

Solutions to Chapter 1
Accounting: the language of business

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Assignment 1.1 Multiple-choice questions

1. Answer: (a)

Answers (b) through (d) have elements of relevance but any set of GAAP (i.e., answer (a)) is a compromise between the interests described in b, c and d. Answer (e) is absolutely wrong, as reporting has nothing to do with tax regulations.

2. Answer: (d).

The purpose of the financial statements is to inform the user so they can understand the business model of the firm and how the wealth was created during the last period. The financial statements also describe both the resources and obligations and how the cash flows from various sources were used to improve the wealth creation potential.

Answer (a) is tempting as such an objective fits the purpose of the balance sheet, however ‘Financial reporting’ also includes the income statement and the statement of cash flows. Answer (b) cannot apply as reporting can only be about the past. However it must be acknowledged that many attempts have been made, by a variety of regulatory authorities, to request that managers provide financial statement users with ‘forecasts’. The technical difficulties pertaining to forecasting and the required confidentiality of strategic decisions make the public provision of forecasts an impossible task. Answer (c) is wrong since financial reporting cannot assume how the financial markets will interpret the facts reported and the risks perceived by investors, thus financial reporting does not refer to market value of the firm.

3. Answer: (c).

The text of the answer is self-explanatory. Each business model generates a different cash-to-cash cycle, thus none of the mentioned ‘authorities’ have the ability to define the operating cycle of a business firm.

4. Answer: (b).

Beyond the business cycle of cash-to-cash, there generally is some seasonality in any business. When the business is at its ‘lowest’ level of activity, inventories should be at their lowest level and the risk of returns after a peak sales period are over. For example a toy manufacturer might close its books on 31 December because the peak sales period to supply the distributors takes place in October or November, but, on the other hand, a toy distributor is likely to close its books around the end of February because its peak sales period probably takes place during the Christmas season and sales-returns are probably over around mid January at the earliest. All other answers, although plausible since the firm can choose freely its closing date, are highly unlikely and thus should be considered as wrong since the wording of the question was ‘based largely on’.

5. **Answer:** (b) and (l) are the most likely appropriate answers if only two characteristics must be selected. The other answers, although they generally have a grain of validity, are not as important as (b) and (l). Some remarks about the eliminated answers:

- (a) is included in (b);
- (c) is desirable but precision supposes one agrees on the rules of coding and the purpose ‘true and fair’ supersedes the precision aspect;
- (d) relevance is only defined by the user – relevant to their decision model – but the accounting signal has to serve all classes of users and therefore is the result of a compromise which may make the signal relevant to some users and not to others;
- (e) unambiguous is certainly desirable but one can have an unambiguous number that is neither true nor fair, nor timely, in the description of the wealth-creation process of the firm;
- (f) and (g) are included in ‘true and fair’ as without such qualities true and fair would be impossible, thus (f) and (g) are necessary but not sufficient;
- (h) is certainly desirable but not necessary; GAAP attempt to create a common set of principles so that comparability can be achieved, but they still leave a lot of leeway, thus allowing each firm to be true and fair in describing its financial situation but comparability is not an objective *per se* for the firm creating the accounting signal;
- (i) is not a quality of any signal; if anything, ‘neutral’ is the opposite of relevant or of useful, but relevance, as seen before is not one of the two most important qualities of an accounting signal;
- (j) refers to materiality, i.e., the relative size of the signal to the mesh of analysis by the decision-maker or user of financial information signals; although important so as to avoid information overload, but it is not one of the two most important qualities of an accounting signal; incidentally a relatively immaterial signal may be very significant as for example the case of a reduction in cash advances from clients that may be dwarfed by an increase in sales revenue but the change in cash advances is the result of a shift in the nature of customers expectations and thus, although probably immaterial, is very meaningful for giving a true and fair view of the financial position of the firm;
- (k) conservatism is not a key characteristic of accounting signals, even if GAAP include conservatism as a guiding principle.

6. Answer: (e).

Sometimes, (g) is also considered an acceptable definition, but the authors feel it would be a mistake to accept (g) as an answer as it is impossible to define a relevant threshold in all circumstances, given the turbulence of markets. Although (f) is true for a tax accountant, it is important for the reader to keep in mind that financial reporting often obeys different rules from those set by tax authorities.

7. Answer: (a).

While for a manufacturing firm or for a retailer, the closing date is generally based on a period of low activity (low inventories) or low risk of returns affecting the relevance of the receivables (retailer), in a service firm, unless there is a clear seasonality (rarely the case, but could happen: for example in the case of a service provider to oil drilling in Alaska or Siberia, in which case Winter is clearly a period of low activity and thus a good choice for a closing date), the choice of the period for closing is totally at the discretion of senior management as there is no reason service contracts with the diverse customers would end around a similar period or milestones be reached in a synchronized fashion. The correct answer is (a). All other answers are more or less plausible, but they are all already included in (a).

Assignment 1.2 Discussion questions

1. *Should managers of a company (i.e., decision-makers who are inside the business entity) be considered to be part of the population of 'users' of financial accounting?*

Yes, the managers should be considered as internal users of the financial statements. These documents will help them plan, make strategic and resource allocation decisions and control the implementation of these actions. They also need financial accounting information to evaluate the company's output, outcome, results, achievements and performance, and to monitor, among other things, the operations of the business process and to control the budget and inventory.

2. *Are there possible conflicts of interest between the various users of financial information? If your answer is yes, please provide some illustrations; if your answer is no, explain why.*

Yes, users have different interests. For example:

- The management team or the owners of a company may want to minimize profit in order to pay the lowest possible tax amount and thus reduce the drain on the cash flow (so as to be able to invest to support growth).
- Conversely, the market and investors may want to see the highest profits in order to possibly award themselves high dividends or to signal to the financial markets a strong probability of growth of the earnings stream that is likely to lead to an increase in market price.
- At the same time, a low level of dividend pay-out generally increases the cash balance, i.e., means an increase of the liquidity, which is generally seen favorably by trading partners, customers as well as suppliers and, if the firm has attractive investment opportunities, may lead to a higher market value (the market value of the firm is generally understood to be the value today of the future stream of earnings or cash flows the firm can create).

- Tax authorities are interested in the firm reporting higher net income, which serves as a tax base, thus allowing the government or administration to generate a higher level of tax revenue.

However, the answer is not as simple as it may appear at first glance. In theory there is no ‘conflict’ of interest per se. But there may be, at the same time, very different focuses in the way different users look at the financial statements. A banker might be interested in the long-term cash flow of the firm (ability to reimburse the principal of the loans) or its ability to pay its interest expense, while a supplier might be interested mainly in the short-term solvency of the firm to make sure his invoices will be paid, and in the evolution of R&D investments to see whether the materials or components they are currently providing might still be needed in the future. However both of these users are interested in the long-term viability of the firm (is it a going concern?) as they want to remain the providers of loans or of materials to this firm, if it is a viable and solvent customer. Keep in mind it costs a lot more (the commonly accepted order of magnitude is 5 to 1) to acquire a customer than to maintain one already acquired.

All users are interested in the long-term viability of the firm but each class of users will, at one point in time or another, focus on certain specific aspects of the financial statements, mainly for their short-run view. Financial statements as they are constructed and presented are, in fact, a compromise trying to satisfy every user in all the ways they want to be informed. Some details may be disregarded by some users while others may wish they had more details on certain elements.

For example, in Q4 of 2012, Apple Inc. is reputed to have \$137 billion in liquidities (This amount led some key shareholders to sue Apple to force them to pay more dividends to return this cash to the shareholders). However these \$137 billion can be broken down between \$16 billion in cash or equivalent, \$24 billion in ‘short term marketable securities’ (which the footnotes define as maturing in less than 5 years) and \$97 billion in ‘long-term marketable securities’ (defined in the footnotes as having a maturity date exceeding 5 years) of which \$42 billion are corporate securities. Apple does not report ‘financial investments’ and those are included under the heading ‘long-term marketable securities’ which means a fair -- but unspecified-- portion of these securities are likely to be financial investments that are crucial to the running of the business (investments in suppliers, in distributors, in start-ups, in current or future industrial or intellectual property partners, etc.). The investors who sued Apple (suit later withdrawn before that annual general assembly) thought there was a conflict of interest between them and management regarding the uses (usefulness?) of that massive amount of perceived ‘liquidity’ but, in fact, once one dug a little deeper (and the footnotes are very useful for this purpose), it became clear there was no conflict of interest between management and investors. Had Apple chosen to separate their ‘long-term marketable securities’ between ‘financial investments’ and ‘investments to protect the purchasing power of liquidity’, the debate about what to do with the \$137 billion would never have occurred. As we said, financial statements are compromises in describing the financial health of the firm and thus short-term divergence of views may happen but no real conflict of interest exists.

3. *How can a decision maker obtain a copy of a firm’s financial statements if the latter does not make them public (for example, an unlisted business or a closely held competitor)? Identify concrete examples in a given country.*

In many countries, especially in Europe, companies must file their annual financial statements with some governmental or judicial agency, which makes them available to the public (see Chapter 18, Appendix 18.3).

4. *Why are suppliers and customers interested in studying the financial statements of a company?*

- It is important for suppliers to evaluate the credit risk (solvency of their customers), i.e., to know whether a customer has sufficient payment capacity (for example: positive net income, positive cash flow, although both are not linked directly in the short-term). In practice, a supplier may decide, after reviewing the financial statements, that it will only accept cash payments from certain customers, rather than accepting sales on credit, if it thinks there is a significant risk of non-payment by these customers.
- Customers may be interested in equivalent descriptors about the financial condition of their suppliers in order to ascertain the risk that the supplier might default and be unable to deliver goods or services ordered (in both the short- and the long-run. As explicitly integrated supply chains become more and more common, often along with a 'just-in-time' approach, reliability (also defined from a financial point of view) becomes crucial when choosing suppliers. Customers want to evaluate the 'delivery risk'. There may also be a 'credit risk' with regards to payments made in advance.

5. *What sources of information on a business' economic situation, other than financial statements, are available to the general public?*

- Newspaper reports, press releases in the media (see Chapter 18, Appendix 18.2)
- Staff of the in-house dedicated function (generally called 'investor relations manager' or something similar)
- Financial analysts at brokerage or investment houses
- Databases.

Assignment 1.3 Xenakis

Topic: Financial situation

Level of difficulty: Low

A Power Point file is available for this assignment (file A1.3).

1. *Describe Venture Xenakis' 'net worth' on the day of his departure from Athens for Byblos before procuring his sea passage.*

Venture Xenakis owns		Venture Xenakis owes	
Gold flatware pieces	300		
Crystal glassware pieces	150		
Cash in hand	160		
Total	610	Total	0
		Net worth of Venture Xenakis (Including amount owed to Xenakis	610 610)

2. *How much cash does the Venture Xenakis have after he sold all his merchandise after his return to Athens?*

Computation of cash	Transactions	Cumulated cash balance
Initial balance		160
Travel from Byblos to Athens	-48	112
Accommodation	-10	102
Sale of flatware	420	522
Sale of glassware	250	772
Purchase of spices	-540	232
Purchase of silk	-180	52
Travel from Athens to Byblos	-50	2
Sale of spices	720	722
Sale of silk	240	962
Ending balance		962

Other method of presentation

Initial balance	160
<i>Cash receipts</i>	
Sale of flatware	420
Sale of glassware	250
Sale of spices	720
Sale of silk	240
<i>Total receipts</i>	1,630
<i>Cash payments</i>	
Travel from Byblos to Athens	-48
Accommodation	-10
Purchase of spices	-540
Purchase of silk	-180
Travel from Athens to Byblos	-50
<i>Total payments</i>	-828
Cash flow	802
Ending balance	962

3. *Compute the income generated by the Venture Xenakis on his round trip.*

Computation of income (method 1)

Revenues	
Sale of flatware	420
Sale of glassware	250
Sale of spices	720
Sale of silk	240
Total revenues (1)	1,630
Expenses	
Consumption of inventory of flatware	-300
Consumption of inventory of glassware	-150
Purchase of spices	-540
Purchase of silk	-180
Travel from Byblos to Athens	-48
Accommodation	-10
Travel from Athens to Byblos	-50
Total expenses (2)	-1,278
Income (1) + (2)	352

There is a second method that can be used to compute income where the profit (or margin) on each category of products sold is determined.

Computation of income (method 2)

Profit on sale of flatware	120
Profit on sale of glassware	100
Profit on sale of spices	180
Profit on sale of silk	60
Travel from Byblos to Athens	-48
Accommodation	-10
Travel from Athens to Byblos	-50
Income	352

4. Describe Venture Xenakis' 'net worth' after his return to Athens.

Venture Xenakis owns		Venture Xenakis owes	
Gold flatware pieces	0		
Crystal glassware pieces	0		
Cash in hand	962		
Total	962	Total	0
		Net worth of Venture Xenakis	962
		Beginning amount owed to Xenakis (beginning net worth)	610
		Income for the 'period'	352

Assignment 1.4 Theodorakis

Topic: Users of financial information

Level of difficulty: low

Classes of users and possible uses they may have for the financial statements:

- **investors:** cash flow and profit, trend and short-term and long-term expected evolution of these so as to evaluate potential return on their investment;
- **bankers:** cash flow, profit, evaluation of solvency, some might add (although we feel it would now be an obsolete approach in a modern financial market) 'availability of collateral' the business can provide to reduce (or eliminate) the perceived risk of insolvency;
- **labor unions:** long-term viability of the firm (as an employer), discussion about sharing, between the various stakeholders (the labor force being one), of the value created;
- **customers:** reliability of the supplier or its long-term financial strength;
- **suppliers:** same as customers, in a mirror effect;
- **competitors:** evaluate the strategy and the resilience of the firm to a possible strategic 'attack' on price, on credit terms, on availability of inventory, etc.;
- **municipal or local administration:** assessment basis for asset-related taxes, protection of assets, viability of the firm as a long-term employer in the community, potential provider of sponsorship of cultural events, etc.;
- **government:** assessment basis for income-related taxes, viability as an employer, funding of pension obligations, contribution to the balance of payment (export sales and import sourcing, foreign exchange earned, etc.), fairness of value-added sharing between parties;
- **health authorities:** effect of management policies and business processes on the health of the work force and on the health of both customers and the community located around the firm's business facilities

- **government labor agency or employment department:** viability of the firm as a long-term employer, fairness of added-value sharing, evolution of productivity and sales as a basis for forecasting possible future employment, etc.
- **ecologically oriented non-government agencies:** effect of the firm's business on the environment, ability of the firm to assume, in the distant future, the social cost of decommissioning and decontaminating its facilities when the times comes, etc.
- etc.

Accounting partially serves all categories of users listed here. However none of these categories receives much information about the future of the firm, beyond 'extrapolations'. Accounting acts like a rear view mirror: it tells in (sometimes great) details what was done, but is unable to provide information about the future, except by way of a direct extrapolation (and a straight extrapolation does not assume that decisions can be made that alter the course of the firm). Chapters 15 through 18 deal with interpreting past data to help better understand the future of a firm.

Financial accounting does not reveal certain relevant financial information:

- production cost of products or services, or
- relative profitability of classes of products or services, customer satisfaction (% of sales revenue coming from new customers is not generally reported in an income statement; the ratio of 'customers lost to customers gained' is not revealed under any GAAP), or
- social tensions (the cost of strikes is not explicitly stated in a financial report).

Some potentially relevant non-financial information is not reported by financial accounting such as the development of the firm's intellectual capital (ability by managers, and personnel in general, to provide original solutions to unexpected and non programmable situations) or such as the development of customers' loyalty.

Most of these elements of information are not provided in the financial statements because they do not meet the requirements for verifiability, precision, unambiguousness, reliability, consistency, etc. but mainly because they would be much too revealing of the strategic and competitive position of the firm. Managerial Accounting, which is internal, proprietary and unregulated, will focus on these aspects but will not let its information content be made available, under normal circumstances, to external users.

Assignment 1.5 Horn of Abundance

Topic: Users of financial information and investors

Level of difficulty: moderate

To the instructor

- *A Power Point file is available. It includes a template that can be used to record the position of each group at the beginning of class.*
- *Many different 'selections or answers' are possible. We propose one selection among many other acceptable ones.*
- *We suggest the instructor split the class in work-groups, and ask each group to communicate their solution to the others during a plenary session, and then have the students discuss the reasons for their (likely) different proposed selections.*

Items		Found in an annual report	Location in the annual report	Explanation of the importance of the item
8	Financial statements (balance sheet, income statement, statement of cash flows)	Yes	Financial statements (FS)	They form the heart of financial reporting and the source for most financial information.
11	Evolution of sales of each key product group over the past 3 years	Yes (generally)	FS (note on 'segment reporting') (see Chapter 18)	The analysis of sales per product group gives a clear indication of the markets the company is operating. It gives a clear input on the product strategy.
13	Number of employees	Yes (generally)	Management Discussion and Analysis (MD&A) or in the notes	Employees are an element of the human capital. The number of employees is a useful data for ratio computation.
20	Percent of completion of investment projects started in the last three years	Yes (generally)	The value of 'projects in progress' is reported as part of 'inventories' in the FS. The percentage of completion is not reported. It might be evoked in the MD&A or in the notes	Investments projects are important for the future.
25	Amount spent on acquiring new customers and creating demand (marketing, advertising, promotion and sales expenses).	Yes/No (depending on local GAAP)	Income statement by function (see this concept in Chapters 2 and 5)	Marketing, advertising... will generate future benefits. However the various actions taken are generally not detailed.
30	Amounts spend on R&D, structured by types of research	Yes (generally)	MD&A and Income statement by function (see this concept in Chapters 2 and 5)	R&D is generally very important for the future of the firm.
31	Evolution of the duration of R&D projects until success or abandonment and percentage of successful projects in the last 10 years	Yes (generally)	MD&A	Information about successful R&D projects will prove the capacity of the firm to transform its R&D expenditures into streams of future cash flows and profit.
32	Percentage of sales (per product group) carried out in currencies other than that of the home country of the business. Percent of physical volume of sales exported.	Yes (most of the time)	Notes to the financial statements	Information always relevant and particularly important if the firm's sales revenue includes a large percentage of export sales, specially if these export sales are to countries with volatile currencies compared to the home currency
33	Existence, details and status of any court litigation against the business or which the business has originated against others	Yes	FS (Notes)	These are negative elements concerning the future of the firm.
41	List of subsidiaries and affiliates	Yes	Consolidated FS	Gives an idea of the scope of the group.

Although every one of the pieces of information listed in the text of the assignment can prove to be very important to an investor, some of them are too focused to fit within the scope of a financial accounting reporting system that has to be general, standard, and serve a diversity of industries and stakeholders.

In order to allow other choices, we categorized the information in six different classes (more could be added):

- Accounting and finance
- Human resources
- Marketing and Sales
- Operations (production, supply chain management, physical distribution and sourcing)
- R&D
- Legal aspects.

N°	Item	Category	Item selected
1	List of managers and directors.	Human resources	
2	Compensation package of directors and managers.	Human resources	
3	List of major competitors by markets and by product groups.	Marketing and sales	
4	Allocation of responsibility in the business.	Operations	
5	Age distribution pyramid of employees and managers.	Human resources	
6	Result of labor union elections in the various establishments of the business.	Human resources	
7	Social climate in each department of the business.	Human resources	
8	Financial statements (balance sheet, income statement, notes, statement of cash flows)	Accounting & finance	x
9	Map of the layout of the plant and the warehouse.	Operations	
10	Location, size and staffing of all points of sale.	Marketing and sales	
11	Evolution of sales of each key product group over the past three years.	Marketing and sales	x
12	Age distribution of products (products still sold today that were launched one, two, or three years ago or more).	Marketing and sales	
13	Number of employees.	Human resources	x
14	Distribution of shares ownership (with major shareholders and percentage they own as well as percentage of total shares traded in a normal month).	Legal aspects	
15	Details of the loans received (amounts and reimbursement schedule).	Accounting & finance	
16	Cost of capital (weighted current average cost of capital).	Accounting & finance	
17	Opportunities for investments in the business and their expected rate of return.	Accounting & finance	
18	Major capital investment projects approved over the last three years.	Accounting & finance	
19	Partition of assets between owned and leased.	Accounting & finance	
20	Percent of completion of investment projects started in the last three years.	Accounting & finance	x
21	Outside expert report on the technological and physical obsolescence of assets owned by the business.	Accounting & finance	
22	Details on the incentive plans implemented in this business (including stock options).	Human resources	
23	Evolution of the share price of the business on the NYSE-Euronext Stock markets over the past three years (including a comparison with other firms in the same economic sector).	Accounting & finance	
24	Description of the sales technology and techniques used in each of the markets in which the products are sold.	Marketing and sales	
25	Amount spent on acquiring new customers and creating demand (marketing, advertising, promotion and sales expenses).	Marketing and sales	x
26	Tax filings for the past three years and amount of taxes still owed.	Accounting & finance	

27	Cash or liquid assets position.	Accounting & finance	
28	Description of key customers with length of relationship and evolution of percentage each represents in the business' total sales.	Marketing and sales	
29	Opinion of the senior management team about how they see the future of the firm and its markets.	Operations	
30	Amounts spend on R&D, structured by types of research.	R&D	x
31	Evolution of the duration of R&D projects until success or abandonment and percentage of successful projects in the last 10 years.	R&D	x
32	Percentage of sales (per product group) carried out in currencies other than that of the home country of the business. Percent of total physical volume of sales that is exported.	Accounting & finance	x
33	Existence, details and status of any court litigation against the business or which the business has originated against others.	Legal aspects	x
34	A summary of the history of the business.	Operations	
35	By-laws or articles of incorporation.	Legal aspects	
36	Existence, value and relevance of proprietary technology owned by the business (own research or purchased?).	R&D	
37	Percent of total expenses spent on humanitarian or not-for-profit activities (and the list of these activities).	Accounting & finance	
38	Environmental report by an external independent agency evaluating the effect of the business on noise, air and water quality as well as the health environment of both workers and citizens in a ten kilometer radius around the plant.	Legal aspects	
39	Statistics of the work related injuries and deaths over the past ten years.	Human resources	
40	Partnership agreements with suppliers and customers.	Legal aspects	
41	List of subsidiaries and affiliates.	Operations	x
42	Percentage of employees (structured by homogeneous classes) connected effectively via a broadband intranet/internet system.	Operations	

To the instructor

The choices proposed here are only suggestions and many other selections are, of course, possible and legitimate.

Assignment 1.6 Kalomiris Construction

Topic: Useful information

Level of difficulty: Moderate

Before commenting on the informational needs of concerned parties, it is important to understand the business model of the firm. Kalomiris is in the construction business. The cycle of operations (cash-to-cash) is long and it takes between 6 and 12 months, sometimes more, to complete a contract. Although customers often give a cash advance upfront at the start of the project, a critical success factor in this business is to be able to control the lag between the time costs (expenses) are incurred and cash is obtained from customers after billing takes place at agreed upon time (generally triggered by milestones in the project such as 'foundations are poured', 'plumbing is complete', 'roofing is complete', etc.). An increase in profit may come from either a growth in the number of projects undertaken or from an improved productivity of either personnel, equipment or materials, or a combination of all three. Profit growth, year on year is a signal that is generally seen as indicative of a favorable situation, but the order book replenishment should also be looked at, and accounting, designed to be looking backwards, is not reporting the situation of the order book. Evolution of upfront payment might be a surrogate of the evolution of the order book. The reported reduction in the

closing cash balance, unless the level of the opening cash balance had been too large, is an aspect that needs to be explored: is the cash level sufficient to keep the firm operating smoothly? Do we need to look for external financing and, if so, of which type: rollover short-term credit, overdraft, medium-term or long-term loans? Thus it is critical to find out why the cash balance has decreased so dramatically: are customers paying slower than previously and why? Are we growing the number of building contracts too quickly (creating a larger, but temporary, float we need to finance)? Are we incurring some technical problems that prevent us from reaching the billing milestones? Have we reimbursed some previously existing loan? Have we drained cash by paying out large dividends? The financial statements (here it will mainly be the statement of cash flows) are a key source of information to answer these questions.

Let us now review stakeholder by stakeholder what kind of information they might be interested in (the lists are in no way exhaustive, nor are the comments we provide).

Current shareholders: they want to know at least (a) what the current net worth of their collective investment is, (b) how the increase in their investment (net worth) was created, and (c) whether the cash flows created by operations, or obtained from external sources, have been used in ways that increase the likelihood of their investment growing even further in the future. Actions taken might include the confirmation, or the replacement, of the management team.

Potential investors: although the answer (a) immediately above is probably of interest to them, answers (b) and (c) are utmost importance to potential investors as they want to know what the future cash flows might look like (the value of a share is generally considered to be driven by the net present value of future cash flows) and what level of risk is attached to a potential investment. Action taken is obviously their decision to invest or not in Kalomiris.

Creditors: they are interested in the liquidity of the firm (ability to pay its debt without having to sell those assets that are essential to operating its business cycle) and, if such liquidity did not look assured, they might take actions such as either not extend further credit to the firm or might request immediate payment of current outstanding credit.

Customers: they want to be sure the builder will be able to complete its contract; for this they want to be assured of both liquidity and profitability of the firm. They might also be interested in such things as the share of value-added distributed in the form of remuneration to the work force (especially in comparison to other builders) as a proxy for the likelihood of an industrial dispute, which could delay completion of the contract. Actions taken concern essentially their decision of choosing Kalomiris as supplier or not (a supplier who is not profitable enough may not survive long). Knowledge of past profit might possibly affect the price negotiations in case of a decision to consider purchase from Kalomiris (if the customer feels the profitability level is unusually high, it may feel hesitant to accept without discussion prices as they were bid by Kalomiris).

Tax authorities: they are interested in the value created during the period (income) that is used as a basis for assessing any income-based tax. They are also interested in the principles guiding the timing of recognition of expenses and revenues between periods, as they would rather levy the income tax 'earlier than later'. Actions may include audits and restatement of previous years' taxable income if the timing of revenues or expenses or both is deemed unacceptable or in violation of pre-established rules and regulations.

Bankers: they are essentially ‘creditors’; they might also be interested in identifying how much of the cash flow of the business transits through each of the banks used by Kalomiris so that if a bank feels it does not get enough of the ‘business’ of the firm it can address questions such as ‘how can we provide a better service to Kalomiris and become their lead bank?’

Regional association of real estate developers: they want to have information as to the medium to long-term viability of Kalomiris as a builder for their developments. Possible action: if they feel the firm is not likely to be able to complete the development projects, their members should look for other builders.

National Association of suppliers of lumber and construction materials: this is a group of suppliers and, as a supplier, they are interested in both the short-term ability of Kalomiris to pay any purchases made on credit and in the long-term whether the firm will be in existence as a future customer. Actions undertaken would probably focus on whether or not to extend credit to Kalomiris and, if so, under what terms (duration, discount for cash payment, maximum cumulated credit allowed at any one point in time).

Regional government: they might be interested in both the ability of Kalomiris to maintain or grow employment in the region and in the fairness of the sharing of the firm value added with the workforce so as to verify the labor force is ‘well treated’. This government authority may also be interested in whether pension liabilities and health care premiums are well accounted for and fully funded (and the firm has the ability to continue funding them). Actions may include the award of subsidies to encourage development, placing the firm on a list of qualified bidders for government work, or, on the opposite side, blacklisting the company from the pool of firms eligible to do business with the regional government.

Industrial council (legally instituted structure representing the interests of the work force, and a partner for management, in many countries: it shares its interests with the preoccupations of any labor union. Fairness of remunerations compared to the return provided to capital providers, viability of the firm in the long run, reasonableness of the funds dedicated to developing the business (funds dedicated to finding new customers, or allocated to R&D, for example). Actions based on such information include position taken in salary negotiation and intervention in the strategy definition of the firm, if such a possibility is offered.

Assignment 1.7 Nikopoulos

Topic: Book value versus market value

Level of difficulty: High

The key message of this assignment is that ‘book value’ and ‘market value’ of net worth can be very different. This offers an opportunity to have students reflect on the message that the market value of a firm is generally considered to reflect the net present value of future cash flows (with the caveat that the choice of interest rate – including the risk factor—is a personal choice).

A firm with a net worth of 500,000 CU may be worth several millions to a buyer if the buyer feels the future cash flows generated by the business will keep accruing and growing at a risk level that is acceptable.

Net worth is an accounting artifact that, at one point in time, measures the difference between assets (at their historical and depreciated value) and the liabilities, i.e., what the entity owes to third parties.. First of all, the historical value of assets (depreciated for depreciable assets) has no link with their market value (keep in mind the rules of prudence that lead to using both 'historical cost' and the rule of 'lower of cost or market'). Secondly the assets are in the firm's hand to help generate future economic benefits: if these assets are used effectively and efficiently in the competitive markets where the firm operates, they may create large quantities of future wealth. Financial statements (from which net worth is extracted, in the balance sheet) cannot describe (directly) either efficiency or effectiveness or use of the resources, or potential future wealth creation. Their purpose is to account for the past, not to forecast or foretell the future. However, through a comparative analysis of the evolution of the components of the financial statements, an investor can form an opinion regarding the efficiency and effectiveness of the use of resources available to the firm and thus can evaluate the potential for future value creation (as an independent firm, or as integrated with another firm, or under new management).

Some students may also be asked to explore, in class, the reasons that may explain why the investor might be willing to pay even less than 100,000 CU for a 20% stake in Nikopoulos, Inc.: if the assets were under-depreciated or use an obsolete technology, the potential investors may feel their main interest in the firm might be the market share it would bring, and that the future costs of liquidating the firm (human resource costs as well as sale of useless resources) might be so significant as to reduce the perceived value of the firm below its net worth, or even that they are buying the firm to close it to eliminate a competitor and thus are willing to pay the minimal amount previous owners are willing to accept.

The whole idea of buying firms under their book net worth was the foundation of the US firm Burlington Industries: by acquiring essentially bankrupt and undersized textile mills, then rationalizing the use of resources, reaching a critical size none of the acquired firms had, and liquidating excess resources and personnel, the acquirer of all these small firms created a viable giant whose net worth (after acquisitions and cleaning up) was greater than the cumulated net worth of the acquired firms.

Assignment 1.8 Sheik Selim

Topic: Financial performance reporting and decision making

Level of difficulty: High

- *An Excel file including the figures can be found on the book's website.*

1. For each plot of land (defined as a ‘business entity’), prepare a statement (or statements) describing, from the point of view of Sheik Selim (and of Anis or Sami, if appropriate), the resources of the business (and their origin) at the beginning and at the end of the growing season and a statement describing, for the entire season, the consumption and creation of ‘resources’ by each business entity.

Case A

Anis - River bend plot of land
Beginning Balance Sheet

Assets		Equity	
Land	500	Contributed capital	580
Ox	40		
Fertilizer	20		
Seeds	20		
Total	580		580

Sami - Downstream plot of land
Beginning Balance Sheet

Assets		Equities	
Land	250	Contributed capital	310
Ox	40		
Fertilizer	10		
Seeds	10		
Total	310		310

Anis - River bend plot of land
Income statement

Expenses = resources consumed		Revenue = resources created	
Seed used	20	Wheat produced	243
Fertilizer used	20		
Ox depreciation	4		
Plow depreciation	3		
Salary	80		
	total		
	127		
Income	116		
<i>Dividends paid</i>	20		
<i>Retained earnings</i>	96		

Sami - Downstream plot of land
Income statement

Expenses = resources consumed		Revenue = resources created	
Seed used	10	Wheat produced	138
Fertilizer used	10		
Ox depreciation	4		
Plow depreciation	1		
Salary	40		
	total		
	65		
Income	73		
<i>Dividends paid</i>	30		
<i>Retained earnings</i>	43		

Anis - River bend plot of land
Fluctuation of sellable wheat (cash and revenue)

Sellable wheat available (cash balance)	223	
+ Wheat withdrawn	20	(equivalent to dividends)
+ Payment of salary	0	
+ Payment to Mahmoud	0	
Wheat created (revenue)	<u>243</u>	

Sami - Downstream plot of land
Fluctuation of sellable wheat (cash)

Sellable wheat available (cash balance)	105	
+ Wheat withdrawn	30	(equivalent to dividends)
+ Payment of salary	0	
+ Payment to Mahmoud	3	
Wheat created (revenue)	<u>138</u>	

Anis - River bend plot of land
 Closing Balance sheet

Assets		Equity and liabilities	
Land	500	Contributed capital	580
Ox	40	Income from period	116
- Accumulated depreciation	-4	minus dividends paid	20
Plow	3	Payable Mahmoud)	3
- Accumulated depreciation	-3	Payable (salary)	80
Sellable wheat	<u>223</u>		
Total	<u>759</u>		<u>799</u>

Sami - Downstream plot of land
 Closing Balance sheet

Assets		Equity and liabilities	
Land	250	Contributed capital	310
Ox	40	Income	73
- Accumulated depreciation	-4	minus dividends	30
Plow	3	Payable (Mahmoud)	0
- Accumulated depreciation	-1	Payable (salary)	40
Sellable wheat	<u>105</u>		
Total	<u>393</u>		<u>453</u>

Case B

Anis - River bend plot of land
 Beginning Balance Sheet

Assets		Equity and liabilities	
Ox	40	Contributed capital	0
Fertilizer	20	Debt to Sheik Selim	80
Seeds	<u>20</u>		
Total	<u>80</u>		<u>80</u>

Sami - Downstream plot of land
 Beginning Balance Sheet

Assets		Equity and liabilities	
Ox	40	Contributed capital	0

Fertilizer	10	Debt to Sheik Selim	60
Seeds	10		
Total	60		60

Anis - River bend plot of land
Income statement

Expenses = resources consumed		Revenue = resources created	
Seed used	20	Wheat produced	243
Fertilizer used	20		
Ox depreciation	4		
Plow depreciation	3		
Land rental fee	120		
	<i>total</i>		
	167		
Operating Income	76		
<i>Debt repayment</i>	20		
<i>Cash flow to business</i>	56		

Sami - Downstream plot of land
Income statement

Expenses = resources consumed		Revenue = resources created	
Seed used	10	Wheat produced	138
Fertilizer used	10		
Ox depreciation	4		
Plow depreciation	1		
Land rental fee	60		
	<i>total</i>		
	85		
Income	53		
<i>Debt repayment</i>	30		
<i>cash flow to business</i>	23		

Anis - River bend plot of land
Fluctuation of sellable wheat (cash)

Wheat created	243	(i.e. 223+20)
- Wheat withdrawn	-20	(equivalent to debt repayment)
- Reimbursement of costs	-44	(44 to Sheik Selim)
Sellable wheat available	179	

Sami - Downstream plot of land
Fluctuation of sellable wheat (cash)

Wheat created	138	
- Wheat withdrawn	-30	(equivalent to debt repayment)
- Payment of costs to S. Selim	-24	
- Payment to Mahmoud	-3	
Sellable wheat available	81	

Anis - River bend plot of land
Closing Balance sheet

Assets		Equities and liabilities	
Ox	40	Contributed capital	0
		Retained earnings	76

- Accumulated depreciation	-4		
Plow	3	Payable (Mahmoud)	3
- Accumulated depreciation	-3	Debt to Sheik Selim	16
Sellable wheat	179	Debt for rent	120
Total	215		215

Sami - Downstream plot of land
Closing Balance sheet

<i>Assets</i>		<i>Equity and Liabilities</i>	
Ox	40	Contributed capital	0
- Accumulated depreciation	-4	Retained earnings	53
Plow	3	Payable (Mahmoud)	0
- Accumulated depreciation	-1	Debt to Sheik Selim	6
Sellable wheat	81	Debt for rent	60
Total	119		119

Case C

Anis - Riverbend plot of land
Beginning Balance Sheet

<i>Assets</i>		<i>Equities</i>	
Land	500	Contributed capital SELIM	580
Ox	40		
Fertilizer	20	Contributed capital ANIS	0
Seeds	20		
Total	580		580

Sami - Downstream plot of land
Beginning Balance Sheet

<i>Assets</i>		<i>Equities</i>	
Land	250	Contributed capital SELIM	310
Ox	40		
Fertilizer	10	Contributed capital SAMI	0
Seeds	10		
Total	310		310

Anis - Riverbend plot of land
Income statement

<i>Expenses</i>		<i>Revenue</i>	
Seed used	20	Wheat produced	243
Fertilizer used	20		
Ox depreciation	4		
Plow depreciation	3		
total	47		
Income (Profit)	196	claim on income	
Dividend to Selim	20	Sheik Selim	130.7
To retained earnings	176	Anis	65.3

Sami - Downstream plot of land
Income statement

Expenses

Revenue

Seed used	10		Wheat produced	138
Fertilizer used	10			
Ox depreciation	4			
Plow depreciation	1			
<i>total</i>	25		<i>claim on income</i>	
Income (Profit)	113	of which	Sheik Selim	75.3
<i>Dividends to S. Selim</i>	30		Sami	37.7
<i>To retained earnings</i>	83			

Anis - Riverbend plot of land
Fluctuation of sellable wheat (cash)

Wheat created	243	
- Wheat withdrawn	-20	= dividend paid to Sheik Selim
Sellable wheat available	223	

Sami - Downstream plot of land
Fluctuation of sellable wheat (cash)

Wheat created	138	
- Wheat withdrawn	-30	dividend paid to Sheik Selim
- Payment to Mahmoud	-3	
Sellable wheat available	105	

Anis - Riverbend plot of land
Closing Balance sheet

<i>Assets</i>		<i>Equities and liabilities</i>	
Land	500	Contributed capital SELIM	580
Ox	40	Contributed capital ANIS	0
- Accumulated depreciation	-4		0
Plow	3	Retained earnings	176.0
- Accumulated depreciation	-3	<i>Selim's Share = 130.7 - 20</i>	110.7
Sellable wheat	223	<i>Anis' share</i>	65.3
		Payable (Mahmoud)	3
Total	759		759

Sami - Downstream plot of land
Closing Balance sheet

<i>Assets</i>		<i>Equities and liabilities</i>	
Land	250	Contributed capital SELIM	310
Ox	40	Contributed capital SAMI	0
- Accumulated depreciation	-4		
Plow	3	Retained earnings	83.0
- Accumulated depreciation	-1	<i>Sheik Selim's Share</i>	45.3
Sellable wheat	105	<i>Sami's share</i>	37.7
		Payable Mahmoud)	0
Total	393		393

2. From the point of view of Sheik Selim, which person (Anis or Sami) was the better steward of the resources provided to him? What do you recommend Sheik Selim should do for the next growing season?

1) Productivity

	Production	Acreage	Yield/ac	Yield per ox
Riverbend (ANIS)	243	20	12.15	243
Downstream (SAMI)	138	10	13.8	138

2) Care of assets by individual

Anis ‘consumed’ the plow: will need a new one next year.

Sami has a plow for 2 more years.

3) Return on investment

	Riverbend (ANIS)			Downstream (SAMI)		
	A	B	C	A	B	C
<i>Sheik Selim</i>						
Original investment	580	500 0?	580	310	250 0?	310
Firm’s income	116	76	196	73	53	113
Firm ROI	20.0%	N/A	33.8%	23.5%	N/A	36.5%
Selim’s share of ‘income’	116	120	130.7	73	60	81.3
Sheik Selim ROI	20.0%	24.0%	22.5%	23.5%	24.0%	26.2%

4) Sami is clearly the better ‘manager’: **despite** being burdened by an underused ox, he manages to create higher productivity of land and compensates his ‘burden’.

5) Risk sharing (case C) is likely to yield more responsible behavior on the part of Anis or Sami and yield higher return for Sheik Selim than leasing the land out

	A	B	C	A	B	C
Return Anis or Sami	80	76	65.3	40	53	37.7

6) Sami is likely to find an alternative use of his ox (he is using it half as productively as Anis does). This might increase the revenue on Sami’s side.