



**VISITOR
SOLUTIONS**



**TRACTION
—ROOM—**

SOUTHERN RAIL TOURISM PASSENGER SERVICES PHASE TWO: SUMMARY BUSINESS MODEL ANALYSIS FINDINGS

**CONFIDENTIAL
JUNE 2019**

PREPARED FOR THE CANTERBURY MAYORAL FORUM

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EXECUTIVE SUMMARY.

As part of the Canterbury Economic Development Strategy (CREDS) programme, the Canterbury Mayoral Forum has requested a review of the potential for periodic rail passenger charter services, or a regular service offering on the Main South Line [MSL] between Christchurch and Invercargill. KiwiRail has indicated that they have no intention of running this service unless there is evidence to support a commercial proposition. The purpose of this project is to complete an indicative business justification case to determine whether there is potential and what the opportunity could be. The project was staged in two phases, the first of which is now complete. The methodology used to undertake the first phase of the project included a review of all available secondary data, site visits, interviews and analysis.

Initial research led to the project brief being refined to focus on catering for tourism services between Christchurch and Dunedin. Regular public passenger services were excluded on the grounds of competitiveness against other transport modes, while the Dunedin to Invercargill route was less desirable for operational and consumer demand reasons¹. The first phase of the study concluded:

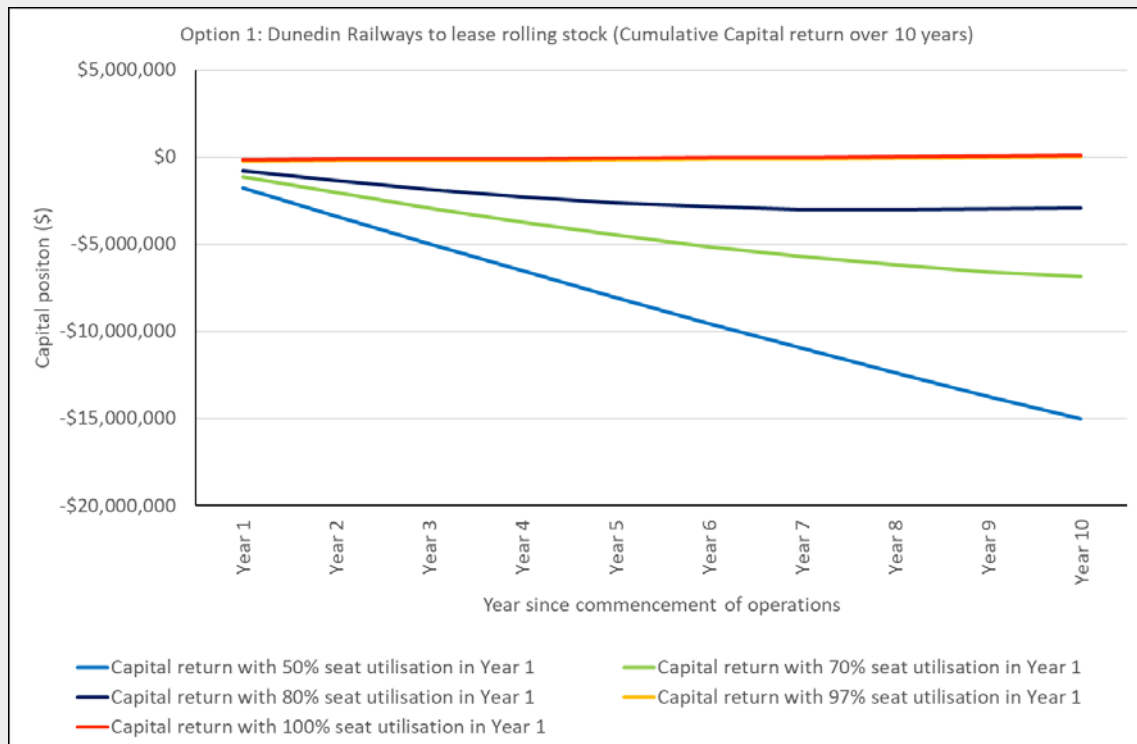
1. The concept of a South Canterbury tourist rail experience looked promising from a technical, operational and market demand perspective.
2. Dunedin Rail is a natural partner that brings significant benefits to the testing and potential implementation of the concept. Dunedin Rail is likely to be central to the concept's feasibility.
3. Timaru and Oamaru would potentially be the two main rail stops on route between Christchurch and Dunedin (with Timaru being the simplest option).
4. The 'loop' approach to the concept potentially brings many other industry players into consideration (which could assist higher visitation on the Christchurch to Dunedin rail leg).
5. Implementation is likely to be dependent on the use of a Silver Fern Railcar, either RM30 or RM18 (both owned by KiwiRail). RM18 would need to be made operational.
6. Critically KiwiRail could facilitate or terminate the concept given its central role in any development.

The second phase of the study, the preliminary financial analysis tested the proposition of using the Silver Fern Rail car for the service. The modelling concluded that the operation of a Silver Fern railcar service between Christchurch and Dunedin (with a stop in Timaru) was not operationally viable. The financial model indicates that the rail car does not have enough capacity (at the required ticket price) to be a viable proposition. In the unlikely scenario that 100% seat utilisation is achieved, the cumulative capital return over a 10 year period is calculated to be \$110k, however based on the level of assumptions required for the development of the model it cannot be considered to report to this level of accuracy. The cumulative capital return can therefore be treated as zero. A more realistic 70% seat utilisation presents a cumulative capital return loss of circa \$7m over the same 10 year period. In summary, a nearly 100% seat utilisation is required for the service offering to break even using the Silver Fern Rail Car.



IMAGE FROM GREAT JOURNEYS OF NZ WEBSITE

1. A Dunedin to Invercargill route could be explored at a later stage if required.



During the study it also became apparent that Kiwirail had alternative plans (potentially in the short term) for the railcar that it was leasing to Dunedin Railways. This highlights the difficulty of establishing a service without Kiwirail being a core partner.

Should the potential service be able to utilise engines (and carriages) other than the Silver fern rail car the financial model is likely to change for the better. Costs would be unlikely to increase significantly while capacity could be improved substantially, thus improving profitability. Achieving this would be dependant entirely on Kiwirail, given its control over so much of the required infrastructure.

The potential benefit of such a route for Kiwirail would be in facilitating the tourist loops outlined in the first phase of this study. These loops could assist patronage on Kiwirail's existing services, while also unlocking potential new revenue streams from partner organisations.

Dunedin Railways also has the potential to be a partner in some form in the future (even without utilisation of the Silver Fern railcar).

Based on the findings of the financial analysis it is recommended that:

1. Advancing any further investigation into a Christchurch to Dunedin rail service using a Silver Fern railcar should be ceased.
2. Dunedin Railways should be thanked for their assistance in the study and be informed of its findings. An indication of Dunedin Railways future interest in any new partnering opportunities should be tested.
3. Kiwirail should be approached and the information from this study shared to determine if they are interested in exploring potential partnering opportunities for the rail route.
4. If Kiwirail is interested, focus should be placed on:
 - Options that increase service capacity above that of a Silver Fern rail car,
 - Options that enable the development of the South Island tourist loops outlined in Phase One of the study.
5. Should the concept be advanced to the next stage with Kiwirail, a full market analysis and business case should be completed.



IMAGE BY PIXA BAY

1. INTRODUCTION.

PROJECT BRIEF AND METHODOLOGY

As part of the Canterbury Economic Development Strategy (CREDS) programme, the Canterbury Mayoral Forum has requested a review of the potential for periodic rail passenger charter services, or a regular service offering on the Main South Line [MSL] between Christchurch and Invercargill. KiwiRail has indicated that they have no intention of running this service unless there is evidence to support a commercial proposition. The purpose of this project is to complete an indicative business justification case to determine whether there is potential and what that opportunity could be. The project was staged in two phases, the first of which is now complete. The methodology used to undertake the first phase of the project included a review of all available secondary data, site visits, interviews and analysis.

Initial research led to the project brief being refined to focus on catering for tourism services between Christchurch and Dunedin. Regular public passenger services were excluded on the grounds of competitiveness against other transport modes, while the Dunedin to Invercargill route was less desirable for operational and consumer demand reasons². The first phase of the study concluded:

1. The concept of a South Canterbury tourist rail experience looked promising from a technical, operational and market demand perspective,
2. Dunedin Rail is a natural partner that brings significant benefits to the testing and potential implementation of the concept. Dunedin Rail is likely to be central to the concept's feasibility.
3. Timaru and Oamaru would potentially be the two main rail stops on route between Christchurch and Dunedin (with Timaru being the simplest option),
4. The 'loop' approach to the concept potentially brings many other industry players into consideration (which could assist higher visitation on the Christchurch to Dunedin rail leg).
5. Implementation is likely to be dependent on the use of a Silver Fern Railcar, either RM30 or RM18 (both owned by KiwiRail). RM18 would need to be made operational.
6. Critically KiwiRail could facilitate or terminate the concept given its central role in any development.

The second phase of the study, the preliminary financial analysis is outlined in this section and tests the proposition of using the Silver Fern Rail car for the service. The key findings from the analysis are set out in summary form together with an Appendix containing additional detail.



IMAGE FROM GREAT JOURNEYS OF NZ WEBSITE

2. A Dunedin to Invercargill route could be explored at a later stage if required.

2. ANALYSIS.

2.1 MODEL ASSUMPTIONS

a. Operational Assumptions

The cost model for the proposed service offering has been developed based on several high-level assumptions regarding the operation of the service:

- Dunedin Railways will operate the service using the Silver Fern rail car, currently on lease from Kiwirail.
- It is noted that Kiwirail have given notice to Dunedin Railways of their intention to take back the rail car for purposes unknown. It is assumed that the rail car will again be made available by Kiwirail to Dunedin Railways, either for purchase or for long term lease. The assumed costs for lease of the rail car are \$50,000 per year, whereas it is assumed that it would cost circa \$500,000 to purchase outright.
- The service can be operated under Dunedin Railway's existing Rail Safety Case.
- Owing to constraints around journey times and availability of platform space at Christchurch Station, the service would not be able to operate a same day return service. Therefore, the return journey between Christchurch and Dunedin would have to incorporate an overnight stop.
- Any refurbishments to Timaru Station required to bring it up to a standard that is appropriate will be borne by a combination of the local authority and the stations private owner, not Dunedin Railways. These costs have therefore been excluded.
- Where possible all other operational assumptions outlined in the model have been tested using multiple data sources. However, these figures remain estimates.

b. Market Assumptions

For the purpose of developing the cost model for the proposed service, a range of assumptions have been made regarding market conditions and levels of patronage for the service:

- The service will operate three return journeys per week between Dunedin and Christchurch and will operate for 52 weeks per year.
- The maximum number of passengers that can be accommodated on the Silver Fern rail car is 96.
- The average one-way ticket price upon commencement of the service will be \$100. This is comparable with similar scenic services (Coastal Pacific and Tranz- Alpine), making allowance for different fare types (starter, flexi etc).
- Passengers' on board spending in Year 1 is assumed to be an average of \$10.
- Activities would be offered to passengers when stopped in Timaru (estimated stop over is between 1 - 2 hours). Concessions paid to Dunedin Rail from these activities have been excluded from modelling at this preliminary stage.
- Ticket prices and the value of on-board purchases will be subject to annual price inflation of 1.9% in line with recent market observations.
- Annual demand growth of 3% will be observed.

2.2 FINANCIAL MODEL

The financial model for the proposed service offering has been developed based on a number of revenue scenarios, dependent on seat utilisation, and estimated operational and capital expenditure involved in delivering the service. The outputs of the model are, for each revenue scenario:

- Annual operating profit or loss for the first ten years of operation.
- Annual "Farebox" for the first ten years of operation. The farebox model is used for transit systems worldwide to measure the proportion of operating and capital expenditure that is covered by revenue from ticket sales. A farebox of 100% is where the operation is cash neutral, less than this would be an operating loss, greater than this would be an operating profit.
- Overall capital return over a 10-year period i.e. the value of establishment costs recovered from fare revenue.

The model has been developed for scenarios where Dunedin Railways would both lease and purchase the rolling stock from Kiwirail. In interpreting the results, it became apparent that the

lease model was more financially sustainable, both in terms of delivering improved returns to Dunedin Railways, but also in terms of mitigating the risk of a large capital outlay on an ageing asset (the railcars are approximately 50 years old). Furthermore, during informal discussions with Dunedin Railways during the preparation of the model, they suggested that they did not have much appetite for purchasing the rail car outright. For this reason, only the results for the option of leasing the rail car are presented in the body of this report. The full analysis for both options is however included in Appendix A.

2.2.1 Revenue

As discussed above, the revenue has been calculated based upon an average one-way ticket price of \$100 in the first year of operations, with an average on board spend of \$10 per passenger. Ticket prices and on-board revenue are assumed to be subject to market inflation of 1.9% per year. It is assumed that patronage will grow by 3% per year, up to the maximum capacity of the rail car.

The revenue has been assessed for seat utilisation values of 50%, 70%, 80%, 97% and 100%. The 97% was analysed as it was found that that was the minimum level of patronage required to break even after 10 years.

The revenue calculations for different seat utilisation values can be seen in Table 2.1 below:

Table 2.1: Estimated revenue for 10 years of operations.

	Y 1	Y 2	Y 3	Y 4	Y 5	Y 6	Y 7	Y 8	Y 9	Y 10
Ticket price + 2% inflation	\$100	\$102	\$104	\$106	\$108	\$110	\$113	\$115	\$117	\$120
On board spending per person plus 2% inflation	\$10	\$10	\$10	\$11	\$11	\$11	\$11	\$11	\$12	\$12
Revenue with 50% seat utilisation in Year 1	\$1.65m	\$1.74m	\$1.83m	\$1.93m	\$2.02m	\$2.13m	\$2.23m	\$2.34m	\$2.46m	\$2.59m
Revenue with 70% seat utilisation in Year 1	\$2.31m	\$2.42m	\$2.54m	\$2.67m	\$2.81m	\$2.95m	\$3.10m	\$3.26m	\$3.43m	\$3.60m
Revenue with 80% seat utilisation in Year 1	\$2.64m	\$2.77m	\$2.91m	\$3.06m	\$3.21m	\$3.38m	\$3.54m	\$3.73m	\$3.86m	\$3.94m
Revenue with 97% seat utilisation in Year 1	\$3.20m	\$3.36m	\$3.43m	\$3.50m	\$3.57m	\$3.64m	\$3.71m	\$3.78m	\$3.86m	\$3.94m
Revenue with 100% seat utilisation in Year 1	\$3.29m	\$3.36m	\$3.43m	\$3.50m	\$3.57m	\$3.64m	\$3.71m	\$3.78m	\$3.86m	\$3.94m

2.2.2 Costs - OPEX

The operating costs of the proposed service offering have been derived based upon 'cost per trip' figures obtained through informal liaisons with Dunedin Railways, regarding their existing charter services between Dunedin and Rolleston. These figures have been increased on a pro rata basis to allow for the final 20km (circa) leg between Rolleston and Christchurch. The figure used for the model was \$17,920 per return journey. This includes:

- running rights,
- on board staffing,
- routine maintenance and refuelling, and
- An additional \$200 and \$650 have been allowed for staffing of Christchurch Station and overnight accommodation for train crews in Christchurch.

An annual cost of \$50,000 has been allowed for lease of the rolling stock required to operate the service. This value would have to be verified by further negotiations with Kiwirail for continued use of the Silver Fern Rail Car, if these vehicles were offered back to Dunedin Railways in the future and if the proposal was to be advanced.

Further operational expenditure allowed for includes:

- travel agents' commission,
- marketing,
- ticketing,
- insurance,
- industry memberships,
- re-training of train drivers, and
- loss of revenue due to service disruptions.

The operational expenditure allowed for is summarised in Table 2.2 below. It should be noted that these are Year 1 figures and with the exception of the lease of rolling stock, are subject to 1.9% annual inflation.

Table 2.2: Estimated Annual OPEX in Year 1

Lease of rolling stock	\$50k
Running costs - based on Dunedin Charter Rates (per return journey)	\$18k (\$2.8m per year)
Christchurch Station staffing costs (per return journey)	\$200 (\$31k per year)
Dunedin Railways overnight staff costs (per return journey)	\$650 (\$100k per year)
Travel agents commission (Assume 25/75 split between agents and booking direct. Agent commission is 20%. Assume 5% of ticket revenue)	\$115k
Marketing Budget	\$100k
Ticketing (use existing Dunedin Railways forum)	\$20k
Insurance	\$20k
Industry memberships	\$10k
Loss of revenue due to service unavailability due to unplanned/ planned outage - allow 2 weeks per year	\$45k
Re-training/replacement of train drivers	\$7k every three years
Total OPEX in year 1	\$3.29m

Note: * Assumes that the operation is leveraging off Dunedin Rails existing advertising / marketing operations.

2.2.3 Costs - CAPEX

The capital cost associated with establishment of the proposed service have been estimated based on industry experience.

The largest capital outlay required, if the decision was taken to purchase rather than lease the rail car(s), would be procurement of rolling stock. A value of circa \$500,000 has been assumed for this cost (which is only used in the models in the Appendix A). This would have to be verified by further discussion and negotiation with Kiwirail, should the option be pursued further.

The remaining capital expenditure is summarised in Table 3 below:

Table 3: Estimated CAPEX to establish the service

Refurbishment of Timaru Station - to be funded by local council/private owner	\$0
Agreement of interface with other network operations	\$50,000
Set up of access rights (from Kiwirail)	\$10,000
Modifications to Dunedin Railways ticketing forums	\$20,000
Advertising, PR campaigns, travel expos	\$50,000
Training of existing train drivers to operate Rolleston to Christchurch	\$4,800
Training of additional train drivers, \$6,900 each driver. Assume two additional drivers required.	\$13,800
Total Establishment Cost	\$148,600

Note: * Assumes that the operation is leveraging off Dunedin Rails existing advertising / marketing operations.

The model has been developed on the assumption that Dunedin Railways (and / or partners) hold sufficient cash to fund the establishment costs detailed above without requiring financing (Note: This is an area for further discussion regarding investment from other parties such as the Southern Regional Mayoral forum and the Regional Growth Fund).

The option of purchasing rolling stock has been analysed on the assumption that it would be financed at an interest rate of 10% over a 10-year term. This would equate to repayments of \$80,000 per year over the life of the term (this option is only shown in Appendix A).

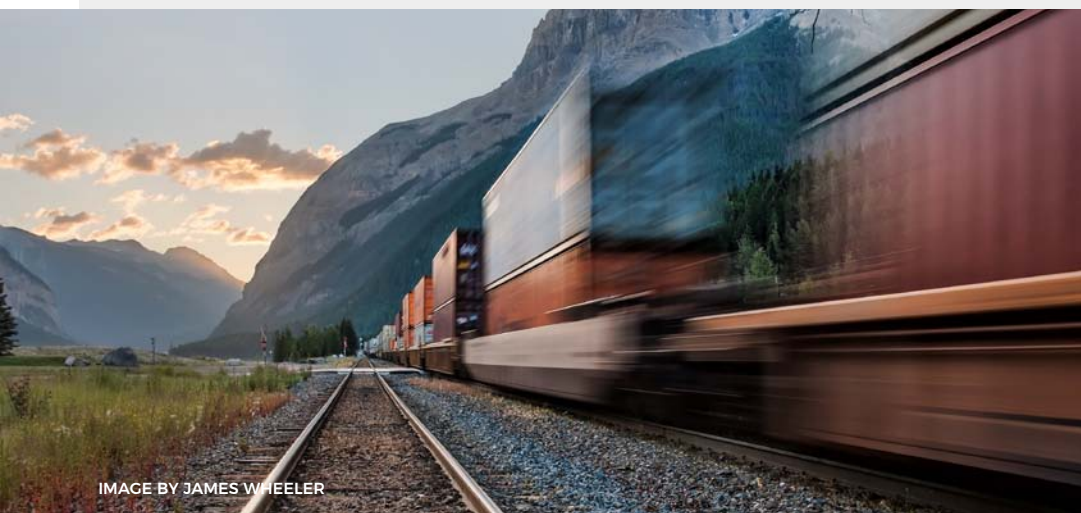
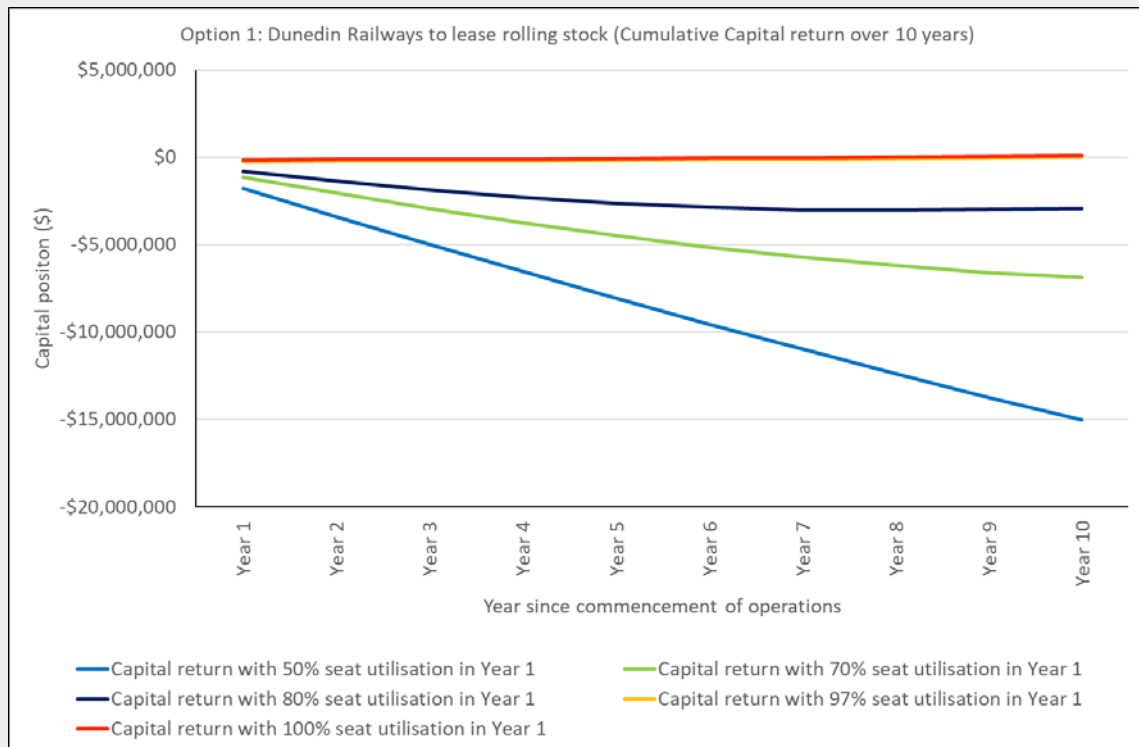


IMAGE BY JAMES WHEELER

Table 3: Estimated CAPEX to establish the service



Due to restricted capacity with the Silver Fern rail car, high seat utilisation is required almost immediately for the service to be profitable in the long term.

Even with relatively high seat utilisation, the service will still operate at a loss every year. Over time, the cumulative loss will increase, meaning that without significant financial subsidy, the service will not be financially sustainable.

The full financial model is attached to this report as Appendix A.

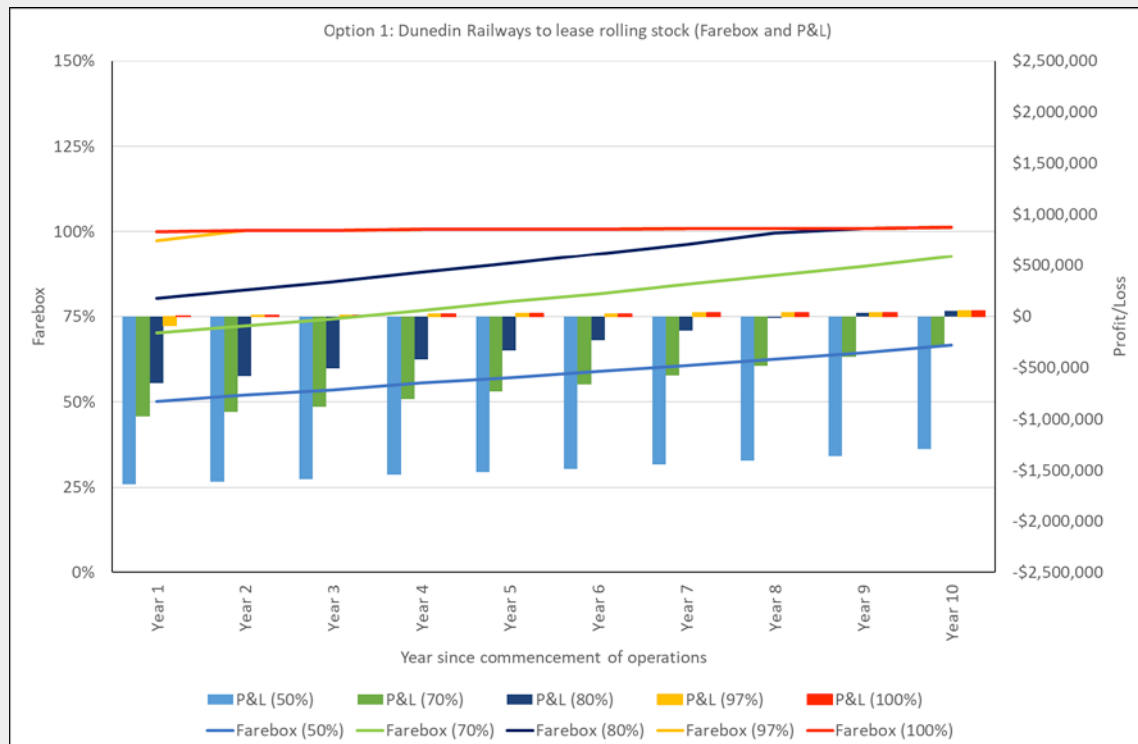


IMAGE BY VEERASAK PIYAWATANAKUL

2.2.4 Outputs

Figure 2.1, below, shows the annual operating profit and farebox for the revenue scenarios analysed (the lease option):

Figure 2.1: Annual farebox and operating profit over 10 years



For the service to operate at a profit, seat utilisation needs to be almost 100% (the seat utilisation at which break even occurs, considering the assumptions that have been made is 97%). The profitability of the proposed service is constrained by the seat capacity of the Silver Fern rail car, as can be seen by the fact that at 100% utilisation, the farebox is only just over 100%. (**Note:** this would be an area for discussion with KiwiRail, as the provision of higher capacity carriages could be considered at relatively little increase in assumed operating costs).

It is considered unlikely that 100% seat utilisation would be achievable, particularly at the commencement of operations. Low seat utilisation would result in considerable operating losses being incurred. For 50% seat utilisation, these losses would amount to approximately \$1.2m per year. This is a significant risk to the proposed operation.

Figure 2.2, below, shows the cumulative capital returns over 10 years of operations for the revenue scenarios analysed:



IMAGE BY RHONDA ALBOM

3. RISKS AND MITIGATION.

Given that there are a number of key assumptions behind the development of the cost model, there are a series of risks that also apply, as outlined in Table 3.1 below:

Table 3.1: Risks associated with the proposed service offering

RISK	DESCRIPTION	MITIGATION OPTIONS	LIKELIHOOD & SEVERITY
Fare pricing	The one-way ticket price of \$100 is not compatible with market expectation and will result in significantly reduced patronage and therefore, reduced revenue.	Benchmark against other tourist services operated in New Zealand. Undertake further market research to determine predicted demand at that price.	The proposed fare has been reviewed against similar tourist services and it is therefore considered a low risk that it is over-priced. The consequences of low patronage will be that the operation would run at a significant loss i.e. greater than \$1m per year.
Price inflation	Market inflation may exceed the assumed rate of 1.9% which could make it difficult to maintain competitive ticket prices and recover operating costs.	Secure long-term contracts with suppliers that limit levels of price inflation per annum.	The New Zealand economy has not experienced high levels of inflation in recent times and there is no reason to expect this to change. If the risk was to be realised, either by keeping fares low, or increasing fares and risking low patronage, the service would operate at a significant loss.
Over-estimated patronage levels	Risk of patronage levels being over estimated. To break-even over a 10 year period would require 29,100 one-way journeys in Year 1, equating to a high seat utilisation of 97% for the Silver Fern rail car.	Undertake further market research to determine predicted demand at that price.	The feasibility of the service offering is dependent on patronage levels - if only 50% seat utilisation was achieved in Year 1 (15,000 one-way journeys), then after 10 years there would be a cash shortfall of \$15m.
Seasonal variation in patronage levels	It is expected that patronage levels would be reduced during the low season, however the cost of operation the service would remain the same.	Consider operating a reduced timetable during the off season. Undertake further market research to determine predicted demand. Hold sufficient levels of cash in reserve to operate during the off season.	The analysis undertaken is based on a year round service and showed near full seat utilisation would be required for the service to be profitable. If the low season was to equate to 4 months, and patronage levels were to drop to 50%, this would equate to a drop in revenue of circa \$500k.
Directional variation in patronage levels	It is expected that demand will be considerably greater for the Christchurch commencing service and lower for the Dunedin commencing service. Therefore, whilst it could be forecast that demand	Offer reduced pricing for the Dunedin commencing service to encourage return trips. Pump the northern leg (e.g. Offer trips from Christchurch to fly to Dunedin and make the return journey by train. Or promote a	If seat utilisation is dramatically reduced for northbound services, there would be a significant loss of revenue. If average seat utilisation northbound was only 50%, instead of 100%, this would equate to 25% shortfall (circa \$800k per annum) from the revenue required for the service to

	will grow to achieve seat utilisation for the southbound journey, this may be more difficult to achieve for both service offerings.	Queenstown to Dunedin leg that returns to Christchurch via rail).	be profitable.
On board spending	Levels of on-board spending per person is over estimated resulting in reduced revenue.	Benchmark against prices offered on competing services. Consider including on board spending in ticket price.	The level of on board spending of \$10 per person is relatively modest in light of the length of the journey. At full capacity, the assumed on board spending equates to revenue of circa \$300k per year. This is approximately 10% of total revenue, therefore would leave a significant shortfall.
Maintenance requirements for rolling stock	The Silver Fern rail car is 48 years old and is likely to require a high level of ongoing maintenance.	Lease more than one unit, providing redundancy in the service offering for maintenance activities. Try to negotiate with Kiwirail that leasing charges are only paid for day when the rail car is operating.	The high levels of maintenance could result in increased operational expenditure. It should be noted that during informal consultation with Dunedin Railways as part of this exercise, reservations were expressed regarding the feasibility of operating the service at the proposed frequency using the Silver Fern rail car (due to age of the rail car).
Unforeseen service disruption	In the event of unforeseen events that result in the service not being able to operate, there would be lost revenue due to the service not operating, in addition to the cost of providing alternative transport. This could be the result of unavailability of rolling stock or unplanned maintenance of the railway line. Such an event could also be the result of events such as extreme weather or seismic activity.	Negotiate running rights with Kiwirail that entitle Dunedin Railways to compensation should the rail network not be available. Financial projections to allow for some loss of revenue. Maintain the fleet of rolling stock to a high level.	It is highly likely that at some stage, there will be service disruption. The rail network is subject to operating restrictions in the event of extreme weather, which is inevitable in the region. For each trip that would be unable to operate, it would cost \$9,600 in lost fare revenue, based on Year 1 ticket prices and 100% seat utilization.
Loss of the Silver fern rail car	Kiwirail makes the Silver fern rail car unavailable.	Seek and alternative engine and carriages. This would require significant support from Kiwirail.	The services would cease until an alternative engine and carriages were available. However, an alternative configuration to the Silver fern rail car is likely to be more financially viable.

4. OPPORTUNITIES.

The cost model only accounts for direct revenue from the sale of tickets and on-board purchases, set against the operational and capital expenditure involved in establishing and operating the service. It indicates that a high level of seat utilisation is required for the proposed service to be financially sustainable as a standalone operation. However, the proposed service provides the opportunity to open additional revenue streams that cannot be quantified by the cost model alone. These opportunities include:

- General increase in tourist numbers being delivered to destinations and stops in question.
- Selling tickets as part of a wider rail package including Kiwirail tourist services, the Interislander Ferry or Dunedin Railways other tourist services. There is the opportunity to partner with Kiwirail in offering the route as part of the nationwide tourist services. This would offer greater opportunities to cross sell the service with the other experiences operated by Kiwirail. Furthermore, Kiwirail would be able to operate using modern rolling stock used elsewhere on their tourist routes, specifically designed for tourist services. This would provide greater capacity than the Silver Fern and potentially offer greater profitability.
- Selling tickets as part of a rail/air combination in partnership with an airline, including airport transfers. This may be of value as it would facilitate offering the service as a same day return. Currently, only Air New Zealand operates flights between Christchurch and Dunedin, which includes evening flights. This same approach could be expanded to bus, rental car, plane and rail options that facilitate the South Island route loops outlined in phase one of this report.
- Sell as part of a tourist loop, or selection of tourist loops, with set itineraries including car/camper van hire and accommodation.
- Selling tour packages including side trips destinations. Side trips offered may include:
 - Christchurch:
 - Banks Peninsula
 - Kaikoura
 - Hanmer Springs
 - Mt Hutt – during ski season
 - Timaru
 - Tekapo
 - Aoraki/Mt Cook
 - Pleasant Point Museum and Railway
 - Dunedin
 - Road transfer to Queenstown/Wanaka
 - Otago Peninsula
 - Catlins Coast
 - Moeraki Boulders
- Offer trip packages including accommodation, meals etc in Christchurch or Dunedin (and other destinations along the route loops outlined in phase one of the study).

The wider regional benefits that are likely to be realised as a result seeking to unlock some or all of these opportunities have the potential to be considerable.

5. CONCLUSION + RECOMMENDATIONS.

5.1 Conclusion

The financial modelling undertaken in this second phase of the project has concluded that the operation of a Silver Fern railcar service between Christchurch and Dunedin (with a stop in Timaru) is not operationally viable. The financial model indicates that the rail car does not have enough capacity (at the required ticket price) to be a viable proposition.

During the study it also became apparent that Kiwirail had alternative plans (potentially in the short term) for the railcar that it was leasing to Dunedin Railways. This highlights the difficulty of establishing a service without Kiwirail being a core partner.

Should the potential service be able to utilise engines (and carriages) other than the Silver Fern rail car the financial model is likely to change for the better. Costs would be unlikely to increase significantly, while capacity could be improved substantially, thus improving profitability. Achieving this would be dependant entirely on Kiwirail, given its control over so much of the required infrastructure.

The potential benefit of such a route for Kiwirail would be in facilitating the tourist loops outlined in the first phase of this study. These loops could assist patronage on Kiwirail's existing services while also unlocking potential new revenue streams from partner organisations.

Dunedin Railways also has the potential to be a partner in some form in the future (even without utilisation of the Silver Fern railcar).

5.2 Recommendations

Based on the findings of the financial analysis it is recommended that:

1. Advancing any further investigation into a Christchurch to Dunedin rail service using a Silver Fern railcar should be ceased.
2. Dunedin Railways should be thanked for their assistance in the study and be informed of its findings. An indication of Dunedin Railway's future interest in any new partnering opportunities should be tested.
3. Kiwirail should be approached and the information from this study shared to determine if they are interested in exploring potential partnering opportunities for the rail route.
4. If Kiwirail is interested, focus should be placed on:
 - Options that increase service capacity above that of a Silver fern rail car,
 - Options that enable the development of the South Island tourist loops outlined in Phase One of the study.
5. Should the concept be advanced to the next stage with Kiwirail, a full market analysis and business case should be completed.

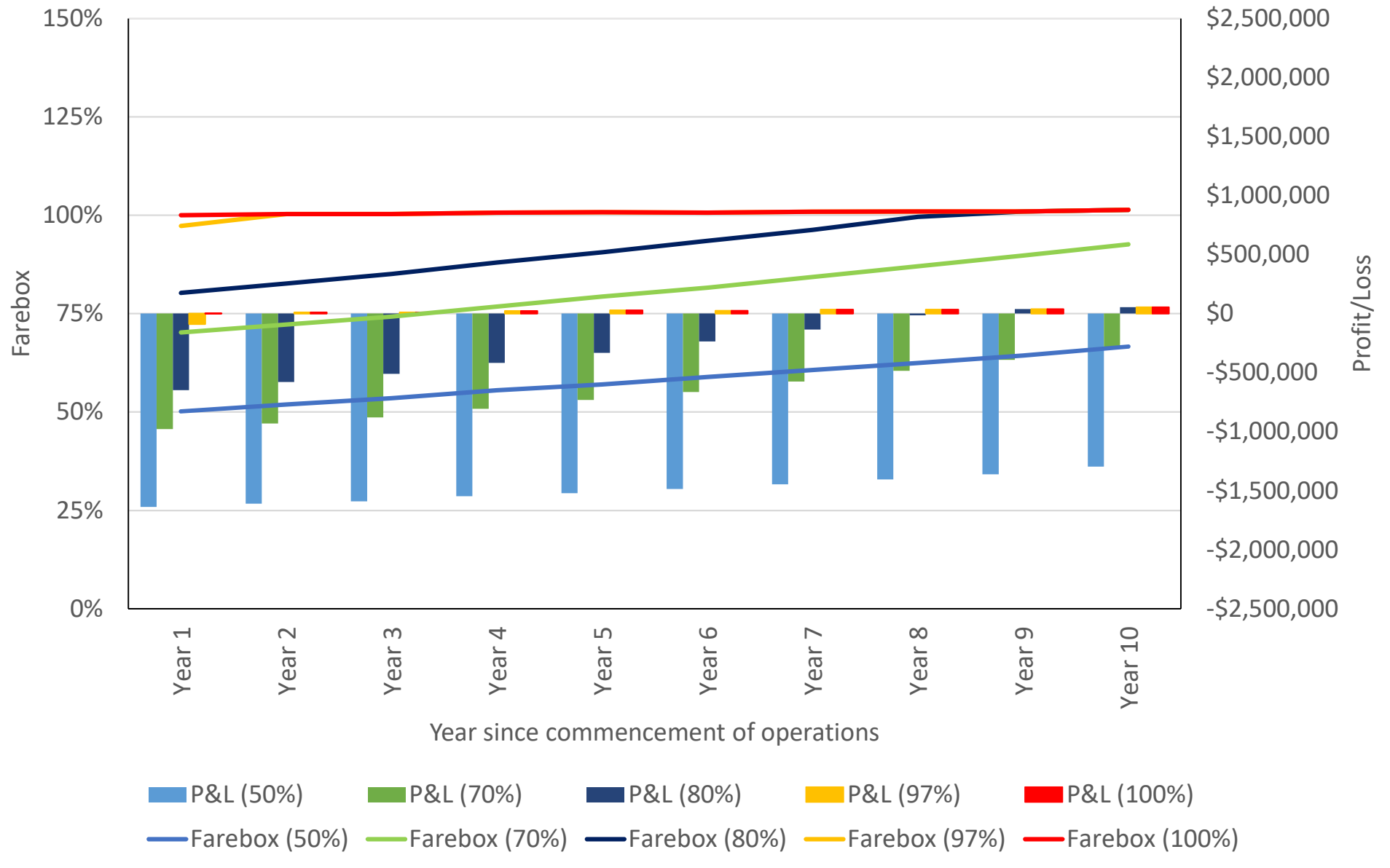
6. APPENDIX.



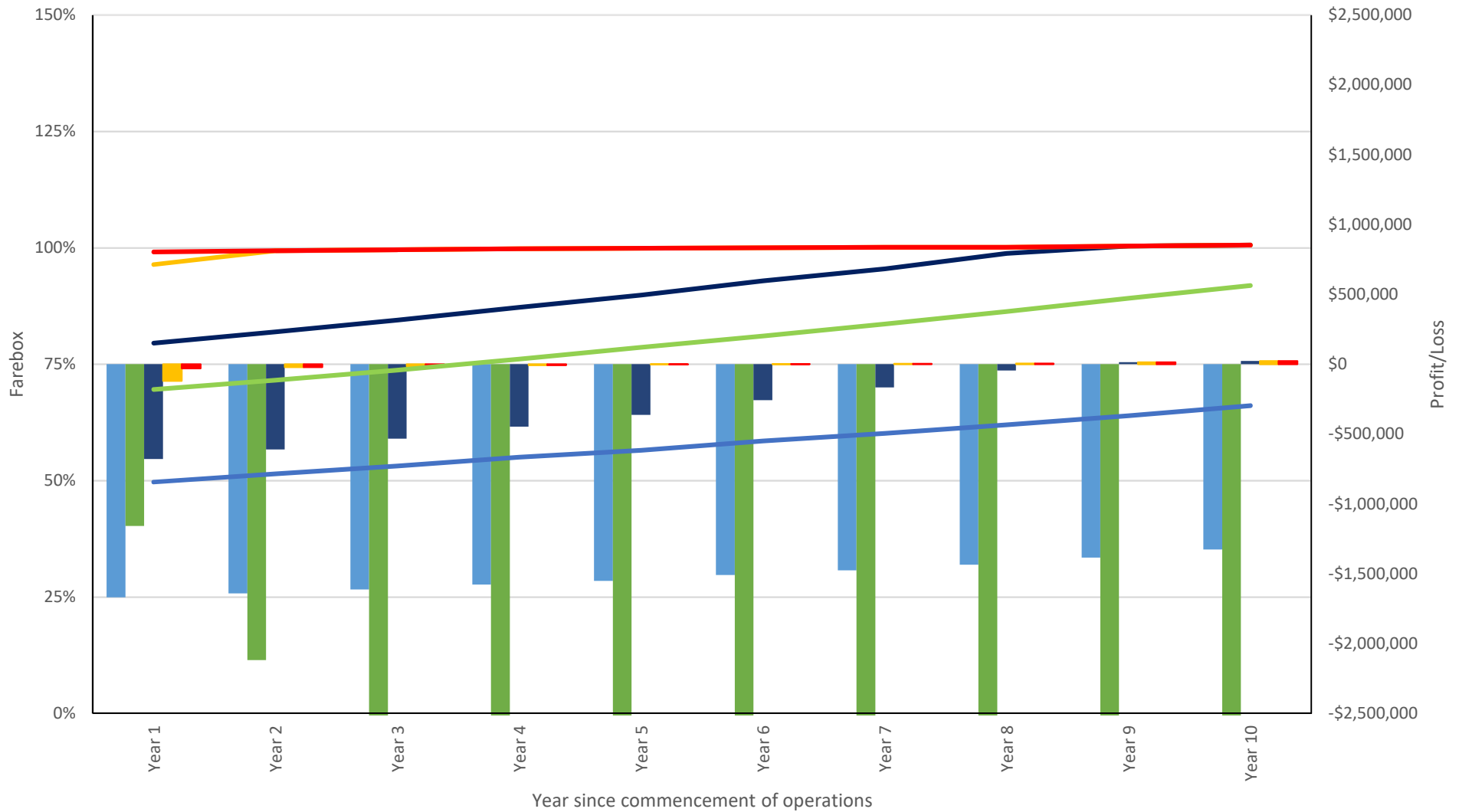
Option 1: Dunedin Railways Lease Rolling Stock										
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Farebox with 50% seat utilisation in Year 1	50%	52%	54%	56%	57%	59%	61%	62%	64%	67%
Farebox with 70% seat utilisation in Year 1	70%	72%	74%	77%	79%	82%	84%	87%	90%	93%
Farebox with 80% seat utilisation in Year 1	80%	83%	85%	88%	91%	93%	96%	100%	101%	101%
Farebox with 97% seat utilisation in Year 1	97%	100%	100%	101%	101%	101%	101%	101%	101%	101%
Farebox with 100% seat utilisation in Year 1	100%	100%	100%	101%	101%	101%	101%	101%	101%	101%
Operating profit with 50% seat utilisation in Year 1	-\$1,638,620	-\$1,610,154	-\$1,589,757	-\$1,546,751	-\$1,521,859	-\$1,485,105	-\$1,445,810	-\$1,404,701	-\$1,361,800	-\$1,296,433
Operating profit with 70% seat utilisation in Year 1	-\$978,620	-\$930,154	-\$879,757	-\$806,751	-\$731,859	-\$665,105	-\$575,810	-\$484,701	-\$391,800	-\$286,433
Operating profit with 80% seat utilisation in Year 1	-\$648,620	-\$580,154	-\$509,757	-\$416,751	-\$331,859	-\$235,105	-\$135,810	-\$14,701	\$38,200	\$53,567
Operating profit with 97% seat utilisation in Year 1	-\$88,620	\$9,846	\$10,243	\$23,249	\$28,141	\$24,895	\$34,190	\$35,299	\$38,200	\$53,567
Operating profit with 100% seat utilisation in Year 1	\$1,380	\$9,846	\$10,243	\$23,249	\$28,141	\$24,895	\$34,190	\$35,299	\$38,200	\$53,567
Capital return with 50% seat utilisation in Year 1	-\$1,787,220	-\$3,397,374	-\$4,987,130	-\$6,533,881	-\$8,055,741	-\$9,540,845	-\$10,986,656	-\$12,391,357	-\$13,753,157	-\$15,049,590
Capital return with 70% seat utilisation in Year 1	-\$1,127,220	-\$2,057,374	-\$2,937,130	-\$3,743,881	-\$4,475,741	-\$5,140,845	-\$5,716,656	-\$6,201,357	-\$6,593,157	-\$6,879,590
Capital return with 80% seat utilisation in Year 1	-\$797,220	-\$1,377,374	-\$1,887,130	-\$2,303,881	-\$2,635,741	-\$2,870,845	-\$3,006,656	-\$3,021,357	-\$2,983,157	-\$2,929,590
Capital return with 97% seat utilisation in Year 1	-\$237,220	-\$227,374	-\$217,130	-\$193,881	-\$165,741	-\$140,845	-\$106,656	-\$71,357	-\$33,157	\$20,410
Capital return with 100% seat utilisation in Year 1	-\$147,220	-\$137,374	-\$127,130	-\$103,881	-\$75,741	-\$50,845	-\$16,656	\$18,643	\$56,843	\$110,410

Option 2: Dunedin Railways Purchase Rolling Stock										
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Farebox with 50% seat utilisation in Year 1	50%	51%	53%	55%	57%	59%	60%	62%	64%	66%
Farebox with 70% seat utilisation in Year 1	70%	72%	74%	76%	79%	81%	84%	86%	89%	92%
Farebox with 80% seat utilisation in Year 1	80%	82%	85%	87%	90%	93%	96%	99%	100%	101%
Farebox with 97% seat utilisation in Year 1	96%	99%	100%	100%	100%	100%	100%	100%	100%	101%
Farebox with 100% seat utilisation in Year 1	99%	99%	100%	100%	100%	100%	100%	100%	100%	101%
Operating profit with 50% seat utilisation in Year 1	-\$1,668,620	-\$1,640,154	-\$1,612,857	-\$1,576,751	-\$1,551,859	-\$1,508,205	-\$1,475,810	-\$1,434,701	-\$1,384,900	-\$1,326,433
Operating profit with 70% seat utilisation in Year 1	-\$1,008,620	-\$960,154	-\$902,857	-\$836,751	-\$761,859	-\$688,205	-\$605,810	-\$514,701	-\$414,900	-\$316,433
Operating profit with 80% seat utilisation in Year 1	-\$678,620	-\$610,154	-\$532,857	-\$446,751	-\$361,859	-\$258,205	-\$165,810	-\$44,701	\$15,100	\$23,567
Operating profit with 97% seat utilisation in Year 1	-\$118,620	-\$20,154	-\$12,857	-\$6,751	-\$1,859	\$1,795	\$4,190	\$5,299	\$15,100	\$23,567
Operating profit with 100% seat utilisation in Year 1	-\$28,620	-\$20,154	-\$12,857	-\$6,751	-\$1,859	\$1,795	\$4,190	\$5,299	\$15,100	\$23,567
Capital return with 50% seat utilisation in Year 1	-\$1,817,220	-\$3,457,374	-\$5,070,230	-\$6,646,981	-\$8,198,841	-\$9,707,045	-\$11,182,856	-\$12,617,557	-\$14,002,457	-\$15,328,890
Capital return with 70% seat utilisation in Year 1	-\$1,157,220	-\$2,117,374	-\$3,020,230	-\$3,856,981	-\$4,618,841	-\$5,307,045	-\$5,912,856	-\$6,427,557	-\$6,842,457	-\$7,158,890
Capital return with 80% seat utilisation in Year 1	-\$827,220	-\$1,437,374	-\$1,970,230	-\$2,416,981	-\$2,778,841	-\$3,037,045	-\$3,202,856	-\$3,247,557	-\$3,232,457	-\$3,208,890
Capital return with 97% seat utilisation in Year 1	-\$267,220	-\$287,374	-\$300,230	-\$306,981	-\$308,841	-\$307,045	-\$302,856	-\$297,557	-\$282,457	-\$258,890
Capital return with 100% seat utilisation in Year 1	-\$177,220	-\$197,374	-\$210,230	-\$216,981	-\$218,841	-\$217,045	-\$212,856	-\$207,557	-\$192,457	-\$168,890

Option 1: Dunedin Railways to lease rolling stock (Farebox and P&L)

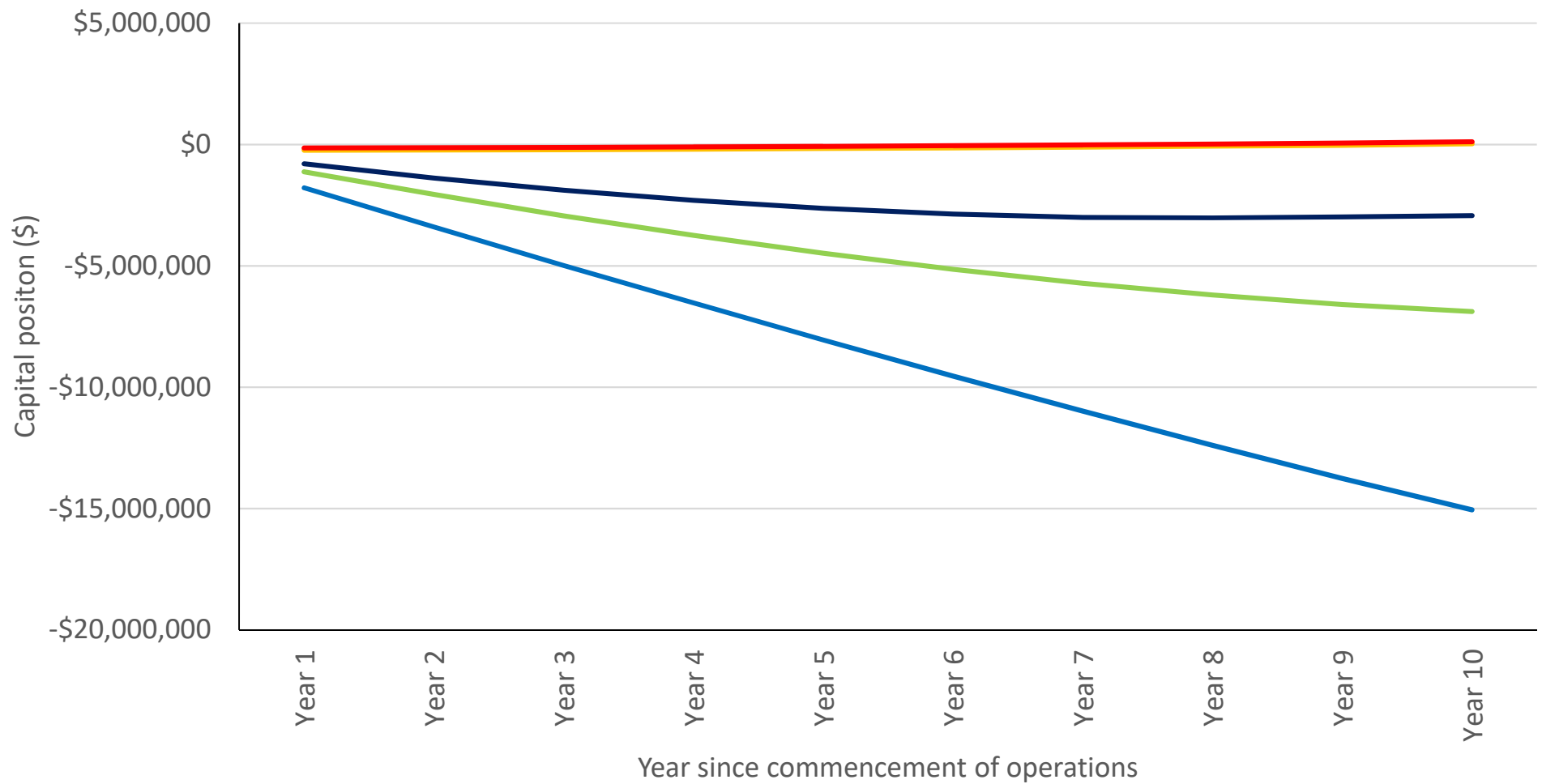


Option 2: Dunedin Railways to purchase rolling stock (Farebox and P&L)



■ P&L (50%) ■ P&L (70%) ■ P&L (80%) ■ P&L (97%) ■ P&L (100%)
— Farebox (50%) — Farebox (70%) — Farebox (80%) — Farebox (97%) — Farebox (100%)

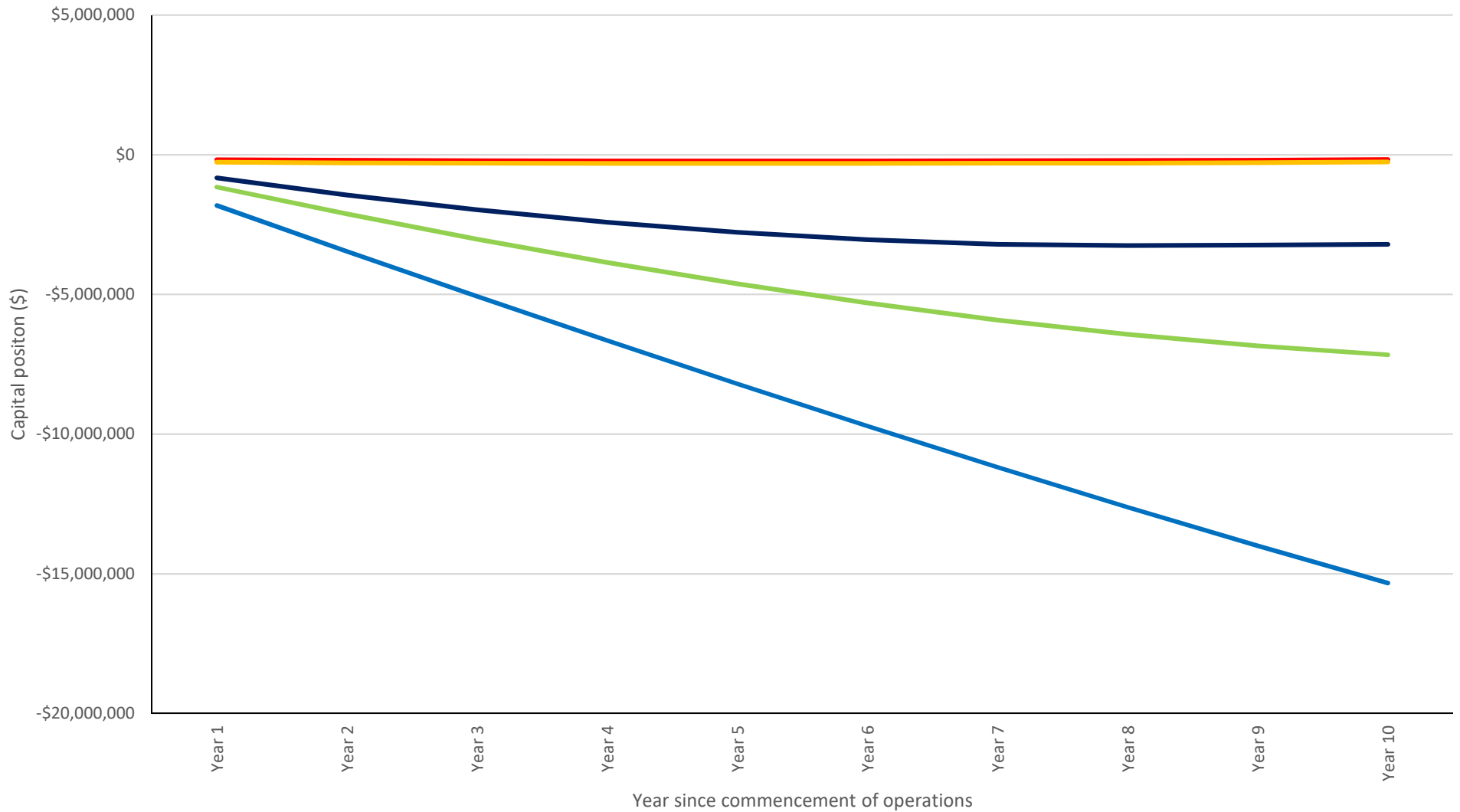
Option 1: Dunedin Railways to lease rolling stock (Cumulative Capital return over 10 years)



- Capital return with 50% seat utilisation in Year 1
- Capital return with 80% seat utilisation in Year 1
- Capital return with 100% seat utilisation in Year 1

- Capital return with 70% seat utilisation in Year 1
- Capital return with 97% seat utilisation in Year 1

Option 2: Dunedin Railways to purchase rolling stock (Cumulative Capital return over 10 years)



Capital return with 50% seat utilisation in Year 1 Capital return with 70% seat utilisation in Year 1 Capital return with 80% seat utilisation in Year 1
Capital return with 100% seat utilisation in Year 1 Capital return with 97% seat utilisation in Year 1