

FIN322 Group Assignment – Case study

Case: Water Fantasy Senior Living Development

The Case:

In early 2018, Daniel Cooper and James Mitchell met to discuss a potential real estate development opportunity. The *Water Fantasy* property was created through the purchase of eight individual properties to create a single 9.66-acre footprint on the banks of the Hawkesbury River in Sydney's northwest. When completed, the development would contain 132 individual units in two mirrored buildings with a private street separating them. The current developer of the project was experiencing financial difficulties and was seeking a buyer for the partially complete project.

Daniel Cooper is the President of Cooper Properties, a real estate development and management firm specialising in multiple occupant facilities. Cooper Properties' projects include Greystone, a 38-unit senior living property and Windy Pointe, a 51-unit facility. James Mitchell is Managing Director of Mitchell International and is a seed-stage investor in early-stage technology companies. Trump International also invests in commercial and residential real estate projects in metropolitan areas.

Daniel Cooper and James Mitchell agreed to evaluate the acquisition of Water Fantasy property as a joint venture between their companies. Their first concern is to evaluate the potential value of the opportunity.

The Senior Housing Movement

Australia is a quickly greying country and north-western Sydney region has a shortage of attractive senior living alternatives. Currently, senior living facilities in the area represent a total of less than 500 units. Potential customers prefer to relocate nearby their homes in order to retain connections to their local communities. Unfortunately, there are a limited number of appropriate undeveloped spaces in proximity to the population centres. Only one other major project has been announced locally, a \$14M project of roughly 100 units to be started in early 2019.

Acquisition Cash Flows

The partnership would acquire the property for \$9.5 million, 70% of which would be financed through an interest-only bank loan. Once acquired, the group anticipates investing an additional \$5.5 million (equity) in year zero to complete construction. The partnership intends to sell the property after twenty years.

Anticipated Project Cash Inflows

The cash inflows for the project are dominated by the monthly rents. The maximum monthly rents for Water Fantasy would be \$980 per unit per month by the end of financial year 2018. Assume no discounts for rent in Year 1 (2019, \$ 1,050 per unit per month) and beyond, with rents increasing at 5% annually. For simplicity, assume rents for the year are collected at the beginning of each year.

Secondary cash flow comes from an arrangement with Optus to purchase internet, cable TV, and digital phone services at a discount and resell these services to the residents for a profit. The current cost is \$42 per month per unit. The services are resold at \$80. The partners expect that 75% of the residents will purchase this service and that these costs and revenues will increase at 5% per year. For simplicity, assume that costs and revenue for this service for the year occur as a lump sum at the beginning of each year.

Completion schedule	30/June/2018	30/June/2019	30/June/2020
Building 1 units	30	66	66
Building 2 units		33	66

Operating Costs

Employees

Based on his previous experience, Cooper estimates that Water Fantasy will require one full time employee acting as property manager. An appropriate individual for the demographics of Water Fantasy would be about \$5,500 per month for salary, with employee superannuation and taxes adding \$1,200 for a total of \$6,700 per month. This figure will increase at 5% annually for the term of holding of the property. For simplicity, assume employee costs as a lump sum at the end of each year.

Maintenance

Initially, Water Fantasy will require little maintenance (\$5,000, year 0). Annual maintenance will increase in year 1 (2019) to \$65,000. This amount will increase by \$6,000 annually until the end of the holding period. For simplicity, assume that maintenance costs as a lump sum at the end of each year.

Insurance

Due to the design of Water Fantasy, insurance costs are not as much of a burden as to be expected with a facility this size. The previous developer installed hydrants outside the buildings and sprinklers on every floor. There are fire control panels and full monitoring, and relatively proximity to both fire and police stations. The current policy on Water Fantasy pre-completion is \$45,000 per year, based on a \$9 million value. Using a full value of \$15 million, the estimated insurance cost is \$75,000 for the year. Insurance costs are expected to increase at a 5% annual rate. For simplicity, assume insurance costs are prepaid at the beginning of each year.

Depreciation Calculations

Normally a building is straight line depreciated over its usable life of 30 years. While the simplest manner, it is not nearly the most tax efficient as components other than the building itself (carpets, light fixtures, etc) can be depreciated in as little as five years. Based on preliminary estimates, Water Fantasy enjoys \$750,000 a year of depreciation each year for the first ten years of the project's life. After that time, normal depreciation of the structures and other long-lived components gives \$300,000 for the remaining years of ownership.

Taxes

Taxes for Water Fantasy are on a per unit basis. As Water Fantasy is not 100% completed at this point, it does not carry the full tax burden. The tax rate for the next two years is projected to be \$8,333 per month until July 2019, when full assessment will be in effect. This number shall be used for Year 1 calculations. 75% of this (\$6,248) shall be used in Year 0. Full assessment shall be used thereafter.

At full assessment, the tax rate is \$1,100 per unit per year, for a full value of \$145,200 per year. Due to the fiscal constraints of the current economy, 5% per annum tax rate growth will be utilized annually from full assessment.

Taxes on gain/loss on sale of the property in the terminal year will be estimated at a 30% tax rate.

Interest Charges

Given the current credit markets, it is assumed that only 70% of the purchase value of Water Fantasy can be leveraged via mortgage. An 8% assumption is used for interest only with a balloon payment (i.e., a one-off lump sum that the borrower agrees to pay their lender) beyond the holding time horizon.

The Evaluation

As the partners sat down to evaluate the project, Mitchell raised some of his concerns. "In order to determine the value of this opportunity, we'll need to clearly understand all the cash inflows and outflows. Is this project really worth the \$15 million price tag? Our overall cost of capital on this project is 14%. Will the investment create value? I am sure that our lender will want to see our estimates."

Cooper replied, "I agree that we need to value the project for the full twenty years, but I am concerned about competition in the longer term. Should we consider selling after ten years instead? I am also concerned about keeping the apartments filled throughout the project. Let's plan on ninety percent occupancy in our calculations."

Financial year starts at 1 July and ends on 30 June. For simplicity, assume it was 1 February 2018 when the evaluation was performed.

Structure of the Report

Below are the **minimum** requirements:

At the beginning of the report, clearly state your assumptions, decision criteria, and overall decision. Then, address the following:

1. Valuation & decision metrics. Estimate cash flows and calculate net present value (NPV), internal rate of return (IRR), and modified internal rate of return (MIRR) if there is one. Compute the payback period and discounted payback period and discuss how these criteria

align or conflict with NPV. Consider two exit strategies: (a) sale after 10 years, (b) sale after 20 years. Compare results and recommend the optimal holding period.

2. Capital structure & cost of capital. Currently, 70% of acquisition is debt financed at 8% interest. Re-evaluate project value under alternative debt ratios (50%, 70%, 90%). Discuss how leverage affects project risks and expected return.

3. Scenario & sensitivity analysis. Perform sensitivity analysis on at least three key drivers: occupancy rate, rent growth, and maintenance cost escalation. Conduct a scenario analysis with three cases: base case (as provided), optimistic case (higher occupancy, lower maintenance, stronger rental growth), and pessimistic case (lower occupancy, slower rental growth, and unexpected cost increase). Present results in a summary table and explain how decision-making changes under each scenario.

4. Risk analysis. Briefly discuss non-financial risks (e.g., regulatory changes in aged care housing, demographic shifts, macroeconomic conditions). Suggest risk mitigation strategies the joint venture could adopt.

5. Discuss whether the option to sell after 10 years can be viewed as a real option. Qualitatively evaluate how an option valuation approach might alter the assessment compared to traditional NPV.

Submission:

1. Each group needs to submit one soft copy via Moodle. A submission link will be set up in Moodle in due course. ***Email submission will not be accepted or marked.***

2. An Excel worksheet needs to be submitted with your report. ***Reports not accompanied by an Excel worksheet will not be marked.***

3. The online submission is due on **12 October 2025**, at 11:59pm Sydney time.

4. Penalty applies to late submissions. 5% of your mark will be deducted for each day late. For example, you submit the assignment one day after the due date and your mark before penalty is 12 (out of 15). Then your final mark for the assignment will be 11.4.