**GROUP MEMBERS (GROUP 15)**

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**3) Time Series and Cross sectional Analysis**

a) The following charts present a trend analysis of Chevron Phillips, Balchem Corporation, and Liquidmetal Technologies regarding their overall profitability, utilizing the Net Profit Ratio and Gross Profit Ratio.

b) The following charts present a trend analysis of Chevron Phillips, Balchem Corporation, and Liquidmetal Technologies regarding their components of profitability, utilizing the Net Profit Ratio and Return on Average Capital Employed.

c) The following charts present a trend analysis of Chevron Phillips, Balchem Corporation, and Liquidmetal Technologies regarding their risk ratios, utilizing the Interest Coverage ratio and Net Debt Ratio.

**Cross Sectional Analysis**

a) The following charts present a cross sectional analysis of Chevron Phillips, Balchem Corporation, and Liquidmetal Technologies regarding their overall profitability, utilizing the Net Profit Ratio and Gross Profit Ratio.

b)The following charts present a cross sectional analysis of Chevron Phillips, Balchem Corporation, and Liquidmetal Technologies regarding their components of profitability, utilizing the Net Profit Ratio and Return on Capital Employed.

c) The following charts present a cross-sectional analysis of Chevron Phillips, Balchem Corporation, and Liquidmetal Technologies regarding their risk ratios, utilizing the Interest Coverage ratio and Debt to Equity.

**4) Discussion of Liquidity Risk of Chevron Philips Chemical Company**

Liquidity ratios are financial metrics that measure a company's ability to pay its short-term and long-term financial obligations. The liquidity ratios can be analyzed using current ratio and quick ratio (benchmark for the same is 2:1 & 1:1 respectively).

A graph of a chart with numbers and a bar chart

Description automatically generated with medium confidence

The current ratio has as of 2023 is 1.27:1 which is less than the benchmark suggesting more risk also, the liquidity ratio is 0.87:1 which hasn’t met the benchmark showing the inability to pay its financial obligation in the short term.

**5) Discussion of financial risk of Chevron Philips Chemical Company based on a review of notes to the financial statements.**

Based on the notes to the financial statements and the financial ratios analyzed on the Chevron Philips Chemical Co. the possibility of losing money on an investment or a business venture is low as the entity has a profit during the current financial year. Further, the company is showing steady growth in the industry with good financial ratios showing fewer financial risks.

From the breakdown of total costs and deductions versus revenues, one may safely conclude that its expense profile is pretty stable. Since high revenue is purchased by crude oil and products, around 59.3% in 2023, Chevron Phillips has heavy exposure to market volatility in the cost of the raw material, which is highly financial risk critical.  
Income Before Tax stands for positive earnings, which reflect resilience against immediate risks, although the net profit margin declined slightly in 2023, reflecting tighter margins in realization.

**6) Discussion of business opportunities and threats posed by Chevron Philips Chemical Company.**

**Opportunities**:

**Global Expansion in Emerging Markets**:

* Growing economies in Asia and Latin America are increasing demand for petrochemical products, especially plastics and specialty chemicals. Chevron Phillips could expand its presence in these regions to tap into new, high-growth markets.

**Sustainability and Green Chemistry**:

* As regulatory and consumer demands shift towards sustainability, there’s a significant opportunity for Chevron Phillips to invest in bio-based or renewable chemicals. Developing a portfolio of environmentally friendly products could open new revenue streams and improve brand reputation.

**Threats**:

**Volatility in Crude Oil Prices**:

* Since crude oil is a primary input, Chevron Phillips faces price fluctuation risks. Sudden increases in crude oil prices could squeeze profit margins, especially if it’s unable to pass these costs on to customers.

**Regulatory Pressures and Environmental Compliance**:

* The petrochemical industry is subject to strict environmental regulations, which are only expected to tighten. Compliance costs can be substantial, especially in regions where emission standards are evolving rapidly, adding pressure to profit margins.

**7) Discussion of Liquidity Risk of Balchem Corporation**

The liquidity position of Balchem Corporation can be assessed using the **Current Ratio** and **Quick Ratio**:

* **Current Ratio**: Balchem’s current ratio for the years 2023, 2022, and 2021 are 2.1, 2.4, and 2.2, respectively, which are above the typical benchmark of 2:1. This indicates that Balchem generally has enough current assets to cover its current liabilities, suggesting a low liquidity risk.
* **Quick Ratio**: Balchem’s quick ratio for the years 2023, 2022, and 2021 are 1.38, 1.54, and 1.61, respectively. Although the quick ratio is slightly below the benchmark of 1.0 in 2023, it still reflects a reasonable liquidity position, indicating Balchem can cover its short-term obligations without relying heavily on inventory.

Overall, Balchem’s liquidity position appears stable, with both the current and quick ratios indicating sufficient coverage of liabilities in the short term.

**8) Discussion of Financial Risk of Balchem Corporation**

The financial risk of Balchem Corporation can be analyzed using the **Interest Coverage Ratio**, **Debt Ratio**, and **Return on Capital Employed (ROCE)**:

* **Interest Coverage Ratio**: Balchem’s interest coverage ratio was 6.1 in 2023, 13.0 in 2022, and 51.0 in 2021. The decreasing trend suggests that the company’s ability to cover interest expenses with its earnings has weakened over time, though it remains at an acceptable level in 2023. This indicates moderate financial risk regarding debt servicing.
* **Debt Ratio**: Balchem’s debt ratio is consistently at 30% across the years. This indicates a balanced capital structure with a reasonable level of debt in relation to equity, implying a controlled financial risk profile.
* **Return on Average Capital Employed (ROCE)**: Balchem’s ROCE was 9.5% in 2023, 9.0% in 2022, and 11.9% in 2021, showing slight variations. This return level suggests Balchem is efficiently using its capital to generate profit, which is positive for reducing financial risk.

Overall, Balchem’s financial risk remains moderate, with sufficient earnings to cover interest obligations and a balanced debt structure. However, the declining interest coverage ratio should be monitored closely.

**9) Discussion of Business Opportunities and Threats for Balchem Corporation**

**Opportunities**:

* **Growth in Specialty Ingredients and Chemicals**: Balchem’s focus on specialty ingredients, such as those used in food, nutrition, and health industries, positions it well to benefit from the increasing consumer demand for health and wellness products.
* **Expansion in Emerging Markets**: With the growth in emerging markets in Asia and Latin America, Balchem has opportunities to expand its presence and increase market share, especially in food ingredients and animal nutrition products.
* **Sustainable and Green Products**: Balchem could capitalize on the increasing demand for sustainable products by investing in green chemistry and bio-based ingredients, which would improve its brand reputation and open new revenue streams.

**Threats**:

* **Fluctuating Raw Material Costs**: As with other companies in the chemical industry, Balchem faces the risk of price volatility for raw materials. This could impact profitability if the company cannot pass on higher costs to customers.
* **Regulatory and Compliance Costs**: Operating in the specialty chemicals and nutrition industry brings regulatory challenges, particularly regarding environmental and health standards. Compliance costs could increase if regulations tighten, impacting Balchem’s margins.
* **Competitive Pressure**: The specialty chemicals industry is competitive, and Balchem faces threats from other companies investing heavily in innovation and technology. Balchem needs to continuously innovate to maintain its competitive edge.

**10) Conclusion of which firm in the group of firms your team is analysing is best positioned to succeed (in terms of growth in earnings and the attendant risk) in the future and why.**

* As per the chart, the PE ratio of Balchem Corp is the highest among all the companies. But as per the ratios and the analysis of other financial heads, the overall performance of Chevron Philips Chemical Co. has been the best so far showing continuous profitability and stable growth. Thus, it can be said that the Chevron Philips Chemical Co. is best positioned to succeed.