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MANAGEMENT DEVELOPMENT PROGRAMME

Management Development Branch
International Labour Office
CH-1211 Geneva 22

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202.6-84 FI-1575 I /

AUTONOMOUS GROUP LEARNING (AGL)

LIBRARY, INTERNATIONAL REFERENCE
CENTRE FOR COMMUNITY WATER SUPPLY
AND SANITATION (ICCS)
P.O. Box 50103, 2000 AD The Hague
Tel. (070) 514811 ext. 141/142
RN: 24926 on 1575 vol. 2
LC: 202-6 04FI

No. 11: FINANCIAL MANAGEMENT FOR THE WATER INDUSTRY

COURSE DIARY
FOR EACH MEMBER
To be Retained

Name:

Boland/Wallace/ILO 1984/3

REGISTRATION DATA

COURSE DATE AND LOCATION:

PARTICIPANT'S NAME:

TITLE:

COMPANY:

BUSINESS ADDRESS:

PREVIOUS FINANCIAL AND ACCOUNTING EXPERIENCE:

QUIZ RESULTS:

DAY 1 DAY 2 DAY 2 DAY 2
 100 48 60 100

PERSONAL OBJECTIVES IN TAKING THE COURSE:

NOTE: COMPLETE ONE SHEET OF THE COURSE DIARY FOR EACH DAY INDICATING:

1. Key points learned
2. Reactions to AGL
3. Questions which are not satisfactorily answered
4. Results of any quizzes given during the day.

NOTES ON AUTONOMOUS GROUP LEARNING (AGL) FOR EACH COURSE MEMBER

1. AGL is an intensive basic finance course for personnel who have little or no financial training.
2. AGL creates a learning environment that is new to the course members. It is an effective but challenging learning experience. Course members should keep an open mind on their reactions until the second day of the course.
3. This AGL course also helps you apply your new knowledge in your work.
4. Course members can solve ALL problems and answer all questions using the materials provided and the experience of other members of the group.
5. The Course Organiser will avoid (whenever possible) responding to ANY TECHNICAL QUESTION.
6. The Course Organiser is NOT a TEACHER. The Course Organiser's task is to help members:
 - (a) Understand the AGL methodology
 - (b) Use effectively the learning materials and the group experiences.
 - (c) Solve administrative problems.
7. The Course Organiser will occasionally outline differences in the timing of some parts of the work.
8. Members should not be disturbed by references to different currencies since AGL is used in many countries.
9. The Course Organiser can help you prepare an ACTION PLAN to apply your new knowledge on the job and may also be able to help you carry out your action plan.
10. We hope that you will find AGL stimulating, informative and effective!

QUIZ ANSWER SHEET

NAME: _____

Mark each correct answer with a clear X - e.g. (a) (b) (c) (d)

- | | | | |
|---------------------|---------------------|---------------------|----------------------|
| 1. (a) (b) (c) (d) | 26. (a) (b) (c) (d) | 51. (a) (b) (c) (d) | 76. (a) (b) (c) (d) |
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QUIZ ANSWER SHEET

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COURSE DIARY - DAY 1

NOTE: COMPLETE ONE SHEET OF THE COURSE DIARY FOR EACH DAY INDICATING:

1. Key points learned
2. Reactions to AGL
3. Questions which are not satisfactorily answered
4. Results of any quizzes given during the day.

ASSIGNMENT 11.0 - SUMMARY LECTURE FOR PART 1

11.1 OBJECTIVES

- (a) Understand accounting language and concepts
- (b) Interpret balance sheets and profit and loss accounts
- (c) Use basic financial ratios and performance indicators for the water industry
- (d) Develop confidence in using accounting and financial data for the water industry
- (e) Motivate further study in the future.

11.2 ACCOUNTING LANGUAGE

- (a) Glossary of ASS is a continuous reference
- (b) 200 words (only) is the basic vocabulary
- (c) The USA/European language differences are minimal:

<u>USA</u>	<u>EUROPEAN</u>
receivables	debtors
payables	creditors
inventory	stock
capital stock	share capital
capital surplus	capital reserve
earned surplus	accumulated profit
retained earnings	revenue reserve
earnings statement)	
operating statement)	profit and loss account
income statement)	

Note: the layout of the statement is irrelevant to this content.

11.3 ACCOUNTING CONCEPTS

Records of transactions are converted into accounting reports by using practical accounting concepts:

- cost (assets generally at cost)
- consistency
- conservatism
- comparability
- accounting period
- going concern (not break-up value)
- entity (the business not its workers)
- profit realisation
- accrual (cash and credit transactions included)
- true and fair (as possible)
- MATERIALITY (most important of all)

11.4 ACCOUNTING PERIOD

Accounting periods create uncertainty and doubt.

Try to associate all sales, costs, expenses and profits with a specific accounting period.

All accounting figures are estimates not scientific facts.

11.5 INCOME STATEMENT - GENERAL BUSINESS

Sales less cost of goods sold equals gross profit.

Gross profit less selling and administrative expenses equals net profit for the accounting period.

Profit depends upon charging all the proper costs and stock valuation.

11.6 BALANCE SHEET - GENERAL BUSINESS

Assets of the business; how they are financed from liabilities and owners equity.

Fixed assets are valued at cost less depreciation (based on the working life of an asset).

Fixed assets such as land and buildings may be revalued periodically.

Current assets (one year only) are valued at cost or lower realisable (market) value.

Stocks (inventory) are valued at the lower of cost of market value.

11.7 HEALTH OF THE BUSINESS

LAPP system.

Liquidity - cash is more important than profit.

Activity - turning over the assets and the stock, more activity requires more assets!

Profitability - gross and net profit related to sales and owners equity.

Potential - depends upon: product market, facilities, human resources, contacts and relationships, financial resources and management ability.

11.8 BASIC FINANCIAL RATIOS - GENERAL BUSINESS

		<u>ROUGH STANDARD SCALE</u>		
		<u>Good</u>	<u>Average</u>	<u>Poor</u>
(a)	Liquidity			
	CA:CL	2:1	1:1	1:2
	QA:QL	1.5:2	1:1	1:2
	E : D	2:1	1:1	1:2
(b)	Activity			
	<u>Sales</u>	Up	Same	Down
	<u>Assets</u>			
	<u>Cost of goods sold</u>	Up	Same	Down
	<u>Stock</u>			
(c)	Profitability			
	<u>Gross profit</u>	Up	Same	Down
	<u>Sales</u>			
	<u>Net profit</u>	Up	Same	Down
	<u>Sales</u>			
	<u>Net profit</u>	Up	Same	Down
	<u>Owners equity</u>			

11.9 MATERIALITY

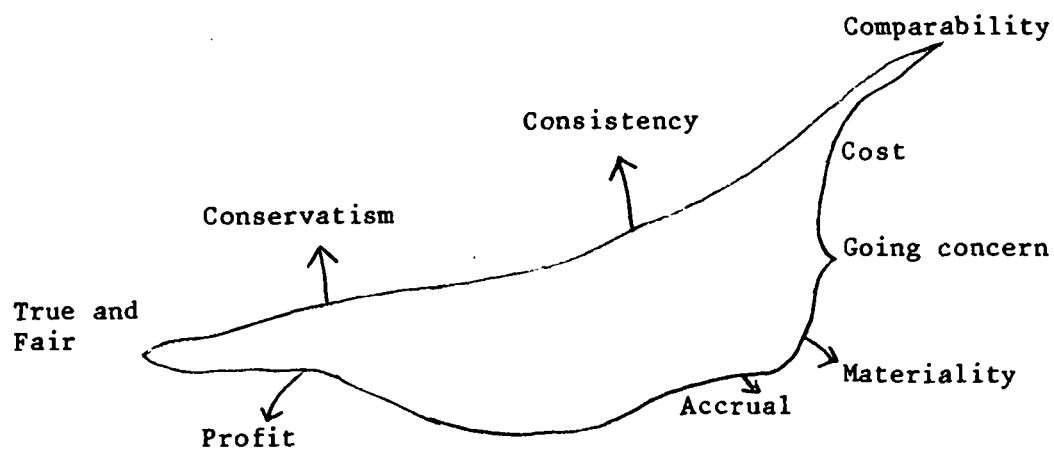
Look for the big figures which are significant. Compare them with the past, the future and the industry averages to determine the significance of changes. Look for "CHANGE" and ask the reasons why.

11.10 LEARNING PATTERNS - REVIEW

1. BS and PL

<u>PL</u>	<u>PL</u>	<u>PL</u>	<u>PL</u>	<u>PL</u>	<u>PL</u>
S	S	S	S	S	S
-C	-C	-C	-C	-C	-C
--	--	--	--	--	--
BS	BS	BS	BS	BS	BS

2. Accounting concepts



3. Formulae

$$A - L = OE$$

$$OE + L = A$$

$$A - OE = L$$

$$S - CGS = GP$$

$$GP - E = P$$

11.11 WATER INDUSTRY ACCOUNTING

- (a) Basic accounting concepts apply to the water industry with the special features outlined below.
- (b) The water industry activity: water production, treatment and distribution for non-agricultural purposes, requires high fixed asset investment with low sales/assets ratio (about 0.4 compared with 1.0).
- (c) The resulting "Structure of Cost" is: high fixed and low variable cost, with wide total cost variation (\$0.01 to \$5.00 per M³).
- (d) Water Industry fixed assets have a long horizon (working life) of 10-50 years which results in low depreciation rates. However, with inflation, the fixed assets replacement cost may exceed book value by a factor of two to four times. Thus tariffs and profitability may depend on the depreciation charged.
- (e) Water Industry financial statements include:
 1. Balance Sheet - showing assets and how they are financed from liabilities and owners' equity. Often the Equity:Debt (E:D) ratio will be 1:1 or even 1:2 rather than 2:1, with increased use of long-term debt (Exhibit 1).
 2. Income Statement - showing sales less operating costs to give OPBD (Operating Profit before Depreciation). OPBD less depreciation to give OPAD (Operating Profit after Depreciation). OPAD less Non-operating Expense to give PBT. PBT less Income Tax equals Net Profit (Exhibit 2).

Ratios for the Income Statement are the same as those for general business PLUS special performance indicators relating revenues and costs to: No. of Connections, Water Output (M³ and \$), No. of Employees, etc.
 3. Statement of Accumulated Profit - showing the opening balance, plus net profit less dividends to give the closing balance, which is part of the Owners' Equity in the Balance Sheet (Exhibit 3).
 4. Funds Flow Statement - showing the sources and uses of new funds during the accounting period (to be discussed later).
 5. Statistical Data - on population, production, number of connections, tariffs, employees, sales M³, sales \$, etc. (Exhibit 4).
 6. Operating Ratios for the Water Industry with rough standards (Exhibit 5).
- (f) The long-term financial strategy of the water industry is to provide efficient coverage of the total population in a way that is financially viable in the long term. Thus, water tariffs should exceed long-term costs and each water company should always be financially "healthy" in terms of: liquidity, activity, profitability and potential (LAPP).

WATER INDUSTRY - STANDARD BALANCE SHEET AT 31 DECEMBER 1983

	<u>\$000</u>
<u>ASSETS</u>	
<u>Current assets</u>	
Cash	2
Accounts receivable	146
Inventory	78
Other	175
A. Total current assets	<u>401</u>
<u>Fixed assets</u>	
Cost/revaluation	5,831
Accumulated depreciation	1,165
Net	4,666
Construction in progress	30
B. Total fixed assets	<u>4,696</u>
<u>Other assets</u>	
Investments	32
Other	116
Total	<u>148</u>
C. TOTAL ASSETS	5,245 =====

LIABILITIES AND OWNERS EQUITY

<u>Current liabilities</u>	
Accounts payable	115
Accrued expenses	77
Other	25
D. Total current liabilities	<u>217</u>
<u>Long term liabilities</u>	
Bonds	2,522
Other	896
E. Total long term liabilities	<u>3,418</u>
<u>Owners equity</u>	
F. Capital stock	814
G. Revaluation reserve	299
H. Accumulated profit	497
I. Total equity	<u>1,610</u>
TOTAL LIABILITIES AND OWNERS EQUITY	5,245 =====

WATER INDUSTRY - STANDARD INCOME STATEMENT
YEAR ENDED 31 DECEMBER 1983

	<u>Amount</u> <u>\$000</u>	<u>%</u>
<u>REVENUE</u>		
a. Water sales	1,420	100
b. Other sales	-	-
c. Total revenue	<u>1,420</u>	<u>100</u>
<u>OPERATING COSTS</u>		
d. Personnel	405	28
e. Power	75	5
f. Chemicals	125	9
g. Maintenance, Other	115	8
h. Indirect Administrative Expenditure	<u>153</u>	<u>10</u>
i. Total operating expenses	<u>873</u>	<u>61</u>
j. OPERATING PROFIT BEFORE DEPRECIATION (OPBD)	547	39
k. DEPRECIATION	87	6
l. OPERATING PROFIT AFTER DEPRECIATION (OPAD)	<u>460</u>	<u>33</u>
m. NON-OPERATING EXPENSES - Interest	<u>309</u>	<u>22</u>
n. NON-OPERATING INCOME	151	11
	21	1
o. PROFIT BEFORE TAXES	<u>172</u>	<u>12</u>
p. TAXES	71	5
q. NET PROFIT	<u>101</u> =====	<u>7</u> ===

WATER INDUSTRY - STATEMENT OF ACCUMULATED PROFIT YEAR ENDED 31 DECEMBER

Opening balance	471
Add: Net profit for the year	<u>101</u>
	572
Less: Dividends	<u>85</u>
Closing balance	<u>497</u> =====

SPECIAL PERFORMANCE INDICATORS FOR THE WATER INDUSTRY

<u>No.</u>	<u>Std.</u> *	<u>Item</u>	<u>Indicators</u>	
			<u>Format I</u>	<u>Format II</u>
<u>LIQUIDITY</u>				
L1	2:1	CA:CL	1.5:1	1.5
L2	1:1	QA:QL	.7:1	.7
L3	1:2	E : D	1:2	.5
<u>ACTIVITY</u>				
A1	.4	S/A	- times	.3
A2	30	Days - Receivables	- days	30.0
A3	30	Days - Payable	- days	30.0
A4	-	Connections - No.	- no. conn.	10,000
A5	+10	Conn. (new)/Conn. no. %	- %	+10
A6	600	Sales Vol. M ³ /Conn. No.	- M ³ /conn.	400
A7	200	Sales Vol. \$/Conn. No.	- \$/conn.	\$ 140
A8	1000	Pop. served/employee No.	- population	800
A9	1500	Population served/employee	- no	1,750
<u>PROFITABILITY</u>				
P1	50	OPBD/S %	- %	39
P2	5	NP/S %	- %	7
P3	10	NP/OE %	- %	6
P4	15	Cash Flow/Total Assets %	- %	4
P5	5	OPAD/Interest	- times	1.5
P6	\$.20	Oper. Cost \$/Sales Vol. M ³	- \$/M ³	\$.24
P7	\$.25	Total Cost \$/Sales Vol. M ³	- \$/M ³	\$.32
P8	\$.33	Sales Val. \$/Sales Vol. M ³	- \$/M ³	\$.35
<u>POTENTIAL</u>				
O1	80	Pop. served/Total Pop. %	- %	70
O2	80	Prod. Metered/Prod. Cap. %	- %	60
O3	80	Sales Vol./Prod. Met. %	- %	81
O4	20	Water Unacctd./Prod. Met. %	- %	19

* Note: The above are only rough standards. More useful standards relate to such factors as: size, technology, location, etc., and the effects of inflation.

11.12 INSTRUCTIONS

- (a) Study this note and learning patterns very carefully.
- (b) Record significant points in your notebook
- (c) Do the following homework tonight:
 - (1) Complete the daily course diary for Part I including notes on each case and key points learned for review tomorrow.
 - (2) Bring your programmed learning up to date and read the glossary.
 - (3) Study the summary lectures for Part I and Part II
 - (4) Do the quiz of financial arithmetic covering every question

COURSE DIARY - DAY 2

NOTE: COMPLETE ONE SHEET OF THE COURSE DIARY FOR EACH DAY INDICATING:

1. Key points learned
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IDEAS FOR ACTION ITEMS

Course: _____

Dates: _____

Ideas I would like to try out when I return to work, based on what I learned in this course.

Note: You can use the course objectives, what you learn in class, the course handouts, conversations with others, etc., to come up with ideas. Think especially about the kind of information you now manage with and the kind of information you would like to have.

ASSIGNMENT 12.0 - SUMMARY LECTURE FOR PART II AND FEEDBACK REPORT

12.1 WORK COMPLETED

Package of accounting reports

Basic financial analysis

Water industry - performance indicators

12.2 POINTS ON CASES

Tom Lyster

- Analysis of income statements
- Water industry performance indicators
- Comparison with past years, budget and industry averages
- Forecasting a future income statement based on estimates of: population, sales, ratios, etc.

Bill Brown

Effects of change on sales and costs: in total and by M³ or by connection.

Special Supply Company

- Comparison of financial statements against past and forecast figures
- Water industry performance indicators
- Effect of increased sales on assets required
- Deterioration of E:D ratio
- Bank problems
- Dividend reduction to save cash

12.3 MATERIALITY

Compare data by amounts and ratios

Concentrate on the big figures

Compare them against a standard (past, forecast, industry average)

Find out why they changed

12.4 TRENDS TO BE EXPECTED IN A HEALTHY COMPANY

Sales and profits increase

Profitability ratios increase

Inventory and receivables in relation to sales

Equity : Debt (1:1 strong) but not less than 1:2

12.5 BALANCE SHEET

Fixed assets and current assets financed by liabilities and owners equity. Investigate how and why the assets are valued!

12.6 INCOME STATEMENT

Sales less cost and expense gives profit for the accounting period. Distinguish operating (normal) profits from non-operating profits and losses. Investigate profits and losses NOT charged to the income statement but charged to:

- (a) Accumulated profit
- (b) Capital reserve

Note: Published financial statements often do not reveal sales, gross profit or detailed operating expenses.

12.7 WATER DEMAND AND QUALITY

- (a) Tariffs - selling prices for water are negotiated tariffs based on past costs and allowed rates of return on investment. The long delay between the request for price increases and the actual change of tariffs are normal and requires "financial forecasting".
- (b) Demand - it is also often assumed that the customers' demand for water is "inelastic" (not changed by price), however, recent studies report elasticity of demand by 30% when prices are increased by 100%.
- (c) Water quality - justification for high water quality at high cost must relate to the ultimate water usage. However, only about 20% water produced is actually consumed internally. Individual consumption may vary from 20 M³ to 100 M³ per capita per annum. In developing countries, contamination is often due less to processing problems than to infiltration of the pipes due to failure to maintain adequate water pressure in all parts of the system. This involves complex investment decisions as to how much spare pumping capacity is justified to maintain pressure and water quality.

12.8 WATER INDUSTRY FORECASTING

Since the horizon of the fixed assets is from 10 to 50 years, new capital projects require long-term financial forecasting to justify their return on investment. However, two problems arise:

- (a) There may be no viable return on investment where the investment is made for social/political objectives.
- (b) Financial forecasts of 5-20 years ahead require three key underlying assumptions that are difficult to estimate: tariff levels, inflation and exchange rates. These affect sales, costs, profits and, above all, cash flow. For long-term financial viability, there must be some attempt (despite all the financial uncertainties) to cover long-term cost with adequate tariffs.

12.9 WATER INDUSTRY PRODUCTION COSTS AND SALES

- (a) Production - measurement of metered water is a complex technical problem, and the difference between total water production metered and total water sold ("Unaccounted for water") may vary from 10 to 60%. Alternative causes of such "losses" include: poor measurement, illegal connections, leakage, etc.
- (b) Cost - in the Water Industry, there is a wide variation of cost per M³ of water sold which may related to such factors as: water source, location, processing, quality, size of plant, etc. A rough indication of this variation is given below:

	<u>Small</u>	<u>Medium</u>	<u>Large</u>
Population served - thousands	10.0	100.0	1,000.0
No. of Connections - thousands	2.0	20.0	200.0
Annual Production Capacity - M ³ millions	1.0	10.0	100.0
Total Water Cost - M ³	\$.30	\$.20	\$.10

Cost variations may also result from the following factors:

1. Only 20 to 80% of total population served.
2. 20 to 80% of population served with only private connnections.
3. Capacity production based on annual per capita consumption which may vary from 20 to 100 M³ per capita per annum.
4. Different water technologies:

	<u>Cost \$/M³</u>
Gravity feed without processing	\$0.01 to \$0.10
Deep well pumping with processing	\$0.10 to \$0.30
Salt water processing	\$0.40 to \$5.00

- (c) Non-operating expense and income - expense not directly related to normal water operations includes: interest, losses on sale of fixed assets, etc. Non-operating income may include: profits on sale of fixed assets, interest and dividends received, etc. Such non-operating items may significantly effect net profit, especially when foreign exchange and inflationary effects are considered.

12.11 WATER INDUSTRY PERFORMANCE INDICATOR ANALYSIS

- (a) Liquidity - current ratio (2:1) and quick ratio (1:1) are generally comparable with business norms. However, the E:D ratio varies from 1:1 to 1:3, while still being "healthy" according to the industry (health in financial terms relates to comparability with other organisations in the industry).

However, the main current asset is accounts receivable (not inventory) which requires special controls and expediting to provide the critical cash flow. Regular "ageing" of accounts receivable by due date helps to determine which accounts are overdue and require special treatment. The objective is to keep receivables current and avoid the need to cut off supplies, which would reduce future sales volume, especially when the pipe-laying investment has already been incurred. Illegal water connections are a critical problem in many countries and require continuous detection procedures.

- (b) Activity - low ratio of S/A (sales/assets) seldom exceeds 0.3 due to the high fixed asset investment, especially when assets are revalued to replacement cost. Days of receivables and payables are useful control measures. Concentrate on the number of connections, related to sales volume in M³ and sales value and number of employees.
- (c) Profitability - distinguish OPBD from OPAD by amount and percentage. Consider the interest coverage by the ratio OPAD/interest. Relate water sales and costs to M³ for various types of connections.
- (d) Potential - relates to population coverage, capacity working and control of meter production. Recognise that the tariff price of water could affect demand. Although demand is inelastic within certain limits, current studies show resistance to new schemes for water supply which involve higher out-of-pocket expenses than existing water regardless of quality.

Expansion of capacity to improve population coverage must relate to the customers' ability and willingness to pay, since accounts receivable are a major investment of working capital and a major source of both cash flow and potential losses.

12.12 WATER INDUSTRY FINANCIAL FORECASTING

- (a) Horizon - since the working life of the fixed assets may be 10 to 100 years, new major investments require long-term financial forecasting. The value of such forecast depends upon the validity of the underlying key assumptions. Inflation and tariff levels are extremely difficult to estimate over long periods.
- (b) Income statements and balance sheets can be forecast forward using baseline data, ratios and estimates for a 1-5 year period.
- (c) Short-term cash forecasting using ((b) above) and credit term data can indicate receipts and payments over shorter periods of 1-2 years.
- (d) Long-term funds flow statements, however, are vital to show the key major management financing decisions for a 1-20 year period as follows:

Sources of funds:

	<u>Amount</u>	<u>Source</u>
Net income (after deducting depreciation)	37	Income statement
Depreciation (already deducted to compute net income but added back now because it is not paid back in cash)	100	Income statement
New long-term loans	385	Balance sheet
Sale of fixed terms	-	Special data
New capital	-	Balance sheet
Total sources	<u>522</u>	

Uses of funds:

New fixed assets	423	Balance sheet/ special data
Dividends paid	33	Statement of accumulated profit
Changes in working capital (below)	66	Balance sheet
Total uses	<u>522</u>	

Changes in working capital:

	<u>Opening</u>	<u>Closing</u>	<u>Change</u>	
Current assets	70	287		Balance sheet
Current liabilities	24	175		Balance sheet
Net working capital	<u>46</u>	<u>112</u>	66	

12.12 WATER INDUSTRY FINANCIAL FORECASTING (CONT'D)

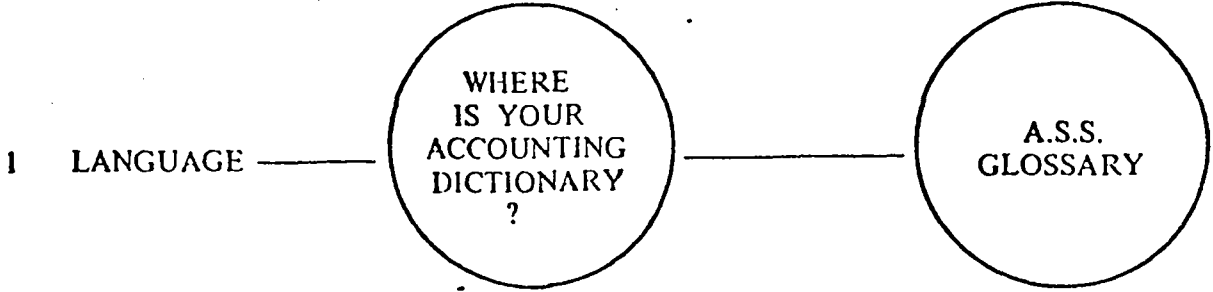
- (e) Sources of data for the funds flow statement are: opening and closing balance sheets, income statement for the accounting period, statement of accumulated profit plus other data on changes in fixed assets and long-term financing during the period. The computations can become extremely complex and every effort must be made to simplify the results for easy communication to management.
- (f) Funds flow may be used to analyse past decisions or to forecast the effect of future decisions so that appropriate changes in policy may be made to have funds available when needed, while keeping the financial health of the company to the appropriate level of risk.

12.13 WATER INDUSTRY OPERATING RATIOS

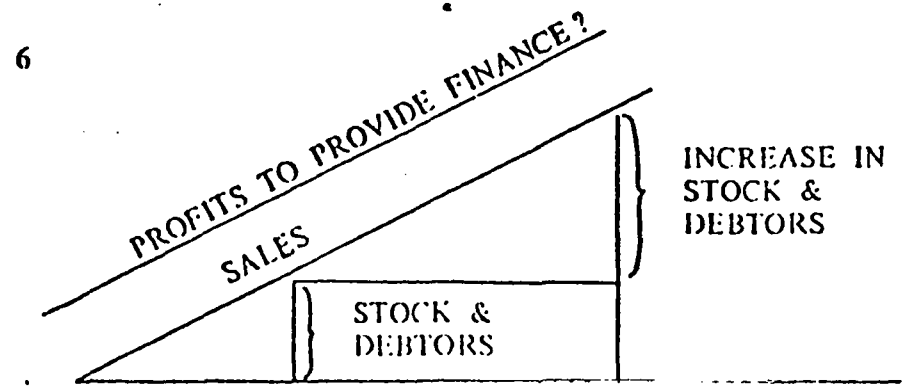
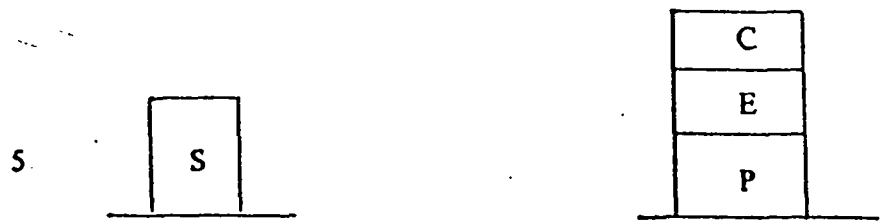
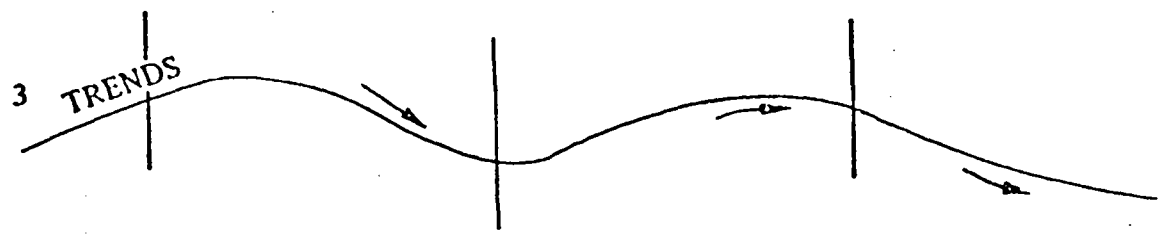
The performance indicators can be extended and analysed by: liquidity, marketing, collection, production, cost control, profitability and personnel management as outlined in Exhibit 1.

For effective business control each water industry should:

- (1) analyse the environment and operation at least once a year.
- (2) develop a list of critical operatory problems
- (3) establish appropriate critical monthly indicators directly related to these problems
- (4) control monthly indicators with appropriate investigation.



2 CASH)
ORDERS) VITAL FOR HEALTH



WATER INDUSTRY PERFORMANCE INDICATORS BY FUNCTION

<u>No.</u>	<u>Indicator</u>	<u>Measure</u>	<u>Rough standard</u>
<u>Liquidity management</u>			
1.	CA:CL	R	2:1
2.	QA:QL	R	1:1
3.	E : D	R	1:2
4.	OPAD/Interest	times covered	3
<u>Marketing management</u>			
5.	Population served/Total population	%	80
6.	No. of connections		
7.	Connection increase (decrease) %	%	10
8.	Sales volume M ³ /connection	M ³ /conn.	600
9.	Sales value \$/connection	\$/conn.	\$200
<u>Collection management</u>			
10.	Days of receivables	No. days	30
<u>Production management</u>			
11.	Production metered M ³ /production capacity	%	80
12.	Sales volume M ³ /production metered	%	80
13.	Water unaccounted for M ³ /production	%	20
<u>Cost control management</u>			
14.	Total oper. exp. before depn./sales vol. M ³	\$/M ³	\$0.20
15.	Total oper. exp. after depn./sales vol. M ³	\$/M ³	\$0.25
16.	Fuel cost/sales volume M ³	\$/M ³	\$0.02
17.	Pumping cost/sales volume M ³	\$/M ³	\$0.03
18.	Personnel cost/sales volume M ³	\$/M ³	\$0.10
19.	Water treatment cost/connection	\$/conn.	\$10.00
20.	Water transmission and distr. cost/conn.	\$/conn.	\$10.00
21.	General admin. cost/connection	\$/conn.	\$10.00
<u>Profitability management</u>			
22.	OPBD/S	%	50
23.	Depreciation/S	%	15
24.	Interest/S	%	10
25.	NP/S (net profit/sales)	%	5
26.	NP/OE (net profit/owners equity)	%	10
27.	Cash flow/total assets	%	15
<u>Personnel management</u>			
28.	No. employees/connection	No. employees	.03
29.	Total payroll/no. employees	\$	\$3,000
30.	Overtime pay/total payroll %	%	10
31.	Population served/employer	No	1,500

Note: The rough standards above are for illustration of data to be developed from industry averages separately for: small, medium and large scale water company operations.

CONCLUSIONS

AGL is designed to help you develop language, concepts and confidence and to motivate you towards further study and practice!

Financial analysis and the usual performance indicators help to tease out the questions to ask; the layout of the financial statements is not important provided you have the confidence to find your way about!

Cash flow is more important than profit.

Financial statements are based on accounting concepts (which are as flexible as proverbs one for every occasion!)

Figures are only estimates; compare them against a useful standard to determine their significance. Don't pretend to be too accurate!

Try to find out management's objectives in preparing the specific financial statements that you study (tariffs? shareholders? bank? mergers? efficiency?)

Study the "Notes to the financial statements" very carefully! Question the valuation of assets. Look out for possible manipulation. Check that the financial statements are audited. Consider whether the auditors are professional, qualified and independent!

FINAL NOTE

- (a) THIS ENDS OUR PROGRAMME. WE HOPE IT HAS INSPIRED YOU TO DEVELOP YOUR SKILLS BY PRACTICAL APPLICATION. THANK YOU FOR YOUR INTEREST AND HARD WORK. KEEP THE GLOSSARY HANDY AS A DAILY REFERENCE FOR ACCOUNTING LANGUAGE AND CONTINUE YOUR STUDIES! WE HOPE YOU ENJOYED THE AGL EXPERIENCE.

GLOSSARY OF ACCOUNTING LANGUAGE

ACCOUNT - page in the ledger recording the common aspect of different transactions. Real, personal, nominal accounts. A record of monetary transactions grouped by categories.

ACCOUNTANCY - accounting.

ACCOUNTING - art of preparing accounting reports from book-keeping records. Based on accounting concepts or principles: true and fair, money, cost, conservatism, consistency, comparability, entity, going concern, recognition of profit, accrual, etc.

ACCOUNTING CONCEPTS - accounting principles. Practical rules which enable book-keeping records of transactions to be converted into accounting reports.

ACCOUNTING LANGUAGE - special accounting meaning rather than the ordinary meaning of words.

ACCOUNT PAYABLE - creditor. Money owed by a business. Current liability.

ACCOUNTING PERIOD - time interval from the date of one balance sheet to the next. Period of the income statement. Usually one year.

ACCOUNTING PRINCIPLES - accounting concepts.

ACCOUNT RECEIVABLE - debtor. Money owed to the business.

ACCOUNTING REPORTS - reports on the situation and progress of an organisation in financial terms. For example, balance sheet and income statement (profit and loss account).

ACCUMULATED DEPRECIATION - a total amount by which the original cost of a fixed asset shown on the balance sheet has been reduced to represent its deterioration and obsolescence. For example, consider a water works that cost one million dollars and each year depreciation of \$50,000 is recorded against it. After five years, its accumulated depreciation would be 5 x \$50,000 or \$250,000. The main purpose of depreciation is to help set prices so as to accumulate a fund that can be used to replace assets. "Reserve" for depreciation. "Provision" for depreciation. NOT the profit for one year only.

ACCRUAL - liability. Creditor. Payable. Current liability. Accounting concept: income and expense for the accounting period must be included whether for cash or credit. Matching of revenues with appropriate expenses to provide a meaningful net income figure for an accounting period, independent of the time cash may have been exchanged.

ADMINISTRATIVE EXPENSE - cost of directing and controlling a business. Includes: director's fees, office salaries, office rent, lighting, heating, legal fees, auditor's fees, accounting services, etc. NOT: research, manufacturing, sales or distribution expense.

AGING - an analysis according to time elapsed after the billing date (or due date) to help management determine how to collect bills and to discipline customers.

AMORTISATION - similar to depreciation. The process of writing off the cost of an intangible asset, such as a lease or patent, over its useful life. The accounting process for amortisation is similar to the process of depreciation for fixed assets.

APPROPRIATION ACCOUNT - statement of accumulated profit.

ASSET - something owned by the business which has a measurable cost. Fixed, current or other assets.

AUDITING - a critical investigation of the accounting records and internal controls of an organisation. For many organisations, it is a legal requirement that an audit be carried out by an independent accountant prior to the issuance of the annual accounts of an organisation.

AUTHORISED CAPITAL - capital stock of the business authorised by law. May be only partly issued for cash. Ordinary or preferred stock.

BAD DEBT - debtor who fails to pay. Amount written off to expense.

BALANCE - difference between the debits and credits in a ledger account.

BALANCE SHEET - accounting report. Statement of assets owned by a business and the way they are financed from liabilities and owners equity. DOES NOT indicate the market value of the business.

BONDS - debentures. Long-term loans. Often secured on assets. NOT current liabilities.

BOOK-KEEPING - systematic recording of transactions in debits and credits as they occur. Posting of transactions from journals to ledgers to provide data for accounting reports.

BOOK VALUE - two meanings:

- (a) Value of assets in the books, the original cost of fixed assets minus their accumulated depreciation.
- (b) Value of ordinary shares in the books. (Computed: owners equity less preference shares, divided by the number of ordinary shares).

BUDGET - plan of action expressed in numbers, for using manpower, materials and other resources. Capital budgets are for project activities often requiring special financing. Operating budgets are for planning and controlling programme activities and are often further divided into source of water supply, transmission, distribution and customer service. There can also be budgets for inventory, maintenance and overheads.

BUILDINGS - fixed assets unless acquired for re-sale. Depreciated to expense over their working life. Balance sheet value at cost less depreciation. NOT market value. Sometimes revalued periodically. Land is NOT depreciated.

CAPITAL - several different meanings:

- (a) Capital stock.
- (b) Owners equity (net worth).
- (c) Working capital.
- (d) Fixed asset (as apart from expenses).
- (e) Assets of the business.

CAPITAL INVESTMENT - a large investment in fixed or other long-term assets.

CAPITAL RESERVE - capital surplus. Capital profit. NOT available for normal dividend. NOT accumulated profit. Includes share premium. NOT cash. The money which comes mainly from customers to help finance capital investment in facilities.

CAPITAL STOCK - share capital in units with or without par value.

CAPITAL SURPLUS - capital reserve.

CASH - money asset of a business. Includes both cash in hand and cash in the bank. A balance sheet current asset.

CASH DISCOUNT - discount allowed to a customer for prompt payment of the debt. Terms may be: "2¹/₂% for payment within 10 days or net (no discount) for payment within one month".

CASH FLOW - cash receipts and cash disbursements over a given period.

CASH TRANSACTION - receipt or payment of cash.

CHART OF ACCOUNTS - a systematic list of all accounts for a concern. A chart of accounts with a description of their use and operation is a manual or a book of accounts, which is a main feature of a system of accounts.

CLAIMS - claims against the assets of the business. Owners or creditors. Total claims equal total assets. Creditors' claims are called liabilities. Owners' claims are called owners equity.

CLOSING STOCK (INVENTORY) - inventory at end of the accounting period. Part of the computation of cost of goods sold.

COLLATERAL - security

COMPARABILITY - accounting concept: accounting reports are prepared consistently so that the data is comparable.

COMPANY - legal entity. Limited or unlimited. Regulated by the Companies Act.

CONSISTENCY - accounting concept. See comparability.

CONSERVATISM - accounting concept: accounting reports avoid overstating the financial position. Profits usually not recognised until realised. Losses usually recognised as soon as they are known.

CONSOLIDATED STATEMENTS - accounting statements for a group of companies as a whole with transactions between subsidiary companies eliminated.

CONTINGENT LIABILITY - liability not yet recorded on the balance sheet. May or may not become an actual liability.

CONVENTION - assumption made in accounting. Many accounting concepts arise from assumptions that have proved to be practicable.

CORPORATION - company.

COST - several meanings:

- (a) Expenditure on a given thing.
- (b) To compute the cost of something.
- (c) Direct cost or indirect cost (indirect cost is overhead).

COST ACCOUNTING - recording of cost data and preparation of cost statements.

COST CONCEPT - accounting concept. Assets valued at cost NOT market value. Exceptions:

(a) Fixed assets valued at cost less depreciation.

(b) Current assets normally valued at the LOWER of cost OR market value.

COST OF GOODS SOLD - cost of goods ACTUALLY sold during the accounting period. Excludes cost of goods left unsold. Excludes all overhead except manufacturing overhead. Charged in the income statement. Sales less cost of goods equals gross profit. Cost of sales.

COST OF SALES - cost of goods sold.

CREDITOR - payable. Account payable. Liability. Money owed to other parties. NOT owners equity. Current or long-term liability. A person or company who has supplied goods or services but who has not yet been paid for them.

CREDITOR'S CLAIMS - liabilities. NOT owners equity.

CREDIT TRANSACTION - transaction which incurs (accrues) liability. No cash is paid or received until later.

CUMULATIVE PREFERENCE SHARES - preference shares whose unpaid dividends accumulate until they are eventually paid by the company. Some preference shares are specifically non-cumulative.

CURRENT ASSETS - assets which are normally realised in cash or used up in operations during one operating period. Normally one year. Includes: cash, debtors, inventory, prepaid expenses. Not fixed or "other" assets.

CURRENT LIABILITY - liability due for payment within one operating period, normally one year. Does not include: long-term liabilities or owners equity.

CURRENT TAX LIABILITY - current liability for income tax. Due within one year. See also future income tax liability.

CURRENT RATIO - ratio of current assets divided by current liabilities. Measure of liquidity.

DEBENTURES - secured loans.

DEBIT - a book-keeping term meaning an entry on the left-hand side of a book-keeping record, as in "debits on the left, credits on the right".

DEBTOR - receivable. Account receivable. Money due to business. Current asset. Someone who has received goods or services but has not yet paid for them.

DEFERRED SHARES - shares of a company ranking for dividend after preference and ordinary shares. Deferred stock.

DEFICIT - a loss on the revenue account.

DEPRECIATION (BUILDINGS, VEHICLES, ETC.) - allocating the cost of a fixed asset to expense over its working life. Measure of the COST of using the fixed asset. Land does not depreciate. See also accumulated depreciation, depreciation expense, straight line depreciation and diminishing balance depreciation.

DEPRECIATION EXPENSE - depreciation (at cost) during the accounting period. NOT the same as accumulated depreciation except in the first year of the fixed asset. See depreciation.

DIMINISHING BALANCE DEPRECIATION - depreciation method charging in off the cost of a fixed asset by LEVEL PERCENTAGE of the reducing balance over its working life. The percentage remains the SAME but the depreciation charge decreases.

DIRECT COST - cost which can easily be attributed to a service or product such as the cost of the labour and materials that went into it.

DIRECTOR - officer of a limited company. Member of the board of directors. NOT a partner.

DUAL ASPECT - accounting concept. Two aspects of each transaction. Basis of double entry book-keeping. Debit and credit.

EARNINGS - income. Profit. Revenue.

ENTITY - accounting concept: accounting reports are prepared for a SPECIFIC ENTITY. A shopkeeper, who PERSONALLY owns his business premises, has three entities and rewards:

ENTITY	REWARD
(a) Business owner	Profit
(b) Landlord	Rent
(c) Employee	Wages

EQUIPMENT - fixed asset if acquired for LONG-TERM USE and NOT for re-sale. Recorded in the balance sheet at cost less depreciation, not at market value.

EQUITY - money provided by the owners; any right or claim to assets. An equity holder may be a creditor, part owner or proprietor.

EXCESS OVER PAR VALUE - see stock premium.

EXPENDITURE - money paid for cost, expense, asset or other purposes. An expenditure is charged against income in the period when that asset is consumed to help generate that income.

EXPENSE - expenditure properly chargeable in the income statement. Amount used up during the accounting period. Indirect cost. Manufacturing, selling or administrative expense. Includes DEPRECIATION of fixed assets. Expenses are "matched" against revenues during the accounting period to compute the figure of profit. Not fixed asset.

Note: purchases of small low value fixed assets (e.g. under \$100 each) are often charged as expense, to avoid depreciation calculations and show a conservative financial position.

FACE VALUE - nominal value of shares, par value. Not the book (owners equity) value or market value.

FINANCE - dealing with money and its investment.

FINANCIAL POSITION - the display of assets and liabilities on a balance sheet.

FIXED ASSETS - assets such as land, plant and equipment acquired for long-term USE in the business and NOT for re-sale. Charged to overhead expense periodically and NOT for re-sale. Charged to overhead expense periodically as DEPRECIATION. Recorded in the balance sheet at cost less depreciation, not market value. Sometimes revalued periodically. Land is NOT depreciated. See also expense.

FIXED COST - an operating expense that depends on the passing of time, and not so much on business volume. For example, interest on loans, rent, property taxes, depreciation (mostly).

FIXTURES AND FITTINGS - fixed assets if acquired for use and NOT for re-sale.

FUNDS-FLOW STATEMENT - shows funds received and expended; sources and applications of funds showing elements of net income and working capital to help managers understand the whole financial operations for a period of time.

FUTURE TAX LIABILITY - reserve for future income tax. Tax computed on the current year's profit not due for payment until a future date. Normally becomes the current tax liability in the following year.

GENERAL EXPENSE - expense of the business which is NOT part of manufacturing, selling or administrative expense. Sometimes grouped with administrative expense in the income statement. Includes: audit fees, legal expenses, etc.

GENERAL RESERVE - part of accumulated profit set aside in the owners equity section of the balance sheet. Avoids distribution of profits as dividends. IS NOT AN ASSET. IS NOT CASH. MERELY PART OF OWNERS EQUITY SHOWN SEPARATELY ON THE CLAIMS SIDE OF THE BALANCE SHEET.

GOING CONCERN - accounting concept: all accounting reports and values assume that the business is continuing and not about to liquidate (end). In accounting, MARKET values are therefore based upon those expected in the NORMAL course of business.

GOODWILL - value of the name, reputation or other intangible assets of a business. In accounting, it is only recorded (at cost) when it is PURCHASED. Not depreciated. Often written off to nil. Never valued at market price. Generally a hidden asset of the business.

GROSS PROFIT - sales minus cost of goods sold. Profit computed before charging for selling and administrative expenses, etc.

GROSS PROFIT PERCENTAGE - measure of profitability computed:

$$\frac{\text{Gross profit}}{\text{Net sales}} \times 100\%$$

INCOME - earnings. Profit. Revenue. Sometimes used to mean sales and all forms of incoming benefits, not necessarily in cash. Money or money equivalent earned or accrued in an accounting period.

INCOME STATEMENT - profit and loss statement. Earnings statement. It shows the income, expenses and net income (or net loss) for a period of time.

INCOME TAX LIABILITY - see current tax liability or future tax liability.

INCOMPLETE TRANSACTION - transaction incomplete at the end of the accounting period. Cause of uncertainty in accounting. Concept of profit recognition must be employed to determine in which accounting period the profit is earned or loss sustained.

INDIRECT COST - overhead. Costs which cannot be directly attributed to a unit of production, service or product.

INTANGIBLE ASSET - asset which cannot be physically touched. Normally "other" asset. NOT fixed or current asset. Examples are goodwill and patents.

INVESTMENT - amount invested in stocks, shares, bonds, debentures or any asset. See also trade investments and marketable securities.

INVENTORY - store of goods on hand for re-sale. Includes supplies. Valued at cost or LOWER market value, NOT selling price. Increased by purchases. Decreased by cost of goods sold. Balance sheet current asset. Not a fixed asset.

ISSUED CAPITAL - capital stock actually issued by a company. Part of owners equity in the balance sheet. See also authorised capital. Price at which a share is first sold by a company. Normally the nominal value plus share premium or less SHARE discount. May be ordinary, preference or deferred shares. NOT bonds or debentures. NOT cash. NOT working capital.

ISSUE PRICE OF A SHARE - price at which stock is first sold by a company. Normally the nominal value plus share stock premium or less share discount.

LAND - freehold or leasehold property owned by a business. Normally fixed asset. Recorded at cost. NOT depreciated. Sometimes land and buildings revalued to market value. Difference between cost and revaluation, increases fixed assets and increases capital reserve.

LEASE - an arrangement with the owner of an asset that allows another person or organisation to use it.

LEDGER - a group of accounts showing in detail all the transactions on those accounts. Small organisations may still keep ledgers in books; large organisations now store such information magnetically on tape or disks.

LIABILITY - an amount owed by one person or organisation to another.

LIFO - last in first out method of costing stock.

LIMITATIONS OF ACCOUNTING - accounting reports show a limited picture of a business because:

- (a) Some important facts cannot be stated in money terms.
- (b) Accounting periods at fixed intervals involve uncertainty due to incomplete transactions.
- (c) Accounting reports depend on concepts.
- (d) Accounting is not scientific, but depends upon judgement.

LIMITED COMPANY - corporation whose stockholders have limited their liability to the amounts they subscribe to the stock they hold. Regulated by the corporation acts and SEC regulations.

LIQUIDITY - availability of cash or assets easily turned into cash to pay liabilities.

LONG-TERM LIABILITY - liability NOT due for payment within one year. Bonds, debentures or loans. Holders are creditors and receive interest. They are not shareholders. Not current liability. Not owners equity.

LOSS - opposite of profit or income. Excess of costs and expenses over income or sales. Reduces owners equity. May not affect the cash balance. Deficit.

LOSS ON DISPOSAL OF FIXED ASSETS - loss due to sale or disposal of fixed assets. Excess of fixed asset cost over accumulated depreciation, and scrap or sale proceeds. Treated as "other income and expense" in the income statement. Significant losses or profits sometimes charged to capital reserve.

MACHINERY - fixed asset if acquired for USE and not for re-sale. Valued at cost less depreciation. Machinery manufactured or acquired for RE-SALE is inventory. See depreciation.

MAINTENANCE COST - expense of maintaining or repairing the fixed assets of the business. Charged as expense in the income statement.

MATCHING - accounting concept: costs and revenues in the accounting period should be "matched" in order that the computed profit may be true and fair. Matching means "appropriate to" not "equal to".

MONEY - accounting concept: limitation of accounting reports which cannot reveal facts about the business which cannot be expressed in money terms.

MANUFACTURING EXPENSES - overheads for manufacturing. Part of cost of goods sold. Not sales or administrative expense.

MORTGAGE - long-term loan normally SECURED on fixed assets, usually property. Long-term liability. Not a current liability.

NET - two meanings:

(a) Figure after deduction, e.g. GROSS sales less sales returns, equal NET sales.

(b) Payment of the full amount due with no allowance for cash discount (2¹/₂% 10 days, net 30 days).

NET INCOME - see net profit.

NET PROFIT - profit for the accounting period after income tax. Net income. Net earnings. Increases owners equity. Does NOT necessarily affect cash balance.

NET PROFIT PERCENTAGES - measures of profitability:

(a) Net profit to sales: $\frac{\text{Net profit}}{\text{Net sales}} \times 100\%$

(b) Net profit to owners equity (return on investment):
 $\frac{\text{Net profit}}{\text{Owners equity}} \times 100\%$

Note: return on investment may appear to be high if the assets in the balance are significantly UNDERVALUED.

NET WORTH - owners equity. Assets less liabilities. Balance sheet value of owner's claims based on accounting concepts. Does not indicate the market value of a business.

NOMINAL VALUE - face (par) value of shares. Authorised and issued share capital in the balance sheet shows the nominal value of the shares separately from any premium or discount. Not the book value or market value of shares.

NON-OPERATING EXPENSES - expense not directly related to **NORMAL** operations, e.g. loss on sale of fixed assets, interest paid, etc., significant losses sometimes charged to accumulated profits or even to capital reserve.

NON-OPERATING INCOME - income not arising from **NORMAL** operations, e.g. profit on sale of fixed assets, dividends received, etc.

NOTES TO FINANCIAL STATEMENTS - notes attached to the balance sheet and income statement which explain:

- (a) Significant accounting adjustments.
- (b) Information required by law, if not disclosed in the financial statements.
- (c) Changes in accounting concepts used to prepare the financial statements.
- (d) Exceptions to consistency with previous figures.
- (e) Contingent liabilities.
- (f) Commitments.

OBJECTIVITY PRINCIPLE - accounting information must be based on verifiable (but perhaps irrelevant for decision-making) evidence.

OPENING STOCK - inventory at the beginning of the accounting period.

OPERATING COST - operating expense.

OPERATING EXPENSES - all overheads of the business. Sometimes restricted to mean only selling, administrative and general expenses.

OPERATING PROFIT - gross profit less operating expense in the income statement.

ORDINARY SHARES - capital stock. **PART** of owners equity in the balance sheet. Holders entitled to dividends recommended by the directors. Not preferred stock. Possible values:

- (a) Face or nominal value.
- (b) Market value.
- (c) Issue price (including any premium).
- (d) Book value (total owners equity less the par value of preferred shares). See also deferred shares.

ORDINARY STOCK - ordinary shares. Common stocks. Shares in units.

ORDER - purchase order to a supplier for delivery of goods and services.

OTHER ASSETS - assets which are not fixed or current assets. Normally: goodwill, research expenditure carried forward, trade investments, etc. Valued at cost not market value, unless **LOSSES** are exceptional.

OTHER CREDITORS - creditors or accruals for services. Not trade creditors for purchase of material and supplies. Current liabilities.

OVERHEAD - overhead expense. Indirect cost which cannot be conveniently associated with a unit of production.

OVERHEAD EXPENSE - overhead. Indirect cost. Fixed or variable with volume of production. See manufacturing, sales and administrative or general expenses. **NOT** direct cost. **NOT** direct labour. **NOT** direct material.

OWNERS CLAIMS - owners equity.

OWNERS EQUITY - owner's claims. Net worth. Amount due to owners of the business. Increased by profits. Reduced by losses and dividends. Note: assets less liabilities equals owners equity.

PACK OF ACCOUNTING REPORTS - set of financial statements. Balance sheet, income statement, statement of accumulated profit.

PAR VALUE - see nominal value.

PATENT - legal right to exploit an invention. Asset in the balance sheet. Recorded at cost less depreciation under the heading "other assets".

PAYABLE - creditor. Liability. Account payable.

PLANT - equipment and machinery. Fixed asset if acquired for use and NOT for re-sale.

PREFERRED SHARE - share which entitles the holder to fixed dividends (only) in preference to the dividends for ordinary shares. On liquidation, normally entitled only to the par value. NO right to share in excess profits. Preferred stock.

PREFERRED STOCK - preference shares in units.

PREPAID EXPENSE - expense paid in advance for more than one accounting period. Examples prepaid rent or taxes, unexpired insurance premiums.

PRINCIPLES OF ACCOUNTING - accounting concepts.

PROFIT - income. Earnings. Excess of sales over costs and expenses, during an accounting period. Does not necessarily increase cash - it may be reflected in increased assets or decreased liabilities. Increases owners equity. The term NET profit sometimes means profit less income tax.

PROFIT AFTER TAX - net profit. Profit before tax, less income tax for the accounting period, in the income statement.

PROFIT BEFORE TAX - operating profit less non-operating expenses plus non-operating income, in the income statement. NOT net profit.

PROFIT AND LOSS ACCOUNT - income statement. NOT a balance sheet. Statement showing sales, costs, expenses and profit for an accounting period.

PROFIT AND LOSS APPROPRIATION ACCOUNT - statement of accumulated profit. Retained earnings. Balance of profit and loss account.

PROFORMA STATEMENT - projected financial statement for a future date or period, based on transactions not yet made; frequently accompanies a budget.

PROVISION - strictly means liability, but often has several different meanings:

- (a) Reserve, e.g. future income tax liability.
- (b) Accumulation, i.e. accumulated depreciation.
- (c) Expense, e.g. depreciation expense.
- (d) Accrual, e.g. accrued expense, liability.

PROVISION FOR FEDERAL INCOME TAX - federal income tax on the profit in the income statement. Sometimes refers to the:

- (a) Charge in the income statement and/or
- (b) Liability in the balance sheet.

PUBLISHED FINANCIAL STATEMENTS - balance sheet, profit and loss account and statement of accumulated profit, with comparative figures and notes disclosing the information required under the law. Less informative than internal statements. See notes to financial statements.

QUICK ASSETS - cash, call loans, marketable securities, commodity immediately salable, receivables. Quick assets can be made liquid in the immediate future, such as within a month.

QUICK LIABILITIES - current liabilities payable within about a month.

QUICK RATIO - ratio of quick assets to quick (current) liabilities. A measure of immediate liquidity.

R. AND D. - research and development costs. Normally expense. Sometimes treated as "other asset".

RECEIVABLE - account receivable. Debtor. Current asset.

RECOGNITION OF PROFIT - accounting concept: profit (income) is not recognised and recorded until **REALISED** (in cash or debtors). By contrast, **LOSSES** are recognised **IMMEDIATELY THEY ARE KNOWN**. Profit normally recognised when goods are shipped to the customer **NOT** when the order is received or when the customer pays for the goods.

RESEARCH COST - cost of research. Separate overhead or part of manufacturing overhead. Expense. Sometimes carried forward as an "other asset" if it is of specific future benefit for a future limited period.

REDEEMABLE PREFERRED STOCK - preferred stock which may be repurchased by the Company from the shareholders. Part of owners equity. **NET** common stock.

RESERVE - vague term. Strictly means accumulated profit. See revenue reserve, capital reserve, provision.

RETAINED EARNINGS - accumulated profits. Available for dividend. **NOT** capital reserve. **NOT** capital surplus. Part of owners equity.

RETAINED PROFIT - see retained earnings.

RETURNS - see sales returns.

REVALUATION - sometimes fixed assets revalued from cost to current values. Difference credited to capital reserve.

REVENUE - earnings. Income. Profit. Sometimes also used to mean sales.

REVENUE RECOGNITION - revenue is recognised in accrual accounting at the time of sale, regardless of when the money changes hands.

RULES - accounting rules are concepts. Some rules are definite, others depend on judgement.

SALE - price for which goods are sold. Total of amounts sold. Recognised normally when goods are shipped to the customer.

SALES ALLOWANCE - special allowance to a customer against the amount due for goods sold. Often allowed for damaged goods or shortages.

SALES DISCOUNT - trade or cash discount on sales.

SALES EXPENSE - cost of promoting sales and retaining custom. Indirect cost. Overhead expense. NOT manufacturing, administrative or general expense. Includes: advertising, sales literature, sales salaries, travelling expenses, depreciation of sales cars, etc.

SALES RETURN - goods returned by customers.

SALVAGE VALUE - scrap value. The value of a fixed asset that is realised when it is sold.

SEC - a US government agency which sets regulations for financial reporting and securities and stock exchange activities.

SECURITY - an asset pledged against a liability. Collateral. Assets claimable by some creditors in priority to others.

SELLING EXPENSE - sales expense. Expense incurred to get and keep customers.

SHARE - document certifying ownership of shares in a company. Share capital. Part of owners equity.

SHARE CAPITAL - capital stock. Part of owners equity. Money put into a business by the owners. Ordinary, preferred or deferred shares.

SHAREHOLDER - owner of part of the capital stock and owners equity.

SHARE PREMIUM - stock premium excess of original sales price of a stock over its face or par or nominal value. Owners equity. Capital (stock) reserve. NOT available for dividend.

STOCK - usually means capital stock or shares (note that, in Europe and in the retail trades, the word stock is also used to mean inventory).

STOCKHOLDER - shareholder.

STORES - supplies, inventory.

STRAIGHT LINE DEPRECIATION - depreciation method charging off the cost of a fixed asset equally over the years of its working life. See also depreciation, diminishing line depreciation.

SUBSIDIARY - a company, the majority of whose shares are owned by one other organisation. The latter is the parent company.

SUPPLIES - materials used up. NOT part of the product.

TANGIBLE ASSET - asset which can be physically identified or touched. Sometimes means only those assets which have a definite value, i.e. excludes intangible assets, goodwill and R. and D. expenditure carried forward.

TRADE CREDITOR - account payable. Money owed for credit purchases. Current liability.

TRADE DISCOUNT - deduction from the selling price of an invoice because the buyer is in the same trade as the seller. NOT a cash discount.

TRADE INVESTMENT - investment in shares or debentures of another company in the same trade or industry. Long-term investment. NOT a marketable security. "Other asset" in the balance sheet. Value at cost, unless there is a substantial loss.

TRANSACTION - a business event recorded in the accounts. A change in two items in the balance sheet. Cash or credit transaction. May be sale, purchase, cash receipt, cash payment or accounting adjustment. Translated into debits and credits in the book-keeping records.

TREASURY STOCK - capital stock (shares) sold by a corporation and then purchased and held for possible re-sale. Deducted from owners equity in the balance sheet. Nothing to do with the US Treasury!

TRUE AND FAIR - accounting concept: balance sheet and income statement show a "true and fair view" of the business, in accordance with generally accepted accounting principles.

UNCERTAINTY - limitation of accounting. Uncertainty at the end of each accounting period makes it difficult to determine the "true and fair" position. Uncertainty arises from:

- (a) Incomplete transactions.
- (b) Market value of inventory.
- (c) Working life of fixed assets for depreciation calculations.
- (d) Realisable values of current assets.
- (e) Contingent liabilities not yet known or calculable.

UNPAID DIVIDENDS - dividends declared as due to shareholders but NOT yet paid in cash. Shown as current liability in the balance sheet. Deducted from accumulated profit in the owners equity.

VALUE - several meanings:

- (a) Accounting value - value according to accounting concepts, appropriate to the particular asset. Fixed assets valued at cost less depreciation. Current assets generally valued at cost or LOWER realisable value.
- (b) Market value - realisable value of inventory in the normal course of business. (Not in liquidation).
- (c) Real value - NOT known in accounting.

WORKING CAPITAL - special meaning: current assets less current liabilities. NOT the same as "capital".

WORKING CAPITAL RATIO - ratio of current assets to current liabilities. Indication of the liquidity of the business.

WORK IN PROCESS - inventory. Stock. Work partially completed. Valued at the lower of manufacturing cost or market value.

WATER INDUSTRY PERFORMANCE INDICATORS

DEFINITIONS

Liquidity

Current ratio (CA:CL)		Current assets:current liabilities
Quick ratio (QA:QL)		Cash plus receivables:current liabilities
Equity:debt ratio		Total owners equity:current and long-term liabilities

Activity

Sales/assets turnover	- times	Sales/assets
Days receivables	- days	Receivables x 365 days/sales
Days payables	- days	Payables x 365 days/operating expenses except personnel and depreciation
Connections increase	- %	New connections/old connections x 100%
Water M ³ /conn.	- M ³ /conn.	Sales volume M ³ /no. connections
Sales \$/conn.	- \$/conn.	Sales value \$/connections
Employees/conn.	- No./conn.	Total employees/no. connections

Profitability

OPBD/S	- %	Operating profit before depreciation/sales x 100%
NP/S	- %	Net profit/sales x 100%
NP/OE	- %	Net profit/owners equity x 100%
CF/TA	- %	Net profit + depreciation/total assets x 100%
OPAD/interest	- times	Operating profit after depreciation/interest
Oper. cost/M ³ sold	- \$/M ³	Operating cost including depreciation/volume M ³
Total cost/M ³ sold	- \$/M ³	Operating cost + depreciation + interest/sales volume M ³
Sales \$/M ³	- \$/M ³	Sales value \$/ sales volume M ³

Potential

Population served	- %	Population served/total population x 100%
Production capacity	- %	Metered production M ³ /production capacity x 100%
Water consumed	- %	Sales volume M ³ /metered production x 100%
Water unaccounted-for	- %	Water unaccounted-for M ³ /metered production M ³ x 100%

WATER INDUSTRY PERFORMANCE INDICATORS

(Refer to Exhibits 1 and 2 on pages D.12 and D.13)

(The small letters (a, b, c, ...) refer to Income Statements,
and the capital letters refer to entries on the balance sheets)

$$\begin{aligned} \text{P.1 Operating profit before depreciation} &= \frac{j}{d} \times 100 = \frac{\text{Operating revenue} - \text{Operating expenses}}{\text{Operating revenue}} \\ &= \frac{547,000}{1,420,000} = 39\% \end{aligned}$$

Operating expenses include salaries, fuel, chemicals and maintenance funds to run the utility. About 40% of this utility's revenue is being spent to operate it.

$$\text{P.2 Net income ratio} = \frac{\%}{c} = \frac{\text{Net income}}{\text{Total operating income}} = \frac{101,000}{1,420,000} = 7\%$$

Management should be in a position to retain enough net income from revenue to meet current and future needs of the utility. A company that is losing money must go to other sources, such as government, to continue to operate. This usually means that management loses control.

$$\begin{aligned} \text{P.3 Rate of return} &= \frac{o}{I} \times 100 = \frac{\text{Net (or profit before tax)}}{\text{Owners equity}} \times 100 \\ &= \frac{172}{1,610} \times 100 = 10.7\% \end{aligned}$$

$$\text{P.9 Depreciation over operating revenue} = \frac{k}{c} \times 100 = \frac{\text{Depreciation}}{\text{Operating revenue}} = \frac{87,000}{1,420,000} = 6\%$$

A water utility requires a lot of capital assets to generate revenue. Almost half a utility's revenue goes to depreciation, which is the most important source of money to replace assets as they wear out. Depreciation is important to consider when setting prices to generate revenue.

$$\text{P.10 Interest expense over operating revenue} = \frac{m}{c} \times 100 = \frac{\text{Interest expense}}{\text{Operating revenue}} = \frac{309,000}{1,420,000} = 22\%$$

A utility must usually borrow money from banks in order to rehabilitate and expand its system. The cost of money is interest. Over 22% of this utility's revenue is being spent on interest.

$$A. \quad \underline{\text{OPERATING ACTIVITY}} = \frac{172}{1,610} \times 100 = 10.7\%$$

$$B.3 \quad \text{Operating revenue} = \frac{\text{Operating revenue}}{\text{No. of connections}} = \frac{1,420,000}{10,000} = \$142$$

This utility is earning \$142 per connection per year on average.

$$A.6 \quad \text{Cubic metres billed per connection} = \frac{\text{Cubic metres billed}}{\text{No. of connections}} = \frac{4,000,000}{10,000} = 400$$

$$B.5 \quad \text{Operating revenue per cubic metre billed} = \frac{\text{Operating revenue}}{\text{Cubic metres billed}} = \frac{1,420,000}{4,000,000} = 0.36$$

C. COLLECTION EFFORT

$$A.2 \quad \text{Average collection period (months)} = \frac{A2}{c} \times 12 = \frac{\text{Accounts receivable}}{\text{Monthly total revenue}} = \frac{146,000}{1/12 \times 1,420,000} = 1 \text{ month}$$

$$\text{Average collection period (days)} = \frac{A2}{c} \times 365 = \frac{146,000}{1,420,000} \times 365 = 38 \text{ days}$$

This is one of the most critical management ratios for any water utility. Most well-run utilities try to keep their collection period under two months. They do this by having a disciplined programme of shutting off service to defaulters. Utilities that provide both electricity and water are in particularly strong positions to generate cash in this way. However, accurate meter reading is fundamental to success here.

D. COST CONTROL

$$P.1 \quad \text{Operating ratios} = \frac{\text{Operating profit before depreciation}}{\text{Operating revenue}} = \frac{\text{OPBD}}{\text{Sales}} = \frac{i}{c} \times 100 = 39\%$$

$$= \frac{\text{Operating profit after depreciation}}{\text{Operating revenue}} = \frac{\text{OPAD}}{\text{Sales}} = \frac{1}{c} \times 100 = \frac{460}{1,420} \times 100 = 33\%$$

$$\begin{aligned}
 \text{P.10 Operating profit per connection} &= \frac{i}{\text{No. of connections}} \\
 &= \frac{547,000}{10,000} = \$55
 \end{aligned}$$

$$\text{P.11 \% Personnel cost} = \frac{d}{c} \times 100 = \frac{\text{Payroll cost}}{\text{Revenue}} \times 100 = \frac{405}{1,420} \times 100 = 28\%$$

$$\begin{aligned}
 \text{P.12 \% Administrative cost} &= \frac{h}{c} \times 100 = \frac{\text{Administrative and general expense}}{\text{Revenue}} \times 100 \\
 &= \frac{153}{1,420} \times 100 = 11\%
 \end{aligned}$$

These ratios are very easy to compute directly on the income statement and are useful for comparing year by year and with other utilities.

$$\text{D.4 \% Unaccounted-for water} = \frac{\text{Total unaccounted-for water}}{\text{Total water delivered to distribution system}} \times 100$$

(Revenue producing water)

A ratio of 20-10% is often considered good performance. This ratio is a measure of the efficiency and effectiveness of operations. By increasing this ratio, a manager can reduce the need to invest in expensive programmes to increase plant capacity. Increased net income should result from increasing the percentage of treated water charged to users. Management actions to increase this ratio include:

1. Meter testing and repair programmes
2. Leakage control programme
3. Unauthorised water usage control programmes
4. Meter reading control programmes.

$$\text{L.1 Current ratio (liquidity)} = \frac{A}{D} = \frac{\text{Current assets and stocks}}{\text{Current liabilities}} = \frac{401}{217} = 1.85:1$$

Current ratio (and L.2, the "acid test" ratio) measures the ability of a business to pay its bills.

$$\begin{aligned}
 \text{L.2 Liquidity (or "acid test")} &= \frac{A1 + A2}{D} \\
 &= \frac{\text{Cash + Receivables + Marketable securities}}{\text{Current liabilities}} \\
 &= \frac{128}{217} = 0.59
 \end{aligned}$$

This ratio is a severe test of a firm's "solvency": its ability to meet its obligations. A ratio of +1 is considered satisfactory, but the important consideration is whether the ratio is rising or falling: its trend.

$$\begin{aligned}
\text{L.4 Cash balance over average} &= \frac{A1}{i} \text{ or } \frac{A1 + A2}{i} = \frac{\text{Cash and equivalent}}{1/12 \text{ total operating expenses}} \\
\text{monthly cash requirement} & \\
&= \frac{A1 + A2}{1/12 \times i} = \frac{148,000}{1/12 \times 873,000} = 2.03 \\
&= \frac{2,000}{1/12 \times 873,000} = 0.03
\end{aligned}$$

This ratio is also an indication of whether a company can pay its bills. This utility has almost no cash. It must collect its bills to pay its bills.

FEEDBACK SUMMARY

AGL COURSE NO:

DATE:

1. NAME
TITLE:
COMPANY:
BUSINESS ADDRESS:

2. PREVIOUS FINANCIAL BACKGROUND:

3. QUIZ SCORES (THIS IS A MEASURE OF HOW MUCH YOU LEARNED):
QUIZ DAY 1 DAY 2 B. Brown DAY 2 QUIZ DAY 2
_____ out of 100 _____ out of 48 _____ out of 60 _____ out of 100

4. DID THE PROGRAMME COMPLETELY SATISFY YOUR PERSONAL OBJECTIVE? If not, why not?

5. WHAT SUGGESTIONS COULD YOU MAKE FOR IMPROVING THE PROGRAMM?

6. DO YOU SERIOUSLY INTEND TO TRY TO DO SOMETHING DIFFERENTLY WHEN YOU RETURN TO WORK?

7. WHAT OTHER AGL PROGRAMMES COULD BE DEvised WHICH WOULD BE USEFUL TO YOU OR YOUR COMPANY?

8. WHAT IS YOUR OVERALL EVALUATION OF THE COURSE IN TERMS OF:

Excellent	Good	Fair	Poor	Terrible
1	2	3	4	5

Content

Presentation

Administration

Usefulness

Note: mark the appropriate item with an X.

GUIDELINES FOR WRITING ACTION ITEMS

I. What an action item looks like

- A. The most important characteristic of an action item is that it is written so that you - or someone else - will know when it occurs. One way to help achieve this is to use specific action verbs. The following is a list of such verbs:

Mental Skill	Physical Skill	Attitude
State	Execute	Choose
Name	Operate	Volunteer
Describe	Repair	Allow
Relate	Adjust	Recommend
Tell	Manipulate	Defend
Write	Handle	Endorse
Express	Manufacture	Co-operate
Recount	Calibrate	Accept
	Remove	Decide to
	Replace	Agree

- B. As you are working on the action items, ask yourself: Is the behaviour described observable? Will it be obvious to me or others when it happens?

C. Examples of action items:

As a result of being in this course, I plan to:

1. Describe this course to my supervisor within a week of my returning to the job. As a result, my supervisor will know: the contents of the course; how I can apply what I learned to the job; and whether or not others in the organisation should attend.
2. Handle every piece of paper only once in order to improve the management of my own time. Begin as soon as I am back on the job.
3. Analyse one of the accounting reports I receive and write a list of actions for improving something in my department.
4. Evaluate the timeliness of the accounting reports I receive and discuss possibilities for improving them with my supervisor.
5. Within two weeks after I return, negotiate with my supervisors to implement a _____ system in my unit, and come to an agreement on whether or not I can proceed.

II. Implementing the action item

- A. As you proceed to develop action items, be sure to think of yourself in your actual job setting, implementing the activity you have described.
- B. If you have an idea of when you will be able to begin implementing the action items, you can make a note of it. Three categories can be chosen: (1) "as arises" (you don't know when the opportunity to try this item will occur); (2) "within two months"; and (3) "after two months".
- C. You may find that you cannot try out your ideas exactly as you envisioned them, or that it is difficult to be specific. That's OK - it is still important to write out your intent, as a tentative plan, knowing you may have to modify it once you are back on the job. Try to develop at least two or three action items - one may not work, so it's handy to have others.

ACTION PLAN

COURSE TITLE: _____

NAME: _____

DATES: _____

Start to implement
(check if known)

ACTION ITEMS
I plan to:

within 2 months	after 2 months	as arises
--------------------	-------------------	--------------

QUESTIONS ABOUT YOUR ACTION ITEMS

A. Preliminary nature of plan

Were you specific in writing the action plan?

What will you need to do when you return to work in order to find out which actions are possible?

B. Resources

Who would be carrying out the proposed action, or helping with it (formally or informally)?

Are the skills for carrying it out available?

How much time would this take?

Are there special materials or equipment required?

What is involved in obtaining them?

Will you be using a tool or system or aid from this course?

How much adaptation is required?

Is continual monitoring or follow-through required?

Who will do it?

C. Implementation

Do you have the authority to implement the action?

If not, who does?

What do you think the degree of support is for your idea?

Will you need to sell people on it?

Who?

D. Effects

Whom will this action affect?

How will it affect them?

Will anyone be the worse for the results?

Anyone improved?

What will be affected?

E. Environment

What in the organisational environment might interfere with your doing this?

What in the organisation would support your efforts?