VIS

Credit Rating Company Limited

OIL AND GAS (MARKETING & DISTRIBUTION)

Table of Contents

INTRODUCTION

Oil and gas sector is vast and complex and it is broken down into three segments: Upstream, Midstream and Downstream. Upstream or Exploration & Production (E&P) companies, find reservoirs and drill oil and gas wells. Midstream companies deal with the transportation of oil from wells to refineries where it is filtered and sold to end consumers by downstream companies. The key activities pertaining to the oil and gas sector have been visualized below:

1 - EXPLORATION | **2 - DRILLING** | **3 - EXTRACTION & PRODUCTION** | **4 - PROCESSING & REFINING** | **5 - DISTRIBUTION & MARKETING**

1 - EXPLORATION: This process involves geological surveys and use of advanced technologies to identify potential hydrocarbon deposits. Geologists and geophysicists analyze seismic data, gravitational fields, magnetic properties, and satellite imagery to pinpoint promising reserves. This phase is critical and comes with high risks and costs, as the potential for finding commercially viable quantities of oil or gas is uncertain.

2 - DRILLING: Once a potential reserve has been identified, the next step is drilling. This is where the physical work begins, using rigs to bore holes into the Earth's crust to reach the hydrocarbon reservoirs. Drilling can take place on land (onshore) or at sea (offshore), with offshore drilling often involving more complex and expensive operations due to the challenging environments.

3 - EXTRACTION & PRODUCTION: After a successful drilling operation that reaches an oil or gas reserve, the extraction phase begins. This involves drawing the hydrocarbons to the surface, a process that may require the use of pumps (in the case of oil) or pressure control techniques (for gas). The production phase is carefully managed to maximize recovery and extend the life of the reservoir.

4 - PROCESSING & REFINING: Crude oil and natural gas undergo processing and refining to remove impurities and separate useful components. Oil is refined into various products such as gasoline, diesel, and jet fuel, while natural gas is treated to remove water, carbon dioxide, and other gases before being considered market-ready. This stage is crucial for transforming raw hydrocarbons into usable products.

5 - DISTRIBUTION & MARKETING: The final products are transported to consumers through a network of pipelines, tankers, and trucks. Natural gas may also be liquefied (LNG) for easier transportation over long distances. These distribution networks are extensive and complex, ensuring that energy products reach markets around the world.

This report encompasses the marketing and distribution sub-sector of the oil and gas. Oil and gas marketing and distribution companies are vital intermediaries in the energy sector, responsible for the wholesale and retail sale of fuel products derived from crude oil and natural gas. These companies manage the logistics of transporting oil and gas from refineries to various consumer outlets such as gas stations, industries, and households. Their operations encompass a broad range of activities including storage, distribution, and the sale of fuels, ensuring that energy needs of the market are met efficiently and reliably. They play a crucial role in maintaining the energy supply chain and stabilizing local markets by matching supply with consumer demand.

ECONOMIC OVERVIEW

GLOBAL

In 2023, the global economic landscape was shaped by enduring inflationary pressures, with many countries experiencing high inflation rates, leading central banks to pursue aggressive monetary tightening. The global growth forecast, according to the International Monetary Fund (IMF), was adjusted to around 3.1%, reflecting a subdued post-pandemic recovery influenced by factors such as supply chain issues and the ongoing Russia-Ukraine conflict, which exacerbated volatility in energy and food markets. China's economy, grappling with its challenges, received fiscal support, targeting growth above 5%. Emerging markets dealt with the impact of a strong US dollar, which contributed to capital outflows and currency pressures, with some currencies depreciating significantly against the dollar. The combined effect of these factors presented a significant challenge for global economic stability, with the risks of a slowdown and recession looming on the horizon.

PAKISTAN

Pakistan's economic landscape can be defined by its struggle with high inflation and efforts to narrow its trade deficit, achieving a significant reduction of 34.29% in the first half of the FY23, compared to the same period in the previous year. This was partly buoyed by a noteworthy 66.4% increase in exports to China during July-December 2023, showcasing a strengthening of trade ties between the two countries. This upward trend in exports, particularly to China, hints at potential continued economic engagement and benefits for Pakistan. The Asian Development Bank's forecasts encapsulate these dynamics, predicting a cautious GDP growth of 0.3% for 2023 and a slight improvement to 1.9% in 2024. The inflation rates are projected to remain high at 29.2% in 2023, with a slight improvement to below 25% in 2024, indicating persistent cost-of-living pressures.

The future outlook of Pakistan’s economy in 2024 is cautiously optimistic yet hinges on several external and internal factors. Key among these are global energy prices influenced by geopolitical tensions, such as the ongoing Ukraine-Russia conflict and the situation in the Middle East, and climate change effects on agriculture. Additionally, Pakistan's economic trajectory is closely tied to its relationship with the International Monetary Fund (IMF), with recent engagements stabilizing some economic indicators. The country's ability to sustain and leverage these improvements depends on maintaining disciplined economic policies and enhancing its investment climate, as indicated by the establishment of the Special Investment Facilitation Council. However, challenges remain, including the need for a transition to a greener economy amidst global calls for climate justice and equitable responsibility sharing. These dynamics present a complex but navigable path for Pakistan’s economy, contingent on strategic policy decisions and international cooperation

OIL AND GAS (MARKETING & DISTRIBUTION) INDUSTRY

GLOBAL

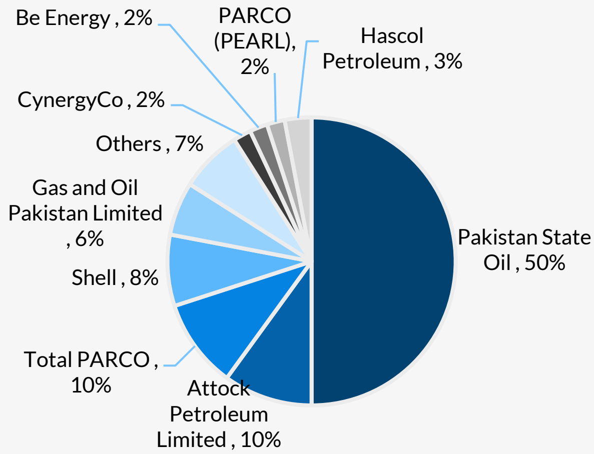
The global marketing and distribution sub-sector plays a vital role in the energy supply chain, facilitating the efficient delivery of crude oil and natural gas products worldwide, with a market size of USD 1.7T in 2020. Despite its significance, oil marketing companies (OMCs) have encountered numerous challenges, including fluctuations influenced by global economic trends, geopolitical tensions, and shifts in the energy landscape. The COVID-19 pandemic exacerbated these challenges, causing unprecedented disruptions in energy demand and supply chains, leading to a surplus in supply and plummeting prices. This scenario strained OMCs with excess inventory and reduced profitability, but gradual economic reopening led to a recovery in oil demand and prices, albeit slower than pre-pandemic levels. Despite ongoing uncertainties, companies in the sub-sector adapted strategies to optimize operations and mitigate impacts. Geopolitical tensions and regulatory changes, such as conflicts in oil-producing regions and trade disputes, further affected market volatility. Additionally, the growing emphasis on environmental sustainability prompted companies to invest in renewable energy initiatives and technology solutions, reflecting a shift towards cleaner energy sources.

PAKISTAN

OIL MARKETING COMPANIES (OMCs)

OMCs are responsible for the distribution and marketing of crude oil, refined petroleum products, and lubricants to consumers nationwide. During FY23, this industry experienced a significant decrease of 22% in the demand of white oil, with MoGas dropping by 17% and diesel by 29%. This decline can be attributed to several factors, including a slowdown in economic activities, rising fuel prices, and the influx of petroleum products from the western border. Additionally, there was a 45% decrease in the demand for black oil, as a result of reduction in furnace oil-based power generation by 62% on YoY basis. This reduction in furnace oil-based power generation was a result of a 10% decrease in electricity production in the country. Lubricant industry, similar to remaining energy sector, also experienced a decline of 16% as compared to previous year.

OMCS MARKET SHARE 2022-2023



The overall liquid fuel consumption in Pakistan was 16.9M.T reflecting a decrease of 26% over last year. Furthermore, there was a significant decline of 59% in automobile sales that is a part of an overall decrease of 38% in the automotive industry. This trend is expected to continue into the coming year as a result of escalating car prices. Moreover, regulatory constraints and government policies, such as taxation and pricing regulations, pose challenges for OMCs in terms of pricing flexibility and market competitiveness. Lastly, infrastructure limitations, including insufficient storage and distribution facilities, hinder efficient operations and supply chain management for these companies.

Despite these challenges, the country's strategic geographic location offers potential for increased trade and transit activities, positioning Pakistan as a key player in regional energy markets. Furthermore, technological advancements and innovations in the energy sector present opportunities for OMCs to improve operational efficiency and explore alternative fuel options. Pakistan State Oil (PSO) stands out as the largest and most prominent player, holding a 50% market share.

Going forward, the future outlook appears promising yet challenging. While the growing demand for petroleum products presents opportunities for revenue growth, OMCs must navigate through various obstacles, including regulatory constraints, infrastructure limitations, and market volatility. Additionally, with increasing global focus on sustainability and renewable energy, OMCs will need to adapt their business models and explore eco-friendly alternatives to ensure long-term sustainability and competitiveness in the evolving energy landscape of Pakistan.

NATURAL GAS DISTRIBUTION COMPANIES

By end-FY23, the country's balance recoverable reserves of gas were 18.3T cubic feet. The gas production for the year 2022-23 was 3,259mCft per day, and the gas consumption during the same period was 3,357mCft. This market remains dominated by two major players, Sui-Northern Gas Pipelines Limited (SNGPL) and Sui-Southern Gas Company Limited (SSGCL). These companies face several challenges that impact their operations and profitability. One major challenge is the inadequate infrastructure, including pipelines and storage facilities, which hinders the efficient distribution of natural gas across the country. Additionally, the high incidence of theft and leakages in the gas distribution network contributes to revenue losses and operational inefficiencies. Regulatory constraints and government policies, such as pricing regulations and taxation, pose further challenges for these companies, limiting their pricing flexibility and market competitiveness.

Domestically, natural gas is utilized by power and domestic sector followed by fertilizer sector. The sector-wise consumption of natural gas has been given below:

Natural Gas Consumption by Sector (Million CFt)			
Sector	**2021**	**2022**	**2023**
Power	434878	385522	387556
Domestic	312688	309,768	312,963
Gen. Industries	262,370	232,369	192,888
Fertilizer (as feedstock)	221,431	225,436	211,762
Fertilizer (as fuel)	93,105	94,315	73,801
SSGC	56,503	47,219	0
Transport (CNG)	53,780	21,945	23,337
Commercial	27,316	24,013	21,114
Cement	932	1,101	1,188
Pakistan Steel Mills	0	747	798
Total	1,463,002	1,342,434	1,225,407

LNG DISTRIBUTION COMPANIES

During FY23, Pakistan imported 8.05m metric tons of liquefied natural gas (LNG) to meet the growing demand for gas that resulted in a substantial import bill for the country. LNG is utilized primarily for power generation, industrial processes, and as a fuel source for transportation. In the power sector, LNG is increasingly being used in thermal power plants to generate electricity, helping to bridge the gap between demand and supply. Industries such as cement, textiles, and fertilizers also utilize LNG as a feedstock or fuel for various manufacturing processes due to its clean-burning properties and cost-effectiveness. Additionally, imported LNG is utilized as a fuel in vehicles (CNG); however a notable decline in its usage is evident in the previous years.

Sector-wise consumption of LNG in Pakistan is as follows:

LNG Consumption by Sector (Million CFt)			
Sector	**2021**	**2022**	**2023**
Power	230,513	226,911	168,813
Gen. Industries	97,183	76,819	57,999
SSGC	56,503	47,219	0
Transport (CNG)	18,199	6,575	755
Fertilizer (as feedstock)	13,510	15,974	11,033
Fertilizer (as fuel)	2,979	4,118	3,238
Commercial	2,722	2,871	1,988
Cement	422	0	0
Domestic	161	282	277
Total	**422,190**	**380,769**	**244,103**

LPG DISTRIBUTION COMPANIES

The LPG supplies and consumption in Pakistan stood at 1.625 million tons and 1.385 million tons respectively during FY23, driven by factors such depletion of natural gas resources, and government policies promoting cleaner fuel sources. The surplus in LPG supply indicates a potential for export or storage for future use. During FY23, local refineries yielded 196,045 TOE (FY22: 219,639 TOE: FY21: 215,436 TOE) of LPG whereas, imports of LPG were valued at 8,051,421 TOE (FY22: 9,499,119 TOE) during FY23 raising the import bills considerably.

Sector-wise consumption of LPG has been summarized below:

LPG Consumption by Sector in Tonnes			
Sector	**2021**	**2022**	**2023**
Commercial	483,751	544,009	510,591
Domestic	464,750	454,302	385,182
Others	319,099	278,638	488,741
Total	1,267,600	1,276,949	1,384,514

There are over 300 LPG distribution companies in Pakistan and their performance is influenced by various factors such as market dynamics, regulatory changes, and economic conditions. Despite challenges such as fluctuating global energy prices and supply chain disruptions, LPG companies have generally shown resilience and adaptability in navigating the evolving landscape. They have invested in infrastructure upgrades and technology to streamline their distribution processes and ensure reliable supply to consumers. Additionally, strategic partnerships and collaborations with international energy firms have enabled them to access new markets and diversify their product offerings.

BUSINESS RISK

In Pakistan, the cyclicality risk in the oil and gas marketing and distribution sub-sector is heightened due to economic volatility and fluctuations in oil prices that globally impact the purchasing power of consumers and industrial demand and directly affect the sector's revenues. Geopolitical tensions in the region can disrupt supply chains and increase operational costs, adding to the sector's cyclicality risk. Additionally, regulatory uncertainties and government policies regarding pricing and taxation further contribute to the sector's vulnerability to economic cycles. On the other hand, competition risk in the sub-sector of Pakistan is generally low owing to regulatory controls and market dynamics. The government's regulations often limit the number of players in the market through licensing requirements, fostering a more stable competitive landscape. Additionally, established companies often benefit from long-standing relationships with suppliers and customers, creating barriers to entry for potential competitors.

The marketing and distribution is highly capital intense, marked by sub-sector's high capital requirements for infrastructure and distribution networks that deter new entrants, and further solidifies the position of existing players. On the flip side, technology risk is low due to the reliance on established and proven technologies. The industry typically employs traditional methods for transportation, storage, and distribution, which have been refined over time and are well-suited to the local operating environment. Additionally, the conservative approach of companies in adopting new technologies minimizes the potential for technological disruptions. Lastly, energy sensitivity is high in in the sub-sector as the sub-sector relies heavily on oil and gas products for both internal operations and external distribution. Fluctuations in energy prices directly impact the cost structure of these companies, affecting profitability and margins. Additionally, as a developing economy, Pakistan's energy demand is closely tied to its economic growth and industrial activity, further magnifying the sensitivity of oil and gas companies to energy market dynamics. The pricing structure of OMCs products being regulated and dependent upon international pricing dynamics the Inventory carrying risk is elevated in this sector. The emergence of unaccounted for imports of petroleum products in a significant quantity in the past few years has placed stress on the entire business chain of Oil and Gas sector.

RECENT DEVELOPMENTS AND THEIR IMPACT

- GOP is currently undertaking substantial efforts to promote the use of liquefied natural gas (LNG) as a cleaner alternative to traditional fuels such as diesel and furnace oil. The country has made substantial investments in LNG infrastructure, including the construction of LNG terminals and pipelines, to facilitate the import, storage, and distribution of LNG across the country. This initiative is expected to reduce reliance on imported petroleum products, improve energy security, and lower emissions, contributing to Pakistan's efforts to meet its climate commitments.

- The country has been actively exploring opportunities to diversify its energy mix and promote renewable energy sources such as solar and wind power. In recent years, the government has implemented policies and incentives to encourage investment in renewable energy projects, including the establishment of special economic zones and tariff incentives for renewable energy producers. These efforts aim to reduce dependency on fossil fuels, mitigate environmental impact, and enhance energy sustainability in Pakistan.

- OMCs in Pakistan have been investing in the expansion and modernization of their retail outlets, storage facilities, and logistics networks to improve accessibility, efficiency, and customer experience. This includes the introduction of advanced technology solutions such as automated fuel dispensers, mobile payment systems, and digital marketing platforms to streamline operations and enhance service delivery.

- The emergence of Electrical Vehicles and Hybrid Vehicles worldwide is finding its way in limited volumes in Pakistan. However, given the cost and environmental efficiencies and the interest shown by the local vehicle assemblers in EV and HV vehicles this segment has the potential to grow to achieve a recognizable position in the vehicles market. This would entail introducing support services for EV and HV vehicles along with conventional fuel stations.

SECTOR DRIVERS

- **Infrastructure Development:** Investments in expanding and modernizing infrastructure such as pipelines, storage facilities, and distribution networks can enhance the efficiency and reliability of oil and gas distribution. This would facilitate smoother transportation and delivery of petroleum products, reducing operational costs and improving market accessibility.

- **Government Policies and Regulatory Framework:** Clear and supportive government policies can incentivize investment in the sector, promote competition, and ensure a stable operating environment.

- **Domestic Demand and Economic Growth:** With anticipated growth in Pakistan's economy, there will be an increased demand for energy, including petroleum products, driven by industrial expansion, urbanization, and rising consumer consumption. This growing domestic demand presents opportunities for companies in the distribution sector to expand their market presence and capitalize on emerging opportunities.

- **Technological Advancements:** Adoption of advanced technologies in exploration, production, refining, and distribution processes can improve operational efficiency, reduce costs, and enhance the competitiveness of the sector. Innovations such as digitalization, automation, and data analytics can optimize supply chain management, improve asset utilization, and facilitate better decision-making.

SECTOR RISKS

Regulatory Changes: The frequent shifts in government policies and regulations can lead to increased compliance costs and operational uncertainties. Changes in taxation or environmental regulations can impact profit margins and require adjustments in business strategies.

Price Volatility: Fluctuations in global oil prices affect the cost of inventory and can lead to unpredictable revenue streams. This volatility requires effective risk management strategies to maintain profitability.

Supply Chain Disruptions: Geopolitical tensions or domestic issues disrupt the supply chain, leading to shortages at distribution points. This can result in increased costs and customer dissatisfaction, ultimately affecting market share and revenues.

Competition from Alternative Energy Sources: The increasing shift towards renewable energy sources poses a long-term risk to the traditional oil and gas sector. This shift can reduce demand for oil and gas products, impacting the sector's growth prospects.

Technological Changes and Cybersecurity Threats: Rapid technological advancements may render existing processes obsolete, requiring significant investment in new technologies. Moreover, increased digitalization enhances exposure to cybersecurity threats, potentially impacting operations and sensitive data.

Infrastructure Degradation: Pakistan's oil and gas infrastructure may be susceptible to degradation due to aging pipelines and storage facilities; the same can lead to leaks or failures, causing environmental damage, regulatory fines, and repair costs.

Emerging competition from EV vehicles: the running cost advantage and the regulatory support available to EV vehicles may pose some competitive threats to the conventional fuel market of OMC in the medium to long term. This would entail adaptation of the support services to EV vehicles by OMCs over a period of time

INDUSTRY BUSINESS RISK:

The OMC sub-sector of Pakistan is characterized by "medium to high risk"; the same is due to several interconnected challenges such as the sub-sector's vulnerability to global oil price fluctuations and reliance on imported crude oil heighten its cyclicality risk. Additionally, the need for substantial capital investments, strict regulatory requirements, and frequent technological upgrades contribute to the sector's overall risk profile. Challenges such as outdated infrastructure and energy supply issues exacerbate operational disruptions and financial instability. Given these factors, the medium to high risk rating reflects the sector's need for strategic management and resilience to navigate both market dynamics and regulatory landscapes effectively.

SECTOR OUTLOOK

OVERALL ASSESSMENT/OUTLOOK: STABLE

In line with the aforementioned factors; the sub-sector has been assigned a "Stable Outlook". However, the future outlook is likely to be influenced by a combination of domestic and global factors. While Pakistan continues to have significant untapped reserves of natural gas and ongoing exploration efforts, the sector faces challenges such as regulatory uncertainty, infrastructure limitations, and geopolitical tensions in the region. On the other hand, with the government's focus on energy security and the promotion of downstream industries, there is potential for growth and investment in the sector. Additionally, advancements in technology and a shift towards cleaner energy sources may reshape the landscape of oil and gas distribution in Pakistan, with opportunities emerging in areas such as renewable energy integration and efficient distribution networks.

VIS RATING UNIVERSE

VIS rates a various entities that are engaged in the distribution and marketing of oil and gas products including LNGs. The following table summarizes the ratings assigned to the rated OMCs:

Summary of VIS Oil and Gas (Marketing & Distribution) Ratings Universe			
Company	Long-term Rating	Short-term Rating	Outlook
Pakistan State Oil (PSO)	AA+	A-1+	Stable
Sui Northern Gas Pipelines Limited	AA+	A-1+	Stable
Oil Industries Pakistan	A-	A-2	Stable
PGP Consortium Limited	A-	A-2	Positive
Taj Gasoline (Pvt) Limited	A-	A-2	Stable
Hi-Tech Lubricants	A-	A-2	Stable
Servo Motor Oil (Pvt) Limited	BBB	A-2	Stable
Zoom Marketing Oils (Pvt) Limited	BBB-	A-3	Positive
Zoom Petroleum (Pvt) Limited	BBB-	A-3	Stable

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RESEARCH & PUBLICATIONS

Arooba Ashfaq – Assistant Manager | Ratings

arooba.ashfaq@vis.com.pk

Jahangir Kothari Parade (Lady LLoyd Pier) Inspired by Her Excellency, The Honorable Lady Lloyd, this promenade pier and pavillion was constructed at a cost of 3 Lakhs and donated to the public of Karachi by Jahangir Kothari to whose genrosity and public spirit the gift is due. Foundation stone laid on January 5, 1920. Opened by Her Excellency, The Honorable Lady Lloyd on March 21, 1921.

Dome: A roof or vault, usually hemispherical in form. Until the 19th century, domes were constructed of masonry, of wood, or of combinations of the two, frequently reinforced with iron chains around the base to counteract the outward thrust of the structure.

Origins: The dome seems to have developed as roofing for circular mud-brick huts in ancient Mesopotamia about 6000 years ago. In the 14th century B.C. the Mycenaean Greeks built tombs roofed with steep corbeled domes in the shape of pointed beehives (tholos tombs). Otherwise, the dome was not important in ancient Greek architecture. The Romans developed the masonry dome in its purest form, culminating in a temple built by the emperor Hadrian. Set on a massive circular drum the coffered dome forms a perfect hemisphere on the interior, with a large oculus (eye) in its center to admit light.

VIS Credit Rating Company Limited is committed to the protection of investors and offers a blend of local expertise and international experience to serve the domestic financial markets. With its international reach, VIS is positioned to aim for an international mark. In this regard, the global experience of our international affiliates and partners have been invaluable towards adding depth to our ongoing research endeavors, enriching us in ways, that enable us to deliver our responsibilities to the satisfaction of all investors. The edifice of the Jahangir Kothari Parade has stood proudly through the years and is a symbol of our heritage. Its 'Dome' as the most stable of building structures, exemplifies architectural perfection. Committed to excellence, VIS continues its endeavour to remain an emblem of trust.

INTERNATIONAL

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Japan Credit Rating Agency, Ltd. - Japan

China Chengxin International Credit Rating Company Limited - China

CONTACT

Karachi VIS House

128/C, 25th Lane off Khayaban-e-Ittehad,
Phase VII, DHA, Karachi

Tel: (92-21) 35311861-64

Lahore VIS House

431, Block-Q, Commercial Area, Phase-II,
D.H.A. Lahore - Cantt.

Tel: (92-42) 35723411-13

VIS
Credit Rating Company Ltd.

www.vis.com.pk

info@vis.com.pk

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