Corporate Finance – Semester 2

**CASH FLOW STATEMENT & WORKING CAPITAL MANAGEMENT**

The following topics will be discussed in this lecture.

**Cash flow statement**

**Direct method**

**Indirect method**

**Working capital management**

**Cash and operating cycle**

**Cash Flow Statement**

The cash flow statement analyses changes in cash and cash equivalents during a period. Cash and cash equivalents comprise cash on hand and demand deposits, together with short-term, highly liquid investments that are readily convertible to a known amount of cash, and that are subject to an insignificant risk of changes in value. Guidance notes indicate that an investment normally meets the definition of a cash equivalent when it has a maturity of three months or less from the date of acquisition. Equity investments are normally excluded, unless they are in substance a cash equivalent (e.g. preferred shares acquired within three months of their specified redemption date). Bank overdrafts which are repayable on demand and which form an integral part of an enterprise's cash management are also included as a component of cash and cash equivalents. [IAS 7.7-8]

**Presentation of the Cash Flow Statement**:

Cash flows must be analyzed between operating, investing and financing activities. [IAS 7.10] Key principles specified by IAS 7 for the preparation of a cash flow statement are as follows:

* **Operating Activities** are the main revenue-producing activities of the enterprise that are notinvesting or financing activities, so operating cash flows include cash received from customers and cash paid to suppliers and employees [IAS 7.14]
* **Investing Activities** are the acquisition and disposal of long-term assets and other investmentsthat are not considered to be cash equivalents [IAS 7.6]
* **Financing Activities** are activities that alter the equity capital and borrowing structure of theenterprise [IAS 7.6]
* interest and dividends received and paid may be classified as operating, investing, or financing cash flows, provided that they are classified consistently from period to period [IAS 7.31]
* cash flows arising from taxes on income are normally classified as operating, unless they can be specifically identified with financing or investing activities [IAS 7.35]
* for operating cash flows, the direct method of presentation is encouraged, but the indirect method is acceptable [IAS 7.18]

The **direct method** shows each major class of gross cash receipts and gross cash payments. The operating cash flows section of the cash flow statement under the direct method would appear something like this:

Cash receipts from customers xx,xxx

Cash paid to suppliers xx,xxx

Cash paid to employees xx,xxx

Cash paid for other operating expenses xx,xxx

Interest paid xx,xxx

Income taxes paid xx,xxx

**Net cash from operating activities** **xx,xxx**

The **indirect method** adjusts accrual basis net profit or loss for the effects of non-cash transactions. The operating cash flows section of the cash flow statement under the indirect method would appear something like this:

|  |  |  |  |
| --- | --- | --- | --- |
| Profit before interest and income taxes | | xx,xxx |  |
| Add back depreciation | | xx,xxx |  |
| Add back amortization of goodwill | | xx,xxx |  |
| Increase in receivables | xx,xxx | | |
| Decrease in inventories | xx,xxx | | |
| Increase in trade payables | xx,xxx | | |
| Interest expense | xx,xxx | | |
| Less Interest accrued but not yet paid | xx,xxx | | |
| Interest paid | xx,xxx | | |
| Income taxes paid | xx,xxx | | |
| **Net cash from operating activities** | **xx,xxx** | | |

* Cash flows relating to extraordinary items should be classified as operating, investing or financing as appropriate and should be separately disclosed [IAS 7.29]
* The exchange rate used for translation of transactions denominated in a foreign currency and the cash flows of a foreign subsidiary should be the rate in effect at the date of the cash flows [IAS 7.25]
* Cash flows of foreign subsidiaries should be translated at the exchange rates prevailing when the cash flows took place [IAS 7.26]
* As regards the cash flows of associates and joint ventures, where the equity method is used, the cash flow statement should report only cash flows between the investor and the investee; where proportionate consolidation is used, the cash flow statement should include the venturer's share of the cash flows of the investee [IAS 7.37-38]
* Aggregate cash flows relating to acquisitions and disposals of subsidiaries and other business units should be presented separately and classified as investing activities, with specified additional disclosures. The aggregate cash paid or received as consideration should be reported net of cash and cash equivalents acquired or disposed of [IAS 7.39]
* Cash flows from investing and financing activities should be reported gross by major class of cash receipts and major class of cash payments except for the following cases, which may be reported on a net basis: [IAS 7.22-24]
  + cash receipts and payments on behalf of customers (for example, receipt and repayment of demand deposits by banks, and receipts collected on behalf of and paid over to the owner of a property)
  + cash receipts and payments for items in which the turnover is quick, the amounts are large, and the maturities are short, generally less than three months (for example, charges and collections from credit card customers, and purchase and sale of investments)
  + cash receipts and payments relating to fixed maturity deposits
  + cash advances and loans made to customers and repayments thereof
* investing and financing transactions which do not require the use of cash should be excluded from the cash flow statement, but they should be separately disclosed elsewhere in the financial statements [IAS 7.43]
* the components of cash and cash equivalents should be disclosed, and a reconciliation presented to amounts reported in the balance sheet [IAS 7.45]
* the amount of cash and cash equivalents held by the enterprise that is not available for use by the group should be disclosed, together with a commentary by management [IAS 7.48]

**Defining Working Capital**

The term working capital refers to the amount of capital which is readily available to an organization. That is, working capital is the difference between resources in cash or readily convertible into cash (Current Assets) and organizational commitments for which cash will soon be required (Current Liabilities). Current Assets are resources which are in cash or will soon be converted into cash in "the ordinary course of business".

Current Liabilities are commitments which will soon require cash settlement in "the ordinary course of business".

Thus:

**WORKING CAPITAL = CURRENT ASSETS - CURRENT LIABILITIES**

In a department's Statement of Financial Position, these components of working capital are reported under the following headings:

Current Assets

* Liquid Assets (cash and bank deposits)
* Inventory
* Debtors and Receivables

Current Liabilities

* Bank Overdraft
* Creditors and Payables
* Other Short Term Liabilities

**The Importance of Good Working Capital Management**

Working capital constitutes part of the Crown's investment in a department. Associated with this is an opportunity cost to the Crown. (Money invested in one area may "cost" opportunities for investment in other areas.) If a department is operating with more working capital than is necessary, this over-investment represents an unnecessary cost to the Crown.

From a department's point of view, excess working capital means operating inefficiencies. In addition, unnecessary working capital increases the amount of the capital charge which departments are required to meet from 1 July 1991.

**Approaches to Working Capital Management**

The objective of working capital management is to maintain the optimum balance of each of the working capital components. This includes making sure that funds are held as cash in bank deposits for as long as and in the largest amounts possible, thereby maximizing the interest earned. However, such cash may more appropriately be "invested" in other assets or in reducing other liabilities.

Working capital management takes place on two levels:

* Ratio analysis can be used to monitor overall trends in working capital and to identify areas requiring closer management (see Chapter Three).
* The individual components of working capital can be effectively managed by using various

techniques and strategies (see Chapter Four).

When considering these techniques and strategies, departments need to recognize that each department has a unique mix of working capital components. The emphasis that needs to be placed on each component varies according to department. For example, some departments have significant inventory levels; others have little if any inventory.

Furthermore, working capital management is not an end in itself. It is an integral part of the department's overall management. The needs of efficient working capital management must be considered in relation to other aspects of the department's financial and non-financial performance.

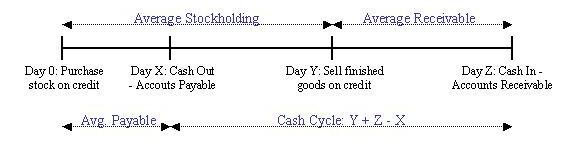
**Cash Operating Cycle**

**Cash Conversion Cycle**, also known as the asset conversion cycle, net operating cycle, working capitalcycle or just cash cycle, is used in the financial analysis of a business. The higher the number, the longer a firm's money is tied up in business operations and unavailable for other activities such as investing. The cash conversion cycle is the number of days between paying for raw materials and receiving cash from selling goods made from that raw material.

* Cash Conversion Cycle = Average Stockholding Period (in days) + Average Receivables Processing Period (in days) - Average Payables Processing Period (in days)

with:

* Average Stockholding Period (in days) = Closing Stock / Average Daily Purchases
* Average Receivables Processing Period (in days) = Accounts Receivable / Average Daily Credit Sales
* Average Payable Processing Period (in days) = Accounts Payable / Average Daily Credit Purchases



A short cash conversion cycle indicates good working capital management. Conversely, a long cash conversion cycle suggests that capital is tied up while the business waits for customers to pay.

It is possible for a business to have a negative cash conversion cycle, i.e. receiving customer payments before having to pay suppliers. Examples are typically companies that employ Just in Time practices such as Dell, and companies that buy on extended credit terms and sell for cash, such as Tesco.

The longer the production process, the more cash the firm must keep tied up in inventories. Similarly, the longer it takes customers to pay their bills, the higher the value of accounts receivable. On the other hand, if a firm can delay paying for its own materials, it may reduce the amount of cash it needs. In other words, accounts payable reduce net working capital.

**WORKING CAPITAL MANAGEMENT**

The following topics will be discussed in this lecture.

* Working capital management

Risk, Profitability and Liquidity

* Working capital policies

Conservative

Aggressive

Moderate

* Risk and return of current liabilities

**Working Capital Management**

Decisions relating to working capital and short term financing are referred to as *working capital management*. These involve managing the relationship between a firm's short-term assets and its short-term liabilities. The goal of Working capital management is to ensure that the firm is able to continue its operations and that it has sufficient cash flow to satisfy both maturing short-term debt and upcoming operational expenses.

**Decision Criteria**

By definition, Working capital management entails short term decisions - generally, relating to the next one year period - which is "reversible". These decisions are therefore not taken on the same basis as Capital Investment Decisions (NPV or related, as above) rather they will be based on cash flows and / or profitability.

* One measure of cash flow is provided by the cash conversion cycle - the net number of days from the outlay of cash for raw material to receiving payment from the customer. As a management tool, this metric makes explicit the inter-relatedness of decisions relating to inventories, accounts receivable and payable, and cash. Because this number effectively corresponds to the time that the firm's cash is tied up in operations and unavailable for other activities, management generally aims at a low net count.
* In this context, the most useful measure of profitability is Return on capital (ROC). The result is shown as a percentage, determined by dividing relevant income for the 12 months by capital employed; Return on equity (ROE) shows this result for the firm's shareholders. Firm value is enhanced when, and if, the return on capital, which results from working capital management, exceeds the cost of capital, which results from capital investment decisions as above. ROC measures are therefore useful as a management tool, in that they link short-term policy with long-term decision making.

**Management of Working Capital**

Guided by the above criteria, management will use a combination of policies and techniques for the management of working capital. These policies aim at managing the current assets (generally cash and cash equivalent, inventories and debtors) and the short term financing, such that cash flows and returns are acceptable.

* **Cash Management**. Identify the cash balance which allows for the business to meet day to dayexpenses, but reduces cash holding costs.
* **Inventory Management**. Identify the level of inventory which allows for uninterruptedproduction but reduces the investment in raw materials - and minimizes reordering costs - and hence increases cash flow.
* **Debtor’s Management**. Identify the appropriate credit policy, i.e. credit terms which will attractcustomers, such that any impact on cash flows and the cash conversion cycle will be offset by increased revenue and hence Return on Capital (or vice versa).
* **Short Term Financing**. Identify the appropriate source of financing, given the cash conversioncycle: the inventory is ideally financed by credit granted by the supplier; however, it may be necessary to utilize a bank loan (or overdraft), or to "convert debtors to cash" through "factoring".

**Financial Risk Management**

Risk Management is the process of measuring risk and then developing and implementing strategies to manage that risk. Financial risk management focuses on risks that can be managed ("hedged") using traded financial instruments (typically changes in commodity prices , internet rates, foreign exchange rates and stock prices). Financial risk management will also play an important role in cash management.

This area is related to corporate finance in two ways. Firstly, firm exposure to business risk is a direct result of previous Investment and Financing decisions. Secondly, both disciplines share the goal of creating, or enhancing, firm value. All large corporations have risk management teams, and small firms practice informal, if not formal, risk management.

Derivatives are the instruments most commonly used in financial risk management. Because unique derivative contracts tend to be costly to create and monitor, the most cost-effective financial risk management methods usually involve derivatives that trade on well-established financial markets. These standard derivative instruments include options, future contacts, forward contacts, and swaps.

**Working Capital Policies**

* + Conservative – Use permanent capital for permanent assets and temporary assets.
  + Moderate – Match the maturity of the assets with the maturity of the financing.
  + Aggressive – Use short-term financing to finance permanent assets.

Let’s view the characteristics of each policy.

1. **CONSERVATIVE WORKING CAPITAL POLICY;**

– high level of investment in current assets

– support any level of sales and production

– high liquidity level

– Avoid short-term financing to reduce risk, but decreases the potential for maximum value creation because of the high cost of long-term debt and equity financing.

– Borrowing long-term is considered less risky than borrowing short-term.

– This approach involves the use of long-term debt and equity to finance all long-term fixed assets and permanent assets, in addition to some part of temporary current assets.

– The firm has a large amount of net working capital. It is a relatively low-risk position.

– The safety of conservative approach has a cost.

– Long-term financing is generally more expensive than short-term financing.

1. **AGGRESSIVE WORKING CAPITAL POLICY;**

– Low level of investment

– More short-term financing is used to finance current assets.

– Support low level of production & sales

– Borrowing short-term is considered more risky than borrowing long-term.

– Firm risk increases, due to the risk of fluctuating interest rates, but the potential for higher returns increases because of the generally low-cost financing.

– This approach involves the use of short-term debt to finance at least the firm’s temporary assets, some or all of its permanent current assets, and possibly some of its long-term fixed assets. (Heavy reliance on short term debt)

– The firm has very little net working capital. It is more risky.

– May be a negative net working capital. It is very risky

1. **MODERATE WORKING CAPITAL POLICY**

– This approach tries to balance risk and return concerns.

– Temporary current assets that are only going to be on the balance sheet for a short time should be financed with short-term debt, current liabilities. And, permanent current assets and long-term fixed assets that are going to be on the balance sheet for a long time should be financed from long-term debt and equity sources.

– The firm has a moderate amount of net working capital. It is a relatively amount of risk balanced by a relatively moderate amount of expected return.

– In the real world, each firm must decide on its balance of financing sources and its approach to working capital management based on its particular industry and the firm’s risk and return strategy.

**LIQUIDITY & PROFITABILITY:**

* Lenders prefer a company having a large excess of current assets over current liabilities whereas the owners prefer a high return.
* Current assets have the advantage of being liquid, but holding them is not very profitable.
* Cash account is paid no interest.
* Accounts receivable earns no return.
* Inventory earns no return until it is sold.
* Non-current assets can be profitable, but they are usually not very liquid.
* Firms are usually faced with creating trade-off in their working capital management policy.
* They seek a balance between liquidity and profitability that reflects their desire for profit and their need for liquidity.

**OPTIMAL LEVEL OF CURRENT ASSETS**

A firm’s optimal level of current assets is reached when the optimal level of cash, inventory, accounts receivable, and other current assets is achieved.

Cash: firms try to keep just enough cash on hand to conduct day-to-day business, while investing extra amounts in short-term marketable securities.

Inventory: firms seek the level that reduces lost sales due to lack of inventory, while at the same time holding down bad debt and collection expenses through sound credit policies.

* **PROJECTING THE ALL THREE POLICIES**
* **CONSERVATIVE = A**
* **MODERATE = B**
* **AGGRESSIVE = C**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **LIQUIDITY** | **PROFITABILITY** | **RISK** |
|  |  |  |  |
| HIGH | A | C | C |
|  |  |  |  |
| NOR | B | B | B |
|  |  |  |  |
| LOW | C | A | A |
|  |  |  |  |

**The chart tells us two things:**

* Profitability varies inversely with liquidity; increased liquidity can be achieved at the expense of (decreased) profitability
* Profitability & risk have same direction; in order to have greater profitability, we need to take greater risk.

- **Conclusion:** optimal level of each current asset will depend on the management’s attitudetowards risk & return.

**Risk and Return of Current Liabilities**

The goal of the return management process is to maximize earnings in the context of an acceptable level of risk.

Firm’s working capital is financed from short-term borrowing, long-term borrowing, equity financing, or some mixture of all three.

The choice of the firm’s working capital financing depends on manager’s desire for profit versus their degree of risk aversion.

The balance between the risk and return of financing options depends on the firm, its financial managers, and its financing approaches.