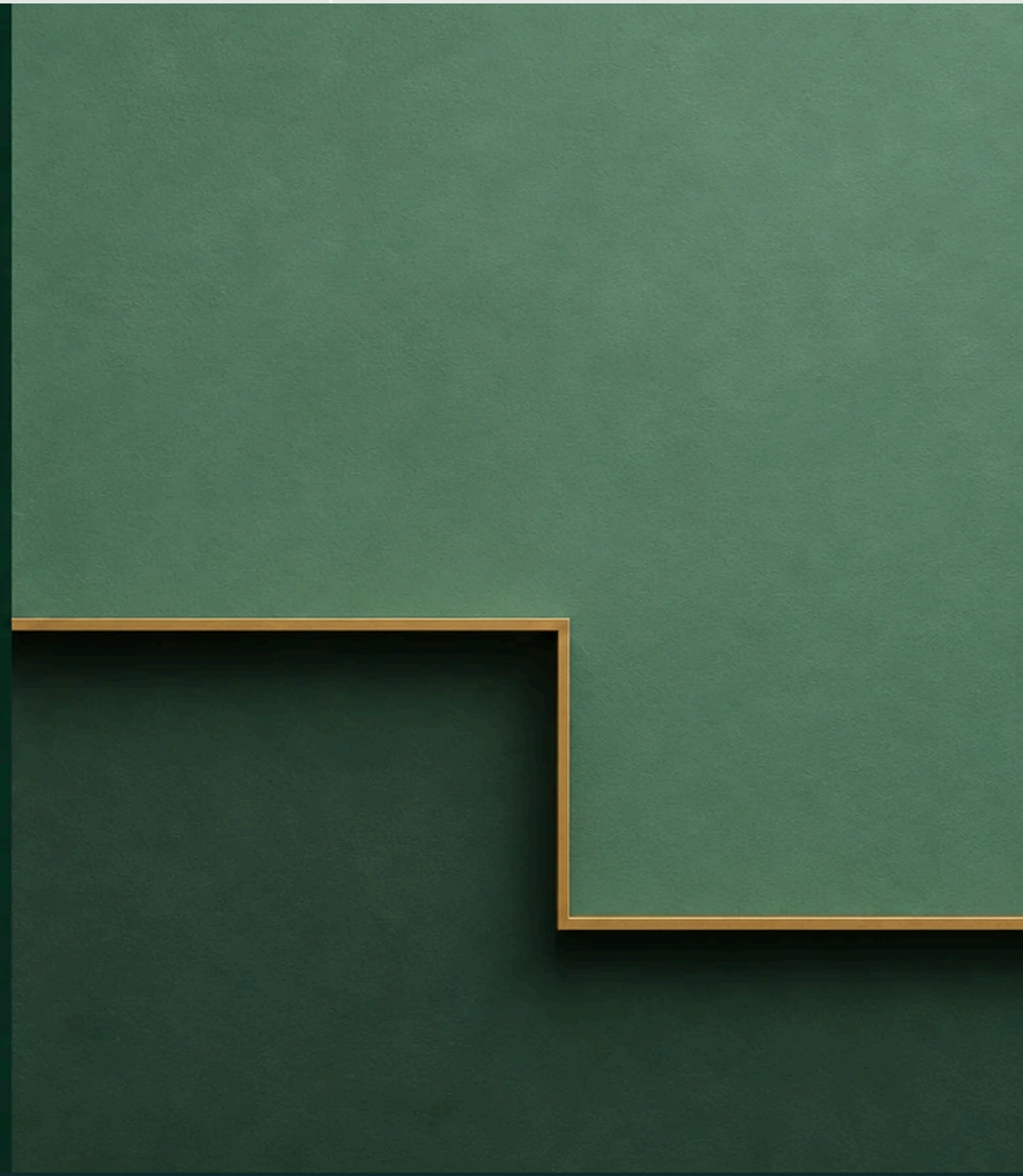
ACC 300 · MEETING 23

Impairment and asset returns

November 19, 2026



Where we are in Unit 6

Lecture 22

- **Depreciation:** How much cost belongs to each period?
- **Disposal:** What remains when the asset is sold?

Lecture 23 · Today

- **Impairment:** Can the company recover the carrying amount?
- **Asset returns:** How much income do the assets earn?

Lecture 24

- **Natural resources:** How does extraction use up cost?
- **Retirement obligations:** What must the company restore later?

What is impairment?

Today we are testing **long-lived tangible assets**, such as buildings and equipment.

- **Depreciation** allocates an asset's cost over its estimated useful life.
- **An impairment test** asks whether the company can recover the **carrying amount**.
- If the test shows the carrying amount is too high, the company writes it down and records an **impairment loss**.

Source: ASC 360-10-35-17 and 35-43.

Held and used or held for sale?

In our earlier lecture on discontinued operations we distinguished between assets held for use and assets held for sale. The same classification matters when testing long-lived assets for impairment.

Held and used

The asset stays held and used until it meets the criteria for held for sale. A plan to sell at the end of its useful life is an example.

Held for sale

The asset is available for immediate sale and meets all other sale criteria.

The classification determines which impairment rules apply.

Source: ASC 360-10-35-17, 35-43, and 45-9.

Adrenaline Rush's motion-simulator theater

Opened January 1, 2021.

Balance sheet excerpt	December 31, 2027
Motion-simulator theater, at cost	$3,250,000
Less: accumulated depreciation	($1,750,000)
Carrying amount	**$1,500,000**

$$\text{Annual depreciation} = \frac{\text{Cost} - \text{Residual value}}{\text{Useful life}} = \frac{\$3{,}250{,}000 - \$250{,}000}{12 \text{ years}} = \$250{,}000.$$

Accumulated depreciation = Annual depreciation × Years in use = $250,000 × 7 = $1,750,000.

New event in 2027. A competing attraction draws visitors away. Adrenaline Rush keeps the theater open and expects less cash from operating it.

IMPAIRMENT WHILE IN USE

Impairment of assets held and used



Impairment triggers for assets held and used

Under US GAAP, **test recoverability** when an event or change suggests the company may be unable to recover the carrying amount. The four examples below show what to look for.

Market price

A significant drop in the asset's market price.

Use or condition

A significant adverse change in how the company uses the asset or in its physical condition.

Legal or business climate

A significant adverse change in legal factors or the business climate.

Operating or cash flow losses

A current loss plus a history of losses or a forecast of continuing losses.

An event can call for a test before the company knows whether it has a loss.

Source: ASC 360-10-35-21.

Which assets belong in an impairment test?

An **asset group** is the lowest level at which identifiable cash flows are largely independent of the cash flows of other assets and liabilities.

One simulator seat

- Earns no admission revenue on its own.
- Its cash flows cannot be separated from the theater's.

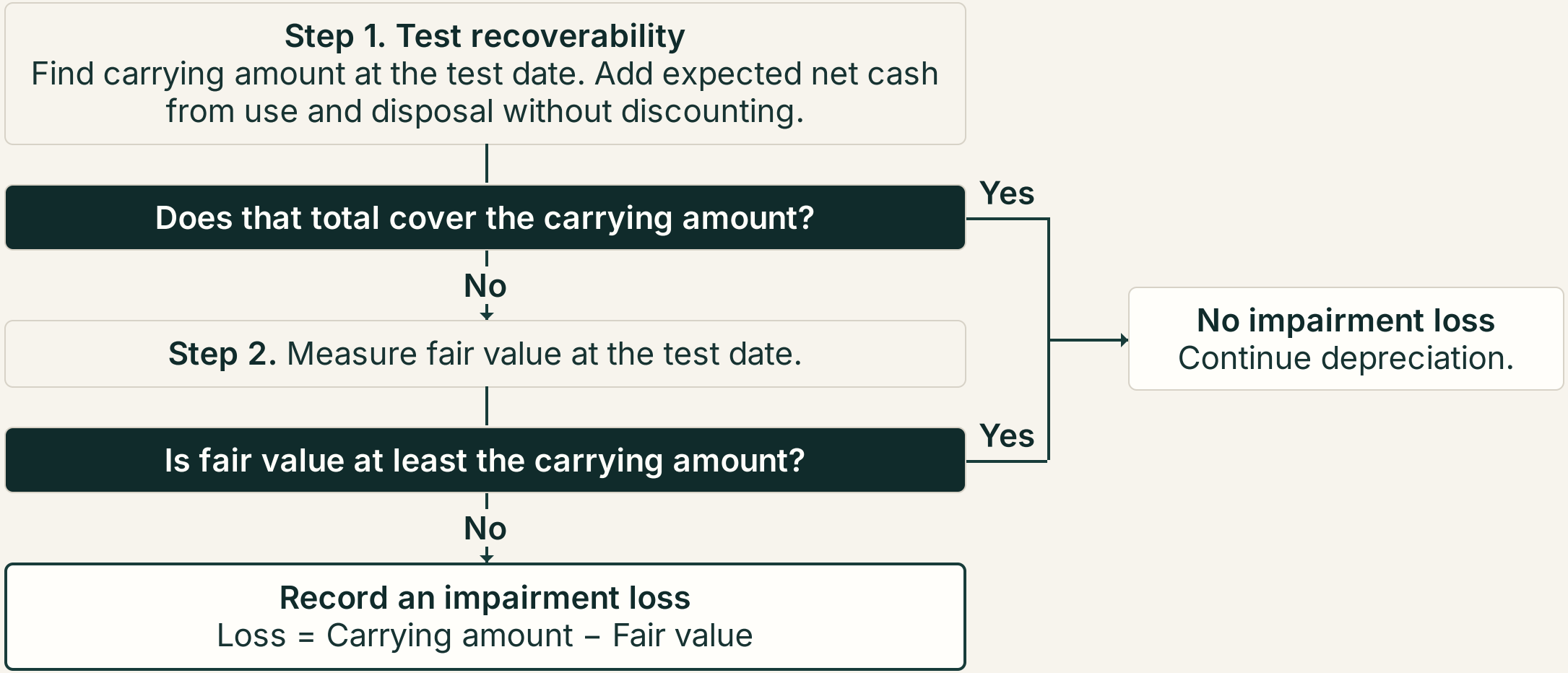
The theater asset group

- Building, simulator seats, and projection equipment.
- Separate ticket sales and operating costs let management estimate the theater's net cash flows apart from the rest of the park.

- **Largely independent theater cash flows:** Test the theater group.
- **Park-wide admission:** Test a larger group if the theater has no largely independent cash flows.

Source: ASC 360-10-35-23.

The two steps of a US impairment test



Source: ASC 360-10-35-17.

Cash flows for the theater's impairment test

Net cash flow from use = Expected cash from operating the asset or asset group – Expected cash payments to operate it (excluding interest).

- **Theater:** Expected ticket receipts less cash operating costs.
- **Net cash from an eventual sale** = Expected sale proceeds – Expected selling costs.

Net cash flow from use	Amount	Other fact	Amount
December 31, 2028	$255,000	Carrying amount	$1,500,000
December 31, 2029	$245,000	Cash from disposal, December 31, 2032	$250,000
December 31, 2030	$235,000	Residual value	$250,000
December 31, 2031	$225,000	Fair value, a market price	$950,000
December 31, 2032	$220,000	Remaining useful life	5 years

Cash from disposal equals the residual value.

Source: ASC 360-10-35-29 and 35-31.

Step 1: Can the theater recover its carrying amount?

Net cash flow from use	Amount	Other fact	Amount
December 31, 2028	**$255,000**	Carrying amount	**$1,500,000**
December 31, 2029	**$245,000**	Cash from disposal, December 31, 2032	**$250,000**
December 31, 2030	**$235,000**	Residual value	$250,000
December 31, 2031	**$225,000**	Fair value, a market price	$950,000
December 31, 2032	**$220,000**	Remaining useful life	5 years
Total net cash flow from use	**$1,180,000**		

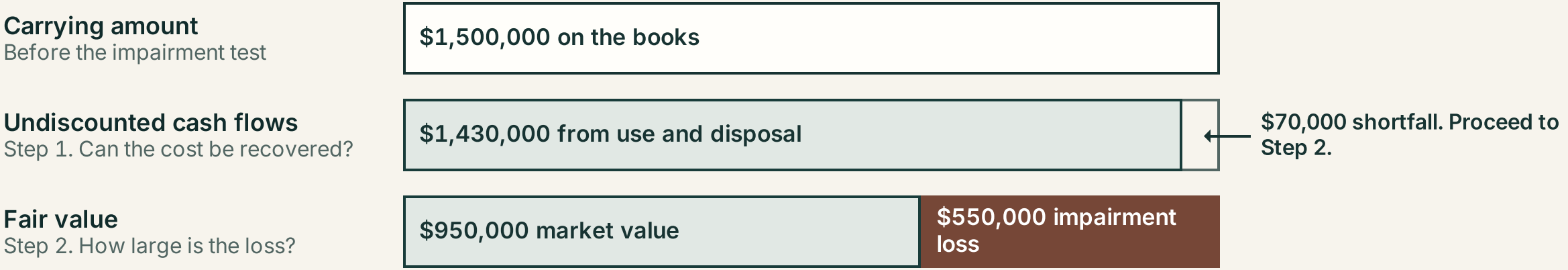
Undiscounted cash flows = Total net cash flow from use + Net cash from disposal = $1,180,000 + $250,000 = $1,430,000.

Undiscounted cash flows < Carrying amount. $1,430,000 < $1,500,000. Continue to Step 2.

Step 2: Fair value determines the impairment loss

For assets held and used, Step 2 uses fair value at the test date, before selling costs. Comparable sales can help estimate fair value.

DECEMBER 31, 2027



Impairment loss = Carrying amount – Fair value = $1,500,000 − $950,000 = $550,000.

If fair value equals or exceeds carrying amount, record no loss.

Source: ASC 360-10-35-17 and 820-10-35-9A through 35-9B.

Allocate the theater's impairment loss

- **Allocate only to long-lived assets.** Inventory receives none.
- **Fair value limit:** Keep carrying amount at or above fair value when you can determine it without undue cost and effort.
- **Excess loss:** Divide it in proportion to the other long-lived assets' adjusted carrying amounts. Apply the same limit.

$$\textbf{Initial loss allocation} = \frac{\text{Asset's carrying amount}}{\text{Total carrying amount of long-lived assets}} \times \text{Group impairment loss}$$

Building fair value: $610,000. A separate equipment valuation would take undue cost and effort.

Asset	Carrying amount before loss	Initial share × $550,000	Loss allocated	Carrying amount after loss
Building	$900,000	$330,000 (60.00%)	$900,000 − $610,000 = **$290,000**	$610,000
Equipment	$600,000	$220,000 (40.00%)	$550,000 − $290,000 = **$260,000**	$340,000
Total	**$1,500,000**		**$550,000**	**$950,000**

Source: ASC 360-10-35-28 and 55-22.

Record the theater's impairment loss

DECEMBER 31, 2027: RECORD THE THEATER'S IMPAIRMENT LOSS

Impairment loss	$550,000	
Accumulated depreciation, theater building		$290,000
Accumulated depreciation, theater equipment		$260,000

Count the impairment loss once. Use balances after the entry.

Account credited	Carrying amount
Accumulated depreciation (shown)	Cost − Updated accumulated depreciation
Accumulated impairment losses	Cost − Accumulated depreciation − Accumulated impairment losses
Equipment	Reduced Equipment balance − Accumulated depreciation

Source: ASC 360-10-35-20.

Where the impairment loss appears

US GAAP for long-lived assets held and used

Income statement

- Include the loss in pretax income from continuing operations.
- Include the loss in operating income if the company reports that subtotal.

Statement of cash flows

- Recording the loss uses no cash.
- A business reconciles net income to operating cash flow under either method. Add back the loss in that reconciliation.

Adrenaline Rush, 2027

- **Pretax income:** Down $550,000 from the loss.

- **Direct method:** The operating section reports cash receipts and payments only.
- **Separate reconciliation:** Add $550,000 back to net income.

Source: ASC 360-10-45-4 and 230-10-45-28 through 45-30.

Depreciation after an impairment loss

Depreciate each asset using its revised carrying amount, residual value, and remaining useful life. The theater assets each have 5 years left, so we can calculate their total depreciation together.

$$\textbf{New annual depreciation} = \frac{\text{New cost basis} - \text{Residual value}}{\text{Remaining useful life}} = \frac{\$950{,}000 - \$250{,}000}{5 \text{ years}} = \$140{,}000.$$

Annual depreciation	Amount
Before the loss, 2021 through 2027	$250,000
After the loss, 2028 through 2032	$140,000
Decrease = Annual depreciation before loss − Annual depreciation after loss	**$110,000**

- Earlier depreciation stays as recorded.

Source: ASC 360-10-35-20.

US GAAP prohibits reversing the impairment loss

December 31, 2028: Attendance recovers, and the theater's fair value rises.

Theater, December 31, 2028	Amount
Carrying amount = New cost basis − 2028 depreciation = $950,000 − $140,000	$810,000
Fair value	$1,050,000
Excess of fair value over carrying amount	**$240,000**

- **No entry:** US GAAP prohibits reversing the loss while the theater is held and used.
- Continue depreciation using the $950,000 cost basis.

IFRS. Reverse part or all of the loss if revised estimates increase the recoverable amount above carrying amount.

Revised carrying amount = Lower of the revised recoverable amount and the depreciated carrying amount without the prior loss.

Source: ASC 360-10-35-20; IAS 36, paragraphs 114 and 117.

Why does Adrenaline Rush record no impairment loss?

Fair value of $950,000 is below the $1,500,000 carrying amount.

Revised forecast, December 31, 2027. The theater expects $1,450,000 in total net cash flow from use over its remaining life.

Undiscounted cash flows = Total net cash flow from use + Net cash from disposal = $1,450,000 + $250,000 = $1,700,000.

Step 1. Test recoverability. Do undiscounted cash flows cover the carrying amount?

Yes. $1,700,000 exceeds $1,500,000. The test ends there. Depreciation continues at $250,000 a year.

Test Healing Hands's MRI scanner for impairment

5 minutes. Work alone or with your neighbor.

Healing Hands Hospital, December 31, 2028: A competing technology has cut referrals for the magnetic resonance imaging (MRI) scanner. The hospital plans to use it through 2030 and then sell it.

Fact	Amount	Fact	Amount	Fact	Amount
Original cost	$970,000	2029 net cash from use	$200,000	Fair value	$380,000
Residual value	$25,000	2030 net cash from use	$200,000	2030 selling costs	$20,000
Carrying amount	$505,000	2030 sale proceeds	$45,000	Useful life left	2 years

1. **December 31, 2028.** Test the scanner for impairment and measure any loss.
2. **2029.** Calculate depreciation using the scanner's carrying amount after any write-down.

iClicker | Question 1 of 5

MRI scanner held and used, December 31, 2028

- Original cost $970,000. Carrying amount $505,000. Fair value $380,000.
- Net cash from use $200,000 each year in 2029 and 2030.
- 2030 sale proceeds $45,000. Selling costs for that sale $20,000.

What impairment loss does the hospital record?

A $80,000

B $145,000

C $125,000

D $590,000

iClicker | Answer 1 of 5

Correct answer: C

MRI scanner held and used, December 31, 2028

- Original cost $970,000. Carrying amount $505,000. Fair value $380,000.
- Net cash from use $200,000 each year in 2029 and 2030.
- 2030 sale proceeds $45,000. Selling costs for that sale $20,000.

What impairment loss does the hospital record?

A **$80,000**
Step 1 shortfall = Carrying amount − Undiscounted cash flows.

B **$145,000**
Deducts 2030 selling costs from the test-date fair value.

C **$125,000**
C is correct. Expected net cash of $425,000 falls short of carrying amount. Impairment loss = Carrying amount − Fair value = $505,000 − $380,000 = $125,000.

D **$590,000**
This choice compares fair value with original cost instead of carrying amount.

The scanner's impairment loss and revised depreciation

Step 1. Test recoverability

Net cash from disposal = Expected sale proceeds − Expected selling costs
= $45,000 − $20,000 = **$25,000**

Undiscounted cash flows = 2029 net cash from use + 2030 net cash from use + Net cash from disposal
= $200,000 + $200,000 + $25,000
= **$425,000**

Cash flows fall below the $505,000 carrying amount. Proceed to Step 2.

Step 2. Measure and record the loss

Impairment loss = Carrying amount − Fair value
= $505,000 − $380,000 = **$125,000**

DECEMBER 31, 2028

Impairment loss	$125,000	
Accumulated depreciation		$125,000

$$\textbf{2029 depreciation} = \frac{\text{New cost basis} - \text{Residual value}}{\text{Remaining useful life}} = \frac{\$380{,}000 - \$25{,}000}{2 \text{ years}} = \$177{,}500.$$

How much can the company recover under IFRS?

Check for signs of impairment at each reporting date. This machine shows a sign of impairment. Its carrying amount is **$100,000**.

What is continued use worth today?

Value in use = Present value of expected net cash flows from use and eventual disposal. The estimate is **$80,000**.

What could the machine sell for today?

Fair value less costs of disposal = Fair value − Costs of disposal = $75,000 − $5,000 = **$70,000**.

Recoverable amount = Higher of value in use and fair value less costs of disposal. Value in use is higher here, so recoverable amount is **$80,000**.

Impairment loss = Carrying amount − Recoverable amount = $100,000 − $80,000 = **$20,000**.

If recoverable amount covers carrying amount, record no loss. US GAAP starts with an undiscounted cash flow test.

Source: IAS 36, paragraphs 6, 9, 18, 19, and 59; ASC 360-10-35-17.

Same machine, different impairment losses

The machine is **held and used**. Its carrying amount is **$100,000** under both standards.

US GAAP

Test recoverability. Undiscounted cash flows of $90,000 fall below carrying amount. Proceed to Step 2.

Measure the loss. Impairment loss = Carrying amount − Fair value = $100,000 − $75,000 = **$25,000**.

IFRS

Find recoverable amount. Use the higher of value in use ($80,000) and fair value less disposal costs ($70,000).

Compare with carrying amount. Impairment loss = Carrying amount − Recoverable amount = $100,000 − $80,000 = **$20,000**.

Source: ASC 360-10-35-17; IAS 36, paragraphs 18 and 59.

IMPAIRMENT BEFORE SALE

Impairment of assets held for sale



When is an asset held for sale?

The asset must meet all 6 criteria.

1. Commitment

Authorized management commits to a sale plan.

2. Readiness

Available for immediate sale in its present condition under customary terms.

3. Execution

Buyer search and other required sale actions have begun.

4. Timing

- Sale is probable, and the company expects to complete it within 1 year.
- Limited exceptions apply.

5. Realistic price

Active marketing at a price reasonable in relation to current fair value.

6. Stability

Major changes to the plan or its withdrawal are unlikely.

Source: ASC 360-10-45-9 and 45-11.

iClicker | Question 2 of 5

On December 31, 2027, Healing Hands reviews 4 machines. Which one does the hospital classify as held for sale?

A. Authorized management commits to sell. Available now. Active buyer search and marketing near fair value. Sale probable within 6 months. Major changes or withdrawal unlikely.

B. Sale approved. The hospital will transfer the machine only after its replacement arrives in mid-2028.

C. Sale approved and available now; listed at a price well above fair value

D. To be scrapped next year, with no proceeds

iClicker | Answer 2 of 5

Correct answer: A

On December 31, 2027, Healing Hands reviews 4 machines. Which one does the hospital classify as held for sale?

A **Authorized management commits to sell. Available now. Active buyer search and marketing near fair value. Sale probable within 6 months. Major changes or withdrawal unlikely.**
A is correct. It meets all 6 criteria, including a sale plan that management is unlikely to change or withdraw.

B **Sale approved. The hospital will transfer the machine only after its replacement arrives in mid-2028.**
This machine is not available for immediate sale in its present condition. The hospital will delay transfer until the replacement arrives.

C **Sale approved and available now; listed at a price well above fair value**
A price well above fair value fails the reasonable-price criterion.

D **To be scrapped next year, with no proceeds**
An asset to be abandoned stays held and used until disposal.

Source: ASC 360-10-45-9 and 45-15.

How to measure equipment held for sale

US GAAP and IFRS

Held-for-sale measure = Lower of carrying amount and (Fair value – Cost to sell).

- **Cost to sell:** Incremental direct costs, such as commissions, legal fees, and closing costs.
- **At classification:** Record a loss if fair value less cost to sell is lower. Otherwise, keep the carrying amount.
- **Depreciation:** Stop at classification, even if the company still uses the asset.
- **Later loss:** Write the asset down if fair value less cost to sell falls below carrying amount.
- **Later gain:** If fair value less cost to sell rises above carrying amount, apply the limit below.

US GAAP

Limit the gain to unreversed write-downs recorded while the asset was held for sale.

IFRS

Limit the gain to unreversed impairment losses on the asset, including losses before classification.

Source: ASC 360-10-35-38, 35-40, and 35-43. IFRS 5, paragraphs 15, 20, 21, and 25.

Healing Hands classifies its older X-ray machine as held for sale

- **In service October 1, 2022.** $640,000 cost, straight-line over 8 years, zero residual value.
- **September 30, 2027.** The machine meets all 6 criteria for classification as held for sale.
- **At classification.** Fair value $180,000. Cost to sell $15,000.

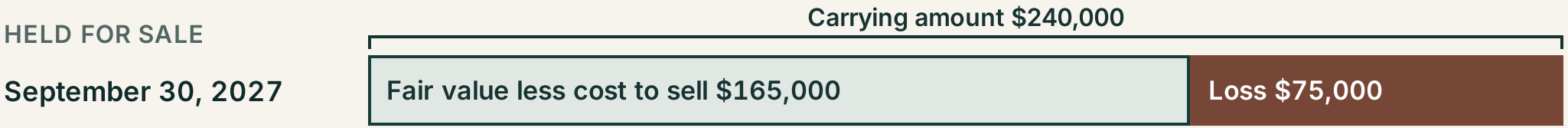
Formula	September 30 amounts
Annual depreciation = (Cost − Residual value) ÷ Useful life	($640,000 − 0) ÷ 8 = **$80,000**
Accumulated depreciation = Annual depreciation × Years in use	$80,000 × 5 = **$400,000**
Carrying amount = Cost − Accumulated depreciation	$640,000 − $400,000 = **$240,000**

SEPTEMBER 30, 2027: RECLASSIFY THE MACHINE AS HELD FOR SALE

X-ray machine held for sale	$240,000	
Accumulated depreciation	$400,000	
X-ray machine		$640,000

The write-down of the X-ray machine held for sale

Formula	September 30 amounts
Fair value less cost to sell = Fair value − Cost to sell	$180,000 − $15,000 = **$165,000**
Held-for-sale measure = Lower of carrying amount and (Fair value − Cost to sell)	Lower of $240,000 and $165,000 = **$165,000**
Impairment loss = Carrying amount before classification − Held-for-sale measure	$240,000 − $165,000 = **$75,000**



SEPTEMBER 30, 2027: WRITE THE MACHINE DOWN TO FAIR VALUE LESS COST TO SELL

Loss on write-down of asset held for sale	$75,000	
X-ray machine held for sale		$75,000

Combined entry: The reading shows both steps in one entry. The ending balances are the same.

When a held-for-sale write-down can be reversed

- **December 31, 2027.** Fair value rises from $180,000 at classification to $215,000.
- Cost to sell stays at $15,000. The prior write-down set carrying amount at $165,000.

Formula	December 31 amounts
Fair value less cost to sell = Fair value − Cost to sell	$215,000 − $15,000 = **$200,000**
Amount above prior carrying amount = Updated fair value less cost to sell − Prior carrying amount	$200,000 − $165,000 = **$35,000**
Gain = Lower of amount above prior carrying amount and cumulative loss	Lower of $35,000 and $75,000 = **$35,000**

DECEMBER 31, 2027: RECORD THE INCREASE IN FAIR VALUE LESS COST TO SELL

X-ray machine held for sale	$35,000	
Gain on recovery of asset held for sale		$35,000

- The machine stays at or below its $240,000 carrying amount before classification.

Source: ASC 360-10-35-40.

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- **September 30, 2027:** X-ray machine held for sale at $165,000 after a $75,000 loss.
- **December 31, 2027 (changed fact):** Fair value $300,000. Cost to sell $15,000.

What gain does the hospital record?

A No gain

B $120,000

C $135,000

D $75,000

iClicker | Answer 3 of 5

Correct answer: D

- **September 30, 2027:** X-ray machine held for sale at $165,000 after a $75,000 loss.
- **December 31, 2027 (changed fact):** Fair value $300,000. Cost to sell $15,000.

What gain does the hospital record?

A **No gain**
Applies the reversal rule for assets held and used.

B **$120,000**
Records the full increase without applying the loss limit.

C **$135,000**
Omits both cost to sell and the loss limit.

D **$75,000**
D is correct. The loss recorded at classification caps the gain.

How the prior impairment loss caps the gain

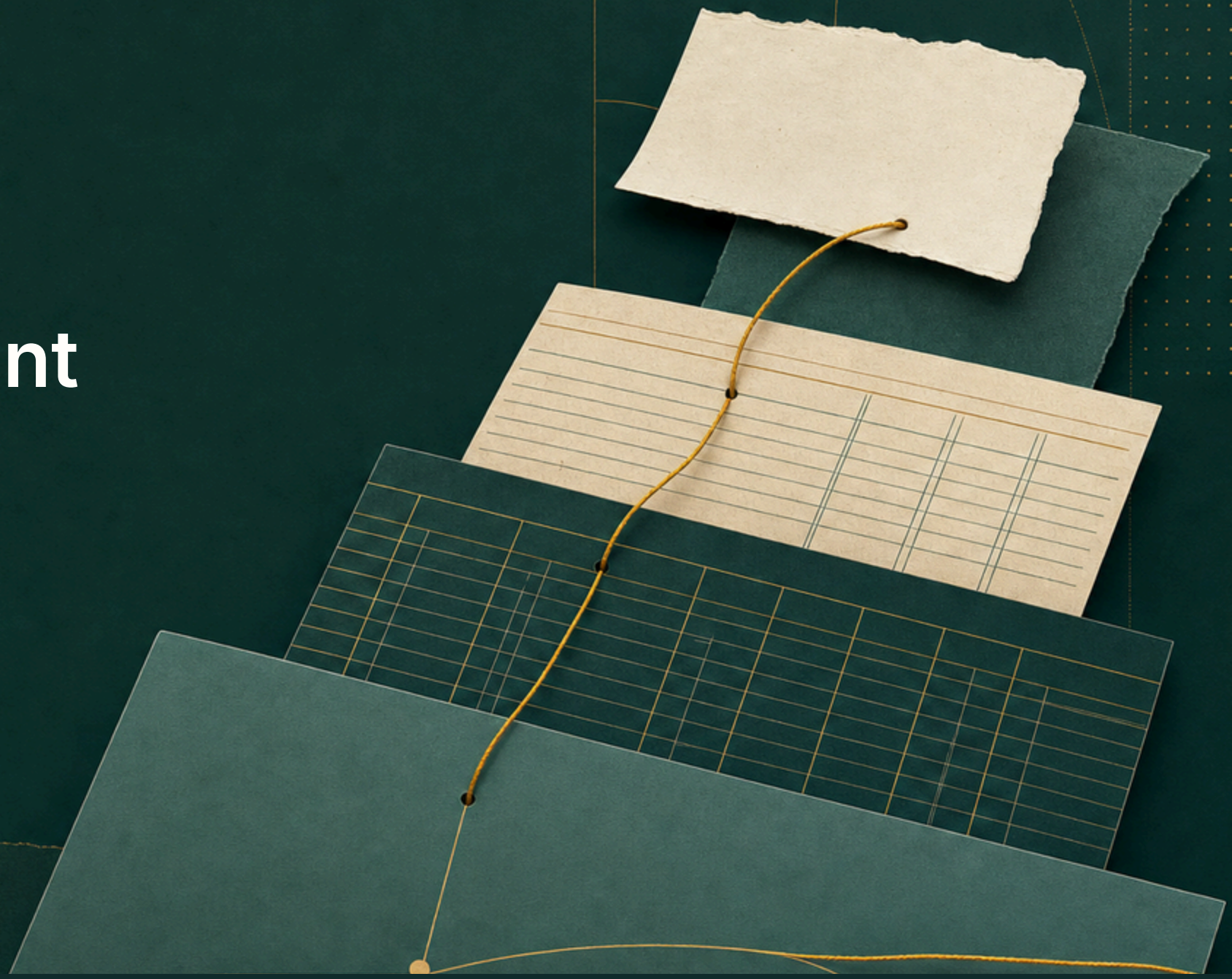
- **September 30, 2027.** The hospital writes the X-ray machine down to $165,000 and records a $75,000 impairment loss.
- **December 31, 2027.** The machine remains held for sale. Fair value is $300,000 and cost to sell is $15,000.

Formula	December 31 amounts
Fair value less cost to sell = Fair value − Cost to sell	$300,000 − $15,000 = **$285,000**
Amount above prior carrying amount = Updated fair value less cost to sell − Prior carrying amount	$285,000 − $165,000 = **$120,000**
Gain = Lower of amount above prior carrying amount and cumulative loss	Lower of $120,000 and $75,000 = **$75,000**

Source: ASC 360-10-35-40.

IMPAIRMENT AND ASSET RETURNS

How impairment affects return on assets



Return on assets compares income with the assets used

- **What it measures.** Net income earned per dollar of average total assets.
- **Why use it?** Compare periods even when the company has more or fewer assets on its books.

$$\text{Return on assets} = \frac{\text{Net income}}{\text{Average total assets}}$$

$$\text{Average total assets} = \frac{\text{Beginning total assets} + \text{Ending total assets}}{2}$$

- Net income covers the whole year.
- Averaging the balances at the start and end estimates the assets used during the year.

What drives return on assets?

Net profit margin $= \dfrac{\text{Net income}}{\text{Net sales}}$

Net income per dollar of net sales.

Total asset turnover $= \dfrac{\text{Net sales}}{\text{Average total assets}}$

Net sales per dollar of average total assets.

Return on assets = Net profit margin × Total asset turnover

$$\frac{\textbf{Net income}}{\textbf{Net sales}} \times \frac{\textbf{Net sales}}{\textbf{Average total assets}} = \frac{\textbf{Net income}}{\textbf{Average total assets}}$$

- **When return on assets changes,** check which of the two ratios moved.
- **After a write-down,** lower average total assets can raise total asset turnover with flat net sales.
- **In later periods,** lower depreciation can raise net income and net profit margin.

Recall net profit margin from Lecture 6 and Chapter 6.

How impairment affects Adrenaline Rush's 2027 statements

Company-wide amounts for 2027. Ignore income taxes.

Income statement	Amount
Net sales	$24,000,000
Net income before impairment	$1,990,000
Less: impairment loss	($550,000)
Net income	**$1,440,000**

Balance sheet	Amount
January 1 total assets	$19,450,000
Year-end assets before write-down	$19,500,000
Less: theater write-down	($550,000)
December 31 total assets	**$18,950,000**

What Adrenaline Rush's 2027 ratios tell us

Average total assets = $\frac{\text{Beginning total assets + Ending total assets}}{2} = \frac{\$19{,}450{,}000 + \$18{,}950{,}000}{2} = \$19{,}200{,}000.$

Ratio	Formula	2027 amounts	What the result means
Net profit margin	$\frac{\text{Net income}}{\text{Net sales}}$	$\frac{\$1{,}440{,}000}{\$24{,}000{,}000} = \mathbf{6.00\%}$	6 cents of net income per dollar of net sales.
Total asset turnover	$\frac{\text{Net sales}}{\text{Average total assets}}$	$\frac{\$24{,}000{,}000}{\$19{,}200{,}000} = \mathbf{1.25}$	$1.25 in net sales per dollar of average total assets.
Return on assets	$\frac{\text{Net income}}{\text{Average total assets}}$	$\frac{\$1{,}440{,}000}{\$19{,}200{,}000} = \mathbf{7.50\%}$	7.5 cents of net income per dollar of average total assets.

Return on assets = Net profit margin × Total asset turnover = 6.00% × 1.25 = 7.50%.

The impairment lowers 2027 margin and return

2027	Reported under US GAAP	Without the loss: comparison only
Net income	$1,440,000	$1,990,000
Average total assets	$19,200,000	$19,475,000
Net profit margin	6.00%	8.29%
Asset turnover	1.25	1.23
Return on assets	7.50%	10.22%

Adrenaline Rush reports the first column. The second column is an analyst's comparison, not a reported amount.

The loss is a large one-year expense, so margin and return fall. The smaller year-end balance raises turnover only slightly.

Your turn: calculate the 2028 ratios

5 minutes. Work alone or with your neighbor.

Adrenaline Rush, 2028 company totals. No new impairment. Ignore income taxes.

Fact	Amount	Fact	Amount
Net sales, 2028	$24,000,000	Total assets, December 31, 2027, after the loss	$18,950,000
Net income, 2028	$2,100,000	Total assets, December 31, 2028	$18,550,000

Calculate 2028 net profit margin, total asset turnover, and return on assets.

- **Average total assets** = (Beginning total assets + Ending total assets) ÷ 2
- **Net profit margin** = Net income ÷ Net sales
- **Total asset turnover** = Net sales ÷ Average total assets
- **Return on assets** = Net income ÷ Average total assets

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- **2028:** Net sales $24,000,000. Net income $2,100,000.
- **Total assets:** $18,950,000 at the start of 2028, after the loss. $18,550,000 at year-end.

What is 2028 return on assets?

A 8.27%

B 11.20%

C 11.32%

D 8.75%

iClicker | Answer 4 of 5

Correct answer: B

- **2028:** Net sales $24,000,000. Net income $2,100,000.
- **Total assets:** $18,950,000 at the start of 2028, after the loss. $18,550,000 at year-end.

What is 2028 return on assets?

A **8.27%**
Deducts the 2027 loss again from 2028 net income.

B **11.20%**
B is correct. Divide net income by average total assets. The next slide shows the calculation.

C **11.32%**
Uses ending total assets as the denominator.

D **8.75%**
Uses net sales as the denominator.

The 2028 margin, turnover, and return

$$\textbf{Average total assets} = \frac{\text{Beginning total assets} + \text{Ending total assets}}{2} = \frac{\$18{,}950{,}000 + \$18{,}550{,}000}{2} = \$18{,}750{,}000.$$

Ratio	Formula	2028 amounts
Net profit margin	$\frac{\text{Net income}}{\text{Net sales}}$	$\frac{\$2{,}100{,}000}{\$24{,}000{,}000} = \mathbf{8.75\%}$
Total asset turnover	$\frac{\text{Net sales}}{\text{Average total assets}}$	$\frac{\$24{,}000{,}000}{\$18{,}750{,}000} = \mathbf{1.28}$
Return on assets	$\frac{\text{Net income}}{\text{Average total assets}}$	$\frac{\$2{,}100{,}000}{\$18{,}750{,}000} = \mathbf{11.20\%}$

Return on assets = Net profit margin × Total asset turnover = 8.75% × 1.28 ≈ 11.20%.

January 1, 2028 total assets already reflect the write-down.

Net profit margin drove the rise in return on assets



Net profit margin rose from 6.00% to 8.75%. Total asset turnover rose from 1.25 to 1.28.

What did the 2027 write-down change in 2028?

Both columns show Adrenaline Rush in 2028. The comparison holds operating activity constant.

	Without the 2027 write-down	As reported
Net sales	$24,000,000	$24,000,000
Net income	$1,990,000	$2,100,000
Average total assets	$19,245,000	$18,750,000
Net profit margin	8.29%	8.75%
Total asset turnover	1.25	1.28
Return on assets	**10.34%**	**11.20%**

- **Higher net profit margin.** The write-down cuts 2028 depreciation by $110,000, so net income rises.
- **Higher total asset turnover.** Average total assets fall after the write-down. Net sales stay the same.

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Return on assets = Net income ÷ Average total assets

Adrenaline Rush's write-down lowers average total assets in 2028. Assume 2028 net income is the same positive amount with or without the write-down.

How does the smaller asset balance affect return on assets?

A Return on assets falls.

B Return on assets stays the same.

C Return on assets rises.

D We need net sales to tell.

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Correct answer: C

Return on assets = Net income ÷ Average total assets
Adrenaline Rush's write-down lowers average total assets in 2028. Assume 2028 net income is the same positive amount with or without the write-down.
How does the smaller asset balance affect return on assets?

A **Return on assets falls.**
With positive net income fixed, dividing by a smaller balance raises the ratio.

B **Return on assets stays the same.**
Average total assets are the denominator. A change in the denominator changes the ratio when net income stays positive and fixed.

C **Return on assets rises.**
C is correct. The same positive net income divided by a smaller average asset balance gives a higher return on assets.

D **We need net sales to tell.**
The formula uses net income and average total assets.

Compare the two US GAAP impairment models

	Held and used	Held for sale
When	Test when impairment indicators arise	Classify when all 6 criteria are met
Record a loss if	Recoverability test fails and fair value is below carrying amount	Fair value less cost to sell is below carrying amount
Loss amount	Carrying amount – Fair value	Carrying amount – (Fair value – Cost to sell)
Depreciation	Use the new cost basis after a loss	Stop at classification
Later increase	No reversal	Gain, up to unreversed held-for-sale write-downs

- **In the loss year:** The loss reduces margin and return in this example.
- **Later:** Lower depreciation and a smaller asset base raise return in this example, even with the same operations.

NEXT MEETING

Next class: Account for natural resources and retirement obligations

Tuesday, November 24, 2026

Unit 6 review assignment due:
Monday, November 30, at 11:59 PM.

