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# Valero energy corporation case study

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## Abstract

**Aim:** The purpose of this research is to delve into the business practices of Valero Energy Corporation. The Valero Energy Corporation (Valero) was founded in 1980 and has since grown to become a major petroleum refiner in the U.S. and international oil and gas industries. Valero is a Texas-based oil and ethanol company that operates 15 refineries and 14 plants.
**Method:** The methods used by Valero Energy Corporation were dissected using a case study approach.
**Findings:** The findings of this study show that Valero Energy Corporation is up against difficulties in the industry's midstream and downstream, with an emphasis on external factors like weather and geopolitical influences. Valero Energy Corporation will continue to face challenges soon, even though crude oil prices appear to stabilize. This is because of the continued volatility in the market and the slowdown in international economic growth. As a long-term strategy to prepare themselves for future economic uncertainty and unsteady industry conditions, oil and gas companies will continue to enforce capital discipline. Though Valero's strategic acquisitions and divestitures helped the company weather previous economic storms, the question remains whether or not the company's current asset mix is optimal.
**Implications/Novel Contribution:** Students at both the undergraduate and graduate levels of business study can benefit from the Valero Energy Corporation Case Study by applying concepts like critical thinking, qualitative and quantitative analysis, and decision-making. Valero Energy Corporation's (Valero) efforts to remain competitive and generate above-average returns are the focus of this case study.

*Keywords:* Case study, Strategic management, Valero energy corporation

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## INTRODUCTION

### Firm and Industry

Valero Energy Corporation is a privately held oil refining, marketing, and ethanol manufacturing company. Refining, ethanol production, and Valero Energy Partners are the three divisions that make up the company (VLP). Valero has its headquarters in San Antonio, Texas, and employs around 10,261 people (Valero Energy Partners). Valero's refining segment consists of refining operations and marketing activities, while its ethanol segment consists of ethanol operations, marketing activities, and logistics assets that support its ethanol operations (Reuters, 2019). Valero's logistics assets include terminals, tanks, marine docks, and truck rack bays; these facilities serve as a backbone for the company's refining division (Khakimyanov & Khusainov, 2016; Reuters, 2019).

In August of 1997, Valero Refining and Marketing Company officially became Valero Energy Corporation. In 1980, the Texas Railroad Commission, which at the time oversaw the state's natural gas industry, approved a $1.6 billion settlement that led directly to the formation of Valero Energy Corporation. As a result of investing in a crude oil refinery in Corpus Christi, Texas, and gradually acquiring more refineries, Valero has grown from its original natural gas business to become a Fortune 50 conglomerate. In addition to its wholesale operations, Valero now sells its namesake brand of fuels at retail locations across the United States, Canada, the United Kingdom, and Ireland (Valero Marketing and Supply Company, 2018; Yoshino & Alekhina, 2016).

Valero owns 14 ethanol plants with a combined capacity of about 1.73 billion gallons per year and 15

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petroleum refineries with a combined total of 3.1 million barrels per day (Valero Marketing and Supply Company, 2018). Across the United States, Canada, and the United Kingdom, the company operates oil refineries, while its ethanol plants are primarily located in the Midwest. As stated on their website, Valero's goal is to "provide quality products that are indispensable to everyday life while investing in flexible and efficient manufacturing, renewable fuels, and infrastructure to meet today's needs and prepare for future energy markets" (Valero Energy Corporation, 2017a).

To mitigate the effects of a surplus of biofuel production and a decline in gasoline consumption, Valero Energy Corporation added an ethanol segment to its portfolio in March 2009 by announcing the acquisition of seven ethanol plants from VeraSun Energy for approximately $477 million (Krauss, 2009). Additionally, in 2018, Valero Energy purchased three ethanol plants from Green Plains Inc., but in 2019, due to overproduction in biofuel, Valero Energy decided to shut down two of the three ethanol plants (Hirtzer & Almeida, 2019). In general, Valero Energy keeps growing and expanding its assets. In 2018, they finished developing a Green Diesel plant in Louisiana, and in the first part of 2019, they expanded a refinery in Houston (Valero Marketing and Supply Company, 2018).

**Oil and Gas Refining and Marketing Industry**

In the energy sector, Valero Energy is a part of the oil and gas refining and marketing industry. The oil and gas sector is affected worldwide. The oil and gas industry is vulnerable to the influence of countries like Russia, the United States, and OPEC. The price of crude oil is affected by both supply and demand and both domestic production and imports. Companies in similar lines of work, such as Marathon Petroleum, Phillips 66, and Chevron, are also impacted by these factors. When the Organization of the Petroleum Exporting Countries (OPEC) cuts production to boost crude oil prices, for example, all of these companies in the oil and gas industry feel the effects.

The oil and gas sector is interconnected with economies around the world. The demand for oil and gas increases as a country's economy improves because people have more disposable income to spend. People with less disposable income during a recession may opt to use public transportation or carpool to cut back on their oil and gas consumption.

**Industry Structural Characteristics**

Upstream, midstream, and downstream are the three distinct segments of the oil and gas market. The first step in the oil and gas production process involves finding promising deposits, drilling test wells, and extracting necessary raw materials. Companies in this sector are often referred to as E&P firms, and their activities can include anything from equipment rental to rig operations to feasibility studies (Kramer, 2019). In the upstream sector, you'll find companies like China National Offshore Oil Corporation and Schlumberger.

Companies involved in downstream oil and gas production are those that refine petroleum products after they have been extracted from the ground. Some examples of these refined goods are diesel, natural gas, gasoline, heating oil, lubricants, pesticides, and propane. A further activity in which they may partake is the marketing and distribution of petroleum and natural gas end products. Marathon Petroleum and Phillips 66 are examples of downstream refiners.

Operators that bridge the gap between the upstream and downstream sectors make up the midstream. In the energy industry, midstream firms are responsible for the pipelines and gathering systems that move and store resources. Companies operating channels and/or gathering plans fall into this category (Kramer, 2019).

In the oil and gas industry, many companies are "integrated" or perform tasks in multiple disciplines at once (Kramer, 2019). Oil and gas majors like Chevron and Exxon Mobil have combined their upstream and downstream operations into a streamlined business model. Convenience stores are an integral part of the distribution networks of many of these corporations. Valero Energy operates in the midstream and downstream sectors but not the upstream industry. Similar to BP, Marathon Petroleum is a fully integrated business.

## EXTERNAL ENVIRONMENT

Companies such as Valero and its peers would face similar external environment risks that can cause delays in their day to day operations. These risks can be divided in five categories of risks.

Table 1: Environmental risks

| Risks | Effects |
|---|---|
| Political Risk | - Sudden change in regulatory environment in a foreign country due to political shift in the host country.<br>- Original deal may not hold up as foreign government may change its mind. |
| Geological Risk | - Difficulty of extraction in reserves.<br>- Smaller amount of reserves than expected. |
| Price Risk | - Unconventional extraction that may cost more.<br>- Project may shut down due to lack of profit. |
| Supply and Demand risk | - When overproduction happens, an oversupply of crude oil will cause a drop-in demand in which prices will be affected.<br>- Financial crisis such as recession can also affect supply and demand in the market. |
| Cost Risks | - Operational costs such as difficulty in drilling will cost the project more money than expected.<br>- Payroll and wages may increase quickly during an oil boom where company may struggle to find suitable and qualified workers. |

Other external factors include trying to maintain compliance with environmental regulations, suffering severe weather with the potential to damage infrastructure, and fluctuating global economic demand for petrochemical products. Standard & Poor categorizes the oil and gas refining and marketing industry as a moderately high-risk industry (Standard and Poor's Rating Services, 2014).

Refining companies may need to incur more debt as there is also a long lead time of several years to build new refineries and bring them into operation. This can cause companies in this industry to have cyclical periods of profitability, alternating between over-capacity with low profit margins and under-capacity with high profit margins (Standard and Poor's Rating Services, 2014). Some government may choose to subsidize companies that are operating in loss which can lead to a disadvantage for companies in countries producing in a free market environment. As the external environment continues to affect the prices of crude oil, companies in the refining industry may find it hard to be profitable.

Most refineries in the United States are located by ports, with the single largest concentration of refineries along the Gulf Coast. About 45% of the countrys refining capacity was located along the coasts of Texas, Louisiana, Mississippi, and Alabama (Energy Information Administration, 2018). Many of these refineries have a high capacity factor. By spreading the overhead costs of production over a large volume of output, companies are better able to achieve economies of scale than companies with a lower output capability. Companies with more than one refinery, and refineries in more than one geographic location, can also increase their diversity of product offerings and minimize the impact of operational disruption at any one facility (Standard and Poor's Rating Services, 2014).

Refineries that have a more complex set of capabilities to refine multiple types of feedstocks are better able to take advantage of changes in crude oil prices. Light sweet crude oils are typically more costly than heavy sour crude oils. Sour crude requires more treatment and is used in fewer high-priced refined products. A refinery that is able to be flexible and refine both sour and sweet crude oil can opt to focus efforts on whichever type of oil is more profitable at the time (Standard and Poor's Rating Services, 2014).

Based on an analysis of global data, Standard & Poor estimates the oil refining and marketing industry in the United States has a cyclical nature for profitability. S&P states companies in this industry experience an average peak-to-trough decline in revenues of 12% during periods of recession dating back to 1972 (Standard and Poor's Rating Services, 2014). The largest decline was an average of 31% from 2007 to 2009. However, S&P states the overall effect of cyclicality on an industrys risk profile can be mitigated or exacerbated by the industrys competitive risk and growth (Standard and Poor's Rating Services, 2014).

For companies operating in the oil and gas industry, securing feedstocks is a critical part of operations. Without access to the raw materials to produce transportation fuels and petrochemical products, Valero Energy will be unable to fill its mission. A vital feedstock in the oil and gas industry is crude oil. Crude oil can be procured from several locations around the world and is traded at several benchmarks. Commonly used benchmarks include WTI crude, or West Texas Intermediate, and Brent crude, which hails from oil fields in the North Sea. These benchmarks

are based on factors such as sulfur content and gravity and are used by buyers and sellers to reference types of oil.

The price of these various types of crude oil is dependent on many factors, including the political environment surrounding oil production. More than half of the worlds crude oil reserves lie in the Middle East, an area that is subject to great changes in the political environment. In addition to the local political environments, volatility in the currency market can also impact crude oil prices in the Middle East. Import and export restrictions affect the amount of crude oil that can be bought or sold in or out of the U.S. This variability in crude oil prices affects every corporation operating in the oil and gas industry that depends on purchasing feedstocks for operations.

Another political factor affecting the industry concerns environmental regulations. Companies in this sector must comply with local and federal regulations for air emissions, greenhouse gasses, and regulations regarding releases into soil, surface water, or groundwater. Capital investments may be required by companies in this sector in order to maintain compliance with a changing regulatory environment.

Every company operating in the oil and gas operations industry depends on a steady supply of crude oil, however, the discoveries of new crude oil reserves have been slowing. Only 3.5 billion barrels of oil and gas liquids were discovered in 2017, enough to meet just 10 percent of the demand for them (Branson, Biscardini, & Morrison, 2018). Most of the large reserves have already been discovered and the productive areas have already been explored. In addition, companies are not investing much in exploring for new developments. This leads to a classic case of a supply and demand economy for crude oil, where a shrinking supply is met by an increasing demand. Companies in this sector must then continue to manage their operations in a more cost-efficient manner, regardless of what the actual oil price is. This may cause companies to cease exploration activities of unconventional or offshore oil and gas fields that have a higher cost of extraction.

The oil and gas operations industry is a very capital-intense industry. It is a difficult area for new entrants into the market, as the costs of equipment for exploration and processing operations rise into the billions of dollars. This leads to high barriers to entry for any new greenfield facilities. A greenfield facility is one that is being constructed where no refinery or production facility existed before, meaning it is being constructed on a green field. This differs from expansion or upgrades to currently existing facilities.

Notable among these barriers are the significant cost of capital to build a new refinery, and the long lead times required to get a new facility up and running and able to produce product. Companies looking to expand and upgrade existing refineries also face barriers of governmental permitting requirements. Some changes in existing facilities also have long lead times and require significant capital investment (Standard and Poor's Rating Services, 2014).

Many of the social factors that influence the oil and gas industry have potential ties to the political environment. As consumers in the United States demand fewer single-use plastic products be used, oppose new pipeline infrastructure construction projects, or advocate for a ban on fossil fuels, the potential exists for a change in the regulatory environment regarding these issues as well. However, even without new laws being enacted, the social pressure on individuals to move to a more green or sustainable lifestyle will impact this industry.

Sustainability is moving to a central issue for strategy and investment decisions among companies in this industry. Many major oil companies are investing in renewable energy technologies, while petrochemical producers are undertaking efforts to mitigate plastic waste impacts through recycling and other processes (Dickson, 2018). Many of these changes have been driven not by a regulatory compliance agenda but in order to respond to increasing consumer awareness of environmental and climate impacts.

Despite concerns about these impacts, however, transportation fuels and petrochemical products continue to be used daily by most individuals. As much as there may exist a social drive to reduce their use, there is also a social drive to continue using them. We heat our homes with natural gas, we fly on planes using jet fuel, and we drive cars on asphalt, all of which are petrochemical products. In addition, we pay for other products to be transported to stores when we purchase them from a retail location, or we pay for transportation fuels when we order products online to be delivered to our homes. Numerous examples of the increasing role of technology in the oil and gas operations industry exist. Companies are looking at deploying artificial intelligence, analytics, and robotics, as well as explore the use of blockchain technologies to improve operations (Dickson, 2018). Evidence of the increasing importance of oil and gas innovation is seen in patents, for example. The number of patents related

to extractive industries more than doubled from 2005 to 2010 (Elatab, 2012).

Technological improvements in vehicles also impact the demand for refined crude oil. As automobiles have improved gasoline mileage and incorporate hybrid technology allowing the vehicle to run on both gasoline fuels and electricity, the demand for refined product will drop. These developments pose a risk to the industry as a whole as they can only be partially mitigated by increases in fuel usage from developing countries (S&P).

S&P states that for the next 20 to 25 years, gasoline and diesel will continue to provide the lions share of fuel used in transportation, and that there is a low risk of this product becoming obsolete. As countries such as China and India continue to industrialize and expand their public and private transportation options, the global demand for refined products will continue to grow. Government mandates by some countries to increase the use of alternative fuels may cut into the demand for refined products such as gasoline and diesel fuel (S&P). The U.S. Environmental Protection Agency Renewable Fuel Standard requires a quantity of fuels such as ethanol to be blended into transportation fuels. This displaces the amount of refined petroleum products used in each gallon of fuel. Some companies, including Valero Energy, have invested in alternative energy sources and technology to offset any future drop in demand of the traditional gasoline and diesel products.

**Competitors**

*Marathon petroleum corporation*

Marathon Petroleum Corporation is an integrated energy company that focuses in refining, marketing, retailing, and transportation of petroleum products primarily in the United States. Marathon Petroleum also owns the general partner and majority limited partner interests in two midstream companies, MPLX LP and Andeavor Logistics LP. These companies own and operate gathering, processing and fractionation assets, as well as product transportation and logistics infrastructure (Marathon Petroleum). This is similar to VLP which is part of Valero Energy.

Marathon Petroleum was founded in Lima, Ohio in 1887 as The Ohio Oil Company. Standard Oil purchased Ohio Oil in 1889 and owned the assets until 1911, when a U.S. Supreme Court ruling broke up the Standard Oil trust, re-establishing Ohio Oil as an independent company. In 1962, as part of the companys 75th anniversary, the company changed the corporate name to Marathon Oil Company. Marathon Petroleum Corporation then became a stand-alone refining, marketing and transportation company in 2011 (Marathon Petroleum).

Marathon Petroleum Corporation has three segments which consists of refining and marketing, retail, and midstream. Its refining and marketing segment have 16 refineries in the West Coast, Gulf Coast, and Mid-Continent area in the United States. They also purchase refined products and ethanol for resale purposes as well. The refined products that Marathon Petroleum consists of includes transportation fuels, heavy fuel oil, and asphalt.

In 2018, Marathon Petroleum acquired Andeavor, extending its operations into Washington, North Dakota, Utah, and Minnesota. Included in the acquisition were ten refineries, approximately 3,300 retail stations, and the general partner of Andeavor Logistics (Marathon Petroleum). This expanded the midstream aspect of Marathons operations, which had been enhanced through a 2015 acquisition of MarkWest Energy Partners LP. Now, Marathon Petroleum owns 16 refineries and has a crude oil refining capacity of more than three million barrels a day. This acquisition means that Marathon Petroleum is the largest independent refiner in the United States.

Marathon Petroleum also owns and operates biodiesel facilities. The company purchased a biodiesel facility in Cincinnati in 2014, adding to the renewable fuel to its portfolio. The Cincinnati plant has a capacity of approximately 80 million gallons per year. Marathon also has ownership interests in three additional ethanol production facilities with a combined capacity of approximately 410 million gallons per year, or 27 million barrels per day. The company plans to convert the Dickinson refinery in North Dakota to a renewable diesel facility, with a planned capacity of 12,000 barrels per day, by December 2020.

Marathon has more than 60,000 employees, including the 40,000 who are employed by the companys retail segment. As of end of 2018, Marathon oil owned, leased, and had ownership interests in over 16,600 miles of crude oil as well as operated in approximately 3,920 convenience stores spanning over 35 states in the United States, the District of Columbia, and Mexico.

*Phillips 66*

The second biggest competitor to Valero Energy Corporation is Phillips 66. Phillips 66 is an energy manufacturing and logistics company. Phillips 66 was created in 2012 when ConocoPhillips spun off its midstream and downstream business. Today, Phillips 66 has 14,000 employees worldwide and is headquartered in Houston, TX. Phillips 66 owns 13 refineries in the United States and in Europe with a global refining capacity of 2.2 million barrels of crude oil per day. The company has a refinery utilization rate of 95%. This is down from a rate of 96% in 2016.

Phillips 66 (2018) has stated earnings of $5.6 billion, and earnings of $11.80 per share, in 2018. The company also states that it generated $7.6 billion of operating cash flow in 2018 (Phillips 66 annual report). Phillips 66 (2018) had an operating revenue (in millions) of $111,461 in 2018, up from $102,354 in 2017 and $84,279 in 2016 (Phillips 66, 2018). This indicates year over year growth for the past three years. Phillips states the increase in earnings in 2018 was due to higher refining margins and lower income taxes (Phillips 66, 2018).

The company has a debt to capital ratio of 29 percent. Phillips 66 plans to re-invest 60% of the operating cash flow back into the business and distribute 40% to shareholders. The company states it has a strong balance sheet and investment credit rating. Phillips 66 refining segment also refines crude oil such as gasolines, distillates, and aviation fuels at 13 different refineries locations in the U.S. and Europe. Phillips 66 (2018) also manage to diversify itself by manufacturing and selling specialty products such as petroleum coke products, waxes, solvents and polypropylene.

Phillips 66 (2018) has stated strategic priorities of growth, returns, and distributions. The company is committed to safety, reliability, and environmental stewardship while protecting shareholder value. Phillips 66 plans to enhance its portfolio through growth in its midstream and chemicals divisions, while improving returns by maximizing earnings from existing assets and investing capital efficiently. As a newer stand-alone company, Phillips 66 is much smaller than both Valero and Marathon. While the company has been experiencing significant growth and posting strong returns, it is not likely to challenge either Valero or Marathon for shares of the industry in the short or medium turn.

## INTERNAL ANALYSIS

Valeros operations are concentrated in three areas: refining, ethanol, and VLP. VLP is the limited partnership that is a fee-based, growth-oriented limited partnership that Valero Energy Corporation formed to own, operate, develop, and acquire crude oil and refined petroleum products pipelines, terminals, and other transportation and logistics assets (Valero Marketing and Supply Company, 2018). These facilities are integral to the operations of several refineries that Valero Energy Corporation owns in the Gulf of Mexico region. VLP is involved in the midstream section of the company, and its refining and ethanol segments are considered downstream. Valero Energy Corporation does not operate its own drilling rigs, and must depend on purchasing feedstocks, which are acquired long before the products are refined and sold.

Valeros refining sector includes refining operations and other associated activities and logistics to support those operations. Valero sells refined petroleum products in bulk and at wholesale. Approximately 7,400 outlets carry the Valero brand or other brands owned by Valero (Valero Marketing and Supply Company, 2018).

The ethanol segment of the business similarly includes ethanol operations and related support. Valero owns 11 ethanol plants throughout the mid-western portion of the United States. The company sells its ethanol to refiners and gasoline blenders (Valero Marketing and Supply Company, 2018). Again, Valero Energy also purchase three ethanol plants from Green Plains Inc. in 2018 but decided to shut down two of the three ethanol plants due an overproduction in biofuel in 2019 (Hirtzer & Almeida, 2019).

Valero Energy has invested in a renewable fuels effort to produce ethanol as well as gasoline and diesel fuels. This ethanol can then be blended into gasoline to maintain compliance with the U.S. Environmental Protection Agency Renewable Fuel Standard. This standard requires a certain percentage of fuels such as ethanol to be blended into transportation fuels. In addition, Valero is able to sell ethanol as a stand-alone product for those consumers who choose to drive vehicles that can operate at higher blends of fuels than what is mandated.

Valero Energy has created most of its refining capability through acquisitions, which it has also used to branch out into retail and wholesale markets. The initial refinery that the company purchased shortly after its

inception required renovation and startup which nearly put the company out of business. Valero then sold off its natural gas properties to regain financial stability and concentrate on refining operations. The company then grew through further acquisitions (Valero Energy Corporation, 2017a).

Valero also continues to expand its refining operations. Most recently they expanded their Corpus Christi, Texas refinery in 2015, after several other prior expansions. There are 132 operating refineries in the United States, and 13 of them are owned by Valero. Four of the 13 have a refining capability of more than 200,000 barrels per day (Energy Information Administration, 2018). Until late 2018, Valero Energy was the largest independent refiner in the U.S.

Valero Energy has invested significantly over the years in updating and maintaining its refineries and has been moving its gasoline brand from a discount brand to a premium brand. Valero has spent significant amounts of money in investments including capital expenditures. Many of these investments were made to maintain compliance with environmental regulations. This amount was $145 million in 2017 and is expected to double to $290 million in 2018 and then require $123 million in 2019 (Valero Energy Corporation, 2017a). Valero states that the costs to improve refinery assets are increasing over time and are significant when compared to the amounts paid to acquire refineries (Valero Marketing and Supply Company, 2018).

**Valero Assets**

Valero Energy Corporation has a presence in 43 American states, six Canadian provinces, and the U.K., Ireland, and Peru. As shown in the map are the operating sections, countries, and presence of Valero energy across the world.


Figure 1. Valeros map of operations Valero Energy Corporation (2017a)

Critical to the operation of these assets are those owned by VLP. These logistics assets connect and support the work done at the refineries and ethanol facilities. Below is a map showing the location and type of assets owned by VLP.

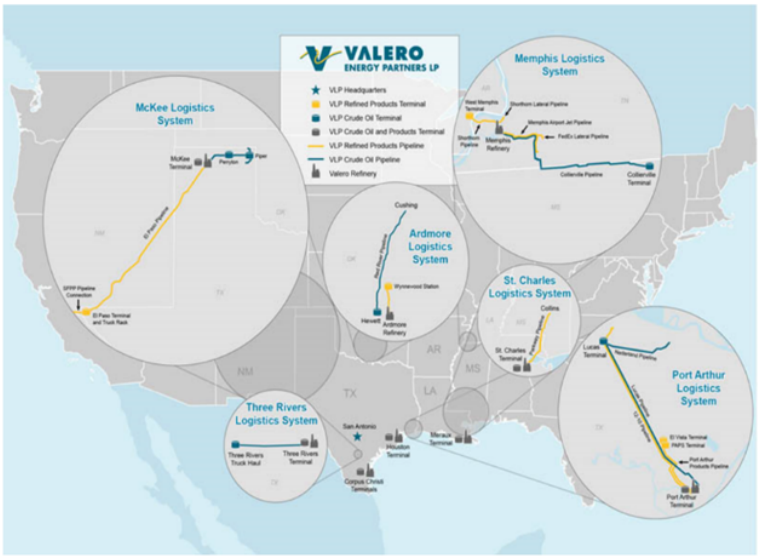


Figure 2. Valero energy partners map of assets Valero Energy Corporation (2017a)

**Organizational Structure**

Valero Energy Corporation is structured with a hybrid structure of both functional and divisional structure. Joe Gorder is the President and Chief Executive Officer and is also chairman of the board. He has been in these positions since 2014 (about Valero).

Valero has several Executive Vice Presidents who oversee areas including Human Resources, Operations, Finance, and Legal areas. The leaders of each operational area of Valero have the title of Senior Vice President or Vice President. Rich Lashway is the Senior VP of Corporate Development and Midstream Operations and is responsible for developing and managing logistics projects for Valero (about Valero). Martin Parrish is the Senior Vice President for Alternative Fuels and oversees the companys ethanol plants, as well as the development of alternative energy investments.

Eric Honeyman is the Vice President of Refining Operations. Eric Fisher is the Vice President of Wholesale Marketing and International Commercial Operations. Other vice presidents at Valero oversee transportation, supply chain optimization, information services, and investment relations.

**Financial Analysis**

Below is a table reflecting the balance sheet for Valero Energy Corporation in 2019, according to the companys filings with the Securities and Exchange Commission. All numbers are in millions of dollars.

Table 2: Valero energy corporation Balance Sheet 2019

| Assests | Amount |
|---|---|
| Current Assests | |
| Cash | $2,137.00 |
| Accounts Receivable | $7, 992.00 |
| Inventory | $6, 376.00 |
| Prepaid expenses and others | $526.00 |
| Total Current Assests | $ 17, 003.00 |
| Fixed Assests | |
| Machinery, Equipment, Furniture and Fixture | $44, 877.00 |

Table 2: Continue..

| Assests | Amount |
|---|---|
| Accumulated deprication | $14, 649.00 |
| Deferred Charges and other assests net | $3, 968.00 |
| Book value or net fixed assets | $30, 228.00 |
| Total Assests | $52, 229.00 |
| Current Liabilites (or debt) | |
| Current promotion of long term debt | $316.00 |
| Accounts Paybale | $9, 504.00 |
| Accrurd Expeneses | $1717.00 |
| Taxes other than income taxes payable | $6.00 |
| Income Tax payable | $168.00 |
| Total current Liabilities | $12, 130.00 |
| Long term liabilites | |
| Debit and Capital lease obligations | $8, 426.00 |
| Deferred income tax liabilities | $4, 920.00 |
| Other long term liabilities | $2, 451.00 |
| Total Liabilities for Debt | $29, 641.00 |
| Stakeholder's equity: | |
| Paid in capital (for which stock shares are issued) | $6, 818.00 |
| Treasury stock at cost | $15, 472.00 |
| Retained Earnings | $31, 283.00 |

Valero has posted relatively volatile financial performance indicators in the past five years with a couple of years showing strong financial capability. As of December 2019, the current ratio for Valero was 1.40 and the quick ratio was 0.84. Both current ratio and quick ratio measures Valeros liquidity. With a current ratio of 1.4, it shows that the company can remain solvent, but it does not show that Valero is in good financial health. A general good range of current ratio is between 1.5 to 3.0 and this will show that a company has good short-term financial strength. The current ratio of Valero shows that its short-term financial strength is slightly below the healthy range. The quick ratio of 0.84 as of December 2019 shows that Valero is going through some tough times and may find it challenging to meet their short-term liabilities. A general thumb of rule of a good company has a quick ratio of 1.0 or higher.

Valero Energy Corporations net working capital for 2018 was (in millions) $6,951. This means that 94% of the companys net working capital is tied up in its inventory. As of December 2019, Valero Energy has a total debt to equity of 50.38%. The long-term debt to equity ratio shows that for every dollar of stockholders equity. With a drop in covered ratio of 10% in 2018 to 7.68% in 2019, Valero energy can only cover its debt 7 times over.
To measure the profitability of Valero Energy Corporation, we need to examine its profitability level and ratios in 2019. Its current asset turnover ratio is 2.01%. With an asset turnover ratio of just 2.01% in 2019, Valero energy can only generate $2.01 worth of revenue for every $1 worth of assets. Again, there is a drop-in asset turnover ratio from 2018 to 2019. With a gross profit margin of 6.25%, it shows that Valero Energy has a low profit margin in comparison to industry average of 10% which is average. With the size of Valero Energy, its EBIT margin is 3.33% which shows a relatively small number for the size of Valero and this ratio shows a drop-in revenue earned. The Return on Equity (ROE) for Valero corporation is 11.12% as of December 2019 and this shows that that it is relatively low. The ROE measures the managements capability in generating income from the equity available.

These numbers show a dip in performance from Valero Energy in the year 2018 to 2019. Various explanation of this can be deduce from the slowing down of economic growth in the world as well as trade wars that are going on between the United State and China. With OPEC reducing its production, the hope of rising crude oil prices that may help Valero Energy may seem pointless as other oil and gas companies in the United States are pumping as much as they could for profit. With the trade wars unsolved and low crude oil prices, year 2020 for Valero may draw similar financial performance in comparison to 2019.

**Current Performance**

So far in 2019, Valero Energy Corporation has beat its initial quarterly profit estimates and has been responding well to international geopolitical turmoil. Valero states that it is well prepared for the effect of sanctions imposed by the U.S. on Venezuela, a supplier of crude oil (Sarkar, 2019). Valero is one of the largest buyers of Venezuelan crude oil but ceased imports from the country in January 2019. It has been substituting the crude oil normally purchased from Venezuela with light crude oil from North America and other sources (Sarkar, 2019). Valero Energy has also signed long-term agreements for using three new refined product terminals in Mexico that will provide at least 5.8M barrels of storage capacity and will start serving customers in 2020 (Surran, 2019). The ability of Valero to adapt to these changing conditions is due to its nimble operations and past investments in refinery upgrades. Valero states the recent completion of pipelines and storage have given the company greater access to North American crude oil, which is being used to replace the Venezuelan crude. If Valero did not have the ability to process different types of crudes, or the ability to economically transport and store different crude oil feedstocks, the company would not be able to deliver profitable results during a time of sanctions (Sarkar, 2019).

**Financial Comparison with Marathon Petroleum**

Marathon Petroleum Corporation adopted a different reporting mechanism effective January 1, 2018 than it had used in years prior. Information reflected in the companys financial analysis is based on financial data filed with the Securities and Exchange Commission using this new reporting standard for 2018. The comparative numbers indicated in the 2018 filings were updated to reflect the new standard and differ from the numbers filed with the SEC in 2017.

In the third quarter of 2018, Marathon Petroleum acquired Andeavor, making the company the largest independent crude oil refiner in the country. Amounts filed with the SEC for 2018 include the results of Andeavor from the date of the acquisition forward. As a result of the acquisition, by the end of 2018, Marathon owned, leased, or had ownership interests in approximately 16,600 miles of crude oil and refined product pipelines to deliver product to 16 refineries in the gulf coast, mid-continent, and west coast regions of the U.S.

Below is a table reflecting the balance sheet for Marathon Petroleum Corporation in 2018, according to filings with the Securities and Exchange Commission. All figures are in millions of dollars.

Table 3: Marathon petroleum corporation balance sheet, 2019

| Assests | Amount |
|---|---|
| Current Assests | |
| Cash | $1, 525.00 |
| Accounts Receivable | $5, 211.00 |
| Inventory | $9, 696.00 |
| Prepaid expenses and others | $457.00 |
| Total Current Assests | $ 19, 139.00 |
| Fixed Assests | |
| Equity method investment | $6725.00 |
| Propety, plant and equipment, net | $47, 556.00 |
| Good will | $21, 277.00 |
| Other noncurrent assests | $3, 442.00 |
| Total assests | $98, 139.00 |
| Current Liabilities (For Debt) | |
| Accounts Payable | $11, 380.00 |
| Accrued Expenses | $939.00 |
| Accrued Taxes | $1, 015.00 |
| Long term debt | $502.00 |
| Other current liabilities | $862.00 |
| Total Current Liabilities | $15, 339.00 |
| Long term liabilities | |
| Long term debt | $27, 628.00 |

Table 3: Continue..

| Assests | Amount |
|---|---|
| Deferred income taxes | $6, 180.00 |
| Defines benefits postretirement plan obligations | $1, 487.00 |
| Deferred credits and other liabilities | $1,265.00 |
| Total Liabilities | $54, 515.00 |
| Stockholders' equity | |
| Paid-in Capital (For which stock shares are issued) | $33, 125.00 |
| Treasury stock at cost | $15, 076.00 |
| Retained Earning | $15, 891.00 |
| Accumulated other comprehensive loss | $212.00 |
| Non-controlling interests | $9, 886.00 |
| Total equity | $43, 624.00 |
| Total Liailities and Owner's Equity | $98,139.00 |

As of December 2019, Marathon Petroleum has a current ratio of 1.25 and the quick ratio was 0.59. Both current ratio and quick ratio measures Marathon Petroleum liquidity. A general good range of current ratio is between 1.5 to 3.0 and this will show that a company has good short-term financial strength. The current ratio of Marathon Petroleum shows that its short-term financial strength is slightly below the healthy range. The quick ratio of 0.59 as of December 2019 shows that Marathon Petroleum is also going through some tough times and may find it challenging to meet their short-term liabilities. A general thumb of rule of a good company has a quick ratio of 1.0 or higher.

As of December 2019, Marathon Petroleum has a total debt to equity of 71.95%. The long-term debt to equity ratio shows that for every dollar of stockholders equity. Marathon Petroleum shows a drop in covered ratio from 2018 to 2019 and its current covered ratio is 4.86. Marathon Petroleum can only cover its debt 5 times over.

To measure the profitability of Marathon Petroleum, we need to examine its profitability level and ratios in 2019. Its current asset turnover ratio is 1.66%. With an asset turnover ratio of just 1.66% in 2019, Marathon Petroleum can only generate $1.66 worth of revenue for every $1 worth of assets. Again, there is a drop-in asset turnover ratio from 2018 to 2019. With a gross profit margin of 11.27%, it shows that Marathon Petroleum has an average profit margin in comparison to industry average of 10%. With the size of Marathon Petroleum, its EBIT margin is 4.87% which shows a relatively small number for the size of Marathon Petroleum and this ratio shows a drop-in revenue earned. The return on equity (ROE) for Marathon Petroleum is 13.16% as of December 2019 and this shows that that it is relatively low. The ROE measures the managements capability in generating income from the equity available.

These numbers show a dip in performance from Marathon Petroleum in the year 2018 to 2019. Various explanation of this can be deduce from the slowing down of economic growth in the world as well as trade wars that are going on between the United State and China. With OPEC reducing its production, the hope of rising crude oil prices that may help Marathon Petroleum may seem pointless as other oil and gas companies in the United States are pumping as much as they could for profit. Marathon petroleum profit margin is better than Valero profit margin as of December 2019.

**Comparison with Industry Averages**

Return on capital in the refining industry is volatile. The average ROC for independent refiners in the U.S. changed greatly from a strong period between 2005 and 2007, to a trough period from 2008 to 2009 (S&P). The average ROC during the strong period was 37.1%, which dropped to an average of 7.3% during the trough period. S&P notes that 2009 was a particularly weak year for the industry, where refiners saw an average ROC of just 3.8%. Return on capital is the key general profitability measure for refiners (S&P). Operating margins do not provide a useful measure of a companys profitability due to the pass-through nature of the business, where a refiners margin can fluctuate with the price of crude oil (S&P). Standard & Poor states that a refining company has below average ROC when it is below 10%, an average ROC of 0% to 20%, and an above average ROC of greater than 20%.

Many of the factors influencing the industrys profitability are outside of the cost of control of a single company. This includes the price of feedstocks, which put pressure on a companys margins if the price of refined products does not move along with changes in feedstock prices. Crude oil is globally traded and subject to volatile price fluctuation. It is used to produce gasoline, diesel fuel, and other fuel products, which are also globally traded. The price of those products tends to be closely tied to the price in crude oil prices, but timing lags between the changes in price can have adverse effects on a companys profit margins (S&P).

The difference can be seen clearly with the balance sheets of both Valero Energy and Marathon Petroleum. It can be seen that the current state of the industry shows that refining companies are not as profitable as they were before. This is causing strains on companies like Valero Energy and Marathon Petroleum and pushes them to diversify as well as implement cost cutting measures. Valero Energy and Marathon Petroleum should focus on their cash flow and strategically plan out what they need to do through this tough period of time.

## ASSESSMENT OF VALERO ENERGY CORPORATION

Valeros vision is to become the premier manufacturer, distributor, and marketer of quality transportation fuels and petrochemical feedstocks, while serving the needs of its employees, communities, and stakeholders. The company can achieve this goal through operational excellence in each of its three main operational areas: refining, ethanol production, and VLP.

The refining segment constitutes most sales for Valero and has an international presence. This segment includes refining operations and associated marketing activities (Valero Energy Corporation, 2017a). The ethanol segment consists of sales of internally produced ethanol and distillers grains in the United States. This segment also consists of ethanol operations and associated marketing activities, as well as logistics assets that support ethanol operations. VLP is a midstream master limited partnership that is owned by Valero Energy Corporation. VLPs assets include crude oil and refined petroleum pipeline and terminal systems that are used to support the refining operation. Valero Energy Corporation owns additional pipelines, terminals, tanks, docks, and other assets to support refining operations activities (Valero Energy Corporation, 2017b).

A functional analysis as described by Grant (2016) identifies organizational capabilities within each of these functional areas will identify key resources of Valero Energy Corporation. Valero Energy Corporations operations are centered around refining and marketing and require the support from areas dedicated to logistics and product transportation, operational improvements, legal and environmental compliance, government relations, communication and public relations, and human resource management.

As a large corporation with an international presence, Valero Energy Corporation must maintain positive relationships with the governments and communities in which it is located. Valero is able to sustain positive community relationships through the Valero Energy Foundation, which aims to improve the quality of life in communities with unmet needs. This is done through providing services to meet basic needs, such as food and shelter for the elderly and working poor, and those hit by natural disasters. This was especially evident in the aftermath of Hurricane Harvey, which impacted areas where the company has refining operations and pipeline assets, and where many employees lived.

The company invests in health care and education systems to serve not just immediate but also long-term needs of a community. The company believes that its success is tied to the success of communities where its employees live and work, creating a symbiotic relationship between the locations of the firm and the success of the firm (Valero Energy Corporation, 2017a).

Investing in education and communities also helps meet the needs of human resource management. The company needs qualified, skilled, and educated operators, technicians, engineers, and others in order to maintain successful operations. By partnering with local schools to increase the quality of education provided in a community, Valero will ensure a more highly educated pool of candidates for future workforce needs. By maintaining positive connections within a community, Valero can position itself as a desirable employer and attract high-quality, motivated candidates.

Currently, most profits for Valero Energy Corporation come through the sale of refined crude oil products. However, the company has recognized the need to diversify, and has been investing in the alternative fuels business (Vault Company Profiles, 2017). By investing in its own ethanol plants, Valero Energy has positioned itself well

to meet governmental or societal demands for increased blends of ethanol in traditional gasoline fuels without having to buy ethanol on the open market. The company is also investing in alternative energy sources, including installing wind turbines with the capability to power one of their refineries. Because the company is not involved in the exploration and recovery of crude oil, it must depend on purchasing feedstocks produced by other companies. Creating a diversified area of operations allows the company to not be as dependent upon crude oil prices to ensure profitability.

Valero has also continued to invest in its profitable refining business in North America, while selling its high-cost assets and non-core assets (Vault Company Profiles, 2017). In 2009, Valero Energy closed its operations at Delaware City. The following year, the company sold its Delaware City Refining operations and Delaware Pipeline to PBF Energy Partners. The company then sold its refinery at the Port of Paulsboro, which was the last refinery the company owned on the east coast (Berita Indonesia, 2019). This also shows the companys willingness to invest in fast-growing markets where it may expect to see increased returns.

Safe operation of these assets is a critical requirement and Valero Energy has created a process to focus on safe, stable, and reliable operations (Valero Energy Corporation, 2017b). This key capability is done through a proprietary management system that provides for quality investigations in situations where a safety incident does occur. They focus on understanding any technical or program issues that contributed to the cause of an incident, allowing for focused improvement in key areas such as management systems and work practices to prevent similar situations from occurring again. This process has led Valero Energy to have a lower rate of recorded injuries than accounting or law firms (Valero Energy Corporation, 2017a).

It is common for assets in the oil and gas industry to change ownership frequently. In 2016, Valero purchased a pipeline from Kinder Morgan, enhancing the companys ability to grow and optimize product supply to the eastern part of the United States. In 2017, Valero Energy Corporation invested $2.4 billion to sustain and grow its business (Valero Energy Corporation, 2017a). This was done through starting up new operations, expanding existing plants, and boosting production. Finding new and continuous improvement possibilities with existing assets has been a key capability of Valero Energy since the company was created.

The investment in infrastructure that Valero continues to make allows it to increase not its volume of production, but instead the variety of products that it can produce. Instead of just selling more of the same product at whatever price the market is on a given day, the company has optimized itself to provide more products with a higher value at a given point in time, using the same low-price feedstocks. This diversity in production allows it to sell higher priced products to a world market and increase its operating profits.

Valero Energy focuses on operational excellence, which means the company strives to have reliable and predictable operations, making facilities safe and efficient (Valero Energy Corporation, 2017b). Through a Commitment to Excellence Management System (CTEMS), the company has implemented a process to assess existing programs within the company against set expectations.

Valero has seen above-average returns for about the past ten years, as compared to the oil and gas refining and marketing segment. Year to date returns are 13.74% compared to an industry average of 7.39%- and five-year returns are 12.61% as compared to 7.01%. However, there have been a few time periods where the industry average returns were negative, and the returns for Valero were also negative to a larger degree. This occurred when comparing the one-year average return where Valero saw a -6.12% return and the industry average was -3.47% (Morningstar Rating, 2018).

Valero has seen consistent positive cash flows, allowing the company to invest in new developments and increase its dividends. The company again announced a dividend increase (Seeking Alpha, 2017). Much of this advantage may be due to the increase in domestically produced oil. Refiners such as Valero gain a competitive advantage when oil in the U.S., which is benchmarked against the West Texas Intermediate crude oil price, is cheaper than the international Brent crude benchmark. This advantage may disappear in the long run (Yieke, 2014).

Valero has assets spread out over a larger portion of the Gulf Coast than many of its competitors do. This means it spends less on transporting oil, as it has refineries closer to where the oil comes from (Yieke, 2014). Valero has also invested in developing its own rail and pipeline transportation network, meaning it will not have to rely on third party midstream companies to transport oil (Yieke, 2014). This is another long-term cost saving measure.

## CONCLUSION, RECOMMENDATIONS AND IMPLICATIONS

There are opportunities for Valero to be the dominant force in the oil and gas industry in comparison to Marathon Petroleum even without being the largest independent petroleum refiner. Valero Energy would need to first diversify its portfolio and ensure that its profitability levels are back to where it once was even with the current geopolitical risks. Investors are attracted to Valeros dividend of close to 4]% which is slightly higher than Marathon petroleum.

The main difference that gives Valero Energy an advantage is its payout ratio of 71.31% in comparison to Marathon Petroleum of 47.20%. This will give investors confidence that the organization will continue to pay out dividend every quarter in the coming future. Valero 5-year dividend growth rate (CAGR) is also significantly higher than Marathon Petroleum with 30.90% and 19.03% respectively.

The other main challenge for Valero Energy will be to re-capture the title of the largest independent petroleum refiner in the United States. The company held this distinction until October 2018, when Marathon Petroleum went through an acquisition of Andeavor. Both refiners now have a capacity of about 3.1 billion barrels a day, with Marathon having a slight advantage. Valero has a higher capacity utilization rate than Marathon does, by about three percent. This means that Valero uses more of its refining capability than Marathon does. If Marathon were able to increase its utilization rate, it would increase its production lead over Valero.

Both Valero Energy and its major competitors are likely to continue operations into the future. As mergers and acquisitions in this industry are common, it is likely that if Valero chose to add refining capacity in order to again be the premier refiner in the country, a future merger or acquisition could again result in a change. Valero has divested past assets that did not fit within the overall strategic goals of the organization. If Valero had retained these assets, it would likely have a larger capacity than Marathon. However, its willingness to sell assets that were not optimized for the company show that Valero is more interested in pursuing a successful strategy than it is regaining a title.

Valero Energy Corporation could choose to continue its investments in its current refining facilities, adding capacity as needed, and growing its transportation network. This strategy could lead to an increase in capacity for refining, if the company is able to identify other refineries that fit with the companys mission. This would be a successful strategy for Valero to pursue, as it meets the primary goal of effective operations.

The refining industry is a highly capital-intensive industry, as the equipment, operating facilities, and transportation requirements involved in operations are all large and expensive. Given how much capital must be invested in the refining industry, Valero has positioned itself well by keeping its long-term debt ratio to its total assets low and keeping its debt-to-equity ratio low. By operating with efficiency, Valero has managed to out-perform expectations and increase value for shareholders. While Valero is still susceptible to changes in the energy market, such as a drop-in oil prices, the company appears to have poised itself well for the future.

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