Analyzing Cash Flows

Marcelo Ortiz

(UPF, BSE, BSM)

How to measure and interpret cash flows?

1. Cash Flow Statement
2. Interpretation of Cash Flow Statement
3. Alternative measures of cash flows

1. Cash Flow Statement

1. Cash Flow Statement

If we forget about the accruals and the matching principle, we can say that the cash flow statement is equal to the income statement.

However, as this is not the case for the vast majority of firms, we need a report informing about cash inflows and outflows.

Why? Because cash is king!

- financial flexibility
- solvency

What we want to know:

- How much cash is generated from or used in operations?
- What expenditures are made with cash from operations?
- How are dividends paid when confronting an operating loss?
- How is the increase in investments financed?
- Why is cash lower when income increased?

1.1 Reporting by activity

1. Operating activities: cash flows from the main business of the firm
2. Investing activities: purchases and sales of PPE and investment in securities
3. Financing activities: borrowing and repaying funds with bonds and other loans, issuing and repurchasing shares, paying dividends

1.2 Constructing the Cash Flow Statement

There are two methods to construct the cash flows from operating activities:

1. **Direct method**: cash flows from operating activities are reported directly

- more difficult to prepare
- more useful to investors/creditors

2. **Indirect method**: net income is adjusted for noncash income (expense) items and accruals to yield cash flows from operations

- easier to prepare
- enable a reconciliation of net income and cash flows from operations

The process for capturing cash flows of the investing and financing activities is the same in both methods

1.3 Indirect method

The statement of cash flows incorporates elements from the income statement and the balance sheet.

Steps
+ Net Income
+ Depreciation and Amortization Expense
- Gains (Losses) on Sales of Assets
+ Cash Generated (Used) by Current Assets and Liabilities
= *Net Cash Flows from Operating Activities*

Example: ABC Corp 20x2

Income Statement for the Year 20X2

Item	Amount (USD)
Revenue	100,000
Operating Expenses	-70,000
Depreciation	-5,000
Net Income	25,000

Elements of the Balance Sheet for Year-End 20X1 and 20X2

Item	2021 (USD)	2022 (USD)
Accounts Receivable	5,000	7,000
Accounts Payable	2,000	3,000
PPE	350,000	440,000
Accumulated depreciation	(125,000)	(145,000)

Information in Footnotes:

1. The company purchased a truck during the year at a cost of $30,000 that was financed in full by the manufacturer.
2. A truck with a cost of $10,000 and a net book value of $2,000 was sold during the year for $7,000. There were no other sales of depreciable assets.
3. Dividends paid during Year 2 are $51,000.

Steps to Calculate Cash Flow from Operating Activities

Step 1: Start with Net Income: **25,000**

Step 2: Add Depreciation and Amortization Expense

- Depreciation from Income Statement: **+5,000**

Step 3: Remove Gains (Losses) on Sales of Assets

Using the Accounting Equation:

- (+) Cash: 7,000
- (-) Asset (Truck): 10,000
- (+) Accumulated Dep: 8.000
- (+) Gain on sale: 5.000. This gain should be zeroed out, as it is not an operating cash flow, it is an investing cash flow

Step 3: Add Cash Generated (Used) by Current Assets and Liabilities

- Increase in Accounts Receivable: **-2,000** (7,000 - 5,000)
- Increase in Accounts Payable: **+1,000** (3,000 - 2,000)

Step 4: Cash Flow from Operating Activities = **24,000**

Steps to Calculate Cash Flow from Investing Activities

Step 1: Identify purchase price (p) of plant assets and investments in securities

$$PPE_t = PPE_{t-1} + p - \text{cost of the assets sold}$$

In our case, $PPE_{t-1} = 350,000$, $\text{cost of the assets sold} = 10,000$, $PPE_t = 440,000$.

Therefore, purchases of PPE are $p = 100,000$. But, remember in the footnotes it says that $30,000 of the purchase was financed in full by the manufacturer (not ABC Corp!).

Therefore, the cash outflow of Investing Activities is $p = 70,000$.

Step 2. Identify sales (s) of plant assets and investments in securities

In our case, the cash inflow from the sale of the truck is $s = 7,000$.

Step 3: Calculate Net Cash Flows from Investing Activities = **(63,000)**

Steps to Calculate Cash Flow from Financing Activities

Step 1: Identify inflows from Financing Activities

Step 2: Identify outflows from Financing Activities

Dividend payments: **(51,000)**

Step 3: Calculate Net Cash Flows from Financing Activities = **(51,000)**

Cash Flow Statement of ABC Corp for the Year 20X2

Item	Amount (USD)
Net Cash Flows from Operating Activities	24,000
Net Cash Flows from Investing Activities	(63,000)
Net Cash Flows from Financing Activities	(51,000)
Net Increase (Decrease) in Cash	(90,000)
Cash at Beginning of Year	100,000
Cash at End of Year	10,000

🔎 Example

- Check the cash flow statement of the Apple (US GAAP) and Inditex (IFRS) for the year 2022
- Notice
  - Types of adjustments for operating activities
  - Types of flows for investing and financing activities
  - the differences between the two methods
- The core idea, however, remains the same

Analyzing firms using the indirect method

Equity Method Investments

When a company reports that use Equity Method Accounting, we have to be aware that the firm records as income its percentage interest in the income of the investee company and records dividends received as a reduction of the investment balance

- The fraction of undistributed earnings of the investee company is non cash for the investor company
- Adjustment: subtracting from *net income* the percentage interest in earnings of the investee company net of dividends received from the investee company

Acquisition of companies with stocks

When a company purchases another with stocks, then the consolidated balance sheet will show the assets and liabilities of the acquired company at their fair market value

- The indirect method, based on variations in balance sheet accounts, will not capture the operating cash flows.

Securitization of Accounts Receivable

Similar idea to the previous one

If Receivables are sold to a trust, then the company will report an increase in operating cash flows

But, we alredy know that is not because the company is collecting receivables more efficiently, but because it is selling/borrowing them.

1.4 Direct method

This method reports gross cash payments and collections related to operations adjusting each income statement item from **accrual to cash basis**

This offers most analysts a better format to readily assess the amount of cash inflows and outflows for which management has discretion.

However, companies claimed this method imposes excessive implementation costs, and therefore, regulators decided to only encourage the direct method and to permit the indirect method.

2. Interpretation of cash flow statements

2. Interpretation of cash flow statements

2.1 Limitations

- **Lack of Extraordinary Item Disclosure**: No mandate to separately reveal cash flows related to extraordinary events or terminated operations.
- **Interest and Dividends Classification**: Both interest and dividends received, as well as interest paid, are categorized as operating cash flows. This is at odds with views that consider interest paid as financing outflows and interest and dividends received as investment inflows.
- **Tax Expense Handling**: Taxes are treated as operating cash flows, potentially skewing the understanding of each activity if notable tax implications are unevenly allocated. Example: a company that has a large tax refund in a given year will report a large operating cash inflow; similarly, tax from asset sales is reported as an operating cash outflow even they are part of an investing activity.

2.1 Relation with Net Income

- **Confusion on Terminology**: There's often ambiguity about what 'operations' mean and how cash flows and accrual-based net income offer different perspectives on it.
- **Role of Income Statement**: It gauges a firm's profitability over a specific time frame, recognizing revenues when earned and expenses when incurred. However, it fails to illuminate cash timing or impact on liquidity and solvency.
- **Limitations of Net Measures**: Both net income and cash flows from operations offer limited insights by themselves. The essence lies in their components for effective past or future performance analysis.

- **Accrual Accounting Nuances**: Net income involves estimates and valuations that can introduce subjectivity, unlike the more straightforward cash flows.
- **Quality of Earnings**: Cash flows can validate the quality of net income. Higher-quality earnings often have a higher ratio of cash flows to net income. This addresses concerns about high net income figures that don't translate to cash.
- **Cash Flows as a Check, Not a Substitute**: Cash flows from operations act as a reality check on net income but are not an alternative to it.

2.3 Inferences from the cash flow statement

Insights from Analyzing the Statement of Cash Flows

- **Inferences on Strategic Choices**: The statement sheds light on where management has invested, divested, generated extra cash, or relieved financial obligations.
- **Operating Cash Flows**: Offers a deep dive into the makeup, trends, and robustness of cash generated from operations.
- **Profit vs. Loss Impact**: Profitable activities boost cash inflows; losses do the opposite.

- **Caution on Components**: Not all increases in operating cash flows are sustainable or reliable. Examples include securitization of receivables and inventory reduction.
- **Liabilities and Cash Flow**: Relying on increasing liabilities like trade payables can temporarily boost cash flow but are not sustainable. Accruals like unpaid wages or rent are also temporary measures to defer cash outflows.
- **Supplier Relations**: Leaning too heavily on trade payables can backfire, leading to higher costs or even halted supplies.

3. Alternative measures of cash flows

3. Alternative measures of cash flows

3.1 Net Income Plus Depreciation and EBITDA

- **Common Proxy**: Net income plus depreciation often serves as a basic approximation for operating cash flow.
- **Pitfall**:
    i. **Overlooks Working Capital**: Fails to account for changes in working capital, a key part of operating cash flows.

Free Cash Flow (FCF)

- **Analytical Utility**: FCF is a derived metric from the statement of cash flows, useful for understanding discretionary cash.
- **Components Matter**: Be wary of how components are reported, as it can affect the measure's validity.
- **Definitions**:
    i. **Common Formula**: *Operating Cash Flows* - *Net Capital Expenditures* (maintaining productive capacity) - *Dividends*
    ii. **Alternative**: Net operating profits after tax: - Change in Net Operating Assets.
- **Pitfall**:
    i. **Capital Expenditure Ambiguity**: Disclosure usually doesn't distinguish between maintenance and expansion-related capital expenditures.

Based on:

- Subramanyam, K. R. (2014). Financial statement analysis. McGraw-Hill Education. Chapter 7.
- Fridson, M. S., & Alvarez, F. (2022). Financial statement analysis: a practitioner's guide. John Wiley & Sons. Chapter 8.

Questions ❓

Check my website for an updated version of this presentation:

👉 https://www.marceloortizm.com/

Thanks 👏