Permanent Debt and Equity Financing

Learning Problems

Online Discussion

Problem: Credit Assessment of All-Weather

Hanna Struthers is a lending officer at the Royal Bank and is assessing a loan application by All-Weather Inc. for a 3-year term loan. After preparing pro forma financial statements for the next three years, Struthers calculated the following ratios:

|  |  |  |  |
| --- | --- | --- | --- |
| **Pro Forma Financial Ratios** | **2019** | **2020** | **2021** |
| Current ratio | 1.20 | 1.23 | 1.26 |
| Quick ratio | 0.71 | 0.73 | 0.76 |
| Debt service coverage ratio | 1.19 | 1.25 | 1.36 |
| Total debt/Total assets | 0.78 | 0.75 | 0.70 |

Royal Bank instructs its lending officers that a credit applicant’s debt service coverage ratio should generally not be below 1.20. Before refusing a potential client though, they should carefully consider the company’s credit history, the character of its owners, the quality of all collateral pledged including any personal guarantees, general economic and industry conditions, and whether the firm’s operations are improving.

The bank also provides loan pricing guidelines for different industries to aid its lending officers in negotiating an appropriate interest rate. Lending officers have the discretion to increase or decrease an applicant’s credit score by one step depending on the quality of the application.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Credit scores**  | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| Current ratio | 2.00 | 1.80 | 1.60 | 1.40 | 1.20 | 1.00 | 0.80 |
| Quick ratio | 1.10 | 1.00 | 0.90 | 0.80 | 0.75 | 0.70 | 0.50 |
| Debt service coverage ratio | 6.50 | 4.75 | 3.60 | 2.00 | 1.25 | 1.10 | (1.80) |
| Total debt/Total assets | 0.40 | 0.55 | 0.65 | 0.70 | 0.75 | 0.79 | 0.85 |
| Interest rate | P + 25 bps | P + 50 bps | P + 80 bps | P + 120 bps | P + 200 bps | P + 300 bps | P + 400 bps |

Note: A basis point (BPS) is 1/100 of 1.0%. P is the prime rate which is currently 5.0%.

All-Weather is owned by Jack Walterhouse who is a long-term Royal Bank client. His company has a strong credit history with only two late loan payments and no defaults in over 20 years of doing business. The term loan is secured by collateral that exceeds the value of the loan and is well maintained and highly marketable. Walterhouse and his spouse are willing to provide a personal guarantee and have accumulated sizeable personal assets over a lifetime of hard work. After a period of slow growth, experts believe All-Weather’s industry will grow at an above-average rate over the next five years. All-Weather has been an industry leader since its inception.

**REQUIRED:**

1. Should Struthers approve the term loan to All-Weather? What interest rate should she try to negotiate? Discuss.

**Problem: Capitalizing Leases at Secure Transport**

New Flyer Industries manufactures transit buses, which it sells or leases to city transit authorities or private transportation companies at the list price of CAD 180,000. Buses last an average of 15 years and have a negligible salvage value.

Secure Transport leased 10 buses on December 1, 2018. A monthly lease payment of CAD 2,263.19 per bus was negotiated. The lease is for 10 years at which time Secure Transport will take possession of the buses at no charge under a bargain purchase option.

The implicit rate in the lease is 9.0%, compounded monthly.

**REQUIRED:**

1. Prepare a partial income statement and balance sheet for Secure Transport at the end of the first month of the lease.

**Problem: Capitalizing Leases at Wilson**

Network Company manufactures computers, which it sells or leases for use as front-end processors in wide-area networks. Network builds computers and sells them for CAD 95,000. The computers have an estimated life of seven years and a negligible salvage value.

Network leased two computers to Wilson Company for five years at CAD 1,754.88 each per month on December 1, 2018. Network expects each computer to be worth CAD 11,732.65 at the end of the lease when they are returned to the lessor.

The implicit rate in the lease is 8.0%, compounded monthly.

**REQUIRED:**

1. Prepare a partial income statement and balance sheet for Wilson at the end of the first month of the lease.

**Problem: Capitalizing Leases at Porta Power**

Porta Power Company manufactures industrial generators that are used at isolated construction sites. Each generator sells for CAD 238,300. The generators have a life of approximately 10 years if properly maintained and a negligible salvage value.

Porta Power both sells and leases its product. Arctic Construction leased four generators on December 1, 2019. The lease is for eight years and the monthly payment for each generator is CAD 3,585.97 payable at the beginning of each month. Arctic Construction takes possession of the generators at the end of the lease at no cost.

The implicit rate in the lease is 10.0%, compounded monthly. Arctic Construction has an incremental borrowing rate of 9.0%, compounded monthly.

**REQUIRED:**

1. Prepare a partial income statement and balance sheet at the end of 2019 relating to the lease.

**Problem: Capitalizing Leases at Acme**

Acme Ltd. has entered into a 2-year operating lease for the use of some equipment on December 1, 2018. Lease payments are CAD 2,000 per month payable at the beginning of each month.

The company’s incremental borrowing rate is 5.0%, compounded monthly.

**REQUIRED:**

1. Prepare a partial income statement and balance sheet for Acme at the end of the first month of the lease.

**Problem: Calculating Lease Payments at Stead Leasing**

Stead Leasing Inc. is leasing a machine to Orion Ltd. and is determining the payments that will be due at the beginning of each month. The following information was collected:

 Cost of machine: CAD 5,000,000

 Lease term: 10 years

 RRR: 12.0%, compounded monthly

 Estimated residual: CAD 1,000,000

 CCA rate: 30.0%

 Tax rate: 30.0%

The machine is an exempt specified leasing property under the Income Tax Act.

**REQUIRED:**

1. Calculate the monthly lease payment.
2. If the lease payment was CAD 82,000 per month, what would be the rate of return?
3. What would the lease payments in Part 1 be if the lease had a bargain purchase option where Orion could buy the asset at the end of the lease for CAD 1?

**Problem: Lease or Buy at Hawkeye**

Hawkeye Industries is purchasing a new machine for CAD 3,000. The machine is subject to a CCA rate of 40.0% and will be worthless in three years. CIBC has offered Hawkeye a 3-year loan for CAD 3,000. The repayment schedule requires three principal payments of CAD 1,000 and an interest charge of 11.2% on the outstanding balance of the loan payable at the end of each year.

Ottawa Leasing Ltd. offers to lease the same machine to Hawkeye. Lease payments of CAD 1,200 per year are payable at the beginning of each of the next three years.

The machine is exempt specified leasing property under the Income Tax Act. Hawkeye’s tax rate is 25.0%.

**REQUIRED:**

1. Should Hawkeye lease the machine or purchase it with bank financing?
2. Why was the after-tax cost of debt used as the discount rate and not the WACC?

**Problem: Lease or Buy at Shaw**

Shaw Company wants to acquire a new machine for CAD 100,000. It can be financed using an eight-year lease with payments of CAD 17,000 per year that are payable at the beginning of each year. Alternatively, it can borrow the CAD 100,000 at 8.0% for eight years with annual payments at the end of each year. The machine has an estimated residual value of CAD 10,000 at the end of the lease.

The machine is exempt specified leasing property under the Income Tax Act and is subject to a CCA rate of 20.0%. Shaw has a 25.0% tax rate.

**REQUIRED:**

1. Which is the most cost-effective method of financing the new machine?

**Problem: Lease or Buy at Anzio**

Anzio Manufacturing Ltd. purchased real estate for CAD 2,700,000. Of the total cost, CAD 700,000 was deemed to be the cost of the land, and the remaining CAD 2,000,000 was the cost of the building.

Immediately after the purchase, a leasing company offered to purchase the property for CAD 2,700,000 and lease it back to the manufacturing company for twenty years at CAD 300,000 per year, payable at the end of the year. The building is estimated to be worth CAD 100,000 and the land is estimated to be worth CAD 1,000,000 in 20 years. The building is exempt specified leasing property under the Income Tax Act and is subject to a CCA rate of 5.0%. Anzio can obtain a mortgage at the market rate of 8.0%, and the tax rate is 25.0%.

**REQUIRED:**

1. Should Anzio accept the sale and leaseback offer?

**Problem: Lease or Buy at Olesen**

Olesen Company has decided to buy a new truck. One alternative is to lease the truck for the next four years at payments of CAD 10,000 per year, payable at the end of each year. Alternatively, Olesen could purchase the truck for CAD 40,000 and finance it with a 4-year bank loan at an interest rate of 8.0%, compounded monthly. Blended equal loan payments would be made at the end of each year. The truck has an expected salvage value of CAD 10,000 at the end of four years, at which time Olesen plans to replace it irrespective of whether it leases or buys. The truck is exempt specified leasing property under the Income Tax Act and is subject to a CCA rate of 30.0%. Olesen has a tax rate of 25.0%.

**REQUIRED:**

1. Which is the most cost-effective method of financing the new machine?

**Problem: Lease or Buy at Halo Manufacturing**

Halo Manufacturing Ltd. is expanding its production facilities and needs to acquire a new machine costing CAD 80,000. The machine can be either leased or purchased. The proposed leasing agreement requires beginning-of-year payments of CAD 16,900 over five years.If Halo purchases the machine, a 20.0% down payment is required and the remainder is financed with a 5-year loan at an interest rate of 8.0%, compounded monthly with equal payments at the end of each month. The machine will be subject to a CCA rate of 30.0%. At the end of the 5-year loan, Halo plans to replace the machine and expects it will have a salvage value of CAD 20,000. Halo’s tax rate is 25.0% tax.

**REQUIRED:**

1. Would you recommend that Halo lease or buy the new machine?

**Problem: Specified Leasing Property**

High Country Financial Inc. leases equipment to Langston Ltd. beginning in January 2018. The equipment has a fair market value of CAD 200,000 and is classified as non-exempt specified leasing property under the Income Tax Act. Lease payments are CAD 28,750 payable at the end of each year over the 5-year term of the lease. The CCA rate for the leased property is 40.0% and the Bank of Canada’s prescribed rate is currently 6.0%.

**REQUIRED:**

1. How should High Country Financial account for this lease in 2018?
2. How can Langston elect to account for this lease in 2018?

### Problem: Bond Refunding at Acme

Acme Ltd. is considering replacing one bond issue with another to take advantage of lower interest rates. The following information is available:

|  |  |  |
| --- | --- | --- |
|  | **Old Issue** | **New Issue** |
| Amount | CAD 5,000,000 | CAD 5,000,000 |
| Interest rate | 8.0% | 6.5% |
| Original life | 13 years | 10 years |
| Remaining life | 10 years | 10 years |
| Call premium | 4.0% | - |
| Underwriting costs | CAD 60,000 | CAD 90,000 |
| Other issuance costs | CAD 13,000 | CAD 15,000 |

Issuance costs relating to the old issue have two years of amortization remaining. The overlap period of the issues is two months. Funds can be invested temporarily at 2.0% before tax. Call premiums on bond issues are tax-deductible in the year incurred and issuance costs are amortized over five years. Any unamortized issuance costs relating to the old issue can be immediately deducted. Acme has a tax rate of 25.0%.

**REQUIRED:**

1. Should Acme refund this bond issue?
2. How was the discount rate determined?

**Problem: Bond Refunding at Hansen Brothers**

Hanson Brothers Ltd. has CAD 15 million of bonds outstanding with a 7.0% coupon rate and 10 years to maturity. Similar bonds are currently yielding 5.8% over 10 years, and Hanson Brothers are wondering if refunding is advisable. The existing bond has a call premium of 4.0%. A new issue would require issuance costs of CAD 410,000. An overlap period of one month for the two bond issues is expected. Surplus funds can be invested at 2.5% before tax. All issuance costs relating to the old issue have been amortized. Call premiums on bond issues are tax-deductible in the year incurred and issuance costs are amortized over five years. Hanson Brothers have a tax rate of 25.0%.

**REQUIRED:**

1. Should Hanson Brothers refund this bond issue?
2. Besides saving on interest costs, what other reasons may Hanson Brothers have for refunding the bond issue?
3. How would Part 1 change if the bond had a Canada Plus Call which allowed Hanson Brothers to purchase the bond issue at a 1.2% premium over the Government of Canada Bond rate which is currently 4.5%?

**Problem: Preferred Share Refunding at Spencer**

Spencer Inc. is considering replacing CAD 2 million in preferred shares because of a drop in market yields on similar securities. The existing preferred shares carry a dividend of CAD 5 per share, which is a rate of 10.0% on their stated value. Current market yields on Spencer’s preferred shares are estimated to be 7.0%. Spencer’s preferred shares are currently trading at CAD 71.43. Issuance costs on a new preferred issue would be CAD 160,000 which are tax-deductible over five years. The preferred shares are callable at 105 but call premiums on equity securities are not tax-deductible. All issuance costs relating to the old issue have been amortized. Spencer’s tax rate is 25.0%.

**REQUIRED:**

1. Should Spencer refund these preferred shares?

**Problem: Classifying Assets and Liabilities**

1. ABC Company issued CAD 5, non-cumulative preferred shares that have an unlimited life.

2. Dexter Company issued CAD 3, cumulative preferred shares that have an unlimited life.

3. Rose Company issued preferred shares that have an unlimited life, which requires the company to pay a mandatory annual dividend of CAD 6.

1. Amber Company issued term-preferred shares that require it to repurchase the shares in five years at CAD 40 per share.

What if repurchasing is on a “best efforts” basis only?

5. Rambo Inc. issued bonds with an unlimited life that are retractable at the investor’s option.

6. Ethel Company issued preferred shares that have an unlimited life with an accelerating dividend, which starts at CAD 2 per year and increases by 10% yearly. Ethel Company has the option of repurchasing these shares after five years.

7. Delta Company issued perpetual bonds with an indefinite life and a coupon rate of 7.0%.

8. Alexa Company issued perpetual bonds with an indefinite life that have a coupon rate of 8.0%. The principal is unsecured and subordinate to other debt instruments. The interest payment is not guaranteed and is also subordinate to other debt instruments.

9. Jones Ltd. negotiated mezzanine debt financing where the interest and sinking fund payments can be met by issuing common shares.

**REQUIRED:**

1. Classify the financial securities in the above transactions as either debt or equity under IFRS.

**Problem: Rights Offering at Quaker**

Quaker Ltd. wants to raise CAD 12 million in new common equity to finance an expansion of its production facilities. According to its preemptive rights provision, Quaker must sell the new common shares using a rights offering. Company practice has been to issue rights with a subscription price of 75.0% of the common share’s market value at the time of the rights issue. The company currently has 10 million common shares outstanding with a market price of CAD 8 each. Irene Dunne is the founder of Quaker and owns 40.0% of the common shares and plans to exercise her rights. Her son, William Roberts, currently owns 5.0% of the company but plans to sell his rights.

**REQUIRED:**

1. What is the subscription price of the rights offering? How many new common shares will be issued? How many rights are required to buy one common share?
2. Does Dunne retain the same percentage ownership in the company? Is the value of her investment diluted by the drop in common share price due to the low subscription price?
3. Does Roberts retain the same percentage ownership in the company? Is the value of his investment diluted by the drop in common share price due to the low subscription price?
4. How is the subscription price determined?

Problem: Appropriate Forms of Debt and Equity Financing

1. Allentown Industries approached its local credit union about an expansion loan. The credit union indicated the company had an excellent credit rating but the loan was too large for them to manage alone.
2. Halston Ltd. requires financing until proceeds from a private bond placement are received in a few months.
3. Bella Coola Resources is constructing a pipeline and liquified natural gas export facility on Canada’s west coast with an estimated cost of CAD 30 billion.
4. A popular local food critic retired from her position at a Vancouver TV station and wants to open a health food restaurant in the city’s downtown.
5. Devers Industries is experiencing a period of rapid growth and needs financing, but it has no collateral remaining to pledge and the owner is concerned about losing control of her business if it issues new equity.
6. Hanson Leasing is a major independent leasing company with a large portfolio of lease contracts that need to be financed on an on-going basis.
7. Tri-Star Inc. will receive its third round of venture capital financing in three months, but it needs funds immediately for payroll and other operating expenses.
8. Simpson Inc. has recently been awarded a patent for a new product but has insufficient capital to expand beyond Canada at this time. It is concerned that if it waits to develop the international market that technological advancements will make the product obsolete.
9. Ashern Manufacturing Ltd. has recently completed a new headquarters building which has exhausted its cash reserves, but the company still needs to purchase 10 tractor-trailer units to meet growing demand.
10. Canadian International Development Agency (CIDA) is constructing a hydro-electric dam in a central African country.
11. Heather Donner worked for the provincial government for 20 years but decided to take early retirement and purchase a single-unit franchise of Marvelous Meats.
12. Hank Sprong has developed a family of barbeque sauces that have received excellent reviews from food critics. He has an excellent business plan and has attended several new ventures seminars, but was unable to secure the start-up capital he needs.
13. Hecla Industries is a mature manufacturer that is majority-owned by its founders Mary and Karen Thomas. The two owners are concerned about the high cost of public equity placements and the possibility of losing control of the business if it continues to issue common shares.
14. Blue River Inc. is a small business that is dissatisfied with recent dealings with a major chartered bank. The bank is not offering the long amortization periods and flexible repayment options the company needs and their collateral requirements are too demanding.
15. Aster Industries received a large order to supply brake pads to an auto manufacturer in Germany, but may not be able to accept it because Aster has reached the limit on its line of credit.
16. A partner of Fraser Valley Law was appointed as a judge so he was bought out by the firm. A new partner has been recruited, but they will not begin work for another six months.
17. Ladner Enterprises is a small business that needs additional equity capital to expand in British Columbia, but it does not meet the listing requirements for the TSXV and does not want to deal with venture capitalists.
18. Melford Ltd. is researching new materials for use in the computer chip industry but requires considerable funding to complete its work and begin production.
19. Atlantis Inc. expects interest rates to fall significantly over the next two years. It wants the security of a long-term loan but does not wish to be locked into a high-interest rate.
20. Telford Consolidated wants to enhance its productivity and customer service through greater labour-management harmony. It also needs a core group of investors who will remain loyal during any corporate take-over attempts.
21. Big Sky is a popular Calgary bar band that wants to take the next step and produce their first CD before beginning a Canada-wide tour.
22. Robson Industries is growing rapidly but is in a highly cyclical industry. It needs equity capital but is concerned about a market downturn in the coming year.
23. Evergreen Foods has decided to go public but the founder wants to ensure he can maintain voting control of the business.
24. Harrison Ltd. needs to raise debt financing quickly and does not want to disclose important information about the company to its competitors.
25. Lac Rouge Enterprises is a large-cap company that issues sizable amounts of long-term debt and equity financing each year. It wants to negotiate the lowest interest rate possible and have the least restrictive monitoring process possible.
26. Ryerson Inc. is a small business whose bankers are very concerned about the quality of the collateral they have pledged to secure a loan. The bank is considering calling the loan.

REQUIRED:

1. Determine a suitable type of financing in each of the above situations.

**Discussion: Sources of Permanent Financing at a Canadian Company**

#### REQUIRED:

1. Access the most recent annual reports for NFI (New Flyer Industries) Group found on its company website or through SEDAR.
2. Research these annual reports and analyze NFI’s capital structure and selection of permanent debt and equity sources.
3. Prepare an approximately 200-word submission addressing Part 2. All submissions should be well researched and carefully written and edited before being posted to the discussion board.
4. Respond to the posts of at least three classmates.