Organizing the Business

Decentralized organization. Decision-making authority is not confined to a few top executives but rather is spread throughout the organization. (p. 478)

Cost center. A business segment whose manager has control over cost but has no control over revenue or investments in operating assets. (p. 479)

Responsibility center. Any business segment whose manager has control over costs, revenues, or investments in operating assets. (p. 479)

Investment center. A business segment whose manager has control over cost, revenue, and investments in operating assets. (p. 479)

Profit center. A business segment whose manager has control over cost and revenue but has no control over investments in operating assets. (p. 479)

Evaluating Results of Operations

Net operating income. Income before deducting interest and income taxes. (p. 480)

Margin. Net operating income divided by sales. (p. 480)

Operating assets. Cash, accounts receivable, inventory, plant and equipment, and all other assets held for operating purposes. (p. 480)

Turnover. Sales divided by average operating assets. (p. 480)

Return on investment (ROI). Net operating income divided by average operating assets. It also equals margin multiplied by turnover. (p. 480)

Residual income. The net operating income that an investment center earns above the minimum required return on its operating assets. (p. 483)

Economic Value Added (EVA). A concept similar to residual income in which a variety of adjustments may be made to GAAP financial statements for performance evaluation purposes. (p. 484)

Evaluating Business Processes

Throughput time. The amount of time required to turn raw materials into completed products. (p. 487)

Delivery cycle time. The elapsed time from receipt of a customer order to when the completed goods are shipped to the customer. (p. 487)

Manufacturing cycle efficiency (MCE). Process (value-added) time as a percentage of throughput time. (p. 488)

Balanced scorecard. An integrated set of performance measures that are derived from and support the organization's strategy. (p. 490)

Balance Sheet	Begin.	End.		Begin.	End.
Current assets			**Current Debt**		
Cash	$10,000	$20,000	None		
Accounts receivable	20,000	30,000			
Inventory	40,000	50,000			
Total current assets	**$70,000**	**$100,000**			
Plant and equipment	$120,000	$140,000	**Long-term Debt**		
Accumulated Depreciation	($60,000)	($70,000)	Bonds Payable	$50,000	$70,000
Plant and equipment (net)	**60,000**	**70,000**	**Owner Equity**		
Investment in BB Company	**30,000**	**30,000**	Common stock	100,000	100,000
Land for future expansion	**20,000**	**20,000**	Retained Earn.	30,000	50,000
Total Assets	**$180,000**	**$220,000**	**Debt & Equity**	**$180,000**	**$220,000**

Total operating assets | | | **Dividends of $6,000 were paid.**

Investment & land for expansion are not operating assets. Cost of capital (minimum return) is 20%.

Income Statement		
Sales		**$600,000**
Expenses (Include Deprec. of $10,000)		($550,000)
Net operating income (EBIT)		**$50,000**
Interest expense	$4,000	
Income Tax expense	$20,000	$24,000
Net income		**$26,000**

Average Operating Assets	Beginning total operating assets			
	Ending total operating assets		=	
	Total			
Margin	Net Operating Income		=	
	Sales			
Turnover	Sales		=	
	Average operating assets			
ROI (Margin X Turnover)	Margin X Turnover		=	
Residual income	Average operating assets			
	Minimum required return rate			
	Minimum required return			
	Net operating income			
	Residual income			

ROI vs. Residual Income (Company's required rate of return is 20%.)

Company considered a proposed investment at the start of the current year.
The project required an investment of $100,000. It would have increased earnings by $25,000.
Investment would have been made at start of year, so you should add $1,000,000 to average assets.
What was the projected impact of the proposed project on ROI and Residual Income?

	Actual	Proposed	Total
Operating Assets	**$900,000**	**$100,000**	**$1,000,000**
Min. required rate of return	**20%**		
Minimum required return	**$180,000**		
Actual net operating income	**$25,000**		
ROI			
Residual income			

Balance Sheet	Begin.	End.		Begin.	End.
Current assets			**Current Debt**		
Cash	$10,000	$20,000	None		
Accounts receivable	20,000	30,000			
Inventory	40,000	50,000			
Total current assets	**$70,000**	**$100,000**			
Plant and equipment	$120,000	$140,000	**Long-term Debt**		
Accumulated Depreciation	($60,000)	($70,000)	Bonds Payable	$50,000	$70,000
Plant and equipment (net)	**60,000**	**70,000**	**Owner Equity**		
Investment in BB Company	**30,000**	**30,000**	Common stock	100,000	100,000
Land for future expansion	**20,000**	**20,000**	Retained Earn.	30,000	50,000
Total Assets	**$180,000**	**$220,000**	**Debt & Equity**	**$180,000**	**$220,000**

Total operating assets **$130,000** **$170,000** **Dividends of $6,000 were paid.**

Investment & land for expansion are not operating assets. Cost of capital (minimum return) is 20%.

Income Statement		
Sales		**$600,000**
Expenses (Include Deprec. of $10,000)		($550,000)
Net operating income (EBIT)		**$50,000**
Interest expense	$4,000	
Income Tax expense	$20,000	$24,000
Net income		**$26,000**

Average Operating Assets	Beginning total operating assets Ending total operating assets Total	$130,000 $170,000 $300,000	=	**$150,000**
Margin	Net Operating Income Sales	$50,000 $600,000	=	**8.33%**
Turnover	Sales Average operating assets	$600,000 $150,000	=	**4.00**
ROI (Margin X Turnover)	Margin X Turnover		=	**33%**
Residual income	Average operating assets Minimum required return rate Minimum required return Net operating income Residual income	$150,000 **20%** $30,000 $50,000		**$20,000**

ROI vs. Residual Income (Company's required rate of return is 20%.)

Company considered a proposed investment at the start of the current year.
The project required an investment of $100,000. It would have increased earnings by $25,000.
Investment would have been made at start of year, so you should add $1,000,000 to average assets.
What was the projected impact of the proposed project on ROI and Residual Income?

	Actual	Proposed	Total
Operating Assets	**$900,000**	**$100,000**	**$1,000,000**
Min. required rate of return	**20%**	**20%**	**20%**
Minimum required return	**$180,000**	**$20,000**	**$200,000**
Actual net operating income	**$300,000**	**$25,000**	**$325,000**
ROI	**33.3%**	**25%**	**32.5%**
Residual income	**$120,000**		**$125,000**