

Case Telus

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Dear Students

Based on the complexity of the case, that is very realistic, some of you have shown interest to have one solution possible solution on paper for this case. Here is one. As I am not sure, exactly the solution at class, therefore, this one can be slightly different.

The objective of this case is to calculate the cost of capital for Telus. You may calculate the actual cost of capital and the marginal cost of capital for each source of funds: common shareholder's equity, preferred shareholder's equity and debt (short-term and long-term).

1. Managerial balance sheet

As I mentioned, it is useful to prepare the managerial balance sheet (right side and left side). This balance sheet is shown to be coherent with the valuation approach as well as capital budgeting appraisal. From Exhibit 1:

Table 1-Invested Capital

	Amount
Total assets	\$16 415,0
Account payables and accrued liabilities	\$1 326,0
Other short-term liabilities	\$310,0
Invested capital	\$14 779,0

Table 2 – Capital Employed

	Amount	Weight
Common shareholder's equity	\$6 348,0	43,0%
Preferred shares	\$70,0	0,5%
Long-term loans	\$3 047,0	
Other long-term liabilities	\$281,0	
Long-term debt	\$3 328,0	22,5%
Short term debt	\$5 033,0	34,1%
Total debt	\$8 361,0	
Capital employed	\$14 779,0	100,0%

2. Effective income tax rate

Income tax rate is required to calculate cost of debt and WACC (weighted average cost of capital). From Exhibit 2:

Table 3 – Income tax rate

Income taxes	\$496,0
Earnings before taxes	\$990,0
Effective tax rate	50,1%

3. Cost of debt

Long-term debt

“Telus bond issues outstanding, with average maturities of about 15 years and average asking prices of about \$118.00 the current average yield is actually 8.81 per cent”. (Page 2, 2nd paragraph)

Footnote page 2: Cost of long-term financing after fee for the underwriter: 9.31%. This is the marginal cost of long-term debt.

How substantial are the underwriting costs? $9.31\% - 8.81\% = 0.5\%$ which is a generally acceptable cost. It is very common in practice to omit the underwriting cost that is effectively a cost to the company.

The case also mentions (page 2) that the 2021 Telus bond were issued with a 10.65% coupon.

The case also mentions that the average coupon rate is 11% (page 2, 2nd paragraph). However as the actual asking prices are \$118 the current average yield is 8.81%

Table 4 - Yield

Asking price	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Yield
-\$118,00	\$11,00	\$11,00	\$11,00	\$11,00	\$11,00	\$11,00	\$11,00	\$11,00	\$11,00	\$11,00	\$11,00	\$11,00	\$11,00	\$11,00	\$111,00	8,79%

The yield is the Internal Rate of Return an investor may have if buys the bond in the secondary market at \$118 and keeps the bon until maturity date.

What type of rate to consider? One potential approach is as follow:

1. The coupon rate was at the date of the issue. This was in the past; therefore, it is not relevant in the present.
2. Current yield is the actual cost of debt. This is good to evaluate the actual performance of the company
3. Cost of debt after underwriting fee, signals the cost of the next issue. Consequently, this is the marginal cost of debt.

Short-term debt

Footnote 2 to balance sheet (Exhibit 1): Cost of short term-debt 5.86%

Actual Weighted Average Cost of Debt

Based on previous information:

Table 5 – Actual Weighted Average Cost of Debt

Debt	Amount	Weight	Actual interest rate	Cost of debt
Long-term debt	\$3 328,0	39,8%	8,81%	3,51%
Short term debt	\$5 033,0	60,2%	5,86%	3,53%
Total debt	\$8 361,0	100,0%		7,03%

Note the discrepancy of the cost of debt (before taxes) from financial accounting:

Interest expense (Income statement) = \$496

Total Debt = \$8361

$$\text{Cost of Debt} = \frac{\$496}{\$8361} = 5.93\%$$

This may result because the amount of debt \$8361 in the balance at 31 December, do not represent the average level of debt during the year.

4. Cost of preferred shares

The cost of preferred shares should be calculated as the current yield on preferred shares adjusted for issuing costs.

Note that preferred share dividends are not tax deductible.

On page 2, 4th paragraph is said that "Telus was able to issue two major preferred stocks at a cost of 5% in the past". This means the dividend per share per year \$100x5%=\$5.00

On the same page, 5th paragraph, it is said that the cost of underwriting is 4%: "...about \$4.00 for every \$100 par value share goes to the underwriter".

Same page, 6th paragraph, is said that "currently trading yield is 5.9%"

The cost of preferred equity including underwriting costs would be approximately:

$$k_p = \frac{\text{actual yield}}{1 - \text{underwriting costs in \%}} = \frac{5.9\%}{1 - 4\%} = 6.15\%$$

Another way to calculate could be the following:

If the yield is equal to 5.9% and dividend per share is \$5.00 this means that the actual asking price of preferred shares is:

$$S_p = \frac{\$5.00}{0.059} = \$84.75$$

If Telus is issuing new preferred shares at par \$100 considering the actual yield it should pay \$5.9 per share (that is 5.9% x \$100).

The cost of underwriting would be $4\% \times \$84.75 = 3.39\$$.

This means the cash inflow of the issue would be $\$100 - \$3.39 = \$96.61$

Finally, the cost of the preferred shares would be on total:

$$k_p = \frac{\text{Dividend paid}}{\text{Inflow of the issue}} = \frac{\$5.9}{(\$100 - \$3.39)} = 6.11\%$$

Of course, this discussion is only relevant if the company planned to issue preferred shares in the future.

5. Cost of equity

One approach is the Gordon model

Gordon Model

$$k_e = \frac{\text{Future Dividend per Share}}{\text{Current Share Price}} + \text{Valorization} = \text{Dividend yield} + \text{growth}$$

$$\text{Dividend yield} = \frac{\text{Current Dividend}}{\text{Current share price}} = \frac{\$1.4}{\$25.00} = 5.60\%$$

Growth sometimes is based on the sustainable growth rate (g^*):

$$g^* = ROE \times (1 - d)$$

Where ROE is return on equity using as denominator the equity in the beginning of the year and d is the payout ratio.

Page 3, 4th paragraph says that ROE (return on equity) for 2000 was 7.36%.

It is slightly different from the financial statements:

Table 6 - ROE

Net profit attributable to common equity	\$457,0
Common equity	\$6 348,0
Return on Equity	7,20%

However the denominator of the ratio ROE on Table 6 is the end of year equity. For the sustainable growth rate should be based on the beginning of the year (or the average of equity used during the year). So, let us assume the 7.36% is the correct one.

Calculation of payout ratio:

Dividend per share (Exhibit 3) = \$1.4

Earnings per Share (EPS) in Exhibit 3 = \$1.85

$$\text{Payout ratio} = \frac{\$1.4}{\$1.85} = 75.7\%$$

There is a discrepancy with the accounting data:

Common share Earnings (Exhibit 2) = \$457 million

Number of shares outstanding (Footnote 3 page 5) = 287 million at the end of 2000.

$$\text{EPS} = \frac{\$457}{287} = \$1.59$$

This last figure was based on the number of shares at the end of the year.

The appropriate figure for EPS is based on the average number of shares during the year. So, let us assume the \$1.85 was calculated on the average number of shares during the year

Finally the sustainable growth rate is:

$$g^* = ROE \times (1 - d) = 7.36\% \times (1 - 0,757) = 1.79\%$$

Consequently the cost of equity using the Gordon model is:

$$k_e = \text{Dividend yield} + \text{growth} = 5.60\% + 1.79\% = 7.39\%$$

It is always useful to have more than one way to calculate the cost of equity.

CAPM

$$k_e = r_f + \beta \times (r_m - r_f)$$

The actual risk free rate is 5.82% (page 2, 1st paragraph)

Beta is 0.75 (page 3, paragraph 6)

Risk premium: there are several ways to estimate. In this case, the data available is to estimate historical risk premium (naïve approach).

Exhibit 5 presents plenty of options using the average of markets in U.S.A. and Canada, between 1926 and 2000.

Table 7 – Returns in Canada and USA between 1926 and 2000

	U.S.		Canada	
	Arithmetic Average	Geometric Average	Arithmetic Average	Geometric Average
Long-term Government Bonds	5,7%	5,3%	6,4%	6,0%
Equities (market)	13,0%	11,0%	11,8%	10,2%
Historical Risk Premium	7,3%	5,7%	5,4%	4,2%

Geometric averages represent a better estimate of expected returns over long-term periods.

The arithmetic average can be biased by the time period measurement and the problem of averaging years with positive and negative returns. However, it is said that arithmetic averages represent the best guess for next year's return.

We do not know if the company is American or Canadian based, or the weight of invested capital it has in both countries. We know that for countries like USA and Canada, the risk premium used in practice is between 5% and 6%. So, the 5.7% geometric average for US is acceptable.

$$k_e = r_f + \beta \times (r_m - r_f) = 5.82\% + 0.75 \times 5.7\% = 10.10\%$$

Incorporating the underwriting costs:

Page 3, 1st paragraph says that the cost of a new issue would be \$1.75 per share and the actual share price is \$25.00. This represents a cost of 7%.

The cost of equity for a new issue would be:

$$\frac{10.10\%}{1-7\%} = 10.85\%$$

6. Actual WACC of Telus

Table 8 and Table 9 summarize the WACC based on the estimated costs in previous sections.

Table 8 – Actual WACC (no underwriting costs)

Actual cost of capital	Amount	Cost of capital	Income taxes	Weight	WACC
Common equity	6 348,0 €	10,10%		42,95%	4,34%
Preferred equity	70,0 €	5,90%		0,47%	0,03%
Long-term debt	3 328,0 €	8,81%	50,1%	22,52%	0,99%
Short-term debt	5 033,0 €	5,86%	50,1%	34,06%	1,00%
Total	14 779,0 €			100,0%	6,35%

Table 9 – WACC (including underwriting costs)

Including underwriting costs	Amount	Cost of capital	Income taxes	Weight	WACC
Common equity	6 348,0 €	10,85%		42,95%	4,66%
Preferred equity	70,0 €	6,11%		0,47%	0,03%
Long-term debt	3 328,0 €	9,31%	50,1%	22,52%	1,05%
Short-term debt	5 033,0 €	5,86%	50,1%	34,06%	1,00%
Total	14 779,0 €			100,0%	6,73%