



**NUS**  
National University  
of Singapore

**NUS**  
BUSINESS  
SCHOOL

# ACCOUNTING

The language of the business world

## ACC 1701X: Accounting for Decision Makers Lecture 11

Lecturer: Dr. Hanny Kusnadi

# Prior Lecture 10 Refresher

- Types of Shares and related transactions
  - Ordinary Shares
    - Issuing par: common stock @ par, amount above par goes into paid in capital in excess (premium)
    - Issuing no par: common stock account only
  - Preferred Shares – issuing par & no par
  - Treasury Shares
    - Repurchasing is recorded at cost
    - Reissuing: if higher than cost then premium account is used, if lower than cost then RE account is used if there is no balance in the premium account.
- Dividends – cash & stock dividends (small stock dividend @ fair value, large stock dividend at par value)
- FSA:
  - EPS ( Earnings per share)
  - PE (Price Earnings) Ratio
  - Dividend Payout Ratio





Chapter 14

# Statement of Cash Flows

# Goals for Lecture 11

## Statement of Cash Flows

- Importance of Cash Flow
- Statement of Cash Flows (SCF) (LO1 & 2)
- Preparing Statement of Cash Flows
  - Cash Flow from Operations (CFO) - Indirect Method (LO7)
  - Cash Flow from Investing (CFI) (LO5)
  - Cash Flow from Financing (CFF) (LO5)
- Using SCF for Decision Making (LO6)

*Note: Direct Method of CFO (LO7) will NOT be covered in the module, and is not examinable.*



# Importance of Cash



## CASH IS KING!

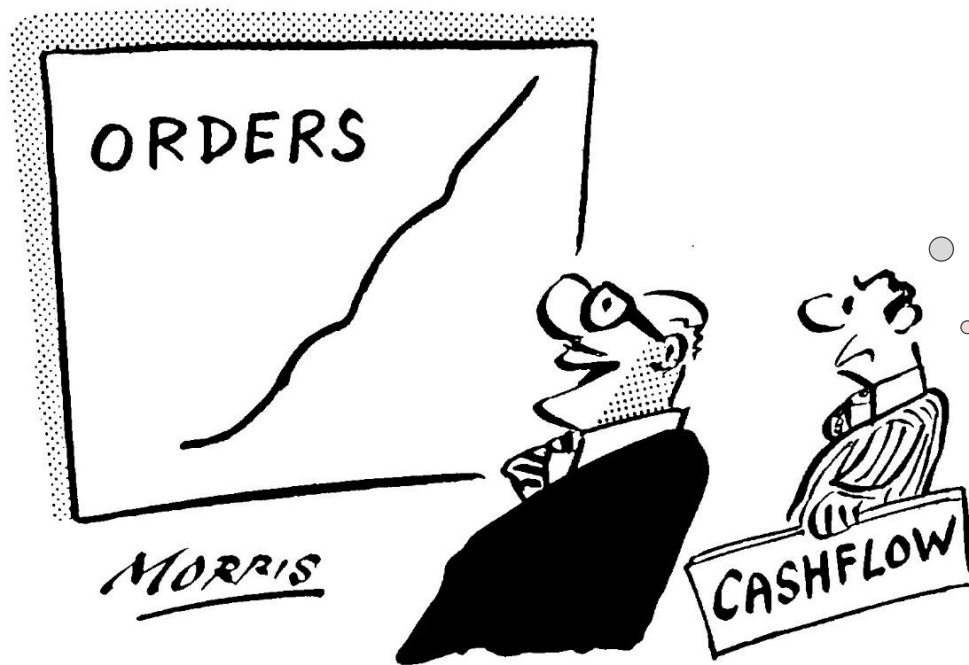
Cash Flow is a company's ongoing ability to generate and use cash.

- **POSITIVE** Cash Flow is critical to a company's success!
  - Drives daily operations and increases purchasing power
  - Allows for expansion and new investment opportunities
  - Provides greater protection against creditors
  - Gives greater flexibility to respond to critical situations
  - Lets you pay dividends to owners

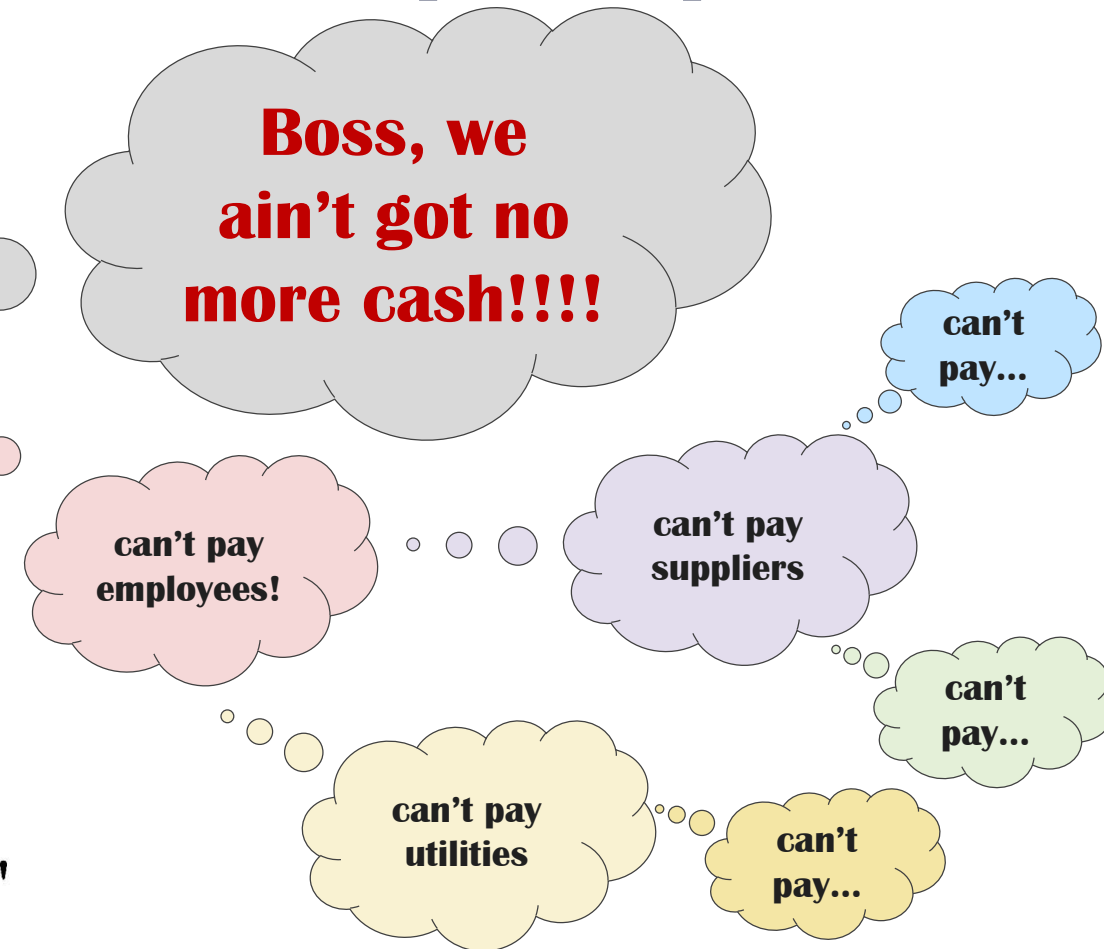


# Importance of Cash Flow

- Without sufficient cash to fund its daily operations, even companies with high net income can go into financial trouble and end up bankrupt!



"Well you can't upset me.  
Timpson - what's the bad news you've got?"



# Collapse of Hyflux

HYFLUX LTD  
ANNUAL REPORT 2017 53

## Independent Auditors' Report

Members of the Company  
Hyflux Ltd

### REPORT ON THE AUDIT OF THE FINANCIAL STATEMENTS

#### Opinion

We have audited the accompanying financial statements of Hyflux Ltd (the "Company") and its subsidiaries (the "Group"), which comprise the consolidated statements of financial position of the Group and the Company as at 31 December 2017, and the consolidated income statement, consolidated statement of comprehensive income, statement of changes in equity and statement of cash flows of the Group for the year then ended, and notes to the financial statements, including a summary of significant accounting policies and other explanatory information, as set out on pages 59 to 143.

In our opinion, the accompanying consolidated financial statements of the Group and the Company are properly drawn up in accordance with the provisions of the Companies Act, Chapter 50 (the "Act") and Financial Reporting Standards in Singapore ("FRSs") so as to give a true and fair view of the consolidated financial position of the Group and the Company as at 31 December 2017 and of the consolidated financial performance, consolidated changes in equity and consolidated cash flows of the Group for the year ended on that date.


**KPMG LLP**  
Public Accountants and  
Chartered Accountants

**A "clean" audit opinion**

Singapore  
22 March 2018

Source: Hyflux Annual Report 2017

## Hyflux seeks court protection for debt reorganisation



**Financial distress**

Ms Olivia Lum, founder and group CEO of Hyflux at its Tuaspring Desalination Plant on Sept 10, 2013. PHOTO: ST FILE

UPDATED MAY 22, 2018, 10:40 PM

## Hyflux placed under judicial management

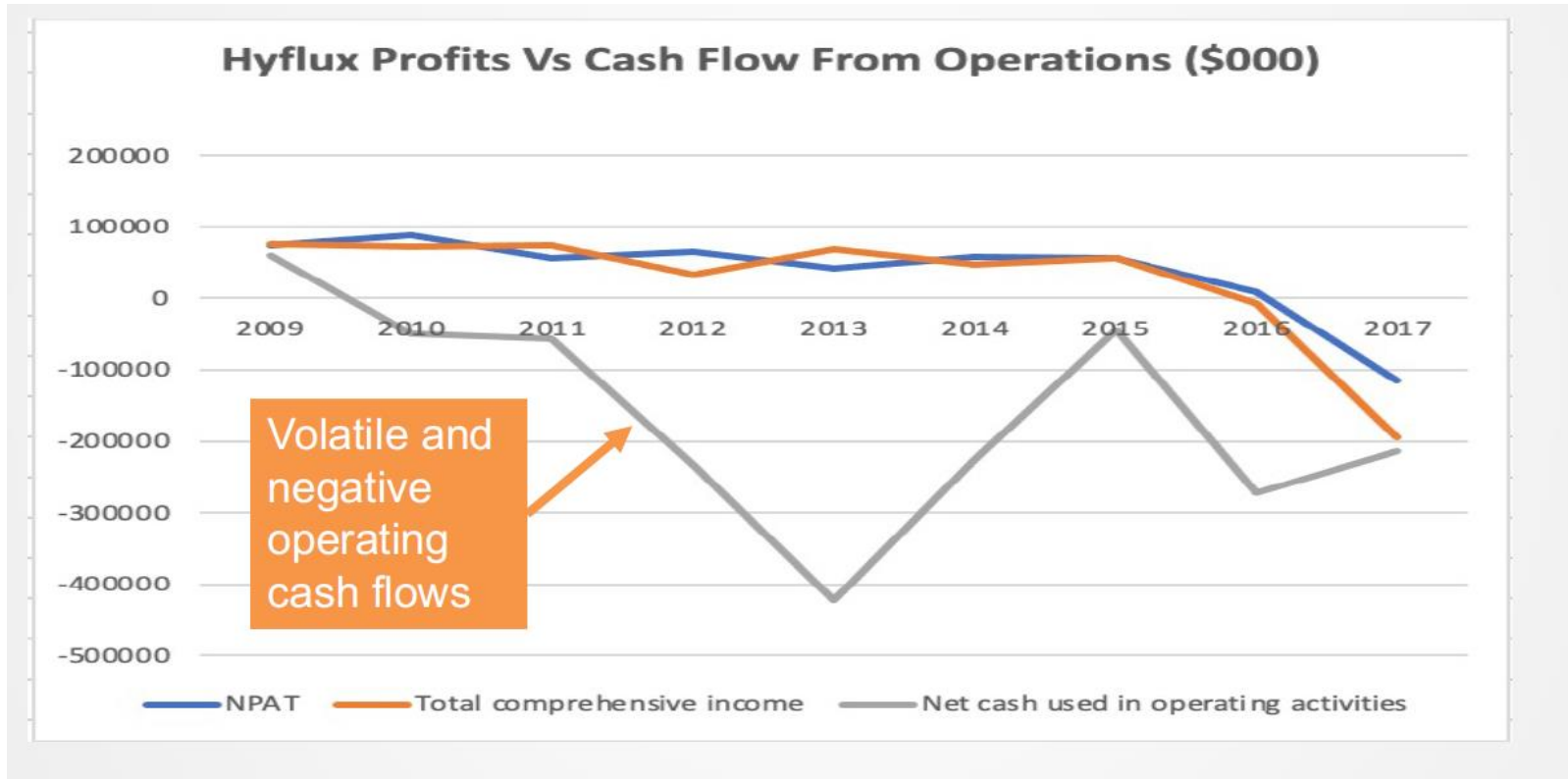
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**Collapse**

Sources: Business Times

# Collapse of Hyflux

## Net Profit vs. Operating Cash Flows



Sources: Hyflux Annual Reports 2009-2017



Hyflux has at least 7 non-binding offers  
as cash runs out

PUBLISHED MAR 5, 2021, 5:00 AM SGT



# Statement of Cash Flows (SCF)

- Explains how cash (reported on the Statement of Financial Position) changes from the beginning of the period to the end of the period.
  - Where did the cash come from?
  - Where did the cash go?
  - What explains the change in cash balance?
- CASH includes:
  - Currency
  - Cash equivalents – short-term highly liquid investments that are readily converted into cash, usually with extremely short maturity dates (less than 3 months) such that there's little to no risk of value changing due to interest rates changes.

***“Number one, Cash is King.... Number two, communicate... Number three, buy or bury the competition” Jack Welch (GE CEO)***



# Real FS

## Alphabet's (Google) Cash is No Joke!

### Alphabet Inc. CONSOLIDATED BALANCE SHEETS

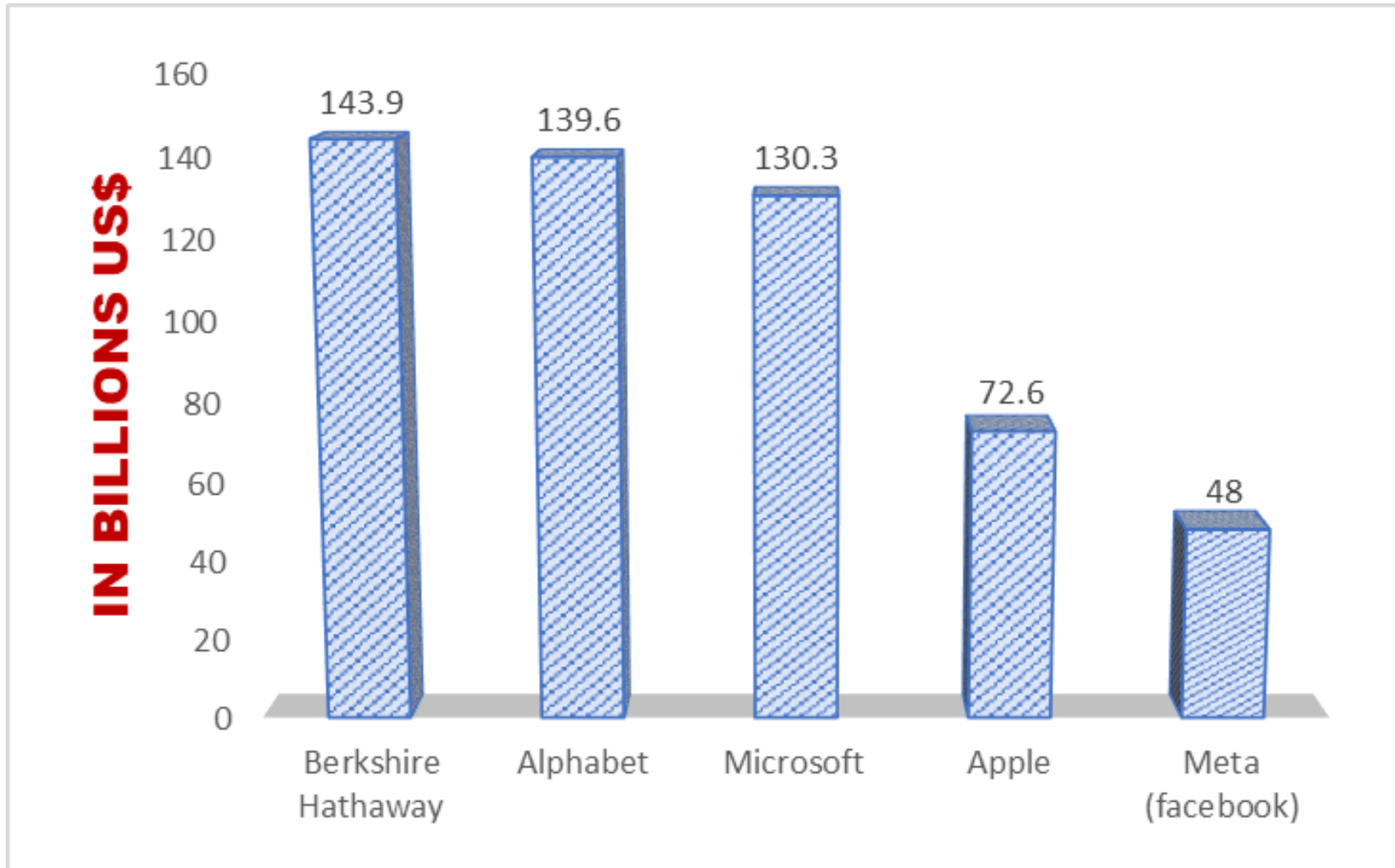
(In millions, except share amounts which are reflected in thousands, and par value per share amounts)

	As of December 31,	
	2020	2021
<b>Assets</b>		
Current assets:		
Cash and cash equivalents	\$ 26,465	\$ 20,945
Marketable securities	110,229	118,704
Total cash, cash equivalents, and marketable securities	136,694	139,649
Accounts receivable, net	30,930	39,304
Income taxes receivable, net	454	966
Inventory	728	1,170
Other current assets	5,490	7,054
Total current assets	174,296	188,143
Non-marketable securities	20,703	29,549
Deferred income taxes	1,084	1,284
Property and equipment, net	84,749	97,599
Operating lease assets	12,211	12,959
Intangible assets, net	1,445	1,417
Goodwill	21,175	22,956
Other non-current assets	3,953	5,361
Total assets	\$ 319,616	\$ 359,268



# So much Cash!

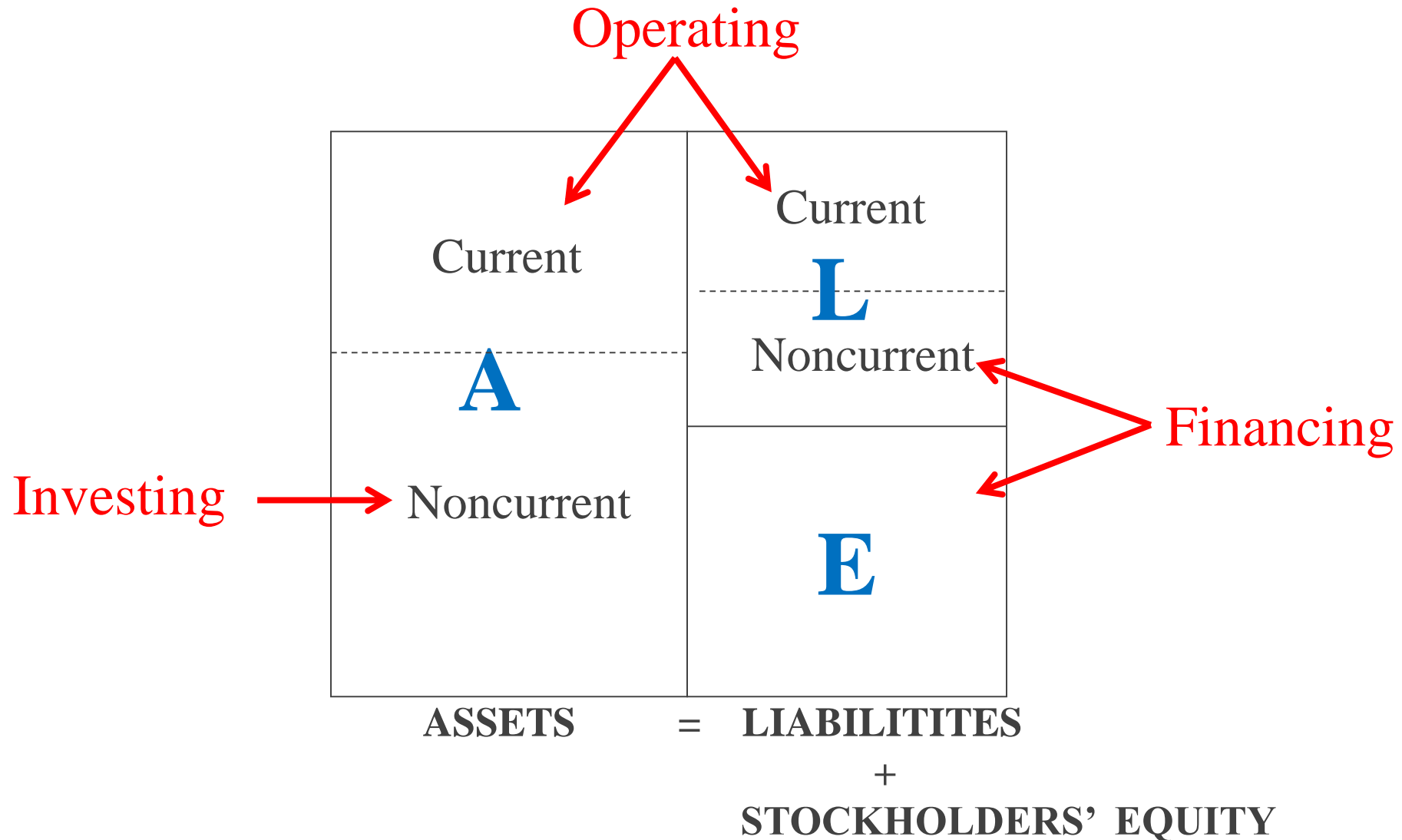
## Companies with HUGE stockpile of cash\*



*\* As at FY 2021 year end. Cash and cash equivalents (including short-term US Treasury bills and marketable securities)*

# Remember this slide?

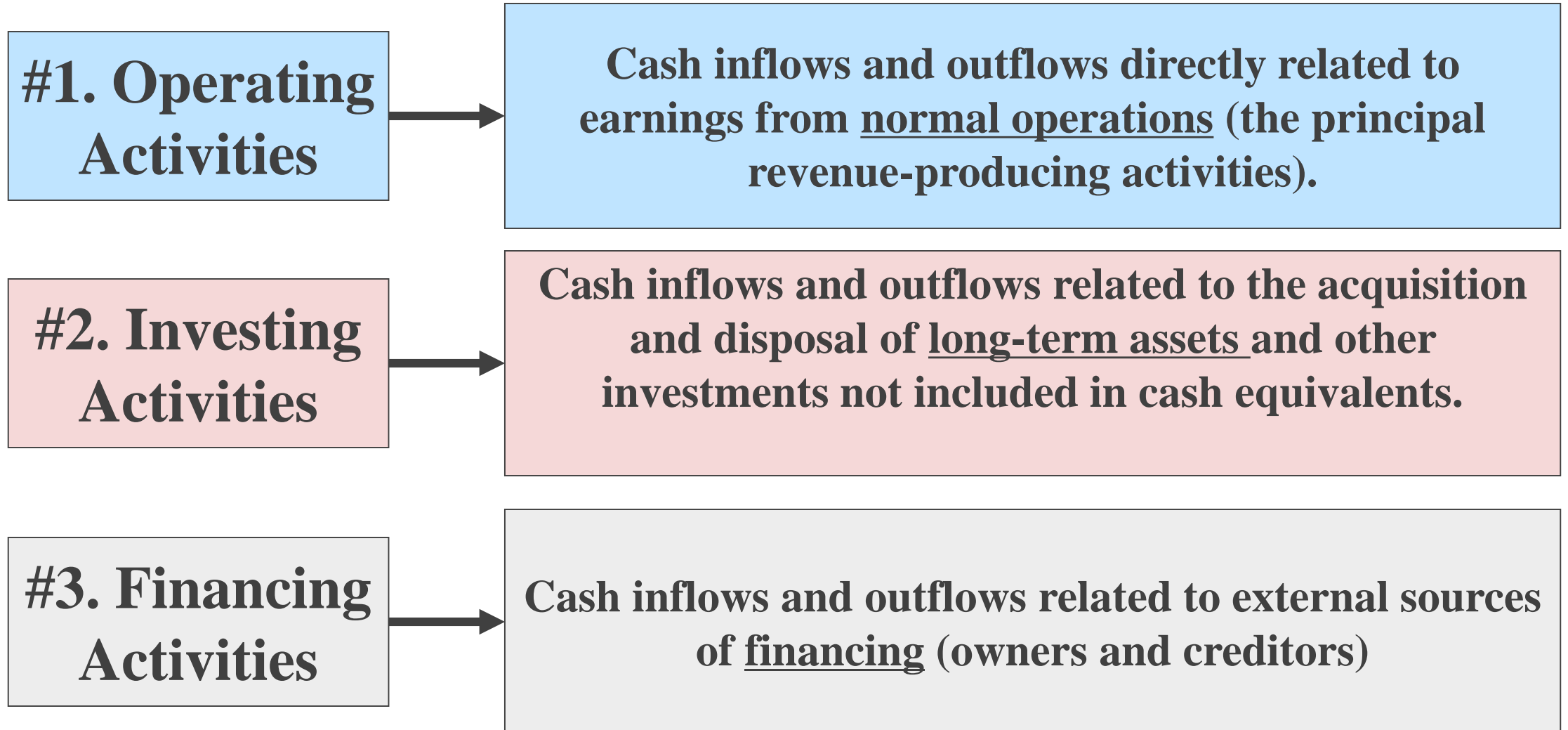
## Balance Sheet and 3 Major Activities





# Statement of Cash Flows

## Classification



# #1. Cash Flows from Operating Activities (CFO)

- Cash inflows and cash outflows directly related to earnings from normal business operations (i.e. main business operations). Transactions and events that typically determine Net Income.

## Inflows

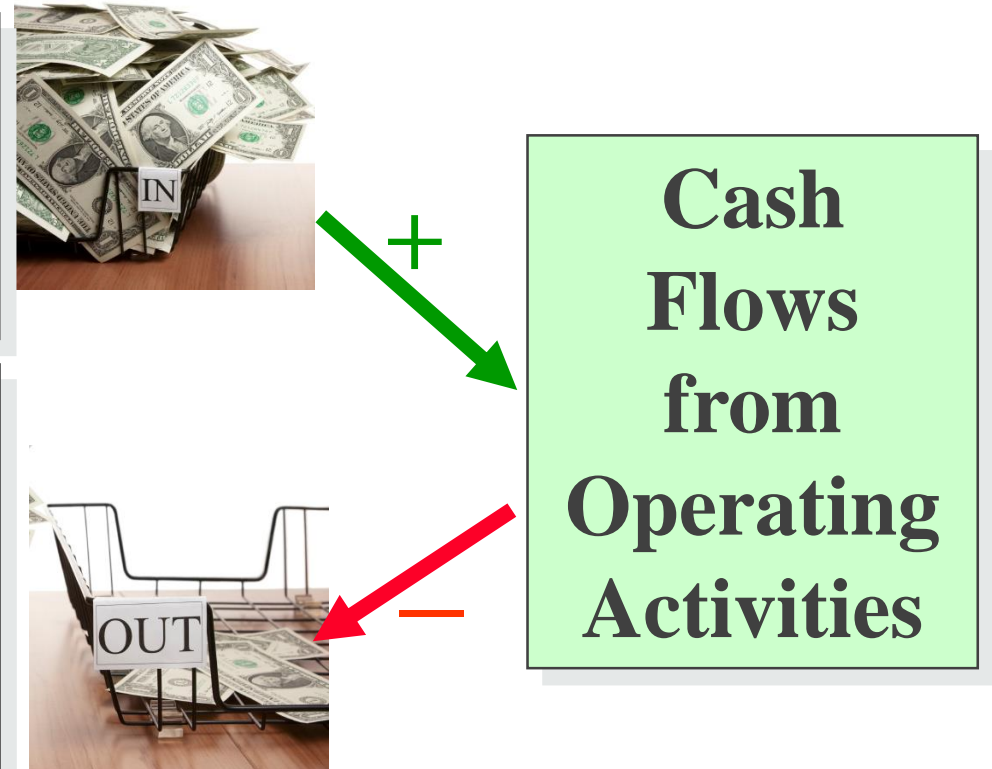
### Cash received from:

- Customers (from sale of goods or services)
- Royalties, fees, commission, other revenue

## Outflows

### Cash paid for:

- Purchase of goods and services from suppliers
- Salaries and wages
- Income taxes
- Other operating expenses (e.g. rent, utilities)



## #2. Cash Flows from Investing Activities (CFI)

- Cash inflows and cash outflows related to acquisitions & disposals of long-term assets and investments.

### Inflows

#### Cash received from:

- Sale/disposal of PPE & other LT assets
- Sale or maturity of investments in securities
- Repayment of loans made to other parties



+

**Cash  
Flows  
from  
Investing  
Activities**

### Outflows

#### Cash paid for:

- Purchase of PPE and other long-term assets.
- Purchase of investments in securities
- Loans made to other parties



-

# #3. Cash Flows from Financing Activities (CFF)

- Cash inflows and cash outflows related to external sources of financing (creditors & stockholders)

## Inflows

### Cash received from:

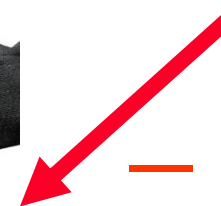
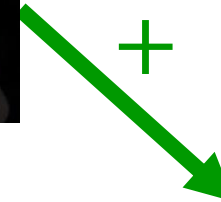
- Borrowings on loans, notes, bonds, etc.
- Issuing shares to owners



## Outflows

### Cash paid for:

- Repayment of principal to creditors
- Repurchasing shares from shareholders
- Dividends to owners



**Cash  
Flows  
from  
Financing  
Activities**



# Statement of Cash Flows

## Classification of Interest & Dividends

- IFRS allow reporting entities a choice in where they want to classify interest & dividends in their SCF (as long as it is consistent):

	Operating	Investing	Financing
Interest received	Yes	Yes	
Dividends received	Yes	Yes	
Interest paid	Yes		Yes
Dividends paid	Yes		Yes

Unless otherwise stated, in this module we will assume that all interest and dividends are treated as operating cash flows, except for **dividends paid** which is part of financing cash flow!

# NON-Cash Investing & Financing

- Some transactions involve investing and financing activities but NO CASH → will not appear in the SCF.
- E.g. – acquisition of long term asset by issuing equity shares
- Such transactions needs to be disclosed in the notes of the FS!

## **Items requiring separate disclosure include:**

- **Retirement of debt by issuing equity securities.**
- **Conversion of preference shares to ordinary shares.**



# Sample Format of SCF

COMPANY NAME		
Statement of Cash Flows		
For <i>period</i> Ended <i>date</i>		
<b>Cash flows from operating activities</b>		
[List of individual inflows and outflows]		
Net cash provided (used) by operating activities . . . . .	\$	#
<b>Cash flows from investing activities</b>		
[List of individual inflows and outflows]		
Net cash provided (used) by investing activities . . . . .		#
<b>Cash flows from financing activities</b>		
[List of individual inflows and outflows]		
Net cash provided (used) by financing activities . . . . .		#
<b>Net increase (decrease) in cash . . . . .</b>	<b>\$</b>	<b>#</b>
<b>Cash (and equivalents) balance at prior period-end . . . . .</b>		<b>#</b>
<b>Cash (and equivalents) balance at current period-end . . . . .</b>	<b>\$</b>	<b>#</b>
Separate schedule or note disclosure of any “noncash investing and financing transactions” is required.		

# SCF Relationships to the BS and IS

- We have learnt how to prepare Balance Sheet and Income Statement in previous chapters – using journal entries & T-accounts.
- BUT, Statement of Cash Flows cannot be prepared using T-accounts, because those are based on accrual accounting!
- Therefore, we must analyze the numbers from BS and IS (under accrual method) and **adjust** them to cash basis!



## Information needed to prepare SCF:

- **Comparative Balance Sheets/Statements of Financial Positions.**
- **Current Income Statement.**
- **Additional details concerning selected accounts.**



# #1. Cash Flows from Operations(CFO)

## Indirect Vs. Direct Method

- There are **TWO** acceptable formats for presenting the CFO:

### (1) Indirect Method

- Profit/loss adjusted for effects of non-cash transactions, any deferrals or accruals of past or future operating cash receipts or payments, and items of income/expense associated with investing or financing cash flows.
- Starts with accrual profit before tax and converts to cash basis
- The method *most commonly used!*

### Indirect Format:

$$\begin{array}{rcl} & \text{Net Income} & \\ +/- & \text{Adjustments} & \\ = & \text{Operating cash flows} & \end{array}$$

**Our Focus!**

### (2) Direct Method

- Reports components of cash flows from operating activities as gross receipts and gross payments.
- Preferred method for financial reporting but *RARELY USED!*

### Direct Format:

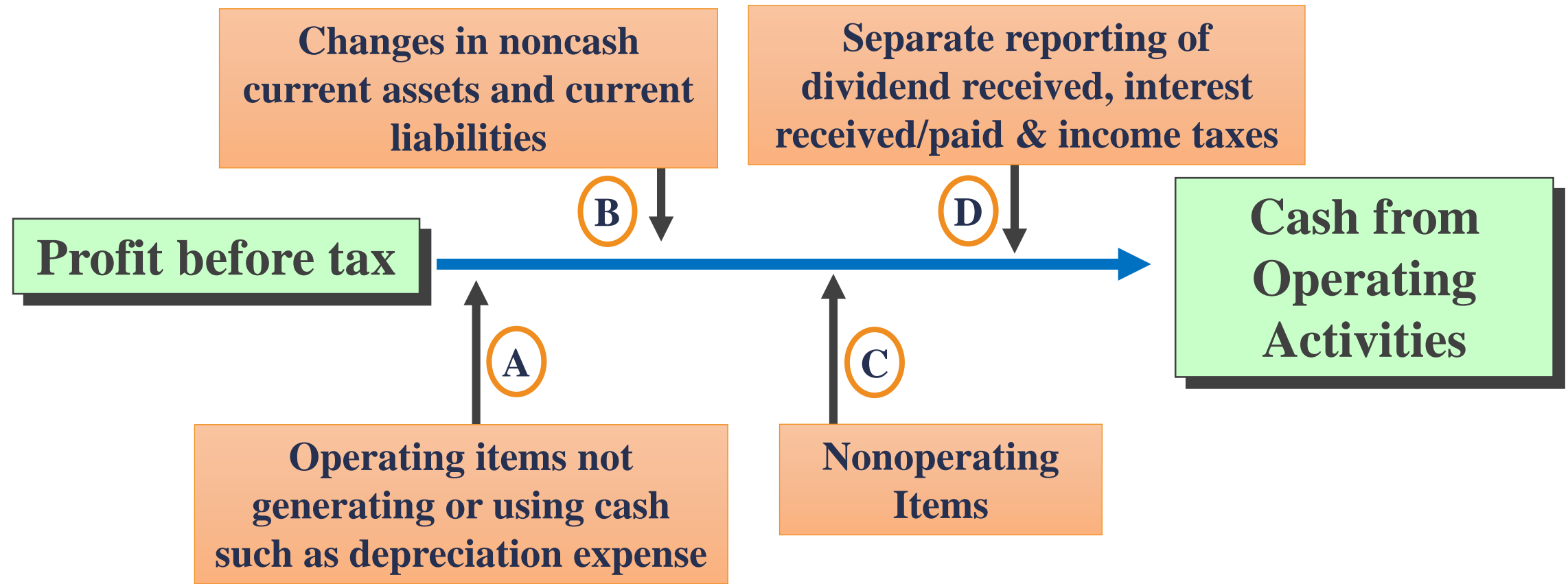
$$\begin{array}{rcl} & \text{Cash Sales} & \\ - & \text{Cash Expenses} & \\ = & \text{Operating cash flows} & \end{array}$$

**NOTE** that no matter which format is used, the same amount of net cash flows from operating activities is generated.

# #1. CFO

## The Indirect Method

- The indirect method starts with *Profit Before Tax* and converts it to cash flows from operating activities.



*Refer to the APPENDIX (at the end of lecture slides) to learn more about the logic behind the SCF Algebraic Formulation*

# CFO – Indirect Method

## Intuition behind the approach

	Profit Before Tax (PBT)	<i>Our starting point</i>
<b>A</b>	+ Depreciation & Amortization	<i>No cash involved in these expenses. Therefore we <u>add</u> it back to PBT.</i>
<b>B</b>	- Increase in Noncash Current Assets / + Decrease in Noncash Current Assets	<i>Increase in non-cash assets represent revenues which we did not get cash (e.g. Accounts Receivable). OR the use of cash that still have not been expensed (e.g. Inventory). Therefore, we <u>subtract</u> it from PBT. For decrease, we <u>add</u> it back to PBT.</i>
<b>B</b>	+ Increase in Current Liabilities/ - Decrease in Current Liabilities	<i>Increase in current liabilities represent expenses that did not use cash, so we <u>add</u> it back to PBT. For decrease, we <u>subtract</u> from PBT.</i>
<b>C</b>	- Gain / + Loss on disposal of long-term assets	<i>Because gain &amp; loss from sale of assets are reported under the Investing section, we have to adjust them to avoid double counting. Therefore Gain is <u>subtracted</u>, and Loss is <u>added</u> back into PBT.</i>
<b>D</b>	- Income Taxes paid + Interest expense - interest income - Dividend income	<i>IFRS requires cash for taxes paid on income to be separately disclosed. Taxes paid is a cash outflow so it is <u>subtracted</u> from PBT. Interest paid/received and dividends received needs to also be reported separately.</i>
	<b>= Cash Flow from Operations (CFO)</b>	

# CFO – Indirect Method

## Noncash Current Assets & Current Liabilities Adjustments

Use this summary table when  
Adjusting Profit to CFO:

	Change in Account Balance During Year	
	Increase	Decrease
Noncash Current Assets	<b>Subtract from profit</b>	<b>Add to profit</b>
Current Liabilities	<b>Add to profit</b>	<b>Subtract from profit</b>

- If a current asset account has increased, the increase would be subtracted from NI. (e.g. End bal \$50k – Beg bal \$30k = \$20k to be subtracted from NI)
- If current asset account has decreased however, the decrease would be added to NI. (e.g. End bal \$20k – Beg bal \$30k = - \$10k. Subtracting a negative amount will result in an addition to NI)
- For liabilities, increases are added to and decreases are subtracted from NI



# IN CLASS ACTIVITY : WildLuwak Coffee

## Preparing the Statement of Cash Flows (Indirect Method)

Prepare the **Statement of Cash Flows** for WildLuwak Coffee Company for the year 2020 using the *Indirect Method* for CFO.

▪ Use the following to help in the preparation of the SCF:

(1) 2019 & 2020 Statement of Financial Position (SFP)

(2) 2020 Income Statement (IS)

(3) Additional Information:

- a) The company purchased \$10,000 new PPE in cash.
- b) The company disposed of \$30,000 worth of PPE with accumulated depreciation of \$26,491 and received \$1,009 in cash.
- c) The company repurchased shares for \$305 in cash, and also issued ordinary shares to employees for \$950 in cash.
- d) The company paid dividends in cash of \$8,000 for the year 2020.



# IN CLASS ACTIVITY : WildLuwak Coffee

## 2019 and 2020 SFP & 2020 IS

WildLuwak Coffee Company Statement of Financial Position As at Dec 31, 2019 & 2020		
	2020	2019
<b>ASSETS</b>		
<b>Current assets:</b>		
Cash & cash equivalents	\$ 84,140	\$ 54,497
Accounts Receivable	53,735	49,186
Inventories	39,612	38,754
Prepaid expenses	5,552	12,009
<b>Total current assets</b>	<b>183,039</b>	<b>154,446</b>
PPE	80,000	100,000
Less Accumulated Depreciation	(619)	(18,219)
<b>Total assets</b>	<b>\$ 262,420</b>	<b>\$ 236,227</b>
<b>LIABILITIES &amp; STOCKHOLDERS' EQUITY</b>		
<b>Current liabilities:</b>		
Accounts payable	\$ 48,005	\$ 49,803
Income tax payable	15,000	12,000
Accrued expenses	29,403	29,799
<b>Total current liabilities</b>	<b>92,408</b>	<b>91,602</b>
<b>Shareholders' Equity:</b>		
Share Capital	9,803	9,158
Retained earnings	160,209	135,467
<b>Total shareholders' equity</b>	<b>170,012</b>	<b>144,625</b>
<b>Total liabilities &amp; shareholders' equity</b>	<b>\$ 262,420</b>	<b>\$ 236,227</b>

WildLuwak Coffee Company Income Statements For the Year Ended Dec 31, 2020	
	2020
<b>Net sales</b>	<b>\$ 585,677</b>
<b>Cost of sales</b>	<b>405,322</b>
<b>Gross profit</b>	<b>180,355</b>
<b>Operating expenses:</b>	
Selling, general and administrative	123,027
Depreciation expense	8,891
<b>Total operating expenses</b>	<b>131,918</b>
<b>Operating income</b>	<b>48,437</b>
Other Loss (on disposal of assets)	2,500
Interest income	860
<b>Profit before tax</b>	<b>46,797</b>
Income taxes	14,055
<b>Net income</b>	<b>32,742</b>

**WildLuwak Coffee**

# IN CLASS ACTIVITY : WildLuwak Coffee

## Preparing the CFO Section

### Steps in preparing the SCF – CFO Section:

#### Step 1:

**Use the comparative SFP to calculate the accounts changes for each items in the SFP.**

#### Step 2:

**Take the Profit Before Tax from the IS to begin the SCF.**

#### Step 3:

**Prepare the CFO section.**

**WildLuwak Coffee**

# IN CLASS ACTIVITY : WildLuwak Coffee

We will be going through in detail  
how to create the  
**Statement of Cash Flows – CFO Section**  
for the WildLuwak Coffee together  
in the lecture using Excel.

**WildLuwak Coffee**

# IN CLASS ACTIVITY : WildLuwak Coffee

## CFO Answer Solution – Step 1

WildLuwak Coffee Company Statement of Financial Position As at Dec 31, 2019 & 2020				STEP 1 : Determine account changes	
	2020	2019		Account Changes	SCF Section
<b>ASSETS</b>					
<b>Current assets:</b>					
Cash & cash equivalents	\$ 84,140	\$ 54,497		29,643	
Accounts Receivable	53,735	49,186		4,549	CFO
Inventories	39,612	38,754		858	CFO
Prepaid expenses	5,552	12,009		-6,457	CFO
<b>Total current assets</b>	<b>183,039</b>	<b>154,446</b>			
PPE	80,000	100,000		-20,000	CFI
Less Accumulated Depreciation	(619)	(18,219)		17,600	CFI
<b>Total assets</b>	<b>\$ 262,420</b>	<b>\$ 236,227</b>			
<b>LIABILITIES &amp; STOCKHOLDERS' EQUITY</b>					
<b>Current liabilities:</b>					
Accounts payable	\$ 48,005	\$ 49,803		-1,798	CFO
Income tax payable	15,000	12,000		3,000	CFO
Accrued expenses	29,403	29,799		-396	CFO
<b>Total current liabilities</b>	<b>92,408</b>	<b>91,602</b>			
<b>Shareholders' Equity:</b>					
Share Capital	9,803	9,158		645	CFF
Retained earnings	160,209	135,467		24,742	
<b>Total shareholders' equity</b>	<b>170,012</b>	<b>144,625</b>			
<b>Total liabilities &amp; shareholders' equity</b>	<b>\$ 262,420</b>	<b>\$ 236,227</b>			

*Step 1:* Use the comparative SFP to calculate the accounts changes for each items in the SFP.

- Indicate which ones are going to CFO, CFI and CFF of the SCF.

**WildLuwak Coffee**

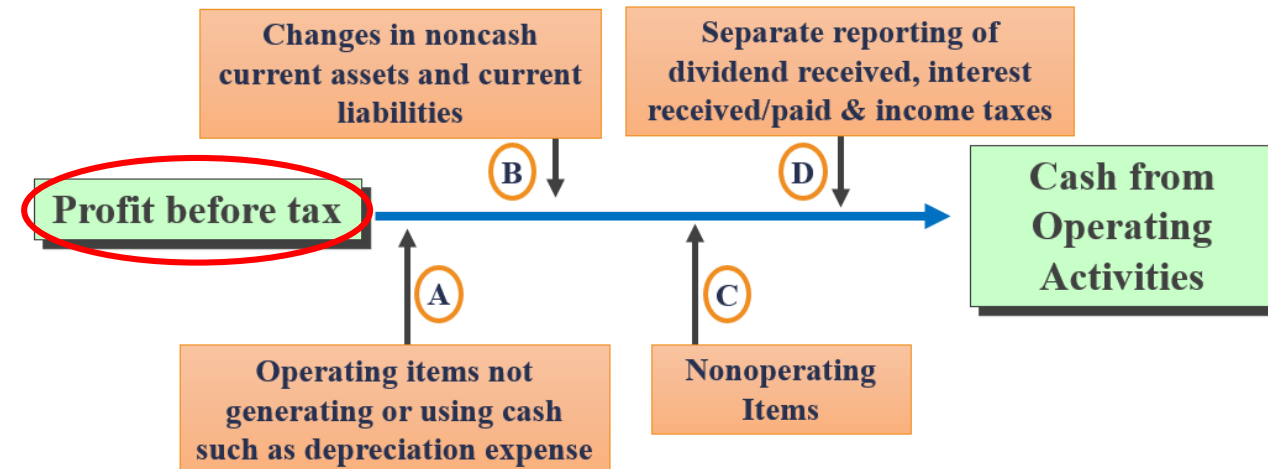


# IN CLASS ACTIVITY : WildLuwak Coffee

## CFO Answer Solution – Step 2

WildLuwak Coffee Company Income Statements For the Year Ended Dec 31, 2020		2020
Net sales	\$	585,677
Cost of sales		405,322
Gross profit		180,355
Operating expenses:		
Selling, general and administrative		123,027
Depreciation expense		8,891
Total operating expenses		131,918
Operating income		48,437
Other Loss (on disposal of assets)		2,500
Interest income		860
Profit before tax		46,797
Income taxes		14,055
Net income		32,742

*Step 2:* Take the Profit Before Tax from the IS to begin the SCF.



**WildLuwak Coffee**

# IN CLASS ACTIVITY : WildLuwak Coffee

## CFO Answer Solution – Step 3

### WildLuwak Coffee Company Statement of Cash Flows For the Year Ended Dec 31, 2020

#### Cash Flows from Operating Activities:

Profit before taxes

46,797

Adjustments to reconcile profit to net cash from operating activities:

Depreciation Expense

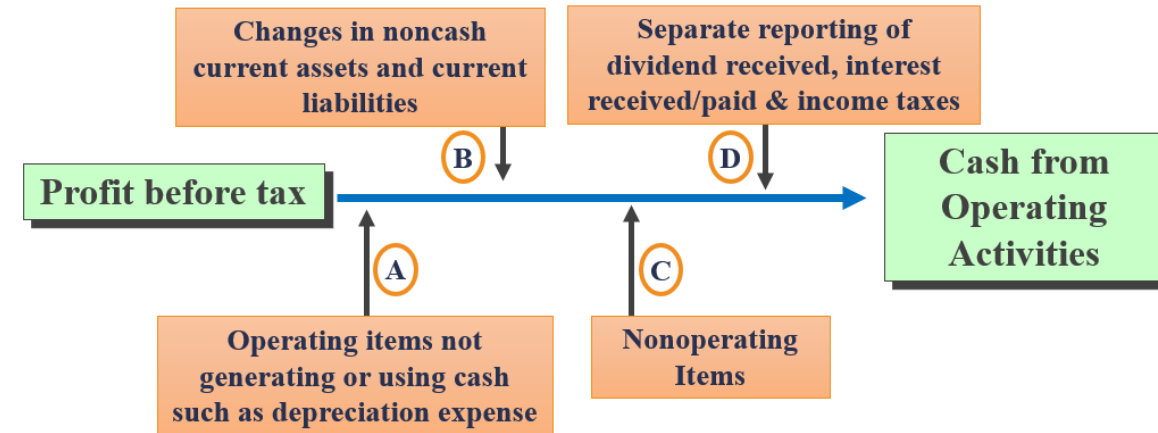
8,891

### WildLuwak Coffee Company Income Statements For the Year Ended Dec 31, 2020

2020

Net sales	\$ 585,677
Cost of sales	405,322
Gross profit	180,355
Operating expenses:	
Selling, general and administrative	123,027
Depreciation expense	8,891
Total operating expenses	131,918
Operating income	48,437
Other Loss (on disposal of assets)	2,500
Interest income	860
Profit before tax	46,797
Income taxes	14,055
Net income	32,742

### Step 3: Prepare the CFO section.



**A** Adjust for depreciation.

**WildLuwak Coffee**

# IN CLASS ACTIVITY : WildLuwak Coffee

## CFO Answer Solution – Step 3 (continued)

### WildLuwak Coffee Company Statement of Cash Flows For the Year Ended Dec 31, 2020

#### Cash Flows from Operating Activities:

Profit before taxes	46,797
Adjustments to reconcile profit to net cash from operating activities:	
Depreciation Expense	8,891
Changes in non cash current assets & liabilities:	
Accounts Receivable	(4,549)
Inventories	(858)
Prepaid expenses	6,457
Accounts payable	(1,798)
Accrued expenses	(396)

**SCF:**

Current assets:						
Cash & cash equivalents	\$	84,140	\$	54,497	29,643	
Accounts Receivable		53,735		49,186	4,549	CFO
Inventories		39,612		38,754	858	CFO
Prepaid expenses		5,552		12,009	-6,457	CFO
Total current assets		183,039		154,446		
Current liabilities:						
Accounts payable	\$	48,005	\$	49,803	(1,798)	CFO
Income tax payable		15,000		12,000	3,000	CFO
Accrued expenses		29,403		29,799	(396)	CFO
Total current liabilities		92,408		91,602		

*Step 3:* Prepare the CFO section.

- B** Adjust for changes in noncash current assets and current liabilities
- Use the **worksheet from Step 1** for the changes in accounts
  - Remember to use the summary table to help you remember how to adjust.

	Change in Account Balance During Year	
	Increase	Decrease
Noncash Current Assets	Subtract from profit	Add to profit
Current Liabilities	Add to profit	Subtract from profit

# IN CLASS ACTIVITY : WildLuwak Coffee

## CFO Answer Solution – Step 3 (continued)

**WildLuwak Coffee Company**  
**Statement of Cash Flows**  
**For the Year Ended Dec 31, 2020**

**Cash Flows from Operating Activities:**

Profit before taxes	46,797
Adjustments to reconcile profit to net cash from operating activities:	
Depreciation Expense	8,891
Changes in non cash current assets & liabilities:	
Accounts Receivable	(4,549)
Inventories	(858)
Prepaid expenses	6,457
Accounts payable	(1,798)
Accrued expenses	(396)
Loss on disposal of asset	2,500

**IS:**

Operating income	48,437
Other Loss (on disposal of assets)	2,500
Interest income	860
Profit before tax	46,797
Income taxes	14,055
Net income	32,742

*Step 3:* Prepare the CFO section.

- C** Adjust non-operating items (as they don't belong in the CFO)
- Loss on disposal of asset is not part of operating activities, it is an investing activity. So the \$2,500 loss is added back in the CFO section as it will be taken into account later in CFI.

**WildLuwak Coffee**

# IN CLASS ACTIVITY : WildLuwak Coffee

## CFO Answer Solution – Step 3 (continued)

**SCF:**

### Cash Flows from Operating Activities:

Profit before taxes	46,797
Adjustments to reconcile profit to net cash from operating activities:	
Depreciation Expense	8,891
Changes in non cash current assets & liabilities:	
Accounts Receivable	(4,549)
Inventories	(858)
Prepaid expenses	6,457
Accounts payable	(1,798)
Accrued expenses	(396)
Loss on disposal of asset	2,500
Interest income	(860)
Cash generated from operations	56,184
Income tax paid	(11,055)
Interest income received	860
Net cash from operating activities	45,989

**IS:**

Operating income	48,437
Other Loss (on disposal of assets)	2,500
Interest income	860
Profit before tax	46,797
Income taxes	14,055
Net income	32,742

*Step 3: Prepare the CFO section.*

**D** Separate reporting of interest received and paid.

- On IS, interest income is \$860. So first we deduct from profit.
- Then we need to calculate how much interest was actually received in cash.
- On SFP, there is no interest receivable outstanding. Therefore we can deduce that the whole \$860 interest income was already received in cash this year! So we add it back into CFO.

**WildLuwak Coffee**



# IN CLASS ACTIVITY : WildLuwak Coffee

## CFO Answer Solution – Step 3 (continued)

*Step 3: Prepare the CFO section.*

**D** Separate reporting of income taxes

- On SFP, we can see the beginning and ending balance of income tax payable. On IS, income tax for the year is \$14,055.
- Use these information to calculate how much tax was already paid in cash this year by using the T-account of Income taxes payable:

Income taxes payable		
	Beg	\$ 12,000.00
Taxes Paid	\$ 11,055.00	Taxes recognized \$ 14,055.00
	End	\$ 15,000.00

**WildLuwak Coffee**

### LIABILITIES & STOCKHOLDERS' EQUITY

#### Current liabilities:

Accounts payable	\$ 48,005	\$ 49,803
Income tax payable	15,000	12,000
Accrued expenses	29,403	29,799
<b>Total current liabilities</b>	<b>92,408</b>	<b>91,602</b>
<b>Shareholders' Equity:</b>		
Share Capital	9,803	9,158
Retained earnings	160,209	135,467
<b>Total shareholders' equity</b>	<b>170,012</b>	<b>144,625</b>
<b>Total liabilities &amp; shareholders' equity</b>	<b>\$ 262,420</b>	<b>\$ 236,227</b>

**SFP:**

**IS:**

Operating income	48,437
Other Loss (on disposal of assets)	2,500
Interest income	860
<b>Profit before tax</b>	<b>46,797</b>
Income taxes	14,055
<b>Net income</b>	<b>32,742</b>

# IN CLASS ACTIVITY : WildLuwak Coffee

## CFO Answer Solution – Step 3 (continued)

WildLuwak Coffee Company	
Statement of Cash Flows	
For the Year Ended Dec 31, 2020	
<b>Cash Flows from Operating Activities:</b>	
Profit before taxes	46,797
Adjustments to reconcile profit to net cash from operating activities:	
Depreciation Expense	8,891
Changes in non cash current assets & liabilities:	
Accounts Receivable	(4,549)
Inventories	(858)
Prepaid expenses	6,457
Accounts payable	(1,798)
Accrued expenses	(396)
Loss on disposal of asset	2,500
Interest income	(860)
Cash generated from operations	56,184
Income tax paid	(11,055)
Interest income received	860
Net cash from operating activities	45,989

*Step 3: Prepare the CFO section.*

- D** Separate reporting of income taxes
- Taxes paid in cash is \$11,055.

→ And finally, calculate the  
“Net cash from operating activities”

**WildLuwak Coffee**

# Analyzing & Interpreting CFO

- CFO focuses attention on the firm's ability to generate cash internally through operations and its management of current assets and current liabilities (also called working capital)
- CFO is regarded as the most important section of the SCF
- Operations is the company's major source of cash!
- **A common rule of thumb followed by financial and credit analysts is to avoid firms with rising net income but falling cash flow from operations.**

**Investors will not invest in a company if they do not believe that cash generated from operations will be available to pay them dividends or expand the company.**

**Creditors will not lend money if they do not believe that cash generated from operations will be available to pay back the loan.**

# Analyzing & Interpreting CFO

## AR & Inventory Changes

### Accounts Receivable Changes

Managers sometimes attempt to boost declining sales by extending credit terms or by lowering credit standards. The resulting increase in accounts receivable can cause net income to outpace cash flows from operations.

### Inventory Changes

Inventory growth can be a sign that planned sales growth did not materialize. A decline in inventory can be a sign that the company is anticipating lower sales in the next quarter.

## #2. Cash Flows from Investing Activities (CFI)

### Preparing the CFI

*A three-stage process to determine cash provided or used in investing activities:*

**Identify changes in  
INVESTING-related  
accounts**

**Explain these  
changes using  
reconstruction  
analysis**

**Report their cash  
flow effects**

# IN CLASS ACTIVITY : WildLuwak Coffee

## Preparing the CFI Section

### Steps in preparing the SCF – CFI Section:

**WildLuwak Coffee**

#### Step 1:

**Use the comparative SFP to calculate the accounts changes for CFI items in the SFP**

#### Step 2:

**Complete the CFI section using the additional information on investing activities (e.g. purchase/sale of fixed assets, purchase/sale of investments).**

Additional Information on WildLuwak Coffee:

- a) The company purchased \$10,000 new PPE in cash.
- b) The company disposed of \$30,000 worth of PPE with accumulated depreciation of \$26,491 and received \$1,009 in cash.



# IN CLASS ACTIVITY : WildLuwak Coffee

## CFI Answer Solution – Step 1

WildLuwak Coffee Company Statement of Financial Position As at Dec 31, 2019 & 2020				STEP 1 : Determine account changes	
	2020	2019		Account Changes	SCF Section
<b>ASSETS</b>					
<b>Current assets:</b>					
Cash & cash equivalents	\$ 84,140	\$ 54,497		29,643	
Accounts Receivable	53,735	49,186		4,549	CFO
Inventories	39,612	38,754		858	CFO
Prepaid expenses	5,552	12,009		-6,457	CFO
<b>Total current assets</b>	<b>183,039</b>	<b>154,446</b>			
<b>PPE</b>	<b>80,000</b>	<b>100,000</b>		<b>-20,000</b>	<b>CFI</b>
Less Accumulated Depreciation	(619)	(18,219)		17,600	CFI
<b>Total assets</b>	<b>\$ 262,420</b>	<b>\$ 236,227</b>			
<b>LIABILITIES &amp; STOCKHOLDERS' EQUITY</b>					
<b>Current liabilities:</b>					
Accounts payable	\$ 48,005	\$ 49,803		-1,798	CFO
Income tax payable	15,000	12,000		3,000	CFO
Accrued expenses	29,403	29,799		-396	CFO
<b>Total current liabilities</b>	<b>92,408</b>	<b>91,602</b>			
<b>Shareholders' Equity:</b>					
Share Capital	9,803	9,158		645	CFF
Retained earnings	160,209	135,467		24,742	
<b>Total shareholders' equity</b>	<b>170,012</b>	<b>144,625</b>			
<b>Total liabilities &amp; shareholders' equity</b>	<b>\$ 262,420</b>	<b>\$ 236,227</b>			

*Step 1:* Use the comparative SFP to calculate the accounts changes for CFI items in the SFP.

- Just the account changes alone from the SFP is insufficient to inform us of the cash paid/received relating to the purchase and disposals of the PPE!

**WildLuwak Coffee**

# IN CLASS ACTIVITY : WildLuwak Coffee

## CFI Answer Solution – Step 2

**Step 2:** Complete the CFI section using additional information from the accounting system

- The company purchased \$10,000 new PPE in cash.
- The company disposed of \$30,000 worth of PPE with accumulated depreciation of \$26,491 and received \$1,009 in cash.

<b>SCF:</b>	<b>Cash Flows from Investing Activities:</b>	
	Cash received from disposal of asset	1,009
	Cash paid for purchases of asset	(10,000)
	Net cash from investing activities	<u>(8,991)</u>

- Looking at the T-accounts for PPE and its Accumulated Depreciation:

PPE			Accumulated Depreciation		
Beg	\$ 100,000.00			Beg	\$ 18,219.00
Purchases	\$ 10,000.00	Disposals	\$ 30,000.00	Disposals	\$ 26,491.00
End	\$ 80,000.00			Depr. Expense	\$ 8,891.00
				End	\$ 619.00

- Journal entry for (b):
 

Dr Cash	1,009
Dr Accumulated Depr	26,491
Dr Loss on disposal	2,500
Cr PPE	30,000

**WildLuwak Coffee**

# #3. Cash Flows from Financing Activities (CFF)

## Preparing the CFF

*A three-stage process to determine cash provided or used in financing activities:*

**Identify changes in  
FINANCING-related  
accounts**

**Explain these  
changes using  
reconstruction  
analysis**

**Report their cash  
flow effects**

# IN CLASS ACTIVITY : WildLuwak Coffee

## Preparing the CFF Section

### Steps in preparing the SCF – CFF Section:

**WildLuwak Coffee**

#### Step 1:

**Use the comparative SFP to calculate the accounts changes for CFF items in the SFP**

#### Step 2:

**Complete the CFF section using the additional information on financing activities (e.g. sale/repurchase of stock, dividend payments, borrowings)**

Additional Information on WildLuwak Coffee:

- c) The company repurchased shares for \$305 in cash, and also issued ordinary shares to employees for \$950 in cash.
- d) The company paid dividends in cash of \$8,000 for the year 2020.

# IN CLASS ACTIVITY : WildLuwak Coffee

## CFF Answer Solution – Step 1

WildLuwak Coffee Company Statement of Financial Position As at Dec 31, 2019 & 2020				STEP 1 : Determine account changes	
	2020	2019		Account Changes	SCF Section
<b>ASSETS</b>					
<b>Current assets:</b>					
Cash & cash equivalents	\$ 84,140	\$ 54,497		29,643	
Accounts Receivable	53,735	49,186		4,549	CFO
Inventories	39,612	38,754		858	CFO
Prepaid expenses	5,552	12,009		-6,457	CFO
<b>Total current assets</b>	<b>183,039</b>	<b>154,446</b>			
PPE	80,000	100,000		-20,000	CFI
Less Accumulated Depreciation	(619)	(18,219)		17,600	CFI
<b>Total assets</b>	<b>\$ 262,420</b>	<b>\$ 236,227</b>			
<b>LIABILITIES &amp; STOCKHOLDERS' EQUITY</b>					
<b>Current liabilities:</b>					
Accounts payable	\$ 48,005	\$ 49,803		-1,798	CFO
Income tax payable	15,000	12,000		3,000	CFO
Accrued expenses	29,403	29,799		-396	CFO
<b>Total current liabilities</b>	<b>92,408</b>	<b>91,602</b>			
<b>Shareholders' Equity:</b>					
Share Capital	9,803	9,158		645	CFF
Retained earnings	160,209	135,467		24,742	
<b>Total shareholders' equity</b>	<b>170,012</b>	<b>144,625</b>			
<b>Total liabilities &amp; shareholders' equity</b>	<b>\$ 262,420</b>	<b>\$ 236,227</b>			

*Step 1:* Use the comparative SFP to calculate the accounts changes for CFF items in the SFP.

- Just the account changes alone from the SFP is insufficient to inform us of the cash paid/received relating to the share capital and the changes in Retained Earnings.

**WildLuwak Coffee**

# IN CLASS ACTIVITY : WildLuwak Coffee

## CFF Answer Solution – Step 2

**Step 2:** Complete the CFF section using additional information from the accounting system

- c) The company repurchased 100 shares for \$305 in cash, and then issued 100 ordinary shares to employees for \$950 in cash.
- d) The company paid dividends in cash of \$8,000 for the year 2020.

**SCF:**

### Cash Flows from Financing Activities:

Cash paid to repurchase shares	(305)
Cash received from share issuance	950
Cash paid for dividends	(8,000)
Net cash from financing activities	(7,355)

- Share buyback journal:
 

Dr Treasury Shares	305	
Cr Cash		305
- Reissue Treasury shares:
 

Dr Cash	950	
Cr Treasury Shares		305
Cr Share capital - premium		645
- Dividends payment:
 

Dr Retained Earnings	8,000	
Cr Cash		8,000

**WildLuwak Coffee**



**WildLuwak Coffee Company**  
**Statement of Cash Flows**  
**For the Year Ended Dec 31, 2020**

<b>Cash Flows from Operating Activities:</b>	
Profit before taxes	46,797
Adjustments to reconcile profit to net cash from operating activities:	
Depreciation Expense	8,891
Changes in non cash current assets & liabilities:	
Accounts Receivable	(4,549)
Inventories	(858)
Prepaid expenses	6,457
Accounts payable	(1,798)
Accrued expenses	(396)
Loss on disposal of asset	2,500
Interest income	(860)
Cash generated from operations	56,184
Income tax paid	(11,055)
Interest income received	860
Net cash from operating activities	45,989
<b>Cash Flows from Investing Activities:</b>	
Cash received from disposal of asset	1,009
Cash paid for purchases of asset	(10,000)
Net cash from investing activities	(8,991)
<b>Cash Flows from Financing Activities:</b>	
Cash paid to repurchase shares	(305)
Cash received from share issuance	950
Cash paid for dividends	(8,000)
Net cash from financing activities	(7,355)
Net increase in cash	29,643
Beginning cash balance	54,497
Ending cash balance	84,140

## WildLuwak Coffee

### FINAL STEP: Complete the SCF

- Calculate net increase/decrease in cash for the year: Add up all the net cash from CFO, CFI and CFF.
  - Add to the Beginning cash balance
- Ending cash balance **MUST** tie to the ending cash balance on the SFP!!

WildLuwak Coffee Company Statement of Financial Position As at Dec 31, 2019 & 2020		
	2020	2019
<b>ASSETS</b>		
Current assets:		
Cash & cash equivalents	\$ 84,140	\$ 54,497

# Analyzing & Interpreting CFF

- The long-term growth of a company is normally financed from three sources:
  - Internally generated funds
  - The issuance of stock
  - Money borrowed on a long-term basis.
- The statement of cash flows shows how management has elected to fund its growth.
- From the CFF, one can see a company's capital structure. What kind of financing from external sources is used, whether it is from shareholders or creditors.
- This information is used by analysts who wish to evaluate the capital structure and growth potential of a business.

# Using SCF for Decision Making:

## Identifying Patterns from SCF

	CF from Operating	CF from Investing	CF from Financing	General Explanation
#1	+	+	+	Company is using cash generated from operations, from sale of assets, and from financing to build up a pile of cash—very liquid company—possibly looking for acquisition.
#2	+	–	–	Company is using cash flows generated from operations to buy fixed assets and to pay down debt or pay owners.
#3	+	+	–	Company is using cash from operations and from sale of fixed assets to pay down debt or pay owners.
#4	+	–	+	Company is using cash from operations and from borrowing (or from owner investment) to expand.
#5	–	+	+	Company's operating cash flow problems are covered by sale of fixed assets, by borrowing, or by stockholder contributions. The negative cash flow from operations could cause long-term problems if it persists.
#6	–	–	+	Company is growing rapidly, but has shortfalls in cash flows from operations and from purchase of fixed assets financed by long-term debt or new investment.
#7	–	+	–	Company is financing operating cash flow shortages and payments to creditors and/or stockholders via sale of fixed assets.
#8	–	–	–	Company is using cash reserves to finance operation shortfall and pay long-term creditors and/or investors.

**REAL FS:**  
Which of these pattern can you see?

Samsung  
Apple, Dell, FB

Tencent

Source: Michael T. Dugan, Benton E. Gup, and William D. Samson, "Teaching the Statement of Cash Flows," *Journal of Accounting Education*, 9 (1991): 36.

# Take Away for Lecture 11

- Importance of Cash Flows for a company
- Statement of Cash Flow (SCF)
  - Cash Flow from Operations (CFO)
    - Using the Indirect Method
  - Cash Flow from Investing (CFI)
  - Cash Flow from Financing (CFF)
- Analyzing & interpreting SCF



"Just exactly how bad is our cash flow problem?"

# FINAL EXAM Reminder!

**FINAL Exam is on Nov 26<sup>th</sup> 2022 (Saturday) @ 09.00hrs !**

- It is a **2 hours ON-SITE** digital exam using **EXAMPLIFY**. There is NO remote exam option!
- It is a **comprehensive** exam covering ALL materials covered in the lectures, assigned textbook readings, tutorials and self-study problems.
- It is a **closed-book** exam, consisting of multiple choice questions and problems.
- You are allowed to bring in **ONE A4 size “cheatsheet”, with notes on both-side!**
- You must bring your **LAPTOP**, calculator, ID cards and stationery. No other unauthorized materials will be allowed in the exam venue. You will be given 2 sheets of rough paper for workings.
- **If you are unable to attend the on-site exam, you will have to file special consideration.**
- Students will be advised if there are any changes to the above exam procedures.
- Actual exam venues and further details about the final exam to be advised at a later date.

# Mock Exams

- I will be posting **THREE** Mock Exams for you to practice on Exemplify in Week 12.
- These will be made available for you to download on Exemplify.
- Please ATTEMPT the mock exams to familiarize yourself with the type of exam questions you can expect.
- For the essay questions, please practice typing in your answers into the answer box:
  - Use tab and spacing when you are typing in your answers (e.g. journal entries/financial statements) into the answer box.
  - Do NOT worry too much about formatting when creating financial statements (e.g. trying to line everything up in a column etc..), just focus on getting the content right.
  - For journal entries, to be clear you can also put Dr and Cr in front of your entries.
  - Important note: the spreadsheet function in Exemplify is unstable, so do **NOT** rely on it to copy & paste tables into the answer box!
- I will provide further instructions in Week 12.



# That's all folks!



**LAST lecture next week: Financial Statements Integrity**

**Post your questions on Canvas discussion forum.**

**My email: [hanny.kusnadi@nus.edu.sg](mailto:hanny.kusnadi@nus.edu.sg)**

# APPENDIX

## **Algebraic Formulation of the SCF**

# CFO – Indirect Method

## Logic Behind the SCF Algebraic Formulation

- Recall the basic accounting equation:

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

- Assets are either cash (C) or not (NCA), so the equation becomes:

$$\text{Cash} + \text{Non-cash assets} = \text{Liabilities} + \text{SE}$$

- If we look at the change in balances, the equation can be written as:**

$$\Delta \text{Cash} + \Delta \text{Non-cash assets} = \Delta \text{Liabilities} + \Delta \text{SE}$$

- After re-arranging the equation, we can express it as:

$$\Delta \text{Cash} = (\Delta \text{Liabilities} + \Delta \text{SE}) - \Delta \text{Non-cash assets}$$

- The change in cash ( $\Delta \text{Cash}$ ) is the increase or decrease in the cash account. This amount equals changes in liabilities *plus* changes in stockholders' equity *minus* changes in assets other than cash.
- THUS, we can identify the causes in the change in the cash account by studying the changes in the non-cash accounts!



# CFO – Indirect Method

## Logic Behind the SCF Algebraic Formulation (continued)

$$\Delta \text{ Cash} = (\Delta \text{ Liabilities} + \Delta \text{ SE}) - \Delta \text{ Non-cash assets}$$


- Expanding the equation further into current & non-current, we can get:

$$\begin{aligned} \Delta \text{ Cash} = & (\Delta \text{ Current Liabilities} + \Delta \text{ Long-term Liabilities} + \Delta \text{ SE}) \\ & - (\Delta \text{ Non-cash Current assets} + \Delta \text{ Long-term Assets}) \end{aligned}$$

- Further expansion gives us:

$$\begin{aligned} \Delta \text{ Cash} = & (\Delta \text{ Current Liabilities} + \text{Issue new long-term debt} - \text{pay old long-term debt} \\ & + \text{Net income} - \text{dividend} + \text{Sales of new shares} - \text{Repurchase of shares}) \\ & - (\Delta \text{ Non-cash current assets} + \text{Purchase of PPE/investment} - \text{depreciation} \\ & - (\text{Sale of PPE/investment} - \text{Gain} + \text{Loss})) \end{aligned}$$

- Re-arranging the equation will eventually give us:


$$\begin{aligned} \Delta \text{ Cash} = & \text{Net income (Profit before tax} - \text{Income taxes)} + \text{Depreciation} \\ & - \text{Gain} + \text{Loss} - \Delta \text{ Non-cash current assets} + \Delta \text{ Current Liabilities} \\ & - \text{Purchase of PPE/investment} + \text{Sale of PPE/investment} \\ & + \text{Issue new long-term debt} - \text{Pay old long-term debt} \\ & + \text{Sales of new shares} - \text{Repurchase of shares} - \text{Dividend} \end{aligned}$$

} **Operating**  
} **Investing**  
} **Financing**