FIN 521: Case 4: Blaine Kitchenware

Due on Tuesday, April 3, 2018

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Question 1

Question 2

The current capital structure and payout policies of the firm are not appropriate since there are lots of benefits from using debt. Of course, increasing leverage makes firm's revenue risky, but on the current status, compensation from increasing leverage is much larger since the current amount of debt is zero. Most of firms which uses debt has larger market-to-book ratio, and larger ROE than Blaine Kitchenware. Assuming that industrial background among the firms are negligible, it justifies the argument that Blaine should raise debt. It is reasonable to increase D/V ratio to 17.09%, which is the average D/V ratio of other firms.

Question 3

a) 1) From exhibit 3 of the case, we can find cash, enterprise value, debt, and equity of the firm at 2006. Table 1 shows the balance sheet before announcement.

Asset		Liabilities	
Cash	230,866	Debt	0
Enterprise Value	728,730	Equity	959,596

Table 1: Balance sheet before announcement

2) After the announcement but before any debt issuance or repurchase is made, under perfect market, the balance sheet does not change because the announcement itself does not affect capital structure and systematic risk of the firm. Therefore, the balance sheet after announcement is same as Table 1.

3) After the firm issue 100,000(thousand dollars) amount of debt, debt increases and cash also increases on balance sheet. Therefore, the balance sheet of the firm changes to Table 2. Equity value and enterprise value does not change.

Asset		Liabilities	
Cash	330,866	Debt	100,000
Enterprise Value	728,730	Equity	959,596

Table 2: Balance sheet after issuing debt(Perfect market)

4) After repurchase, 300,000 amount of cash decreases, and the same value of equity also decreases. Although market value of equity decreased, because the same amount of cash also decreased, therefore,

enterprise value does not change. Furthermore, since number of shares also decreased, stock price also does not change.

Asset		Liabilities	
Cash	30,866	Debt	100,000
Enterprise Value	728,730	Equity	659,596

Table 3: Balance sheet after repurchase(Perfect market)

b) 1) Before the announcement, the balance sheet is same as Table 1.

2) Unlike answers in question a)-2), the balance sheet does change because there is tax benefit if debt is issued and cash is decreased, and equity value reflects the benefit. Increase in equity value would be same as present value of tax benefit from issuing debt and decrease in cash. Present value of tax shield from debt is calculated by multiplying interest expense to corporate tax rate, and discounting at cost of debt. Assuming Blaine's credit rating is Baa, corporate bond yield is equal to 6.72%. Therefore, interest expense at each fiscal year is calculated as $100,000 \times 6.72\% \times 30.76\% = 2,067.072$. Therefore, present value of income tax shield from issuing debt is equal to $\frac{2,067.072}{0.06} = 34,451.2$. Assuming amount of cash on balance sheet grows at risk-free rate, if the firm does not repurchase stock, it should pay $200,000 \times 5.10\% \times 30.76\% = 3,137.52$ for tax every year. (We used 30-year US treasury rate as risk-free rate.) Therefore, by using perpetuity formula, the present value of tax benefit from cash deducting is equal to $\frac{3,137.52}{0.06} = 52,292$. Hence, after the announcement of stock repurchase, equity value would increase by $34,451.2 + 52,292 = 86,743.2$. Since other accounts are constant, enterprise value would also increase by 86,743.2 thousand dollars. Table 4 represents balance sheet after the announcement under market in which corporate tax exists. Since the number of outstanding share in 2006 is 59,052 and it remains constant after the announcement, stock price per share would increase to $1,046,339.2/59,052 = \$17.72$.

Asset		Liabilities	
Cash	230,866	Debt	0
Enterprise Value	815,473.2	Equity	1,046,339.2

Table 4: Balance sheet after announcement(Imperfect market)

3)

4)

Question 4

a)

b)

c)

d)

e)

f)

g)

Question 5

a)

b)

Question 6