

SOLUTIONS TO END-OF-CHAPTER QUESTIONS CHAPTER 8

► RECALL AND REVIEW

► Question 8.1

In addition to a potential decrease in the productivity of both operational managers and other employees, the following factors beyond management control may have played a role in the decline in the gross profit percentage in 2021:

- A fall in selling prices as a result of market- or economy-related factors such as a recession or other market downturn.
- A rise in the cost of materials and in the cost of other inputs and services.
- Industry-wide changes such as higher competition or substitute goods.

► Question 8.2

Random companies cannot be compared with each other. Before making any comparisons between companies, we must make sure that they are truly comparable. The companies being compared should be in the same sector/industry, of similar size, operate in similar locations and have similar accounting year ends in order for their results to be comparable.

►► DEVELOP YOUR UNDERSTANDING

►► Question 8.3

	2021 Calculation	2021 Ratio	2020 Calculation	2020 Ratio
Gross profit %	$£18,711/£34,650 \times 100\%$	54.00%	$£15,267/£29,360 \times 100\%$	52.00%
Operating profit %	$£9,702/£34,650 \times 100\%$	28.00%	$£7,634/£29,360 \times 100\%$	26.00%
Profit before tax %	$£9,102/£34,650 \times 100\%$	26.27%	$£7,059/£29,360 \times 100\%$	24.04%
Profit after tax %	$£6,920/£34,650 \times 100\%$	19.97%	$£5,365/£29,360 \times 100\%$	18.27%
Non-current asset turnover	$£34,650/£21,655$	£1.60	$£29,360/£18,820$	£1.56
Revenue per employee	$£34,650/275$	£126,000	$£29,360/250$	£117,440
Operating profit per employee	$£9,702/275$	£35,280	$£7,634/250$	£30,536
Earnings per share	$£6,920/20,000 \times 100$ pence	34.6p	$£5,365/18,500 \times 100$ pence	29.0p
Dividends per share	$£4,400/20,000 \times 100$ pence	22.0p	$£3,700/18,500 \times 100$ pence	20.0p
Dividend pay-out ratio	$22.0/34.6 \times 100\%$	63.58%	$20.0/29.0 \times 100$ pence	68.97%
Dividend cover	$£6,920/£4,400$	1.57 times	$£5,365/£3,700$	1.45 times

» Question 8.4

As DD plc has preference shares in issue, preference dividends will need to be deducted from the profit for the year before earnings per share can be calculated.

Preference dividends for the year ended 30 June 2021: 50 pence \times 4% = 2 pence per share \times 22m shares = £440,000

Preference dividends for the year ended 30 June 2020: 50 pence \times 4% = 2 pence per share \times 20m shares = £400,000

	2021 Calculation	2021 Ratio
Earnings per share	$(£8,622,350 - £440,000)/37,192,500 \times 100$ pence	22.00 pence
Dividends per ordinary share	$£3,347,325/37,192,500 \times 100$ pence	9.00 pence
Dividend pay-out ratio	$9.0/22 \times 100\%$	40.91%
Dividend cover	$(£8,622,350 - £440,000)/£3,347,325$	2.44 times
Dividend yield*	$9.0 \text{ pence}/325 \text{ pence} \times 100\%$	2.77%
Annual growth in share price	$(325 - 260)/260 \times 100\%$	25.00%

* Using the end of year share price. You could also use the average share price ((share price at the end of the year + the share price at the beginning of the year) \div 2) for the year to calculate this figure.

	2020 Calculation	2020 Ratio
Earnings per share	$(£7,241,330 - £400,000)/36,197,500 \times 100$ pence	18.90 pence
Dividends per ordinary share	$£2,895,800/36,197,500 \times 100$ pence	8.00 pence
Dividend pay-out ratio	$8.0/18.9 \times 100\%$	42.33%
Dividend cover	$(£7,241,330 - £400,000)/£2,895,800$	2.36 times
Dividend yield*	$8.0 \text{ pence}/260 \text{ pence} \times 100\%$	3.08%
Annual growth in share price	$(260 - 220)/220 \times 100\%$	18.18%

* Using the end of year share price. You could also use the average share price ((share price at the end of the year + the share price at the beginning of the year) \div 2) for the year to calculate this figure. This would give a dividend yield for 2021 of 3.08% ($9.00 \div ((325 + 260)/2)$) and for 2020 of 3.33% ($8.00 \div ((260 + 220)/2)$).

» Question 8.5

(a) Green plc EPS = £250,000 profit for the year \div 1,000,000 ordinary shares in issue = 25.00p
 Blue plc EPS = (£400,000 profit for the year – £50,000 preference dividends) \div 2,000,000 ordinary shares in issue = 17.50p

(b) Although total profit is a key figure for assessing the financial performance of individual companies, EPS is a relative measure of the profit that one ordinary share of every company has earned for its holder. EPS is a ratio and so provides a readily comparable figure with which to compare the profits of different companies. The total profit of different companies will differ due to their size, geographical spread, industry sector and differing size so the total profit figures for different companies are not a relative measure and so are not immediately comparable in the same way.

- (c) Green plc P/E ratio = 250 pence (current market price) ÷ 25.00 pence (earnings per share) = 10
 Blue plc P/E ratio = 350 pence (current share price) ÷ 17.50 pence (earnings per share) = 20
- Blue plc has a higher P/E ratio. This implies that the market is more optimistic about the future of Blue plc in comparison to that of Green plc. That is why investors are currently willing to pay 20 times EPS to purchase one share in Blue plc while they are only willing to pay 10 times EPS to purchase one share in Green plc.

» Question 8.6

Ratios

	2021		2020	
	Calculation	Ratio	Calculation	Ratio
Gross profit %	$750/2,500 \times 100\%$	30.00%	$825/2,750 \times 100\%$	30.00%
Operating profit %	$375/2,500 \times 100\%$	15.00%	$495/2,750 \times 100\%$	18.00%
Profit before tax %	$175/2,500 \times 100\%$	7.00%	$275/2,750 \times 100\%$	10.00%
Profit after tax %	$140/2,500 \times 100\%$	5.60%	$220/2,750 \times 100\%$	8.00%

Comments on the ratios calculated for Milner plc:

- While sales have fallen, the gross profit % has held up across the two years, remaining at 30.00%. Milner plc has been able to maintain its gross margin despite the reduction in sales.
- Further investigations would be required to identify the reasons for the fall in sales in 2021.
- Operating profit % has fallen from 18.00% in 2020 to 15.00% in 2021. The reduction in sales means that there is less gross profit to absorb the operating costs of the company which have not fallen in line with sales.
- This tells us that at least some of the operating costs are fixed and cannot be reduced easily in the short term.
- This fall in operating profit has also reduced both profit before tax and profit after tax and the ratios based upon them.
- Tax as a % of profit before tax has remained at 20% ($(£175 - £140) \div £175 \times 100\%$) and ($(£275 - £220) \div £275 \times 100\%$) so the fall in profit after tax % was not caused by an increase in the tax rate.

» Question 8.7

(a)

	2021 £m	2020 £m
Profit before interest and tax	$140 + 35 + 15 = 190$	$120 + 30 + 12 = 162$
Capital employed	$920 - 150 = 770$	$985 - 145 = 840$

Return on capital employed is calculated by dividing the profit before interest and tax by capital employed (equity + long-term borrowings). Total assets – current liabilities = equity + non-current liabilities, so this is equivalent to (equity + long-term borrowings). Profit before interest and tax is calculated by adding profit for the year to the income tax charge and the interest expense. Based on these figures, return on capital employed for the two years is:

2021: $(£190 \text{ profit before interest and tax} \div £770 \text{ capital employed}) \times 100\% = 24.68\%$

2020: $(£162 \text{ profit before interest and tax} \div £840 \text{ capital employed}) \times 100\% = 19.29\%$

(b) ROCE has increased by more than 5% from 2020 to 2021. The increase is due to two factors: a sharp rise in profit before interest and tax and a fall in capital employed. The company seems to be using its resources more efficiently to generate profit.

(c) The limitations of the return on capital employed ratio:

- Capital employed is based on figures in the financial statements and therefore certain valuable assets such as internally generated goodwill, the knowledge and skills of the employees and other unrecorded intangible assets are not included in the calculation of capital employed even though they will certainly have contributed to the profits generated.
- Certain figures used in calculating capital employed are historical numbers which are not up to date. Thus, the figure for equity is based on the cash raised from the issue of shares many years ago and retained profits that were earned in previous years. Similarly, borrowings might have been taken out up to 10 years ago. These historical figures are being divided into profits that are presented in terms of today's money values, so the comparison of current profits with out-of-date numbers from the past produces a result that fails to compare like with like.

»» TAKE IT FURTHER

»» Question 8.8

Ratio calculations and ratios: Taylor Wimpey plc

	2019 Calculation	2019 Ratio	2018 Calculation	2018 Ratio
Gross profit %	$£1,044.1/£4,341.3 \times 100\%$	24.05%	$£1,074.5/£4,082.0 \times 100\%$	26.32%
Operating profit %	$£856.8/£4,341.3 \times 100\%$	19.74%	$£828.8/£4,082.0 \times 100\%$	20.30%
Profit before tax %	$£835.9/£4,341.3 \times 100\%$	19.25%	$£810.7/£4,082.0 \times 100\%$	19.86%
Profit after tax %	$£673.9/£4,341.3 \times 100\%$	15.52%	$£656.6/£4,082.0 \times 100\%$	16.09%
Non-current asset turnover	$£4,341.3/£188.8$	£22.99	$£4,082.0/£196.6$	£20.76
Revenue per employee	$£4,341.3/5,883$	£737,940	$£4,082.0/5,442$	£750,092
Operating profit per employee	$£856.8/5,883$	£145,640	$£828.8/5,442$	£152,297
Earnings per share	$£673.9/3,283.108 \times 100 \text{ pence}$	20.53p	$£656.6/3,278.055 \times 100 \text{ pence}$	20.03p
Dividends per share	$£600.5/3,283.108 \times 100 \text{ pence}$	18.29p	$£544.7/3,278.055 \times 100 \text{ pence}$	16.62p
Dividend pay-out ratio	$18.29/20.53 \times 100\%$	89.09%	$16.62/20.03 \times 100\%$	82.98%
Dividend cover	$£673.9/£600.5$	1.12 times	$£656.6/£544.7$	1.21 times

Ratio calculations and ratios: Persimmon plc

	2019 Calculation	2019 Ratio	2018 Calculation	2018 Ratio
Gross profit %	$\text{£}1,130.7/\text{£}3,649.4 \times 100\%$	30.98%	$\text{£}1,179.9/\text{£}3,737.6 \times 100\%$	31.57%
Operating profit %	$\text{£}1,029.4/\text{£}3,649.4 \times 100\%$	28.21%	$\text{£}1,082.7/\text{£}3,737.6 \times 100\%$	28.97%
Profit before tax %	$\text{£}1,040.8/\text{£}3,649.4 \times 100\%$	28.52%	$\text{£}1,090.8/\text{£}3,737.6 \times 100\%$	29.18%
Profit after tax %	$\text{£}848.8/\text{£}3,649.4 \times 100\%$	23.26%	$\text{£}886.4/\text{£}3,737.6 \times 100\%$	23.72%
Non-current asset turnover	$\text{£}3,649.4/\text{£}420.7$	£8.67	$\text{£}3,737.6/\text{£}436.0$	£8.57
Revenue per employee	$\text{£}3,649.4/5,097$	£715,990	$\text{£}3,737.6/4,809$	£777,209
Operating profit per employee	$\text{£}1,029.4/5,097$	£201,962	$\text{£}1,082.7/4,809$	£225,140
Earnings per share	$\text{£}848.8/318.902 \times 100$ pence	266.16p	$\text{£}886.4/317.560 \times 100$ pence	279.13p
Dividends per share	$\text{£}749.5/318.902 \times 100$ pence	235.03p	$\text{£}746.3/317.560 \times 100$ pence	235.01p
Dividend pay-out ratio	$235.03/266.16 \times 100\%$	88.30%	$235.01/279.13 \times 100\%$	84.19%
Dividend cover	$\text{£}848.8/\text{£}749.5$	1.13 times	$\text{£}886.4/\text{£}746.3$	1.19 times

Ratio calculations and ratios: Crest Nicholson plc

	2019 Calculation	2019 Ratio	2018 Calculation	2018 Ratio
Gross profit %	$\text{£}183.5/\text{£}1,086.4 \times 100\%$	16.89%	$\text{£}246.9/\text{£}1,121.0 \times 100\%$	22.02%
Operating profit %	$\text{£}114.6/\text{£}1,086.4 \times 100\%$	10.55%	$\text{£}182.0/\text{£}1,121.0 \times 100\%$	16.24%
Profit before tax %	$\text{£}102.7/\text{£}1,086.4 \times 100\%$	9.45%	$\text{£}168.7/\text{£}1,121.0 \times 100\%$	15.05%
Profit after tax %	$\text{£}82.5/\text{£}1,086.4 \times 100\%$	7.59%	$\text{£}136.6/\text{£}1,121.0 \times 100\%$	12.19%
Non-current asset turnover	$\text{£}1,086.4/\text{£}108.2$	£10.04	$\text{£}1,121.0/\text{£}109.8$	£10.21
Revenue per employee	$\text{£}1,086.4/1,005$	£1,080,995	$\text{£}1,121.0/1,016$	£1,103,346
Operating profit per employee	$\text{£}114.6/1,005$	£114,030	$\text{£}182.0/1,016$	£179,134
Earnings per share	$\text{£}82.5/256.921 \times 100$ pence	32.11p	$\text{£}136.6/256.921 \times 100$ pence	53.17p
Dividends per share	$\text{£}84.7/256.921 \times 100$ pence	32.97p	$\text{£}84.7/256.921 \times 100$ pence	32.97p
Dividend pay-out ratio	$32.97/32.11 \times 100\%$	102.68%	$32.97/53.17 \times 100\%$	62.01%
Dividend cover	$\text{£}82.5/\text{£}84.7$	0.97 times	$\text{£}136.6/\text{£}84.7$	1.61 times

»» Question 8.9**Taylor Wimpey plc**

All profitability percentages for the company in 2019 are lower than the profitability percentages in 2018.

Gross profit % in 2019 has fallen in comparison to 2018 from 26.32% to 24.05%. Comments on this fall:

- Is this fall due to lower selling prices or higher cost prices or a combination of both? What other factors might have led to this fall in gross profit %?
- Average price per home sold: £276,188 (£4,341.4m/15,719) v. £273,354 (£4,082.0m/14,933), a rise of 1.04%.

- However, the cost of each home sold was £209,759 (£3,297.2m/15,719) v. £201,400 (£3,007.5m/14,933), a rise of 4.15%.
- Costs are thus rising more quickly than selling prices hence the fall in gross profit %.
- To find out why the company has suffered this adverse result, it would be necessary to consult the annual report and accounts where the reasons for this fall will be presented to shareholders.
- Pages 14, 21 and 54 consider house price inflation (selling prices are not rising in the year to 31 December 2019) against the rising costs of building houses.
- These rising costs arose from skill shortages (pages 5, 15 and 20). In an attempt to reduce these skill shortages, the group has set up in-house apprentice schemes to train the next generation of craftspeople. Inevitably, these schemes have cost the company money in the short term (pages 15 and 21) but will benefit the organisation in the longer term.
- Continued investment in both the quality of the houses constructed and the customer experience (page 54) has also added costs which have reduced the gross margin and gross margin %.
- Land costs per completed unit were 2.9% higher in 2019 compared to 2018 (page 54).
- Political and economic uncertainty (pages 14 and 19) resulted in increasing caution in the market, particularly in London and the South-East and the higher price units produced (page 19), leading to softening of selling prices.
- Thus, a combination of increased costs and limited increases in selling prices reduced the gross profit % of the group.

Operating profit %, profit before tax % and profit after tax %:

- Operating profit %, profit before tax % and profit after tax % in 2019 are all lower than in 2018
- However, while gross profit % has fallen 8.62% $((24.05\% - 26.32\%)/26.32\% \times 100\%)$, operating profit % has only fallen 2.76% while profit before tax % is down 3.17% and profit after tax % is lower by 3.54%.
- The statement of profit and loss on page 148 shows net operating expenses of £187.3m in 2019 v. £245.7m in 2018, a fall of 23.77%. Lower net operating expenses will have mitigated the impact of lower gross profit on the operating profit resulting in the lower fall in the operating profit % compared to the fall in the gross profit %.
- Note 6 to the financial statements on page 160 shows a fall of £0.8m in administration and other expenses, but the main contributor to the fall in net operating expenses is exceptional items which were a £46.1m charge in 2018 compared to £14.3m of income in 2019.
- A rise in finance costs from £26.3m to £31.8m and a rise in the taxation rate (the income tax charge as a % of profit before tax) from 19.01% to 19.38% help to explain the increased fall in the profit before tax and profit after tax %s compared to the fall in operating profit %.

Comments on the performance of Taylor Wimpey plc from the point of view of the shareholders:

- Earnings per share have increased slightly despite the reduction in profits.
- This slight increase arises from the fact that the number of shares in issue has increased more slowly than the increase in profit for the year.
- The company has paid a higher dividend for the year as an indicator both of the directors' confidence in the business and of the positive outlook for 2020.

- The dividend cover has fallen in 2019 from 1.21 times to 1.12 times but, given the robust demand for housing and the current housing shortage, revenue and profits should hold up well in the future, justifying the payment of such a high proportion of profits as dividends.
- A dividend cover ratio of less than two times might not be considered a safe level of pay-out for the year but the company has scope to reduce the special dividend (10.7p per share in 2019 v. 10.4p per share in 2018) in future if necessary.
- Shareholders will welcome the rise in the dividend and retain their confidence in the company to bounce back in the next financial year.

Persimmon plc

All four profitability %s have fallen in 2019 when compared to 2018.

Gross profit % has reduced to 30.98% in 2019 from 31.57% in 2018. Comments on this fall:

- Is this fall in the gross profit % due to lower selling prices or higher cost prices or a combination of both? What other factors might have led to this fall in gross profit %?
- Average selling price per home sold was: £230,173 (£3,649.4m/15,855) in 2019 v. £227,224 (£3,737.6m/16,449) in 2018, a rise of 1.30%.
- Average cost price per home sold rose to £158,858 (£2,518.7m/15,855) in 2019 v. £155,493 (£2,557.7m/16,449) in 2018, a rise of 2.16%.
- As with Taylor Wimpey, build cost pressure is an issue (pages 6 and 25) due to skills shortages (pages 11 and 25).
- In an attempt to reduce these skill shortages, the group has set up in-house apprentice schemes to train the next generation of craftspeople (pages 11 and 25). Inevitably, these schemes will have cost the company money in the short term but will benefit the organisation in the longer term.
- The annual report places great emphasis on the significant investment made in the customer care improvement plan (pages 2, 3, 5, 7, 13, 14, 22, and 29) which prioritises customer care over volume growth. Negative coverage in previous years of faults in construction has focused the directors' minds on product improvement over profit increases and the additional costs involved in this improvement plan will also have affected gross margins on homes sold.
- Similarly, there is now a focus on delivering consistently higher build quality and improving the standard and responsiveness of service that customers receive (page 3).
- Elevated levels of uncertainty relating to both the political outlook and economic prospects have resulted in customers being more reluctant to spend on new homes (pages 5, 10 and 24) which will have impacted upon selling prices.
- Thus, a combination of increased costs and limited increases in selling prices reduced the gross profit % of the group.

Falling operating profit %, profit before tax % and profit after tax %:

- The fall in the gross profit % has fed through into these profit lines.
- While gross profit % fell by 1.87%, operating profit % is down 2.62%, profit before tax % is down 2.31% and profit after tax % is down 1.94%.
- Operating expenses rose from £102.8m in 2018 to £110.1m in 2019, a rise of 7.10%.

- Operating expenses are 3.02% of revenue in 2019 and 2.75% of revenue in 2018. A combination of falling revenue and gross profit and rising expenses explains the fall in the operating profit % in 2019.
- Net finance income of £11.4m in 2019 v. £8.1m in 2018 explains the smaller fall in PBT % compared to the fall in the operating profit %.
- Notably, profit before tax % is higher than operating profit % in both years indicating that finance income exceeds finance expense as a result of surplus cash being invested in interest-generating assets to produce additional returns for shareholders.
- The income tax charge as a % of profit before tax is 18.45% in 2019 v. 18.74% in 2018, hence the reduced fall in PAT% compared to both operating profit % and PBT %.

Comments on the performance of Persimmon from the point of view of the shareholders:

- Shareholders will be pleased with the efforts to tackle construction faults and the focus on the customer care improvement plan and build quality as these will guarantee future sales and future earnings for the shareholders.
- Earnings per share are down 4.65% in 2019 compared to 2018.
- However, dividends per share remain steady at 235 pence per share.
- Current dividends are covered 1.12 times by profit after tax and the pay-out ratio is high at 88.30%. Given the political and economic uncertainty, the customary strength of the housing market may not sustain rising profits for the company, so dividends may fall in the future while the economy settles down post Brexit. There is plenty of scope to reduce dividends should the need arise.
- Shareholders will be pleased with the steady dividend, but may question the group's ability to maintain or increase this dividend into the future.

Crest Nicholson plc

All profitability %s have fallen in 2019.

Gross profit % has fallen from 22.02% in 2018 to 16.89% in 2019. Comments on this fall:

- Is this fall in the gross profit % due to lower selling prices or higher cost prices or a combination of both? What other factors might have led to this fall in gross profit %?
- Average selling price per home was: £373,077 (£1,086.4m/2,912) in 2019 v. £367,782 (£1,121.0m/3,048) in 2018, a rise of 1.44%.
- Average cost price per home sold rose to £310,062 (£902.9m/2,912) in 2019 v. £286,778 (£874.1m/3,048) in 2018, a rise of 8.12%.
- Crest Nicholson's operations take place predominantly in London and the South-East, the areas hardest hit by the difficulties in the housing market in 2019 (pages 4–5, 13 and 28).
- Brexit-related uncertainty weighed heavily on customers' minds (pages 3, 8, 28 and 35).
- There was a significant reduction in house price inflation in London and the South-East during the year (pages 28 and 36) and selling prices had to be reduced in the London area to encourage sales (pages 11 and 36).
- Coupled with build cost inflation (pages 14, 28 and 36), the reduction in selling prices resulted in reduced margins (pages 35 and 36).

- A lack of skilled labour pushed up costs (pages 28 and 35).
- While the weak value of sterling pushed up the prices of imported materials (page 35).
- Reduced operational efficiency (page 14).
- An £18.4m exceptional charge in cost of sales for remedial work on existing buildings (pages 11 and 36) following the Grenfell fire knocked 1.69% off the gross profit % in 2019.
- The fall in the gross profit % in 2019 is thus very much attributable to both a reduction in the growth of selling prices and increased costs.

Falling operating profit %, profit before tax % and profit after tax %:

- The lower year on year gross profit reduced the operating profit % (page 36).
- Sales and marketing costs and central overheads were higher than they needed to be (pages 12 and 14).
- Administration expenses as a % of revenue were 6.00% compared to 5.80% in 2018 (page 36).
- A £3.2m charge for expected future credit losses on receivable interest from a joint venture (page 36) also impacted the operating profit % adversely.
- A fall in the operating profit % of 35.04% in 2019 compares with a fall in profit before tax % of 37.21% and a fall in profit after tax % of 37.74%.
- Profit after tax % reduced further when compared to the fall in the operating profit % as a result of an effective tax rate of 19.67% in 2019 v. 19.03% in 2018 (page 36).

Comments on the performance of Crest Nicholson from the point of view of the shareholders:

- Earnings per share are down 39.61% in 2019 compared to 2018.
- Dividends for 2019 have been held at 33 pence per share.
- Current dividends are not covered by profit after tax. The directors, to indicate their confidence in the company's ability to bounce back from the adverse year and in the strength of the housing market, have decided to dip into retained profits from previous years to reward shareholders.
- Shareholders will be disappointed with the falling profits and falling earnings per share, but will be pleased with the maintenance of the current level of dividend per share and the steps taken by the directors to improve future performance.

»» Question 8.10

Tracking share prices for the week 24 February 2020 to 28 February 2020

	24 Feb pence	25 Feb pence	26 Feb pence	27 Feb pence	28 Feb pence	Average pence
Taylor Wimpey plc	224.30	219.00	212.40	205.30	202.90	212.78
Persimmon plc	3,184.00	3,087.00	3,078.00	2,883.00	2,839.00	3,014.20
Crest Nicholson plc	498.20	479.40	474.00	453.00	452.00	471.32

Dividend yield: Taylor Wimpey: $18.29/212.78 \times 100\% = 8.60\%$

Dividend yield: Persimmon: $235.03/3014.20 \times 100\% = 7.80\%$

Dividend yield: Crest Nicholson: $32.97/471.32 \times 100\% = 7.00\%$

Price/earnings ratio: Taylor Wimpey: $212.78/20.53 = 10.36$

Price/earnings ratio: Persimmon: $3014.20/266.16 = 11.32$

Price/earnings ratio: Crest Nicholson: $471.32/32.11 = 14.68$

Of the three companies, Crest Nicholson has the highest price earnings ratio. Earnings per share in 2019 for Crest Nicholson have been depressed by the factors outlined in the answer to Question 8.9. As a result of an expectation of its ability to bounce back from the disappointments of the current year, the share price has maintained its value despite the fall in earnings. House building is an economy-sensitive activity. When the economy is doing well, house prices rise and building takes place. But when the economy is in recession, consumers save their cash and spend their money on essentials rather than on new houses, so that house prices fall and economic activity in the house-building sector reduces as a result of this weakened demand. The stock market rates all three companies on the basis of what they will achieve in the future rather than on the basis of the short-term dip in results in 2019.

Share prices for the week 25 February to 1 March 2019

	25 Feb pence	26 Feb pence	27 Feb pence	28 Feb pence	1 March pence	Average pence
Taylor Wimpey plc	165.35	170.95	177.00	181.40	179.80	174.90
Persimmon plc	2,352.00	2,396.00	2,452.00	2,433.00	2,433.00	2,413.20
Crest Nicholson plc	379.40	391.40	394.60	390.80	401.40	391.52

Percentage share price changes over the year:

Taylor Wimpey: $(212.78 - 174.90)/174.90 \times 100\% =$ a rise of 21.66%

Persimmon: $(3,014.20 - 2,413.20)/2,413.20 \times 100\% =$ a rise of 24.90%

Crest Nicholson: $(471.32 - 391.52)/391.52 \times 100\% =$ a rise of 20.38%

Total shareholder return over the year:

Dividend yield + share price increase over the past year:

Taylor Wimpey: $8.60\% + 21.66\% = 30.26\%$

Persimmon: $7.80\% + 24.90\% = 32.70\%$

Crest Nicholson: $7.00\% + 20.38\% = 27.38\%$

Persimmon has clearly produced the best total return over the year based on the two weeks reviewed, although all three companies have produced strong total returns for their shareholders.