Chapter 12

Financial Analysis of Oil and Gas Firms

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Abstract

In this chapter, we show how to interpret the financial statements of firms in the oil and gas industry. We first provide a tour of fundamental building blocks of financial statements noting items that are peculiar to the oil and gas industry. We present analysis of a typical oil and gas firm financial statements considering profitability, efficiency, liquidity and leverage. We use ratios and present two approaches to analysis—trend analysis and common size analysis. We end the chapter with a note on non-financial information and how that complements the analysis of financial data. Financial ratios are only useful for financial information analysis, but other non-financial information should be considered when conducting analysis of performance to get a full picture.

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12.1 Introduction

Oil and gas companies operate in an industry that has a long value chain traditionally divided into upstream, midstream and downstream. An oil and gas company may have operations in all three streams. Such are referred to as integrated companies. In this chapter we provide the structure for analysis of financial statements of oil and gas firms. To facilitate understanding of and gas financial statements we first explore the components of financial reports, highlighting peculiar items in reports of oil and gas companies. We do so to facilitate understanding of financial performance of oil and gas companies. Financial ratios are the indicators we use for the analysis of oil and gas firm financial statements.

12.3 Industry Economics and Dynamics

Oil and gas companies operate in an industry that has a worldwide market with many buyers. Many oil and gas companies are price-takers. So, to understand the performance of oil and gas companies, one also needs to understand the world economic situation and consider these in the financial performance evaluation of oil and gas companies. Figure 12.1 below plots the quarterly prices of one of the benchmark oil price indicators – the Western Texas Intermediate Brent Crude oil price series. Crude oil prices, as the figures show, has been on quite a ride over the last two decades. This trend has implications for the fortunes of firms in the industry. This should be in the background in trying to understand the trends in the performance of an oil and gas firms over this period.

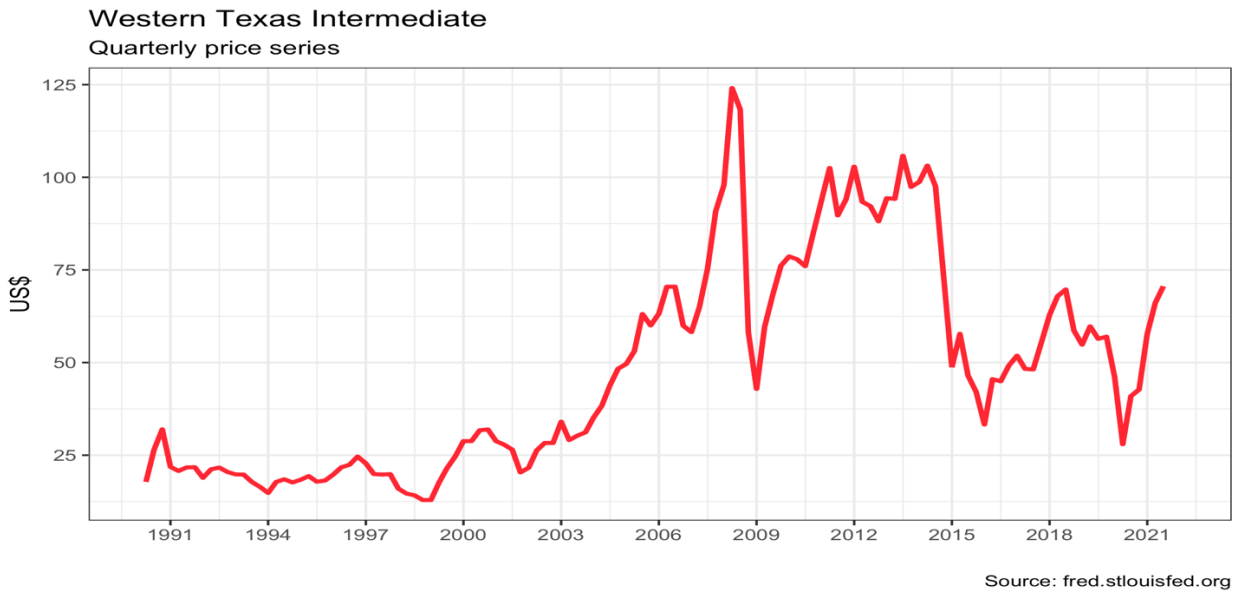

Figure 12.1 Quarterly Crude oil prices using the Western Texas Intermediate price series

12.4 Components of Financial Statements

Financial statement components are determined by the International Accounting Standards Board (IASB) in the International Accounting Standard (IAS) 1 *Presentation of financial statements*. A complete set of financial statement includes:

i. Statement of Income or Statement of Comprehensive Income

ii. Statement of Financial position

iii. Statement of Cash flows

iv. Statement of changes in equity

v. Notes to the financial statements

The statement of cash flows provides information about the movements of cash and cash equivalents of the reporting entity. The cash flow statement provides information on the cash generation ability of the business that is not made apparent in the financial statements because of the accruals basis of accounting that underlies the statements. Three key parts to the statement of cash flows are cash flow from operations, investment and financing. Cash flows from a firm's ordinary business is called cash flow from operations. Cash flow from purchases of noncurrent assets and sales of noncurrent assets are cash flow from investing activities. Cash flows from financing activities are borrowing, raising equity, paying dividends and paying interests on borrowings. The statement of changes in equity shows how, over the course of a financial year, equity has been impacted by transactions sanctioned by management. The notes provide further details to better understand how figures are arrived at and the composition of figures.

12.4 Statement of Financial of Position

The statement of financial position reports information on the values of assets, liabilities and equity of a firm at a particular date. The statement of financial position gives shareholders information on the value of the assets their capital has been used to acquire and any obligations taken by management in the operations of the business. The appendix provides illustrative statement of financial position.

Assets and liabilities are reported in two categories— current and noncurrent. Noncurrent assets are those assets from which economic benefits are expected to accrue to the firm for more than one financial year after the reporting date. Noncurrent assets are either tangible or intangible. Tangible noncurrent assets have physical form—example, property, plant and equipment. Intangible noncurrent assets do not have a physical form--- example exploration and evaluation cost. An example of intangible noncurrent assets is the ***Intangible exploration and evaluation assets*** in Table 12.1. Upstream developments of oil and gas resources have a period of expenditure on prospecting until commercially viable quantities of reserves are discovered or nothing is found. Intangible exploration and evaluation assets represent such costs. The IASB consolidated financial reporting practices for the extractive industries in the IFRS 6 *Exploration and evaluation of mineral resources* to provide guidance for reporting on expenditures incurred in exploration and evaluation. Exploration and evaluation expenditure includes costs of licenses, leases, concessions, geological and geophysical studies, and possible financing costs. Expenditures incurred prior to obtaining a legal right to explore are not included. There are two approaches to dealing with exploration and evaluation costs— full cost method and successful efforts method.

Exploration and evaluations costs are capitalised under the full cost method based on large geographic cost centre or cost pool (PricewaterhouseCoopers, 2017). The cost centre is then depleted (depreciated) as production occurs. If all efforts in a cost pool or geographic formation are unsuccessful, then exploration and evaluation costs are expensed. With successful efforts, costs are capitalised field-by-field and if a field is unsuccessful, the costs are expensed. The capitalised costs are allocated to commercially viable fields. A reporting entity will disclose their approach in the notes to the financial statements.

Noncurrent liabilities are liabilities that will be due for repayment in the future for a period in excess of the end of the next financial year. Provisions for decommissioning and restoration may be found under noncurrent liabilities of an oil and gas entity. Current liabilities are liabilities that will be due for repayment by the end of the next financial year. For example, if the statement of financial position is prepared on 30 September 2020, any debt obligations due for payment before 30 September 2021 are current liabilities and those after that are noncurrent liabilities. Overlifts in a joint venture for oil and gas firm becomes a trade payable under current liabilities.

Current assets are assets whose benefits will be consumed by the end of the next financial year. Trade receivables are amounts due from credit customers. For oil and gas entities this will include amounts due from joint venture partners, underlift and monies due from insurance claims. Held for sale assets are items that were previously accounted for as noncurrent assets, but a decision has been taken to sell these assets.

12.6 Statement of Income

We now highlight elements of the statement of income of a firm in the oil and gas sector. Illustrative statements in the appendix provides more detail.

12.6.1 Revenue

Sales revenue in the income statement represents the market value of products delivered to customers. Where production is done in a joint venture, sales revenue will include lifting that is

within entitlements of the reporting entity. Revenue from the joint venture will include overlifting by the reporting entity's joint venture partners.

12.6.2 Expenses

Expense items of interest, for their uniqueness to oil and gas firms, are exploration costs written off, and provisions for onerous contracts and restructuring. Write-offs of exploration and evaluation costs to income statement reflects the approach to accounting for exploration and evaluation costs— full cost method or successful efforts. For a firm applying the successful efforts method, these write-offs imply efforts in a particular cost pool or field was not successful and the field or cost centre has been abandoned. The successful efforts method is considered more compatible with the *Conceptual Framework* (PricewaterhouseCoopers 2017).

Impairment of property, plant and equity may be found in other financial statements, but it does have unique implications for oil and gas firms. Exploration and evaluation assets and other assets in the financial statements are subject to impairment testing within the general framework of financial reporting under IFRS. Impairment of exploration and evaluation assets occurs when certain triggers are in place under the impairment-testing regime of the IFRS 6. The indicators are factors that suggest that the incurred exploration and evaluation costs may not be recovered. Impairment indicators for exploration and evaluation assets under IFRS 6 include when no further explorations are planned or budgeted, expiration of exploration rights, not finding commercially viable discoveries of mineral resources and sufficient data exists to show that the mineral resources found are not enough to recover the cost of exploration and evaluation (IASB, 2004).

12.7 Evaluating Oil and Gas Firm Performance

We will use pro-forma financial statements to demonstrate the computations and evaluation of the performance of oil and gas firms. The basic framework for assessing financial performance is the computation of ratios. Ratios relate one financial statement item to another. The choice of items is informed by the relations of interest to the analyst. Adequate interpretations of ratios require a comparator. Comparators can be prior year values, competitor firms or an industry benchmark. We will use the prior year's approach. Past performance is best appreciated when a trend can be depicted. We compute ratios for a firm in the oil and gas sector for a five-year period. A firm's financial performance can be assessed on dimensions of profitability, liquidity, productivity and leverage (or solvency). We illustrate these dimensions with the pro forma financials.

12.7.1 Profitability

Profitability is measured as the net income of a venture over a financial year with respect to, most often, the capital invested by shareholders, or the value of capital made available to management. Return on equity, ROE, is profits as a percentage of shareholders equity and return on assets measures profitability with respect to total assets. The difference between ROA and ROE is to show the impact of the use leverage (borrowed funds) to generate profits. The formulas for computing these ratios are below.

$$ROA = \frac{\text{Net profit after taxes}}{\text{Total assets}} \times 100$$

$$ROE = \frac{\text{Net profit after taxes}}{\text{Shareholders' fund}} \times 100$$

Profitability may also be measured with respect to pricing power and cost efficiency. Gross profit margin provides a measure of profitability that indicates the proportion of sales revenue that is in excess of direct cost of production. Firms in the oil and gas industry are price-takers, which implies that a high gross profit margin is indicative of control of cost of production. For firms operating in the upstream sector, this ratio reflects control of cost of extraction and the efficiency of the firm's technology. Gross profit margin is,

$$\text{Gross profit margin} = \frac{\text{Gross profit}}{\text{Total revenue}} \times 100$$

Another profitability measure is the net profit margin. Net profit margin is net profit after tax as a percentage of revenue. This ratio may also be computed as net profit before interest and taxes as a percentage of revenue to give emphasis to the use capital from all capital providers. Net profit margin when considered in relation to the gross profit margin, provides information on how operating expenses are eating into revenues.

$$\text{Net profit margin} = \frac{\text{Net profit after tax}}{\text{Total revenue}} \times 100$$

Figure 12.2 presents trends of the foregoing ratios for our illustrative company. We provide in the appendix the five-year financial data used in the computation of these ratios.

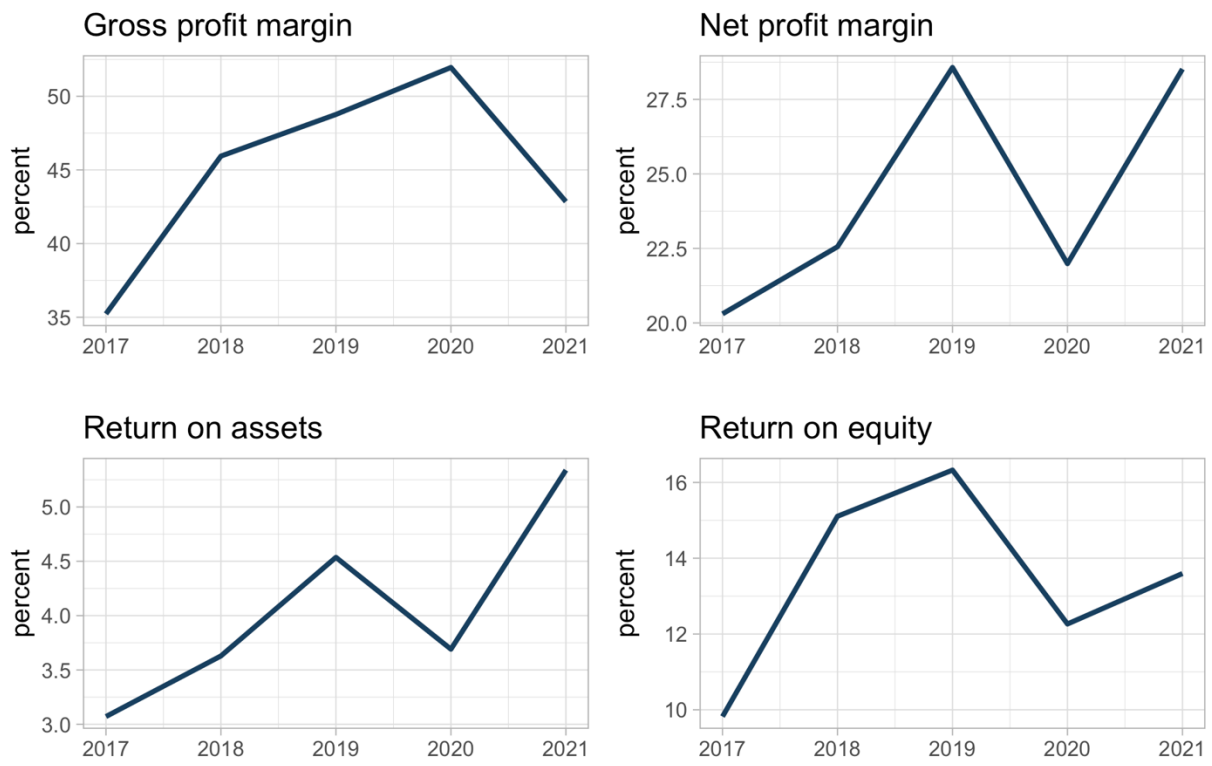

Figure 12.2 Profitability ratios

From Figure 12.2, gross profit margin increased over the initial four years of the series from about 35% to 52% but falls sharply in the last year of the series to about 42%. Several factors can explain this trend. Compared to the Western Texas Intermediate quarterly price series, the sharp fall in the gross margin is likely attributable to the falling oil prices during that period. The net profit margin series has a similar trend to the gross profit margin except a sharp decline occurs a year earlier than the fall in the gross profit margin. Investigating the financial statement for any jumps in expenditures and information on cost control considerations can explain this change. In the illustrative statements we find that the rise in exploration costs written off jumps in this year. Such

write offs can be occasioned by exits, exploration licenses expiration, or decision to discontinue exploration at a site.

ROA and ROE have similar trends. Both increase in the initial year, drops in mid-way and rises in the last year. Like the net profit margin trend. We learn more by decomposing ROA and ROE into profitability and asset utilisation for ROA and profitability, asset utilisation and leverage for ROE. Price inflation may lead to higher net profit margins when assets might not have been put to their best use. DuPont analysis is the framework to find drivers of ROA and ROE. ROA is decomposed into effect of net profit margin and asset utilisation.

$$ROA = \frac{\text{Net profit after tax}}{\text{Sales revenue}} \times \frac{\text{Sales revenue}}{\text{Total assets}}$$

Our analysis in the productivity section shows that asset utilisation was increasing throughout the five-years. Our illustrative firm extracted more from assets in place. Falling global oil prices in 2020 means that managers were doing what was reasonable in a difficult year.

The decomposition of ROE leads to:

$$ROE = \frac{\text{Net profit after tax}}{\text{Sales revenue}} \times \frac{\text{Sales revenue}}{\text{Total assets}} \times \frac{\text{Total assets}}{\text{Shareholders' fund}}$$

The ratio of assets to shareholders' fund (equity) is called the equity multiplier and indicates the effect of leverage on the returns generated for shareholders. Increasing ROE from increased leverage implies shareholders are getting higher returns from increasing financial risk.

12.7.2 Liquidity

Liquidity is the ability to raise cash when needed. Liquidity is, thus, measured in terms of the assets that can be converted into cash at a short notice with minimal or no loss in value. Current assets are the focus of liquidity management for any firm. Liquidity ratios measures ratio liquid assets relative to its short-term obligations. We define the following liquidity ratios.

$$\text{Current ratio} = \frac{\text{Total current assets}}{\text{Total current liabilities}}$$

$$\text{Quick ratio} = \frac{\text{Total current assets - Inventory}}{\text{Total current liabilities}}$$

$$\text{Cash ratio} = \frac{\text{Cash and cash equivalents}}{\text{Total current liabilities}}$$

Figure 12.3 presents trends of these principal liquidity ratios.

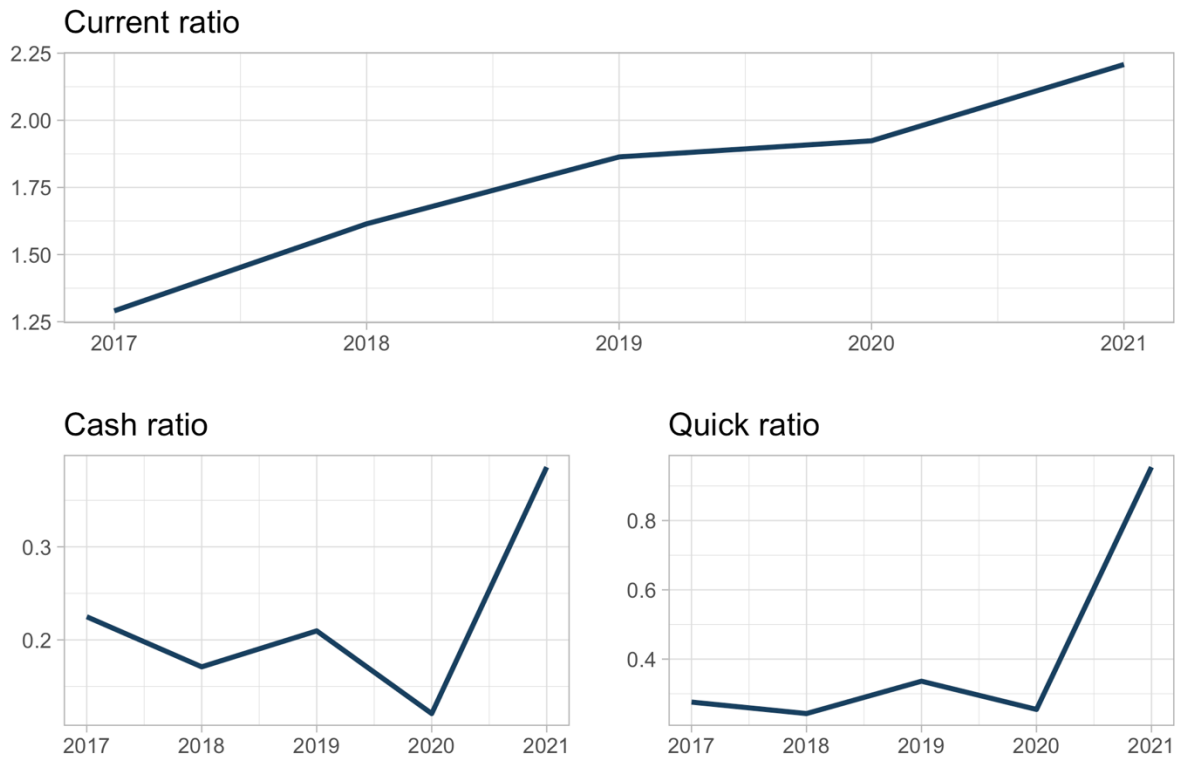

Figure 12.3 Working capital ratios

The current ratio provides the answer to the question: how many times do our current assets cover our current liabilities? For the years 2017-2020, the current ratio of our illustrative firm is increasing and consistently greater than one. Computation of current ratio includes inventory, which is not is easily converted into cash like cash balances and other money market financial securities that can easily be sold at a short notice. Slow moving inventory can make this ratio higher. A more stringent liquidity measure is the quick ratio, which excludes inventory.

Quick ratio of our illustrative firm is below one, and for the years 2017-2020 is not a similar upward trend like the current ratio. Inventory seems to have been the greater component of the

current assets over these years. Cash ratio focuses on only cash and cash equivalents. Cash ratio is decreasing through the years 2016-2019 but makes a sharp increase in the year to 2020, like the quick ratio. These trends are better explained when the asset utilisation ratios are considered. Cash ratio increases may result from delays in paying current liabilities or more generous trade payables periods offered by trade partners. An oil and gas firm that owes much of its trade payables to joint venture partners through overlifting may have a leeway in how long it takes to repay. Borrowings on short-term basis adds to liquidity and current liabilities but borrowing on long-term basis increases liquid assets in the form of cash and this can boost the quick and cash ratios. So quick and cash ratios provide insights on the financing strategy for current assets. Funding current assets with long-term debt offers liquidity but it may not be the cheapest option.

12.7.3 Productivity

Our profitability analysis highlighted the importance of the asset utilisation in understanding the trends in profitability. This section elaborates on measures of asset utilisation (also termed efficiency). Others prefer productivity ratios. A firm's sales are generated from the operations of assets in place. We present four productivity ratios— asset turnover, inventory turnover, accounts receivable turnover, and accounts payable turnover. Asset turnover provides an answer to the question: how much in sales has been generated for each unit of investment in assets? Asset turnover is

$$\text{Asset turnover} = \frac{\text{Total sales revenue}}{\text{Total assets}}$$

Another question to ask is how many times of our average inventory at the end of the financial year did we sell? To answer that we compute the inventory turnover ratio. A higher inventory

turnover ratio indicates an ability to move inventory quickly. Slow moving has knock-on effects on liquidity as noted above in our analysis of liquidity indicators. Inventory turnover is computed as

$$\text{Inventory turnover} = \frac{\text{Cost of sales}}{\text{Inventory}}$$

Accounts receivable turnover is the indicator of how many times of our receivables we have been able to collect given credit sales over the year. A higher ratio means receivables are collected more quickly on average. A lower ratio indicates either cash-based sales or more extended credit periods for customers. Accounts receivable turnover is calculated as

$$\text{Accounts receivable turnover} = \frac{\text{Sales revenue}}{\text{Trade receivables}}$$

Another question is how many times a firm has taken trade credits and repaid them over the year. This is the accounts payable turnover. Cost of sales is used as indicator of how much inventory was acquired on credit. Oil and gas firms in the upstream this is replaced with production costs. For downstream firms the definition of the ratio does not change. Accounts receivable turnover is

$$\text{Accounts payable turnover} = \frac{\text{Cost of sales}}{\text{Trade payables}}$$

The Figure 12.4 present the trends of the foregoing ratios computed from our example financial statements.

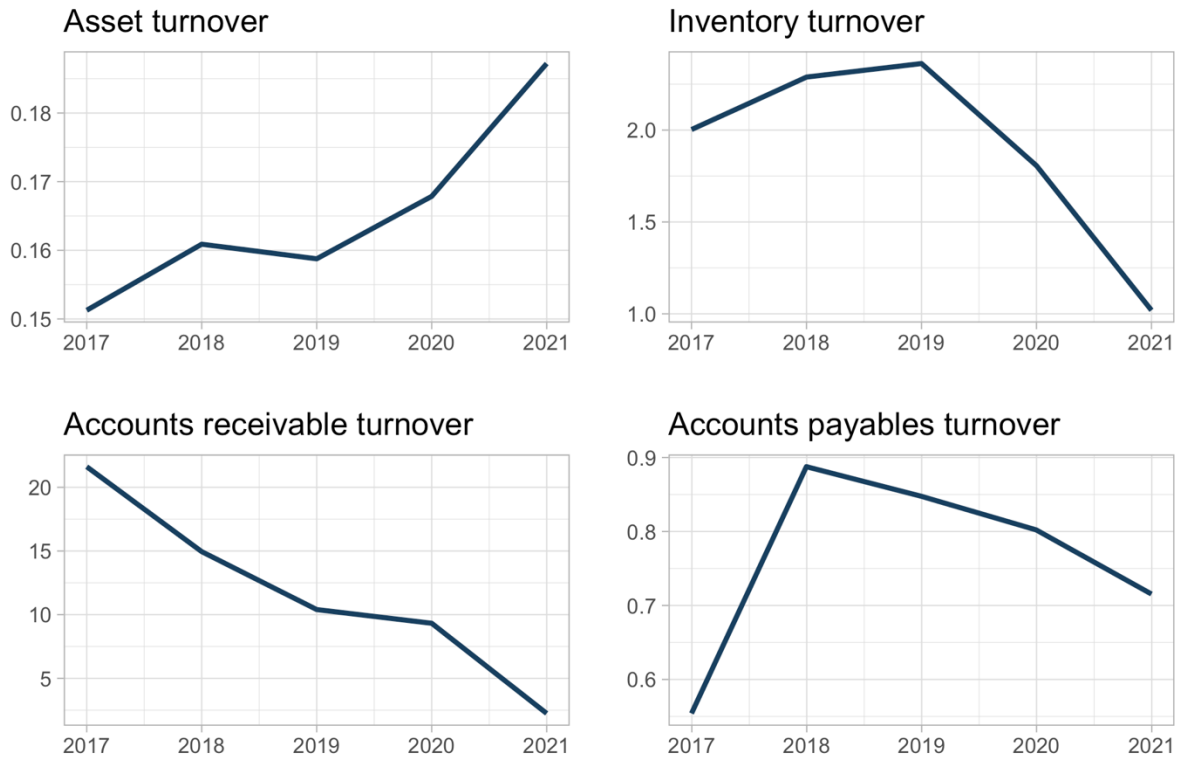

Figure 12.4 Productivity ratios

Asset turnover indicates the amount of sales generated for each $1 of investment in assets. While our computation of asset turnover divides total sales revenue by total assets that includes both current and noncurrent assets, an alternative is to divide total sales by total assets excluding current liabilities. With the alternative computation the focus is on long-term funded assets. As Figure 12.4 shows, asset turnover is less than one dollar for each dollar of asset investment over the five years presented. But asset turnover is on an upward trend over the period. Asset turnover is depressed by new investments because some assets may take years to develop and for eventual sales to be generated. Exploration and evaluation expenditures for a period may be capitalised and

form part of assets but no revenue will be generated on these expenditures because no product has yet been sold based on these investments. In our analysis of net profit margin, we noted that the drop in net profit margin coincided with increased write-offs of exploration and evaluation expenditures in 2020. Asset turnover for 2019-2020 shows the boost in the asset turnover ratio over this period, which in part can be attributed to the exploration and evaluation assets write-offs.

Inventory turnover in Figure 12.4 has a downward trend over the five-year period. This may be a sign of slow-moving inventory. For a downstream firm that can signal bottlenecks in sales in the face of competition. For an upstream firm that can signal quality issues especially for crude oil from newer wells drawn from hard-to-reach reserves.

Figure 12.4 also shows declining accounts receivable turnover. This implies that receivables were taking increasingly longer to collect. Extended credit terms could be accountable, but the effect is that the firm less cash is generated from operations, which may increase the need for short-term borrowings or use of long-term debt to finance current assets.

Accounts payable turnover is also declining over the five-years, although it started the period with an uptick. Accounts payable turnover decline means the firm is taking longer to pay trade payables, another sign of liquidity difficulties. Our analysis in this section helps make sense of liquidity trends we observed earlier. In Figure 12.3, current ratio was on an upward trajectory with can be attributed to slow moving inventory piling up. We also saw in Figure 12.3 an uptick in cash ratio and the quick ratio both signalling borrowed funds shoring up cash balances.

12.7.4 Leverage Analysis

Leverage analysis is about the long-term sustainability of a firm given its long-term debt obligations. Long-term debts have fixed commitments, which has implications for the firm's financial flexibility. Leverage analysis also evaluates the extent shareholders' capital is exposed to financial risk from leverage. We present three ratios below that provide an assessment of a firm's capacity to take on debt and a firm's ability to service its existing debt.

First, we compute the debt-to-equity ratio as

$$\text{Debt to equity ratio} = \frac{\text{Total debt}}{\text{Shareholders funds}}$$

Total debt in the formula includes both short-term and long-term borrowings. Only interest-bearing borrowings of any maturity are included in the figure for total debt. Increases in debt-to-equity ratio implies increasing financial risk.

Debt-to-total assets compares total debt to total assets of the firm to understand the portion of the firm's assets that is funded by external funds other than funds from shareholders. When debt-to-total asset is rising, that signals increasing financial risk. Uncertainty in the business environment means a sudden change in the normal business performance can lead to financial difficulty.

$$\text{Debt-to-total assets} = \frac{\text{Total debt}}{\text{Total assets}}$$

Debt-servicing ability is assessed through the interest coverage ratio. Interest coverage ratio shows how many times profits before interest and taxes can pay off current interest commitments. A lender will be interested in a trend of increasing interest coverage ratio, which indicates whether current profitability level is enough to service interest on debt.

$$\text{Interest coverage ratio} = \frac{\text{Net profit before interest and taxes}}{\text{Interest expense}}$$

While we use interest expense in the formula, the corresponding terminology in the financial statements we have presented above is finance costs. Figure 12.5 shows the trends of the leverage ratios from example financial statements.

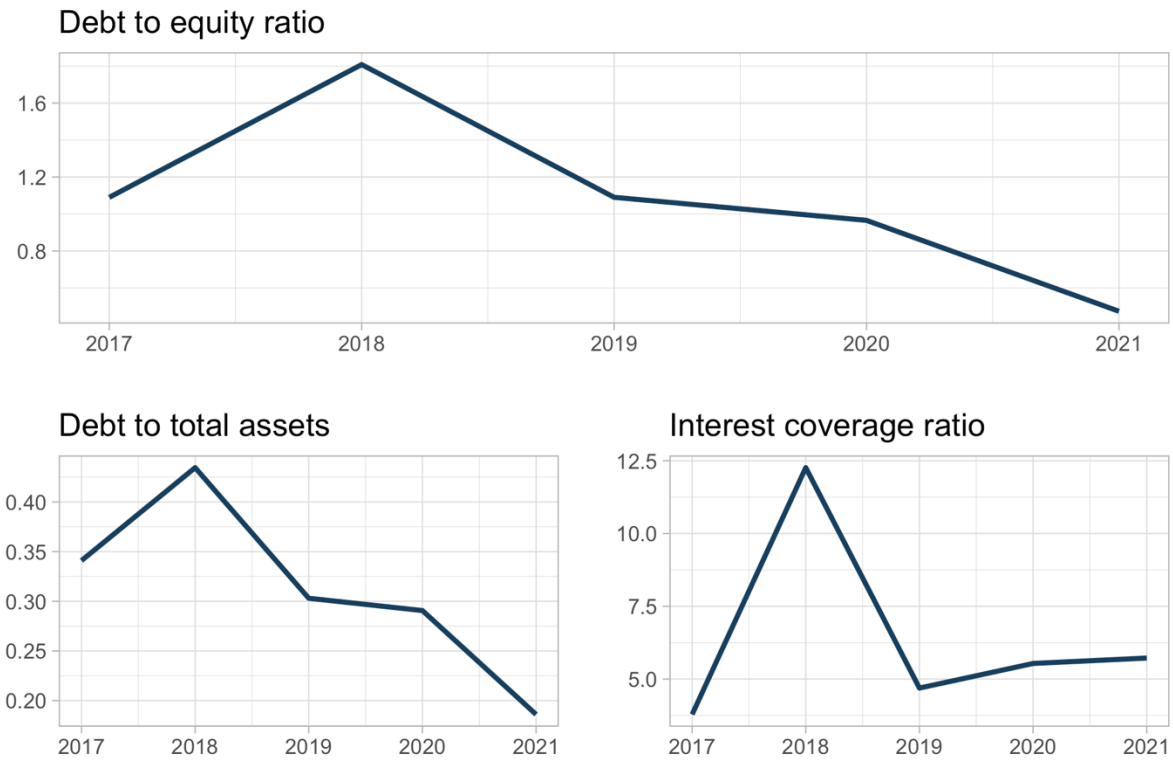

Figure 12.5 Leverage ratios

Figure 12.5 shows that from 2018 to 2021, there is a continued effort to reduce the ratio of debt-to-equity. This mean either fresh capital from shareholders to pay down debt or profits are used. In the financial statements in the appendix, one will notice zero balances for short-term borrowings and decreases in long-term borrowings. This means financing arrangements are being rationalised. The trend of debt-to-total assets is like that of debt-to-equity, and the inferences about debt-to-equity applies. Interest coverage ratio shows an uptick between 2017 and 2018 but falls from there on. We can understand this change by referring to the profitability trends. The period 2019 and 2021 had no consistent profitability growth, likewise asset turnover. But the crude oil prices in Figure 12.1 suggests that revenues were hampered by falling oil prices.

When the profitability, liquidity and leverage ratios are put together we see that price dynamics in the market led oil firms to cutbacks in leverage and paying down debts, which drained liquidity. If a firm's management rationalises its debt ahead of the price falls, the firm will have a better chance of withstanding liquidity challenges when the price falls bite.

12.8 Common Size Analysis

We have conducted the above analysis based on relations between different elements in the financial statements— from the income statement to the statement of financial position. There is an alternative: common size analysis. Common size analysis involves comparing elements against one typical value in the financial statement of interest. Typically, income statement items are compared to revenue and all statement of financial position items are compared to total assets.

Common size analysis facilitates evaluation of a firm's position in relation to its competitors. Common size analysis is also useful for trend analysis of a firm's performance. We now present the common size ratios for the income statement from our illustrative financial statements.

Table 12.1 Common size ratios of the income statement

Item	2021	2020	2019	2018	2017
Sales revenue	100.00	100.00	100.00	100.00	100.00
Other operating income, lost production insurance proceeds	2.22	9.20	8.34	4.84	2.61
Cost of sales	41.90	47.18	44.70	43.72	34.31
Gross profit	58.10	52.82	55.30	56.28	65.69
Administrative expenses	5.79	4.41	4.90	6.26	10.80
Restructuring costs	0.00	0.00	0.75	0.66	2.28
Gain/loss on disposal	0.34	1.04	0.08	0.18	3.15
Goodwill impairment	0.00	0.00	0.00	8.82	2.99
Exploration costs written off	13.16	14.42	7.37	6.61	8.30
Impairment of property, plant and equipment, net	5.26	0.89	7.15	9.01	3.68
Provisions for onerous contracts and restructuring	0.22	8.34	0.05	0.37	1.42
Operating (loss)/profit	33.55	32.07	35.04	24.74	34.49
(Loss)/gain on hedging instruments	0.08	0.12	0.61	0.98	3.28
Finance revenue	2.88	2.85	2.16	1.42	0.23
Finance costs	6.35	6.29	7.80	2.05	8.31
(Loss)/profit from continuing activities before tax	30.00	28.52	28.79	23.13	23.14
Income tax expense	2.11	8.55	2.60	1.67	3.37

(Loss)/profit for the year from continuing activities	27.89	19.96	26.19	21.46	19.77

Common size ratios are calculated by dividing each item in the income statement by the sum of sales revenue and other operating income. Table 12.1 show that cost of sales as a percentage of revenue increased from 34.31% of sales in 2017 to 47.18% in 2020 and then drops in 2021. This is mirrored by the gross profit margin moving in the opposite direction. Administrative expenses reduced from a high of 10.80% of revenues in 2017 to 5.79% in 2021. But exploration costs written off increased as a percentage of gross revenues from 2017 to 2021. With common size analysis we easily see the effects of expenses on reported net profit margin. Administrative cost was controlled but write-offs of exploration expenditure hampered net profits.

We now consider common size ratios for the statement of financial position items. All items are expressed as a percentage of total assets. We highlight the portion total assets financed by equity, noncurrent liabilities and the trends in each of these.

Table 12.2 Common size ratios of statement of financial position

Non-current assets	2021	2020	2019	2018	2017
Goodwill	0.00	0.00	0.00	0.00	1.42
Intangible exploration and evaluation assets	17.55	17.14	17.22	18.42	29.45
Property, plant and equipment	38.70	44.39	46.80	48.75	45.07
Other non-current assets	6.20	6.29	7.03	1.60	1.93
Derivative financial instruments	0.03	0.46	0.01	0.14	1.89
Deferred tax assets	5.15	5.86	6.45	6.90	2.56

Total noncurrent assets	67.62	74.15	77.52	75.81	82.32
Current assets					
Inventories	7.87	4.83	3.28	3.23	2.66
Trade receivables	8.34	1.80	1.53	1.08	0.70
Other current assets	9.24	8.75	6.84	7.63	6.61
Current tax assets	0.43	0.55	0.51	1.26	1.11
Derivative financial instruments	0.85	0.72	0.02	0.83	3.52
Cash and cash equivalents	5.66	1.62	2.53	2.56	3.08
Assets classified as held for sale	0.00	7.59	7.78	7.61	0.00
Total current assets	32.38	25.85	22.48	24.19	17.68
Total assets	100.00	100.00	100.00	100.00	100.00
Current liabilities					
Trade and other payables	11.21	10.87	9.13	8.33	9.62
Provisions	1.72	1.79	2.06	0.47	1.62
Borrowings	0.00	0.00	0.00	5.38	0.64
Current tax liabilities	1.59	0.75	0.40	0.76	1.80
Derivative financial instruments	0.15	0.02	0.47	0.05	0.02
Total current liabilities	14.67	13.44	12.06	14.99	13.70
Non-current liabilities					
Trade and other payables	12.06	11.58	12.67	1.02	2.25
Borrowings	18.61	29.07	30.30	38.06	33.45
Decommissioning and other provisions	7.49	6.11	7.14	10.06	9.25
Deferred tax liabilities	7.89	9.71	9.81	11.75	10.09

Derivative financial instruments	0.01	0.00	0.23	0.10	0.00
Total non-current liabilities	46.07	56.46	60.15	60.99	55.03
Total liabilities	60.73	69.90	72.21	75.98	68.73
EQUITY					
Called-up share capital	2.10	1.89	1.85	1.34	1.27
Share premium	13.72	12.14	11.82	5.63	5.28
Foreign currency translation reserve	2.41	2.15	1.99	2.11	2.16
Hedge reserve	0.05	1.18	0.02	1.17	4.94
Other reserves	7.51	6.82	6.60	6.74	6.42
Retained earnings	13.48	5.92	5.41	6.93	11.03
Equity attributable to equity holders of the Company	39.27	30.10	27.69	23.91	31.10
Non-controlling interest	0.00	0.00	0.09	0.11	0.17
Total equity	39.27	30.10	27.79	24.02	31.27
Total equity and liabilities	100.00	100.00	100.00	100.00	100.00

Table 12.2 shows that intangible assets related to exploration and evaluation costs as a percentage of total assets decreased from 30% to 18% between 2017 and 2021. The income statement shows significant amount written off intangible assets, indicating that exploration efforts are coming on stream or write-off of unsuccessful efforts. Property, plant and equipment as a percentage of assets decreased between 2018 and 2021, implying asset sales and decommissioning. Held for sale assets stayed at 8% of total assets between 2018 and 2020, implying a firm retreating from certain

exploration activities or asset sales to pay down debts. Short-term and long-term borrowings to total assets ratios suggest efforts to reduce debt levels. Noncurrent borrowings declined from 38% in 2018 to 18.61% of total assets in 2021. One can infer a change in financial strategy. While borrowings where on decline, long-term trade and other payables were increasing as a percentage of total assets. These provide some explanation for the observations made about the debt-to-total assets ratio.

12.9 Non-financial Information

The analysis above relies on financial data presented in the financial statements. A comprehensive understanding of a firm's performance needs to consider non-financial information. For an oil and gas firm, information on production is important. Natural resources are subject to depletion. Oil and gas reserves deplete with continued production. This means information on reserves and rate at which the reserves are being depleted is crucial to make informed decisions about future continued operations.

12.10 Summary and Conclusions

In this chapter we have introduced a framework of analysing financial performance of oil and gas firms. We also highlighted financial statement items peculiar to the financial statements of oil and gas firms. We have shown, through financial ratios, how to evaluate the financial performance of an oil and gas firm. We proceed to give a few caveats about using ratios to evaluate performance. As noted above non-financial information is crucial to get a complete picture. Financial ratios only

provide insights about financial aspects of a firm's operations. For example, production technology of an oil and gas firm is important to making decisions about the future sustainability of the firm. Financial ratios are affected by the accounting policies chosen in the measurement of financial statements items.

Appendices

Illustrative Financial Statements

Income Statement items					
Item	2021	2020	2019	2018	2017
Sales revenue	9,413.00	9,296.00	8,912.50	8,849.50	8,733.00
Other operating income, lost production insurance proceeds	213.50	942.00	810.50	450.50	234.00
Cost of sales	4,033.50	4,830.00	4,346.50	4,065.50	3,076.50
Gross profit	5,593.00	5,408.00	5,376.50	5,234.50	5,890.50
Administrative expenses	557.50	451.50	476.50	582.00	968.00
Restructuring costs			72.50	61.50	204.00
Gain/loss on disposal	33.00	106.50	8.00	17.00	282.50
Goodwill impairment				820.00	268.50
Exploration costs written off	1,267.00	1,476.00	717.00	615.00	744.50
Impairment of property, plant and equipment, net	506.00	91.00	695.50	838.00	330.00
Provisions for onerous contracts and restructuring	21.00	854.00	5.00	34.00	127.50
Operating (loss)/profit	3,229.50	3,283.00	3,407.00	2,301.00	3,093.00
(Loss)/gain on hedging instruments	7.50	12.00	59.00	91.00	294.00
Finance revenue	277.50	292.00	210.00	132.00	21.00
Finance costs	611.50	643.50	758.50	191.00	745.00
(Loss)/profit from continuing activities before tax	2,888.00	2,919.50	2,799.50	2,151.00	2,075.00

Income tax expense	203.50	875.50	253.00	155.00	302.00
(Loss)/profit for the year from continuing activities	2,684.50	2,044.00	2,546.50	1,996.00	1,773.00
Basic	6.40	3.05	3.50	3.29	5.68
Diluted	5.67	2.95	3.15	2.70	3.68
(Loss)/profit for the year	2,684.50	2,044.00	2,546.50	1,996.00	1,773.00
Cash flow hedges					
(Loss)/gain arising in the year	593.00	503.50	33.50	676.50	565.00
(Loss)/gain arising in the year , time value	368.00	81.00			
Reclassification adjustments for items included in (loss)/profit on realisation	38.00	163.50	809.00	476.00	512.00
Reclassification adjustments for items included in loss on realisation, time value	305.00	263.50			
Exchange differences on translation of foreign operations	17.50	77.00	45.00	85.50	218.00
Other comprehensive (loss)/profit	2,414.00	1,881.00	2,558.00	1,405.00	1,426.00
Tax relating to components of other comprehensive loss			121.50	44.00	211.50
Net other comprehensive loss for the year			609.00	2,123.00	623.50
Total comprehensive (expense)/income for the year	2,414.00	1,881.00	2,436.50	1,361.00	1,214.50

Statement of Financial Position Items

Non-current assets

Goodwill	820.00

Intangible exploration and evaluation assets	8,822.00	9,493.00	9,667.00	10,129.00	17,000.00
Property, plant and equipment	19,458.50	24,582.00	26,273.50	26,814.50	26,022.00
Other non-current assets	3,116.00	3,482.00	3,949.00	878.50	1,117.00
Derivative financial instruments	15.50	256.00	4.00	79.00	1,093.50
Deferred tax assets	2,587.50	3,247.00	3,622.50	3,794.50	1,476.50
Total noncurrent assets	33,999.50	41,060.00	43,516.00	41,695.50	47,529.00
Current assets					
Inventories	3,957.50	2,674.00	1,840.00	1,776.50	1,536.00
Trade receivables	4,193.50	997.00	857.00	592.00	404.00
Other current assets	4,643.50	4,845.00	3,841.50	4,194.50	3,816.00
Current tax assets	214.50	302.50	288.50	691.50	638.00
Derivative financial instruments	428.50	398.50	9.00	458.50	2,032.50
Cash and cash equivalents	2,844.00	899.00	1,420.00	1,409.50	1,778.50
Assets classified as held for sale		4,201.00	4,365.50	4,185.50	
Total current assets	16,281.50	14,317.00	12,621.50	13,308.00	10,205.00
Total assets	50,281.00	55,377.00	56,137.50	55,003.50	57,734.00
Current liabilities					
Trade and other payables	5,638.00	6,021.50	5,128.00	4,580.50	5,553.00
Provisions	864.00	992.50	1,154.00	259.50	935.00
Borrowings				2,957.50	369.00
Current tax liabilities	798.00	415.00	225.00	415.50	1,041.50
Derivative financial instruments	74.00	13.50	265.50	29.50	10.50
Total current liabilities	7,374.00	7,442.50	6,772.50	8,242.50	7,909.00
Non-current liabilities					
Trade and other payables	6,064.50	6,411.50	7,113.00	561.50	1,296.50

Borrowings	9,358.00	16,095.50	17,011.00	20,937.00	19,312.00
Decommissioning and other provisions	3,768.00	3,385.00	4,008.00	5,533.50	5,340.50
Deferred tax liabilities	3,967.00	5,376.50	5,506.00	6,462.00	5,822.50
Derivative financial instruments	6.00		129.00	54.50	
Total noncurrent liabilities	23,163.50	31,268.50	33,767.00	33,548.50	31,771.50
Total liabilities	30,537.50	38,711.00	40,539.50	41,791.00	39,680.50
EQUITY					
Called-up share capital	1,054.50	1,045.50	1,041.00	737.50	736.00
Share premium	6,900.00	6,721.00	6,634.00	3,096.50	3,049.00
Foreign currency translation reserve	1,210.50	1,193.00	1,116.00	1,161.00	1,246.50
Hedge reserve	23.00	654.00	13.00	641.00	2,849.50
Other reserves	3,776.00	3,776.00	3,704.50	3,704.50	3,704.50
Retained earnings	6,779.50	3,276.50	3,037.50	3,810.00	6,369.00
Equity attributable to equity holders of the Company	19,743.50	16,666.00	15,546.00	13,150.50	17,954.50
Non-controlling interest			52.00	62.00	99.00
Total equity	19,743.50	16,666.00	15,598.00	13,212.50	18,053.50
Total equity and liabilities	50,281.00	55,377.00	56,137.50	55,003.50	57,734.00

References

Berk, J., and De Marzo, P. 2017. *Corporate Finance*. 4th ed. Harlow, England: Pearson.

International Accounting Standards Board. 2004. "International Financial Reporting Standard 6 Exploration for and Evaluation of Mineral Resources." International Accounting Standards Board.

———. 2013. "IAS 36 Impairment of Assets." International Accounting Standards Board.

———. 2018. "Conceptual Framework for Financial Reporting." International Accounting Standards Board.

Johnston, D. C., and Johnston, D. 2006. *Introduction to Oil Company Financial Analysis*. PennWell Nontechnical Series. PennWell Corporation.

PricewaterhouseCoopers. 2017. "*Financial Reporting in the Oil and Gas Industry: International Financial Reporting Standards*." PricewaterhouseCoopers.