

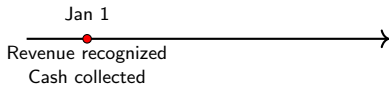
ACC250: Intro to Financial Accounting
Ch8. Accounts Receivable and Bad Debt Expense

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Central Michigan University

- 1 Credit Sales and Accounts Receivable
- 2 Bad Debt Expense
- 3 Two Methods accounting for Bad Debt Expense
 - Method 1. Direct Write-off Method (not allowed under GAAP)
 - Method 2. Allowance Method (allowed under GAAP)
- 4 Estimation of Bad Debt Expense
 - Method 1. % of Credit Sales
 - Method 2. Aging A/R

Cash Sales vs. Credit Sales¹

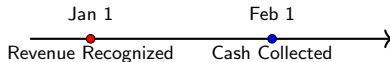
Cash Sales



- Immediate cash inflow
- No collection risk

Cash	5,000
Revenues	5,000

Credit Sales



- Delayed cash inflow
- Collection risk exists

Acc Rec	5,000
Revenues	5,000

Weeks later:

Cash	5,000
Acc Rec	5,000

¹For brevity, the following journal entries (Ch6) are omitted here (and later in the notes). See Ch6 for details.:

CGS	XXX
Inventory	XXX

Extending Credit: Concept, Pros, and Cons

- Companies **extend credit** to customers to increase sales.
(e.g., 30-day credit terms)

Benefits of Credit Sales:

- Increased **sales volume**
- Customer relationship

Costs of Credit Sales:

- Collection & admin costs
- **Bad debt losses**
- Cash flow delays



Accounts Receivable (A/R, Asset)

Amounts customers owe you for products and services sold on credit.

- Cash inflows expected
- Usually collected within 30-60 days
- Reported as current asset

Accounts Receivable

- In practice, companies keep multiple A/R accounts for different customers. See below an example with A/Rs for three customers (A, B, and C).

A/R for A	
5,000	3,000
2,000	
EB. 4,000	

A/R for B	
5,000	
2,000	
EB. 7,000	

A/R for C	
11,000	2,000
EB. 9,000	

- Merged into A/R general ledger account.
 - ▶ **Total A/R:** \$4,000 + \$7,000 + \$9,000 = \$20,000
- **Collection risk exists.**

Gross and Net A/R²

- **Gross A/R:** The total amount owed to a company by its customers for goods/services sold on credit.
- **Net A/R:** The amount of A/R a company expects to actually collect after adjusting uncollectible A/R.

EX. Gross Accounts Receivable: \$20,000 but we expect that \$1,000 is uncollectible.

Gross A/R	\$20,000
Less: Allowance for Doubtful Accounts (xA) ³	\$1,000
Net A/R	\$19,000

²Conceptually similar to Net Sales (Ch6) and Net PPE (Ch9).

³This is what we will study in this chapter.

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Bad Debt:

- For each customer, collection risk exists.
 - ▶ Some may not pay their debts.
 - ▶ Some may pay late.
 - ▶ Some may pay less than the amount owed.
- This uncollectible portion is called **bad debt**.
- Bad debt should be **recognized** as expense in a **proper period**.

How much? and When?

Bad Debt Expense

Bad Debt Expense (BDE, Expense)

Operating expense resulting from credit sales that become uncollectible.

- Usually included in SG&A Expense.^a
- Doesn't affect gross profit.
- Affects operating income and net income.

^aSG&A stands for Selling, General, and Administrative Expenses, including a variety of operating expenses such as salaries and wages, utilities, and rent.

Simplified Income Statement

Revenue	\$5,000
CGS	3,000
Gross Profit	\$2,000
SG&A Expense	800
Operating Income	1,200
Interest Expense	150
Marketing Expense	50
Pretax Income	1,000
Income Tax (20%)	200
Net Income	\$800

Balance Sheet Equation

$$\text{Assets} = \text{Liabilities} + \text{Shareholders' Equity}$$

Higher Bad Debt Expense

- 1 Higher SG&A Expense
- 2 Lower Operating Income
- 3 Lower Net Income
- 4 Lower Retained Earnings
- 5 Lower Shareholder's Equity

Higher Bad Debt Expense

- 1 Lower Net A/R

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Method 1. Direct Write-off Method

- Recognizes bad debt expense when a specific account is deemed uncollectible.
- No estimate of uncollectible accounts is made.
- Not allowed under GAAP for financial reporting.
- Allowed for tax purposes.

Method 1. Direct Write-off Method

EX. On Jan 1, we made \$5,000 in credit sales and expect that 10% of the sales is uncollectible. A customer declared bankruptcy and we wrote off \$500 on Feb 1. On Feb 10, \$4,500 was collected. Prepare journal entries:



Jan 1:	A/R (+A)	5,000
	Sales revenues (+R)	5,000

Feb 1:	BDE (+E)	500
	A/R (-A)	500

Feb 10:	Cash (+A)	4500
	A/R (-A)	4500

Method 1. Direct Write-off Method

Note that we do not make adjustment journal entries at the end of January under Direct Write-off Method.

Income Statement based on the given info:

January	
Revenue	\$5,000
BDE	0
Net Income	\$5,000

February	
Revenue	\$0
BDE	500
Net Income	-\$500

Matching Principle

- Expenses should be recognized in the same period as the revenues they help to generate, regardless of when cash is paid. In other words,
- Expenses should be recognized when the resources are used up to generate the revenues.

Note:

- BDE in Feb is not recognized in the same period as the credit sales in Jan.
 - Not in compliance with the matching principle.
 - Not allowed under GAAP for financial reporting.
- Used for tax purposes.

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To comply with the matching principle: At the end of each accounting period,

- **BDE** is estimated and recorded.
- **A/R, net** is adjusted to reflect the estimated uncollectible amount.
→ **AJE** is needed.⁴

⁴AJE: Adjusting Journal Entry

The impact of the AJE:

- Increases BDE (expense) on the income statement.
- Decreases Net, A/R (asset) on the balance sheet.
- Decreases net income and total assets.

Method 2. Allowance Method

- A contra-asset account (xA), so it has a credit balance.
- **Net A/R = Gross A/R - ADA**

Method 2. Allowance Method

EX. Credit sales on Jan 1: \$5,000; Bad debt estimate: 10% of sales; None collected until Jan 31.

Journal Entries:

Jan 1:	A/R (+A)	5,000
	Sales revenues (+R)	5,000

Jan 31:	BDE (+E)	500
	ADA (+xA)	500

A/R Reporting:^a

Gross A/R:	\$5,000
Less: ADA:	\$500
Net A/R:	\$4,500

^aThis is the way A/R is reported on the balance sheet.

Income Statement based on the given info:

January	
Revenue	\$5,000
BDE	500
Net Income	\$4,500

February	
Revenue	\$0
BDE	0
Net Income	\$0

Remember!

- Customers who do not pay will be identified later (Feb).
- **Bad debt expense** is recognized in the same period as the credit sales (Jan).

Write-off of A/R: When a specific A/R is deemed uncollectible:

- Write off the A/R against the allowance account.

Allowance for Doubtful Accounts (-xA)	500
Accounts Receivable (-A)	500

- No additional expenses are recorded at this time as it was already recognized as BDE in Jan.

- Net A/R is not affected by the write-off.**

Gross A/R	\$5,000 - X
ADA (xA)	\$500 - X
Net A/R	\$4,500⁵

⁵ $(5000 - X) - (500 - X) = 4500$.

ADA is akin to **ADE**.⁶

- Both are contra-asset accounts.
- Both reduce the book value of their related assets (A/R and PPE, respectively)

A/R and ADA

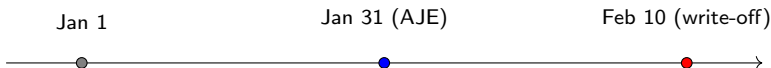
Description	Amount
Gross A/R	\$5,000
Less: ADA (xA)	(500)
Net A/R	\$4,500

PPE and ADE

Description	Amount
Gross PPE	\$10,000
Less: ADE (xA)	(2,000)
Net PPE	\$8,000

⁶ADA: Allowance for Doubtful Accounts, ADE: Accumulated Depreciation Expense

EX. Credit sales on Jan 1: \$5,000; Bad debt estimate: 10% of sales; None collected until Jan 31. On Feb 10, a customer declared bankruptcy and we wrote off \$500.



Journal Entries:

Jan 1:		A/R (+A)	5,000
		Sales revenues (+R)	5,000

Jan 31:		BDE (+E)	500
		ADA (+xA)	500

Feb 10:		ADA (-xA)	500
		A/R (-A)	500

A/R before and after write-off

A/R as of Jan 31	
Gross A/R	\$5,000
Less: ADA (xA)	\$500
Net A/R	\$4,500



A/R as of Feb 10	
Gross A/R	\$4,500
Less: ADA (xA)	\$0
Net A/R	\$4,500

Figure: Balance Sheet

CROCS, INC. AND SUBSIDIARIES CONSOLIDATED BALANCE SHEETS (in thousands, except share and par value amounts)			
		December 31,	
		2024	2023
ASSETS			
Current assets:			
Cash and cash equivalents	\$	180,485	\$ 149,288
Restricted cash — current		—	2
Accounts receivable, net of allowances of \$31,579 and \$27,591, respectively		257,657	305,747

Figure: Disclosures in Note

Accounts Receivable, Net

Accounts receivable are recorded at invoiced amounts, net of reserves and allowances. We reduce the carrying value for estimated uncollectible accounts based on a variety of factors including the length of time receivables are past due, economic trends and conditions affecting our customer base, and historical collection experience. Specific provisions are recorded for individual receivables when we become aware of a customer's inability to meet its financial obligations. We write off accounts receivable to the reserves when they are deemed uncollectible or, in certain jurisdictions, when legally able to do so. See Schedule II in Item 15. *Exhibits, Financial Statement Schedule* of this Annual Report on Form 10-K for more information.

Allowance for Doubtful Accounts

- Captures the outstanding balance of uncollectible A/R
- Contra-asset account
- Balance sheet account

Bad Debt Expense

- Captures how much adjustment is needed to ADA
- Expense account
- Income statement account

Relationship between ADA and BDE

Allowance for Doubtful Accounts (ADA, Contra Asset, xA)

The estimated amount of uncollectible A/R.

Bad Debt Expense (BDE, Expense)

Operating expense resulting from credit sales that become uncollectible.

To get the ending balance of ADA:

- Start with the beginning balance of ADA.
- Add the BDE for the period. (ADA increases)
- Subtract the Write-off for the period. (ADA decreases)

Allowance for Doubtful Accounts Equation

$$ADA_{t+1} = ADA_t + BDE_{t+1} - \text{Write-off}_{t+1}$$

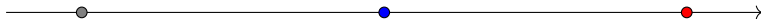
Illustration

EX. On Jan 1, a company made \$10,000 in credit sales. It estimates 5% of sales will be uncollectible. The cost of goods sold (CGS) for these sales is \$6,000. On Feb 10, \$300 of A/R deemed uncollectible.

Jan 1

Jan 31 (AJE)

Feb 10 (write-off)



- Step 1: Record Credit Sales and CGS

Jan 1:		A/R (+A)	10,000
		Sales Rev. (+R)	10,000

Jan 1:		CGS (+E)	6,000
		Inv (-A)	6,000

- Step 2: Estimate Bad Debt Expense

Jan 31:		BDE (+E)	500
		ADA (+xA, -A)	500

- Step 3: Write-off of bad debts

Feb 10:		ADA (-xA, +A)	300
		A/R(-A)	300

Table: Partial Income Statement for January

Sales Revenue	\$10,000
Cost of Goods Sold	\$6,000
Bad Debt Expense	\$500
Net Income:	\$3,500

Table: Net A/R as of Jan 31

Gross A/R	\$10,000
Less: ADA	\$500
Net A/R	\$9,500

Table: Net A/R as of Feb 10

Gross A/R	\$9,700
Less: ADA	\$200
Net A/R	\$9,500

Note: It is possible that A/R deemed uncollectible earlier can be collected later! Accounting for this recovery of uncollectible A/R goes beyond this course.

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Two methods for BDE estimation

- ➊ Percentage of Credit Sales Method
- ➋ Aging of Accounts Receivable

* So far, the 1st one was used. But the 2nd one is widely used in practice.

Method 1. % of Credit Sales

- Focus: BDE
→ I/S approach.
- BDE is estimated by multiplying the historical % of bad debt losses by the current period's credit sales.
- Then ADA is adjusted by the estimated BDE.
- Simple and intuitive, but not widely used.

EX. VFC has experienced bad debt losses of 2% of credit sales in prior periods. VFC recorded credit sales of \$120,000 in January.

- Calculate BDE this month.
 $\$120,000 * 2\% = \$2,400.$
- Prepare journal entries for the recognition of Bad debt expense.

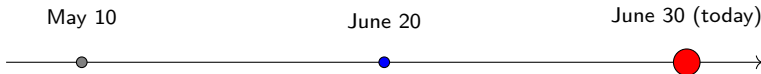
Jan 31:	BDE (+E)	2,400
	ADA (+x A, -A)	2,400

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- Focus: ADA
→ B/S approach.
- The ending balance of ADA is estimated considering ages of A/Rs.
- Principle: *The older an A/R is, The less likely it is to be collectible.*
- Complex, but widely used.

EX. Our company has the following uncollected A/Rs as of June 30.

- \$5,000 credit sales made on May 10.
- \$5,000 credit sales made on June 20.



Based on the history of uncollected A/R:

- 31–60 days: 10% estimated uncollectible.
- 0–30 days: 2% estimated uncollectible.

Bad debt estimate for each group:

- May 10 sales (\$5,000, 51 days old): $10\% \times \$5,000 = \500 .
- June 20 sales (\$5,000, 10 days old): $2\% \times \$5,000 = \100 .

ADA at the end of Q2

$$= \$500 + \$100$$

$$= \$600.$$

ADA, BDE, and Journal entries

- \$600 is the updated ending balance of ADA.
- It doesn't mean that BDE for Q2 is \$600.
- Recall: BDE captures how much adjustment is needed to ADA.
- Journal entries on June 30 assuming Beg.Bal of ADA was \$200.

ADA (xA)

BB. 200
?
EB. 600

BDE (+E)	400
ADA (+xA, -A)	400

Summary

- At the beg of Q2, \$200 of A/R was considered uncollectible.
- During Q2, there were credit sales.
- At the end of Q2, \$600 of A/R is considered uncollectible.
- \$400 of BDE should be recognized.

Illustration

Our company's aging schedule and A/R data as of Dec 31 are shown below. The beginning balance of the ADA on Jan 1 was \$1,000.

Aging Schedule:

Age	A/R	Est. % Uncollectible	Uncollectible Amount
0-30 days	\$50,000	1%	\$500
31-60 days	30,000	5%	1,500
Over 60 days	20,000	10%	2,000
Total	\$100,000		\$4,000

Requirements:

- 1 Calculate the ending balance of the ADA as of December 31.
- 2 Calculate the BDE for the year.
- 3 Complete the journal entry to record the BDE on December 31.

- ① Ending balance of the ADA as of Dec 31:
\$4,000, as determined by the total uncollectible amount from the aging schedule.
- ② Bad Debt Expense (BDE) for the year:
 $\$4,000 \text{ (ending ADA)} - \$1,000 \text{ (beginning ADA)} = \$3,000.$
- ③ Journal entry to record the BDE on Dec 31:

Dec 31:		BDE (+E)	3,000
		ADA (+xA, -A)	3,000