**Fall 2020—Finance 422 Results**

Here is the breakdown for the four sections of FIN 422 (sections 1 and 2 = 39 and sections 3 and 4 = 50; total number of students assessed = 89)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Level of Competence** | **Objective****1** | **Objective 2; Alternative Objective 2** | **Objective****3** | **Objective****4** |  |
| **1** | 6 | N/A; 3 | 6 | 7 |  |
| **2** | 35 | N/A; 19 | 23 | 23 |  |
| **3** | 22 | N/A; 20 | 38 | 40 |  |
| **4** | 26 | N/A; 47 | 22 | 19 |  |
| **Total** | **89** | **89** | **89** | **89** |  |

Discussion (January 2021):

The estimate of free cash flows (FCF) (Objective 1) showed the lowest performance, measured with 54% of students scoring either three or four. The current results are nine percent lower than the initial assessment results (64%) for the same question. The decrease in student’s performance could be attributed to: critically low-class attendance through-out the semester, low participation and a lack of face-to-face discussion, during a critical time of the semester, the topic of mergers and acquisition topic was not adequately addressed during the semester.

Additionally, the second objective, estimating the discount rate using the CAPM, was not evaluated this term, due to the negative impact of student error(s) would have resulted in incorrect values for the time value of money (Objective 3) and/or the valuation calculation (Objective 4). As a replacement, an alternative second objective of evaluating projects based on supplied cash flows was measured. The students’ performance of 75% was the maximum result for the current assessment. This positive result indicates that students in the capstone class are retaining capital budgeting methods, one of the key components of finance curriculum.

The third and fourth objectives, the time value of money calculations and the estimated market value of the firm’s equity, scored at the levels of 67% and 66%, respectively. The current results mirrored the earlier class assessment in 2018. Future changes include plans to administer the assessment in a face-to-face delivery method and based on departmental discussion, possibly including a conceptual assessment objective. Included exhibits are: the current assessment, the BBA Finance rubric and Winter 2018 Assessment Results and discussion of the initial assessment.

Exhibits:

Finance Department Assessment-422

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Fall 2020— Due on Friday (12/4/20) by 11:59 p.m. by emailing a scanned copy of your solution to willeyt@gvsu.edu. Your score will range from one to five required participation points, with a possibility of one additional point for extraordinary analysis.

Goal: Students can estimate the intrinsic value of the firm and determine the appropriate value of equity

Learning Objectives: Students will be able to …

1. Develop the forecasted free cash flows of the firm.
2. Estimate the appropriate cost of capital for the firm.
3. Apply time value of money concepts to determine the intrinsic value of operations.
4. Estimate the market value of the firm’s equity.
5. Evaluate the feasibility of projects based on cash flows.

Part I: Wansley Portal Inc., a large Internet service provider, is evaluating the possible acquisition of Alabama Connections Company (ACC), a regional Internet service provider. Wansley's analysts project the following post-merger data for ACC (in thousands of dollars):

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | 2021 | 2022 | 2023 | 2024 | 2025 |
| Net sales | $500 | $600 | $700 | $760 | $806 |
| Selling and administrative expense | 60 | 70 | 80 | 90 | 96 |
| Interest | 30 | 40 | 45 | 60 | 74 |
| Depreciation | $80 | $78 | $80 | $88 | $100 |

If the acquisition is made, it will occur on January 1, 2021. All cash flows shown in the income statements are assumed to occur at the end of the year. ACC currently has a capital structure of 30 percent debt, which costs 9 percent, but Wansley would increase that to 40 percent debt, costing 10 percent if the acquisition were made. ACC, if independent, would pay taxes at 30 percent, but its income would be taxed at 35 percent if it were consolidated. ACC's current market-determined beta is 1.40. The cost of goods sold is expected to be 65 percent of sales, but it could vary somewhat. The risk-free rate is 7 percent, and the market risk premium is 6.5 percent.

|  |  |
| --- | --- |
| Tax rate of ACC before the merger | 30% |
| Tax rate after merger | 35% |
| Cost of goods sold as a % of sales | 65% |
| Debt ratio (percent financed with debt) before the merger | 30% |
| Cost of debt before merger | 9% |
| Debt ratio (percent financed with debt) after the merger | 40% |
| Cost of debt after merger | 10% |
| Beta of ACC | 1.40 |
| Risk-free rate | 7% |
| Market risk premium | 6.5% |
| Terminal growth rate of free cash flow | 6.0% |

1. What are the Free Cash Flows (FCF) and the horizon value of the tax shields?
2. Using a discount rate of 14% and with $400 million of debt, what is the value of ACC’s operations?

Part II: Consider the two mutually exclusive investments whose expected net cash flows are:

|  |  |
| --- | --- |
|  | Expected Net Cash Flows |
| Year | Project A | Project B |
| 0 | -$400 | -$650 |
| 1 | -$528 | $210 |
| 2 | -$219 | $210 |
| 3 | -$150 | $210 |
| 4 | $1,100 | $210 |
| 5 | $820 | $210 |
| 6 | $990 | $210 |
| 7 | -$325 | $210 |

1. Construct a NPV profile for Projects A and B.
2. What is each project’s IRR?
3. If each project’s cost of capital were 10%, which project, if either, should be selected? If the cost of capital were 17%, what would be the proper choice?
4. What is each project’s MIRR at a cost of capital of 10%? At 17%?
5. What is the crossover rate, and what is its significance?

**BBA Finance**

**Goal:** Estimate the intrinsic value of the firm and determine the appropriate cost of equity.

* Objective 1: Develop the forecasted free cash flows of the firm
* Objective 2: Estimate the appropriate cost of capital for the firm
* Alternative Objective 2: Evaluate the feasibility of projects based on cash flows
* Objective 3: Apply the time value of money concepts to determine the intrinsic value of operations
* Objective 4: Estimate the market value of the firm’s equity

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Criteria** | **Level 1** | **Level 2** | **Level 3** | **Level 4** |
| Develop the forecasted free cash flows of the firm | Shows no evidence of understanding relevant components of free cash flows. Three or more errors are made in the analysis. | Shows some evidence of understanding relevant components of free cash flows. Two errors are made in the analysis. | Uses data and proper technique to find the required cash flow. One error is made in the analysis. | Uses data and proper technique to correctly calculate the required cash flow. No errors are made in the analysis. |
| Estimate the appropriate cost of capital for the firm | Shows no evidence of understanding relevant components of the cost of capital. Three or more errors are made in the analysis. | Shows some evidence of understanding relevant components of the cost of capital. Two errors are made in the analysis. | Uses data and proper technique to find the cost of capital. One error is made in the analysis. | Uses data and proper technique to correctly calculate the cost of capital. No errors are made in the analysis. |
| Evaluate the feasibility of projects based on cash flows. | Shows no evidence of understanding the analysis of projects. Three or more errors are made in the analysis. | Shows some evidence of understanding the analysis of projects. Two errors are made in the analysis. | Uses data and proper technique to analyze projects. One error is made in the analysis. | Uses data and proper technique to analyze projects. No errors are made in the analysis. |
| Apply time value of money concepts to determine the intrinsic value of operations | Shows no evidence of understanding relevant components of the intrinsic value of operations. Three or more errors are made in the analysis. | Shows some evidence of understanding relevant components of the intrinsic value of operations. Two errors are made in the analysis. | Uses data and proper technique to find the intrinsic value of operations. One error is made in the analysis. | Uses data and proper technique to correctly calculate the intrinsic value of operations. No errors are made in the analysis. |
| Estimate the market value of the firm’s equity | Shows no evidence of understanding the market value of the firm’s equity. Three or more errors are made in the analysis. | Shows some evidence of understanding the market value of the firm’s equity. Two errors are made in the analysis. | Uses data and proper technique to find the market value of the firm’s equity. One error is made in the analysis. | Uses data and proper technique to correctly calculate the market value of the firm’s equity. No errors are made in the analysis. |

Winter 2018—Finance 422 Results

Here is the breakdown for the five sections of FIN 422 (sections 1 and 2 = 50 and sections 3, 4 and 5 = 76; total number of students assessed = 126)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Level of Competence** | **Objective 1** | **Objective 2** | **Objective 3** | **Objective 4** |
| **1** | 3 | 0 | 0 | 0 |
| **2** | 44 | 17 | 0 | 0 |
| **3** | 21 | 98 | 0 | 0 |
| **4** | 58 | 11 | 126 | 126 |
| **Total** | **126** | **126** | **126** | **126** |

Departmental Discussion (August 2018):

The required return estimate using the CAPM (Objective 2) showed the lowest performance measured with 63% of students scoring either three or four. This result mirrors similar low performance in the recent 320 assessment results, which suggest further emphasis on the topic in all classes.

The calculation of the value of the firm’s equity (Objective 3) showed all the students achieving the established range of discounted cash flow (DCF) of the free cash flows (FCF from Objective 1).

The addition of a conceptual question and in-class administration of the assessment were presented as a future improvement. According to AOL guidelines, the assessment is not required for two years but the possibility of regular assessment is being considered.

Closing the Loop (September 2018):

1. The use of assessment will be revised to include a uniform in-class period across all sections for the evaluation. 422 faculty will discuss the possible inclusion of a conceptual item to the existing four analytical questions.
2. The adding of a specific cost of capital case in either 322 and/or 422 will be considered in order to give additional reinforcement for the CAPM approach (Objective 2). West Coast Semiconductor, Inc. is attached and is a potential inclusion item.
3. Attached items are: Sample Case; Grader Solution/Notes; Student Results (2) and the BBA Finance Rubric are below.