

E145

Workshop A:

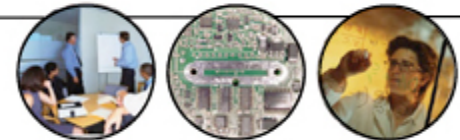
Case Method and Basics of Accounting

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TECHNOLOGY VENTURES



Workshop A Agenda

- **OAP**
- **Case Method Thoughts**
- **Basics of Accounting**

OAP

- Concept:
 - What is the pain point?
 - What is your solution? Why is it unique or compelling?
- Market:
 - Why is this market attractive?
 - How large is this opportunity? What are people willing to pay (customers vs. users)?
 - Is it growing?
- Customers
 - Who are your customers?
 - What are their needs?

OAP

- Business Model:
 - How do you reach your customer?
 - How will you make money?
- Competition
 - Who else serves this customer need?
 - Who might attempt to serve this market in the future?
 - What advantages and weaknesses do these competitors and would-be competitors have?

DUE JANUARY 29

What is a Case?

- “Simulates” decision-making in business
- Presents **lots of information** arranged in an **unstructured way**.
- Presents a problem with some context:
 - Which source of funding should Founder X take?
 - Which target market should Company Y focus on?

please read E145 handouts on Case Analysis on the website

Your job...

- 8PM prior to day of case analysis - students will be required to submit a 1 page case analysis to e145-homework@lists.stanford.edu consisting of:
 - Brief analysis of the situation and pending decision problem which tells us what the relevant information is.
 - Your decision or recommendation with supporting reasons.
- What if there isn't enough information?
 - Too bad. In real life, there is never enough information.
- **Teamwork** is essential for case-based learning and for the development of well grounded opinions
- **Disagreement is normal** and even necessary, since unique solutions are rare.

Seven Tips for Case Analysis

1- Gain a **Basic Understanding** of the Company

- What does the company sell, to whom, how, and why do people buy it?
- Size of revenues - How big is the business?
- Growth of revenue and assets – How quickly is the company growing?
- Profitability of the business (several measures)
- Who are the key players in the situation described and what are their motivations?

2- Understand the **Financial Situation** of the Company

- Is operational cash flow positive or negative?
- How is the short term cash position?
- How much debt does the company have?

3- **Benchmark** the company against competitors and the industry average

- Measures of profitability
- Measures of operational efficiency
- How are the company's products differentiated from competition?

4- Analyze the **historical evolution** of the company's financial situation

Seven Tips for Case Analysis

- 5- Analyze the **sustainability of growth** and the **cash burn rate**
 - How long will the company be able to maintain operations with the current cash position?
- 6- Don't **confuse symptoms with problems**. Often the numbers reflect symptoms that help in diagnosing business problems. One of the most important tasks of case analysis is to identify the problems addressed by the case.
- 7- You should reach a **clear decision** on the case, which is well supported and logically consistent with the analysis. Write the assignments in concise language, using a bullet point format.

Case Write-Up Tips

- 1- **Skip the intro.** We know what question you're answering; we have to read at least 16 answers to the same question. You've only one page in which to make your case, make effective use of it.
- 2- **Build an argument.** Don't just answer the "what" question, back it up with the "why". If you make assertions or assumptions outside of the case, justify them. We ought to be able to read your answer and create a representative outline of the form:
 - "I think _____ should do/choose _____ option because
 - Reason A
 - Reason B
 - Reason Cdespite Fact D because of Reason E"

In fact, maybe make the outline first. If the outline is good enough, you can just turn it in. Content over style.

Case Write Up Tips

- 3- Read the case carefully and learn to filter.** These cases have a lot of info, not all of it is relevant. Many of these cases were written with different case questions in mind. Some of them deal with technologies you may not be familiar with. If there's terminology or anything in the text that you don't quite understand, feel free to ask. The teaching team is here to help.
- 4- Use the study questions.** At least read them. Preferably, discuss and answer them. The study questions have been carefully designed to help you narrow down the scope of the actual homework question or, at very least, to point you in the right direction. Again, if you're not sure, ask.

Case Write Up Tips

- 5- Feel free to use outside knowledge.** Make full use of your own and your team's knowledge. What do you know about this particular technology or market? Between you and all of your team members, you probably know a lot more than you think you know. What would you do in this situation? From what you know of the personalities in the case, which of the decision options do you think they would prefer?
- 6- But, don't just look up an answer.** With point 5 in mind, don't just look up what really happened and let historical determinism answer your question. Answer the case from the time and perspective of the personalities in the case. We don't look for right or wrong answers, we look for well-constructed arguments.

Case Write Up Tips

- 7- **Think through the alternatives.** They won't always be laid out in the case or the question.
- 8- **Think about limitations as well as advantages.** Argue for your choice, but recognize the risks. Every choice has tradeoffs, else these decisions wouldn't be so interesting or so difficult. What are the big risks for each alternative and why, despite these risks, do you think your choice is the best path of action?
- 9- **Know when to use the numbers.** Hint: if we teach you financing in class and then you get a case with financing numbers in it, we probably want you to run the numbers. You'll note that you won't have all the values you need – you can solve for some values, others you'll just have to guess (and justify why those numbers are reasonable).

Workshop A Agenda

- Case Method Thoughts
- **Basics of Accounting**

Why should I care?

- Key Business Drivers
 - Identifies the **critical assumptions** you are making about your business (for revenues and for costs)
 - Identifies what drives the growth of your business
- Timeline analysis
 - Enables you to know **how much** resources are required to scale the business and **when** those resources are required
- Does this business even make sense?
 - Can't make a \$1 widget with a \$3B fab
 - Sure, selling dollar bills at a discount gets you great market share fast but also makes you broke

Accounting Principals

$$\text{Assets} = \text{Liabilities} + \text{Equity}$$
A diagram showing the accounting equation 'Assets = Liabilities + Equity'. An arrow points from 'Assets' to its definition. A bracket under 'Liabilities + Equity' points to their definitions.

What the company owns
(used to generate income)

- **How the ownership of assets was financed** (By third parties or by the owners)
- **Equity** = *book value* of company

$$\text{Market Value} = \text{Share price} \times \# \text{ shares issued}$$

- **Note:** *Market and book value of company are not the same. Market value takes into account the potential growth of the company*

Balance Sheet

- A *snapshot* of the investing and financing activities of a firm

Balance Sheet of XYZ Corp. - 31 December of 2007 (in thousand \$)

Shareholder's equity is the owners' claim

- Contributed capital (Paid-in capital): the amount invested
- Retained earnings: Increase in equity due to operations

Assets are economic resources

- An asset has the ability to provide future benefits to the company

Total Assets = Total Liabilities + Shareholder's Equity

Balance Sheets Comparison

Assets	Wal-Mart (\$B)	Cisco (\$B)	VmWare (\$M)
Cash	7.4	22.3	176
Accounts Receivable	2.8	4.0	201
Inventories	33.7	1.3	0
Prepayments	2.7	2.0	7
Other Current Assets	0	2.0	38
Total Current Assets:	46.6	31.6	422
Property, Plant and Equipment	88.4	6.0	49
Intangible Assets	13.8	14.7	604
Other Long Term Assets	2.4	2.7	71
Total Assets:	151.2	53.3	1146
Liabilities and Shareholders' Equity			
Accounts Payable	28.1	0.8	44
Notes Payable	2.6	0	0
Accrued Expenses	14.7	5.4	103
Other Current Liabilities	6.5	7.1	330
Total Current Liabilities	51.7	13.4	478
Long Term Debt	30.7	6.4	800
Other Noncurrent Liabilities	7.1	2.1	99
Total Liabilities	89.6	21.9	1377
Shareholders' Equity	61.6	31.5	-231
Total Liabilities and Shareholders' Equity ..	151.2	53.3	1146

Balance Sheet Analysis

- **Working Capital:** Part of current assets not financed by current liabilities. Also a measure of how much you have in quickly liquid assets

$$= \text{Current Assets} - \text{Current Liabilities}$$

- **Liquidity ratios:** measures of the ability to meet short term financial obligations
 - **Current Ratio** = Current Assets / Current Liabilities
 - **Acid-test** = (Cash + Accounts Receivable) / Current Liabilities
- **Operational Efficiency Measures**
 - **Inventory Turnover** = Cost of Sales per year / Current Inventory
 - **Accounts Receivable Collection Period** = Accounts Receivable / Sales
 - **Accounts Payable Collection Period** = Accounts Payable / Cost of Sales

Balance Sheet Analysis

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Notes Payable	2.6	0
Accrued Expenses	14.7	5.4
Other Current Liabilities	6.5	7.1
Total Current Liabilities	51.7	13.4
Long Term Debt	30.7	6.4
Other Noncurrent Liabilities	7.1	2.1
Total Liabilities	89.6	21.9
Shareholders' Equity	61.6	31.5
Total Liabilities and Shareholders' Equity ..	151.2	53.3

Working Capital:

Walmart: -5.1B

Cisco: 18.2B

Current Ratio:

Walmart: 0.9

Cisco: 2.4

Inventory Turnover

Walmart: 7.8

Cisco: 9.5

Acct Receivable Collection Period:

Walmart: 0.01

Cisco: 0.11

Acct Payable Collection Period:

Walmart: 0.11

Cisco: 0.06

Balance Sheet and Income Statement

$$\text{Assets} = \text{Liabilities} + \text{Equity}$$

$$\begin{aligned} \text{Assets} &= \text{Liabilities} + \text{Contributed Capital} + \text{Retained Earnings} \\ \text{Assets} &= \text{Liabilities} + \text{Contributed Capital} + \text{Retained Earnings, Beginning of Period} + \text{Net Income for Period} - \text{Dividends for Period} \\ \text{Assets} &= \text{Liabilities} + \text{Contributed Capital} + \text{Retained Earnings, Beginning of Period} + \text{Revenues - Expenses for Period} - \text{Dividends for Period} \end{aligned}$$

Income Statement

Reports the **economic results** of a company over a time period. It shows the derivation of earnings or losses.

Income Statement of XYZ Corp. – year 2007

\$

% Rev.

+ **Revenues**

- Cost of Revenue (product cost or COGS)

= **Gross Margin**

- Sales and Marketing

- General and Administrative

- Research & Development

- Depreciation and Amortization

= **Operating Income (EBIT)**

+ Interest Income(expense) net

= **Net Income before Taxes**

- Income Tax Provision

- Extraordinary Items

= **Net Income**

Net Income = Revenues - Expenses

Income Statement Comparison

	Cisco (\$M)	VmWare (\$M)	Wal-Mart (\$M)
+ Revenues	34,922	704	348,650
- Cost of Revenue (COGs)	12,586	123	264,152
= Gross Profit	22,336	581	84,498
- SG&A*	8,728	308	64,001
- Research & Development	4,499	152	-
- Depreciation and Amortization	488	-	-
= Operating Income (EBIT)	8,621	121	20,497
+ Interest Income(expense) net	840	2	(1,529)
= Net Income before Taxes	9,461	123	18,968
- Income Tax Provision	2,128	37	6,365
- Extraordinary Items	-	-	894
= Net Income	7,333	86	11,182

SG&A = Selling, General and Administrative Expenses

Income Statement Analysis

- Some Profitability Measures:
 - **Gross Margin (%)** = Gross Profit / Sales
 - **Operating Margin** = Operating Income / Sales
 - **Return on Sales** = Net Income / Sales
 - **Return on Equity** = Net Income / Shareholders' Equity
- Other Important Measures
 - **Earnings Per Common Share (EPS)** = Net Income / Common Shares
 - **Price Earnings Ratio (P/E)** = Market Price / Earnings Per Share

Income Statement Analysis

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Gross Margin:
Walmart: 24%
Cisco: 64%

Operating Margin:
Walmart: 6%
Cisco: 25%

SG&A = Selling, General and Administrative Expenses

Cash Flow Statement

CFIMITYM !!!

(Cash Flow is More Important Than Your Mother!!)

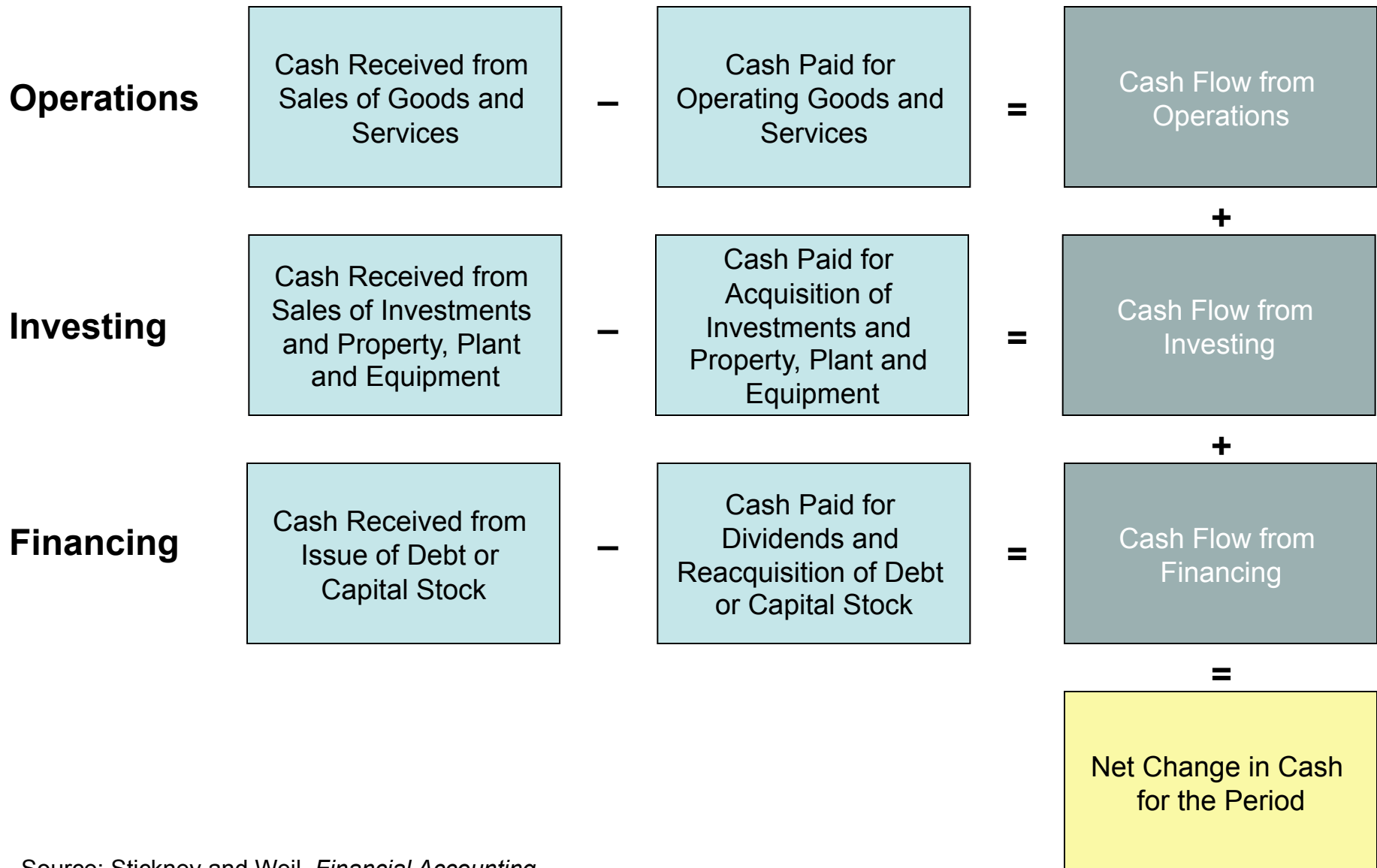
Especially for an entrepreneurial firm...

It is possible for a profitable firm to go bankrupt because they lack the cash to keep things afloat

Financing: Revenues and costs are not necessarily recognized when cash is transacted (e.g. accounts payable and receivable, salaries payable, depreciation vs. capital equipment purchase)

- *Investment Activities:* Firm also receives cash from sources not related operations (e.g. issuance of stocks and bonds)

Cash Flow Components



Source: Stickney and Weil, *Financial Accounting*

Statement of Cash Flows - Example

SIERRA CORPORATION
Statement of Cash Flows
For the Month Ended October 31, 2004

Cash flows from operating activities		
Cash receipts from operating activities	\$ 11,200	
Cash payments for operating activities	<u>(5,500)</u>	
Net cash provided by operating activities		\$ 5,700
Cash flows from investing activities		
Purchased office equipment	<u>(5,000)</u>	
Net cash used by investing activities		(5,000)
Cash flows from financing activities		
Issuance of common stock		10,000
Issued note payable	5,000	
Payment of dividend	<u>(500)</u>	
Net cash provided by financing activities		<u>14,500</u>
Net increase in cash		15,200
Cash at beginning of period		<u>0</u>
Cash at end of period		<u><u>15,200</u></u>

Source: Kimmel et. al. *Financial Information For Decision Making*

Wrap-Up

- Financial model is not a part of your OAP but understanding financials is a critical part of your case analysis
- In practice, your financial model for a business plan will answer:
 - How long will it take to build your product?
 - How will you price it?
 - How will you sell it? How long will that take?
 - What are my critical risk factors?