1.4%	2.1%	2.5%	1.9%	1.2%
Asia	$1,041	$1,051	$1,052	$1,063	$1,077	$1,036	$1,042	$1,030	$1,040	$1,054	-0.4%	-0.8%	-2.1%	-2.1%	-2.1%
Atlantic	$686	$686	$686	$686	$686	$686	$686	$686	$686	$686	0.0%	0.0%	0.0%	0.0%	0.0%
Long Haul Pacific	$1,062	$1,062	$1,063	$1,063	$1,064	$1,067	$1,068	$1,098	$1,099	$1,100	0.5%	0.5%	3.2%	3.3%	3.4%
	Passengers (000s)					Passengers (000s)					Passengers (000s)				
Tasman	4,491	4,967	5,134	5,335	5,544	4,403	4,685	4,822	5,027	5,225	-2.0%	-5.7%	-6.1%	-5.8%	-5.8%
Domestic	4,213	4,370	4,527	4,662	4,803	3,422	4,203	4,378	4,506	4,639	-18.8%	-3.8%	-3.3%	-3.3%	-3.4%
Short Haul Pacific	851	894	942	985	1,031	810	848	892	933	977	-4.9%	-5.2%	-5.3%	-5.3%	-5.2%
Asia	1,228	1,327	1,440	1,547	1,662	1,232	1,327	1,441	1,548	1,663	0.3%	0.1%	0.1%	0.0%	0.0%
Atlantic	1,437	1,493	1,552	1,613	1,676	1,437	1,493	1,552	1,613	1,676	0.0%	0.0%	0.0%	0.0%	0.0%
Long Haul Pacific	2,852	2,967	3,082	3,194	3,310	2,828	2,938	2,895	3,002	3,112	-0.8%	-1.0%	-6.1%	-6.0%	-6.0%

146. The outputs overall appear logical and as expected price rises are supported by corresponding declines in passengers. On a number of limited city pairs a large change in capacity stimulates new passenger demand that outweighs the price impacts on passenger levels. As these results appear counter intuitive, we have tested the Model output by eliminating the capacity effect (by setting capacity elasticity to zero) and observed results that are consistent with the price movement.

Model Sensitivity Analysis

147. In order to assess the impact of changes in the key drivers of the Model outputs, we have conducted sensitivity analysis on the following factors:

(a) unit costs;

(b) average revenue;

(c) counterfactual and factual flight schedules;

(d) capacity and price elasticity;

(e) VBA vs FSA cost differential;

(f) business, leisure passenger split; and

(g) average tourist spend.

148. In each case, we have determined the impact on net benefits of a given change in the variable under consideration.

149. The following table summarises our sensitivity testing:

Sensitivity Analysis	Variable Adjustment/Value		Net Benefits (NZD)	
Variable Adjusted	Lower	Upper	Lower	Upper
Actual Leisure Price Elasticity }	-0.2	-1.2		
Actual Business Price Elasticity }	-0.8	-2.4	**1,694**	**2,120**
Actual Capacity Elasticity	0.05	0.2	**2,014**	**2,055**
Change in Average Fare	+10%	-10%	**2,018**	**2,051**
Actual VBA Discount	10%	30%	**1,984**	**2,084**
Change in Alliance Airline Factual Flight Schedule Capacity	10%	-10%	**1,070**	**2,992**
Change in Alliance Airline Counterfactual Flight Schedule Capacity	-10%	10%	**1,008**	**3,061**
Change in Alliance Airline Factual & Counterfactual Schedules	-10%	10%	**1,966**	**2,097**
Change in Business/Leisure Split	20%	-20%	**2,011**	**2,053**
Change in Average Tourist Spend	-20%	20%	**1,838**	**2,231**

150. Further, in order to analyse the sensitivity of model outputs to changes in the key input drivers and identify transaction critical assumptions and inputs, we have applied Decision Programming Language ("DPL") software to the outputs generated by the five annual models. A tornado diagram showing the relative sensitivity of net benefits to a +/-10% movement in the underlying input variables is shown at Appendix 5.

PRICEWATERHOUSECOOPERS

VII Summary & Conclusions

151. As instructed, we have:

(a) reviewed the methodology applied by NECG;

(b) reviewed material input assumptions to the Models; and verified them to the extent described above;

(c) considered the reasonableness of the Models' outputs;

(d) tested the accuracy of the Models' operation.

152. We have not considered:

(a) the impact of any undertakings which may be provided by the Alliance Parties;

(b) NECG's sensitivity analysis;

(c) the reasonableness of expected increased tourism numbers; and

(d) the reasonableness of the discount rate applied.

153. We have relied on Qantas' assessment that the Alliance will provide the necessary economic and commercial incentives for Qantas to place its Engineering and Maintenance work with Air New Zealand.

154. Subject to the foregoing comments, we confirm that:

(a) nothing has come to our attention to suggest that the Models used are not reliable or appropriate for their purposes;

(b) nothing has come to our attention to indicate that the inputs applied to the Models are not reasonable for their intended purpose; and accordingly;

(c) we have no reason to consider that the calculations supporting NECG's conclusions are not reliable.

Yours faithfully

E Lucas

ERIC LUCAS