

# Financial Accounting Recitation: Midterm

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# Overview

## Agenda

- 14:30 - 15:15: Walk through the specific questions collected (and additional thoughts)
- 15:15 - 15:30: Answer follow-up questions (can be extended to 16:00 if needed)

## Reminders

- This recitation is not intended to be an exhaustive review for *everything* in the midterm
- The slides are organized in the order of logical connections, not the order of questions
- Prof Ziv will walk through the entire sample midterm in Oct the 16th's review session, and the recordings will be available on Canvas
- For any additional questions that I cannot cover, I will follow up with an email
- I will share the slides via email after the session

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# Interconnections of the Financial Statements

- B/S: Describes the company's status quo → two arguably most important aspects are profitability (net income) and liquidity (cash flow)
- I/S → Net income: Reconciles retained earnings in B/S
  - Ending R/E = beginning R/E + N/I - dividends
- S/C/F → Cash flow: Reconciles Cash in B/S
  - Ending cash = beginning cash + total C/F = beginning cash + CFO + CFI + CFF
- Debits/Credits - if applicable to mid-term
  - **Assets = Liabilities + Equity (+ Revenue - Expense)**
  - Dr: Increase LHS, decrease RHS; Cr: Decrease LHS, increase RHS

# Cash Flow Statement

- Structure: Operating, investing, financing
- Approaches: direct (not impossible to appear in the exam), **indirect**
- Operating activities: NI  $\rightarrow$  CFO
  - (+) depreciation and amortization
  - Adjust for non-cash income and non-operating income items
  - (-) change in operating assets and (+) change in operating liabilities
- Investing activities
  - Adjust for cash changes from purchases/sales of long-term assets (e.g., PP&E, intangibles), purchases/sales of other firms' securities/debts, etc.
- Financing activities
  - Adjust for issuance of common stock/bonds, payment of dividends, stock repurchases, etc.

## Question 3: Conceptual Foundations

These two principles are pervasive. Memorize them.

- Matching principle: expenses are recognized at the same time as the revenue that they helped generate, regardless of whether cash has been paid
- Revenue recognition: revenue is only recognized when it is earned and realized or realizable, regardless of whether cash has been received

## Question 1.b.1: Depreciation Expense

### **Depreciation expense was \$100.**

- Depreciation is a kind of non-cash expense, the same as, e.g., COGS
- When it happens, we recognize an expense and, at the same time, track it in Accumulated Depreciation (a contra-account for PP&E)
- The journal entry...
  - Dr: Depreciation Expense 100 (+)
  - Cr: Accumulated Depreciation 100 (+)

## Question 1.b.5: Sale of Goods

**Sales (of goods that cost \$900) were \$1,350 and collections were \$1,410.**

- Step 1: Reduce inventory ( $\leftrightarrow$  match with COGS)
  - Dr: COGS 900 (+)
  - Cr: Inventory 900 (-)
- Step 2: Recognize revenue ( $\rightarrow$  split between cash and credit)
  - Dr: Accounts Receivable 1350 (+)
  - Cr: Revenue 1350 (+)
  - Dr: Cash 1410 (+)
  - Cr: Accounts Receivable 1410 (-)
- Step 2 (alternative): Record net values
  - Dr: Cash 1410 (+)
  - Cr: Revenue 1350 (+)
  - Cr: Accounts Receivable 60 (-)



## Question 1.b.9: Sale of PP&E

**A machine that cost \$100 and that had accumulated depreciation of \$40 was sold for \$50, cash. (It was sold for \$60 in the original question, but let's examine this more complex scenario.)**

- Step 1: Determine the net value of the piece of PP&E:  $\$100 - \$40 = \$60$
- Step 2: Determine whether the sale incurs a gain (proceeds  $>$  net value) or loss (otherwise)  $\rightarrow$  a loss in this case since  $\$50 < \$60$
- Step 3: Record the transaction by increasing cash, writing off PP&E and depreciation, and recognizing gain or loss
  - Dr: Cash 50 (+)
  - Dr: Accumulated depreciation 40 (-)
  - Dr: Loss on Sale of PP&E 10 (+)
  - Cr: PP&E 100 (-)

## Question 1.b.9: Sale of PP&E (Impact on SCF)

**A machine that cost \$100 and that had accumulated depreciation of \$40 was sold for \$50, cash. (It was sold for \$60 in the original question, but let's examine this more complex scenario.)**

- Let's revisit the journal entries...
  - Dr: Cash 50 (→ Cash inflow from investing activities...)
  - Dr: Accumulated depreciation 40 (no impact)
  - Dr: Loss on Sale of PP&E 10 (→ affects NI but does not involve cash transactions, requires adjustments in CFO)
  - Cr: PP&E 100 (no impact)

## Question 2.a.2: Accrued Salary

### The adjusting entry to record accrued salary

- Accrued salary: The salary that has **occurred** but has **not been paid out**
- Recognition (matching principle): Recognize the **salary expense** and a **liability to the employee**
- Journal entry
  - Dr: Salary (wage) expense (↑ expense or ↓ equity)
  - Cr: Salary (wage) payable (↑ liability)

## Question 2.a.6: Prepaid Expense

**The recognition of an expense that had been paid for previously. A “prepaid” account was increased upon payment.**

- The prepaid account: The payment has already been made, but the goods or services have not been received, e.g., prepay the supplier
- The journal entries when the prepayment takes place
  - Cr: Prepaid expense (+)
  - Dr: Cash (-)
- When the expense is actually incurred,
  - Cr: Expense (↑ expense or ↓ equity)
  - Dr: Prepaid expense (↓ asset)

# Gordon growth model (GGM)

- A model to evaluate the intrinsic value of company stock
- (Very simplified) assumption: The company exists forever, and there is a constant growth in dividends, which exclusively provides benefits to investors
  - $P$ : stock price in period 0 (what we need to value)
  - $g$ : growth rate of dividends (can be estimated using historical dividend growth rate, sustainable growth rate ( $\text{ROE} \times \text{retention ratio}$ ), or analyst estimates)
  - $r$ : discount rate (can be estimated using models such as the Capital Asset Pricing Model)
  - $D_0$ : dividend in period 0 (directly available)
- Valuation: 
$$P = \sum_{t=1}^{\infty} D_0 \frac{(1+g)^t}{(1+r)^t} = \frac{(1+g)D_0}{r-g}$$

## Residual Income Model

- (After some algebra...)  $\text{Equity value} = \text{book value} + \text{PV of expected future residual income}$
- Residual income is earnings in excess of the return required by equity investors given the amount and cost of equity capital
- Residual income can also be expressed as the product of the beginning-of-period book value and the difference between ROE and the cost of equity
- To estimate intrinsic equity value, one must predict ROE and the equity growth rate in each future year, as well as estimate the cost of equity
- Refer to Section 7.3.5 of Prof Nissim's manuscript if interested

# Tips

For the preps...

- Focus on the core materials, such as the sample midterm, PS, and slides
- Make sure you can solve and understand the sample midterm (the recordings!)

When taking the exam...

- Avoid exporting fractured pages if you work with Excel → Making screenshots and putting them together in a Word doc is a good idea if you struggle with formatting
- Clearly number the questions to avoid losing points
- Skip the question if you are stuck to avoid rushing through the simpler ones
- Make attempts! We do reward efforts