## Review Classmates: Module 2 Mini-Project

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| **Reviews** | 10 complete |

**Well done!**

You've sent 10 classmates valuable feedback that will help them improve. You can review another submission below or you can continue the course.

Cut Here's New Video Rendering System



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Submitted on April 10, 2016

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### Part 1

Cut Here, Inc. is considering a new video rendering system for their in-house studio. Currently, there are two options. Each option involves a significant investment in an asset that has a multi-year useful life. The key benefits of each option are cash savings, which Cut Here equates to cash inflows (i.e., compared to the status quo scenario, in which it incurs significant costs in terms of labor, time, etc.).

Use the cash flow information provided in the Assignment Details section of the **Instructions** tab.

Then, use the following measures to assess the two options from a financial perspective. That is, compute the following measures for each option.

* Payback
* Accounting rate of return
* Net present value
* Internal rate of return

No cash flow information was given so the following will be assumed for the project. The amounts in year 0 are the invested amounts while the other amounts are the revenues for each year  
Year Project A Project B  
0 $500,000 $600,000  
1 $200,000 $300,000  
2 $150,000 $200,000  
3 $130,000 $100,000  
4 $120,000 $50,000  
  
**For Project A**  
**1) PAY BACK**  
Initial Out Flow = $500,000  
Year 1 returns = $200,000  
At the end of year 1 =($500,000-$200,000) = $300,000  
year 2 returns = $150,000  
At the end of year 2 = ($300,000-$150,000) = $150,000  
Year 3 returns = $130,000  
At the end of year 3 = ($150,000-$130,000) = $20,000  
Year 4 returns = $120,000  
  
After getting the 3rd year returns, we have $20,000 lest to recover.  
After we receive the 4th year returns, the full invested amount is   
recovered. We actually don't need the entire year.  
Therefore the pay back period = 3 + (20000/120000)  
 = 3.17 years.  
  
**2) ACCOUNTING RATE OF RETURN (ARR)**  
Cost savings = $600,000  
Average Cash Savings per year = ($600,000/4)   
 = $150,000  
Average 4 year depreciation = ($500,000/4)  
 = $125,000  
 **ARR** = ($150,000 - $125,000) / $500,000  
 = 5%   
  
**3) NET PRESENT VALUE (NPV)**  
Assuming a Required Rate of Return (RRR) of 15%  
Solving for the current day values of the future returns  
For year 1: $200,000 X ((1/1+0.15)^1)  
 = $173,913  
  
For year 2: $150,000 X ((1/1+0.15)^2)  
 = $113,421  
  
For year 3: $130,000 X ((1/1+0.15)^3)  
 = $85,526  
  
For year 4: $120,000 X ((1/1+0.15)^4)  
 = $68,610  
  
Adding up the current day values:  
$173,913 + $113,421 +$85,526 + $68,610 = $441,470  
  
Therefore the NPV = $500,000 - $441,470 = $58,530  
  
**4) INTERNAL RATE OF RETURN (IRR)**  
We have the NPV at 15%. We will repeat the above calculation with the rates at 10% and 1% to get the following:  
($58,530) @15%  
($14,583) @10%  
$86,558 @ 1%  
Interpolating for the zero dollar percentage value gives an IRR of 8.68%  
  
Repeating the entire above calculation for project B will give :   
  
 **Project A**  **Project B**  
Amount invested $500,000 $600,000  
1st year returns $200,000 $300,000  
2nd year returns $150,000 $200,000  
3rd year returns $130,000 $100,000  
4th year returns $120,000 $50,000  
Payback Time (years) 3.17 3  
ARR 5% 2.08%  
NPV @15% $58,530 $93,565  
IRR 8.68% 4.78%

Read the response to Part 1 and assign points below. Be sure to see the detailed rubric on the Instructions tab before assigning points.

* **0 pts - 0 points: No answer, completely irrelevant answer.**
* 5 pts - 5 points: Insufficient, incomplete, lacks supporting evidence.
* 7 pts - 7 points: Passing, meets expectations.
* 9 pts - 9 points: Well above average, exceeds expectations.
* 10 pts - 10 points: Superior performance, excellent.

### Part 2

Based on what you calculated in Part 1, which option would you recommend to Cut Here management?

Based on the calculation in part 1, i would recommend Cut Here to go with project B for the following reasons:

1) the payback time is shorter : 3 years as compared to project A which is 3.17 years or 3years and 2 months

2) After 3 years and two months, project B would have yielded roughly $33,000 more after breaking even, while project A will just be breaking even.

Read the response to Part 2 and assign points below. Be sure to see the detailed rubric on the Instructions tab before assigning points.

* **0 pts - 0 points: No answer, completely irrelevant answer.**
* 5 pts - 5 points: Insufficient answer, incomplete, lacks supporting evidence.
* 7 pts - 7 points: Passing, meets expectations.
* 9 pts - 9 points: Well above average, exceeds expectations.
* 10 pts - 10 points: Superior performance, excellent.

### Part 3

Describe some of the strengths and weaknesses of your analysis (i.e., specific measures, etc.). Also, what other considerations might influence your recommendation?

My analysis is detailed and vary well explanatory. I didn't write out the entire steps of the project B calculations as they were identical to the calculations of Project A.  
  
Also if the yearly returns for project B were smaller, it could take longer than 3 years to recover the invested amount, and therefore project A, having a much shorter pay back period, stands a chance of being the better option.

Read the response to Part 3 and assign points below. Be sure to see the detailed rubric on the Instructions tab before assigning points.

* **0 pts - 0 points: No answer, completely irrelevant answer.**
* 5 pts - 5 points: Insufficient answer, incomplete, lacks supporting evidence.
* 7 pts - 7 points: Passing, meets expectations.
* 9 pts - 9 points: Well above average, exceeds expectations.
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Please provide any overall feedback that you have for the author of this assignment. What is one strength of the submission? What is one area of improvement that you would like to suggest?

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