Report need sensitivity analysis(ms excel data tables) and break-even analysis(ms...

**Finance** 



# Report\* NEED sensitivity analysis(MS Excel data tables) and break-even analysis(MS Excel Solver or Goal seek)

INTRODUCTION TO FINANCE Project Report May 12, Executive summary: As the granny flat has a positive NPV (Net Present Value) of \$10144. 73, s the IRR (internal rate of return) is greater than Required Return. IRR is at 13. 48% (12372/91750\*100) which is greater than the required return of 4. 51%. This investment has a payback period of 8 years. As this granny flat has a greater than required Rate of Return, and a large NPV, the construction of this granny flat should go ahead, as it is a good investment.

# Q2) Rental Revenue

renting for whole granny flat with 2 bedrooms- \$455. Electricity bill- \$350 per quarter which is taken from the average of small (3500kWh pa) household scenario.(insert grapgh)

Water bill Per week- \$27. 22

Service charge \$1. 78/week at \$22. 93/quarter

Usage charge- \$19. 4/week at \$250/quarter

Total water bill per week= \$21. 18/week

Real estate weekly commision = approx. \$50

Justification- 2 bedroom 60 square metres is chosen as it is the maximum area of approval and can generate maximum revenue

Rental revenue \$445-(\$27. 22+\$21. 18+50)=\$346. 6

3. Estimate of initial costs such as building and council approval costs.

The initial cost of construction will depend on the existing market price of the building materials. The pricing regimes listed below are estimates based on trends previously reported in the literature (See cost estimates sheet on the

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provided spreadsheet).

The table captures almost the entire list of items needed to begin and complete the construction process. These estimates are based on the approximation; therefore, these figures may change with time. However, when making the purchase for most of these items, the personnel may attract discounts that may reduce the overall cost estimates depending on the supplier Table showing the cost estimates of building the house Figure 1 showing the breakdown of costs as per the material types used with possible percentages.

Figure 3: distribution of different Costs

Question 4-ongoing cost

The construction would incur maintenance and utility cost from the drainage and the dike systems, the solid wastes and the recycling of materials that were not used after completion of the construction process. Besides, other cost associated with maintenance and utilities include the sewer system, water supply, operations and maintenance, constructions of the systems that still need polishing up and the salaries and benefits of the employees. The average daily cost is represented in the diagram below for all the utilities. Figure 4:: showing the average daily cost for the utilities and the maitenance associated with the construction

These costs represent estimates computed for the first three months to obtain the daily cost in the first 90 days. However, it is likely that the amount may be slightly higher during the first one month. The values will fall thereafter with the third and fourth months and even subsequent duration recording lower values owing to the decreasing utilities and maintenance

requirement.

Question 5-Growth Rates of Revenue/ongoing cost

Over the first quarter of 2015, there has been strong growth in the rental market, with national rental growth averaging at 1. 3%, and Sydney rental growth at 1.0%. [1] However, this moderately strong rental growth over the first guarter does not reflect the low annual rental growth rate, 2.6% nationally from March 2014 to March 2015[1], with lower rental growth expected to be the trend for the rest of year." Given the recent high number of dwelling approvals and commencements coupled with the high level of purchase activity from investors, we would anticipate that the rate of rental growth will remain soft throughout 2015" - Cameron Kusher, CoreLogic RP Research Analyst. [2] This low rental growth is exacerbated by the steep rises in the price of property, particularly within Sydney, with prices up 12. 2% over 2014. [3] The large growth in the price of property compared to rental growth has resulted in rental income becoming more incapable of covering the mortgage payments required by investors who have taken a loan, resulting in increased ongoing costs. [4] Ongoing costs for property investment include; Council rates, utility rates, building and landlord insurance, body corporate fees, land tax (\$100+1.6% of property value above threshold of \$432, 000, and under \$2, 641, 000), property management fees if you don't look after the property yourself and maintenance costs, as well as interest repayments if money was borrowed. These costs are set to rise year-to-year as the property sector of the Australian economy grows. The capital return on the granny flat is expected to be in line with the rate of property price

growth, which is currently high in Australia, particularly in Sydney.

# 6. Estimate the required return of the project

The required return of the project was calculated through the CAPM (Capital Asset Pricing Model) and SML (Security Market Line). The Beta required for this calculation was estimated using the  $\beta$  of companies considered to have a similar level of systematic risk, Amalgamated Holdings ( $\beta$ = 0. 29), Land Lease Group ( $\beta$ = 1. 35), Lantern Hotel Group ( $\beta$ = 0. 56) and Cardinal Property Trust ( $\beta$ = 0. 37) (Reuters, 2015). The average of these  $\beta$  was 0. 6425. The current risk free rate for a Government Bond is 2% (RBA, 2015), as it is the current cash rate set by the RBA (Sydney Morning Herald, 2012) and was used as the Risk-Free rate. The Market Risk Premium was found to be at 5. 9% (Fernandez, Linares and Fernandez Acín, 2014) and is the percentage used in the calculation. Therefore, using the formula the required return is;

## **Question 7**

#### 8. Risks

The risks that can be faced by such a project are numerous, and here I highlight the major risk factors that may either slow down the project or lead to its not being completed at all. First is inadequate personnel with relevant skills to undertake a given task, getting the right personnel is a very important factor in project management and lack of it can lead to a project failure. In the sensitivity analysis, the unforeseen factors such as inflation, government regulation on taxes has been analyzed. If the rate of inflation is high, the project will take longer time to recover (break-even) The project is also prone to the changes in tax rates, land rates, which must take into

account as planning of the project takes place. Other risks such as equipment delays, changing of requirement when the building had already been started, rescheduling of the activities when the project has started off, Parkinson's Law (overutilization of resources due to inflation e. t. c.) may also apply.

The risk factors can be controlled, avoided or diverted. These are the major ways of mitigating risks. One way to control risks is through ranking of the risks, risk prioritization according to the extent of damage and impact of the risk. Other way of dealing with the risk is through reducing the scope of the risk thus reducing the chances of the risk occurring. Assigning of work in parallel reduces chances of overrunning the deadline. Avoiding change of labour through attractive remunerations and eliminating unnecessary expenditure can help reduce the chances of a project failing. Above all proper planning is an undoubtedly the best tool in mitigating risks. Taking account of all factors into the project plan and training personnel on the importance of finishing projects in good time can help reduce the risk factors.

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