Chapter 5

Communicating and Interpreting Accounting Information

Learning Objectives

5-1 Recognize the people involved in the accounting communication process (regulators, managers, directors, auditors, information intermediaries, and users), their roles in the process, and the guidance they receive from legal and professional standards.

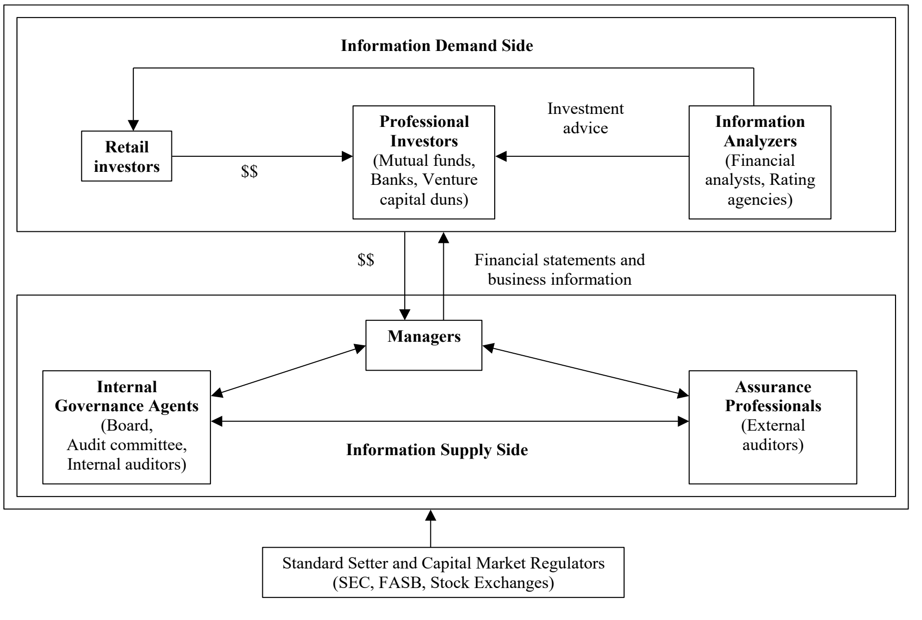
5-2 Identify the steps in the accounting communication process, including the issuance of press releases, annual reports, quarterly reports, and SEC filings, as well as the role of online information services in this process.

5-3 Recognize and apply the different financial statement and disclosure formats used by companies in practice and analyze the gross profit percentage.

5-4 Analyze a company's performance based on return on assets and its components and the effects of transactions on financial ratios.

Learning Objective 5-1

5-1 Recognize the people involved in the accounting communication process (regulators, managers, directors, auditors, information intermediaries, and users), their roles in the process, and the guidance they receive from legal and professional standards.



Managers

Managers are **primarily responsible** for the information in the **financial statements and disclosures.**

Chief Executive Officer (CEO): highest officer of the company

Chief Financial Officer (CFO): highest officer associated with the financial and accounting side of the business

The CEO and CFO must personally certify that:

- Each report filed with the SEC does not contain untrue statements or omitted facts.
- There are no significant deficiencies or material weaknesses in the internal controls over financial reporting.
- They have disclosed to the auditors and audit committee any weaknesses in internal controls or fraud involving management or employees who have a role in financial reporting.

The **accounting staff,** who actually prepare the details of the reports, also bear professional responsibility for the accuracy of this information, although their legal responsibility is smaller.

Board of Directors (Audit Committee)

Board of Directors

The board of directors oversees the CEO and other senior management and assures that the long-term interests of shareholders are being served.

The board of directors are elected by the stockholders.

Audit Committee of the Board of Directors

The audit committee of the board of directors is responsible for ensuring that processes are in place for maintaining the integrity of the company's accounting, financial statement preparation, and financial reporting.

It is responsible for hiring the company's independent auditors and must meet separately with the auditors to discuss management's compliance with their financial reporting responsibilities.

Committee members must be nonmanagement (independent) directors with financial knowledge.

Auditors

Independent Auditors

The SEC requires publicly traded companies to have their statements and their control systems over the financial reporting process audited by an independent registered public accounting firm (independent auditor) following auditing standards established by the PCAOB.

Many privately owned companies also have their statements audited.

By signing an **unqualified (clean) audit opinion**, a CPA firm assumes part of the financial responsibility for the fairness of the financial statements and related presentations. This opinion, which adds credibility to the statements, is often required by lenders and private investors.

Subjecting the company's statements to independent verification reduces the risk that the company's financial condition is misrepresented in the statements.

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The "Big 4"

The following four firms are referred to as the "**Big 4**"

Ernst & Young

Deloitte & Touche

KPMG

PricewaterhouseCoopers

Each of these firms employs thousands of CPAs in offices scattered throughout the world. They audit the great majority of publicly traded companies as well as many that are privately held.

Some public companies and most private companies are audited by smaller CPA firms.

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Information Intermediaries: Information Services and Financial Analysts

Most investors rely on company websites, information services, and financial analysts to gather and analyze information.

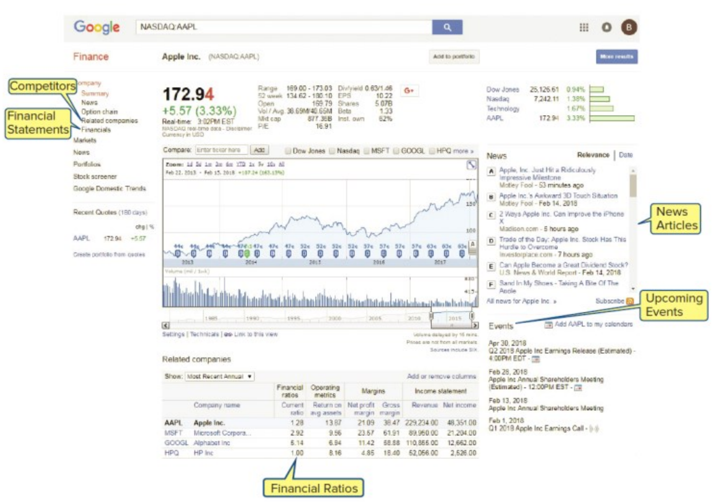
Companies file their SEC forms electronically using the **EDGAR** (Electronic Data Gathering, Analysis, and Retrieval) service. Each fact in the report is tagged to identify its source and meaning using a language called **XBRL**.

Information services allow investors to gather their own information about the company and monitor analysts recommendations.

- Fee-based services (Compustat and Thomson Reuters)
- Information on the web (google, marketwatch, Bloomberg)

Financial analysts prepare reports including forecasts of future quarterly and annual earnings per share and share price; a buy, hold, or sell recommendation for the company's shares; and explanations for these judgments.

Exhibit 5.2
Google Finance Information on Apple



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How Data Analytics Are Affecting What Auditors Do

Data Analytics

Modern data analytics are changing the world of auditing.

The availability of more data has allowed access to entire populations of transactions instead of smaller statistical samples as in the past.

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Data Analytics eases identification of trends, patterns, and outliers, which become the focus for further investigation.

This information will help auditors better anticipate potential areas of high audit risk

Data analytics decreases the amount of repetitive manual work in the audit and increases the value of audit services to clients and securities markets

Information Services and Your Job Search

FINANCIAL ANALYSIS

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Information services have become the primary tool for professional analysts, who use them to analyze competing firms.

Information services are also an important source of information for job seekers.

The best place to begin learning about potential employers is to visit their websites.

Users: Institutional and Private Investors, Creditors, and Others

Institutional Investors
Pension, mutual, endowment, and other funds that invest on the behalf of others.

Private Investors
Individuals, including large individual investors such as venture capitalists, who purchase shares in companies.

Lenders or Creditors
Suppliers, banks, commercial credit companies, and other financial institutions that lend money to companies.

Learning Objective 5-2

5-2 Identify the steps in the accounting communication process, including the issuance of press releases, annual reports, quarterly reports, and SEC filings, as well as the role of online information services in this process.

The Disclosure Process

SEC regulation FD, for "Fair Disclosure," requires that companies provide all investors equal access to all important company news.

Managers and other insiders also are prohibited from trading their company's shares based on nonpublic (insider) information so that no party benefits from early access.

Public companies announce quarterly and annual earnings through a press release as soon as the verified figures (audited for annual and reviewed for quarterly earnings) are available. Many companies follow these press releases with a conference call during which senior managers answer analysts' questions about the results.

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How Does the Stock Market React to Earnings Announcements?

FINANCIAL ANALYSIS

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For actively trading companies, most of the stock market reaction (stock price increases and decreases from investor trading) to news in the press release usually happens quickly.

The market reacts not to the amount of earnings, but to the difference between *expected* and *actual* earnings.

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Exhibit 5.3
Earnings Press Release Excerpt for Apple Inc.

A press release is a written public news announcement normally distributed to major news services.

APPLE REPORTS FOURTH QUARTER RESULTS

Revenue Up 12 Percent and EPS Up 24 Percent to New September Quarter Records

Services Revenue Reaches All-Time High

Cupertino, California—November 2, 2017—Apple today announced financial results for its fiscal 2017 fourth quarter ended September 30, 2017. The Company posted quarterly revenue of $52.6 billion, an increase of 12 percent from the year-ago quarter, and quarterly earnings per diluted share of $2.07, up 24 percent. International sales accounted for 62 percent of the quarter's revenue. . . . .

"Apple's year-over-year revenue growth rate accelerated for the fourth consecutive quarter and drove EPS growth of 24 percent in the September quarter," said Luca Maestri, Apple's CFO. "We also generated strong operating cash flow of $15.7 billion and returned $11 billion to investors through our capital return program."

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The Disclosure Process: Annual Reports and Form 10-K

The annual reports for **privately** held companies normally include:

1. Four basic financial statements.
2. Related notes (footnotes).
3. Report of Independent Accountants (Auditor's Opinion) if the statements are audited.

The annual reports of **public** companies (called Form 10-K) have additional SEC reporting requirements such as these components:

Item 1. Business: Description of business operations and company strategy.

Item 6. Selected Financial Data: Summarized financial data for a 5-year period.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations: Management's views on the causes of its successes and failures during the reporting period and the risks it faces in the future.

Item 8. Financial Statements and Supplemental Data: The four basic financial statements and related notes, the report of management, and the auditor's report.

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The Disclosure Process: Quarterly and Other SEC Reports

Quarterly reports for private companies, usually prepared for lenders, include less information than annual reports and are not audited.

Public companies file their quarterly reports on **Form 10-Q** with the SEC. The Form 10-Q contains most of the information items provided in the financial section of the 10-K and some additional items.

Public companies must file other reports with the SEC. These include the current events report **Form 8-K**, which is used to disclose any material event not previously reported that is important to investors (e.g., auditor changes, mergers).

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Learning Objective 5-3

5-3 Recognize and apply the different financial statement and disclosure formats used by companies in practice and analyze the gross profit percentage.

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A Closer Look at Financial Statement Formats and Notes

There are three additional characteristics of financial statements and related disclosures that make them more useful:

1. **Comparative financial statements.** To allow users to compare performance from period to period, companies report financial statement values for the current period and one or more prior periods.
2. **Additional subtotals and classifications in financial statements.** You should not be confused when you notice slightly different statement formats used by different companies.
3. **Additional disclosures.** Most companies present voluminous notes that are necessary to understand a company's performance and financial condition.

Exhibit 5.4

Balance Sheet of Apple Inc.

APPLE
REAL WORLD EXCERPT:
Annual Report

APPLE INC.
Consolidated Balance Sheets
(In millions, except number of shares which are reflected in thousands and par value)*

		September 30, 2017	September 24, 2016
	ASSETS		
	Current assets:		
Assets that will be used or turned into cash within one year	Cash and cash equivalents	$ 20,289	$ 20,484
	Short-term marketable securities	53,892	46,671
	Accounts receivable, less allowances of $58 and $53, respectively	17,874	15,754
	Inventories	4,855	2,132
	Vendor non-trade receivables	17,799	13,545
	Other current assets	13,936	8,283
	Total current assets	128,645	106,869
Assets that will be used or turned into cash beyond one year	Long-term marketable securities	194,714	170,430
	Property, plant, and equipment, net	33,783	27,010
	Goodwill	5,717	5,414
	Acquired intangible assets, net	2,298	3,206
	Other non-current assets	10,162	8,757
	Total assets	$375,319	$321,686
	LIABILITIES AND SHAREHOLDERS' EQUITY		
	Current liabilities:		
Obligations that will be paid or settled within one year	Accounts payable	$ 49,049	$ 37,294
	Accrued expenses	25,744	22,027
	Deferred revenue	7,548	8,080
	Commercial paper	11,977	8,105
	Current portion of long-term debt	6,496	3,500
	Total current liabilities	100,814	79,006
Obligations that will be paid or settled after one year	Deferred revenue–non-current	2,836	2,930
	Long-term debt	97,207	75,427
	Other non-current liabilities	40,415	36,074
	Total liabilities	241,272	193,437
	Commitments and contingencies		
	Shareholders' equity:		
Capital contributed by shareholders	Common stock and additional paid-in capital, $0.00001 par value; 12,600,000 shares authorized; 5,126,201 and 5,336,166 shares issued and outstanding, respectively	35,867	31,251
Earnings reinvested in the company	Retained earnings	98,330	96,364
	Accumulated other comprehensive income/(loss)	(150)	634
	Total shareholders' equity	134,047	128,249
	Total liabilities and shareholders' equity	$375,319	$321,686

*Apple's statements have been simplified for purposes of our discussion.

Classified Income Statement

Manufacturing and merchandising companies that sell goods report the subtotal Gross Profit. Gross Profit (also called Gross Margin) is the difference between net sales and cost of goods sold.

Operating Income is computed by subtracting operating expenses from gross profit.

Nonoperating (other) Items are revenues, expenses, gains and losses that do not relate to the company's primary operations. These items are added to or subtracted from Operating Income to obtain Income before Income Taxes.

Provision for Income Taxes (Income Tax Expense) is subtracted from Income before Income Taxes to obtain Net Income.

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Exhibit 5.5

Income Statement of Apple Inc.

APPLE INC.
Consolidated Statements of Operations*
(In millions, except number of shares which are reflected in thousands and per share amounts)

	Years ended September 30, 2017	September 24, 2016	September 26, 2015
Net sales	$229,234	$215,639	$233,715
Cost of sales	141,048	131,376	140,089
Gross profit	88,186	84,263	93,626
Operating expenses:			
Research and development	11,581	10,045	8,067
Selling, general, and administrative	15,261	14,194	14,329
Total operating expenses	26,842	24,239	22,396
Operating income	61,344	60,024	71,230
Other income/(expense), net	2,745	1,348	1,285
Income before provision for income taxes	64,089	61,372	72,515
Provision for income taxes	15,738	15,685	19,121
Net income	$ 48,351	$ 45,687	$ 53,394
Earnings per share:			
Basic	$ 9.27	$ 8.35	$ 9.28
Shares used in computing earnings per share:			
Basic	5,217,242	5,470,820	5,753,421

**Apple's statements have been simplified for purposes of our discussion.*

APPLE
REAL WORLD EXCERPT:
Annual Report

Operating activities (central focus of the business)

Peripheral activities (not the main focus of the business)

Income tax expense

= Net Income/Average Number of Shares Outstanding

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Earnings per Share

KEY RATIO ANALYSIS

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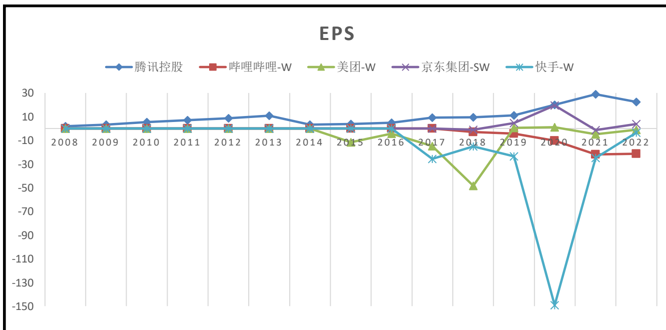
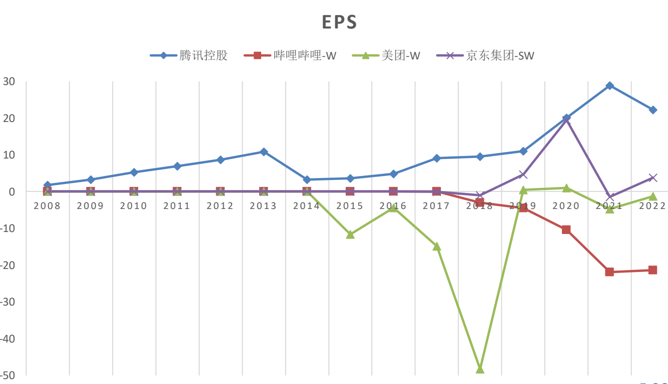
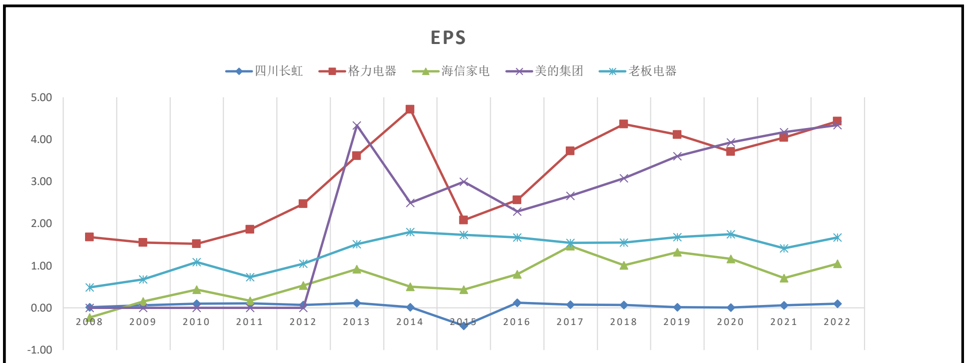
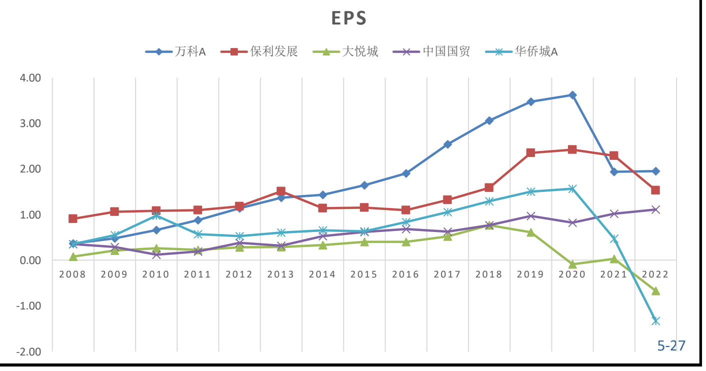
$$\text{Earnings per Share} = \frac{\text{Net Income}^{*}}{\text{Average Number of Shares of Common Stock Outstanding during the Period}}$$

*If there are preferred dividends, the amount is subtracted from net income in the numerator.









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Exercise 5-1

Lorelei's, Inc., operates the two best-known high-end department store chains in North America: Lorelei's and Chorelei. The following data (in millions) were taken from its recent annual report for the year ended September 30:

Cost of sales	$350,000
Federal, state, and local income tax expense	21,000
Interest expense	9,000
Interest income	18,000
Net sales	550,000
Other operating expenses	43,000
Selling, general, and administrative expenses	95,000

Required:
Prepare a complete classified (multiple-step) consolidated statement of income for the company (showing gross margin, operating income, and income before income taxes).

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Cost of sales	$350,000
Federal, state, and local income tax expense	21,000
Interest expense	9,000
Interest income	18,000
Net sales	550,000
Other operating expenses	43,000
Selling, general, and administrative expenses	95,000

LORELEI'S, INC.
Consolidated Statement of Income
For the year ended September 30
(in millions)

Net sales	$550,000
Less: Cost of sales	350,000
Gross margin	200,000
Less: Selling, general and administration expenses	95,000
Less: Other operating expenses	43,000
Operating income	62,000
Add: Interest income	18,000
Less: Interest expense	9,000
Income before income taxes	71,000
Federal, state, and local income tax	21,000
Net income	$ 50,000

Statement of Comprehensive Income

FINANCIAL ANALYSIS

Both the FASB and the IASB require an additional statement entitled the Statement of Comprehensive Income, which can be presented separately or in combination with the income statement.

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APPLE INC.
Consolidated Statement of Comprehensive Income
Three months ended December 30, 2017 (in millions)

Net income	**$20,065**
Other comprehensive income/(loss)	
Change in foreign currency translation	40
Change in unrealized gains/losses on derivative instruments	190
Change in unrealized gains/losses on marketable securities	(921)
Comprehensive income	$19,374

Gross Profit Percentage

KEY RATIO ANALYSIS

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How effective is management in selling goods and services for more than the costs to purchase or produce them?

$$\text{Gross Profit Percentage} = \frac{\text{Gross Profit}^{*}}{\text{Net Sales}}$$

*Gross Profit = Net Sales − Cost of Sales

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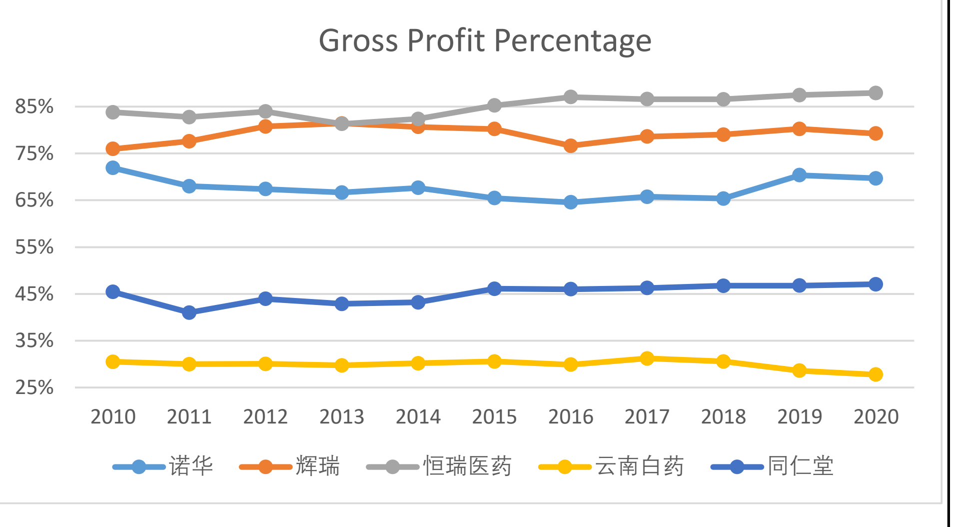

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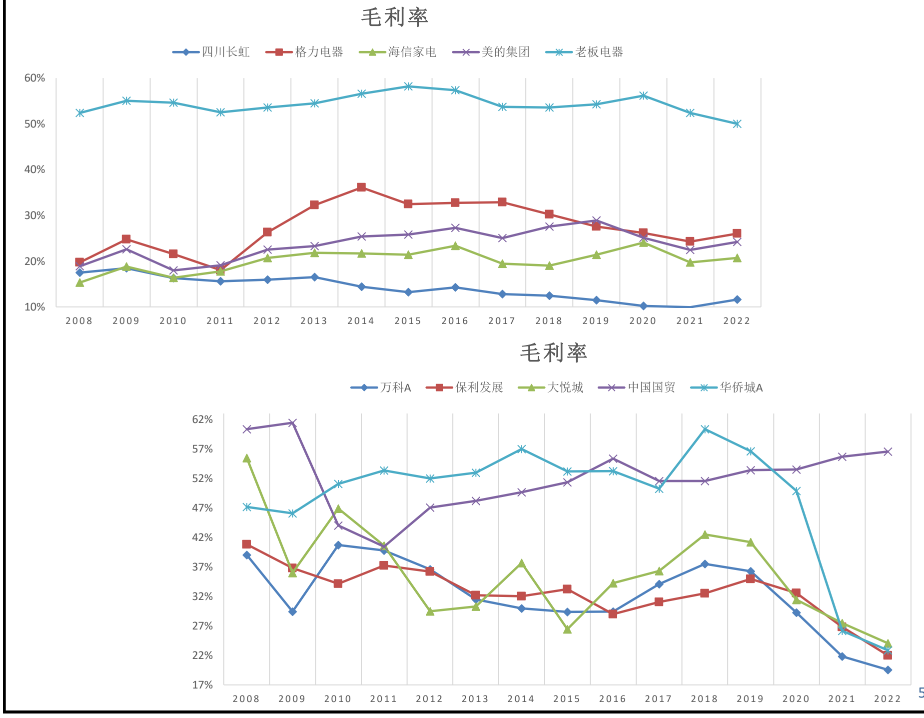

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Exercise 5-2

Supply the missing dollar amounts for the current year income statement of BMW Company for each of the following independent cases.

	Case A	Case B	Case C	Case D	Case E
Sales revenue	1,078	$?	$?	$840	$1,470
Pretax income	?	?	210	182	518
Income tax expense	91	294	84	63	?
Cost of goods sold	?	448	175	350	?
Gross margin	?	1,232	?	?	882
Selling expense	126	385	63	98	?
Net income	161	385	?	?	336
Administrative expense	280	168	112	?	245

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	Case A	Case B	Case C	Case D	Case E
Sales revenue	$1,078	$1,680*	$560*	$840	$1,470
Cost of goods sold	420*	448	175	350	588*
Gross margin	658*	1,232	385*	490*	882
Operating expenses:					
Selling expense	126	385	63	98	119*
Administrative expense	280	168	112	210*	245
Total expenses	406	553	175	308	364
Pretax income	252*	679*	210	182	518
Income tax expense	91	294	84	63	182*
Net income	$ 161	$ 385	$126*	$119*	$ 336

**Amounts not given in the exercise.*

Exhibit 5.6

Statement of Stockholders' Equity

APPLE INC.

Consolidated Statements of Shareholders' Equity (partial)*
(in millions, except number of shares, which are reflected in thousands)

	Common Stock and Additional Paid-In Capital		Retained Earnings	Accumulated Other Comprehensive Income/(Loss)	Total Shareholders' Equity
	Shares	Amount			
Balances as of September 24, 2016	5,336,166	$31,251	$ 96,364	$634	$128,249
Net income	–	–	48,351		48,351
Other comprehensive income/(loss)	–	–	–	(784)	(784)
Dividends and dividend equivalents declared	–	–	(12,803)		(12,803)
Stock issued	36,531	4,616			4,616
Stock repurchased	(246,496)	–	(33,582)		(33,582)
Balances as of September 30, 2017	**5,126,201**	**$35,867**	**$ 98,330**	**($150)**	**$134,047**

*Apple's statements have been simplified for purposes of our discussion.

Statement of Cash Flows

The Statement of Cash Flows is divided into *three* sections:

- **Cash Flows from Operating Activities.** This section reports cash flows associated with earning income.
- **Cash Flows from Investing Activities.** Cash flows in this section are associated with the purchase and sale of (1) productive assets (other than inventory) and (2) investments in other companies.
- **Cash Flows from Financing Activities.** These cash flows are related to financing the business through borrowing and repaying loans from financial institutions, stock (equity) issuances and repurchases, and dividend payments.

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Statement of Cash Flows – Indirect Method

Cash Flows from Operating Activities can be reported using either the direct or indirect method. The indirect method begins with a reconciliation of net income on an accrual basis to cash flows from operations.

Net income (loss)

+/– Adjustments for noncash items

Cash provided by operating activities

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Exhibit 5.7
Cash Flow Statement of Apple

APPLE
REAL WORLD EXCERPT:
Annual Report

APPLE INC.
Consolidated Statements of Cash Flows*
(in millions)

			Years ended	
		September 30, 2017	**September 24, 2016**	**September 26, 2015**
	Cash and cash equivalents, beginning of the year	$ 20,484	$ 21,120	$ 13,844
	Operating activities:			
Cash flows associated with earning income computed by eliminating noncash items from net income	Net income	48,351	45,687	53,394
	Adjustments to reconcile net income to cash generated by operating activities:			
	Depreciation and amortization	10,157	10,505	11,257
	Other noncash items	10,640	9,634	5,353
	Changes in operating assets and liabilities:	(5,550)	(2)	11,262
	Cash generated by operating activities	63,598	65,824	81,266
	Investing activities:			
Cash flows associated with purchase and sale of productive assets and investments	Purchases of marketable securities	(159,486)	(142,428)	(166,402)
	Proceeds from maturities of marketable securities	31,775	21,258	14,538
	Proceeds from sales of marketable securities	94,564	90,536	107,447
	Payments for business acquisitions, net	(329)	(297)	(343)
	Payments for acquisition of property, plant and equipment	(12,451)	(12,734)	(11,247)
	Payments for acquisition of intangible assets	(344)	(814)	(241)
	Other	(175)	(1,498)	(26)
	Cash used in investing activities	(46,446)	(45,977)	(56,274)
	Financing activities:			
Cash flows associated with borrowing and repaying loans, issuing and repurchasing stock, and paying dividends	Proceeds from issuance of common stock	555	495	543
	Proceeds from issuance of term debt, net	28,662	24,954	27,114
	Repayments of term debt	(3,500)	(2,500)	-
	Payments for dividends	(12,769)	(12,150)	(11,561)
	Repurchases of common stock	(32,900)	(29,722)	(35,253)
	Other financing activities	2,605	(1,560)	1,441
	Cash used in financing activities	(17,347)	(20,483)	(17,716)
Total change in cash	Increase/(decrease) in cash and cash equivalents	(195)	(636)	7,276
End of year cash on balance sheet	Cash and cash equivalents, end of the year	$ 20,289	$ 20,484	$ 21,120
	Supplemental cash flow disclosure:			
	Cash paid for income taxes, net	$ 11,591	$ 10,444	$ 13,252
	Cash paid for interest	$ 2,092	$ 1,316	$ 514

*Apple's statements have been simplified for purposes of our discussion.

Notes to Financial Statements

All financial reports include additional information in notes that follow the statements.

(1) Descriptions of the key accounting rules applied in the company's statements.

(2) Additional detail supporting reported numbers.

(3) Relevant financial information not disclosed on the statements.

Accounting Rules Applied in the Company's Statements

One of the first notes is typically a summary of significant accounting policies. Apple's accounting policy for property, plant, and equipment is as follows:

NOTE 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES
Property, Plant, and Equipment
Property, plant, and equipment are stated at cost. Depreciation is computed by use of the straight-line method over the estimated useful lives of the assets, which for buildings is the lesser of 30 years or the remaining life of the underlying building; between two and five years for machinery and equipment, including product tooling and manufacturing process equipment; and the shorter of lease terms or ten years for leasehold improvements.

Additional Detail Supporting Reported Numbers

The second category of notes provides supplemental information concerning the data shown on the financial statements.

NOTE 3 – CONSOLIDATED FINANCIAL STATEMENT DETAILS

Property, Plant, and Equipment	**2017**	**2016**
Land and buildings	$ 13,587	$ 10,185
Machinery, equipment, and internal-use software	54,210	44,543
Leasehold improvements	7,279	6,517
Gross property, plant, and equipment	75,076	61,245
Accumulated depreciation and amortization	(41,293)	(34,235)
Net property, plant, and equipment	$ 33,783	$27,010

Relevant Financial Information Not Disclosed on the Statements

The final category includes information that impacts the company financially but is not shown on the statements.

NOTE 10 – COMMITMENTS AND CONTINGENCIES

Unconditional Purchase Obligations

The Company has entered into certain off-balance sheet arrangements which require the future purchase of goods or services ("Unconditional Purchase Obligations"). The Company's Unconditional Purchase Obligations primarily consist of payments for supplier arrangements, internet and telecommunication services and intellectual property licenses. Future payment under noncancelable Unconditional Purchase Obligations having a remaining term in excess of one year as of September 30, 2017, are as follows (in millions):

2018	$1,798
2019	2,675
2020	1,626
2021	1,296
2022	1,268
Thereafter	14
Total	$8,677

Voluntary Disclosures

GAAP and SEC regulations set only the minimum level of required financial disclosures. Many companies provide additional information.

	2017	2016	2015
Net sales by Product (in millions):			
iPhone	$141,319	$136,700	$155,041
iPad	19,222	20,628	23,227
Mac	25,850	22,831	25,471
Services	29,980	24,348	19,909
Other Products	12,863	11,132	10,067
Total net sales	$229,234	$215,639	$233,715

Differences in Accounting Methods Acceptable under IFRS and U.S. GAAP

Many countries have adopted International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB). IFRS are similar to U.S. GAAP, but there are several important differences. The FASB and IASB are working together to eliminate some of these differences.

Difference	U.S. GAAP	IFRS	Chapter
Last-in first-out (LIFO) method for inventory	Permitted	Prohibited	7
Reversal of inventory write-downs	Prohibited	Required	7
Basis for property, plant, and equipment	Historical cost	Fair value or historical cost	8
Development costs	Expensed	Capitalized	8
Debt to be refinanced	Current	Noncurrent	9
Recognition of contingent liabilities	Probable	More likely than not	9
Stockholders' equity accounts	Common stock	Share capital	11
	Paid-in capital	Share premium	
Interest received on cash flow statement	Operating	Operating or investing	12
Interest paid on cash flow statement	Operating	Operating or financing	12

Learning Objective 5-4

5-4 Analyze a company's performance based on return on assets and its components and the effects of transactions on financial ratios.

Return on Assets (ROA)

KEY RATIO ANALYSIS

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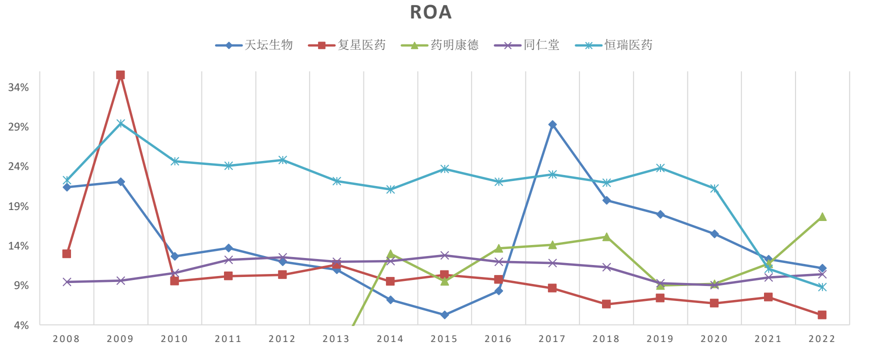
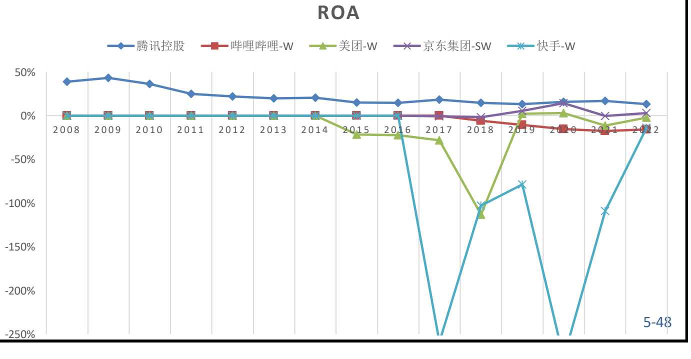
How well has management used the company's total investment in assets financed by both debt holders and stockholders?

$$\text{Return on Assets} = \frac{\text{Net Income}^{*}}{\text{Average Total Assets}^{\dagger}}$$

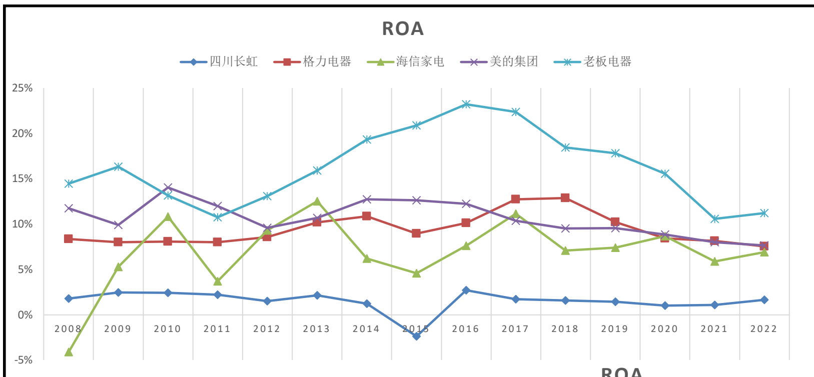
*In more complex ROA analyses, interest expense (net of tax) and minority interest are added back to net income in the numerator.
†(Beginning Total Assets + Ending Total Assets) ÷ 2

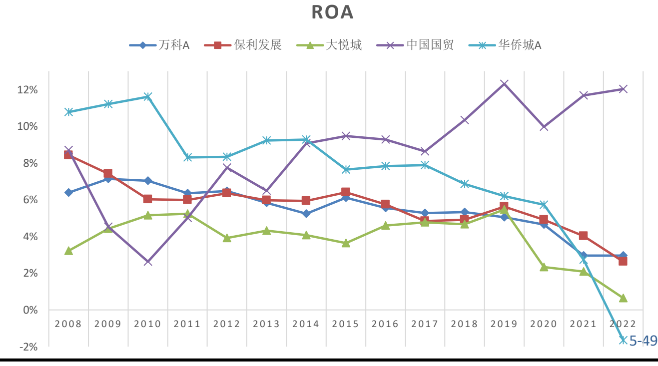
5-47





5-48





5-49

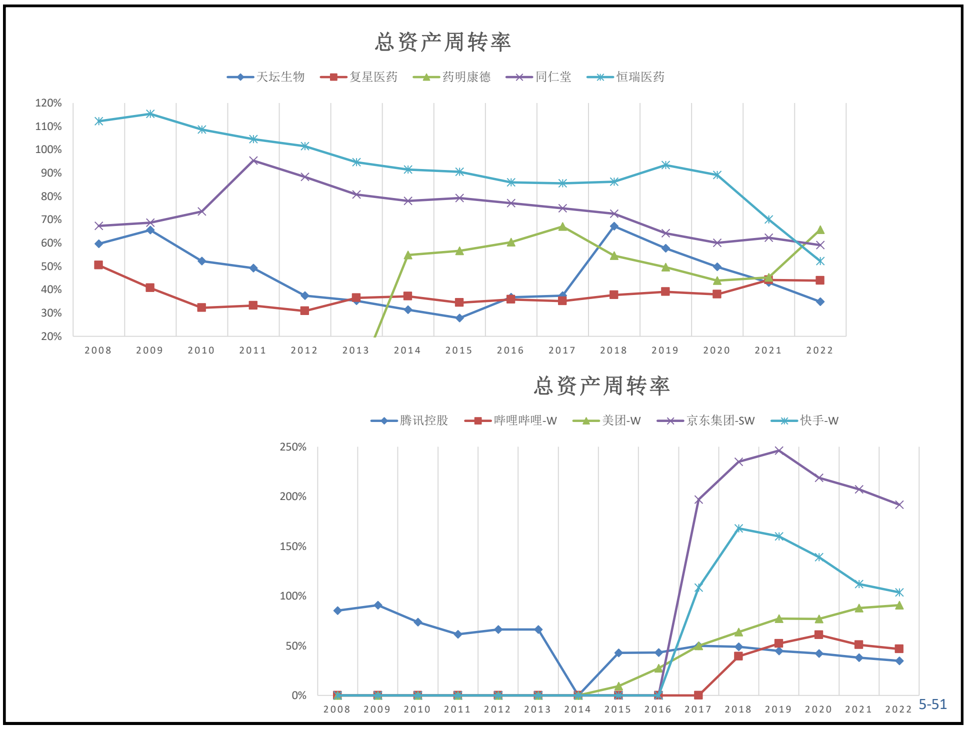
Exhibit 5.8

ROA Profit Driver Analysis

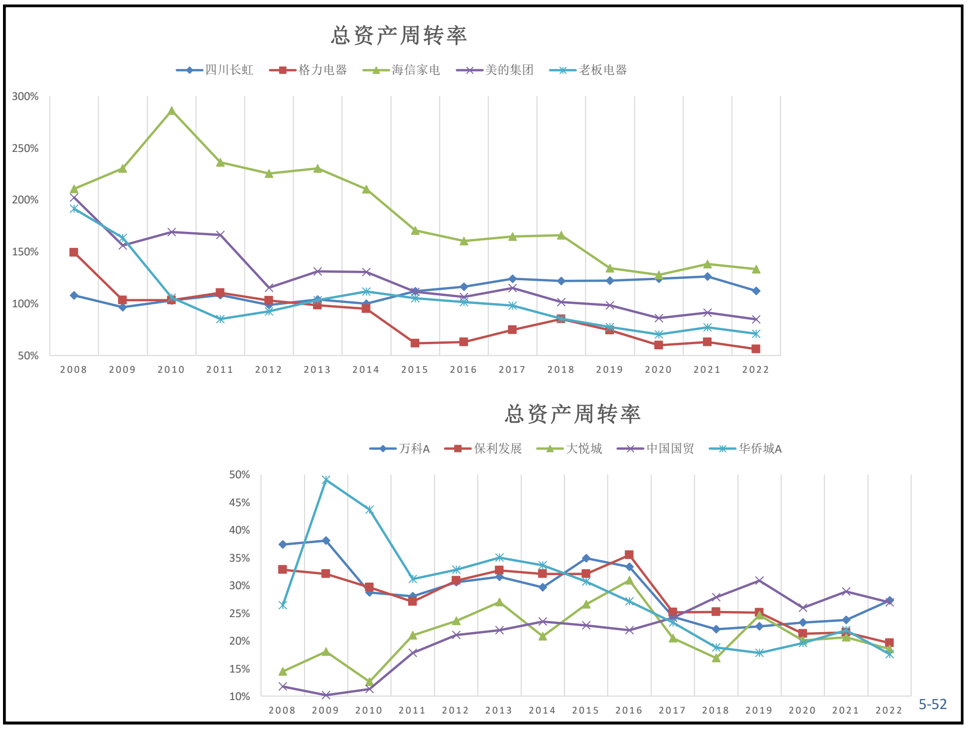
ROA = Net Profit Margin × Total Asset Turnover

$$\frac{\text{Net Income}}{\text{Average Total Assets}} = \frac{\text{Net Income}}{\text{Net Sales}} \times \frac{\text{Net Sales}}{\text{Average Total Assets}}$$

5-50



总资产周转率
天坛生物 复星医药 药明康德 同仁堂 恒瑞医药
120% 110% 100% 90% 80% 70% 60% 50% 40% 30% 20%
2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022
总资产周转率
腾讯控股 哔哩哔哩-W 美团-W 京东集团-SW 快手-W
250% 200% 150% 100% 50% 0%
2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022
5-51



总资产周转率
四川长虹 格力电器 海信家电 美的集团 老板电器
300% 250% 200% 150% 100% 50%
2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022
总资产周转率
万科A 保利发展 大悦城 中国国贸 华侨城A
50% 45% 40% 35% 30% 25% 20% 15% 10%
2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022
5-52

Exercise 5-3

Tiffany & Co. is one of the world's premier jewelers and a designer of other fine gifts and housewares. Presented here are selected income statement and balance sheet amounts (dollars in thousands).

	Current Year	Prior Year
Net sales	$3,644,491	$3,086,844
Net income	432,190	360,957
Average shareholders' equity	2,264,744	2,031,911
Average total assets	3,948,745	3,613,569

Required:

1. Compute ROA for the current and prior years and explain the meaning of the change.
2. Explain the major cause(s) of the change in ROA using ROA profit driver analysis.

Requirement 1

	Current Year	Prior Year
Net sales	$3,644,491	$3,086,844
Net income	432,190	360,957
Average shareholders' equity	2,264,744	2,031,911
Average total assets	3,948,745	3,613,569

$$\text{Return on Assets (ROA)} = \frac{\text{Net Income}}{\text{Average Total Assets}}$$

<u>Current year</u>

$$\frac{\$432,190}{\$3,948,745} = 0.109$$

<u>Prior Year</u>

$$\frac{\$360,957}{\$3,613,569} = 0.100$$

Increase of 0.009

Requirement 2

	Current Year	Prior Year
Net sales	$3,644,491	$3,086,844
Net income	432,190	360,957
Average shareholders' equity	2,264,744	2,031,911
Average total assets	3,948,745	3,613,569

ROA Profit Driver Analysis:

ROA = Net Profit Margin × Total Asset Turnover

$$\frac{\text{Net Income}}{\text{Average Total Assets}} = \frac{\text{Net Income}}{\text{Net Sales}} \times \frac{\text{Net Sales}}{\text{Average Total Assets}}$$

ROA analysis	Net profit margin	×	Total asset turnover	ROA
Current year	$432,190 ÷ $3,644,491 = 0.1186		$3,644,491 ÷ $3,948,745 = 0.9229	0.109
Prior year	$360,957 ÷ $3,086,844 = 0.1169		$3,086,844 ÷ $3,613,569 = 0.8542	0.100

How Transactions Affect Ratios 1

How to determine the effects of transactions on ratios:

Three-Step Process

1. Journalize the transaction to determine its effects on various accounts.
2. Determine which accounts belong to the financial statement subtotals or totals in the numerator (top) and denominator (bottom) of the ratio and the direction of their effects.
3. Evaluate the combined effects from step 2 on the ratio.

How Transactions Affect Ratios 2

What if only the numerator or denominator is affected?

Example 1: Apple incurred an additional $1,000 in research and development expense paid for in cash. What would be the effect on the **net profit margin** ratio?

The journal entry would be:

	Debit	Credit
Research and development expense (+E, −SE)	1,000	
Cash (−A)		1,000

Note that the transaction would decrease the numerator Net Income and have no effect on the denominator Net Sales. The ratio was 0.211. It would decrease to 0.207 as follows.

	Net Income	÷	Net Sales	=	Net Profit Margin
As reported:	$48,351	÷	$229,234	=	0.211
Transaction effect:	−1,000		—		
After transaction:	$47,351	÷	$229,234	=	0.207

5-57

How Transactions Affect Ratios 3

What if both the numerator and denominator are affected, but by different amounts?

Example 2: Consider the same transaction as in Example 1. What would be the effect on the **return on assets** ratio?

Note that the transaction would decrease the numerator Net Income by $1,000. It would also **decrease the ending** total assets by $1,000 but have **no effect on beginning** total assets. So the denominator, **average** total assets, would only decrease by $500:

$$\text{Avg. Total Assets} = (\$321,686 + \$375,319 - \$1,000) \div 2 = \$348,003$$

The ratio was 0.139. It would decrease as follows:

	Net Income	÷	Avg. Total Assets	=	Return on Assets
As reported:	$48,351	÷	$348,503	=	0.139
Transaction effect:	−1,000		—500		
After transaction:	$47,351	÷	$348,003	=	0.136

5-58

How Transactions Affect Ratios 4

What if the numerator or denominator are affected by the same amount?

Example 3: Apple paid $4,000 of accounts payable in cash. What would be the effect on the **current ratio**?

The journal entry would be:

	Debit	Credit
Accounts payable (−L)	4,000	
Cash (−A)		4,000

Note that the transaction would decrease the numerator, Current Assets, and the denominator, Current Liabilities, by the same amount. The ratio was 1.28. It would increase to 1.29.

	Current Assets	÷	Current Liabilities	=	Current Ratio
As reported:	$128,645	÷	$100,814	=	1.28
Transaction effect:	−4,000		—4,000		
After transaction:	$124,645	÷	$ 96,814	=	1.29

Review Chapter 1-4: Accounting cycle

Fast&Easy Company Ltd.

Having lived nearly one year in Tsinghua Univ(TH), Mr. CHEN decided to open an internet grocery shopping service on campus. The company was opened on October 1, 2022 and was named Fast&Easy Co. Ltd. Customers living near TH can logon to www.Fast&Easy.com.cn or send emails to Fast&Easy@tsinghua.com to place their orders. Fast&Easy would deliver goods to customers' doorsteps. The following is a list of transactions that occurred during the month of October 2022.

Write a journal entry (if necessary) for each transaction.

1. On October 1, 2022, CHEN invested $1,000,000 cash into the company for 10,000 shares, which represented 100% of the company's ownership.

   Dr. Cash 1,000,000

   Cr. Paid-in Capital 1,000,000

2. On October 2, 2022, the firm borrowed $800,000 from Construction Bank to run its business. The loan will be paid back after 18 months.

   Dr. Cash 800,000

   Cr. Loan Payable 800,000

3. During October, CHEN purchased two vehicles: a small car and a truck. The total cost of the vehicles is $400,000. CHEN paid $250,000 cash and signed a $150,000 promissory note.

   Dr. Equipment 400,000

   Cr. Cash 250,000

   Notes Payable 150,000

4 During October, the firm purchased $2,000,000 of inventory on open account.

Dr. Inventory 2,000,000

Cr. Accounts Payable 2,000,000

5 On October 15, 2022, facing strong competition from Fast&Easy, another internet grocery shopping service firm owned by a famous local newspaper publisher decided to pull out of the TH area. As a result, Mr. CHEN expected his business volume would go up 25% and he was quite happy with this change.

No effect on Accounting Equation!!!

No Journal Entries!!!

6 The firm paid $11,000 to the car dealer and $1,000,000 to the vendor.

Dr. Notes Payable 11,000

Accounts Payable 1,000,000

Cr. Cash 1,011,000

Fast&Easy Company Ltd.

7. On October 1, 2022, the company signed a one-year rental agreement for a big warehouse and two parking spaces in the university. On the same day, the firm paid $300,000 cash in advance to cover the following six months' rents. The monthly rent is $50,000.

Dr. Prepaid Rent 300,000

Cr. Cash 300,000

8. On October 15, 2022, the company issued 2,000 new shares to WANG for cash $1,000,000 (also think about the percentage of Mr. CHEN's ownership of the company).

Dr. Cash 1,000,000

Cr. Paid-in Capital 1,000,000

9. On October 20, Mr. CHEN sold 2,000 shares (from his 10,000 shares) to LI for cash $5,000,000.

No effect

Fast&Easy Company Ltd.

10. During October 2022, the company provided services for cash $700,000.

Dr. Cash 700,000

Cr. Revenue 700,000

11. During October 2022, the company provided services on credit totalling $1,600,000.

Dr. Accounts Receivable 1,600,000

Cr. Revenue 1,600,000

12. Total cost of inventories used during the month was $1,600,000.

Dr. Cost of Goods Sale (COGS) 1,600,000

Cr. Inventory 1,600,000

Fast&Easy Company Ltd.

13. **CHEN hired two assistants, HE and XIA to hand all the business for this company. HE and XIA hired 40 classmates to work for the company. Together, they were paid $400,000 cash for their service in October.**

    Dr. Salary Expense 400,000

    Cr. Cash 400,000

14. **$1,000,000 was collected from credit customers.**

    Dr. Cash 1,000,000

    Cr. Accounts Receivable 1,000,000

15. **On October 31, 2022, the company paid $12,000 cash to its shareholders ($1 for each share). The company considered this a dividend payout for the shareholders' investment**

    Dr. Retained Earnings 12,000

    Cr. Cash 12,000

5-65

Fast&Easy Company Ltd. (in 000)

Cash	
(1) 1,000	250 (3)
(2) 800	1,011 (6)
(8) 1,000	300 (7)
(10) 700	400 (13)
(14) 1,000	12 (15)
2,527	

AR	
(11) 1,600	1,000 (14)
600	

Inventory	
(4) 2,000	1,600 (12)
400	

Prepaid Rent	
(7) 300	

Equipment	
(3) 400	

5-66

Fast&Easy Company Ltd.

AP

(6) 1,000	2,000 (4)
	1,000

Salary Payable

Loan Payable

	800 (2)

Notes Payable

(6) 11	150 (3)
	139

Tax Payable

Paid-in Capital

	1,000 (1)
	1,000 (8)
	2,000

5-67

Fast&Easy Company Ltd.

Accu. Dep.

Sal. Exp.

(13) 400	

Interest Exp.

Rent Exp.

Depre. Exp.

COGS

(12) 1,600	

5-68

Fast&Easy Company Ltd.

Tax Exp.

Revenue

	700 (10)
	1,600 (11)
	2,300

Retained Earnings

(15) 12	

5-69

Fast&Easy Co. Ltd. Trial Balance October 31, 2022 (in 000)	Debits	Credits
Cash	$2,527	
Accounts Receivable	600	
Inventory	400	
Prepaid Rent	300	
Equipment	400	
Accounts Payable		$ 1,000
Loan Payable		800
Notes Payable		139
Paid-in Capital		2,000
Sales Revenue		2,300
Salary Expense	400	
Cost of Goods Sold	1,600	
Retained Earnings	12	
Total	$ 6,239	$ 6,239

5-70

Fast&Easy Company Ltd._adjusting entries

16. The company still owed HE and XIA $5,000 bonuses for service performed in October. CHEN promised to pay them on November 15, 2022, which he did.

Dr. Salaries Expense 5,000

Cr. Salaries Payable 5,000

17. Depreciation for the two automobiles and other equipment was $3,000 per month.

Dr. Depreciation Expense 3,000

Cr. Accumulated Depreciation 3,000

18. Rental expense was recognized for the month on October 31, 2022.

Dr. Rent Expense 50,000

Cr. Prepaid Rent 50,000

5-71

Fast&Easy Company Ltd._adjusting entries

19. The loan borrowed from Construction Bank carries an annual interest rate 9% and the money borrowed from the car dealer is interest free.

Dr. Interest Expense 6,000

Cr. Loan Payable 6,000

20. Fast&Easy's accountant determined that the company owed government income tax $35,400 at the end of October 2022.

Dr. Tax Expense 35,400

Cr. Tax Payable 35,400

5-72

Fast&Easy Company Ltd._Post the adjusting entries (in 000)

Cash

(1) 1,000	250 (3)
(2) 800	1,011 (6)
(8) 1,000	300 (7)
(10) 700	400 (13)
(14) 1,000	12 (15)
2,527	

AR

(11) 1,600	1,000 (14)
600	

Inventory

(4) 2,000	1,600 (12)
400	

Prepaid Rent

(7) 300	50 (18)
250	

Equipment

(3) 400	

5-73

Fast&Easy Company Ltd._Post the adjusting entries

AP

(6) 1,000	2,000 (4)
	1,000

Salary Payable

	5 (17)

Loan Payable

	800 (2)
	6 (19)
	806

Notes Payable

(6) 11	150 (3)
	139

Tax Payable

	35.4 (20)

Paid-in Capital

	1,000 (1)
	1,000 (8)
	2,000

5-74

Fast&Easy Company Ltd._Post the adjusting entries

Accu. Dep.

	3 (17)

Sal. Exp.

(13) 400	
(16) 5	
405	

Interest Exp.

(19) 6	

Rent Exp.

(18) 50	

Depre. Exp.

(17) 3	

COGS

(12) 1,600	

5-75

Fast&Easy Company Ltd._Post the adjusting entries

Tax Exp.

(20) 35.4	

Revenue

	700 (10)
	1,600 (11)
	2,300

Dividends

(15) 12	

1. From the new ending balance, we can prepare the **adjusted trial balance**.
2. From the data in the adjusted trial balance, the balance sheet and income statement can be prepared.

5-76

Fast&Easy Co. Ltd.
Adjusted Trial Balance October 31, 2022 (in 000)

	Debits	Credits
Cash	$2,527	
Accounts Receivable	600	
Inventory	400	
Prepaid Rent	250	
Equipment	400	
Accumulated Depreciation		3
Accounts Payable		$ 1,000
Salary Payable		5
Loan Payable		806
Notes Payable		139
Tax Payable		35.4
Paid-in Capital		2,000
Sales Revenue		2,300
Salary Expense	405	
Interest Expense	6	
Rent Expense	50	
Depreciation Expense	3	
Tax Expense	35.4	
Cost of Goods Sold	1,600	
Retained Earnings	12	
Total	$ 6,288.4	$ 6,288.4

77

Fast&Easy Co. Limited

Income Statement for October 2022

Sales Revenues	2,300,000
Cost of Goods Sold	1,600,000
Gross margin	700,000
Operating expenses:	
Rent	50,000
Wage	405,000
Depreciation	3,000
Total operating expenses	458,000
Operating Income	242,000
Interest Expense	6,000
Income before taxes	236,000
Tax Expense	35,400
Net Income	200,600
Earnings Per Share	$17.72

5-78

Fast&Easy Co. Ltd.

Balance Sheet

October 31, 2022

Assets:	
Current Assets:	
Cash	2,527,000
AR	600,000
Inventory	400,000
Prepaid Rent	<u>250,000</u>
Total Current Assets	3,777,000
Noncorrent Assets:	
Equipment	400,000
Less Accu. Dep	3,000
Total Noncurrent Assets	<u>397,000</u>
Total Assets	<u>4,174,000</u>

Liabilities and Owners' Equity	
Current Liabilities:	
AP	1,000,000
Salary Payable	5,000
Note Payable	139,000
Tax Payable	<u>35,400</u>
Total Current Liabilities	1,179,400
Noncurrent Liabilities:	
Loan Payable	806,000
Total Liabilities	1,985,400
Owners' Equity:	
Paid In Capital	2,000,000
Retained Earnings	<u>188,600</u>
Total OE and Liabilities	<u>4,174,000</u>

5-79

How to get the Retained Earnings balance? Closing Entries

Oct. 31, 2022:

Sales Revenues	2,300,000	
Cost of Goods Sold		1,600,000
Interest Expense		6,000
Rent		50,000
Wage		405,000
Depreciation		3,000
Tax Expense		35,400
Retained Earnings		200,600

Nominal accounts

real account

5-80

HW5

P270 E5-5

P271 E5-8

P274 E5-17

PROJECT

DD Restaurant 可以跟小组同学讨论，但是独立提交