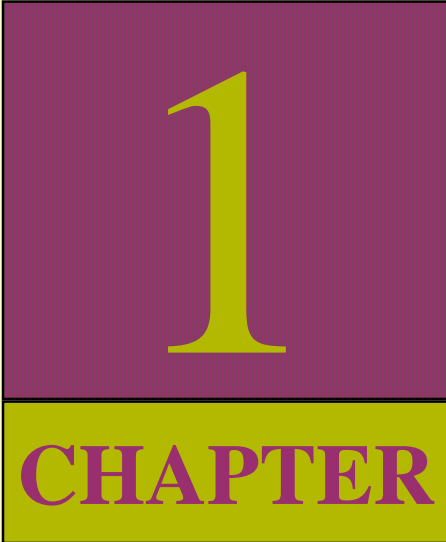


Overview of Financial Statement Analysis

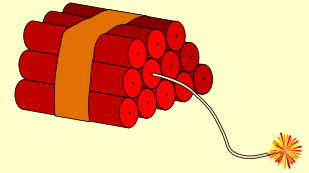


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CHAPTER

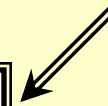
Business Analysis



Evaluate Prospects



Evaluate Risks



Business Decision Makers

- **Equity investors**
- **Creditors**
- **Managers**
- **Merger and Acquisition Analysts**
- **External Auditors**
- **Directors**
- **Regulators**
- **Employees & Unions**
- **Lawyers**

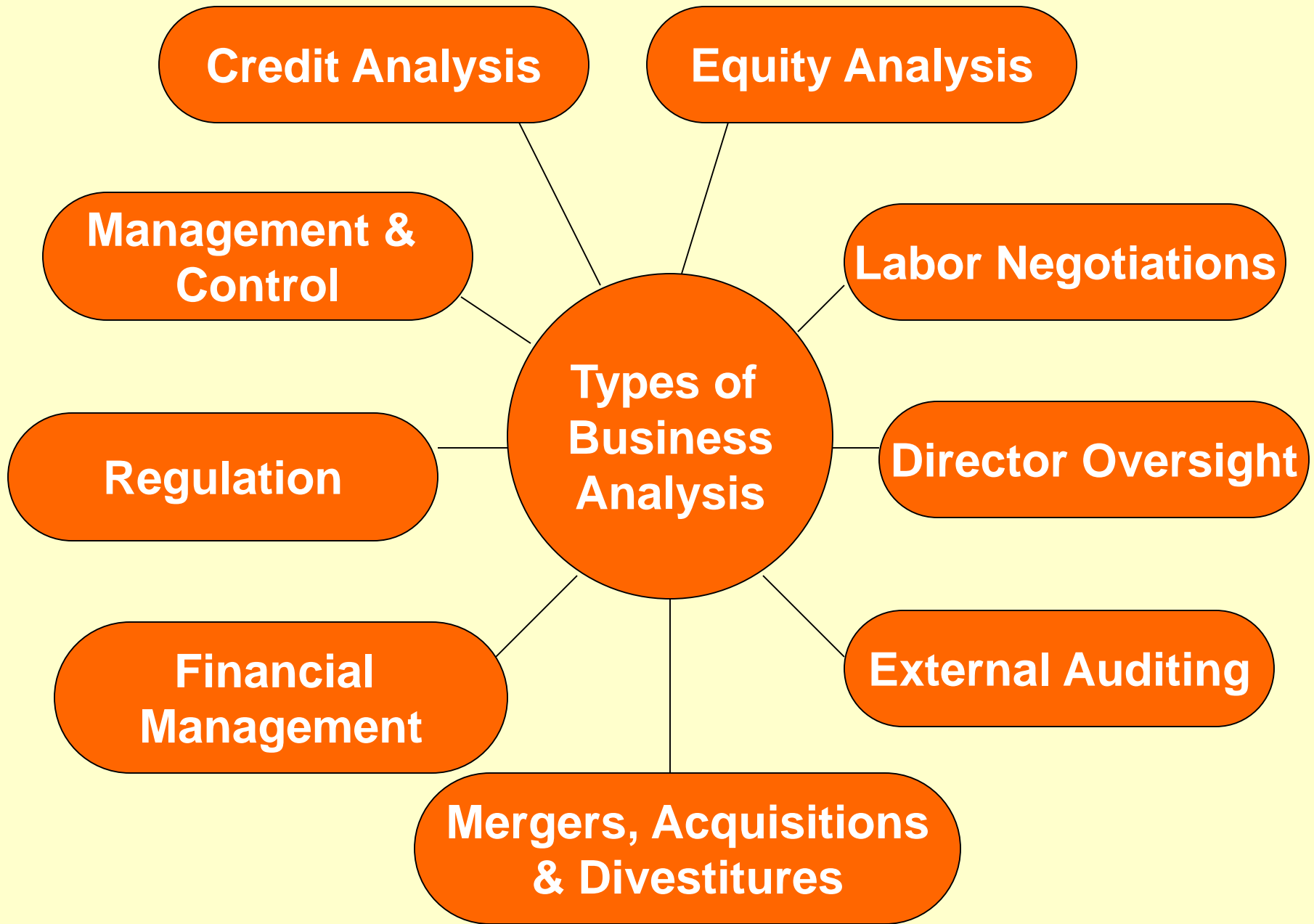
Information Sources for Business Analysis

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

Creditors

```
graph TD; Creditors[Creditors] --> TradeCreditors[Trade Creditors]; Creditors --> NonTradeCreditors[Non-trade Creditors];
```

Trade Creditors

- Provide goods or services
- Most short-term
- Usually implicit interest
- Bear risk of default

Non-trade Creditors

- Provide major financing
- Most long-term
- Usually explicit interest
- Bear risk of default

Credit Analysis

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

Liquidity

Ability to meet short-term 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**

Equity Analysis

Assessment of downside risk and upside potential

Technical Analysis

Charting

- Patterns in price behavior or volume history
- Predict future price movements

Fundamental Analysis

Determine value without reference to price

- Analyze and interpret
 - Economy
 - Industry
 - Company

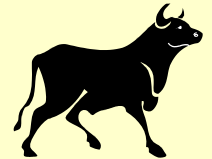
Intrinsic Value

(or Fundamental Value)

Value of Company (or stock) without reference to market value (or stock price)

Strategy

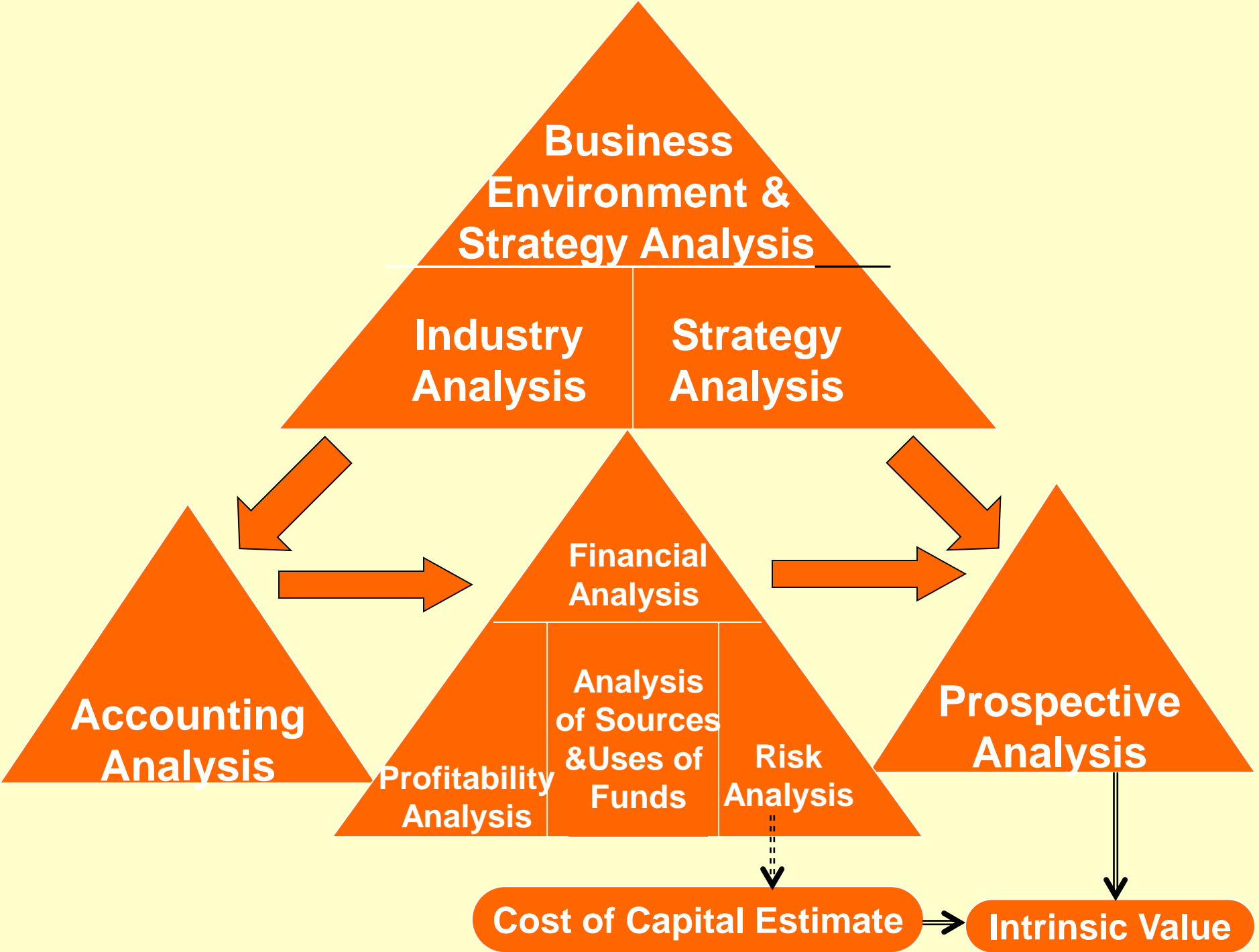
Intrinsic value > Market value \Rightarrow Buy



Intrinsic value < Market value \Rightarrow Sell



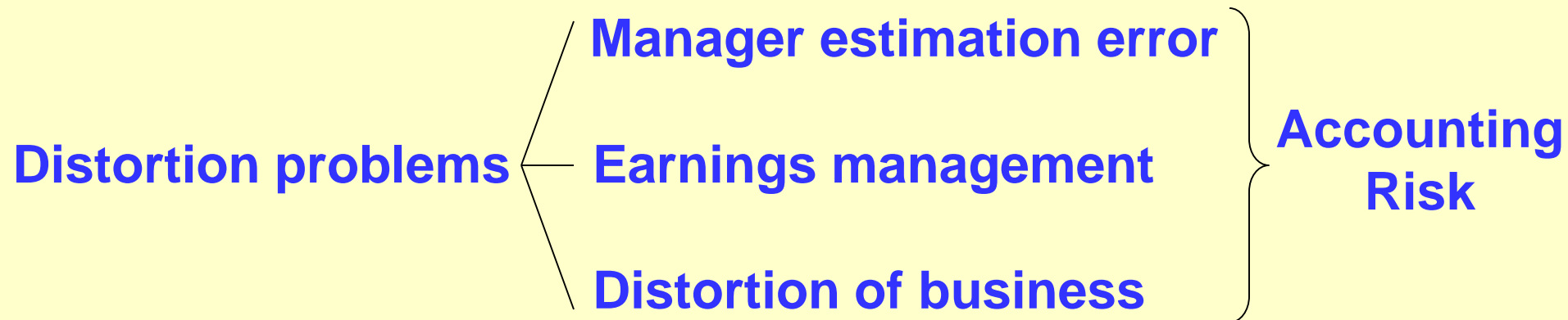
Intrinsic value = Market value \Rightarrow Hold



Accounting Analysis

Process to evaluate and adjust financial statements to better reflect economic reality

Comparability problems — across firms and across time



Financial Analysis

Process to evaluate financial position and performance using financial statements

Profitability analysis — Evaluate return on investments

Risk analysis — Evaluate riskiness & creditworthiness

Analysis of cash flows — Evaluate source & deployment of funds

Common tools	
Ratio analysis	Cash flow analysis

Prospective Analysis

Process to forecast future payoffs



```
graph TD; A[Business Environment & Strategy Analysis] --> B[Accounting Analysis]; B --> C[Financial Analysis]; C --> D[Intrinsic Value];
```

**Business Environment
& Strategy Analysis**

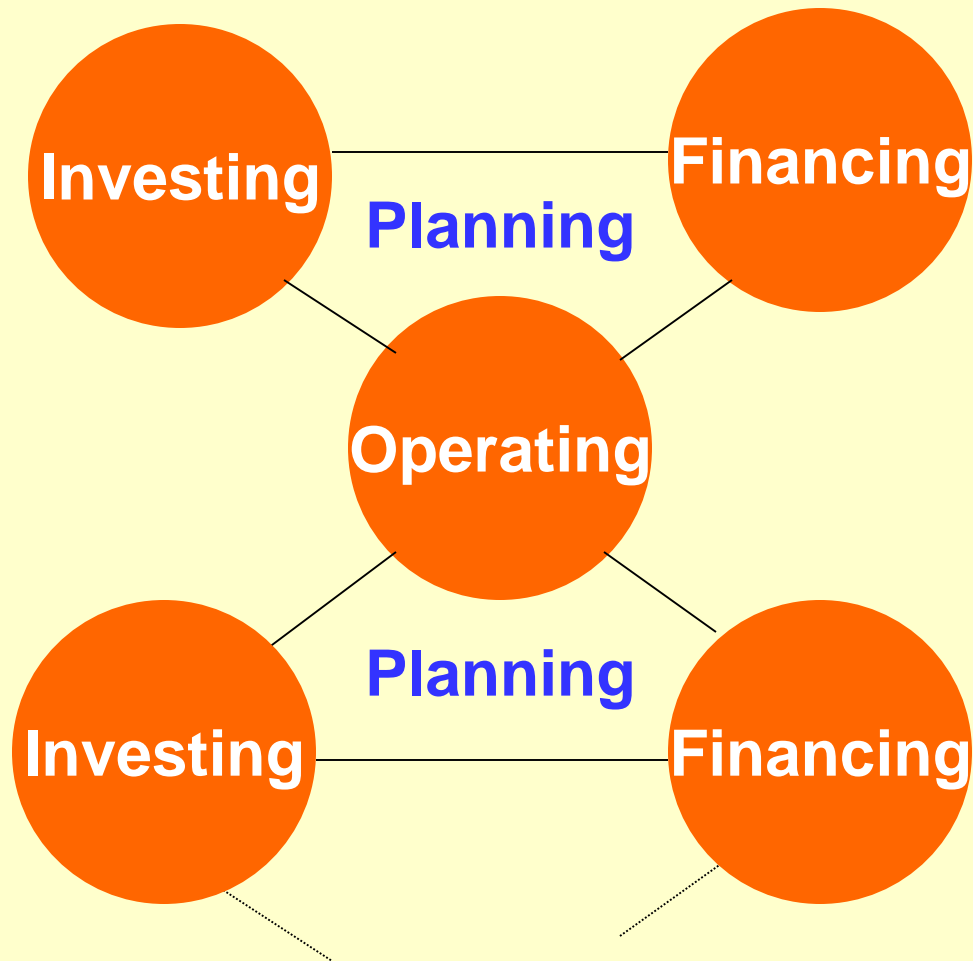
Accounting Analysis

Financial Analysis

Intrinsic Value

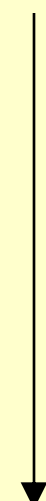
Dynamics of Business Activities

Business Activities



Time

Beginning of period

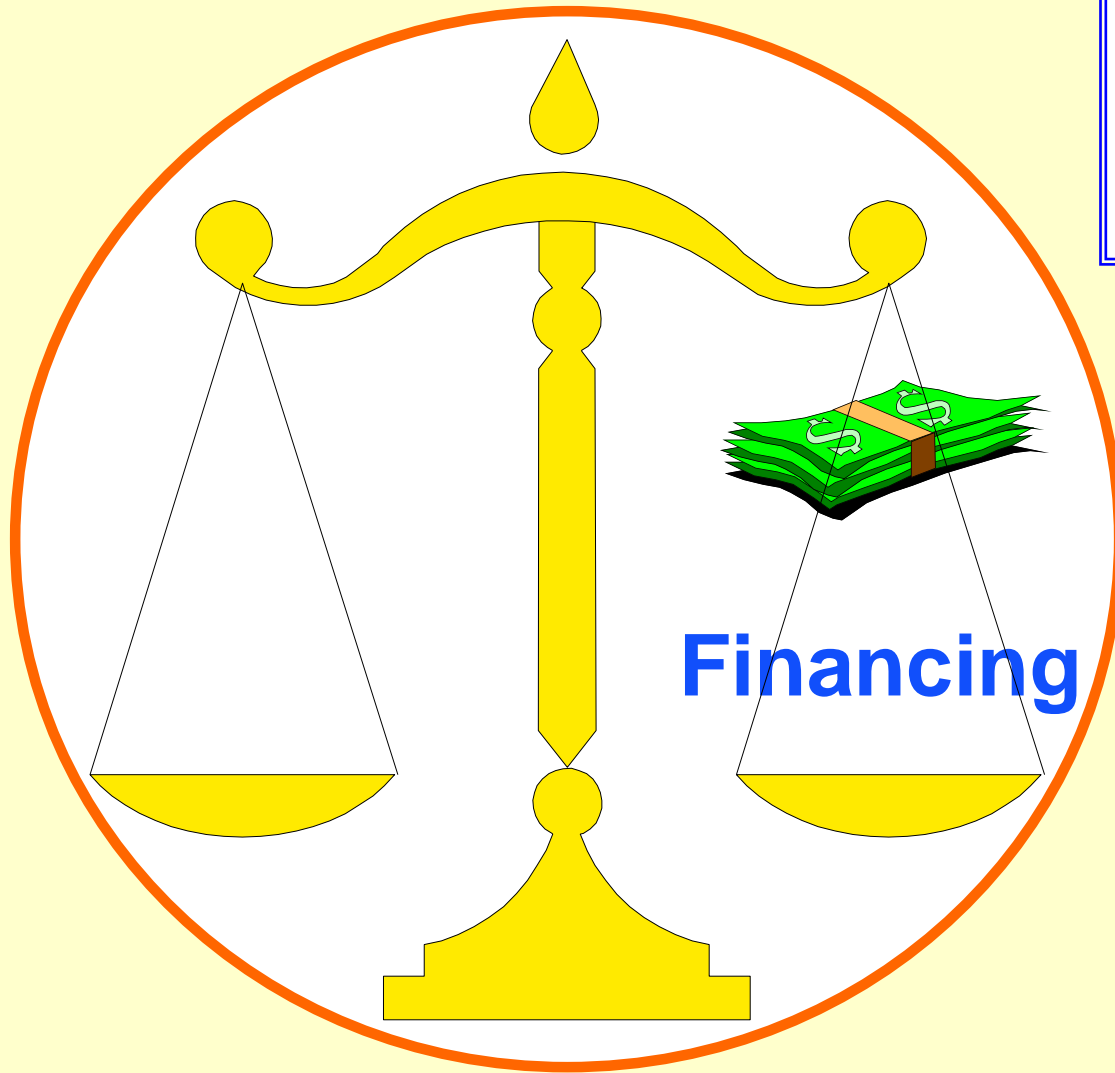


End of period

Business Activities



Business Activities



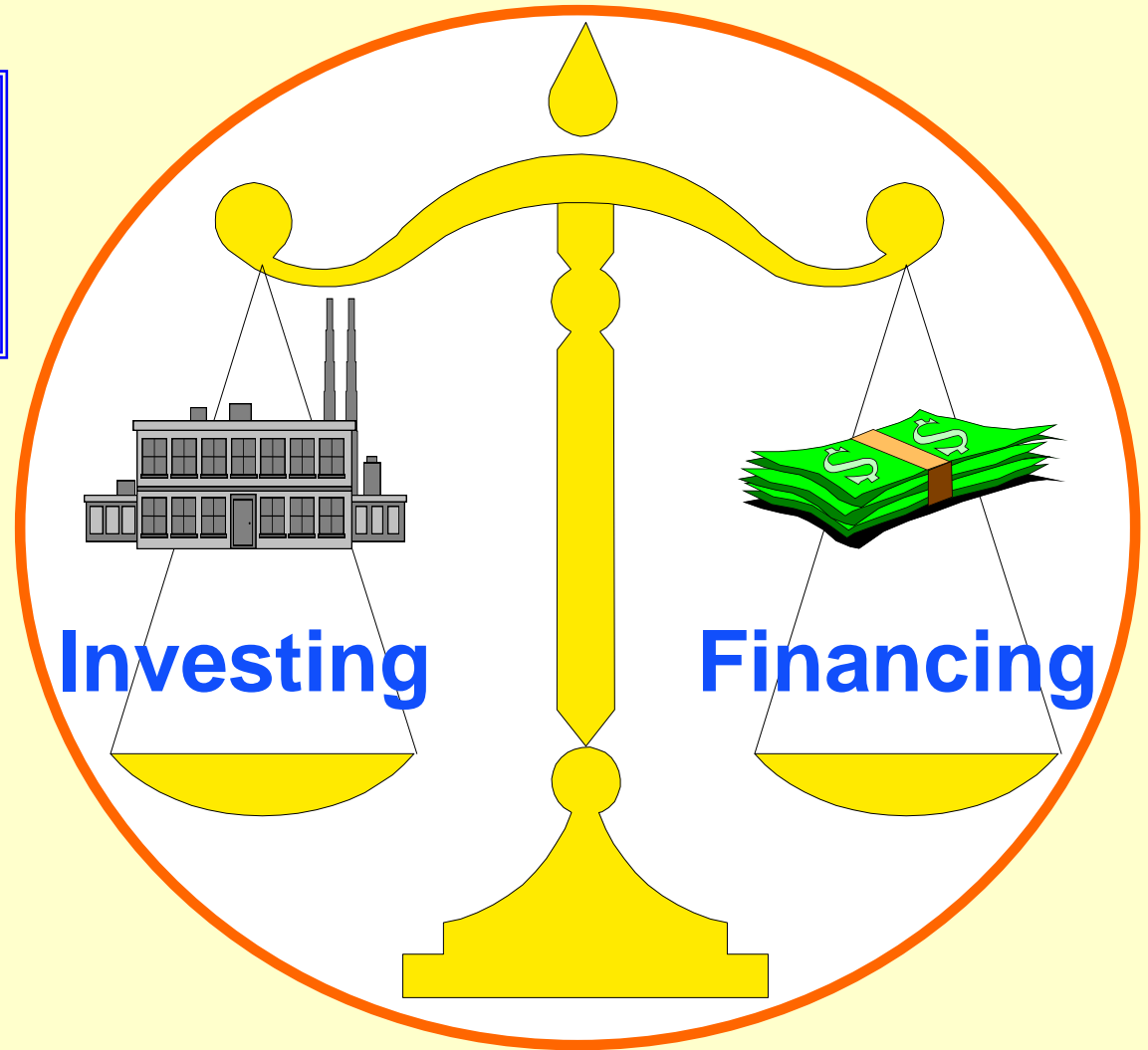
Financing activities

- Owner (equity)
- Nonowner (liabilities)

Business Activities

Investing activities

- Buying resources
- Selling resources



Investing = Financing

Business Activities



Financial Statements Reflect Business Activities

Planning

Investing

Current:

- Cash
- Accounts Receivable
- Inventories
- Marketable Securities

Noncurrent:

- Land, Buildings, & Equipment
- Patents
- Investments

Operating

- Sales
- Cost of Goods Sold
- Selling Expense
- Administrative Expense
- Interest Expense
- Income Tax Expense

Financing

Current:

- Notes Payable
- Accounts Payable
- Salaries Payable
- Income Tax Payable

Noncurrent:

- Bonds Payable
- Common Stock
- Retained Earnings

Net Income

Income statement

Liabilities & Equity

Balance Sheet

Assets

Balance Sheet

Cash Flow

Statement of Cash Flows

Statement of Shareholders' Equity

Financial Statements

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



DELL INC.
CONSOLIDATED STATEMENTS OF FINANCIAL POSITION
(in millions)

	<u>January 28, 2005</u>	<u>January 30, 2004</u>
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 4,747	\$ 4,317
Short-term investments	5,060	835
Accounts receivable, net	4,414	3,635
Inventories	459	327
Other	<u>2,217</u>	<u>1,519</u>
Total current assets	16,897	10,633
Property, plant, and equipment, net	1,691	1,517
Investments	4,319	6,770
Other non-current assets	<u>308</u>	<u>391</u>
Total assets	<u>\$ 23,215</u>	<u>\$19,311</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 8,895	\$ 7,316
Accrued and other	<u>5,241</u>	<u>3,580</u>
Total current liabilities	14,136	10,896
Long-term debt	505	505
Other non-current liabilities	<u>2,089</u>	<u>1,630</u>
Total liabilities	<u>16,730</u>	<u>13,031</u>
Commitments and contingent liabilities (Note 8)	—	—
Stockholders' equity:		
Preferred stock and capital in excess of \$.01 par value; shares issued and outstanding: none	—	—
Common stock and capital in excess of \$.01 par value; shares 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	<u>(44)</u>	<u>(52)</u>
Total stockholders' equity	<u>6,485</u>	<u>6,280</u>
Total liabilities and stockholders' equity	<u>\$ 23,215</u>	<u>\$19,311</u>

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, 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	<u>9,015</u>	<u>7,552</u>	<u>6,349</u>
Operating expenses:			
Selling, general, and administrative	4,298	3,544	3,050
Research, development, and engineering	463	464	455
Total operating expenses	<u>4,761</u>	<u>4,008</u>	<u>3,505</u>
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	<u>\$ 3,043</u>	<u>\$ 2,645</u>	<u>\$ 2,122</u>
Earnings per common share:			
Basic	<u>\$ 1.21</u>	<u>\$ 1.03</u>	<u>\$ 0.82</u>
Diluted	<u>\$ 1.18</u>	<u>\$ 1.01</u>	<u>\$ 0.80</u>

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.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(in millions)

	Common Stock and Capital in Excess of Par Value		Treasury Stock		Retained Earnings	Other Comprehensive Income (Loss)	Other	Total
	Shares	Amount	Shares	Amount				
Balances at February 1, 2002 . . .	2,654	\$5,605	52	\$ (2,249)	\$1,364	\$ 38	\$(64)	\$ 4,694
Net income	—	—	—	—	2,122	—	—	2,122
Change in net unrealized gain on investments, net of taxes of \$14	—	—	—	—	—	26	—	26
Foreign currency translation adjustments	—	—	—	—	—	4	—	4
Change in net unrealized loss on derivative instruments, net of taxes of \$42	—	—	—	—	—	(101)	—	(101)
Total comprehensive income . . .								2,051
Stock issuances under employee plans, including tax benefits	27	410	—	—	—	—	6	416
Repurchases	—	—	50	(2,290)	—	—	—	(2,290)
Other	—	3	—	—	—	—	(1)	2
Balances at January 31, 2003 . . .	2,681	6,018	102	(4,539)	3,486	(33)	(59)	4,873
Net income	—	—	—	—	2,645	—	—	2,645
Change in net unrealized gain on investments, net of taxes of \$19	—	—	—	—	—	(35)	—	(35)
Foreign currency translation adjustments	—	—	—	—	—	6	—	6
Change in net unrealized loss on derivative instruments, net of taxes of \$5	—	—	—	—	—	(21)	—	(21)
Total comprehensive income . . .								2,595
Stock issuances under employee plans, including tax benefits	40	805	—	—	—	—	—	805
Repurchases	—	—	63	(2,000)	—	—	—	(2,000)
Other	—	—	—	—	—	—	7	7
Balances at January 30, 2004 . . .	2,721	6,823	165	(6,539)	6,131	(83)	(52)	6,280
Net income	—	—	—	—	3,043	—	—	3,043
Change in net unrealized gain on investments, net of taxes of \$16	—	—	—	—	—	(52)	—	(52)
Foreign currency translation adjustments	—	—	—	—	—	1	—	1
Change in net unrealized loss on derivative instruments, net of taxes of \$21	—	—	—	—	—	52	—	52
Total comprehensive income . . .								3,044
Stock issuances under employee plans, including tax benefits	48	1,372	—	—	—	—	—	1,372
Repurchases	—	—	119	(4,219)	—	—	—	(4,219)
Other	—	—	—	—	—	—	8	8
Balances at January 28, 2005 . . .	2,769	\$8,195	284	\$(10,758)	\$9,174	\$ (82)	\$(44)	\$ 6,485

Statement of Cash Flows



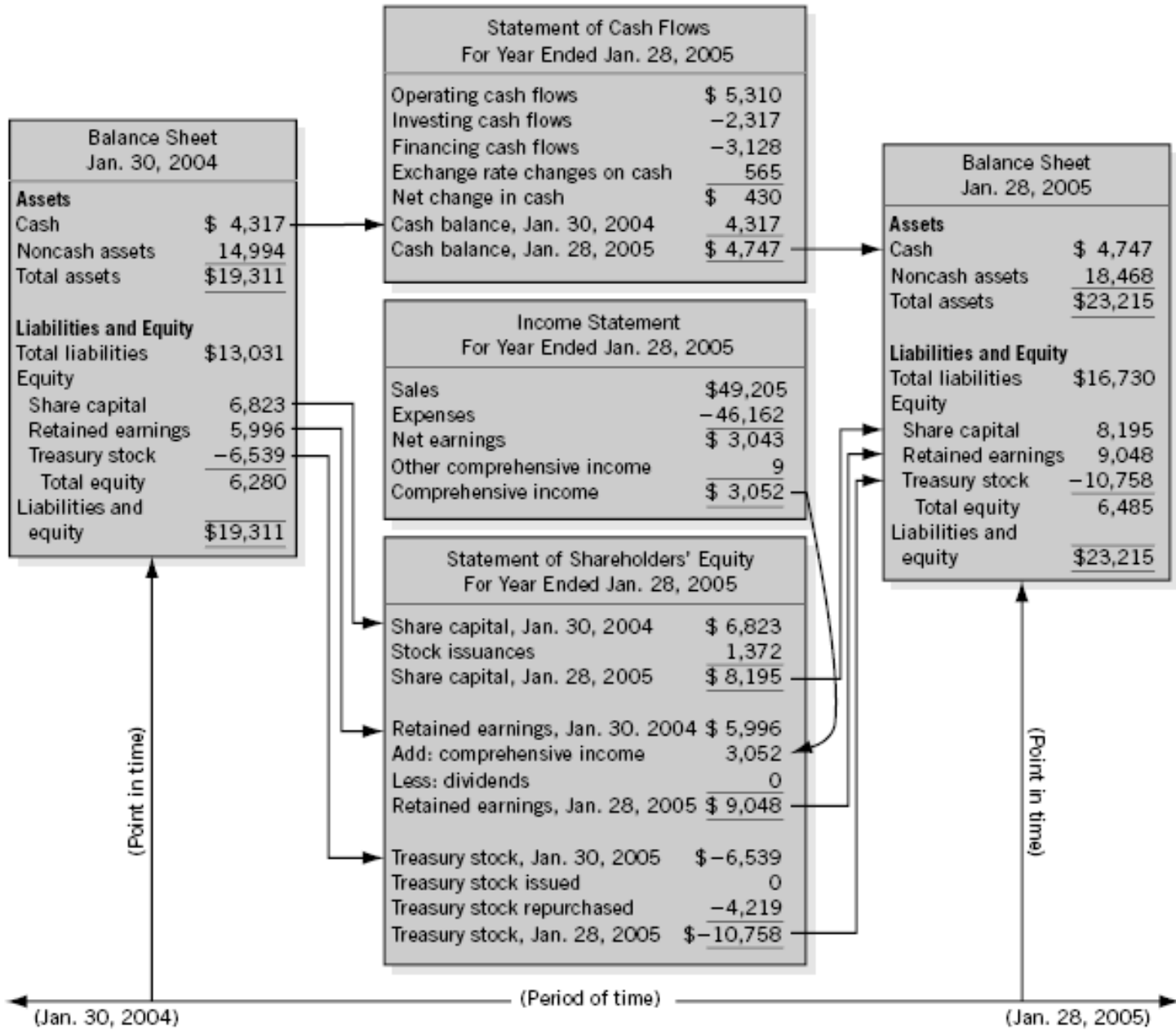
Net Cash Flows from Operating Activities

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	\$ 3,043	\$ 2,645	\$ 2,122
Adjustments to reconcile net income to net cash provided by operating activities:			
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)	(677)	(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	<u>5,310</u>	<u>3,670</u>	<u>3,538</u>
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	<u>(2,317)</u>	<u>(2,814)</u>	<u>(1,381)</u>
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	<u>(3,128)</u>	<u>(1,383)</u>	<u>(2,025)</u>
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	<u>\$ 4,747</u>	<u>\$ 4,317</u>	<u>\$ 4,232</u>



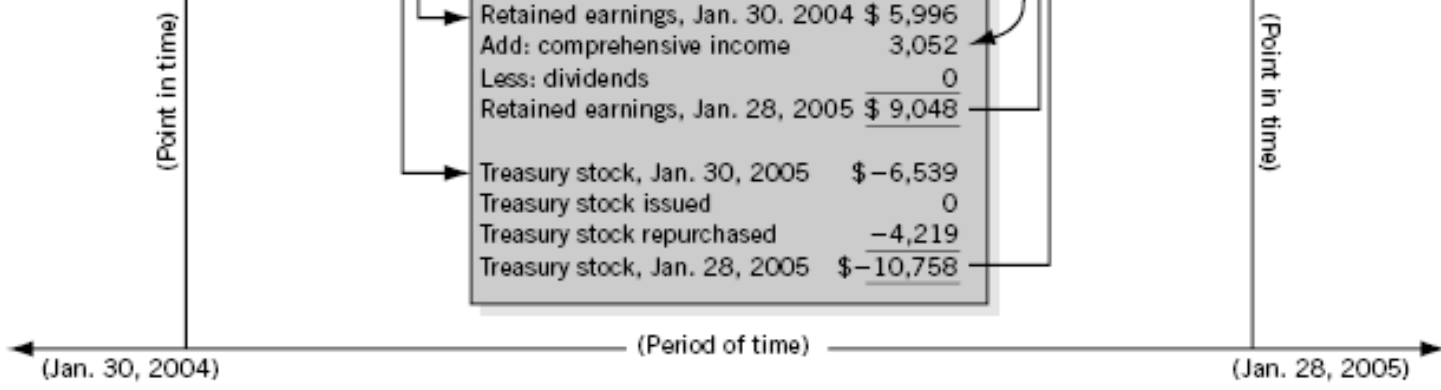
Balance Sheet Jan. 30, 2004	
Assets	
Cash	\$ 4,317
Noncash assets	14,994
Total assets	\$19,311
Liabilities and Equity	
Total liabilities	\$13,031
Equity	
Share capital	6,823
Retained earnings	5,996
Treasury stock	-6,539
Total equity	6,280
Liabilities and equity	\$19,311

Statement of Cash Flows For Year Ended Jan. 28, 2005	
Operating cash flows	\$ 5,310
Investing cash flows	-2,317
Financing cash flows	-3,128
Exchange rate changes on cash	565
Net change in cash	\$ 430
Cash balance, Jan. 30, 2004	4,317
Cash balance, Jan. 28, 2005	\$ 4,747

Income Statement For Year Ended Jan. 28, 2005	
Sales	\$49,205
Expenses	-46,162
Net earnings	\$ 3,043
Other comprehensive income	9
Comprehensive income	\$ 3,052

Statement of Shareholders' Equity For Year Ended Jan. 28, 2005	
Share capital, Jan. 30, 2004	\$ 6,823
Stock issuances	1,372
Share capital, Jan. 28, 2005	\$ 8,195
Retained earnings, Jan. 30, 2004	\$ 5,996
Add: comprehensive income	3,052
Less: dividends	0
Retained earnings, Jan. 28, 2005	\$ 9,048
Treasury stock, Jan. 30, 2005	\$-6,539
Treasury stock issued	0
Treasury stock repurchased	-4,219
Treasury stock, Jan. 28, 2005	\$-10,758

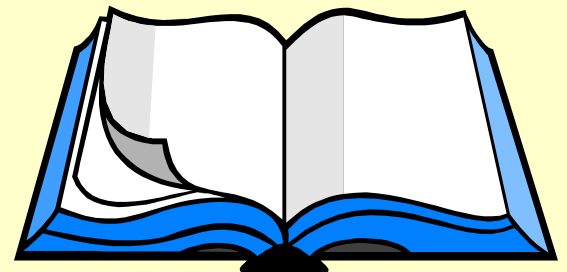
Balance Sheet Jan. 28, 2005	
Assets	
Cash	\$ 4,747
Noncash assets	18,468
Total assets	\$23,215
Liabilities and Equity	
Total liabilities	\$16,730
Equity	
Share capital	8,195
Retained earnings	9,048
Treasury stock	-10,758
Total equity	6,485
Liabilities and equity	\$23,215



Additional Information

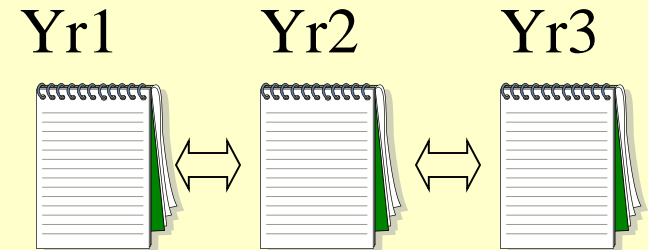
(Beyond Financial Statements)

- **Management Discussion & Analysis (MD&A)**
- **Management Report**
- **Auditor Report**
- **Explanatory Notes to Financial Statements**
- **Supplementary Information (10-K, 10-Q, 8-K, 20-F)**
- **Proxy Statement**



Analysis Preview

Comparative Analysis



Purpose: Evaluation of consecutive financial statements

Output: Direction, speed, & extent of any trend(s)

Types:

- Year-to-year Change Analysis
- Index-Number Trend Analysis

Analysis Preview

Dell's Comparative Income Statements

Exhibit 1.6

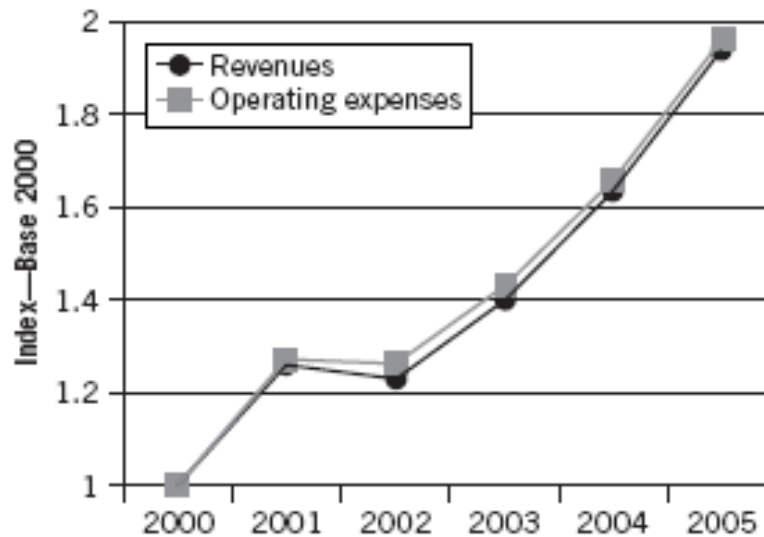


	2005	2004	Change (in \$mil)	Change %
Revenues	\$49,205	\$41,444	\$7,761	18.7%
Cost of goods sold	40,190	33,892	6,298	18.6
Gross profit	9,015	7,552	1,463	19.4
Operating expenses:				
Selling, general, and administrative exp.	4,298	3,544	754	21.3
Research and development	463	464	(1)	-0.2
Operating profit	4,254	3,544	710	20.0
Investment income	191	180	11	6.1
Pretax income	4,445	3,724	721	19.4
Income tax expense	1,402	1,079	323	29.9
Net income	<u>\$ 3,043</u>	<u>\$ 2,645</u>	<u>\$ 398</u>	15.0

Analysis Preview

Dell's Index-Number Trend—Revenues and Operating Expenses

Exhibit 1.7



■■■■■■■■

Analysis Preview

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

Dell's Common-Size Income Statements

Exhibit 1.8



Common size	2005	2004	2003	2002	2001
Net revenue	100.0	100.0	100.0	100.0	100.0
Cost of revenue	<u>81.7</u>	<u>81.8</u>	<u>82.1</u>	<u>82.3</u>	<u>79.8</u>
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	<u>0.9</u>	<u>1.1</u>	<u>1.3</u>	<u>1.5</u>	<u>1.5</u>
Total operating expenses	9.7	9.7	9.9	10.4	11.5
Investment and other income, net	<u>0.4</u>	<u>0.4</u>	<u>0.5</u>	<u>-1.7</u>	<u>1.3</u>
Income before income taxes	9.0	9.0	8.5	5.6	10.0
Income tax provision	<u>2.8</u>	<u>2.6</u>	<u>2.6</u>	<u>1.6</u>	<u>3.0</u>
Net income	<u><u>6.2</u></u>	<u><u>6.4</u></u>	<u><u>6.0</u></u>	<u><u>4.0</u></u>	<u><u>7.0</u></u>

Analysis Preview

Dell's Common-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	<u>72.8</u>	<u>55.1</u>
Property, plant, and equipment, net	7.3	7.9
Investments	18.6	35.1
Other noncurrent assets	1.3	2.0
Total assets	<u>100.0</u>	<u>100.0</u>
Accounts payable	38.3	37.9
Accrued and other	22.6	18.5
Total current liabilities	<u>60.9</u>	<u>56.4</u>
Long-term debt	2.2	2.6
Other noncurrent liabilities	9.0	8.4
Total liabilities	<u>72.1</u>	<u>67.5</u>
Common stock and capital in excess of par	35.3	35.3
Treasury stock	-46.3	-33.9
Retained earnings	39.5	31.7
Other	-0.5	-0.7
Total stockholders' equity	<u>27.9</u>	<u>32.5</u>
Total liabilities and equity	<u>100.0</u>	<u>100.0</u>

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



Liquidity

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}} = \frac{\$16,897}{\$14,136} = 1.20$$

$$\begin{aligned} \text{Acid-test ratio} &= \frac{\text{Cash} + \text{Cash equivalents} + \text{Marketable securities} + \text{Accounts receivable}}{\text{Current liabilities}} \\ &= \frac{\$4,747 + \$5,060 + \$4,414}{\$14,136} = 1.01 \end{aligned}$$

$$\text{Collection period} = \frac{\text{Average accounts receivable}}{\text{Sales}/360} = \frac{(\$4,414 + \$3,635)/2}{\$49,205/360} = 29.45 \text{ days}$$

$$\text{Days to sell inventory} = \frac{\text{Average inventory}}{\text{Cost of sales}/360} = \frac{(\$459 + \$327)/2}{\$40,190/360} = 3.52 \text{ days}$$

Capital Structure and Solvency

$$\text{Total debt to equity} = \frac{\text{Total liabilities}}{\text{Shareholders' equity}} = \frac{\$16,730}{\$6,485} = 2.58$$

$$\text{Long-term debt to equity} = \frac{\text{Long-term liabilities}}{\text{Shareholders' equity}} = \frac{(\$505 + \$2,089)}{\$6,485} = 0.40$$

$$\text{Times interest earned} = \frac{\text{Income before income taxes and interest expense}}{\text{Interest expense}} = \frac{(\$4,445 + \$16)}{\$16} = 278.8$$

Return on Investment

$$\begin{aligned} \text{Return on assets} &= \frac{\text{Net income} + \text{Interest expense} (1 - \text{Tax rate})}{\text{Average total assets}} \\ &= \frac{(\$3,043 + \$16(1 - 0.35))}{(\$23,215 + \$19,311)/2} = 14.36\% \end{aligned}$$

$$\text{Return on common equity} = \frac{\text{Net income}}{\text{Average shareholders' equity}} = \frac{\$3,043}{(\$6,485 + \$6,280)/2} = 47.7\%$$

Operating Performance

$$\text{Gross profit margin} = \frac{\text{Sales} - \text{Cost of Sales}}{\text{Sales}} = \frac{\$9,015}{\$49,205} = 18.32\%$$

$$\text{Operating profit margin (pretax)} = \frac{\text{Income from operations}}{\text{Sales}} = \frac{\$4,254}{\$49,205} = 8.65\%$$

$$\text{Pretax profit margin} = \frac{\text{Income before income taxes}}{\text{Sales}} = \frac{\$4,445}{\$49,205} = 9.03\%$$

$$\text{Net profit margin} = \frac{\text{Net income}}{\text{Sales}} = \frac{\$3,043}{\$49,205} = 6.18\%$$

(continued)

Financial Statement Ratios for Dell (concluded)



Asset Utilization

$$\text{Cash turnover} = \frac{\text{Sales}}{\text{Average cash and equivalents}} = \frac{\$49,205}{(\$4,747 + \$4,317)/2} = 10.86$$

$$\text{Accounts receivable turnover} = \frac{\text{Sales}}{\text{Average accounts receivable}} = \frac{\$49,205}{(\$4,414 + \$3,635)/2} = 12.23$$

$$\text{Inventory turnover} = \frac{\text{Cost of goods sold}}{\text{Average inventory}} = \frac{\$40,190}{(\$459 + \$327)/2} = 102.3$$

$$\text{Working capital turnover} = \frac{\text{Sales}}{\text{Average working capital}} = \frac{\$49,205}{(\$16,897 - \$14,136) + (\$10,633 - \$10,896)/2} = 39.4$$

$$\text{PPE turnover} = \frac{\text{Sales}}{\text{Average PPE}} = \frac{\$49,205}{(\$1,691 + \$1,517)/2} = 30.68$$

$$\text{Total assets turnover} = \frac{\text{Sales}}{\text{Average total assets}} = \frac{\$49,205}{(\$23,215 + \$19,311)/2} = 2.31$$

Market Measures

$$\text{Price-to-earnings ratio} = \frac{\text{Market price per share}}{\text{Earnings per share}} = \frac{\$33.44}{\$1.21} = 27.6$$

$$\text{Earnings yield} = \frac{\text{Earnings per share}}{\text{Market price per share}} = \frac{\$1.21}{\$33.44} = 3.62\%$$

$$\text{Dividend yield} = \frac{\text{Cash dividends per share}}{\text{Market price per share}} = \text{N/A (no dividends paid)}$$

$$\text{Dividend payout rate} = \frac{\text{Cash dividends paid per share}}{\text{Earnings per share}} = \text{N/A (no dividends paid)}$$

$$\text{Price-to-book} = \frac{\text{Market price per share}}{\text{Book value per share}} = \frac{\$33.44}{\$2.61} = 12.8$$

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)

Analysis Preview

Debt (Bond) Valuation

$$B_t = \frac{I_{t+1}}{(1+r)^1} + \frac{I_{t+2}}{(1+r)^2} + \frac{I_{t+3}}{(1+r)^3} + \dots + \frac{I_{t+n}}{(1+r)^n} + \frac{F}{(1+r)^n}$$

B_t is the value of the bond at time t

I_{t+n} is the interest payment in period $t+n$

F is the principal payment (usually the debt's face value)

r is the interest rate (yield to maturity)

Analysis Preview

Equity Valuation

$$V_t = \frac{E(D_{t+1})}{(1+k)^1} + \frac{E(D_{t+2})}{(1+k)^2} + \frac{E(D_{t+3})}{(1+k)^3} + \dots$$

V_t is the value of an equity security at time t

D_{t+n} is the dividend in period $t+n$

k is the cost of capital

$E(\bullet)$ refers to *expected* dividends

Analysis Preview

Equity Valuation - Free Cash Flow Model

$$V_t = \frac{E(\text{FCFE}_{t+1})}{(1+k)^1} + \frac{E(\text{FCFE}_{t+2})}{(1+k)^2} + \frac{E(\text{FCFE}_{t+3})}{(1+k)^3} + \dots$$

FCF_{t+n} is the free cash flow in the period $t + n$ [often defined as cash flow from operations less capital expenditures]

k is the cost of capital

$E(\bullet)$ refers to an expectation

Analysis Preview

Equity Valuation - Residual Income Model

$$V_t = BV_t + \frac{E(RI_{t+1})}{(1+k)^1} + \frac{E(RI_{t+2})}{(1+k)^2} + \frac{E(RI_{t+3})}{(1+k)^3} + \dots$$

BV is the book value at the end of period

Ri_{t+n} is the residual income in period $t + n$ [defined as net income, NI, minus a charge on beginning book value, BV, or $RI_t = NI_t - (k \times BV_{t-1})$]

k is the cost of capital

E(•) refers to an expectation

Analysis in an Efficient Market

Three assumed forms of market efficiency

**Weak Form - prices reflect information in
past prices**

**Semi-strong Form - prices reflect all public
information**

**Strong Form - prices reflect all public and
private information**

Analysis in an Efficient Market

Market Efficiency

- assumes competent and informed analysis
- distinguish aggregate from individual behavior
- reflects information (both reliable and unreliable)
- cross-country differences in rewards to analysis

Financial statement analysis relevant to more than just market analysis, e.g.,

- credit and lending
- auditing
- valuation of nonpublicly traded firms
- mergers and acquisitions
- etc.

Book Organization

Financial Statement Analysis

