**[BSBA] AY 2018-2019 ASSESSMENT**

***Phase 1: Assessment Plan***

**Learning Outcome Assessed:**

[BSBA] Learning Outcome 7  
Students will demonstrate ability to identify relevant information and apply specific knowledge and analysis skills to assess the economic value of real/financial assets or investment opportunities and make appropriate decision to create value.

We assess this learning outcome with the following measurable traits.

1. Identify/construct relevant cash flows for valuing a financial/real asset or an investment opportunity

2. Estimate/calculate risk adjusted discount rate for a given risky asset or investment

3. Value assets or investment opportunities and make appropriate decision to create value

A set of multi-choice questions were used to assess each of the above traits. See Evaluation Process for details.

**Assessment Method:**

An updated set of multi-choice and short-answer questions following the suggestions made in the 2016-2017 Assessment Report was used to assess each trait. Those questions were embedded in homework assignments and some tests assigned in three sections taught by full-time faculty and one section taught by part-time faculty of BUS 305 offered in Fall 2018. The questions used are provided in the Evaluation Process section.

**Targeted performance, based on rubrics:**

Our target is to have a success rate of at least 70% for each of the three traits.

**Evaluation Process:**

The questions below were developed to assess each trait.

Measurable Trait 1: Identify/construct relevant cash flows for valuing a financial/real asset or an investment opportunity

1. Jane has been offered a 15-year bond issued by Barone, Inc., at a price of $943.22. The bond has a coupon rate of 9 percent and pays the coupon semiannually. Similar bonds in the market will yield 10 percent today. Bond has a face value of $1,000. What are the cash flows from this bond?

2. BioSci, Inc., a biotech firm has forecast the following growth rates for the next three years: 30 percent, 25 percent, and 20 percent. The company then expects to grow at a constant rate of 7 percent forever. The company paid a dividend of $1.50 last week. What are the dividends expected over the next four years? (Round final answers to one decimal place)

3. A firm is considering taking a project that will produce $12 million of revenue per year. Cash expenses will be $5 million, and depreciation expenses will be $1 million per year. If the firm takes that project, then it will reduce the cash revenues of an existing project by $3 million. What is the free cash flow on the project, per year, if the firm is in the 40 percent marginal tax rate?

Franco is considering the purchase of new equipment. To begin the project, the equipment costs $350,000, and an additional $120,000 is needed to install it. An inventory investment cost of $90,000 is also required at the start of the project. The equipment will be depreciated straight-line to zero over a five-year life. The equipment will generate additional annual revenues of $250,000, and it will have annual cash operating expenses of $80,000. The equipment will be sold for $70,000 after five years. Franco is in the 40 percent tax bracket and its cost of capital is 10 percent.

4. What is the initial outlay for this project?

5. What are the annual after-tax free cash flows (from operation) for years 1-5?

6. What is the terminal year after-tax cash flow from the recovery of working capital?

7. What is the terminal year after-tax salvage value?

Measurable Trait 2: Estimate risk adjusted discount rate/cost of capital for a given risky investment

1. RetRyder Hand Trucks has a preferred share issue outstanding that pays an annual dividend of $2.00 per year. The current cost of preferred equity for RetRyder is 11 percent. If RetRyder issues additional preferred shares that pay exactly the same dividend and the investment banker retains 8 percent of the sale price proceeds, what is the cost of new preferred shares for RetRyder?

2. TeleNyckel, Inc. has a beta of 1.4 and is trying to calculate its cost of equity capital. If the risk-free rate of return is 4 percent and the market risk premium is 8 percent, then what is the firm's after-tax cost of equity capital if the firm's marginal tax rate is 30 percent?

3. Beckham Corporation has semiannual bonds outstanding with 20 years to maturity and the bonds are currently priced at $746.16. If the bonds have a coupon rate of 8.5 percent, then what is the after-tax cost of debt for Beckham if its marginal tax rate is 35%? Round your intermediate calculation to two decimal places and final percentage answer to three decimal places.

4. Droz's Hiking Gear, Inc. has found that its common equity capital shares have a beta equal to 2.5 while the risk-free return is 8 percent and the expected return on the market is 14 percent. It has 7-year semiannual maturity bonds outstanding with a price of $1,050 that have a coupon rate of 7 percent. The firm is financed with $120 million of common shares (market value) and $80 million of debt. What is the after-tax weighted average cost of capital for Droz's, if it is subject to a 35 percent marginal tax rate? Round your final percentage answer to three decimal places.Measurable Trait 3. Value real/financial assets or investment opportunities and make appropriate decision to create value

1. Jane has been offered a 20-year bond issued by Barone, Inc., at a price of $990. The bond has a coupon rate of 10 percent and pays the coupon semiannually. Similar bonds in the market will yield 8 percent today. What is the value of the bond? (Do not round intermediate computations. Round your final answer to the nearest dollar)

2. In the previous question, should Jane buy the bonds at the offered price?

3. NeuSci, Inc., a biotech firm has forecast the following cash flows for the next three years: $2.60, $3.25, and $3.90. The company then expects cash flows to grow at a constant rate of 5 percent for forever. If the required rate of return is 25 percent, what is the market value of this stock? (Do not round intermediate calculations. Round final answer to two decimal places.)

4. Ajax Company has issued perpetual preferred stock with a par of $100 and a dividend of 9 percent. If the required rate of return is 8 percent, what is the stock's current market price?

5. The Cyclone Golf Resorts is redoing its golf course at a cost of $2,500,000. It expects to generate cash flows of $888,888.80, $1,000,000, and $2,000,000 over the next three years. If the appropriate discount rate for the firm is 20 percent, what is the NPV of this project? (Do not round intermediate computations. Round final answer to nearest dollar.)

6. In the previous question, should Cyclone Golf Resorts accept the project?

A. No, Cyclone Golf Resorts should NOT accept the project.

B. Yes, Cyclone Golf Resorts should accept the project.

C. Cyclone Golf Resorts should be indifferent about accepting or rejecting the project.

D. None of the above"

7. Your mother is trying to choose one of the following bank CDs to deposit $10,000. Which will offer the highest future value if she plans to invest for for five years? A. 5.62% compounded annually, B. 5.50% compounded daily, C. 5.52% compounded monthly, D. 5.56% compounded semi-annually

The questions above were embedded in homework assignments and some tests assigned in three sections taught by full-time faculty and one section taught by part-time faculty of BUS 305 offered in Fall 2018.

**Course where learning outcome was assessed:**

Learning Outcome 7 was assessed in three sections taught by full-time faculty and one section taught by part-time faculty of BUS 305: Principles of Finance offered in Fall 2018.

Evaluator(s): Cathy Goldberg, Mehrnoush Shahhosseini, Lawrence Souza

***Phase 2: Results Assessment and Planned Action***

**Results:**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Success Rate** | **Overall** | |
| ***Measurable Trait 1: Identify/construct relevant cash flows for valuing a financial/real asset or an investment opportunity*** | **71.23%** | **Total Number of Students in Sample** | **Total Number of Students Answering Correctly** |
| 1. Jane has been offered a 15-year bond issued by Barone, Inc., at a price of $943.22. The bond has a coupon rate of 9 percent and pays the coupon semiannually. Similar bonds in the market will yield 10 percent today. Bond has a face value of $1,000. What are the cash flows from this bond? | 79.58% | 142 | **113** |
| 2. BioSci, Inc., a biotech firm has forecast the following growth rates for the next three years: 30 percent, 25 percent, and 20 percent. The company then expects to grow at a constant rate of 7 percent forever. The company paid a dividend of $1.50 last week. What are the dividends expected over the next four years? (Round final answers to one decimal place) | 87.32% | 142 | **124** |
| 3. A firm is considering taking a project that will produce $12 million of revenue per year. Cash expenses will be $5 million, and depreciation expenses will be $1 million per year. If the firm takes that project, then it will reduce the cash revenues of an existing project by $3 million. What is the free cash flow on the project, per year, if the firm is in the 40 percent marginal tax rate? | 61.97% | 142 | **88** |
| Franco is considering the purchase of new equipment. To begin the project, the equipment costs $350,000, and an additional $120,000 is needed to install it. An inventory investment cost of $90,000 is also required at the start of the project. The equipment will be depreciated straight-line to zero over a five-year life. The equipment will generate additional annual revenues of $250,000, and it will have annual cash operating expenses of $80,000. The equipment will be sold for $70,000 after five years. Franco is in the 40 percent tax bracket and its cost of capital is 10 percent. |  |  |  |
| 4. What is the initial outlay for this project? | 90.14% | 142 | **128** |
| 5. What are the annual after-tax free cash flows (from operation) for years 1-5? | 46.48% | 142 | **66** |
| 6. What is the terminal year after-tax cash flow from the recovery of working capital? | 62.68% | 142 | **89** |
| 7. What is the terminal year after-tax salvage value? | 70.42% | 142 | **100** |
|  |  |  |  |
| ***Measurable Trait 3. Value real/financial assets or investment opportunities and make appropriate decision to create value*** | **74.65%** | ***Total Number of Students in Sample*** | ***Total Number of Students Answering Correctly*** |
| 1. Jane has been offered a 20-year bond issued by Barone, Inc., at a price of $990. The bond has a coupon rate of 10 percent and pays the coupon semiannually. Similar bonds in the market will yield 8 percent today. What is the value of the bond? (Do not round intermediate computations. Round your final answer to the nearest dollar) | 79.58% | 142 | **113** |
| 2. In the previous question, should Jane buy the bonds at the offered price? | 76.06% | 142 | **108** |
| 3. NeuSci, Inc., a biotech firm has forecast the following cash flows for the next three years: $2.60, $3.25, and $3.90. The company then expects cash flows to grow at a constant rate of 5 percent for forever. If the required rate of return is 25 percent, what is the market value of this stock? (Do not round intermediate calculations. Round final answer to two decimal places.) | 47.18% | 142 | **67** |
| 4. Ajax Company has issued perpetual preferred stock with a par of $100 and a dividend of 9 percent. If the required rate of return is 8 percent, what is the stock's current market price? | 69.01% | 142 | **98** |
| 5. The Cyclone Golf Resorts is redoing its golf course at a cost of $2,500,000. It expects to generate cash flows of $888,888.80, $1,000,000, and $2,000,000 over the next three years. If the appropriate discount rate for the firm is 20 percent, what is the NPV of this project? (Do not round intermediate computations. Round final answer to nearest dollar.) | 91.55% | 142 | **130** |
| 6. In the previous question, should Cyclone Golf Resorts accept the project?  A. No, Cyclone Golf Resorts should NOT accept the project.  B. Yes, Cyclone Golf Resorts should accept the project.  C. Cyclone Golf Resorts should be indifferent about accepting or rejecting the project.  D. None of the above | 82.39% | 142 | **117** |
| 7. Your mother is trying to choose one of the following bank CDs to deposit $10,000. Which will offer the highest future value if she plans to invest for for five years? A. 5.62% compounded annually, B. 5.50% compounded daily, C. 5.52% compounded monthly, D. 5.56% compounded semi-annually | 76.76% | 142 | **109** |
|  |  |  |  |
| ***Measurable Trait 2: Estimate risk adjusted discount rate/cost of capital for a given risky investment*** | **70.42%** | ***Total Number of Students in Sample*** | ***Total Number of Students Answering Correctly*** |
| 1. RetRyder Hand Trucks has a preferred share issue outstanding that pays an annual dividend of $2.00 per year. The current cost of preferred equity for RetRyder is 11 percent. If RetRyder issues additional preferred shares that pay exactly the same dividend and the investment banker retains 8 percent of the sale price proceeds, what is the cost of new preferred shares for RetRyder? | 61.27% | 142 | **87** |
| 2. TeleNyckel, Inc. has a beta of 1.4 and is trying to calculate its cost of equity capital. If the risk-free rate of return is 4 percent and the market risk premium is 8 percent, then what is the firm's after-tax cost of equity capital if the firm's marginal tax rate is 30 percent? | 77.46% | 142 | **110** |
| 3. Beckham Corporation has semiannual bonds outstanding with 20 years to maturity and the bonds are currently priced at $746.16. If the bonds have a coupon rate of 8.5 percent, then what is the after-tax cost of debt for Beckham if its marginal tax rate is 35%? Round your intermediate calculation to two decimal places and final percentage answer to three decimal places. | 83.10% | 142 | **118** |
| 4. Droz's Hiking Gear, Inc. has found that its common equity capital shares have a beta equal to 2.5 while the risk-free return is 8 percent and the expected return on the market is 14 percent. It has 7-year semiannual maturity bonds outstanding with a price of $1,050 that have a coupon rate of 7 percent. The firm is financed with $120 million of common shares (market value) and $80 million of debt. What is the after-tax weighted average cost of capital for Droz's, if it is subject to a 35 percent marginal tax rate? Round your final percentage answer to three decimal places. | 59.86% | 142 | **85** |

Overall, students met our target of 70% success rate for each of the three traits. The performance for the majority of individual question used in the assessment exceeded the targeted cut-off of 70%. However, we also identified a few questions that have performance below the targeted cut-off and call for attention that either the questions need to be revised to enable us to better assess a specific trait or the instructors need to put more emphasis on the concepts that the questions assess. They are questions 3, 5 and 6 for measurable trait#1, and questions 3 and 4 for measurable trait#3, and questions 1 and 4 for measurable trait#2. Especially four of them are cash flow questions, which is not an easy topic for students to understand.

We present the actions to take in the Suggested Action section below.

**Suggested Action:**

The following concepts are suggested to be put more emphasis on by the instructors:

1. The calculation of annual free cash flows for capital budgeting analysis.
2. The calculation of annual after-tax free cash flows from operation for capital budgeting analysis.
3. The calculation of terminal value for capital budgeting analysis.
4. Use discounted cash flow model to calculate the value of common stock.
5. Use discounted dividend model to calculate the value of preferred stock.
6. The calculation of weighted average cost of capital.

***Phase 3: Closing the Loop***

(In the year that the assessment is made, this is good place to describe how the suggested actions might be evaluated in a future assessment cycle. When that cycle is complete, the results can be added to this document to finalize the report.)

See Suggested Action section.