Financial Estimations for Start-ups

Rosula San Jose-Reyes, Ph.D.
Associate Professor And Chairperson
Department Of Electronics, Computer and Communications Engineering
School Of Science And Engineering
Ateneo De Manila University
Philippines

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Outline of presentation

- Introduction
- Significance of a Financial Plan
- Components of a Financial Plan
- Financial aspects of running a small business
- Basic Financial Terminology
- Forecasting Financial Needs
- Measures of Profitability

Introduction

Introduction

Campus entrepreneurs
(continued)

Flat, but robust

- With a small company like theirs, the owners of Blue Chip Designs are strong believers in maintaining a flat organization and in making its employees truly a part of the company.
- They make it a point to find ways to give their employees broader experience by allowing each of them to work in different projects. They are also not averse to modifying office practices—such as the working hours, for instance—to increase employee motivation.
- Says Noel Patron, chief executive officer: "Employees' opinions and ideas matter, and when you have a flat organization, the setup works for both the owners and the employees. There's a stronger sense of ownership."

'The secret to maintaining clients is keeping your promises—if you can deliver, clients would stick with you'

different specifications and applications.

This was followed in 2004 by their creation of software for a portable ECG (electrocardiogram) machine. Reyes explains the innovation: "An American company developed the hardware, but their machine couldn't transfer data into a PC. The hardware only recorded the ECG signal, but it did not give any reading. Our software enabled it to do that."

In 2003, seeing the growing demand for its R&D services, the group incorporated Blue Chip Designs, but all four ran the company at the Ateneo department. This was because by being housed at the department, the company's overhead expenses were very minimal, and they were also receiving compensation from the university as research consultants. "Of the amount remitted to us as consultants, 30 percent was going to ADMU," Reyes explains. "That percentage was actually equivalent to renting the space in the department."

The incorporation of Blue Chip Designs required them to open a bank account with P6,250, which was 1/16 of the company's total authorized capitalization of P100,000.

Two years later, in 2005, the company moved out of the Ateneo campus and established an office along Loyola Heights in Quezon City independent from the university. This allowed the four, who still teach at the Ateneo, to properly entertain their increasing number of clients who were not from the university. "You just cannot allow people to come in and out of the department if they are not connected with the university," says Reyes.

This time, the group increased the authorized capitalization of Blue Chip Designs to P1 million, thus enabling the company to buy computers and pay for its office rentals one year in advance.

Currently, the company continues to serve clients they had acquired back when they were still with the university. Reyes says that the secret to maintaining clients is keeping your promises. "If you can deliver, clients would stick with you," she adds.

A major client of Blue Chip gives them several projects at a time; in fact, it has appointed the company as its research and development arm, handling all software and firmware needs for color printers, point card printers, and finger and print scanners.

Blue Chip currently has 11 personnel, including the four owners. Most of its projects are for foreign companies but it has put up another company, Bughaw Electronic Solution & Technologies Inc., to cater to the needs of local companies. ■

CONTACT DETAILS:

BLUE CHIP DESIGNS INC.
Unit 302 Xanland Place Condominium
323 Katipunan Avenue,
Loyola Heights, Quezon City
Telephone: (02) 425-1133
E-mail: feedback@ bcdph.com
Website: www.bcdph.com

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I decided to launch the Department of starting or running a

w members of her team at the offices

"We studied and learned the process of incorporating a company by ourselves, liaising with the Department of Trade and Industry, the Board of Investments, the Bureau of Internal Revenue... All without legal counsel, as we couldn't afford one!

"We began operating as a company in 2003, initially developing hardware design using HDL and firmware development using Field Programmable Gate Array (FPGA). We've now expanded into software development, and web and mobile applications, and are starting to be known in the telecommunications industry. We have recently developed a range of applications for the new Android platform, including RemoteDroid, which allows you to access your phone and several of its main functionalities remotely, and MyGreeterDroid, which synchronises with your online calendar triggering SMS messages for those important dates in everyone's life.

"Major providers have been in contact for contractual projects, and we have an expanding network of mostly foreign clients. There are 12 of us in the team altogether; the four founding members, plus a team of design engineers and one clerical staff member. We are proud of the fact that 90% of our employees are pursuing or have obtained a doctorate degree in electronic engineering, electrical engineering or physics.

"Blue Chip Designs is based just opposite the university campus, which is convenient for us all. Most of our clients are in the US or Japan, but it's easy to run our operations. With meetings on Skype, and information and communications via e-mail, distance is not an issue at all. As far as competition goes, we virtually don't have any in our hardware design work in the Philippines, as we cater for small- and medium-sized companies without R&D departments that must outsource their projects at least partially. However, in our software development work, competition is fierce. The comparatively low cost of labour and development mixed with English-language proficiency and solid creative skills mean that international companies find what they want easily in the Philippines.

"I attended IOP's workshop on entrepreneurial skills in 2010, and it has proved enormously useful. Negotiations on intellectual property, contract development, marketing, operations and strategic planning, aside from all the technical aspects of running projects, were all tasks that we continuously need to enhance our skills in, and in which all of us at Blue Chip Designs lack formal training. The workshop has meant that we have now implemented business plans when proposing and developing new projects to clients, as well as the general management of the company.

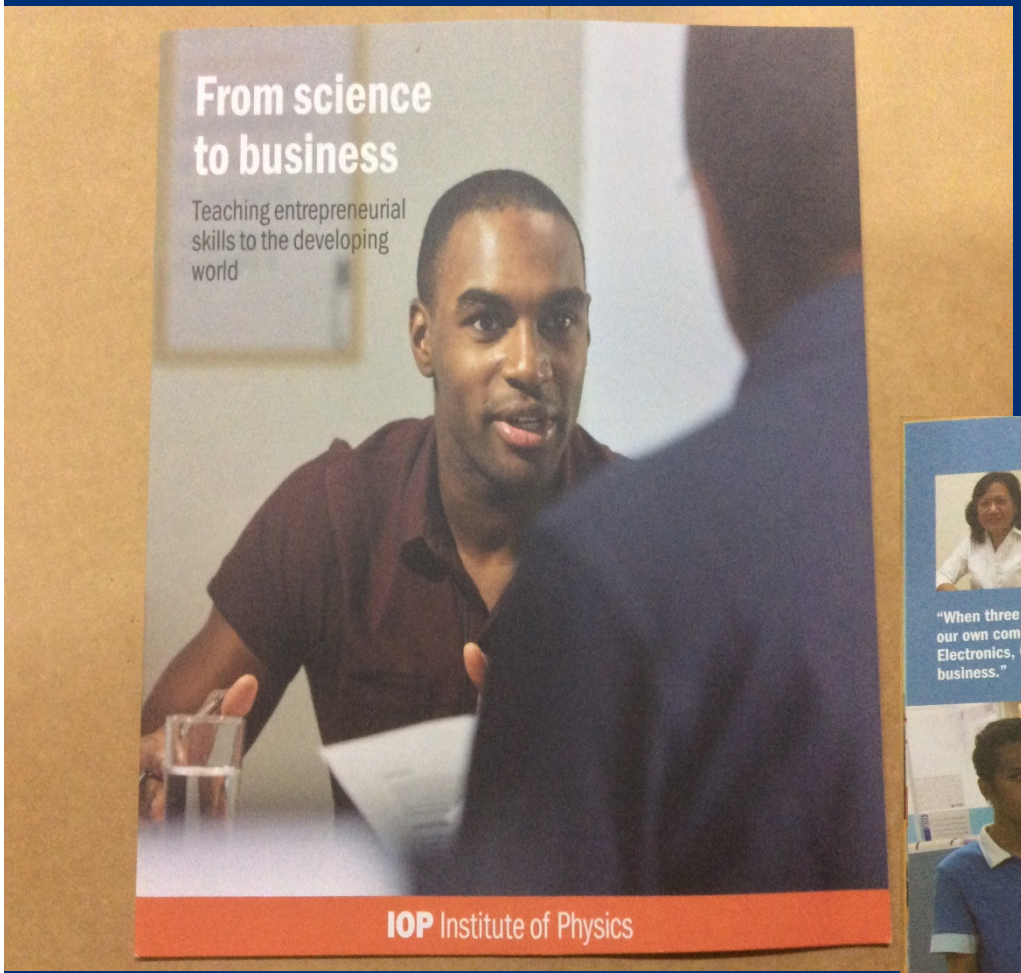
"The hands-on development of a real business plan was invaluable – a real eye-opener."

We have also applied human resources management principles to how we work with our employees, which ensures that everyone is happy and can be as productive as they need them to be.

"I would really encourage others embarking on new physics-based business ventures to experience everything that I did at the workshop. Having access to the expertise of international lecturers is invaluable. The material covered is all essential knowledge for anyone setting up a company, and the hands-on development of a real business plan, under the supervision of highly experienced professionals, is a real eye-opener. And it was all so affordable – I was amazed at how much we got for our money. It goes to show how aware IOP is of new businesses' financial capability and that they really do care about improving skills for the benefit of as many people as possible.

"Personally, I have now become a bit of a champion of the entrepreneurship curriculum here in the Philippines, and I have collaborated with IOP in the organisation of an entrepreneurship workshop in Cebu City in 2011."

Introduction



Significance of a Financial Plan

Significance of a Financial Plan

1. see if it makes sense to start a small business
2. register your business with various government agencies
3. identify whether you are running the business efficiently
4. raise capital for your business
5. forecast your business finance
6. file tax returns

The Components of a Financial Plan

Start With A Sales Forecast. *(Set Up A Spreadsheet Projecting Your Sales Over The Course Of Three Years.)*

Create An Expenses Budget. *(You're Going To Need To Understand How Much It's Going To Cost You To Actually Make The Sales You Have Forecast.)*

The Components of a Financial Plan

Develop A Cash-flow Statement. *Start By Projecting A Cash-flow Statement Broken Down Into 12 Months.*

Income Projections. *Profit And Loss Statement*

Deal With Assets And Liabilities.

Breakeven Analysis.

Part II
Basic Financial Terminology

Financial aspects of running a small business – terminology

Cash flow: measures the amount of money your company makes and spends during a specific period of time.

Liquidity: the ability of an asset to be converted into cash quickly without losing money (without underselling).

Financial statements (accounting):

a) balance sheets
b) income or profit and loss statement
c) cash flow statement

Financial projections: budget, projected balance sheet and profit and loss statement.

Glossary of financial terms

Assets: anything that the business owns that has monetary value.

Current assets: cash assets that can be “quickly” converted to cash, accounts receivable.

Fixed assets: land, buildings, machinery, equipment, furniture, computers and instruments, etc.

Other assets: IP, trade investments, supplier contracts, “trade secrets”, goodwill (also known as intangibles).

Liabilities: debts owned by the business, accounts payable, allowance for taxes.

Equity: equity = assets – liabilities (=owner investment + profit/loss put back into business)

Working capital: current assets – current liabilities.

Typical asset disclosure form

NAME PERSONAL FINANCIAL STATEMENT DATE			
ASSETS		**LIABILITIES & NET WORTH**	
CURRENT ASSETS		**LIABILITIES**	
Cash including checking, & savings		Mortgage (pay off amount)	
Certificate of Deposit		Car Loan	
U. S. Treasury Notes		Credit Cards	
Life Insurance (cash value)		Student Loans	
Stock, Bonds, other Securities		Personal Loans	
Furnishing (Market Value)		Other Loans	
Jewelry (appraised value)		Taxes Owed	
Real Estate (Market Value)		Other Liabilities: (Detail)	
Auto/Vehicles (Market Value)			
		TOTAL LIABILITIES	$0
Vested Pension Plan/401K (Face Value)			
Other Assets: (Detail)			
		NET WORTH	$0
		(Assets minus Liabilities)	
		TOTAL LIABILITIES	
TOTAL ASSETS	$0	**PLUS NET WORTH**	$0

Net present value (NPV)

Each year's cash inflow/outflow is discounted back to its present value (PV). Then they are summed up for all projected years to obtain the net present value.

$$PV = R_t / (1+i)^t$$

t - the time of the cash flow

i - the discount rate (the rate of return that could be earned on an investment in the financial markets with similar risk)

R_t - the net cash flow (the amount of cash, inflow minus outflow) at time t (R_0 is commonly placed to the left of the sum to emphasize its role as [minus the] investment)

Residual value

Residual value is approximated by n^{th} year cash flow/ (discount rate)

Understanding a simple balance Sheet

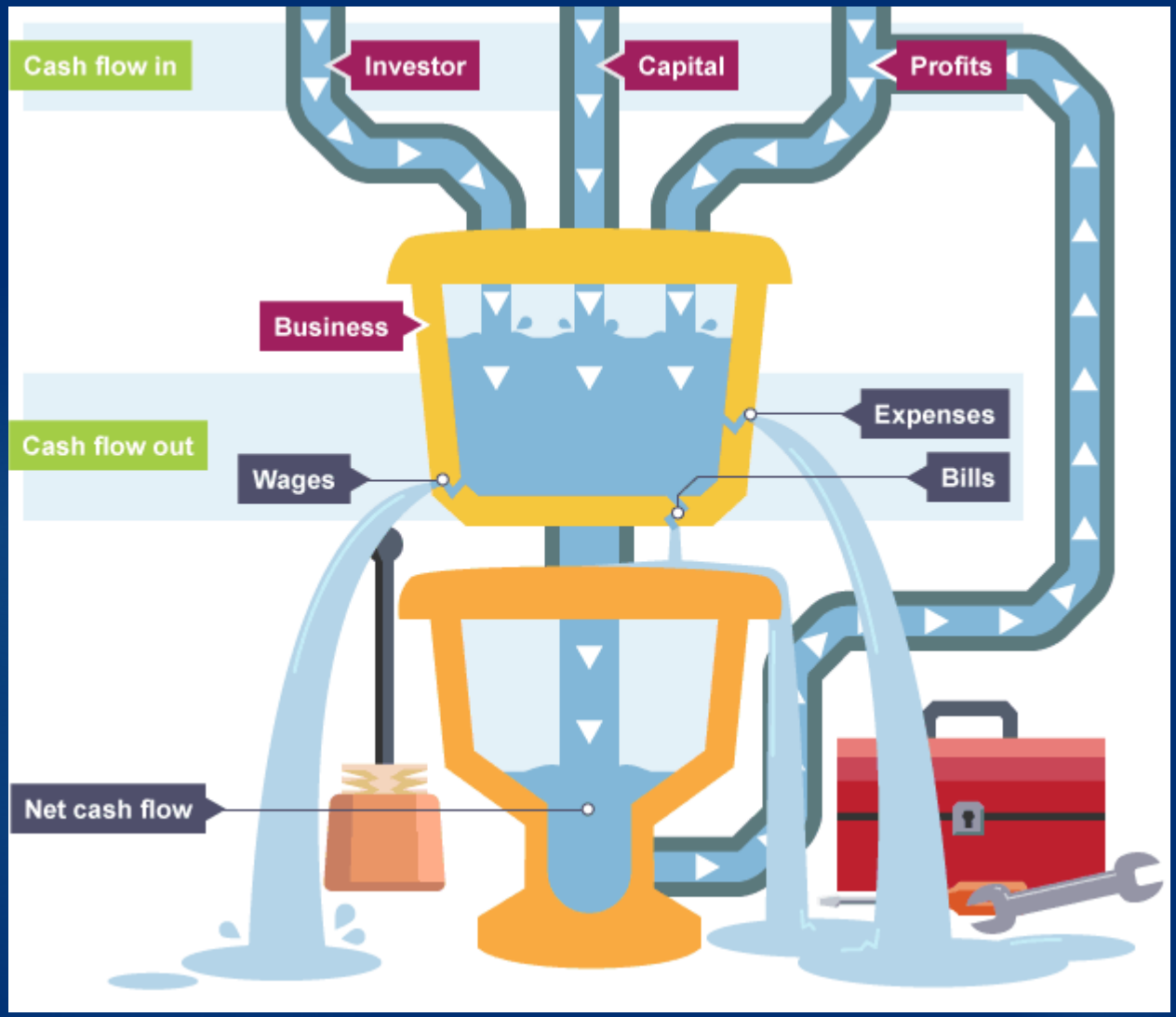
The XYZ Company
Balance Sheet
December 31, 2015

Assets	
Current Assets:	
Cash	$ 15,000
Accounts Receivable	50,000
Inventories	25,000
Total Current Assets	**$90,000**
Fixed Assets:	
Equipment	$ 10,000
Buildings	50,000
Land	30,000
Total Fixed Assets	**$ 90,000**
Total Assets	**$180,000**
Liabilities and Equity	
Current Liabilities:	
Accounts Payable	$ 30,000
Notes Payable	10,000
Accrued Liabilities	15,000
Reserve for Taxes	5,000
Total Current Liabilities	**$ 60,000**
Equity:	
Capital Stock	$ 60,000
Surplus	60,000
Total Equity	**$120,000**
Total Liabilities	**$180,000**

Cash flow statement

- The cash flow (also known as money flow) statement shows beginning cash balance, cash inflows, cash outflows and ending cash balance
- Tells you how the cash is moving in and out of your business

Cash Flow Diagram



Simple cash flow statement

Beginning cash balance	$
Cash in	
– Cash sales	$31.00
– Accounts receivables collections	$20.00
– New loans	$30.00
– Investments	$15.00
Cash out	
– Equipment purchased	$24.00
– Expenses paid	$26.00
– Inventory on hand	$33.80
– Principal payments	$1.00
Ending cash balance (date)	$11.20

Ref: www.sba.gov

Note: a cash flow statement should never have a negative ending cash balance. If so, you are bankrupt or out of cash even if your business is profitable.

Profit-and-loss statement – definitions

- **Sales**: sale of merchandise or services (amount in currency).
- **Cost of goods manufactured or service**: total price paid to produce the product including raw materials, direct labour, manufacturing overheads, including utilities, transportation and/or shipping charges, depreciation of capital, special software, etc.
- **Selling expenses**: salary of sales force, advertising, tradeshows etc.
- **General and administration (G&A) costs**: rent, utilities, secretarial costs, travel, conference participation, legal business entertainment, office software etc.
- **Liquidity**: ability to pay the bills (cash + assets that can be turned readily into cash)
- **Working capital**: current assets – current liabilities.

Small business profit-and-loss statement

The XYZ Company
Profit-and-Loss Statement
For the Year Ending December 31, 2015

Sales	$ 180,000
Costs of goods sold	70,000
Gross Margin	$ 110,000
Selling Expenses:	
Salaries	$ 30,000
Commissions	6,000
Advertising	4,000
Total Selling Expenses	$ 40,000
Selling Margin	$ 70,000
Administrative Expenses	30,000
Net Profit	$ 40,000

Ratio analysis of financial statements

- Measures of "business sense" – how well are we conducting our business?
- Provide trends and comparisons with similar size business.

Current ratio: Does your business have enough current assets to meet its current debts with a margin of safety?

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

~2 is desirable

Question: How do you raise the current ratio?

Ratio analysis of financial statements

Current ratio can be raised by:

- Paying off some debts
- Increasing your current assets by loans with a maturity of more than a year
- Converting non-current assets into current assets
- New equity contributions
- Ploughing back profits

Current ratio analysis

Effects of various transactions on current ratio

	(1) Original current assets and current liabilities	(2) Merchandise bought on account ($15,000)	(3) Cash paid on accounts payable ($7,000)	(4) New capital invested ($10,000)
Current assets:				
Cash	$10,000	$10,000	$3,000	$20,000
Accounts recivable	20,000	20,000	20,000	20,000
Inventory	20,000	35,000	20,000	20,000
Total current assets	**$50,000**	**$65,000**	**$43,000**	**$60,000**
Current liabilities:				
Accounts payable	$20,000	$35,000	$13,000	$20,000
Other	5,000	5,000	5,000	5,000
Total current liabilities	**$25,000**	**$40,000**	**$18,000**	**$25,000**
Net working capital	$25,000	$25,000	$25,000	$35,000
Current ratio	2.0	1.6	2.4	2.4

Ratio analysis of financial statements

Acid-test ratio: if all sales revenues should disappear, could the business meet its current obligations?

$$Acid - test\ Ratio = \frac{Cash + Govt.Securities + receivables}{current\ liabilities}$$

- **Usually small businesses do not have government securities**
- **No inventories considered – concentrates on the really liquid assets**
- **Acid test ration should be >1**

Ratio analysis of financial statements

$$Inventory\ turnover = \frac{Cost\ of\ goods\ sold}{Average\ inventory}$$

Inventory turnover: inventory – finished goods and goods in the making. Shows how fast your merchandise is moving and how much capital is tied up in inventory.

The higher the turnover, the better it is – company is able to operate with relatively small Investment in inventory.

Ratio analysis of financial statements

$$Investment\ Turnover = \frac{Net\ Sales}{Total\ Assets}$$

Investment turnover: measure of annual net sales to total investment (total assets).

Measures of profitability

Is your business earning as much profit as it should? Asset earning power: best guide for appraising the overall earning power of the company's assets.

$$\text{Asset Earning Power} = \frac{\text{Operating profit}}{\text{Total assets}}$$

Example: operating profit = $40 000

Total assets = $230 000

Asset earning power = 0.18 or 18%. Is this a good number?

Measures of profitability

Net profit on sales

Depends on operating costs and pricing policies.

If you have multiple products, you can decide which product needs attention in terms of cost cutting and productivity.

$$\text{Net profit on sales} = \frac{\text{Net profit}}{\text{Net Sales}}$$

Measures of profitability

Return on investment (ROI)

This is the most common term you will hear and the most common denominator (bottom line) of business. In addition to sales volume, profit on sales, this is an important consideration because the amount of capital invested in acquiring the assets matters in a business.

$$\text{Return on Investment} = \frac{\text{Net profit}}{\text{Total assets}}$$

Example: two scenarios to understand ROI

	Original	Expanded
Investment	$250 000	$350 000
Sales	$500 000	$600 000
Net Profit	$55 000	$66 000
Net profit on sales (%)	11	11
ROI (%)	22	18.8
Investment turnover (times)	2	1.7

Ref: R.C. Spurga, 2004

Measure of profitability

Note: These ratios only provide measures of performance, but not solutions to poor performance.

Forecasting your financial needs

The cash budget is a plan for cash receipts and expenditures in a given period. You need to know the following:

- Capital equipment required in the budget
- Labour rates for various categories – including yourself
- Material required
- Supplies
- Consultant rates – accountant, lawyers for setting up company and patent attorneys, marketing, technical consulting
- Permits and licensing (including IP and option agreements)
- Equipment rentals, space, furniture rentals
- Tax rates
- Others

Forecasting your financial needs

- Cash budgets help you avoid financial surprises that can potentially drain your resources
- Budget forecasts are needed in the business plans

Projected balance sheet and profit and loss statement (pro-forma)

- This will be your best estimate of the profitability of your business and the financial condition of your business at the end of the statement period.
- Prepared in the same format as the current balance sheet and profit-and-loss statement.

Different types of financing

Three types of capital required:

- Equity capital
- Working capital
- Growth capital

Different types of financing

Equity capital = total assets – total liabilities

- Answers to the question: “what do you have in the business?”
- It is usually your personal money – this is not something that can be borrowed – at least not in the early stages
- Banks are not interested in equity – you cannot ask them for getting equity in your business.
- Universities will license IP/lease you office/lab space for share in the equity.

Different types of financing

Working capital

- Funds required for on-going activities of the business such as accounts receivables, obtaining inventories and meeting payroll obligations.
- Varies over the year depending on the business cycle.

Growth capital

- Needed for expanding or significantly altering the business.
- You should be able to show increased profits and ability to repay the loan to raise such capital from lenders.

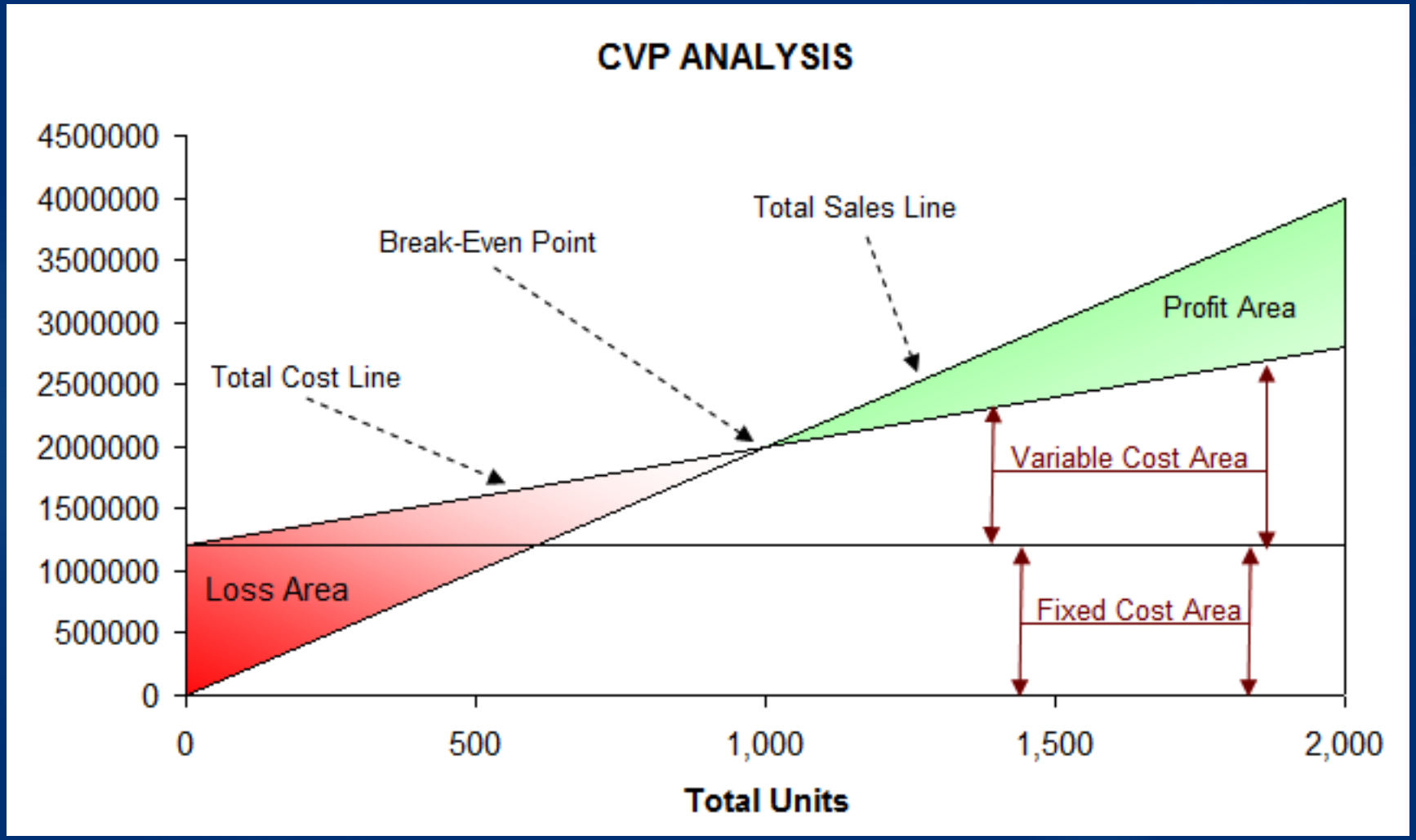
Different types of financing

When to turn to angel investors and venture capitalists (VCs)

- When you need additional equity capital to expand the business.
- Angel investors and VCs expect higher rates of return on investment (>15%) and business to become profitable within about five years.

In order to seek funding from angel investors and venture capitalists you need a sound business plan to convince them to invest money in your business.

Entrepreneurial Finance: Break Even



This is what will tell you whether the business will be viable or whether you are wasting your time and/or money

Acknowledgement
IOP Entrepreneurship Curriculum Module

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thank you
danke
рахмат
謝謝
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teşekkür ederim
Баярлалаа
спасибо
faafetai lava
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Salamat Po!