GLEIM®

CMA REVIEW

Part 1: Financial Planning, Performance, and Analytics

2023 EDITION

GLEIM® CMA REVIEW | ima® Strategic Partner

by

Irvin N. Gleim, Ph.D., CPA, CIA, CMA, CFM

and

Dale L. Flesher, Ph.D., CPA, CIA, CMA, CFM

Gleim Publications, Inc.
PO Box 12848
Gainesville, Florida 32604
(800) 874-5346
(352) 375-0772
www.gleim.com/cma
CMA@gleim.com

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ABOUT THE AUTHORS

Irvin N. Gleim, who authored the first edition of the Gleim CMA Review over 40 years ago, was Professor Emeritus in the Fisher School of Accounting at the University of Florida and a member of the American Accounting Association, Academy of Legal Studies in Business, American Institute of Certified Public Accountants, Association of Government Accountants, Florida Institute of Certified Public Accountants, The Institute of Internal Auditors, and the Institute of Management Accountants. The late Dr. Gleim published articles in the *Journal of Accountancy*, *The Accounting Review*, and the *American Business Law Journal* and authored numerous accounting books, aviation books, and CPE courses.

Dale L. Flesher is a professor, Ph.D., CPA, CIA, CMA, CFM, and holder of the Roland and Sheryl Burns Chair in the School of Accountancy at the University of Mississippi and has written over 300 articles for business and professional journals, including *Management Accounting*, *Journal of Accountancy*, and *The Accounting Review*, as well as numerous books. He is a member of the IMA, AICPA, The IIA, American Accounting Association, and American Taxation Association. He is a past editor of *The Accounting Historians' Journal* and is a trustee and past president of the Academy of Accounting Historians. He is a former vice president of finance for the American Accounting Association. In 2011, he received the AICPA's highest award for educators, The Distinguished Achievement in Accounting Education Award, which is a lifetime achievement award. Previously, in 1990, he received The Institute of Internal Auditors Radde Award as the Outstanding Auditing Educator worldwide.

A PERSONAL THANKS

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REVIEWERS AND CONTRIBUTORS

Garrett W. Gleim, CPA, CIA, CGMA, leads production of the Gleim CPA, CMA, CIA, and EA exam review systems. He is a member of the American Institute of Certified Public Accountants and the Florida Institute of Certified Public Accountants and holds a Bachelor of Science in Economics with a Concentration in Accounting from The Wharton School, University of Pennsylvania. Mr. Gleim is coauthor of numerous accounting and aviation books and the inventor of multiple patents with educational applications. He is also an avid pilot who holds a commercial pilot rating and is a flight instructor. In addition, as an active supporter of the local business community, Mr. Gleim serves as an advisor to several start-ups with ties to the University of Florida.

Brigitte de Graaff, LL.M, MSc, CMA, graduated from Vrije Universiteit Amsterdam, the Netherlands, in Accounting & Control and Criminal Law. She runs the English CMA program at VU Amsterdam while pursuing her Ph.D. in Integrated Reporting. Ms. de Graaff provided substantial editorial assistance throughout the project.

Amy Ford, CMA, CPA, is a senior instructor of accounting at Western Illinois University. She has more than 15 years' experience teaching business and accounting students with a specialty in managerial and cost accounting. Prior to teaching, she worked in public accounting. Professor Ford is the lead CMA Gleim Instruct lecturer. Professor Ford provided substantial editorial assistance throughout the project.

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Gleim also publishes aviation training materials. Go to www.GleimAviation.com for a complete listing of our aviation titles.

A MESSAGE FROM OUR AUTHORS

In 1981, we set out with one mission: to help you prepare to pass the CMA exam. We were **the first** CMA Review course, and our mission was and continues to be to provide an affordable, effective, and easy-to-use study program. While the delivery and technology have changed over the years, our mission and the core learning techniques that we have perfected over the last 40+ years remain the same. The outline presentation, the spacing, and the question-and-answer formats in this book are designed to facilitate readability, learning, understanding, and your success on the CMA exam. Our most successful candidates use the Gleim Premium CMA Review System, which includes our innovative SmartAdapt technology, first-of-their-kind Gleim Instruct video lectures, the Gleim Access Until You Pass guarantee, and comprehensive exam-emulating test questions.

Our course

- ✓ Teaches how to maximize your score through learning strategies and exam-taking techniques.
- ✓ Defines the subject matter tested on Part 1 of the CMA exam.
- ✓ Outlines all of the Part 1 subject matter tested in 20 easy-to-use study units, including all relevant authoritative pronouncements.
- ✓ Presents multiple-choice and essay questions taken or modeled from CMA examinations to prepare you for the types of questions you will find on your CMA exam.
  - In our book, our answer explanations are presented to the immediate right of each multiple-choice question for your convenience. Use a piece of paper to cover our detailed explanations as you answer the question and then review all answer choices to learn why the correct one is correct and why the other choices are incorrect.
  - You also should practice answering these questions through our online platform, which mimics Prometric’s user interface, so you are comfortable answering questions online like you will do on test day. Our adaptive course will focus and target your weak areas.

This review book and all Gleim CMA Review materials comprehensively cover the ICMA’s Content Specification Outlines and Learning Outcome Statements. Note that, with over 40 years of experience, we teach CSO Section D, Cost Management, before Section B, Planning, Budgeting, and Forecasting, and Section C, Performance Management, because there is foundational knowledge that needs to be acquired in cost accounting before tackling other topics. Also, we cover Integrated Reporting at the end, rather than in the middle, of Section A, External Financial Reporting Decisions.

Thank you for trusting us with your CMA studies. Gleim continues to celebrate 40+ years of being the leading CMA Review course. We want to thank, on behalf of our entire team, every candidate who has trusted us to help them pass the CMA exam and achieve career success.

We appreciate any and all feedback from candidates like you. Please go to www.gleim.com/feedbackCMA1 to share suggestions on how we can improve this edition.

Please reach out to us immediately after the exam upon receipt of your exam scores. While the CMA exam is nondisclosed, and you must maintain confidentiality of any CMA questions or answers and agree not to divulge the nature of its content, we ask for you to provide information about our materials, such as the topics that need to be added or expanded, so that we are providing the best review materials possible.

Good Luck on the Exam,

Irvin N. Gleim
Dale L. Flesher

Preparing for and Taking the CMA Exam

Read the *CMA Exam Guide: A System for Success*

Access the free **Gleim CMA Exam Guide** at www.gleim.com/PassCMA and reference it as needed throughout your studying process to obtain a deeper understanding of the CMA exam. This booklet is your system for success.

Overview of the CMA Examination

The total exam is 8 hours of testing. It is divided into two parts, as follows:

Part 1	Financial Planning, Performance, and Analytics
Part 2	Strategic Financial Management

Each part consists of 100 multiple-choice questions and 2 essay scenarios, and testing lasts 4 hours (3 hours for the multiple-choice questions plus 1 hour for the essays). The exams are only offered during the following three testing windows: January/February, May/June, and September/October.

The CMA exam is computerized and offered at hundreds of Prometric testing centers worldwide. The online components of Gleim CMA Review provide exact exam emulations of the Prometric computer screens and procedures so you feel comfortable at the testing center on exam day.

Subject Matter for Part 1

Below, we have provided the ICMA's abbreviated Content Specification Outline (CSO) for Part 1. The percentage coverage of each topic is indicated to its right. We adjust the content of our materials for any changes in the CSO.

Candidates for the CMA designation are expected to have a minimum level of business knowledge that transcends both examination parts. This minimum level includes knowledge of basic financial statements, time value of money concepts, and elementary statistics. Specific discussion of the ICMA's Levels of Coverage (A, B, and C) is provided in Appendix D, which is a reprint of the ICMA's discussion of types and levels of exam questions.

Part 1: Financial Planning, Performance, and Analytics	
External Financial Reporting Decisions	15%
Planning, Budgeting, and Forecasting	20%
Performance Management	20%
Cost Management	15%
Internal Controls	15%
Technology and Analytics	15%

Appendix D contains the CSOs in their entirety as well as cross-references to the subunits in Gleim CMA Review where topics are covered. Remember that we have studied the CSOs in developing our CMA Review materials. Accordingly, you do not need to spend time with Appendix D. Rather, it should give you confidence that Gleim CMA Review is the best and most comprehensive review course available to help you pass the CMA exam.

Learning Outcome Statements

In addition to the CSOs, the ICMA provides Learning Outcome Statements (LOSs). The LOSs are more specific and describe in greater detail what candidates need to know and the skills they are expected to have as CMAs. Gleim materials cover these LOSs thoroughly. For your convenience, Appendix D provides a complete reproduction of the LOSs along with cross-references to the subunits in Gleim CMA Review where they are covered. Like the CSOs, this does not need to be studied. Rather, it should give you confidence in your choice of using Gleim CMA.

Which Pronouncements Are Tested?

New pronouncements are eligible to be tested on the CMA exam in the testing window beginning 1 year after a pronouncement's effective date. Rest assured that Gleim updates our materials as appropriate when any new standard is testable and will only cover what candidates need for the current CMA exam.

How Ethics Are Tested

Ethical issues and considerations are tested from the perspectives of both the individual and the organization in Part 2. Candidates will be expected to evaluate the issues involved and make recommendations for the resolution of the situation in both the multiple-choice section and the essay section of Part 2 of the exam.

Nondisclosed Exam

The CMA is a nondisclosed exam, which means that exam questions are not released to review providers or the public while they are still testable. As part of the ICMA's nondisclosure policy and to prove each candidate's willingness to adhere to this policy, a confidentiality agreement must be accepted by each candidate before each part is taken. This statement is reproduced here to remind all CMA candidates about the ICMA's strict policy of nondisclosure, which Gleim consistently supports and upholds.

> *I hereby attest that I will not divulge the content of this examination, nor will I remove any examination materials, notes, or other unauthorized materials from the examination room. I understand that failure to comply with this attestation may result in invalidation of my grades and disqualification from future examinations. For those already certified by the Institute of Certified Management Accountants, failure to comply with the statement will be considered a violation of the standards of Ethical Conduct for Practitioners of Management Accounting and Financial Management and could result in revocation of the certification.*

The ICMA's Requirements for CMA Designations

The CMA designation is granted only by the ICMA. Candidates must complete the following steps to become a CMA:

1. Become a member of the IMA, enter the certification program, and register for the part(s) you are going to take.
    - The Gleim *CMA Exam Guide* contains helpful guidelines on the membership and certification application and registration processes.
    - A useful worksheet to help you keep track of your process and organize what you need for exam day can be found within the Gleim Study Planner of the CMA Review Course.
2. Pass both parts of the exam within 3 years.
3. Satisfy the education requirement within 7 years.
4. Satisfy the experience requirement within 7 years.
5. Comply with the *IMA Statement of Ethical Professional Practice*.

Eligibility Period

Once candidates are admitted into the Certification Program, they are required to pass both parts of the exam within 3 years. If a candidate is not able to pass both parts within this time period, the Certification Entrance Fee will have to be repaid and the passed part will have to be retaken.

Maintaining Your CMA Designation

When you have completed all requirements, you will be issued a numbered CMA certificate. This certificate is the property of the ICMA and must be returned upon request. To maintain your certificate, membership in the IMA is required. CMAs must pay the CMA Annual Fee, which covers active IMA membership and the CMA Maintenance Fee. You are also required to comply with the *IMA Statement of Ethical Professional Practice* and all applicable state laws. The final requirement is continuing professional education (CPE).

Beginning the calendar year after successful completion of the CMA exams, 30 hours of CPE must be completed, which is about 4 days per year. Qualifying topics include management accounting, corporate taxation, statistics, computer science, systems analysis, management skills, marketing, business law, and insurance. All CMAs are required to complete 2 hours of CPE on the subject of ethics as part of their 30-hour annual requirement. Contact Gleim for all of your CPE needs at www.gleim.com/CPE.

Gleim Premium CMA Review with SmartAdapt

Gleim Premium CMA Review features the most comprehensive coverage of exam content and employs learning techniques to help you study smarter and prepare for the CMA exam with confidence. The Gleim Premium CMA Review System is powered by SmartAdapt technology, an innovative platform that continually identifies areas you should focus on and guides you through the learning process. Follow these steps for an optimized CMA review:

Step 1: Complete a Diagnostic Quiz.

This quiz sets a baseline that our SmartAdapt technology will use to create a custom learning track. Immediately after you complete the quiz, you will see your results broken down by topic and then be able to review the detailed answer explanations to facilitate learning.

Step 2: Read, watch, or listen based on your weak areas.

Study identified areas. Learn concepts from our streamlined outlines with detailed examples and success tips. Watch selections identified from our highly acclaimed Gleim Instruct videos, featuring Amy Ford, CMA, CPA. This will ensure you master the required skills.

Step 3: Practice answering multiple-choice and essay questions.

Practice and perfect your question-answering techniques by taking the adaptive quizzes and essays that SmartAdapt has created for you to optimize your learning.

Final Review: Complete Mock Exams to complete your final review leading up to your exam.

After completing all study units, take the first Mock Exam, a full-length practice exam. Then, SmartAdapt will guide you through a Final Review based on your results. Finally, a few days before your exam date, take the second Mock Exam. SmartAdapt will tell you when you are ready so you can pass with confidence

To facilitate your studies, the Gleim Premium CMA Review System uses the most comprehensive test bank of exam-quality CMA questions on the market. Our system’s content and presentation are the most realistic representation of the whole exam environment so you feel completely at ease on exam day.

Gleim Knowledge Transfer Outlines

This edition of the CMA Part 1 Review book has the following features to make studying easier:

Examples

We use illustrative examples, set off in shaded, bordered boxes, to make the concepts more relatable.

Example 1-6 Issuance of Stock

A company issued 50,000 shares of its $1 par value common stock. The market price of the stock was $17 per share on the day of issue.

Assets	=	Liabilities	+	Stockholders' Equity
Cash $850,000 ↑				Common stock $50,000 ↑ Additional paid-in capital $800,000 ↑

Cash: 50,000 shares × $17 market price = $850,000
Common stock: 50,000 shares × $1 par value = $50,000
Additional paid-in capital: $850,000 cash – $50,000 common stock = $800,000

Gleim Success Tips

These tips supplement the core exam material by suggesting how certain topics might be presented on the exam or how you should prepare for an issue.

Success Tip

CMA candidates will be expected to understand the proper accounting procedure for normal and abnormal spoilage under both job-order costing and process costing. In job-order costing, normal spoilage is treated as a product cost while abnormal spoilage is treated as a period cost. It is important to understand not only that they are treated differently, but why. When answering questions pertaining to spoilage, pay attention to the question stem, what system is being used, and whether the product can be sold or not.

Author’s Notes

Our authors use these to call your attention to specific points of content and give more context.

Author’s Note

Under the **cash basis**, revenues are recognized when cash is received and expenses are recognized when cash is paid. Under GAAP, financial statements cannot be prepared under the cash basis of accounting.

Flowcharts and Visuals

These images help to conceptualize ideas and make procedures clear.

The Value-Creation Process Described by the <IR> Framework

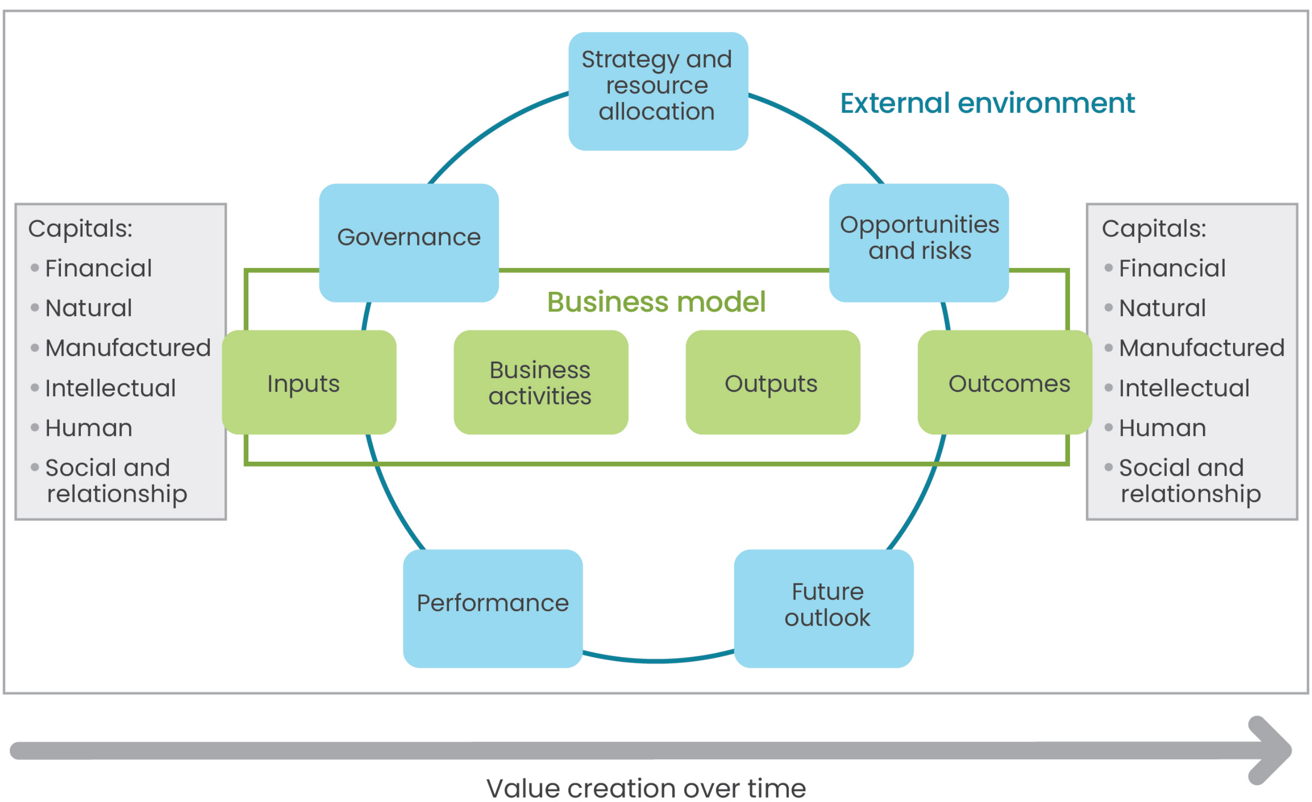

Figure 6-2

Time-Budgeting and Question-Answering Techniques for the Exam

Having a solid multiple-choice answering technique will help you maximize your score on each part of the CMA exam. Remember, knowing how to take the exam and how to answer individual questions is as important as studying/reviewing the subject matter tested on the exam. Competency in both will reduce your stress and the number of surprises you experience on exam day.

- **Budget your time so you can finish before time expires.**
  - Spend about 1.5 minutes per question. This would result in completing 100 questions in 150 minutes to give you 30 minutes to review your answers and questions that you have marked.
- **Answer the questions in consecutive order.**
  - Do **not** agonize over any one item or question. Stay within your time budget.
  - Never leave a multiple-choice question (MCQ) unanswered. Your score is based on the number of correct responses. You will not be penalized for answering incorrectly. If you are unsure about a question,
    - ✓ Make an educated guess,
    - ✓ Mark it for review at the bottom of the screen, and
    - ✓ Return to it before you submit the testlet as time allows. Remember, once you have selected the “End” button, you will no longer be able to review or change any answers in the MCQ section.
- **Ignore the answer choices so that they will not affect your precise reading of the question.**
  - Only one answer option is best. In the MCQs, four answer choices are presented, and you know one of them is correct. The remaining choices are distractors and are meant to appear correct at first glance. *They are called distractors for a reason.* Eliminate them as quickly as you can.
  - In computational items, the distractors are carefully calculated to be the result of common mistakes. Be careful and double-check your computations if time permits.
- **Read the question carefully to discover exactly what is being asked.**
  - Focusing on what is required allows you to
    - ✓ Reject extraneous information
    - ✓ Concentrate on relevant facts
    - ✓ Proceed directly to determining the best answer
  - Be careful! The requirement may be an **exception** that features a negative word.

- **Decide the correct answer before looking at the answer choices.**
- **Read the answer choices, paying attention to small details.**
  - Even if an answer choice appears to be correct, do not skip the remaining answer choices. Each choice requires consideration because you are looking for the best answer provided.
  - Tip: Treat each answer choice like a true/false question as you analyze it.
- **Click on the best answer.**
  - You have a 25% chance of answering the question correctly by guessing blindly, but you can improve your odds with an educated guess.
  - For many MCQs, you can eliminate two answer choices with minimal effort and increase your educated guess to a 50/50 proposition.

Learning from Your Mistakes

Learning from questions you answer incorrectly is very important. Each question you answer incorrectly is an **opportunity** to avoid missing actual test questions on your CMA exam. Thus, you should carefully study the answer explanations provided until you understand why the original answer you chose is wrong, as well as why the correct answer indicated is correct. This study technique is the difference between passing and failing for many CMA candidates.

Also, you **must** determine why you answered questions incorrectly to learn how to avoid the same errors in the future. Reasons for missing questions include

- ⊘ Misreading the requirement (stem)
- ⊘ Not understanding what is required
- ⊘ Making a math error
- ⊘ Applying the wrong rule or concept
- ⊘ Being distracted by one or more of the answers
- ⊘ Incorrectly eliminating answers from consideration
- ⊘ Not having any knowledge of the topic tested
- ⊘ Employing bad intuition when guessing

It is also important to verify that you answered correctly for the right reasons. Otherwise, if the material is tested on the CMA exam in a different manner, you may not answer it correctly.

How to Be in Control While Taking the Exam

You have to be in control to be successful during exam preparation and execution. Control can also contribute greatly to your personal and other professional goals. Control is a process whereby you

- ✓ Develop expectations, standards, budgets, and plans
- ✓ Undertake activity, production, study, and learning
- ✓ Measure the activity, production, output, and knowledge
- ✓ Compare actual activity with expected and budgeted activity
- ✓ Modify the activity, behavior, or study to better achieve the desired outcome
- ✓ Revise expectations and standards in light of actual experience
- ✓ Continue the process or restart the process in the future

Exercising control will ultimately develop the confidence you need to outperform other CMA candidates and PASS the CMA exam! Obtain our *CMA Exam Guide* for a more detailed discussion of control and other exam tactics.

Gleim outlines cover everything in the ICMA Learning Outcome Statements and Content Specification Outlines and are more than sufficient to help you pass the CMA exam. However, some candidates may wish to review certain topics on a more fundamental level. For these candidates, Gleim has created our new **CMA Fundamentals video series**. Contact accountingteam@gleim.com if you would like access to these supplementary videos.

If You Have Questions about Gleim Materials

Gleim has an efficient and effective way for candidates who have purchased the Premium CMA Review System to submit an inquiry and receive a response regarding Gleim materials directly through their course. This system also allows you to view your Q&A session in your Gleim Personal Classroom.

Questions regarding the **information in this introduction and/or the Gleim *CMA Exam Guide* (study suggestions, study plans, exam specifics)** may be emailed to personalcounselor@gleim.com.

Questions concerning **orders, prices, shipments, or payments** should be sent via email to customerservice@gleim.com and will be promptly handled by our competent and courteous customer service staff.

For **technical support**, you may use our automated technical support service at www.gleim.com/support, email us at support@gleim.com, or call us at (800) 874-5346.

Feedback

Please fill out our online feedback form (www.gleim.com/feedbackCMA1) immediately after you take the CMA exam so we can adapt to changes in the exam. Our approach has been approved by the ICMA.

Study Unit Two

Measurement, Valuation, and Disclosure: Assets -- Short-Term Items

(23 pages of outline)

This study unit is the **second of six** on **external financial reporting decisions**. The relative weight assigned to this major topic in Part 1 of the exam is **15%**. The six study units are

- Study Unit 1: External Financial Statements
- **Study Unit 2: Measurement, Valuation, and Disclosure: Assets -- Short-Term Items**
- Study Unit 3: Measurement, Valuation, and Disclosure: Assets -- Long-Term Items
- Study Unit 4: Measurement, Valuation, and Disclosure: Liabilities
- Study Unit 5: Revenue and Impairment Recognition
- Study Unit 6: Integrated Reporting

This study unit discusses two current assets: accounts receivable and inventory. Topics covered in this study unit include

- Accounting for accounts receivable, including
  - Transactions related to accounts receivable, including the timing of recognition
  - Credit losses
  - Types of factoring
- Accounting for inventory, including
  - Items to include in the counts of inventory
  - Cost flow assumption methods
  - Calculating cost of goods sold and ending inventory using different cost flow assumption methods
  - The effects of inventory errors
  - The lower of cost or market rule
  - The lower of cost or net realizable value rule

2.1 Accounts Receivable

Accounts receivable **(trade receivables)** are amounts owed to an entity by its customers resulting from credit sales in the ordinary course of business that are due in customary trade terms.

- The recording of a receivable, which often coincides with revenue recognition, is consistent with the accrual method of accounting.

Allowance for Credit Losses

The allowance for credit losses is a contra asset that reduces accounts receivable on the entity's balance sheet. This account is used to keep track of management's estimate for the amount of accounts receivable that the entity estimates it will not be able to collect.

Credit Loss Expense

Credit loss expense is the income statement account used to keep track of the expense related to estimating credit losses.

Balance Sheet Presentation

Receivables should be separated into **current and noncurrent** portions.

- Most of the entity's accounts receivable are classified as current assets because they are expected to be collected within 1 year or the entity's normal operating cycle.
- **Current** accounts receivable are reported in the balance sheet at **net realizable value (NRV)**, i.e., net of allowance for credit losses (uncollectible accounts), allowance for sales returns, and billing adjustments.
- **Noncurrent** receivables are measured at net present value of future cash flows expected to be collected.

Allowance Method (Required under GAAP)

The allowance method attempts to match **credit loss expense** with the **related revenue**. This method is **required under GAAP**.

- As specific accounts receivable are written off, they are charged to the allowance account.
  - Write-offs do not affect the carrying amount of the net accounts receivable balance because the reductions of gross accounts receivable and the allowance are the same.
    - The **write-off** of a particular account has no effect on expenses.

- In the balance sheet, the carrying amount of accounts receivable is reported at the net amount expected to be collected.

Balance Sheet:	
Accounts receivable	$X,XXX
Allowance for credit losses	(X,XXX)
Accounts receivable, net	$X,XXX

- Under the allowance method, the two approaches to calculating the amount charged to credit loss expense are the income statement approach and the balance sheet approach.

Income Statement Approach (Percentage of Sales)

Under the income statement approach, the entity estimates the periodic credit loss expense as a percentage of sales on credit.

- The ending balance of the allowance for credit losses is determined after all the activity in the allowance account is recorded during the period.

Example 2-1 Income Statement Approach

Midburg Co. has the following unadjusted account balances at year end:

Cash	$ 85,000
Accounts receivable	100,000
Allowance for credit losses	2,000
Sales on credit	500,000

Based on its experience, Midburg expects credit losses to average 2% of credit sales. Thus, the estimated credit loss expense is $10,000 ($500,000 × 2%). The year-end adjusting entry is

Assets	=	Liabilities	+	Stockholders' Equity
Allowance for credit losses $10,000 ↓				Credit loss expense $10,000 ↓

Since allowance for credit losses is a contra asset, this $10,000 entry reduces total assets but increases the balance in the contra asset.

The year-end adjusted balance of allowance for credit losses is $12,000 ($10,000 + $2,000).

Balance sheet presentation:	
Accounts receivable	$100,000
Allowance for credit losses	(12,000)
Accounts receivable, net	$ 88,000

Balance Sheet Approach (Percentage of Receivables)

Under this approach, the ending balance of the allowance for credit losses is a percentage of the ending balance of accounts receivable.

- Credit loss expense reflects the adjustment of the allowance to its correct ending balance.

Example 2-2 Balance Sheet Approach

Using the data from Example 2-1, assume that, based on Midburg's experience, 6% of accounts receivable are determined to be uncollectible. The ending balance of the allowance for credit losses needs to be $6,000 ($100,000 × 6%). Because the allowance currently has a balance of $2,000, the following entry is required:

Assets	=	Liabilities	+	Stockholders' Equity
Allowance for credit losses $4,000 ↓				Credit loss expense $4,000 ↓

Balance sheet presentation:

Accounts receivable	$100,000
Allowance for credit losses	(6,000)
Accounts receivable, net	$ 94,000

An entity rarely experiences a single rate of uncollectibility on all its accounts. For this reason, entities using the balance sheet approach to estimate expected credit losses for accounts receivable generally prepare an **aging schedule**.

Example 2-3 Balance Sheet Approach with Aging Schedule

Midburg prepares the following aging schedule of its accounts receivable:

Balance Range	Less than 30 Days	31-60 Days	61-90 Days	Over 90 Days	Total Balances
$0 - $100	$ 5,000	$ 200	$ 100	$ 100	$ 5,400
$100 - $1,000	8,000	3,800			11,800
$1,000 - $5,000	20,000	2,000	1,900		23,900
$5,000 - $10,000	38,000		8,000	900	46,900
Over $10,000		12,000			12,000
Totals	$71,000	$18,000	$10,000	$1,000	$100,000

-- Continued on next page --

Example 2-3 -- Continued

Midburg then applies an appropriate percentage to each stratum based on experience.

Aging Intervals	Balance	Estimated Uncollectible	Ending Allowance
Less than 30 days	$ 71,000	2%	$1,420
30-60 days	18,000	12%	2,160
61-90 days	10,000	15%	1,500
Over 90 days	1,000	20%	200
Total	$100,000		$5,280

Because the allowance currently has a balance of $2,000, the following entry is required to establish the proper measurement:

Assets	=	Liabilities	+	Stockholders' Equity
Allowance for credit losses $3,280 ↓				Credit loss expense $3,280 ↓

Balance sheet presentation:

Accounts receivable	$100,000
Allowance for credit losses	(5,280)
Accounts receivable, net	$ 94,720

Reconciliation Summaries

The following equation illustrates the reconciliation of the beginning and ending balances of gross accounts receivable (accounts receivable before adjustment for allowance for credit losses):

Beginning accounts receivable
\+ Credit sales during the period
– Cash collected on credit sales during the period
– Accounts receivable written-off during the period
= Ending accounts receivable

The following equation illustrates the reconciliation of the beginning and ending balances of the allowance for credit losses:

Beginning allowance for credit losses
\+ Credit loss expense recognized for the period
– Accounts receivable written off
\+ Collection of accounts receivable previously written off
= Ending allowance for credit losses

Allowance for Customers' Right of Sales Return

When a right of return exists, an entity may recognize revenue from a sale of goods at the time of sale only if the amount of future returns can be reliably estimated. A provision must be made for the return of merchandise because of product defects, customer dissatisfaction, etc.

To be consistent with the **matching principle** (recognition of revenue and related expense in the same accounting period), the revenue from the sale of goods and the expense for the estimated sales returns must be recognized in the same period.

- An allowance for sales returns should be established.

Factoring of Accounts Receivable

Factoring is a transfer of receivables to a third party (a factor) who assumes the responsibility of collection.

Factoring discounts receivables on a **nonrecourse**, notification basis. Thus, payments by the debtors on the transferred assets are made to the factor. If the transferor (seller) surrenders control, **the transaction is a sale**.

- If a sale is **without recourse**, the transferee (credit agency) assumes the risks and receives the rewards of collection. This sale is final, and the seller has no further liabilities to the transferee. Accordingly, the receivables are no longer reported on the seller's financial statements.

- If a sale is **with recourse**, the transferor (seller) may be required to make payments to the transferee or to buy back receivables in specified circumstances.
  - In this circumstance, the transfer might not qualify as a sale. The parties account for the transaction as a secured borrowing with a pledge of noncash collateral.
  - The receivables are still on the seller's financial statements and it must recognize a liability for the amount of cash received.

Example 2-4 Factoring of Accounts Receivable

A factor charges a 2% fee plus an interest rate of 18% on all cash advanced to a transferor of accounts receivable. Monthly sales are $100,000, and the factor advances 90% of the receivables submitted after deducting the 2% fee and the interest. Credit terms are net 60 days. What is the cost to the transferor of this arrangement?

Amount of receivables submitted	$100,000	
Minus: 10% reserve	(10,000)	
Minus: 2% factor's fee	(2,000)	
Amount accruing to the transferor	$ 88,000	
Minus: 18% interest for 60 days	(2,640)	[$88,000 × 18% × (60 ÷ 360)]
Amount to be received immediately	$ 85,360	

The transferor also will receive the $10,000 reserve at the end of the 60-day period if it has not been absorbed by sales returns and allowances. Thus, the total cost to the transferor to factor the receivables for the month is $4,640 ($2,000 factor fee + interest of $2,640). Assuming that the factor has approved the customers' credit in advance (the sale is without recourse), the transferor will not absorb any bad debts.

The main reasons for factoring transactions are:

- The factor often operates more efficiently than its clients because of the specialized nature of its services.
- An entity (seller) that uses a factor tries to speed up its collections.
  - The entity can eliminate its credit department and accounts receivable staff.
  - Credit losses are eliminated from the financial statements.

These reductions in costs can offset the fee charged by the factor.

Credit card sales are a common form of factoring. The retailer benefits by prompt receipt of cash and avoidance of bad debts and other costs. In return, the credit card company charges a fee.

Stop & Review

You have completed the outline for this subunit.
Study multiple-choice questions 1 through 5 beginning on page 82.

2.2 Inventory -- Fundamentals

Inventory is the total of tangible personal property

- Held for sale in the ordinary course of business,
- In the form of work-in-process to be completed and sold in the ordinary course of business, or
- To be used up currently in producing goods or services for sale.
  - Inventory does not include long-term assets subject to depreciation.

Financial Statement Presentation

Inventories are generally classified as current assets in the financial statements. They are expected to be realized in cash or sold or consumed during the normal operating cycle of the business.

Inventory Accounts

The inventories of a **retailer** (trading entity) consist of goods purchased to be resold without substantial modification.

The inventories of a **manufacturer** consist of

- Goods to be consumed in production (materials),
- Goods in the process of production (work-in-process), and
- Finished goods.

Cost Basis of Inventory -- Initial Measurement

The **cost of inventory** includes all costs incurred in bringing the inventories to their existing location and ready-to-use condition.

The **cost of purchased inventories** includes

- The price paid or consideration given to acquire the inventory (net of trade discounts, rebates, and other similar items)
- Import duties and other unrecoverable taxes
- Handling, insurance, freight-in, and other costs directly attributable to
  - Acquiring finished goods and materials
  - Bringing them to their present location and condition (salable or usable condition)

Inventory Accounting Systems

A **perpetual inventory system** updates inventory accounts after each purchase or sale.

- This system is generally more suitable for entities that sell relatively expensive and heterogeneous items and requires continuous monitoring of inventory and cost of goods sold accounts.
- Under this system, inventory and cost of goods sold are adjusted as sales occur.
- An **advantage** of the perpetual inventory system is that the amount of inventory on hand and the cost of goods sold can be determined at any time.
- A **disadvantage** of the perpetual inventory system is that the bookkeeping is more complex and expensive.

In the **periodic inventory system**, inventory and cost of goods sold are updated at specific intervals, such as quarterly or annually, based on the results of a **physical count**.

- Bookkeeping is simpler under this system. It is generally used by entities with relatively inexpensive and homogeneous items that have no need to continuously monitor their inventory and cost of goods sold.
- Under the periodic system, changes in inventory and cost of goods sold are recorded **only at the end of the period**, based on the physical count.

Inventory Period-End Physical Count

An annual period-end **inventory physical count** is necessary under both the perpetual and periodic inventory accounting systems. The amount of inventory reported in the annual financial statements should be based on a physical count.

- Under the **perpetual system**, a physical count helps to detect misstatements in the records and thefts of inventory.
- Under the **periodic system**, the amounts of inventory and cost of goods sold can be determined based only on the results of a physical count.

For a physical count to be accurate, the entity must count all items considered to be inventory and eliminate all items that are not. Items to be counted as inventory include the following:

- **Goods in transit** – Items in transit are inventories that on the physical count date (1) are not on the entity's premises and are on the way to the desired location and (2) whose legal title is held by the entity; i.e., the entity bears the risk of loss on inventory in transit.
  - The following are the most common shipping terms:
    - **FOB shipping point** – Legal title and risk of loss pass to the buyer when the seller delivers the goods to the carrier.
      - The **buyer** must include the goods in inventory during shipping.
    - **FOB destination** – Legal title and risk of loss pass to the buyer when the seller delivers the goods to a specified destination.
      - The **seller** must include the goods in inventory during shipping.
- **Goods out on consignment** – A consignment sale is an arrangement between the owner of goods (consignor) and the sales agent (consignee). Consigned goods are not sold but rather transferred to an agent for possible sale. The consignor records sales only when the goods are sold to third parties by the consignee.
  - Goods out on consignment are included in the **consignor's** inventory at cost.
    - Costs of transporting goods to the consignee are inventoriable costs, not selling expenses.
  - The **consignee** never records the consigned goods as an asset.

Inventory Errors

Inventory errors impact many elements of the entity's financial statements.

- Affected elements of the balance sheet include current assets, working capital (Current assets – Current liabilities), and ending stockholders' equity.
- Affected elements of the income statement include cost of goods sold and net income.

A common error is inappropriate timing of the recognition of transactions.

- If a purchase on account is not recorded and the goods are not included in ending inventory, cost of goods sold and net income are unaffected. Current assets and current liabilities are understated.
- If purchases and beginning inventory are properly recorded but items are excluded from ending inventory, cost of goods sold is overstated. Net income, inventory, retained earnings, and working capital are understated.
- Errors arising from transactions recorded in the wrong period may reverse in the subsequent period.
  - If ending inventory is overstated, the overstatement of net income will be offset by the understatement in the following year that results from the overstatement of beginning inventory.

An **overstatement error in year-end inventory** of the current year affects the financial statements of 2 different years.

The **first year's** effects may be depicted as follows:

Balance Sheet Effects		Income Statement Effects		
		Net sales revenue		$XXX,XXX
		Beginning inventory	$XXX,XXX	
		Plus: Cost of goods purchased/produced	XXX,XXX	
Current assets:		Goods available for sale	XXX,XXX	
Ending inventory	Overstated ↑	Minus: Ending inventory	Overstated ↑	
		Cost of goods sold		Understated ↓
Equity:		Gross profit		Overstated ↑
Retained earnings, 12/31/Yr 0	$XXX,XXX	Expenses		(XX,XXX)
Plus: Net income	Overstated ↑	Net income		Overstated ↑
Retained earnings, 12/31/Yr 1	Overstated ↑			

Figure 2-1

At the end of the **second year**, retained earnings is correctly stated as follows:

Balance Sheet Effects		Income Statement Effects		
		Net sales revenue		$XXX,XXX
		Beginning inventory	Overstated ↑	
		Plus: Cost of goods purchased/produced	XXX,XXX	
Current assets:		Goods available for sale	Overstated ↑	
Ending inventory	$XXX,XXX	Minus: Ending inventory	$(XXX,XXX)	
		Cost of goods sold		Overstated ↑
Equity:		Gross profit		Understated ↓
Retained earnings, 12/31/Yr 1	Overstated ↑	Expenses		(XX,XXX)
Plus: Net income	Understated ↓	Net income		Understated ↓
Retained earnings, 12/31/Yr 2	$XXX,XXX			

Figure 2-2

Stop & Review

You have completed the outline for this subunit.
Study multiple-choice questions 6 and 7 on page 85.

2.3 Inventory -- Cost Flow Methods

Specific Identification Method

Specific identification requires determining which specific items are sold and therefore reflects the actual physical flow of goods. This system is appropriate for

- Items that are not ordinarily interchangeable
- Items that are segregated for a specific project
- Blocks of investment securities or special inventory items, such as automobiles or heavy equipment
  - Any item that has a serial number on it is a candidate for the specific identification method.

Specific identification is the most accurate method because it identifies each item of inventory. However, it requires detailed records and may not be feasible or cost effective.

When the inventory items purchased or produced are identical and interchangeable, specific identification is not appropriate. In such circumstances, several assumptions about the flow of cost, such as **average**, **FIFO**, or **LIFO**, may be appropriate for the measurement of periodic income. The method selected should be the one that, under the circumstances, most clearly reflects periodic income.

Average Method

The average method assumes that goods are indistinguishable and are therefore measured at an average of the costs incurred. The average may be calculated on the periodic basis or as each additional purchase occurs (perpetual basis).

- The **moving-average method** is used under the **perpetual** inventory accounting system. It requires determination of a new weighted-average inventory cost after each purchase. This cost is used for every sale until the next purchase.

Example 2-5 Moving-Average Method

The following data relate to Entity A's Year 1 activities:

Date	Transaction	Number of units	Purchase price per unit ($)	Sale price per unit ($)
January 1	Beginning balance	100	20	
March 1	Purchase	20	32	
April 1	Sale	70		40
June 1	Purchase	30	14	
October 1	Sale	40		24

Under the **moving-average method**, the year-end inventory and Year 1 cost of goods sold are calculated as follows:

Date	Activity	Units	Price	Cost of inventory purchased/sold	Inventory total balance	On-hand units	Cost per unit
Jan. 1	Beg. bal.	100	$20		$2,000 (100 × 20)	100	**$20**
Mar. 1	Purchase	20	$32	$640 = 20 × $32	$2,640 (2,000 + 640)	120	**$22** ($2,640 ÷ 120)
Apr. 1	Sale	70	**$22**	($1,540) = 70 × $22	$1,100 (2,640 – 1,540)	50	**$22** ($1,100 ÷ 50)
Jun. 1	Purchase	30	$14	$420 = 30 × $14	$1,520 (1,100 + 420)	80	**$19** ($1,520 ÷ 80)
Oct. 1	Sale	40	**$19**	($760) = 40 × $19	**$760** (1,520 – 760)	40	**$19** ($760 ÷ 40)

The cost of **inventory** on December 31, Year 1, is **$760**. The Year 1 **cost of goods sold** is **$2,300**.

Beginning inventory	$2,000
Purchases ($640 + $420)	1,060
Ending inventory	(760)
Cost of goods sold ($1,540 + $760)	**$2,300**

- The **weighted-average method** is used under the **periodic** inventory accounting system. The average cost is determined only at the end of the period. The weighted-average cost per unit is used to determine the ending inventory and the cost of goods sold for the period. It is calculated as follows:

$$\frac{\textbf{Cost of beginning inventory (\$) + Cost of purchases during the period (\$)}}{\textbf{Units in beginning inventory + Number of units purchased during the period}}$$

Example 2-6 Weighted-Average Method

Under the **weighted-average method**, Entity A's ending inventory and Year 1 cost of goods sold are determined as follows:

First, the weighted-average cost per unit is calculated.

$$\frac{\text{Cost of beginning inventory + Cost of purchases during the period}}{\text{Units in beginning inventory + Number of units purchased}} = \frac{\$2,000 + \$1,060}{100 + 20 + 30} = \mathbf{\$20.40}$$

Second, the ending inventory and Year 1 cost of goods sold are calculated using the weighted-average cost per unit (WACPU).

Beginning inventory	$2,000	
Purchases	1,060	
Ending inventory	**(816)**	(40 × $20.40) = (WACPU × Units in ending inventory)
Cost of goods sold	**$2,244**	(110 × $20.40) = (WACPU × Units sold during the period)

First-in, First-out (FIFO)

This method assumes that the first goods purchased are the first sold. Ending inventory consists of the latest purchases. Cost of goods sold includes the earliest goods purchased.

Under the FIFO method, year-end inventory and cost of goods sold for the period are **the same** regardless of whether the perpetual or the periodic inventory accounting system is used.

Example 2-7 FIFO

The number of units in Entity A’s ending inventory is 40. Under the FIFO method, the cost of these units is the cost of the **latest purchases ($740)**.

Date of purchase	Units	Price per unit	Total cost
June 1, Year 1	30	$14	$420
March 1, Year 1	10	32	320
Ending inventory	**40**		**$740**

The Year 1 cost of goods sold is **$2,320**.

Beginning inventory	$2,000
Purchases ($640 + $420)	1,060
Ending inventory	(740)
Cost of goods sold	**$2,320**

NOTE: The results are the same under the periodic and perpetual systems.

Last-in, First-out (LIFO)

The LIFO (last-in, first-out) method assumes the newest items of inventory are sold first. Thus, the items remaining in inventory are the oldest.

- Under the LIFO method, the perpetual and the periodic inventory accounting systems may result in different values for year-end inventory and cost of goods sold.
  - Under the **periodic** inventory accounting system, the calculation of inventory and cost of goods sold are made at the end of the period.

Example 2-8 LIFO Periodic

The number of units in Entity A's ending inventory is 40. Under the LIFO method, the cost of those units is the cost of the **earliest purchases** (beginning inventory) of **$800** (40 units × $20). The Year 1 cost of goods sold is **$2,260**.

Beginning inventory	$2,000
Purchases ($640 + $420)	1,060
Ending inventory	(800)
Cost of goods sold	**$2,260**

  - Under the **perpetual** inventory accounting system, cost of goods sold is calculated every time a sale occurs and consists of the most recent (latest) purchases.

Example 2-9 LIFO Perpetual

Date	Activity	Units	Cost per unit	Cost of inventory purchased/sold	Inventory total balance	Number of units
Jan. 1	Beg. bal.	100	$20		100 × $20 = $2,000	100
Mar. 1	Purchase	20	$32	20 × $32 = $640	Jan. 1, layer 100 × $20 = $2,000 Mar. 1, layer 20 × $32 = 640 $2,640	120
Apr. 1	Sale	70		20 × $32 = $ 640 50 × $20 = 1,000 **$(1,640)**	Jan. 1, layer 50 × $20 = $1,000	50
Jun. 1	Purchase	30	$14	30 × $14 = $420	Jan. 1, layer 50 × $20 = $1,000 Jun. 1, layer 30 × $14 = 420 $1,420	80
Oct. 1	Sale	40		30 × $14 = $ 420 10 × $20 = 200 **$(620)**	Jan. 1, layer 40 × $20 = **$800**	40

Entity A's cost of ending **inventory** is **$800**, and the Year 1 **cost of goods sold** is **$2,260** ($1,640 + $620).

NOTE: The results of the LIFO method under the perpetual and periodic systems are the same in this example but may differ in other situations.

IFRS Difference

LIFO is not permitted.

Retail Inventory Method

The retail inventory method is a very effective means of estimating inventory value. It is used for

- Interim and annual financial reporting in accordance with GAAP
- Federal income tax purposes
- Verifying year-end inventory and cost of goods sold data, e.g., as an analytical procedure by an independent auditor

Cost Flow Methods -- Comparison

The cost flow model selected should be the one that most clearly reflects periodic income.

Example 2-10 Cost Flow Methods

The following are Entity A's varying results under each of the five cost flow methods:

	Ending Inventory	Cost of Goods Sold
Moving average	$760	$2,300
Weighted average	816	2,244
FIFO	740	2,320
LIFO periodic	800	2,260
LIFO perpetual	800	2,260

In a time of **rising prices** (inflation), use of the LIFO method results in the lowest year-end inventory, the highest cost of goods sold, and the lowest gross profit. LIFO assumes that the oldest (and therefore the lowest-priced) goods purchased are in year-end inventory, and that cost of goods sold consists of the latest (and therefore the highest-priced) goods purchased.

The following table compares the results under FIFO and LIFO:

During a Period of Inflation	Ending Inventory	Cost of Goods Sold	Gross Profit (Net Income)
LIFO	Lowest	Highest	Lowest
FIFO	Highest	Lowest	Highest

Advantages of FIFO:

- Ending inventory approximates current replacement cost
- In times of rising prices, results in highest net income
- Often matches the physical flow of inventory

Disadvantage of FIFO:

- Matches current revenues with older costs

Advantage of LIFO:

- Lower gross profit in periods of rising prices leads to lower taxable income

Disadvantages of LIFO:

- Management can manipulate net income with an end-of-period purchase that immediately alters cost of goods sold
- Rarely matches physical flow of inventory

Stop & Review

You have completed the outline for this subunit.
Study multiple-choice questions 8 through 17 beginning on page 86.

2.4 Measurement of Inventory Subsequent to Initial Recognition

The subsequent measurement of inventory depends on the cost method used.

- Inventory accounted for using LIFO or the retail inventory method is measured at the **lower of cost or market**.
- Inventory accounted for using any other cost method (e.g., **FIFO or average cost**) is measured at the **lower of cost or net realizable value**.

Loss on Write-Down of Inventory

A write-down of inventory below its cost may result from damage, deterioration, obsolescence, changes in price levels, changes in demand, etc.

- The **loss on write-down** of inventory to market or net realizable value (NRV) generally is presented as a component of cost of goods sold.
  - However, if the amount of loss is material, it should be presented as a separate line item in the current-period income statement.
- A **reversal of a write-down** of inventory recognized in the annual financial statements is **prohibited** in subsequent periods. Once inventory is written down below cost, the reduced amount is the new cost basis.
- Depending on the nature of the inventory, the rules for write-down below cost may be applied either directly to each item or to the total of the inventory (or in some cases, to the total of each major category). The method should be the one that most clearly reflects periodic income.

Measurement of Inventory at the Lower of Cost or Market (LCM)

Inventory accounted for using the **LIFO or retail inventory method** must be written down to **market** if its utility is no longer as great as its cost. The excess of cost over market is recognized as a loss on write-down in the income statement.

Market is the current cost to replace inventory, subject to certain limitations. Market should not (1) exceed a **ceiling** equal to NRV or (2) be less than a **floor** equal to NRV reduced by an allowance for an approximately **normal profit margin**.

- NRV is the estimated selling price in the ordinary course of business minus reasonably predictable costs of completion, disposal, and transportation.
- **Current replacement cost (CRC)** is not to be greater than NRV or less than NRV minus a normal profit (NRV – P).

MARKET (M)

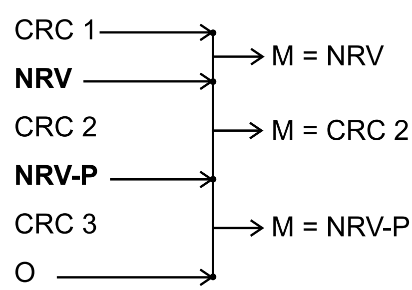

Figure 2-3

- The excess of **cost over market** is recognized as a loss on write-down in the income statement.

Example 2-11 Calculating LCM

The following information is related to a company's year-end inventories:

Cost per inventory unit	Item A	Item B	Item C
Estimated selling price	$80	$70	$44
Minus: Cost of completion	(20)	--	(3)
Minus: Cost of disposal	(6)	(5)	(2)
NRV **(ceiling)**	**$54**	**$65**	**$39**
Minus: Normal profit margin	(3)	(7)	(4)
NRV – NPM **(floor)**	**$51**	**$58**	**$35**
Current replacement cost **(CRC)**	**$53**	**$55**	**$40**
(a) Market	$53 Ceiling > CRC > Floor	$58 Floor > CRC	$39 CRC > Ceiling
(b) Historical cost per unit	$50	$60	$45
Lower of cost (b) or market (a)	$50 Cost < Market	**$58** Market < Cost	**$39** Market < Cost

Example 2-12 LIFO -- LCM

Lala Co. accounts for its inventory using the **LIFO** cost method. The following is its inventory information at the end of the fiscal year:

Historical cost	$100,000
Current replacement cost	82,000
Net realizable value (NRV)	90,000
Normal profit margin	5,000

Under the LIFO method, inventory is measured at the lower of cost or market (current replacement cost subject to certain limitations). Market cannot be higher than NRV ($90,000) or lower than NRV reduced by a normal profit margin ($90,000 – $5,000 = $85,000). Thus, market is $85,000. (The current replacement cost of $82,000 is below the floor.) Because market is lower than cost, the inventory is reported in the balance sheet at market of $85,000. The write-down of inventory of $15,000 ($100,000 – $85,000) is recognized as a loss in the income statement.

IFRS Difference

Inventories are measured at the lower of cost or net realizable value (NRV) regardless of the cost method used. NRV is the estimated selling price less the estimated costs of completion and disposal. NRV is assessed each period. Accordingly, a write-down **may be reversed** but not above original cost. The write-down and reversal are recognized in profit or loss.

A list of IFRS differences can be found in Appendix B.

Measurement of Inventory at the Lower of Cost or NRV (LCNRV)

Inventory measured using any method other than LIFO or retail (e.g., **FIFO or average cost**), must be measured at the **lower of cost or net realizable value**.

- **NRV** is the estimated selling price in the ordinary course of business minus reasonably predictable costs of completion, disposal, and transportation.
- The excess of **cost over NRV** is recognized as a loss on write-down in the income statement.

Example 2-13 FIFO -- LCNRV

Using the data from Example 2-12, assume that Lala Co. accounts for its inventory using the **FIFO** cost method.

Under the FIFO method (or any other method except for LIFO or retail), inventory is measured at the **lower of cost or net realizable value**. NRV of $90,000 is lower than cost of $100,000. Thus, a loss on write-down to NRV of $10,000 is recognized.

Inventory Measurement at Interim Dates

A write-down of inventory below cost (to market for LIFO and retail and to NRV for all other methods) may be **deferred in the interim financial statements** if no loss is reasonably anticipated for the year.

- But inventory losses from a **nontemporary** decline below cost must be recognized at the interim date.
- If the loss is recovered in another quarter, it is recognized as a gain and treated as a change in estimate. The amount recovered is limited to the losses previously recognized.

Stop & Review

You have completed the outline for this subunit.
Study multiple-choice questions 18 through 20 on page 90.