



Intermediate Accounting

TENTH EDITION

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University of Memphis

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Dedicated to:

David's wife Charlene, two daughters Denise and Jessica, and three sons Mike, Michael, and David

Mark's wife Cathy, and daughters Liz and Clara

Wayne's wife Julee, daughter Olivia, and three sons Jake, Eli, and Luke

INTERMEDIATE ACCOUNTING, TENTH EDITION

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About the Authors

DAVID SPICELAND



David Spiceland is Professor Emeritus in the School of Accountancy where he taught financial accounting at the undergraduate, master's, and doctoral levels for 36 years. He received his BS degree in finance from the University of Tennessee, his MBA from Southern Illinois University, and his PhD in accounting from the University of Arkansas.

Professor Spiceland has published articles in a variety of academic and professional journals including *The Accounting Review*, *Accounting and Business Research*, *Journal of Financial Research*, *Advances in Quantitative Analysis of Finance and Accounting*, and most accounting education journals: *Issues in Accounting Education*, *Journal of Accounting Education*, *Advances in Accounting Education*, *The Accounting Educators' Journal*, *Accounting Education*, *The Journal of Asynchronous Learning Networks*, and *Journal of Business Education*, and is an author of McGraw-Hill's *Financial Accounting* with Wayne Thomas and Don Herrmann. Professor Spiceland has received university and college awards and recognition for his teaching, research, and technological innovations in the classroom.

MARK NELSON



Mark Nelson is the Anne and Elmer Lindseth Dean and Professor of Accounting at Cornell University's Samuel Curtis Johnson Graduate School of Management. He received his BBA degree from Iowa State University and his MA and PhD degrees from The Ohio State University. Professor Nelson has won ten teaching awards, including an inaugural Cook Prize from the American Accounting Association.

Professor Nelson's research focuses on decision making in financial accounting and auditing. His research

has been published in the *Accounting Review*; the *Journal of Accounting Research*; *Contemporary Accounting Research*; *Accounting, Organizations and Society*; and several other journals. He has received the American Accounting Association's Notable Contribution to Accounting Literature Award, as well as the AAA's Wildman Medal for work judged to make a significant contribution to practice.

Professor Nelson served three terms as an area editor of *The Accounting Review* and is a member of the editorial boards of several journals. He also served for four years on the FASB's Financial Accounting Standards Advisory Council.

WAYNE THOMAS

Wayne Thomas is the W.K. Newton Chair and George Lynn Cross Research Professor of Accounting at the University of Oklahoma's Price College of Business. He received his BS degree from Southwestern Oklahoma State University and his MS and PhD from Oklahoma State University. He has received teaching awards at the university, college, and departmental levels, and has received the Outstanding Educator Award from the Oklahoma Society of CPAs. He is an author of McGraw-Hill's *Financial Accounting* with David Spiceland and Don Herrmann.



His research focuses on various financial reporting issues and has been published in *The Accounting Review*, *Journal of Accounting Research*, *Journal of Accounting and Economics*, *Contemporary Accounting Research*, *Review of Accounting Studies*, *Accounting Organizations and Society*, and others. He has served as an editor for *The Accounting Review* and has won the American Accounting Association's Competitive Manuscript Award and Outstanding International Accounting Dissertation.

Professor Thomas enjoys various activities such as tennis, basketball, golf, and crossword puzzles, and most of all, he enjoys spending time with his wife and kids.

Intermediate Accounting Tenth Edition:

Welcome to the new standard in intermediate accounting! Instructors recognize the “Spiceland advantage” in content that’s intensive and thorough, as well as in writing that’s fluid and precise—together, these combine to form a resource that’s rigorous yet readable. By blending a comprehensive approach, clear conversational tone, current updates on key standards, and the market-leading technological innovations of Connect®, the Spiceland team delivers an unrivaled experience. As a result of Spiceland’s rigorous yet readable learning system, students develop a deeper and more complete understanding of intermediate accounting topics.

“The textbook is readable and easy to follow since the authors present basic concepts and then cover advanced issues. Conceptually-oriented and dependable as the authors are timely in updating new accounting standards.”

—Hong Pak, California State Polytechnic University, Pomona

The *Intermediate Accounting* learning system is built around four key attributes: current, comprehensive, clear, and Connect.

Current: Few disciplines see the rapid changes that accounting experiences. The Spiceland team is committed to keeping instructors’ courses up to date. The tenth edition fully integrates the latest FASB updates, including:

- ASU No. 2018-02—Income Statement—Reporting Comprehensive Income (Topic 220)—Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income
- ASU No. 2016-013, Financial Instruments—Credit Losses (Topic 326) on “Current Expected Credit Loss” (CECL) model for accounting for credit losses, as well as current GAAP requirements for recognizing impairments of investments
- Comprehensive revision of Chapter 16, Accounting for Income Taxes, improving pedagogy as well as covering effects of the Tax Cuts and Jobs Act of 2017
- FASB ASC 842-10-15-42A: Leases-Overall-Scope and Scope Exceptions-Lessor
- FASB Accounting Standards Update, Compensation—Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost, FASB: December, 2016. SEC Amendment to Rule 15c6-1, Ex-Dividend Date, September 2017
- FASB Accounting Standards Update No. 2017-12, Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities
- ASU No. 2017-04, Intangibles—Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment
- ASU No. 2015-05—Intangibles—Goodwill and Other—Internal-Use Software (Subtopic 350-40): Customer’s Accounting for Fees Paid in a Cloud Computing Arrangement

The Spiceland team also ensures that *Intermediate Accounting* stays current with the latest pedagogy and digital tools. The authors have incorporated new Data Analytics cases featuring Tableau at the end of each chapter. These cases are auto-gradable in Connect and help students develop in-demand skills in analyzing and interpreting data, and effectively communicating findings.

Data Analytics



The phrase *scientia est potentia* is a Latin aphorism meaning “knowledge is power!” In a business sense, this might be paraphrased as “Information is money!” Better information . . . better business decisions! This is the keystone of data analytics.

Data analytics is the process of examining data sets in order to draw conclusions about the information they contain. Data analytics is widely used in business to enable organizations to make better-informed business decisions. Increasingly, this is accomplished with the aid of specialized data visualization software such as Tableau.

The New Standard

Current events regularly focus public attention on the key role of accounting in providing information useful to financial decision makers. The CPA exam, too, has changed to emphasize the professional skills needed to critically evaluate accounting method alternatives. *Intermediate Accounting* provides a **decision makers' perspective**, highlighting the professional judgment and critical thinking skills required of accountants in today's business environment. New in the 10th edition, many of these cases have been translated to an auto-graded format in Connect.

"The use of real-world examples throughout the text helps bring accounting to life for students. For example, the use of Amazon Prime is excellent, illustrating the complexity of current business with an engaging example."

— Jennifer Winchel, University of Virginia

Comprehensive: The Spiceland team ensures comprehensive coverage and quality throughout the learning system by building content and assets with a unified methodology that meets rigorous standards. Students are challenged through diverse examples and carefully crafted problem sets which promote in-depth understanding and drive development of critical-thinking skills.

The author team is committed to providing a learning experience that fully prepares students for the future by solidifying core comprehension and enabling confident application of key concepts. Students can feel confident that the conceptual underpinnings and practical skills conveyed in the tenth edition will prepare them for a wide range of real world scenarios.

Clear: Reviewers, instructors, and students have all hailed *Intermediate Accounting's* ability to explain both simple and complex topics in language that is coherent and approachable. Difficult topics are structured to provide a solid conceptual foundation and unifying framework that is built upon with thorough coverage of more advanced topics. As examples, see chapters 6 (Revenue Recognition), 15 (Leases) and 16 (Income Taxes). The author team's highly acclaimed conversational writing style establishes a friendly dialogue—establishing the impression of a conversation with students, as opposed to lecturing at them.

This tone remains consistent throughout the learning system, as authors Spiceland, Nelson, and Thomas write not only the primary content, but also every major supplement: instructor's resource manual, solutions manual, and test bank. All end-of-chapter material, too, is written by the author team and tested in their classrooms. *Intermediate Accounting* is written to be the most complete, coherent, and student-oriented resource on the market.

Connect: Today's accounting students expect to learn in multiple modalities. As a result, the tenth edition of Spiceland's learning system features the following: Connect, SmartBook's adaptive learning and reading experience, **NEW** Concept Overview Videos, Guided Examples, **NEW** Excel® simulations, and General Ledger problems.

Quality assessment continues to be a focus of Connect, with over **2,500 questions** available for assignment, including more than 1,125 algorithmic questions.

McGraw-Hill Education is continually updating and improving our digital resources. To that end, our partnership with Roger CPA, provides multiple choice practice questions directly within our Connect banks, as well as assignable links to the Roger CPA site for complementary access to selected simulations.

Spiceland's Financial Accounting Series

Intermediate Accounting forms a complete learning system when paired with *Financial Accounting* by authors David Spiceland, Wayne Thomas, and Don Herrmann. Now in its fifth edition, *Financial Accounting* uses the same proven approach that has made *Intermediate Accounting* a success—a conversational writing style with real-world focus and author-prepared supplements, combined with Connect's market leading technology solutions and assessment.



What Keeps SPICELAND Users Coming Back?

Financial Reporting Cases

Each chapter opens with a Financial Reporting Case that places the student in the role of the decision maker, engaging the student in an interesting situation related to the accounting issues to come. Then, the cases pose questions for the student in the role of decision maker. Marginal notations throughout the chapter point out locations where each question is addressed. The case questions are answered at the end of the chapter.

Where We're Headed

These boxes describe the potential financial reporting effects of many of the FASB's proposed projects that have not yet been adopted, as well as joint proposed projects with the IASB. Where We're Headed boxes allow instructors to deal with ongoing projects to the extent they desire.

Additional Consideration Boxes

These are "on the spot" considerations of important, but incidental or infrequent, aspects of the primary topics to which they relate.

Decision Makers' Perspective

These sections appear throughout the text to illustrate how accounting information is put to work in today's firms. With the CPA exam placing greater focus on application of skills in realistic work settings, these discussions help your students gain an edge that will remain with them as they enter the workplace.

Financial Reporting Case Solution



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1. What purpose do adjusting entries serve? (p. 64) Adjusting entries help ensure that all revenues are recognized in the period goods or services are transferred to customers, regardless of when cash is received. In this instance, for example, \$13,000 cash has been received for services that haven't yet been performed. Also, adjusting entries enable a company to recognize all expenses incurred during a period, regardless of when cash is paid. Without depreciation, the friends' cost of using the equipment is not taken into account. Conversely, without adjustment, the cost of rent is overstated by \$3,000 paid in advance for part of next year's rent.

With adjustments, we get an accrual income statement that provides a more complete measure of a company's operating performance and a better measure for predict-

Where We're Headed

As part of its ongoing disclosure framework project, the FASB has proposed using the U.S. Supreme Court's description of materiality. Under that definition, which comes from court cases and interpretations, qualitative and quantitative disclosures are material if there is a substantial likelihood that omitting a disclosure would have been viewed by a reasonable user as having significantly altered the total mix of information made available in making a decision. This change is controversial because it could affect the amount of information that companies disclose. The FASB has committed to seek more input before moving forward with this proposal.

Additional Consideration

Solving for the unknown factor in either of these examples could just as easily be done using the future value tables. The number of years is the value of n that will provide a present value of \$10,000 when \$16,000 is the future amount and the interest rate is 10%.

$$\$16,000 \text{ (future value)} = \$10,000 \text{ (present value)} \times ?^*$$

*Future value of \$1: $n = ?$, $i = 10\%$

Rearranging algebraically, the future value table factor is 1.6.

$$\$16,000 \text{ (future value)} \div \$10,000 \text{ (present value)} = 1.6^*$$

*Future value of \$1: $n = ?$, $i = 10\%$

When you consult the future value table, Table 1, you search the 10% column ($i = 10\%$) for this value and find 1.61051 in row five. So it would take approximately five years to accumulate \$16,000 in the situation described.

Decision Makers' Perspective

Cash often is called a *nonearning* asset because it earns little or no interest. For this reason, managers invest idle cash in either cash equivalents or short-term investments, both of which provide a larger return than a checking account. Management's goal is to hold the minimum amount of cash necessary to conduct normal business operations, meet its obligations, and take advantage of opportunities. Too much cash reduces profits through lost returns, while too little cash increases risk. This trade-off between risk and return is an ongoing choice made by management (internal decision makers). Whether the choice made is appropriate is an ongoing assessment made by investors and creditors (external decision makers).

A company must have cash available for the compensating balances we discussed in the previous section as well as for planned disbursements related to normal operating, investing, and financing cash flows. However, because cash inflows and outflows can vary, companies

Companies hold cash to pay for planned and unplanned transactions

In talking with so many intermediate accounting faculty, we heard more than how to improve the book—there was much, much more that both users and nonusers insisted we not change. Here are some of the features that have made Spiceland such a phenomenal success.

“Our students need to think about topics critically and broadly. Spiceland is superior in terms of presenting big picture cases and scenarios that help students understand how to think beyond simple journal entries and worksheet problems.”

—James Brushwood, Colorado State University

Decision Makers' Perspective



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Apply your critical-thinking ability to the knowledge you've gained. These cases will provide you an opportunity to develop your research, analysis, judgment, and communication skills. You also will work with other students, integrate what you've learned, apply it in real-world situations, and consider its global and ethical ramifications. This practice will broaden your knowledge and further develop your decision-making abilities.

Judgment

Case 4-1

Earnings quality

• LO4-2, LO4-3

The financial community in the United States has become increasingly concerned with the quality of reported company earnings.

Required:

1. Define the term *earnings quality*.
2. Evaluate the quality of reported earnings.

Ethical Dilemma



You recently have been employed by a large retail chain that sells sporting goods. One of your tasks is to help prepare periodic financial statements for external distribution. The chain's largest creditor, National Savings & Loan, requires quarterly financial statements, and you are currently working on the statements for the three-month period ending June 30, 2021.

During the months of May and June, the company spent \$1,200,000 on a hefty radio and TV advertising campaign. The \$1,200,000 included the costs of producing the commercials as well as the radio and TV time purchased to air the commercials. All of the costs were charged to advertising expense. The company's chief financial officer (CFO) has asked you to prepare a June 30 adjusting entry to remove the costs from advertising expense and to set up an asset called *prepaid advertising* that will be expensed in July. The CFO explained that “This advertising campaign has led to significant sales in May and June and I think it

P 15-25

Operating lease;
uneven lease
payments

• LO15-4, LO15-7



On January 1, 2021, Harlon Consulting entered into a three-year lease for new office space agreeing to lease payments of \$5,000 in 2021, \$6,000 in 2022, and \$7,000 in 2023. Payments are due on December 31 of each year with the first payment being made on December 31, 2021. Harlon is aware that the lessor used a 5% interest rate when calculating lease payments.

Required:

1. Prepare the appropriate entries for Harlon Consulting on January 1, 2021, to record the lease.
2. Prepare all appropriate entries for Harlon Consulting on December 31, 2021, related to the lease.
3. Prepare all appropriate entries for Harlon Consulting on December 31, 2022, related to the lease.
4. Prepare all appropriate entries for Harlon Consulting on December 31, 2023, related to the lease.

Decision Makers' Perspective Cases

Designed to further develop students' decision-making abilities, each chapter includes a robust set of powerful and effective cases, asking students to analyze, evaluate, and communicate findings, further building their critical thinking skills. Many of these cases are now auto-gradable in Connect.

Ethical Dilemmas

Because ethical ramifications of business decisions impact so many individuals as well as the core of our economy, Ethical Dilemmas are incorporated within the context of accounting issues as they are discussed. These features lend themselves very well to impromptu class discussions and debates, and are complemented by Ethics Cases found in the Decision Makers' Perspective Case section at the end of each chapter.

Star Problems

In each chapter, particularly rigorous problems, designated by a ★, require students to combine multiple concepts or require significant use of judgment.



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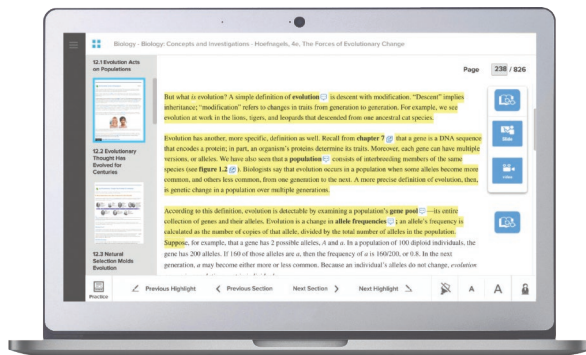
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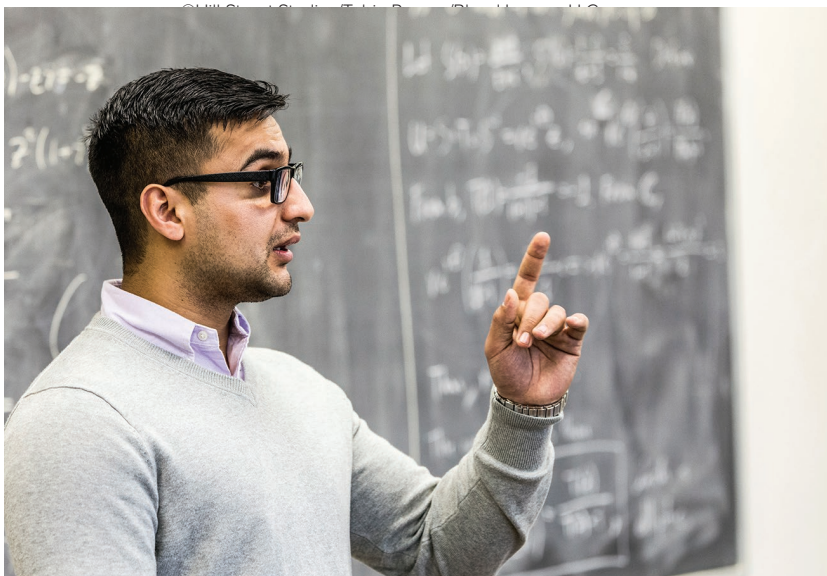


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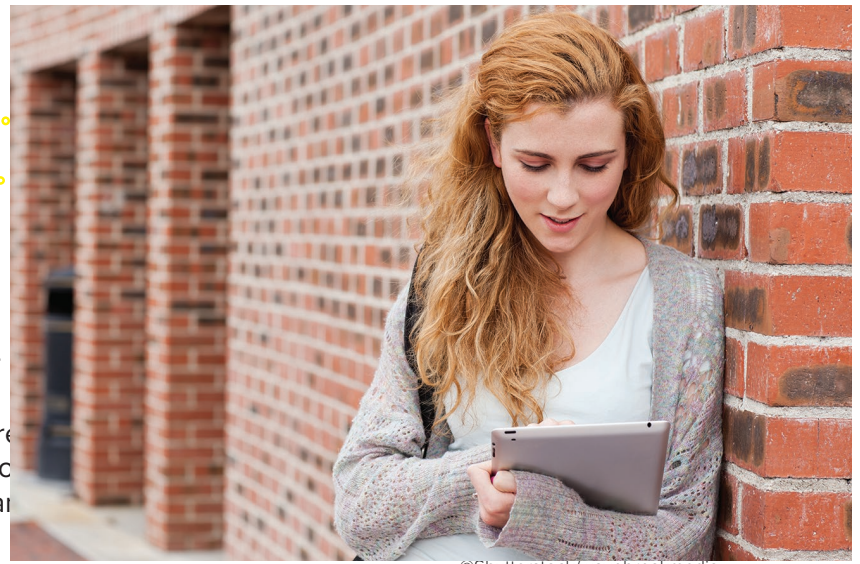
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FOR STUDENTS

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“I really liked this app—it made it easy to study when you don't have your textbook in front of you.”

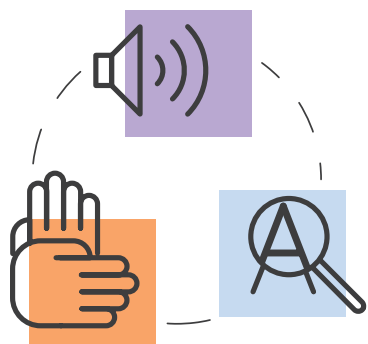
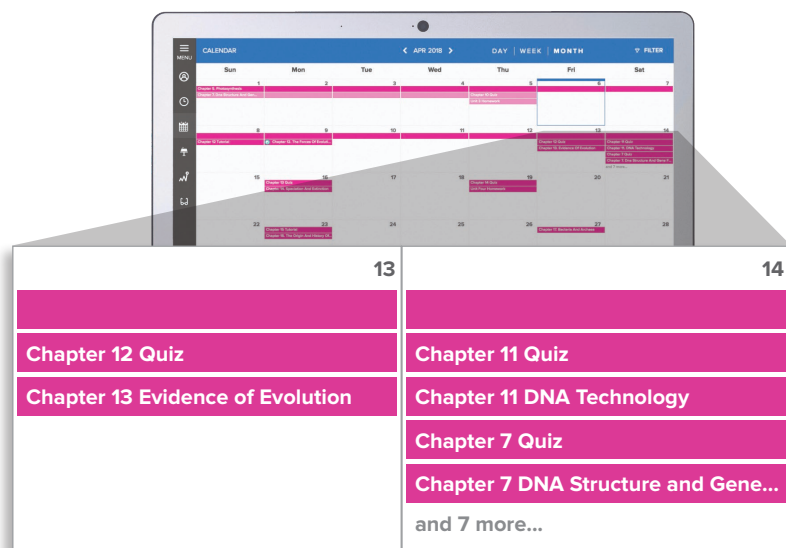
- Jordan Cunningham,
Eastern Washington University

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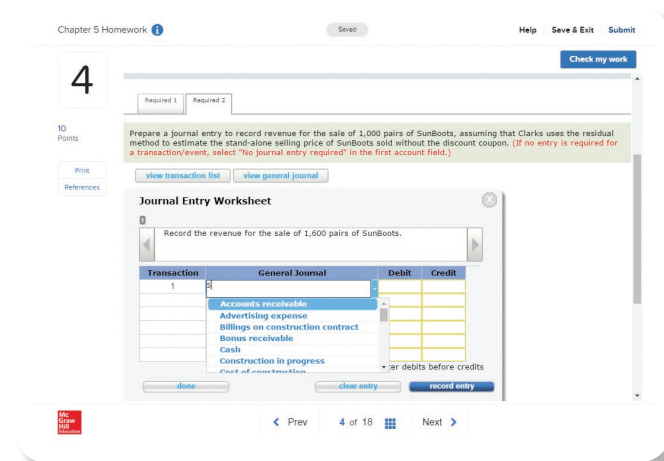
THE NEW STANDARD.

Online Assignments

Connect helps students learn more efficiently by providing feedback and practice material when they need it, where they need it. Connect grades homework automatically and gives immediate feedback on any questions students may have missed. The extensive assignable, gradable end-of-chapter content includes a general journal application that looks and feels like what one would find in a general ledger software package. For this edition, numerous questions have been redesigned to test students' knowledge more fully. New to this edition, many Decision Makers' Perspective Cases have been incorporated as auto-gradable in Connect.

End-of-chapter questions in Connect include:

- Brief Exercises
- Exercises
- Problems
- New! Select Decision Makers' Perspective Cases, Target and Air France Cases, and Data Analytics Cases



"The digital materials are an important learning resource for my students, and the constant updates between new editions are VERY useful."

—Pamela Trafford, University of Massachusetts, Amherst

NEW! Data Analytics Cases

Data analytics is an enormously in-demand skill among employers. Students who can interpret data and effectively communicate their findings to help business makes better-informed decisions are in high-demand. New Data Analysis Cases featuring Tableau are now incorporated at the end of most chapters. These cases can easily be assigned in Connect and are auto-gradable for the instructor's convenience.

General Ledger Problems

General Ledger Problems allow students to see how transactions flow through the various financial statements. Students can audit their mistakes by easily linking back to their original journal entries. Many General Ledger Problems include an analysis tab that allows students to demonstrate their critical thinking skills and a deeper understanding of accounting concepts.

The screenshot displays a 'General Ledger Account' window with several T-accounts for different accounts. The accounts shown are Cash, Accounts Receivable, Supplies, Land, Equipment, Accumulated Depreciation—Equipment, Software, Accumulated Amortization, Accounts Payable, Notes Payable (short-term), Common Stock, and Retained Earnings. Each T-account shows debits and credits over time. To the right, there is a 'Trial Balance' for H&H TOOL, INC. as of December 31, 2015. The trial balance table is as follows:

Account Title	Debit	Credit
Cash	\$ 6	
Accounts Receivable	5	
Supplies	3	
Land		9
Equipment	60	
Accumulated Depreciation—Equipment		6
Software		5
Accumulated Amortization		10
Accounts Payable		12
Notes Payable (short-term)		94
Common Stock		8
Retained Earnings		130
Total	\$ 135	\$ 135

POWERFUL ONLINE TOOLS & ASSESSMENTS

Concept Overview Videos

Concept Overview Videos provide engaging narratives of key topics in an assignable and interactive online format. These videos follow the structure of the text and are available with all learning objectives within each chapter of *Intermediate Accounting*. The Concept Overview Videos provide additional explanation of material in the text, allowing students to learn at their own pace – and test their knowledge with assignable questions.

3 Required Information

Part 2 of 3

Print

References

Check my work

Knowledge Check 01
On January 1, Year 1, Data Corporation accepts a \$10,000 three-month, nine percent promissory note from one of its customers. How much interest will be collected at the maturity date of the note?

\$225
 \$900
 \$75
 \$450

Interest = Face value x Annual interest rate x Fraction of the year
= \$50,000 x 12% x 6/12

Excel Simulations

Simulated Excel Questions, assignable within Connect, allow students to practice their Excel skills—such as basic formulas and formatting—within the content of financial accounting. These questions feature animated, narrated Help and Show Me tutorials (when enabled), as well as automatic feedback and grading for both students and professors.

Prepare a schedule of net cash provided by operating activities.

FILE HOME INSERT PAGE LAYOUT FORMULAS DATA REVIEW VIEW Sign In

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A1 The following information is for FloorCo, Inc. for the year just ended:

	End of year	Beginning of year
Current assets:		
6 Cash	\$ 75,000	\$ 90,000
7 Accounts receivable	158,000	140,000
8 Inventory	285,000	246,000
9 Prepaid expenses	11,000	16,000
Current liabilities:		
12 Accounts payable	284,000	302,000
13 Accrued liabilities	9,500	11,200
14 Income taxes payable	27,000	24,000
16 Net income		\$ 94,500
18 Accumulated depreciation		
19 total credits		\$ 45,000

21 Floor Company did not record any gains or losses during the year.

23 Prepare a schedule of net cash provided by operating activities.

READY Attempt 0

2. On August 31, year 1, the company borrowed \$88,000 from a local bank. The note requires principal and interest at 9% to be paid on August 31, year 2.

AZMIE WHOLESALE FOOD COMPANY
General Journal

Date	Account Title and Explanation	Debit	Credit
June 30	Interest expense	1,980	
	Interest payable		1,980

Principal × Interest rate × Time
\$88,000 × 9% × $\frac{3}{12}$
= \$1,980

Note that failure to record an adjusting entry for an accrued liability will cause net income and...

Guided Example/Hint Videos

The **Guided Examples** in Connect provide a narrated, animated, step-by-step walk-through of select exercises similar to those assigned. These short videos are presented to students as hints and provide reinforcement when students need it most. Instructors have the option of turning them on or off.

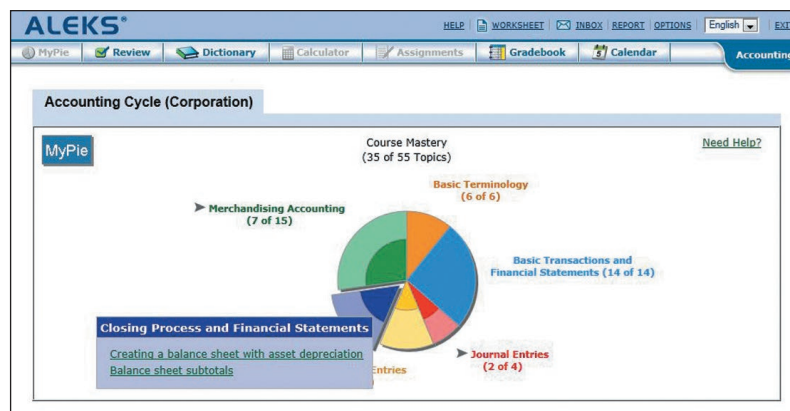
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McGraw-Hill Education has partnered with Roger CPA Review, a global leader in CPA Exam preparation, to provide students a smooth transition from the accounting classroom to successful completion of the CPA Exam. While many aspiring accountants wait until they have completed their academic studies to begin preparing for the CPA Exam, research shows that those who become familiar with exam content earlier in the process have a stronger chance of successfully passing the CPA Exam. Accordingly, students using these McGraw-Hill materials will have access to sample CPA Exam Multiple-Choice questions and Task-based Simulations from Roger CPA Review, with expert-written explanations and solutions. All questions are either directly from the AICPA or are modeled on AICPA questions that appear in the exam. Task-based Simulations are delivered via the Roger CPA Review platform, which mirrors the look, feel and functionality of the actual exam. McGraw-Hill Education and Roger CPA Review are dedicated to supporting every accounting student along their journey, ultimately helping them achieve career success in the accounting profession. For more information about the full Roger CPA Review program, exam requirements and exam content, visit www.rogercpareview.com.

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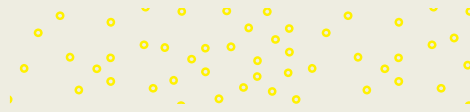
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The Connect Instructor Library is a repository of additional resources to improve student engagement in and out of class. You can select and use any asset that enhances your lecture. The Connect Instructor Library includes:

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- PowerPoints** Three types of PowerPoint decks are available, each responding to a different instructional need:
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 - **Lecture PowerPoints without Concept Checks:** No questions included, mirror presentation from book with key illustrations and notes
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Exercise Presentations PowerPoint slides created from the Guided Example/Hint videos, these allow you to walk through a version of one of the book exercises in class without giving away the answers.

Digital Image Library High-resolution images of all illustrations from the text.

Teaching Resources

New! Instructor’s Edition We know Intermediate Accounting is a daunting course not only for students, but also for instructors! This all-new digital guide to the Spiceland Intermediate learning program contains resources to help instructors think through effective course planning, including:

- Example syllabi
- Guides to Connect setup
- Course planning materials to help identify resources that align with your course goals
- Tips from the authors on key illustrations, teaching points, and end-of-chapter content they highlight and assign
- Bloom’s rubrics for end-of-chapter content

Instructor’s Manual Specific to each chapter, contains learning outcomes, a full lecture outline, and suggestions for in-class activities including real world scenarios, group research activities, IFRS activities, and professional skills development activities. Assignment charts are also provided with topics and estimated completion times.

Solutions Manual Created by the authors, includes solutions to end-of-chapter content.

Updates Stop here for all the most recent updates from FASB. Our authors work tirelessly to keep you current — for instance, within a month of the 2017 Tax Reform bill, our authors had posted an updated PowerPoint deck, video walkthrough, and teaching tip material on how to address the new updates. We have your back!

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TestGen is a complete, state-of-the-art test generator and editing application software that allows instructors to quickly and easily select test items from McGraw Hill's TestGen testbank content and to organize, edit and customize the questions and answers to rapidly generate paper tests. Questions can include stylized text, symbols, graphics, and equations that are inserted directly into questions using built-in mathematical templates. TestGen's random generator provides the option to display different text or calculated number values each time questions are used. With both quick-and-simple test creation and flexible and robust editing tools, TestGen is a test generator system for today's educators.

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ASSURANCE OF LEARNING

Many educational institutions today are focused on the notion of *assurance of learning*, an important element of some accreditation standards. *Intermediate Accounting* is designed specifically to support your assurance of learning initiatives with a simple, yet powerful solution.

Each test bank question for *Intermediate Accounting* maps to a specific chapter learning objective listed in the text. You can use Connect to easily query for learning outcomes/objectives that directly relate to the learning objectives for your course. You can then use the reporting features of Connect to aggregate student results in a similar fashion, making the collection and presentation of assurance of learning data simple and easy.

AACSB STATEMENT

McGraw-Hill Education is a proud corporate member of AACSB International. Understanding the importance and value of AACSB accreditation, *Intermediate Accounting* recognizes the curricula guidelines detailed in the AACSB standards for business accreditation by connecting selected questions in the test bank to the eight general knowledge and skill guidelines in the AACSB standards.



The statements contained in *Intermediate Accounting* are provided only as a guide for the users of this textbook. The AACSB leaves content coverage and assessment within the purview of individual schools, the mission of the school, and the faculty. While *Intermediate Accounting* and the teaching package make no claim of any specific AACSB qualification or evaluation, within the Test Bank to accompany *Intermediate Accounting* we have labeled selected questions according to the eight general knowledge and skill areas.

What's New in the Tenth Edition?

Spiceland is the new global standard for providing students the most accessible, comprehensive, and current Intermediate Accounting learning system. We take seriously the confidence the marketplace has accorded our text. Each revision carefully considers how the print and digital content work together to coordinate improvements in content and industry-leading technology to provide the most robust learning solution. The Spiceland team implements only those changes that constitute real improvements as identified through extensive research with users. The result is a learning system that enhances our reputation for providing the best preparation for passing the CPA exam and successful accounting careers.

Improvements in this edition include the following:

- **NEW! Updated content to reflect the latest GAAP and Accounting Standards Updates including:**
 - **Income taxes**
 - **Leases**
 - **Financial instruments**
 - **Revenue recognition**
- **NEW!** Most **Decision Makers' Perspective cases** are now *auto-gradable in Connect*.
- **NEW! Data Analytics Cases** providing students the opportunity to experience the power and efficacy of data analytics in the context of each chapter's topics, using Tableau as a tool, that are *auto-gradable in Connect*.
- Enhanced partnership with **Roger CPA Review**, with new CPA Exam Review multiple-choice questions that are *auto-gradable in Connect* and access to CPA Exam Review simulations.
- Updated and revised **real-world** illustrations, assignments, and discussions.
- Revised Continuing Cases featuring **Target Corporation** financial statements prepared using U.S. GAAP, now *auto-gradable in Connect*. A comprehensive version of the case is available in Appendix B.
- Revised Continuing Cases featuring **Air France–KLM** financial statements prepared using IFRS, now *auto-gradable in Connect*. A comprehensive version of the case is available in Appendix C.
- Incorporated the latest technology, including:
 - **NEW! Connect interface for students**, along with **Connect Insight for students**
 - an updated **SmartBook**
 - **General Ledger Problems** that auto-post from journal entries to T-accounts to trial balances (*auto-gradable in Connect*)
 - **Excel Simulations** that allow students to practice their Excel skills within the content of financial accounting with animated, narrated Help and Show Me tutorials (*auto-gradable in Connect*)
 - **NEW! Concept Overview Videos** that provide engaging narratives of key topics in an assignable and interactive online format (*assignable in Connect*)
 - **Guided Examples/Hint Videos** in Connect that provide a narrated, animated, step-by-step walk-through of select exercises that provide reinforcement when students need it most (can be turned on or off by instructors)
 - **NEW! Instructor's Edition** to help instructors to more easily design the course and organize chapter resources

Chapter 1

ENVIRONMENT AND THEORETICAL STRUCTURE OF FINANCIAL ACCOUNTING

- Provided more focused discussion of the convergence process.
- Revised discussion of FASB standard setting and ongoing projects (disclosure framework, materiality).
- Added or updated problems and cases relevant to The Gap.

Chapter 2

REVIEW OF THE ACCOUNTING PROCESS

- Revised and reorganized the presentation of the accounting processing cycle.
- Added the use of a Dividends account.
- Eliminated the use of Income Summary in the Closing Process.
- Added a Data Analytics case based on topics in the chapter, using Tableau as a tool (*auto-gradable in Connect*).

Chapter 3

THE BALANCE SHEET AND FINANCIAL DISCLOSURES

- Changed opening balance sheet to Nike.
- Clarified distinction between book value, market value, and fair value.
- Updated terminology in chapter and end-of-chapter material to reflect ASU 2016-01 for investments.
- Updated definition of long-term liability to include FASB's proposed definition.

- Discussed and provided an example of the new format for the auditor's report.
- Revised discussion of executive compensation to reflect the more prominent role of restricted stock compared to stock options.
- Added a Data Analytics case based on topics in the chapter, using Tableau as a tool (auto-gradable in Connect).

Chapter 4

THE INCOME STATEMENT, COMPREHENSIVE INCOME, AND THE STATEMENT OF CASH FLOWS

- Updated all illustrations and end-of-chapter assignments involving income taxes to a new overall rate of 25%.
- Revised definition and discussion of other comprehensive income.
- Added a Data Analytics case based on topics in the chapter, using Tableau as a tool (auto-gradable in Connect).

Chapter 5

TIME VALUE OF MONEY CONCEPTS

- Revised the Financial Reporting Case
- Added **LO5–5** Explain the role of present value techniques in the valuation of notes in the Preview of Accounting Applications of Present Value Techniques—Single Cash Amount section.
- Eliminated the Expected Cash Flow section in the Preview of Accounting Applications of Present Value Techniques—Single Cash Amount section.
- Added a Valuation of Long Term Notes section in the Preview of Accounting Applications of Present Value Techniques—Single Cash Amount section.
- Added a Valuation of Long Term Notes section in the Preview of Accounting Applications of Present Value Techniques—Annuities section

Chapter 6

REVENUE RECOGNITION

- Reordered chapters 5 and 6 to have time value of money (now 5) precede coverage of revenue recognition (now 6) and have revenue recognition immediately precede coverage of receivables (7).
- Expanded coverage of time value of money considerations, including numerical examples of significant financing components for prepayments and receivables, along with new end of chapter material in brief exercises and exercises.
- Added Microsoft real-world example to illustrate materiality of new treatment of licenses.

- Added new Trueblood cases.
- Added or updated problems and cases relevant to Expedia, Priceline, and Alphabet.
- Added a Data Analytics case based on topics in the chapter, using Tableau as a tool (auto-gradable in Connect).

Chapter 7

CASH AND RECEIVABLES

- In chapter, as well as Appendix 7B, enhanced coverage of ASU 2016–13's CECL model for accounting for credit losses.
- Modified coverage of IFRS to focus on IFRS No. 9.
- Enhanced end of chapter material with respect to credit losses and accounts receivable.
- Revised coverage on noninterest-bearing notes receivable.
- Added or updated problems and cases relevant to General Mills, Microsoft, Amdahl, Nike, Avon Products, Cisco, Sanofi-Aventis, Tyson Foods, and Pilgrim's Pride Corp.
- Added a Data Analytics case based on topics in the chapter, using Tableau as a tool (auto-gradable in Connect).

Chapter 8

INVENTORIES: MEASUREMENT

- Clarified discussion of consignment arrangements and related costs.
- Added details about calculation of cost of goods sold and ending inventory for specific identification.
- Clarified discussion of calculating of cost of goods sold and ending inventory using perpetual average cost.
- Clarified the use of LIFO calculations under periodic versus perpetual system in practice.
- Added discussion of the impact of technology and the use of the perpetual inventory system
- Modified the Concept Review Exercise on inventory cost flow to include LIFO reserve.
- Revised Illustration 8-5 to reflect entries under a perpetual inventory system.
- Revised discussion of purchase discounts under the gross versus net method
- Added BE 8-10 for LIFO reserve.
- Modified E 8-19 and P 8-1 to include LIFO reserve adjustment from perpetual FIFO to periodic LIFO.
- Modified E 8-16 to compare FIFO and LIFO when costs are increasing and when costs are decreasing.
- Added a Data Analytics case based on topics in the chapter, using Tableau as a tool (auto-gradable in Connect).

Chapter 9

INVENTORIES: ADDITIONAL ISSUES

- Modified Concept Review Exercise for lower of cost or net realizable value to include unit values.
- Clarified treatment of employee discounts in the conventional retail method and revised Illustration 9-13.
- Revised discussion of Dollar-Value LIFO Retail.
- Added a Data Analytics case based on topics in the chapter, using Tableau as a tool (auto-gradable in Connect).

Chapter 10

PROPERTY, PLANT, AND EQUIPMENT AND INTANGIBLE ASSETS: ACQUISITION

- Revised discussion of nonmonetary exchanges to include four steps, and added summary Illustration 10-16.
- Revised Illustration 10-14A to clarify recording of a nonmonetary exchange.
- Moved discussion and illustration of amortization of software development costs to chapter 11.
- Added discussion of accounting for cloud computing arrangements and related implementation costs.
- Added Brief Exercise 10-18 on accounting for software development costs for internal purposes.
- Added Brief Exercise 10-19 on accounting for software development costs in cloud computing arrangements.
- Added a Data Analytics case based on topics in the chapter, using Tableau as a tool (auto-gradable in Connect).

Chapter 11

PROPERTY, PLANT, AND EQUIPMENT AND INTANGIBLE ASSETS: UTILIZATION AND DISPOSITION

- Moved discussion and illustration of amortization of software development costs from chapter 10.
- Modified Illustration 11–4B to simplify and clarify calculation of partial year depreciation.
- Added discussion of amortization of software development costs for internal purposes and in cloud computing arrangements.
- Updated discussion of impairment for goodwill based on ASU No. 2017-04.
- Added Exercise 11-13 on reporting assets held for sale.

- Updated discussion of MACRS depreciation for changes enacted by the Tax Cuts and Jobs Act.
- Added a Data Analytics case based on topics in the chapter, using Tableau as a tool (auto-gradable in Connect).

Chapter 12

INVESTMENTS

- In chapter, as well as Appendix 12B, enhanced coverage of ASU 2016–13's CECL model for accounting for credit losses.
- Revised wording of account titles to provide more streamlined and cohesive presentation of accounting for HTM, TS, AFS, equity, and equity method investments.
- Provided new Decision Makers' Perspective cases for Intel, FCA and Merck.
- Added a Data Analytics case based on topics in the chapter, using Tableau as a tool (auto-gradable in Connect).

Chapter 13

CURRENT LIABILITIES AND CONTINGENCIES

- Updated General Mills example used in Illustration 13–1 and throughout the chapter.
- Updated contingent liability examples.
- Added a Data Analytics case based on topics in the chapter, using Tableau as a tool (auto-gradable in Connect).

Chapter 14

BONDS AND LONG-TERM NOTES

- Updated Real World Financials in Bonds section.
- Revised the journal entry in Illustration 14-A2 and added additional explanation.
- Replaced illustration of zero coupon securities in Ill. 14-7 with a newer real world example, Coca Cola.
- Added a Data Analytics case based on topics in the chapter, using Tableau as a tool (auto-gradable in Connect).

Chapter 15

LEASES

- Added discussion to the operating leases section *related to our recording* both interest and amortization even though, for an operating lease,

the lessee will report a single lease expense rather than the separate interest and amortization as with a finance lease.

- Added a *Why Lease?* section to Part A and added related EOC and TB questions.
- Added an *Is it a Lease?* section to Part C and added related EOC and TB questions.
- Added a paragraph at end of Nonlease Payments section in Part C to describe new ASU on simplification option for lessors.
- Added a Data Analytics case based on topics in the chapter, using Tableau as a tool (auto-gradable in Connect).

Chapter 16

ACCOUNTING FOR INCOME TAXES

- Reordered early coverage to provide more conceptual basis before walking through treatment of individual temporary differences.
- Revised illustrations to highlight the four-step process for calculating tax expense, using color-coded steps in all examples and solutions to end-of-chapter material.
- Revised coverage to walk through each combination of deferred tax assets and liabilities and revenue- and expense-related temporary differences.
- Modified all examples and end of chapter material to reflect new tax rates.
- Modified coverage of net operating loss carrybacks and carryforwards to reflect new tax act.
- Modified coverage of non-temporary differences to reflect new tax act, including Additional Consideration covering earning repatriation.
- Updated Real World "Shoe Carnival" case covering linkage between tax expense journal entry and changes in deferred tax assets, liabilities, and the valuation allowance.
- Added a Data Analytics case based on topics in the chapter, using Tableau as a tool (auto-gradable in Connect).

Chapter 17

PENSIONS AND OTHER POSTRETIREMENT BENEFIT PLANS

- Added Additional Consideration box to note the trend toward the "spot rate" method of determining the interest rate.
- Added Additional Consideration box to indicate that some companies are voluntarily choosing to

recognize pension gains and losses immediately rather than amortizing them.

- Most Decision Makers' Perspective cases are now auto-gradable in Connect.
- Added a Data Analytics case based on topics in the chapter, using Tableau as a tool (auto-gradable in Connect).

Chapter 18

SHAREHOLDERS' EQUITY

- Revised discussion and assignment material to reflect the SEC's revision of the ex-dividend date from two business days before the date of record to one.
- Replaced Alcoa Case with Nike Case.
- Added a Data Analytics case based on topics in the chapter, using Tableau as a tool (auto-gradable in Connect).

Chapter 19

SHARE-BASED COMPENSATION AND EARNINGS PER SHARE

- Modified all illustrations and end of chapter material to reflect new tax rates.
- Added a Data Analytics case based on topics in the chapter, using Tableau as a tool (auto-gradable in Connect).

Chapter 20

ACCOUNTING CHANGES AND ERROR CORRECTIONS

- Revised discussion of approaches to account for accounting changes to include the modified retrospective approach.
- Modified all illustrations and end of chapter material to reflect new tax rates.

Chapter 21

STATEMENT OF CASH FLOWS REVISITED

- Revised a CVS Caremark Corp illustration of presenting cash flows from operating activities by the direct method.
- Added an enhanced Additional Consideration box on reporting bad debt expense in the SCF.
- Added a real world illustration of presenting cash flows from operating activities by the indirect method.

- Modified all illustrations and end of chapter material to reflect new tax rates.
- Revised a Research Case related to FedEx's investing and financing activities.
- Added a Real World Case on Staples reporting of its SCF.
- Added a Data Analytics case based on topics in the chapter, using Tableau as a tool (auto-gradable in Connect).

Appendix A

DERIVATIVES

- Extensively revised all illustrations, discussions, and assignment material to reflect changes emanating from the new FASB Accounting Standards Update No. 2017-12, Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities.

- Added new discussion, illustration and assignment material for a cash flow hedge, interest rate swap.
- Added new discussion, illustration and assignment material for an option contract.
- Added new discussion, illustration and assignment material for a nonfinancial forward contract
- Revised a Real World Case related to the Chicago Mercantile Exchange.
- Revised a Johnson & Johnson Real World Case on hedging transactions.

Acknowledgments

Intermediate Accounting is the work not just of its talented authors, but of the more than 750 faculty reviewers who shared their insights, experience, and insights with us. Our reviewers helped us to build *Intermediate Accounting* into the very best learning system available. A blend of Spiceland users and nonusers, these reviewers explained how they use texts and technology in their teaching, and many answered detailed questions about every one of Spiceland's 21 chapters. The work of improving *Intermediate Accounting* is ongoing—even now, we're scheduling new symposia and reviewers' conferences to collect even more opinions from faculty.

We would like to acknowledge and highlight the Special Reviewer role that Ilene Leopold Persoff of Long Island University (LIU Post) took on the tenth edition. Utilizing her accounting and reviewing expertise, Ilene verified the accuracy of the manuscript and promoted our efforts toward quality and consistency. Her deep subject-matter knowledge, keen eye for detail, and professional excellence in all aspects were instrumental in ensuring a current, comprehensive, and clear edition. Her contributions are deeply appreciated.

We are especially grateful for the contributions of Charlene Parnell Spiceland of Simmons University in developing the Data Analytics Case sequence that is a key enhancement to the tenth edition of this textbook. Utilizing her expertise in Tableau, she ensured that these cases provide students the opportunity to glimpse the power and efficacy of data analytics. The cases encourage students to use Tableau to analyze data sets to make business decisions in the context of chapter topics as well as to appreciate the most effective and efficient ways to communicate their findings.

In addition, we want to recognize the valuable input of all those who helped guide our developmental decisions for the tenth edition.

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David Spiceland Mark Nelson Wayne Thomas

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CHAPTER

16

Accounting for
Income Taxes

OVERVIEW

In this chapter we explore financial accounting and reporting for the effects of income taxes. The discussion defines and illustrates temporary differences, which are the basis for recognizing deferred tax assets and deferred tax liabilities, as well as permanent differences, which have no deferred tax consequences. You will learn how to adjust deferred tax assets and deferred tax liabilities when tax laws or rates change. We also discuss accounting for the tax effects of net operating losses as well as intraperiod tax allocation.

In December of 2017, the United States Congress passed a sweeping tax reform package. Congress reduced the corporate tax rate, accelerated the timing of the depreciation deduction for some assets, revised how and when a company can use net operating losses to reduce its tax bill, and made many other changes. This chapter is written under the new tax rules to make sure that instructors and their students have access to the most current content possible.

LEARNING
OBJECTIVES

After studying this chapter, you should be able to:

- **LO16-1** Explain the conceptual underpinnings of accounting for temporary differences and the four-step method used to calculate income tax expense. (p. 909)
- **LO16-2** Describe the types of temporary differences that cause deferred tax liabilities and determine the amounts needed to record periodic income taxes. (p. 912)
- **LO16-3** Describe the types of temporary differences that cause deferred tax assets and determine the amounts needed to record periodic income taxes. (p. 919)
- **LO16-4** Describe when and how a valuation allowance is recorded for deferred tax assets. (p. 925)
- **LO16-5** Explain why permanent differences have no deferred tax consequences. (p. 929)
- **LO16-6** Explain how a change in tax rates affects the measurement of deferred tax amounts. (p. 933)
- **LO16-7** Describe when and how the tax effects of net operating losses are recognized in the financial statements. (p. 937)
- **LO16-8** Explain how deferred tax assets and deferred tax liabilities are reported in a classified balance sheet and describe related disclosures. (p. 941)
- **LO16-9** Demonstrate how to account for uncertainty in income tax decisions. (p. 943)
- **LO16-10** Explain intraperiod tax allocation. (p. 946)
- **LO16-11** Discuss the primary differences between U.S. GAAP and IFRS with respect to accounting for income taxes. (p. 931)



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taxes were good things—why did they combine to hurt our earnings? And I also see we have something called a net operating loss carryforward—what’s that?”

FINANCIAL REPORTING CASE

What’s the Difference?

Laura Drake, the new CEO of Times-Lehrer Industries, has asked you, a senior member of the company’s audit staff, to help her prepare for an upcoming board meeting. A brilliant engineer and operations specialist, Laura has limited knowledge of accounting and has been pouring over the past few years of the company’s financial statements.

“Why isn’t the amount we report as tax expense equal to the amount we pay in taxes?” Laura asked. “And I see we are blaming reduced profitability in 2017 on our net deferred tax assets and the fact that Congress passed rules reducing future tax rates. I thought assets and lower

rules reducing future tax rates. I thought assets and lower

By the time you finish this chapter, you should be able to respond appropriately to the questions posed in this case. Compare your response to the solution provided at the end of the chapter.

1. Explain to Laura how differences between financial reporting standards and income tax rules might cause the income tax expense and the amount of income tax paid to differ. (p. 909)
2. How might a reduction in future tax rates affect deferred tax assets in a way that reduces current net income? (p. 933, 935)
3. What are net operating loss carryforwards and how can they provide cash savings? (p. 929, 938)

QUESTIONS

Temporary Differences

Let’s say that JCorp’s 2021 tax return indicates that the company is obligated to pay \$25 million in income taxes. JCorp’s CFO knows that another \$5 million in income taxes is attributable to operations in 2021, but tax rules allow JCorp to delay paying that amount until subsequent tax years. The reason that JCorp is able to defer paying these taxes is that tax rules allow some revenues and expenses to be reported in its tax return in years other than when those amounts are reported in its income statement. These differences cause JCorp’s pretax income in its tax return to differ from pretax income in its income statement. Here are the financial reporting questions to consider:

1. What *tax liability* should JCorp report in its 2021 balance sheet? Tax rules obligate the company to pay \$25 million now for the current tax year, but the company will eventually pay the remaining \$5 million that was deferred to subsequent tax years.
2. What *tax expense* should JCorp report in its 2021 income statement? The company eventually will pay taxes of \$30 million attributable to operations in 2021, but taxes to be paid for the current tax year are only \$25 million.

For perspective on these questions, let’s first consider the circumstances that give rise to deferred taxes and then think about how we should account for them.

PART A

FINANCIAL Reporting Case

Q1, p. 909

● LO16-1

Conceptual Underpinnings

The objectives of financial accounting and tax accounting are not the same.

Temporary differences arise when tax rules and accounting rules recognize income in different periods.

In general, the revenues and expenses (and gains and losses) included in a company's tax return for a given year are the same as those reported in the company's income statement for the same year. However, in some instances, tax laws and financial accounting standards differ because the fundamental objectives of financial reporting and those of taxing authorities are not the same. Financial accounting standards are established to provide useful information to investors and creditors. Congress, on the other hand, establishes tax regulations to allow it to raise funds in a socially acceptable manner, as well as to influence the behavior of taxpayers. Congress uses tax laws to encourage activities it deems desirable, such as investment in productive assets, and to discourage activities it deems undesirable, such as violations of law.

An income statement and a tax return both include revenues and expenses, but differences between financial accounting standards and tax rules create a **temporary difference** between pretax accounting income and taxable income. For temporary differences, the issue is not *whether* an amount is taxable or deductible, but *when*.

For example, assume that Watson Associates purchases \$60 thousand of computer equipment in January of 2021. Watson estimates that the computer equipment will have an estimated useful life of three years. For financial reporting purposes, Watson records straight-line depreciation each year of \$20 thousand.

	2021	2022	2023	Total
Income before tax and depreciation	\$ 120	\$ 120	\$ 120	\$ 360
Depreciation in the income statement	(20)	(20)	(20)	(60)
Pretax accounting income	<u>\$ 100</u>	<u>\$ 100</u>	<u>\$ 100</u>	<u>\$ 300</u>

However, tax rules allow Watson to deduct the entire \$60 thousand cost of the equipment in 2021, essentially taking 100% of the depreciation for tax purposes in the year the asset is purchased. Assuming that Watson has a tax rate of 25%, deducting the entire depreciation in 2021 reduces taxable income that year by \$60 thousand but leaves none of the depreciation to reduce taxable income in 2022 and 2023:

	2021	2022	2023	Total
Income before tax and depreciation	\$ 120	\$ 120	\$ 120	\$ 360
Depreciation on the tax return	(60)	(0)	(0)	(60)
Taxable income (tax return)	\$ 60	\$ 120	\$ 120	<u>\$ 300</u>
Tax rate	× 25%	× 25%	× 25%	
Tax payable	<u>\$ 15</u>	<u>\$ 30</u>	<u>\$ 30</u>	

Let's first focus on pretax accounting income and taxable income. Notice that pretax accounting income and taxable income both are \$300 thousand over the three-year depreciation period. But these two amounts differ from each other in each of the three years. In 2021, tax depreciation (\$60 thousand) is greater than accounting depreciation (\$20 thousand), causing taxable income to be less than pretax accounting income by \$40 thousand. This difference is temporary and reverses in 2022 and 2023 when Watson recognizes depreciation expense in the income statement (\$20 thousand in 2022 and \$20 thousand in 2023) but can't deduct any more depreciation in the tax return.

Now let's consider tax expense and tax payable. We can see that Watson has *tax payable* of \$15 thousand in 2021 but \$30 thousand in 2022 and 2023. But what about *tax expense*? One simple approach would be to make tax expense in the income statement each period equal to whatever tax is payable in that period and ignore any future implications of the timing difference. However, that approach would not communicate to investors that Watson's current activities have resulted in future tax consequences. Investors might incorrectly think that Watson's low tax expense in 2021 and resulting high net income will persist in the

future. Likewise, investors might not realize that Watson anticipates higher tax payable in the future (\$30 thousand in 2022 and 2023 rather than only \$15 thousand in 2021).

Instead, Watson should recognize income tax expense based on the “accrual concept,” just like other expenses. That is, income tax expense reported each period should be the amount caused by that period’s events and activities, regardless of the period in which the tax laws indicate a tax obligation exists. If tax laws allow a company to postpone paying taxes on activities reported in the current period’s income statement, the company must report a **deferred tax liability** because the company anticipates those activities will lead to **future taxable amounts**. On the other hand, if tax laws require the company to pay more tax than is indicated by the activities reported in the current period’s income statement, the company reports a **deferred tax asset** reflecting the benefit of **future deductible amounts**. Each year’s tax expense reported in the income statement includes not only a current portion related to tax payable in the current year but also a deferred portion that includes any changes in deferred tax assets and liabilities.

Accounting for income taxes is consistent with the accrual concept of accounting.

The 4-Step Process

The discussion of differences between accounting income and taxable income leads us to the real key to understanding accounting for income taxes. Tax expense is not calculated directly but rather is the result of the combination of income tax payable and any changes in deferred tax assets and liabilities. We’ll use the following color-coded 4-step process to maintain that perspective throughout the chapter.

Tax expense is a “plug” determined by changes in the tax payable, deferred tax assets, and deferred tax liability accounts.

1. **Calculate tax payable:** This is the amount of tax currently payable based on the current year’s tax return.
2. **Calculate ending DTAs and DTLs:** In this step, we calculate the appropriate ending balances of the deferred tax assets (DTAs) and deferred tax liabilities (DTLs).
3. **Calculate change in DTAs and DTLs:** In this step, we determine the change (debit or credit) in each of the deferred tax assets and liabilities needed to move from their previous balances to the ending balances calculated in step 2.
4. **Plug tax expense:** In this final step, we combine the tax payable (step 1) and any changes in the deferred tax accounts (step 3) to determine income tax expense.

Types of Temporary Differences

You will see that we apply this 4-step process to four basic types of temporary differences. As shown in Illustration 16–1, temporary differences can be categorized by whether they are associated with a revenue (gain) or expense (loss), and whether that revenue or expense is recognized in the income statement before or after it is reported in the tax return.

	Revenues (or gains)	Expenses (or losses)
Reported in the income statement now, but on the tax return later	<ul style="list-style-type: none"> • Installment sales of property (installment method for taxes) • Unrealized gain from recording investments at fair value (taxable when asset is sold) 	<ul style="list-style-type: none"> • Estimated expenses and losses (tax-deductible when paid) • Unrealized loss from recording investments at fair value or inventory at LCM (tax-deductible when asset is sold)
Reported on the tax return now, but in the income statement later	<ul style="list-style-type: none"> • Rent collected in advance • Subscriptions collected in advance • Other revenue collected in advance 	<ul style="list-style-type: none"> • Accelerated depreciation on the tax return in excess of straight-line depreciation in the income statement • Prepaid expenses (tax-deductible when paid)

Illustration 16–1

Types of Temporary Differences

Note that:

- The temporary differences shown in the diagonal purple areas create *deferred tax liabilities* because they result in *taxable* amounts in some future year(s).
- The temporary differences in the opposite diagonal blue areas create *deferred tax assets* because they result in *deductible* amounts in some future year(s).

Next we'll walk through examples applying the 4-step process to each of these four types of temporary differences, starting with the Watson depreciation example we already began. You can refer back to this table throughout our discussion.

Additional Consideration

As shown in Illustration 16–1, temporary differences are primarily caused by revenues, expenses, gains, and losses being included in taxable income in a year other than the year in which they are recognized for financial reporting purposes. Other events that are beyond the scope of this textbook also can cause temporary differences and are briefly described in FASB ASC 740–10–25: Income Taxes—Overall—Recognition. Our discussions in this chapter focus on temporary differences caused by the timing of revenue and expense recognition, but it's important to realize that the concept of temporary differences embraces all differences that will result in taxable or deductible amounts in future years.

Deferred Tax Liabilities

Expense-Related Deferred Tax Liabilities

• LO16–2

To determine taxable income, we add back to pretax accounting income any depreciation expense in the income statement and then subtract any tax deduction allowed on the tax return.

The lower right corner of Illustration 16–1 lists some common expense-related deferred tax liabilities. Perhaps the most common relates to depreciation. Tax laws typically permit the cost of a depreciable asset to be deducted in the tax return sooner than it is reported as depreciation expense in the income statement.¹ The difference in tax laws creates a temporary difference in taxable income and pretax accounting income. Taxable income will be lower in the initial years when the tax depreciation deduction is higher, but the situation reverses in later years when the pretax accounting income will be lower. Let's return to our Watson example to see how this works. Illustration 16–2 summarizes the relevant information.

Illustration 16–2 Expense Reported on the Tax Return *before* the Income Statement

Watson Associates purchased \$60 thousand of equipment in early January of 2021. Watson estimates the equipment has a useful life of three years, so it depreciates the equipment straight line, with \$20 thousand of depreciation expense 2021–2023. However, tax rules allow Watson to take the entire \$60 thousand deduction for the cost of the equipment on its 2021 tax return. Watson has a 25% tax rate and pretax accounting income of \$100 thousand in each of those years.

(\$ in thousands)	2021	2022	2023	Total
Pretax accounting income (income statement)	\$100	\$100	\$100	\$300
Depreciation expense in the income statement	\$20	\$20	\$20	60
Depreciation deduction on the tax return	(60)	(0)	(0)	(60)
Temporary difference	(40)	20	20	0
Taxable income (tax return)	\$ 60	\$120	\$120	\$300

In 2021, taxable income is less than accounting income because depreciation deductions on the tax return are greater than tax expense on the income statement.

Now let's apply the 4-step process to account for the temporary difference related to depreciation expense that is shown in Illustration 16–2. The journal entry to record 2021 income taxes is shown in Illustration 16–2A.

¹The accelerated depreciation method prescribed by the tax code is the modified accelerated cost recovery system (MACRS). However, the tax legislation passed in December 2017 permits companies to deduct 100% of the cost of many relatively short-lived assets in the year the asset is purchased. See Chapter 11's Appendix 11A for further discussion.

Illustration 16-2A Expense-Related Deferred Tax Liability—2021

(\$ in thousands)	Current Year 2021	Future Taxable Amounts		
		2022	2023	Total
Pretax accounting income	\$100			
Temporary difference:				
Depreciation	(40)	\$20	\$20	\$40
Taxable income (tax return)	\$ 60			
Enacted tax rate	25%			25%
Tax payable	\$ 15			\$10

Deferred Tax Liability	
	0
	10
	10

Journal Entry at the End of 2021

Income tax expense (to balance)	25	
Income tax payable (determined above)		15
Deferred tax liability (determined above)		10

- Step 1: Tax payable: \$15
- Step 2: DTL end bal: \$10
- Step 3: DTL change: \$10
- Step 4: Tax exp plug: \$25

Let's walk through the 4-step process (\$ in thousands).

- Step 1:** Pretax accounting income for 2021 is \$100, but taxable income is only \$60 because of a \$40 higher depreciation deduction for tax purposes. Tax payable for 2021 is recorded for **\$15** (= \$60 taxable income × 25% tax rate).
- Step 2:** Watson needs to recognize a deferred tax liability of **\$10** (= \$40 taxable income × 25% tax rate) for the tax the company is allowed to defer to future years as a result of being able to depreciate the asset's entire cost the first period. We say that the temporary difference *originated* in 2021, because that is the year in which it gave rise to the deferred tax liability.
- Step 3:** The balance of the deferred tax liability account needs to be adjusted from its current balance (which is \$0 in the origination year) to the amount that needs to be reported (the ending balance of **\$10** from step 2). In this case, that adjustment is **\$10**.
- Step 4:** Total tax expense equals **\$25**. This amount includes a current portion that's payable now (**\$15** from step 1) plus the deferred portion that's represented by the increase in the deferred tax liability (**\$10** from step 3).

Now, let's follow the determination of income taxes for this illustration all the way through the complete reversal of the temporary difference. Remember, we're assuming the pretax accounting income is \$100 thousand each year and the only difference between that amount and taxable income is the difference in depreciation. We determine income tax expense for 2022 in Illustration 16-2B.

Let's look closer at Illustration 16-2B (\$ in thousands). In 2022, Watson's tax payable is **\$30** (= \$120 taxable income × 25% tax rate). There's no tax deduction for depreciation in 2022 because the tax rules enabled Watson to depreciate the asset's entire cost in 2021. The income statement, though, reports straight-line depreciation expense of \$20, giving us a \$20 difference between pretax income in the income statement and taxable income in the tax return. This difference reverses half of the \$40 temporary difference that originated in 2021. So, at this point, the tax to be deferred to future periods is **\$5**, and we need to reduce the balance of the deferred tax liability by **\$5** (from **\$10** in 2021 to **\$5** in 2022). As a consequence, total tax expense is **\$25**, equal to its current portion (**\$30** from step 1) combined with the *decrease* in the deferred tax liability (**\$(5)** from step 3).

Illustration 16-2B Expense-Related Deferred Tax Liability—2022

(\$ in thousands)	Current Year 2022	Future Taxable Amounts	
		2023	Total
Pretax accounting income	\$100		
Temporary difference:			
Depreciation	20	\$20	\$20
Taxable income (tax return)	\$120		
Enacted tax rate	25%		25%
Tax payable	\$ 30		\$ 5

Deferred Tax Liability	
	10
5	5

Journal Entry at the End of 2022

Income tax expense (to balance)	25	
Deferred tax liability (determined above)	5	
Income tax payable (determined above)		30

- Step 1: Tax payable: \$30
- Step 2: DTL end bal: \$5
- Step 3: DTL change: \$(5)
- Step 4: Tax exp plug: \$25

As you can see from Illustration 16-2C, Watson's accounting in 2023 is very similar to its accounting in 2022. Here's why, Watson's 2023 tax payable again is \$30, and again there's no tax deduction even though the income statement reports straight-line depreciation expense of \$20. This difference reverses the remaining \$20 of the \$40 temporary difference that originated in 2021. So, at this point, the tax to be deferred to future periods is \$0, and we need to reduce the balance of the deferred tax liability by \$5 (from \$5 in 2022 to \$0 in 2023). As a consequence, total tax expense is \$25, equal to its current portion (\$30 from step 1) combined with the decrease in the deferred tax liability (\$5) from step 3).

Illustration 16-2C Expense-Related Deferred Tax Liability—2023

(\$ in thousands)	Current Year 2023	Future Taxable Amounts	
		2023	Total
Pretax accounting income	\$100		
Temporary difference:			
Depreciation	20	\$ 0	
Taxable income (tax return)	\$120		
Enacted tax rate	25%		25%
Tax payable	\$ 30		\$ 0

Deferred Tax Liability	
	5
5	0

Journal Entry at the End of 2023

Income tax expense (to balance)	25	
Deferred tax liability (determined above)	5	
Income tax payable (determined above)		30

- Step 1: Tax payable: \$30
- Step 2: DTL end bal: \$0
- Step 3: DTL change: \$(5)
- Step 4: Tax exp plug: \$25

Notice that the deferred tax liability increased in 2021 when the temporary difference originated, and then decreased in 2022 and 2023 as the temporary difference reversed.

Deferred Tax Liability		
(\$ in thousands)		
	10	2021 (\$40 × 25%)
2022 (\$20 × 25%)	5	
2023 (\$20 × 25%)	5	
		0 Balance after 3 years

Balance Sheet and Income Statement Perspectives

Our perspective in this example so far has focused on the *income statement* effects of the depreciation. Another perspective starts with the *balance sheet*. An assumption underlying a balance sheet is that assets will be recovered (used or sold to produce cash), and liabilities will be settled (paid with cash). Those assets and liabilities typically create taxable or deductible amounts in the future when they are recovered or settled. Before that occurs, there is a temporary difference between the *book value* of assets and liabilities in the balance sheet and their equivalent **tax basis** (which is an asset or liability's original value for tax purposes reduced by any amounts included to date on tax returns). A difference between book value and tax basis, commonly called a *book-tax difference*, implies a future taxable or deductible amount, so we can use book-tax differences to calculate deferred tax assets and liabilities.

Deferred tax assets and liabilities can be computed from temporary book-tax differences.

The tax basis of an asset or liability is its original value for tax purposes reduced by any amounts included to date on tax returns.

To see how this works, let's look back at our depreciation example for Watson. At the end of 2021, the asset's book value is reported as \$40 in the balance sheet, equal to the asset's original cost of \$60 minus depreciation of \$20 in 2021. However, for tax purposes, the asset was fully depreciated in 2021, so its tax basis at the end of 2021 was \$0. This creates a book-tax difference of \$40. That book-tax difference implies that, in the future, Watson will have \$40 less tax deduction for depreciation, so Watson's *future taxable* income will be higher by \$40. Therefore, Watson should recognize a deferred tax liability of $\$40 \times 25\% = \10 .²

As shown in the following table, Watson can use the asset's book-tax difference each year to calculate the related deferred tax liability balance. That's just another way to accomplish **step 2** of our 4-step process. Notice that the deferred tax liability balances (**step 2**) and changes in those balances (**step 3**) shown in this table are the same as those shown in Illustration 16-2A, 16-2B, and 16-2C. The income statement and balance sheet perspectives are two complementary ways to accomplish the same objectives.

	Initial year		2022		2023	
	2021		2022		2023	
	12/31 balance	Depr	12/31 balance	Depr	12/31 balance	Depr
Depreciable asset:						
Accounting book value	\$ 40*	\$(20)	\$ 20	\$(20)	\$ 0	
Tax basis	0		0		0	
Temporary difference	\$ 40		\$ 20		\$ 0	
Tax rate	25%		25%		25%	
Deferred tax liability (DTL)	\$ 10	→	\$ 5	→	\$ 0	
DTL change needed	\$ 10		\$ (5)		\$ (5)	

* \$60 (initial cost) – \$20 (depreciation for 2021) = \$40

²What if Watson sold the asset instead of using it? Watson's gain or loss on sale for tax purposes will be based on the asset's tax basis, so Watson will recognize \$40 more gain (or less loss) for tax purposes. Watson once again will have a higher tax bill of $\$40 \times 25\% = \10 , again implying a deferred tax liability of \$10. Regardless of whether Watson keeps or sells the asset, Watson's \$40 book-tax difference implies a deferred tax liability of \$10.

Revenue-Related Deferred Tax Liabilities

Deferred tax liabilities also can be driven by temporary differences related to revenue recognition. The upper left corner of Illustration 16–1 lists some common revenue-related deferred tax liabilities. One example relates to installment sales. Income from selling properties on an installment basis is reported for financial reporting purposes in the year of the sale. But tax laws permit installment income to be reported in the tax return later, as cash is received. As a consequence, a temporary difference occurs because taxable income is less than accounting income in the year of an installment sale but higher than accounting income in later years when the installment receivable is collected. A numerical example is provided in Illustration 16–3.

Illustration 16–3 Revenue Reported on the Tax Return *after* the Income Statement

Kent Land Management reported pretax accounting income in 2021, 2022, and 2023 of \$180 million, \$100 million, and \$100 million, respectively, which includes 2021 income of \$80 million from installment sales of property. However, the installment sales are reported on the tax return when collected, in 2022 (\$20 million) and 2023 (\$60 million).* The enacted tax rate is 25% each year.

(\$ in millions)	2021	2022	2023	Total
Pretax accounting income (income statement)	\$180	\$100	\$100	\$380
Installment sale income in the income statement	\$(80)	\$ 0	\$ 0	(80)
Installment sale income on the tax return	<u>0</u>	<u>20</u>	<u>60</u>	80
Temporary difference	(80)	20	60	0
Taxable income (tax return)	<u>\$100</u>	<u>\$120</u>	<u>\$160</u>	<u>\$380</u>

In 2021, taxable income is less than accounting income because income from installment sales is not reported on the tax return until 2022–2023.

Notice that pretax accounting income and taxable income total the same amount (\$380) over the three-year period but are different in each individual year. In 2021, taxable income is \$80 million *less* than accounting income because it does not include income from installment sales. That temporary difference reverses over the next two years. In 2022 and 2023, taxable income is *more* than accounting income, because income from the installment sales, reported in the income statement in 2021, becomes taxable during the next two years as installments are collected. Because tax laws permit the company to delay reporting this income as part of taxable income, the company is able to defer paying tax on that income. As shown in Illustration 16–3A, that tax is not avoided, just deferred.

We calculate income tax expense by following the four steps (\$ in millions). Kent's 2021 tax payable is **\$25**. With future taxable amounts of \$80, taxable at 25%, a **\$20** deferred tax liability should be recognized as of the end of 2021. Because no previous balance exists, we credit deferred tax liability for the entire **\$20** change in the account. That amount combines with tax payable of **\$25** to give us income tax expense of **\$45**.

In Illustration 16-3B we see that some of the initial \$80 temporary difference reverses in 2022 as the company collects some of the installment receivable (\$20) and includes that amount in 2022 taxable income.

Kent's 2022 tax payable is **\$30**. Now that \$20 of the installment income is taxed in 2022, the remaining \$60 of the temporary difference remains to be taxed later, so future taxable amounts as of the end of 2022 are \$60. This means that a deferred tax liability of **\$15** should be shown in the balance sheet. Reducing the deferred tax liability from **\$20** in 2021 to **\$15** now requires us to debit the deferred tax liability for **\$5**. As a consequence, total tax expense is **\$25** in 2022, equal to its current portion (**\$30** from step 1) combined with the decrease in the deferred tax liability (**\$5**) from step 3).

Illustration 16-3C shows us that Kent's 2023 tax payable is **\$40**. Now that the remaining \$60 of the installment income is taxed in 2023, none of the temporary difference remains to be taxed later, so future taxable amounts as of the end of 2023 are \$0. With no future taxable amounts remaining, the deferred tax liability should be reported as **\$0** as of the end of 2023,

Illustration 16-3A Revenue-Related Deferred Tax Liability—2021

(\$ in millions)	Current Year 2021	Future Taxable Amounts		
		2022	2023	Total
Pretax accounting income	\$180			
Temporary difference:				
Installment income	(80)	\$20	\$60	\$80
Taxable income (tax return)	\$100			
Enacted tax rate	25%			25%
Tax payable	\$ 25			\$20

Deferred Tax Liability	
	0
	20
	10

Journal Entry at the End of 2021

Income tax expense (to balance)	45	
Income tax payable (determined above)		25
Deferred tax liability (determined above)		20

- Step 1: Tax payable: \$25
- Step 2: DTL end bal: \$20
- Step 3: DTL change: \$20
- Step 4: Tax exp plug: \$45

Illustration 16-3B Revenue-Related Deferred Tax Liability—2022

(\$ in millions)	Current Year 2022	Future Taxable Amounts	
		2023	Total
Pretax accounting income	\$100		
Temporary difference:			
Installment income	20	\$60	\$60
Taxable income (tax return)	\$120		
Enacted tax rate	25%		25%
Tax payable	\$ 30		\$15

Deferred Tax Liability	
	20
	5
	15

Journal Entry at the End of 2022

Income tax expense (to balance)	25	
Deferred tax liability (determined above)		5
Income tax payable (determined above)		30

- Step 1: Tax payable: \$30
- Step 2: DTL end bal: \$15
- Step 3: DTL change: \$(5)
- Step 4: Tax exp plug: \$25

requiring us to debit the deferred tax liability for \$15. As a consequence, total tax expense is \$25 in 2023, equal to its current portion (\$40 from step 1) combined with the decrease in the deferred tax liability ((15) from step 3).

Now look at what happened to the deferred tax liability account over the life of the installment receivable. Do you see how the \$80 temporary difference originates in 2021 and reverses in 2022 and 2023 as that \$80 is taxed?

Illustration 16-3C Revenue-Related Deferred Tax Liability—2023

(\$ in millions)	Current Year 2023	Future Taxable Amounts
Pretax accounting income	\$100	
Temporary difference:		
Installment income	60	\$ 0
Taxable income (tax return)	\$160	
Enacted tax rate	25%	25%
Tax payable	<u><u>\$ 40</u></u>	<u><u>\$ 0</u></u>

Deferred Tax Liability

	15
15	0

Journal Entry at the End of 2023

Income tax expense (to balance)	25	
Deferred tax liability (determined above)	15	
Income tax payable (determined above)		40

- Step 1: Tax payable: \$40
- Step 2: DTL end bal: \$0
- Step 3: DTL change: \$(15)
- Step 4: Tax exp plug: \$25

Deferred Tax Liability

(\$ in millions)		
	20	2021 (\$80 × 25%)
2022 (\$20 × 25%)	5	
2023 (\$60 × 25%)	15	
	0	Balance after 3 years

Taking a balance sheet perspective, we can calculate the deferred tax liability each year by looking at the book-tax difference that exists for the installment receivable. The book value of the receivable starts in 2021 at \$80, drops to \$60 in 2022, and then drops to \$0 in 2023 as cash is collected. There is no receivable from a tax perspective, because taxable income is only recognized as cash is collected, so the tax basis of the receivable is \$0 each year. The book-tax difference in the receivable in a given year represents additional taxable income that Kent will pay tax on in the future. The balance of the deferred tax liability each year is calculated as the book-tax difference times the applicable tax rate. To make sure you understand this point, refer back to Illustration 16-3A, 16-3B, and 16-3C and compare the deferred tax liability balances (step 2) and changes in those balances (step 3) in those illustrations with those shown below.

	Initial year 2021		2022		2023	
	12/31 balance	Cash received	12/31 balance	Cash received	12/31 balance	
Installment receivable:						
Accounting book value	\$80	\$(20)	\$60	\$(60)	\$ 0	
Tax basis	0		0		0	
Temporary difference	\$80		\$60		\$ 0	
Tax rate	25%		25%		25%	
Deferred tax liability (DTL)	<u><u>\$20</u></u>		<u><u>\$15</u></u>		<u><u>\$ 0</u></u>	
DTL change needed	\$20		\$ (5)		\$(15)	

Deferred Tax Assets

The temporary differences illustrated to this point produce future *taxable* amounts when the temporary differences reverse. Sometimes, though, the future tax consequence of a temporary difference will be to *decrease* taxable income relative to accounting income. Such situations produce what's referred to as **future deductible amounts**. These have favorable future tax consequences that are recognized as **deferred tax assets**.

● LO16-3

We report deferred tax assets for the future tax benefits of temporary differences that create future deductible amounts.

Expense-Related Deferred Tax Assets

As noted in the upper right corner of Illustration 16-1, one circumstance that requires recognition of a deferred tax asset is when an estimated expense is reported in the income statement when incurred but deducted on the tax return in later years when the expense is actually paid. Illustration 16-4 provides an example: a quality-assurance warranty (discussed extensively in Chapter 13).

Illustration 16-4 Expense Reported on the Tax Return after the Income Statement

RDP Networking reported pretax accounting income in 2021, 2022, and 2023 of \$120 million, \$100 million, and \$100 million, respectively. The 2021 income statement includes an \$80 million warranty expense that is deducted for tax purposes when paid in 2022 (\$36 million) and 2023 (\$44 million). The income tax rate is 25% each year.

(\$ in millions)	2021	2022	2023	Total
Pretax accounting income (income statement)	\$120	\$100	\$100	\$320
Warranty expense in the income statement	\$80	\$ 0	\$ 0	(80)
Warranty expense on the tax return	0	(36)	(44)	80
Temporary difference	80	(36)	(44)	0
Taxable income (tax return)	<u>\$200</u>	<u>\$ 64</u>	<u>\$ 56</u>	<u>\$320</u>

At the end of 2021, the amounts needed to record income tax for 2021 would be determined as shown in Illustration 16-4A.

In 2021, taxable income is greater than accounting income because warranty expense is not reported on the tax return until 2022-2023.

Illustration 16-4A Expense-Related Deferred Tax Asset—2021

(\$ in millions)	Current Year 2021	Future Deductible Amounts		
		2022	2023	Total
Pretax accounting income	\$120			
Temporary difference:				
Warranty expense	80	\$(36)	\$(44)	\$(80)
Taxable income (tax return)	\$200			
Enacted tax rate	25%			25%
Tax payable	<u>\$ 50</u>			<u>\$(20)</u>

Deferred Tax Asset	
0	
20	
	20

Journal Entry at the End of 2021

Income tax expense (to balance)	30	
Deferred tax asset (determined above)	20	
Income tax payable (determined above)		50

- Step 1: Tax payable: \$50
- Step 2: DTA end bal: \$20
- Step 3: DTA change: \$20
- Step 4: Tax exp plug: \$30

Let's review what happened (\$ in millions). In 2021, RDP's tax payable is \$50 (= \$200 taxable income × 25% tax rate). The reason taxable income is \$80 higher than pretax accounting income is that, while GAAP requires the \$80 warranty expense to be subtracted from accounting income in 2021, the tax rules don't permit RDP to deduct the expense on the tax return until the cost of satisfying the warranty actually is paid, which in this case will occur over the next two years. So, when that total future deductible amount of \$80 is deducted, taxable income will be reduced by that amount, saving a total of \$20 at a 25% tax rate. To represent that future tax savings, RDP reports a \$20 deferred tax asset at the end of 2021. Because no previous balance exists, we debit the deferred tax asset for the entire \$20. That amount combined with the tax payable credit of \$50 gives us income tax expense of \$30. RDP must pay \$50 tax now, but as a result of something that happens in 2021 (selling goods under warranty), it will save \$20 in future taxes, so the 2021 tax expense is actually only \$30.

We follow the situation to 2022 in Illustration 16-4B.

Illustration 16-4B Expense-Related Deferred Tax Asset—2022

(\$ in millions)	Current Year	Future	
	2022	2023	Total
Pretax accounting income	\$100		
Temporary difference:			
Warranty expense	(36)	\$(44)	\$(44)
Taxable income (tax return)	\$ 64		
Enacted tax rate	25%		25%
Tax payable	\$ 16		\$(11)

Deferred Tax Asset	
20	9
11	

Journal Entry at the End of 2022

Income tax expense (to balance)	25	
Deferred tax asset (determined above)		9
Income tax payable (determined above)		16

- Step 1: Tax payable: \$16
- Step 2: DTA end bal: \$11
- Step 3: DTA change: \$(9)
- Step 4: Tax exp plug: \$25

Again, income tax expense is a combination of the tax payable now and the change in deferred tax (\$ in millions). RDP's 2022 tax payable is \$16. One reason it's not more is that taxable income is reduced by deducting \$36 of last year's warranty expense. Because \$36 of the original \$80 temporary difference has reversed, only \$44 remains to be deducted in the future. So, RDP should report a deferred tax asset of \$11 (= \$44 × 25%) as of the end of 2022. So, RDP must credit the deferred tax asset for \$9 to reduce the \$20 existing balance to that amount. This combines with the tax payable currently of \$16 to give us income tax expense of \$25.

We follow the example through the last year in Illustration 16-4C.

RDP's accounting in 2023 is very similar to its accounting in 2022. Tax payable is \$14. As of the end of 2023, no future deductible amounts remain, so the balance in RDP's deferred tax asset should be \$0. That requires RDP to credit the deferred tax asset for \$11, which combines with the tax payable of \$14 to give us income tax expense of \$25.

At the end of 2021 and 2022, the company reports a deferred tax asset representing future income tax benefits. That deferred tax asset is reduced to zero by the end of 2023, after the tax savings the asset represented have been realized.

Illustration 16-4C Expense-Related Deferred Tax Asset—2023

(\$ in millions)	Current Year 2023	Future Deductible Amounts
Pretax accounting income	\$100	
Temporary difference:		
Warranty expense	(44)	\$ 0
Taxable income (tax return)	\$ 56	
Enacted tax rate	25%	25%
Tax payable	\$ 14	\$ 0

Deferred Tax Asset

11	11
0	0

Journal Entry at the End of 2023

Income tax expense (to balance)	25	
Deferred tax asset (determined above)		11
Income tax payable (determined above)		14

- Step 1: Tax payable: \$14
- Step 2: DTA end bal: \$0
- Step 3: DTA change: \$(11)
- Step 4: Tax exp plug: \$25

Deferred Tax Asset			
(\$ in millions)			
2021 (\$80 × 25%)	20		
		9	2022 (\$36 × 25%)
		11	2023 (\$44 × 25%)
Balance after 3 years	0		

We also can calculate this deferred tax asset each year using the book-tax difference that exists for the warranty liability in the balance sheet. The warranty liability starts in 2021 with a book value of \$80, falls to \$44 in 2022, and then to \$0 in 2023 as the warranty liability is settled. The tax basis stays at \$0 each year, because tax deductions are allowed only as cash is used to settle warranty claims, so there is no liability from a tax perspective. The book-tax difference in the warranty liability in a given year represents additional tax deductions RDP will receive in the future. This creates a deferred tax asset. The balance of the deferred tax asset each year is calculated as the book-tax difference times the applicable tax rate. You can verify that these deferred tax asset balances (**step 2**) and changes in those balances (**step 3**) are the same as those shown in Illustrations 16-4A, 16-4B, and 16-4C.

Income taxes payable in 2022 and 2023 are less because of the taxes prepaid in 2021.

	Initial year 2021	2022		2023	
	12/31 balance	Warranty work	12/31 balance	Warranty work	12/31 balance
Warranty liability:					
Accounting book value	\$ 80	\$(36)	\$44	\$(44)	\$ 0
Tax basis	0		0		0
Temporary difference	\$ 80		\$44		\$ 0
Tax rate	25%		25%		25%
Deferred tax asset (DTA)	\$ 20		\$ 11		\$ 0
DTA change needed	\$ 20		\$ (9)		\$(11)

Additional Consideration

Unlike most assets, management views deferred tax assets to be *less* desirable than deferred tax liabilities because deferred tax assets result from taxable income (and tax) being higher now than later. It's more desirable to delay paying taxes as long as possible. Therefore, all else equal, managers would prefer to recognize deferred tax liabilities, which result from having lower taxable income (and thus lower tax) now.

Revenue-Related Deferred Tax Assets

As shown in the lower left corner of Illustration 16–1, another type of temporary difference that gives rise to a deferred tax asset is a *revenue* that is taxed when collected but recognized in the income statement in later years when performance obligations are satisfied. Illustration 16–5 demonstrates this second type with a common example: deferred revenue.

Illustration 16–5 Revenue Reported on the Tax Return before the Income Statement

Tomorrow Publications reported pretax accounting income of \$100 thousand in 2021, 2022 and 2023. The 2021 income statement does not include \$80 thousand of magazine subscriptions received that year for one- and two-year subscriptions. Instead, that revenue will be recognized for financial reporting purposes in 2022 (\$60 thousand) and 2023 (\$20 thousand). The entire \$80 thousand is included in taxable income in 2021. The income tax rate is 25% each year.

(\$ in thousands)	2021	2022	2023	Total
Pretax accounting income (income statement)	\$ 100	\$ 100	\$ 100	\$ 300
Subscription revenue in the income statement	\$ 0	\$ (60)	\$ (20)	(80)
Subscription revenue on the tax return	<u>80</u>	<u>0</u>	<u>0</u>	80
Temporary difference	<u>80</u>	<u>(60)</u>	<u>(20)</u>	<u>0</u>
Taxable income (tax return)	<u>\$ 180</u>	<u>\$ 40</u>	<u>\$ 80</u>	<u>\$ 300</u>

In 2021, taxable income is greater than accounting income because subscription revenue is not reported in the income statement until 2022–2023.

Notice that this temporary difference produces *future deductible* amounts—amounts that are deducted from pretax accounting income to arrive at taxable income in future years. In 2021, taxable income is \$80 thousand *more* than pretax accounting income because it includes the deferred subscription revenue not yet reported in the income statement. However, in 2022 and 2023 taxable income is *less* than accounting income because the subscription revenue is recognized and reported in the income statements but not on the tax returns of those two years.

In effect, tax laws require the company to prepay the income tax on this revenue, which is a sacrifice now but will benefit the company later when the revenue is recognized in the financial statements but not taxed. In the meantime, the company has an asset representing this future income tax benefit.

At the end of 2021, the amounts needed to record 2021 income tax expense would be determined as shown in Illustration 16–5A (\$ in thousands). Tomorrow's 2021 tax payable is **\$45**. Taxable income is greater than pretax accounting income in 2021, but the opposite will be true in 2022 and 2023 when the \$60 and \$20 of deferred revenue are included in the income statement but not taxable on the tax return. With future deductible amounts related to deferred revenue of \$80, taxable at 25%, Tomorrow needs a **\$20** deferred tax asset as of the end of 2021. Because no previous balance exists, Tomorrow debits the deferred tax asset for the entire **\$20**. That amount reduces tax payable of **\$45** to give us income tax expense of **\$25**.

Let's look at Illustration 16–5B to continue the example for 2022. Tomorrow's 2022 tax payable is **\$10**. Because \$60 of the original \$80 temporary difference has reversed, only \$20 remains. So, RDP should report a deferred tax asset of **\$5** (= \$20 × 25%) as of the end

Illustration 16-5A Revenue-Related Deferred Tax Asset—2021

(\$ in thousands)	Current Year 2021	Future Deductible Amounts		
		2022	2023	Total
Pretax accounting income	\$100			
Temporary difference:				
Deferred revenue	80	\$(60)	\$(20)	\$(80)
Taxable income (tax return)	\$180			
Enacted tax rate	25%			25%
Tax payable	\$ 45			\$(20)

Deferred Tax Asset	
0	
20	
20	

Journal Entry at the End of 2021

Income tax expense (to balance)	25	
Deferred tax asset (determined above)	20	
Income tax payable (determined above)		45

- Step 1: Tax payable: \$45
- Step 2: DTA end bal: \$20
- Step 3: DTA change: \$20
- Step 4: Tax exp plug: \$25

Illustration 16-5B Revenue-Related Deferred Tax Asset—2022

(\$ in thousands)	Current Year 2022	Future Deductible Amounts	
		2023	Total
Pretax accounting income	\$100		
Temporary difference:			
Deferred revenue	(60)	\$(20)	\$(20)
Taxable income (tax return)	\$ 40		
Enacted tax rate	25%		25%
Tax payable	\$ 10		\$(5)

Deferred Tax Asset	
20	
5	15

Journal Entry at the End of 2022

Income tax expense (to balance)	25	
Deferred tax asset (determined above)		15
Income tax payable (determined above)		10

- Step 1: Tax payable: \$10
- Step 2: DTA end bal: \$5
- Step 3: DTA change: \$(15)
- Step 4: Tax exp plug: \$25

of 2022, requiring that RDP credit the deferred tax asset for \$15 to reduce the \$20 existing balance to that amount. This combines with the tax payable of \$10 to give us income tax expense of \$25.

Here's another way to look at it. One reason taxable income is not a higher number in 2021 is that \$60 of subscription revenue reported in the 2022 *income statement* was reported on the 2021 *tax return*, so the tax on that amount, \$15 (= \$60 × 25%) already has been paid. This \$15 tax benefit in 2022 that was represented as part of the \$20 deferred tax asset now has been realized, so \$5 of the asset remains.

In Illustration 16–5C, we see what happens in the last year of our example.

Illustration 16–5C Revenue-Related Deferred Tax Asset—2023

- Step 1: Tax payable: \$20
- Step 2: DTA end bal: \$0
- Step 3: DTA change: \$(5)
- Step 4: Tax exp plug: \$25

(\$ in thousands)	Current Year 2023	Future Deductible Amounts
Pretax accounting income	\$100	
Temporary difference:		
Deferred revenue	20	\$ 0
Taxable income (tax return)	\$ 80	
Enacted tax rate	25%	25%
Tax payable	\$ 20	\$ 0

Deferred Tax Asset

5	5
0	0

Journal Entry at the End of 2023

Income tax expense (to balance)	25	
Deferred tax asset (determined above)		5
Income tax payable (determined above)		20

In 2023, the remaining deferred tax benefit is realized. Tomorrow's tax payable is \$20. As of the end of 2023, no future deductible amount remains, so the balance in Tomorrow's deferred tax asset should be \$0. So, Tomorrow should credit the deferred tax asset for \$5, which combines with the tax payable of \$20 to give us income tax expense of \$25.

At the end of 2021 and 2022, the company reports a deferred tax asset for future income tax benefits. That deferred tax asset is reduced to zero by the end of 2023.

Deferred Tax Asset			
(\$ in thousands)			
2021 (\$80 × 25%)	20	15	2022 (\$60 × 25%)
		5	2023 (\$20 × 25%)
Balance after 3 years	0		

Of course, we instead could view this from a balance sheet perspective and calculate the deferred tax asset based on book-tax differences. The deferred revenue liability has a book value of \$80 in 2021, and that liability reduces to \$20 in 2022 and to \$0 in 2023 when it is settled by providing the promised magazines. The tax basis of that liability remains at \$0, because subscription receipts are included in taxable income in 2021 and no additional liability exists. The book-tax difference in deferred revenue represents less taxable income that the company will recognize in the future. This creates a deferred tax asset. The balance of the deferred tax asset each year is calculated as the book-tax difference times the applicable tax rate. Compare those balances (step 2) and changes in those balances (step 3) in the table below with those shown in Illustration 16–5A, 16–5B, and Illustration 16–5C to see that the balance sheet approach accomplishes the same steps in our 4-step process for calculating tax expense.

	Initial year		2022		2023	
	12/31 balance	Goods provided	12/31 balance	Goods provided	12/31 balance	12/31 balance
Deferred revenue:						
Accounting book value	\$ 80	\$(60)	\$ 20	\$(20)	\$ 0	\$ 0
Tax basis	0		0		0	0
Temporary difference	\$ 80		\$ 20		\$ 0	\$ 0
Tax rate	25%		25%		25%	25%
Deferred tax asset (DTA)	\$20		\$ 5		\$ 0	\$ 0
DTA change needed	\$20		\$(15)		\$(5)	\$(5)

Valuation Allowance

We recognize deferred tax assets for all temporary differences giving rise to future deductible amounts.³ However, we then reduce a deferred tax asset by a valuation allowance if it is “more likely than not” that some portion or all of the deferred tax asset will not be realized.⁴ Remember, a future deductible amount reduces taxable income in the future and saves taxes only if there is taxable income to be reduced when that deduction is available. So, a **valuation allowance** is needed if taxable income is anticipated to be insufficient to realize the tax benefit.

● LO16-4

For example, let’s say management has previously recorded a deferred tax asset of \$8 million. However, due to declining income in some tax districts, management determines in 2021 that it’s more likely than not that \$3 million of the deferred tax asset ultimately will not be realized in future years. The net deferred tax asset would be reduced by the creation of a valuation allowance as follows:

	(\$ in millions)
Income tax expense (to balance)	3.0
Valuation allowance	3.0

A valuation allowance is needed if it is more likely than not that some portion or all of a deferred tax asset will not be realized.

The effect is to increase income tax expense in the year the valuation allowance is established as a result of reduced expectations of future tax savings. In the 2021 balance sheet, the deferred tax asset would be reported at the net amount expected to reduce taxes in the future:

Deferred tax asset	\$8
Less: Valuation allowance	(3)
	\$5

This is not a new concept for you. You’ve reduced assets before using an allowance account. Suppose, for example, that you have accounts receivable of \$8 million but expect that \$3 million of that amount will not ultimately be collected from your customers. You would reduce the asset indirectly using an allowance:

Accounts receivable	\$8
Less: Allowance for uncollectible accounts	(3)
	\$5

³Unless the deductibility itself is uncertain. In that case, whether we recognize a deferred tax asset (and if so, its amount) is determined in accordance with FASB ASC 740-10-25: Income Taxes—Overall—Recognition, discussed in Part D of this chapter.

⁴“More likely than not” means a likelihood of more than 50%, FASB ASC 740-10-30: Income Taxes—Overall—Initial Measurement.

Additional Consideration

The decision as to whether a valuation allowance is needed should be based on the weight of all available evidence. The real question is whether or not there will be sufficient taxable income in future years for the anticipated tax benefit to be realized. After all, a deduction reduces taxes only if it reduces taxable income.

All evidence—both positive and negative—should be considered, and much managerial judgment is required. For instance, operating losses in recent years or anticipated circumstances that would adversely affect future operations would constitute negative evidence. On the other hand, a strong history of profitable operations or sizable, existing contracts would constitute positive evidence of sufficient taxable income to be able to realize the deferred tax asset.

We also must take into account any managerial actions that could be taken to recognize taxable income and thereby reduce or eliminate a valuation allowance. These tax-planning strategies include any prudent and feasible actions management might take to realize a tax benefit while it is available.

At the end of each reporting period, the valuation allowance is reevaluated. The appropriate balance is determined and the valuation allowance is adjusted—up or down—to create that balance. For instance, let's say that at the end of the following year, 2022, available evidence now indicates that only **\$500,000** of the deferred tax asset ultimately will not be realized. We would adjust the valuation allowance to reflect the indicated amount:

	Valuation Allowance	
1/1/2022		3,000,000
	2,500,000	
12/31/2022		500,000

In the journal entry that adjusts the valuation allowance, income tax expense is the final plug. In this case, because the valuation allowance is reduced with a debit, income tax expense is reduced with a credit.

	(\$ in millions)
Valuation allowance (\$3 – \$0.5)	2.5
Income tax expense	2.5

Illustration 16–6 accompanied the January 28, 2017, annual report of **Sears Holdings Corporation**, which operates a variety of retailers including Sears, Kmart, and Lands' End. Sears disclosed that it had deferred tax assets of \$5.6 billion, offset by a valuation allowance of \$5.5 billion. Why such a large valuation allowance? Illustration 16–6 provides Sears's depressing explanation.

Illustration 16–6

Explanation for Valuation Allowance—Sears Holding Corporation

Real World Financials

Note 10 – Income Taxes (in part)

Management assesses the available positive and negative evidence to estimate if sufficient future taxable income will be generated to use the existing deferred tax assets. A significant piece of objective negative evidence evaluated was the cumulative loss incurred over the three-year periods ended January 28, 2017, January 30, 2016, and January 31, 2015. Such objective evidence limits the ability to consider other subjective evidence such as our projections for future income.

Source: Sears Holding Corporation

Given its large recent losses, Sears cannot argue convincingly that it's more likely than not that it will have sufficient future income to utilize its deferred tax assets, so it must record a large valuation allowance.

International Financial Reporting Standards



Valuation Allowances. Under U.S. GAAP, companies recognize deferred tax assets and then reduce those assets with an offsetting valuation allowance if it is not “more likely than not” that the asset will be realized. In contrast, under IFRS, deferred tax assets only are recognized to begin with if it is probable (defined as “more likely than not”) that they will be realized. That means that we could see more deferred tax assets and offsetting valuation allowances under U.S. GAAP than how the same company would appear under IFRS.

Disclosures Linking Tax Expense with Changes in Deferred Tax Assets and Liabilities

We’ve now looked at four examples that illustrate revenue-related and expense-related deferred tax assets and deferred tax liabilities. In each example, the journal entry to recognize income tax expense included three items: income tax payable, the change in the deferred tax asset or liability, and (to balance) the income tax expense. We’ve also seen that changes in the valuation allowance sometimes needed to adjust deferred tax assets also can affect the tax expense. Companies provide disclosure in the notes that help investors see these relationships. As an example, let’s look at the tax note that appeared in the January 28, 2017, annual report of **Shoe Carnival, Inc.**, a large footwear retailer.

Note 7 – Income Taxes (in part)
The provision for income taxes consisted of:

(\$ in thousands)	2016	2015	2014
<i>Current:</i>			
Federal	\$ 13,366	\$ 18,366	\$ 14,575
State	1,997	2,267	1,800
Puerto Rico	250	249	350
Total current	15,613	20,882	16,725
<i>Deferred:</i>			
Federal	(153)	(3,000)	(1,229)
State	(1,228)	(145)	(115)
Puerto Rico	(1,456)	(318)	(1,149)
Total deferred	(2,837)	(3,463)	(2,493)
Valuation allowance	1,456	318	1,943
Total provision	\$14,232	\$17,737	\$16,175

Source: Shoe Carnival, Inc.

Illustration 16–7A

Disclosure of Tax Expense—Shoe Carnival, Inc.

Real World Financials

Illustration 16–7A gives us enough information to reproduce a journal entry that summarizes Shoe Carnival’s 2016 tax expense. We just need to understand that “total current” in the note refers to current tax expense, and therefore to tax payable, “total deferred” refers to the deferred portion of tax expense, which is equal to the net change in deferred tax assets and liabilities, “valuation allowance” refers to the change in the valuation allowance, and “total provision” refers to income tax expense. Here’s the journal entry (\$ in thousands):

Income tax expense (to balance)	14,232		
Deferred tax assets and liabilities	2,837	}	\$2,837 – 1,456 = \$1,381
Valuation allowance	1,456		
Income tax payable	15,613		

We can see from this journal entry that Shoe Carnival's operations caused deferred tax assets and liabilities to change by a net debit of **\$2,837** during 2016, and its valuation allowance changed by an offsetting credit of **\$1,456**, so the total change in these accounts was $\$2,837 - \$1,456 = \mathbf{\$1,381}$. Let's verify that change by comparing the 2016 fiscal year end (January 28, 2017) and 2015 fiscal year end (January 30, 2016) balances of Shoe Carnival's deferred tax assets, valuation allowance and deferred tax liabilities, shown in Illustration 16–7B.

Illustration 16–7B

Disclosure of Deferred Tax Assets and Liabilities—Shoe Carnival, Inc.

Real World Financials

Note 7 – Income Taxes (in part)

Deferred income taxes are the result of temporary differences in the recognition of revenue and expense for tax and financial reporting purposes. The sources of these differences and the tax effect of each are as follows:

(\$ in thousands)	January 28, 2017	January 30, 2016	
Deferred tax assets:			
Accrued rent	\$ 4,333	\$ 4,321	
Accrued compensation	8,552	6,911	
Accrued employee benefits	555	532	
Inventory	1,125	737	
Self-insurance reserves	758	641	
Lease incentives	11,996	12,522	
Net operating loss carry forward	3,719	2,261	
Other	638	411	
<i>Total deferred tax assets</i>	<u>31,676</u>	<u>28,336</u>	
Valuation allowance	(3,717)	(2,261)	
<i>Total deferred tax assets—net of valuation allowance</i>	<u>27,959</u>	<u>26,075</u>	
Deferred tax liabilities:			
Depreciation	17,256	16,671	
Capitalized costs	1,103	1,153	
Other	0	32	
<i>Total deferred tax liabilities</i>	<u>18,359</u>	<u>17,856</u>	
Net deferred tax asset	<u>\$ 9,600</u>	–	<u>\$ 8,219</u> = \$1,381

Source: Shoe Carnival, Inc.

We can see from Illustration 16–7B that Shoe Carnival has a net deferred tax asset of **\$9,600** as of January 28, 2017 (the end of its 2016 fiscal year), which is equal to its total deferred tax asset of \$31,676 less its valuation allowance of \$3,717 and its total deferred tax liability of \$18,359. Compared to the net deferred tax asset of **\$8,219** at January 30, 2016, we see that the net deferred tax asset has increased by $\$9,600 - \$8,219 = \mathbf{\$1,381}$. Now look back at our journal entry following Illustration 16–7A. Remember, that entry showed an increase in net deferred tax assets (**\$2,837**) with an offsetting increase in the valuation allowance (**\$1,456**), again totaling **\$1,381**. See how the tax expense journal entry ties to the changes in deferred tax assets, liabilities, and valuation allowance?

Additional Consideration

The amount of change in deferred taxes reconciles perfectly between the tables shown in Illustrations 16–7A and 16–7B. That often won't be the case in practice because the table shown in Illustration 16–7A focuses on taxes from *continuing operations*, but the deferred tax assets and liabilities listed in Illustration 16–7B relate to all aspects of the company. For example, if Shoe Carnival had deferred taxes associated with discontinued operations or other comprehensive income items, or if it had added deferred tax assets and liabilities from an acquisition during the year, the change in deferred taxes from continuing operations wouldn't capture everything that affected deferred tax assets and liabilities.

Permanent Differences

So far, we've dealt with temporary differences between the reported amount of an asset or liability in the financial statements and its tax basis. However, some differences aren't temporary. Rather, they are caused by transactions and events that under existing tax law will *never* affect taxable income or taxes payable. For example, interest received from investments in governmental bonds issued by state and municipal governments typically is permanently exempt from taxation. Interest revenue of this type is, of course, reported as revenue on the recipient's income statement, but not on its tax return—not now, not later. So, there is a **permanent difference** between pretax accounting income and taxable income. This situation will *not* reverse in a later year—the tax-free income will *never* be reported on the tax return.

Illustration 16–8 provides examples of permanent differences that commonly occur in practice.

- Interest received from investments in bonds issued by state and municipal governments (generally not taxable).
- Investment expenses incurred to obtain tax-exempt income (not tax deductible).
- Life insurance proceeds on the death of an insured executive (not taxable).
- Premiums paid for life insurance policies when the payer is the beneficiary (not tax deductible).
- Compensation expense pertaining to some employee stock option plans (not tax deductible).
- Fines and penalties due to violations of the law (generally not tax deductible).
- Difference in tax paid on foreign income permanently reinvested in the foreign country and the amount that would have been paid if taxed at U.S. rates.[§]
- Portion of dividends received from U.S. corporations that is not taxable due to the dividends received deduction.*
- Tax deduction for depletion of natural resources (percentage depletion) that is allowed in excess of an already full-depleted asset's cost.[†]

[§]These differences were largely eliminated by tax reform instituted by the U.S. Congress in late 2017.

*When a corporation owns shares of another U.S. corporation, a percentage of the dividends from those shares is exempt from taxation due to the dividends received deduction. The percentage is 50% if the investor owns less than 20% of the investee's shares, 65% for over 20% ownership, and 100% for dividends from members of the same affiliated group.

[†]The cost of natural resources is reported as depletion expense over their extraction period for financial reporting purposes, but tax rules prescribe sometimes different percentages of cost to be deducted for tax purposes. There usually is a difference between the cost depletion and percentage depletion that doesn't eventually reverse.

Accounting for permanent differences is less complex than is accounting for temporary differences. We calculate taxes payable according to the tax law, and, since permanent differences are not temporary, we don't create a deferred tax asset or liability. Therefore, when we “plug” tax expense, tax expense is determined by tax payable. The term *permanent difference* doesn't refer to a difference between tax payable and tax expense—those are the *same* with respect to these. Rather, it refers to a difference between taxable income and pretax accounting income. That's why we adjust pretax accounting income in the illustrations that follow to eliminate permanent differences when calculating tax payable.

To compare temporary and permanent differences, we can modify Illustration 16–3 to include nontaxable income in Kent Land Management's 2022 pretax accounting income. We do this in Illustration 16–9.

Kent Land Management reported pretax accounting income in 2021 of \$185 million, which included \$80 million from installment sales of property **and \$5 million interest from investments in municipal bonds in 2021**. The installment sales income is reported for tax purposes in 2022 (\$20 million) and 2023 (\$60 million). The enacted tax rate is 25% each year.

(Continued)

PART B

• LO16–5

FINANCIAL Reporting Case

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Illustration 16–8

Differences without Deferred Tax Consequences

Provisions of the tax laws, in some instances, dictate that the amount of a revenue that is taxable or expense that is deductible permanently differs from the amount reported in the income statement.

Illustration 16–9

Temporary and Permanent Differences

Illustration 16-9
(Concluded)

- Step 1: Tax payable: \$25
- Step 2: DTL end bal: \$20
- Step 3: DTL change: \$20
- Step 4: Tax exp plug: \$45

(\$ in millions)	Current Year 2021	Future Taxable Amounts		
		2022	2023	Total
Pretax accounting income	\$185			
Permanent difference:				
Municipal bond interest	(5)			
Temporary difference:				
Installment income	(80)	\$20	\$60	\$80
Taxable income (tax return)	\$100			
Enacted tax rate	25%			25%
Tax payable	\$ 25			\$20

Deferred Tax Liability	
	0
	20
	20

Journal Entry at the End of 2021

Income tax expense (to balance)	45	
Income tax payable (determined above)		25
Deferred tax liability (determined above)		20

The effective tax rate equals tax expense divided by pretax accounting income.

A company's **effective tax rate** is calculated by dividing the company's tax expense by its pretax accounting income. Permanent differences affect the effective tax rate because they affect pretax accounting income. Let's look at Illustration 16-9 to understand why that's the case. In Illustration 16-9, the effective tax rate is \$45 million ÷ \$185 million, or 24.3%. That's with \$5 million of municipal bond interest included in the \$185 million of pretax accounting income. If, instead, pretax accounting income hadn't included the \$5 million of municipal bond interest, it would have been only \$180 million, and the effective tax rate would have been \$45 million ÷ \$180 million, or 25%, equal to the statutory tax rate. Including the municipal bond interest in pretax accounting income increased the denominator of the effective tax rate, so it produced a lower effective tax rate.

Permanent differences affect a company's effective tax rate.

More generally, nontaxable revenues and gains like municipal bond interest are permanent differences that result in *higher* pretax accounting income, so they produce effective tax rates that are *lower* than the statutory tax rate. Likewise, nondeductible expenses and losses are permanent differences that result in *lower* pretax accounting income, so they produce effective tax rates that are *higher* than the statutory tax rate. Companies are required to report a reconciliation between their effective and statutory tax rates in disclosure notes, as shown in Illustration 16-10's example from **Shoe Carnival's** financial statements for the 2016 fiscal year (ended January 28, 2017).

Illustration 16-10
Effective Tax Rate—Shoe Carnival
Real World Financials

Note 9: Taxes (in part)			
Effective Tax Rate Reconciliation			
	2016	2015	2014
U.S. statutory tax rate	35.0%	35.0%	35.0%
State and local income taxes, net of federal tax benefit	2.1	2.7	3.1
Puerto Rico	0.2	0.3	0.2
Valuation allowance	4.0	0.7	4.7
Tax benefit of foreign losses	(3.6)	(0.6)	(4.3)
Other	0.0	0.0	0.1
Effective income tax rate	37.7%	38.1%	38.8%

Source: Shoe Carnival

Two points are important to note about Shoe Carnival's effective tax rate reconciliation. First, the federal statutory rate is 35% in this example—it did not drop to 21% until 2018. Second, the effect of Shoe Carnival increasing its valuation allowance during the year was to increase the effective tax rate. To better understand this, look back at Illustration 16-4A and 16-5A and note that establishing a deferred tax asset decreases tax expense so that the effective tax rate is closer to the statutory rate (in those examples, 25%). Establishing a valuation allowance increases tax expense, thus increasing the effective tax rate. The valuation allowance essentially counteracts the beneficial effect of the deferred tax asset on tax expense, so when the valuation allowance increases, the effective tax rate increases.

Additional Consideration

Accounting for taxes on unrepatriated foreign earnings. Historically, the largest “permanent difference” in many companies' effective tax rate reconciliation related to taxes on foreign earnings. Companies often seek to minimize their tax bills by arranging their operations so their income is recognized outside the United States in jurisdictions that have low tax rates. Those lower tax bills are viewed as creating permanent differences so long as the company does not intend to “repatriate” the foreign earnings by transferring those earnings back to the United States. A company still must include the foreign income in pretax accounting income in the income statement, but that income is taxed at the lower foreign rate, so income tax payable is lower, tax expense is lower, and the company's effective tax rate is lower. As an example, **Coca-Cola's** 2016 10-K indicated that the effect of such “earnings in jurisdictions taxed at rates different from the statutory federal rate” was to cut its effective tax rate in half, reducing the federal statutory rate of 35% to 17.5%. The 2017 “Tax Cuts and Jobs Act” passed by the U.S. Congress increased taxes on such foreign earnings, but some of those permanent differences still are likely to appear in effective tax rate reconciliations.

What if management changes its mind and decides to repatriate foreign earnings? In that case, the company must pay tax at a higher rate. For example, the 2017 tax act imposed a one-time “deemed repatriation tax” on accumulated, untaxed earnings of foreign corporations that was equal to 15.5% on earnings held as “cash and cash equivalents” and 8% on other earnings. These taxes can be significant—**Goldman Sachs Group, Inc.**, announced on December 27, 2017, that it would take a \$5 billion charge associated with the tax act and attributed two-thirds of that amount to the repatriation tax. As a result, the company has a higher tax bill and higher tax expense. Pretax accounting income is unaffected (remember, that income appeared in the income statement in the period in which revenue was recognized), so the higher tax expense results in a higher effective tax rate. The company's original choice not to repatriate created a “permanent” difference that reduced the effective tax rate, and the company's later payment of this repatriation tax creates an offsetting “permanent” difference that goes in the other direction.

International Financial Reporting Standards

Non-Tax Differences Affect Taxes. Despite the similar approaches for accounting for taxation under *IAS No. 12*, “Income Tax,” and U.S. GAAP, differences in reported amounts for deferred taxes are among the most frequent between the two reporting approaches.⁵ The reason is that a great many of the nontax differences between IFRS and U.S. GAAP affect deferred taxes as well.

For example, we noted in Chapter 13 that we accrue a loss contingency under U.S. GAAP if it's both probable and can be reasonably estimated and that IFRS guidelines are similar, but the threshold is “more likely than not.” This is a lower threshold than “probable.” In this chapter, we noted that accruing a loss contingency (like warranty expense) in the income statement leads to a deferred tax asset if it can't be deducted on the tax return until a later period. As a result, under the lower threshold of IFRS, we might record a loss contingency and thus a deferred tax asset, but under U.S. GAAP we might record neither. So, even though accounting for deferred taxes is the same, accounting for loss contingencies is different, causing a difference in the reported amounts of deferred taxes under IFRS and U.S. GAAP.



● LO16-11

⁵“Income Taxes,” *International Accounting Standard No. 12* (IASCF), as amended effective January 1, 2014.

Concept Review Exercise

TEMPORARY AND PERMANENT DIFFERENCES

Mid-South Cellular Systems began operations in 2021. That year the company reported pre-tax accounting income of \$150 million, which included the following amounts:

1. Compensation expense of \$6 million related to employee stock option plans granted to organizers was reported in the 2021 income statement. This expense is not deductible for tax purposes.
2. An asset with a four-year useful life was acquired at the beginning of 2021. It is depreciated by the straight-line method in the income statement. For this asset, Mid-South uses MACRS on the tax return, causing deductions for depreciation to be more than straight-line depreciation the first two years but less than straight-line depreciation the next two years (\$ in millions):

Depreciation			
	Income Statement	Tax Return	Difference
2021	\$150	\$198	\$ (48)
2022	150	264	(114)
2023	150	90	60
2024	150	48	102
	<u>\$600</u>	<u>\$600</u>	<u>\$ 0</u>

The enacted tax rate is 25%.

Required:

Prepare the journal entry to record Mid-South Cellular's income taxes for 2021.

Solution

Because the compensation expense is not tax deductible, taxable income is not reduced by the \$6 million deduction and is higher than accounting income by that amount.

- Step 1: Tax payable: \$27
- Step 2: DTL end bal: \$12
- Step 3: DTL change: \$12
- Step 4: Tax exp plug: \$39

(\$ in millions)	Current Year	Future Taxable Amounts			Total
	2021	2022	2023	2024	
Pretax accounting income	\$150				
Permanent difference:					
Nondeductible compensation	6				
Temporary difference:					
Depreciation	(48)	\$(114)	\$60	\$102	\$48
Taxable income (tax return)	<u>\$108</u>				
Enacted tax rate	25%				25%
Tax payable	<u>\$ 27</u>				<u>\$12</u>

Deferred Tax Liability	
	0
	12
	<u>12</u>

Journal Entry at the End of 2021

Income tax expense (to balance)	39	
Income tax payable (determined above)		27
Deferred tax liability (determined above)		12

The necessary journal entry is:

Journal Entry at the End of 2021

Income tax expense (to balance)	39	
Income tax payable (determined above)		27
Deferred tax liability (determined above)		12

Note that tax expense of \$39 equals $25\% \times \$156$. Because the compensation expense of \$6 will never be deductible (its a permanent difference), tax expense is calculated as if the compensation expense had never occurred. On the other hand, the differences associated with depreciation are temporary, so a deferred tax liability is established to account for those effects.

Other Tax Accounting Issues

Tax Rate Considerations

To measure a deferred tax liability or asset, we multiply a temporary difference by the currently *enacted* tax rate that will be effective in the year(s) the temporary difference reverses.⁶ A conceptual case can be made that these measurements should be based on the tax rates that are *expected* to apply in future periods, regardless of whether those rates have yet been enacted. However, this is one of many examples of the frequent trade-off between relevance and reliability. In this case, the FASB chose to favor reliability by waiting until an anticipated change actually is enacted into law before recognizing its tax consequences.

When Enacted Tax Rates Differ Between Years

Existing tax laws may call for enacted tax rates to differ in the future years in which a temporary difference is expected to reverse. When a phased-in change in rates is scheduled to occur, the specific tax rates of each future year are multiplied by the amounts reversing in each of those years. The total is the deferred tax liability or asset.

To illustrate, let's again modify our Kent Land Management illustration, this time to assume a scheduled change in tax rates. See Illustration 16–11.

Because the 2023 rate is higher (30% as opposed to 25%), the future taxable amount will generate a higher amount of tax (\$18 million, rather than the \$15 million that would be generated if the tax rate were 25% in 2023). That requires a larger increase in the deferred tax liability, and a higher corresponding tax expense. Be sure to note that, when the deferred tax liability of \$23 million is established in 2021, the 2022 rate (25%) and the 2023 rate (30%) already have been enacted into law. In the next section, we discuss how to handle a change resulting from new legislation.

Changes in Enacted Tax Laws or Rates

Tax laws sometimes change. When such a change in a tax law or rate is enacted, any existing deferred tax liability or asset must be adjusted to reflect the effects of the change. Remember, a deferred tax liability or asset is meant to reflect the amount to be paid or recovered in the future. When legislation changes that amount, the deferred tax liability or asset also should change. The effect is reflected in operating income in the year the change in the tax law or rate is enacted.⁷

For clarification, let's consider what happened in late December of 2017. Congress revised the federal tax rate, dropping it from 35% to 21% starting in 2018. There was no change in tax *payable* for companies in 2017 because that amount was calculated using the

⁶The current U.S. federal corporate tax rate is 21% (having been revised downward from the 35% rate that applied to 2017). Most states tax corporate income at rates less than 10%. We use 25% as a combined rate in most of our illustrations to simplify calculations.

⁷FASB ASC 740–10–35: Income Taxes—Overall—Subsequent Measurement.

PART C

● LO16–6

A deferred tax liability (or asset) is calculated using enacted tax rates and laws.

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When an enacted tax rate changes, the deferred tax liability or asset should be adjusted and the effect shown in tax expense in the year the change is enacted.

Illustration 16-11 Scheduled Change in Tax Rates

- Step 1: Tax payable: \$25
- Step 2: DTL end bal: \$23
- Step 3: DTL change: \$23
- Step 4: Tax exp plug: \$48

Kent Land Management reported pretax accounting income in 2021 of \$185 million, which included \$80 million from installment sales of property and **\$5 million interest from investments in municipal bonds in 2021**. The installment sales income is reported for tax purposes in 2022 (\$20 million) and 2023 (\$60 million). The enacted tax rate is 25% in 2021 and 2022, but increases to 30% in 2023.

(\$ in millions)	Current Year 2021	Future Taxable Amounts		
		2022	2023	Total
Pretax accounting income	\$185			
Permanent difference:				
Municipal bond interest	(5)			
Temporary difference:				
Installment income	(80)	\$20	\$60	
Taxable income (tax return)	<u>\$100</u>			
Enacted tax rate	25%	25%	30%	
Tax payable	<u>\$ 25</u>	\$ 5	+ \$18	= <u>\$23</u>
Deferred tax liability				

Deferred Tax Liability	
	0
	23
	23

Journal Entry at the End of 2021

Income tax expense (to balance)	48	
Income tax payable (determined above)		25
Deferred tax liability (determined above)		23

old 35% rate. However, the change did affect the value of companies' deferred tax assets and liabilities, and adjusting those accounts in turn affected each company's 2017 tax expense for the entire year and, in some cases quite substantially, net income. To see this more clearly, let's walk through a couple of examples.

EFFECT OF A TAX RATE CHANGE ON A DEFERRED TAX LIABILITY Imagine that, late in 2017, GladCo has future taxable amounts of \$1 million and a tax rate (federal plus state) of 39%, so has already recognized a deferred tax liability of \$390,000 (= \$1 million × 39%). GladCo then learns that Congress has enacted a law decreasing the tax rate for future years from 35% to 21%, meaning that GladCo's total enacted future tax rate has dropped from 39% to 25%. GladCo revises its deferred tax liability downwards on December 31, 2017, as follows:

Deferred Tax Liability		
	390,000	(\$1 million × 39%)
Plug to revise DTL for decrease in tax rate	140,000	
	250,000	(\$1 million × 25%)

To recognize the effect of the change in future tax rates, GladCo debits its deferred tax liability for **\$140,000**. There is no effect on 2017 tax payable, so the plug to tax expense is a credit of **\$140,000**.

December 31, 2017		
Deferred tax liability	140,000	
Income tax expense		140,000

GladCo is particularly glad about the decrease in future tax rates, because GladCo’s future taxable amount of \$1 million will cost it less in taxes under a 25% rate than under a 39% rate. In 2017, the period in which the future tax rate change is enacted, GladCo revises its estimate of future tax payments and consequently recognizes a reduction in tax expense (i.e., a tax benefit) that improves its 2017 net income. If, instead, future tax rates had been revised upward, GladCo would need to credit its deferred tax liability to revise it upward, and the offsetting debit would increase tax expense and reduce 2017 net income.

EFFECT OF A TAX RATE CHANGE ON A DEFERRED TAX ASSET Now let’s modify our example to consider SadCo, which has future *deductible* amounts of \$1 million and a tax rate (federal plus state) of 39%. SadCo already has recognized a deferred tax *asset* of \$390,000 (= \$1 million × 39%). Late in 2017, SadCo learns that Congress has enacted a law decreasing the future tax rate from 35% to 21%, such that SadCo’s total enacted future tax rate has dropped from 39% to 25%. SadCo revises its deferred tax asset on December 31, 2017, as follows:

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Deferred Tax Asset			
(\$1 million × 39%)	390,000	140,000	Plug to revise DTA for decrease in tax rate
(\$1 million × 25%)	250,000		

To recognize the effect of the change in future tax rates, SadCo credits the deferred tax asset for **\$140,000** in the year the change is enacted. There is no effect on 2017 tax payable, so the plug to tax expense is a debit of **\$140,000**.

December 31, 2017		
Income tax expense	140,000	
Deferred tax asset		140,000

While SadCo is generally happy that tax rates will decrease in future years, it is sad with respect to the effect of that tax rate change on the value of its deferred tax assets, and therefore its 2017 net income. SadCo’s future deductible amount of \$1 million will reduce future tax payments by less with a 25% rate than with a 39% rate. So, that asset is less valuable, and SadCo must reduce the carrying value of its deferred tax asset. The offsetting increase in tax expense reduces SadCo’s net income in 2017, the period in which it revises its deferred tax asset. If, instead, future tax rates had been revised upward, SadCo would debit its deferred tax asset to revise it upward, and the offsetting credit would decrease tax expense and increase 2017 net income.

The effect of a tax rate change on earnings can be very significant, given that the entire effect on the balances of deferred tax assets and deferred tax liabilities is included in earnings in the period the change is enacted. Whether the change increases or decreases earnings depends on the direction of the change as well as on whether a company has a net deferred tax asset or deferred tax liability. For example, the decrease in federal tax rates enacted in late 2017 required **Citigroup** to *decrease* earnings by \$22.6 billion in the fourth quarter of 2017 as it reduced the carrying value of its large net deferred tax asset. On the other hand, the same decrease in tax rates *increased* **Verizon**’s earnings by \$16.8 billion in the fourth quarter of 2017 as it reduced the carrying value of its large net deferred tax liability.

Multiple Temporary Differences

It would be unusual for any but a very small company to have only a single temporary difference in any given year. Having multiple temporary differences, though, doesn’t change any of the principles you’ve learned so far in connection with single differences. We categorize all temporary differences according to whether they create (a) future taxable amounts or (b) future deductible amounts. The total of the future taxable amounts then is multiplied by the future tax rate to determine the appropriate balance for the deferred tax liability, and the total of the future deductible amounts is multiplied by the future tax rate to determine the appropriate balance for the deferred tax asset. This is demonstrated in Illustration 16–12.

Illustration 16–12

Multiple Temporary Differences

2021

During 2021, its first year of operations, Eli-Wallace Distributors reported pretax accounting income of \$200 million, which included the following amounts:

1. Income (net) from installment sales of warehouses in 2021 of \$8 million will be reported for tax purposes in 2022 (\$6 million) and 2023 (\$2 million).
2. Depreciation is reported by the straight-line method on an asset with a four-year useful life. On the tax return, deductions for depreciation will be more than straight-line depreciation the first two years but less than straight-line depreciation the next two years (\$ in millions):

	Income Statement	Tax Return	Difference
2021	\$ 50	\$ 66	\$(16)
2022	50	88	(38)
2023	50	30	20
2024	50	16	34
	<u>\$200</u>	<u>\$200</u>	<u>\$ 0</u>

3. Estimated warranty expense will be deductible on the tax return when actually paid during the next two years. Estimated deductions are as follows (\$ in millions):

	Income Statement	Tax Return	Difference
2021	\$12		\$12
2022		\$ 4	(4)
2023		8	(8)
	<u>\$12</u>	<u>\$12</u>	<u>\$ 0</u>

2022

During 2022, pretax accounting income of \$200 million included an estimated loss of \$2 million from having accrued a loss contingency. The loss is expected to be paid in 2024, at which time it will be tax deductible.

The enacted tax rate is 25% each year.

Look at Illustration 16–12A to see how Eli-Wallace determines the income tax amounts for 2021. Then look at Illustration 16–12B to see how those amounts are determined for 2022.

Illustration 16–12A: Deferred taxes with multiple differences—Initial Year

(\$ in millions)	Current Year	Future Taxable (Deductible) Amounts			Future Taxable Amounts (total)	Future Deductible Amounts (total)
	2021	2022	2023	2024		
Pretax accounting income	\$200					
Temporary difference:						
Installment sales	(8)	\$ 6	\$ 2		\$ 8	
Depreciation	(16)	(38)	20	\$34	16	
Warranty expense	12	(4)	(8)			\$(12)
Taxable income (tax return)	\$188				24	(12)
Enacted tax rate	25%				25%	25%
Tax payable	<u>\$ 47</u>				<u>\$ 6</u>	<u>\$ (3)</u>

Deferred Tax Liability	
0	0
6	6

Deferred Tax Asset	
0	0
3	3
3	3

Journal Entry at the End of 2021

Income tax expense (to balance)	50	
Deferred tax asset (determined above)	3	
Income tax payable (determined above)		47
Deferred tax liability (determined above)		6

- Step 1: Tax payable: \$47
- Step 2: DTA end bal: \$3
DTL end bal: \$6
- Step 3: DTA change: \$3
DTL change: \$6
- Step 4: Tax exp plug: \$50

Illustration 16-12B Deferred taxes with multiple differences—Future year

(\$ in millions)	Current Year 2022	Future Taxable (Deductible) Amounts		Future Taxable Amounts (total)	Future Deductible Amounts (total)
		2023	2024		
Pretax accounting income	\$200				
Temporary difference:					
Installment sales	\$ 6	\$ 2		\$ 2	
Depreciation	(38)	20	\$34	54	
Warranty expense	(4)	(8)			\$ (8)
Estimated loss	2		(2)		(2)
Taxable income (tax return)	\$166			\$56	\$(10)
Enacted tax rate	25%			25%	25%
Tax payable	\$ 41.5			\$14	\$(2.5)

Deferred Tax Liability		Deferred Tax Asset	
	6	3	
	8		0.5
	14	2.5	

Journal Entry at the End of 2021

Income tax expense (to balance)	50	
Deferred tax asset (determined above)		0.5
Deferred tax liability (determined above)		8.0
Income tax payable (determined above)		41.5

- Step 1: Tax payable: \$41.5
- Step 2: DTA end bal: \$2.5
DTL end bal: \$14.0
- Step 3: DTA change: \$(0.5)
DTL change: \$8.0
- Step 4: Tax exp plug: \$50.0

Of course, if a phased-in change in tax rates is scheduled to occur, it would be necessary to determine the total of the future taxable amounts and the total of the future deductible amounts for each future year, as outlined previously. Then the specific tax rates of each future year would be multiplied by the two totals in each of those years. Those annual tax effects then would be summed to find the balances for the deferred tax liability and the deferred tax asset.

Net Operating Losses

A **net operating loss (NOL)** is negative taxable income: tax-deductible expenses exceed taxable revenues. Of course, there is no tax payable for the year a net operating loss occurs because there's no taxable income. In addition, tax laws permit a net operating loss to be used to reduce taxable income in subsequent profitable years. Why do the tax laws permit that offsetting? Well, let's consider two imaginary companies. Volatile Co. has negative income some years and positive income other years that averages out to \$0 income over time. Stable Co. has \$0 income each year. It wouldn't be fair to tax Volatile in the good years and provide no relief in the bad years, while not taxing Stable at all, because Volatile and Stable generate the same total amount of income over time. It's more fair to allow Volatile to offset the income in its good years with the losses in its bad years when determining how much tax it should pay.

• LO16-7

The accounting question is: When should the tax benefit created by a net operating loss be recognized in the income statement? The answer is: In the year the loss occurs.

Net Operating Loss Carryforward

Current federal tax laws allow most companies to carry forward an NOL and offset it against taxable income in future years. Companies are limited to offsetting a maximum of 80% of the taxable income in any given year. If an NOL is big enough, it could be used in multiple future years to offset taxable income and reduce tax payable. NOLs don't expire. Rather, companies can carry forward an NOL indefinitely until it is used.

Additional Consideration

NOLs arising in tax years beginning before December 31, 2017 are treated differently. Those NOLs can offset 100% of the taxable income in each future year to which they are carried forward, but can only be carried forward 20 years before expiring.

Because NOL carryforwards offset future taxable income and therefore reduce tax payable, they produce cash savings for the company when future taxable income is generated. Large NOL carryforwards also can make an unprofitable company an attractive target for acquisition by a company that could use those NOL carryforwards to shelter its own future earnings from taxes. If the IRS determines that an acquisition is made solely to obtain the tax benefits of NOL carryforwards, the deductions will not be allowed. Still, the motivation for making an acquisition is difficult to determine, so it is not uncommon for companies to purchase other companies to obtain their NOL carryforwards.

How do we account for an NOL prior to it being used to offset future taxable income? You have learned in this chapter that a deferred tax asset is recognized for the future tax benefit of temporary differences that create future deductible amounts. A **net operating loss carryforward** also creates future deductible amounts. Logically, then, a deferred tax asset is recognized for an NOL carryforward. Debiting the deferred tax asset associated with the NOL carryforward requires an offsetting credit to tax expense. This is demonstrated in Illustration 16–13A.

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Illustration 16–13A Net Operating Loss Carryforward

During 2021, its first year of operations, American Laminating Corporation reported an operating loss of \$120 million for financial reporting and tax purposes. The enacted tax rate is 25%.

(\$ in millions)	Current Year 2021	Future Deductible Amounts
Net Operating loss	\$(120)	
NOL carryforward	120	\$(120)
Taxable income (tax return)	\$ 0	
Enacted tax rate	25%	25%
Tax payable	\$ 0	\$30

- Step 1: Tax payable: \$0
- Step 2: DTA end bal: \$30
- Step 3: DTA change: \$30
- Step 4: Tax exp plug: \$30

Deferred Tax Asset	
0	
30	
30	

Journal Entry at the End of 2021

Deferred tax asset (determined above)	30
Income tax expense (to balance)	30

RECOGNIZING AN NOL CARRYFORWARD You can see that the reduction of tax expense associated with the NOL is recognized for accounting purposes in the year the net operating loss occurs. That reduction in tax expense is sometimes labeled a tax benefit in the income statement. Just as we reduce pretax *income* by tax *expense* to calculate net income, we reduce a pretax *loss* by its tax *benefit* to calculate a net loss. That way, the net after-tax operating loss shown on the income statement reflects the tax savings that the operating loss is expected to create.

Income Statement (partial)

	(\$ in millions)
Operating loss before income taxes	\$(120)
Less: Income tax benefit	30
Net loss	\$ (90)

UTILIZING AN NOL CARRYFORWARD In a future year, a company can reduce its tax payable by offsetting taxable income with an NOL carried forward from a prior year. Using an NOL is accounted for essentially the same way as using the deductible amounts associated with any deferred tax asset. Let's return to our example to see how this is done. American Laminating's loss in 2021 created a \$120 million NOL carryforward. As demonstrated in Illustration 16-13B, American Laminating will be able to use \$80 million of the NOL in 2022, and will carry forward the remaining \$40 million to subsequent years.

Illustration 16-13B Utilizing an NOL Carryforward

During 2022, its second year of operations, American Laminating Corporation reported pretax income of \$100 million for financial reporting and tax purposes. American is limited to offsetting 80% of income with its NOL carryforward in any tax year. The enacted tax rate is 25%.

(\$ in millions)	Current Year 2022	Future Deductible Amounts
Pretax accounting and taxable income	\$100	
NOL carryforward (using 80% × \$100)	(80)	\$(40)
Taxable income (tax return)	\$ 20	
Enacted tax rate	25%	25%
Tax payable	<u>\$ 5</u>	<u>\$10</u>

Deferred Tax Asset	
30	20
10	

- Step 1: Tax payable: \$5
- Step 2: DTA end bal: \$10
- Step 3: DTA change: \$20
- Step 4: Tax exp plug: \$25

Journal Entry at the End of 2022

Income tax expense (to balance)	25	
Deferred tax asset (determined above)		20
Income tax payable (determined above)		5

American Laminating's income statement would show \$100 million of pretax accounting income reduced by \$25 million of tax expense:

Income Statement (partial)		(\$ in millions)
Pretax accounting income		\$100
Less: Income tax expense		25
Net income		<u>\$ 75</u>

Of the \$25 million of tax expense, \$5 million is payable currently, and the other \$20 million is a result of reducing (using up) the deferred tax asset associated with the NOL. An additional \$40 million of NOL remains to reduce future taxable income, to be represented by a deferred tax asset of \$10 million (= \$40 million × 25%) as of the end of 2022.

VALUATION ALLOWANCE Just as for all other deductible temporary differences, a deferred tax asset is recognized for an NOL without regard to the likelihood of having taxable income in future years sufficient to absorb future deductible amounts. However, the deferred tax asset is then reduced by a valuation allowance if it is "more likely than not" that some of the deferred tax asset will not be realized. Even though current tax law allows NOLs to be carried forward indefinitely, a valuation allowance still might be necessary because the same problems that give rise to current operating losses also make it less likely the company will be able to stay in business.

Additional Consideration

Net Operating Loss Carryback. For tax years beginning before January 1, 2018, companies could elect to carry an NOL *back* to the past two years and carry forward any amount of NOL that remained. Carrybacks produced an immediate refund of taxes paid in those prior years, so this option was very attractive. Carryback was limited to two years, and carryforward up to 20 years. The NOL could be offset against 100% of taxable income in those years.

For tax years beginning after December 31, 2017, NOL carrybacks are not allowed for most companies. Rather, NOLs can only be carried forward, and the use of an NOL carryforward in any individual tax year is limited to offsetting a maximum of 80% of taxable income in that year. However, the old rules still apply for property and casualty insurance companies, and some farm-related businesses are allowed to carry NOLs back two years and forward indefinitely. For these companies, there is no 80% limitation. Also, many states continue to allow NOL carrybacks with respect to calculating state income taxes. Therefore, it is useful to understand how to account for NOL carrybacks.

To illustrate accounting for NOL carrybacks, let's modify Illustration 16–13B to assume that we are dealing with a property and casualty insurance company, and that there was taxable income in the two years prior to the net operating loss. Note that the net operating loss must be applied to the earlier year first and then brought forward to the next year. If any of the NOL remains after reducing taxable income to zero in the two previous years, the remainder is carried forward to future years as a net operating loss carryforward.

During 2021, American Property and Casualty Insurance Corporation reported a net operating loss of \$120 million for financial reporting and tax purposes. The enacted tax rate is 25% for 2021. Taxable income, tax rates, and income taxes paid in the two previous years were as follows:

	Taxable Income	Tax Rate	Income Taxes Paid
2019	\$20 million	20%	\$ 4 million
2020	\$60 million	25%	\$15 million

Here's how the income tax benefit of the net operating loss carryback and the net operating loss carryforward is determined:

(\$ in millions)	Prior Years		Current Year 2021	Future Deductible Amounts (total)
	2019	2020		
Net operating loss			\$(120)	
NOL carryback	\$(20)	\$(60)	80	
NOL carryforward			40	\$ 40
Taxable income (tax return)			\$ 0	
Enacted tax rate	20%	25%	25%	25%
Tax refund	<u>\$ (4)</u>	<u>\$ (15)</u>	<u>\$ 0</u>	<u>\$ 10</u>
Deferred tax asset				

- Step 1: Tax refund: \$19
- Step 2: DTA end bal: \$10
- Step 3: DTA change: \$10
- Step 4: Tax exp plug: \$29

Deferred Tax Asset	
0	
10	
10	

Journal Entry at the End of 2021

Income tax refund receivable (\$4 + \$15, determined above).....	19	
Deferred tax asset (determined above)	10	
Income tax expense (to balance).....		29

(continued)

(concluded)

American's income statement would include the following:

	(\$ in millions)
Operating loss before income taxes	\$(120)
Income tax benefit:	
Current: Tax refund from NOL carryback	\$19
Deferred: Tax savings from NOL carryforward.....	10
	<u>29</u>
Net loss	<u>\$ (91)</u>

The income tax benefit (reduction in tax expense) of both a net operating loss carryback and a net operating loss carryforward is recognized for accounting purposes in the year the NOL occurs. The net after-tax loss reflects the reduction of past taxes from the NOL carryback and future tax savings that the NOL carryforward is expected to create. In this example, the income tax benefit (\$29 million) is less than it was when we assumed a carryforward only (\$30 million; see Illustration 16–13A). This is because the tax rate in one of the carryback years (20% in 2019) was lower than the carryforward rate (25%).

Financial Statement Presentation

Balance Sheet Classification

All deferred tax liabilities, deferred tax assets, and any valuation allowance against deferred tax assets are classified as noncurrent in the balance sheet.⁸ If these deferred tax accounts relate to the same tax-paying component of the company and the same tax jurisdiction, they are netted against each other and shown as a single net number in the balance sheet. For example, a company with a deferred tax liability of \$10 million, a deferred tax asset of \$5 million, and a valuation allowance of \$2 million would show a net noncurrent deferred tax liability of \$7 million [\$10 million – (\$5 million – \$2 million)].

• LO16–8

Sometimes components of a single company are viewed as different companies for tax purposes, or pay tax in different jurisdictions. If deferred tax liabilities and assets relate to components of a company that are separate for tax purposes, or relate to different tax jurisdictions, they should not be offset. So, in the prior illustration, if the deferred tax assets (and related valuation allowance) applied to a separate tax jurisdiction from the deferred tax liabilities, the company would show a noncurrent deferred tax liability of \$10 million and a noncurrent deferred tax asset of \$3 million (\$5 million – \$2 million).

Disclosure Notes

We've already seen many of the disclosures that companies have to present in the tax note, but there are a few we haven't yet covered.

INCOME TAX EXPENSE Illustration 16–7A shows **Shoe Carnival's** disclosure of current tax payable, deferred tax, and tax expense. More generally, disclosure notes should indicate the following:

- Current portion of the tax expense (or tax benefit); that's new tax payable this period.
- Deferred portion of the tax expense (or tax benefit), with separate disclosure of amounts attributable to:
 - Portions that do not include the effect of separately disclosed amounts.
 - Operating loss carryforwards.

⁸Prior to 2017, companies were required to classify deferred tax assets and liabilities as current or noncurrent. To simplify presentation, the FASB required that all deferred tax items be classified as noncurrent when it issued "Balance Sheet Classification of Deferred Taxes," *Accounting Standards Update No. 2015–17: (Topic 740)* (Norwalk, Conn.: FASB, 2015).

- Adjustments due to changes in tax laws or rates.
- Adjustments to the beginning-of-the-year valuation allowance due to revised estimates.
- Tax credits.

Additional Consideration

Throughout this chapter, we have used a single journal entry to record entries for tax payable, deferred tax accounts, and tax expense. As an alternative, we could record two journal entries that separate (a) the current portion of the tax expense and (b) the deferred portion of the tax expense.

For example, in Illustration 16–12A, we recorded tax expense in a single journal entry:

December 31, 2021

Income tax expense	50	
Deferred tax asset	3	
Deferred tax liability		6
Income tax payable		47

Instead, we could have separately recorded the current and deferred tax expense:

December 31, 2021

Current income tax expense	47	
Income tax payable		47
Deferred income tax expense	3	
Deferred tax asset	3	
Deferred tax liability		6

Throughout the chapter, we demonstrated the simpler approach, but using two entries provides the same result.

DEFERRED TAX ASSETS AND DEFERRED TAX LIABILITIES Illustration 16–7B shows **Shoe Carnival**'s disclosure of its deferred tax assets and deferred tax liabilities. It shows a total net deferred tax asset of \$9,600 thousand, which would appear in its January 28, 2017, balance sheet. More generally, companies must disclose the following:

- Total of all deferred tax liabilities.
- Total of all deferred tax assets.
- Total valuation allowance recognized for deferred tax assets.
- Net change in the valuation allowance.
- Approximate tax effect of each type of temporary difference (and carryforward).

EFFECTIVE TAX RATE RECONCILIATION Illustration 16–10 shows **Shoe Carnival**'s effective tax rate reconciliation. Companies are required to provide that reconciliation, indicating the amount and nature of each significant reconciling item.

NET OPERATING LOSS (NOL) CARRYFORWARDS Companies must disclose the amounts of any NOL carryforwards, as well as any applicable expiration dates. As indicated previously, NOLs arising in tax years beginning after December 31, 2017, can be carried forward indefinitely for federal taxes, but sometimes there are expiration dates that apply to older NOLs, to other unusual circumstances, or with respect to state or local taxes.

PART D

Coping with Uncertainty in Income Taxes

As you might imagine, most companies strive to legitimately reduce their overall tax burden and to reduce or delay cash outflows for taxes. However, even without these efforts to reduce taxes, most companies' tax returns will include many tax positions that are subject

to multiple interpretations. That is, the position management takes with respect to an element of tax expense might differ from the position the IRS or other taxing authorities might take on that same item. It can take many years to resolve uncertainty about whether management’s tax positions will be challenged and, if challenged, whether those positions will be upheld. How should we account for such uncertain tax positions? Should we assume management will prevail, or assume that questioned positions will be disallowed and the company ultimately will owe more tax?

• LO16–9

For example, assume that Derrick Company claims on its tax return a particular deduction it believes is legitimate, and that position saves the company \$8 million in 2021 income taxes. Derrick knows that, historically, the IRS has challenged many deductions of this type. Since tax returns usually aren’t examined for one, two, or more years, uncertainty exists.

TWO-STEP DECISION PROCESS To deal with that uncertainty, companies are only allowed to reduce tax expense (recognize a tax benefit) for a questionable position if it is “more likely than not” (defined as a greater than 50% chance) that the position will be sustained if challenged.⁹ Guidance also prescribes how to *measure* the amount to be recognized if, in fact, it can be recognized. The decision, then, is a “two-step” process.

- Step 1.** A tax benefit may be reflected in the financial statements only if it is “more likely than not” that the company will be able to sustain the tax position, based on its technical merits.
- Step 2.** A tax benefit should be measured as the largest amount of benefit that is “cumulatively greater than 50 percent likely to be realized” (demonstrated later).

For the step 1 decision as to whether the position can be sustained, companies must assume that the position will be reviewed by the IRS or other taxing authority and litigated to the “highest court possible,” and that the taxing authority has knowledge of all relevant facts.

NOT “MORE LIKELY THAN NOT” Let’s say that in the step 1 decision, Derrick believes the more-likely-than-not criterion is *not* met. In that case, none of the tax benefit (reduction in tax expense) can be recorded in 2021, and income tax expense is recorded at the same amount as if the tax deduction was not taken.

If there’s a 50% chance or less of the company’s position being sustained on examination, tax expense can’t be reduced to reflect the tax benefit.

Suppose, for instance, that Derrick’s current income tax payable is \$24 million after being reduced by the full \$8 million tax benefit.¹⁰ If it’s *more likely than not* that the tax benefit isn’t sustainable upon examination, the benefit can’t be recognized as a reduction of tax expense. So, Derrick would record (a) current income tax payable that reflects the entire \$8 million benefit of the deduction, (b) an additional tax liability that represents the obligation to pay an additional \$8 million of taxes under the assumption that the deduction ultimately will not be upheld, and (c) tax expense as if the deduction had never been taken.

	(\$ in millions)
Income tax expense (without \$8 tax benefit)	32
Income tax payable (with \$8 tax benefit)	24
Liability—uncertain tax positions	8

The \$8 million liability is recognized to account for the fact that it is probable that tax officials will disallow the tax treatment used to compute income tax payable.

The \$8 million difference is the tax that Derrick didn’t pay because Derrick took the deduction. That amount is potentially due if the deduction is not upheld later. Because the ultimate outcome probably won’t be determined within the upcoming year, the *Liability—uncertain tax positions* is reported as a long-term liability unless it’s known to be current.¹¹

⁹FASB ASC 740: Income Taxes—Overall.

¹⁰For illustration, if pretax accounting income is \$128 million, the tax rate is 25%, and the questionable deduction is \$32 million, income tax payable would be $(\$128 \text{ million} - \$32 \text{ million}) \times 25\% = \24 million .

¹¹If a company has any deferred tax assets from net operating loss carryforwards, it generally nets the liability for uncertain tax positions against those deferred tax assets for presentation in the balance sheet, rather than presenting the liability separately. Why? The liability indicates that future tax will be *paid*, and the operating loss carryforward indicates that future tax will be *saved*, so the two are netted.

MEASURING THE TAX BENEFIT Now, let's say that even though Derrick is aware of the IRS's tendency to challenge deductions of this sort, management believes it *is* more likely than not that the position will be upheld if later challenged. Since Derrick has determined in step 1 that yes, a tax benefit can be recognized, it now needs to decide how much. That's step 2.

Suppose the following table represents management's estimates of the likelihood of various amounts of tax benefit that would be upheld:

Likelihood Table (\$ in millions)

Amount of the tax benefit that management expects to be sustained	\$8	\$7	\$6	\$5	\$4
Percentage likelihood that the tax position will be sustained at this level	10%	20%	25%	25%	20%
Cumulative probability that at least that much tax position will be sustained	10%	30%	55%	80%	100%

The largest amount that has a cumulative greater-than-50%-chance of being realized is \$6 million (10% + 20% + 25% = 55%).

The amount of tax benefit that Derrick can recognize in the financial statements (reduce tax expense) is **\$6** million because it represents the largest amount of benefit that is more likely than not (greater than 50% probability) to be sustained. So, Derrick would record (a) current income tax payable that reflects the entire \$8 million benefit of the deduction, (b) an additional tax liability that represents the obligation to pay an additional \$2 million of taxes under the assumption that **\$6** million of tax benefit ultimately will be upheld, and (c) tax expense as if there is a **\$6** million tax benefit.

	(\$ in millions)
Income tax expense (with \$6 tax benefit)	26
Income tax payable (with \$8 tax benefit)	24
Liability—uncertain tax positions (\$8 – \$6)	2

Only \$6 million of the tax benefit is recognized in income tax expense.

In summary, the highest amount Derrick might have to pay is the full \$8 million of tax previously avoided because of the 2021 deduction; the least amount, of course, is zero. The most likely amount (the largest amount of benefit that is cumulatively greater than 50 percent likely to be realized) is **\$6** million. Therefore, the most likely additional liability is \$2 million (\$8 – **\$6** = **\$2**). That's the amount we record as a *Liability—uncertain tax positions*, along with the current income tax payable of \$24 million.

RESOLUTION OF THE UNCERTAINTY Now let's consider what happens in the future, when the uncertainty associated with the tax position has been resolved. We'll consider three scenarios. Note that, in each scenario, the "Liability—uncertain tax positions" gets reduced to zero in the period in which the uncertainty is resolved.

- Worst case scenario.** The entire position is disallowed, such that Derrick owes \$8 million tax (plus any interest and penalties, which we are ignoring).

	(\$ in millions)
Income tax expense	6
Liability—uncertain tax positions	2
Income tax payable (or cash)	8

- Best case scenario.** The entire position is upheld, so Derrick owes no additional tax.

	(\$ in millions)
Liability—uncertain tax positions	2
Income tax expense	2

- Expected scenario.** The \$6 million position is allowed as expected, so Derrick owes the expected \$2 million tax (plus any interest and penalties, which we are ignoring).

	(\$ in millions)
Liability—uncertain tax positions	2
Income tax payable (or cash)	2

Companies are required to include in the disclosure notes a clear reconciliation of the beginning and ending balance of their liability for unrecognized tax benefits. As an example, Illustration 16–14 includes an excerpt from the tax note of **Staples, Inc.** for its fiscal year ended January 28, 2017.

The following summarizes the activity related to the Company's unrecognized tax benefits, including those related to discontinued operations (\$ in millions):

	2016	2015	2014
Balance at beginning of fiscal year	\$ 136	\$216	\$281
Additions for tax positions related to current year	30	19	22
Additions for tax positions of prior years	8	5	36
Reductions for tax positions of prior years	(8)	(5)	(88)
Reduction for statute of limitations expiration	(22)	(69)	(17)
Settlements	(7)	(30)	(18)
Balance at end of fiscal year	<u>\$ 137</u>	<u>\$ 136</u>	<u>\$216</u>

Source: Staples, Inc.

Illustration 16–14
Disclosure of Deferred Taxes—Staples, Inc.
Real World Financials

Additional Consideration

The Balance Sheet Focus of Income Tax Accounting. The way we account for income taxes is a useful example of the FASB's balance sheet emphasis. Rather than calculating tax expense directly, it always is calculated as whatever amount is implied by the combination of income tax payable and the changes that occurred during the period in deferred tax assets, deferred tax liabilities, the valuation allowance for deferred tax assets, and the liability for uncertain tax positions. In fact, we can summarize virtually everything in this chapter by visualizing the journal entry implied by the changes in those accounts and applying our 4-step process. Let's draw some T-accounts to see how that works:

	Deferred Tax Assets		Val. Allowance—Deferred Tax Assets		Deferred Tax Liabilities		Liability for Uncertain Tax Positions	
Beg. bal.	S			U		W		Y
	B	or B	C	or C	D	or D	E	or E
End. Bal.	T			V		X		Z

- With these T-accounts in mind, think of a company's tax accounting as including the following steps:
- Step 1:** Determine income tax payable (tax rate times taxable income). We'll call that number "A."
 - Step 2:** Determine **T**, **V**, **X**, and **Z**, the ending balances needed in the tax-related balance sheet accounts, as we do in the chapter.
 - Step 3:** Determine whatever changes in those accounts, **B**, **C**, **D**, and **E**, are needed to reach their required ending balances. We already know the beginning balances in those accounts because they are the same as the ending balances reported in the prior period.
 - Step 4:** Finally, calculate tax expense, **F**, as the amount necessary to balance the journal entry. For example:

Tax expense (to balance)	F
Deferred tax asset (amount needed to achieve needed balance)	B
Deferred tax liability (amount needed to achieve needed balance)	D
Valuation allowance—deferred tax asset (amount needed to achieve needed balance)	C
Liability—uncertain tax positions (amount needed to achieve needed balance)	E
Taxes payable (tax rate x taxable income)	A

(continued)

(concluded)

Tax expense (F) always is a “plug” figure to make the journal entry balance. Usually the plug is a debit, but sometimes its a credit to recognize a tax benefit. Depending on a company’s particular circumstances, a debit or a credit could be required to reach the appropriate ending balance in each of the tax-related balance sheet accounts, **B**, **C**, **D**, and **E**. To the extent these accounts changed because of other transactions (for example, an acquisition), we would account for those effects first and then determine the amounts necessary to reach the appropriate ending balances.

Intraperiod Tax Allocation

● LO16–10

You should recall that an income statement reports discontinued operations separately from income (or loss) from continuing operations to better allow the user of the statement to isolate irregular components of net income from those that represent recurring business operations.¹² This helps the user to more accurately project future operations. Because taxes are an important part of operations, the total income tax expense for a reporting period should be allocated between continuing and discontinued operations.

The related tax effect can be either a tax expense or a tax benefit. A gain on disposal of a discontinued operation increases taxable income, so it produces tax expense, while a loss on disposal reduces taxable income, so it produces a tax benefit.¹³ For example, assume a company has \$84 million of pretax income from continuing operations and \$16 million of pretax income from discontinued operations. Assuming a 25% tax rate, the company would report the gain from discontinued operations net of tax in its income statement:

	(\$ in millions)
Income before tax and discontinued operation	\$84
Less: Income tax expense ($\$84 \times 25\%$)	(21)
Income before discontinued operations	63
Income from discontinued operations (net of \$4 income tax expense)	12
Net income	<u>\$75</u>

Similarly, if instead the company has \$116 million of pretax income from continuing operations and \$16 million of pretax *loss* from discontinued operations, the company would report the loss from discontinued operations net of tax in its income statement:

	(\$ in millions)
Income before tax and discontinued operation	\$116
Less: Income tax expense ($\$116 \times 25\%$)	(29)
Income before discontinued operations	87
Loss from discontinued operations (net of \$4 income tax benefit)	(12)
Net income	<u>\$ 75</u>

Allocating income taxes within a particular reporting period is intraperiod tax allocation.

Allocating income taxes among financial statement components in this way within a particular reporting period is referred to as *intraperiod tax allocation*. You should recognize the contrast with *interperiod* tax allocation—terminology sometimes used to describe allocating income taxes between two or more reporting periods by recognizing deferred tax assets and liabilities. While interperiod tax allocation is challenging and controversial, intraperiod tax allocation is relatively straightforward and substantially free from controversy.

¹²Until recently, GAAP included another category, extraordinary items, for which income was shown separately net of tax. The FASB eliminated the concept of extraordinary items starting in 2016 when it issued “Income Statement—Extraordinary and Unusual Items,” *Accounting Standards Update No. 2015-01*: (Subtopic 225-20) (Norwalk, Conn.: FASB, 2015).

¹³As discussed in Chapter 4, companies separately report (a) any gain or loss from running a discontinued operation prior to disposal, and (b) any gain or loss on disposal of a discontinued operation’s assets. For simplicity we report a combined number.

OTHER COMPREHENSIVE INCOME Allocating income tax expense or benefit also applies to components of comprehensive income reported separately from net income. You should recall from our discussions in Chapters 4 and 12 that “comprehensive income” extends our view of income beyond conventional net income to include four types of gains and losses that traditionally haven’t been included in income statements. The other comprehensive income (OCI) items relate to investments, postretirement benefit plans, derivatives, and foreign currency translation. When these OCI items are reported in a statement of comprehensive income and shown in accumulated other comprehensive income (AOCI) in shareholders’ equity, they are reported net of their respective income tax effects.¹⁴

Additional Consideration

The huge federal tax rate reduction that occurred in 2017 created an interesting situation: “stranded tax effects.” Here’s what happened. Let’s say a company had a large unrealized gain from an investment in a previous year. As you learned in Chapter 12, that gain would be reflected in AOCI, net of related tax expense. Because tax is not payable until an investment is sold, this gain would have created a deferred tax liability. So, when the tax rate was reduced by Congress, the company reduced its deferred tax liability to reflect the lower tax to be paid upon sale. But that fixed only one of two accounts affected. The gain sitting in AOCI was reduced by tax expense calculated under the old, high tax rate, and now, the extra tax above the newer, low tax rate was “stranded” in AOCI. Unless an adjustment was made, that inappropriately high tax would be reflected in earnings in some future period when the investment is sold. To solve this problem, the FASB issued ASU 2018-02,¹⁵ which allowed companies to make a one-time adjustment that restated AOCI to reflect the new tax rate, with an offsetting entry to retained earnings.

Decision Makers’ Perspective

Income taxes represent one of the largest expenditures that many firms incur. When state, local, and foreign taxes are considered along with federal taxes, the total bite can easily consume 25% to 30% of income. A key factor, then, in any decision that managers make should be the impact on taxes. Decision makers must constantly be alert to options that minimize or delay taxes. During the course of this chapter, we encountered situations that are not taxable (for example, interest on governmental bonds) and those that delay taxes (for example, using accelerated depreciation on the tax return). Astute managers make investment decisions that consider the tax effect of available alternatives. Similarly, outside analysts should consider how effectively management has managed its tax exposure and monitor the current and prospective impact of taxes on their interests in the company.

Consider an example. Large, capital-intensive companies with significant investments in buildings and equipment often have sizable deferred tax liabilities from temporary differences in depreciation. If new investments cause the level of depreciable assets to at least remain the same over time, the deferred tax liability can be effectively delayed indefinitely. Investors and creditors should be watchful for situations that might cause material pay-downs of that deferred tax liability, such as impending plant closings or investment patterns that suggest declining levels of depreciable assets. Unexpected additional tax expenditures can severely diminish an otherwise attractive prospective rate of return.

You also learned in the chapter that deferred tax assets represent future tax benefits. One such deferred tax asset that often reflects sizable future tax deductions is a net operating loss (NOL) carryforward. When a company has a large net operating loss carryforward, a large amount of future income can be earned tax-free. This tax shelter can be a huge advantage, not to be overlooked by careful analysts.

Investment patterns and other disclosures can indicate potential tax expenditures.

¹⁴This can be accomplished by (a) presenting components of other comprehensive income net of related income tax effects or (b) presenting a single tax amount for all, and individual components shown before income tax effects with disclosure of the income taxes allocated to each component either in a disclosure note or parenthetically in the statement.

¹⁵“Income Statement—Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated other Comprehensive Income” *Accounting Standards Update No. 2018-02*: (Norwalk, Conn.: FASB, 2018).

Net operating loss carryforwards can indicate significant future tax savings.

Deferred tax liabilities increase risk as measured by the debt to equity ratio.

Managers and outsiders are aware that increasing debt increases risk. Deferred tax liabilities increase reported debt. As discussed and demonstrated in the previous chapter, financial risk often is measured by the debt to equity ratio, total liabilities divided by shareholders' equity. Other things being equal, the higher the debt to equity ratio, the higher the risk. Should the deferred tax liability be included in the computation of this ratio? Some analysts will argue that it should be excluded, observing that in many cases the deferred tax liability account remains the same or continually grows larger. Their contention is that no future tax payment will be required. Others, though, contend that is no different from the common situation in which long-term borrowings tend to remain the same or continually grow larger. Research supports the notion that deferred tax liabilities are, in fact, viewed by investors as real liabilities and investors appear to discount them according to the timing and likelihood of the liabilities' settlement.¹⁶

Whenever managerial discretion can materially impact reported earnings, analysts should be wary of the implications for earnings quality assessment. We indicated earlier that the decision as to whether or not a valuation allowance is used, as well as the size of the allowance, is largely discretionary. Research indicates that an increase in a valuation allowance provides useful information, signaling that management is pessimistic about its ability to generate enough future income to benefit from the tax deductions provided by deferred tax assets.¹⁷ However, research also indicates that some companies do use the deferred tax asset valuation allowance account to manage earnings upward to meet analyst forecasts.¹⁸ More generally, a survey of nearly 600 corporate tax executives provides evidence that most top management care at least as much about tax expense and its effect on earnings per share as they do about the actual cash taxes that are paid by their companies, and that an important consideration in tax planning is increasing earnings per share.¹⁹ Alert investors should not overlook the potential for companies using tax expense to manage their earnings.

In short, managers who make decisions based on estimated pretax cash flows and outside investors and creditors who make decisions based on pretax income numbers are perilously ignoring one of the most important aspects of those decisions. Taxes should be a primary consideration in any business decision. ●

Concept Review Exercise

MULTIPLE DIFFERENCES AND NET OPERATING LOSS

Mid-South Cellular Systems began operations in 2021. In 2022, its second year of operations, pretax accounting income was \$88 million, which included the following amounts:

1. Insurance expense of \$14 million, representing one-third of a \$42 million, three-year casualty and liability insurance policy that is deducted for tax purposes entirely in 2022.
2. Insurance expense for a \$2 million premium on a life insurance policy that guarantees a \$50 million payment upon the death of the company president. The premium is not deductible for tax purposes.
3. An asset with a four-year useful life was acquired last year. It is depreciated by the straight-line method in the income statement. MACRS is used on the tax return, causing deductions for depreciation to be more than straight-line depreciation the first two years but less than straight-line depreciation the next two years (\$ in millions):

¹⁶See Dan Givoly and Carla Hayn, "The Valuation of the Deferred Tax Liability: Evidence from the Stock Market," *The Accounting Review*, April 1992, pp. 394–410.

¹⁷See Greg Miller and Doug Skinner, "Determinants of the Valuation Allowance for Deferred Tax Assets under SFAS No. 109," *The Accounting Review*, April 1998, pp. 213–233.

¹⁸See Sonia O. Rego and Mary Margaret Frank, "Do Managers Use the Valuation Allowance Account to Manage Earnings Around Certain Earnings Targets?" *Journal of the American Taxation Association* 28 (1), 2006, pp. 43–65.

¹⁹See John Graham, Michelle Hanlon, Terry Shevlin, and Nemit Shroff, "Incentives for Tax Planning and Avoidance: Evidence from the Field," *The Accounting Review*, May 2014, pp. 999–1023.

	Income Statement	Tax Return	Difference
2021	\$150	\$198	\$ (48)
2022	150	264	(114)
2023	150	90	60
2024	150	48	102
	<u>\$600</u>	<u>\$600</u>	<u>0</u>

4. Equipment rental revenue of \$80 million is reported in the income statement, which does not include an additional \$20 million of advance payment for 2023 rent. Because tax law requires that advance rent be taxed when it is received, \$100 million of rental revenue is correctly reported on the 2022 income tax return.

The enacted tax rate is 25%.

Required:

1. Prepare the journal entry to record Mid-South Cellular’s income taxes for 2022.
2. What is Mid-South Cellular’s 2022 net income?

Solution

1. Prepare the journal entry to record Mid-South Cellular’s income taxes for 2022.

(\$ in millions)	Current Year	Future Taxable (Deductible) Amounts		Future Taxable	Future
	2022	2023	2024	Amounts (total)	Deductible Amounts (total)
Pretax accounting income	\$ 88				
Permanent difference:					
Life insurance premium	2				
Temporary difference:					
Prepaid insurance	(28)	\$14	\$ 14	\$ 28	
Depreciation	(114)	60	102	162	
Advance rent received	<u>20</u>	(20)			\$ (20)
Net operating loss (tax return)	\$(32)				
NOL carryforward	<u>32</u>				(32)
	<u>\$ 0</u>			<u>\$190</u>	<u>\$(52)</u>
Enacted tax rate	25%			25%	25%
Tax payable	<u>\$ 0</u>			<u>\$47.5</u>	<u>\$(13)</u>

Deferred Tax Liability		Deferred Tax Asset	
	12*		0
	35.5		13
	47.5		13

Journal Entry at the End of 2021

Income tax expense (to balance)	22.5
Deferred tax asset (determined above)	13.0
Deferred tax liability (determined above)	35.5

*The opening balance of the deferred tax liability relates to the temporary difference for depreciation in 2021, and is $\$48 \times 25\% = \12 .

- Step 1: Tax payable: \$0
- Step 2: DTA end bal: \$13.0
DTL end bal: \$47.5
- Step 3: DTA change: \$13.0
DTL change: \$35.5
- Step 4: Tax exp plug: \$22.5

2. What is Mid-South Cellular’s 2022 net income?

Pretax accounting income	\$88.0
Income tax expense	<u>(22.5)</u>
Net income	<u><u>\$65.5</u></u>

Financial Reporting Case Solution



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- 1. Explain to Laura how differences between financial reporting standards and income tax rules might cause the income tax expense and the amount of income tax paid to differ.** (p. 909) The differences in the rules for computing taxable income and those for financial reporting often cause amounts to be included in taxable income in a different year(s) from the year in which they are recognized for financial reporting purposes. Temporary differences result in future taxable or deductible amounts when the temporary differences reverse. As a result, tax payments frequently occur in years different from the years in which the revenues and expenses that cause the taxes are generated.
- 2. How might a reduction in future tax rates affect deferred tax assets in a way that reduces current net income?** (pp. 933 and 935) Deferred tax assets capture anticipated reductions in future tax bills that result from the company being able to use tax deductions that have arisen from its operations but not yet been taken. For example, a company may have recognized \$100 of warranty expense in the financial statements but won't report the expense on the tax return until future warranty costs are actually incurred. The company knows it has a \$100 tax deduction coming when those costs are incurred, so it recognizes an asset for the anticipated tax savings arising from that deduction. Given a tax rate of 25%, the company would show a deferred tax asset of $25\% \times \$100 = \25 . Now imagine the company learns that future tax rates have been reduced to 20%. In that case, the future \$100 tax deduction will save only \$20 of taxes, so the value of its deferred tax asset has declined by \$5. In the period the future tax rate change is enacted, the company is required to include in tax expense and therefore net income all of the effects of the tax rate change on existing deferred tax assets and liabilities. That's what happened in 2017 to companies that had big deferred tax assets when Congress enacted legislation that dramatically reduced future corporate tax rates.
- 3. What are net operating loss carryforwards and how can they provide cash savings?** (pp. 929 and 938) When a company has negative taxable income on its tax return, it is permitted to carry that net operating loss forward and offset it against taxable income in future years and to not pay tax in those years. Such NOL carryforwards can produce valuable tax savings in those future years. ●

The Bottom Line


- **LO16-1** Temporary differences between pretax accounting income and taxable income produce future taxable or deductible amounts, which give rise to deferred tax liabilities and deferred tax assets. Consistent with the accrual concept, tax expense includes not only an amount associated with current tax payable, but also includes a deferred amount associated with changes in deferred tax assets and liabilities. To calculate tax expense, we follow a four-step process: (1) calculate tax payable, (2) calculate the ending balances of any deferred tax accounts or any liability for uncertain tax positions, (3) calculate changes in those accounts, and (4) plug for tax expense. (p. 909)
- **LO16-2** When the future tax consequence of a temporary difference will be to increase taxable income relative to pretax accounting income, future taxable amounts are created. The future tax consequences associated with those amounts are recognized as deferred tax liabilities. (p. 912)
- **LO16-3** When the future tax consequence of a temporary difference will be to decrease taxable income relative to pretax accounting income, future deductible amounts are created. The future tax consequences associated with those amounts are recognized as deferred tax assets. (p. 919)
- **LO16-4** Deferred tax assets are recognized for all deductible temporary differences. However, a deferred tax asset is then reduced by a valuation allowance if it is more likely than not that some portion or all of the deferred tax asset will not be realized. (p. 925)
- **LO16-5** Permanent differences between the reported amount of an asset or liability in the financial statements and its tax basis are those caused by transactions and events that under existing tax law will never affect taxable income or taxes payable. These are disregarded when determining both the tax payable currently, the deferred tax effect, and tax expense. (p. 929)

- **LO16-6** Deferred tax liabilities (and assets) are calculated by multiplying future taxable (and deductible) amounts by the currently enacted tax rates that will apply to them. If a change in a tax law or rate occurs, the deferred tax liability or asset is adjusted to reflect the change in the amount to be paid or recovered. That effect is reflected in tax expense in the year of the enactment of the change in the tax law or rate. (*p. 933*)
- **LO16-7** Tax laws permit a net operating loss (NOL) to be used to reduce taxable income in other, profitable years. For most companies, NOLs can be carried forward indefinitely and used to offset up to 80% of the taxable income reported in each future year. Some farm-related companies and insurance companies also are allowed to carry NOLs back two years to offset taxable income in those years and generate an immediate tax refund. The tax benefit of an NOL carryforward or carryback is recognized in the year of the loss. (*p. 937*)
- **LO16-8** Deferred tax assets and deferred tax liabilities are classified as noncurrent. If they relate to the same taxable component of the company and the same tax jurisdiction, they are netted against each other and shown as a single noncurrent net deferred tax asset or liability. Otherwise they are not offset against each other for purposes of balance sheet presentation. Disclosure notes should reveal additional relevant information pertaining to deferred tax amounts reported on the balance sheet, the components of income tax expense, and available operating loss carryforwards. (*p. 941*)
- **LO16-9** A tax benefit associated with an uncertain tax position may be reflected in the financial statements only if it is “more likely than not” that the company will be able to sustain the tax return position, based on its technical merits. It should be measured as the largest amount of benefit that is cumulatively greater than 50 percent likely to be realized. (*p. 943*)
- **LO16-10** Through intraperiod tax allocation, the total income tax expense for a reporting period is allocated among the financial statement items that gave rise to it: specifically, income (or loss) from continuing operations, discontinued operations, and prior period adjustments (to the beginning retained earnings balance). (*p. 946*)
- **LO16-11** Despite the similar approaches for accounting for taxation under IFRS and U.S. GAAP, differences in reported amounts for deferred taxes are among the most frequent between the two approaches because a great many of the *nontax* differences between IFRS and U.S. GAAP affect deferred taxes. (*p. 931*) ●

Questions For Review of Key Topics

- Q 16-1** A member of the board of directors is concerned that the company’s income statement reports income tax expense of \$12.3 million, but the income tax obligation to the government for the year is only \$7.9 million. How might the corporate controller explain this difference?
- Q 16-2** A deferred tax liability (or asset) is described as the tax effect of the temporary difference between the financial statement carrying amount (book value) of an asset or liability and its tax basis. Explain this tax effect of the temporary difference. How might it produce a deferred tax liability? A deferred tax asset?
- Q 16-3** Sometimes a temporary difference will produce future deductible amounts. Explain what is meant by future deductible amounts. Describe two general situations that have this effect. How are such situations recognized in the financial statements?
- Q 16-4** The benefit of future deductible amounts can be achieved only if future income is sufficient to take advantage of the deferred deductions. For that reason, not all deferred tax assets will ultimately be realized. How is this possibility reflected in the way we recognize deferred tax assets?
- Q 16-5** Temporary differences result in future taxable or deductible amounts when the related asset or liability is recovered or settled. Some differences, though, are not temporary. What events create permanent differences? What effect do these have on the determination of income taxes payable? Of deferred income taxes? Of tax expense?
- Q 16-6** Identify three examples of differences with no deferred tax consequences.
- Q 16-7** The income tax rate for Hudson Refinery has been 35% for each of its 12 years of operation. Company forecasters expect a much-debated tax reform bill to be passed by Congress early next year. The new tax measure would increase Hudson’s tax rate to 42%. When measuring this year’s deferred tax liability, which rate should Hudson use?
- Q 16-8** In late 2017 the federal tax rate for subsequent years was decreased from 35% to 21%. How would this affect an existing deferred tax liability? How would the change be reflected in net income?
- Q 16-9** A net operating loss occurs when tax-deductible expenses exceed taxable revenues. Tax laws permit the net operating loss to be used to reduce taxable income in future profitable years. How are loss carryforwards recognized for financial reporting purposes?

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- Q 16-10** How are deferred tax assets and deferred tax liabilities reported in a classified balance sheet?
- Q 16-11** Additional disclosures are required pertaining to deferred tax amounts reported on the balance sheet. What are the needed disclosures?
- Q 16-12** Additional disclosures are required pertaining to the income tax expense reported in the income statement. What are the needed disclosures?
- Q 16-13** Accounting for uncertainty in tax positions is prescribed by GAAP in FASB ASC 740-10: Income Taxes—Overall (previously *FASB Interpretation No. 48 (FIN 48)*). Describe the two-step process required by GAAP.
- Q 16-14** What is intraperiod tax allocation?
-  **IFRS Q 16-15** IFRS and U.S. GAAP follow similar approaches to accounting for taxation. Nevertheless, differences in reported amounts for deferred taxes are among the most frequent between IFRS and U.S. GAAP. Why?

Brief Exercises



- BE 16-1**
Temporary difference
● LO16-1, LO16-2
A company reports 2021 *pretax accounting income* of \$10 million, but because of a single temporary difference, *taxable income* is only \$7 million. No temporary differences existed at the beginning of the year, and the tax rate is 25%. Prepare the appropriate journal entry to record income taxes.
- BE 16-2**
Temporary difference; determine taxable income; determine deferred tax amount
● LO16-2
Kara Fashions uses straight-line depreciation for financial statement reporting and MACRS for income tax reporting. Three years after its purchase, one of Kara's buildings has a book value of \$400,000 and a tax basis of \$300,000. There were no other temporary differences and no permanent differences. Taxable income was \$4 million and Kara's tax rate is 25%. What is the deferred tax liability to be reported in the balance sheet? Assuming that the deferred tax liability balance was \$20,000 the previous year, prepare the appropriate journal entry to record income taxes this year.
- BE 16-3**
Temporary difference; determine taxable income; determine deferred tax amount for asset 100% depreciated in year of purchase
● LO16-2
Milo Manufacturing uses straight-line depreciation for financial statement reporting and is able to deduct 100% of the cost of equipment in the year the equipment is purchased for tax purposes. Four years after its purchase, one of Milo's manufacturing machines has a book value of \$600,000. There were no other temporary differences and no permanent differences. Taxable income was \$10 million and Milo's tax rate is 25%. What is the deferred tax liability to be reported in the balance sheet? Assuming that the deferred tax liability balance was \$175,000 the previous year, prepare the appropriate journal entry to record income taxes this year.
- BE 16-4**
Temporary difference
● LO16-1, LO16-3
A company reports *pretax accounting income* of \$10 million, but because of a single temporary difference, *taxable income* is \$12 million. No temporary differences existed at the beginning of the year, and the tax rate is 25%. Prepare the appropriate journal entry to record income taxes.
- BE 16-5**
Temporary difference; income tax payable given
● LO16-3
In 2021, Ryan Management collected rent revenue for 2022 tenant occupancy. For financial reporting, the rent is recorded as deferred revenue and then recognized as revenue in the period tenants occupy rental property. For tax reporting, the rent is taxed when collected in 2021. The deferred portion of the rent collected in 2021 was \$50 million. Taxable income is \$180 million in 2021. No temporary differences existed at the beginning of the year, and the tax rate is 25%. Prepare the appropriate journal entry to record income taxes in 2021.
- BE 16-6**
Temporary difference; income tax payable given
● LO16-3
Refer to the situation described in BE 16-5. Suppose the deferred portion of the rent collected was \$40 million at the end of 2022. Taxable income is \$200 million. Prepare the appropriate journal entry to record income taxes in 2022.

- BE 16-7**
Valuation allowance
● LO16-3, LO16-4

At the end of the year, the deferred tax asset account had a balance of \$4 million attributable to a temporary difference of \$16 million in a liability for estimated expenses. Taxable income is \$60 million. No temporary differences existed at the beginning of the year, and the tax rate is 25%. Prepare the journal entry(s) to record income taxes, assuming it is more likely than not that three-fourths of the deferred tax asset will not ultimately be realized.

- BE 16-8**
Valuation allowance
● LO16-3 LO16-4

VeriFone Systems is a provider of electronic card payment terminals, peripherals, network products, and software. In its 2015 annual report, the company reported deferred tax assets totaling about \$398 million. The company also reported valuation allowances totaling about \$332 million. What would motivate VeriFone to have a valuation allowance almost equal to its deferred tax assets?

- BE 16-9**
Temporary and permanent differences; determine deferred tax consequences
● LO16-2, LO16-3, LO16-5

Differences between pretax accounting income and taxable income were as follows during 2021:

	(\$ in millions)
Pretax accounting income	\$300
Permanent difference	(24)
	<u>276</u>
Temporary difference	(16)
Taxable income	<u>\$260</u>

The cumulative temporary difference as of the end of 2021 is \$40 million (also the future taxable amount). The enacted tax rate is 25%. What is the deferred tax asset or liability to be reported in the balance sheet?

- BE 16-10**
Calculate taxable income
● LO16-2, LO16-5

Shannon Polymers uses straight-line depreciation for financial reporting purposes for equipment costing \$800,000 and with an expected useful life of four years and no residual value. Assume that, for tax purposes, the deduction is 40%, 30%, 20%, and 10% in those years. Pretax accounting income the first year the equipment was used was \$900,000, which includes interest revenue of \$20,000 from municipal governmental bonds. Other than the two described, there are no differences between accounting income and taxable income. The enacted tax rate is 25%. Prepare the journal entry to record income taxes.

- BE 16-11**
Multiple tax rates
● LO16-6

J-Matt, Inc., had pretax accounting income of \$291,000 and taxable income of \$300,000 in 2021. The only difference between accounting and taxable income is estimated product warranty costs of \$9,000 for sales in 2021. Warranty payments are expected to be in equal amounts over the next three years (2022–2024) and will be tax deductible at that time. Recent tax legislation will change the tax rate from the current 25% to 20% in 2023. Determine the amounts necessary to record J-Matt's income taxes for 2021 and prepare the appropriate journal entry.

- BE 16-12**
Change in tax rate
● LO16-6

Superior Developers sells lots for residential development. When lots are sold, Superior recognizes income for financial reporting purposes in the year of the sale. For some lots, Superior recognizes income for tax purposes when the cash is collected. In 2020, Superior sold lots for \$20 million for which no cash was collected at the time of the sale. This cash will be collected equally over 2021 and 2022. The enacted tax rate was 40% at the time of the sale. In 2021, a new tax law was enacted, revising the tax rate from 40% to 25% beginning in 2022. Calculate the total amount by which Superior should change its deferred tax liability in 2021.

- BE 16-13**
Net operating loss carryforward
● LO16-7

During its first year of operations, **Nive.com** reported a net operating loss of \$15 million for financial reporting and tax purposes. The enacted tax rate is 25%. Prepare the journal entry to recognize the income tax benefit of the net operating loss.

- BE 16-14**
Net operating loss carryback
● LO16-7

Insure Corporation reported a net operating loss of \$25 million for financial reporting and tax purposes. Taxable income last year and the previous year, respectively, was \$20 million and \$15 million. The enacted tax rate each year is 25%. Assume that Insure qualifies as a type of company that is allowed to carry back an NOL to two prior taxable years, using the earliest year first. Prepare the journal entry to recognize the income tax benefit of the net operating loss.

- BE 16-15**
Tax uncertainty
● LO16-9

First Bank has some questions as to the tax-free nature of \$5 million of governmental bonds held in its investment portfolio. This amount is excluded from First Bank's taxable income of \$55 million. Management has determined that there is a 65% chance that the tax-free status of this entire amount of interest can't withstand scrutiny of taxing authorities. Assuming a 25% tax rate, what amount of income tax expense should the bank report?

- BE 16-16**
Intraperiod tax allocation
● LO16-10

Southeast Airlines had pretax earnings of \$65 million. Included in this amount is income from discontinued operations of \$10 million. The company's tax rate is 25%. What is the amount of income tax expense that Southeast would report in its income statement for continuing operations? How should the gain on disposal of a discontinued operation be reported?

Exercises

**E 16-1**

Temporary difference; taxable income given

- LO16-1, LO16-2, LO16-8

Alvis Corporation reports *pretax accounting income* of \$400,000, but due to a single temporary difference, *taxable income* is only \$250,000. At the beginning of the year, no temporary differences existed.

Required:

- Assuming a tax rate of 25%, what will be Alvis's net income?
- What will Alvis report in the balance sheet pertaining to income taxes?

E 16-2

Determine taxable income; determine prior year deferred tax amount

- LO16-2

On January 1, 2018, Ameen Company purchased major pieces of manufacturing equipment for a total of \$36 million. Ameen uses straight-line depreciation for financial statement reporting and MACRS for income tax reporting. At December 31, 2020, the book value of the equipment was \$30 million and its tax basis was \$20 million. At December 31, 2021, the book value of the equipment was \$28 million and its tax basis was \$12 million. There were no other temporary differences and no permanent differences. Pretax accounting income for 2021 was \$50 million.

Required:

- Prepare the appropriate journal entry to record Ameen's 2021 income taxes. Assume an income tax rate of 25%.
- What is Ameen's 2021 net income?

E 16-3

Determine taxable income; determine prior year deferred tax amount; 100% depreciation in year of purchase

- LO16-2

(This exercise is a variation of E 16-2, modified to have the asset fully depreciated in the year of purchase.) On January 1, 2018, Ameen Company purchased major pieces of manufacturing equipment for a total of \$36 million. Ameen uses straight-line depreciation for financial statement reporting and deducted 100% of the equipment's cost for income tax reporting in 2018. At December 31, 2020, the book value of the equipment was \$30 million. At December 31, 2021, the book value of the equipment was \$28 million. There were no other temporary differences and no permanent differences. Pretax accounting income for 2021 was \$50 million.

Required:

- Prepare the appropriate journal entry to record Ameen's 2021 income taxes. Assume an income tax rate of 25%.
- What is Ameen's 2021 net income?

E 16-4

Taxable income given; calculate deferred tax liability from book-tax difference

- LO16-2

Ayres Services acquired an asset for \$80 million in 2021. The asset is depreciated for financial reporting purposes over four years on a straight-line basis (no residual value). For tax purposes the asset's cost is depreciated by MACRS. The enacted tax rate is 25%. Amounts for pretax accounting income, depreciation, and taxable income in 2021, 2022, 2023, and 2024 are as follows:

	(\$ in millions)			
	2021	2022	2023	2024
Pretax accounting income	\$330	\$350	\$365	\$400
Depreciation on the income statement	20	20	20	20
Depreciation on the tax return	(25)	(33)	(15)	(7)
Taxable income	\$325	\$337	\$370	\$413

Required:

For December 31 of each year, determine (a) the temporary book-tax difference for the depreciable asset and (b) the balance to be reported in the deferred tax liability account.

E 16-5

Taxable income given; calculate deferred tax liability from book-tax difference; 100% depreciation in the year of purchase

- LO16-2

(This exercise is a variation of E 16-4, modified to have the asset fully depreciated in the year of purchase.) Ayres Services acquired an asset for \$80 million in 2021. The asset is depreciated for financial reporting purposes over four years on a straight-line basis (no residual value). Ayres deducted 100% of the asset's cost for income tax reporting in 2021. The enacted tax rate is 25%. Amounts for pretax accounting income, depreciation, and taxable income in 2021, 2022, 2023, and 2024 are as follows:

	(\$ in millions)			
	2021	2022	2023	2024
Pretax accounting income	\$330	\$350	\$365	\$400
Depreciation on the income statement	20	20	20	20
Depreciation on the tax return	(80)	(0)	(0)	(0)
Taxable income	\$270	\$370	\$385	\$420

Required:

For December 31 of each year, determine (a) the temporary book-tax difference for the depreciable asset and (b) the balance to be reported in the deferred tax liability account.

E 16-6

Temporary difference; income tax payable given

- LO16-3

In 2021, DFS Medical Supply collected rent revenue for 2022 tenant occupancy. For income tax reporting, the rent is taxed when collected. For financial statement reporting, the rent is recorded as deferred revenue and then recognized as revenue in the period tenants occupy the rental property. The deferred portion of the rent collected in 2021 amounted to \$300,000 at December 31, 2021. DFS had no temporary differences at the beginning of the year.

Required:

Assuming an income tax rate of 25% and 2021 income tax payable of \$950,000, prepare the journal entry to record income taxes for 2021.

E 16-7

Temporary difference; future deductible amounts; taxable income given

- LO16-3

Lance Lawn Services reports warranty expense by estimating the amount that eventually will be paid to satisfy warranties on its product sales. For tax purposes, the expense is deducted when the warranty work is completed. At December 31, 2021, Lance has a warranty liability of \$2 million and taxable income of \$75 million. At December 31, 2020, Lance reported a deferred tax asset of \$435,000 related to this difference in reporting warranties, its only temporary difference. The enacted tax rate is 25% each year.

Required:

Prepare the appropriate journal entry to record Lance's income tax provision for 2021.

E 16-8

Identify future taxable amounts and future deductible amounts

- LO16-2, LO16-3

Listed below are 10 causes of temporary differences. For each temporary difference, indicate (by letter) whether it will create future deductible amounts (D) or future taxable amounts (T).

Temporary Difference

-
- _____ 1. Accrual of loss contingency; tax-deductible when paid.
 - _____ 2. Newspaper subscriptions; taxable when cash is received, recognized for financial reporting when the performance obligation is satisfied.
 - _____ 3. Prepaid rent; tax-deductible when paid.
 - _____ 4. Accrued bond interest expense; tax-deductible when paid.
 - _____ 5. Prepaid insurance; tax-deductible when paid
 - _____ 6. Unrealized loss from recording investments at fair value; tax-deductible when investments are sold.
 - _____ 7. Warranty expense; estimated for financial reporting when products are sold; deducted for tax purposes when paid.
 - _____ 8. Advance rent receipts on an operating lease as the lessor; taxable when received.
 - _____ 9. Straight-line depreciation for financial reporting; accelerated depreciation for tax purposes.
 - _____ 10. Accrued expense for employee vacation days not yet taken; tax deductible when employee takes vacation in future.

E 16-9

Identify future taxable amounts and future deductible amounts

- LO16-2, LO16-3

(This is a variation of E 16-8, modified to focus on the balance sheet accounts related to the deferred tax amounts.)
Listed below are 10 causes of temporary differences. For each temporary difference indicate the balance sheet account for which the situation creates a temporary difference.

Temporary Difference

-
- _____ 1. Accrual of loss contingency; tax-deductible when paid.
 - _____ 2. Newspaper subscriptions; taxable when cash is received, recognized for financial reporting when the performance obligation is satisfied.
 - _____ 3. Prepaid rent; tax-deductible when paid.
 - _____ 4. Accrued bond interest expense; tax-deductible when paid.
 - _____ 5. Prepaid insurance; tax-deductible when paid
 - _____ 6. Unrealized loss from recording available-for-sale investments at fair value; tax-deductible when investments are sold.
 - _____ 7. Warranty expense; estimated for financial reporting when products are sold; deducted for tax purposes when paid.
 - _____ 8. Advance rent receipts on an operating lease as the lessor; taxable when received.
 - _____ 9. Straight-line depreciation for financial reporting; accelerated depreciation for tax purposes.
 - _____ 10. Accrued expense for employee vacation days not yet taken; tax deductible when employee takes vacation in future.

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E 16-10
Calculate income tax amounts under various circumstances

● LO16-2, LO16-3

Four independent situations are described below. Each involves future deductible amounts and/or future taxable amounts produced by temporary differences:

	(\$ in thousands)			
	Situation			
	1	2	3	4
Taxable income	\$84	\$216	\$196	\$260
Future deductible amounts	16		20	20
Future taxable amounts		16	16	28
Balance(s) at beginning of the year:				
Deferred tax asset	2		9	4
Deferred tax liability		8	2	

The enacted tax rate is 25%.

Required:

For each situation, determine the:

- Income tax payable currently.
- Deferred tax asset—balance.
- Deferred tax asset—change.
- Deferred tax liability—balance.
- Deferred tax liability—change.
- Income tax expense.

E 16-11
Determine taxable income

● LO16-2, LO16-3

Eight independent situations are described below. Each involves future deductible amounts and/or future taxable amounts (\$ in millions).

	Temporary Differences Reported First on:			
	The Income Statement		The Tax Return	
	Revenue	Expense	Revenue	Expense
1.		\$20		
2.	\$20			
3.			\$20	
4.				\$20
5.	15	20		
6.		20	15	
7.	15	20		10
8.	15	20	5	10

Required:

For each situation, determine taxable income, assuming pretax accounting income is \$100 million.

E 16-12
Deferred tax asset; taxable income given; valuation allowance

● LO16-4

At the end of 2020, Payne Industries had a deferred tax asset account with a balance of \$25 million attributable to a temporary book-tax difference of \$100 million in a liability for estimated expenses. At the end of 2021, the temporary difference is \$64 million. Payne has no other temporary differences and no valuation allowance for the deferred tax asset. Taxable income for 2021 is \$180 million and the tax rate is 25%.

Required:

- Prepare the journal entry(s) to record Payne's income taxes for 2021, assuming it is more likely than not that the deferred tax asset will be realized.
- Prepare the journal entry(s) to record Payne's income taxes for 2021, assuming it is more likely than not that only one-fourth of the deferred tax asset ultimately will be realized.

E 16-13
Deferred tax asset; income tax payable given; previous balance in valuation allowance

● LO16-4

(This is a variation of E 16-12, modified to assume a previous balance in the valuation allowance.)

At the end of 2020, Payne Industries had a deferred tax asset account with a balance of \$25 million attributable to a temporary book-tax difference of \$100 million in a liability for estimated expenses. At the end of 2021, the temporary difference is \$64 million. Payne has no other temporary differences. Taxable income for 2021 is \$180 million and the tax rate is 25%.

Payne has a valuation allowance of \$10 million for the deferred tax asset at the beginning of 2021.

Required:

- Prepare the journal entry(s) to record Payne's income taxes for 2021, assuming it is more likely than not that the deferred tax asset will be realized.
- Prepare the journal entry(s) to record Payne's income taxes for 2021, assuming it is more likely than not that only one-fourth of the deferred tax asset ultimately will be realized.

E 16-14
FASB codification
research;
valuation
allowance

● LO16-4



When a company records a deferred tax asset, it may need to also report a valuation allowance if it is “more likely than not” that some portion or all of the deferred tax asset will not be realized.

Required:

1. Access the FASB Accounting Standards Codification at the FASB website (www.fasb.org). What is the specific nine-digit Codification citation (XXX-XX-XX-XX) that describes the guidelines for determining the disclosure requirements pertaining to how a firm should determine whether a valuation allowance for deferred tax assets is needed?
2. What are the guidelines?

E 16-15
Multiple
differences;
calculate taxable
income

● LO16-2, LO16-5

Southern Atlantic Distributors began operations in January 2021 and purchased a delivery truck for \$40,000. Southern Atlantic plans to use straight-line depreciation over a four-year expected useful life for financial reporting purposes. For tax purposes, the deduction is 50% of cost in 2021, 30% in 2022, and 20% in 2023. Pretax accounting income for 2021 was \$300,000, which includes interest revenue of \$40,000 from municipal governmental bonds. The enacted tax rate is 25%.

Required:

Assuming no differences between accounting income and taxable income other than those described above:

1. Prepare the journal entry to record income taxes in 2021.
2. What is Southern Atlantic’s 2021 net income?

E 16-16
Multiple
differences

● LO16-2, LO16-3,
LO16-5

For the year ended December 31, 2021, Fidelity Engineering reported pretax accounting income of \$978,000. Selected information for 2021 from Fidelity’s records follows:

Interest income on municipal governmental bonds	\$32,000
Depreciation claimed on the 2021 tax return in excess of depreciation on the income statement	58,000
Carrying amount of depreciable assets in excess of their tax basis at year-end	88,000
Warranty expense reported on the income statement	26,000
Actual warranty expenditures in 2021	10,000

Fidelity’s income tax rate is 25%. At January 1, 2021, Fidelity’s records indicated balances of zero and \$7,500 in its deferred tax asset and deferred tax liability accounts, respectively.

Required:

1. Determine the amounts necessary to record income taxes for 2021, and prepare the appropriate journal entry.
2. What is Fidelity’s 2021 net income?

E 16-17
Multiple tax rates

● LO16-3, LO16-6

Allmond Corporation, organized on January 3, 2021, had pretax accounting income of \$14 million and taxable income of \$20 million for the year ended December 31, 2021. The 2021 tax rate is 25%. The only difference between accounting income and taxable income is estimated product warranty costs. Assume that expected payments and scheduled tax rates (based on recently enacted tax legislation) are as follows:

2022	\$ 2 million	20%
2023	1 million	20%
2024	1 million	20%
2025	2 million	15%

Required:

1. Determine the amounts necessary to record Allmond’s income taxes for 2021 and prepare the appropriate journal entry.
2. What is Allmond’s 2021 net income?

E 16-18
Change in tax
rates; calculate
taxable income

● LO16-2, LO16-6

Arnold Industries has pretax accounting income of \$32 million for the year ended December 31, 2021. The tax rate is 25%. The only difference between accounting income and taxable income relates to an operating lease in which Arnold is the lessee. The inception of the lease was December 28, 2021. An \$8 million advance rent payment at the inception of the lease is tax-deductible in 2021 but, for financial reporting purposes, represents prepaid rent expense to be recognized equally over the four-year lease term.

Required:

1. Determine the amounts necessary to record Arnold’s income taxes for 2021, and prepare the appropriate journal entry.
2. Determine the amounts necessary to record Arnold’s income taxes for 2022, and prepare the appropriate journal entry. Pretax accounting income was \$50 million for the year ended December 31, 2022.

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3. Assume a new tax law is enacted in 2022 that causes the tax rate to change from 25% to 15% beginning in 2023. Determine the amounts necessary to record Arnold's income taxes for 2022, and prepare the appropriate journal entry.
4. Why is Arnold's 2022 income tax expense different when the tax rate change occurs from what it would be without the change?

E 16-19
Deferred taxes;
change in tax
rates
● LO16-2, LO16-6

Bronson Industries reported a deferred tax liability of \$5 million for the year ended December 31, 2020, related to a temporary difference of \$20 million. The tax rate was 25%. The temporary difference is expected to reverse in 2022, at which time the deferred tax liability will become payable. There are no other temporary differences in 2020–2022. Assume a new tax law is enacted in 2021 that causes the tax rate to change from 25% to 15% beginning in 2022. (The rate remains 25% for 2021 taxes.) Taxable income in 2021 is \$30 million.

Required:
Determine the effect of the tax rate change and prepare the appropriate journal entry to record Bronson's income tax expense in 2021. What effect, if any, will enacting the change in the 2022 tax rate have on Bronson's 2021 net income?

E 16-20
Deferred taxes;
change in tax
rates
● LO16-3, LO16-6

Shwonson Industries reported a deferred tax asset of \$5 million for the year ended December 31, 2020, related to a temporary difference of \$20 million. The tax rate was 25%. The temporary difference is expected to reverse in 2022, at which time the deferred tax asset will reduce taxable income. There are no other temporary differences in 2020–2022. Assume a new tax law is enacted in 2021 that causes the tax rate to change from 25% to 15% beginning in 2022. (The rate remains 25% for 2021 taxes.) Taxable income in 2021 is \$30 million.

Required:
Determine the effect of the tax rate change and prepare the appropriate journal entry to record Shwonson's income tax expense in 2021. What effect, if any, will enacting the change in the 2022 tax rate have on Shwonson's 2021 net income?

E 16-21
Multiple
temporary
differences;
record income
taxes
● LO16-2, LO16-3

The information that follows pertains to Esther Food Products:

- a. At December 31, 2021, temporary differences were associated with the following future taxable (deductible) amounts:

Depreciation	\$60,000
Prepaid expenses	17,000
Warranty expenses	(12,000)
- b. No temporary differences existed at the beginning of 2021.
- c. Pretax accounting income was \$80,000 and taxable income was \$15,000 for the year ended December 31, 2021.
- d. The tax rate is 25%.

Required:
Determine the amounts necessary to record income taxes for 2021, and prepare the appropriate journal entry.

E 16-22
Multiple
temporary
differences;
record income
taxes
● LO16-2, LO16-3

The information that follows pertains to Richards Refrigeration, Inc.:

- a. At December 31, 2021, temporary differences existed between the financial statement book values and the tax bases of the following (\$ in millions):

	Book Value	Tax Basis	Future Taxable (Deductible) Amount
Buildings and equipment (net of accumulated depreciation)	\$120	\$90	\$ 30
Prepaid insurance	50	0	50
Liability—loss contingency	25	0	(25)

- b. No temporary differences existed at the beginning of 2021.
- c. Pretax accounting income was \$200 million and taxable income was \$145 million for the year ended December 31, 2021. The tax rate is 25%.

Required:
1. Determine the amounts necessary to record income taxes for 2021, and prepare the appropriate journal entry.
2. What is the 2021 net income?

E 16-23
Net operating loss
carryforward
● LO16-7

During 2021, its first year of operations, Baginski Steel Corporation reported a net operating loss of \$360,000 for financial reporting and tax purposes. The enacted tax rate is 25%.

Required:

1. Prepare the journal entry to recognize the income tax benefit of the net operating loss. Assume the weight of available evidence suggests that future taxable income will be sufficient to benefit from future deductible amounts arising from the net operating loss carryforward.
2. Show the lower portion of the 2021 income statement that reports the income tax benefit of the net operating loss.

E 16-24
Net operating
loss carryback
● LO16-7

Wynn Farms reported a net operating loss of \$100,000 for financial reporting and tax purposes in 2021. The enacted tax rate is 25%. Taxable income, tax rates, and income taxes paid in Wynn's first four years of operation were as follows:

	Taxable Income	Tax Rates	Income Taxes Paid
2017	\$60,000	15%	\$ 9,000
2018	70,000	15	10,500
2019	80,000	25	20,000
2020	60,000	30	18,000

Required:

1. Prepare the journal entry to recognize the income tax benefit of the net operating loss. NOL carrybacks are not allowed for most companies, except for property and casualty insurance companies as well as some farm-related businesses. Assume Wynn is one of those businesses.
2. Show the lower portion of the 2021 income statement that reports the income tax benefit of the net operating loss.

E 16-25
Net operating loss
carryback and
carryforward
● LO16-7

(This exercise is based on the situation described in E 16-24, modified to include a carryforward in addition to a carryback.)

Wynn Farms reported a net operating loss of \$160,000 for financial reporting and tax purposes in 2021. The enacted tax rate is 25%. Taxable income, tax rates, and income taxes paid in Wynn's first four years of operation were as follows:

	Taxable Income	Tax Rates	Income Taxes Paid
2017	\$60,000	15%	\$ 9,000
2018	70,000	15	10,500
2019	80,000	25	20,000
2020	60,000	30	18,000

Required:

1. NOL carrybacks are not allowed for most companies, except for property and casualty insurance companies as well as some farm-related businesses. Assume Wynn is one of those businesses. Prepare the journal entry to recognize the income tax benefit of the net operating loss.
2. Show the lower portion of the 2021 income statement that reports the income tax benefit of the net operating loss.

E 16-26
Identifying
income tax
deferrals
● LO16-2, LO16-3,
LO16-5, LO16-7

Listed below are ten independent situations. For each situation indicate (by letter) whether it will create a deferred tax asset (A), a deferred tax liability (L), or neither (N).

Situation

- _____ 1. Advance payments on insurance, deductible when paid.
- _____ 2. Estimated warranty costs; tax deductible when paid.
- _____ 3. Rent revenue collected in advance; cash basis for tax purposes.
- _____ 4. Interest received from investments in municipal governmental bonds.
- _____ 5. Prepaid expenses, tax deductible when paid.
- _____ 6. Net operating loss carryforward.
- _____ 7. Net operating loss carryback.
- _____ 8. Straight-line depreciation for financial reporting; MACRS for tax purposes.
- _____ 9. Organization costs expensed when incurred; tax deductible over 15 years.
- _____ 10. Life insurance proceeds received upon the death of the company president.

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E 16-27
Multiple temporary differences; balance sheet presentation

- LO16-2, LO16-3, LO16-5, LO16-6, LO16-8

At December 31, DePaul Corporation had the following cumulative temporary differences associated with its operations:

1. Estimated warranty expense, \$16 million temporary difference: expense recorded in the year of the sale; tax-deductible when paid (one-year warranty).
2. Depreciation expense, \$120 million temporary difference: straight-line in the income statement; MACRS on the tax return.
3. Income from installment sales of properties, \$20 million temporary difference: income recorded in the year of the sale; taxable when received equally over the next five years.
4. Rent revenue collected in advance, \$24 million temporary difference; taxable in the year collected; recorded as income when the performance obligation is satisfied in the following year.

Required:

Assuming DePaul will show a single noncurrent net amount in its December 31 balance sheet, indicate that amount and whether it is a net deferred tax asset or liability. The tax rate is 25%.

E 16-28
Multiple tax rates

- LO16-2, LO16-5, LO16-6

Case Development began operations in December 2021. When property is sold on an installment basis, Case recognizes installment income for financial reporting purposes in the year of the sale. For tax purposes, installment income is reported by the installment method. 2021 installment income was \$600,000 and will be collected over the next three years. Scheduled collections and enacted tax rates for 2022–2024 are as follows:

2022	\$140,000	20%
2023	260,000	25
2024	200,000	25

Pretax accounting income for 2021 was \$810,000, which includes interest revenue of \$10,000 from municipal governmental bonds. The enacted tax rate for 2021 is 20%.

Required:

1. Assuming no differences between accounting income and taxable income other than those described above, prepare the appropriate journal entry to record Case's 2021 income taxes.
2. What is Case's 2021 net income?

E 16-29
Multiple differences; multiple tax rates

- LO16-2, LO16-3, LO16-5, LO16-6

(This exercise is a variation of E 16-28, modified to include a second temporary difference.)

Case Development began operations in December 2021. When property is sold on an installment basis, Case recognizes installment income for financial reporting purposes in the year of the sale. For tax purposes, installment income is reported by the installment method. 2021 installment income was \$600,000 and will be collected over the next three years. Scheduled collections and enacted tax rates for 2022–2024 are as follows:

2022	\$140,000	20%
2023	260,000	25
2024	200,000	25

Case also had product warranty costs of \$80,000 expensed for financial reporting purposes in 2021. For tax purposes, only the \$20,000 of warranty costs actually paid in 2021 was deducted. The remaining \$60,000 will be deducted for tax purposes when paid over the next three years as follows:

2022	\$20,000
2023	24,000
2024	16,000

Pretax accounting income for 2021 was \$810,000, which includes interest revenue of \$10,000 from municipal bonds. The enacted tax rate for 2021 is 20%.

Required:

1. Assuming no differences between accounting income and taxable income other than those described above, prepare the appropriate journal entry to record Case's 2021 income taxes.
2. What is Case's 2021 net income?

E 16-30
Balance sheet classification

- LO16-8

As of December 31, 2021, Lange Company has the following deferred tax assets and liabilities:

Deferred tax assets	
Pension plans	\$300,000
Inventory	200,000
Total deferred tax assets	\$500,000

(continued)

(concluded)

Deferred tax liabilities	
Property, plant and equipment	\$100,000
Gain on equity investments (unrealized).....	<u>350,000</u>
Total deferred tax liabilities.....	<u>\$450,000</u>

Required:

1. Assume that all of Lange’s deferred tax assets and liabilities are in the same tax jurisdiction. How would deferred taxes be shown on Lange’s balance sheet?
2. Assume that the deferred tax effects of Lange’s pension plans and unrealized gains on investments occurred in a different tax jurisdiction from Lange’s other deferred tax effects. How would deferred taxes be shown on Lange’s balance sheet?

E 16-31

Concepts;
terminology

- LO16-2 through LO16-8

Listed below are several terms and phrases associated with accounting for income taxes. Pair each item from List A with the item from List B (by letter) that is most appropriately associated with it.

List A	List B
_____ 1. No tax consequences.	a. Deferred tax liability.
_____ 2. Originates, then reverses.	b. Deferred tax asset.
_____ 3. Revise deferred tax amounts.	c. 2 years.
_____ 4. Operating loss.	d. Current and deferred tax consequence combined.
_____ 5. Future tax effect of prepaid expenses; tax deductible when paid.	e. Temporary difference.
_____ 6. Loss carryback.	f. Specific tax rates times amounts reversing each year.
_____ 7. Future tax effect of estimated warranty expense.	g. Nontemporary differences.
_____ 8. Valuation allowance.	h. When enacted tax rate changes.
_____ 9. Phased-in change in rates.	i. Net deferred tax asset or liability.
_____ 10. Balance sheet presentation.	j. “More likely than not” test.
_____ 11. Individual tax consequences of financial statement components.	k. Intraperiod tax allocation.
_____ 12. Income tax expense.	l. Negative taxable income.

E 16-32

Tax credit;
uncertain tax position

- LO16-9

Delta Catfish Company has taken a position in its tax return to claim a tax credit of \$10 million (direct reduction in taxes payable) and has determined that its sustainability is “more likely than not,” based on its technical merits. Delta has developed the probability table shown below of all possible material outcomes (\$ in millions):

Probability Table

Amount of the tax benefit that management expects to receive	\$10	\$ 8	\$ 6	\$ 4	\$ 2
Percentage likelihood that the tax benefit will be sustained at this level	10%	20%	25%	20%	25%

Delta’s taxable income is \$84 million for the year. Its effective tax rate is 25%. The tax credit would be a direct reduction in current taxes payable.

Required:

1. At what amount would Delta measure the tax benefit in its income statement?
2. Prepare the appropriate journal entry for Delta to record its income taxes for the year.

E 16-33

Intraperiod tax allocation

- LO16-10

The following income statement does not reflect intraperiod tax allocation.

Required:

Recast the income statement to reflect intraperiod tax allocation.

INCOME STATEMENT
For the Fiscal Year Ended March 31, 2021
(\$ in millions)

Sales revenue	\$830
Cost of goods sold	<u>(350)</u>
Gross profit	480
Operating expenses	(180)
Income tax expense	<u>(54)</u>
Income before discontinued operations	246
Loss from discontinued operations	<u>(84)</u>
Net income	<u><u>\$162</u></u>

The company’s tax rate is 25%.

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E 16-34

FASB codification research

- LO16-6, LO16-8, LO16-10

Access the *FASB Accounting Standards Codification* at the FASB website (www.fasb.org). What is the specific eight-digit Codification citation (XXX-XX-XX-X) that applies to each of the following items:

- The specific items to which income tax expense is allocated for intraperiod tax allocation.
- The tax rate used to calculate deferred tax assets and liabilities.
- The required disclosures in the notes to financial statements for the components of income tax expense.



Problems



P 16-1

Single temporary difference originates each year for four years

- LO16-2



Alsop Consulting sometimes performs services for which it receives payment at the conclusion of the engagement, up to six months after services commence. Alsop recognizes service revenue for financial reporting purposes when the services are performed. For tax purposes, revenue is reported when fees are collected. Service revenue, collections, and pretax accounting income for 2020–2023 are as follows:

	Service Revenue	Collections	Pretax Accounting Income
2020	\$660,000	\$620,000	\$186,000
2021	750,000	778,000	260,000
2022	710,000	702,000	228,000
2023	716,000	720,000	200,000

There are no differences between accounting income and taxable income other than the temporary difference described above. The enacted tax rate for each year is 25%.

Required:

- Prepare the appropriate journal entry to record Alsop's 2021 income taxes.
- Prepare the appropriate journal entry to record Alsop's 2022 income taxes.
- Prepare the appropriate journal entry to record Alsop's 2023 income taxes.

(Hint: You will find it helpful to prepare a schedule that shows the balances in service revenue receivable at December 31, 2020–2023.)

P 16-2

Temporary difference; determine deferred tax amount for three years

- LO16-3

Times-Roman Publishing Company reports the following amounts in its first three years of operation:

(\$ in thousands)	2021	2022	2023
Pretax accounting income	\$250	\$240	\$230
Taxable income	290	220	260

The difference between pretax accounting income and taxable income is due to subscription revenue for one-year magazine subscriptions being reported for tax purposes in the year received, but reported in the income statement in later years when the performance obligation is satisfied. The income tax rate is 25% each year. Times-Roman anticipates profitable operations in the future.

Required:

- What is the balance sheet account that gives rise to a temporary difference in this situation?
- For each year, indicate the cumulative amount of the temporary difference at year-end.
- Determine the balance in the related deferred tax account at the end of each year. Is it a deferred tax asset or a deferred tax liability?

P 16-3

Change in tax rate; single temporary difference

- LO16-2, LO16-6

Dixon Development began operations in December 2021. When lots for industrial development are sold, Dixon recognizes income for financial reporting purposes in the year of the sale. For some lots, Dixon recognizes income for tax purposes when collected. Income recognized for financial reporting purposes in 2021 for lots sold this way was \$12 million, which will be collected over the next three years. Scheduled collections for 2022–2024 are as follows:

2022	\$ 4 million
2023	5 million
2024	3 million
	<u>\$12 million</u>

Pretax accounting income for 2021 was \$16 million. The enacted tax rate is 25%.

Required:

1. Assuming no differences between accounting income and taxable income other than those described above, prepare the journal entry to record income taxes in 2021.
2. Suppose a new tax law, revising the tax rate from 25% to 20%, beginning in 2023, is enacted in 2022, when pretax accounting income was \$20 million. No 2022 lot sales qualified for the special tax treatment. Prepare the appropriate journal entry to record income taxes in 2022.
3. If the new tax rate had not been enacted, what would have been the appropriate balance in the deferred tax liability account at the end of 2022? Why?

P 16-4

Change in tax rate; record taxes for four years

● LO16-2, LO16-6



Zekany Corporation would have had identical income before taxes on both its income tax returns and income statements for the years 2021 through 2024 except for differences in depreciation on an operational asset. The asset cost \$120,000 and is depreciated for income tax purposes in the following amounts:

2021	\$39,600
2022	52,800
2023	18,000
2024	9,600

The operational asset has a four-year life and no residual value. The straight-line method is used for financial reporting purposes.

Income amounts before depreciation expense and income taxes for each of the four years were as follows:

	2021	2022	2023	2024
Accounting income before taxes and depreciation	\$60,000	\$80,000	\$70,000	\$70,000

Assume the income tax rate for 2021 and 2022 was 30%; however, during 2022, tax legislation was passed to raise the tax rate to 40% beginning in 2023. The 40% rate remained in effect through the years 2023 and 2024. Both the accounting and income tax periods end December 31.

Required:

Prepare the journal entries to record income taxes for the years 2021 through 2024.

P 16-5

Change in tax rate; record taxes for four years

● LO16-2, LO16-5, LO16-6



The DeVille Company reported pretax accounting income on its income statement as follows:

2021	\$350,000
2022	270,000
2023	340,000
2024	380,000

Included in the income of 2021 was an installment sale of property in the amount of \$50,000. However, for tax purposes, DeVille reported the income in the year cash was collected. Cash collected on the installment sale was \$20,000 in 2022, \$25,000 in 2023, and \$5,000 in 2024.

Included in the 2023 income was \$15,000 interest from investments in municipal governmental bonds.

The enacted tax rate for 2021 and 2022 was 40%, but during 2022, new tax legislation was passed reducing the tax rate to 25% for the years 2023 and beyond.

Required:

Prepare the year-end journal entries to record income taxes for the years 2021–2024.

P 16-6

Multiple differences; temporary difference yet to originate; tax rates change

● LO16-2, LO16-3, LO16-6



You are the new accounting manager at the Barry Transport Company. Your CFO has asked you to provide input on the company's income tax position based on the following:

1. Pretax accounting income was \$45 million and taxable income was \$8 million for the year ended December 31, 2021.
2. The difference was due to three items:
 - a. Tax depreciation exceeds book depreciation by \$30 million in 2021 for the business complex acquired that year. This amount is scheduled to be \$60 million in 2022 and to reverse as (\$50 million) and (\$40 million) in 2023 and 2024, respectively.
 - b. Insurance of \$12 million was paid in 2021 for 2022 coverage.
 - c. A \$5 million loss contingency was accrued in 2021, to be paid in 2023.
3. No temporary differences existed at the beginning of 2021.
4. The tax rate is 25%.

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Required:

- Determine the amounts necessary to record income taxes for 2021, and prepare the appropriate journal entry.
- Assume the enacted federal income tax law specifies that the tax rate will change from 25% to 20% in 2023. When scheduling the reversal of the depreciation difference, you were uncertain as to how to deal with the fact that the difference will continue to originate in 2022 before reversing the next two years. Upon consulting **PricewaterhouseCoopers'** *Comperio* database, you found:

.441 Depreciable and amortizable assets

Only the reversals of the temporary difference at the balance sheet date would be scheduled. Future originations are not considered in determining the reversal pattern of temporary differences for depreciable assets. *FAS 109* [FASB ASC 740–Income Taxes] is silent as to how the balance sheet date temporary differences are deemed to reverse, but the FIFO pattern is intended.

You interpret that to mean, when future taxable amounts are being scheduled, and a portion of a temporary difference has yet to originate, only the reversals of the *temporary difference at the balance sheet date* can be scheduled and multiplied by the tax rate that will be in effect when the difference reverses. Future originations (like the depreciation difference the second year) are not considered when determining the timing of the reversal. For the existing temporary difference, it is assumed that the difference will reverse the first year the difference begins reversing.

Determine the amounts necessary to record income taxes for 2021, and prepare the appropriate journal entry.

P 16–7

Multiple differences; calculate taxable income; balance sheet classification

- LO16–2, LO16–3, LO16–5, LO16–8

Sherrod, Inc., reported pretax accounting income of \$76 million for 2021. The following information relates to differences between pretax accounting income and taxable income:

- Income from installment sales of properties included in pretax accounting income in 2021 exceeded that reported for tax purposes by \$3 million. The installment receivable account at year-end 2021 had a balance of \$7 million (representing portions of 2020 and 2021 installment sales), expected to be collected equally in 2022 and 2023.
- Sherrod was assessed a penalty of \$2 million by the Environmental Protection Agency for violation of a federal law in 2021. The fine is to be paid in equal amounts in 2021 and 2022.
- Sherrod rents its operating facilities but owns one asset acquired in 2020 at a cost of \$80 million. Depreciation is reported by the straight-line method, assuming a four-year useful life. On the tax return, deductions for depreciation will be more than straight-line depreciation the first two years but less than straight-line depreciation the next two years (\$ in millions):

	Income Statement	Tax Return	Difference
2020	\$20	\$26	\$ (6)
2021	20	35	(15)
2022	20	12	8
2023	20	7	13
	<u>\$80</u>	<u>\$80</u>	<u>\$ 0</u>

- For tax purposes, warranty expense is deducted when costs are incurred. The balance of the warranty liability was \$2 million at the end of 2020. Warranty expense of \$4 million is recognized in the income statement in 2021. \$3 million of cost is incurred in 2021, and another \$3 million of cost anticipated in 2022. At December 31, 2021, the warranty liability is \$3 million (after adjusting entries).
- In 2021, Sherrod accrued an expense and related liability for estimated paid future absences of \$7 million relating to the company's new paid vacation program. Future compensation will be deductible on the tax return when actually paid during the next two years (\$4 million in 2022; \$3 million in 2023).
- During 2020, accounting income included an estimated loss of \$2 million from having accrued a loss contingency. The loss is paid in 2021, at which time it is tax deductible.

Balances in the deferred tax asset and deferred tax liability accounts at January 1, 2021, were \$1 million and \$2.5 million, respectively. The enacted tax rate is 25% each year.

Required:

- Determine the amounts necessary to record income taxes for 2021, and prepare the appropriate journal entry.
- What is the 2021 net income?
- Show how any deferred tax amounts should be classified and reported in the 2021 balance sheet.

P 16-8

Multiple differences; taxable income given; two years; balance sheet classification; change in tax rate

- LO16-1, LO16-2, LO16-3, LO16-5, LO16-6, LO16-8



Arndt, Inc. reported the following for 2021 and 2022 (\$ in millions):

	2021	2022
Revenues	\$ 888	\$ 980
Expenses	760	800
Pretax accounting income (income statement)	\$ 128	\$ 180
Taxable income (tax return)	\$ 116	\$ 200
Tax rate: 25%		

- Expenses each year include \$30 million from a two-year casualty insurance policy purchased in 2021 for \$60 million. The cost is tax deductible in 2021.
- Expenses include \$2 million insurance premiums each year for life insurance on key executives.
- Arndt sells one-year subscriptions to a weekly journal. Subscription sales collected and taxable in 2021 and 2022 were \$33 million and \$35 million, respectively. Subscriptions included in 2021 and 2022 financial reporting revenues were \$25 million (\$10 million collected in 2020 but not recognized as revenue until 2021) and \$33 million, respectively. *Hint:* View this as two temporary differences—one reversing in 2021; one originating in 2021.
- 2021 expenses included a \$14 million unrealized loss from reducing investments (classified as trading securities) to fair value. The investments were sold and the loss realized in 2022.
- During 2020, accounting income included an estimated loss of \$6 million from having accrued a loss contingency. The loss was paid in 2021, at which time it is tax deductible.
- At January 1, 2021, Arndt had a deferred tax asset of \$4 million and no deferred tax liability.

Required:

- Which of the five differences described in items a–e are temporary and which are permanent differences? Why?
- Prepare a schedule that (a) reconciles the difference between pretax accounting income and taxable income and (b) determines the amounts necessary to record income taxes for 2021. Prepare the appropriate journal entry.
- Show how any 2021 deferred tax amounts should be classified and reported on the 2021 balance sheet.
- Prepare a schedule that (a) reconciles the difference between pretax accounting income and taxable income and (b) determines the amounts necessary to record income taxes for 2022. Prepare the appropriate journal entry.
- Explain how any 2022 deferred tax amounts should be classified and reported on the 2022 balance sheet.
- Suppose that during 2022, tax legislation was passed that will lower Arndt's effective tax rate to 15% beginning in 2023. Repeat requirement 4.

P 16-9

Determine deferred tax assets and liabilities from book-tax differences

- LO16-2, LO16-3

Corning-Howell reported taxable income in 2021 of \$120 million. At December 31, 2021, the reported amount of some assets and liabilities in the financial statements differed from their tax bases as indicated below:

	Carrying Amount	Tax Basis
Assets		
Current		
Net accounts receivable	\$ 10 million	\$ 12 million
Prepaid insurance	20 million	0
Prepaid advertising	6 million	0
Noncurrent		
Investments in equity securities (fair value)*	4 million	0
Buildings and equipment (net)	360 million	280 million
Liabilities		
Current		
Deferred subscription revenue	14 million	0
Long-term		
Liability—compensated future absences	594 million	0

*Gains and losses taxable when investments are sold.

The total deferred tax asset and deferred tax liability amounts at January 1, 2021, were \$156.25 million and \$25 million, respectively. The enacted tax rate is 25% each year.

Required:

- Determine the total deferred tax asset and deferred tax liability amounts at December 31, 2021.
- Determine the increase (decrease) in the deferred tax asset and deferred tax liability accounts at December 31, 2021.
- Determine the income tax payable currently for the year ended December 31, 2021.
- Prepare the journal entry to record income taxes for 2021.

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P 16-10
Net operating loss carryforward; multiple differences

- LO16-3, LO16-5, LO16-7



Fore Farms reported a pretax operating loss of \$137 million for financial reporting purposes in 2021. Contributing to the loss were (a) a penalty of \$5 million assessed by the Environmental Protection Agency for violation of a federal law and paid in 2021 and (b) an estimated loss of \$12 million from accruing a loss contingency. The loss will be tax deductible when paid in 2022.

The enacted tax rate is 25%. There were no temporary differences at the beginning of the year and none originating in 2021 other than those described above.

Required:

- Prepare the journal entry to recognize the income tax benefit of the net operating loss in 2021.
- Show the lower portion of the 2021 income statement that reports the income tax benefit of the net operating loss.
- Prepare the journal entry to record income taxes in 2022 assuming pretax accounting income is \$160 million. No additional temporary differences originate in 2022.

P 16-11
Net operating loss carryback and carryforward; multiple differences

- LO16-3, LO16-5, LO16-7



(Note: this problem is a variation of P 16-10, modified to allow a net operating loss carryback.) Fore Farms reported a pretax operating loss of \$137 million for financial reporting purposes in 2021. Contributing to the loss were (a) a penalty of \$5 million assessed by the Environmental Protection Agency for violation of a federal law and paid in 2021 and (b) an estimated loss of \$12 million from accruing a loss contingency. The loss will be tax deductible when paid in 2022.

The enacted tax rate is 25%. There were no temporary differences at the beginning of the year and none originating in 2021 other than those described above. Taxable income in Fores's two previous years of operation was as follows:

2019	\$80 million
2020	\$32 million

Required:

- Prepare the journal entry to recognize the income tax benefit of the net operating loss in 2021. Assume Fore will carry back its NOL to prior years.
- Show the lower portion of the 2021 income statement that reports the income tax benefit of the net operating loss.
- Prepare the journal entry to record income taxes in 2022 assuming pretax accounting income is \$160 million. No additional temporary differences originate in 2022.

P 16-12
Integrating problem—bonds, leases, taxes

- LO16-2, LO16-6, LO16-8



The long-term liabilities section of CPS Transportation's December 31, 2020, balance sheet included the following:

- A lease liability with 15 remaining lease payments of \$10,000 each, due annually on January 1:

Lease liability	\$76,061
Less: Current portion	2,394
	<u>\$73,667</u>

The incremental borrowing rate at the inception of the lease was 11% and the lessor's implicit rate, which was known by CPS Transportation, was 10%.

- A deferred income tax liability due to a single temporary difference. The only difference between CPS Transportation's taxable income and pretax accounting income is depreciation on a machine acquired on January 1, 2020, for \$500,000. The machine's estimated useful life is five years, with no salvage value. Depreciation is computed using the straight-line method for financial reporting purposes and the MACRS method for tax purposes. Depreciation expense for tax and financial reporting purposes for 2021 through 2024 is as follows:

Year	MACRS Depreciation	Straight-line Depreciation	Difference
2021	\$160,000	\$100,000	\$60,000
2022	80,000	100,000	(20,000)
2023	70,000	100,000	(30,000)
2024	60,000	100,000	(40,000)

The enacted federal income tax rates are 20% for 2020 and 25% for 2021 through 2024. CPS had a deferred tax liability of \$7,500 as of December 31, 2020. For the year ended December 31, 2021, CPS's income before income taxes was \$900,000.

On July 1, 2021, CPS Transportation issued \$800,000 of 9% bonds. The bonds mature in 20 years, and interest is payable each January 1 and July 1. The bonds were issued at a price to yield the investors 10%. CPS records interest at the effective interest rate.

Required:

1. Determine CPS Transportation's income tax expense and net income for the year ended December 31, 2021.
2. Determine CPS Transportation's interest expense for the year ended December 31, 2021.
3. Prepare the long-term liabilities section of CPS Transportation's December 31, 2021, balance sheet.

P 16-13

Multiple differences; uncertain tax position

- LO16-2, LO16-5, LO16-9



Tru Developers, Inc., sells plots of land for industrial development. Tru recognizes income for financial reporting purposes in the year it sells the plots. For some of the plots sold this year, Tru took the position that it could recognize the income for tax purposes when the installments are collected. Income that Tru recognized for financial reporting purposes in 2021 for plots in this category was \$60 million. The company expected to collect 60% of each sale in 2022 and 40% in 2023. This amount over the next two years is as follows:

2022	\$36 million
2023	24 million
	<u>\$60 million</u>

Tru's pretax accounting income for 2021 was \$88 million. In its income statement, Tru reported interest income of \$16 million, unrelated to the land sales, for which the company's position is that the interest is not taxable. Accordingly, the interest was not reported on the tax return. There are no differences between accounting income and taxable income other than those described above. The enacted tax rate is 25%.

Management believes the tax position taken on the land sales has a greater than 50% chance of being upheld based on its technical merits, but the position taken on the interest has a less than 50% chance of being upheld. It is further believed that the following likelihood percentages apply to the tax treatment of the land sales (\$ in millions):

Amount Qualifying for Installment Sales Treatment	Percentage Likelihood of Tax Treatment Being Sustained
\$60	20%
50	20%
40	20%
30	20%
20	20%

Required:

1. What portion of the tax benefit of tax-free interest will Tru recognize on its 2021 tax return?
2. What portion of the tax benefit of tax-free interest will Tru recognize on its 2021 financial statements?
3. (a) What portion of the tax on the \$60 million income from the plots sold on an installment basis will Tru defer on its 2021 tax return? (b) What portion of the tax on the \$60 million income from the plots sold on an installment basis will Tru show as a deferred tax asset or liability in its 2021 financial statements? (c) How is the difference between these two amounts reported?
4. Prepare the journal entry to record income taxes in 2021, assuming full recognition of the tax benefits in the financial statements of both differences between pretax accounting income and taxable income.
5. Prepare the journal entry to record income taxes in 2021, assuming the recognition of the tax benefits in the financial statements you indicated in requirements 1–3.

Decision Maker's Perspective



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Apply your critical-thinking ability to the knowledge you've gained. These cases will provide you an opportunity to develop your research, analysis, judgment, and communication skills. You also will work with other students, integrate what you've learned, apply it in real-world situations, and consider its global and ethical ramifications. This practice will broaden your knowledge and further develop your decision-making abilities.

Analysis**Case 16-1**

Basic concepts

- LO16-1 through LO16-8

One of the longest debates in accounting history is the issue of deferred taxes. The controversy began in the 1940s and has continued, even after the FASB issued *Statement of Financial Accounting Standards No. 109* [FASB ASC 740: Income Taxes] in 1992. At issue is the appropriate treatment of tax consequences of economic events that occur in years other than that of the events themselves.

Required:

1. Distinguish between temporary differences and permanent differences. Provide an example of each.
2. Distinguish between *intra*period tax allocation and *inter*period tax allocation (deferred tax accounting). Provide an example of each.
3. How are deferred tax assets and deferred tax liabilities classified and reported in the financial statements?

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Integrating Case 16-2

Postretirement benefits

- LO16-3

FASB ASC 715-60: Compensation—Retirement Benefits—Defined Benefit Plans—Other Postretirement (previously *Statement of Financial Accounting Standards No. 106*) establishes accounting standards for postretirement benefits other than pensions, most notably postretirement health care benefits. Essentially, the standard requires companies to accrue compensation expense each year employees perform services, for the expected cost of providing future postretirement benefits that can be attributed to that service. Typically, companies do not prefund these costs for two reasons: (a) unlike pension liabilities, no federal law requires companies to fund nonpension postretirement benefits, and (b) funding contributions, again unlike for pension liabilities, are not tax deductible. (The costs aren't tax deductible until paid to, or on behalf of, employees.)

Required:

1. As a result of being required to record the periodic postretirement expense and related liability, most companies report lower earnings and higher liabilities. How might many companies also report higher deferred tax assets as a result of GAAP for postretirement plans?
2. One objection to current GAAP as cited in the chapter is the omission of requirements to discount deferred tax amounts to their present values. This objection is inappropriate in the context of deferred tax amounts necessitated by accounting for postretirement benefits. Why?

Integrating Case 16-3

Tax effects of accounting changes and error correction; six situations

- LO16-2, LO16-3, LO16-8

Williams-Santana Inc. is a manufacturer of high-tech industrial parts that was started in 2007 by two talented engineers with little business training. In 2021, the company was acquired by one of its major customers. As part of an internal audit, the following facts were discovered. The audit occurred during 2021 before any adjusting entries or closing entries were prepared. The income tax rate is 25% for all years.

- a. A five-year casualty insurance policy was purchased at the beginning of 2019 for \$35,000. The full amount was debited to insurance expense at the time.
- b. On December 31, 2020, merchandise inventory was overstated by \$25,000 due to a mistake in the physical inventory count using the periodic inventory system.
- c. The company changed inventory cost methods to FIFO from LIFO at the end of 2021 for both financial statement and income tax purposes. The change will cause a \$960,000 increase in the beginning inventory at January 1, 2020.
- d. At the end of 2020, the company failed to accrue \$15,500 of sales commissions earned by employees during 2020. The expense was recorded when the commissions were paid in early 2021.
- e. At the beginning of 2019, the company purchased a machine at a cost of \$720,000. Its useful life was estimated to be 10 years with no salvage value. The machine has been depreciated by the double declining-balance method. Its carrying amount on December 31, 2020, was \$460,800. On January 1, 2021, the company changed to the straight-line method.
- f. Additional industrial robots were acquired at the beginning of 2018 and added to the company's assembly process. The \$1,000,000 cost of the equipment was inadvertently recorded as repair expense. The robots have 10-year useful lives and no material salvage value. This class of equipment is depreciated by the straight-line method for both financial reporting and income tax reporting.

Required:

For each situation:

1. Identify whether it represents an accounting change or an error. If an accounting change, identify the type of change.
2. Prepare any journal entry necessary as a direct result of the change or error correction, as well as any adjusting entry for 2021 related to the situation described. Any tax effects should be adjusted for through the deferred tax liability account.
3. Briefly describe any other steps that should be taken to appropriately report the situation.

Communication Case 16-4

Deferred taxes; changing rates; write a memo

- LO16-2, LO16-5, LO16-6

The date is November 15, 2017. You are the new controller for Engineered Solutions. The company treasurer, Randy Patey, believes that as a result of pending legislation, the currently enacted 40% income tax rate may be decreased for 2018 to 25% and is uncertain which tax rate to apply in determining deferred taxes for 2017. Patey also is uncertain which temporary differences should be included in that determination and has solicited your help. Your accounting group provided you the following information.

Two items are relevant to the decisions. One is the \$50,000 insurance premium the company pays annually for the CEO's life insurance policy, for which the company is the beneficiary. The second is that Engineered Solutions purchased a building on January 1, 2016, for \$6,000,000. The building's estimated useful life is 30 years from the date of purchase, with no salvage value. Depreciation is computed using the straight-line method for financial reporting purposes and the MACRS method for tax purposes. As a result, the building's tax basis is \$5,200,000 at December 31, 2017.

Required:

Write a memo to Patey that:

- a. Identifies the objectives of accounting for income taxes.
- b. Differentiates temporary differences and permanent differences.

- c. Explains which tax rate to use.
d. Calculates the deferred tax liability at December 31, 2017.

**Real World
Case 16–5**

Disclosure issues;
balance sheet
classifications;
Walmart

- LO16–2, LO16–3,
LO16–4, LO16–8

Real World Financials

The income tax disclosure note accompanying the January 31, 2017, financial statements of **Walmart** is reproduced below:

	2017	2016	2015
Current:			
U.S. federal	\$3,454	\$5,562	\$6,165
U.S. state and local	495	622	810
International	1,510	1,400	1,529
Total current tax provision	5,459	7,584	8,504
Deferred:			
U.S. federal	1,054	(704)	(387)
U.S. state and local	51	(106)	(55)
International	(360)	(216)	(77)
Total deferred tax expense (benefit)	745	(1,026)	(519)
Total provision for income taxes	\$6,204	\$6,558	\$7,985
		2017	2016
Deferred tax assets:			
Loss and tax credit carryforwards		\$3,633	\$3,313
Accrued liabilities		3,437	3,763
Share-based compensation		309	192
Other		1,474	1,390
Total deferred tax assets		8,853	8,658
Valuation allowances		(1,494)	(1,456)
Deferred tax assets, net of valuation allowance		\$7,359	\$7,202
Deferred tax liabilities:			
Property and equipment		\$6,435	\$5,813
Inventories		1,808	1,790
Other		1,884	1,452
Total deferred tax liabilities		10,127	9,055
Net deferred tax liabilities		\$2,768	\$1,853

Required:

- Focusing on only the first part of Note 9, relating current, deferred, and total provision for income taxes, prepare a summary journal entry that records Walmart's 2017 tax expense associated with income from continuing operations. Please make a single entry to "Deferred tax liability (net)" for the total effect on deferred tax assets, deferred tax liabilities and the valuation allowance.
- Calculate the actual change in Walmart's net deferred tax liability for fiscal 2017. Does that change reconcile with the change indicated in your summary journal entry? What besides continuing operations might affect deferred taxes?

Source: Walmart

C 16–6

Valuation
allowance; Delta
Air Lines

- LO16–4

Real World Financials

Delta Air Lines revealed in its 10-K filing that its valuation allowance for deferred tax assets at the end of 2013 was \$177 million, dramatically lower than the over \$10 billion recorded at the end of 2012. Here is an excerpt from a press report from Bloomberg in January 2014, regarding this allowance:

Delta Air Lines Inc. (DAL) led shares of U.S. carriers higher after posting fourth-quarter profit that topped analysts' estimates and forecasting an operating margin of as much as 8 percent in this year's initial three months. . . . Airlines are benefiting from lower fuel prices, constraints on capacity growth, controls on operating costs and demand that's keeping planes full, said Ray Neidl of Nexa Capital Partners LLC, a Washington-based aerospace and transportation consulting firm. . . . Net income was \$8.48 billion, including an \$8 billion non-cash gain from the reversal of a tax valuation allowance.²⁰

²⁰Mary Schlangenstein, "Delta Leads Airline Stock Gains as Profit Beats Estimates," *Bloomberg*, January 21, 2014.

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The following is an excerpt from a disclosure note to Delta's 2013 financial statements:

NOTE 12. INCOME TAXES (In part)		
Deferred Taxes		
The components of deferred tax assets and liabilities at December 31 were as follows (\$ in millions):		
	December 31,	
	2013	2012
Deferred tax assets:		
Net operating loss carryforwards	\$ 6,024	\$ 6,414
Pension, postretirement and other benefits	4,982	6,415
AMT credit carryforward	378	402
Deferred revenue	1,965	2,133
Other	698	881
Valuation allowance	(177)	(10,963)
Total deferred tax assets	<u>\$13,870</u>	<u>\$5,282</u>
Deferred tax liabilities:		
Depreciation	\$ 4,799	\$ 4,851
Intangible assets	1,704	1,730
Other	639	285
Total deferred tax liabilities	<u>\$ 7,142</u>	<u>\$ 6,866</u>

Required:

1. What is a valuation allowance against deferred tax assets? When must such an allowance be recorded? Use Delta's situation to help illustrate your response.
2. Is an amount recorded in a valuation allowance for a deferred tax asset permanent? Explain why Delta is able to reclaim its valuation allowance.
3. Consider the excerpt from Bloomberg's press release. Recalculate the effect on Delta's 2013 net income of the change in Delta's valuation allowance for its deferred tax assets.

Source: Delta Air Lines

Research**Case 16-7**

Researching the way tax deductions are reported on a corporation tax return; retrieving a tax form from the Internet

- LO16-2, LO16-3, LO16-4, LO16-8

The Internal Revenue Service (IRS) maintains an information site on the Internet that provides tax information and services. Among those services is a server for publications and forms which allows a visitor to download a variety of IRS forms and publications.

Required:

1. Access the IRS site at irs.gov. After exploring the information available there, navigate to the forms and instructions page.
2. Download the corporation tax return, Form 1120.
3. Note the specific deductions listed that are deductible from total income to arrive at taxable income. Are any deductions listed that might not also be included among expenses in the income statement? One of the deductions indicated is "net operating loss deduction." Will every company report this tax deduction in every year? If not, under what circumstances might a company report an amount for this item?

Analysis**Case 16-8**

Reporting deferred taxes; Ford Motor Company

- LO16-2, LO16-3, LO16-4, LO16-7

Real World Financials

Access the 2016 financial statements and related disclosure notes of **Ford Motor Company** from its website at corporate.ford.com.

Required:

1. In Note 21, find Ford's net deferred tax asset or liability. What is that number?
2. Does Ford show a valuation allowance against deferred tax assets? If so, what is the number, and what is Ford's explanation for it?
3. Does Ford have any NOL carryforwards? What is the amount of any carryforward, what deferred tax asset or liability is associated with it, and what effective tax rate does that imply was used to calculate its deferred tax effect?

**Analysis
Case 16–9**

Reporting deferred taxes; Kroger Co.

- LO16–2, LO16–3, LO16–4, LO16–7, LO16–8

Real World Financials

Kroger Co. is one of the largest retail food companies in the United States as measured by total annual sales. The Kroger Co. operates supermarkets, convenience stores, and manufactures and processes food that its supermarkets sell.

Using EDGAR (sec.gov) or the company's website (kroger.com), check the company's annual report for the year ended January 28, 2017.

Required:

- From the income statement, determine the income tax expense for the most recent year. Tie that number to the first table in disclosure Note 5: "Taxes Based on Income," and prepare a summary journal entry that records Kroger's tax expense from continuing operations in the most recent year.
- In 2016 companies could classify their deferred tax assets and liabilities as current or noncurrent. From Kroger's Note 5, calculate the total (current + noncurrent) net deferred tax asset or liability as of January 28, 2017, and January 30, 2016. By how much did that amount change? To what extent did you account for that change in the journal entry you wrote for the first requirement of this case? Speculate as to the explanation of any difference.

The following is a portion of the balance sheets of **Macy's, Inc.** for the years ended January 28, 2017 and January 30, 2016:

	January 28, 2017	January 30, 2016
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current Liabilities:		
Short-term debt	\$ 309	\$ 642
Merchandise accounts payable	1,423	1,526
Accounts payable and accrued liabilities	3,563	3,333
Income taxes	352	227
Total Current Liabilities	5,647	5,728
Long-Term debt	6,562	6,995
Deferred Income Taxes	1,443	1,477
Other Liabilities	1,877	2,123
Shareholders' Equity		
Common stock (310.3 and 340.6 shares outstanding)	3	3
Additional paid-in capital	617	621
Accumulated equity	6,088	6,334
Treasury stock	(1,489)	(1,665)
Accumulated other comprehensive loss	(896)	(1,043)
Total Macy's, Inc. Shareholders' Equity	4,323	4,250
Noncontrolling interest	(1)	3
Total Shareholders' Equity	4,322	4,253
Total Liabilities and Shareholders' Equity	<u>\$ 19,851</u>	<u>\$ 20,576</u>

Required:

- What is Macy's debt to equity ratio for the year ended January 28, 2017?
- What would Macy's debt to equity ratio be if we excluded deferred tax liabilities from its calculation? What would be the percentage change?
- What might be the rationale for not excluding long-term deferred tax liabilities from liabilities when computing the debt to equity ratio?

Source: Macy's, Inc.

The following Trueblood case is recommended for use with this chapter. The case provides an excellent opportunity for class discussion, group projects, and writing assignments. The case, along with Professor's Discussion material, can be obtained from the Deloitte foundation at its website: www.deloitte.com/us/truebloodcases.

Case 13-10: LOL – Income Taxes

This case gives students an opportunity to better understand how valuation allowances against deferred tax assets are estimated and calculated. Students consider the sources of taxable income that can be used to determine whether a deferred tax asset is more likely than not to be realized in the future.

**Judgment
Case 16–10**

Analyzing the effect of deferred tax liabilities on firm risk; Macy's, Inc.

- LO16–8

Real World Financials**Trueblood
Accounting
Case 16–11**

Valuation allowances against deferred tax assets

- LO16–4

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**Trueblood
Accounting Case
16-12**Uncertain tax
positions

● LO16-9

The following Trueblood case is recommended for use with this chapter. The case provides an excellent opportunity for class discussion, group projects, and writing assignments. The case, along with Professor's Discussion Material, can be obtained from the Deloitte Foundation at its website: www.deloitte.com/us/truebloodcases.

Case 15-9: Settled or Not Settled

This case gives the students an opportunity to better understand accounting for uncertain tax positions. The case illustrates the judgments involved in applying FASB ASC 740 (formerly FIN 48).

**Judgment
Case 16-13**Intraperiod tax
allocation

● LO16-10

Russell-James Corporation is a diversified consumer products company. During 2021, Russell-James discontinued its line of cosmetics, which constituted discontinued operations for financial reporting purposes. As vice president of the food products division, you are interested in the effect of the discontinuance on the company's profitability. One item of information you requested was an income statement. The income statement you received was labeled *preliminary* and *unaudited*:

RUSSELL-JAMES CORPORATION		
Income Statement		
For the Year Ended December 31, 2021		
(\$ in millions, except per share amounts)		
Sales revenue		\$ 300
Cost of goods sold		(90)
Gross profit		210
Selling and administrative expenses		(50)
Income from continuing operations before income taxes		160
Income tax expense		(19)
Income from continuing operations		141
Discontinued operations:		
Loss from operations of cosmetics division	\$(100)	
Gain from disposal of cosmetics division	16	(84)
Net income		\$ 57
Per Share of Common Stock (100 million shares):		
Income from continuing operations		\$ 1.41
Loss from operations of cosmetics division		(1.00)
Gain from disposal of cosmetics division		0.16
Net income		\$ 0.57

You are somewhat surprised at the magnitude of the loss incurred by the cosmetics division prior to its disposal. Another item that draws your attention is the apparently low tax rate indicated by the statement ($\$19 \div 160 = 12\%$). Upon further investigation, you are told the company's tax rate is 25%.

Required:

- Recast the income statement to reflect intraperiod tax allocation.
- How would you reconcile the income tax expense shown on the statement above with the amount your recast statement reports?

Source: Russell-James Corporation

Data Analytics

Data analytics is the process of examining data sets in order to draw conclusions about the information they contain. If you haven't completed any of the prior data analytics cases, follow the instructions listed in the Chapter 1 Data Analytics case to get set up. You will need to watch the videos referred to in the Chapters 1 - 3 Data Analytics cases. No additional videos are required for this case. All short training videos can be found here: <https://www.tableau.com/learn/training#getting-started>.

Data Analytics Case

Deferred Taxes and the Tax Cuts and Jobs Act of 2017

- LO16-4

In the Data Analytics Cases in the previous chapter, you used Tableau to examine a data set and create charts to examine two (hypothetical) publicly traded companies: GPS Corporation and Tru, Inc. as to their pattern of leasing facilities, their transition to the new lease accounting standard in 2019, and the effect of that transition on debt covenants. In this case, you examine the effect of the Tax Cuts and Jobs Act of 2017 on these companies' operations and financial position.

Required:

For each of the two companies in the ten-year period, 2012-2021, use Tableau to calculate and display the trends for (a) the provision for income taxes (b) the deferred tax liability, and (c) effective tax rate. Based upon what you find, answer the following questions:

1. Is Tru, Inc.'s provision for income tax (a) higher, (b) lower, or (c) roughly the same over the period 2018-2021 than in previous years?
2. Did Tru, Inc.'s deferred tax liability appear to benefit from the Tax Act?
3. What is the effective tax rate for GPS in 2017 (calculated as the provision for income tax divided by income from continuing operations plus provision for income tax)?
4. What is the effective tax rate for GPS in 2018 (calculated as the provision for income tax divided by income from continuing operations plus provision for income tax)?

Resources:

Download the "GPS_Trु_Financials.xlsx" Excel file available in Connect or under Student Resources within the Library tab. Save it to the computer on which you will be using Tableau.

For this case, you will create calculations to produce the effective tax rate to allow you to compare and contrast the effect of the 2017 Tax Act on the two companies.

After you view the training videos, follow these steps to create the charts you'll use for this case:

- Start Tableau and open the Excel spreadsheet you downloaded.
- Starting on the Sheet 1 tab at the bottom of the canvas to the right of the data source, drag "Company" and "Year" under Dimensions to the Columns shelf. Change "Year" to *discrete* by right-clicking and selecting "Discrete."
- Drag "Provision for income tax" and "Deferred income taxes" under Measures into the Rows shelf.
- Add labels to the bars by clicking on "Label" under the "Marks" card and clicking the box "Show mark labels." Format the labels to Times New Roman, bold, black and 10-point font. Edit the color of the years on the "Marks card" if desired by dragging "Year" on to the Color Marks card.
- Change the title of the sheet to be "Provision for Income Taxes and Deferred Tax Liability Trend 2012-2021" by right-clicking and selecting "Edit title." Format the title to Times New Roman, bold, black and 15-point font. Change the title of "Sheet 1" to match the sheet title by right-clicking, selecting "Rename," and typing in the new title.
- On the Sheet 2 tab, follow the procedure above for the company and year.
- Create a calculated field by clicking the "Analysis" tab at the top of the screen and selecting "Create Calculated Field." Name the calculation "Effective Tax Rate." In the Calculation Editor window, drag the following from the Rows shelf: "Provision for income taxes"; type a division sign and open parenthesis, "Income from continuing operations," an addition sign, "Provision for income taxes," and a closed parenthesis. Make sure the window says that the calculation is valid and click OK.
- Drag the newly created "Effective Tax Rate" to the Rows shelf. Click on the "Show Me" and select "side-by-side bars." Add labels to the bars by clicking on "Label" under the "Marks" card and clicking the box "Show mark labels." Format the labels to Times New Roman, bold, black and 10-point font. Edit the color on the "Marks" card if desired.
- Change the title of the sheet to be "Effect of the Tax Cuts and Jobs Act of 2017" by right-clicking and selecting "Edit title." Format the title to Times New Roman, bold, black and 15-point font. Change the title of "Sheet 2" to match the sheet title by right-clicking, selecting "Rename" and typing in the new title.
- Format all other labels to be Times New Roman, bold, black and 12-point font.
- Once complete, save the file as "DA16_Your initials.twbx."

Continuing Cases

Target Case

- LO16-2, LO16-3, LO16-5, LO16-8, LO16-9

Real World Financials

Target Corporation prepares its financial statements according to U.S. GAAP. Target's financial statements and disclosure notes for the year ended February 3, 2018, are available in Connect. This material also is available under the Investor Relations link at the company's website (www.target.com).

Required:

1. From the income statement, determine the income tax expense for the year ended February 3, 2018. Tie that number to the second table in disclosure Note 23, "Provision for Income Taxes," and prepare a summary journal entry that records Target's tax expense from continuing operations for the year ended February 3, 2018.

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2. Focusing on the third table in disclosure Note 23, "Net Deferred Tax Asset/(Liability)," calculate the change in net deferred tax assets or liability. By how much did that amount change? To what extent did you account for that change in the journal entry you wrote for the first requirement of this case? List possible causes of any difference.
3. Target's Note 23 indicates that "In December 2017, the U.S. government enacted the Tax Cuts and Jobs Act tax reform legislation (the Tax Act), which among other matters reduced the U.S. corporate income tax rate from 35 percent to 21 percent effective January 1, 2018. . . . We have recorded a provisional \$352 million net tax benefit primarily related to the remeasurement of certain deferred tax assets and liabilities, including \$381 million of benefit from the new lower rate, partially offset by \$29 million of deferred income tax expense from our foreign operations." What's the effect on net income?
4. What is Target's liability for unrecognized tax benefits as of February 3, 2018? If Target were to prevail in court and realize \$50 million more in tax savings than it thought more likely than not to occur, what would be the effect on the liability for unrecognized tax benefits and on net income?

Air France–KLM Case

● LO16–11



Real World Financials

Air France–KLM (AF), a Franco-Dutch company, prepares its financial statements according to International Financial Reporting Standards. AF's financial statements and disclosure notes for the year ended December 31, 2017, are available in Connect. This material is also available under the Finance link at the company's website (www.airfranceklm.com).

Required:

1. What amounts are shown in AF's December 31, 2017, balance sheet for deferred taxes?
2. Here's an excerpt from AF's notes to its financial statements:

Deferred taxes (in part)

The Group records deferred taxes using the balance sheet liability method, providing for any temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes, except for exceptions described in IAS 12 "Income taxes." The tax rates used are those enacted or substantively enacted at the balance sheet date.

Is this policy consistent with U.S. GAAP? Explain.

3. Here's an excerpt from one of AF's notes to its financial statements:

Deferred taxes (in part)

Deferred tax assets related to temporary differences and tax losses carried forward are recognized only to the extent it is probable that a future taxable profit will be available against which the asset can be utilized at the tax entity level.

Is this policy consistent with U.S. GAAP? Explain.

CPA Exam Questions and Simulations



Sample CPA Exam questions from Roger CPA Review are available in Connect as support for the topics in this chapter. These multiple-choice questions and task-based simulations include expert-written explanations and solutions, and provide a starting point for students to become familiar with the content and functionality of the actual CPA Exam.

