Learning Module 5: Analyzing Statements of Cash Flows II

FINANCIAL STATEMENT ANALYSIS

Table of contents

Download Files

Download PDF | Download Word |

testing

Free Cash Flow to The Firm (FCFF)

$$\text{FCFF} = \text{NI} + \text{NCC} + \text{Int}(1 - \text{Tax rate}) - \text{FCInv} - \text{WCInv}$$

where:

NI = Net income

NCC = Non-cash charges (such as depreciation and amortization)

Int = Interest expense

FCInv = Capital expenditures (fixed capital, such as equipment)

WCInv = Working capital expenditures.

- FCFF is the cash flow available to both debt and equity investors after all operating expenses (including income taxes) have been paid and necessary investments in working capital and fixed capital have been made.

- The reason for adding back interest is that FCFF is the cash flow available to the suppliers of debt capital as well as equity capital.

FCFF can also be computed from cash flow from operating activities as follows

$$\text{FCFF} = \text{CFO} + \text{Int}(1 - \text{Tax rate}) - \text{FCInv}$$

Where

- CFO represents cash flow from operating activities under US GAAP or under IFRS, where the company has included interest paid in operating activities.

- If interest paid was included in financing activities, then CFO does not have to be adjusted for $\text{Int}(1 - \text{Tax rate})$.

- Under IFRS, if the company has placed interest and dividends received in investing activities, these should be added back to CFO to determine FCFF.

- Additionally, if dividends paid were subtracted in the operating section, these should be added back in to compute FCFF.

View Markdown Source

```
### Free Cash Flow to The Firm (FCFF)

$\text{FCFF} = \text{NI} + \text{NCC} + \text{Int(}1 - \text{Tax rate)}$
$- \text{FCInv} - \text{WCInv}$

where:

NI = Net income

NCC = Non-cash charges (such as depreciation and amortization)

Int = Interest expense

FCInv = Capital expenditures (fixed capital, such as equipment)

WCInv = Working capital expenditures.

- FCFF is the cash flow available to both debt and equity investors after all
  operating expenses (including income taxes) have been paid and necessary
  investments in working capital and fixed capital have been made.
- The reason for adding back interest is that FCFF is the cash flow available
  to the suppliers of debt capital as well as equity capital.

**FCFF can also be computed from cash flow from operating activities as follows**

$$
\text{FCFF} = \text{CFO} + \text{Int}(1 - \text{Tax rate}) - \text{FCInv}
$$

Where

- CFO represents cash flow from operating activities under US GAAP or under
IFRS, where the company has included interest paid in operating activities.
- If interest paid was included in financing activities, then CFO does not have
  to be adjusted for $\text{Int}(1 - \text{Tax rate})$.
- Under IFRS, if the company has placed interest and dividends received in
  investing activities, these should be added back to CFO to determine FCFF.
- Additionally, if dividends paid were subtracted in the operating section,
  these should be added back in to compute FCFF.
```

Free Cash Flow to Equity (FCFE)

$$\text{FCFE} = \text{CFO} - \text{FCInv} + \text{Net borrowing}$$

Where:

- CFO represents cash flow from operating activities
- FCInv = Capital expenditures (fixed capital, such as equipment)
- FCFE is the cash flow available to the company's common stockholders after all operating expenses and borrowing costs (principal and interest) have been paid and necessary investments in working capital and fixed capital have been made.

When net borrowing is negative, debt repayments exceed receipts of borrowed funds. In this case, FCFE can be expressed as follows:

$$\text{FCFE} = \text{CFO} - \text{FCInv} - \text{Net debt repayment}$$

View Markdown Source

```
### Free Cash Flow to Equity (FCFE)

$\text{FCFE} = \text{CFO} - \text{FCInv} + \text{Net borrowing}$

Where:

- CFO represents cash flow from operating activities
- FCInv = Capital expenditures (fixed capital, such as equipment)
- FCFE is the cash flow available to the company's common stockholders after
  all operating expenses and borrowing costs (principal and interest) have
  been paid and necessary investments in working capital and fixed capital
  have been made.

When net borrowing is negative, debt repayments exceed receipts of borrowed
funds. In this case, FCFE can be expressed as follows:

$\text{FCFE} = \text{CFO} - \text{FCInv} - \text{Net debt repayment}$
```

Cash Flow Ratios

Ratios based on information in statements of cash flows can be used to compare the performance and prospects of different companies in an industry and of different industries. These ratios generally fall into
- **Cash Flow Performance (Profitability) Ratios**
- and **Cash Flow Coverage (Solvency) Ratios**.

Performance Ratio: Cash Flow to Revenue

$$\text{Cash Flow to Revenue} = \frac{\text{CFO}}{\text{Net Revenue}}$$

What it Measures
- Operating cash generated per dollar of revenue

View Markdown Source

```
### Performance Ratio: Cash Flow to Revenue

$$
\text{Cash Flow to Revenue} = \frac{\text{CFO}}{\text{Net Revenue}}
$$

What it Measures
- Operating cash generated per dollar of revenue
```

Performance Ratio: Cash return on assets

$$\text{Cash return on assets} = \frac{\text{CFO}}{\text{Average total assets}}$$

What it Measures
- Operating cash generated per dollar of asset investment

View Markdown Source

```
### Performance Ratio: Cash return on assets

$$
\text{Cash return on assets} = \frac{\text{CFO}}{\text{Average total assets}}
$$

What it Measures
- Operating cash generated per dollar of asset investment
```

Performance Ratio: Cash return on equity

$$\text{Cash return on equity} = \frac{\text{CFO}}{\text{Average shareholders' equity}}$$

What it Measures
- Operating cash generated per dollar of owner investment

View Markdown Source

```
### Performance Ratio: Cash return on equity

$$
\text{Cash return on equity} = \frac{\text{CFO}}{\text{Average shareholders' equity}}
$$

What it Measures
- Operating cash generated per dollar of owner investment
```

Performance Ratio: Cash to income

$$\text{Cash to income} = \frac{\text{CFO}}{\text{Operating income}}$$

What it Measures
- Cash generating ability of operations

View Markdown Source

```
### Performance Ratio: Cash to income

$$
\text{Cash to income} = \frac{\text{CFO}}{\text{Operating income}}
$$

What it Measures
- Cash generating ability of operations
```

Performance Ratio: Cash flow per share[a]

$$\text{Cash flow per share}^a = \frac{\text{CFO} - \text{Preferred dividends}}{\begin{aligned}\text{Number of common} \\ \text{shares outstanding}\end{aligned}}$$

What it Measures
- Operating cash flow on a per-share basis
- [a]: If the company reports under IFRS and includes total dividends paid as a use of cash in the operating section, total dividends should be added back to CFO as reported and then preferred dividends should be subtracted. Recall that CFO reported under US GAAP and IFRS may differ depending on the treatment of interest and dividends, received and paid.

View Markdown Source

```
### Performance Ratio: Cash flow per share$^a$

$$
\text{Cash flow per share}^a = \frac{\text{CFO} - \text{Preferred dividends}}
{\begin{aligned}
\text{Number of common} \\
\text{shares outstanding}
\end{aligned}}
$$

What it Measures
- Operating cash flow on a per-share basis
- $^a$: If the company reports under IFRS and includes total dividends paid as
  a use of cash in the operating section, total dividends should be added back
  to CFO as reported and then preferred dividends should be subtracted. Recall
  that CFO reported under US GAAP and IFRS may differ depending on the
  treatment of interest and dividends, received and paid.
```

Coverage Ratio: Debt coverage

$$\text{Debt coverage} = \frac{\text{CFO}}{\text{Total debt}}$$

What it Measures
- Financial risk and financial leverage

View Markdown Source

```
### Coverage Ratio: Debt coverage

$$
\text{Debt coverage} = \frac{\text{CFO}}{\text{Total debt}}
$$

What it Measures
- Financial risk and financial leverage
```

Coverage Ratio: Interest coverage[b]

$$\text{Interest coverage}^{b} = \frac{\text{CFO} + \text{Interest paid} + \text{Taxes paid}}{\text{Interest paid}}$$

What it Measures
- Ability to meet interest obligations
- [b]: If the company reports under IFRS and included interest paid as a use of cash in the financing section, then interest paid should not be added back to the numerator.

View Markdown Source

```
### Coverage Ratio: Interest coverage$^b$

$$
\text{Interest coverage}^b = \frac{
\text{CFO} + \text{Interest paid} + \text{Taxes paid}}{
\text{Interest paid}}
$$

What it Measures
- Ability to meet interest obligations
- $^b$: If the company reports under IFRS and included interest paid as a use
  of cash in the financing section, then interest paid should not be added
  back to the numerator.
```

Coverage Ratio: Reinvestment

$$\text{Reinvestment} = \frac{\text{CFO}}{\text{Cash paid for long-term assets}}$$

What it Measures
- Ability to acquire assets with operating cash flows

View Markdown Source

```
### Coverage Ratio: Reinvestment

$$
\text{Reinvestment} = \frac{\text{CFO}}{\text{Cash paid for long-term assets}}
$$

What it Measures
- Ability to acquire assets with operating cash flows
```

Coverage Ratio: Debt payment

$$\text{Debt payment} = \frac{\text{CFO}}{\text{Cash paid for long-term debt repayment}}$$

What it Measures
- Ability to pay debts with operating cash flows

View Markdown Source

```
### Coverage Ratio: Debt payment

$$
\text{Debt payment} = \frac{\text{CFO}}{
\text{Cash paid for long-term debt repayment}}
$$

What it Measures
- Ability to pay debts with operating cash flows
```

Coverage Ratio: Dividend payment

$$\text{Dividend payment} = \frac{\text{CFO}}{\text{Dividends paid}}$$

What it Measures
- Ability to pay dividends with operating cash flows

View Markdown Source

```
### Coverage Ratio: Dividend payment

$$
\text{Dividend payment} = \frac{\text{CFO}}{\text{Dividends paid}}
$$

What it Measures
- Ability to pay dividends with operating cash flows
```

Coverage Ratio: Investing and financing

$$\text{Investing and financing} = \frac{\text{CFO}}{\begin{aligned}\text{Cash outflows for investing} \\ \text{and financing activities}\end{aligned}}$$

What it Measures
- Ability to acquire assets, pay debts, and make distributions to owners

View Markdown Source

```
### Coverage Ratio: Investing and financing

$$
\text{Investing and financing} = \frac{\text{CFO}}
{\begin{aligned}
\text{Cash outflows for investing} \\
\text{and financing activities}
\end{aligned}}
$$

What it Measures
- Ability to acquire assets, pay debts, and make distributions to owners
```