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## Pakistan Refinery Limited – Business Model:

Pakistan Refinery Limited (PRL) stands as a cornerstone in Pakistan's oil refining sector, contributing significantly to the nation's energy infrastructure since its establishment in 1960. Operating out of Karachi, PRL is strategically located to refine a blend of imported and local crude oil, ensuring a steady supply of petroleum products to meet domestic demand. With a refining capacity of 50,000 barrels per day (bpd), PRL produces a diverse range of high-quality products, including gasoline, diesel, kerosene, and furnace oil. These products are distributed across the country, primarily serving major urban centers and industrial zones. PRL is committed to continuous improvement, demonstrated by its substantial investments in upgrading its refining processes and environmental management systems to align with global standards. By maintaining stringent quality controls and adopting advanced technologies, PRL ensures its products meet both national and international specifications.

## Industry Analysis:

The refinery sector in Pakistan is crucial to the nation's industrial framework, serving as a backbone for transportation, industrial activities, and power generation. The industry comprises five major participants: PARCO, ATRL, NRL, PRL, and CENERGY, predominantly utilizing hydro skimming technology. Among these, PARCO operates the only mild conversion refinery. Despite an overall refining capacity of approximately 20.6 million tons annually, the sector operated at around 54% capacity in FY23. This underutilization resulted in the import of 11 million tons of petroleum products due to a reduced demand for Furnace Oil (FO) amidst evolving energy industry dynamics. To address these challenges and promote modernization, the Pakistani government has implemented an upgradation policy for brownfield refineries. This policy aims to increase the production of Motor Spirit (MS) and High-Speed Diesel (HSD) while reducing FO output and encouraging compliance with Euro V standards.

Pakistan Refinery Limited (PRL), operating as a subsidiary of Pakistan State Oil (PSO), is well-positioned to benefit from these initiatives. PRL has embarked on an ambitious Refinery Expansion and Upgrade Project (REUP), underpinned by license agreements with Honeywell UOP and Axens. This project aims to double PRL's current refining capacity from 50,000 barrels per day (bpd) to 100,000 bpd and transform the existing facility into a deep conversion refinery. The completion of this project by the end of 2028 is expected to significantly enhance PRL's operational efficiency and output quality. In FY23, Pakistan Refinery Limited (PRL) achieved a capacity utilization of 62.9%, indicating a stable performance amid the challenges faced by the refining sector in Pakistan.

## Assumptions - Income Statement:

Sales revenue was forecasted using three key variables: the exchange rate, the price of oil barrels, and the number of barrels sold. The exchange rate and oil prices were projected based on an in-depth analysis of Pakistan's economic conditions and future global oil demand. As there were no expansion plans mentioned in the annual report, the number of barrels sold was projected to increase by 3% annually, aligning with industry and company trends. Cost of sales was primarily calculated based on the quantity of crude oil consumed, which was estimated using moving averages of growth rates using the percentage of barrels sold relative to barrels purchased to reflect stagnant growth and decline in the future. Distribution costs, including transportation, fuel, and repairs, were based on the number of barrels sold, while salaries and staff transport were tied to the number of employees. Administrative expenses, such as salaries, staff transport, training, and travel, were also based on employee numbers; repairs were linked to barrels sold, and advertising was tied to revenue. For other operating expenses, the workers' profit and welfare funds were based on the number of employees, and research costs were tied to revenue. All other expenses were forecasted using the moving average method.

## Assumptions - Balance Sheet:

The company took Rs. 2000,000,000 of long-term loans in 2023 and its loan schedule (using all present assumptions such as KIBOR 23%) was made assuming no further borrowing will take place. Lease liability is amortized at 10% per annum using the straight-line method. Property, plant, and equipment were forecasted using the fixed asset schedule, while stores and spares were calculated with the moving average method. Capital work in progress was based on the cost of goods sold.

## Valuation:

PRL's equity per share value stood at Rs. 2.03. The terminal value after discounting cashflows is Rs. 12,760,088,121. Sensitivity analysis resulted in lowest (Rs. 4.97) and highest (Rs. 7.03) prices for shares.