Valero Energy Corporation Analyst Report

2017 – 2018 UConn Student Managed Fund
Team Gilson

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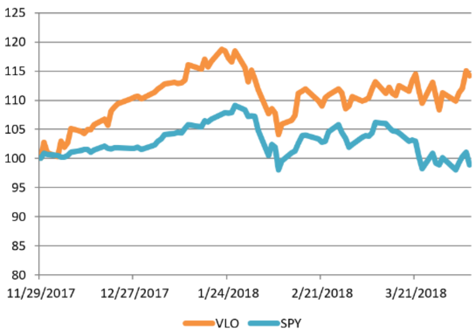
Valero Energy Corporation

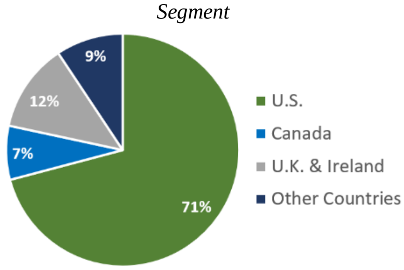
Current Price	Target Price	52-Week H	52-Week L	P/E	Market Cap.	Div. Yield	Recommendation	Margin of Safety
$101.83	$117.24	$102.23	$60.69	11.12	$43.9B	3.14%	**BUY**	15.13%

Figure 1 *– VLO vs. SPY Return*



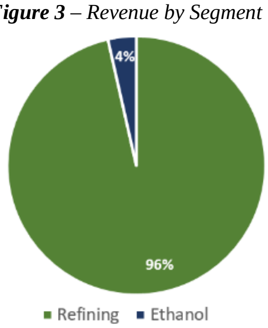
Source: Bloomberg

Figure 2 *– Revenue by Geographic Segment*



Source: FY 2017 10-K

Figure 3 *– Revenue by Segment*



Source: FY 2017 10-K

Investment Highlights

We recommend a **BUY** rating for Valero Energy Corp. (NYSE: VLO) based on a ten-year target price of $117.24 per share. Our target price offers a 15.13% margin of safety based on its closing price of $101.83 on April 13th, 2018. The following three factors are the main drivers of our investment rationale:

Input-flexible Assets in Advantaged Regions

Valero Energy has the most sophisticated refinery assets in the industry and are located in advantageous locations. Valero is the leader in input flexibility with the ability to process about 86 different varieties of crude oil, which includes light domestic crude and heavy crude oil. This gives Valero the ability to process almost any grade crude oil, allowing them to operate with higher margins than competitors.

Solid Financial Position

Valero has a strong balance sheet and liquidity position, which provide a cushion during tough economic times. This corporation has been able to maintain an average current ratio of 1.8 for the past five years, reflecting Valero's strong liquidity position. It has also been able to generate healthy free cash flows throughout the previous five years. Valero's strong financial position has allowed it to provide excess cash to shareholders, maintaining the highest dividend yield among its peers.

Favorable Industry Outlook

Demand for petroleum products will continue to expand as the overall global economy improves. As a result, industrial activity will strengthen, and Valero will benefit from increased demand. Petroleum production is expected to increase over the five years to 2022, which will drive revenue growth for petroleum refiners.

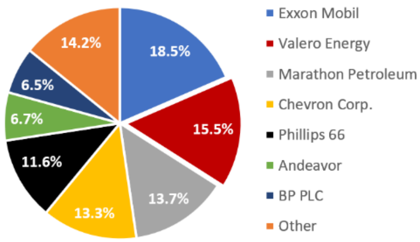
Business Description

Business Overview

Valero Energy is an independent petroleum refining and ethanol producing company based in San Antonio, TX. Valero operates in the US, Canada, U.K. and Ireland. The company owns and operates 15 petroleum refineries and 11 ethanol plants. As shown on **Figure 3**, refining and ethanol contribute 96% and 4% of total revenues, respectively. Valero's major products are transportation fuels, of which gasoline and diesel contribute the most to revenues. Valero is a majority-owner of Valero Energy Partners LP (VLP), a midstream master limited partnership which serves as Valero's primary vehicle to expand the transportation and logistics assets supporting its business. Valero is the operator and 50% owner of Diamond Green Diesel renewable diesel, which has production capacity of 11,000 barrels per day (BPD).

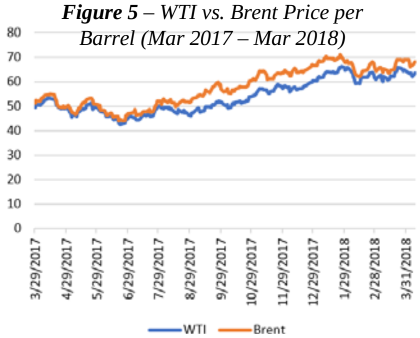
Valero is the world's largest independent refinery with a throughput capacity of 3.1 million BPD. It is also one of North America's largest ethanol producers with 11 plants that combine to form an operating capacity of 1.45 billion gallons per year. As shown on **Figure 2**, Valero's main source of revenue is generated in the United States, followed by the U.K., Ireland and Canada.

Figure 4 *– VLO Market Share in US Refining Industry*



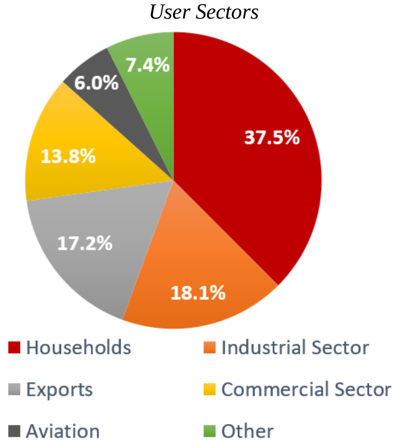
Source: IBIS World

Figure 5 *– WTI vs. Brent Price per Barrel (Mar 2017 – Mar 2018)*



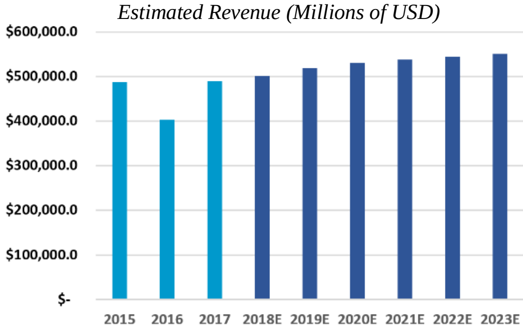
Source: U.S. Energy Information Administration

Figure 6 *– Petroleum Products End-User Sectors*



Source: IBIS World

Figure 7 *– Refining Industry Past and Estimated Revenue (Millions of USD)*



Source: IBIS World

Valero's ethanol plants are dry mill facilities that process corn to produce ethanol, distillers' grains, and corn oil. It sells its ethanol primarily to refiners, gasoline blenders under term and spot contracts. The combined production of ethanol from Valero's plants averaged 4.0 million gallons per day in 2017. All of Valero's ethanol plans are concentrated in the U.S. Midwest region, which provides a transportation cost advantage since this is where the majority of ethanol suppliers are located in the United States.

Valero Energy Partners LP (NYSE: VLP) is a publicly traded master limited liability partnership, which Valero formed in July 2013 to own, operate, develop, and acquire crude oil and refined petroleum product pipelines, terminals and other transportation and logistics assets.

Valero has eight refineries in the U.S. Gulf Coast region; three in the U.S. Mid-Continent region; two in the North Atlantic region (U.K., and Canada); and two in the U.S. West Coast region, for a total of 15 refineries.

Industry Overview & Competitive Positioning

Industry Overview

The refining industry includes firms that refine crude oil into petroleum products such as gasoline, jet fuel, and diesel. The industry does not include firms that extract crude or retail gasoline.

This industry's primary revenue and cost driver is crude oil. When crude prices increase, refineries often pass down the higher costs to consumers as higher product prices. This is why higher crude prices tend to result in industry revenue and profit margin growth. However, profit margins can also decline if oil prices grow faster than petroleum product prices. Most refined petroleum products are distributed through gasoline and petroleum bulk stations, and higher demand from stations results in increased industry revenue.

Valero's Competitive Positioning

Competition in the industry is high, and firms compete mainly on product *price* and *product quality*. Valero is well-positioned to compete in both areas. Firms with access to discount crude (West Texas Intermediate or WTI), such as Valero, can charge lower prices, leading to more sales and higher revenue. At the same time, the lower input costs lead to greater profit margins. Regarding product quality, firms that can produce high-quality petroleum from a wide variety of crude oils have a competitive advantage. For instance, in 2015, Valero experienced a smaller drop in revenue than many other refiners because Valero can process 86 different crude oils.

Crude oil prices do not directly affect Valero Energy's top line and bottom line performance. Instead, refineries rely on the spread between crude oil prices and the price of the refined product (i.e. gasoline, diesel) to make profits. The main industry elements that affect this corporation are volume and demand for its petroleum products. As long as prices remain at relatively low or moderate levels, there will be sufficient demand in the marketplace during the next decade.

The differential between crude oil and refined products has remained relatively consistent historically and is projected to remain so over the next few years, leaving Valero with a cost advantage. This is because lower WTI prices reduce input costs for Valero compared with European and other international refineries, increasing the competitiveness of exported petroleum products.

Currently, there is an abundant global supply of crude oil and natural gas for Valero. World economies have been aligning for sustainable economic growth, leading to healthier demand for refined products. Petroleum product shortages in

Latin America, Eastern Canada, Europe and Africa are beneficial to Valero as they will have the opportunity to boost revenues from a rise in exports to those countries.

Figure 8 – *Valero Energy Investment Thesis*

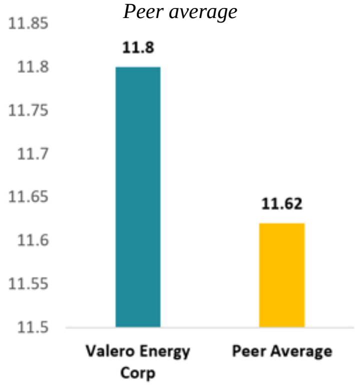
Source: Student Analysis

Industry Outlook

Demand for petroleum products is expected to increase as the overall global economy improves and industrial activity picks up, driving the refining industry to grow consistently over the next five years. Crude prices and refined petroleum product prices are expected to increase, boosting revenue growth. One major caveat, however, is environmental regulation, which could slow or limit new refinery development.

Petroleum production will increase over the five years to 2022, which will drive revenue growth for refined products. In the next five years to 2023, Petroleum refining industry revenue in the U.S. will increase at an annualized rate of approximately 2%. Exports will grow at an annualized rate of 1.6% to $87.5 billion in the five years to 2022. Although the industry faces growing environmental regulation regarding emissions and renewable energy, there will always be a demand for refined petroleum products over the next 10 years.

Figure 9 – *Complexity of Valero Refineries vs. Peer average*



Source: Morningstar

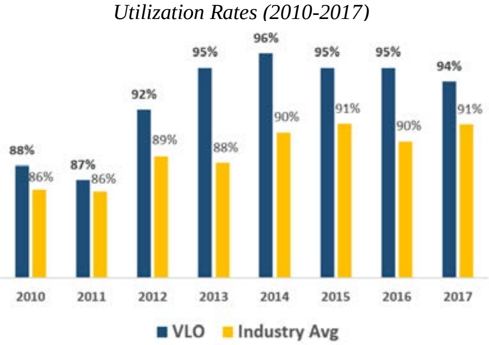
Investment Summary

Valero is poised to deliver long-term value given the competitive advantages arising from its highly input-flexible assets, as well as its strong financial position. These fundamental characteristics are supported by a strong industry outlook.

Input-flexible Assets in Advantaged Regions

What differentiates one refinery from another are their capacities, types of processing units used to refine crude as well as how complex such units are. Valero has the most complex refinery system amongst its peers, with a weighted-average complexity of 11.8 compared to the peer average of 11.62 as shown on **Figure 9**. In addition, Valero's refineries are located in advantaged regions, with 53% of the refineries located in the U.S. Gulf Coast, where Valero has access to discounted water-borne crude and to discount light crude. The high refinery complexity gives Valero the ability to refine cheap, heavy crude or discount light-domestic, depending on which one offers the highest margins at the moment. Similarly, Valero's refineries have the ability to process 86 different types of crude, which further supports the company's input flexibility strength.

Figure 10 – *Valero vs. Industry Refinery Utilization Rates (2010-2017)*



Source: VLO Investor Presentation & EIA

In addition to its industry leading input flexibility, Valero has been switching the crude its refineries use from OPEC-based to regional supplies, including Canadian crude and shale oil. This is allowing the company to face less quota restrictions and to save on supply cost.

Valero has been able to put its highly-complex assets to good use. As shown on **Figure 10**, the company has been able, for the past eight years, to yield a higher refinery utilization rate than the industry average. Furthermore, management has invested in logistics assets and processing capacity with the goal to capitalize on discounts associated with domestic light crude production.

Figure 11 – *Valero Energy Credit Ratings*

Moody's	Baa2 (Stable Outlook)
S&P	BBB (Stable Outlook)
Fitch Ratings	BBB (Stable Outlook)

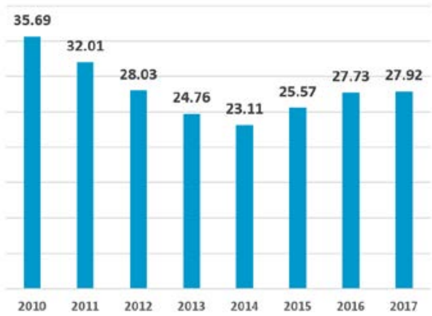
Source: FY 2017 10-K

Additionally, Valero's refining assets are concentrated in the U.S. Gulf Coast, allowing Valero to export surplus product to Mexico and other countries in a cost-efficient manner. These advantages allow the company to generate competitive margins in the petroleum refining industry and position it to perform well in various market conditions.

Solid Financial Position

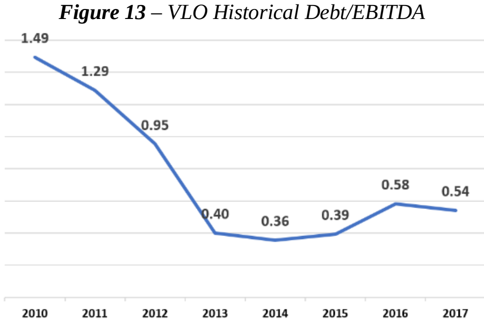
Valero has a conservative balance sheet with low risk. As shown on **Figure 11**, all three major credit rating agencies have given Valero investment grade ratings and expect a stable outlook. Also, the company's management is quite disciplined with

Figure 12 – VLO Historical Debt to Capital



Source: Bloomberg

Figure 13 – VLO Historical Debt/EBITDA

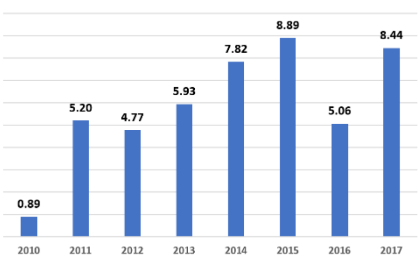


Source: Bloomberg

Figure 14 – VLO Historical ROE %

Source: Bloomberg

Figure 15 – VLO Historical Return on Assets (%)



Source: Bloomberg & Analysis

capital allocation, making sure not to over-leverage the company at any given time. Valero is able to generate healthy free cash flows, allowing management to allocate capital on important projects, such as the 50% interest acquisition in 2016 of a pipeline designed to connect oil from the Cushing, OK regional hub to its Memphis facility. The company's strong financial position allows it to offer one of the most generous dividend yields in the industry, as well as to buy back stock.

Favorable Industry Outlook

Synchronized global economic growth will maintain the demand for petroleum products over the next few years. This will allow Valero to keep up its high refinery utilization rates and competitive margins. Given Valero's capability to continuously refine petroleum, under good macroeconomic conditions, its refinery system is a well annuitized cash machine. In addition to this, in the coming years Valero's bottom line will benefit from the new Tax Reform.

One result of projected economic growth over the next decade will be increased productivity in emerging economies, such as Latin America. This will in turn result in product shortages in the area. For instance, Mexico's refined product demand is expected to grow, with imports filling a large percentage of the supply shortage. With a large footprint in the U.S. Gulf Coast, Valero is well-positioned to export supply to Mexico and other Latin American countries. Given that proximity, scale and flexibility of the Gulf Coast refineries, Valero is able to provide fuel at competitive prices.

The petroleum refining industry is expected to return to growth over the next five years, according to IBISWorld, and refined petroleum product demand is expected to increase. In addition, according to the Energy Information Administration (EIA), petroleum production will increase over the five years to 2023, which will boost revenue growth for petroleum refineries such as Valero. We expect this corporation to perform exceptionally well over the next decade, similar to FY 2017.

Financial Analysis

Balance Sheet and Financing

Total assets have increased from $34.4 billion in 2008 to $50.2 billion in 2017. Inventories, as well as Accounts & Notes Receivable, also increased during that period. From 2010 to 2017, Valero's leverage has decreased, as debt to EBITDA has dropped from 1.49x to 0.54x, as sown on **Figure 13**. This is because the company's ability to generate free cash flow has allowed it to increase its current assets and keep debt levels relatively low. This also shows that Valero has been able to decrease its debt diligently while investing in new projects and giving back to shareholders. Valero has also been able to increase its return on assets significantly, as shown on **Figure 15,** further supporting the company's effective use of its refining assets. Management targets a 20% to 30% debt-to-capital ratio, and as **Figure 12** portrays, Valero has maintained such ratio within that range over the past six years.

Earnings and Profitability

As shown on **Figure 14**, Return on Common Equity has increased from less than 3% to almost 20% from 2010 to 2017. This reflects Valero's increasingly effective use of shareholders' invested money. For fiscal 2017, Valero had a $1.9 billion benefit from the new tax reform. Excluding such benefit, adjusted net income increased to $509 million from $367 in fiscal 2016. Income tax expense decreased from $1.7 billion in 2016 to $1.9 billion in 2017 primarily due to an income tax benefit resulting from Tax Reform.

Figure 16 – VLO Operating Cash Flow (2013-2017)

Source: Morningstar

Figure 17 – VLO Valuation

Method	Weight	Value
DCF	75%	$ 115.01
Comparables	25%	$ 123.92
Intrinsic Value		$ 117.24
Current Price		$ 101.83
Margin of Safety		15.13%

Source: Student Analysis

Figure 18 – Comparables

Competitors
Valero Energy Corp
HOLLYFRONTIER CORP
MARATHON PETROLEUM CORP
CVR REFINING LP
ANDEAVOR
PHILLIPS 66

Source: Student Analysis

Figure 19 – VLO Refining Cash Operating Expense Per Barrel of Throughput

Source: VLO Investor Presentation

Cash Flows and Shareholder Return

Considering the still recuperating industry and its high capital intensity, as shown on Figure 16 Valero has been able to generate healthy levels of Operating Cash Flows in the five years. We expect this to continue into the next decade given management's discipled capital allocation and the company's competitive advantages.

During fiscal 2017, Valero paid dividends of $2.6 billion, which represented 63% of adjusted operating cash flow, and for 2018, Valero is targeting a payout ratio of 40% - 50% of operating cash flow. In January of 2018, management announced a 14% increase in dividend, and the company has $3.7 billion available in share repurchase authorizations.

Valuation

Discounted Cash Flow Model

We believe Valero Energy will continue to provide strong cash flows over the next 10 years, which is why we weighted our DCF at 75%. There are several key assumptions that should be noted from our model. Our short-term revenue growth rate starts at 10% and declines by 1% annually for 4 years, followed by a 1% terminal growth rate.

Given the strong macroeconomic environment in the refining industry along with management assistance, we projected revenues to grow by 10% for 2018, and decline by 1% each year until the terminal year (to account for possible environmental regulations that may limit Valero's expected growth potential). The long-term growth rate of 1% is conservative compared to expected GDP growth over the next decade of around 2.5%. Our WACC of 10% was calculated using data provided by several business school resources, including Bloomberg, Morningstar, and ValueLine. This discount rate also falls in line with conservative estimates that are used in the industry by professionals, such as Warren Buffet.

We calculated an intrinsic value of $117.24. Our growth assumptions, as well as a detailed model, can be found in **Appendix H**.

Comparables Model

Our comparables model is relatively straight forward. We used several competitors with similar business models in this analysis and applied their respective P/E ratios. We then calculated the average P/E of these competitors and multiplied by the TTM EPS of $9.15 for Valero Energy.

We obtained an intrinsic value of $123.92 and weighted this model at only 25% since we feel as if this is a rough estimate compared with our DCF model listed above. The detailed comparables model can be found in **Appendix I**.

Intrinsic Value

After taking into account both our DCF and Comparables models, we value Valero Energy at $117.24. This gives us a margin of safety of 15.13% since the current share price is $101.83, as shown on **Figure 17**.

Historical Price Target

It should be noted that we did pitch Valero Energy in Q4 of 2017, before FY 2017 earnings were released. At that time, the share price was $80.71, and our calculated intrinsic value was $96.12, giving us a margin of safety of almost 20%. Although the share price has reached and surpassed our original target price, we as a team feel that the price target should now be $117.24. Our valuation has been updated to include the FY 2017 financial results which were released in February, as well as the new Tax Reform. Valero performed very well on FY 2017, and we believe it will continue to do so during our 10-year investment horizon.

Investment Risks

Changing Government Regulations

Valero Energy is exposed to increased environmental regulations, such as proposed climate change laws, by the government. It is evident that the world is trying to move away from fossil fuels and start using renewable energy to power commercial and residential vehicles, aircraft, buildings and factories. Harsh government regulations could adversely impact Valero's production, business model and consumer demand for refined products in the future.

Mitigant:

Demand for refined products will continue to grow throughout the next decade as our society does not have the technology or ability to transfer to environmentally-friendly resources just yet. The majority of the world will continue using fossil fuels for the foreseeable future, and only a very small percentage of retail consumers will switch to electric vehicles and similar modes of transportation.

Volatile Refining Margins

Valero Energy's profit margins are highly tied to the spread between input crude oil and the market price at which refined products are sold. This price differential has been known to be volatile at certain times historically and could adversely affect refining margins in an unexpected macro-environment circumstance.

Mitigant:

The spread between crude oil and the market price at which Valero sells its refined products has remained relatively stable historically, as shown on **Figure 21**. Although it can be volatile at times, historical data show that the spread will remain high enough for Valero to remain profitable.

Narrowing WTI-Brent Spread

Valero currently benefits from light and heavy crude differentials on the Gulf Coast. Valero experiences major competitive advantages over European refineries by purchasing WTI crude oil (which is cheaper) compared with the international benchmark, Brent. If the price differential between WTI and Brent crude begin to narrow, margins could suffer, and Valero's competitive advantage could diminish.

Mitigant:

Historically, the crude-oil spread has remained relatively consistent and is projected to do so over the next few years.

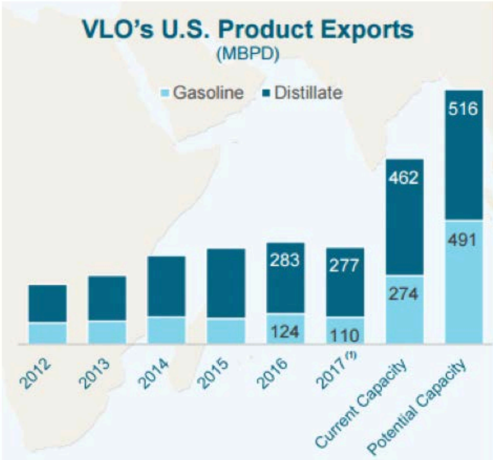
Dependence on Crude Oil Supply

Supply interruptions and the loss of ability to obtain crude oil may significantly drive up feedstock prices, causing margins to decline.

Mitigant:

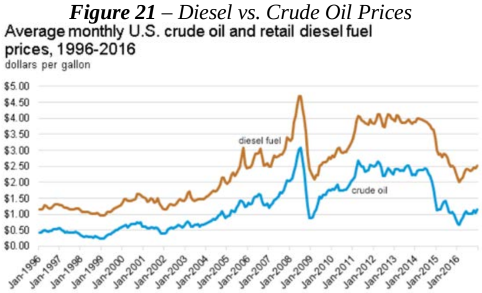
Currently, there is a crude-oil surplus around the globe, making it increasingly less probable that a shortage will occur in the short-term. Similarly, Valero Energy has adequate and diversified supply contracts in the Middle East, Africa, Asia, North America and South America. Therefore, it is highly unlikely that Valero will experience a problem obtaining crude-oil at a fair price.

Figure 20 *– VLO Exports*



Source: VLO Investor Presentation

Figure 21 *– Diesel vs. Crude Oil Prices*

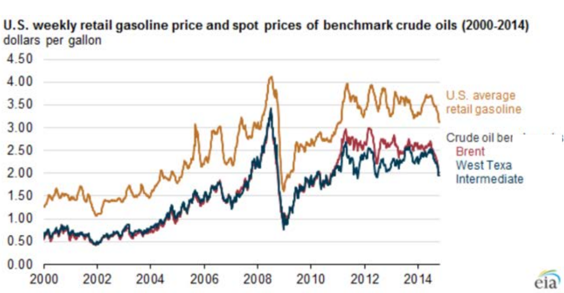


Source: Energy Information Administration

Figure 22 *– Incident Rate*

Source: VLO Investor Presentation

Figure 23 *– Brent, WTI and Gasoline Price Spread*



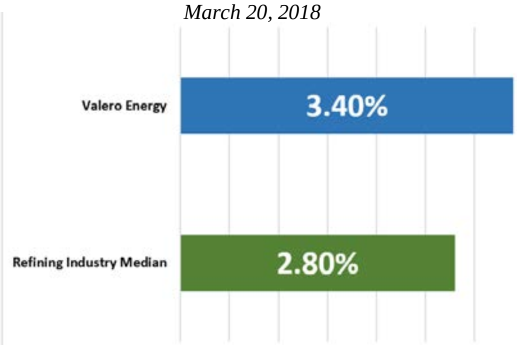
Source: Energy Information Administration

Figure 24 – *Compensation vs. Performance (1-yr % Change)*

CEO Compensation	22.11%
Stock Return	38.63%
Revenue	24.22%
ROE	71.39%
Net Income	77.59%

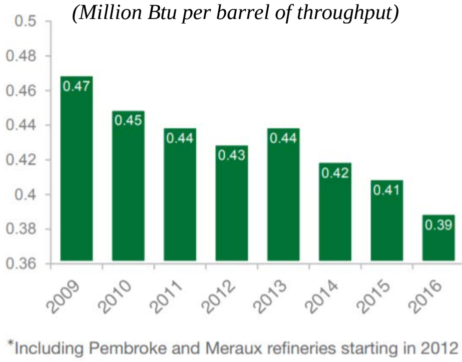
Source: Morningstar

Figure 25 – *Annual Dividend Yield as of March 20, 2018*



Source: VLO Investor Presentation

Figure 26 – *VLO Refinery Total Energy Use (Million Btu per barrel of throughput)*



Source: VLO 2016 CSR Report

Figure 26 – *VLO's Top 10 Institutional Owners*

Institution	% Shares Out
The Vanguard Group	7.78%
BlackRock	6.16%
SSgA Funds Mgmt	5.61%
LSV Asset Mgmt	2.06%
Columbia Mgmt	1.97%
Fidelity	1.93%
Northern Trust Investments	1.54%
Dimensional Fund Advisors	1.32%
BNY Mellon Asset Mgmt	1.25%
Norges Bank	1.19%

Source: Factiva

Corporate Governance & CSR

Executive Management

Valero's current Chairman and CEO, Joe Gorder, assumed his current role in 2014, and is a 27-year industry veteran. Gorder has held multiple senior leadership positions and has proven to be a capable leader. Although Valero's CEO compensation is higher than average, in the past year CEO compensation growth was below the company's performance metrics growth, as shown on **Figure 24**. The average executive tenure is 21.2 years, and the average age is 56 years. Overall, Valero's management team is good for the company's long-term value creation and for shareholders, with its disciplined capital allocation and shareholder-friendly dividend and buyback policies.

Board of Directors

Valero's Board of Directors is comprised of 11 members, all of which, except Gorder, are independent directors. The average age of the Board members is 63, and the average Director tenure is 8.34 years. Overall, we see no threat coming from the Directors and they have proven to guide the company strategically and favor shareholder well-being.

Corporate Social Responsibility

Valero puts effort into taking care of its stakeholders and the environment. The company follows five guiding principles: Safety, Environment, Community, Employees, and Stakeholders.

Occupational safety has been improving significantly at Valero in the past seven years. In 2016, the company established a company record-low refinery employee incident rate of 0.35, below the industry average of about 0.6.

Valero has strived to reduce its greenhouse-gas and other air emissions through adoption of new technologies. From 2012-2015, the average per-barrel greenhouse-gas emission was decreased by 15%. As shown on **Figure 26**, the company has been reducing the total energy use in its refining operations, and its refineries have ranked among the top facilities in energy efficiency in industry surveys.

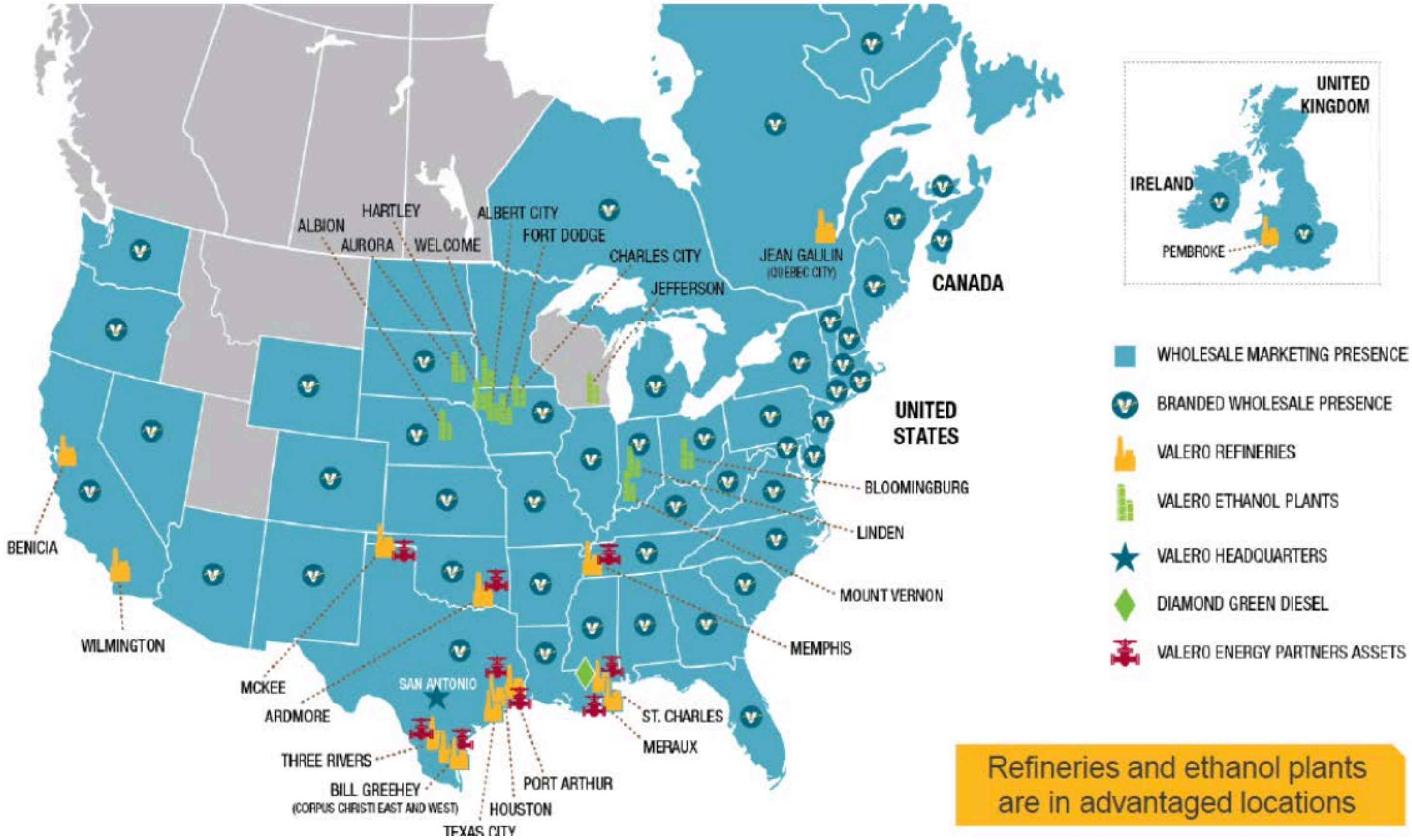
Conclusion

Valero Energy will continue creating value in the next decade given its effective refining assets, which are located in advantageous locations for low transportation costs and competitive pricing of exported products. The company has relatively strong financial health, which will persist since management has shown consistent discipline in capital allocation. These fundamentals will be supported by a strong macroeconomic environment in the next decade.

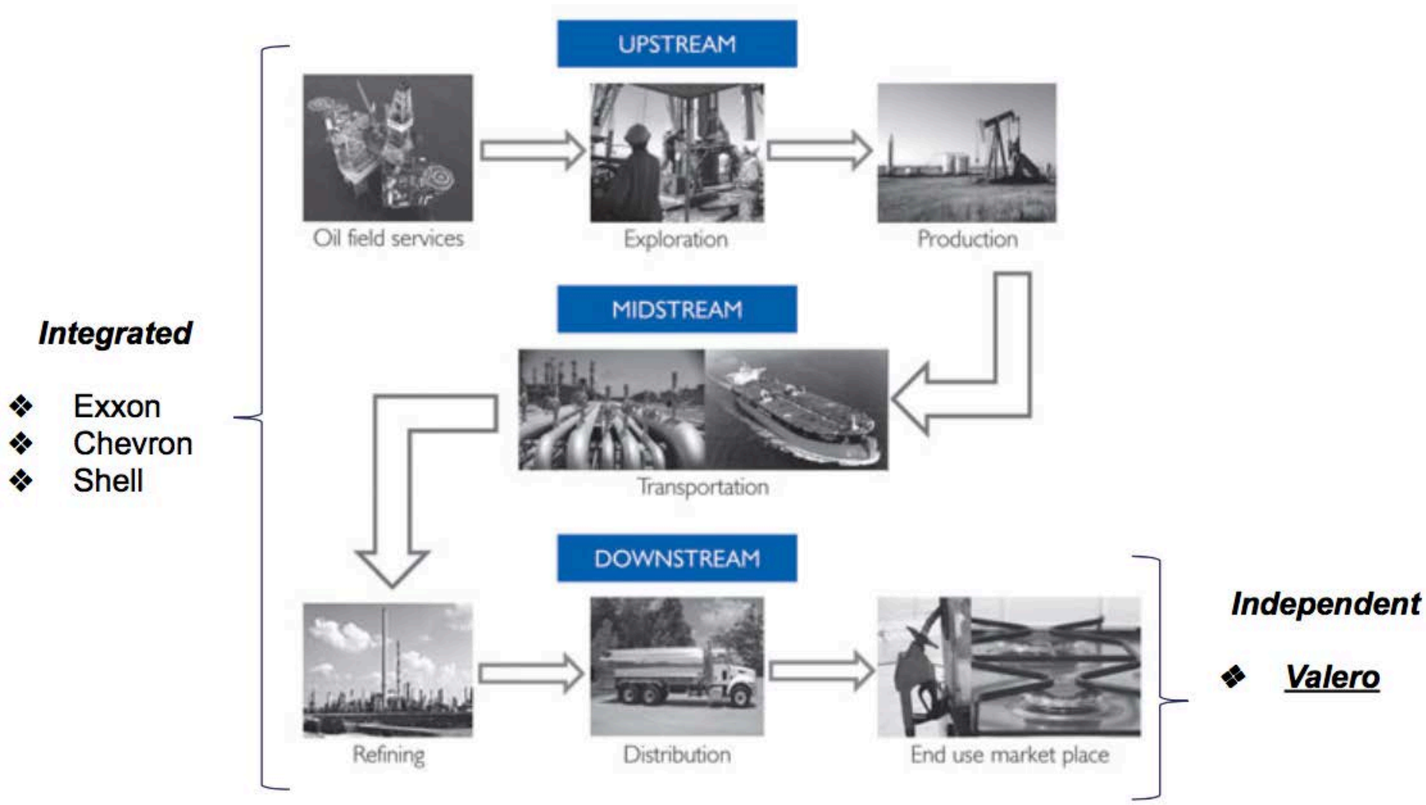
Because of those reasons, we recommend a **BUY** rating for Valero Energy Corp. (NYSE: VLO) based on a ten-year target price of $117.24 per share. Our target price offers a 15.13% margin of safety based on its closing price of $101.83 on April 13th, 2018.

Appendix

Appendix A: Map of Operations



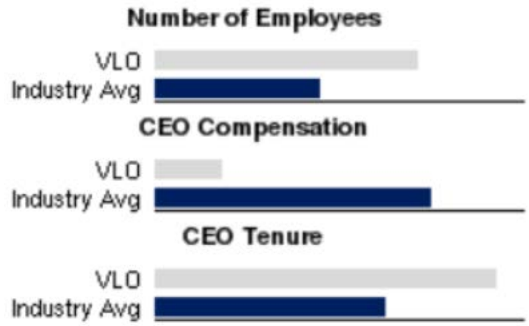
Appendix B: Independent versus Integrated Refinery



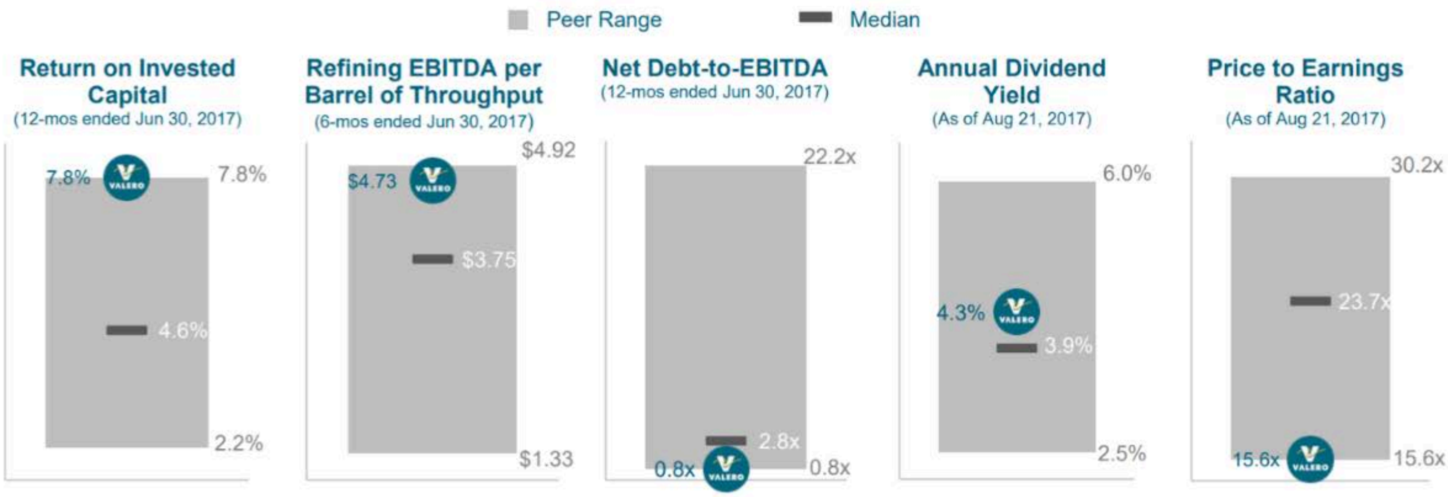
Appendix C: Management & Employee Stats

Joe Gorder

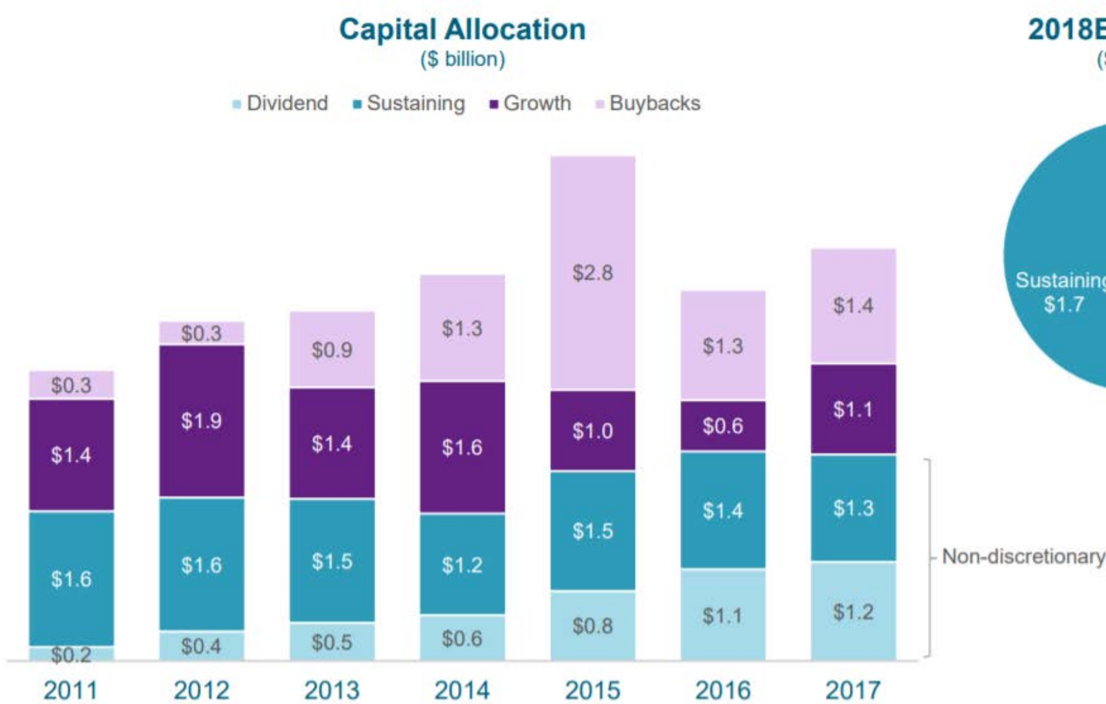
Mike Ciskowski

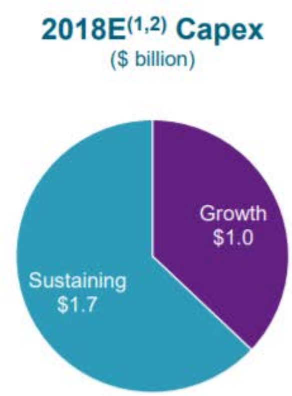


Appendix D: Valero Competitive Landscape Ratios



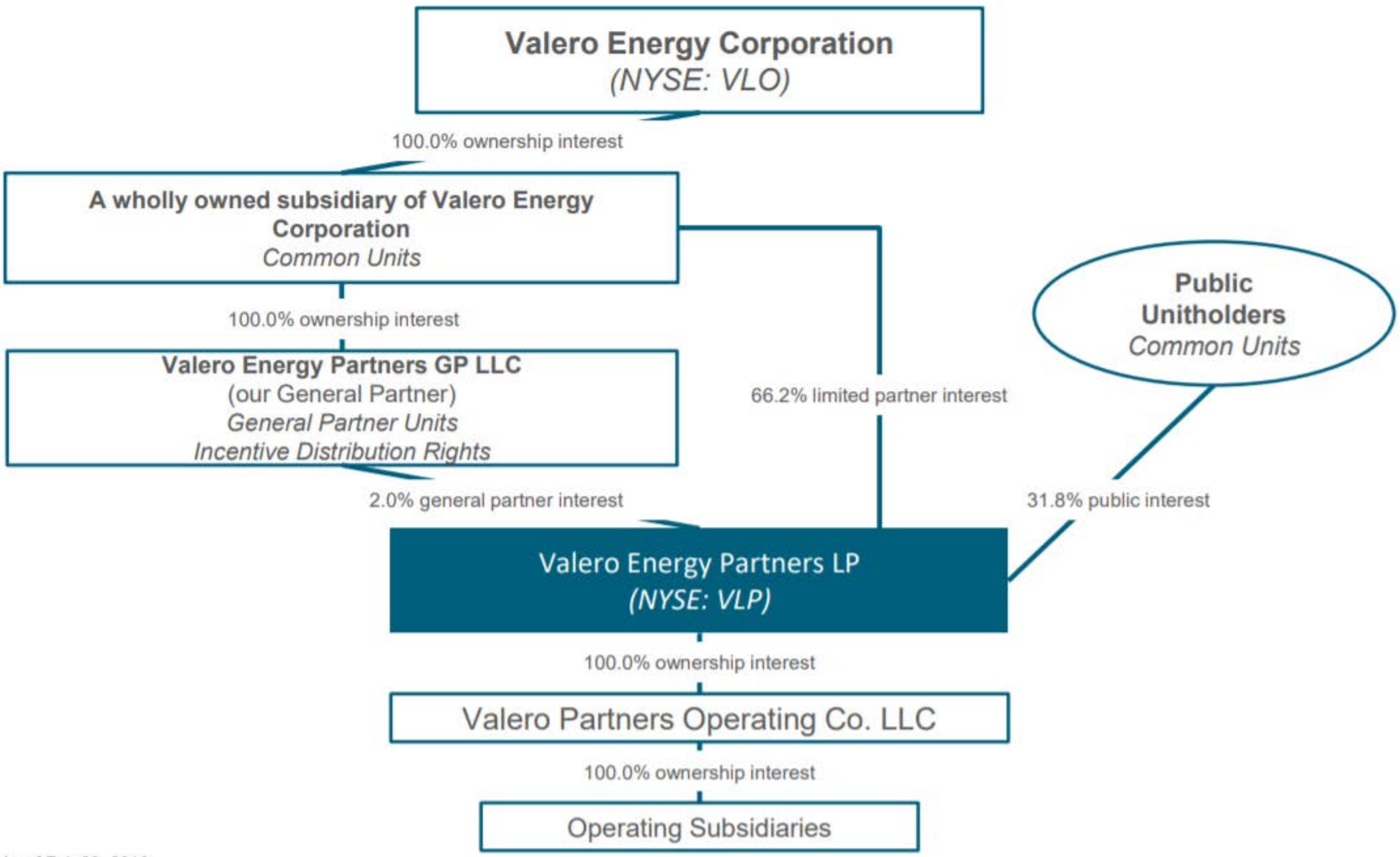
Appendix F: Capital Allocation





(1) 2018 values are estimates.
(2) Sustaining reflects costs expected for Turnarounds and Catalysts and Regulatory Compliance.

Appendix G: Valero Energy Partners (VLP) Organizational Structure



[1] As of Feb 28, 2018.

Appendix H: Discounted Cash Flow Model

Valero Energy Corporation

Discounted Cash Flow (Millions of USD)

	Historical Period						Projection Period					CAGR
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2017-2021E
Revenue	**$ 139,250.0**	**$ 138,074.0**	**$ 124,943.0**	**$ 81,824.0**	**$ 70,166.0**	**$ 88,407.0**	**$ 97,247.7**	**$ 106,000.0**	**$ 114,480.0**	**$ 122,493.6**	**$ 129,843.2**	*11.8%*
% growth		*-0.8%*	*-9.5%*	*-34.5%*	*-14.2%*	*26.0%*	*10.0%*	*9.0%*	*8.0%*	*7.0%*	*6.0%*	
Cost of Revenue	127,268.0	127,316.0	116,627.0	72,124.0	64,676.0	81,926.0	89,133.7	97,201.8	104,880.9	111,869.6	119,270.3	
% of Revenue	*91.4%*	*92.2%*	*93.3%*	*88.1%*	*92.2%*	*92.7%*	*91.7%*	*91.7%*	*91.6%*	*91.3%*	*91.9%*	
Gross Margin	**$ 11,982.0**	**$ 10,758.0**	**$ 8,316.0**	**$ 9,700.0**	**$ 5,490.0**	**$ 6,481.0**	**$ 8,114.0**	**$ 8,798.1**	**$ 9,599.1**	**$ 10,624.0**	**$ 10,572.9**	*14.1%*
Gross Margin %	*8.6%*	*7.8%*	*6.7%*	*11.9%*	*7.8%*	*7.3%*	*8.3%*	*8.3%*	*8.4%*	*8.7%*	*8.1%*	
SG&A	1,384.0	984.0	724.0	710.0	715.0	835.0	972.5	2,120.0	2,289.6	3,674.8	3,895.3	
% margin	*1.0%*	*0.7%*	*0.6%*	*0.9%*	*1.0%*	*0.9%*	*1.0%*	*2.0%*	*2.0%*	*3.0%*	*3.0%*	
Other Operating Expenses	5,014.0	4,097.0	-	790.0	56.0	61.0	1669.7	1112.3	614.8	717.3	705.2	
Total Operating Expenses	**$ 6,398.0**	**$ 5,081.0**	**$ 724.0**	**$ 1,500.0**	**$ 771.0**	**$ 896.0**	**$ 2,642.1**	**$ 3,232.3**	**$ 2,904.4**	**$ 4,392.1**	**$ 4,600.5**	*41.6%*
% margin	*4.6%*	*3.7%*	*0.6%*	*1.8%*	*1.1%*	*1.0%*	*2.7%*	*3.0%*	*2.5%*	*3.6%*	*3.5%*	
EBITDA	**$ 7,158.0**	**$ 7,397.0**	**$ 9,282.0**	**$ 10,042.0**	**$ 6,613.0**	**$ 7,571.0**	**$ 7,557.2**	**$ 7,755.4**	**$ 8,993.7**	**$ 8,645.9**	**$ 8,507.1**	*5.5%*
% margin	*5.1%*	*5.4%*	*7.4%*	*12.3%*	*9.4%*	*8.6%*	*7.8%*	*7.3%*	*7.9%*	*7.1%*	*6.6%*	
Depreciation & Amortization	1,574.0	1,720.0	1,690.0	1,842.0	1,894.0	1,986.0	2,085.3	2,189.6	2,299.0	2,414.0	2,534.7	
% growth		*9.3%*	*-1.7%*	*9.0%*	*2.8%*	*4.9%*	*5.0%*	*5.0%*	*5.0%*	*5.0%*	*5.0%*	
EBIT	**$ 5,584.0**	**$ 5,677.0**	**$ 7,592.0**	**$ 8,200.0**	**$ 4,719.0**	**$ 5,585.0**	**$ 5,471.9**	**$ 5,565.9**	**$ 6,694.6**	**$ 6,231.9**	**$ 5,972.4**	*5.7%*
% margin	*4.0%*	*4.1%*	*6.1%*	*10.0%*	*6.7%*	*6.3%*	*5.6%*	*5.3%*	*5.8%*	*5.1%*	*4.6%*	
Taxe Expense (Benefit)	1,626.0	1,254.0	1,777.0	1,870.0	765.0	(949.0)	820.8	834.9	1,004.2	934.8	895.9	
% tax	*29.1%*	*22.1%*	*23.4%*	*22.8%*	*16.2%*	*-17.0%*	*15.0%*	*15.0%*	*15.0%*	*15.0%*	*15.0%*	
EBIAT	**$ 3,958.0**	**$ 4,423.0**	**$ 5,815.0**	**$ 6,330.0**	**$ 3,954.0**	**$ 6,534.0**	**$ 4,651.1**	**$ 4,731.0**	**$ 5,690.4**	**$ 5,297.1**	**$ 5,076.6**	*6.0%*
Plus: Depreciation & Amortization	1,574.0	1,720.0	1,690.0	1,842.0	1,894.0	1,986.0	2,085.3	2,189.6	2,299.0	2,414.0	2,534.7	
Less: Capital Expenditures	(2,931.0)	(2,121.0)	(2,153.0)	(1,618.0)	(1,278.0)	(1,379.0)	(2,000.0)	(2,100.0)	(2,150.0)	(2,200.0)	(3,000.0)	
Less: Increase in Net Working Capital	$ (302.00)	$ 922.00	$ (1,810.00)	$ (1,306.00)	$ 976.00	$ 1,289.00	(38.5)	5.4	(147.3)	129.8	369.1	
Free Cash Flow	**$ 2,299.0**	**$ 4,944.0**	**$ 3,542.0**	**$ 5,248.0**	**$ 5,546.0**	**$ 8,430.0**	**$ 4,697.9**	**$ 4,826.0**	**$ 5,692.1**	**$ 5,640.9**	**$ 4,980.3**	*0.3%*
% growth		*115.1%*	*-28.4%*	*48.2%*	*5.7%*	*52.0%*	*-44.3%*	*2.7%*	*17.9%*	*-0.9%*	*-11.7%*	
WACC	10.00%											
Discount Period							1	2	3	4	5	
Discount Factor							0.91	0.83	0.75	0.68	0.62	
Present Value of Free Cash Flow							**$ 4,270.8**	**$ 3,988.4**	**$ 4,276.6**	**$ 3,852.8**	**$ 3,092.4**	

Implied Perpetuity Growth Rate	
Terminal Year Free Cash Flow	$ 4,980.3
WACC	10.00%
Terminal Value	$ 55,890.3
Implied Perpetuity Growth Rate	**1.0%**

Implied Equity Value and Share Price	
PV of Cash Flows	$ 19,481.0
PV of Terminal Value	$ 34,703.5
Enterprise Value	$ 54,184.4
Less: Total Debt	$ 8,750.00
Less: Preferred Securities	$ -
Less: Noncontrolling Interest	$ 909.00
Plus: Cash and Cash Equivalents	$ 5,850.00
Implied Equity Value	**$ 50,375.4**
Fully Diluted Shares Outstanding	438.00
Implied Share Price	**$ 115.01**

Sensitivity Analysis of Implied Share Price						
		WACC				
		9.0%	9.5%	10.0%	10.5%	11.0%
Growth Rate	0.0%	$ 119.08	$ 112.40	$ 106.38	$ 100.94	$ 95.99
	0.5%	$ 124.34	$ 117.02	$ 110.47	$ 104.57	$ 99.23
	1.0%	$ 130.27	$ 122.19	$ 115.01	$ 108.58	$ 102.80
	1.5%	$ 136.98	$ 128.01	$ 120.09	$ 113.04	$ 106.74
	2.0%	$ 144.65	$ 134.60	$ 125.80	$ 118.03	$ 111.12

Appendix: I: Comparables Model

Company Name	Revenue FY 2017 (mm)	EBITDA TTM (mm)	Beta	EPS TTM	PE
Valero Energy Corp	**$ 88,407.00**	**$ 5,330.00**	**1.14**	**$ 9.15**	**11**
HOLLYFRONTIER CORP	$ 14,251.30	$ 1,074.04	1.52	$ 4.52	12
MARATHON PETROLEUM CORP	$ 66,345.00	$ 5,701.00	1.41	$ 6.70	11
CVR REFINING LP	$ 5,416.90	$ 250.40	1.67	$ 0.60	26
ANDEAVOR	$ 27,683.00	$ 1,935.00	1.17	$ 10.81	10
PHILLIPS 66	$ 83,021.00	$ 2,661.00	0.99	$ 9.85	11
Peer Average	**$ 43,844.46**	**$ 2,532.82**	**1.34**	**$ 6.94**	**13.54**

Peer Average P/E		13.54
Valero Energy EPS TTM	$	9.15
Share Price	$	123.92

Appendix J: Crude Oil & Refined Fuel Prices

Price summary (historical and forecast)

	2015	2016	*2017*	*2018*
WTI Crude Oil[a] *dollars per barrel*	48.67	43.33	*49.69*	*50.57*
Brent Crude Oil *dollars per barrel*	52.32	43.74	*52.43*	*54.07*
Gasoline[b] *dollars per gallon*	2.43	2.15	*2.39*	*2.41*
Diesel[c] *dollars per gallon*	2.71	2.31	*2.64*	*2.79*
Heating Oil[d] *dollars per gallon*	2.65	2.10	*2.50*	*2.66*
Natural Gas[d] *dollars per thousand cubic feet*	10.36	10.04	*11.1*	*10.99*
Electricity[d] *cents per kilowatthour*	12.65	12.55	*12.96*	*13.31*

[a]West Texas Intermediate.
[b]Average regular pump price.
Note: Italics indicate forecast.
Source: Short-Term Energy Outlook

[c]On-highway retail.
[d]U.S. Residential average.

Appendix K: Income Statement

In Millions of USD except Per Share 12 Months Ending	FY 2012 12/31/2012	FY 2013 12/31/2013	FY 2014 12/31/2014	FY 2015 12/31/2015	FY 2016 12/31/2016	FY 2017 12/31/2017	Last 12M 12/31/2017	FY 2018 Est 12/31/2018	FY 2019 Est 12/31/2019
Revenue	**139,250.0**	**138,074.0**	**124,943.0**	**81,824.0**	**70,166.0**	**88,407.0**	**89,877.0**	**98,812.4**	**98,498.3**
+ Sales & Services Revenue	139,250.0	138,074.0	124,943.0	81,824.0	70,166.0	88,407.0	89,877.0		
- Cost of Revenue	127,268.0	127,316.0	116,627.0	72,124.0	64,676.0	81,926.0	82,271.0		
+ Cost of Goods & Services	127,268.0	127,316.0	116,627.0	72,124.0	64,676.0	81,926.0	82,271.0		
Gross Profit	**11,982.0**	**10,758.0**	**8,316.0**	**9,700.0**	**5,490.0**	**6,481.0**	**7,606.0**	**11,758.7**	**13,986.8**
+ Other Operating Income	0.0	0.0	0.0	0.0	747.0	0.0	0.0		
- Operating Expenses	7,972.0	6,801.0	2,414.0	3,342.0	2,665.0	2,882.0	4,007.0		
+ Selling, General & Admin	1,384.0	984.0	724.0	710.0	715.0	835.0	835.0		
+ Selling & Marketing	*686.0*	*226.0*	*0.0*	—	—	—			
+ General & Administrative	*698.0*	*758.0*	*724.0*	*710.0*	*715.0*	*835.0*	*835.0*		
+ Research & Development	0.0	0.0	0.0	0.0	0.0	—			
+ Depreciation & Amortization	1,574.0	1,720.0	1,690.0	1,842.0	1,894.0	1,986.0	1,986.0		
+ Other Operating Expense	5,014.0	4,097.0	0.0	790.0	56.0	61.0	1,186.0		
Operating Income (Loss)	**4,010.0**	**3,957.0**	**5,902.0**	**6,358.0**	**3,572.0**	**3,599.0**	**3,599.0**	**4,490.8**	**5,151.6**
- Non-Operating (Income) Loss	304.0	-19.0	350.0	387.0	390.0	392.0	392.0		
+ Interest Expense, Net	313.0	365.0	397.0	433.0	446.0	468.0			
+ Interest Expense	*313.0*	*365.0*	*397.0*	*433.0*	*446.0*	*468.0*	*488.0*		
- Interest Income	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*			
+ Foreign Exch (Gain) Loss	0.0	0.0	0.0	0.0	0.0	0.0			
+ (Income) Loss from Affiliates	—	—	0.0	—	—	—			
+ Other Non-Op (Income) Loss	-9.0	-384.0	-47.0	-46.0	-56.0	-76.0	-76.0		
Pretax Income	**3,706.0**	**3,976.0**	**5,552.0**	**5,971.0**	**3,182.0**	**3,207.0**	**3,207.0**	**3,991.6**	**4,503.0**
- Income Tax Expense (Benefit)	1,626.0	1,254.0	1,777.0	1,870.0	765.0	-949.0	-949.0		
+ Current Income Tax	663.0	753.0	1,332.0	1,705.0	535.0	1,594.0			
+ Deferred Income Tax	963.0	501.0	445.0	165.0	230.0	-2,543.0			
+ Tax Allowance/Credit	—	—	0.0	—	—	—			
Income (Loss) from Cont Ops	**2,080.0**	**2,722.0**	**3,775.0**	**4,101.0**	**2,417.0**	**4,156.0**	**4,156.0**	**3,115.1**	**3,437.4**
- Net Extraordinary Losses (Gains)	0.0	-6.0	64.0	0.0	0.0	0.0	0.0		
+ Discontinued Operations	0.0	-6.0	64.0	0.0	0.0	0.0	0.0		
+ XO & Accounting Changes	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Income (Loss) Incl. MI	**2,080.0**	**2,728.0**	**3,711.0**	**4,101.0**	**2,417.0**	**4,156.0**	**4,156.0**		
- Minority Interest	-3.0	8.0	81.0	111.0	128.0	91.0	91.0		
Net Income, GAAP	**2,083.0**	**2,720.0**	**3,630.0**	**3,990.0**	**2,289.0**	**4,065.0**	**4,065.0**	**3,115.1**	**3,437.4**
- Preferred Dividends	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
- Other Adjustments	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Net Income Avail to Common, GAAI	**2,083.0**	**2,720.0**	**3,630.0**	**3,990.0**	**2,289.0**	**4,065.0**	**4,065.0**	**3,115.1**	**3,437.4**
Net Income Avail to Common, Adj	**2,817.6**	**2,282.8**	**3,140.9**	**3,984.9**	**2,297.7**	**2,203.0**	**2,203.0**	**3,115.1**	**3,437.4**
Net Abnormal Losses (Gains)	734.6	-431.2	-553.2	-5.1	8.7	-1,862.0	-1,862.0		
Net Extraordinary Losses (Gains)	0.0	-6.0	64.0	0.0	0.0	0.0	0.0		
Basic Weighted Avg Shares	550.0	542.0	526.0	497.0	461.0	442.0	435.0		
Basic EPS, GAAP	**3.77**	**4.99**	**6.90**	**8.00**	**4.94**	**9.17**	**9.25**	**7.17**	**8.34**
Basic EPS from Cont Ops	**3.77**	**4.98**	**7.02**	**8.00**	**4.94**	**9.17**	**9.25**	**7.17**	**8.34**
Basic EPS from Cont Ops, Adjustec	**5.12**	**4.21**	**5.97**	**8.00**	**4.98**	**4.98**	**4.99**	**7.19**	**8.42**
Diluted Weighted Avg Shares	556.0	548.0	530.0	500.0	464.0	444.0	437.0		
Diluted EPS, GAAP	**3.75**	**4.97**	**6.85**	**7.99**	**4.94**	**9.16**	**9.24**	**7.17**	**8.34**
Diluted EPS from Cont Ops	**3.75**	**4.96**	**6.97**	**7.99**	**4.94**	**9.16**	**9.24**	**7.17**	**8.34**
Diluted EPS from Cont Ops, Adjuste	**5.07**	**4.17**	**5.93**	**7.98**	**4.96**	**4.97**	**4.98**	**7.19**	**8.42**
Reference Items									
Accounting Standard	US GAAP	US GAAP	US GAAP	US GAAP	US GAAP	US GAAP			
EBITDA	5,584.0	5,677.0	7,592.0	8,200.0	5,466.0	5,585.0	5,585.0	6,547.2	7,061.5
EBITDA Margin (T12M)	4.01	4.11	6.08	10.02	7.79	6.32	6.21	6.63	7.17
EBITA	4,484.0	4,477.0	6,392.0	6,900.0	4,166.0	4,285.0			
EBIT	4,010.0	3,957.0	5,902.0	6,358.0	3,572.0	3,599.0	3,599.0	4,490.8	5,151.6
Gross Margin	8.60	7.79	6.66	11.85	7.82	7.33	8.46		
Operating Margin	2.88	2.87	4.72	7.77	5.09	4.07	4.00	4.54	5.23
Profit Margin	1.50	1.97	2.91	4.88	3.26	4.60	4.52	3.15	3.49
Sales per Employee	6,425,637.95	##########	###########	##########	7,019,407.76	8,827,458.81			
Dividends per Share	0.65	0.85	1.05	1.70	2.40	2.80	2.80	3.21	3.48
Total Cash Common Dividends	360.0	462.0	552.0	845.0	1,108.0	1,238.0	1,238.0		
Capitalized Interest Expense	221.0	118.0	70.0	71.0	65.0	71.0			
Depreciation Expense	1,100.0	1,200.0	1,200.0	1,300.0	1,300.0	1,300.0			
Rental Expense	529.0	635.0	661.0	837.0	809.0	712.0			

Source: Bloomberg

Appendix L: Statement of Cash Flows

In Millions of USD except Per Share 12 Months Ending	FY 2009 12/31/2009	FY 2010 12/31/2010	FY 2011 12/31/2011	FY 2012 12/31/2012	FY 2013 12/31/2013	FY 2014 12/31/2014	FY 2015 12/31/2015	FY 2016 12/31/2016	FY 2017 12/31/2017	Last 12M 12/31/2017
Cash from Operating Activities										
+ Net Income	-1,982.0	324.0	2,090.0	2,083.0	2,720.0	3,630.0	3,990.0	2,289.0	4,065.0	4,065.0
+ Depreciation & Amortization	1,527.0	1,473.0	1,534.0	1,574.0	1,720.0	1,690.0	1,842.0	1,894.0	1,986.0	1,986.0
+ Non-Cash Items	2,023.0	1,180.0	333.0	1,915.0	202.0	791.0	1,085.0	-339.0	-1,858.0	-1,858.0
+ Stock-Based Compensation	66.0	54.0	58.0	58.0	64.0	60.0	—	—	—	
+ Deferred Income Taxes	-343.0	347.0	461.0	963.0	501.0	445.0	165.0	230.0	-2,543.0	-2,543.0
+ Other Non-Cash Adj	2,300.0	779.0	-186.0	894.0	-363.0	286.0	920.0	-569.0	685.0	685.0
+ Chg in Non-Cash Work Cap	255.0	68.0	81.0	-302.0	922.0	-1,810.0	-1,306.0	976.0	1,289.0	1,289.0
+ (Inc) Dec in Accts Receiv	-806.0	-679.0	-3,110.0	437.0	-753.0	2,753.0	1,294.0	-1,531.0	-870.0	-870.0
+ (Inc) Dec in Inventories	-77.0	-407.0	643.0	-282.0	-13.0	-1,014.0	-222.0	771.0	-516.0	-516.0
+ Inc (Dec) in Accts Payable	1,475.0	670.0	2,004.0	-113.0	977.0	-3,149.0	-1,787.0	1,556.0	1,842.0	1,842.0
+ Inc (Dec) in Other	-337.0	484.0	544.0	-344.0	711.0	-400.0	-591.0	180.0	833.0	833.0
+ Net Cash From Disc Ops	—	—	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cash from Operating Activities	**1,823.0**	**3,045.0**	**4,038.0**	**5,270.0**	**5,564.0**	**4,241.0**	**5,611.0**	**4,820.0**	**5,482.0**	**5,482.0**
Cash from Investing Activities										
+ Change in Fixed & Intang	-2,306.0	-1,730.0	-2,355.0	-2,931.0	-2,121.0	-2,153.0	-1,618.0	-1,278.0	-1,379.0	-1,379.0
+ Disp in Fixed & Intang	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
+ Disp of Fixed Prod Assets	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
+ Disp of Intangible Assets	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
+ Acq of Fixed & Intang	-2,306.0	-1,730.0	-2,355.0	-2,931.0	-2,121.0	-2,153.0	-1,618.0	-1,278.0	-1,379.0	-1,379.0
+ Acq of Fixed Prod Assets	*-2,306.0*	*-1,730.0*	*-2,355.0*	*-2,931.0*	*-2,121.0*	*-2,153.0*	*-1,618.0*	*-1,278.0*	*-1,379.0*	*-1,379.0*
+ Acq of Intangible Assets	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
+ Net Change in LT Investment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
+ Dec in LT Investment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
+ Inc in LT Investment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
+ Net Cash From Acq & Div	-606.0	-260.0	-2,238.0	160.0	0.0	-14.0	-141.0	-4.0	-406.0	-406.0
+ Cash from Divestitures	0.0	-260.0	0.0	160.0	0.0	0.0	0.0	0.0	0.0	0.0
+ Cash for Acq of Subs	-606.0	0.0	-2,238.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
+ Cash for JVs	0.0	0.0	0.0	0.0	0.0	-14.0	-141.0	-4.0	-406.0	-406.0
+ Other Investing Activities	-380.0	585.0	-705.0	-580.0	-691.0	-677.0	-728.0	-724.0	-597.0	-597.0
+ Net Cash From Disc Ops	—	—	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cash from Investing Activities	**-3,292.0**	**-1,405.0**	**-5,298.0**	**-3,351.0**	**-2,812.0**	**-2,844.0**	**-2,487.0**	**-2,006.0**	**-2,382.0**	**-2,382.0**
Cash from Financing Activities										
+ Dividends Paid	-324.0	-114.0	-169.0	-360.0	-462.0	-554.0	-848.0	-1,111.0	-1,242.0	-1,242.0
+ Cash From (Repayment) Debt	1,612.0	-298.0	-628.0	-2,212.0	537.0	-176.0	933.0	678.0	359.0	359.0
+ Cash From (Repay) ST Debt	—	—	—	—	1,017.0	0.0	0.0	0.0	0.0	0.0
+ Cash From LT Debt	—	—	—	—	0.0	28.0	1,446.0	2,153.0	380.0	380.0
+ Repayments of LT Debt	—	—	—	—	-480.0	-204.0	-513.0	-1,475.0	-21.0	-21.0
+ Cash (Repurchase) of Equity	7.0	7.0	-300.0	-222.0	-500.0	-1,249.0	-2,615.0	-1,330.0	-1,326.0	-1,326.0
+ Increase in Capital Stock	11.0	20.0	49.0	59.0	428.0	47.0	223.0	6.0	46.0	46.0
+ Decrease in Capital Stock	-4.0	-13.0	-349.0	-281.0	-928.0	-1,296.0	-2,838.0	-1,336.0	-1,372.0	-1,372.0
+ Other Financing Activities	-6.0	1,221.0	31.0	1,561.0	262.0	49.0	-15.0	-249.0	-63.0	-63.0
+ Net Cash From Disc Ops	—	—	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cash from Financing Activities	**1,289.0**	**816.0**	**-1,066.0**	**-1,233.0**	**-163.0**	**-1,930.0**	**-2,545.0**	**-2,012.0**	**-2,272.0**	**-2,272.0**
Effect of Foreign Exchange Rates	65.0	53.0	16.0	13.0	-20.0	-70.0	-154.0	-100.0	206.0	206.0
Net Changes in Cash	**-115.0**	**2,509.0**	**-2,310.0**	**699.0**	**2,569.0**	**-603.0**	**425.0**	**702.0**	**1,034.0**	**1,034.0**
Cash Paid for Taxes	**-165.0**	**-690.0**	**486.0**	**705.0**	**387.0**	**1,624.0**	**2,093.0**	**444.0**	**410.0**	**410.0**
Cash Paid for Interest	**390.0**	**457.0**	**397.0**	**302.0**	**361.0**	**392.0**	**416.0**	**427.0**	**457.0**	**457.0**
Reference Items										
EBITDA	1,610.0	3,349.0	5,214.0	5,584.0	5,677.0	7,592.0	8,200.0	5,466.0	5,585.0	5,585.0
Trailing 12M EBITDA Margin	2.53	4.12	4.14	4.01	4.11	6.08	10.02	7.79	6.32	6.21
Net Cash Paid for Acquisitions	606.0	0.0	2,238.0	—	—	—	—	—	—	
Tax Benefit from Stock Options	—	0.0	—	—	0.0	—	—	—	—	
Free Cash Flow	-483.0	1,315.0	1,683.0	2,339.0	3,443.0	2,088.0	3,993.0	3,542.0	4,103.0	4,103.0
Free Cash Flow to Firm	—	1,613.2	1,936.0	2,514.7	3,692.9	2,357.9	4,290.4	3,880.8	—	
Free Cash Flow to Equity	1,129.0	1,017.0	1,055.0	127.0	3,980.0	1,912.0	4,926.0	4,220.0	4,462.0	4,462.0
Free Cash Flow per Basic Share	-0.89	2.34	2.99	4.25	6.35	3.97	8.03	7.68	9.28	9.30
Price to Free Cash Flow	—	9.90	7.04	8.02	7.93	12.47	8.80	8.89	9.90	10.95
Cash Flow to Net Income	—	9.40	1.93	2.53	2.05	1.17	1.41	2.11	1.35	0.70

Source: Bloomberg *Right click to show data transparency (not supported for all values)*

Appendix M: Balance Sheet

In Millions of USD except Per Share 12 Months Ending	FY 2008 12/31/2008	FY 2009 12/31/2009	FY 2010 12/31/2010	FY 2011 12/31/2011	FY 2012 12/31/2012	FY 2013 12/31/2013	FY 2014 12/31/2014	FY 2015 12/31/2015	FY 2016 12/31/2016	FY 2017 12/31/2017
Total Assets										
+ Cash, Cash Equivalents & STI	940.0	825.0	3,334.0	1,024.0	1,723.0	4,292.0	3,689.0	4,114.0	4,816.0	5,850.0
+ Cash & Cash Equivalents	940.0	825.0	3,334.0	1,024.0	1,723.0	4,292.0	3,689.0	4,114.0	4,816.0	5,850.0
+ ST Investments	—	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
+ Accounts & Notes Receiv	2,897.0	3,602.0	4,583.0	8,706.0	8,167.0	8,536.0	2,340.0	3,420.0	4,772.0	5,892.0
+ Accounts Receivable, Net	2,897.0	3,602.0	4,583.0	8,706.0	8,167.0	8,582.0	2,340.0	3,420.0	4,772.0	5,892.0
+ Notes Receivable, Net	—	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
+ Inventories	4,637.0	4,578.0	4,947.0	5,623.0	5,973.0	5,758.0	6,623.0	5,898.0	5,709.0	6,384.0
+ Raw Materials	2,140.0	2,004.0	2,225.0	2,474.0	2,995.0	3,231.0	3,926.0	3,774.0	3,153.0	3,459.0
+ Work In Process	—	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
+ Finished Goods	2,314.0	2,398.0	2,535.0	2,931.0	2,761.0	2,301.0	2,464.0	2,646.0	2,306.0	2,669.0
+ Other Inventory	183.0	176.0	187.0	218.0	217.0	226.0	233.0	-522.0	250.0	256.0
+ Other ST Assets	976.0	1,917.0	654.0	619.0	597.0	691.0	3,962.0	1,466.0	1,503.0	1,186.0
+ Prepaid Expenses	—	384.0	121.0	124.0	154.0	—	—	—	—	—
+ Derivative & Hedging Assets	—	177.0	0.0	0.0	0.0	0.0	3,133.0	685.0	915.0	894.0
+ Assets Held-for-Sale	—	289.0	—	—	—	—	—	—	—	—
+ Deferred Tax Assets	—	180.0	190.0	283.0	274.0	266.0	162.0	—	—	—
+ Taxes Receivable	—	887.0	343.0	212.0	169.0	72.0	97.0	218.0	58.0	—
+ Misc ST Assets	—	0.0	0.0	0.0	0.0	353.0	570.0	563.0	530.0	292.0
Total Current Assets	**9,450.0**	**10,922.0**	**13,518.0**	**15,972.0**	**16,460.0**	**19,277.0**	**16,614.0**	**14,898.0**	**16,800.0**	**19,312.0**
+ Property, Plant & Equip, Net	23,213.0	21,615.0	22,669.0	25,177.0	26,300.0	25,707.0	26,735.0	26,703.0	26,472.0	27,480.0
+ Property, Plant & Equip	28,103.0	26,885.0	28,921.0	32,253.0	34,132.0	33,933.0	35,933.0	36,907.0	37,733.0	40,010.0
- Accumulated Depreciation	4,890.0	5,270.0	6,252.0	7,076.0	7,832.0	8,226.0	9,198.0	10,204.0	11,261.0	12,530.0
+ LT Investments & Receivables	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
+ Other LT Assets	1,754.0	3,035.0	1,434.0	1,634.0	1,717.0	2,276.0	2,201.0	2,626.0	2,901.0	3,366.0
+ Total Intangible Assets	224.0	227.0	224.0	227.0	213.0	0.0	0.0	0.0	0.0	0.0
+ Goodwill	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
+ Other Intangible Assets	*224.0*	*227.0*	*224.0*	*227.0*	*213.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
+ Deferred Tax Assets	—	—	—	—	—	502.0	706.0	—	0.0	—
+ Derivative & Hedging Assets	—	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
+ Misc LT Assets	1,530.0	2,808.0	1,210.0	1,407.0	1,504.0	1,771.0	1,495.0	2,626.0	2,901.0	3,366.0
Total Noncurrent Assets	**24,967.0**	**24,650.0**	**24,103.0**	**26,811.0**	**28,017.0**	**27,983.0**	**28,936.0**	**29,329.0**	**29,373.0**	**30,846.0**
Total Assets	**34,417.0**	**35,572.0**	**37,621.0**	**42,783.0**	**44,477.0**	**47,260.0**	**45,550.0**	**44,227.0**	**46,173.0**	**50,158.0**
Liabilities & Shareholders' Equity										
+ Payables & Accruals	4,446.0	2,226.0	3,475.0	8,258.0	8,836.0	10,721.0	4,895.0	5,268.0	6,263.0	8,682.0
+ Accounts Payable	4,446.0	1,481.0	2,842.0	7,505.0	8,218.0	9,402.0	3,840.0	4,350.0	5,462.0	7,372.0
+ Accrued Taxes	—	95.0	3.0	119.0	1.0	773.0	433.0	337.0	78.0	568.0
+ Interest & Dividends Payable	—	0.0	—	0.0	0.0	0.0	0.0	0.0	0.0	0.0
+ Other Payables & Accruals	—	650.0	630.0	634.0	617.0	546.0	622.0	581.0	723.0	742.0
+ ST Debt	312.0	237.0	822.0	1,009.0	586.0	303.0	606.0	127.0	115.0	122.0
+ ST Borrowings	—	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
+ Current Portion of LT Debt	—	237.0	822.0	1,009.0	586.0	303.0	606.0	127.0	115.0	122.0
+ Other ST Liabilities	1,451.0	5,346.0	4,487.0	3,441.0	2,507.0	2,099.0	4,479.0	1,599.0	1,950.0	2,267.0
+ Deferred Revenue	—	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
+ Derivatives & Hedging	—	4,376.0	3,599.0	1,967.0	1,130.0	529.0	2,925.0	563.0	900.0	982.0
+ Deferred Tax Liabilities	—	253.0	257.0	249.0	378.0	249.0	376.0	—	—	—
+ Misc ST Liabilities	1,451.0	717.0	631.0	1,225.0	999.0	1,321.0	1,178.0	1,036.0	1,050.0	1,285.0
Total Current Liabilities	**6,209.0**	**7,809.0**	**8,784.0**	**12,708.0**	**11,929.0**	**13,123.0**	**9,980.0**	**6,994.0**	**8,328.0**	**11,071.0**
+ LT Debt	6,264.0	7,163.0	7,515.0	6,732.0	6,463.0	6,261.0	5,780.0	7,208.0	7,886.0	8,750.0
+ LT Borrowings	—	7,163.0	7,515.0	6,732.0	6,463.0	6,261.0	5,780.0	7,208.0	7,886.0	8,750.0
+ LT Capital Leases	—	—	—	—	—	—	—	—	—	—
+ Other LT Liabilities	6,324.0	5,875.0	6,297.0	6,898.0	7,990.0	7,930.0	8,546.0	8,671.0	9,105.0	7,437.0
+ Accrued Liabilities	—	238.0	228.0	235.0	242.0	277.0	269.0	231.0	223.0	232.0
+ Pension Liabilities	—	625.0	690.0	832.0	1,014.0	507.0	792.0	719.0	742.0	776.0
+ Pensions	—	—	*264.0*	*394.0*	*578.0*	—	—	—	—	—
+ Other Post-Ret Benefits	—	—	*426.0*	*438.0*	*436.0*	—	—	—	—	—
+ Deferred Revenue	—	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
+ Deferred Tax Liabilities	—	4,006.0	4,530.0	5,017.0	5,860.0	6,601.0	6,607.0	7,060.0	7,361.0	4,708.0
+ Derivatives & Hedging	—	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
+ Misc LT Liabilities	6,324.0	1,006.0	849.0	814.0	874.0	545.0	878.0	661.0	779.0	1,721.0
Total Noncurrent Liabilities	**12,588.0**	**13,038.0**	**13,812.0**	**13,630.0**	**14,453.0**	**14,191.0**	**14,326.0**	**15,879.0**	**16,991.0**	**16,187.0**
Total Liabilities	**18,797.0**	**20,847.0**	**22,596.0**	**26,338.0**	**26,382.0**	**27,314.0**	**24,306.0**	**22,873.0**	**25,319.0**	**27,258.0**
+ Preferred Equity and Hybrid Capital	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
+ Share Capital & APIC	7,196.0	7,903.0	7,711.0	7,493.0	7,329.0	7,194.0	7,123.0	7,071.0	7,095.0	7,046.0
+ Common Stock	—	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
+ Additional Paid in Capital	—	7,896.0	7,704.0	7,486.0	7,322.0	7,187.0	7,116.0	7,064.0	7,088.0	7,039.0
- Treasury Stock	6,884.0	6,721.0	6,462.0	6,475.0	6,437.0	7,054.0	8,125.0	10,799.0	12,027.0	13,315.0
+ Retained Earnings	15,484.0	13,178.0	13,388.0	15,309.0	17,032.0	18,970.0	22,046.0	25,188.0	26,366.0	29,200.0
+ Other Equity	-176.0	365.0	388.0	96.0	108.0	350.0	-367.0	-933.0	-1,410.0	-940.0

Equity Before Minority Interest	**15,620.0**	**14,725.0**	**15,025.0**	**16,423.0**	**18,032.0**	**19,460.0**	**20,677.0**	**20,527.0**	**20,024.0**	**21,991.0**
+ Minority/Non Controlling Interest	0.0	0.0	0.0	22.0	63.0	486.0	567.0	827.0	830.0	909.0
Total Equity	**15,620.0**	**14,725.0**	**15,025.0**	**16,445.0**	**18,095.0**	**19,946.0**	**21,244.0**	**21,354.0**	**20,854.0**	**22,900.0**
Total Liabilities & Equity	**34,417.0**	**35,572.0**	**37,621.0**	**42,783.0**	**44,477.0**	**47,260.0**	**45,550.0**	**44,227.0**	**46,173.0**	**50,158.0**
Reference Items										
Accounting Standard	US GAAP	US GAAP	US GAAP	US GAAP	US GAAP	US GAAP	US GAAP	US GAAP	US GAAP	US GAAP
Shares Outstanding	516.2	564.7	568.4	556.8	552.1	535.6	514.3	473.0	451.5	433.9
Number of Treasury Shares	111.3	108.8	105.1	116.7	121.4	137.9	159.2	200.5	222.0	239.6
Pension Obligations	0.0	625.0	690.0	832.0	1,014.0	507.0	792.0	719.0	742.0	776.0
Future Minimum Operating Lease Obliga	1,249.0	1,133.0	1,248.0	1,065.0	1,305.0	1,203.0	1,169.0	1,467.0	1,625.0	1,272.0
Capital Leases - Total	39.0	—	—	51.0	49.0	39.0	32.0	85.0	75.0	562.0
Options Granted During Period	3.8	3.8	0.3	0.4	0.3	1.0	0.1	0.0	0.0	0.0
Options Outstanding at Period End	25.1	26.6	24.4	19.9	13.2	8.6	4.7	—	0.0	0.0
Net Debt	5,636.0	6,575.0	5,003.0	6,717.0	5,326.0	2,272.0	2,697.0	3,221.0	3,185.0	3,022.0
Net Debt to Equity	36.08	44.65	33.30	40.85	29.43	11.39	12.70	15.08	15.27	13.20
Tangible Common Equity Ratio	45.03	41.02	39.58	38.06	40.26	41.18	45.39	46.41	43.37	43.84
Current Ratio	1.52	1.40	1.54	1.26	1.38	1.47	1.66	2.13	2.02	1.74
Cash Conversion Cycle	7.96	28.97	31.32	19.70	16.30	13.59	14.69	23.60	26.36	20.60
Cash Held Overseas	—	—	—	—	—	1,100.0	738.0	1,700.0	2,200.0	3,200.0
Number of Employees	21,765.00	20,920.00	20,313.00	21,942.00	21,671.00	10,007.00	10,065.00	10,103.00	9,996.00	10,015.00
Source: Bloomberg	*Right click to show data transparency (not supported for all values)*									

Appendix N: Sources

Valero Investor Reports 2017 & 2018

Valero 2017 & 2018 10-K

Bloomberg

ValueLine

Financial Times

Valero Investor Relations

Energy Information Administration

IBIS World

Morningstar

Valero's 2016 CSR Report

Factiva