

COMM 221 Section 1: Case 2

Calculate the WACC of Bombardier

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Section 1: Debt

Table 1: Copying Bond information from Case and Bombardier Financial Statements.

Number	Bonds	Price	Market Value Of Bonds	Number of Bonds	Total Bonds
1	March 2018 7.5%	\$101.00	677,000,000	6,702,970	
2	September 2018 5.5%	\$101.90	740,000,000	7,262,022	
3	April 2019 4.75%	\$99.90	594,000,000	5,945,946	
4	March 2020 7.75%	\$104.45	916,000,000	8,769,746	
5	May 2021 6.13%	\$104.44	985,000,000	9,431,252	
6	March 2022 5.75%	\$93.25	510,000,000	5,469,169	
7	October 2022 6%	\$93.81	1,234,000,000	13,154,248	
8	January 2023 6.13%	\$92.21	1,290,000,000	13,989,806	
9	March 2025 7.5%	\$93.60	1,487,000,000	15,886,752	
10	May 2034 7.45%	\$101.00	248,000,000	2,455,446	
11	December 2026 7.35%	\$90.37	107,000,000	1,184,021	
					(Sum Amounts)
Totals					90,251,378

Table 2: Calculations of the Percentage of bonds and Weighted YTM

Percent of total bonds	YTM	Singular Weighted YTM	Total Weighted YTM	Outstanding Debt	Sale and Lease Back Less Cost (10%)
0.074270005	0.075	0.00557025		\$677,000,000.00	
0.080464384	0.055	0.004425541		\$740,000,000.00	
0.065882052	0.0475	0.003129397		\$594,000,000.00	
0.09717022	0.0775	0.007530692		\$916,000,000.00	
0.104499816	0.0613	0.006405839		\$985,000,000.00	
0.060599284	0.0575	0.003484459		\$510,000,000.00	
0.145751214	0.06	0.008745073		\$1,234,000,000.00	
0.155009332	0.0613	0.009502072		\$1,290,000,000.00	
0.176027807	0.075	0.013202085		\$1,487,000,000.00	
0.027206737	0.0745	0.002026902		\$248,000,000.00	
0.013119149	0.0735	0.000964257		\$107,000,000.00	
			(Sum Singular weighted YTM)	(Sum Of Above)	
100.0000%			6.50%	\$8,788,000,000.00	119,700,000.00

Section 2: Equity

Table 3: Cost of Equity

Risk Free Rate	Bombardier Beta	Sharpe Ratio	Total Cost of Equity
0.0157	1.28	0.0625	9.57%

The Total Cost of Equity was calculated as $0.0157 + (1.28 * 0.0625) = 0.0957$

Table 4: Value of Equity

Share type	Share Class	Number of Shares Outstanding	Price as of Market Close Dec 31 2015	Dividends Per Share	Dividends By Share Volume (CDN)
Preferred	Series 2	9,692,521	6.66	0.7	\$6,784,764.70
Preferred	Series 3	2,307,479	6.85	0.78	\$1,799,833.62
Preferred	Series 4	9,400,000	12.66	1.56	\$14,664,000.00
Common	Class A	313,900,550	1.49	0	\$0.00
Common	Class B	1,906,316,489	1.34	0	\$0.00

Table 5: Total Valuation of Equity

Dividends Total (CDN)	Total Value Per Class	Total Value of Equity
	\$64,552,189.86	
	\$15,806,231.15	
	\$119,004,000.00	
	\$467,711,819.50	
	\$2,554,464,095.26	
\$23,248,598.32		\$3,244,786,934.09

Total Value Per Class = Dividends by Share Volume (CDN) In Table 4 + (Price* Number of Shares Outstanding) In Table 4

Section 3: WACC

Table 6: Calculating Weights

	Value	Weight
Debt	\$8,788,000,000.00	0.730337872
Equity	\$3,244,786,934.09	0.269662128

Weight of Debt = $D/(D+E)$

Weight of Equity = $E/(D+E)$

Table 7: Items Necessary for WACC Calculation

	Weight	Rate	Tax Rate
Debt	73.0338%	6.50%	19.13%
Equity	26.9662%	9.57%	-

Calculation of WACC:

$$WACC = [(W_E + R_E) + [(W_D + R_D) * (1 - T_C)]]$$

$$WACC = 0.0641893 \text{ or } 6.41893\%$$

Therefore Bombardier should use the rate of 6.41893% when calculating the NPV of projects. This is because they must only pick projects, which improve the company value in relation to the return on investment expected by investors.