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# The Fundamentals of Financial Statement Analysis as Applied to the Coca-Cola Company



**Carl B. McGowan, Jr.**  
**John C. Gardner**  
**Susan E. Moeller**



BUSINESS EXPERT PRESS

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Financial Statement  
Analysis as Applied to  
the Coca-Cola Company**



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## **Abstract**

Recent stock market crises are exacerbated by investors not understanding what has been happening to companies because investors lack an understanding of financial ratio analysis. Stock markets are efficient in that they incorporate, and even anticipate, information about companies based on financial accounting data provided by companies. However, market efficiency results from extensive analysis performed by financial analysts. Much of this financial analysis is based on the analysis of financial information provided by companies and analyzed using financial ratio analysis.

The goal of this book is to provide a step-by-step demonstration of how to download data from Internet sources, transfer the data into a spreadsheet, and conduct a financial ratio analysis of Coca-Cola. The book shows the steps needed to perform a financial ratio analysis, the financial statements to be retrieved from EDGAR, and the five categories of financial ratios used in the financial analysis of Coca-Cola. The data retrieved from the financial statements is copied to a worksheet and used to compute and graph the financial ratios. The ratios and graphs are used to determine the performance drivers of Coca-Cola.

## **Keywords**

asset management ratios, consolidated balance sheet, consolidated statement of cash flows, consolidated statement of income, EDGAR, financial analysis, financial leverage ratios, internet data retrieval, liquidity ratios, market based ratios, profitability ratios, ratio analysis



# Contents

<i>Introduction</i> .....	ix
Chapter 1    Internet Data Collection .....	1
Chapter 2    Financial Ratio Analysis—Calculating and Graphing Ratios.....	39
Chapter 3    The DuPont System of Financial Analysis .....	61
<i>References</i> .....	69
<i>Index</i> .....	71





# Introduction

Stock market crises can be exacerbated by investors not understanding what has been happening to companies due to a lack of understanding of financial statement analysis. Stock markets are efficient in that they incorporate, and even anticipate, information about companies based on financial accounting data provided by companies. However, market efficiency results from extensive analysis performed by financial analysts. Much of this financial analysis is based on the analysis of financial information provided by companies and analyzed using financial ratio analysis. The objective of this book is to demonstrate how to conduct a financial statement analysis covering the entire process of collecting and analyzing the data for financial ratio analysis. This book shows how to collect data, enter data into a spreadsheet, analyze the data, write a paper about the process, and create and present a PowerPoint presentation. The Coca-Cola Company is used as the example in this book but the process can be applied to any company that has financial information available in the Internet data resources used.

This book provides a step-by-step demonstration of how to download data from EDGAR and other Internet sources, transfer the data to a spreadsheet, and conduct a financial ratio analysis of Coca-Cola. The presentation shows how to find the ticker symbol for Coca-Cola (KO) and use the ticker symbol to access Form 10-K data from EDGAR. EDGAR stands for *Electronic Data Gathering, Analysis, and Retrieval System*, which is the database system provided by the Securities and Exchange Commission (SEC) for the disclosure of financial information required by U.S. Securities Laws.

The use of the microcomputer and the Internet has increased dramatically over the past 30 years. The use of microcomputers for pedagogical purposes has expanded from spreadsheet analysis and transparency master creation to the use of real-time Internet access that can be used to find data on the Internet, download the data into spreadsheets, and analyze the data. Instead of transparency masters, instructors can use

microcomputer-generated PowerPoint presentation slides for projection in the classroom. Real-time access to the Internet, which can be projected in the classroom, now exists and can be used to demonstrate the data collection process.

The steps needed to perform a financial ratio analysis are:

Collect ticker data from Yahoo Finance.

Collect stock prices from Yahoo! Finance.

Collect financial data from the EDGAR Online Database.

Download financial statements to spreadsheet(s).

Consolidate the input data into a single spreadsheet.

Compute and graph financial ratios.

The five categories of financial ratios that will be used in the financial analysis of Coca-Cola are:

Liquidity ratios

Asset management ratios

Financial leverage ratios

Profitability ratios

Market-based ratios

The financial statements to be retrieved from EDGAR are:

Consolidated Statement of Income

Consolidated Balance Sheets

Consolidated Statement of Cash Flows

The ticker symbol for Coca-Cola is retrieved from Yahoo Finance, by entering the URL of Yahoo! Finance: <http://www.finance.yahoo.com>, which takes the analyst to the Yahoo! Finance homepage. URL stands for uniform resource locator and is the unique location for every website. Enter the name Coca-Cola in the Get Quotes box to retrieve the ticker symbols. The ticker symbol for Coca-Cola is KO.

The URL for EDGAR is <http://www.sec.gov/edgar.shtml>, which takes the analyst to the EDGAR homepage. Click on *Search for Company*

*Filings* to begin the download process. Click on *Company or fund name, ticker symbol, Central Index Key (CIK), file number, state, country, or Standard Industrial Classification (SIC)* next. On the next page, enter the ticker symbol for the company, such as KO for Coca-Cola. This provides all forms filed with the SEC by the company.

In the *Filter Results* text box, enter 10-K to limit the list to annual reports Form 10-K. To collect data for 10 years of analysis, they must be downloaded. The analyst can obtain three years of data for the Consolidate Income Statement and the Consolidate Statement of Cash Flow and two years of data for the Consolidated Balance Sheet from each Form 10-K; so alternating years' data must be downloaded. Click on the appropriate year for the Form 10-K to download the annual filing for that year. This will download the entire Form 10-K document. Click on the *Table of Contents* key. Click on *Item 8 Consolidate Financial Statements and Supplementary Data*. The analysts will download the *Consolidated Statement of Income*, the *Consolidated Balance Sheet*, and the *Consolidated Statement of Cash Flows* for every other year.

The data retrieved from the Consolidated Statement of Income are Sales, Costs of Goods Sold, Operating Expenses, EBIT, Interest Expense, and Net Income. The data retrieved from the Consolidated Balance Sheet are Accounts Receivable, Inventory, Current Assets, Depreciation, Net Fixed Assets, Accounts Payable, Current Liabilities, Long-Term Debt, Retained Earnings, Total Owners' Equity, Total Liabilities, and Owners' Equity and Shares Outstanding. The data retrieved from the Consolidated Statement of Cash Flows are Depreciation and Dividends.

The data retrieved are copied to a single spreadsheet and placed in rows for each of the 10 years. Stock price at the end of each year is retrieved from Yahoo! Finance. The analyst goes to Yahoo! Finance homepage and enters the ticker symbol, for example, KO. The Yahoo! Finance page for KO will come up and the analyst clicks on *Historical Prices*. Enter the *Start Date:* and the *End Date:* for the 10-year time period for daily data. Click *Get Prices*. At the bottom of the screen, click on *Download to Spreadsheet*. Select the last trading day for each year and delete the remaining data.

The working spreadsheet has the data entered for the Income Statement, the Balance Sheet, and the Statement of Cash Flows from top to bottom. Enter formulas for each ratio in Column B and drag and click the formula across the spreadsheet. Repeat the process for each financial ratio. At this point, the analyst can use the ratios for trend analysis.

# CHAPTER 1

## Internet Data Collection

### Course Outcomes

- Find and collect data
  - Yahoo! Finance
  - EDGAR
- Process data
  - Excel
  - PowerPoint
  - Word
- Present (communicate) data
  - Word
  - PowerPoint

### Financial Statement Analysis

- Collect ticker symbol from Yahoo! Finance<sup>®</sup>
- Collect stock prices from Yahoo! Finance<sup>®</sup>
- Collect financial data from the EDGAR (SEC) Online Database
- Download financial statements to spreadsheet(s)
- Consolidate the input data into a single spreadsheet
- Compute and graph financial ratios

### Consolidated Statement of Income

- Sales
- Operating income
- EBIT
- Interest expense
- Net income
- Shares outstanding

## **Consolidated Balance Sheets**

- Accounts receivable
- Inventory
- Current assets
- Net fixed assets
- Accounts payable
- Current liabilities
- Long-term debt
- Long-term liabilities
- Retained earnings
- Total owners' equity
- Total liabilities and owners' equity

## **Consolidated Statement of Cash Flows**

- Depreciation
- Dividends

## **Yahoo! Finance**

- Ticker symbol
- Stock prices

## **Financial Ratios**

- Liquidity ratios
- Asset management ratios
- Financial leverage ratios
- Profitability ratios
- Market-based ratios

### ***Liquidity Ratios***

- Current ratio
- Quick ratio

***Asset Management Ratios***

- Days sales outstanding
- Inventory turnover
- Net fixed assets turnover
- Total asset turnover

***Financial Leverage Ratios***

- Total debt ratio
- Debt-to-equity ratio
- Equity multiplier
- Times interest earned

***Profitability Ratios***

- Operating margin
- Basic earning power
- Net profit margin
- Return on assets
- Return on equity

***Market-Based Ratios***

- Earnings per share
- Price-to-earnings ratio
- Book value per share
- Market value to book value
- Dividend per share
- Dividend yield
- Payout ratio
- Retention ratio



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CNBC

Featured  
Rates in Your Area  
Tax Season Advice

Earnings: JC Penney posts adjusted loss of 68 cents/shr on revenue...

Wed, Feb 26, 2014, 4:22 PM EST - U.S. Markets closed U.S.

S&P 500 **1,845.16**  
+0.04 (0.00%)

Dow **16,198.41**  
+18.75 (0.12%)

Gold 1,329.10 -1.01% Crude Oil 102.50 +0.66% EUR/USD 1.3685 -0.44%

**per** Reuters  
**J.C. Penney expects sales, gross profit margin to improve**  
JCP 5.96 +0.33 (+5.86%)  
J.C. Penney Co on Wednesday forecast more improvement in its

Log on to Yahoo! Finance <http://www.finance.yahoo.com/>

Recent % | \$  
Quotes you view appear here for quick access.

Fidelity Strategic Funds can help you strike the right balance for your portfolio.

Wed, Feb 26, 2014, 4:33 PM EST - U.S. Markets closed

S&P 500 **1,845.16**

Dow **16,198.41**

ko Go

KO	The Coca-Cola Company	Equity - NYSE	0.12%
KSS	Kohl's Corp.	Equity - NYSE	4%
*KS11	KOSPI Composite Index	Index - Korea	
KKR	Kohlberg Kravis Roberts & Co.	Equity - NYSE	
KOF	Coca-Cola FEMSA S.A.B de C.V.	Equity - NYSE	
KEP	Korea Electric Power Corp.	Equity - NYSE	
KORS	Michael Kors Holdings Limited	Equity - NYSE	
KOG	Kodiak Oil & Gas Corp.	Equity - NYSE	
KOOL	ThermoGenesis Corp.	Equity - NASDAQ	
EWY	iShares MSCI South Korea Capped	ETF - PCX	+0.33%

Show all results for ko

Tip: Use comma (,) to separate multiple quotes. Learn more...

Tax Season Advice

Enter Coca-Cola in get quotes

Dow  $\uparrow$ 0.12% Nasdaq  $\uparrow$ 0.10%

More On KO  
 QUOTES  
 Summary  
 Order Book  
 Options  
 Historical Prices  
 CHARTS  
 Interactive  
 Basic Chart  
 Basic Tech. Analysis  
 NEWS & INFO  
 Headlines  
 Press Releases  
 Company Events  
 Message Boards  
 Market Pulse  
 COMPANY  
 Profile  
 Key Statistics  
 SEC Filings  
 Competitors  
 Industry  
 Components  
 ANALYST COVERAGE  
 Analyst Opinion  
 Analyst Estimates

E\*TRADE  
 OPEN AN ACCOUNT  
 KO  $\uparrow$  0.10

RESEARCH  
 KO  
 Ameritrade

Scotttrade  
 \$7 Set-Up Fees  
 KO Open An Account

200 FREE TRADES  
 Fidelity

The Coca-Cola Company (KO) - NYSE Add to Portfolio Like 523

**37.87**  $\uparrow$ 0.10(0.26%) 4:00PM EST | After Hours: **37.86**  $\downarrow$ 0.01(0.03%) 4:03PM EST

Prev Close:	37.77	Day's Range:	37.72 - 37.94
Open:	37.90	52wk Range:	36.83 - 43.43
Bid:	37.78 x 100	Volume:	18,180,345
Ask:	37.87 x 4100	Avg Vol (3m):	15,674,700
1y Target Est:	43.92	Market Cap:	166,708
Beta:	0.35	P/E (ttm):	19.93
Earnings Date:	Apr 14 - Apr 18 (Est.)	EPS (ttm):	1.90
		Div & Yield:	1.22 (3.30%)

People viewing KO also viewed:

Click on KO

The Coca-Cola Company (KO) - NYSE Follow

**37.87**  $\uparrow$ 0.10(0.26%) 4:00PM EST | After Hours: **37.86**  $\downarrow$ 0.01(0.03%) 4:03PM EST

Historical Prices Get Historical Price

Set Date Range

Start Date: Jan 2 1962 Eg. Jan 1, 2010  
 End Date: Feb 26 2014

Daily  
 Weekly  
 Monthly  
 Dividends Only

Get Prices

Prices First | Previous | Next | Last

Date	Open	High	Low	Close	Volume	Adj Close*
Feb 25, 2014	37.63	37.94	37.50	37.77	22,845,500	37.77
Feb 24, 2014	37.30	37.60	37.22	37.50	24,223,500	37.50
Feb 21, 2014	37.59	37.62	37.14	37.18	19,419,800	37.18
Feb 20, 2014	37.06	37.52	36.89	37.30	22,639,900	37.30

Click on historical prices

The Coca-Cola Company (KO) - NYSE ★ Follow

**37.87** +0.10(0.26%) 4:00PM EST | After Hours : **37.86** -0.01 (0.03%) 4:03PM EST

**Historical Prices**

[Get Historical Price](#)

Set Date Range

Start Date:    Eg. Jan 1, 2010  Daily  
 End Date:     Weekly  
 Monthly  
 Dividends Only

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Prices						
Date	Open	High	Low	Close	Volume	Adj Close*
Feb 25, 2014	37.63	37.94	37.50	37.77	22,845,500	37.77
Feb 24, 2014	37.30	37.60	37.22	37.50	24,223,500	37.50
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Feb 20, 2014	37.06	37.52	36.89	37.30	22,639,900	37.30

*Enter historical price range*

Dec 6, 2013	40.05	40.50	40.05	40.46	12,557,100	40.46
Dec 5, 2013	40.28	40.40	39.80	39.83	18,171,200	39.83
Dec 4, 2013	40.20	40.47	39.94	40.37	13,166,900	40.37
Dec 3, 2013	40.05	40.39	40.01	40.35	16,592,300	40.35
Dec 2, 2013	40.10	40.20	39.75	40.08	16,738,800	40.08
Nov 29, 2013	40.27	40.48	40.11	40.19	8,641,100	40.19
Nov 27, 2013	40.09	40.38	39.69	40.19	9,909,100	40.19
Nov 27, 2013	0.28 Dividend					
Nov 26, 2013	40.49	40.60	40.24	40.25	14,240,400	39.97
Nov 25, 2013	40.48	40.88	40.33	40.37	14,059,100	40.09
Nov 22, 2013	40.34	40.46	40.09	40.43	26,396,500	40.15
Nov 21, 2013	40.20	40.49	40.10	40.43	26,364,300	40.15
Nov 20, 2013	40.05	40.45	39.94	40.06	14,422,500	39.78
Nov 19, 2013	40.14	40.23	39.92	40.14	11,014,800	39.86

\* Close price adjusted for dividends and splits.

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*Scroll to the bottom of the page*

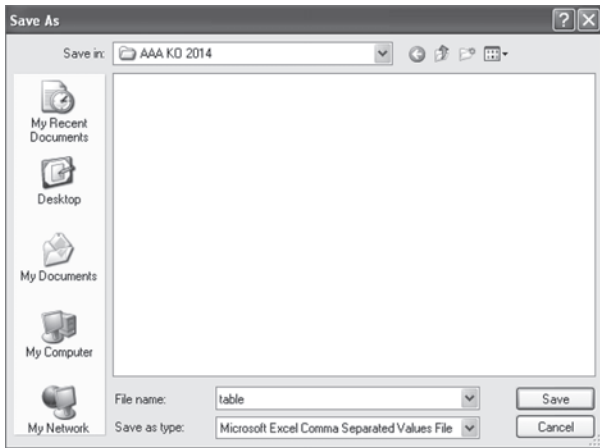
Dec 11, 2013	File Download					40.13
Dec 10, 2013	Do you want to open or save this file?					39.85
Dec 9, 2013	Name: table.csv					40.40
Dec 6, 2013	Type: Microsoft Excel 97-2003 Worksheet					40.46
Dec 5, 2013	From: <b>ichart.finance.yahoo.com</b>					39.83
Dec 4, 2013	Open Save Cancel					40.37
Dec 3, 2013	While files from the Internet can be useful, some files can potentially harm your computer. If you do not trust the source, do not open or save this file. <a href="#">What's the risk?</a>					40.35
Dec 2, 2013						40.08
Nov 29, 2013						40.19
Nov 27, 2013						40.19
Nov 27, 2013						
Nov 26, 2013						39.97
Nov 25, 2013	40.48	40.88	40.33	40.37	14,059,100	40.09
Nov 22, 2013	40.34	40.46	40.09	40.43	26,396,500	40.15
Nov 21, 2013	40.20	40.49	40.10	40.43	26,364,300	40.15
Nov 20, 2013	40.05	40.45	39.94	40.06	14,422,500	39.78
Nov 19, 2013	40.14	40.23	39.92	40.14	11,014,800	39.86

\* Close price adjusted for dividends and splits.

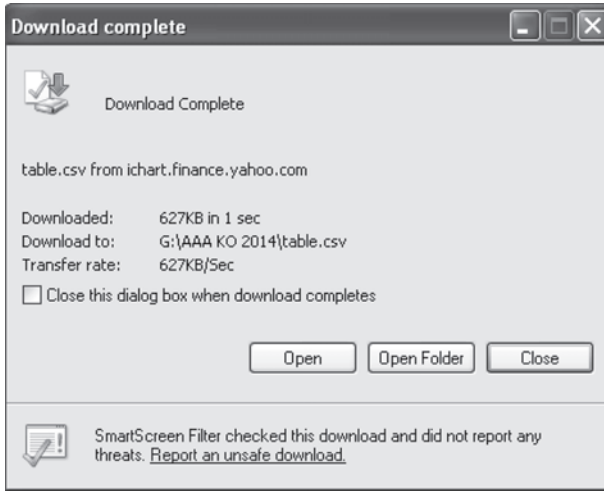
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## Download to spreadsheet




## Save



**Open**

	A	B	C	D	E	F	G	H
1	Date	Open	High	Low	Close	Volume	Adj Close	
2	2/25/2014	37.63	37.94	37.5	37.77	22845500	37.77	
3	2/24/2014	37.3	37.6	37.22	37.5	24223500	37.5	
4	2/21/2014	37.59	37.62	37.14	37.18	19419800	37.18	
5	2/20/2014	37.06	37.52	36.89	37.3	22639900	37.3	
6	2/19/2014	37.5	37.6	37.05	37.1	26645100	37.1	
7	2/18/2014	37.98	38.11	37.26	37.47	46098500	37.47	
8	2/14/2014	38.6	39.02	38.27	38.93	16030100	38.93	
9	2/13/2014	38.13	38.76	38.13	38.65	10435600	38.65	
10	2/12/2014	38.85	38.92	38.4	38.51	10633400	38.51	
11	2/11/2014	38.67	38.78	38.51	38.64	15361300	38.64	
12	2/10/2014	38.07	38.62	37.84	38.57	20877200	38.57	
13	2/7/2014	38.17	38.35	37.87	37.95	20389000	37.95	
14	2/6/2014	38.76	38.94	37.92	38.03	22661500	38.03	

*Spreadsheet with prices*



U.S. Securities and Exchange Commission

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### Filings & Forms


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**Enter ticker symbol (KO)**

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**COCA COLA CO CIK#: 0000021344 (see all company filings)**

SIC: 2000 - BEVERAGES  
State location: GA | State of Inc: DE | Fiscal Year End: 1231 (Assistant Director Office: 9)  
Get insider transactions for this issuer.  
Get insider transactions for this reporting owner.

Business Address: ONE COCA COLA PLAZA, ATLANTA GA 30313, 404-876-2121  
Mailing Address: ONE COCA COLA PLAZA, ATLANTA GA 30313

Filter Results: Filing Type: 10-k, Prior: (YYYYMMDD), Ownership?  include  exclude  only, Limit Results Per Page: 40 Entries,

Items 1 - 22 RSS Feed

Filings	Format	Description	Filing Date	File/Film Number
10-K	<a href="#">Interactive Data</a>	Annual report [Section 13 and 15(d), not S-K Item 405] Acc-no: 0000021344-14-000008 (34 Act) Size: 34 MB	2014-02-27	001-02217 14847845
10-K	<a href="#">Interactive Data</a>	Annual report [Section 13 and 15(d), not S-K Item 405] Acc-no: 0000021344-13-000007 (34 Act) Size: 37 MB	2013-02-27	001-02217 13845684
10-K	<a href="#">Interactive Data</a>	Annual report [Section 13 and 15(d), not S-K Item 405] Acc-no: 0000021344-12-000007 (34 Act) Size: 35 MB	2012-02-23	001-02217 12833150
10-K	<a href="#">Interactive Data</a>	Annual report [Section 13 and 15(d), not S-K Item 405] Acc-no: 0001047469-11-001506 (34 Act) Size: 30 MB	2011-02-28	001-02217 11843993
10-K	<a href="#">Interactive Data</a>	Annual report [Section 13 and 15(d), not S-K Item 405] Acc-no: 0001047469-10-001476 (34 Act) Size: 6 MB	2010-02-26	001-02217 10836366
10-K	<a href="#">Interactive Data</a>	Annual report [Section 13 and 15(d), not S-K Item 405] Acc-no: 0001047469-09-001875 (34 Act) Size: 2 MB	2009-02-26	001-02217 09837277

**Filter results for 10-Ks**

SEC Home » Search the Next-Generation EDGAR System » Company Search » Current Page

Form 10-K - Annual report [Section 13 and 15(d), not S-K Item 405] SEC Accession No. 0000021344-14-000008

Filing Date: 2014-02-27, Period of Report: 2013-12-31, Accepted: 2014-02-27 13:24:23, Filing Date Changed: 2014-02-27, Documents: 22, Interactive Data

Document Format Files

Seq	Description	Document	Type	Size
1	10-K	a2013123110-k.htm	10-K	4339244
2	EX 10.46	a20131231ex-10.46.htm	EX-10.46	26948
3	EX 10.47	a20131231ex-10.47.htm	EX-10.47	60387
4	EX 12.1	a20131231ex-12.1.htm	EX-12.1	38948
5	EX 21.1	a20131231ex-21.1.htm	EX-21.1	35581
6	EX 23.1	a20131231ex-23.1.htm	EX-23.1	15509
7	EX 24.1	a20131231ex-24.1.htm	EX-24.1	87559
8	EX 31.1	a20131231ex-31.1.htm	EX-31.1	9133
9	EX 31.2	a20131231ex-31.2.htm	EX-31.2	8990
10	EX 32.1	a20131231ex-32.1.htm	EX-32.1	8198
17		a2013123110_char-38336.jpg	GRAPHIC	63936

**List of form 10-Ks**

SEC Home » Search the Next-Generation EDGAR System » Company Search » Current Page

Form 10-K - Annual report [Section 13 and 15(d), not S-K Item 405]		SEC Accession No. 000021344-14-000008
Filing Date 2014-02-27	Period of Report 2013-12-31	
Accepted 2014-02-27 13:24:23	Filing Date Changed 2014-02-27	
Documents 22		
<a href="#">Interactive Data</a>		

## Document Format Files

Seq	Description	Document	Type	Size
1	10-K	a2013123110-k.htm	10-K	4339244
2	EX 10.46	a20131231ex-1046.htm	EX-10.46	25949
3	EX 10.47	a20131231ex-1047.htm	EX-10.47	60387
4	EX 12.1	a20131231ex-121.htm	EX-12.1	38948
5	EX 21.1	a20131231ex-211.htm	EX-21.1	35581
6	EX 23.1	a20131231ex-231.htm	EX-23.1	15509
7	EX 24.1	a20131231ex-241.htm	EX-24.1	87559
8	EX 31.1	a20131231ex-311.htm	EX-31.1	9133
9	EX 31.2	a20131231ex-312.htm	EX-31.2	8990
10	EX 32.1	a20131231ex-321.htm	EX-32.1	8198
17		a2013123110_chart-38336.jpg	GRAPHIC	63936

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10-K, 1 a2013123110-k.htm 10-K

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**  
Washington, D.C. 20549  
**FORM 10-K**

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934  
For the fiscal year ended December 31, 2013

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from to

Commission File No. 001-02217

*The Coca-Cola Company*

(Exact name of Registrant as specified in its charter)

DELAWARE  
(State or other jurisdiction of incorporation or organization)

58-0628465  
(IRS Employer Identification No.)

One Coca-Cola Plaza  
Atlanta, Georgia  
(Address of principal executive offices)

30313  
(Zip Code)

Registrant's telephone number, including area code: (404) 676-2121

*Move to table of contents*

## Table of Contents

	<u>Page</u>
	1
<u>Forward-Looking Statements</u>	1
<b>Part I</b>	
Item 1. <u>Business</u>	1
Item 1.A. <u>Risk Factors</u>	11
Item 1B. <u>Unresolved Staff Comments</u>	20
Item 2. <u>Properties</u>	20
Item 3. <u>Legal Proceedings</u>	21
Item 4. <u>Mine Safety Disclosures</u>	22
Item 5. <u>Executive Officers of the Company</u>	22
<b>Part II</b>	
Item 5. <u>Market for Registrant's Common Equity; Related Stockholder Matters and Issuer Purchases of Equity Securities</u>	26
Item 6. <u>Selected Financial Data</u>	29
Item 7. <u>Management's Discussion and Analysis of Financial Condition and Results of Operations</u>	29
Item 7.A. <u>Quantitative and Qualitative Disclosures About Market Risk</u>	71
Item 8. <u>Financial Statements and Supplementary Data</u>	73
Item 9. <u>Changes in and Disagreements with Accountants on Accounting and Financial Disclosure</u>	143
Item 9.A. <u>Controls and Procedures</u>	143
Item 9B. <u>Other Information</u>	143
<b>Part III</b>	

*Click on item 8 financial statements*



ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

TABLE OF CONTENTS

<a href="#">Consolidated Statements of Income</a>	74
<a href="#">Consolidated Statements of Comprehensive Income</a>	75
<a href="#">Consolidated Balance Sheets</a>	76
<a href="#">Consolidated Statements of Cash Flows</a>	77
<a href="#">Consolidated Statements of Shareowners' Equity</a>	78
<a href="#">Notes to Consolidated Financial Statements</a>	79
<a href="#">Report of Management</a>	135
<a href="#">Report of Independent Registered Public Accounting Firm</a>	138
<a href="#">Report of Independent Registered Public Accounting Firm on Internal Control Over Financial Reporting</a>	139
<a href="#">Quarterly Data (Unaudited)</a>	140

Click on consolidated statement of income

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Form 10-K - Annual report (Section 17 and 15(d), not S-K Item 425) SEC Accession No. 000021244-14-00000

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9	EX 31.2	a20131231ex-312.htm	EX-31.2	8990
10	EX 32.1	a20131231ex-321.htm	EX-32.1	8198
17		a2013123110_cha6-38339.jpg	GRAPHIC	63906

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THE COCA-COLA COMPANY AND SUBSIDIARIES  
CONSOLIDATED STATEMENTS OF INCOME

Year Ended December 31,	2013	2012	2011
(In millions except per share data)			
<b>NET OPERATING REVENUES</b>	\$ 46,854	\$ 48,017	\$ 46,542
Cost of goods sold	18,421	19,053	18,215
<b>GROSS PROFIT</b>	28,433	28,964	28,327
Selling, general and administrative expenses	17,310	17,738	17,422
Other operating charges	895	447	732
<b>OPERATING INCOME</b>	10,228	10,779	10,173
Interest income	534	471	483
Interest expense	463	397	417
Equity income (loss) — net	602	319	690
Other income (loss) — net	576	137	579
<b>INCOME BEFORE INCOME TAXES</b>	11,477	11,809	11,458
Income taxes	2,851	2,723	2,812
<b>CONSOLIDATED NET INCOME</b>	8,626	9,086	8,646
Less: Net income attributable to noncontrolling interests	42	67	62
<b>NET INCOME ATTRIBUTABLE TO SHAREOWNERS OF THE COCA-COLA COMPANY</b>	\$ 8,584	\$ 9,019	\$ 8,584

Copy and paste income statement

**THE COCA-COLA COMPANY AND SUBSIDIARIES**  
**CONSOLIDATED BALANCE SHEETS**

December 31,	2013	2012
(In millions except par value)		
<b>ASSETS</b>		
<b>CURRENT ASSETS</b>		
Cash and cash equivalents	\$ 10,414	\$ 8,442
Short-term investments	6,707	5,017
<b>TOTAL CASH, CASH EQUIVALENTS AND SHORT-TERM INVESTMENTS</b>	<b>17,121</b>	<b>13,459</b>
Marketable securities	3,147	3,092
Trade accounts receivable, less allowances of \$61 and \$53, respectively	4,873	4,759
Inventories	3,277	3,284
Prepaid expenses and other assets	2,886	2,781
Assets held for sale	—	2,973
<b>TOTAL CURRENT ASSETS</b>	<b>31,804</b>	<b>30,328</b>
EQUITY METHOD INVESTMENTS	10,393	9,216
OTHER INVESTMENTS, PRINCIPALLY BOTTLING COMPANIES	1,119	1,232
OTHER ASSETS	4,661	3,585
PROPERTY, PLANT AND EQUIPMENT — net	14,967	14,476
TRADEMARKS WITH INDEFINITE LIVES	6,744	6,527
BOTTLERS' FRANCHISE RIGHTS WITH INDEFINITE LIVES	7,415	7,405
GOODWILL	12,312	12,255
OTHER INTANGIBLE ASSETS	1,140	1,150
<b>TOTAL ASSETS</b>	<b>\$ 90,055</b>	<b>\$ 86,174</b>

### Copy of balance sheet

<b>LIABILITIES AND EQUITY</b>		
<b>CURRENT LIABILITIES</b>		
Accounts payable and accrued expenses	\$ 9,577	\$ 8,680
Loans and notes payable	16,901	16,297
Current maturities of long-term debt	1,024	1,577
Accrued income taxes	309	471
Liabilities held for sale	—	796
<b>TOTAL CURRENT LIABILITIES</b>	<b>27,811</b>	<b>27,821</b>
LONG-TERM DEBT	19,154	14,736
OTHER LIABILITIES	3,498	3,468
DEFERRED INCOME TAXES	6,182	4,981
<b>THE COCA-COLA COMPANY SHAREOWNERS' EQUITY</b>		
Common stock, \$0.25 par value; Authorized — 11,200 shares; Issued — 7,040 and 7,040 shares, respectively	1,760	1,760
Capital surplus	12,276	11,379
Reinvested earnings	61,660	59,045
Accumulated other comprehensive income (loss)	(3,432)	(3,382)
Treasury stock, at cost — 2,638 and 2,571 shares, respectively	(39,091)	(35,009)
<b>EQUITY ATTRIBUTABLE TO SHAREOWNERS OF THE COCA-COLA COMPANY</b>	<b>33,173</b>	<b>32,790</b>
<b>EQUITY ATTRIBUTABLE TO NONCONTROLLING INTERESTS</b>	<b>267</b>	<b>378</b>
<b>TOTAL EQUITY</b>	<b>33,440</b>	<b>33,168</b>
<b>TOTAL LIABILITIES AND EQUITY</b>	<b>\$ 90,055</b>	<b>\$ 86,174</b>

Refer to Notes to Consolidated Financial Statements.

### Copy and paste balance sheet

<b>THE COCA-COLA COMPANY AND SUBSIDIARIES CONSOLIDATED BALANCE SHEETS</b>		
<b>December 31, (in millions except par value)</b>	<b>2011</b>	<b>2010</b>
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	12,803	8,517
Short-term investments	1,08	2,682
<b>TOTAL CASH, CASH EQUIVALENTS AND SHORT-TERM INVESTMENTS</b>	<b>13,891</b>	<b>11,199</b>
Marketable securities	144	138
Trade accounts receivable, less allowances of \$83 and \$48, respectively	4,920	4,430
Inventories	3,092	2,650
Prepaid expenses and other assets	3,450	3,162
<b>TOTAL CURRENT ASSETS</b>	<b>25,497</b>	<b>21,579</b>
EQUITY METHOD INVESTMENTS	7,233	6,954
OTHER INVESTMENTS, PRINCIPALLY BOTTLING COMPANIES	1,141	631
OTHER ASSETS	3,495	2,121
PROPERTY, PLANT, AND EQUIPMENT—net	14,939	14,727
TRADEMARKS WITH INDEFINITE LIVES	6,430	6,356
BOTTLERS' FRANCHISE RIGHTS WITH INDEFINITE LIVES	7,770	7,511
GOODWILL	12,219	11,665
OTHER INTANGIBLE ASSETS	1,250	1,377
<b>TOTAL ASSETS</b>	<b>79,974</b>	<b>72,921</b>

**Copy of balance sheet**

<b>LIABILITIES AND EQUITY CURRENT LIABILITIES</b>		
Accounts payable and accrued expenses	9,009	8,859
Loans and notes payable	12,871	8,100
Current maturities of long-term debt	2,041	1,276
Accrued income taxes	362	273
<b>TOTAL CURRENT LIABILITIES</b>	<b>24,283</b>	<b>18,508</b>
<b>LONG-TERM DEBT</b>	<b>13,656</b>	<b>14,041</b>
<b>OTHER LIABILITIES</b>	<b>5,420</b>	<b>4,794</b>
<b>DEFERRED INCOME TAXES</b>	<b>4,694</b>	<b>4,261</b>
<b>THE COCA-COLA COMPANY SHAREOWNERS' EQUITY</b>		
Common stock, \$0.25 par value; Authorized—5,600 shares;	880	880
Issued—3,520 and 3,520 shares, respectively		
Capital surplus	11,212	10,057
Reinvested earnings	53,550	49,278
Accumulated other comprehensive income (loss)	2,703	1,450
Treasury stock, at cost—1,257 and 1,228 shares, respectively	31,304	27,762
<b>EQUITY ATTRIBUTABLE TO SHAREOWNERS OF THE COCA-COLA COMPANY</b>	<b>31,635</b>	<b>31,003</b>
<b>EQUITY ATTRIBUTABLE TO NONCONTROLLING INTERESTS</b>	<b>286</b>	<b>314</b>
<b>TOTAL EQUITY</b>	<b>31,921</b>	<b>31,317</b>
<b>TOTAL LIABILITIES AND EQUITY</b>	<b>79,974</b>	<b>72,921</b>
Refer to Notes to Consolidated Financial Statements.		

*Copy of balance sheet*

THE COCA-COLA COMPANY AND SUBSIDIARIES			
CONSOLIDATED STATEMENTS OF CASH FLOWS			
Year Ended December 31,	2013	2012	2011
(In millions)			
<b>OPERATING ACTIVITIES</b>			
Consolidated net income	\$ 8,626	\$ 9,086	\$ 8,646
Depreciation and amortization	1,977	1,982	1,954
Stock-based compensation expense	227	259	354
Deferred income taxes	648	632	1,035
Equity (income) loss — net of dividends	(201)	(426)	(269)
Foreign currency adjustments	168	(130)	7
Significant (gains) losses on sales of assets — net	(670)	(98)	(220)
Other operating charges	465	166	214
Other items	234	254	(354)
Net change in operating assets and liabilities	(932)	(1,080)	(1,893)
Net cash provided by operating activities	10,542	10,645	9,474
<b>INVESTING ACTIVITIES</b>			
Purchases of investments	(14,782)	(14,824)	(4,798)
Proceeds from disposals of investments	12,791	7,791	5,811
Acquisitions of businesses, equity method investments and nonmarketable securities	(353)	(1,486)	(971)
Proceeds from disposals of businesses, equity method investments and nonmarketable securities	872	20	398
Purchases of property, plant and equipment	(2,550)	(2,780)	(2,920)
Proceeds from disposals of property, plant and equipment	111	143	101
Other investing activities	(303)	(268)	(145)
Net cash provided by (used in) investing activities	(4,214)	(11,404)	(2,524)

### Copy and paste statement of cash flows

<b>FINANCING ACTIVITIES</b>			
Issuances of debt	43,425	42,791	27,495
Payments of debt	(38,714)	(38,573)	(22,530)
Issuances of stock	1,328	1,489	1,569
Purchases of stock for treasury	(4,832)	(4,559)	(4,513)
Dividends	(4,969)	(4,595)	(4,300)
Other financing activities	17	100	45
Net cash provided by (used in) financing activities	(3,745)	(3,347)	(2,224)
<b>EFFECT OF EXCHANGE RATE CHANGES ON CASH AND CASH EQUIVALENTS</b>			
	(611)	(255)	(430)
<b>CASH AND CASH EQUIVALENTS</b>			
Net increase (decrease) during the year	1,972	(4,361)	4,286
Balance at beginning of year	8,442	12,803	8,517
Balance at end of year	\$ 10,414	\$ 8,442	\$ 12,803

Refer to Notes to Consolidated Financial Statements.

### Copy and paste statement of cash flows

<b>THE COCA-COLA COMPANY AND SUBSIDIARIES CONSOLIDATED STATEMENTS OF CASH FLOWS</b>			
<b>Year Ended December 31, (in millions)</b>	<b>2011</b>	<b>2010</b>	<b>2009</b>
<b>OPERATING ACTIVITIES</b>			
Consolidated net income	8,634	11,859	6,906
Depreciation and amortization	1,954	1,443	1,236
Stock-based compensation expense	354	380	241
Deferred income taxes	1,028	617	353
Equity (income) loss—net of dividends	(269)	(671)	(359)
Foreign currency adjustments	7	151	61
Significant (gains) losses on sales of assets—net	(220)	(645)	(43)
Other significant (gains) losses—net	—	(4,713)	—
Other operating charges	214	264	134
Other items	(335)	477	221
Net change in operating assets and liabilities	(1,893)	370	(564)
Net cash provided by operating activities	9,474	9,532	8,186
<b>INVESTING ACTIVITIES</b>			
Purchases of short-term investments	(4,057)	(4,579)	(2,130)
Proceeds from disposals of short-term investments	5,647	4,032	—
Acquisitions and investments	(977)	(2,511)	(300)
Purchases of other investments	(787)	(132)	(22)
Proceeds from disposals of bottling companies and other investments	562	972	240
Purchases of property, plant, and equipment	(2,920)	(2,215)	(1,993)
Proceeds from disposals of property, plant, and equipment	101	134	104
Other investing activities	(93)	(106)	(48)
Net cash provided by (used in) investing activities	(2,524)	(4,405)	(4,149)

*Copy of statement of cash flows*

FINANCING ACTIVITIES			
Issuances of debt	27,495	15,251	14,689
Payments of debt	(22,530)	(13,403)	(12,326)
Issuances of stock	1,569	1,666	664
Purchases of stock for treasury	(4,513)	(2,961)	(1,518)
Dividends	(4,300)	(4,068)	(3,800)
Other financing activities	45	50	(2)
Net cash provided by (used in) financing activities	(2,234)	(3,465)	(2,293)
EFFECT OF EXCHANGE RATE CHANGES ON CASH AND CASH EQUIVALENTS	(430)	(166)	576
CASH AND CASH EQUIVALENTS			
Net increase (decrease) during the year	4,286	1,496	2,320
Balance at beginning of year	8,517	7,021	4,701
Balance at end of year	12,803	8,517	7,021

**Copy of statement of cash flows**

Income statement	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Average
Sales	17,545	19,564	21,044	21,742	23,104	24,088	28,857	31,944	30,990	35,119	46,542	26,272
Cost of Goods Sold	6,044	7,105	7,762	7,674	8,195	8,164	10,406	11,374	11,088	12,693	18,216	9,385
Operating Expenses	6,149	7,001	8,061	8,370	8,824	9,616	11,199	12,124	11,671	13,977	28,326	10,094
EBIT	5,352	5,458	5,221	5,698	6,085	6,308	7,252	8,446	8,231	8,449	10,154	6,794
Interest Expense	289	199	178	196	240	220	456	438	355	733	417	335
Net Income	3,969	3,050	4,347	4,847	4,872	5,080	6,027	5,874	6,906	11,859	8,572	5,874

*Coca-Cola*



Balance sheet	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	AVERAGE
Cash	1,866	2,260	3,362	6,707	4,701	2,440	4,093	4,701	7,021	8,517	12,803	4,867
Accounts Receivable	1,882	2,097	2,091	2,244	2,281	2,587	3,317	3,090	3,758	4,430	4,920	2,877
Inventory	1,055	1,294	1,252	1,420	1,424	1,641	2,220	2,187	2,354	2,650	3,092	1,827
Current Assets	7,171	7,352	8,396	12,094	10,205	8,441	12,105	12,176	17,551	21,579	8,012	12,211
Depreciation	803	806	850	893	932	938	1,163	1,228	1,236	1,443	1,954	1,054
Net Fixed Assets	4,453	5,911	6,097	6,091	5,831	6,903	8,493	8,326	9,561	14,727	14,939	7,993
Total Assets	22,417	24,406	27,342	31,441	29,427	29,963	43,269	40,519	48,671	72,921	79,974	38,662
Accounts Payable	3,679	3,692	4,058	4,403	4,493	5,055	6,915	6,205	6,657	8,859	9,009	5,593
Current Liabilities	8,429	7,341	7,886	10,971	9,836	8,890	13,225	12,988	13,721	18,508	24,293	11,485
Long-Term Debr	1,219	2,701	2,517	1,157	1,154	1,314	3,277	2,781	5,059	14,041	13,656	3,778
Total Debt	11,051	12,606	13,252	15,392	13,072	13,043	21,525	19,657	23,325	41,604	48,683	19,275
Retained Earnings	23,443	24,506	26,687	29,105	31,299	33,468	36,235	38,513	41,537	49,278	53,550	34,514
Total Owners' Equity	11,366	11,800	14,090	15,935	16,355	16,920	21,744	20,862	25,346	31,317	31,291	19,374
Total Liabilities and OE	22,417	24,406	27,342	31,327	29,427	29,963	43,269	40,519	48,671	72,921	79,974	38,649

Coca-Cola

Statement of cash flows	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Average
Dividends (-)	1,791	1,987	2,166	2,429	2,678	2,911	3,149	3,521	3,800	4,068	4,300	2,968
Stock Price	37.66	35.59	42.05	35.27	35.03	43.13	56.26	42.70	55.64	64.39	69.97	45.56
Shares	2,487	2,483	2,462	2,429	2,393	2,350	2,331	2,336	2,329	2,333	2,284	2,383

**Coca-Cola**

## Liquidity Ratios

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}} \quad (\text{See Figure 1.1})$$

- The current ratio is a going concern ratio that indicates how many short-term assets the company has for each dollar of short-term liabilities.

$$\text{Quick ratio} = \frac{\text{Current assets} - \text{inventories}}{\text{Current liabilities}} \quad (\text{See Figure 1.1})$$

- The quick ratio is a distress ratio that measures the company's ability to meet short-term financial obligations when inventory is not being converted to accounts receivable and cash.

## Asset Management Ratios

$$\text{Days sales outstanding} = \frac{\text{Receivables}}{\text{Annual sales}/365} \quad (\text{See Figure 1.2})$$

- The days' sales outstanding ratio is the average number of days to collect accounts receivable.



Figure 1.1 Current ratio (red) and quick ratio (blue)

**Table 1.1 Coca-Cola**

Liquidity ratios	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Average
Current ratio	0.8508	1.0015	1.0647	1.1024	1.0375	0.9495	0.9153	0.9375	1.2791	1.1659	1.0496	1.0504
Quick ratio	0.7256	0.8252	0.9059	0.9729	0.8927	0.7649	0.7474	0.7691	1.1076	1.0227	0.9223	0.8898

$$\text{Inventory turnover} = \frac{\text{Sales}}{\text{Inventory}} \quad (\text{See Figure 1.3})$$

- Inventory turnover is the number of dollars of sales generated each year for each dollar of inventory and measures the number of times a year that inventory is sold.

$$\text{Net fixed assets} = \frac{\text{Sales}}{\text{Fixed assets}} \quad (\text{See Figure 1.4})$$

- Net fixed assets ratio is the number of dollars of sales generated each year for each dollar of net fixed assets.

$$\text{Total assets turnover} = \frac{\text{Sales}}{\text{Total assets}} \quad (\text{See Figure 1.5})$$

- Total asset turnover is the number of dollars of sales generated each year for each dollar of total assets.

$$\text{Total debt ratio} = \frac{\text{Total debt}}{\text{Total assets}} \quad (\text{See Figure 1.6})$$

- The total debt ratio indicates the proportion of assets financed with fixed costs financing debt.

$$\text{Debt-to-equity} = \frac{\text{Total debt}}{\text{Owner's equity}} \quad (\text{See Figure 1.7})$$

- The debt-to-equity ratio is total debt divided by total equity and the equity multiplier is total assets divided by owners' equity.

$$\text{Equity multiplier} = \frac{\text{Total assets}}{\text{Owner's equity}} \quad (\text{See Figure 1.8})$$

- The equity multiplier

$$\text{Times interest earned} = \frac{\text{EBIT}}{\text{Interest}} \quad (\text{See Figure 1.9})$$

**Table 1.2 Coca-Cola**

<b>Asset management ratios</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>Average</b>
Days sales outstanding	39.15	39.12	36.27	37.67	36.04	39.20	41.96	35.31	44.26	46.04	38.58	39.5405
Inventory turnover	16.63	15.12	16.81	15.31	16.22	14.68	13.00	14.61	13.16	13.25	15.05	14.6849
Fixed asset turnover	3.94	3.31	3.45	3.57	3.96	3.49	3.40	3.84	3.24	2.38	3.12	3.4048
Total asset turnover	0.78	0.80	0.77	0.69	0.79	0.80	0.67	0.79	0.64	0.48	0.58	0.7139

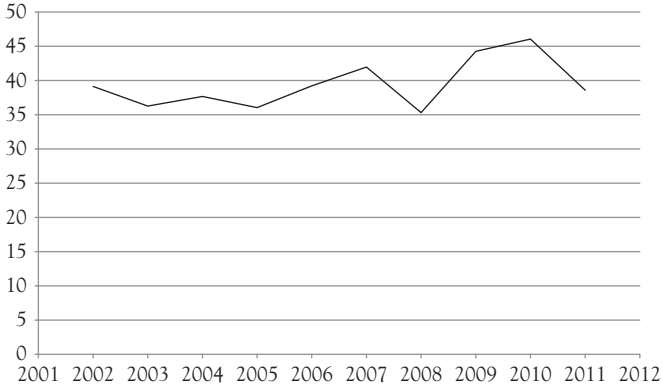


Figure 1.2 Days sales outstanding

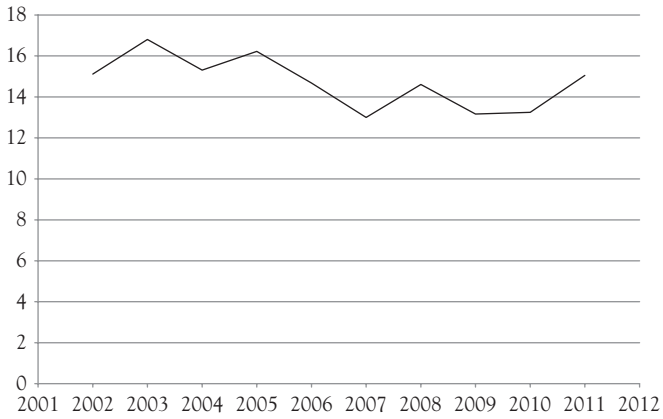


Figure 1.3 Inventory turnover

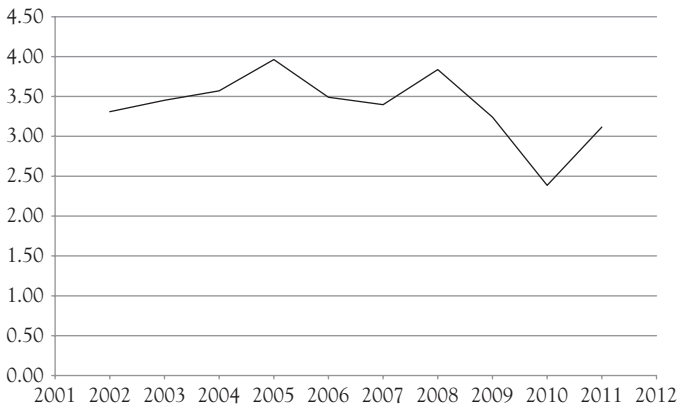
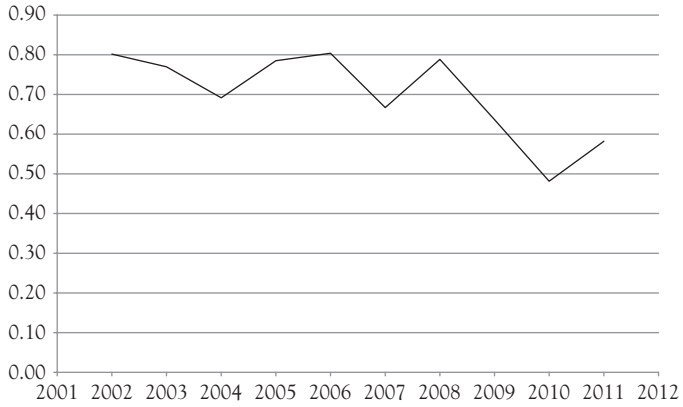
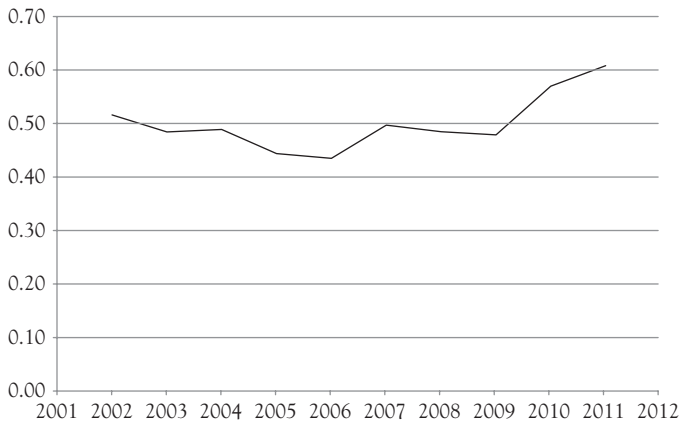


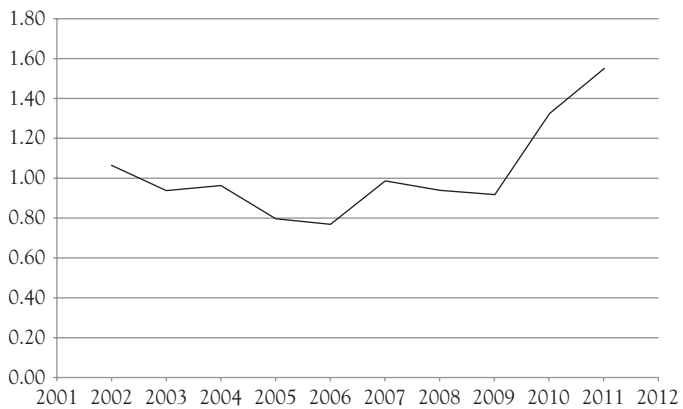
Figure 1.4 Fixed asset turnover



**Figure 1.5 Total asset turnover**



**Figure 1.6 Total debt ratio**



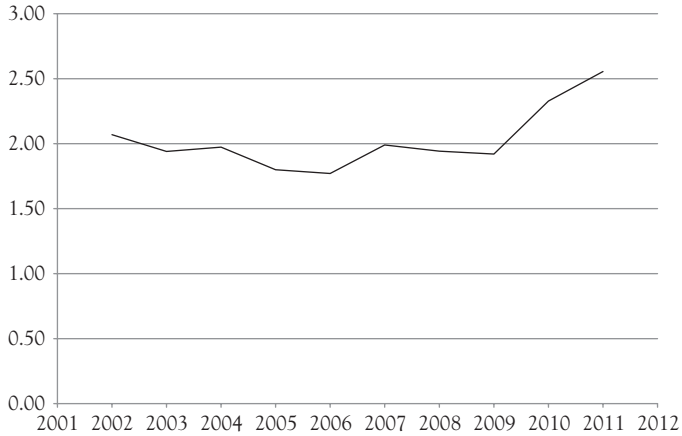
**Figure 1.7 Debt-to-equity ratio**



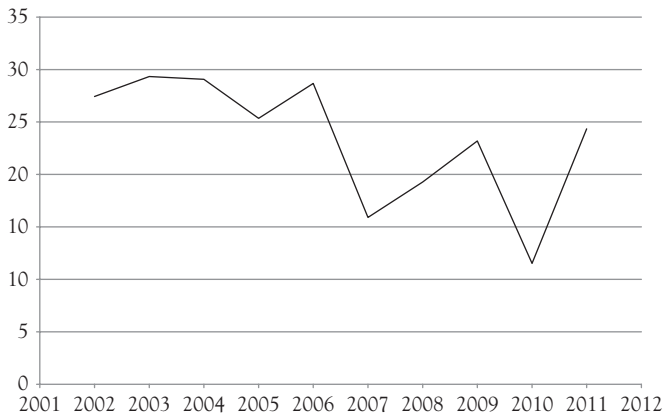
### Financial Leverage Ratios

**Table 1.3 Coca-Cola**

Financial leverage ratios	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Average
Total debt ratio	0.49	0.52	0.48	0.49	0.44	0.44	0.50	0.49	0.48	0.57	0.6087	0.4892
Debt-to-equity ratio	0.97	1.07	0.94	0.97	0.80	0.77	0.99	0.94	0.92	1.33	1.5538	0.9695
Equity multiplier	1.97	2.07	1.94	1.97	1.80	1.77	1.99	1.94	1.92	2.33	2.56	1.9703
Times earned interest	18.52	27.43	29.33	29.07	25.35	28.67	15.90	19.28	23.19	11.53	24.35	23.3062



**Figure 1.8** *Equity multiplier*



**Figure 1.9** *Times earned interest*

- Times interest earned is interest expense divided by EBIT and indicates the extent that EBIT can drop before the company does not have sufficient earnings to cover interest expense.

$$\text{Operating margin} = \frac{\text{EBIT}}{\text{Sales}} \quad (\text{See Figure 1.10})$$

- Operating margin measures ratio of the difference between revenues and operating costs and sales.

### Profitability Ratios

**Table 1.4 Coca-Cola**

Profitability ratios	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	AVERAGE
Operating Margin	0.048	0.028	0.023	0.026	0.029	0.027	0.044	0.039	0.032	0.058	0.023	0.0339
Basic Earning Power	0.239	0.224	0.191	0.181	0.207	0.211	0.168	0.208	0.169	0.116	0.127	0.1860
Net Profit Margin	0.226	0.156	0.207	0.223	0.211	0.211	0.209	0.184	0.223	0.338	0.184	0.2178
Return on Assets	0.177	0.125	0.159	0.154	0.166	0.170	0.139	0.145	0.142	0.163	0.107	0.1513
Return on Equity	0.349	0.258	0.309	0.304	0.298	0.300	0.277	0.282	0.272	0.379	0.274	0.2977

$$\text{Basic earning power} = \frac{\text{EBIT}}{\text{Total assets}} \quad (\text{See Figure 1.11})$$

- Basic earning power is the difference between revenues and operating costs and total assets.

$$\text{Net profit margin} = \frac{\text{Net income}}{\text{Sales}} \quad (\text{See Figure 1.12})$$

- Net profit margin is the ratio of revenue minus all costs divided by sales.

$$\text{Return on assets} = \frac{\text{Net income}}{\text{Total assets}} \quad (\text{See Figure 1.13})$$

- Return on assets is net income divided by total assets.

$$\text{Return on equity} = \frac{\text{Net income}}{\text{Owner's equity}} \quad (\text{See Figure 1.14})$$

- Return on equity is the ratio of net income to owner's equity.

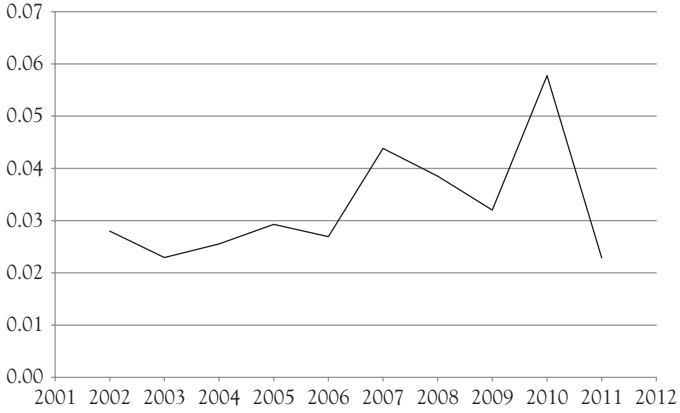
$$\text{Earnings per share} = \frac{\text{Net income}}{\# \text{ of shares outstanding}} \quad (\text{See Figure 1.15})$$

- Earnings per share is net income divided by the number of shares outstanding.

$$\text{Price-to-earnings} = \frac{\text{Market price per share}}{\text{Earnings per share}} \quad (\text{See Figure 1.16})$$

- The price-to-earnings ratio, P/E, is the market price per share of the stock divided by earnings per share and represents the number of dollars investors are willing to pay for each dollar of earnings.

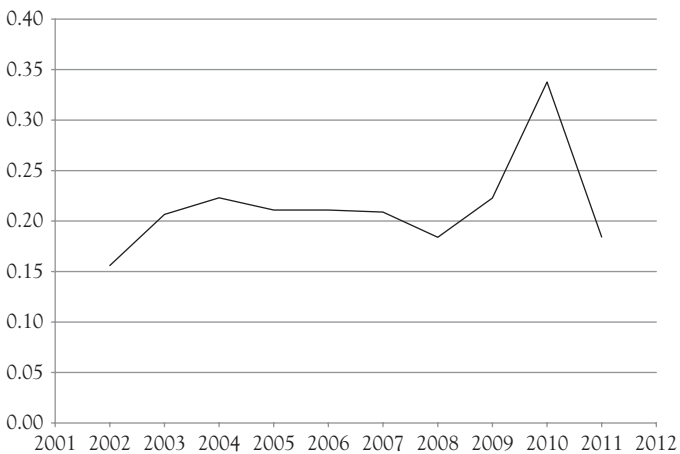
$$\text{Book value per share} = \frac{\text{Owner's equity}}{\# \text{ of shares out}} \quad (\text{See Figure 1.17})$$



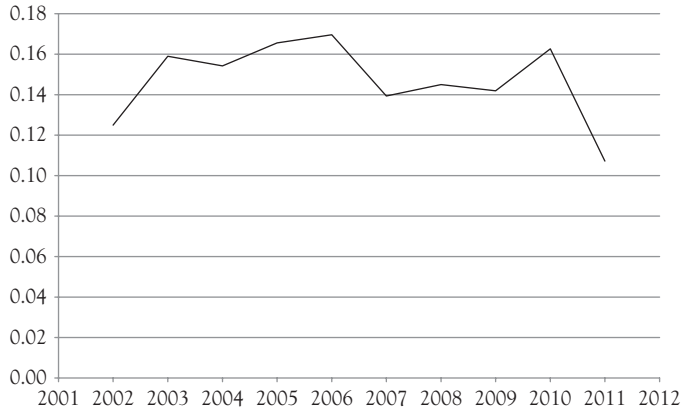
**Figure 1.10** Operating margin



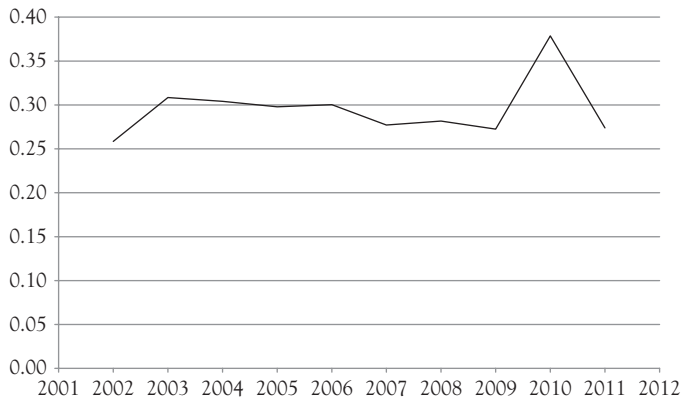
**Figure 1.11** Basic earning power



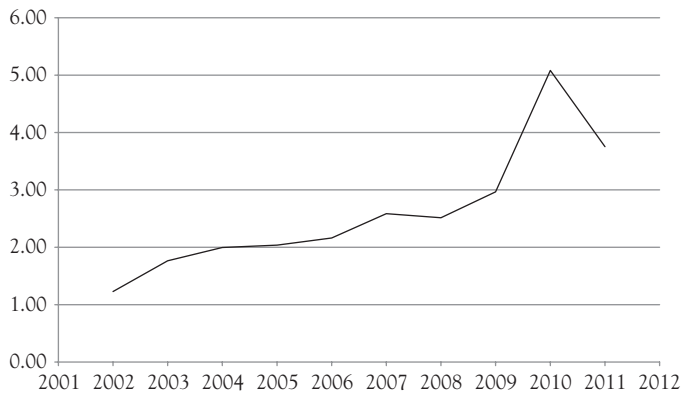
**Figure 1.12** Net profit margin



**Figure 1.13** Return on assets



**Figure 1.14** Return on equity



**Figure 1.15** Earnings per share

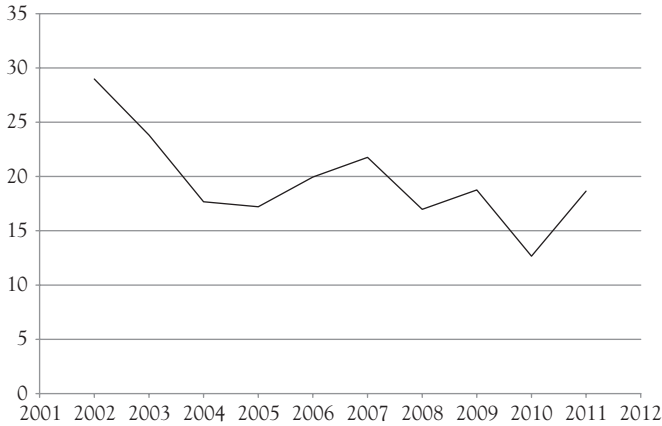


Figure 1.16 Price-to-earnings ratio

- Book value per share is owners' equity divided by the number of shares outstanding.

$$\text{Market to book value} = \frac{\text{Stock price per share}}{\text{Book value per share}} \quad (\text{See Figure 1.18})$$

- The market value to book value ratio is the market price per share divided by the book value per share and is the number of dollars that investors are willing to pay for each dollar of assets in the company.

$$\text{Dividends per share} = \frac{\text{Dividends}}{\text{\# of shares}} \quad (\text{See Figure 1.19})$$

- Dividends per share is the dividends paid by the company divided by the number of shares outstanding.

$$\text{Dividend yield} = \frac{\text{Dividend per share}}{\text{Stock prices}} \quad (\text{See Figure 1.20})$$

- Dividend yield is the dividend per share divided by the market price per share.

$$\text{Payout ratio} = \frac{\text{Dividend per share}}{\text{Earnings per share}} \quad (\text{See Figure 1.21})$$

## Market-Based Ratios

Table 1.5 Coca-Cola

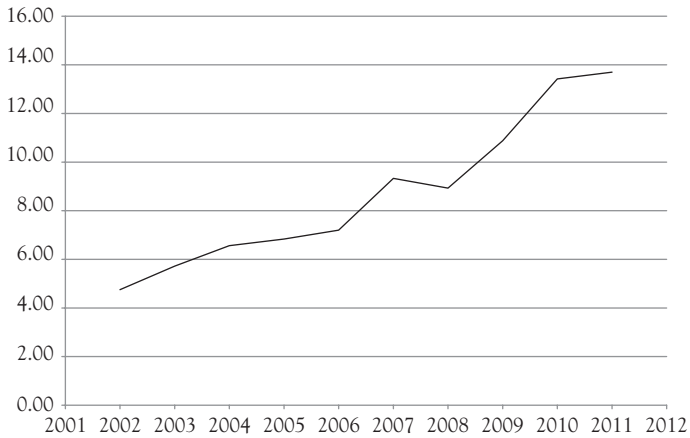
Market ratios	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Average
Earnings per share	1.60	1.23	1.77	2.00	2.04	2.16	2.59	2.51	2.97	5.08	3.75	2.4817
Price earnings	23.60	28.97	23.82	17.68	17.21	19.95	21.76	16.98	18.76	12.67	18.64	19.7549
Book value	4.57	4.75	5.72	6.56	6.83	7.20	9.33	8.93	10.88	13.42	13.70	8.1817
Market value	8.24	7.49	7.35	5.38	5.13	5.99	6.03	4.78	5.11	4.80	5.11	5.7834
Payout ratio	0.45	0.65	0.50	0.50	0.55	0.57	0.52	0.60	0.55	0.34	0.50	0.5321
Earnings retention ratio	0.55	0.35	0.50	0.50	0.45	0.43	0.48	0.40	0.45	0.66	0.50	0.4679
Dividends per share	0.72	0.80	0.88	1.00	1.12	1.24	1.35	1.51	1.63	1.74	1.88	1.2524
Dividend yield	0.019	0.022	0.021	0.028	0.032	0.029	0.024	0.035	0.029	0.027	0.027	0.0276



- The payout ratio is dividend per share divided by the market price per share.

Retention ratio =  $(1 - \text{payout ratio})$  (See Figure 1.22)

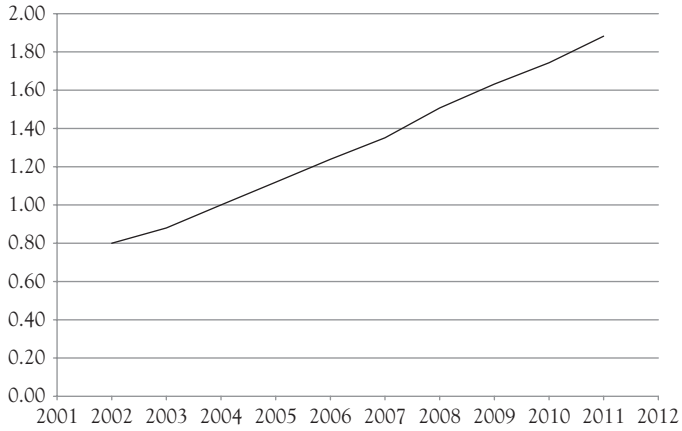
- The retention rate is one minus the payout ratio.



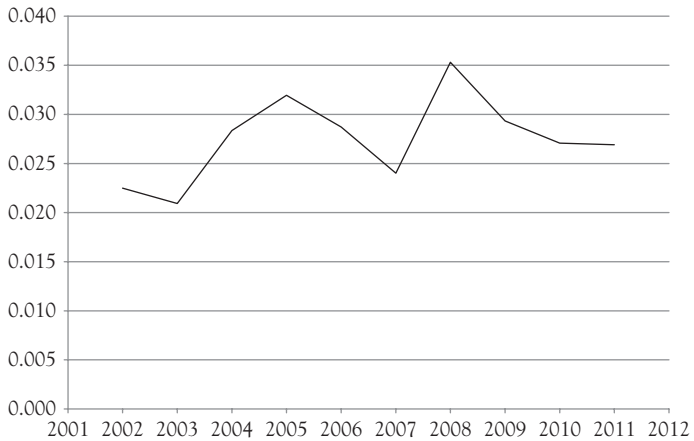
**Figure 1.17 Book value**



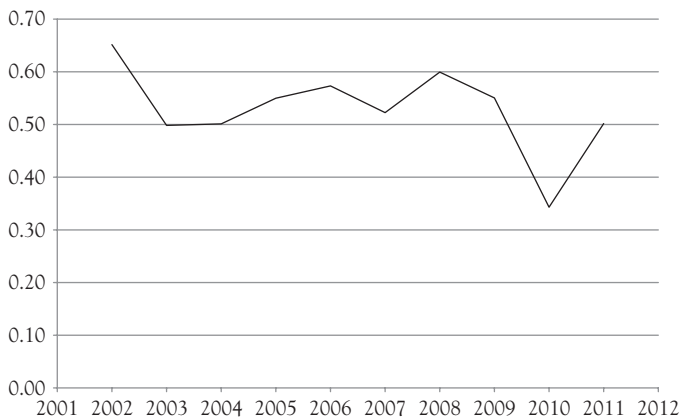
**Figure 1.18 Market value**



**Figure 1.19** Dividends per share



**Figure 1.20** Dividend yield



**Figure 1.21** Payout ratio



Figure 1.22 Retention ratio

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Average
<b>61 Liquidity Ratios</b>											
62 Current ratio	0.73	0.76	0.81	1.45	1.76	0.80	1.39	1.14	1.49	1.25	1.16
63 Quick ratio	0.68	0.71	0.77	1.41	1.72	0.77	1.34	1.11	1.46	1.22	1.12
<b>65 Asset Management Ratios</b>											
66 Days sales outstanding	20.24	13.64	14.27	15.20	14.15	16.88	14.47	17.02	17.89	18.04	16.97
67 Inventory turnover	1.88	3.52	3.28	3.50	3.84	18.7	21	21.4	21.9	22.1	9.77
68 Net fixed assets turnover	0.83	0.86	0.92	0.94	1.07	1.09	1.16	1.04	1.09	1.18	1.02
69 Total assets turnover	0.64	0.67	0.69	0.64	0.72	0.78	0.83	0.73	0.75	0.82	0.73
<b>72 Financial Leverage Ratios</b>											
73 Total debt ratio	0.37	0.33	0.49	0.49	0.47	0.48	0.33	0.34	0.34	0.26	0.32
74 Debt to equity ratio	1.33	1.23	0.96	0.99	0.97	0.62	1.10	1.15	1.18	1.29	1.05
75 Equity multiplier	2.33	2.13	1.96	1.98	1.87	1.82	2.13	2.15	2.18	2.29	2.10
76 Times interest earned	5.65	7.30	9.89	11.18	11.03	9.46	12.33	14.46	16.57	17.31	11.52
<b>78 Profitability Ratios</b>											
79 Operating Margin	0.14	0.17	0.19	0.21	0.21	0.17	0.27	0.30	0.31	0.32	0.23
80 Basic Earnings Per Share	0.08	0.11	0.13	0.13	0.15	0.13	0.23	0.23	0.28	0.28	0.17
81 Net profit margin	0.08	0.09	0.12	0.14	0.17	0.11	0.18	0.20	0.21	0.20	0.15
82 Return on assets	0.04	0.06	0.08	0.09	0.12	0.08	0.13	0.15	0.15	0.17	0.11
83 Return on equity	0.09	0.12	0.16	0.17	0.23	0.16	0.32	0.32	0.34	0.38	0.23
<b>85 Market Based Ratios</b>											
86 Earnings per share	0.70	1.16	1.81	2.06	2.87	2.02	3.83	4.17	4.64	3.33	2.86
87 Price to earnings ratio	17.93	17.03	14.96	13.11	13.08	35.62	14.59	13.88	13.82	18.54	16.41
88 Book value per share	8.08	9.44	11.27	12.02	12.33	12.86	11.88	12.87	13.73	13.94	11.86
89 Market to book ratio	1.54	2.09	2.30	2.32	3.00	3.89	4.68	4.50	3.37	3.09	3.69
90 Dividend per share	0.23	0.40	0.53	0.67	0.99	1.09	1.63	2.05	2.26	2.33	1.28
91 Dividend yield	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.04	0.03	0.03	0.03
92 Payout ratio	0.33	0.34	0.31	0.32	0.34	0.34	0.42	0.49	0.49	0.47	0.43
93 Retention ratio	0.67	0.66	0.69	0.68	0.66	0.28	0.58	0.51	0.51	0.53	0.57

Excel worksheet showing calculated ratios

## CHAPTER 2

# Financial Ratio Analysis—Calculating and Graphing Ratios

### Financial Statements

In corporate financial reports there are two constructed financial statements and two derived financial statements. Constructed financial statements are the Balance Sheet and Income Statement, which consist of financial information derived from journal entries. The Balance Sheet is a cross-sectional representation of the company at a point in time and is a stock concept, that is, measurements at a point in time. The Balance Sheet represents the total of all the transactions that have occurred in the company up to that point in time. Alternatively, the Income Statement is a flow concept that reports what happened to the company over the latest reporting period. The Statement of Retained Earnings and the Statement of Cash Flows are derived financial statements developed from information in the Balance Sheet and Income Statement. The Statement of Retained Earnings links the Income Statement and the Balance Sheet and shows the increase in retained earnings for each reporting period. The Statement of Cash Flows reports how the company attained and used its cash over the reporting period.

Accounting information is classified according to the uses of the information. The broadest set of accounting information is Managerial Accounting Information. Managerial Accounting Information is comprised of all the accounting information, including financial accounting, available within the corporation that is used by corporate decision makers. Financial Accounting Information is a subset of Managerial Accounting Information and is used primarily for reporting the company's financial condition to outside fund providers: banks, debt holders,

and stock investors. Tax Accounting Information is used to construct tax returns for governments.

## Benchmarking

Benchmarking can be done for the individual corporation or comparatively within a company's industry. Financial ratio analysis is a fundamental way to benchmark a company's performance over time. A financial decision maker within the corporation can view financial ratios over time to determine trends that help evaluate the company's past performance and estimate future performance. Generally, financial ratios deteriorate over time prior to a collapse of the firm. For example, the current ratio, a measure of liquidity, deteriorates prior to bankruptcy.

Industry group analysis is done to determine how the company is performing relative to other similar companies. Industry groups are normally determined by the Standard Industrial Classification (SIC) code the company is listed in. There are 10 one-digit SIC codes and each SIC code has as many as four digits. Sidebar A contains the 10 SIC codes and their definitions.

When benchmarking to other companies in an SIC code, financial ratios are compared to the industry median. Companies within an industry (SIC) are ranked on a ratio from high to low. As an industry matures, many firms go out of existence. In 1900, there were more than 500 automobile manufacturing companies in America alone. Now, six car companies make 95 percent of cars worldwide. All of the other car companies were merged or went bankrupt. Firms that exist tend to have similar—optimal—financial structures because they have similar operating environments. Thus, average translates into optimal. Firms with return on investment ratios that are too high are copied until their advantage is reduced to zero by competition. Firms with return on investment (ROI) ratios that are too low are acquired or go bankrupt. Thus, survivor firms have similar financial structures.

## Financial Ratio Analysis of an Individual Company

This chapter conducts a financial ratio analysis to assess the individual historical performance of Coca-Cola. There are five categories of financial

ratios that we calculate in this chapter: liquidity ratios, asset management ratios, financial leverage ratios, profitability ratios, and market-based ratios. Ratio analysis allows the financial analyst to examine a company and assess how the company is performing over the time period being analyzed. Using data from financial statements, we examine the company's performance over time. The Power Point slides in Chapter 2 show in detail how to locate the information needed to conduct this analysis.

### *Liquidity Ratios*

Liquidity ratios measure the firm's ability to meet short-term financial obligations. These ratios measure the firm's ability to continue to stay in business and to ensure that the firm has enough cash and short-term assets, such as accounts receivables and inventories, to meet short-term financial obligations, such as accounts payables and notes payables. The current ratio is a liquidity ratio that shows the relationship between short-term financial assets and short-term financial liabilities. The short term is either one accounting period or one year, whichever is shorter. The current ratio is a going concern measure and shows how many dollars of short-term assets a company has for each dollar of short-term obligations, assuming that the company continues to operate normally. That is, the company continues to convert labor, raw materials, and fixed assets to inventory, which is sold for accounts receivable, and later the accounts receivable are converted to cash after which the process begins again. The quick ratio measures the firm's liquidity assuming that the inventory is not to be included in the numerator. The quick ratio is a distress ratio and measures the number of dollars of short-term monetary assets (denominated in a fixed number of currency units) held by the firm for each dollar of short-term obligations owed by the company. Both formulas for each ratio are shown below. The current ratio for Coca-Cola was the highest in 2009 at 1.2791 and the quick ratio 1.1076 was the highest in 2009. The averages for the current ratio and the quick ratio for the 10-year period from 2004 to 2013 were 1.0653 and 0.91781, respectively.

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}} \quad (\text{See Figure 2.1})$$

**Table 2.1 Coca-Cola Co. (KO) financial statement input, 2004–2013**

Balance sheet	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Average
Cash	6,707	4,701	2,440	4,093	4,701	7,021	8,517	12,803	8,482	10,414	6,988
Accounts receivable	2,244	2,281	2,587	3,317	3,090	3,758	4,430	4,920	4,759	4,873	3,626
Inventory	1,420	1,424	1,641	2,220	2,187	2,354	2,650	3,092	3,264	3,277	2,353
Other current assets	1,723	1,799	1,773	2,475	2,198	4,418	5,982	4,682	13,823	12,740	5,161
Current assets	12,094	10,205	8,441	12,105	12,176	17,551	21,579	25,497	30,328	31,304	18,128
Net fixed assets	19,347	19,222	21,522	31,164	28,343	31,120	51,342	54,477	55,846	58,751	37,113
Total assets	31,441	29,427	29,963	43,269	40,519	48,671	72,921	79,974	86,174	90,055	55,241
Accounts payable	4,403	4,493	5,055	6,915	6,205	6,657	8,859	9,009	8,680	9,577	6,985
Current liabilities	10,971	9,836	8,890	13,225	12,988	13,721	18,508	24,283	27,821	27,811	16,805
Long-term debt	1,157	1,154	1,314	3,277	2,781	5,059	14,041	13,656	14,736	28,804	8,598
Total debt	15,392	13,072	13,043	21,525	19,657	23,325	41,604	48,683	53,006	56,615	30,592
Retained earnings	29,105	31,299	33,468	36,235	38,513	41,537	49,278	53,550	58,045	61,660	43,269
Total owners' equity	15,935	16,355	16,920	21,744	20,862	25,346	31,317	31,291	33,168	33,440	24,638
Total liabilities and OE	31,327	29,427	29,963	43,269	40,519	48,671	72,921	79,974	86,174	90,055	55,230

Income statement	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Average
Sales	21,742	23,104	24,088	28,857	31,944	30,990	35,119	46,542	48,017	46,854	33,726
Cost of goods sold	7,674	8,195	8,164	10,406	11,374	11,088	12,693	18,216	19,053	18,421	12,528
Operating income	14,068	14,909	15,924	18,451	20,570	19,902	22,426	28,326	28,964	28,433	21,197
Operating expenses	8,370	8,824	9,616	11,199	12,124	11,671	13,977	28,326	10,779	18,205	13,309
EBIT	5,698	6,085	6,308	7,252	8,446	8,231	8,449	10,154	10,779	10,228	8,163
Interest expense	196	240	220	456	438	355	733	417	471	534	406
Net income	4,847	4,872	5,080	6,027	5,874	6,906	11,859	8,572	9,019	8,584	7,164
<b>Statement of cash flows</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>Average</b>
Dividends (-)	2,429	2,678	2,911	3,149	3,521	3,800	4,068	4,300	4,595	4,969	3,642
Stock price	35.27	35.03	43.13	56.26	42.70	55.64	64.39	69.97	35.74	41.31	48
Shares	2,429	2,393	2,350	2,331	2,336	2,329	2,333	2,284	4,504	4,434	2,772
Depreciation	893	932	938	1,163	1,228	1,236	1,443	1,954	1,982	1,977	1,375

Table 2.2 Coca-Cola

Liquidity ratios	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Average
Current ratio	1.1024	1.0375	0.9495	0.9153	0.9375	1.2791	1.1659	1.0500	1.0901	1.1256	1.0653
Quick ratio	0.9729	0.8927	0.7649	0.7474	0.7691	1.1076	1.0227	0.9227	0.9728	1.0078	0.9181



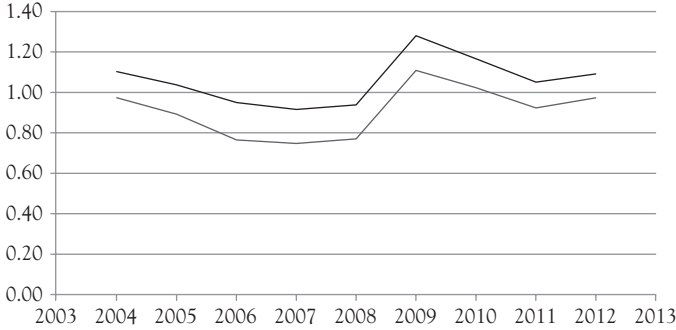


Figure 2.1 Current ratio (red) and quick ratio (blue)

$$\text{Quick ratio} = \frac{\text{Current assets} - \text{inventories}}{\text{Current liabilities}} \quad (\text{See Figure 2.1})$$

**Asset Management Ratios**

Asset management ratios measure the efficiency of the firm in the use of assets. If a firm holds excess assets, these excess assets will increase the cost of funds and the increased cost of funds will reduce profitability. If asset levels are too low, sales opportunities may be lost, which reduces profitability, also. Asset management ratios are days’ sales outstanding, inventory turnover, net fixed assets turnover, and total assets turnover. The days’ sale outstanding ratio is the average number of days needed to collect accounts receivable. Inventory turnover shows how many dollars of sales the company generates for each dollar of inventory, which measures sales efficiency. Net fixed assets turnover is the number of dollars of sales generated for each dollar of inventory. Total asset turnover is the number of dollars of sales generated for each dollar of total assets. The highest value for days’ sales outstanding was in 2010 at 46.04 days and the average was 39.32 days. The highest level for inventory turnover was in 2005 at 16.22 and the average was 14.43. The highest value for net fixed asset turnover was 1.20 in 2005 and the average was 0.97. The highest value for total asset turnover was 0.80 in 2006 and the average was 0.65.

$$\text{Days sales outstanding} = \frac{\text{Receivables}}{\text{Annual sales}/365} \quad (\text{See Figure 2.2})$$

$$\text{Inventory turnover} = \frac{\text{Sales}}{\text{Inventory}} \quad (\text{See Figure 2.3})$$

$$\text{Net fixed assets turnover (NFA)} = \frac{\text{Sales}}{\text{Fixed assets}} \quad (\text{See Figure 2.4})$$

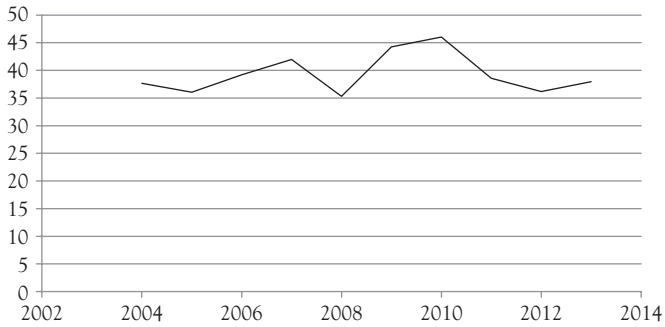


Figure 2.2 Days sales outstanding

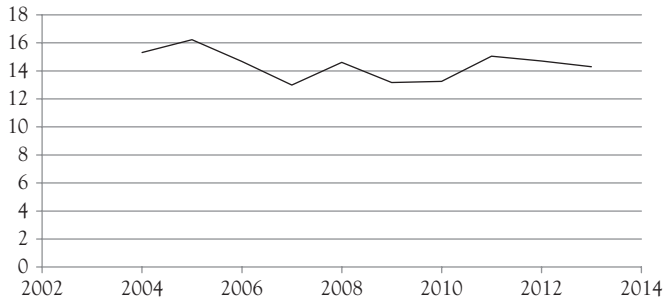


Figure 2.3 Inventory turnover

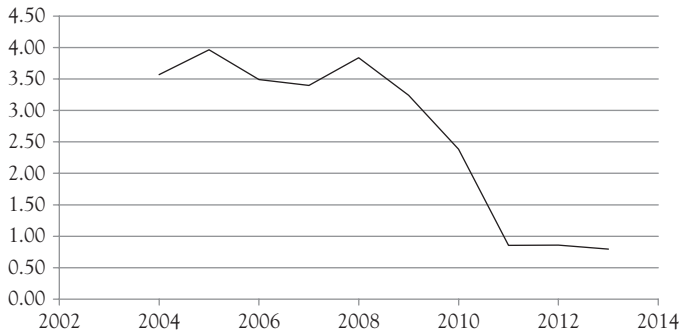
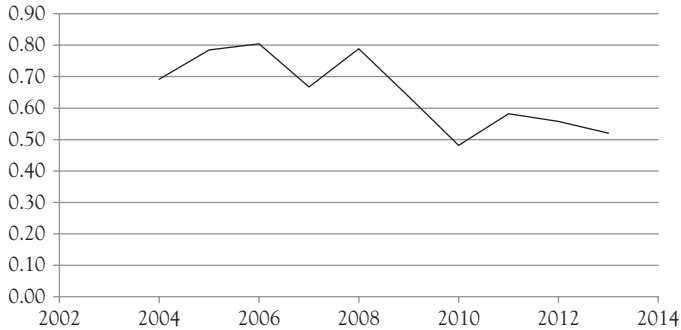


Figure 2.4 Fixed asset turnover

*Table 2.3 Coca-Cola*

Asset management ratios	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	AVERAGE
Days sales outstanding	37.6718	36.0355	39.2002	41.9553	35.3071	44.2617	46.0420	38.5845	36.1754	37.9614	39.3195
Inventory turnover	15.3113	16.2247	14.6789	12.9986	14.6063	13.1648	13.2525	15.0524	14.7111	14.2978	14.4298
Fixed asset turnover	1.1238	1.2020	1.1192	0.9260	1.1271	0.9958	0.6840	0.8543	0.8598	0.7975	0.9689
Total asset turnover	0.6915	0.7851	0.8039	0.6669	0.7884	0.6367	0.4816	0.5820	0.5572	0.5203	0.6514



**Figure 2.5 Total asset turnover**

$$\text{Total assets turnover (NFA)} = \frac{\text{Sales}}{\text{Total assets}} \quad (\text{See Figure 2.5})$$

### **Financial Leverage Ratios**

Financial leverage ratios or debt management ratios indicate the extent to which Coca-Cola uses debt to finance assets. The use of debt will increase a firm's return on equity (ROE) if the firm earns more on its assets than the interest rate on debt and, at the same time, increased financial leverage will increase the variability of net income. The ratios in this category include the total debt ratio, the debt-to-equity ratio, the equity multiplier, and the times-interest earned ratio. The total debt ratio measures the proportion of funds provided by creditors and debt holders. Total debt includes both current liabilities and long-term debt. Creditors and bond holders prefer a lower debt ratio. The debt-to-equity ratio measures the ratio of total debt to total equity. A higher debt ratio indicates more financial leverage and more risk. The equity multiplier is total assets divided by total equity. This ratio indicates how many additional dollars of assets the company can buy for each additional dollar of equity. Times interest earned is the ratio of EBIT to interest expense and measures the ratio of dollars of EBIT the company has for each dollar of interest expense. The times interest earned ratio indicates how much EBIT can fall before EBIT is less than the interest expense. This is an important indicator because the failure to make interest payments is an act of bankruptcy. The highest total debt ratio was 0.63 in 2013 and indicates that Coca-Cola financed

**Table 2.4 Coca-Cola**

<b>Financial leverage ratios</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>Average</b>
Total debt ratio	0.4896	0.4442	0.4353	0.4975	0.4851	0.4792	0.5705	0.6087	0.6151	0.6287	0.5254
Debt-to-equity ratio	0.9659	0.7993	0.7709	0.9899	0.9422	0.9203	1.3285	1.5558	1.5981	1.6930	1.1564
Equity multiplier	1.9731	1.7993	1.7709	1.9899	1.9422	1.9203	2.3285	2.5558	2.5981	2.6930	2.1571
Times earned interest	29.0714	25.3542	28.6727	15.9035	19.2831	23.1859	11.5266	24.3501	22.8854	19.1536	21.9386

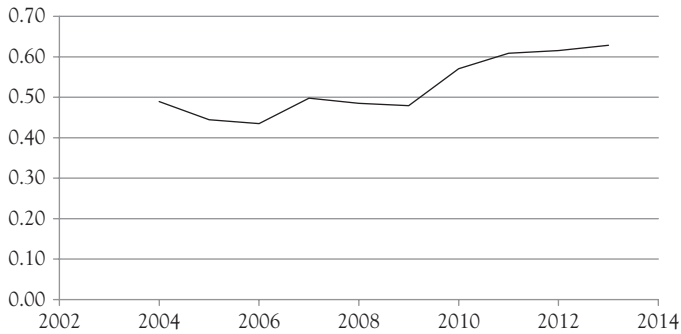
57 percent of assets with debt. The average total debt ratio was 0.53. The highest debt-to-equity ratio was 1.69 in 2013 and averaged at 1.16. The highest equity multiplier was 2.69 in 2013 and averaged at 2.16. The highest times interest earned was 29.07 in 2004 and averaged at 21.94.

$$\text{Total debt ratio} = \frac{\text{Total debt}}{\text{Total assets}} \quad (\text{See Figure 2.6})$$

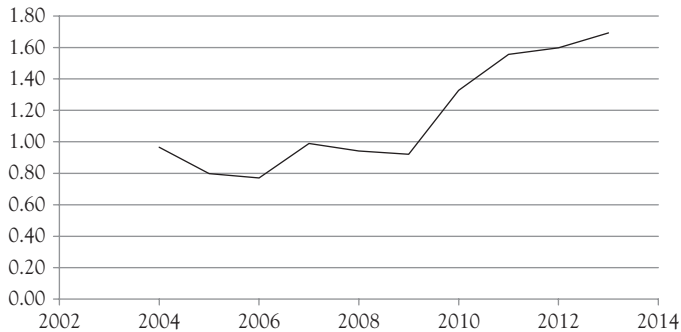
$$\text{Debt to equity} = \frac{\text{Total debt}}{\text{Owner's equity}} \quad (\text{See Figure 2.7})$$

$$\text{Equity multiplier} = \frac{\text{Total assets}}{\text{Owner's equity}} \quad (\text{See Figure 2.8})$$

$$\text{Times interest earned} = \frac{\text{EBIT}}{\text{Interest}} \quad (\text{See Figure 2.9})$$



**Figure 2.6 Total debt ratio**



**Figure 2.7 Debt-to-equity ratio**

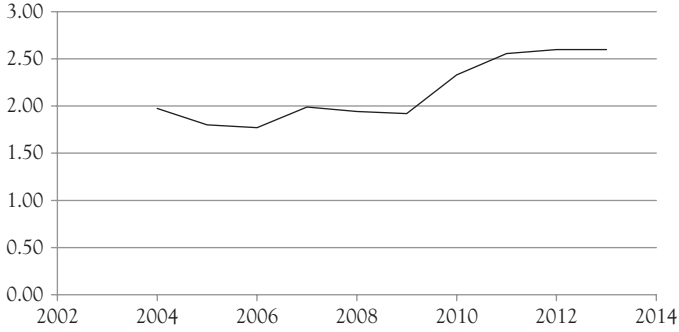


Figure 2.8 Equity multiplier

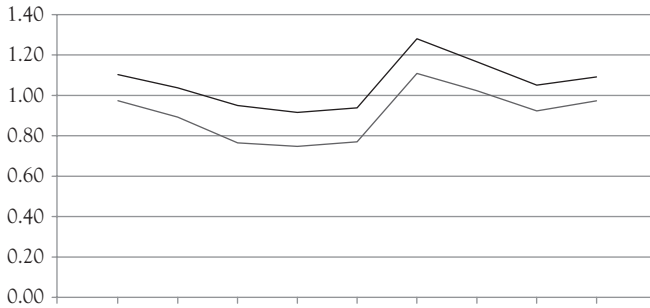


Figure 2.9 Times earned interest

**Profitability Ratios**

Profitability ratios measure a company’s overall efficiency and analyze the relationship between sales and expenses. Profitability ratios are operating margin, net profit margin, return on assets, and ROE. Operating margin is the ratio of operating income and sales and shows operating profit per dollar of sales. Net profit margin is the ratio of net income to sales and measures the overall operating efficiency of the company. Net profit margin is the proportion of revenue earned by the company. Return on assets is net income divided by total assets. ROE is the ratio of net income to owner’s equity. ROE is the proportion of profit generated for each dollar of equity. The highest operating margin was 0.058 in 2010 and the average was 0.033. The highest level of net profit margin was 0.338 in 2010 and the average was 0.215. The highest level of return on assets was 1.70

in 2006 and the average was 0.139. The highest level of ROE was 0.379 in 2010 and the average was 0.291.

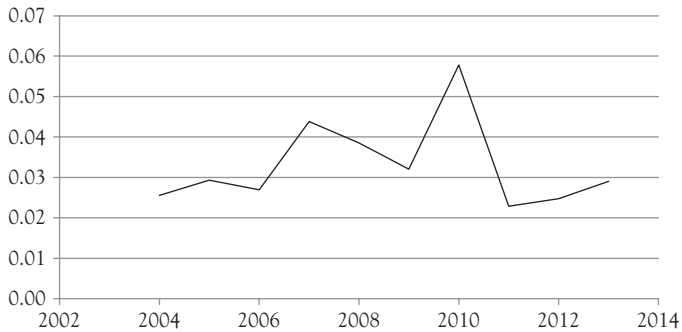
$$\text{Operating margin} = \frac{\text{EBIT}}{\text{Sales}} \quad (\text{See Figure 2.10})$$

$$\text{Net profit margin} = \frac{\text{Net income}}{\text{Sales}} \quad (\text{See Figure 2.11})$$

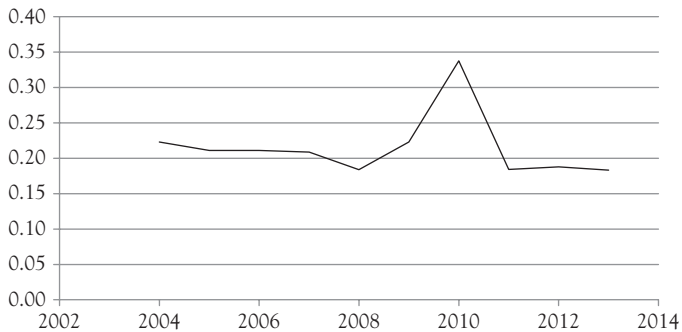
$$\text{Return on assets} = \frac{\text{Net income}}{\text{Total assets}} \quad (\text{See Figure 2.12})$$

$$\text{Return on equity} = \frac{\text{Net income}}{\text{Owner's equity}} \quad (\text{See Figure 2.13})$$

- ROE is the ratio of net income to owner's equity.



**Figure 2.10** Operating margin

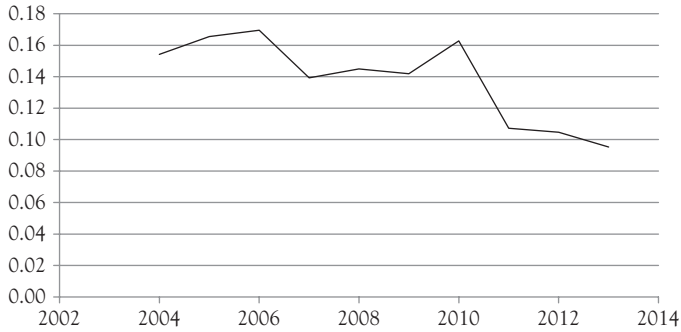


**Figure 2.11** Net profit margin

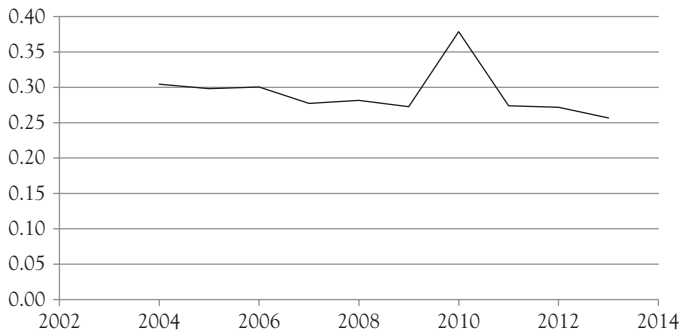


*Table 2.5 Coca-Cola*

Profitability ratios	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Average
Operating margin	0.0255	0.0293	0.0269	0.0438	0.0385	0.0320	0.0577	0.0229	0.0247	0.0290	0.0330
Net profit margin	0.2229	0.2109	0.2109	0.2089	0.1839	0.2228	0.3377	0.1842	0.1878	0.1832	0.2153
Return on assets	0.1542	0.1656	0.1695	0.1393	0.1450	0.1419	0.1626	0.1072	0.1047	0.0953	0.1385
Return on equity	0.3042	0.2979	0.3002	0.2772	0.2816	0.2725	0.3787	0.2739	0.2719	0.2567	0.2915



**Figure 2.12** Return on assets



**Figure 2.13** Return on equity

### Market-Based Ratios

Market-based ratios show the value placed on the company by shareholders. The value of the firm is equal to the market capitalization of the firm. The market capitalization of the firm is equal to the number of shares outstanding times the price per share. There are seven market-based ratios: earnings per share, the price-to-earnings ratio, the book value ratio, the market value ratio, the payout ratio, the dividends per share ratio, and dividend yield. The earnings per share ratio measures net income earned for each share. The price to earnings ratio is the dollars shareholders will pay for each dollar of earnings of the company. The book value ratio is the stock price based on the accounting value of the firm. The market value ratio shows the number of dollars that shareholders pay for each dollar of book value. The payout ratio is the proportion of net income paid in

dividends. Dividends per share are dividends divided by shares. Dividend yield is dividends per share divided by the stock price.

Coca-Cola did a two-for-one stock split on July 27, 2012. This provides some interesting challenges for the financial analyst. Although the share data in financial reports after the split adjust for the split, financial information from previous financial statements has not been adjusted. Figure 2.14A shows earnings per share for the period from 2004 to 2013 if the data are not adjusted. It appears that the Coca-Cola earnings per share have dropped. Figure 2.14B uses data have been adjusted retroactively. The EPS trend is still increasing with the exception of the large increase in 2010. Adjusted earnings per share were the highest in 2010 at \$2.54 per share and averaged at \$1.55 per share. The price-earnings ratio was the highest in 2002 at 28.97 and averaged at 20.14. The book value per share was the highest in 2013 at 21.34 and averages 18.28. The market value ratio was the highest in 2007 at 6.03 and averaged at 5.27. The payout ratio was the highest in 2008 at 0.60 and averaged at 0.52. The retention ratio was the highest in 2010 at 0.66 and averaged at 0.48. Adjusted dividends per share were the highest in 2013 at 1.12 and averaged at 1.36. The dividend yield was the highest in 2008 at 3.53 percent and averaged at 2.87 percent.

$$\text{Earnings per share} = \frac{\text{Net income}}{\text{\# of shares outstanding}} \quad (\text{See Figure 2.14})$$

$$\text{Price-to-earnings} = \frac{\text{Market price per share}}{\text{Earnings per share}} \quad (\text{See Figure 2.15})$$

$$\text{Book value per share} = \frac{\text{Owner's equity}}{\text{\# of shares outstanding}} \quad (\text{See Figure 2.16})$$

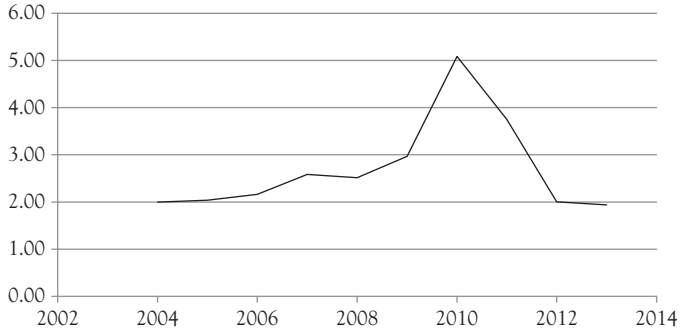
$$\text{Market value} = \frac{\text{Stock price per share}}{\text{Book value per share}} \quad (\text{See Figure 2.17})$$

$$\text{Payout ratio} = \frac{\text{Dividend per share}}{\text{Earnings per share}} \quad (\text{See Figure 2.18})$$

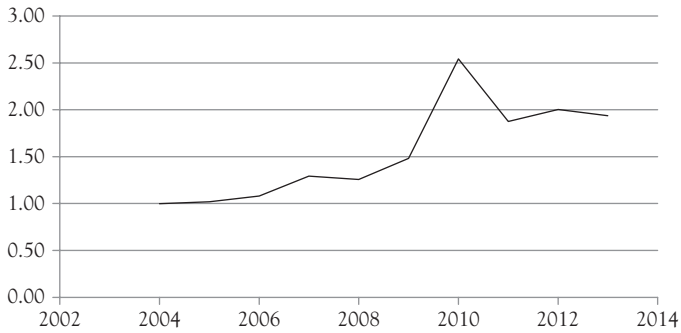
$$\text{Retention ratio} = \frac{\text{Dividends}}{\text{Net Income}} \quad (\text{See Figure 2.19})$$

$$\text{Dividend per share} = \frac{\text{Dividends}}{\text{\# of Shares}} \quad (\text{See Figure 2.20})$$

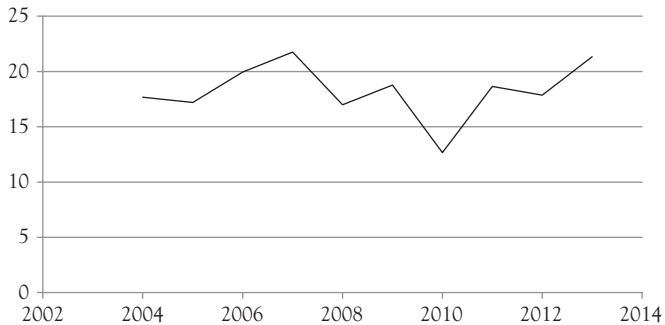
$$\text{Dividend yield} = \frac{\text{Dividend per Share}}{\text{Stock Prices}} \quad (\text{See Figure 2.21})$$



**Figure 2.14A** *Earnings per share*



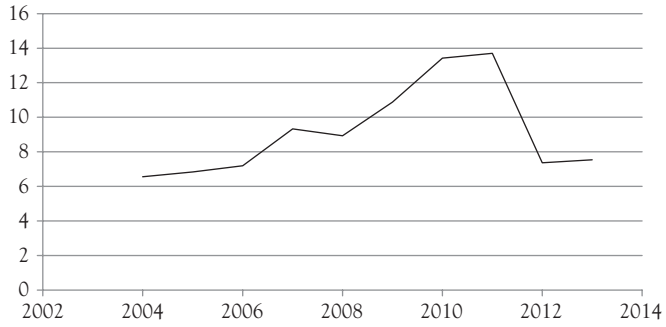
**Figure 2.14B** *Adjusted earnings per share*



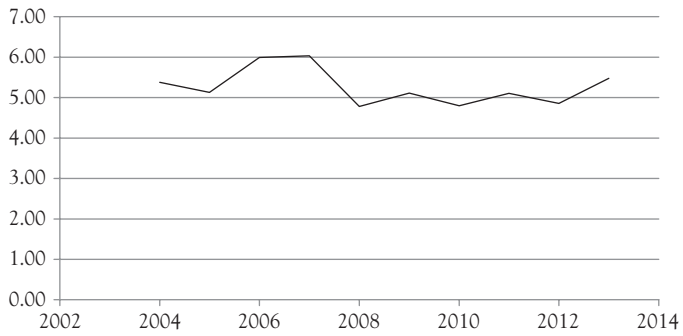
**Figure 2.15** *Price-to-earnings*

**Table 2.6 Coca-Cola**

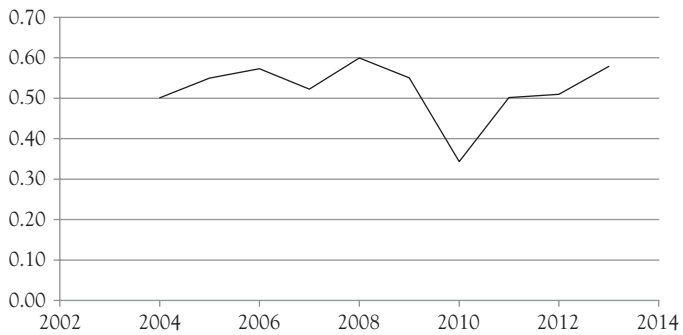
Market ratios	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Average
Earnings per share	1.9955	2.0359	2.1617	2.5856	2.5146	2.9652	5.0832	3.7531	2.0024	1.9359	2.7033
Price earnings	17.6750	17.2058	19.9519	21.7591	16.9811	18.7642	12.6673	18.6434	17.8482	21.3384	18.2834
Book value	6.5603	6.8345	7.2000	9.3282	8.9307	10.8828	13.4235	13.7001	7.3641	7.5417	9.1766
Market value	5.3763	5.1255	5.9903	6.0312	4.7813	5.1127	4.7968	5.1073	4.8533	5.4775	5.2652
Payout ratio	0.5011	0.5497	0.5730	0.5225	0.5994	0.5502	0.3430	0.5016	0.5095	0.5789	0.5229
Earnings retention ratio	0.4989	0.4503	0.4270	0.4775	0.4006	0.4498	0.6570	0.4984	0.4905	0.4211	0.4771
Dividends per share	1.0000	1.1191	1.2387	1.3509	1.5073	1.6316	1.7437	1.8827	1.0202	1.1207	1.3615
Dividend yield	0.0284	0.0319	0.0287	0.0240	0.0353	0.0293	0.0271	0.0269	0.0285	0.0271	0.0287
EPS adjusted	0.9977	1.0180	1.0809	1.2928	1.2573	1.4826	2.5416	1.8765	2.0024	1.9359	1.5486
Adjusted DPS	0.5000	0.5595	0.6194	0.6755	0.7536	0.8158	0.8718	0.9413	1.0202	1.1207	1.3615



**Figure 2.16** Book value



**Figure 2.17** Market value ratio



**Figure 2.18** Payout ratio

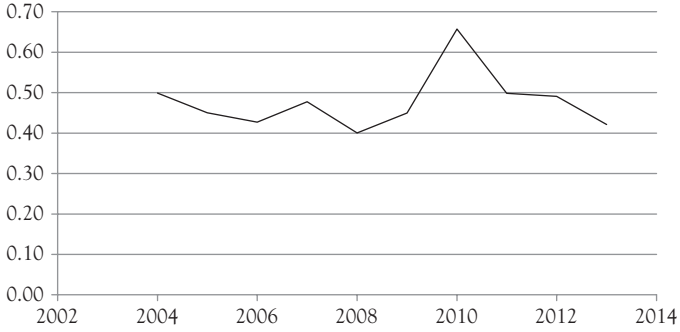


Figure 2.19 Retention ratio

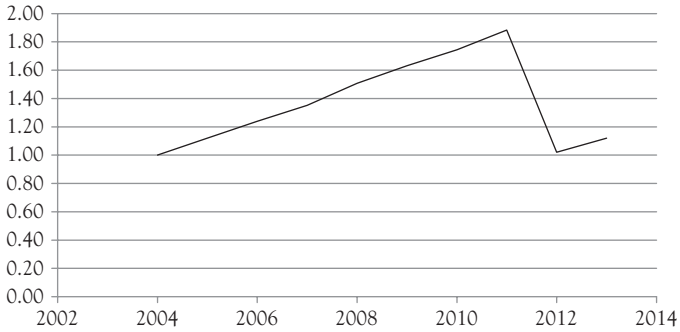


Figure 2.20A Dividends per share

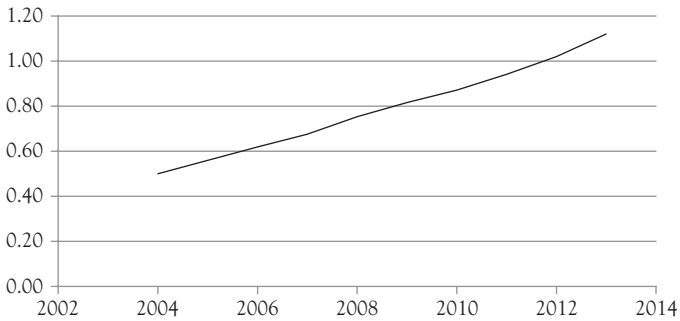
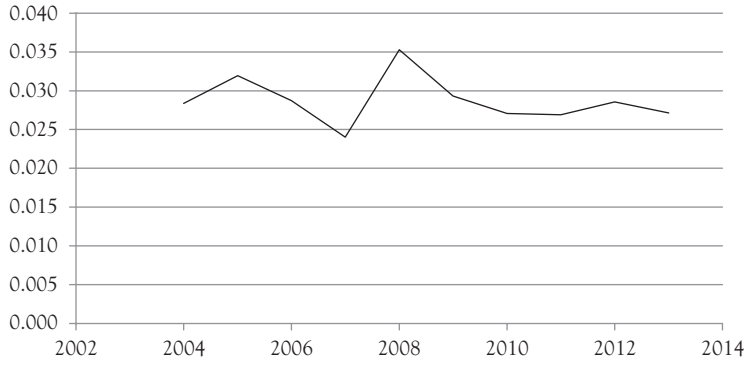


Figure 2.20B Adjusted dividends per share



**Figure 2.21** *Dividend yield*





## CHAPTER 3

# The DuPont System of Financial Analysis

The DuPont system of financial analysis uses a financial model that is based on the return on equity (ROE) of a firm. The DuPont system of financial analysis is used to examine a firm's financial statements and financial performance. The three variables that determine ROE are net profit margin (NPM), total asset turnover (TAT), and the equity multiplier (EM). NPM measures a company's overall profitability. NPM is the ratio of net income to sales, where net income is sales minus costs. A firm with a higher NPM would be more efficient than a firm with a lower NPM; other things being equal. TAT is a measure of a company's efficiency in using assets to generate sales. A firm with a higher TAT ratio generates more sales per dollar of assets than a firm with a lower TAT. The EM is the ratio of total assets to owners' equity and measures financial leverage for a firm. A higher EM ratio shows that a firm is relying more heavily on debt financing to obtain funds to finance assets. ROE is a measure of return to the owners of a firm. Financial managers can use the ratios for the DuPont system of financial analysis to create pro forma financial statements.

ROE can be decomposed into return on assets and the EM. Return on assets can be further disaggregated into NPM and TAT:

$$\text{ROE} = (\text{ROA}) * (\text{EM}) \quad (3.1)$$

$$\text{ROA} = (\text{NPM}) * (\text{TAT}) \quad (3.2)$$

$$\text{ROE} = (\text{NPM}) * (\text{TAT}) * (\text{EM}) \quad (3.3)$$

where,

ROE = return on equity

ROA = return on assets

EM = equity multiplier

NPM = net profit margin

TAT = total asset turnover

NPM is net profit (loss) divided by sales. TAT is sales divided by total assets. The EM is total assets divided by total owners' equity:

$$\text{NPM} = (\text{NI})/(\text{S}) \quad (3.4)$$

$$\text{TAT} = (\text{S})/(\text{TA}) \quad (3.5)$$

$$\text{EM} = (\text{TA})/(\text{OE}) \quad (3.6)$$

where,

NPM = net profit margin

NI = net income

S = sales

TAT = total asset turnover

TA = total assets

EM = equity multiplier

OE = owners' equity

The DuPont system of financial analysis is based on the ROE model that disaggregates ROE into three components: NPM, TAT, and EM. The NPM ratio allows the financial analyst to forecast the income statement and the components of the income statement, both revenue and expenses. To achieve the target ROE, the firm should determine the net income required to achieve the target ROE. Total revenue is predicted from the required net income based on the NPM ratio. TAT allows the financial analyst to forecast the left-hand side of the balance sheet: assets. The firm uses the total revenue projection to predict total asset requirements. Based on the firm's operating leverage, corporate managers can determine the ratio of current assets to total assets and the composition of assets. The EM allows the financial analyst to forecast the right-hand side of the balance sheet because liabilities and owners' equity must equal total assets. The corporation must issue debt so that the leverage ratio remains constant. From the DuPont system of financial analysis, the company is

able to develop pro forma financial statements, particularly, the income statement and the balance sheet.

The DuPont system of financial analysis fulfills three functions. First, the DuPont system allows the firm to project future operations through the pro forma financial statements developed as a budget or financial plan. The second function performed by the DuPont system is as a control mechanism. As the firm progresses through the year, the firm can use the pro forma financial statements to monitor performance. If the firm's operating performance deviates from the budget, the firm can take corrective action. If the deviation is negative, managers can correct the problem or adjust their forecasts. If the deviation is positive, managers can analyze and potentially enhance the positive change. The third function of the DuPont system is in the post-performance audit function. After the planning year ends, the firm can compare actual operating performance with planned operating performance to determine the deviation from the plan. In the long term, effective performance budgeting should result in the deviation from the budget being near zero. Otherwise, the firm will be under-budgeting or over-budgeting.

ROE analysis provides a system for planning and for analyzing a company's performance. The NPM allows the analyst to develop a pro forma income statement, as in Figure 3.1. The top box of Figure 3.1 shows an abbreviated income statement where the net income is equal to revenues minus expenses. Given a target ROE, the financial manager can determine the net income needed to achieve the target ROE. From the target ROE, the financial manager can determine the revenue level necessary to achieve the net income target. The middle box of Figure 3.1 shows how the financial manager can use the TAT ratio to project the total asset level necessary to generate the projected revenue level. Given a level of projected revenue, the financial manager can project the level of total assets needed to produce the projected level of revenues. The total asset requirement can be used to project the pro forma levels of all of the asset accounts. The fundamental equation of accounting is that assets equal liabilities plus owners' equity. The bottom box of Figure 3.1 shows how the financial manager uses the EM ratio that can be useful in projecting the pro forma financial needs and the financial structure of the company. Total liabilities and equity must be equal to the projected total asset requirements.

Using the DuPont System of Financial Analysis to Develop <i>Pro Forma</i> Financial Statements
$NPM = (NI) (S)$
Sales
<u>- Total costs</u>
Net income
$TAT = (S) (TA)$
Current assets
<u>+ Fixed assets</u>
Total assets
$EM = (TA) (OE)$
Total liabilities
<u>+ Total equity</u>
Total liabilities + Owners' equity

**Figure 3.1** Using the DuPont system of financial analysis to develop pro forma financial statements. NI, net income; NPM, net profit margin; OE, owners' equity; S, sales; TA, total assets; TAT, total asset turnover

The DuPont system of financial analysis has three uses. First, the DuPont system of financial analysis can be used to construct pro forma financial statements for Coca-Cola for planning purposes. Second, the DuPont system of financial analysis allows the firm to monitor performance during the planning period. Third, the DuPont system of financial analysis can be used to audit the planning process. Over the period from 2001 to 2010, NPM for Coca-Cola was 0.2181. The TAT and EM averages for Coca-Cola are 0.7261 and 1.9969. ROE averaged 0.3095 for the period from 2001 to 2010.

### Analysis of ROE and Sustainable Growth for Coca-Cola

Table 3.1 contains the data and ratios for the DuPont system financial analysis of ROE and the analysis of sustainable growth for Coca-Cola based on the annual data for the years from 2004 to 2013. The first five lines of Table 3.1 from total revenue to dividends contain the raw data

Table 3.1 Extended DuPont analysis of Coca-Cola, 2004–2013

KO	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Average
Sales	21,742	23,104	24,088	28,857	31,944	30,990	35,119	46,542	48,107	48,108	33,860
Net income	4,847	4,872	5,080	6,027	5,874	6,906	11,859	8,572	9,019	8,584	7,164
Total assets	31,441	29,427	29,963	43,269	40,519	48,671	72,921	79,974	86,174	90,055	55,241
Total owners' equity	15,935	16,355	16,920	21,744	20,862	25,346	31,317	31,291	33,168	33,440	24,638
Dividends (-)	2,429	2,678	2,911	3,149	3,521	3,800	4,068	4,300	4,595	4,969	3,642
NPM	0.2229	0.2109	0.2109	0.2089	0.1839	0.2228	0.3377	0.1842	0.1875	0.1784	0.2148
TAT	0.6915	0.7851	0.8039	0.6669	0.7884	0.6367	0.4816	0.5820	0.5383	0.5342	0.6529
EM	1.9731	1.7993	1.7709	1.9899	1.9422	1.9203	2.3285	2.5558	2.5981	2.6930	2.1571
RR	0.4989	0.4503	0.4270	0.4775	0.4006	0.4498	0.6570	0.4984	0.4905	0.4211	0.4771
ROE	0.3042	0.2979	0.3002	0.2772	0.2816	0.2725	0.3787	0.2739	0.2719	0.2567	0.2915
G	0.1517	0.1341	0.1282	0.1324	0.1128	0.1225	0.2488	0.1365	0.1334	0.1081	0.1409

EM, equity multiplier; G, sustainable growth; NPM, net profit margin; RR, retention rate; TAT, total asset turnover.

needed to compute the ratios used in the DuPont system of financial analysis and for the sustainable growth rate. Over the period from 2004 to 2013, total revenue for Coca-Cola increased from \$21,742 million to \$48,108 million. Total revenue for Coca-Cola increased every year over the sample period except 2009. The net income rose from \$4,847 million to \$8,584 million and increased every year. Total assets rose from \$31,441 to \$90,055 but did not increase every year, that is, total assets declined in 2005 and 2008. Total owners' equity rose from \$15,935 million in 2004 to \$33,440 million in 2013. Total owners' equity rose every year except 2008 and 2011. Dividends rose from \$2,429 million in 2004 to \$4,969 million in 2014. Dividends rose every year from 2001 to 2010.

The subsequent four lines in Table 3.1 contain NPM, TAT, EM, and the earnings RR, which are the ratios needed to compute ROE, and sustainable growth, G. ROE is computed by two methods. The first line of ROE is computed by dividing net income by total owners' equity.

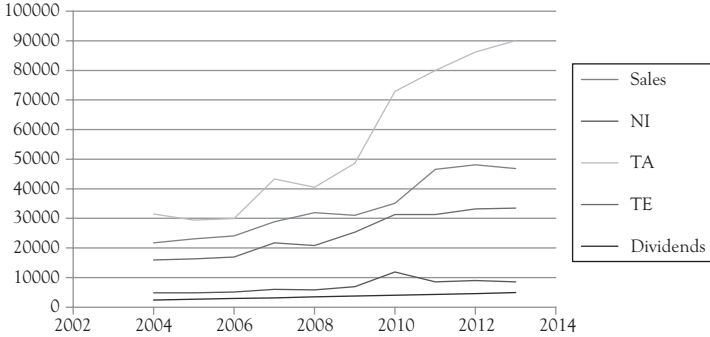
The second line of ROE is computed by multiplying NPM by TAT by EM. If the two computations for ROE are the same, then the analysis is correct and is verified. The last line in Table 3.1 is the value of sustainable growth, G, and is calculated by multiplying sustainable growth by the dividend RR.

The NPM went from 0.2262 in 2004 to 0.3363 percent in 2013, but not consistently. The highest NPM was 0.3377 in 2010 and the lowest NPM was observed in 2013 and equaled 0.1784. The average NPM is 0.2148. The TAT ratio was the highest in 2006 at 0.8039 and varied over the sample period ending at 0.5342 in 2013. The average TAT is 0.6529. For Coca-Cola, TAT is the most volatile of the three variables affecting ROE. The EM was 1.9731 in 2004 and ended at 2.6930 in 2013 but not monotonically. The average EM is 2.1571. The ROE was 0.3042 in 2003 and averaged 0.2915 over the sample period.

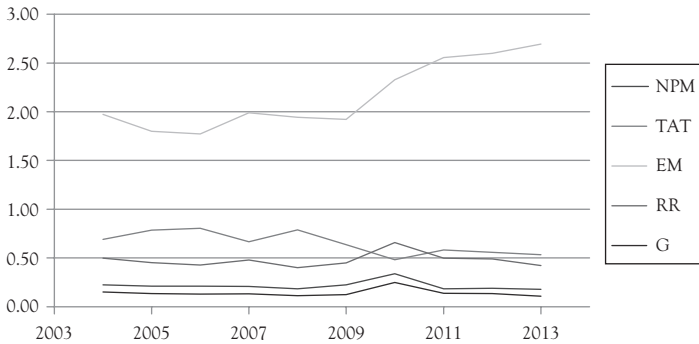
The dividend RR averaged at 0.4771 over the entire analysis period with a low value of 0.4006 in 2008 and a high value of 0.6570 in 2010. Sustainable growth was lowest in 2013 at 0.1081 and highest in 2010 at 0.2488. The average sustainable growth is 0.1409.

Figure 3.1 shows the variables needed to compute ROE: NPM, TAT, and EM. Figure 3.2 shows that NPM and EM are relatively stable but that TAT declines over the analysis period. Thus, except for 2001, ROE is

relatively stable averaging at 30.95 percent. Figure 3.2 shows sustainable growth for Coca-Cola and ROE and RR, which are used to compute G. The RR and sustainable growth rate were stable from 2003 to 2007.



**Figure 3.2** Financial data for Coca-Cola, 2004–2013. NI, net income; TA, total assets; TE, total equity



**Figure 3.3** DuPont ratios for Coca-Cola, 2004–2013. EM, equity multiplier; G, sustainable growth; NPM, net profit margin; RR, retention rate; TAT, total asset turnover





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# Index

- Accounting information, 39
- Accounts payable, 2
- Accounts receivable, 2
- Adjusted earnings per share, 55
- Asset management ratios, 2–3, 22–27, 44–47
  
- Balance sheet, 39. *See also* constructed financial statement
- Bankrupt, 40
- Bankruptcy, 47
- Banks, 39
- Basic earning power, 31–32
- Benchmarking, 40
- Bond holders, 47
- Book value, 36
- Book value per share, 31
- Book value ratio, 53
  
- Coca Cola Company (KO) and subsidiaries, 4–8, 64–67
  - asset management ratios, 22–27, 46
  - balance sheet, 20
  - consolidated balance sheets, 14
  - consolidated statements of cash flows, 16–18, 21
  - financial leverage ratios, 28–29, 48
  - financial statement input (2004–2013), 42–43
  - income statement, 19
  - liabilities and equity current liabilities, 15
  - market-based ratios, 35–38, 53–55
  - market ratios, 56–59
  - profitability ratios, 30–34, 52
- Consolidated balance sheets, 1
- Consolidated statement of cash flows, 2
- Consolidated statement of income, 1
- Constructed financial statement, 39
  
- Creditors, 47
- Current
  - assets, 2
  - liabilities, 2
  - ratio, 22, 40
  
- Days sales outstanding, 22, 26, 44–45
- Debt holders, 39
- Debt-to-equity ratio, 24, 27, 49
- Depreciation, 2
- Derived financial statement, 39
- Dividends, 2, 54
- Dividends per share ratio, 34, 37, 53
- Dividend yield, 34, 37, 53
- DuPont system of financial analysis
  - based on ROE of firm, 61
  - develop pro forma financial statements, 62–64
  - disaggregates ROE into three components, 62
  - functions of, 63
  - uses of, 64
  
- Earnings per share ratio, 31, 33, 53, 55
- EBIT, 1, 19, 29, 47
- EDGAR, 1, 9
- Equity multiplier (EM), 24, 29, 50, 61–63
  
- Financial accounting information, 39
- Financial decision maker, 40
- Financial leverage ratios, 2–3, 47–50
- Financial ratios, 2, 40
- Financial statement
  - analysis, 1
  - analysis of individual company
    - asset management ratios, 44–47
    - financial leverage ratios, 47–50
    - liquidity ratios, 40–44

- market-based ratios, 53–59
- profitability ratios, 50–53
- constructed (*see also* constructed financial statement)
- derived (*see also* derived financial statement)
- Firms, 40
- Fixed asset turnover, 26, 45
- Income statement, 39. *See also* constructed financial statement
- Industry group analysis, 40
- Interest expense, 1
- Inventory, 2
  - turnover, 24, 26, 45
- Investment ratios, 40
- Liquidity ratios, 2, 22, 40–44
- Long-term
  - debt, 2
  - liabilities, 2
- Managerial accounting information, 39
- Market-based ratios, 2–3, 35–38, 53–59
- Market capitalization of firm, 53
- Market value ratio, 36, 53
- Market value to book value ratio, 34
- Net fixed assets, 2, 24
  - turnover, 44–45
- Net income (NI), 1, 62, 64
- Net profit margin (NPM), 31–32, 51, 61–62, 64
- Operating income, 1, 51
- Operating margin, 29, 32
- Owners equity (OE), 62, 64
- Payout ratio, 34, 36–37, 53–54
- Price-to-earnings ratio, 31, 34, 53, 55
- Profitability ratios, 2–3, 30, 50–53
- Quick ratio, 22, 44
- Retained earnings, 2
- Retention ratio, 36, 38
- Return on assets (ROA), 31, 33, 51, 61
  - analysis and sustainable growth for Coca-Cola, 64–67
- Return on equity (ROE), 31, 33, 51, 61–63. *See also* DuPont system of financial analysis
- Return on investment (ROI) ratios, 40
- Sales, 1, 62, 64
- Securities and Exchange Commission (SEC), 1, 9
- Shares outstanding, 1
- Standard Industrial Classification (SIC), 40
- Statement of cash flows, 39
- Statement of retained earnings, 39
- Stock investors, 40
- Stock prices, 2
- Tax accounting information, 40
- Ticker symbol, 2, 10
- Times interest earned, 24, 29, 50
- Total assets (TA), 62, 64
- Total asset turnover (TAT), 24, 27, 47, 61–64
- Total debt ratio, 24, 27, 47, 49
- Total owners equity, 2
- Total revenue, 62
- Yahoo! Finance, 1–3

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This book provides a step-by-step demonstration of how to download data from Internet sources, transfer the data to a spreadsheet, and conduct a financial ratio analysis of any company. The book outlines the steps needed to perform a financial ratio analysis, the financial statements to be retrieved from EDGAR, and the five categories of financial ratios used in the financial analysis of the company. The data retrieved from the financial statements is copied to a worksheet and used to compute and graph the financial ratios. The ratios and graphs are used to determine the performance drivers of this company.

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