ACCOUNTING

The language of the business world

ACC 1701X
Accounting for Decision Makers

Lecturer: Dr. Hanny Kusnadi

Prior Lecture Refresher

- The double-entry system
  - DEBIT (Left) / CREDIT (right)
  - Increase in Assets = Debit
  - Increase in Liabilities / Equity = Credit
- Analyze and record transactions using:
  - Journal entries (General Journal)
  - T-accounts (General Ledger)
- Trial balance
- *FSA: ROA & Debt Ratio (to be covered in this lecture)*

Chapter 04 – PART 1

Adjusting Accounts

Goals for Today (Chapter 04)

Concepts

- **Importance of periodic reporting**
- **Importance of accrual accounting**
- **Adjustments and their purposes**

Accounting Procedures

- **Prepare adjusting entries**
- Prepare adjusted trial balance *
- Prepare financial statements from adjusted trial balance *
- Closing the books*

Financial Analysis

- Profit Margin *

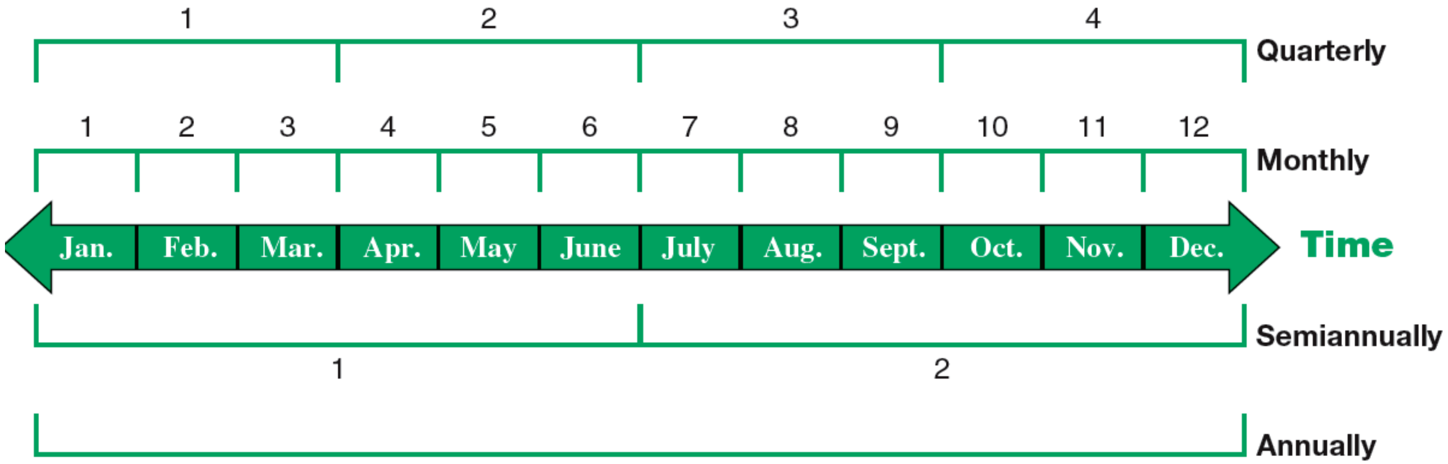
* We will continue these parts of Chapter 4 in the next lecture (Lecture 04)

Why do we need periodic reporting?

- Recall (from lecture 01) that one of the enhancing qualitative characteristics of financial reporting is **timeliness.**

➔ Regular reports provides timely information

- Accounting system prepares reports at <u>regular intervals</u>
- **Time Period Assumption:** A business entity's activities can be divided into specific time periods



- **Calendar Year: Jan 1 to Dec 31**
- **Fiscal Year : 12 consecutive months ending any date other than Dec 31**
  (e.g. April 1 – Mar 31)

Importance of Accrual Accounting

- Can accrual accounting better measure a firm's performance than cash basis data?

Accrual-Basis Accounting	Cash-Basis Accounting
▪ Recognizes event when main economic impact occurs ▪ Revenues are recorded as they are <u>earned</u>, regardless of when cash is received. ▪ Expenses are recorded as they are <u>incurred</u>, regardless of when cash is paid. ▪ **Required** by GAAP & IFRS ▪ **ALWAYS** used	▪ Simply adds up the cash inflows and cash outflows ▪ Revenues and expenses are recorded when <u>cash is received or paid</u>. ▪ Has a "time-period problem" ▪ Cash flows may not occur in the same period as the economic activity that produces them. (e.g. credit transactions) ▪ **NOT** accepted under GAAP or IFRS ▪ **NEVER** used

The Revenue Recognition Principle

When are revenues recognized?

- Revenue should only be recognized when the **four** criteria are met:
  1) **Goods has been delivered, or services rendered.**
  2) **Seller’s price to buyer is fixed or determinable.**
  3) **Persuasive evidence of a payment arrangement exists.**
  4) **Payment is realized or realizable (i.e. collectability is reasonably assured).**
- The above conditions are usually met by the time goods/services are delivered, regardless of when cash is received.

The Revenue Recognition Principle

An Example

In March, McKenz Consulting received $100k cash in advance from Tweet Co. for consulting services to be delivered in June.

Q: When should McKenz Consulting recognize revenue?

June!

Q: What transactions should McKenz Consulting record in March and in June? (journal entries)

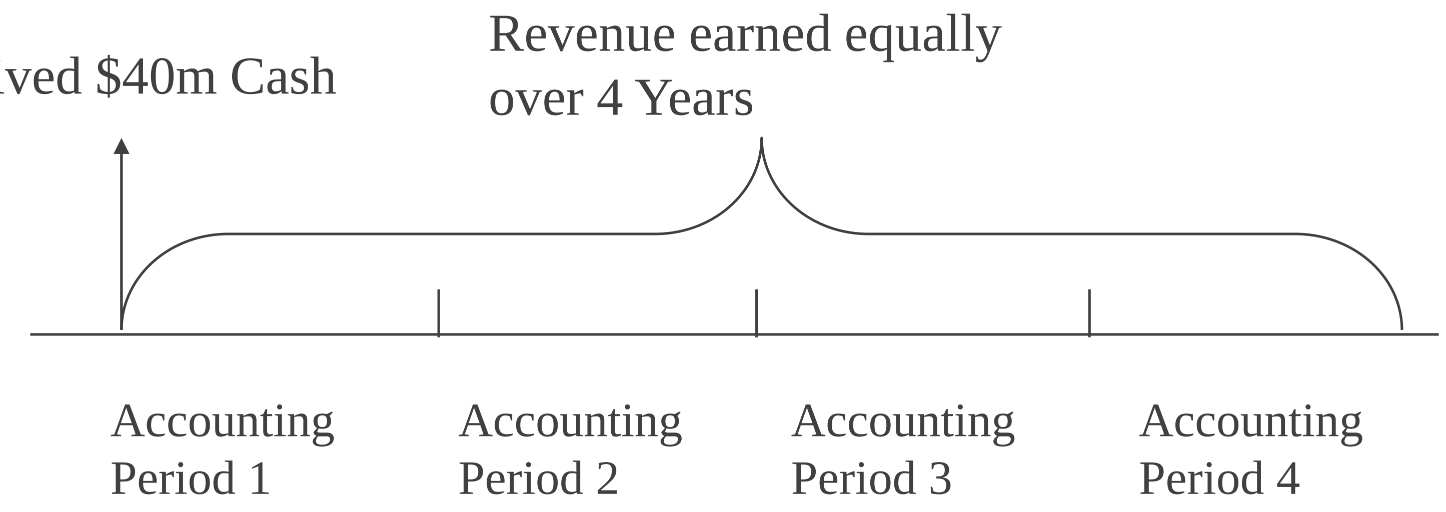
March	Cash (A)	$100k	
	Unearned Consulting Revenue (L)		$100k
June	Unearned Consulting Revenue (L)	$100k	
	Consulting Revenue (SE)		$100k

Bonus Q: What are the journal entries for Tweet Co. in March & June?

Why accrual basis is used instead of cash basis?
Example: Unearned (Deferred) Revenue

Unearned revenue: When cash is received before revenue is earned

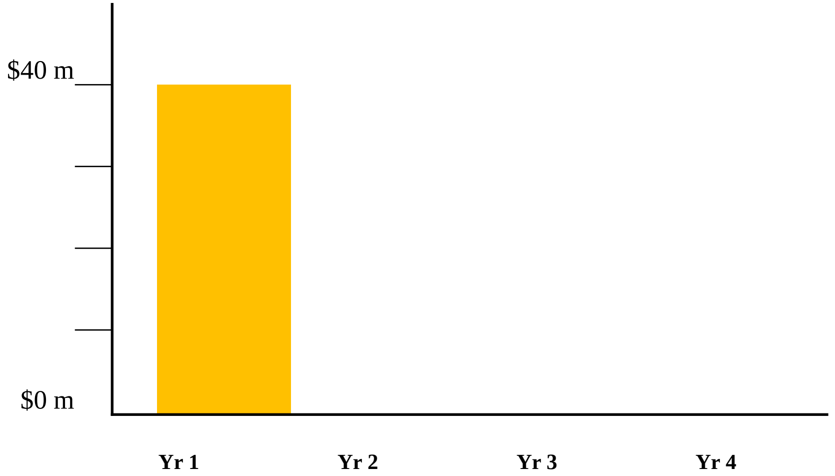
- For example: Received advance payment of $40m in year 1 to build a cruise ship in the next four years. (Assume 25% of the ship is completed for each of the four years)



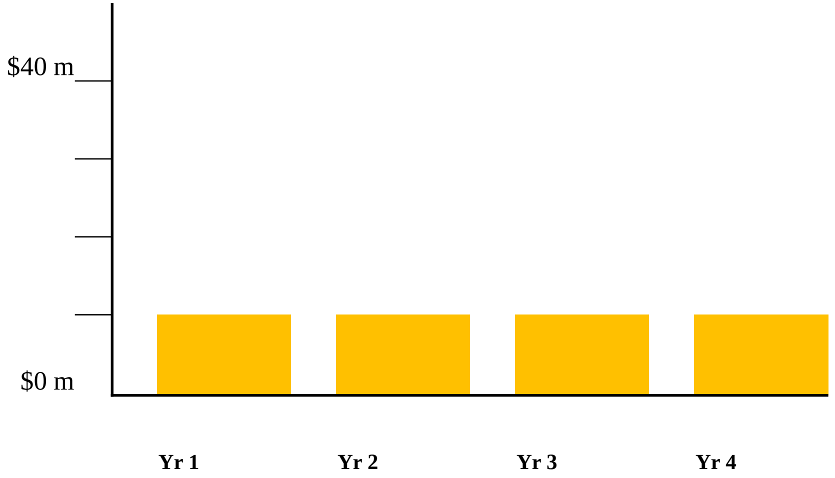
Why accrual basis is used instead of cash basis? Example: Unearned (Deferred) Revenue

When should revenues be recognized?

- ***Cash-basis***:
  - At the beginning of year 1, recognize all $40m cash receipt as revenue → revenue should have been deferred
  - No more records of revenue after year



- ***Accrual-basis***:
  - At the beginning of year 1, recognize all $40m cash receipt as unearned revenue (liability account).
  - At the end of each year, recognize the portion that is earned that year as revenue.
    - $40 million / 4 years = $10 million per year

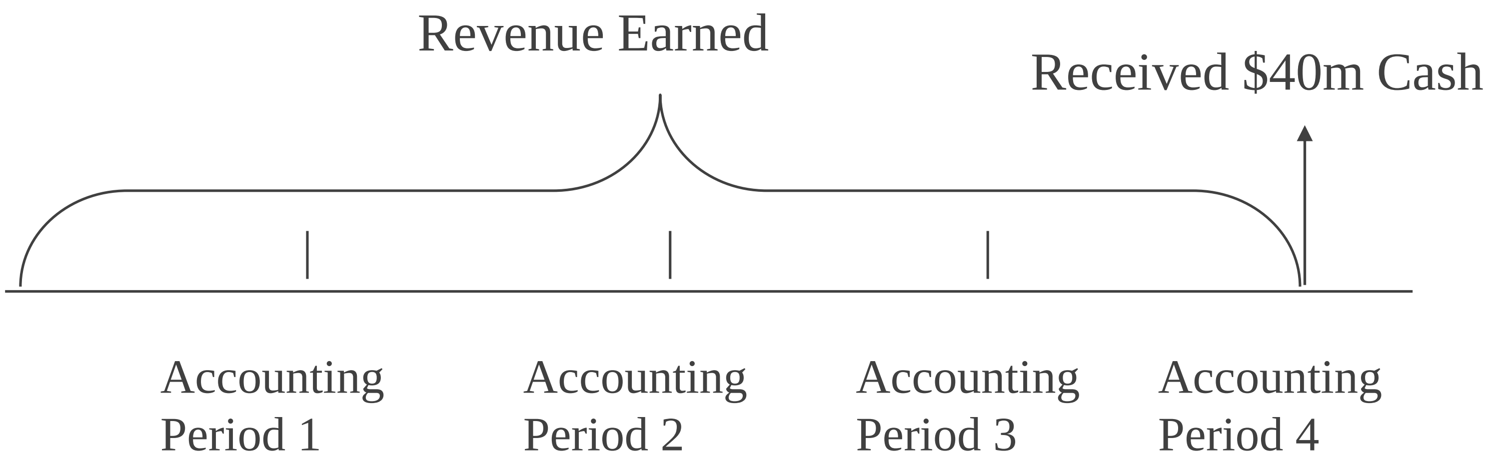


→ Accrual basis results in a smoother recognition of revenue stream over the length of the contract (4 years) and gives a fairer representation of the company's economic activities.

Why accrual basis is used instead of cash basis?
Example: Accrued Revenue (Unrecorded Receivables)

Accrued Revenue: Revenue is earned before cash is received

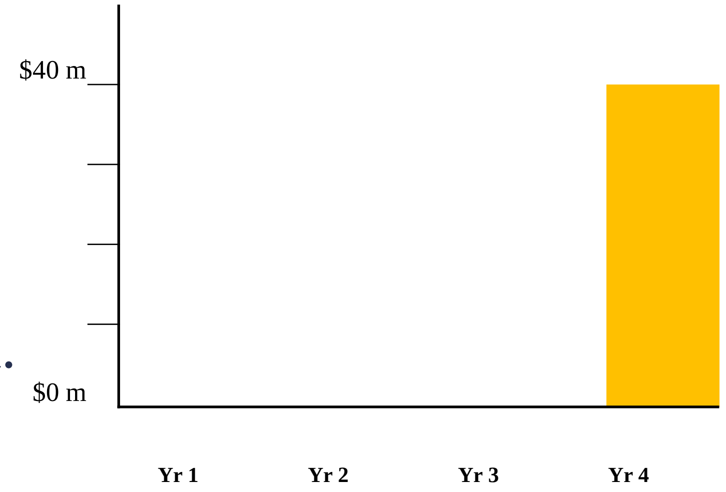
- For example: Long term contract – Receive $40m in cash *after* finish building one ship, which takes 4 years. (Assume 25% of the ship is completed for each of the four years)



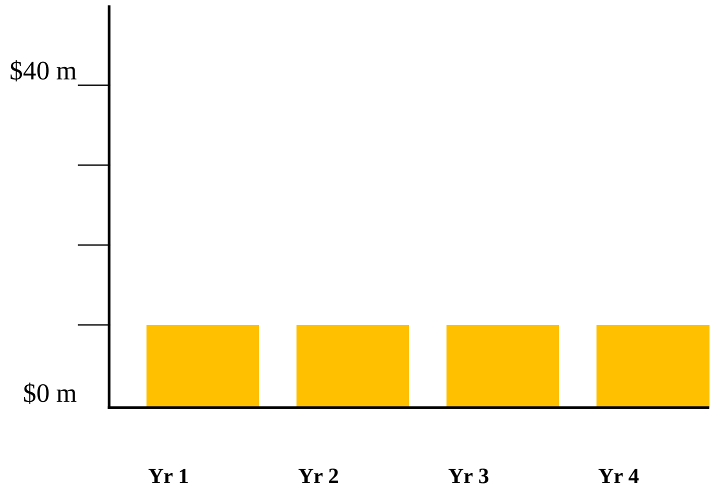
Why accrual basis is used instead of cash basis?
Example: Accrued Revenue (Unrecorded Receivables)

When should revenues be recognized?

- ***Cash-basis***:
  - No revenue record for accounting year 1, 2, 3 → unrecorded receivables
  - Record $40 m revenue at the end of period 4 when cash is received.



- ***Accrual-basis***:
  - At the end of each year for year 1, 2 and 3, recognize the portion of revenue that is earned that year but not received as accounts receivables (asset).
    - $40 million / 4 years = $10 million per year
  - At the end of year 4, recognize the portion of revenue earned for that year, the cash received and reduce accounts receivable.



→ Accrual basis results in a smoother recognition of revenue stream

The Matching Principle

When are expenses recognized?

- Expenses should be <u>matched</u> with the revenues they generate.
- If they cannot be matched, then they are recognized in the period they occur.
- Expenses are recognized in the period over which they generate economic benefits, regardless of when cash is paid.
- E.g. An equipment with 10 years useful life should be "expensed" gradually over the 10 years it is being used: this is called depreciation.

The Matching Principle

An Example

In January, BigMart purchased inventory costing $9k in cash from Johnson Co. BigMart sold the whole inventory for $12k in cash in May.

Q: When should BigMart recognize cost (expense)?

May!

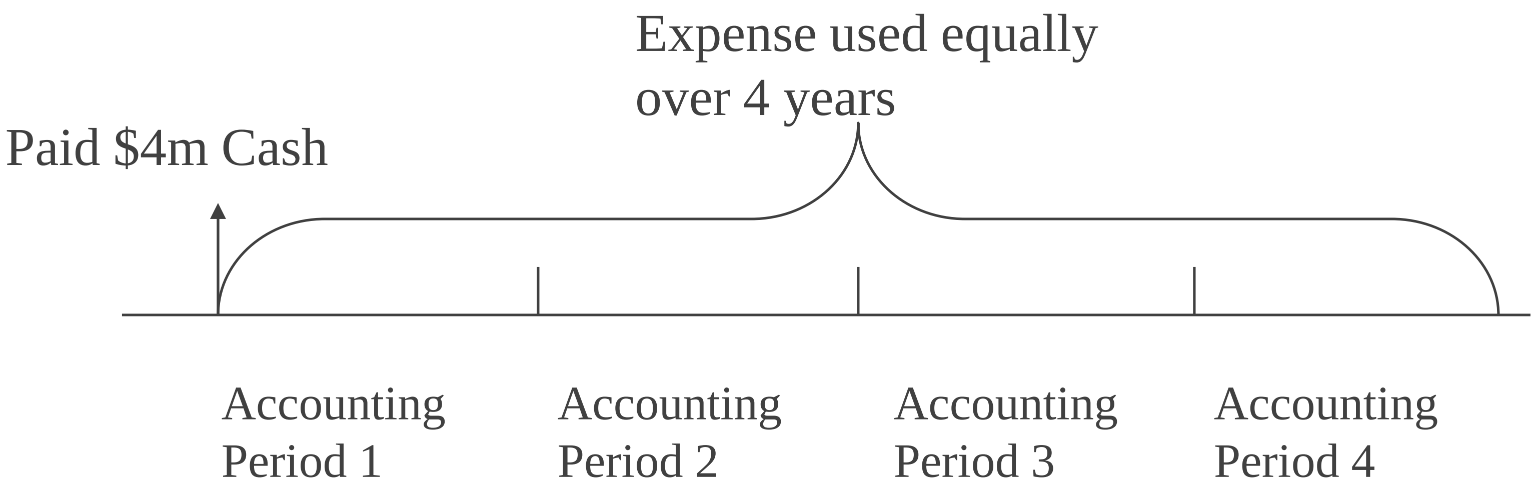
Q: What transactions should BigMart record in January and in May? (journal entries)

Jan	Inventory (A)	$9k	
	Cash (A)		$9k
May	Cash (A)	$12k	
	Sales Revenue (SE)		$12k
	Cost of Goods Sold (SE)	$9k	
	Inventory (A)		$9k

Why accrual basis is used instead of cash basis?
Example: Prepaid (Deferred) Expense

Prepaid Expense: When cash is paid before expense is incurred.

- For example: Paid 4 years rental fee $ 4 million in advance at the beginning of Year 1 (Assume each year rental is $1 million)

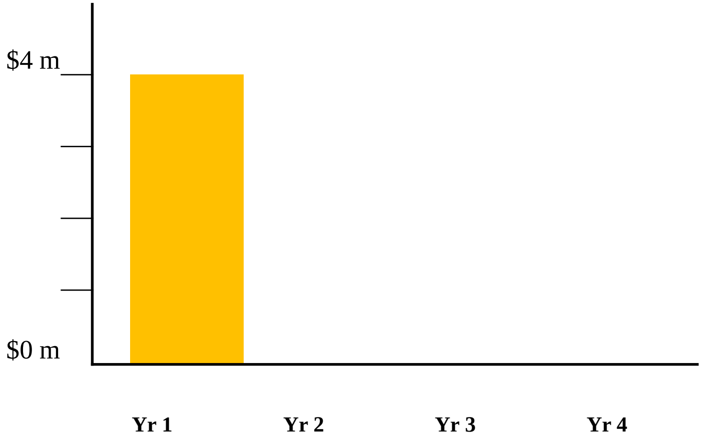


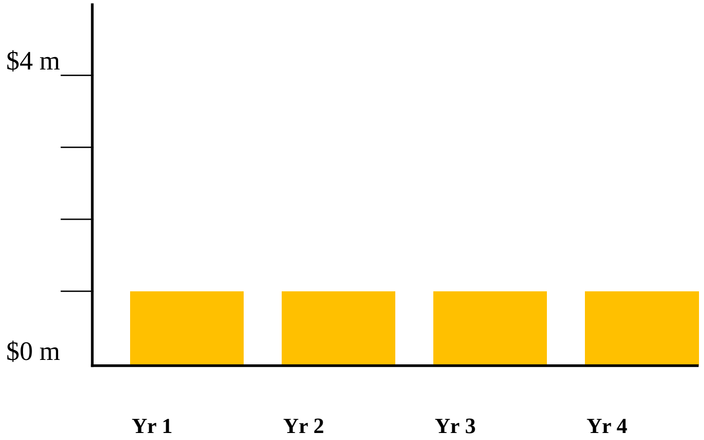
Why accrual basis is used instead of cash basis?
Example: Prepaid (Deferred) Expense

When should expense be recognized?

- ***Cash-basis***:
  - At beginning of Year 1, recognize all \$4m as rental expense → expense should have been deferred
  - No more record of expense in Year 2, 3, 4
- ***Accrual-basis***:
  - At the beginning of year 1, recognize all cash payment of \$4m as Prepaid Rent (asset).
  - At the end of each year, recognize the portion that is used for that year.
    - \$4 million / 4 years = \$1 million per year

➔ Accrual basis results in a fairer representation of expense over the 4 years.

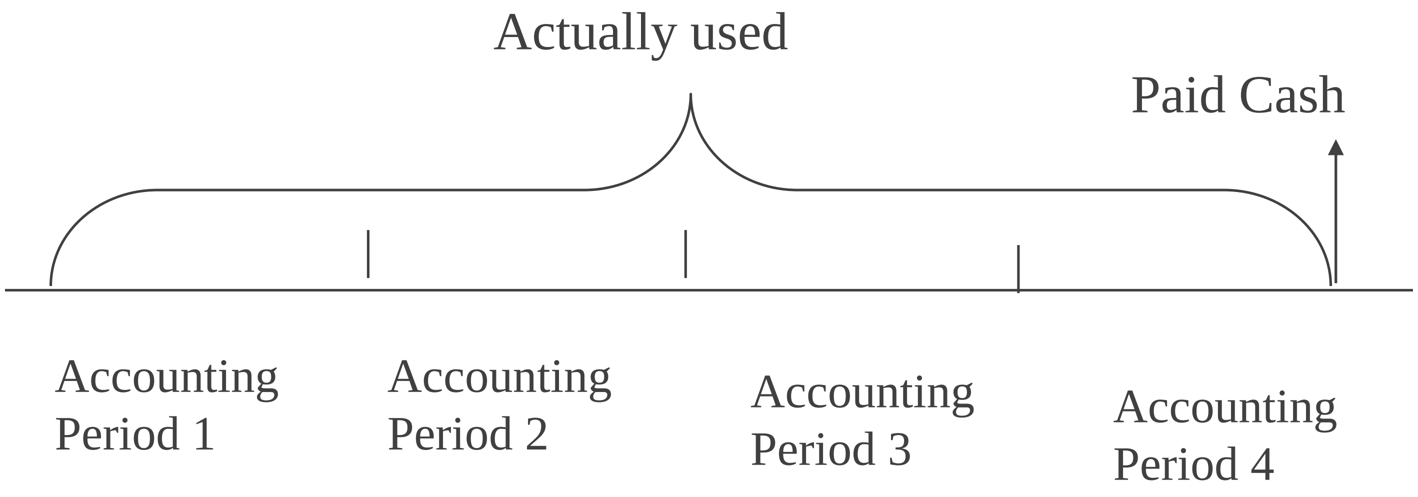




Why accrual basis is used instead of cash basis?
Example: Accrued Expense (Unrecorded liabilities)

Accrued Expense: When expense is incurred before cash is paid.

- For example: Borrow $40 million from bank in Year 1. Annual interest rate is 10% (non-compounded). Interest and principal are both paid at the end of 4th year.

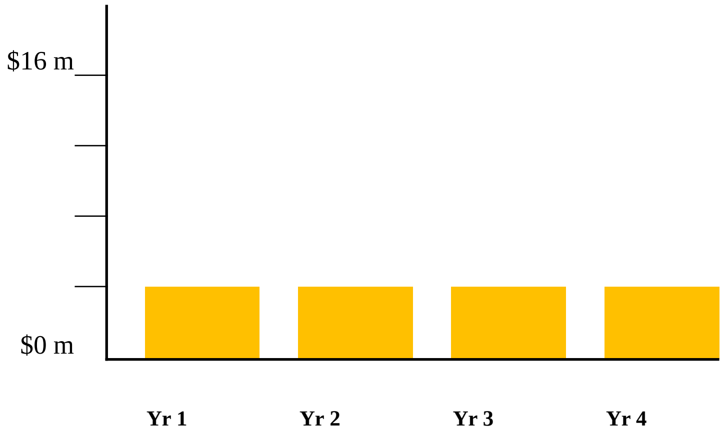


Why accrual basis is used instead of cash basis? Example: Accrued Expense (Unrecorded liabilities)

When should expense be recognized? (Focusing only on interest expense, ignore principal payment)

- ***Cash-basis***:
  - At year 4, record Interest Expense when interest is paid in cash to the bank, $16m (10% x $40m x 4 years).
  - No record of expense in Year 1, 2 & 3 → unrecorded liabilities

- ***Accrual-basis***:
  - At each Year 1, 2, 3, recognize the interest expense portion that is due but not yet paid as interest payable (liability).
  - At the end of Year 4, recognize the interest expense portion that is used, pay all interest in cash and reduce interest payable.



➔ Accrual basis results in a fairer representation of expense over the 4 years.

Importance of Accrual Accounting

- Recall that the primary objective of financial reporting is to help investors with investment decisions.
- Are earnings better than cash flows at capturing the value of the firm?
  - Look at the following example:

	EFFECT (↑ , ↓ or NONE) the following:		
TRANSACTION	**INCOME**	**FREE CASH FLOWS**	**FIRM VALUE**
Sales on credit	↑	NONE	↑
Inventory write-off due to fire (uninsured)	↓	NONE	↓

Benefit of matching revenue with expense
Example: Accrual vs. Cash

- **Compare the following cash-basis vs. accrual-basis income statement:** **(**Assume that all revenues and expenses are paid in cash in the same period**)**

Cash Basis	2013	2014	2015
Cash Revenue Received	$50,000	$50,000	$50,000
Cash Expenditures	30,000	30,000	30,000
Truck Purchase	30,000	0	0
Operating Income	$(10,000)	$20,000	$20,000

Cash-basis gives poor matching of revenues and expenses, making it difficult to forecast future net income based on historical accounting information!

Accrual Basis	2013	2014	2015
Revenue	$50,000	$50,000	$50,000
Expenses	30,000	30,000	30,000
Depreciation ($30k truck/3 years)	10,000	10,000	10,000
Operating Income	$10,000	$10,000	$10,000

FSA from Lecture 02

Financial Statement Analysis (FSA)

Decision Making Using Financial Ratios

Financial ratios are often used to aid in decision making.

<u>General areas of financial statement analysis:</u>

(1) Liquidity and efficiency – ability to meet short term obligations and efficiently generate revenues.

(2) Solvency – ability to meet long term obligations and generate future revenues.

(3) Profitability – ability to generate attractive and sufficient financial rewards for investors.

(4) Cash Flow – ability to manage cash inflow and outflow: “Cash is King”

(5) Market prospects – ability to generate positive market expectations.

*Note: I will be covering different financial ratios along the way as we cover different topics. All these ratios can be found in Chapter 15 (Analyzing Financial Statements).

Return on Assets (ROA)

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

- *Profitability* ratio that measures how much return (net profit) a company earns from its asset.
- Also known as "Return on Investment"
- Useful for evaluating management, analyzing profits and forecasting
- Benchmark with competitors / prior years performance
- Higher ratio is preferred (i.e. higher return)

ROA
An example: ComfortDelGro 2021, 2020 & 2019

SFP

	Note	The Group 2021 $'mil	The Group 2020* $'mil
ASSETS			
Current assets			
Short-term deposits and bank balances	4	919.1	742.8
Trade and other receivables	5	536.9	533.4
Due from subsidiaries	6	–	–
Grant receivables	12	0.6	20.1
Inventories	7	116.9	127.9
		1,573.5	1,424.2
Assets classified as held for sale	43	8.3	–
Deferred tax assets	16	6.5	–
Total current assets		1,588.3	1,424.2
Non-current assets			
Subsidiaries	8	–	–
Associates	9	0.8	0.7
Investments	10	27.7	22.5
Trade and other receivables	5	10.7	6.7
Due from subsidiaries	6	–	–
Vehicles, premises and equipment	13	2,430.5	2,604.1
Intangible assets	14	220.0	210.6
Goodwill	15	646.9	659.4
Deferred tax assets	16	30.1	30.4
Total non-current assets		3,366.7	3,534.4
Total assets		4,955.0	4,958.6

IS

	Note	2021 $'mil	2020* $'mil
Revenue	27	3,538.3	3,242.6
Staff costs	28	(1,711.9)	(1,550.1)
Depreciation and amortisation		(401.6)	(432.0)
Repairs and maintenance costs		(312.1)	(301.0)
Fuel and electricity costs		(264.2)	(182.0)
Contract services		(141.2)	(126.0)
Materials and consumables costs		(95.5)	(94.2)
Road tax and licence fees		(84.7)	(81.0)
Insurance premiums and accident claims		(81.1)	(85.7)
Premises costs		(80.2)	(77.6)
Utilities and communication costs		(17.3)	(18.9)
Advertising production and promotion costs		(16.9)	(12.7)
Net loss on disposal of vehicles, premises and equipment		(14.7)	(11.2)
Provision for impairment on vehicles and goodwill		(9.0)	(48.3)
Other operating costs		(97.9)	(100.2)
Total Operating Costs		(3,328.3)	(3,120.9)
Operating Profit		210.0	121.7
Net Income from Investments		6.2	8.8
Finance Costs	29	(11.3)	(14.7)
Profit before Taxation		204.9	115.8
Taxation	30	(44.9)	(24.1)
Profit after Taxation	31	160.0	91.7

(in $mil)	**2021**	**2020**	**2019**
ROA	**0.0323**	**0.0177**	**0.0605**
Net Profit	160	92	318
Current Yr Total Assets	4,955	4,959	5,379
Prior Yr Total Assets	4,959	5,379	5,137
Average Total Assets	4,957	5,169	5,258

What pattern do you observe in its ROA the past three years? Why do you think that is so?

COMFORTDELGRO

ROA
ComfortDelGro vs Uber

- Financial ratios are also useful for comparison with competitors

Let's compare ComfortDelGro with a competitor Uber *(Uber's 2021 Annual Report is available for download from Canvas) :*

	ComfortDelGro		**Uber**	
	2021	***2020***	***2021***	***2020***
Net Profit	160	92	(-8,506)	(-6,768)
Average Total Assets	4,957	5,169	36,013	32,507
ROA	**0.0323**	**0.0177**	**-0.2362**	**-0.2082**

- Comfort's ROA is positive, about 1.7% in 2020 and 3.2% in 2021.
- Uber is in the red (which means it is unprofitable). In 2021, it reported a loss of US$8.5 billion, and in 2021 it had a US$6.7 billion loss. And so, it has **negative** ROA. (In 2019, it reported loss of $8 billion.)

Assessing Solvency
Debt Ratio

Debt Ratio

$$\text{Debt Ratio} = \frac{\text{Total Liabilities}}{\text{Total Assets}}$$

- *Solvency* ratio that measures much total liabilities a company has relative to its total assets.
- Useful for evaluating the level of debt risk
- Company finance its assets either through liabilities or equity so a company that uses a lot of liabilities to finance its assets is said to have high **financial leverage** (highly leveraged)
- Higher ratio indicates higher leverage → higher risk

Debt Ratio
An example: ComfortDelGro

SFP

	Note	The Group 2021 $'mil	The Group 2020* $'mil
ASSETS			
Current assets			
Short-term deposits and bank balances	4	919.1	742.8
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Deferred tax assets	16	30.1	30.4
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Total assets		4,955.0	4,958.6

	Note	The Group 2021 $'mil	The Group 2020* $'mil
LIABILITIES AND EQUITY			
Current liabilities			
Borrowings	17	23.9	110.3
Lease liabilities from financial institutions	18	28.0	30.7
Lease liabilities	19	33.3	32.6
Trade and other payables	20	775.6	675.0
Due to subsidiaries	20	–	–
Deferred grants	21	0.6	30.5
Fuel price equalisation account		20.0	20.0
Provision for accident claims	22	44.3	48.7
Income tax payable		64.4	64.7
Total current liabilities		990.1	1,012.5
Non-current liabilities			
Borrowings	17	317.1	353.4
Lease liabilities from financial institutions	18	30.3	57.9
Lease liabilities	19	185.4	156.3
Deferred grants	21	4.8	5.8
Other liabilities	23	76.8	73.3
Fuel price equalisation account		20.0	20.0
Deferred tax liabilities	16	194.2	210.7
Total non-current liabilities		828.6	877.4
Total liabilities		1,818.7	1,889.9

	2021	2020	2019
Debt Ratio (TL/TA)	**0.3670**	**0.3811**	**0.4406**
Total Liabilities	1,819	1,890	2,370
Total Assets	4,955	4,959	5,379

COMFORTDELGRO

Debt Ratio
ComfortDelGro vs Uber

- Financial ratios are also useful for comparison with competitors

Let's compare ComfortDelGro with its competitor Uber:

	ComfortDelGro			Uber		
	2021	*2020*	*2019*	*2021*	*2020*	*2019*
Debt Ratio	**0.3670**	**0.3811**	**0.4406**	**0.6041**	**0.5864**	**0.5220**
Total Liabilities	1,819	1,890	2,370	23,425	19,498	16,578
Total Assets	4,955	4,959	5,379	38,774	33,252	31,761

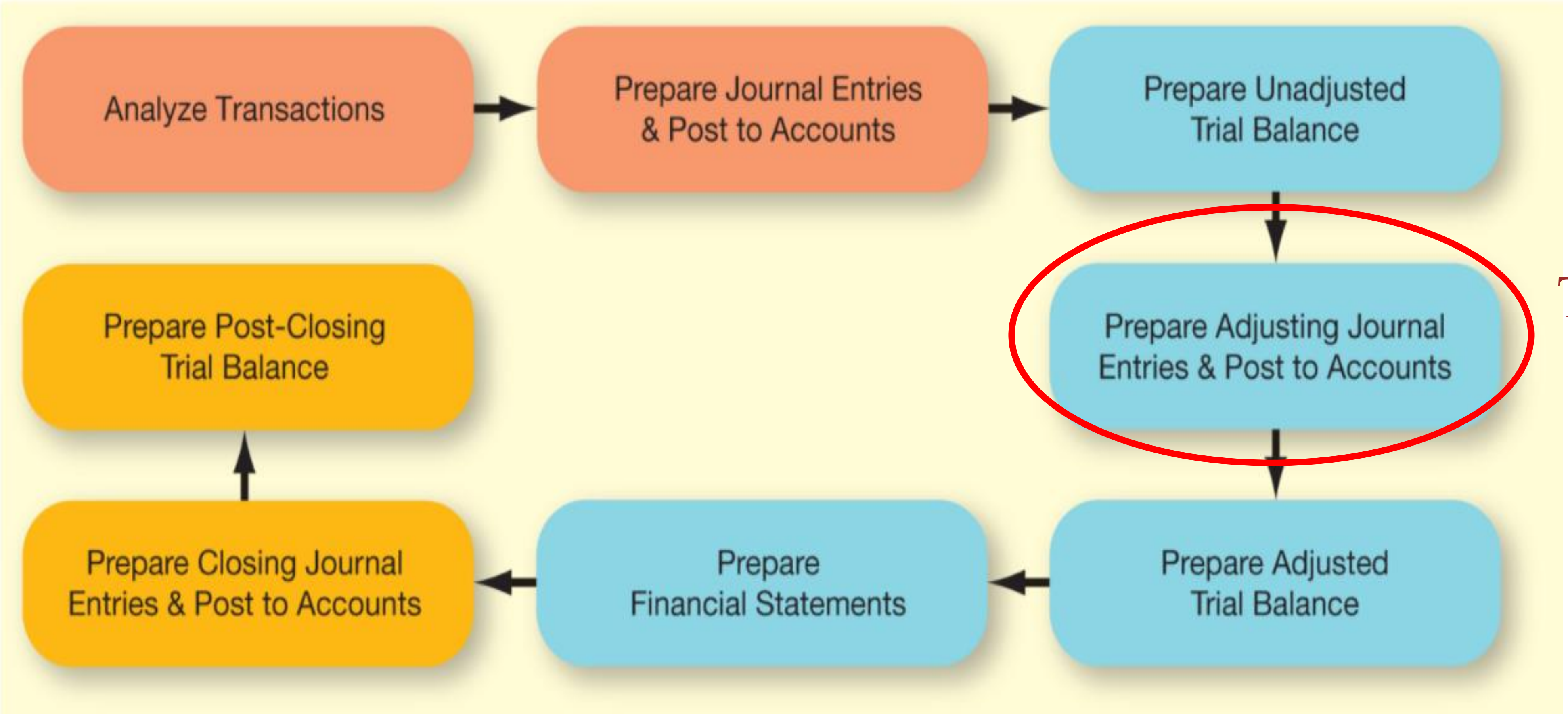
- Uber's debt ratio is much higher than ComfortDelGro.
- Uber is more highly leveraged than ComfortDelGro, indicating a higher level of debt risk.
- **Uber's debt ratio is constantly going up from 2019 to 2021. What do you think contributed to the ratio's increase year on year?**

Accounting Procedures

Concepts	▪ Importance of periodic reporting ▪ Importance of accrual accounting ▪ Adjustments and their purposes
Accounting Procedures	▪ **Prepare adjusting entries** ▪ Prepare adjusted trial balance * ▪ Prepare financial statements from adjusted trial balance * ▪ Closing the books*
Financial Analysis	▪ Profit Margin*

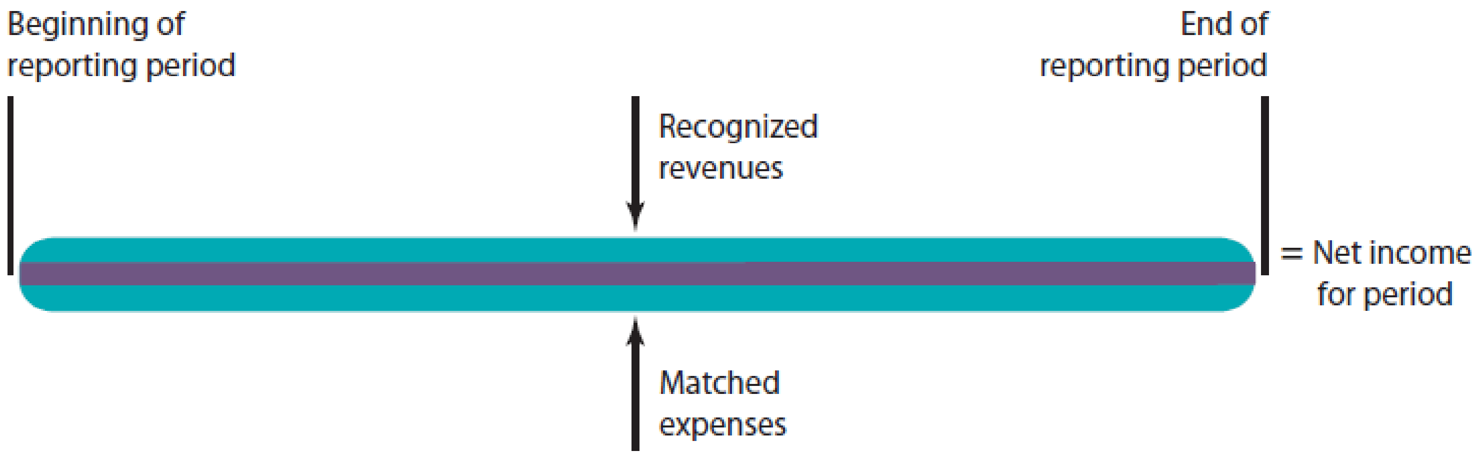
* We will continue these parts of Chapter 4 in the next Lecture (Lecture 04)

The Accounting Cycle



Today's Focus

End-of-period Adjustments
What is the purpose of adjustments?



Matching Principle

- Because transactions occur over time, **adjustments** are required at the end of each fiscal period to get the revenues and expenses into the "right" period.
  - Recognize revenues and expenses for the period
  - To report proper amounts for assets, liabilities and equity.
- Adjustments are done at the **end** of the accounting period, and before a company wants to prepare financial statements for external users.

Types of Adjustments

Adjustments to Revenues

An adjusting entry is recorded to bring an asset or liability account balance to its proper amount.

<u>Revenues</u>

- **Unearned Revenues : cash is received <u>before</u> revenue is earned**

    e.g. Customer Advance → Sales Revenue

    Subscription Advance → Subscription Revenue

- **Accrued Revenues: cash is received <u>after</u> revenue is earned**

    e.g. Sales Revenue → Cash will come next month

Types of Adjustments

Adjustments to Expenses

An adjusting entry is recorded to bring an asset or liability account balance to its proper amount.

Expenses

- **Prepaid Expenses: expense is incurred after cash is paid**

  e.g. Prepaid insurance → Insurance Expense

  Computer → Depreciation Expense

- **Accrued Expenses: expense is incurred before cash is paid**

  e.g. Interest Expense →Will be paid next month

  Wages Expense →Will be paid next month

Adjustments for Revenues: Unearned (Deferred) Revenue

Recall our earlier example: Received advance payment of $40 million on Jan 1, 2020 to build a cruise ship in the next four years. (Assume 25% of the ship is completed each year). How should we record this transaction?

- *Cash received before its corresponding revenue can be recognized.*
- *Debit to Cash, Credit to liabilities (Unearned Revenues).*

(1) On 1st Jan 2020, recognize all cash payment of $40 million as unearned revenue:

Jan 1, 2020	Cash (A)	$40 million	
	Unearned Revenue (L)		$40 million

Cash (A)

Debit	Credit
Jan 1, 2020 $40 m	

Unearned Revenue (L)

Debit	Credit
	Jan 1, 2020 $40 m

Adjustments for Revenues: Unearned (Deferred) Revenue

- *When the company finally renders the service/goods in the future, it will recognize the revenue.*
- *Debit to Unearned Revenue (reduce liabilities), Credit to Revenue.*

(2) **Adjustment entry** (at the end of each following years: 2020, 2021, 2022, 2023)

Dec 31	Unearned Revenue (L)	$10 million	
	Sales Revenue (SE)		$10 million

Cash (A)

Debit		Credit	
Jan 1, 2020	$40 m		

Sales Revenue (SE)

Debit		Credit	
		Dec 31, 2020	$10 m
		Dec 31, 2021	$10 m
		Dec 31, 2022	$10 m
		Dec 31, 2023	$10 m

Unearned Revenue (L)

Debit		Credit	
		Jan 1, 2020	$40 m
Dec 31, 2020	$10 m		
Dec 31, 2021	$10 m		
Dec 31, 2022	$10 m		
Dec 31, 2023	$10 m		
		Bal	$0

Adjustments for Revenues: Accrued Revenue

<u>Recall our earlier example</u>: Long term contract to build a ship starting Jan 1, 2020, with payment of $40 million in cash upon completion in 2023 (Assume 25% completion each year).

- *Revenues earned during a period that have not been recorded by the end of that period is an asset as it represents amounts receivable in the future.*
- *Debit to receivables (asset), Credit to revenue.*

(1) On Jan 1, 2020. There is no entry as there is not transaction.

(2) **Adjustment entry** (for first three years, at the end of each year: 2020, 2021, 2022)

Dec 31	Accounts Receivable (A)	$10 million	
	Sales Revenue (SE)		$10 million

Accounts Receivable

Debit		Credit
Dec 31, 2020	$10 m	
Dec 31, 2021	$10 m	
Dec 31, 2022	$10 m	

Sales Revenue

Debit	Credit	
	Dec 31, 2020	$10 m
	Dec 31, 2021	$10 m
	Dec 31, 2022	$10 m

Adjustments for Revenues: Accrued Revenue

- *When the company finally receives payment on the receivables: Debit to cash, Credit to receivables.*

(3) At the end of 4th year, upon completion of contract, record the portion of revenue earned for that year, the cash received and reduce accounts receivable.

Journal entry is:

Dec 31, 2023	Cash (A)		$40 million	
		Sales Revenue (SE)		$10 million
		Accounts Receivable (A)		$30 million

Accounts Receivable

Dec 31, 2020	$10 m	Dec 31, 2023	$30 m
Dec 31, 2021	$10 m		
Dec 31, 2022	$10 m		
Bal	$ 0 m		

Cash

Dec 31, 2023	$40 m		

Sales Revenue

		Dec 31, 2020	$10 m
		Dec 31, 2021	$10 m
		Dec 31, 2022	$10 m
		Dec 31, 2023	$10 m

Adjustments for Expenses:
Prepaid Expense

<u>Recall our earlier example:</u> Paid 4 years rental fee of $4 million for a building, paid cash in advance on Jan 1, 2020.

- *Prepaid Expense – payments made in advance for expenses not yet incurred.*
- *Debit to an asset account (Prepaids),Credit to cash.*

(1) On 1st Jan 2020, recognize all cash payment of $4 m as Prepaid Rent (asset).

Jan 1, 2020	Prepaid Rent (A)	$4 m	
	Cash (A)		$4 m

Cash

		Jan 1, 2020	$4 m

Prepaid Rent

Jan 1, 2020	$4 m		

Adjustments for Expenses: Prepaid Expense

- *An expense is recorded when the prepaid asset is "used" up.*
- *Debit to expense account, Credit to prepaids (i.e. reduce outstanding future benefits)*

(2) **Adjustment entry** (at the end of each following years: 2020, 2021, 2022, 2023)

Dec 31	Rent Expense (SE)	$1 m	
	Prepaid Rent Expense (A)		$1 m

Cash

		Jan 1, 2020	$4 m

Prepaid Rent

Jan 1, 2020	$4 m	Dec 31, 2020	$1 m
		Dec 31, 2021	$1 m
		Dec 31, 2022	$1 m
		Dec 31, 2023	$1 m
Bal	$ 0 m		

Rent Expense

Dec 31, 2020	$1 m		
Dec 31, 2021	$1 m		
Dec 31, 2022	$1 m		
Dec 31, 2023	$1 m		

Other Prepaid Expenses

- Other common types of prepaid expenses:
  - Prepaid Insurance
  - Supplies
  - Prepaid Wages (Salaries)
  - Prepaid Taxes etc..
- Accounted for in similar ways to our prepaid rent example.
- Note that some prepaid expenses are both paid for and fully used up <u>within a single period</u>.
  - For example, a company may pay monthly rent on the first day of each month. This payment creates a prepaid expense on the first day of the month that fully expires by the end of the month.
  - In these special cases, we can record the cash paid with a debit to the expense account instead of a prepaid asset account. So no adjustment is needed at the end of the period.

Adjustment for Expenses: Depreciation for PPE (Property, Plant & Equipment)

- **Depreciation is the allocation of an asset's over its estimated useful life.**
- Most common allocation method is straight-line depreciation – where you take the asset's cost (less any residual value) and allocate expense equally over its useful life.
- Example: Buying a truck in Jan 2020 for $200,000.

(1) On 1st Jan 2020, journal entry is:

Jan 1, 2020	PPE – Truck (A)	$200,000	
	Cash (A)		$200,000

PPE - Truck

Jan 2020 $200,000	

Cash

	Jan 2020 $200,000

Adjustment for Expenses: Depreciation for PPE (Property, Plant & Equipment)

The truck's useful life is 5 years, and residual value is zero. So how much expense do we allocate each year?

(Cost – Residual Value) / useful life = ($200,000 - $0) / 5

= $40,000

- When recognizing depreciation expense, the PPE asset account is **not subtracted**.
- Instead, we use a **CONTRA-ASSET** (which we will denote as XA) account, which is directly linked to the PPE account but with an opposite balance.
- This contra account is called **Accumulated Depreciation.**
- Note: On the Statement of Financial Position, PPE is reported net of accumulated depreciation.

Adjustment for Expenses: Depreciation for PPE (Property, Plant & Equipment)

(2) **Adjustment entry** (at the end of each following years: 2020, 2021, 2022, 2023, 2024)

Dec 31	Depreciation Expense (Exp)	$40,000	
	Accumulated Depreciation (XA)		$40,000

PPE - Truck

Jan 2020	$200k		

Cash

		Jan 2020	$200 k

Accumulated Depreciation

		Dec 2020	$40k
		Dec 2021	$40k
		Dec 2022	$40k
		Dec 2023	$40k
		Dec 2024	$40k

Depreciation Expense

Dec 2020	$40k		
Dec 2021	$40k		
Dec 2022	$40k		
Dec 2023	$40k		
Dec 2024	$40k		

- *We will cover PPE in more details later in Chapter 10.*

Adjustments for Expenses: Accrued Expense

Recall our earlier example: Borrow $40 million from a bank on Jan 2020 for 4 years term. Annual interest rate is 10% (non-compounded). Interest and principal are both paid at the end of 4th year. How should we record the transaction for the interest portion (ignore principal) ?

- *Expenses incurred during a period that have not been recorded by the end of that period*
- *Debit to expense account, Credit to payables account (obligation to pay in the future)*

(1) **Adjustment entry** (for first three years, at the end of each year: 2020, 2021, 2022), we recognize the annual interest expense portion (10% x $40m = $4m) that is due but not yet paid as a liability.

Dec 31	Interest Expense (SE)	$4 m	
	Interest Payable (L)		$4 m

Interest Payable

	Dec 31, 2020 $4 m
	Dec 31, 2021 $4 m
	Dec 31, 2022 $4 m

Interest Expense

Dec 31, 2020 $4 m	
Dec 31, 2021 $4 m	
Dec 31, 2022 $4 m	

Adjustments for Expenses: Accrued Expense

- *When payment is made to settle the obligation: Debit to payables, Credit to cash.*

(2) At the end of Year 4, we recognize the interest for that year & record interest payment:

Dec 31, 2023	Interest Expense (SE)	$4 m	
	Interest Payable (L)	$12 m	
	Cash (A)		$16 m

Interest Payable

Dec 31, 2023	$12 m	Dec 31, 2020	$4 m
		Dec 31, 2021	$4 m
		Dec 31, 2022	$4 m
		Bal	$0 m

Interest Expense

Dec 31, 2020	$4 m		
Dec 31, 2021	$4 m		
Dec 31, 2022	$4 m		
Dec 31, 2023	$4 m		

Cash

		Dec 31, 2023	$16 m

Quick chart of journal entries & FS effect for Adjustments to Revenues

		Unearned Revenues	Accrued Revenues
During the period	Cash received before revenue earned	Cash (A) Dr Unearned Rev (L) Cr	None *
End-of-period Adjustments	**Company has earned revenue in the period**	**Unearned Rev (L) Dr** **Sales Rev (Rev) Cr**	**Receivables (A) Dr** * **Sales Rev (SE) Cr**
Next Period	Cash received after revenue earned	None	Cash (A) Dr Receivables (A) Cr
Effect on Financial Statements **Prior** to Adjustments *(i.e. if without adjustments, the FS of the company would be under/over stated)*		Balance Sheet: • Liability overstated • Equity understated Income Statement • Revenue understated	Balance Sheet: • Asset understated • Equity understated Income Statement • Revenue understated

- Note that sales on credit that happens during the period is typically entered as a normal journal entry during the period as the sales occur, there is NO need to wait till end of the period to record it as an adjusting entry.

Quick chart of journal entries & FS effect for Adjustments to Expenses

		Prepaid Expenses	Accrued Expenses
During the period	Cash paid before expense incurred	Prepaids (A) Dr Cash (A) Cr	None *
End-of-period Adjustments	**Company must recognize expense**	**Expense (Exp) Dr** **Prepaids (A) Cr**	**Expense (Exp) Dr** **Payables (L) Cr** *
Next Period	Cash paid after expense incurred	None	Payables (L) Dr Cash (A) Cr
Effect on Financial Statements **Prior** to Adjustments *(i.e. if without adjustments, the FS of the company would be under/over stated)*		Balance Sheet: • Asset overstated • Equity overstated Income Statement • Expense understated	Balance Sheet: • Liability understated • Equity overstated Income Statement • Expense understated

* Note that incurring an expense on credit during the period can also be entered as a normal journal entry.

These two tables will be very useful reference for your studying purpose and exam preparation! =)

Other Types of Adjustments

- Adjusting entries made at the end of an accounting period do not usually involve cash.
- Adjusting entries involves a balance sheet account and an account on the income statement/statement of comprehensive income.
- Adjusting journal entries are typically called "AJEs" for short.

Some other major end-of-period adjustments are:

(a) Provision for Bad Debts *(To be covered in Chapter 7)*

- Not all accounts receivables can be collected, some become *bad debts*, which are uncollectable.
- GAAP / IFRS requires an estimation and recognition of bad debts every period.

(b) Cost of Goods Sold/ Cost of Sales *(To be covered in Chapter 8)*

(c) Depreciation *(To be covered in Chapter 10)*

(d) Provision for Income Tax

- As the saying goes, only two things in life are certain: death & taxes!
- An estimation of income tax expense is recognized every period.

Take Away for Lecture 03

- Periodic accounting provides timely information & **accrual-based** accounting provides better matching of revenues and expenses.
- Adjustments are required to get the revenues and expenses into the "right" period.
- Adjustment to Revenues:
  - Unearned Revenues : cash is received before revenue is earned. When revenue is earned, the liability is reduced to show that the obligation has been performed.
  - Accrued Revenues (unrecorded receivables): cash is received after revenue is earned. When revenue is earned, an asset is recorded to show future receipts from customers.
- Adjustment to Expenses:
  - Prepaid Expenses: expense is incurred after cash is paid. When expense is incurred, the prepaid asset is reduced.
  - Accrued Expenses (unrecorded liabilities) : expense is incurred before cash is paid. When expense is incurred, a liability is recorded to show future obligation to be settled.

Summary of AJEs:

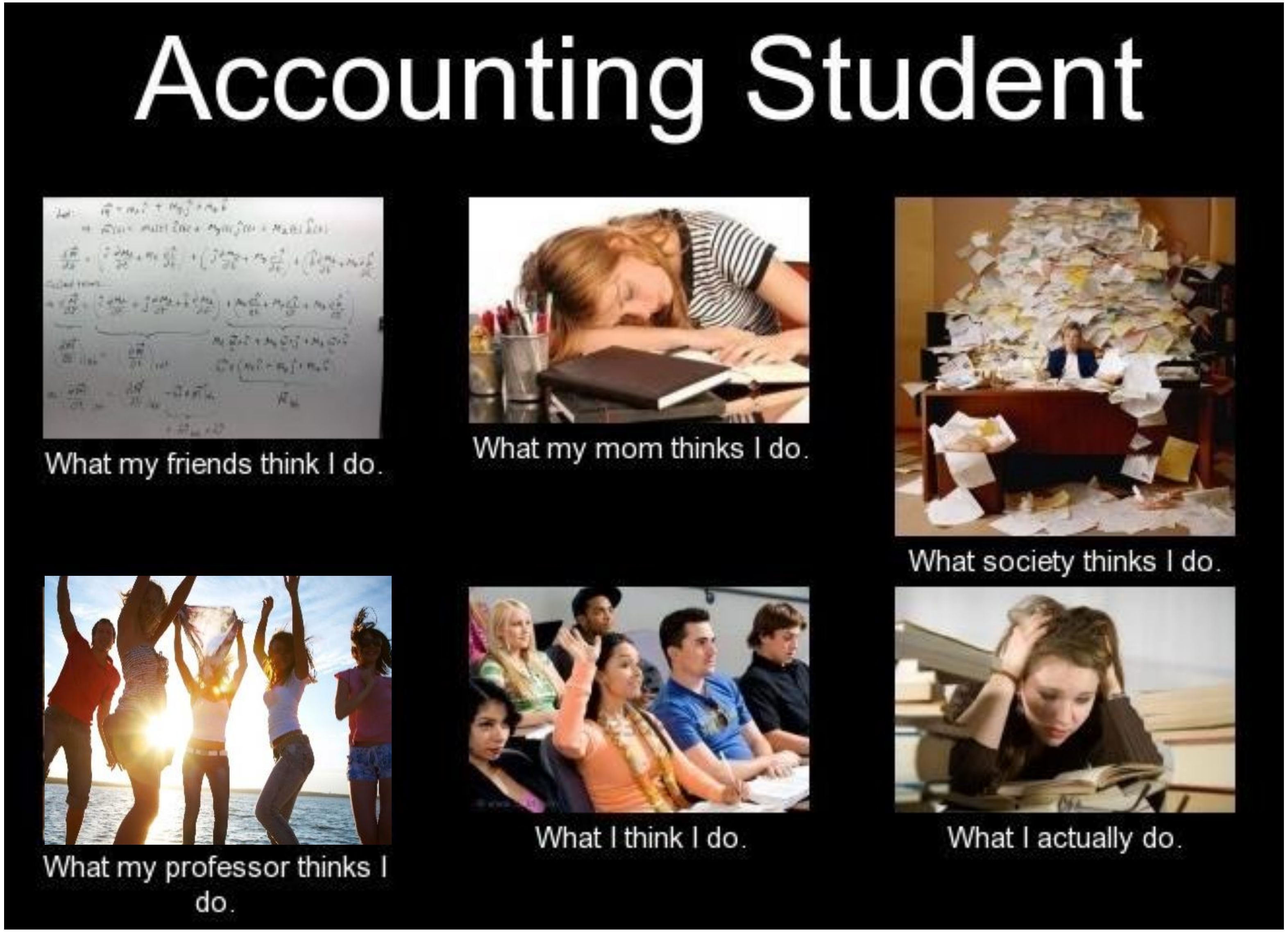
Unearned revenues	*Unrecorded receivables*	*Prepaid expenses*	*Unrecorded liabilities*
▶ *Debit liability*	▶ *Debit asset*	▶ *Debit expense*	▶ *Debit expense*
▶ *Credit revenue*	▶ *Credit revenue*	▶ *Credit asset*	▶ *Credit liability*

Preview for Lecture 04
(Chapter 04 – Part 2)

Next week, we will finish up Chapter 04:

- Posting Adjusting Entries → Adjusted Trial balance
- Preparing Financial Statements using Adjusted Trial Balance:
  (1) Income Statement
  (2) Statement of Changes in Equity
  (3) Statement of Financial Position
- Closing the Books
- FSA: Net Profit Margin

That's all folks!



Don't forget to review the materials after the lecture!

Post any questions/discussion in the Canvas Discussion Forum for Lecture 03.

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See you next week!