ACC 1701XA
Accounting for Decision Makers

LECTURE 02

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Accounting
The language of the business world

NUS National University of Singapore | NUS BUSINESS SCHOOL

Quick Prior Class Refresher

What have we done in Lecture 01?

- Fundamental Accounting Equation: **ASSETS = LIABILITIES + EQUITY**
- Basic Financial Statements:

(1) Statement of Financial Position (SFP) – also known as the Balance Sheet

Assets = Liabilities + Equity

(2) Statement of Profit & Loss (SPL) – also known as the Income Statement

Net Income = Revenues – Expenses + Gain/(Loss)

(3) Statement of Changes in Equity (SCE)

Beg Equity + Net Changes in Capital + Net Income – Dividends + OCI* = End Equity

(4) Statement of Cash Flows (SCF)

Changes in Cash = CFO + CFI + CFF

**OCI = Other Comprehensive Income (will not be covered in detail in this module)*

Chapter 03

The Accounting Cycle : Mechanics of Accounting

Goals for Today

We will look deeper into the accounting process today…

Concepts	Accounting Procedures	Financial Analysis
• What are "transactions"? • Accounts in the accounting system • Double-entry accounting: **DEBIT & CREDIT**	• Analyze Transactions • Journal entries • T-accounts • Trial balance	• What is FSA? • ROA • Debt Ratio

What are "Transactions"?

Past events that have an economic impact on the company

- **External events**
  - exchanges of assets/service of one party for assets/service/liabilities of other parties.
  - e.g. Best Denki buys computers from Lenovo and pays in cash
    (exchange one asset "cash" for another asset "computer")
- **Internal events**
  - not an exchange between the firm and other parties, but have a direct effect on the accounting entity.
  - e.g. an unexpected fire destroys a factory, the company suffers from losing one asset "factory" and there is a reduction in equity

NOTE:

- An event is not a transaction if the exchange hasn't occurred yet (e.g. signing a contract for a service is not a transaction until the service has been rendered)
- Events that cannot be reliably measured in monetary terms cannot be recorded in the accounting system and thus will not be reflected in the financial statements.

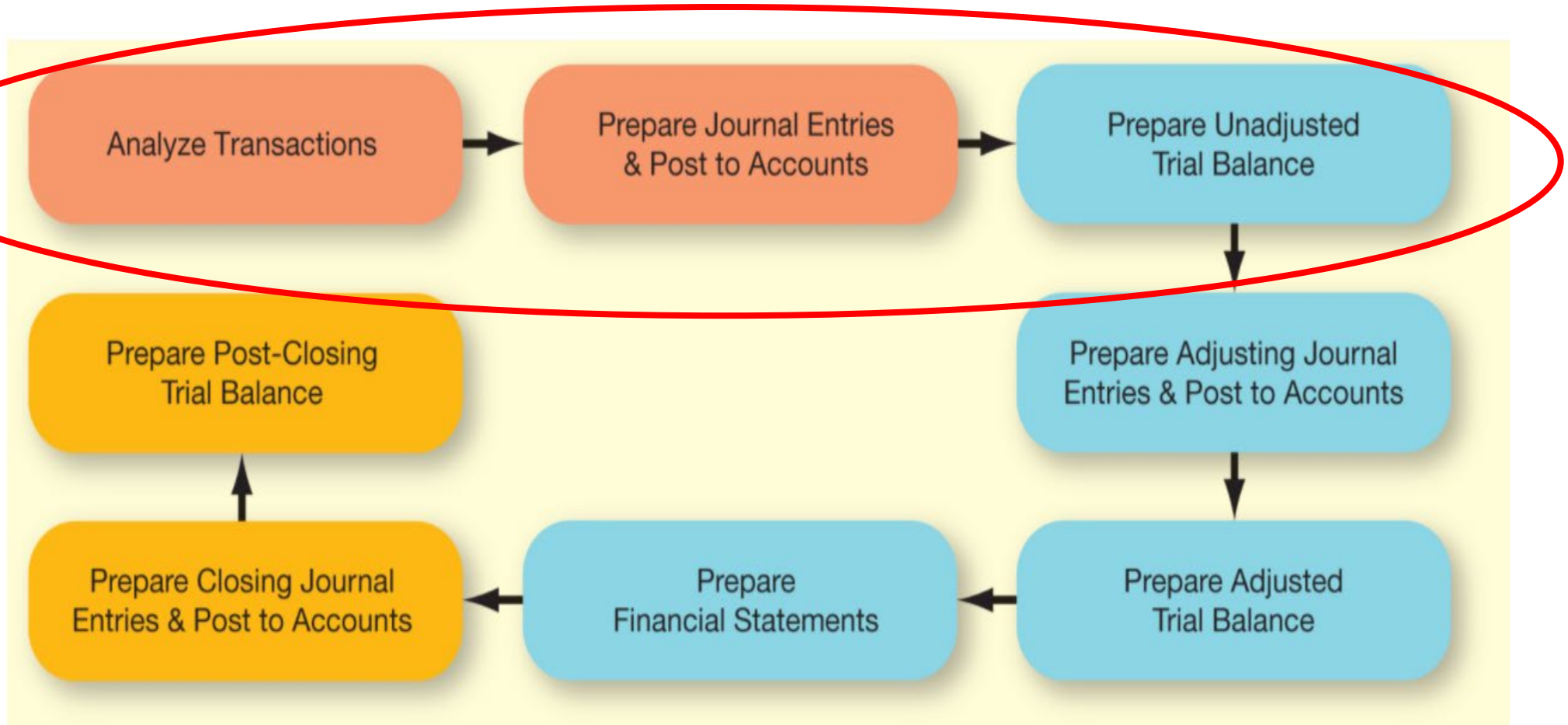
How Transactions are Recorded in the Accounting System

1) Analyze transaction
   - Using source documents that identify and describe the events
   - E.g. sales receipts, purchase orders, invoices from suppliers

2) Record transaction in a journal
   - In chronological order by date of occurrence
3) Post all the journals to a ledger account at the end of an accounting period
   - Transfer information from journals to ledger account
   - The ledger houses all the different types of accounts (e.g. cash, accounts payable, equipment, sales revenue)
4) Prepare Trial Balance
5) Use Trial Balance to prepare Financial Statements (FS)

The Accounting Cycle

The procedure for analyzing, recording, summarizing, and reporting the transactions of a business.



What is an Account?

An account keeps track of activities (recording increases/decreases)

- Account types are based on the fundamental accounting equation: asset, liability, equity, revenue, expense
- Think of an individual account as a summary of every transactions affecting that certain item.
- Shows increases, decreases and a balance.

All the accounts together makes up a General Ledger

- A record containing all accounts used by the company

Chart of Accounts is a list of all accounts along with individual unique identifying account numbers

- e.g. 101 Cash, 102 Accounts Receivable, 201 Accounts Payable, 301 Share capital, 401 Sales Revenue, 501 Cost of Sales etc…

Chart of Accounts Example: Different Types of Accounts

Sample chart of accounts of a hypothetical company showing some of the most common accounts you will encounter:

Assets (100–199)

Current Assets (100–150):
101 Cash
103 Notes Receivable
105 Accounts Receivable
107 Inventory
108 Supplies

Non-current Assets (151–199):
151 Land
152 Buildings
154 Office Equipment

Liabilities (200–299)

Current Liabilities (200–219):
201 Notes Payable
202 Accounts Payable
203 Salaries Payable
204 Interest Payable
206 Income Taxes Payable

Non-current Liabilities (220–239):
222 Mortgage Payable

Equity (300–399)

301 Capital Stock
330 Retained Earnings

Revenues (400–499)

400 Sales Revenue
410 Service Revenue

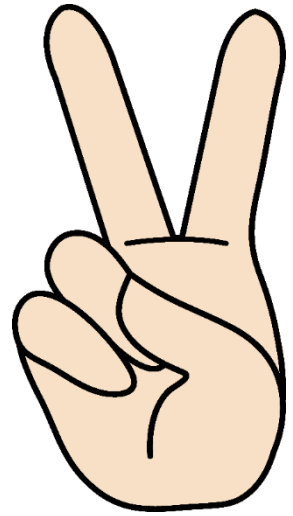
Expenses (500–599)

500 Cost of Goods Sold
501 Sales Salaries and Commissions
523 Rent Expense
525 Travel Expense
528 Advertising Expense
551 Officers' Salaries
553 Administrative Salaries
570 Payroll Taxes
571 Office Supplies Expense
573 Utilities Expense
578 Office Equipment Rent Expense
579 Accounting and Legal Fees
580 Interest Expense
590 Income Tax Expense

The Power & Beauty of Accounting

Double-Entry System

Each transaction affects at least TWO accounts!



- Most transactions with external parties involved are exchanges
  - Where the business entity gives up something and
  - Receives something in return
  - That's the **duality of effect notion**!
- Recall the accounting equation:

Assets	=	Liabilities	+	Equity
◆ Resources owned or controlled by the firm		◆ Creditors' claim against the firm's resources ◆ Requires repayment		◆ Owners' claim against the firm's resources ◆ Requires no repayment but represents ownership interest in the firm

- A transaction affects (1) the goods/resources, and (2) the claim of it.
- And remember that the accounting equation must **ALWAYS** balances after every transaction!

Debit/Credit :
The T Accounts

Left side = DEBIT **Right side = CREDIT**

Account Title	
DEBIT (Dr)	**CREDIT (Cr)**

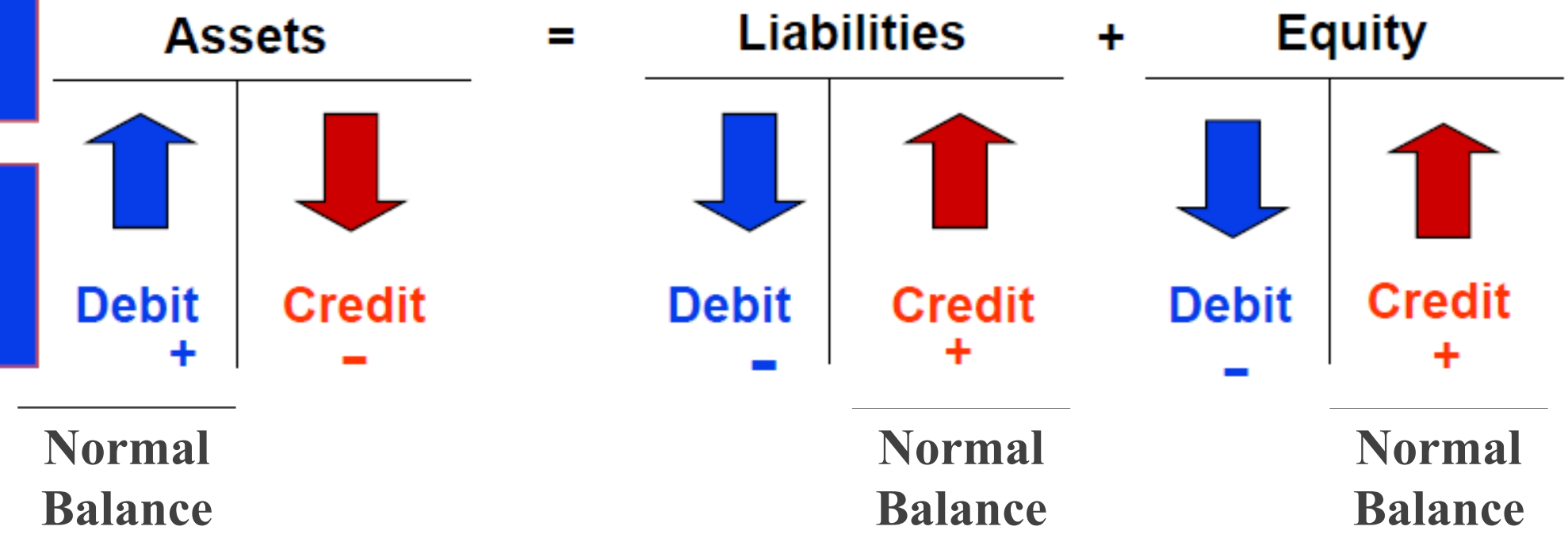
- Every business transaction involves at least **one debit** and **one credit**.
- We need to recognize two effects (duality) at the same time on (at least) two accounts!
- DEBIT must always equal CREDIT for each transaction.

Debit/Credit :
Double-Entry Accounting

The type of account determines how **increases** & **decreases** are recorded in it:

Accounting Equation

Rules of Debit and Credit



Debit/Credit : Expanding & Understanding the Mecanics of Equity

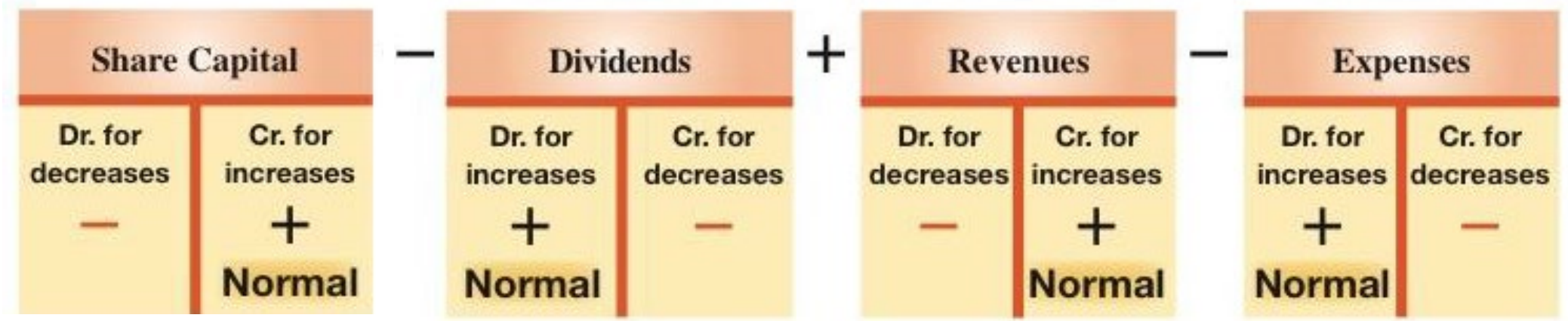
Recall from Lecture 01:

Equity

Assets = Liabilities + Share Capital + Retained Earnings

= Liabilities + Share Capital + Revenues – Expenses – Dividends

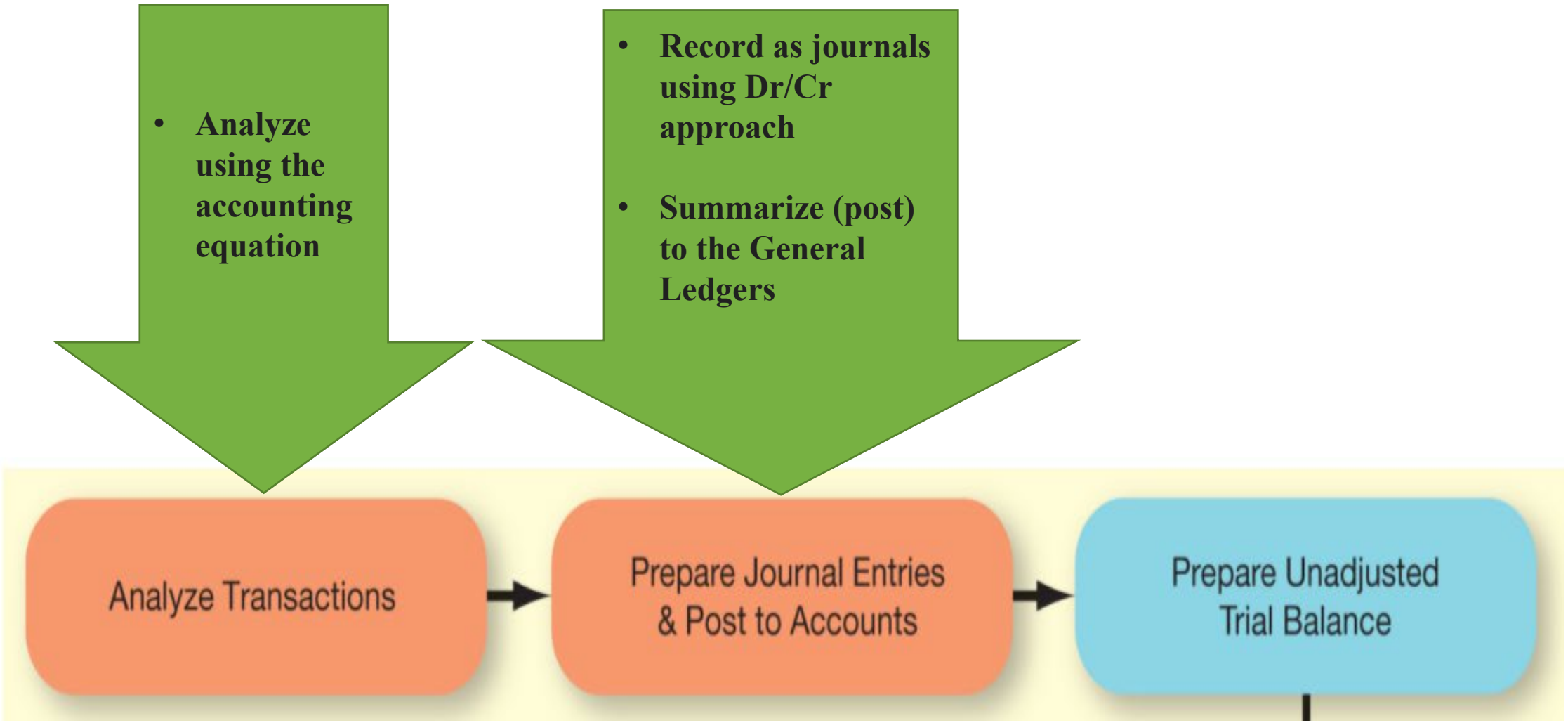
- Increases in Share Capital and Revenues will cause equity to increase
  - ➔ Recorded as a **credit** entry
- Increases in Expenses and Dividends will cause equity to decrease
  - ➔ Recorded as a **debit** entry



Accounting Procedures

Concepts	**Accounting Procedures**	Financial Analysis
• What are "transactions"? • Accounts in the accounting system • Double-entry accounting: **DEBIT & CREDIT**	• Analyze Transactions • Journal entries • T-accounts • Trial balance	• What is FSA? • ROA • Debt Ratio

The Accounting Cycle



Debit/Credit :
General Journal

Transactions are recorded as **journal entries** in a general journal, in chronological order.

- A journal entry is an accounting record which transactions are entered.
- A **typical journal entry** might look like this:

Provide a reference date for each transaction.

Debit entries are always written first.

General Journal — Page G1

Date	Account Titles and Explanation	Ref.	Debit	Credit
Aug. 29	Software		9,000	
	Cash			4,000
	Accounts Payable			5,000
	(Bought app using cash and credit.)			

Credits are indented and written after debits.

Total debits must equal total credits.

Dollar signs usually are omitted

Debit/Credit :
General Journal → T-Accounts

The journal entry gets summarized into the related T-accounts affected by the transaction.

For example:

		Debit	Credit
(g)	Software (+A)	9,000	
	Cash (−A)		4,000
	Accounts Payable (+L)		5,000

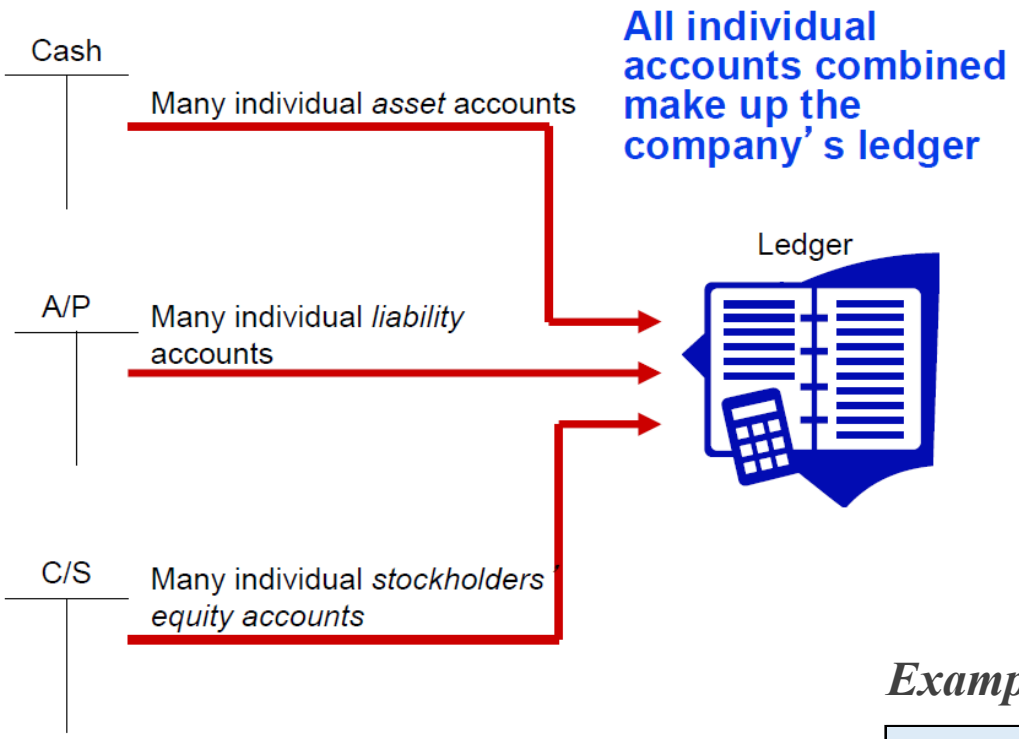
dr +	Software (A)	*cr −*
Beg. bal.	0	
(g)	9,000	
End. bal.	9,000	

dr +	Cash (A)		*cr −*
Beg. bal.	0	300	(b)
(a)	10,000	5,000	(e)
(c)	20,000	4,000	(g)
End. bal.	20,700		

dr −	Accounts Payable (L)	*cr +*
	0	Beg. bal.
(e) 5,000	9,600	(d)
	5,000	(g)
	9,600	End. bal.

The ending balance on a T-account is the difference between the debit and credit entries in the account

Debit/Credit :
T-Accounts → General Ledger



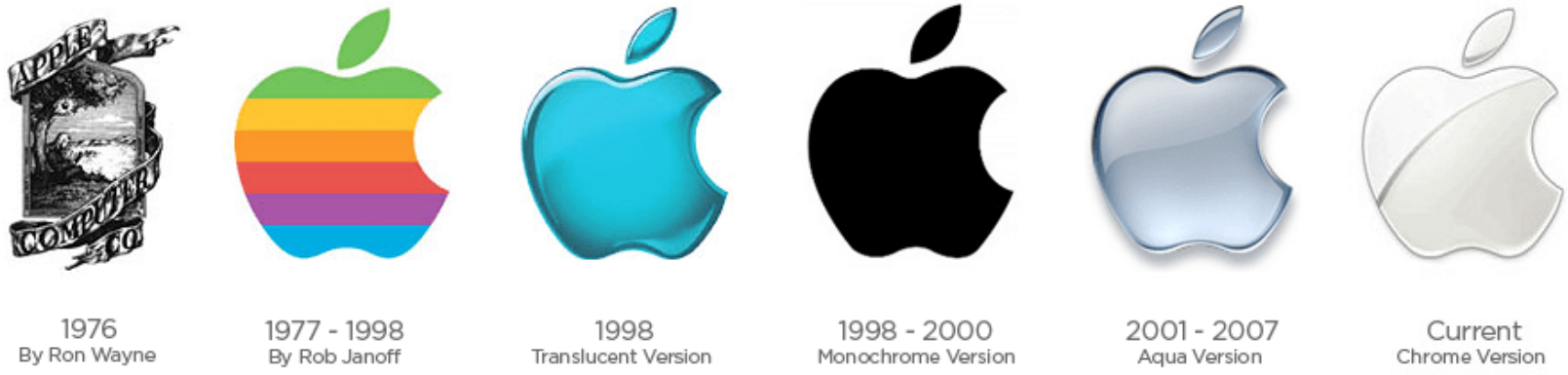
Note:
While T-accounts are useful for illustrative learning purposes, they are not really used in practice. Most companies simply use balance column ledger accounts to summarize their transactions.

**In this course, we will not be relying on using T-accounts but rather column ledger accounts (see example below) to post our journal entries.*

Example of a Cash ledger account:

Cash (Account No. 101)				
Date	**Explanation**	**Debit**	**Credit**	**Balance**
1-Aug-24	Sales Revenue	30,000		30,000
2-Aug-24	Salary Expense		2,500	27,500
4-Aug-24	Rent Expense		26,000	1,500
9-Aug-24	Accounts Receivables	4,200		5,700

The Apple Story:
Recording Transactions in the Accounting System

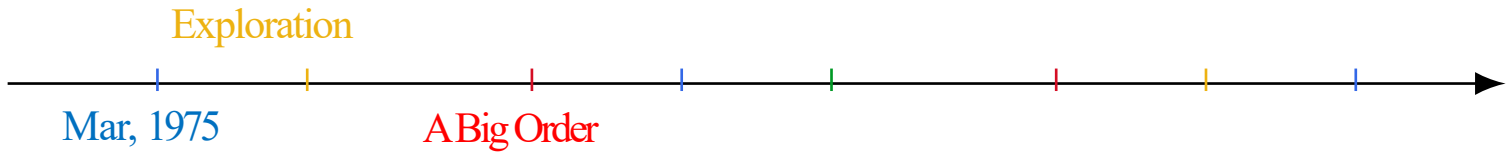


- Let's now hop on the time machine and travel back in time to 1976, with a story about how Steve Jobs and Steve Wozniak founded Apple Computer in 1976.
- We will (1) analyze the transactions and see how it affects the accounting equation

  (2) record the transactions using journal entries & illustrate the T-accounts

Apple Story - Event #1-3

(1) Transaction Analysis



1) In 1975, Steve Wozniak and Steve Jobs attended a club called Homebrew Computer Club and got inspired.
2) Wozniak estimated that it would cost $1,000 to lay out the design of the computer circuits and they could sell each circuit for $200 each.
3) Jobs got a big order from The Byte Shop, whose boss ordered 100 computer circuits, and would pay $500 each, cash on delivery.

Should there be any transactions recorded for the above?

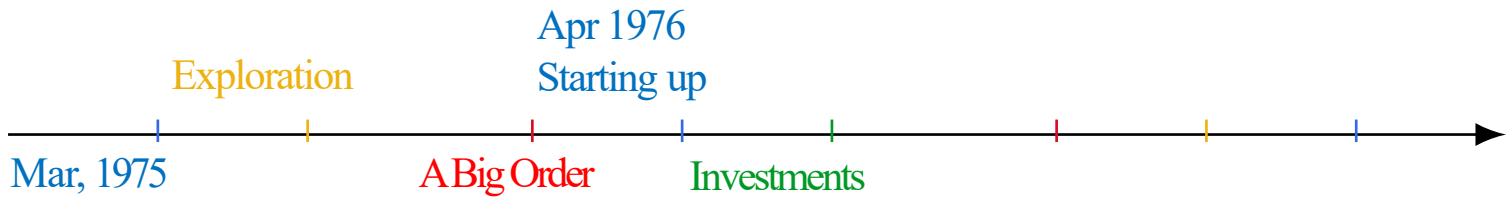
NO!

Why not?

Because there are no exchanges of goods/services.

Apple Story – Event #4

(1) Transaction Analysis



4) Wozniak sold his HP scientific calculator for $500 and Jobs sold his VW van for $800, and injected the money into their new company "Apple". They also borrowed $5,000 cash from a friend as a loan.

ASSETS (A)	=	LIABILITIES (L)	+	EQUITY (E)
+ 500 Cash				+ $500 Share Capital (Wozniak)
+ 800 Cash				+ $800 Share Capital (Jobs)
+ $5,000 Cash		+ $5,000 Debt		
$6,300	=	**$5,000**	+	**$1,300**

Transaction Type:
> Issuance of Shares.
> Financing through debt.

Verify that the accounting equation remains in balance!

Apple Story – Event #4
(2) Journal Entries & Ledger Accounts

4) Journal entry (General Journal):

		Debit	Credit
4)	Cash (A)	6,300	
	Share Capital (E)		1,300
	Debt (L)		5,000

- Post to Ledger Accounts:

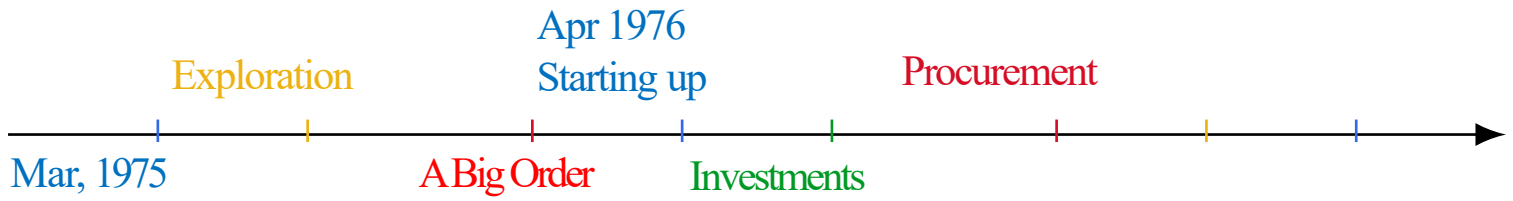
ASSETS = **LIABILITIES** + **EQUITY**

Cash			
Ref	**Debit**	**Credit**	**Balance**
4)	6,300		6,300

Debt			
Ref	**Debit**	**Credit**	**Balance**
4)		5,000	5,000

Share Capital			
Ref	**Debit**	**Credit**	**Balance**
4)		1,300	1,300

Apple Story – Event #5
(1) Transaction Analysis



5) Wozniak spent $1,000 cash, of which $200 was used to buy an equipment, and $800 was for development expense.

ASSETS (A)	=	LIABILITIES (L)	+	EQUITY (E)
$6,300	=	**$5,000**	+	**$1,300**
- $1,000 Cash				- $800 Development Expense
+ $200 Equipment				
$5,500		**$5,000**		**$500**

Transaction Type:
> Acquiring equipment
> Incurring operating expense

Verify that the accounting equation remains in balance!

Apple Story – Event #5
(2) Journal Entries & Ledger Accounts

5) Journal entry (General Journal):

		Debit	Credit
5)	Equipment (A)	200	
	Development Expense (E)	800	
	Cash (A)		1,000

- Post to Ledger Accounts:

ASSETS = **LIABILITIES** + **EQUITY**

Cash

Ref	Debit	Credit	Balance
4)	6,300		6,300
5)		1,000	5,300

Equipment

Ref	Debit	Credit	Balance
5)	200		200

Debt

Ref	Debit	Credit	Balance
4)		5,000	5,000

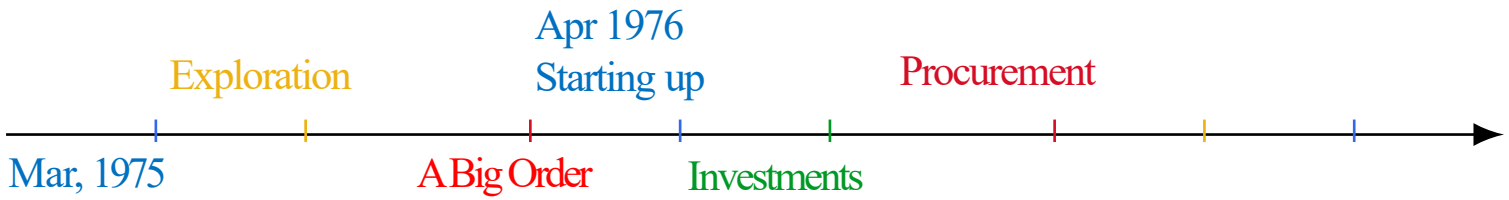
Share Capital

Ref	Debit	Credit	Balance
4)		1,300	1,300

Development Expense

Ref	Debit	Credit	Balance
5)	800		800

Apple Story – Event #6
(1) Transaction Analysis



6) Jobs purchased component parts from Cramer Electronics on credit, costing $20,000, payable on a net 30-days terms. These parts are to be used for producing the computers circuits.

ASSETS (A)	=	LIABILITIES (L)	+	EQUITY (E)
$5,500	=	**$5,000**	+	**$500**
+ $20,000 Inventory		+ $20,000 Accounts Payable		
$25,500		**$25,000**		**$500**

Transaction Type: Purchase of inventory parts on credit

Verify that the accounting equation remains in balance!

Apple Story – Event #6
(2) Journal Entries & Ledger Accounts

6) Journal entry (General Journal):

		Debit	Credit
6)	Inventory (A)	20,000	
	Accounts Payable (L)		20,000

- Post to Ledger Accounts:

ASSETS = **LIABILITIES** + **EQUITY**

Cash

Ref	Debit	Credit	Balance
4)	6,300		6,300
5)		1,000	5,300

Equipment

Ref	Debit	Credit	Balance
5)	200		200

Inventory

Ref	Debit	Credit	Balance
6)	20,000		20,000

Debt

Ref	Debit	Credit	Balance
4)		5,000	5,000

Accounts Payable

Ref	Debit	Credit	Balance
6)		20,000	20,000

Share Capital

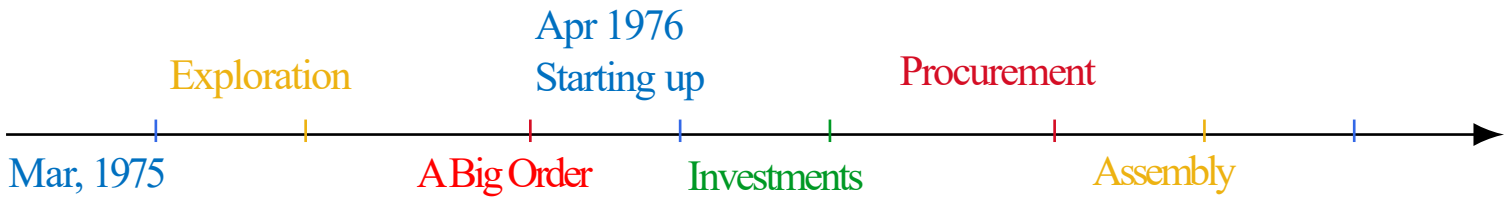
Ref	Debit	Credit	Balance
4)		1,300	1,300

Development Expense

Ref	Debit	Credit	Balance
5)	800		800

Apple Story – Event #7

(1) Transaction Analysis



7) In ten days, the two Steves assembled 100 sets of computer circuits in Wozniak family's garage, with additional $2,000 in cash spent on parts.

ASSETS (A)	=	LIABILITIES (L)	+	EQUITY (E)
$25,500	=	**$25,000**	+	**$500**
- $2,000 Cash				
+ $2,000 Inventory				
$25,500		**$25,000**		**$500**

Transaction Type: Purchase of inventory parts by cash

Verify that the accounting equation remains in balance!

Apple Story – Event #7
(2) Journal Entries & Ledger Accounts

7) Journal entry (General Journal):

		Debit	Credit
7)	Inventory (A)	2,000	
	Cash (A)		2,000

- Post to Ledger Accounts:

ASSETS = **LIABILITIES** + **EQUITY**

Cash

Ref	Debit	Credit	Balance
4)	6,300		6,300
5)		1,000	5,300
7)		2,000	3,300

Equipment

Ref	Debit	Credit	Balance
5)	200		200

Inventory

Ref	Debit	Credit	Balance
6)	20,000		20,000
7)	2,000		22,000

Debt

Ref	Debit	Credit	Balance
4)		5,000	5,000

Accounts Payable

Ref	Debit	Credit	Balance
6)		20,000	20,000

Share Capital

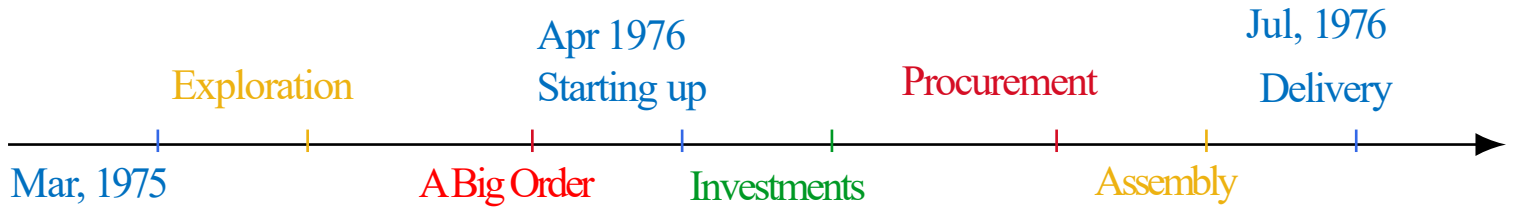
Ref	Debit	Credit	Balance
4)		1,300	1,300

Development Expense

Ref	Debit	Credit	Balance
5)	800		800

Apple Story – Event #8

(1) Transaction Analysis



8) In July, they delivered the 100 computer circuits to Byte Shop and got $40,000 in cash, and $10,000 on credit. Byte sold each computer at $666.

ASSETS (A)	=	LIABILITIES (L)	+	EQUITY (E)
$25,500	=	**$25,000**	+	**$500**
+ $40,000 Cash + $10,000 Receivables				+ $50,000 Sales Revenue
- $22,000 Inventory				- $22,000 Cost of Goods Sold
$53,500		**$25,000**		**$28,500**

Transaction Type: Sold products for cash and credit.

Verify that the accounting equation remains in balance!

Apple Story – Event #8
(2) Journal Entries

8) Journal entry (General Journal):

		Debit	Credit
8a)	Cash (A)	40,000	
	Accounts Receivable (A)	10,000	
	Sales Revenue (E)		50,000
8b)	Cost of Goods Sold (E)	22,000	
	Inventory (A)		22,000

*(Note that how much Byte sold the computer for to its own customers is **irrelevant** to Apple and is not a transaction related to Apple.)*

When company sell goods:

- Sales, whether made on account or for cash, require entries that reflect not only the sale, but also the cost of the inventory sold.
- The **"cost of goods sold"** is an expense. It is subtracted from the sales revenue in the Income Statement to determine the profitability of sales transactions.

Apple Story – Event #8
(2) Ledger Accounts

11 & 12) (continued): Post to Ledger Accounts

ASSETS = **LIABILITIES** + **EQUITY**

Cash

Ref	Debit	Credit	Balance
4)	6,300		6,300
5)		1,000	5,300
7)		2,000	3,300
8)	40,000		43,300

Equipment

Ref	Debit	Credit	Balance
5)	200		200

Inventory

Ref	Debit	Credit	Balance
6)	20,000		20,000
7)	2,000		22,000
8)		22,000	-

Accounts Receivable

Ref	Debit	Credit	Balance
8)	10,000		10,000

Debt

Ref	Debit	Credit	Balance
4)		5,000	5,000

Accounts Payable

Ref	Debit	Credit	Balance
6)		20,000	20,000

Share Capital

Ref	Debit	Credit	Balance
4)		1,300	1,300

Development Expense

Ref	Debit	Credit	Balance
5)	800		800

Cost of Goods Sold

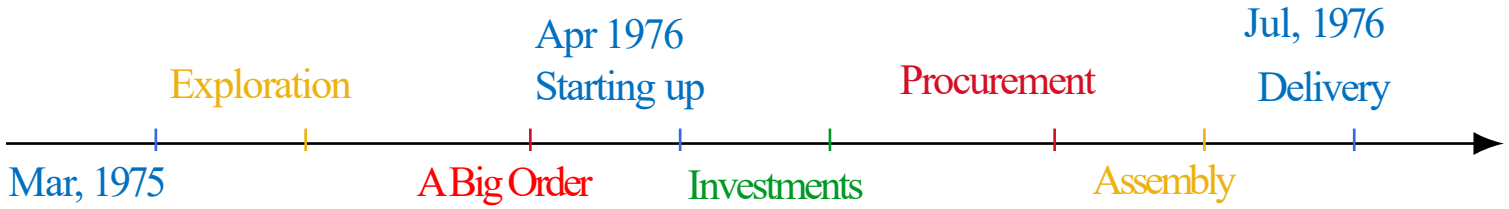
Ref	Debit	Credit	Balance
8)	22,000		22,000

Sales Revenue

Ref	Debit	Credit	Balance
8)		50,000	50,000

Apple Story – Event #9 &10

(1) Transaction Analysis



9) A week later, Byte Shop paid the remaining $10,000 in cash to Apple.
10) Apple paid back Cramer Electronics $20,000 cash.

ASSETS (A)	=	LIABILITIES (L)	+	EQUITY (E)
$53,500	=	**$25,000**	+	**$28,500**
+ $10,000 Cash - $10,000 Receivables				
- $20,000 Cash		-$20,000 Accounts Payables		
$33,500		**$5,000**		**$28,500**

Transaction Type:
> Collection of cash from receivables.
> Payment of accounts payable.

Verify that the accounting equation remains in balance!

Apple Story – Event #9 &10
(2) Journal Entries & T-Accounts

9) & 10) Journal entry (General Journal):

		Debit	Credit
9)	Cash (A)	10,000	
	Accounts Receivable (A)		10,000
10)	Accounts Payable (L)	20,000	
	Cash (A)		20,000

- The collection of receivables merely involves exchanging one asset for another. You are receiving an asset (cash) and reducing another asset (accounts receivable)). Note that there are NO revenue involved here as sales was already completed prior.
- The payment of a payable merely involves a reduction in asset and liability. You are using an asset (cash) to reduce a liability (accounts payable)).

Apple Story – Event #9 & 10
(2) Ledger Accounts

11 & 12) (continued): Post to Ledger Accounts

ASSETS = **LIABILITIES** + **EQUITY**

Cash			
Ref	**Debit**	**Credit**	**Balance**
4)	6,300		6,300
5)		1,000	5,300
7)		2,000	3,300
8)	40,000		43,300
9)	10,000		53,300
10)		20,000	33,300

Equipment			
Ref	**Debit**	**Credit**	**Balance**
5)	200		200

Inventory			
Ref	**Debit**	**Credit**	**Balance**
6)	20,000		20,000
7)	2,000		22,000
8)		22,000	-

Accounts Receivable			
Ref	**Debit**	**Credit**	**Balance**
8)	10,000		10,000
9)		10,000	-

Debt			
Ref	**Debit**	**Credit**	**Balance**
4)		5,000	5,000

Accounts Payable			
Ref	**Debit**	**Credit**	**Balance**
6)		20,000	20,000
10)	20,000		-

Share Capital			
Ref	**Debit**	**Credit**	**Balance**
4)		1,300	1,300

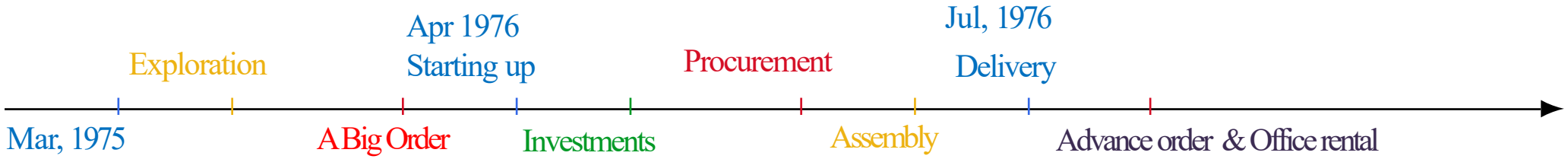
Development Expense			
Ref	**Debit**	**Credit**	**Balance**
5)	800		800

Cost of Goods Sold			
Ref	**Debit**	**Credit**	**Balance**
8)	22,000		22,000

Sales Revenue			
Ref	**Debit**	**Credit**	**Balance**
8)		50,000	50,000

Apple Story – Event #11 & 12

(1) Transaction Analysis



11) Apple plans to move out of the garage next year and paid $3,500 in advance rent for a small office to start next year.

12) Byte Shop places an advance order to Apple for more computer circuits to be delivered next year and paid $11,000 cash to Apple.

ASSETS (A)	=	LIABILITIES (L)	+	EQUITY (E)
$33,500	=	**$5,000**	+	**$28,500**
- $3,500 Cash + $3,500 Prepaid Rent				
+ $11,000 Cash		+ $11,000 Unearned Revenue		
$44,500		**$16,000**		**$28,500**

Transaction Type:
> Payment of advance rent.
> Collect cash in advance from customer.

Apple Story – Event #11 & 12
(2) Journal Entries

11) & 12) Journal entry (General Journal):

		Debit	Credit
11)	Prepaid Rent (A)	3,500	
	Cash (A)		3,500
12)	Cash (A)	11,000	
	Unearned Sales Revenue (L)		11,000

- Prepaid Expense is an **asset** because it is a resource that a company has paid for but has not enjoyed the benefits of it. (e.g. prepaid rent)
- Unearned Revenue is a **liability** because the company has received payment for goods/service yet to be delivered, so it is an obligation that needs to be fulfilled in the future.

Apple Story – Event #11 & 12
(2) Ledger Accounts

11 & 12) (continued): Post to Ledger Accounts

ASSETS = **LIABILITIES** + **EQUITY**

Cash			
Ref	**Debit**	**Credit**	**Balance**
4)	6,300		6,300
5)		1,000	5,300
7)		2,000	3,300
8)	40,000		43,300
9)	10,000		53,300
10)		20,000	33,300
11)		3,500	29,800
12)	11,000		40,800

Equipment			
Ref	**Debit**	**Credit**	**Balance**
5)	200		200

Inventory			
Ref	**Debit**	**Credit**	**Balance**
6)	20,000		20,000
7)	2,000		22,000
8)		22,000	-

Accounts Receivable			
Ref	**Debit**	**Credit**	**Balance**
8)	10,000		10,000
9)		10,000	-

Prepaid Rent			
Ref	**Debit**	**Credit**	**Balance**
11)	3,500		3,500

Debt			
Ref	**Debit**	**Credit**	**Balance**
4)		5,000	5,000

Accounts Payable			
Ref	**Debit**	**Credit**	**Balance**
6)		20,000	20,000
10)	20,000		-

Unearned Revenue			
Ref	**Debit**	**Credit**	**Balance**
12)		11,000	11,000

Share Capital			
Ref	**Debit**	**Credit**	**Balance**
4)		1,300	1,300

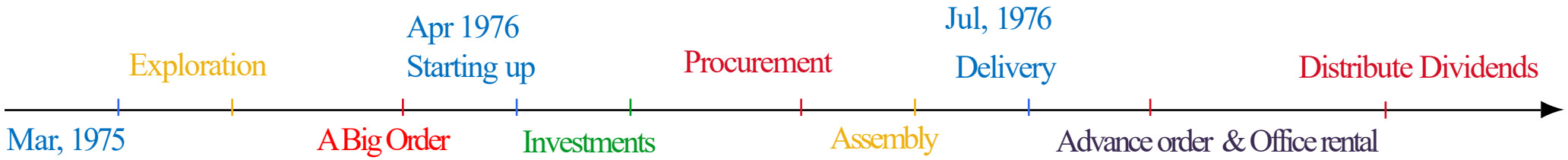
Development Expense			
Ref	**Debit**	**Credit**	**Balance**
5)	800		800

Cost of Goods Sold			
Ref	**Debit**	**Credit**	**Balance**
8)	22,000		22,000

Sales Revenue			
Ref	**Debit**	**Credit**	**Balance**
8)		50,000	50,000

Apple Story – Event #13

(1) Transaction Analysis



13) Wozniak needs to buy a new scientific calculator and Jobs a new car, so Apple the company decided to distribute $4,000 cash dividends to its owners.

ASSETS (A)	=	LIABILITIES (L)	+	EQUITY (E)
$44,500	=	**$16,000**	+	**$28,500**
- $4,000 cash				- $4,000 dividends
$40,500		**$16,000**		**$24,500**

Transaction Type: Distribution of dividends in cash.

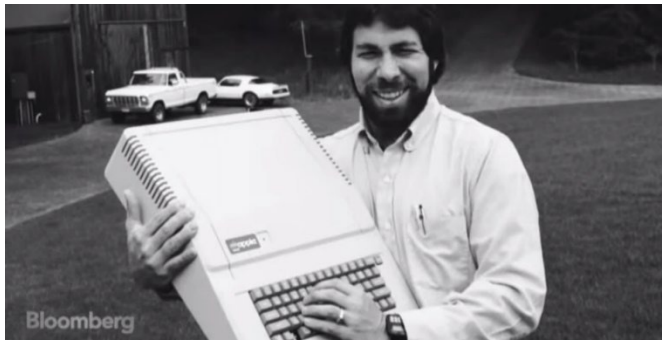
Verify that the accounting equation remains in balance!

Apple Story – Event #13
(2) Journal Entries

13) Journal entry (General Journal):

		Debit	Credit
13)	Dividends (E)	4,000	
	Cash (A)		4,000

- Dividends results in a reduction of equity (retained earnings) as its decreases the owners' claim on the assets of the company.
- Corporations that are profitable generally pay dividends to their shareholders.



Apple Story – Event #13
(2) Ledger Accounts

13) (continued): Post to Ledger Accounts

ASSETS = **LIABILITIES** + **EQUITY**

Cash			
Ref	**Debit**	**Credit**	**Balance**
4)	6,300		6,300
5)		1,000	5,300
7)		2,000	3,300
8)	40,000		43,300
9)	10,000		53,300
10)		20,000	33,300
11)		3,500	29,800
12)	11,000		40,800
13)		4,000	36,800

Equipment			
Ref	**Debit**	**Credit**	**Balance**
5)	200		200

Inventory			
Ref	**Debit**	**Credit**	**Balance**
6)	20,000		20,000
7)	2,000		22,000
8)		22,000	-

Accounts Receivable			
Ref	**Debit**	**Credit**	**Balance**
8)	10,000		10,000
9)		10,000	-

Prepaid Rent			
Ref	**Debit**	**Credit**	**Balance**
11)	3,500		3,500

Debt			
Ref	**Debit**	**Credit**	**Balance**
4)		5,000	5,000

Accounts Payable			
Ref	**Debit**	**Credit**	**Balance**
6)		20,000	20,000
10)	20,000		-

Unearned Revenue			
Ref	**Debit**	**Credit**	**Balance**
12)		11,000	11,000

Share Capital			
Ref	**Debit**	**Credit**	**Balance**
4)		1,300	1,300

Development Expense			
Ref	**Debit**	**Credit**	**Balance**
5)	800		800

Cost of Goods Sold			
Ref	**Debit**	**Credit**	**Balance**
8)	22,000		22,000

Sales Revenue			
Ref	**Debit**	**Credit**	**Balance**
8)		50,000	50,000

Dividends			
Ref	**Debit**	**Credit**	**Balance**
13)	4,000		4,000

Apple Story : Summary of Transaction Analysis using Accounting Equation

No.	ASSETS	=	LIABILITIES	+	EQUITY
(1) To (3) NO TRANSACTIONS TO BE RECORDED					
(4)	+ 500 Cash + 800 Cash + $5,000 Cash		+ $5,000 Debt		+ $500 Share capital + $800 Share capital
(5)	- $1,000 Cash + $200 Equipment				- $800 Development Expense
(6)	+ $20,000 Inventory		+ $20,000 Accounts Payable		
(7)	- $2,000 Cash + $2,000 Inventory				
(8)	+ $40,000 Cash + $10,000 Receivables - $22,000 Inventory				+ $50,000 Sales Revenue - $22,000 Cost of Goods Sold
(9)	+ $10,000 Cash - $10,000 Receivables				
(10)	- $20,000 Cash		-$20,000 Accounts Payables		
(11)	- $3,500 Cash + $3,500 Prepaid Rent				
(12)	+ $11,000 Cash		+ $11,000 Unearned Revenue		
(13)	- $4,000 Cash				- $4,000 Dividends
	$40,500 Assets	=	**$16,000 Liabilities**	+	**$24,500 Equity**

The accounting equation ALWAYS remains in balance!

Apple Story:
Summary of Journal Entries

		Debit	Credit
4)	Cash (A)	6,300	
	Share Capital (E)		1,300
	Debt (L)		5,000
5)	Equipment (A)	200	
	Development Expense (E)	800	
	Cash (A)		1,000
6)	Inventory (A)	20,000	
	Accounts Payable (L)		20,000
7)	Inventory (A)	2,000	
	Cash (A)		2,000
8a)	Cash (A)	40,000	
	Accounts Receivable (A)	10,000	
	Sales Revenue (E)		50,000
8b)	Cost of Goods Sold (E)	22,000	
	Inventory (A)		22,000
9)	Cash (A)	10,000	
	Accounts Receivable (A)		10,000
10)	Accounts Payable (L)	20,000	
	Cash (A)		20,000
11)	Prepaid Rent (A)	3,500	
	Cash (A)		3,500
12)	Cash (A)	11,000	
	Unearned Sales Revenue (L)		11,000
13)	Dividends (E)	4,000	
	Cash (A)		4,000

Total Debit $149,800 = Total Credit $149,800

Apple Story : Summary of Ledger Accounts

ASSETS = LIABILITIES + EQUITY

Cash

Ref	Debit	Credit	Balance
4)	6,300		6,300
5)		1,000	5,300
7)		2,000	3,300
8)	40,000		43,300
9)	10,000		53,300
10)		20,000	33,300
11)		3,500	29,800
12)	11,000		40,800
13)		4,000	**36,800**

Equipment

Ref	Debit	Credit	Balance
5)	200		**200**

Inventory

Ref	Debit	Credit	Balance
6)	20,000		20,000
7)	2,000		22,000
8)		22,000	-

Accounts Receivable

Ref	Debit	Credit	Balance
8)	10,000		10,000
9)		10,000	-

Prepaid Rent

Ref	Debit	Credit	Balance
11)	3,500		**3,500**

Debt

Ref	Debit	Credit	Balance
4)		5,000	**5,000**

Accounts Payable

Ref	Debit	Credit	Balance
6)		20,000	20,000
10)	20,000		-

Unearned Revenue

Ref	Debit	Credit	Balance
12)		11,000	**11,000**

Share Capital

Ref	Debit	Credit	Balance
4)		1,300	**1,300**

Development Expense

Ref	Debit	Credit	Balance
5)	800		**800**

Cost of Goods Sold

Ref	Debit	Credit	Balance
8)	22,000		**22,000**

Sales Revenue

Ref	Debit	Credit	Balance
8)		50,000	**50,000**

Dividends

Ref	Debit	Credit	Balance
13)	4,000		**4,000**

Assets $40,500 = Liabilities $16,000 + Equity $24,500

Trial Balance

A list of all accounts with their normal balances to provide a check on the equality of debits and credits. **(Debit = Credit)**

- Trial balance lists accounts in financial statement order: assets, liabilities, stockholders' equity, revenues and expenses.
- Trial Balance helps in the preparation of financial statements.
- A typical trial balance may look something like this:

Account Types	Debit	Credit
Cash	100,000	
Accounts Receivable	50,000	
Accounts Payable		20,000
Long-term Debt		45,000
Common Stock		50,000
Retained earnings		35,000
Total	**150,000**	**150,000**

Apple Story
Trial Balance

Use the ending balances from each ledger accounts to create a Trial Balance:

Cash			
Ref	**Debit**	**Credit**	**Balance**
4)	6,300		6,300
5)		1,000	5,300
7)		2,000	3,300
8)	40,000		43,300
9)	10,000		53,300
10)		20,000	33,300
11)		3,500	29,800
12)	11,000		40,800
13)		4,000	**36,800**

Unearned Revenue			
Ref	**Debit**	**Credit**	**Balance**
12)		11,000	**11,000**

Sales Revenue			
Ref	**Debit**	**Credit**	**Balance**
8)		50,000	**50,000**

Cost of Goods Sold			
Ref	**Debit**	**Credit**	**Balance**
8)	22,000		**22,000**

Accounts	**Debit**	**Credit**
Cash	36,800	
Equipment	200	
Prepaid Rent	3,500	
Long-term Debt		5,000
Unearned Sales Revenue		11,000
Share Capital		1,300
Dividends	4,000	
Sales Revenue		50,000
Development Expense	800	
Cost of Goods Sold	22,000	
Total	**67,300**	**67,300**

Trial Balance is simply a list of accounts with their ending balances.

As always,
DEBIT = CREDIT

Common Mistakes in Preparing Trial Balance

- A trial balance must balance, so what happens when it does not…. balance?

❶Make sure the trial balance columns are correctly added.

❷Make sure account balances are correctly entered from the ledger.

❸See if debit or credit accounts are mistakenly placed on the trial balance.

❹Re-compute each account balance in the ledger.

❺Verify that each journal entry is posted correctly.

❻Verify that each original journal entry has equal debits and credits.

- NOTE: A trial balance that balances does not necessarily mean that it is free of errors.

Apple Story

Financial Statements (excluding Cash Flow Statement)

Apple
Income Statement
For the period ended July 31, 1976

Sales Revenue	$ 50,000
Expenses:	
Cost of Goods Sold	22,000
Development Expense	800
Net Profit	**$ 27,200**

Apple
Statement of Changes in Equity
For the period ended July 31, 1976

	Share Capital	Retained Earnings	Total Equity
Beginning Balance	$ -	$ -	$ -
Plus: Issuance of Shares	1,300		1,300
Net Profit		27,200	27,200
Less : Dividend		4,000	4,000
Ending Balance	$ 1,300	23,200	24,500

Apple
Statement of Financial Position
As at July 31, 1976

ASSETS		**LIABILITIES**	
Current Assets		Current Liabilities	
Cash	$ 36,800	Unearned Sales Revenue	$ 11,000
Prepaid Rent	3,500	Total Current Liabilities	11,000
Total Current Assets	40,300	Non Current Liabilities	
Non Current Assets		Long-term Debt	5,000
Equipment	200	Total Liabilities	16,000
Total Assets	**$ 40,500**		
		STOCKHOLDERS' EQUITY	
		Share Capital	1,300
		Retained Earnings	23,200
		Total Equity	24,500
		Total Liabilities & Equity	**$ 40,500**

Recall:
Relationships Among the 4 FS

STEP 1:

Income Statement

NET INCOME

NI is a component to determine ending RE

STEP 2:

Statement of Changes in Equity

Beg Equity + share capital changes
+ **Net Income –** Dividends
+ OCI = Ending Equity

Ending RE = Beg RE + Net Income - Dividends

STEP 3:

Statement of Financial Position

Assets (**Cash**)
Liabilities
Shareholders' Equity (ending equity, including **RE**)

Statement of Cash Flow (SCF)

Reports changes in cash
→ **CASH (End balance)**

- ***Ending Cash Balance is reported on Statement of Financial Position's Assets.***
- ***SCF provides greater details on how cash changes***

Note: SCF will be covered in the later part of the course

Financial Statement Analysis

Concepts	Accounting Procedures	Financial Analysis
• What are "transactions"? • Accounts in the accounting system • Double-entry accounting: **DEBIT & CREDIT**	• Analyze Transactions • Journal entries • T-accounts • Trial balance	• What is FSA? • ROA • Debt Ratio

What is Financial Statement Analysis (FSA)?

- **Financial statements are not created from a void** - It is a reflection of a company's strategy and decisions and the results of implementing those decisions.
- Analyzing financial statement involves:
  - Examining relationship between the financial numbers and the trends of those numbers
  - Examining relationship between various financial statement amounts
- FSA is used for:

(1) Diagnostic purposes – helps users to evaluate and identify problems in a company

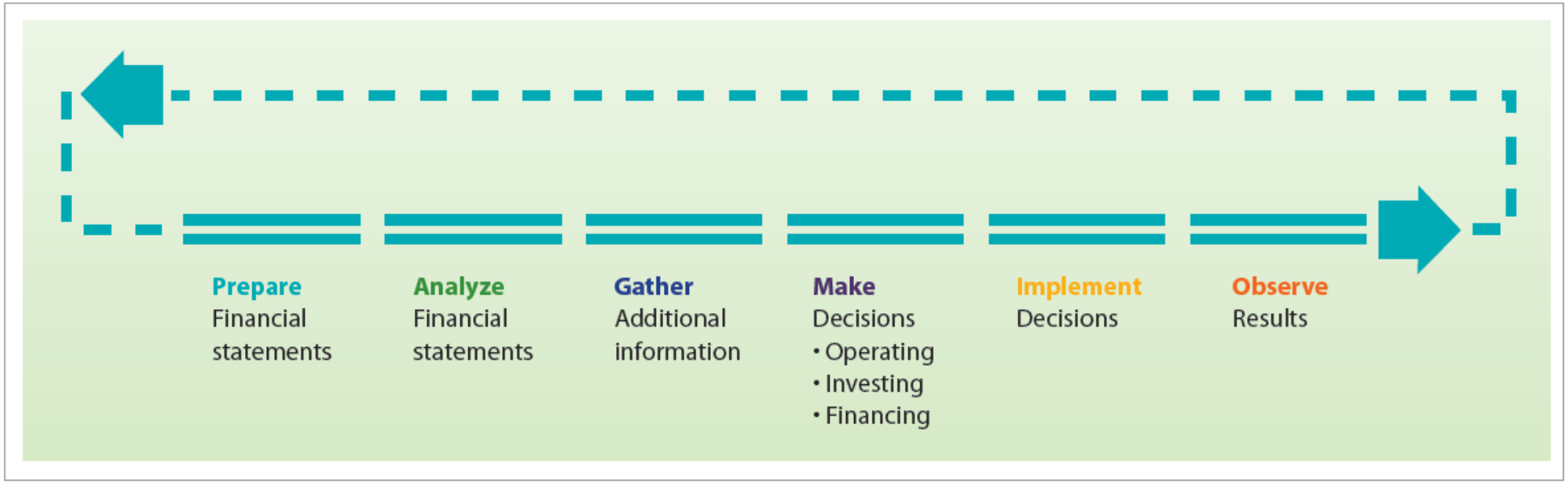
(2) Prognostic purposes – helps users to predict future performance of a company based on its past performance

Why analyze financial statements?

- Why do companies spend billions of dollars every year preparing, auditing and publishing financial statements?

→ **Because financial statements helps users make better economic decisions!**

- External users: Investors (current stockholders & potential investors), Financial analysts, Creditors, Customers
- Internal users: Management



Building Blocks of Financial Analysis Using Financial Ratios

Financial ratios are often used to aid in decision making - a company's financial performance is often analyzed along 4 main elements:

Company's ability to generate attractive & sufficient financial rewards for investors.

Company's ability to meet short term obligations and efficiently generate revenues.

Company's ability to meet long term obligations and generate future revenues.

Company's 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.

Standards for Comparison

- **Financial statements cannot be evaluated in isolation.**
- It needs to be compared to appropriate benchmarks/standards:

(1) Intracompany - Time series analysis

- Examines a single company to identify trends **over time**. Comparing to its own prior performance.
- E.g. Looking at the trend of sales growth from year to year

(2) Comparison with similar companies (competitors)

- Comparing to a competitor in the same industry can provide insights concerning a company's relative performance, because companies in the same industry are exposed to the same industry factors.

(3) Industry benchmarks

- Industry statistics can provide standards of comparisons (e.g. Dun & Bradstreet, Standard & Poor's, and Moody's)

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: Samsung 2021 - 2023

(in million KRW)	**2024**	**2023**	**2022**	**2021**
ROA	**0.0710**	**0.0343**	**0.1272**	**0.0992**
Net Profit	34,451,351	15,487,100	55,654,077	39,907,450
Current Yr Total Assets	514,531,948	455,905,980	448,424,507	426,621,158
Prior Yr Total Assets	455,905,980	448,424,507	426,621,158	378,235,718
Average Total Assets	485,218,964	452,165,244	437,522,833	402,428,438

ROA
Samsung SFP & SPL

SFP

	Notes	December 31, 2024	December 31, 2023
		KRW	KRW
Assets			
Current assets			
Cash and cash equivalents	4, 28	53,705,579	69,080,893
Short-term financial instruments	4, 28	58,909,334	22,690,924
Short-term financial assets at amortized cost	4, 28	-	608,281
Short-term financial assets at fair value through profit or loss	4, 6, 28	36,877	27,112
Trade receivables	4, 5, 7, 28	43,623,073	36,647,393
Non-trade receivables	4, 7, 28	9,622,974	6,633,248
Prepaid expenses		3,362,824	3,366,130
Inventories	8	51,754,865	51,625,874
Other current assets	4, 28	6,046,740	5,038,838
Assets held-for-sale	33	-	217,864
		227,062,266	**195,936,557**
Non-current assets			
Financial assets at fair value through other comprehensive income	4, 6, 28	10,580,932	7,481,297
Financial assets at fair value through profit or loss	4, 6, 28	1,175,749	1,431,394
Investments in associates and joint ventures	9	12,592,117	11,767,444
Property, plant and equipment	10	205,945,209	187,256,262
Intangible assets	11	23,738,566	22,741,862
Net defined benefit assets	14	3,089,571	4,905,219
Deferred income tax assets	25	14,236,468	10,211,797
Other non-current assets	4, 7, 28	16,111,070	14,174,148
		287,469,682	**259,969,423**
Total assets		**514,531,948**	**455,905,980**

SPL

	Notes	2024	2023
		KRW	KRW
Revenue	29	300,870,903	258,935,494
Cost of sales	21	186,562,268	180,388,580
Gross profit		**114,308,635**	**78,546,914**
Selling and administrative expenses	21, 22	81,582,674	71,979,938
Operating profit	29	**32,725,961**	**6,566,976**
Other non-operating income	23	1,960,338	1,180,448
Other non-operating expense	23	1,625,229	1,083,327
Share of net profit of associates and joint ventures	9	751,044	887,550
Financial income	24	16,703,304	16,100,148
Financial expense	24	12,985,684	12,645,530
Profit before income tax		**37,529,734**	**11,006,265**
Income tax expense (benefit)	25	3,078,383	(4,480,835)
Profit for the year		**34,451,351**	**15,487,100**
Profit attributable to			
Owners of the parent company		33,621,363	14,473,401
Non-controlling interests		829,988	1,013,699

ROA
Samsung vs Apple

- Financial ratios are also useful for comparison with competitors, especially if they are on different currencies.

Let's compare Samsung with a competitor Apple:

	SAMSUNG *(in millions KWR)*			Apple *(in millions USD)*		
	2024	**2023**	**2022**	**2024**	**2023**	**2022**
ROA	**0.0710**	**0.0343**	**0.1272**	**0.2613**	**0.2750**	**0.2836**
Net Profit	34,451,351	15,487,100	55,654,077	93,736	96,995	99,803
Average Total Assets	485,218,964	452,165,244	437,522,833	358,782	352,669	351,002

- Samsung's ROA is much lower than Apple for all past years.
- Apple shows a slight decline in ROA over the last 3 years, from 28% in 2022 to 26% in 2024.
- Samsung's ROA fell drastically from 12.7% in 2022 to 3.4% in 2023. Some recovery in 2024 to about 7%, but still nowhere near its 2022 level.

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: Samsung

(in million KRW)	**2024**	**2023**	**2022**	**2021**
Debt Ratio	**0.2183**	**0.2023**	**0.2089**	**0.2853**
Total Liabilities	112,339,878	92,228,115	93,674,903	121,721,227
Total Assets	514,531,948	455,905,980	448,424,507	426,621,158

ROA
Samsung SFP

SFP

	Notes	December 31, 2024	December 31, 2023
		KRW	KRW
Assets			
Current assets			
Cash and cash equivalents	4, 28	53,705,579	69,080,893
Short-term financial instruments	4, 28	58,909,334	22,690,924
Short-term financial assets at amortized cost	4, 28	-	608,281
Short-term financial assets at fair value through profit or loss	4, 6, 28	36,877	27,112
Trade receivables	4, 5, 7, 28	43,623,073	36,647,393
Non-trade receivables	4, 7, 28	9,622,974	6,633,248
Prepaid expenses		3,362,824	3,366,130
Inventories	8	51,754,865	51,625,874
Other current assets	4, 28	6,046,740	5,038,838
Assets held-for-sale	33	-	217,864
		227,062,266	**195,936,557**
Non-current assets			
Financial assets at fair value through other comprehensive income	4, 6, 28	10,580,932	7,481,297
Financial assets at fair value through profit or loss	4, 6, 28	1,175,749	1,431,394
Investments in associates and joint ventures	9	12,592,117	11,767,444
Property, plant and equipment	10	205,945,209	187,256,262
Intangible assets	11	23,738,566	22,741,862
Net defined benefit assets	14	3,089,571	4,905,219
Deferred income tax assets	25	14,236,468	10,211,797
Other non-current assets	4, 7, 28	16,111,070	14,174,148
		287,469,682	**259,969,423**
Total assets		**514,531,948**	**455,905,980**

	Notes	December 31, 2024	December 31, 2023
		KRW	KRW
Liabilities and Equity			
Current liabilities			
Trade payables	4, 28	12,370,177	11,319,824
Short-term borrowings	4, 5, 12, 28	13,172,504	7,114,601
Other payables	4, 28	18,547,365	15,324,119
Advances received	17	1,841,420	1,492,602
Withholdings	4, 28	991,812	892,441
Accrued expenses	4, 17, 28	29,613,258	26,013,273
Current income tax liabilities		4,340,171	3,358,715
Current portion of long-term liabilities	4, 12, 13, 28	2,207,290	1,308,875
Provisions	15	8,216,469	6,524,876
Other current liabilities	4, 17, 28	2,025,833	2,308,472
Liabilities held-for-sale	33	-	61,654
		93,326,299	**75,719,452**
Non-current liabilities			
Debentures	4, 13, 28	14,530	537,618
Long-term borrowings	4, 12, 28	3,935,860	3,724,850
Long-term other payables	4, 28	5,510,455	5,488,283
Net defined benefit liabilities	14	521,410	456,557
Deferred income tax liabilities	25	528,231	620,549
Long-term provisions	15	3,120,044	2,878,450
Other non-current liabilities	4, 17, 28	5,383,049	2,802,356
		19,013,579	**16,508,663**
Total liabilities		**112,339,878**	**92,228,115**

Debt Ratio
Samsung vs Apple

- Financial ratios are also useful for comparison with competitors, especially if they are on different currencies.

Let's compare Samsung with a competitor Apple:

	SAMSUNG *(in millions KWR)*			*(in millions USD)*		
	2024	**2023**	**2022**	**2024**	**2023**	**2022**
Debt Ratio	**0.2183**	**0.2023**	**0.2089**	**0.8440**	**0.8237**	**0.8564**
Liabilities	112,339,878	92,228,115	93,674,903	308,030	290,437	302,083
Assets	514,531,948	455,905,980	448,424,507	364,980	352,583	352,755

- Apple's debt ratio (about 80%) is almost 4 times higher than Samsung's (about 20%).
- Apple is more highly leveraged than Samsung, which indicates a higher level of debt risk.
- What can you infer from the above ratios with regards to the two company's leverage strategy?

Take Aways for Lecture 02

- Understanding the double-entry system
  - **DEBIT / CREDIT**
- How to analyze and record transactions
  - Journal entries (General Journal)
  - Ledger accounts (General Ledger)
  - Preparing trial balance
- Financial Analysis
  - Return on Assets (ROA)
  - Debt Ratio

What to expect for the next 2 lectures? (Chapter 4)

PART 1 (Lecture 03): Adjusting Accounts

- Accrual vs. Cash Basis Accounting
- Adjustments : purpose and mechanics
  - Prepaid Expenses & Accrued Expenses
  - Unearned Revenues & Accrued Revenues

PART 2 (Lecture 04): FS Prep & Closing the Books

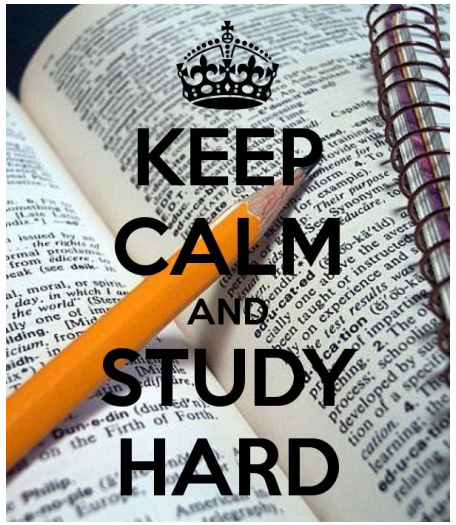
- Adjusted Trial Balance
- Preparing Financial Statements (SFP, SPL & SCE)
- Closing the Books
- FSA: Net Profit Margin

TUTORIAL 1

- **SBS Transit Tutorial 1 Questions**

That's all folks!

Another lecture with lots of materials covered!



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

it will help you to understand the concepts better.

Post any questions/discussion in the Canvas Discussion Forum for Lecture 02.

For consultations: hanny.kusnadi@nus.edu.sg

See you next week!