



Article – The importance of linking profitability and cash flow when analysing financial statements.

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It has been argued that “profit” does not always give a useful or meaningful picture of a company’s operations. Readers of a company’s financial statements could even be misled by a reported profit figure. For example, shareholders may believe that if a company makes a profit after tax of £300,000 then this is the amount it could afford to pay in dividends. Unless the company has sufficient cash available to stay in business and also to pay a dividend, the shareholders’ expectations would be wrong. Survival of a business depends not just on its profit-generating ability but on the ability to pay debts when they fall due.

The analysis and interpretation of a company’s financial statements requires an understanding of the basis on which they are prepared, the underlying objectives of their preparation and the purpose of financial reporting generally. These are all areas which students will have covered during the course of their studies.

The distinction between profit and cash is fundamental to understanding any set of financial statements. Financial statements are based on the accruals concept and as such the operating profit disclosed in the financial statements will often be significantly different from the cash flow generated from operations. To exploit opportunities and to meet its bills as they fall due, the business has to generate the necessary cash and ensure that the amounts and timing match the needs. On the face of it, it would appear that a company making profit would necessarily have correspondingly more cash. Such an expectation would be met if the increased profit was not tied up in additional inventory, receivables and non-current assets. The income statement sets out the revenue and expenses, rather than the cash receipts and cash payments, for an accounting period. Let’s take a very simple example of a business making revenue by selling goods on credit. Assuming the goods are sold at above cost then the business will generate a profit and wealth will increase. However, as the sale is on credit, no cash changes hands at the time of the sale. In addition, any inventory sold will result in a loss of wealth to the business as an asset is reduced. The income statement will record an expense but there is no change in cash.

The examples below illustrate the effect of other various transactions on profit and cash:

	Effect <u>on profit</u>	Effect <u>on cash</u>
1. Repayment of bank loan	<i>none</i>	<i>decrease</i>
2. Depreciating a non-current asset	<i>decrease</i>	<i>none</i>
3. Making a share issue	<i>none</i>	<i>increase</i>
4. Payment of interest	<i>decrease</i>	<i>decrease</i>

In the past, there was no regulation requiring companies to produce more than an income statement and a balance sheet. The argument was that if a business was profitable, then it must have plenty of cash. When businesses fail, it is their inability to find the cash to pay obligations owing that finally pushes them into bankruptcy. Cash flow statements must now be presented as an integral part of an entity’s financial statements.

Cash flow statements can be used in conjunction with the rest of the financial statements to gain an understanding of: changes in net assets, the financial position and the ability of the entity to adapt to changing circumstances and opportunities by affecting the amount and timing of cash flows. Importantly, these statements enhance comparability as they are not affected by differing accounting policies.

IAS 7 - *Cash Flow Statements*⁷ (assigned Competency Level 3 on the P2 ACR syllabus) requires cash flow statements to report cash flows during the period classified according to: operating activities, investing activities and financing activities. A business needs to be able to generate cash from their operations as other cash inflows may be non-recurring. It is these operating cash flows which must, in the end, pay for all cash outflows relating to other activities: i.e. paying interest, dividends and so on. Students often get confused when reviewing the cash implications of increases or decreases in working capital. An increase in inventories means less cash as the company has spent cash on buying inventory, an increase in receivables means the company's customers have not paid as much, and therefore there is less cash. Finally, if the company pays off accounts payables, causing the figure to decrease, again there is less cash. It is therefore critically important that businesses think through the cash implications of engaging in large expansion, and that they have the long term and short term funds to support increases in non-current assets and working capital.

Cash as a cycle

Cash is the life blood of all growing businesses. Cash management is as much an integral part of the business cycle as any other part of the process. Not managed correctly, cash problems can lead to the bankruptcy of a business. Cash flow can be thought of in terms of a cycle in which goods or services are produced, then sold and money is collected. As already mentioned, profits are not the same as cash flow. It is possible to declare a healthy profit for the year, and yet face a significant pressure on your cash flows. Part of managing your cash flow involves budgeting when you believe your cash outflows will exceed your inflows. A useful technique when looking at financial statements is to calculate the cash operating cycle (sometimes called the cash conversion period or working capital cycle). This provides an estimate of the amount of time it takes to convert your product or service into cash. It is calculated as follows:

$$\text{Inventory (days)} + \text{Trade receivables (days)} - \text{Accounts payable (days)}$$

It is important to note that different business sectors will have very different conversion cycles. For example, Tesco plc would have a negative cash operating cycle because, inventory would be well managed and the majority of sales are on a cash basis. Suppliers would be queuing up to supply such a company and are prepared to wait to get paid. Accelerating the cash inflows will help to improve overall cash inflows and the quicker you can collect the cash, the faster it can be spent on non-current assets and working capital in pursuit of further profit. For example, improving inventory management, implementing improved credit checks for new customers and reviews for existing customers, will all help to improve cash flow in the business. As the availability of cash is so important for survival, it would be normal for a business to prepare cash flow projections.

Such projections will enable the business to anticipate cash shortages and take timely remedial action (e.g. arranging for increase in overdraft). Whilst managing cash is important, the performance of a business is still normally gauged in terms of overall profitability. Cash flow management needs to be interpreted within the context of the other key financial indicators.

Financial analysis

Financial ratios can be used as a quick and relatively simple means of assessing the financial state of a business. By calculating a small number of ratios it is often possible to build up a useful picture of the liquidity and performance of a business. It must always be remembered that ratios are useful as attention directors; they do not provide the answers and can be difficult to interpret. The ratios must be interpreted and discussed in the context of the particular business sector which is being analysed. The main categories of ratios which are used in financial analysis are:

- Profitability
- Efficiency
- Liquidity
- Capital structure
- Investment

In any analysis of financial statements, the analyst must be clear who the target users are and why they need the information. In addition, there are numerous inter-relationships between various ratios in the above categories. By way of example, if a business had poor credit control you would expect to see an increase in day's receivables and a decrease in liquidity. Likewise, if a business had high levels of debt you would expect this to have an adverse effect on liquidity.

One of the key measures of any company's success is profitability. Businesses generally exist with the primary purpose of creating wealth for their owners. Profitability ratios provide an insight to the degree of success in achieving this purpose. They express profit as a percentage of sales. This percentage can then be compared with previous years, or with similar companies in the sector. Sometimes it can be useful to compare the percentage with targets

(i.e. budgets) that management have developed before the start of the period under review.

Turning to the short scenario on page 7, there are some key issues that can be very quickly ascertained without calculating any ratios.

1. Revenue has increased by 62.5%, inventories by 165% and trade receivables by 84%.
2. Cash has decreased and loans have doubled.
3. Profit after tax has increased by 148%.
4. Reading the background to the scenario, there appears to be relatively little financial competencies within the senior management of the business.
5. Boyle Ltd wants to expand further, but where will the cash come from to invest in more working capital and non-current assets?
6. Christine does not appear to have prepared any budgeted figures to tie in with her plans for expansion.

In conclusion, on the basis of our very limited analysis of the information, it is clear Boyle Ltd is attempting to grow too quickly with too little permanent capital or cash inflows to sustain it. We can now look at some of the key performance ratios in a little more detail. In particular we will focus on profitability and liquidity as they provide an interesting comparison in the case of this company.

Profitability

	2009	2008
Gross profit	44%	43%

Clearly, the business has maintained an increase in revenue without sacrificing an erosion of its gross profit margin. A decrease in this ratio can indicate greater competition in the market and therefore lower selling prices, or alternatively, an increase in cost of sales. It is possible that sales prices may have been reduced but this was matched by a similar reduction on cost of sales.

The relationship between gross and net profit percentage provides an indication of how well Boyle Ltd. is managing its business overheads.

	2009	2008
Net profit	20.1%	14%

The net profit percentage has increased by 6.1% which would indicate that Boyle Ltd is managing its overhead expenses. The increased sales have not resulted in disproportionate increases in business expenses. Ideally, an analyst would like a full break down of the business expenses figures broken down between distribution, administrative and selling expenses. It would then be possible to look at expenses to sales ratios to ascertain any further trends. We have used operating profit (before interest and taxation) as this represents the profit from trading operations before the finance expense is taken into account, and so the ratio will not be affected by differences arising from the way the business is financed.

	2009	2008
ROCE	27.3%	16.9%

The return on capital employed (ROCE) is a fundamental measure of business performance. This ratio measures how efficiently and effectively management has used the resources available to it. It compares inputs (capital invested) with outputs (operating profit).

We normally use operating profit before interest and capital divided by the average capital employed figure where the information is available. (Note: to calculate the capital employed, simple take total assets and deduct current liabilities). The ROCE measures the return achieved by management from assets they control, before payments to providers of financing for those assets. Because of the lack of detailed information, the year end total capital employed figure is often used. There are different versions of this ratio used in practice, but whichever version of the ratio is used; it must be used consistently to produce meaningful comparisons.

Clearly, this ratio confirms that Boyle Ltd is generating an increased return on its capital relative to the previous year. For every 1€ invested it is earning 27 cents profit in 2009 compared to nearly 17 cents in 2008. This ratio can be broken down into a profit margin and a net asset turnover component. For 2009 this would be $20.1\% \times 1.36 = 27.3\%$. Clearly the revenue generated from capital employed has increased together with the increase in profit margin. The investment in non-current assets is now beginning to generate revenue. A trade-off often exists between margin and net asset turnover. Low margin businesses, e.g. supermarkets, usually have high asset turnover. Conversely, capital-intensive manufacturing industries usually have relatively low asset turnover but higher margins. Particular care must be taken when calculating, and then considering the implications of, profitability ratios if the company concerned is presenting both continuing and discontinued operations.

Liquidity

Liquidity ratios are concerned with the ability of the business to meet its short-term financial obligations. Two ratios are widely used in practice:

- Current ratio
- Quick (acid test) ratio

The current ratio is defined as current assets /current liabilities, whereas the quick ratio eliminates inventories from the current assets as it is the least liquid current asset.

	2009	2008
Current ratio	0.96	1.78
Quick ratio	0.36	0.82

It would appear, there has been a significant deterioration in the liquidity situation of Boyle Ltd. This confirms our earlier observation that the company had recorded a significant drop in cash balances in the last year. Both these ratios need to be interpreted with caution. As the quick ratio omits inventories, it is a better indicator of liquidity but is subject to distortions, e.g. supermarket retailers have few trade receivables and utilise cash sales quickly, but finance their inventories from trade payables. Hence, their quick ratios are often very low, but this does not indicate that they have major solvency problems. A high current or quick ratio may be due to a company having large amounts of cash or cash equivalents. Both these ratios draw on information from the balance sheet, which only provides a “snapshot” of the position at a particular point in time. It is entirely possible that balance sheet figures are not representative of the true liquidity position during the year. Therefore, both the above ratios need to be treated with caution and should be analysed in conjunction with other information, such as efficiency ratios (working capital ratios) and cash flow information.

Referring back to the balance sheets for Boyle Ltd, it is clear that both the trade receivables and inventories have both increased by more than revenue over the last year. This would be reflected in an increase in the operating cash cycle for Boyle Ltd in 2009. This will have significant implications in terms of short-term cash flow for the business, as will the increase in bank overdraft (repayable on demand) and long term loans.

A reconciliation of operating profit to net cash flows from operating activities for Boyle Ltd is provided below. It is clear that cash flow from operations is much less than operating profits. Changes in working capital account for €3,726 of the difference between operating profit and cash flow from operations.

	€'000
Operating profit	4,400
Depreciation	2,800
Increase in inventory	(3,800)
Increase in trade receivables	(1,600)
Increase in other receivables	(50)
Increase in trade payables	<u>1,576</u>
	3,326
Interest paid (260 + 920 – 400)	(780)
Taxation paid (420 + 924 – 850)	(494)
Dividends paid	<u>(400)</u>
Cash flow from operating activities	<u><u>1,652</u></u>

Combining the above with the €10,000 spent on non-current assets, and the increase in bank loans €2,800; we can reconcile these figures with the decrease in cash and cash equivalents amounting to €5,548.

Conclusion

In conclusion, it is clear that Boyle Ltd is very profitable but has a major cash flow problem with too little long term capital to support the expansion in sales revenue. There are clear signs that the business is overly dependent on other people's money, and is displaying the classic symptoms of a business that is over trading. The lack of financial skills has resulted in no forward financial planning taking place, i.e. cash flow projections/budgets. There is a strong possibility that this business will run into difficulties if the banks refuse to increase the overdraft facility, or if the business does not get an injection of fresh external capital. The problems demonstrated in this short scenario are very common in many small and medium sized businesses. There is often a blinkered focus on wealth creation via profitability without the same attention and analysis being paid to the cash flow situation, until it is too late. Liquidity and profitability ratios must be interlinked and discussed in the context of actual changes in cash and cash equivalents. Looking at the financial statements provided in the scenario, it is clear that Boyle Ltd has significantly increased its gearing ratio in 2009, and this will have consequences for the business in terms of liquidity and increased financial risk.

Scenario

Boyle Ltd is a family run company based in Donegal which manufactures sports and leisure wear items primarily for the Irish market. The company had grown considerably over the last couple of years and this has been reflected in the significant increase in turnover over the last year. John Boyle, the managing director, retired in 2008, and his daughter Christine took over the day to day running of the business. Christine had just graduated from Dublin City University in Art and Design, and wanted to put her own stamp on the strategic direction of the company. Eamon Barton, the production director was concerned that the bank would soon be on the phone looking for a big reduction in the bank overdraft. Given the current economic climate, and the reluctance of banks to offer credit, the firm needed to be mindful of its short term profitability and cash flow situation. He was reflecting on whether it was sensible to have paid a dividend of €400,000 in 2009. Christine quickly set about developing a plan to grow the business, and within weeks of taking over, had successfully negotiated a contract with a large sports retailer based in Bulgaria. The contract will result in an increase in revenue amounting to €3 million per annum for the next four years. In addition, the company received a large order from a leading supplier of GAA sportswear located in Belfast. To meet the increase in demand for the firm's products, Boyle Ltd invested in new plant and machinery. Just last week, Christine had a phone call from her father, suggesting that it might be useful to consider employing someone who had financial skills, or alternatively, that she herself enrolled on a financial management course.

Income Statements for the year ended 30 June

	2009	2008
	€'000	€'000
Revenue	<u>21,910</u>	<u>13,486</u>
Gross profit	9,672	5,855
Operating profit	4,400	1,900
Finance charges	<u>(920)</u>	<u>(430)</u>
Profit before taxation	3,480	1,470
Taxation	<u>(924)</u>	<u>(441)</u>
Profit after taxation	<u>2,556</u>	<u>1,029</u>

Balance Sheets as at 30 June

ASSETS

Non-current assets

Property, Plant and equipment	16,500	9,300
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Current assets

Inventories	6,100	2,300
Trade receivables	3,500	1,900
Other receivables	100	50
Cash	<u>62</u>	<u>10</u>
	<u>9,762</u>	<u>4,260</u>
Total assets	<u>26,262</u>	<u>13,560</u>

EQUITY AND LIABILITIES

Capital and reserves

Ordinary share capital of 1€ each	3,600	3,600
Retained profit	5,236	3,080

Non-current liabilities

Bank loans	7,300	4,500
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Current liabilities

Bank overdraft	6050	450
Trade payables	2,826	1,250
Taxation	850	420
Accruals	<u>400</u>	<u>260</u>
	<u>10,126</u>	<u>2,380</u>
Total equity and liabilities	<u><u>26,262</u></u>	<u><u>13,560</u></u>

Note: Assume all the accruals relate to interest payable and that the depreciation charge for 2009 amounted to €2,800.