

# EARNINGS PER SHARE

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1/2023



# EARNINGS PER SHARE

- A way of summarizing the performance of business enterprises in a single number
- IFRS and US GAAP require the presentation of EPS on the face of the income statement for net profit or loss (net income) and profit or loss (income) from continuing operations
- Basic EPS
- Diluted EPS

# CAPITAL STRUCTURE

- A company's capital is composed of *its equity and debt*. Some types of equity have preference over others, and some debt (and other instruments) may be converted into equity.
- Equity: Common stocks (ordinary shares) VS preferred stocks (preference shares)
  - Common stocks: the right to vote, receive dividends, rights to share the liquidation of assets, preemptive rights
  - Preferred stocks: no right to vote, receive dividends before common stockholders, receive the distribution of assets before common stockholders
- Examples of financial instruments that are potentially convertible into common stock
  - Convertible bonds → convert bonds to common stocks
  - Convertible preferred stock
  - Employee stock options<sup>compensation</sup> exercise price below current price
  - Warrants. (A warrant is a call option typically attached to securities issued by a company, such as bonds. A warrant gives the holder the right to acquire the company's stock from the company at a specified price within a specified time period).

# CAPITAL STRUCTURE

- The type of equity for which EPS is presented is **for the ordinary shareholders** who are basically the owners of the company—the equity holders who are paid last in a liquidation of the company (subordinate to all other types of equity) and who benefit the most when the company does well.
- When a company has issued any financial instruments that are potentially convertible into common stock, it is said to have a **complex capital structure**.
  - Financial instruments that are potentially convertible into common stock could, as a result of conversion or exercise, potentially dilute (i.e., decrease) EPS.
  - **Diluted EPS**
- If a company's capital structure does not include such potentially convertible financial instruments, it is said to have a **simple capital structure**.
  - **Basic EPS**

$$\text{EPS} = \frac{\text{NI}}{\text{\# C I S}} \downarrow$$

# EARNINGS PER SHARE

- Earnings per share (EPS) is the net earnings available to **common stockholders** for the period divided by the **weighted average** number of common stock shares outstanding
- If firm has a “complex” capital structure, it will report *basic* and *diluted* EPS.
- EPS is extensively used by analysts in evaluating a firm.
- Income statement: Microsoft 10-K (2022)

Net income	\$ 72,738	\$ 61,271	\$ 44,281
Earnings per share:			
Basic	\$ 9.70	\$ 8.12	\$ 5.82
Diluted	\$ 9.65	\$ 8.05	\$ 5.76
Weighted average shares outstanding:			
Basic	7,496	7,547	7,610
Diluted	7,540	7,608	7,683

Refer to accompanying notes.

# BASIC EPS: EXAMPLE 1

Basic EPS: Earnings available to common shareholders divided by weighted average number of shares outstanding.

Basic EPS =

$$\frac{(\text{Net income} - \text{Preferred dividends})}{\text{Weighted average number of shares outstanding}}$$

Assume the following:

- Company had net income of \$2,431 million for the year,
- 488.3 million weighted average number of common shares outstanding
- No preferred stock, no convertible securities, no options

Basic EPS

= (Net income – Preferred dividends)/Weighted average number of shares outstanding

= (\$2,431 – \$0)/488.3

= \$4.98

50 if preferred stock pays dividend  
↓

# BASIC EPS: EXAMPLE 2

## WEIGHTED AVERAGE NUMBER OF SHARES

Assume the following:

$$\begin{aligned} \text{earnings available for c/s} &= \$2,500,000 - 200,000 \\ &= \$2,300,000 \end{aligned}$$

Company had net income of \$2,500,000 for the year and paid \$200,000 of preferred dividends.

1,000,000 Shares outstanding on 1 January 20XX

200,000 Shares issued on 1 April 20XX

100,000 Shares repurchased on 1 October 20XX

Calculate: the weighted average number of shares outstanding, the company's basic EPS

Timeline diagram showing share changes:

- Jan 1: 1,000,000 shares
- Apr 1: +200,000 shares
- Oct 1: -100,000 shares
- Dec 31: End of year

Calculation for weighted average number of shares:

$$\# \text{ c/s} = \left( 1,000,000 \times \frac{12}{12} \right) + \left( 200,000 \times \frac{9}{12} \right) - \left( 100,000 \times \frac{3}{12} \right) = 1.125 \text{ M}$$

Calculation for Basic EPS:

$$\text{Basic EPS} = \frac{2,300,000}{1.125 \text{ M}} = \$2.04 / \text{share}$$

# BASIC EPS: EXAMPLE 3

## STOCK DIVIDENDS AND SHARE SPLITS

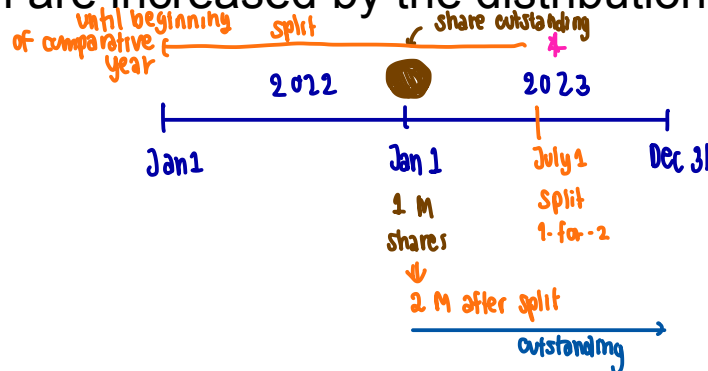
Increase in shares from selling new shares	Increase in shares caused by a stock dividend
<p>When new shares are sold, both assets and shareholders' equity are increased by an additional investment in the firm by shareholders.</p> $A = L + E$ $+\text{Cash} = 0 + C/S$	<p>Stock dividend or stock split merely increases the number of shares without affecting the firm's assets.</p> $A = L + E$ $0 = 0 + (-R/E + C/S)$
<p>Shareholders' interests in their company's earnings is diluted.</p>	<p>Larger number of less valuable shares. Same "pie," more slices.</p>



# BASIC EPS: EXAMPLE 3

## STOCK DIVIDENDS AND SHARE SPLITS

- Ordinary shares issued as part of stock dividend (also known as bonus issues) and share splits are **treated retroactively** as subdivisions of the shares already outstanding at the date of the split or dividend.
  - The share dividend is assumed to be outstanding since the beginning of the year (of the comparative fiscal year)
- When a stock distribution (stock dividend) occurs during the reporting period, any sales or purchases of shares that occur **before, but not after**, the distribution are increased by the distribution



# BASIC EPS: EXAMPLE 3

## STOCK DIVIDENDS AND SHARE SPLITS

Assume the following:

Company had net income of \$154 million for the year 2021, and \$100 for the year 2020. Its capital structure included the following:

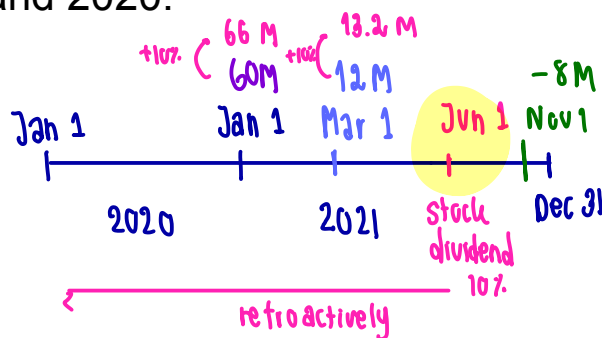
\* 60,000,000 Shares outstanding on 1 January 20XX<sup>2021</sup>

\* 12,000,000 Shares issued on 1 March 20XX<sup>2021</sup>

10% stock dividend was distributed. (June 1, 2021)

8,000,000 shares were repurchased as treasury stock (Nov 1, 2021)

Calculate: the weighted average number of shares outstanding, the company's basic EPS 2021 and 2020.



$$\begin{aligned} \# \text{ Shares} &= \left( 60 \times 1.1 \times \frac{12}{12} \right) + \left( 12 \times 1.1 \times \frac{10}{12} \right) - \left( 8 \times \frac{2}{12} \right) \\ &= 75.67 \text{ M shares} \end{aligned}$$

$$\text{Basic EPS (2021)} = \frac{154 \text{ M}}{75.67 \text{ M shares}} = \$ 2.035/\text{share}$$

$$\text{Basic EPS (2020)} = \frac{100}{60 \times 1.1} = \$ 1.515/\text{share}$$

also adjust #share to be comparable in same basis<sup>10</sup>

## CONCEPT CHECK: BASIC EPS

On December 31, 2020, Wayne Sparks Company had 600,000 shares of common stock issued and outstanding. Sparks issued a 5% stock dividend on June 30, 2021. On September 30, 2021, 20,000 shares of common stock were reacquired as treasury stock. What is the appropriate number of shares to be used in the basic earnings per share computation for 2021?

- a. 595,000
- b. 625,000
- c. 630,000
- d. 635,000

# DILUTED EPS

- When a company has convertible securities outstanding, diluted EPS is calculated using the **if-converted method**. *Worst case → everyone convert assume conversion*
- The if-converted method is based on what EPS *would have been* if the convertible securities had been converted at the beginning of the period or date of issuance, if later.  
*no int to pay ⇒ net income ↑*  
*↑ no bond*  
*no PS → no preferred dividend*  
*↑*  
*unlike basic EPS, don't have to deduct this in numerator*
- The assumed conversion of convertible bonds or preference shares has two effects on dilutive earnings per share:
  - Increase the denominator by the number of ordinary shares issuable upon conversion.
  - Increase the numerator by decreasing after-tax interest expense on convertible bonds, and dividends on convertible preference shares.  
*NIT ↑ bcs have to pay higher tax*

# DILUTED EPS: EXAMPLE 1

## IF-CONVERTED METHOD FOR CONVERTIBLE PREFERRED STOCK SOLUTION

Assume a company has the following:

- net income of \$1,750,000
- an average of 500,000 shares of common stock outstanding
- 20,000 shares of convertible preferred outstanding  $\uparrow \text{CIS} = +100,000$
- no other potentially dilutive securities

Each share of preferred pays a dividend of \$10 per share, and each is convertible into five shares of the company's common stock.

Calculate the company's basic and diluted EPS.

- Diluted EPS = Net income / (Weighted average number of shares outstanding + New common shares that would have been issued at conversion).

# DILUTED EPS: EXAMPLE 1

## IF-CONVERTED METHOD FOR CONVERTIBLE PREFERRED STOCK SOLUTION

	Basic EPS	Diluted EPS Using If-Converted Method
Net income	\$1,750,000	\$1,750,000
Preferred dividend	<u>– 200,000</u>	no PS → no div <u>0</u>
<b>Numerator</b>	<u>\$1,550,000</u>	<u>\$1,750,000</u>
Weighted average number of shares outstanding	500,000	500,000
If converted	<u>0</u>	<u>100,000</u>
<b>Denominator</b>	<u>500,000</u>	<u>600,000</u>
<b>EPS</b>	<b>\$3.10</b>	<b>\$2.92</b>

## DILUTED EPS: EXAMPLE 2

### IF-CONVERTED METHOD FOR CONVERTIBLE DEBT

Assume a company has the following:

- net income of \$750,000
- an average of 690,000 shares of common stock outstanding
- \$50,000 of 6% convertible bonds outstanding that are convertible into a total of 10,000 shares
- no other potentially dilutive securities
- An effective tax rate is 30%

$$\begin{aligned} \hookrightarrow \text{CIS } \uparrow &= 10,000 \\ * \text{ Interest expense after tax} &= 6\% \times 50,000 \times (1 - 30\%) \\ &= 2,100 \end{aligned}$$

Calculate the company's basic and diluted EPS.

Diluted EPS

= (Net income + After-tax interest on convertible debt – Preferred dividends) / (Weighted average number of shares outstanding + Additional common shares that would have been issued at conversion)

# DILUTED EPS: EXAMPLE 2

## IF-CONVERTED METHOD

### FOR CONVERTIBLE DEBT SOLUTION

	Basic EPS	Diluted EPS Using If-Converted Method
Net income	\$750,000	\$750,000
After-tax cost of interest	0	+ 2,100
Preferred dividend	<u>0</u>	<u>0</u>
<b>Numerator</b>	<u>\$750,000</u>	<u>\$752,100</u>
Weighted average number of shares outstanding	690,000	690,000
If converted	<u>0</u>	<u>10,000</u>
<b>Denominator</b>	<u>690,000</u>	<u>700,000</u>
<b>Earnings per share (EPS)</b>	<b>\$1.09</b>	<b>\$1.07</b>



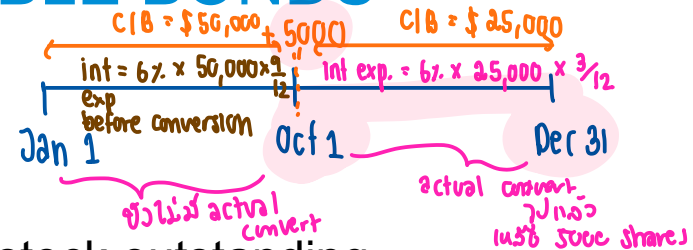
# DILUTED EPS: EXAMPLE 3

## IF-CONVERTED METHOD FOR PREFERRED STOCK AND CONVERTIBLE BONDS

Assume a company has the following:

- net income of \$1,000,000
- On January 1, 69,000<sup>12/12</sup> shares of common stock outstanding
- \$50,000 of 6% convertible bonds outstanding that are convertible into a total of 10,000 shares. On October 1, half of convertible bonds are converted into ordinary shares.
- 20,000 shares of preferred outstanding. each share of preferred pays a dividend of \$10 per share. Dividend is declared this year.
- An effective tax rate is 30%

Calculate the company's basic and diluted EPS.



↳ + CIB = 5000 outstanding 3/12  
actual convert

$$\begin{aligned} \text{ps dividend} &= 10 \times 20,000 \\ &= \$200,000 \end{aligned}$$

↑  
convert bonds into  
0

คิด Int exp ที่ไม่ติดตัวก็  
→ 10m convert oct 1

- $$= (1,000,000 - 200,000) / (69,000 + 5,000 * 3/12)$$

↓ actual conversion

$$= (800,000 + \overset{\text{int exp. first part}}{70\% \cdot 50,000 \cdot 6\% \cdot 9/12} + \overset{\text{int exp. second part}}{70\% \cdot 25,000 \cdot 6\% \cdot 3/12})$$

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# DILUTED EPS: EXAMPLE 4

## TREASURY STOCK METHOD FOR STOCK OPTIONS

- Stock options, warrants, or their equivalents outstanding give investors the right to exercise their option to purchase ordinary shares, resulting in the dilution.
- To reflect the dilutive effect of a security:

We assume the options were exercised *at the beginning* of the reporting period, or when the options *were issued* if that's *later*.

### Treasury stock method

- The company used the proceeds from exercise to repurchase as many shares of common stock as possible at the average market price of common stock during the period.

# DILUTED EPS: EXAMPLE 4

## TREASURY STOCK METHOD FOR STOCK OPTIONS

Assume a company reported net income of \$2.3 million for the year ended 30 June 2018 and has the following:

- an average of 800,000 common shares outstanding
- 30,000 options with an exercise price of \$35 outstanding (1 option per 1 common stock)  
 ↳ if everyone exercise <sup>30,000 C/S</sup>
- no other potentially dilutive securities

$$\begin{aligned} \text{Cash} &= 35 \times 30,000 \\ &= 1,050,000 \end{aligned}$$

Over the year, its market price averaged \$55 per share.

$$\begin{aligned} \text{repurchase shares} &= \frac{1,050,000}{55} \\ &= 19,091 \end{aligned}$$

Calculate the company's basic and diluted EPS.

Diluted EPS

$$= \frac{\text{Net Income} - \text{Preferred dividends}}{\text{Weighted average number of shares outstanding} + \text{New shares issued at option exercise} - \text{Shares that could have been purchased with cash received upon exercise}}$$

# DILUTED EPS: EXAMPLE 5

## TREASURY STOCK METHOD FOR STOCK OPTIONS SOLUTION

### Calculate Denominator

800,000	Weighted average number of shares outstanding
+ 30,000	New shares issued at option exercise
– 19,091	Shares that could be purchased with cash received upon exercise, calculated as \$1,050,000 (\$35 for each of the 30,000 options exercised) divided by average market price of \$55 per share = 19,091 shares
= 810,909	Shares

→  $30,000 - 19,091 = 10,909$

# DILUTED EPS: EXAMPLE 5

## TREASURY STOCK METHOD

### FOR STOCK OPTIONS SOLUTION

	Basic EPS	Diluted EPS Using Treasury Stock Method
Net income	<u>\$2,300,000</u>	<u>\$2,300,000</u>
<b>Numerator</b>	\$ 2,300,000	\$2,300,000
Weighted average number of shares outstanding	800,000	800,000
If exercised and treasury shares purchased	<u>0</u>	<u>10,909</u>
<b>Denominator</b>	800,000	810,909
<b>EPS</b>	<b>\$2.88</b>	<b>\$2.84</b>

# DILUTIVE VS. ANTIDILUTIVE SECURITIES

Dilutive securities: Securities that, if included in a diluted EPS calculation, result in an EPS lower than the company's basic EPS.

Antidilutive securities: Securities that, if included in a diluted EPS calculation, would result in an EPS higher than the company's basic EPS:

- Antidilutive securities are *not included* in the calculation of diluted EPS.
- Diluted EPS should reflect the maximum potential dilution from conversion or exercise of potentially dilutive financial instruments.
- By definition, diluted EPS will *always* be less than or equal to basic EPS.

# ANTI-DILUTED EPS: EXAMPLE 1

Assume a company reported net income of \$1.75 million for the year ended 31 December 2018 and has the following:

- an average of 500,000 common shares outstanding
  - an average of 20,000 shares of convertible preferred stocks
  - Each share of preferred pays a dividend of \$10 per share, and each is convertible into three shares of the company's common stock.
- 
- Basic EPS =  $(1,750,000 - 200,000) / (500,000) = \$3.10$
  - Diluted EPS =  $(1,750,000) / (500,000 + 60,000) = \$3.13$  (Exceeds Basic EPS!)
  - Reported diluted EPS = \$3.10, Basic EPS = \$3.10



# DILUTED EPS: MULTIPLE CONVERTIBLE SECURITIES

- When a company has multiple convertible securities, diluted EPS is the lowest possible figure or the “worst case” EPS.
- The sequence in which we include a potential ordinary share matters.
- We have to include the most dilutive security first and stop at the point when the diluted EPS is at the lowest point.
- We rank the dilutive effects of each potential ordinary share by calculating their earnings per incremental share (EPIS).
- The EPIS is the after-tax earnings saved from the assumed conversion or exercise of the potential ordinary shares divided by the increase in number of ordinary shares.
- The higher the EPIS, the lower the dilutive impact.

# MULTIPLE CONVERTIBLE SECURITIES :

## EXAMPLE 1

- Sovran Financial Corporation reported net income of \$154 million in 2021 (tax rate 20 percent). Its capital structure included:

- **Ordinary shares**

January 1                      60 million ordinary shares were outstanding

March 1                        12 million new shares were sold

June 17                        A 10% stock dividend was distributed

October 1                      8 million shares were reacquired as treasury stock

The average market price of the ordinary shares during 2021 was \$25 per share.

- **Preference shares (convertible)**

January 1 – December 31    5 million shares, 8%, \$10 par

- **Incentive stock options**

Executive stock options granted in 2016, exercisable after 2020 for 15 million ordinary shares at an exercise price of \$20 per share

- **Convertible bonds**

Effective interest rate of 10%, \$300 million carrying amount on January 1, 2011, debt issued in 2021 convertible into 12 million ordinary shares.

# MULTIPLE CONVERTIBLE SECURITIES : EXAMPLE 1

- Basic EPS =

	Increase in Earnings	Increase in # ordinary shares	EPIS
Preference Shares convertible			
Incentive Stock Options			
Convertible Bonds			

- Rank

## ANTI-DILUTED EPS: EXAMPLE 2

Securities	Increase in Earnings	Increase in Ordinary shares	Diluted EPS	
Basic EPS	\$150	75	\$2.00	

# DISCLOSURE OF EARNINGS PER SHARE

- Microsoft 10-K (FY2022)

## NOTE 2 — EARNINGS PER SHARE

Basic earnings per share (“EPS”) is computed based on the weighted average number of shares of common stock outstanding during the period. Diluted EPS is computed based on the weighted average number of shares of common stock plus the effect of dilutive potential common shares outstanding during the period using the treasury stock method. Dilutive potential common shares include outstanding stock options and stock awards.

The components of basic and diluted EPS were as follows:

(In millions, except earnings per share)

Year Ended June 30,	2022	2021	2020
Net income available for common shareholders (A)	\$ 72,738	\$ 61,271	\$ 44,281
Weighted average outstanding shares of common stock (B)	7,496	7,547	7,610
Dilutive effect of stock-based awards	44	61	73
Common stock and common stock equivalents (C)	<u>7,540</u>	<u>7,608</u>	<u>7,683</u>
<b>Earnings Per Share</b>			
Basic (A/B)	\$ 9.70	\$ 8.12	\$ 5.82
Diluted (A/C)	\$ 9.65	\$ 8.05	\$ 5.76

Anti-dilutive stock-based awards excluded from the calculations of diluted EPS were immaterial during the periods presented.

# DISCLOSURE OF EARNINGS PER SHARE

- Tesla 10-K (FY2020)

## *Net Income (Loss) per Share of Common Stock Attributable to Common Stockholders*

Basic net income (loss) per share of common stock attributable to common stockholders is calculated by dividing net income (loss) attributable to common stockholders by the weighted-average shares of common stock outstanding for the period. During the year ended December 31, 2020, we decreased net income attributable to common stockholders by \$31 million to arrive at the numerator used to calculate net income per share. During the year ended December 31, 2019, we increased net loss attributable to common stockholders by \$8 million to arrive at the numerator used to calculate net loss per share. These adjustments represent the difference between the cash we paid to the financing fund investors for their noncontrolling interest in our subsidiaries and the carrying amount of the noncontrolling interest on our consolidated balance sheets, in accordance with ASC 260, *Earnings per Share*. Potentially dilutive shares, which are based on the weighted-average shares of common stock underlying outstanding stock-based awards, warrants and convertible senior notes using the treasury stock method or the if-converted method, as applicable, are included when calculating diluted net income (loss) per share of common stock attributable to common stockholders when their effect is dilutive. Since we intend to settle or have settled in cash the principal outstanding under our 0.25% Convertible Senior Notes due in 2019 ("2019 Notes"), 1.25% Convertible Senior Notes due in 2021 ("2021 Notes"), 2.375% Convertible Senior Notes due in 2022 ("2022 Notes"), 2024 Notes and our subsidiary's 5.50% Convertible Senior Notes due in 2022, we use the treasury stock method applied using our average share price during the period when calculating their potential dilutive effect, if any. Furthermore, in connection with the offerings of our convertible senior notes, we entered into convertible note hedges and warrants (see Note 12, *Debt*). However, our convertible note hedges are not included when calculating potentially dilutive shares since their effect is always anti-dilutive. Warrants which have a strike price above our average share price during the period were out of the money and were not included in the tables below. Warrants will be included in the weighted-average shares used in computing basic net income (loss) per share of common stock in the period(s) they are settled.

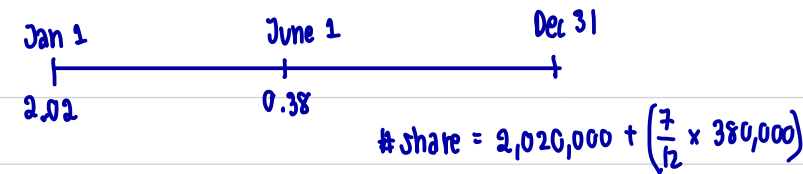
The following table presents the reconciliation of basic to diluted weighted average shares used in computing net income (loss) per share of common stock attributable to common stockholders, as adjusted to give effect to the Stock Split (in millions):

	Year Ended December 31,		
	2020	2019	2018
Weighted average shares used in computing net income (loss) per share of common stock, basic	933	887	853
Add:			
Stock-based awards	66	—	—
Convertible senior notes	47	—	—
Warrants	37	—	—
Weighted average shares used in computing net income (loss) per share of common stock, diluted	1,083	887	853

The following table presents the potentially dilutive shares that were excluded from the computation of diluted net income (loss) per share of common stock attributable to common stockholders, because their effect was anti-dilutive (in millions):

	Year Ended December 31,		
	2020	2019	2018
Stock-based awards	2	50	50
Convertible senior notes	1	5	7
Warrants	—	—	1

9/9



1

For 2009, Flamingo Products had net income of \$1,000,000. At 1 January 2009, there were 1,000,000 shares outstanding. On 1 July 2009, the company issued 100,000 new shares for \$20 per share. The company paid \$200,000 in dividends to common shareholders. What is Flamingo's basic earnings per share for 2009? (1 Point)

- ☐ \$0.80.
- ☐ \$1.00.
- ☐ \$0.91.
- ☒ \$0.95.



$$\# \text{ share} = 1 \text{ mm} + \left(\frac{6}{12} \times 0.1\right) = 1.05 \text{ million shares}$$

$$\text{Basic EPS} = \frac{1 \text{ mm}}{1.05 \text{ mm}} = \$0.95 / \text{share}$$

2

For its fiscal year-end, Calvin Water Corporation (CWC) reported net income of \$12 million and a weighted average of 2,000,000 common shares outstanding. The company paid \$800,000 in preferred dividends and had 100,000 options outstanding with an average exercise price of \$20. CWC's market price over the year averaged \$25 per share. CWC's diluted EPS is closest to: (1 Point)

- ☐ \$5.60
- ☐ \$5.33
- ☐ \$5.94
- ☒ \$5.54

► # of common shares that can be purchased with fund from options =  $\frac{100,000 \times 20}{25} = 80,000$

► Net increase in C/S from exercise of options =  $100,000 - 80,000 = 20,000$

► Diluted EPS =  $\frac{12,000,000 - 800,000}{2,000,000 + 20,000} = \$5.54 / \text{share}$

Which statement about the calculation of LB's EPS is most accurate? (1 Point)

Laurelli Builders (LB) reported the following financial data for year-end December 31:

Common shares outstanding, January 1	2,020,000
Common shares issued as stock dividend, June 1	380,000
* Warrants outstanding, January 1	500,000
✓ Net income	\$3,350,000
✓ Preferred stock dividends paid	\$430,000
Common stock dividends paid	\$240,000

- ☒ LB's diluted EPS is equal to or less than its basic EPS.

► Basic EPS =  $\frac{3,350,000 - 430,000}{2,241,666.67} = \$1.37 / \text{share}$

- ☐ LB's basic EPS is \$1.12.

- ☐ The weighted average number of shares outstanding is 2,210,000.

► Diluted EPS =  $\frac{3,350,000 - 430,000}{2,241,666.67 + 500,000}$

4

Cell Services Inc. (CSI) had 1,000,000 average shares outstanding during all of 2009. During 2009, CSI also had 10,000 options outstanding with exercise prices of \$10 each. The average stock price of CSI during 2009 was \$15. For purposes of computing diluted earnings per share, how many shares would be used in the denominator? (1 Point)

- ☐ 1,010,000.
- ☒ 1,003,333.
- ☐ 1,006,667.
- ☐ 1,000,000

► Net Increase in C/S from options =  $10,000 - \left(\frac{10,000 \times 10}{15}\right) = 3,333.33$



5

For its fiscal year-end, Sublyme Corporation reported net income of \$200 million and a weighted average of 50,000,000 common shares outstanding. There are 2,000,000 convertible preferred shares outstanding that paid an annual dividend of \$5. Each preferred share is convertible into two shares of the common stock. The diluted EPS is closest to:  (1 Point)

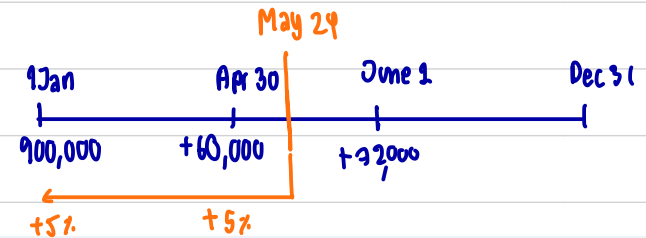
- ☐ \$3.65
- ☐ \$3.52
- ☒ \$3.70
- ☐ \$3.80

$$\text{Diluted EPS} = \frac{200}{50 + (2 \times 2)} = \$3.70 / \text{share}$$

6

When calculating diluted EPS, which of the following securities in the capital structure increases the weighted average number of common shares outstanding without affecting net income available to common shareholders?  (1 Point)

- ☒ Stock options.
- ☐ Convertible debt that is dilutive. X
- ☐ Convertible preferred stock that is dilutive.



7

For the year ended December 31, 2021, Norstar Industries reported net income of \$655,000. At January 1, 2021, the company had 900,000 ordinary shares outstanding. The following changes in the number of shares occurred during 2021:

April 30 Sold 60,000 shares in a public offering. May 24 Declared and distributed a bonus issue of 5%. June 1 Issued 72,000 shares as part of the consideration for the purchase of assets from a subsidiary.

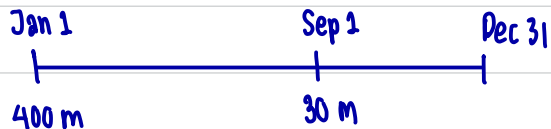
Basic EPS is closest to:  (1 Point)

- ☐ \$0.73
- ☒ \$0.64
- ☐ \$0.67

$$\begin{aligned} \# \text{ of shares} &= \left( 900,000 \times 1.05 \right) + \left( \frac{8}{12} \times 60,000 \times 1.05 \right) + \left( \frac{7}{12} \times 72,000 \right) \\ &= 991,200 \end{aligned}$$

$$\text{Basic EPS} = \frac{655,000}{991,200} = \$0.66 / \text{share}$$





8

At December 31, 2021, the financial statements of North Industries included the following:

Net income for 2021 \$560million

\* Bonds payable, convertible into 36 million ordinary shares

Ordinary shares:

✓ Shares outstanding on January 1 400million

\* Treasury shares purchased for cash on September 1 30million

**Additional data:**

The effective interest rate was 10% and the unamortized balance of the bonds was approximately \$300 million on January 1. The tax rate for 2021 was 20%.

Basic EPS is closest to:

☐ (1 Point)

☐ \$1.50

☒ \$1.44

☐ \$1.37

☐ \$1.40

$$\# \text{ of shares} = 400 - \left( 30 \times \frac{4}{12} \right) = 390$$

$$\text{Basic EPS} = \frac{560}{390} = \$1.436 / \text{share}$$

9

At December 31, 2021, the financial statements of North Industries included the following:

Net income for 2021 \$560million

Bonds payable, convertible into 36 million ordinary shares

Ordinary shares:

Shares outstanding on January 1 400million

Treasury shares purchased for cash on September 1 30million

**Additional data:**

The effective interest rate was 10% and the unamortized balance of the bonds was approximately \$300 million on January 1. The tax rate for 2021 was 20%.

Diluted EPS is closest to: ☐ (1 Point)

☐ \$1.50

☐ \$1.44

☒ \$1.37

☐ \$1.40

$$\text{After-tax Interest saving} = 300 \times 10\% \times (1 - 20\%) = 24$$

$$\text{Diluted EPS} = \frac{560 + 24}{390 + 36} = \$1.371 / \text{share}$$