Anton Bogovik 02/20/23

**Financing New Ventures: Write Up Ch 4 & 5**

I had well detailed overview of process to identify and obtain resources needed to start a venture in Ch.4. A balance sheet is a way to keep track of assets and liabilities + equity, which plays a significant role when determining the venture’s performance. The income statement covers revenues made by a company and its expenses, which also is a measure of a company’s viability. Balance and income statements differ from well established companies and start-ups due to significant difference of tasks prioritization in both ventures.

Accounting Equation: Assets = Liabilities + Equity. The key components of a balance sheet are Assets, Liabilities and Equity, and a balance sheet reports the financial position of a company at a point in time.

**Net income formula** = Revenue – Expenses

**Liquidity** - how quickly an asset can be converted into cash.

**Current Assets** - cash and other assets that are expected to be converted into cash in less than one year.

**Cash** - amount of coin, currency, and checking account balances.

**Marketable securities** - short-term, high quality, highly liquid investments that typically pay interest.

**Receivables** - credit sales made to customers.

**Inventories** - raw materials, work-inprocess, and finished products that the venture hopes to sell.

**Fixed assets** - assets with expected lives of greater than one year

**Depreciation** - reduction in value of a fixed asset over its expected life, intended to reflect the usage or wearing out of the asset.

**Other long-term asset** - intellectual property rights or intangible assets that can be patented or owned

**Payables** – short-term liabilities owed to suppliers for purchases made on credit.

**Accrued wages** - liabilities owed to employees for previously completed work.

**Bank loan interest** - bearing loan from a commercial bank.

**Other current liabilities** - catchall account that includes borrowing in the form of cash advances on credit cards.

**Long-term debts loans** - that have maturities of longer than one year.

**Capital leases long-term** - noncancelable leases whereby the owner receives payments that cover the cost of equipment plus a return on investment in the equipment.

**Operating leases** - provide maintenance in addition to financing and are also usually cancelable.

**Owners’ equity** - capital contributed by the owners of the business.

**Stockholders’ equity** - book value of owners’ equity in a corporation.

**Common stock account -** book value of ownership interest in a corporation.

**Additional-paid-incapital account -** additional book value of ownership interest in a corporation when the common stock has a par value.

**Retained earnings account -** accumulated profits (or losses) retained in the business from operations.

**Cost of goods sold -** cost of materials and labor incurred to produce the products that were sold.

**Gross earnings** - net sales minus the cost of production.

**Operating income** - also called earnings before interest and taxes (EBIT), the firm’s profit after all operating expenses, excluding financing costs, have been deducted from net sales.

**EBIT** - earnings before interest and taxes; also called operating income.

**Net income** (or profit) bottom-line measure of what’s left of the firm’s net sales after operating expenses, financing costs, and taxes have been deducted.

**EBITDA -** earnings before interest, taxes, depreciation, and amortization.

**EBDAT** - earnings before depreciation, amortization, and taxes.

**EBDAT** - breakeven amount of revenues (i.e., survival revenues) needed to cover a venture’s cash operating expenses.   
 ***EBDAT = Revenues (R) - Variable Costs (VC) - Cash Fixed Costs (CFC)***

***Survival Revenue = CFC/(1 - VCRR); CFC – Cash fixed costs; VCRR – variable cost revenue ratio***

**Cash flow breakeven** - cash flow at zero for a specific period (EBDAT = 0).

Chapter 5

Financial analysis allows us to make predictions about a venture’s future and determine if investments could be made from perspective of time before the need of external investments. Financial analysis could be applied to different development stages of the venture. There are three main stages: Development and Start Up, Survival, Rapid-Growth.

Financial ratios are one of the integral indicators of the financial state of the venture. A ratio is a relationship between two financial variables. There are 3 main analyses with involvement of financial ratios:

* Trend analysis: financial data is compared over a period.
* Cross-sectional analysis: financial data against other venture’s financial data in a similar life cycle stage or industry.
* Industry comparable analysis: financial performance and comparing it against the average performance of other ventures in a similar industry.

Cash Burn Rates and Liquidity Ratios

* Cash Burn Rate: can be defined as the amount of cash burnt by a venture on its operating and financing expenses and its investments in assets over a fixed period.

Cash Build rate: is the cash built for a fixed period.

Net Cash Burn = Cash Burn - Cash Build

* Current ratio: This ratio indicates the margin of current assets over current liabilities.   
  Current Ratio = Average Current Assets/ Average Current Liabilities
* Quick ratio: The quick ratio indicates the ability of liquid assets to pay current. liabilities.   
  Quick Ratio = Average Current Assets - Average Inventories) / Average Current Liabilities
* NWC to Total Assets Ratio: is used to analyze the venture’s liquidity with respect to it’s net working capital.   
  NWC to Total assets Ratio = (Average Current assets- Average Current Liabilities) / Average Total Assets

Conversion Period Ratios

* Inventory to Sale Conversion Period: This ratio is used to analyze the amount of time between the cash outlay for materials and labor and production of a salable good. Inventory to Sale Conversion Period = Average Inventories /(Cost of Goods Sold/365)
* Purchase to Payment Conversion Period: This ratio helps to measure the average time from a purchase of materials and labor to actual cash payment.
* Purchase to Payment Conversion Period = (Average Payables + Average Accrued Liabilities)/ (Cost of Goods Sold/ 365)
* Cash Conversion Cycle: This ratio indicates the average time it takes a venture to complete its operating cycle, less a deduction for the days supported by trade credit and delayed payroll financing.  
    
  Cash Conversion Cycle = **DIO + DSO – DPO**

Leverage Ratios are primarily used to analyze a venture’s current to meet its debt obligations.

* Total Debt to Total Assets Ratio: helps to analyze that how much of a venture has been committed to its debt holders and how much is supported by equity.  
    
  Total Debt to Total Assets Ratio = Average Total Debt/ Average Total Assets
* Equity Multiplier: shows how much of the ventures is financed by the owner and how much of the venture is financed by debt.   
    
  Equity Multiplier = Average Total Assets/ Average Owner’s equity
* Debt to Equity Ratio: shows a direct comparison between debt and equity
* Current Liabilities to Total Debt Ratio: helps to assess the cash outflow of a company with respect to time. It tells us how much a venture is bound to pay its creditors in the short term and long term.   
    
  Current Liabilities to debt Ratio = Average Current Liabilities/ Average Total Debt
* Interest Coverage: helps to analyze whether the venture’s earnings are able to meet its interest obligations. Interest Coverage= EBITDA/Interest
* Fixed-Charges Coverage: is a ratio that helps to asses that if a firm’s earnings are adequate enough to meet its fixed charges obligations Fixed Charges  
  Coverage = (EBITDA + Lease Payments)/(Interest + Lease Payments + [Debt repayments/ (1-Tax rate])

Profitability and Efficiency Ratios determine how a venture controls its expenses and uses its assets efficiently.

* Gross Profit Margin: helps to assess whether a venture’s revenues exceed the cost of goods sold.

Gross Profit Margin: (Net Sales -Cost of Goods Sold)/ Net Sales

* Operating Profit Margin: helps to assess if a venture can cover its financing costs and pay the tax bill and experience net profit.

Operating Profit Margin = EBIT/Net sales

* Net Profit Margin: is known as the bottom line indicates if the venture is making profit or not. (Net Profit Margin = Net income/ Net Sales)
* NOPAT Margin: is used to compare net profit margins between two ventures with different amounts of financing and tax distortions in relative performance.

NOPAT Margin = (EBIT (1-Tax Rate))/Net Sales

* Sales to Total Assets Ratio: helps to assess how much revenue is generated based on the assets invested.

Sales to Total Assets Ratio = Net Sales/Average Total Assets

An additional interesting measure is Price/Cash Flow Ratio (P/CF)**1** - The price-to-cash flow (P/CF) ratio is a stock valuation indicator or multiple that measures the value of a stock’s price relative to its operating cash flow per share.

Basically, if the P/CF is high, it might indicate the company has large non-cash expenses (e.g. depreciation). If P/CF is low, it might be an indicator of undervalued stocks.

1 - https://www.investopedia.com/terms/p/price-to-cash-flowratio.asp