FINANCIAL MANAGEMENT

A practical and accessible introduction for students and entrepreneurs

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VERNON PRESS

www.vernonpress.com

In the Americas:
Vernon Press
1000 N West Street,
Suite 1200, Wilmington,
Delaware 19801
United States

In the rest of the world
Vernon Press
C/Sancti Espiritu 17,
Malaga, 29006
Spain

Library of Congress Control Number: 2014942085

ISBN 978-1-62273-015-5

PAGES MISSING

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Chapter 2

THE FINANCIAL PLAN AT START-UP

2.1 CAPITAL AND SHAREHOLDERS' EQUITY

Anybody starting his own business has a choice: the founder either decides to stay just a private enterprise, like a small retail store, or he decides it should become a **legal entity**. In that case there will be an official deed to establish the business as a legal entity, like a **corporation or a limited liability company, which coincides with the emission of shares to the founders.** Larger businesses may opt for having the public buy shares through the **official stock exchange.**

The difference between a private company and an incorporated company is in the **liabilities to pay all debts.** If the privately owned company has insufficient means to pay for all of the debts the **private company and the private owner himself will be declared bankrupt**. In an incorporated enterprise the company itself, not the founders, will be declared bankrupt. A legal entity like a corporation is authorized to participate in the economic field, buy, sell, hire employees etc. The company is employer. The company, not the founders, can be brought to trial when there is a lawsuit brought against it. What all of these types of business have in common is the necessity to bring own money into the company before it can look for bank loans. This "own money" is called: **EQUITY**.

When a company is founded as an **incorporated there always will be share capital.** This is a sum of money made available first by the founders and possibly also by partners who make available larger sums of money in return of which they receive shares in the company. The offered shares are part of a **"share emission". Share capital or stock** is the primary source to shape the financing of all of the investments at start up. It is owned by the shareholders and it will remain their possession as long as they do not sell those shares to another party. Contrary to money to be paid to suppliers or to be paid back to a bank,

this money received from participating parties never will have to be paid back.

From the first chapter we remember that any investment made by a company needs financing by one or another type of financial resource. Any company, be it at its start up or during its existence, will need equity if it also needs third parties for outside financing aid. No bank will extend a loan to a company if there is no or hardly any, equity. But what do they require? Banks have their **standards for the relation between equity and outside financial resources.**

A bank is prepared to finance part of the investments of a company but will not be prepared to become exposed to the risks of the business. Banks translate this in what they demand to be the minimum of equity which should be a **buffer against financial risks.** They demand sufficient equity to finance a part of the total investments before granting loans, which will become a liability of the borrowing company. They set a standard for the **ratio equity: liabilities.**

One bank, in need of more clients may grant more concessions in terms of this ratio and will be satisfied as long as equity will finance 30% of all of the assets, while more conservative banks never will go below a ratio of 40 : 60 for equity : liabilities. It will be evident that also in the selection of a preferred bank economic options present themselves to select from. Let us look at a simple balance sheet at the start of a company.

Finally: every asset (debit side of the balance sheet) added after start-up raises the repeated question: how is it financed (credit side of the balance sheet)

BALANCE SHEET			
FIXED ASSETS	$ 400 000	Share capital/equity= 40% $ 240 000 = 40%	
CURRENT ASSETS	- 200 000	LONG TERM LIABILITIES Mortgage loan 5% CURRENT LIABILITIES Current account credit Creditors	$ 180 000 - 120 000 - 60 000
TOTAL ASSETS	$ 600 000	TOTAL CAPITAL	$ 600 000

We see in this balance sheet that all of the possessions (assets) were financed by 40% equity and 60% liabilities. The ratio equity – liabilities is 40/60 or: 40: 60

Let us now start this chapter by retrieving Clark's investment plan

- building	$ 628 500
- rack system	- 95 000
- tooling workshop	- 8 500
- forklift truck	- 80 000
- computers + software	- 18 000
- inventory	- 200 000
- 2 trucks	- 380 000
- liquidity	- 50 000
CLARK'S TOTAL	**$ 1 460 000**

We also saw that Clark has $ 560 000 to invest in his new venture which accounts for 38.35% of total investment of $ 1.46 million. Every

asset added to a balance sheet raises the question by which source it was financed **(financial resources).** Both debit and credit side of the balance sheet always **must be "in balance"**

When setting up a financing plan it is wise always to follow a **sequence** in the financial resources **from cheap to expensive.** For Clark's business this may work out as shown here below, depending on his bank's cooperation and which payment term will be granted by suppliers.

We assume that his bank is prepared to grant a loan for the purchase of the building of 100% based on a mortgage and that the suppliers of his inventory will grant a term of payment of 60 days. We also assume that interest rates vary: a mortgage requires 5%, a 5-year' loan 8% and a **credit limit on his current account as allowed by his bank will cost 14% per year.**

Let us see how this would work out for Clark.

FIXED ASSETS		**= TOTAL FINANCING NEED**	**$ 1 460 000**
building	$ 628 500	suppliers 'payment term	- 200 000
rack system	- 95 000		
tooling workshop	- 8 500	still to be financed	$ 1 260 000
forklift truck	- 80 000	private equity	- 560 000
computers + software	- 18 000		
2 trucks	- 380 000	still to be financed	$ 700 000
		mortgage loan 5%	- 628 500
Total fixed assets	$ 1 210 000		
CURRENT ASSETS		still to be financed 5 years' bank loan 8%	$ 71 500 - 71 500
inventory	- 200 000		
liquidity	- 50 000	$ 0	
Total current assets	$ 250 000	(From cheapest : suppliers to most expensive: 8% bank loan)	
TOTAL ASSETS	$ 1 460 000		

SUMMARY OF FINANCIAL RESOURCES:	
CLARK'S TOTAL NEED IS	$ 1 460 000
STOCKHOLDERS' EQUITY	$ 560 000
LONG TERM LIABILITIES	- 700 000 *
CURRENT LIABILITIES	- 200 000 *
TOTAL FINANCING	$ 1 460 000

* see Par. 2 of this chapter.

We see that Clark's savings were high enough to remain at the safe side of the bank's demand that 35% of all of the assets should be financed by equity. He still has a borrowing capacity for additional investments of $ 140 000, bringing total assets at $1 600 000. Even then his $ 560 000 equity would represent 35% of total assets.

Now, let us have a look at private equity and how it will be affected by the company's activities. And in this book we will deal with middle sized incorporated companies only, since its activities and results are managed by the owner, or a small group of owners, only. Large corporations on the NYSE (New York Stock Exchange) are much more under the influence of investment corporations which would present more complications than useful for this elementary book on Financial Management.

The start up phase of a company always **requires private capital (equity)** to a sufficient level to qualify for bank loans. Again: a bank is never prepared to take over all of the risks inherent to doing business. This private capital starts by **an emission of shares, which are issued to the owner(s) against payment in cash.**

Once a company becomes successful by growing turnover figures the level of its inventory will grow as will the amount of accounts receivable. These two represent assets. And growth in assets always raises the question**: how will this growth be financed by equity and/or liabilities?** There is a saying: growing always costs money. And as long as the earnings will be higher than those costs of growth a company remains in healthy conditions.

Bank loans are less easily obtained by a private business compared to a private limited liability company or to a corporation, one reason among others being the vulnerability of a business depending on the health of its only owner.

A corporation, however, represents a legal entity, a subject of rights and obligations like human beings. The corporation, contrary to a private entrepreneur, cannot die. It can go bankrupt without hurting its owners privately. When a founder dies, he will be succeeded by another managing director. So, anyone intending to start a business of his own would act wisely to start a private corporation based on **share capital**.

A corporation must file so called **Articles of Incorporation** which must contain several specific articles, e.g. how high the share capital will be at start up (= **Authorized Shares**) and which **nominal or par value** each of these shares will have ($ 10.00, $50.00, $100.00 or $ 1 000 each). Also it should be illustrated in the Articles of Incorporation if only common stock will be issued or also **preferred stock.**

Preferred stock may rend the owner stronger or exclusive voting rights on important issues or it may indicate that there is a stronger position in receiving dividends.

Once shares have been sold to the founders of the private corporation we will see a figure appearing on the credit side of its balance sheet, so on the right side of the T-vertical, under the name: (Stockholders') **Equity**. It heads all other sources of finance on the right side of the balance sheet. On the asset side the money received for the shares by the company is reported under "cash". Clark in our example may well have issued common stock to himself in the order of $560 000.

On the liability side (credit side) of a balance sheet we see two distinct financial sources for the financing of the assets: stockholders' equity and liabilities, the latter split up in two: **current liabilities and long term liabilities.** The most important difference between the two is that current assets must be paid back within one year. The long term liabilities are allowed from two to thirty years. The difference with equity is that **stockholders' equity will never have to be paid back** and remains at the disposal of the corporation indefinitely, whereas all of the liabilities will have to be paid back sooner or later.

BALANCE SHEET	
FIXED ASSETS	**EQUITY** COMMON STOCK
CURRENT ASSETS	**LIABILITIES:** LONG TERM LIABILITIES CURRENT LIABILITIES

The long term liabilities may consist of a mortgage loan only, or also of loans granted for more than 2 years. The current liabilities mostly consist of money due to suppliers, but also of tax to be paid within one year, of repair jobs carried out and not yet paid, etc. Changes in the long term liabilities mostly will show a regular pattern over the years because of paid back instalments of equal annual amounts. Current liabilities will show a much more dynamic pattern, coinciding with the flow of the business.

Now we would like to know what changes may occur in the stockholders' equity during the business life of a corporation.

In the first place the figure on the balance sheet under stockholders' equity may change when additional shares are issued to the existing shareholders or, with their consent, to outsiders.

In the second place the value on the balance sheet will rise as soon as **profits are retained** by the corporation. This is called **"retained earnings".** It is obvious that shareholders having taken the risk to invest in a newly created corporation, will be entitled to these retained earnings since they are the exclusive owners of the corporation. Exception is made to that portion of the net earnings that **must be retained** by the company according to its Articles of Incorporation or to local legislation.

So, on the balance sheet we can distinguish two portions of equity belonging to the owners: **common stock plus retained earnings.** The figure on the balance sheet for common stock **shall not change unless there is a change in the number of shares issued.** So, every addition to equity other than newly issued shares, must be recorded under a different name.

Let us look at a simple example

Mike, having established his own private corporation has issued 1 000 shares of a nominal value of $ 100. On the balance sheet we will see:

BALANCE SHEET			
CURRENT ASSETS		**EQUITY**	
Cash	$ 100 000	Stockholders' equity	$ 100 000

The corporation now shows a **cash figure as its only (current) asset,** financed by equity.

Mike purchases 50 laptops at a price of $ 400 each and pays them in cash. His balance sheet would now show the following:

BALANCE SHEET			
CURRENT ASSETS		**EQUITY**	
Inventory	$ 20 000	Stockholders' equity	$ 100 000
Cash	- 80 000		
Total assets	**$ 100 000**	**Total equity**	**$ 100 000**

Nothing changed in the equity. The **one current asset was used to buy another current asset.**

Mike sells 40 of the laptops at a sales price of $ 580 and receives payment in cash.

BALANCE SHEET			
CURRENT ASSETS		**EQUITY**	
Inventory	$ 4 000	Stockholders' equity	$ 100 000
Cash	- 103 200	Retained earnings	- 7 200
Total assets	**$ 107 200**	**Total equity**	**$ 107 200**

We note several changes and details:

1. Stockholders' equity remained at its **original (nominal) value**, because no change took place in the number of shares issued.

2. The inventory level decreased at purchase price value for the 40 pieces sold. Inventory always appears on a balance sheet at purchase price or at its variable costs (material cost), whichever is higher. (Cost prices: see chapters 8 and 9).

3. The generated total sales of $ 23 200 were added to the $ 80 000 available in cash.

4. A **profit** was made which **is the property of the owner.** Shareholder Mike booked under retained earnings 40 X ($ 580 - $ 400) = $ 7 200.

5. There now is an **equity value** per share which is higher than the nominal, or par, value of $ 100. This current value of $ 107.20 is 7%+ compared to the **nominal value.**

6. The book value of the company increased from $ 100 000 to $ 107 200.

Intermezzo

Retained earnings are a common term in BE for recording generated earnings. That raises the question: how to record if a corporation incurred a loss in its first year? Imagine Tom who started his business and who purchased an industrial building for$ 420 000 and put up $ 500 000 in equity. Before he can start operations he is knocked down by a mean virus which keeps him in a hospital for 12 months. There was depreciation of the building in that first year of $420 000: 30 = $ 14 000. And since no turnover was generated nor other corporate expenses incurred there is an operating loss of that amount. How to record this?

On the balance sheet the best way to account for this loss is as follows:

BALANCE SHEET			
Fixed assets depreciation	$ 420 000 - 14 000	Shareholders' equity Operating loss	$ 500 000 - 14 000
Total fixed assets Current assets	$ 406 000 - 80 000	Total equity	$ 486 000
Total assets	**$ 486 000**	**Total capital**	**$ 486 000**

Note that the depreciation did not lead to a payment; it only indicates a decrease in value. Hence, there was no cash flow involved. Instead of "retained earnings" we see a **negative reserve** under equity.

End of intermezzo

Let us go back to Mike's balance sheet showing a total of $ 107 200.

What would have to be recorded if Mike would be in need of a second shareholder in order to strengthen the corporation's equity? Suppose his friend Carl would be interested to join forces. What would Carl have to pay for shares issued to him: $ 100 or $ 107.20?

It is obvious that the retained earnings increased the equity and it would be perfectly normal that Carl will have to pay $ 107.20 per share. Let us assume that Carl buys 200 shares at the price of $ 107.20. How will this transaction have to appear on the balance sheet?

In most countries and states law prescribes that the figure for common **stock on a balance sheet represents the nominal, or par, value of the shares.** In this case $100 each.

The excess amount paid will have to be booked under shareholders' equity but with a different name**: "additional paid-in capital" or "APIC".** This way of phrasing may vary by country. In The Netherlands the term "Agio reserve" is used. Other countries may use the term "share (issue) premium", or "paid-in surplus". Let us hope the global

financial world will develop a uniform term everybody can understand for this purpose. In this book we will use the short term APIC.

In Derek's case the transaction will be booked the American way:

BALANCE SHEET			
Cash	+ $ 21 440	common stock APIC	+ $ 20 000 - 1 440
increase assets	+ $ 21 440	increase equity total	+ $ 21 440

We now have seen how equity can comprise 1. share capital + 2. retained earnings + 3. APIC. The three terms and their amounts in dollars represent the ownership by the shareholders.

Is that all?

No. There is one more situation where equity can rise without any share being issued. Let us look at a business where the ratio equity – liabilities on the balance sheet is so delicate that no liability can be added without violation of its bank's condition of 35 : 65 for the ratio equity : liabilities.

If this situation occurs, when no earnings can be reported yet, the business may find one more option to satisfy the bank: **the revaluation reserve**

It works as follows: on the balance sheet of the company the building, bought 5 years ago for $ 300 000 with a depreciation period of 30 years is reported for the amount of the depreciated value of $ 250000. A registered appraiser requested by the business to reappraise the market value of the building certifies that market value is $ 425 000. There is a positive difference of $ 175 000. The business now can report on its balance sheet:

BALANCE SHEET			
ASSETS		EQUITY	
Building	+ $ 175 000	Common stock	$ 210 000
all other assets	- 600 000	Revaluation reserve	- 175 000
		Shareholders' equity	$ 385 000
		Total liabilities	- 390 000
ASSETS TOTAL	$ 775 000	CAPITAL TOTAL	$ 775 000

The difference between book value and market value is **made visible on the balance sheet.** The original amount for assets of $ 600 000 grows by $ 175 000.

This reserve becomes the fourth possible part of shareholders' equity. The amount of $175 000 raises equity substantially and with that it changes the equity-liability ratio in a very positive way by which the bank will be very pleased. Equity now finances 49.68% of all of the assets which is distinctly higher than the required 35%.

What it does NOT do is that earnings or income will go up. There is no cash involved! Like no cash flow occurs at the moment of depreciation so is the case after a revaluation of a building. What it does: **it restores borrowing capacity**. We can draw conclusions:

The limit of liabilities was raised by the revaluation. Equity now is $ 385 000. Since this must be at least 35% of the total balance this total balance can grow to ($385 000 : 35) X 100 = $ 1 100 000. The company can invest $ 325 000 in assets additionally and have all of these assets financed by liabilities without violating the 35-65 limits demanded by its bank: total assets would be $1 100 000 and equity represents ($ 385 000: $ 1 100 000) X 100 = 35%.

On the balance sheet we can also see that the original amount of equity of $210 000 financed 35% exactly of all of the assets at their starting value of $600 000.

The increased shareholders' equity of $ 385 000 allows an increase in assets of $325 000 up to a total of $ 1 100 000 and still equity will not come below the required 35% of the total assets: ($ 385 000: 35) X 100 = $ 1 100 000.

When so requested, the bank will be very willing to extend additional loans to this business.

After this reappraisal the business can opt to increase the annual depreciation figure for the very same building on the Profit & Loss Statement as an operating cost, thus lowering net earnings but also lowering its tax liability.

In summary

The credit side of a balance sheet contains all of the financial resources for the financing of all of the assets. The total of dollars of these sources is called CAPITAL. Those sources are divided in categories:

Shareholders equity = A Common Stock at par value

B Retained earnings

C APIC (Additional Paid-In Capital

D Revaluation reserve

2. Liabilities

a: Long term liabilities

b: current liabilities.

(see following paragraph 2.2)

For a successful corporation who reported solid net earnings for the past years its success caused the total figure of equity to rise. That is very positive. There can be a disadvantage, however.

Let us look at the following balance sheet:

BALANCE SHEET			
FIXED ASSETS	$ 600 000	EQUITY	
CURRENT ASSETS	- 250 000	Common stock	$ 250 000
		Retained Earnings	- 400 000
		TOTAL EQUITY	$ 650 000
		LIABILITIES	- 200 000
TOTAL ASSETS	$ 850 000	TOTAL CAPITAL	$ 850 000

We assume that par value of the shares is $ 1 000 per share. What is the **actual (=intrinsic) value per share now?** Total equity amounts to $ 650 000. This is $650 000 : 250 = $ 2 600 per share.

Suppose that shareholders received dividends of $ 200 per share during the past 4 years. That is a formidable return on their invested $ 1 000 of 20%!

Now, suppose that the corporation would have a rare opportunity to buy a competing company but could only accomplish this by attracting more share capital? If it requires an additional quantity of 400 newly issued shares from the **authorized capital**, what would new shareholders have to pay for one share?

Would these new shareholders be offered shares at $ 1 000? Or at $ 2 600? The latter amount would be much more likely. Existing shareholders who are the owners of total equity would not allow the board to issue shares to new shareholders at the same $ 1 000 price they paid at the start. First of all, these newcomers had not been exposed to all kinds of risks and should not be entitled to pay the lowest price. And, secondly: once a new shareholder enters the existing group of shareholders this new shareholder becomes **co-owner of the total equity**, thus lowering the value of the proportionate part for the existing shareholders. But then the question is: would shareholder candidates hastily accept the offer at $ 2 600 for each share they like **to invest in**?

Let us see how **their return** would look if dividend payments would, again, be $ 200. If they would pay $ 2 600 per share their return would be ($ 200: $ 2 600) X 100 = 7.7% These candidates might find better investment opportunities easily. The corporation might not sell one share!

Most corporations are aware of this negative chance. They would not issue new shares before they would have brought down the equity value of the existing shares to a more attractive level. How can a corporation do that?

Given the fact that shareholders are proportionate owners of the amount of shares plus equity **the corporation may issue free shares = BONUS SHARES to the existing shareholders**, if these agree to the proposition during a general meeting of shareholders, required to decide on such an important proposition. The corporation might propose to issue 350 bonus shares to be given to the existing shareholders in proportion to their existing number of shares. If the general meeting agrees and the bonus shares will have been distributed the balance sheet would look as follows:

BALANCE SHEET			
FIXED ASSETS	$ 600 000	EQUITY	
CURRENT ASSETS	- 250 000	Common stock	$ 250 000
		+ Bonus shares	- 350 000
		Retained earnings	- 50 000
		TOTAL EQUITY	$ 650 000
		LIABILITIES	- 200 000
TOTAL ASSETS	$ 850 000	TOTAL CAPITAL	$ 850 000

We can see that the balance total equals the earlier balance sheet above. But we also see that the number of shares now totals 600 and that the intrinsic value per share decreased to $ 650 000: 600 = $ 1 083.33. At this price it would be much more likely that new

shareholders can be convinced that the offer of $ 1 083.33 would promise them an attractive return when dividends are paid of $ 200 per share: ($ 200: $ 1 083.33) X 100 = 18.46%

Summarizing: **all parts of the equity are eligible to be transformed into common (bonus) shares at any time**. It would be a logical step if the current value of the common stock is too high to tempt new shareholders to buy stock.

One last observation: a corporation considering selling all of the outstanding shares to a new owner would act wisely to assess if there is any hidden reserve among its assets, e.g. increased market value of an industrial building, before extending a buy-out offer. Try to find the reason for this.

EXERCISES OF CHAPTER 2.1: EQUITY

1.1. Jack and his wife Anna each own 50 shares of $ 1 000 par value. They decide to increase the number of outstanding shares again after one year by purchasing 25 additional shares each against payment in cash. Report the consequent changes in the balance sheet by + or – per balance item.

a. cash + $ 25 000 and equity + $ 25 000

b. cash + $ 50 000 and mortgage loan + $ 50 000

c. cash + $ 50 000 and common stock + $ 50 000

1.2. After three years Jack and Anna, together the owners of 150 shares at $ 1 000 par value decide to invite Jack's brother Hank to join them as a shareholder. But because of retained earnings accrued over the past years the total equity now amounts to $ 177 000. Hank is prepared to pay the book value per share and buys 20 shares, newly issued by the corporation.

Report the changes to the balance sheet by using + and -.

a. Cash + $ 23 600, common share capital + $ 23 600

b. Cash + $ 23 600, common share capital + $ 20 000, APIC $ 3 600

c. Cash + $ 23 600, common share capital + $ 20 000, retained earnings $3 600.

2. Gordon founded his corporation in which he invested $ 240 000 for 240 shares. One month after his start-up he was hit by a tropical virus that kept him in hospital for a full year. The corporation had purchased an industrial building of $ 210 000 with the cash it received when Gordon paid for his shares. The building will be depreciated to $0 in 30 years.

Adjust the balance sheet after this first unlucky year by using + and – per item.

a. Fixed assets - $ 7 000 and under equity: operating loss - $ 7 000

b. Fixed assets - $ 7 000 and retained earnings - $ 7 000

c. Fixed assets - $ 7 000 and revaluation reserve - $ 7 000

3. Gordon from exercise 2 recovered fully and is very satisfied with accrued net earnings after five years of operation. He now has the ambition to buy out a competing corporation and needs a long term loan from the bank for that purpose. Before talking to his bank he decides to correct the total value of fixed assets on the balance sheet by having the building reappraised. This building after five years of depreciation proves to have a market value of exactly $ 300 000. What are the changes to be made in his balance sheet? Use + and – again per item to be changed.

a. fixed assets + $ 90 000, retained earnings + $ 90 000

b. fixed assets + $ 125 000, revaluation reserve + $ 125 000

c. fixed assets + $ 125 000, retained earnings + $ 125 000

4. The corporation Cyber Mate shows 60 common shares of $ 1 000 par value on its balance sheet. Under equity the balance sheet shows retained earnings of $120 000 and a reappraisal reserve of $ 60 000.

4.1. What is the exact total equity of Cyber Mate?

a. $ 200 000

b. $ 220 000

c. $ 240 000

4.2. What is the intrinsic value per share now?

a. $ 1 000

b. $ 4 000

c. $ 3 000

5. Cyber Mate corp. has the ambition to buy out a large competitor. It decides to have the industrial building with a **book value** of $ 240 000 reappraised in order to sell and lease it back from the buyer. The market value after appraisal is $ 600 000 and the buyer pays that sum in cash. Report the consequential changes on the balance sheet by + and –

a. fixed assets - $ 600 000, cash + $ 600 000

b. fixed assets + $ 360 000, reappraisal reserve + 240 000; fixed assets - $ 600 000 and cash + $ 600 000

c. fixed assets +$ 360 000, reappraisal reserve +$ 360 000; fixed assets - $600 000 and cash + $ 600 000

6. Geoffrey decides to start his own retail shop where he intends to sell iPads and notebooks. He made a list of assets he will need: a store in Charleston of $350 000, store fixings of $ 85 000, storage racks of $ 10 000 and warehouse inventory $110 000. Suppliers, Samsung and Apple, grant a payment term of 60 days on their supplies, the bank will grant a mortgage loan of 100% of the building at 5% interest and a credit on current account up to an amount of 60% of total inventory at 15% interest.

Prepare Geoffrey's investment budget and financing plan. Show which amounts for fixed assets and which amount for current assets are involved. Record the financing resources in descending order of costs involved and show how much private capital Geoffrey will have to put in if the bank requires that private capital must finance 40% at least of all of the assets.

a. INVESTMENT BUDGET		FINANCING PLAN	
Fixed assets	$ 350 000	Credit by suppliers	$ 90 000
Current assets	- 205 000	Mortgage loan	- 350 000
Total assets	$ 555 000	Agreed Financing	$ 440 000
		Equity needed	- 115 000
			$ 555 000

b. INVESTMENT BUDGET		FINANCING PLAN	
Fixed assets	$ 445 000	Credit by suppliers	$ 110 000
Current assets	- 110 000	Mortgage loan	- 350 000
Total assets	$ 555 000	Agreed Financing	$ 440 000
		Equity needed	- 95 000
		Total financing	$ 555 000

c. INVESTMENT BUDGET		FINANCING PLAN	
Fixed assets	$ 445 000	Financing need	$ 555 000
Current assets	- 110 000	Credit by suppliers	$ 110 000
		Equity 40%	- 222 000
Total assets	$ 555 000	Available finance	$ 332 000
		Still needed finance	$ 223 000
		Mortgage loan	- 223 000
Total assets	$ 555 000	finance complete	$ 0

7. A large corporation in medical equipment, Global Pharma, shows the following depreciations among its operating costs: building: -$ 15 000, warehouse equipment -$10 000. Also Global Pharma reports net earnings after tax of $80 000. Remember: depreciation does not create a cash outflow!

7.1. What was Global Pharma 's cash flow

a. $ 110 000

b. $ 105 000

c. $ 90 000

7.2. Apply the changes from 7.1 by + and - to the balance sheet

a. Retained earnings will increase by + $ 80 000, cash will increase by $ 80 000 - $25 000 = + $ 55 000

b. Building will decrease by - $ 15 000, warehouse equipment by - $ 10 000 and retained earnings will increase by + $ 80 000 - $ 25 000 = + $ 55 000

c. Cash will increase by net earnings + depreciations = + $ 105 000, building will decrease by - $ 15 000 and warehouse equipment by -$ 10 000, retained earnings will increase by + $ 80 000

8. Ex-barber Bing of 62 years intends to open up his own wholesale company in barbers' tools and lotions. He found a suitable warehouse of $ 180 000 where he needs storage racks to a total of $ 18 000. Office furniture will cost him $ 8 000 and two computers will cost $ 4 000 in total. He considers starting with an inventory of tools of $ 60 000 and of lotions of $ 25 000. His savings amount to $125 000. Consultation with his bank revealed that he can obtain a mortgage loan of 75% of the purchase price of the building against annual interest of 4.5% and a five year loan of 60% of the purchase price of the other fixed assets against an interest rate of 7%. Finally there is room for a credit on his current account to a maximum of $ 20 000 at an interest rate of 15%. The suppliers demand cash payment of their respective shipments of tools and lotions. The bank requires that equity will finance at least 40% of all of the assets. Bing accepts all of the conditions but firmly intends not to make use of the most costly credit. If necessary he would rather reduce the purchase of tools and lotions proportionately.

Prepare Bing 's investment plan and his financing plan and show how much less in proportion of the tools and the lotions he must purchase in order not to make use of the expensive credit

a. From the total investment in fixed assets of $ 210 000 he can count on mortgage of $135 000 and a 5-year loan of $ 18 000. He has room to spend $ 57 000 for inventory of tools and lotions which sum accounts for 76% of current assets. Tools maximum will be $45 600 and lotions $ 11 400

b. INVESTMENT PLAN		FINANCING RESOURCES	
Fixed assets building	$ 180 000	75% financed by mortgage	$ 135 000
		+ equity use =	$ 45 000
racks	$ 18 000	of which 60% financed by	
furniture	$ 8 000	5-year loan =	$ 18 000
computers	$ 4 000	+ equity =	$12 000
		equity shows a balance of	$ 125 000
		less	- 57 000
Fixed assets:	$ 210 000	BALANCE =	$ 68 000

BALANCE = $ 68 000 to be used for investing in current assets of tools and lotions = 80% of intended total of $ 85 000 > he can afford 80% of $ 60 000 for tools = $ 48 000 and 80% of $ 25 000 for the lotions = $ 20 000, totaling $ 68 000.

Tools	$ 48 000	Total investment	$ 278 000
lotions	- 20 000	financed by equity	$ 125 000
		mortgage loan	$ 135 000
Current assets	$ 68 000	long term loan	$ 18 000
Total assets	$ 278 000		$ 278 000

c $ 125 000 accounts for 43.86% of the total investment. Consequently 56.14% will have to be financed by outside sources = $ 285 000.

Mortgage will be $ 135 000 and the 5-year loan will be $ 19 500, totaling $ 154 500. Add his equity of $ 125 000 = $279 500. There is room for tools and lotions of $ 285 000 - $ 279 500 = $ 5 500 which is 7.33%. He can afford tools for $ 60 000 X 7.33% = $ 4 398 and lotions of $1 102

9. We see the following BALANCE SHEET

Building	$ 280 000	Common share capital	$ 150 000
Storage racks	- 95 000	Retained earnings	- 88 000
Office furniture	- 110 000		
Equipment	- 60 000		
FIXED ASSETS	**$ 545 000**	**EQUITY**	**$ 238 000**
Inventory	75 000	Mortgage loan 5%	$ 257 000
Accounts receiv.	- 35 000	long term loan 8%	- 120 000
Cash	- 20 000	**LONG TERM LIABILITIES**	**$ 377 000**
CURRENT ASSETS	$ 130 000	Creditors	- 60 000
		CURRENT LIABILITIES	$ 60 000
TOTAL BALANCE	**$ 675 000**	**TOTAL BALANCE**	**$ 675 000**

This balance sheet represents the Thompson corp. The bank's demand is that equity must finance at least 40% of all of the assets at all times. Thompson is facing a dilemma. They could sell $ 60 000 from their inventory of electronic devices to a Taiwanese client in one shipment on which sale they can make a nice profit of 40% However, the client will only confirm their interest if Thompson accepts 6 months' of payment for this special deal. Because of the strict demands by the bank and a too large increase in accounts receivable Thompson considers two options: enlarge the number of shares by attracting an outside shareholder or have the building **reappraised**, hoping there will be excess value. He prefers the latter. The official reappraisal report shows a market value of $ 430 000. Thompson makes the appropriate adjustments in his balance sheet based on a reappraisal

9.1. Make the proper adjustments in the balance sheet by + and/or -

a. Assets: Building + $ 150 000, Equity: retained earnings + $ 150 000

b. Assets: Building + $ 430 000. Equity: revaluation reserve + $ 430 000

c. Assets: Building + $ 150 000, Equity: revaluation reserve + $ 150 000

9.2. What is the intrinsic value per share now if there are 150 shares?

a. Equity grows by $ 430 000 to $ 668 000: 150 = $ 4 453.33

b. Equity was $ 238 000 and grows to $ 388 000 after the revaluation.

Value per share is $ 388 000: 150 = $ 2 586.67

c. Value per share will be $ 3 453.33

9.3. With which amount can assets and financing resources grow now in view of the bank's demand?

a. Equity now amounts to $ 238 000 + $ 150 000 =$ 388 000. Assets grew to $675 000 + $ 150 000 = $ 825 000. Equity now is 47% of all assets. These now have a new limit of ($ 388 000: 40) X 100 = $ 970 000 leaving room of $ 145 000 for new investments.

b. Equity of $ 668 000 allows additional borrowings of $ 430 000

c. Equity of $ 388 000 allows $ 646 667 in assets. This is $ 408 667 higher

2.2 LIABILITIES

Every starting company must prove to have sufficient private capital to invest if it wants to count on outside financial resources. We saw earlier that banks can demand that private equity finances 35% - 45% of all of the assets. And we also saw **that all of the liabilities must be paid back sooner or later.**

What types of liabilities do we see on most balance sheets?

Mortgage loan

Long term credit

Creditors

Credit on current account

Sometimes: Bonds

It could look like this on a BALANCE SHEET

FIXED ASSETS Building Equipment Fixtures Furniture	**EQUITY** Common Share capital Retained Earnings Additional paid-in capital Revaluation reserve
CURRENT ASSETS inventory of products accounts receivable cash	**LONG TERM LIABILITIES** Mortgage loan 5% Long term loan 8%
	CURRENT LIABILITIES creditors current account credit line 15%

Let us explore the liabilities.

1. Mortgage Loan

Mostly, such a loan is granted for a maximum of 30 years. Interest can either be fixed for that period or can be adjusted from time to time, depending on the contractual conditions. From all of the loans mortgage loans require the lowest of actual interest rates.

The contract can stipulate periodic pay-back instalments or it waves pay back during the contract period. And, subject to agreement between bank and client, interest and pay back can be combined in one fixed instalment per year which comprises both interest and pay back. The proportion between the two changes over time: in the beginning the interest portion is high and pay back portion is low; in the course of the years this proportion changes such that the pay back portion will be higher and higher, so that the full amount of the loan will have been paid back at the end of the contract period.

Second and third mortgages can be granted on the same fixed asset, depending on the growing market value.

If the debtor discontinues his payment obligations the creditor will have the right of foreclosure, meaning that the creditor will have the right to have the fixed asset auctioned. In most countries this takes place by a notary public.

2. Long term loan

While a mortgage can be granted on built property or territory other fixed assets, such as equipment, office furniture and office machines qualify for financing by long term loans. Mostly the term is limited to five years and banks require pay back installments on an annual basis. The reason behind this lies in the **decrease in value** over time of all of these assets.

The interest rate is always higher than the rate for a mortgage for the same reason. Sometimes the creditor requires the respective asset to be pledged by contract. It remains in use at the debtor as long as he fills his contractual obligations. Should he discontinue his payment obligations than the creditor can demand the asset to be removed from the debtor's

premises in order to be sold at an auction. The right of the creditor remains strong even when the debtor goes bankrupt.

Many countries know **Personal Loans** especially for starters of a new business. It can be granted if the business plan was approved by the creditor. And in some countries the state warrants the pay back of the loan to a certain degree. This happens when a state decides to encourage individuals to start their own business. Mostly, long term loans are for a maximum of five years with annual pay back installments.

3. Creditors

This term covers all of the parties entitled to payments by a company other than creditors having allowed long term loans. Mostly, payment terms are relatively short: 1-3 months.

Most of the times they are suppliers to a company, but also tax authorities can be listed under this term. And also a bank entitled to periodic payments within a year, such as interest and installments are considered creditors.

A creditor who is not yet familiar with a buying company can stipulate **to retain ownership** of the goods delivered until full payment will have taken place.

In a “buying market”, where every supplier undergoes decrease in sales and in earnings the buyer has the opportunity to select the supplier with a) the longest payment term and b) the highest discounts. Every dollar saved this way is a dollar that the buyer does not have to borrow from his bank.

4. Credit on current account

This is a continuing credit limit allowed by a bank on the current account of the client. The client uses the account to make and to receive payments practically on a daily basis and can make use of the credit within the agreed limits.

Interest rates are very high: up to 15% - 18% on an annual basis. The credit is used mostly for the financing of current assets.

Also under such a credit agreement a bank may require securities in the form of collateral of accounts receivable or of inventory of goods to be sold. As long as the debtor fills his payment obligations and remains within the allowed credit limit nothing will happen. Once he skips payments too frequently the bank can take ownership of receivables or can require the goods to be removed from debtor's premises in order to be sold at an auction.

5. (Bearer) Bonds

A bond is a paper, the bearer of which is entitled to what the bond pledges. In general the bond states that it owes a certain amount of money to the bearer which the issuing organization promises to pay back in a specific calendar year and –month. Also it pledges to pay interest to the bearer annually at a fixed rate, expressed in the bond. Most of the times this interest can be collected at a number of banks specified in the bond.

States and larger hospitals but also large international companies issue bonds to gather financing. Companies make bonds convertible occasionally: the bearer is granted the option to be either paid back in full or to convert the bond into shares of the issuing organization.

Starting companies would act very unwisely to issue bonds to the citizens. No one knows the company and neither deserves such company to be trusted in its starting phase.

Trade in bonds constitutes a very large market for investors, especially in times when dividends are low or even scarce. We will not deal with bonds in this book.

Looking at the liabilities we realize that all types of loans charge interest, which will appear on the Profit & Loss statement (also: financial statement) after the operating result. (See chapter 4). **Even and may be foremost the fastest growing companies are subject of growing interest costs. The reason is that growing may generate earnings, but it also forces levels of inventory and of accounts receivable upward. This happens in those companies where lack of sufficient cash forces them to increase loans or their credit in current account.**

Conservative leaders retain as much of the earnings in the company, especially in the growing stages.

Let us pick up the information of Clark again and see how the financing worked out.

We know that his bank was prepared to grant a loan for the purchase of the building of 100% based on a mortgage and that the suppliers of his inventory granted a term of payment of 60 days. Finally, we saw which interest rates applied in Clark's case: his mortgage requires 5%, and the 5-years' loan 8% and a credit limit on his current account as allowed by his bank would cost him 14% per year for every $ 1 borrowed. Notice that **the financing sources best be ranked from "cheap" to "high interest costs".**

This was Clark's financing plan:

FIXED ASSETS TOTAL		**FINANCING NEED**	**$ 1 460 000**
- building	$ 628 500	suppliers' payment term	- 200 000
- rack system	- 95 000	still to be financed	$ 1 260 000
- tooling workshop	- 8 500	private equity	- 560 000
- forklift truck	- 80 000	still to be financed	$ 700 000
- computers + software	- 18 000	mortgage loan 5%	- 628 500
- 2 trucks	- 380 000	still to be financed	$ 71 500
Total fixed assets	**$ 1 210 000**	5 years' bank loan 8%	- 71 500
			$ 0
CURRENT ASSETS			
- inventory	- 200 000		
- liquidity	- 50 000	CLARK'S **TOTAL CAPITAL** IS	
Total current assets	**$ 250 000**		$ 1 460 000

SUMMARY OF FINANCIAL RESOURCES
STOCKHOLDERS' EQUITY $ 560 000
LONG TERM LIABILITIES*- 700 000 * = mortgage and long term loan
CURRENT LIABILITIES* - 200 000 * = suppliers and current account credit
TOTAL FINANCING $ 1 460 000

As we saw in chapter 1 the bank demands that 35% of all assets are financed by equity. In Clark's case his equity represents 38.356% of all of

the assets. He may have made a wise choice not to stretch his liabilities too far. His equity allows a limit to a total level of assets of ($ 560 000: 35) X 100 = $ 1 600 000. Clark still would have room for additional investments of $ 1.600 000 - $ 1 460 000 = $ 140 000 and then, still would meet the bank's demand that 35% of all of the assets be financed by equity: $ 560 000 is exactly 35% of $ 1 600 000.

The good news for Clark is that this additional space allows for an increase of inventory and accounts receivable in his growing phase. This is not unimportant to note. Overstretching of borrowing capacity right from the start might have brought Clark's business under pressure from the side of his bank.

For this reason quite a number of starters of a new business may afford to buy an industrial building but prefer to start leasing this until there are sufficient retained earnings which will then serve them as a buffer.

The **credit on current account represents a Trojan horse** for many companies where inventory and accounts receivable increase constantly. We know: every growth in assets, booked on the balance sheet, leads to the question how this growth was financed. There may be revenues, but as long as these insufficiently help equity to grow proportionally a bank may take drastic steps. One of these might be to terminate the credit in current account instantly. Every bank reserves the right to put an immediate end to this type of financing. It takes place by a summon from the bank to bring back the balance of this credit to the agreed maximum level within two weeks. If that does not happen it means the end of the company. Bankruptcy will follow shortly thereafter.

The **two financing resources which do not generate operating costs are equity and creditors**. Obtaining longer payment terms from suppliers is a common effort by many companies for exactly this reason. Also Clark succeeded in obtaining payment terms of 60 days which allows sales to get started and to generate a growing income and growing retained earnings before he has to pay the bills of his suppliers.

Suppliers on their part also look for advantages and security. They cannot control what is happening to their clients. One of the

instruments they use frequently is to offer a cash discount if the client pays in cash for a shipment. The other instrument they use is **retention of ownership** which can be found in the general conditions of sale most of the times. The advantage for these suppliers is that, if they prove that the retention clause applies, they can retrieve the goods delivered as their property even in bankruptcy situations.

EXERCISES OF CHAPTER 2.2

LIABILITIES

1. Starter Vincent is preparing to start his own business in medical supplies. He saved $225 000 and is not sure yet if this will be sufficient to meet the bank's demand that 40% of the assets be financed by equity. His investment plan shows a warehouse building with two offices and a warehouse for the price of $ 300 000. There also is a warehouse for rent at an annual lease price of $ 38 000. He also needs packing and assembly equipment for $240 000. Racking and furniture plus printers and computers will cost $ 40 000. At start-up he wants to have inventory of goods to be assembled for $ 30 000 and he wants available cash of $ 10 000. His bank agrees to a mortgage loan of 90% of the purchase price of the building at 5% interest, a long term loan for five years of $ 220 000 at 8.5% and a credit on current account with a limit of $ 25 000 at 14%. Suppliers are prepared to grant payment terms of 60 days during his first year.

1.1 Prepare Vincent's investment plan and indicate the sources of finance with the proper amount in dollars per asset. Draw the conclusion if Vincent can afford the purchase of the building

a. Assets		**financing sources**			
Fixed assets		mortgage loan			
Building	$ 300 000		$ 165 000	equity	$ 155 000
Equipment	- 240 000	5-year loan	- 210 000	equity	- 20 000
furniture etc	- 40 000			equity	- 40 000
inventory	- 30 000			suppliers	- 30 000
cash	- 10 000			equity	- 10 000
	= $ 620 000		**= $ 375 000**		**+ $ 255 000**

b. Assets		**financing sources**			
Building	300 000	mortgage loan		equity	$ 30 000
equipment	- 240 000		$ 270 000	equity	- 145 000
furniture etc	- 40 000	5-year loan	- 95 000	equity	- 40 000
inventory	- 30 000			suppliers	- 30 000
cash	- 10 000			equity	- 10 000
Investment total					
	$ 620 000	**Liabilities**	**$ 365 000**	**+ equity**	**$ 225 000**

$ 225 000 is 36% of all assets against the bank's demand.

c. With ownership of a building all of the assets would amount to $ 620 000 and equity represents 36.35% in that case. So, Vincent should lease the building:

Assets		**financing sources**			
Building	$ 0	5-year loan	$ 65 000	equity	$ 175 000
equipment	- 240 000			equity	- 40 000
furniture etc.	- 40 000			suppliers	- 30 000
inventory	- 30 000			equity	- 10 000
cash	- 10 000				
Assets	**$ 320 000**		**$ 65 000**		**$ 255 000**

Sound financing: equity $ 225 000, suppliers $ 30 000 and long term loan $ 65 000

1.2. How much too low is equity in view of the bank's condition of 40% when building is purchased?

a. 40% of $ 620 000 is $ 248 000. Equity falls short by $ 23 000

b. Vincent's equity should be $ 240 000. He needs an additional $ 15 000

c. Investment is $ 610 000. 40% is $ 244 000. A shortage of $ 19 000

2. Vincent negotiates with another bank before picking one of two options: either a bank is found who agrees to a lower portion of equity or Vincent will have to lease a building. He finds a new bank who agrees to a minimum of 35% equity, a mortgage of 100% of the price of the building at only 4% and a full long term loan at 7.5%.

2.1. How does his financing plan look now?

a. Vincent needs $ 620 000 in assets. He must take the mortgage of $ 300 000 and $ 120 000 of the long term loan His equity is sufficient to finance half of his equipment and all of the furniture = $ 160 000. He pays all of the inventory and still will have $ 35 000 as starting cash balance.

b. The best choice is to take the mortgage of $ 300 000 and the payment term of the suppliers of $ 30 000 and invest $ 100 000 of his equity in equipment and $ 40 000 in his furniture. The best way to assure sufficient cash of $ 85 000.

c. Assets	**financing sources**	
Fixed assets Building $ 300 000 Equipment - 240 000 furniture etc. - 40 000 inventory - 30 000 cash - 10 000	mortgage loan $ 300 000 5-year loan - 65 000 Suppliers 30 000	Equity $ 175 000 equity - 40 000 equity - 10 000
$ 620 000	**= $ 395 000**	**+ $ 225 000**

The most economical choice is to use as much equity for equipment to save the higher interest rates of a long term loan.

2.2. What will be the ratio of equity: liabilities after the most economical choice?

a. Equity versus liabilities will be 35: 65

b Equity finances 36.29 of the assets, liabilities 63.71%. Ratio = 36.3 : 63.7 .

c Equity : liabilities ratio will be 33 : 67

2.3. How much interest will Vincent have to pay in his first year without any pay back?

a. 4% of $ 300 000 and 7.5% of $ 240 000 = $ 12 000 + $18 000 = $ 30 000

b. 4% of $ 300 000 and 7.5% of $ 120 000 = $ 12 000 + $ 9 000 = $ 21 000

c. provided Vincent uses a large portion of his equity ($ 175 000) for equipment his mortgage will cost 4% of $ 300 000 = $ 12 000 and long term loan 7.5% of $ 65 000 = $ 4 875. Total interest first year: $ 16 875.

3. Michael operates a franchise store of “Pets animal feed”. On his year-end balance sheet inventory of animals feed packs is shown at

purchase price value of $ 30 000. His annual sales were reported to have been $ 120 000 at a purchase value of $ 90 000. His annual sales are equally divided over the 12 months' period = **50 weeks**. His supplier can deliver within one week. A two weeks of inventory would be a good choice. All of his clients order by phone and their order is delivered the same day. They have to pay their bill within half a month. On the balance sheet accounts receivable are $ 40 000.

Both his inventory and his accounts receivable are financed by a credit on current account at an annual interest rate of 16%

3.1. For how many months of sale will Pets inventory last

a. 7.5 months

b. 4 months

c. 6 months

3.2. What was the payment term used by his clients

a 4.0 months

b 4.5 months

c 5.0 months

3.3. Apparently, Pets must pay too much interest for the credit on current account. How much excess interest in dollars on an annual basis?

a. Needed inventory is $ 120 000: 50 = $ 2 400. Excess is $ 27 600. Accounts payable should be $ 120 000: 100 = $ 1 200. Excess is 38 800. Total: $ 66 400. Excess interest is 16% of $ 66 400 = $ 10 624

b. Needed inventory is $ 90 000: 25 = $ 3 600. Excess is $ 26 400. Accounts receivable allowed was $ 120 000: 50 = $ 2 400. Excess is $ 37 600. Total = $ 64 000 Excess interest is 16% of $ 64 000 = $ 10 240

c. Based on purchases of $ 90 000 two weeks would require $ 3 600. Excess is $30 000 - $ 3 600 = $ 26 400. Sales were $ 120 000. Divide by 25 = $ 4 800 which tells the amount of allowed accounts receivable. Excess is $ 40 000 - $ 4 800 = $ 35 200. Total excess: $ 61 600. Interest could be 16% of ($ 3 600 + $ 4 800) = $ 1 344. Actual interest costs 16% of ($ 30 000 + $ 40 000) = $11 200. Excess: $ 9 856.

4. If a starting businessman owns $ 300 000 in equity and his bank demands that 40% of the assets to be chosen will be financed by equity how much in liabilities can this starter afford?

a. $ 480 000

b. $ 450 000

c. $ 430 000

5. When a company owns shares in another corporation they have to be treated as?

a. current assets

b. fixed assets

CLOSING ASSIGNMENTS OF CHAPTER 2

Fred intends to start his own Butcher's store where he also plans to sell meat from exotic places like Argentina for steaks and Iceland for seal meat. His savings which he can invest in his new business are $ 270 000. He will need a store building in a lively district which will cost him $ 300 000, a cold room for $ 180 000, a cool counter of $ 50 000 and furniture and tooling for $ 12 000. He decided on a starting product inventory of $ 15 000 which amount is to be paid within 60 days. He also wants $ 20 000 in cash for his first expenses. Finally, he needs a cool van which will cost $ 80 000.

His bank, after having approved his business plan with a focus at the high end of the market, is prepared to grant a mortgage loan for 80% of the price of the building at 5% interest and a five year loan up till 50% of the price of both cold room and cool counter at 8.5% interest. Finally, Fred can count on a credit on current account with a maximum tolerance of $ 40 000 at 15%. The bank demands that 40% of all the assets will be financed by equity.

1. Prepare Fred's investment plan and split this plan in fixed and current assets.

solution	**a**	**b**	**c**
fixed assets	$ 812 000	$ 622 000	$ 610 000
current assets	- 127 000	- 35 000	- 37 000
total investment	**$ 939 000**	**$ 657 000**	**$ 647 000**

2. Prepare Fred's financing plan and show the percentage by which equity will finance the assets.

assets	**a**	**b**	**c**
Investments Equity Equity in %	$ 622 000 - 270 000 =43.4%	$ 637 000 - 270 000 =42.4%	$ 657 000 - 270 000 =41.1%
liabilities needed mortgage loan long term loan creditors	**$ 352 000** - 240 000 - 105 000 - 2 000	**$ 367 000** - 220 000 - 112 000 - 35 000	**$ 387 000** - 240 000 - 115 000 - 15 000
available so far still needed credit on current account	$ 347 000 $ 5 000	$ 367 000 0	$ 370 000 - 17 000
Liabilities total	**$ 352 000**	**$ 367 000**	**$ 387 000**

Which amount of interest will Fred have to pay based on the correct financing plan?

a. $ 24 325

b. $ 23 325

c. $ 24 070

TEACHER CONTROLLED ASSIGNMENTS OF CHAPTER 2

THE FINANCING PLAN

Henry and Tom, two brothers just established their own corporation active in the field of importing meat products and acting as a wholesaler to the meat trade. They bought shares in the company for a total of $ 500 000. Their father is willing to extend a subordinated loan up to $ 100 000 if need would arise. Interest rate 2.5%.

The investment plan Henry and Tom prepared looks as follows:

FIXED ASSETS	
Industrial building	$ 450 000
Fork lift trucks	- 220 000
Furniture and equipment	- 140 000
Total fixed assets	**$ 810 000**
CURRENT ASSETS	
Inventory	- 380 000
Packing material	- 45 000
Cash	- 110 000
Total current assets	**$ 535 000**
TOTAL INVESTMENT	**$ 1 345 000**

The brothers realize that they definitely will need a cooling truck which would cost $335 000. However, for this investment they decide to make use of dad's help. If that would not be enough they will lease such a vehicle.

Negotiations at the bank gave the following results. Provided that the brothers would finance at least 35 per cent of the assets the bank is prepared to grant a full mortgage loan for the building at 5% interest

rate, a long term loan of $ 200 000 at 8% and a credit on current account up to a maximum credit of $ 150 000 at 16% of interest.

The suppliers of the inventory granted a payment term of 60 days.

2D 1.1. Prepare the financing plan for Henry and Tom without the cooling truck.

2D 1.2. Specify all possible financial sources to buy the truck

2D 1.3. How much interest will the brothers have to pay if they were to use dad's loan as well.

2D 2. After 5 years of doing business successfully here is the balance sheet of Henry and Tom

BALANCE SHEET

FIXED ASSETS		**EQUITY**	
Building	$ 375 000	Ordinary share capital	$ 500 000
Fork lift trucks	- 110 000	Retained earnings	- 420 000
Furniture and equipment	- 70 000	**Total equity**	**$ 920 000**
Total fixed assets	**$ 555 000**		
CURRENT ASSETS		**LIABILITIES**	
Inventory	$ 650 000	Mortgage loan	$ 350 000
Accounts receivable	- 380 000	Long term loan	- 195 000
Cash	- 160 000	Current account credit	- 30 000
Total current assets	$ 1 190 000	Creditors	- 250 000
TOTAL BALANCE	**$ 1 745 000**	**TOTAL BALANCE**	**$ 1 745 000**

2D 2.1. What is the percentage of the assets financed by equity now?

2D 2.2. If accounts receivable represent buying clients only who promptly pay after 60 days and the sales are divided equally during the whole year, what would have been the total sales figure during that year?

2D 2.3. If no investments took place during the previous five years what may have been the depreciation period for each of the fixed assets mentioned in the investment plan under 1?

2D 2.4. What was the total amount of interest paid in the 5th year if no pay back of any of the loans took place during that year?

2D 2.5. In view of the amount in cash available: which of the loans might have easily been paid back by the company. Which changes in the balance sheet are required in that situation?

2D 2.6. If there are 500 shares of a par value of $ 1 000 each, what then is the intrinsic value per share following this balance sheet?

2D 2.7. Imagine a new shareholder would be prepared to pay the intrinsic value per share and the annual dividend paid per share was $ 150, what would have been the return for the new shareholder?

2D 2.8. In view of the demand by the bank that 35% of all of the assets is financed by equity to which amount then, is the company free to raise the total of assets?

2D 2.9. If the company would have the building reappraised and the market value would prove to be $ 645 000 then what would be the changes on the balance sheet if the company would like to show the higher value on its balance sheet?

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