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A Financial Analysis and Valuation of Shell

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Abstract: In today's era of global energy transition, the strategic choices made by energy giants like Shell carry immense significance, shaping not only their own future blueprint but also profoundly influencing the overall energy sector's trends. The article provides a comprehensive analysis of Shell plc with liquidity, solvency, profitability, and valuation analysis of 2023 with its main competitors in the oil and gas industry. Despite facing challenges from fluctuating commodity prices and regulatory changes, Shell maintains a competitive advantage and favorable market position. The company demonstrates robust financial health, with strong liquidity, solvency, and profitability ratios compared to industry peers. Nevertheless, the analysis reveals the company's profitability ratios lag behind competitors, indicating room for improvement. Although facing uncertainties in future commodity prices and regulatory environments, the analysis highlights Shell's commitment to balancing environmental goals with shareholder value, as evidenced by its energy transition strategy. Shell's stock is still fairly valued according to the analysis, presenting a compelling investment opportunity with its well-constructed financial framework. Overall, Shell's strategic plans and adjustments aim to ensure resilience and adaptability, promising investors sustainable development amidst evolving market dynamics.

Keywords: Energy Industry, Shell, Financial Analysis, Valuation.

1. Introduction

Shell is a British multinational oil and gas company headquartered in London, operates in over 70 countries, produces around 3.7 million barrels of oil equivalent per day, and has around 44,000 service stations worldwide. As the second largest investor-owned oil and gas company in the world by revenue, according to the Fortune 500 Global 2023 rankings, Shell is the 9th of the world's biggest companies.

Shell has built its competitive advantages upon the disparity portfolio. In the oil operation, Shell established its core competencies from vertical integration in every field from oil exploration to production, transportation, refining, and finally trading and marketing. Similar competencies were also established in the field of natural gas, which has become one of the most important businesses in which Shell is involved, and which contributes a significant proportion of the company's profits. Downstream operations, which now also include chemicals businesses and renewable energy solutions, generated respectively 1,530 and 3,038 million US dollars, constituting a large proportion of its revenue.

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In the energy industry, the transition from traditional oil to renewable energy and low-carbon energy like solar energy and hydrogen has become a consensus among all the multinational companies. Yet the pace and certainty of this transition remain subject to considerable deliberation and uncertainty [1].

In 2020, Shell promised to become a net-zero emissions company by 2050, in line with its global climate goals. However, Shell has been facing pressure to reconsider its emission reduction strategy under changing market dynamics and shareholder expectations. The pressure comes from the conflict between near-term goals of financial imperatives and long-term goals of environmental commitment. The pressure continues to grow especially after its European counterpart, BP plc, decided to reconsider its strategy of emission-reduction trajectory, which notably received a positive response on its share price [2].

As a result of the pressure, Shell reconciles its long-term goals, and affirms recently a realignment toward the oil and gas business, demonstrating its new commitment to increase shareholder values.

For its financial performance, Shell experienced a sharp decline from 2018 to 2020, dropping from $388,379 million to $180,543 million, decreasing by approximately 53.54%, yet rebounding back to $261,504 million in 2021, presenting an increase of 44.81%.

The total revenue for 2023 was $316.62 million, marking a decrease of approximately 16.95% compared to 2022's $381.31 million. Quarterly, the revenue variations are notable. While 2023Q1 showed a modest increase of around 3.27% in comparison to 2022Q1, the subsequent three quarters experienced a decline in the revenue, and compared to the same quarter in 2022, it decreased by a year-on-year decline of 25.46%, 20.26%, and 22.28% respectively [3].

2. Performance Evaluation

2.1. Liquidity

Table 1: Liquidity ratios of Shell plc. and its competitors.

Company Name	Current Ratio	Quick Ratio	Cash Ratio
Shell	1.40	1.13	0.41
BP	1.21	0.94	0.38
Exxon Mobil	1.48	1.09	0.48
Chevron	1.27	1.01	0.25

Data Source: Annual Report (Shell plc, BP plc, Exxon Mobil Corporation, Chevron Corporation).

Table 1 presents Shell's performance in its ability to meet short-term liabilities using its current assets. Shell has demonstrated robust financial health, evidenced by its higher current ratio, quick ratio, and cash ratio compared to its competitors. This indicates the company's stability in meeting its short-term obligations.

Shell's current ratio of 1.40 indicates that Shell has sufficient assets to cover its short-term liabilities. With every $1 of current liabilities, Shell maintains $1.4 of current assets to cover it. Similarly, with a quick ratio of 1.13 and a cash ratio of 0.41, reflecting Shell's ability to address current liabilities with highly liquid assets like cash and cash equivalents, showing prudent asset management practice.

Relative to its peers in the oil industry, all three of the ratios demonstrate a favorable position among the competitors, ranking second only after Exxon Mobil, maintaining a highly competitive liquidity level in the dynamic market and amid fluctuations in the macroeconomic environment [4].

According to Shell's management, they believe that Shell has access to sufficient cash and cash equivalents, debt funding sources (capital markets), and undrawn committed borrowing facilities to

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meet foreseeable requirements. As revealed in the annual report of 2023, cash and cash equivalents in 2023 are amounts totaling $38,774 million, marginally decreased from $40,246 in 2022, reflecting adjustments in the company's cash management practices. The component of cash and cash equivalents saw a reduction in cash reserves alongside a concurrent increase in short-term bank deposits, which signifies a deliberate reallocation of liquid assets toward financial instruments, suggesting a nuanced approach to optimize the use of liquidity assets to enhance revenue while maintaining a robust financial state [2].

2.2. Solvency

Table 2: Solvency ratios of Shell plc and its competitors.

Company Name	Total Debt Ratio	Long-Term Debt Ratio	Times-interest-earned
Shell	0.54	0.12	7.6
BP	0.69	0.17	8.9
Exxon Mobil	0.44	0.10	55.8
Chevron	0.38	0.08	57.5

Data Source: Annual Report (Shell plc, BP plc, Exxon Mobil Corporation, Chevron Corporation) & Finbox.

Table 2, on the other hand, signifies Shell's ability to meet its long-term obligations using its assets. Reflected by the total debt ratio, long-term debt ratio, along the times-interest-earned ratio, Shell moderately relies on debt financing to build its assets and displays relatively conservative long-term debt compared to its industry peers. For all, in regard to the times-interest-earned ratio, Shell appeared to have lower covering times on its interest expense, yet it still has a reasonable capacity to meet its interest obligations.

Shell's Total Debt Ratio of 0.54 indicates that 54% of its assets are financed by debt, suggesting that Shell relies moderately on debt financing to fund its operations and investments. In addition, a long-term debt ratio that stands at 0.12 demonstrates a conservative approach to long-term debt financing and a preference for short-term debt. While it decreases the risk of long-term financial strain, it may also put financial strain on the company's cash flow and liquidity position. Both of these ratios appeared moderate compared to competitors, with ratios slightly bigger than Exxon Mobil and Chevron [5].

On the other hand, Shell's times-interest-earned ratio is 7.6, although it presents as the lowest among its peers, falling behind Exxon and Chevron, marginally after BP, it is still a reasonable ratio in covering the interest.

According to Shell's annual report for 2023, it has a total debt of $53,832 million, presenting a decrease in the total debt amount from $56,152 million in 2022. The current debt contributed $9,931 million to the total, an amount 10.3% higher than in 2022, while the non-current debt witnessed a decline from $51,532 million in 2022 to $48,554 million in 2023.

Delving further to dissect the components of Shell's current debt, it saw a noticeable increase of 23.62% in long-term debt within 1 year from $3,594 million in 2022 to $4,443 million in 2023, along with a ponderable decrease in the amount of short-term debt from $1,026 million to 845 million, representing strategic maneuvering to enhances financial stability as well as resilience in navigating market uncertainties.

However, the composition of the contractual payments should raise some concerns. Based on the notes in the annual report of Shell, in 2023, significant portions of Shell's contractual payments for bonds and bank borrowings are due within the next year. The total contractual payments for bonds and bank borrowings due within one year amount to $5,352 million. Additionally, Shell also faces substantial contractual payments for bonds and bank borrowings between 1 and 2 years, amounting

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to $6,424 million. Although the bulk of Shell's debt falls due beyond the next two years, the sheer magnitude of these obligations, particularly for bonds, raises concerns about the company's long-term financial commitments. Contractual payments for bonds beyond 5 years exceed $30 billion, indicating substantial long-term debt exposure [2]. This significant payment schedule casts a shadow on Shell's liquidity position, raising concerns about its ability to meet obligations without encountering cash shortfall risks.

2.3. Profitability

Table 3: Profitability ratios of Shell plc and its competitors.

Company Name	Profit Margin	Operating Margin	Asset Turnover
Shell	6.11%	3.95%	0.76
BP	7.31%	3.04%	0.76
Exxon Mobil	10.65%	11.22%	0.93
Chevron	10.97%	10.59%	0.78

Data Source: Yahoo Finance & The Wall Street Journal.

Table 3 assesses Shell's ability to generate profit. While Shell maintains a solid level of profit, the table reveals that Shell's profitability ratios are at a lower level among its peers. There is still room for Shell to improve its profitability, maximize asset utilization, and enhance its position in the competitive landscape of the oil industry.

Shell's profit margin of 6.11% reflects the company's ability to convert revenue into profit. While it demonstrates a satisfactory level of profitability, this ratio falls behind its peers listed in the table. This suggests that Shell may be having challenges in converting revenue into profit compared to its competitors. Likewise, Shell's operating margin and asset turnover ratio are acceptable but in a worrisome position in the competitive landscape, suggesting a further improvement in operational efficiency and asset usage optimization.

According to Shell's annual report of 2023, integrated gas and upstream still contributed the most revenue proportion, for $7,046 million and $8,528 million each, yet both underwent a great decrease of 68.28% and 47.43%, respectively. Similarly, chemicals and products also experienced a sharp deduction of 66.11%. Nevertheless, marketing, along with renewables and energy solutions went on an upsurge in earnings.

The key factor influencing Shell's revenue in integrated gas and upstream section comes down to the macroeconomic risks, mainly the fluctuating prices of crude oil, natural oil, oil products, as well as chemicals. While managing to lower the impact of price volatility with a disparate portfolio, the oil and gas section still counts for the largest portion of Shell's revenue (Shell, n.d.). Under unpredicted high oil and gas prices, the reduction of demand might result in lower profitability in certain business groups; on the other hand, in a low oil and gas price environment, the most profitable sections generate a less acceptable revenue, resulting in probable delayed and canceled projects, as well as the sharp impairment on the value of the assets.

3. Valuation

Table 4: Valuation of Shell plc and Competitors.

	Shell	BP	Exxon Mobil	Chevron
Market value of equity(M(E))	212.925B	107.72B	474.52B	295.39B
Market value of debt(M(D))	81.54B	63.08B	47.71B	26.07B
Leverage	27.69%	36.93%	9.14%	8.11%

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Table 4: (continued).

Debt-to-equity ratio	38.30%	58.56%	10.05%	8.83%
P/E ratio	12.48	7.48	13.47	14.08
Marginal corporate tax rate	39.82%	33.00%	29.23%	27.60%
Expected cost of debt capital(r_D)	12.53%	9.30%	1.58%	1.56%
Equity beta(β)	0.56	0.55	0.96	1.13
Expected cost of equity capital (r_E)	6.50%	6.41%	9.92%	11.37%
Weighted average cost of capital(WACC)	6.79%	6.35%	9.11%	10.54%
Business risk (β_A)	0.46	0.40	0.90	1.06

Data Source: Annual Report (Shell plc, BP plc, Exxon Mobil Corporation, Chevron Corporation) & Yahoo Finance.

Based on the quantitative analysis of Shell's business risk, Table 4 illustrates a competitive advantage and favorable market position in the oil and gas field's landscape. As evidenced by a P/E ratio of 12.48, as well as a comparatively low weighted average cost of capital relative to its peers, demonstrating a prudent allocation of its capital structure. Furthermore, Shell displays lower business risk in comparison to its industry counterparts, as indicated by a lower β, implying a more stable and predictable earnings stream.

Despite the favorable valuation, Shell faces potential risks from fluctuating prices of commodities, the EU government's regulatory changes with cleaner energy sources, and the company's evolving approach to developing renewable energy, all of which might impact its future valuations.

3.1. Uncertainties in Future Commodity Prices

Shell has been exposed to macroeconomic risk, notably the fluctuation in prices of crude oil, natural gas, oil products, and chemicals. In the preceding years, the company has been experiencing significant volatility in oil and gas prices across its key markets. Oil price, with Brent as the global benchmark, has been dropping from $101/bbl average in 2022 to $83/bbl average in 2023. Gas prices went with a similar downward trend in 2023, with prices fluctuating more frequently, and maintained at an elevated price compared to historical norms at the year-end. The fluctuation arose from the unmatched supply and demand, which can be attributed to a list of factors. On the supply side, impacting factors include geopolitical tensions, natural disasters, weather, and so on. For the demand side, while global economic growth is at a moderate level, simultaneously demonstrating a rebounded demand from the COVID-19 pandemic period, concerns about climate change and the effect of the ongoing energy transition had a contrasting effect of pushing a fall in demand for traditional energy.

Confronted with the risk of commodity price volatility, despite efforts to qualify its impact through a diversified portfolio and prudent interventions against a variety of prices, Shell's future remains highly contingent upon unpredictable fluctuations in commodity prices.

3.2. Regulatory Changes and Environmental Policies

As a multinational company operating in over 70 countries, Shell's operations are subject to regulations and environmental policies imposed by a myriad of governments. Regulatory changes, in particular, climate-related regulations aimed at accelerating the energy transition to low-emission energy sources have a significant influence on the corporation's strategy [6]. These regulations entail stricter restrictions and higher taxes on greenhouse gas (GHG), especially in the European Union where an aggressive green agenda has been pushing forward in recent years. Such regulatory changes have profoundly affected the operational performance of traditional energy companies like Shell and

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BP, leading to an undervalued compared to its American peers, as Shell's chief executive Wael Sawan noted.

In the short term, increased compliance costs with emission limits in some regions might lead to a potential loss in exerting an additional operational cost in response, thereby adding distress on the corporation's assets, and diverting funds away from other opportunities for investment projects that generate potential revenue.

In the middle- and long-term, uncertain regulatory changes may hinder Shell's ability to deliver optimized value with oil and gas operations to its shareholders. The evolving regulations require a reshaping of Shell's business model and impacting the long-term returns, calling on substantial investments in technologies geared toward low-carbon products that are not yet matured and yield lower operating margins than the company's traditional businesses [1].

3.3. Shell's Energy Transition Strategy: Investor Returns vs. Climate Goals

Though peak oil demand has yet to materialize, the decreasing oil demand seems like an impending trend [7]. As traditional oil and gas enterprises, particularly in Europe, traditional oil and gas enterprises grapple with the strategic challenge of balancing climate objectives with shareholder value maximization. Oil majors have begun to acknowledge their contribution to climate change, and committed to a net zero emissions blueprint, aiming to line with the Paris Agreement to limit the rise in global average temperature, which necessitates increased investment in cleaner energy, aiming at a promising future wherein renewable energy solutions play a key role in revenue generation, aligning with the trend of energy replacement [8]. While some investors are comfortable with the strategy of opting for cleaner energy, putting forward environmentally motivated shareholder activities, others hold a contrasting view according to this strategy, citing concerns about the unpromising outlook on the returns of renewable energy solutions in preceding years [9].

Similar juxtapositions are exerted upon its rival company BP, where shareholders' negative sentiments have prompted an adjustment to reduce its emission reduction targets. BP has announced to refocus on oil and gas production, which quickly triggered a positive market response with a quick increase in its share price.

Subsequently, Shell released its Energy Transition Strategy Report 2024, declaring its adjustment to slow the pace of carbon-emission cuts, reverting its focus from a diversified portfolio in renewable energy investments towards its conventional business lines [8]. Shell declared its first and foremost focus is the oil and gas business, and creating value for shareholders takes precedence over environmental constraints [10].

4. Conclusion

In 2023, three years after the sharp plunge in revenue in 2020, Shell has illustrated a full-year profit exceeding its expectations, despite a 29% drop from the highest annual profits resulting from a significant rise in the oil price in the prior year, demonstrating a normalization and a moderate growth when excluding the volatilization in commodity prices. Shell has shown its resolution in continuing to present robust financial health to the industry investors, with strong liquidity, solvency, and profitability ratios compared with its peers in the oil and gas industry. By keeping sufficient current assets, remarkably, cash and cash equivalents over its current liabilities, Shell has its liquidity states at the forefront of its business rivals. Furthermore, the company has made an acceptable solvency commitment by establishing moderate debt financing while relying on long-term debt at a conservative level and maintaining a promising times-interest ratio. In contrast with the satisfying liquidity and solvency state, while profitability ratios are still favorable, the numbers are seen to have been left behind by its competitors, indicating room for improvement in generating profits.

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Key qualitative risk factors that may greatly influence Shell's future performance are regulatory changes and environmental policies, uncertainties in future commodity prices, and the conflict between achieving climate goals and maximizing shareholder values.

Considering all the factors, the recommendation given to Shell is that the stock is fairly valued. Shell presents a compelling investment opportunity with its meticulously constructed financial framework. Despite the potential risk posed to the company's future, its strategic plans and adjustments to ensure resilience and adaptability have promised investors sustainable development.

References

[1] *Fattouh, B., Poudineh, R., & West, R. (2019). The rise of renewables and energy transition: What adaptation strategy exists for oil companies and oil-exporting countries? Energy Transit, 3, 45–58.*

[2] *Shell. (2024). Shell. https://www.shell.com/*

[3] *BP. (2023). BP Annual Report and Form 20-F 2023. https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/investors/bp-annual-report-and-form-20f-2023.pdf*

[4] *ExxonMobil. (2023). ExxonMobil announces 2023 results. ExxonMobil. https://investor.exxonmobil.com/news-events/press-releases/detail/1156/exxonmobil-announces-2023-results*

[5] *Chevron. (2023). Chevron Corporation annual report 2023. https://www.chevron.com/-/media/chevron/annual-report/2023/documents/2023-Annual-Report.pdf*

[6] *Blazquez, J., Fuentes, R., & Manzano, B. (2020). On some economic principles of the energy transition. Energy Policy, 147, 111807.*

[7] *Pickl, M. J. (2019). The renewable energy strategies of oil majors – From oil to energy? Energy Strategy Reviews, 26, 100370.*

[8] *Halttunen, K., Slade, R., & Staffell, I. (2023). Diversify or die: Strategy options for oil majors in the sustainable energy transition. Energy Research & Social Science, 104, 103253.*

[9] *Tillotson, P., Slade, R., Staffell, I., & Halttunen, K. (2023). Deactivating climate activism? The seven strategies oil and gas majors use to counter rising shareholder action. Energy Research & Social Science, 103, 103190.*

[10] *Laursen, C. M. (2024). Shell to Slow Pace of Carbon Emission Cuts. The Wall Street Journal. https://www.wsj.com/articles/shell-to-slow-pace-of-carbon-emission-cuts-4b24acce?siteid=yhoof2*