Carillion: building on shaky ground

Article  (Supplemental Material)

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Carillion: Building on Shaky Ground

Synopsis

Carillion’s rapid and unexpected collapse led to it filing for bankruptcy in January 2018. Its failure raised uncomfortable questions about the role of those expected to adopt a more critical stance, including the Board, the auditors, the Regulators and the government.

The chain of events leading to its bankruptcy was set in motion when a review of the company’s contracts led to a provision of £845m in July 2017\(^1\). The provision was rapidly increased to £1,045m by September\(^2\).

The case focuses on financial analysis and its limits, encouraging students to question the decision usefulness of current financial reporting standards.

Target audience

This case can be used in undergraduate financial reporting and current issues in accounting courses/modules at the postgraduate level.

Learning objectives

1. Analyse the financial performance of Carillion using financial ratio and trend analysis
2. Evaluate the limitations of financial analysis
3. Critically appraise the role of Carillion’s growth strategy on its financial strength
4. Examine the decision usefulness of financial reporting

Discussion questions

1. Were clues present in the company’s financial statements or was the mounting crisis hidden from analysts and the public? (LO1)
2. Evaluate the limitations of financial analysis (LO2)
3. What role did growth by acquisition have on Carillion’s financial condition? (LO3)
4. What was the contributory role of the current approach to accounting for goodwill on acquisition? (LO3/4)
5. Is it the case that corporate financial reporting is no longer a useful basis for decision-making? (LO4)

Theory discussion

General ratio analysis frameworks in most accounting texts may be used to discuss the financial performance of Carillion in the period leading to its demise. The ratio analysis is organised as follows with relevant ratios used to illustrate Carillion’s financial performance in each area:

- Company performance
- Solvency and liquidity
- Control of working capital
- Return on investment and risk

The analysis follows the structure presented in Chapter 29 of

The interrelationship between financial analysis and valuation is explored in more advanced textbooks. For example,

\(^1\) Carillion plc, 2017, first-half trading update 10 July 2017
\(^2\) Carillion plc, Financial results for the six months to 30 June 2017, 29 September 2017
The mechanics of ratio analysis are supplemented with the two papers which have been recommended for students to read. The papers are not essential to the discussion but they do help frame the background to the discussion. Both papers critique the move from an approach which seeks to match income to a balance sheet valuation model.

In the first, Amel-Zadeh, Meeks G., & Meeks, J., (2016) the controversial history of accounting for mergers and acquisitions is explained. This background helps students to understand how different approaches to accounting affect the aim of decision usefulness.

In the second, Lev (2018) explores the utility of the current mode of financial reporting and whether it meets the criteria for decision usefulness sought by the IASB conceptual framework.

Teaching strategy
The case can be taught both face to face and online. Expected teaching time face to face is 120 minutes.

It focuses on the mechanics of financial analysis in the first instance but quickly moves on to reflecting on the basis of preparation of financial statements and the usefulness of current financial reporting for decision making purposes. If instructors choose to use the case with students who are learning financial analysis they might use the case to demonstrate the application of ratio analysis and limit the discussion to Q1-3.

**IM Table 1: Suggested lesson plan (Minutes)**

<table>
<thead>
<tr>
<th>Topic</th>
<th>Content</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>Understand the importance of financial analysis of businesses</td>
<td>10 minutes</td>
</tr>
<tr>
<td>Financial ratio analysis</td>
<td>Use the financial statements provided in the case to analyse Carillion’s performance</td>
<td>30 minutes</td>
</tr>
<tr>
<td></td>
<td>Q1 Were the clues present in the company’s financial statements or was the mounting crisis hidden from analysts and the public? (LO1)</td>
<td>15 minutes</td>
</tr>
<tr>
<td></td>
<td>Q2 Evaluate the limitations of financial analysis (LO2)</td>
<td>10 minutes</td>
</tr>
<tr>
<td>Growth strategies</td>
<td>Q3 What role did growth by acquisition have on Carillion’s financial condition? (LO3)</td>
<td>10 minutes</td>
</tr>
<tr>
<td>Accounting standards</td>
<td>Q4 What was the contributory role of the current approach to accounting for goodwill on acquisition? (LO3/4)</td>
<td>20 minutes</td>
</tr>
<tr>
<td></td>
<td>Q5 Is it the case the corporate financial reporting is no longer a useful basis for decision-making? (LO4)</td>
<td>15 minutes</td>
</tr>
<tr>
<td>Wrap up</td>
<td>Summarise lessons learned</td>
<td>10 minutes</td>
</tr>
</tbody>
</table>
Before class

Students undertake a quiz using the financial statement ratios to ensure that they have mastered the techniques. (It is assumed this is a refresher rather than the first time they have undertaken financial analysis).

Students are asked to read the case along with the two papers in preparation for the session. Alternatively, video presentations of the papers can be posted to the virtual learning environment (VLE) for preparation

- Baruch Lev presentation at [ICAEW Information for Better Markets Conference 2017](#)
- Geoff Meeks presentation at [ICAEW Information for Better Markets Conference 2015](#)

During class

Students perform ratio analysis using the data presented in the case and offer a commentary. This helps students develop their ratio analysis skills over a multi year dataset. If you are short of time you could assign students to work groups of ratios and share their results with the rest of the group.

Alternatively, the analysis could be prepared in advance of class and students might be asked to write and submit a short reflection or group presentation on the financial health of Carillion in the years leading up to its failure. (The peer review function in many VLEs is useful for students learning to compose feedback).

**Q1 Were the clues present in the company’s financial statements or was the mounting crisis hidden from analysts and the public? (LO1)**

In this section polling software could be used to rank students’ perceptions of importance of Carillion’s ratios.

Question for poll:
Rank the ratios in order of usefulness for evaluating Carillion’s underlying performance
1. company performance
2. solvency and liquidity
3. control of working capital
4. return on investment and risk

Depending on the ranking students can then be asked to justify their views using the ratios they have calculated as evidence. This makes the discussion more lively than going through every possible ratio.

**Q2 Evaluate the limitations of financial analysis (LO2)**

The discussion should then turn to the limitations of financial analysis. This can be built upon using the following three questions and collaborative tools e.g. Padlet, googledocs. Each student or group could be asked to contribute at least one posting which is then discussed with the class.

- What are the limitations of ratio analysis?
- Why do they occur?
- How can they be addressed?

**Q3 What role did growth by acquisition have on Carillion’s financial condition? (LO3)**
This question starts to require students to make links between their prior learning in relation to financial accounting and the case study encouraging reflection upon the magnitude of accounting estimates involved.

(You might include a short Youtube video on IFRS 3 onto your VLE for a recap on accounting for acquisition e.g. [https://youtu.be/4k9awiViuFg](https://youtu.be/4k9awiViuFg) )

The two topics to be discussed in this section comprise goodwill on acquisition and pension liabilities.

**Q4 What was the contributory role of the current approach to accounting for goodwill on acquisition? (LO3/4)**

Using the Amel-Zadeh et al. (2016) paper students will be able to discuss the current accounting for goodwill in the context of the historical development of accounting for goodwill.

The important point is to understand that the accounting approach has moved from income statement matching to balance sheet valuation. In addition, the current IFRS consultation ([International Accounting Standards Board, 2020](https://www.iasb.org.uk)) indicates that the topic is far from settled so discussions around alternatives and responses to the consultation are appropriate extension activities or potential assignments.

**Q5 Is it the case the corporate financial reporting is no longer a useful basis for decision-making? (LO4)**

Whilst this question can be answered in a straightforward manner by drawing on the answers of Q1-3, a deeper contextual understanding is gained if students draw on the Lev (2018) paper and the arguments it presents.

Rather than simply encouraging students to critique current financial reporting norms the instructor could encourage students to present alternatives. This might be done via a short group activity or a break out room if online.

Likely questions for the instructor include – who can make better decisions as a result of the solution presented and how?

**Wrap up**

Play short news video - How the City Failed to Spot Carillion’s Downfall (3 minutes 15 secs) [https://youtu.be/LH8anJTzT7A](https://youtu.be/LH8anJTzT7A)

Key points to take away:
- Financial analysis can provide some insight into performance but needs to be placed in the context of the economic environment and sector
- Acquisitive companies often acquire additional obligations in the process of acquisition e.g. pension liabilities
- Analysts often make adjustments as part of their analysis to incorporate debt-like instruments, exclude goodwill on acquisition etc.
- Accounting for goodwill on acquisition continues to be problematic and may be reviewed further upon conclusion of the current consultation ([International Accounting Standards Board, 2020](https://www.iasb.org.uk))
- The move to valuation based accounting has increased reliance on management estimates and introduced more volatility into the income statement
After class

Instructors might decide to give students a follow-up assignment based on the Epilogue below. Possible topics could include the following:

- To what extent did the Financial Reporting Council (FRC) fail investors by not following up its initial concerns? How is this likely to be addressed by the Kingman (2018) report suggestions?

- (If the FRC has reported back on its investigations) Analyse the outcome of the FRC’s investigations into KPMG’s audit of Carillion. To what extent is this likely to be addressed by recent measures introduced by Big Four firms in the UK audit market?

- Where is the boundary between accounting estimates and misleading investors?

Sample answers to discussion questions

Q1 Were clues present in the company’s financial statements or was the mounting crisis hidden from analysts and the public? (LO1)

The financial analysis performed in this section focuses on historic analysis of Carillion only as the question asks about Carillion’s financial statements. Broader sector analysis is encouraged to address the limitations identified in Q2.

The purpose of financial analysis is to provide insight into the financial performance and financial position of a company over time and/or in relation to other companies. It is also important to be aware of the limitations of ratio analysis. Such limitations may include the reliance on historic data, and the visibility of seasonal effects and changes to accounting policies.

Financial ratios are typically grouped into the following categories. Whilst the ratios discussed are by no means comprehensive a broad range is covered below. Students who have calculated additional ratios are encouraged to justify their choice and the insights derived from the ratio in question:

- Company performance
- Solvency and liquidity
- Control of working capital
- Return on investment and risk

Based on the data presented in the case the following observations would be expected from students.

Company performance

**IM Table 2: Company performance ratios**

<table>
<thead>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue growth (% year on year)</td>
<td>-7.3%</td>
<td>-0.2%</td>
<td>12.6%</td>
<td>13.7%</td>
<td></td>
</tr>
<tr>
<td>Gross Profit % (Gross profit/revenues)</td>
<td>8.8%</td>
<td>8.5%</td>
<td>8.0%</td>
<td>7.4%</td>
<td>6.7%</td>
</tr>
<tr>
<td>Operating Profit % (Profit before interest and tax/revenues)</td>
<td>4.4%</td>
<td>3.7%</td>
<td>4.9%</td>
<td>4.6%</td>
<td>3.5%</td>
</tr>
</tbody>
</table>

Gross profit margin declined over 5 year period and dropped by 1.3% in the final 2 years whilst revenues increased. This implies that the company was subject to increased costs of sales and possibly moving into less profitable work. The operating profit margin is below 5% over the period leaving the company vulnerable to short term fluctuations in business which are common in the construction
industry. The semi-fixed cost base is reflected in the reduction in gross profit % being mirrored in the operating profit %.

The continued quest for revenue growth was reported as a factor which led to the adoption of aggressive accounting practices³.

How does this compare with the reporting of underlying operating profit by the company⁴?

**IM Table 3: Reported operating profit v underlying operating profit**

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reported operating profit (Case Exhibit 1)</td>
<td>209.4</td>
<td>181.9</td>
</tr>
<tr>
<td>Underlying operating profit (Case Exhibit 3)</td>
<td>259.0</td>
<td>268.4</td>
</tr>
</tbody>
</table>

The purpose of reporting underlying operating profit is to assist users of the accounts to understand the year on year performance of the company. Many companies report adjusted underlying operating profits each year in addition to their actual operating profits, stripping out one-off items which are argued not to contribute to the underlying performance. However, such adjustments can have a substantial effect on financial performance and if they are a recurrent feature the costs are arguably part of the ongoing operations (IM Table 2 above). IM Table 3 indicates that the reported operating profit was lower than indicated by the divisional performance disclosure (Case Exhibit 3).

The Joint committee report stated the divisional performance (Case Exhibit 3):

‘while unspectacular at around 5–6%, were still “attractive relative to peers”’⁵

**IM Table 3: Return on capital employed (ROCE)**

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ROCE (Profit before interest and tax/capital employed)</td>
<td>8.9%</td>
<td>7.6%</td>
<td>9.6%</td>
<td>10.0%</td>
<td>8.2%</td>
</tr>
<tr>
<td>Asset turnover (Revenue/(Total assets – current liabilities)</td>
<td>2.02</td>
<td>2.06</td>
<td>1.95</td>
<td>2.19</td>
<td>2.35</td>
</tr>
<tr>
<td>Profit margin (Profit before interest and tax/revenue)</td>
<td>4.4%</td>
<td>3.7%</td>
<td>4.9%</td>
<td>4.6%</td>
<td>3.5%</td>
</tr>
</tbody>
</table>

ROCE can be broken into asset turnover and profit margin. The asset turnover ratio is industry specific and varies significantly between capital intensive and labour intensive industries. This ratio has limited utility in relation to Carillion due to the large amount of goodwill on acquisition included in non-current assets (Case Exhibit 1). Investors typically use earnings before interest, tax, depreciation and amortisation based ratios to adjust for this effect (IM Table 12).

**Solvency and Liquidity**

Liquidity ratios consider whether the liabilities are covered by assets which can be realised when the liabilities fall due. These ratios provide a quick way of evaluating the company’s solvency. In

³ [https://publications.parliament.uk/pa/cm201719/cmselect/cmworpen/769/769.pdf](https://publications.parliament.uk/pa/cm201719/cmselect/cmworpen/769/769.pdf) p.32
⁴ Carillion plc, 2016 Annual Report p.38
⁵ [https://publications.parliament.uk/pa/cm201719/cmselect/cmworpen/769/769.pdf](https://publications.parliament.uk/pa/cm201719/cmselect/cmworpen/769/769.pdf) p.36
Carillion’s case there was little inventory therefore the current ratio difference between current and quick ratios is small.

**IM Table 4: Liquidity ratios**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Current ratio (CA/CL)</td>
<td>1.09</td>
<td>1.01</td>
<td>1.03</td>
<td>1.02</td>
<td>1.02</td>
</tr>
<tr>
<td>Quick ratio (CA-Inventory/CL)</td>
<td>1.06</td>
<td>0.98</td>
<td>1.00</td>
<td>0.99</td>
<td>0.99</td>
</tr>
</tbody>
</table>

The ratios in IM Table 4 indicate that Carillion’s liquidity was stretched and it was not able to cover its current liabilities with its current assets.

**IM Table 5: Borrowings**

<table>
<thead>
<tr>
<th></th>
<th>£m</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total net borrowings</td>
<td>155.8</td>
<td>215.2</td>
<td>177.3</td>
<td>169.8</td>
<td>218.9</td>
<td></td>
</tr>
<tr>
<td>Average net borrowings</td>
<td>344.1</td>
<td>490.6</td>
<td>450.7</td>
<td>538.9</td>
<td>586.5</td>
<td></td>
</tr>
</tbody>
</table>

The level of net borrowings can help users of the accounts to better understand how the company is financed. However, caution should be applied as some companies like Carillion have seasonal borrowing needs which result in the year end figures not reflecting the average requirements of the business. This is typically due to year end management of borrowings/invoicing or seasonality in the business. The result is that the year end gearing ratios may not reflect the borrowing patterns of the company and that adjustments are required to ratios to reflect the underlying borrowings.

The company defined average net borrowings as follows:

‘Average net borrowing is calculated as the average of the net borrowing at the end of the previous financial year and each of the month end net borrowing figures as reported to the Board in the current financial year.’

**IM Figure 1: Comparison of year end to average net borrowings**

![Net borrowings (£m)](image)

**Source:** devised by author from Carillon Annual Reports

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6 Carillion plc, 2016 Annual Report, p.142
Control of working capital (Liquidity)

**IM Table 6: Working capital ratios**

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Payable days</td>
<td>53.3</td>
<td>48.5</td>
<td>54.5</td>
<td>47.1</td>
<td>52.4</td>
</tr>
<tr>
<td>Receivable days</td>
<td>26.3</td>
<td>26.9</td>
<td>27.9</td>
<td>25.6</td>
<td>20.7</td>
</tr>
</tbody>
</table>

The ratios show us that Carillion was receiving payment from its customers prior to paying its suppliers. However, in Carillion’s case the treatment of payables was not straightforward and the case facts tell us that accounting for the Early Payment Facility (IM Figure 2) resulted in reduction in payable days in the accounts not reflecting the actual payment terms of the company. However, this was not clearly disclosed in the accounts (Case Exhibit 6) and only become public knowledge as part of the parliamentary committee investigation. Prior to this point there had been some reporting of the structure of the facility in the construction trade press (Case Exhibit 7) which led to some analysts making adjustments to their analysis.

There is a clear contrast between Carillion’s signature of the prompt payment code and its use of the early payment facility (also known as reverse factoring). Externally the company was signalling that it was a responsible purchaser who would pay small suppliers in a timely manner, however at the same time it had set up a form of reverse factoring to enable it to delay payment.

Whilst Carillion enforced standard terms of 120 days the facility suppliers to be paid earlier in return for a fee. The suppliers received payment after 45 days by selling their invoices at a discount and Carillion didn’t reimburse the bank until the standard terms expired.

**IM Figure 2: Carillion EPF structure**

![Carillion EPF structure diagram]

**Source:** devised by author
Carillion’s accounting classified the facility within other creditors which meant that for cash flow purposes movements were included in working capital. The implication of this treatment is that the company benefitted from increased cash from operations and it flattered the cash-flow conversion ratio, whilst increasing net cash and reducing net debt.

An alternative treatment highlighted by Moody’s and Standard and Poor points to the treatment of the facility as a form of borrowing which should therefore have been included in the covenant testing.

“They argue the EPF (early payment facility) structure meant Carillion had a financial liability to the banks that should have been presented in the annual account as “borrowing”. Instead Carillion choose to present these as liabilities to “other creditors”. Moody’s claim that as much as £498 million was misclassified as a result, though Carillion’s audit committee papers show the actual figure drawn was slightly lower at £472 million.”

The result of the treatment adopted by Carillion was to mask the underlying substance of the transaction, thereby delaying the warning to investors. However, the IFRS Foundation perspective on accounting for reverse factoring arrangements appears to allow both the approach adopted by Carillion and that adopted by Moody’s and Standard and Poor.

An illustration of the potential effect upon the financial performance of this type of adjustment is shown below using the ‘other creditors’ disclosures from the financial accounts to make adjustments and the effect on cash generated by operations and borrowings.

**IM Table 7: Adjusted cash generated by operations**

<table>
<thead>
<tr>
<th>£m</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash generated from operations (Case Exhibit 1)</td>
<td>-16.4</td>
<td>-62.2</td>
<td>156</td>
<td>120.3</td>
<td>115.5</td>
</tr>
<tr>
<td>Increase in other creditors (Derived from other creditors Case Exhibit 1)</td>
<td>-11.4</td>
<td>141.5</td>
<td>104.9</td>
<td>51.7</td>
<td>198.8</td>
</tr>
<tr>
<td><strong>Adjusted cash generated from operations</strong></td>
<td><strong>-5.0</strong></td>
<td><strong>-203.7</strong></td>
<td><strong>51.1</strong></td>
<td><strong>68.6</strong></td>
<td><strong>-83.3</strong></td>
</tr>
</tbody>
</table>

The reclassification of other creditors as borrowing leads to a reversal of the working capital advantages that had previously been included in cash generated from operations. The increasing creditor balances had previously led to cash inflows.

**IM Table 8: Reclassification of creditors as borrowing**

<table>
<thead>
<tr>
<th>£m</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash and cash equivalents (Case Exhibit 1)</td>
<td>657.1</td>
<td>413.7</td>
<td>472</td>
<td>462.2</td>
<td>469.8</td>
</tr>
<tr>
<td>Bank overdrafts plus other creditors</td>
<td>-268</td>
<td>-407.9</td>
<td>-515.7</td>
<td>-567.6</td>
<td>-762.6</td>
</tr>
<tr>
<td><strong>Net cash and cash equivalents- adjusted</strong></td>
<td><strong>389.1</strong></td>
<td><strong>5.8</strong></td>
<td><strong>-43.7</strong></td>
<td><strong>-105.4</strong></td>
<td><strong>-281.8</strong></td>
</tr>
</tbody>
</table>

The reclassification would have had a significant effect upon the company’s covenant ratios which the Joint Committee report as testing Net debt (borrowings)/EBITDA (IM Table 9).

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7 [https://publications.parliament.uk/pa/cm201719/cmselect/cmworpen/769/769.pdf](http://publications.parliament.uk/pa/cm201719/cmselect/cmworpen/769/769.pdf) p.43
9 [https://publications.parliament.uk/pa/cm201719/cmselect/cmworpen/769/769.pdf](http://publications.parliament.uk/pa/cm201719/cmselect/cmworpen/769/769.pdf) (note 318)
**IM Table 9: Adjusted leverage ratio**

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Net debt/EBITDA</td>
<td>0.61</td>
<td>1.1</td>
<td>0.72</td>
<td>0.67</td>
<td>0.96</td>
</tr>
<tr>
<td>Adjusted Net debt/EBITDA</td>
<td>1.64</td>
<td>2.42</td>
<td>2.68</td>
<td>2.85</td>
<td>3.82</td>
</tr>
</tbody>
</table>

**Return on investment and risk**

**IM Table 10: Dividend analysis**

<table>
<thead>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dividend (£m)</td>
<td>70.4</td>
<td>74.6</td>
<td>75.7</td>
<td>76.8</td>
<td>78.9</td>
</tr>
<tr>
<td>Dividend pay out (dividend/profit after tax)</td>
<td>45.4%</td>
<td>70.2%</td>
<td>59.4%</td>
<td>55.1%</td>
<td>60.9%</td>
</tr>
<tr>
<td>Dividend cover (profit after tax/dividend)</td>
<td>2.2</td>
<td>1.4</td>
<td>1.7</td>
<td>1.8</td>
<td>1.6</td>
</tr>
<tr>
<td>Proposed dividend per share (p)</td>
<td>18.45</td>
<td>18.25</td>
<td>17.75</td>
<td>18.25</td>
<td>18.45</td>
</tr>
<tr>
<td>Underlying earnings per share (p) (Case Exhibit 5)</td>
<td>40.4</td>
<td>34.7</td>
<td>33.7</td>
<td>35.0</td>
<td>35.3</td>
</tr>
<tr>
<td>Dividend per share/Earnings per share</td>
<td>45.7%</td>
<td>52.6%</td>
<td>52.6%</td>
<td>52.1%</td>
<td>53.3%</td>
</tr>
</tbody>
</table>

IM Figure 3 illustrates that a significant amount of cash flows generated by operations (Case Exhibit 1) were being distributed to shareholders in the form of dividends ahead of reinvestment within the business.

**IM Figure 3: Carillion dividend payments**

![Dividend payments graph]

**Source:** devised by author from Carillion Annual Reports and IM Table 3

**IM Table 11: Return on equity**

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Return on equity (Profit after tax/equity)</td>
<td>15.3%</td>
<td>10.8%</td>
<td>14.3%</td>
<td>13.7%</td>
<td>17.7%</td>
</tr>
</tbody>
</table>
Carillion’s return on equity improved in 2016, primarily due to the reduction in retained earnings in the financial year. Reviewing the accounts reveals that the reduction was a result of the revaluation of the pension liability. The equity total on the balance sheet includes a number of significant historic reserves e.g. merger reserve which do not reflect the ongoing operations of the company, therefore an unadjusted debt/equity measure will reflect a low level of gearing as a result. IM Table 12 illustrates the widely used Net Debt/EBITDA measure which is typically used by analysts to evaluate the underlying health of companies by this removing depreciation and amortisation from the calculation as they do not reflect the cash generation capacity of the business.

**IM Table 12: Net Debt/EBITDA measures**

<table>
<thead>
<tr>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Net debt/EBITDA</td>
<td>0.61</td>
<td>1.1</td>
<td>0.72</td>
<td>0.67</td>
<td>0.96</td>
</tr>
<tr>
<td>Average net debt/EBITDA</td>
<td>1.34</td>
<td>2.51</td>
<td>1.84</td>
<td>2.11</td>
<td>2.58</td>
</tr>
</tbody>
</table>

It is important to bear in mind that gearing or leverage can vary according to whether a business is seasonal or cyclical. In the case of Carillion it was a seasonal business where the average net borrowings (debt) varied significantly from the year end net borrowings.

**Cash flow analysis**

Analysis of the cash flows provides further indication of how the company used the cash it generated within its business. In this case Carillion’s financing outflows were significant reflecting the continued and significant dividend outflows highlighted in IM Figure 3.

**IM Table 13: Net cash flows**

<table>
<thead>
<tr>
<th>£m</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash flow from operating activities</td>
<td>-25.6</td>
<td>-78.4</td>
<td>123.8</td>
<td>73.3</td>
<td>73.3</td>
</tr>
<tr>
<td>Cash flow from investing activities</td>
<td>14.3</td>
<td>107.2</td>
<td>0.8</td>
<td>26.0</td>
<td>0.2</td>
</tr>
<tr>
<td>Cash flow from financing activities</td>
<td>178</td>
<td>-265.9</td>
<td>-71.7</td>
<td>-105.4</td>
<td>-84.4</td>
</tr>
<tr>
<td>Increase in cash and cash equivalents</td>
<td>166.7</td>
<td>-237.1</td>
<td>52.9</td>
<td>-6.1</td>
<td>-10.9</td>
</tr>
</tbody>
</table>

The cash flow statement (Case Exhibit 1) indicates that the operations did not support the level of financing activities. On a close inspection the financing activities were primarily the payment of the dividend. The dividend was therefore prioritised above internal investment in the company’s operational capability. However, the main issue faced by Carillion was the use of the EPF which masked the cashflow as illustrated by IM Table 8.

**Q2 Evaluate the limitations of financial analysis (LO2)**

Some of the limitations of specific ratios or approaches have been outlined in the response to Q1. The discussion in this section should focus on the role of ratio analysis as a tool to draw comparisons between peers.

The spreadsheet of peers including Balfour Beatty, Keir, Costain, Serco and Carillion has been drawn from Thomson One. Companies were selected as major UK based competitors, listed on the London Stock Exchange and operating in the Construction and Materials or Industrial Support Services sub-sectors. Students should be alerted to the limitation of relying upon databases for financial analysis. As they will be able to see, a number of items are aggregated in an effort to increase comparability, and which may alter the user’s perspective on the underlying performance of the business. This is why analysts focus on specific sectors and follow both the companies and the news flows very carefully.
They typically make comparable adjustments across companies using both the notes to the accounts and other disclosures that are common to the sectors they are covering.

An example of how adjustments can be made is shown in the FitchRatings video linked here\(^\text{10}\). Different types of analyst will make different adjustments based upon their methodologies and their interest in the entity e.g. ratings agencies will have a different perspective to equity investors.

Vertical and horizontal analysis could also be performed to supplement the historic analysis undertaken in response to question 1. This may reveal that the structure of Carillion’s balance sheet deteriorated over time, although it is less likely to be a leading indicator in view of the significant disparity between year end debt levels and average debt levels.

For example, the case indicates that adjustments had already been made for goodwill on acquisition and the EPF by investors. Others, including credit rating agencies also adjust for pension obligations.

**How can appropriate judgements be made without requiring the benefit of hindsight?**

Murdo Murchison (Kiltean Investors) highlighted the benefit of hindsight in his evidence to the Parliamentary Joint Committee:

> ‘The two issues we were not aware of and were not evident from the financials were first the poor operational performance, in terms of contract management and so on, bidding for contracts at low prices, and, secondly and critically in this case, the aggressive accounting that has come to light. As a third party observer of publicly available information, those issues are quite difficult to identify from a distance.’\(^\text{11}\) (Oral evidence, 7 March 2018)

In addition, the company’s recognition of revenues, traded not certified could not have been identified by users of the accounts and seems to have been both significant and misleading.

The aggressive accounting practices remain the subject of an ongoing review by the Financial Reporting Council\(^\text{12}\), and as result it is unclear whether they went beyond the boundaries of legal acceptability.

**Q3 What role did growth by acquisition have on Carillion’s financial condition? (LO3)**

Carillion’s acquisitive past led to a balance sheet which had significant goodwill balances. In addition, the acquisition of companies with defined benefit pension schemes led to the assumption of the funding obligations for those schemes.

1. **Goodwill**

The goodwill that was acquired reflected the inflated acquisition prices paid. This appears to have been revised upwards to reflect anticipated cash flows which didn’t materialise.

**Should goodwill on acquisition be capitalised on the balance sheet?**

As Amel-Zadeh et al. (2016) identify accounting for goodwill has undergone a number of changes over time and remains controversial. Alternative suggestions could be made and their impact on the financial accounts explored e.g. writing off the premium, taking it through reserves.

**Why was goodwill not impaired in this case?**

\(^\text{10}\) [https://www.fitchratings.com/videos/fitch-adjusted-financials-for-corporates-03-11-2020](https://www.fitchratings.com/videos/fitch-adjusted-financials-for-corporates-03-11-2020) (1minute 14s)

\(^\text{11}\) [Q1004](http://data.parliament.uk/writtenevidence/committeeevidence.svc/evidencedocument/work-and-pensions-committee/carillion/oral/79969.pdf)

There are a number of discussion points. Firstly, the assumptions made by management regarding the future cash flows resulting from the acquisition can be difficult to challenge. For example, the joint committee report indicates that approximately 80% of the net present value calculation was derived from a perpetuity calculation. As a result, a small change to the assumptions e.g. the discount rate applied may have made a significant difference to this calculation. Secondly, the standard requires grouping into cash generating units which enables a strategic grouping to take place where an impairment might be triggered. The cash generating units are not disclosed to users of the accounts and the groupings may be difficult for auditors to challenge.

What would the effect of goodwill impairment have been?
Investors who followed Carillion claimed to have excluded goodwill from their analysis. However, the signalling to the wider market resulting from an impairment of goodwill on acquisition would have been a public admission of overpayment for the acquisition. The related accounting entries would have resulted in a substantial debit to the income statement and thereby restricted the distributable reserves available to fund dividends to the extent it had in the past.

2. Pension liabilities
In addition to the goodwill, the acquisitions brought long term liabilities in the form of defined benefit pension schemes. The current UK legislation requires companies to agree a plan to recover any deficits over a period of 10 years. However, the evidence is that the directors of Carillion prioritised the payment of dividends ahead of their duties to pensioners. In the aftermath the Pension Regulator has opened its first anti avoidance case in relation to Carillion. At the time of writing it has not reported back.

IM Table 14: Pension liabilities and recovery payments

<table>
<thead>
<tr>
<th>£m</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retirement benefit liabilities</td>
<td>351.7</td>
<td>373.9</td>
<td>515.8</td>
<td>406.2</td>
<td>810.6</td>
</tr>
<tr>
<td>Deficit recovery payments to pension scheme</td>
<td>30.2</td>
<td>39.2</td>
<td>46.0</td>
<td>47.4</td>
<td>34.6</td>
</tr>
</tbody>
</table>

There is some evidence that investors and credit rating agencies make adjustments to their calculations to incorporate the debt resulting from unfunded pension liabilities to reflect the debt like nature of the obligation. If the pension liability was treated as incremental debt the effect on the Net debt/EBITDA ratio would be as illustrated in the table below. The adjustments make a significant difference to the leverage, particularly in 2016 where the pension liability increased significantly as a result of a revaluation. If the EPF adjustment from IM Table 9 is also made to the calculation, the ratio is increased even further over the period under consideration.

IM Table 15: Pension adjusted leverage

<table>
<thead>
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</thead>
<tbody>
<tr>
<td>Net debt/EBITDA</td>
<td>0.61</td>
<td>1.1</td>
<td>0.72</td>
<td>0.67</td>
<td>0.96</td>
</tr>
<tr>
<td>EPF adjusted Net debt/EBITDA</td>
<td>1.64</td>
<td>2.42</td>
<td>2.68</td>
<td>2.85</td>
<td>3.82</td>
</tr>
<tr>
<td>Pension adjusted Net debt/EBITDA</td>
<td>1.98</td>
<td>3.02</td>
<td>2.83</td>
<td>2.26</td>
<td>4.54</td>
</tr>
<tr>
<td>EPF &amp; pension adjusted Net debt/EBITDA</td>
<td>3.01</td>
<td>5.09</td>
<td>4.91</td>
<td>4.46</td>
<td>7.89</td>
</tr>
</tbody>
</table>

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13 https://publications.parliament.uk/pa/cm201719/cmselect/cmworpen/769/769.pdf p.53
Q4 What was the contributory role of the current approach to accounting for goodwill on acquisition? (LO3)

The Amel-Zadeh et al. (2016) article provides a backdrop to the debate regarding accounting for goodwill on acquisition. Perhaps the most fundamental questions revolve around whether companies are incentivised by financial reporting practices to grow organically or through acquisition.

**Preparation materials:** Students should have read the article which outlines the historic approaches to accounting for goodwill and some of the strengths and weaknesses along with the implications for investors.

Students could be asked to share and explain alternative accounting for goodwill on acquisition and its impact on the financial accounts explored e.g. writing off the premium, taking it through reserves. Key themes that emerge from the article are the tension between decision usefulness/value relevance and stewardship, measures of cost and market value, owners and management interests, market assumptions.

**Key points:**
- Purchase plus amortisation can help with stewardship as the visibility of the amortisation can be used to hold management accountable for acquisitions. It doesn’t necessarily provide the market with new information but is simple to implement and the scope for manipulation is limited.
- Purchase plus impairment can be value relevant as it releases new information to the markets but significant limitations have been identified in the literature. It suffers from a lack of timeliness, scope for opportunism and is hard to audit due to the assumptions involved.
- The retention of the safeguard against gross abuse may have mitigated the incentive for incoming management to write down purchased goodwill significantly so that they benefit from a low base. The safeguard required that for a period of five years following an impairment that the cash flows should be compared to the forecasts.

**Extension work:** Students could be invited to prepare a response to the International Accounting Standards Board consultation document (2020). Once the consultation has closed they could be invited to critique the responses received and discuss the interests of those who have responded and why they are responding in that manner.

Q5 Is it the case that corporate financial reporting is no longer a useful basis for decision-making (Lev, 2018)? (LO4)

The Lev (2018) paper outlines the implications for decision usefulness of moving from an income matching approach to a balance sheet valuation approach. The argument is that this shift has led to increases in alternative adjustments made by companies to provide increased insight for users of the underlying business e.g. Case Exhibit 3. However, the adjustments are often not comparable between companies in the same sector and are not audited as they do not form part of the annual accounts. Lev points to analysts and fund managers’ reliance upon earnings based valuation models suggesting a move to a new approach to capture the performance of investment in strategic assets of a business.

The outcome of this shift is that the income statement reflects the residual between balance sheet valuations and is therefore increasingly volatile. It no longer reflects the ongoing operational capability of the company which is of fundamental importance to the management of the business and investors alike. The valuation estimates contained in the balance sheet are significant and often reliant on those who are incentivised on the company’s performance i.e. management. However, they are
also problematic to audit as there is little basis on which to challenge the assumptions put forward. The self interest aspects of these estimates are compounded by the lack of ability of investors to verify the estimates following the event (Lev, 2018). Publication of estimates made by management and the subsequent performance of acquisitions etc. against those estimates may have meant that Carillion’s problems would have been identified significantly earlier potentially enabling it to recapitalise, and continue in business. Importantly the paper also picks up the discussion in relation to the status of internally generated intangible assets arguing for recognition under certain conditions.

**Epilogue**
The Financial Reporting Council (FRC) had identified disclosure concerns in 2015 when it reviewed the company’s accounts as part of its regular cycle of reviews. This wasn’t subsequently followed up.

The FRC announced investigations into KPMG’s audit of Carillion from 2014 onwards in Jan 2018 and the conduct of Richard Adam and Zafar Khan (former Carillion Finance Directors) regarding preparation and approval of the company’s accounts. The FRC only has jurisdiction over members of professional accountancy bodies. It expected to report in 2020 but has not yet done so (March 2021).

The Kingman (2018) report into the FRC proposed creation of a new regulator (Audit, Reporting and Governance Authority) ARGA with stronger powers. In March 2021 the UK Department for Business, Energy and Industrial Strategy issued a consultation which responds to the recommendations of the prior independent reviews, including Kingman (2018). The consultation period is open until July 2021.

During January 2021 the Insolvency Service issued director disqualification proceedings against eight directors and former directors of Carillion. Separately, the UK government also announced its intended changes to the Prompt Payment Code to require payment to smaller businesses within 30 days.

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Relevant readings


