International Accounting

(Financial Statement Analysis)



Course overview and introduction to financial statement analysis

Course presentation

<u>Course name:</u> International Accounting (*Financial Statement Analysis-FSA*)

Credits: 5

Class

Monday 09:30-12:30

Lecturer:

- Davide Moro (dmoro@liuc.it)
- Office hours: Monday 12:30-13:30

Textbook:

Wild, Subramanyam, Halsey, <u>Financial Statement Analysis</u> – (9th ed.), McGraw-Hill, 2007

Course presentation

"Rules of the game"

- <u>Basic requirements:</u> The course requires an <u>understanding of basic accounting concepts</u> and practices. For this reason the course is recommended only to those students who have previously attended and passed a <u>basic course in financial accounting</u>.
- Attendance: highly recommended
- <u>Textbook</u>: its use is fundamental for class exercises and home study. <u>Available</u> at LIUC's bookshop and/or at LIUC University Library.
- Overheads: provided by the teacher on the course web site (course material)
 - A paper copy for the class will be available at the International Student Office.
- Examination: written examination structured as following:
 - Open questions and multiple choices about the main topics of the course
 - Exercises: application of tools and techniques for financial statement analysis

Course presentation

"Rules of the game": examination

Two options are provided:

- 1. Written examination divided into two parts (highly recommended for Erasmus students as well as LIUC students!!)
 - a. <u>Midterm examination</u>: written examination on topics presented within the first 5 lectures of the course
 - b. Final examination: written examination,
 - only on the remaining topics;
 - open only to those students that have passed (15/30) the Midterm examination
- 2. <u>Final comprehensive examination</u>: written examination on the whole course program

Course presentation

"Rules of the game": examination

Final evaluation:

- Examination divided into two parts: average between the marks obtained in the intermediate and in the final examination.
- 2. <u>Final comprehensive examination</u>: the exam is passed with a mark equal or higher than 18/30.

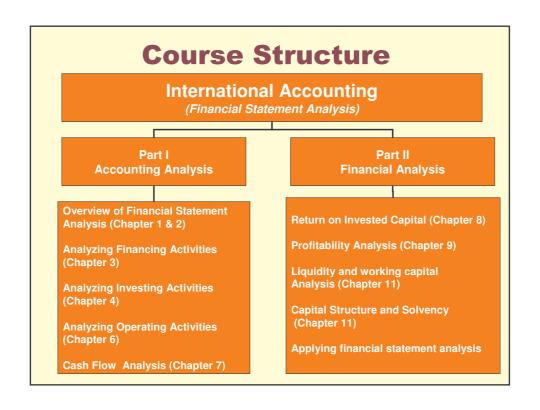
Course presentation

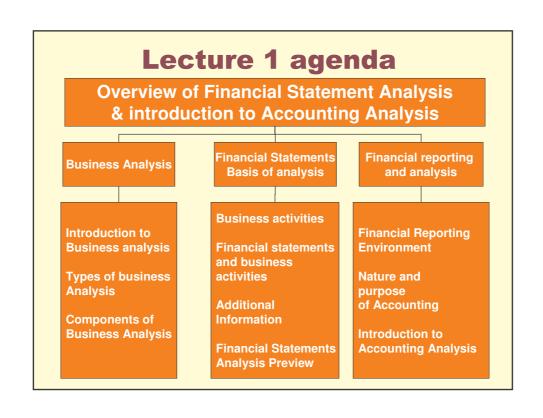
"Rules of the game": project work

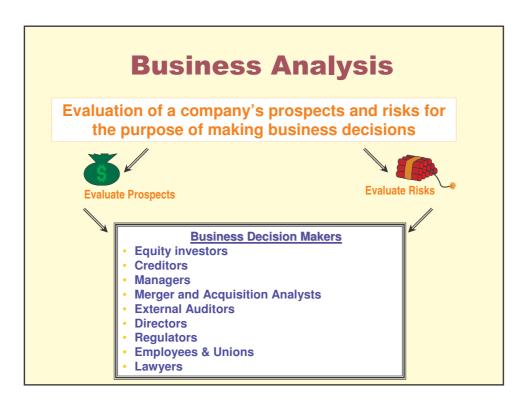
Students who wish to improve their final mark and want to "put in practice" skills developed during the course may prepare a final project work. It will consist in writing a financial statement analysis report using a variety of financial analysis tools covered during the course (see the document delivered by the lecturer for further information).

Some basic rules:

- a. The project work will be <u>developed in group</u>. Each group must be composed of <u>up to 5 students</u>
- b. It is up to the students the choice of the company to analyse.
- c. The lecturer will evaluate each project work and will decide how many marks to assign to each group (from 1 up to 5 "extra points"), according to the quality of work, the fullness and the consistency of the analysis conducted. Each member of the group will receive the same amount of "extra points".
- Each group must hand the project work over to the lecturer by 21st of December.







Financial Statement Analysis

- It is part of business analysis
- It is the application of analytical tools and techniques to general –purpose financial statements and related data to derive estimates and inferences useful in business analysis
- Through it, an analyst will better understand and interpret both <u>qualitative</u> and <u>quantitative</u> financial information so that reliable inferences are drawn about company prospects and risks

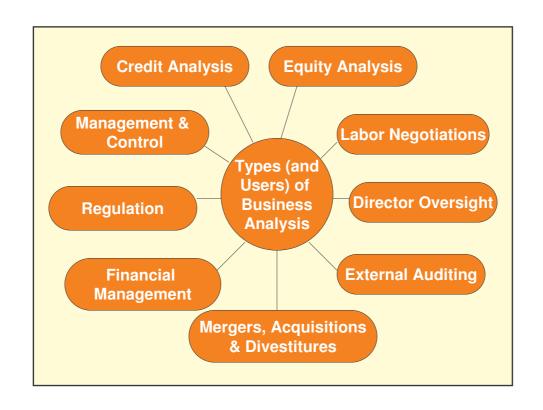
Information Sources for Business Analysis

Quantitative

- Financial Statements
- Industry Statistics
- Economic Indicators
- Regulatory filings
- Trade reports

Qualitative

- Management Discussion & Analysis
- Chairperson's Letter
- Vision/Mission Statement
- Financial Press
- Press Releases
- Web sites



Credit Analysis

Credit worthiness: Ability to honor credit obligations (downside risk)

Liquidity

Ability to meet shortterm obligations

Focus:

- Current Financial conditions
- Current cash flows
- Liquidity of assets

Solvency

Ability to meet long-term obligations

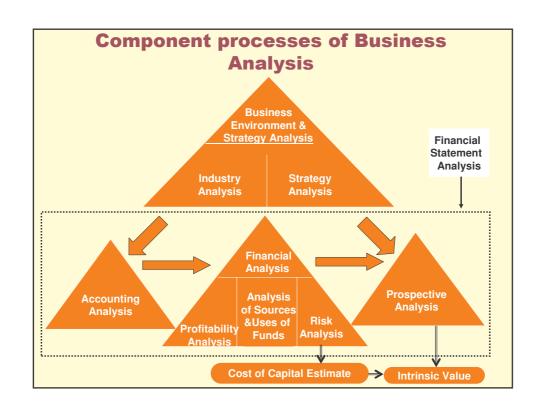
Focus:

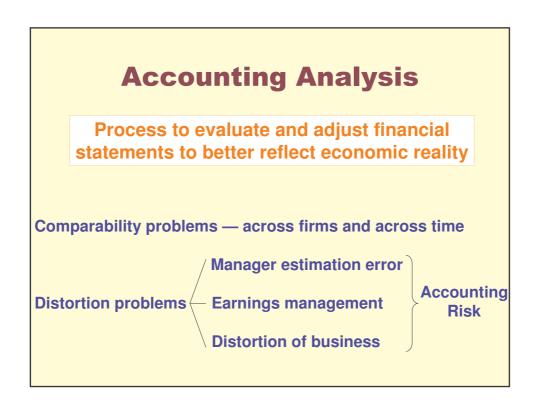
- Long-term financial conditions
- Long-term cash flows
- Extended profitability (sustainable earning power): main source of assurance to meet longterm obligations

Equity Analysis

<u>Fundamental analysis</u>: process of determining the value of a company by analyzing and interpreting key factors for the economy, the industry and the company. (downside risk and upside potential)

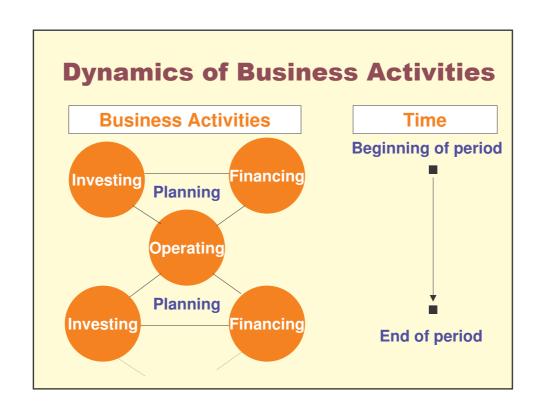
One of the major goals of fundamental analysis is to determine INTRINSIC
VALUE

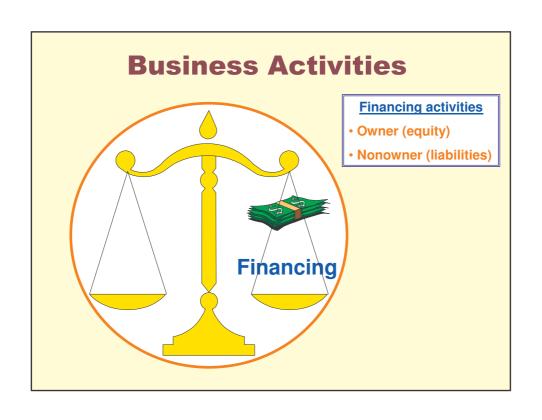


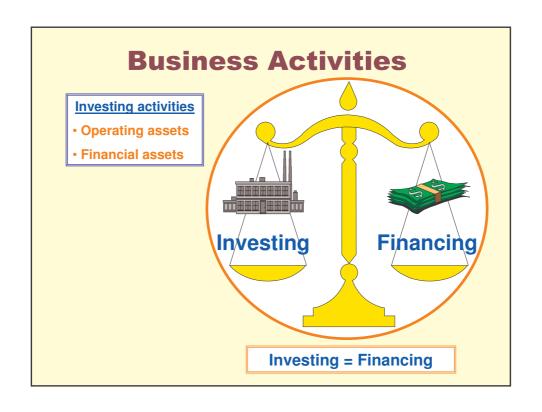


Financial Analysis Process to evaluate financial position and performance using financial statements Profitability analysis—Evaluate return **Common tools** on investments Risk analysis — Evaluate riskiness Ratio Cash & creditworthiness analysis flow analysis Sources and uses —Evaluate source & Comparative of funds analysis deployment of funds analysis

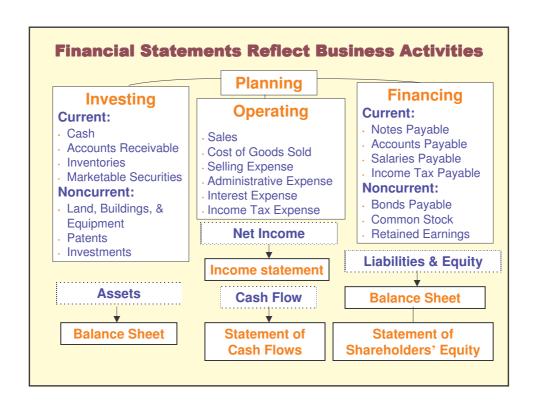












Financial Statements

- Balance Sheet
- Income Statement
- Statement of Shareholders' Equity
- Statement of Cash Flows

DELL INC.			
CONSOLIDATED STATEMENTS OF FINANCIAL POSIT	ION		
(in millions)	ION		
(III IIIIIIIOII3)			
	January 28, 2005	January 30, 2004	
	2000	2004	
ASSETS			
Current assets:	0 4747	0 4 047	
Cash and cash equivalents	\$ 4,747	\$ 4,317	
Short-term investments	5,060 4,414	835 3,635	
Accounts receivable, net	4,414	3,635	
Other	2.217	1.519	
Total current assets	16,897	10,633	
Property, plant, and equipment, net	1,691	1,517	
Investments	4,319 308	6,770 391	
Total assets	\$ 23,215	\$19,311	
LIABILITIES AND STOCKHOLDERS' EQUITY			
Current liabilities:			
Accounts payable	\$ 8,895	\$ 7.316	
Accrued and other	5.241	3,580	
Total current liabilities	14.136	10.896	
Long-term debt	505	505	
Other non-current liabilities	2.089	1.630	
Total liabilities	16,730	13.031	
	16,730	13,031	
Commitments and contingent liabilities (Note 8)	_	_	
Stockholders' equity:			
Preferred stock and capital in excess of \$.01 par value; shares issued			
and outstanding: none	_	_	
authorized: 7,000; shares issued: 2,769 and 2,721, respectively	8,195	6.823	
Treasury stock, at cost; 284 and 165 shares, respectively	(10.758)	(6,539)	
Retained earnings	9,174	6,131	
Other comprehensive loss	(82)	(83)	
Other	(44)	(52)	
Total stockholders' equity	6,485	6,280	
Total liabilities and stockholders' equity	\$ 23,215	\$19,311	

Balance Sheet

Total Investing = Total Financing = Creditor Financing + Owner Financing

Dell Financing (in \$billions)

\$23.215 = **\$16.730** + **\$6.485**

DELL INC. CONSOLIDATED STATEMENTS OF INCOME (in millions, except per share amounts) Fiscal Year Ended January 28, January 30, 2004 January 30, 2005

	i iocai i eai Liided				
	January 28, 2005	January 30, 2004	January 31, 2003		
Net revenue	\$49,205	\$41,444	\$35,404		
Cost of revenue	40,190	33,892	29,055		
Gross margin	9,015	7,552	6,349		
Operating expenses:					
Selling, general, and administrative	4,298	3,544	3,050		
Research, development, and engineering	463	464	455		
Total operating expenses	4,761	4,008	3,505		
Operating income	4,254	3,544	2,844		
Investment and other income, net	191	180	183		
Income before income taxes	4,445	3,724	3,027		
Income tax provision	1,402	1,079	905		
Net income	\$ 3,043	\$ 2,645	\$ 2,122		
Earnings per common share:					
Basic	\$ 1.21	\$ 1.03	\$ 0.82		
Diluted	\$ 1.18	\$ 1.01	\$ 0.80		

Income Statement

Revenues – Cost of goods sold = Gross Profit Gross profit – Operating expenses = Operating Profit

Dell Profitability (in \$billions)

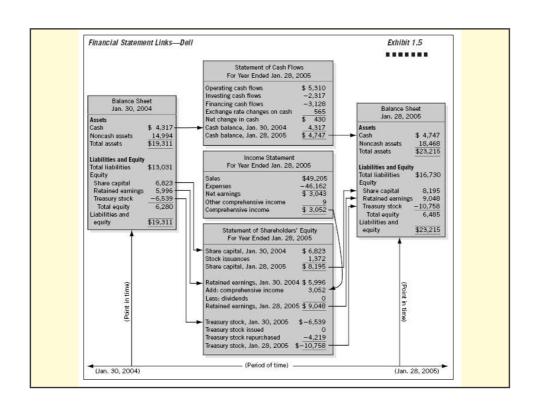
\$49,205 - \$40,190 = \$9,015 Gross Profit \$9,015 - \$4,761 = \$4,254 Operating profit

			DELL	INC.								
CONSOL	CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (in millions)											
	and C Exce Par	Common Stock and Capital in Excess of Par Value		and Capital in Excess of Par Value		pital in ss of /alue Treası		asury Stock	Retained	Other Comprehensive		
	Shares	Amount	Shares	Amount	Earnings	Income (Loss)	Other	Total				
Balances at February 1, 2002 Net income Change in net unrealized gain on investments, net of taxes	_	\$5,605 —	52 —	\$ (2,249) —	\$1,364 2,122	\$ 38 — 26	\$(64) —	\$ 4,694 2,122				
of \$14	_	_		_	_	20	_	20				
adjustments Change in net unrealized loss on derivative instruments, net of taxes of \$42	_	-	_	_	_	4 (101)	_	(101)				
Total comprehensive income Stock issuances under employee plans, including		410					6	2,051				
tax benefits		410	50	(2,290)	_		- 6	(2,290)				
Other		3	_	(2,250)	_	_	(1)	2				
Balances at January 31, 2003		6,018	102	(4,539)	3,486	(33)	(59)	4.873				
Net income	-	-	-		2,645	_	_	2,645				
of \$19 Foreign currency translation	_	_	_	_	_	(35)	_	(35)				
adjustments	-	-	-	-	_	6	-	6				
net of taxes of \$5 Total comprehensive income Stock issuances under employee plans, including		_	_	_	_	(21)	_	2,595				
tax benefits		805	-		_	_	_	805				
Repurchases		_	63	(2,000)	_	_	7	(2,000)				
Other												
Balances at January 30, 2004 Net income		6,823	165	(6,539)	6,131 3,043	(83)	(52)	6,280 3,043				
of \$16 Foreign currency translation	_	_	_	_	_	(52)	_	(52)				
adjustments		-	-	-	-	1	_	1				
net of taxes of \$21 Total comprehensive income Stock issuances under employee plans, including	_	_	_	_	_	52	_	3,044				
tax benefits		1,372	_	_	_	_	_	1,372				
Repurchases	_	_	119	(4,219)	_	=	_ 8	(4,219) 8				
Balances at January 28, 2005		\$8,195	284	\$(10,758)	\$9,174	\$ (82)	\$(44)	\$ 6,485				
	21.00	201.00		. (10), 50)	******	4 (44)		. 01.00				

Statement of Cash Flows

Net Cash Flows from Operating Activities
Net Cash Flows from Investing Activities
Net Cash Flows from Financing Activities

DELL INC.								
CONSOLIDATED STATEMENTS OF CASH FLOWS (in millions)								
Fiscal Year Ended								
	January 28, 2005	January 30, 2004	January 31, 2003					
Cash flows from operating activities:								
Net income Adjustments to reconcile net income to net cash provided by operating activities:	\$ 3,043	\$ 2,645	\$ 2,122					
Depreciation and amortization	334	263	211					
Tax benefits of employee stock plans	249	181	260					
Effects of exchange rate changes on monetary assets								
and liabilities denominated in foreign currencies	(602)		(537)					
Other	78	113	60					
Changes in: Operating working capital	1.755	872	1,210					
Non-current assets and liabilities	453	273	212					
Net cash provided by operating activities	5,310	3,670	3,538					
Cash flows from investing activities:								
Investments:								
Purchases	(12,261)	(12,099)	(8,736)					
Maturities and sales	10,469	10,078	7,660					
Capital expenditures	(525)	(329)	(305)					
Purchase of assets held in master lease facilities	_	(636)	_					
Cash assumed in consolidation of Dell Financial Services L.P.		172						
Net cash used in investing activities	(2,317)	(2,814)	_(1,381)					
Cash flows from financing activities:								
Repurchase of common stock	(4,219)	(2,000)	(2,290)					
Issuance of common stock under employee plans and other	1,091	617	265					
Net cash used in financing activities	(3,128)	(1,383)	(2,025)					
Effect of exchange rate changes on cash and cash equivalents	565	612	459					
Net increase in cash and cash equivalents	430	85	591					
Cash and cash equivalents at beginning of period	4,317	4,232	3,641					
Cash and cash equivalents at end of period	\$ 4.747	\$ 4.317	\$ 4,232					



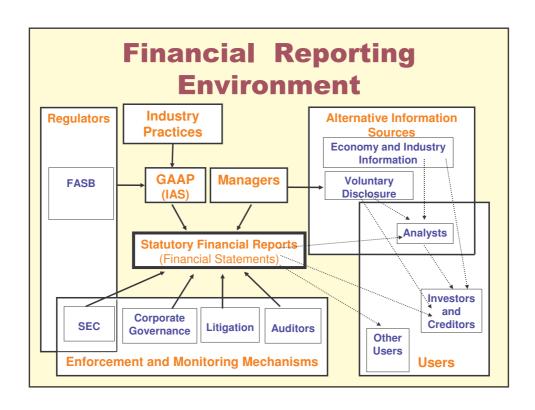
Additional Information

(Beyond Financial Statements)

- Management Discussion & Analysis (MD&A)
- Management Report
- Auditor Report
- Notes to Financial Statements
- Supplementary information



Financial Reporting and Analysis



Environmental Factors

GAAP
(Generally Accepted Accounting Principles)
IAS

(International Accounting Standards)

- <u>Rules</u> and <u>guidelines</u> of financial accounting: collection of standards, pronouncements, opinions, interpretations, and practice guidelines set by professional and statutory bodies.
- Determine measurement and recognition policies such as how assets are measured, when liabilities are incurred, when revenues and gains are recognized, when expenses and losses are incurred, what information must be provided in the notes.

Financial Accounting

Desirable qualities of accounting information

- Relevance capacity of information to affect a decision. It implies:
 - · to have predictive value
 - to have feedback value
 - <u>Timeliness</u> (to be reported before it loses its capacity to affect decision
- · Reliability -
 - Verifiability: means that the information is confirmable
 - Representational faithfulness: information reflects reality
 - · Neutrality: truthful and unbiased
- Comparability information is measured in a similar manner across company
- Consistency the same method is used for similar transaction across time.

Accounting Analysis

Process of evaluating the extent to which a company's accounting numbers reflect economic reality

- Precondition for an effective financial analysis: the <u>quality of financial analysis</u> and the inferences drawn depend on the quality of the underlying accounting information
- It is the process an analyst uses to identify and <u>assess accounting distortions</u> in a company's financial statements

Accounting Analysis

Demand for Accounting Analysis

- Adjust for accounting distortions so financial reports better reflect economic reality
- Adjust general-purpose financial statements to meet specific analysis objectives of a particular user

Accounting Analysis

Sources of Accounting Distortions

- Accounting Standards attributed to (1) political process of standard-setting, (2) accounting principles and assumptions, and (3) conservatism
- Estimation Errors attributed to estimation errors inherent in accrual accounting
- Reliability vs Relevance attributed to overemphasis on reliability at the loss of relevance
- Earnings Management attributed to windowdressing of financial statements by managers to achieve personal benefits

Accounting Analysis

Process of Accounting Analysis

Accounting analysis involves several inter-related processes and tasks that can be grouped into two broad areas:

Evaluating Earning Quality (or accounting quality):

Identify and assess key accounting policies Evaluate extent of accounting flexibility Determine the reporting strategy adopted by the company

Identify and assess "red flags"

Adjusting Financial Statements:

Identify, measure, and make necessary adjustments to financial statements to better serve one's analysis objectives (<u>lectures 2-3</u> focus on adjusting – recasting the statements)

Analysis Preview

Sets of tools for financial analysis

- 1. Comparative financial statements analysis
- 2. Common-size financial statement analysis
- 3. Ratio analysis
- 4. Cash flow analysis
- 5. Valuation

Analysis Preview

Comparative Analysis



Purpose: Evaluation of consecutive

financial statements, from period to

period

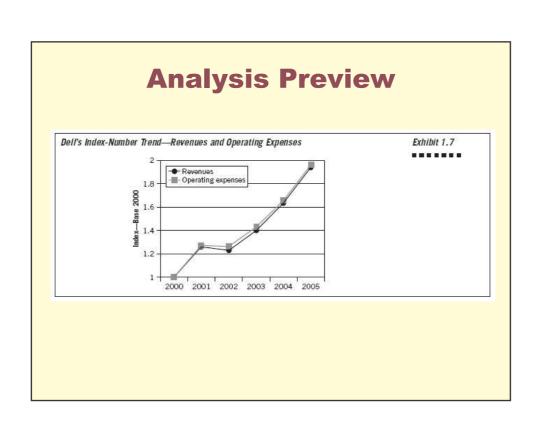
Output: Direction, speed, & extent of any

trend(s)

Types: •Year-to-year Change Analysis

•Index-Number Trend Analysis

Dell's Comparative Income Statements	벳				Exhibit 1.6
	2005	2004	Change (in \$mil)	Change %	200000000
Revenues Cost of goods sold	\$49,205 40,190	\$41,444 33,892	\$7,761 6,298	18.7% 18.6	
Gross profit	9,015	7,552	1,463	19.4	
Selling, general, and administrative exp		3,544 464	754 (1)	21.3 -0.2	
Operating profit	7.20000	3,544 180	710 11	20.0 6.1	
Pretax income	4,445 1,402	3,724 1,079	721 323	19.4 29.9	
	\$ 3,043	\$ 2,645	\$ 398	15.0	



Common-Size Analysis

Purpose: • Evaluation of internal makeup of financial statements

 Evaluation of financial statement accounts across companies

Output:

Proportionate size of assets, liabilities, equity, revenues, & expenses

Analysis Preview

Common-Size Analysis

Common size 2	2005	2004	2003	2002	2001	
Net revenue	0.00	100.0	100.0	100.0	100.0	
Cost of revenue	81.7	81.8	82.1	82.3	79.8	
Gross margin	18.3	18.2	17.9	17.7	20.2	
Selling, general, and administrative	8.7	8.6	8.6	8.9	10.0	
Research, development, and engineering	0.9	1.1	1.3	1.5	1.5	
Total operating expenses	9.7	9.7	9.9	10.4	11.5	
investment and other income, net	0.4	0.4	0.5	-1.7	1.3	
Income before income taxes	9.0	9.0	8.5	5.6	10.0	
Income tax provision	2.8	2.6	2.6	1.6	3.0	
Net income	6.2	6.4	6.0	4.0	7.0	

ommon-Size Balance Sheets			Exhibit 1.9
	2005	2004	
Cash and cash equivalents.	20.4	22.4	
Short-term investments	21.8	4.3	
Accounts receivable, net	19.0	18.8	
Inventories	2.0	1.7	
Other current assets	9.5	7.9	
Total current assets	72.8	55.1	
Property, plant, and equipment, net	7.3	7.9	
Investments	18.6	35.1	
Other noncurrent assets	1.3	2.0	
Total assets	100.0	100.0	
Accounts payable	38.3	37.9	
Accrued and other	22.6	18.5	
Total current liabilities	60.9	56.4	
Long-term debt	2.2	2.6	
Other noncurrent liabilities	9.0	8.4	
Total liabilities	72.1	67.5	
Common stock and capital in excess of par		35.3	
Treasury stock	-46.3	-33.9	
Retained earnings	39.5	31.7	
Other	-0.5	-0.7	
Total stockholders' equity	27.9	32.5	
Total liabilities and equity	100.0	100.0	

Analysis Preview

Ratio Analysis

Purpose: Evaluate relation between two or more

economically important items (one starting point for further analysis)

Output: Mathematical expression of relation

between two or more items

Cautions: • Prior Accounting analysis is important

 Interpretation is key -- long vs short term & benchmarking

Ratio Analysis

- 1. Credit (risk analysis)
 - Liquidity
 - Capital structure and Solvency
- 2. Profitability analysis
 - Return on investment
 - Operating performance
 - Asset utilization
- 3. Valuation (market measure)

Analysis Preview

Valuation

Valuation - an important goal of many types of business analysis

Purpose: Estimate intrinsic value of a

company (or stock)

Basis: Present value theory (time value of

money)