

A Case on Free Cash Flow

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Abstract

This case deals with free cash flow. Students will learn how to compute the free cash flow. They will also learn about the different components of free cash flow. This case forces students to think about the options that a Treasurer has in terms of debt and equity financing. It is a hands-on experience for students who want to learn about a corporation's financing activities.

Keywords: free cash flow, debt financing, equity financing, share repurchases, retired debt, new issues

Introduction

Zach and Kristin are taking the “Financial Statement Analysis” class. Recently, they have learned about free cash flow. Their professor showed them some examples where free cash flow and its components are calculated.

They have an assignment due in two days. They are both very worried about it.

“This homework will be tough. I missed one of the classes, so now everything suddenly looks more confusing” Zach says.

Kristin adds “Yeah. I agree. I didn't miss any class, but still I am not feeling too good. I know that part of the free cash flow comes from the shareholders and part comes from the creditors, but in the graph that he draw on the board, there were so many arrows going to the right and going to the left. All so confusing!”

“Do you have your notes with you? Maybe they will help.” Zach asks.

“Sure. I have them. Let's look at them and see if we can do this. Otherwise, we may need to request some help from Dave. He is doing well in this class”. Kristin responds.

“I agree. He is good. Let's try to do ourselves first and then if it doesn't work, we can call him”.

“O.K. then. That table over there looks good. Let's start diving in”.

Free Cash Flow

Investopedia.com explains free cash flow as follows: “Free cash flow (FCF) is a measure of a company's financial performance, calculated as operating cash flow minus capital expenditures. FCF represents the cash that a company is able to generate after spending the money required to maintain or expand its asset base. FCF is important because it allows a company to pursue opportunities that enhance shareholder value.”

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The website further explains FCF as follows: “FCF is an assessment of the amount of cash a company generates after accounting for all capital expenditures, such as buildings or property, plant and equipment. The excess cash is used to expand production, develop new products, make acquisitions, pay dividends and reduce debt.

Another website (i.e. www.investinganswers.com) explains FCF as follows: “Free cash flow (FCF) is a measure of how much cash a business generates after accounting for capital expenditures such as buildings or equipment. This cash can be used for expansion, dividends, reducing debt, or other purposes.”

The formula for free cash flow is:

$$\text{FCF} = \text{Operating Cash Flow} - \text{Capital Expenditures}$$

Or

$$\text{FCF} = C - I$$

Where C is the operating cash flow for a firm and I is the capital expenditures by the firm.

The FCF created by the firm will be distributed to the firm’s shareholders and creditors in different forms.

The cash flows between the firm and the shareholders can be in three forms:

- 1) Dividends (this is cash from the firm to the shareholders)
- 2) Share repurchases (this is cash from the firm to the shareholders because the firm pays money to the shareholders when repurchasing the shares)
- 3) New share issues (this is cash from the shareholders to the firm because shareholders, new or existing, pay money to the firm to buy these newly issued shares)

The equation for the net cash flow to shareholders (d) can be stated as:

$$d = \text{dividends} + \text{share repurchases} - \text{new share issues}$$

The cash flows between the firm and the creditors can be in three forms:

- 1) Interest payment (this is cash from the firm to the creditors)
- 2) Retired debt (this is cash from the firm to the creditors because the firm pays money to the creditors when retiring its debt)
- 3) New debt issues (or borrowing) (this is cash from the creditors to the firm because creditors, new or existing, pay money to the firm to buy these newly issued debt)

The equation for the net cash flow to creditors (F) can be stated as:

$$F = \text{interest paid} + \text{retired debt} - \text{new debt issues (or borrowing)}$$

Therefore, we can finalize our equation that ties the sources of FCF to the uses of FCF as follows:

$$\text{FCF} = C - I = d + F$$

$$\text{FCF} = C - I = (\text{dividends} + \text{repurchases} - \text{new shares issued}) + (\text{interest paid} + \text{retired debt} - \text{new debt issued})$$

Example

A firm generated \$68 million in FCFs, paid \$18 million in dividends, issued \$54 million in new shares, and repurchased \$40 million of outstanding shares from the investors. This firm

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borrowed an additional \$70 million from the creditors during that period while retiring \$20 million of existing debt.

- a. What was the net CF to the shareholders during that year?
- b. How much interest did this firm pay during that year?

a. $\text{Net dividends} = d = \text{dividends} + \text{share repurchases} - \text{share issues}$
 $= 18 \text{ million} + 40 \text{ million} - 54 \text{ million} = \4 million

b. $C - I = d + F$
 $\$68 \text{ million} = \$4 \text{ million} + F$
 $F = \$64 \text{ million}$

$$F = \$64 \text{ million} = \text{interest payment} + \text{retired debt} - \text{new debt issued}$$
$$= \text{interest payment} + \$20 \text{ million} - \$70 \text{ million}$$
$$\text{Interest payment} = \$114 \text{ million}$$

The Task

Zach's assignment is below:

1. In the formula, we have a positive sign for both dividends and share repurchases and a negative sign for new shares issued. Why?
2. In the formula, we have a positive sign for both interest paid and retired debt and a negative sign for new debt issued. Why?
3. If operating cash flows for a firm is \$45 million, the net investment in operations is \$35 million, dividend payment is \$5 million, the value of shares repurchased is \$15 million, interest payment is \$3 million, and retired debt is \$27 million, what should be the Treasurer's other action(s) on debt and equity financing during that period?
4. If operating cash flows for a firm is \$100 million, the net investment in operations is \$50 million, new shares issued is \$25 million, and new debt issued is \$18 million, what should be the Treasurer's other action(s) on debt and equity financing during that period?
5. A firm generated \$50 million in FCFs, paid \$25 million in dividends, issued \$100 million in new shares, and repurchased \$40 million of outstanding shares from the investors. This firm borrowed an additional \$70 million from the creditors during the same period. What was the net CF to the shareholders (d) during that year?
6. How much interest did the firm in question #5 pay during that year?

References

"Free Cash Flow (FCF) – Investopedia,"

<http://www.investopedia.com/terms/f/freecashflow.asp#ixzz4eNdbaAZ1>

"Free Cash Flow Definition & Example | Investing Answers"

<http://www.investinganswers.com/financial-dictionary/financial-statement-analysis/free-cash-flow-1000>

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