

CRS Report for Congress

Oil Industry Profit Review 2007

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Summary

Increases in the price of crude oil that began in 2004 pushed the spot price of West Texas Intermediate (WTI), a key oil in determining market prices, to nearly \$100 per barrel in the third quarter of 2007. Tight market conditions persisted through the remainder of 2007, with demand growth in China, India, and other parts of the developing world continuing. Uncertain supply related to political unrest in Nigeria, Venezuela, Iraq, and other places continued to threaten the market and contribute to a psychology that pushed up prices.

The decline of the value of the U.S. dollar on world currency markets, as well as the investment strategies of financial firms on the oil futures markets, has also been identified by some as factors in the high price of oil.

The profits of the five major integrated oil companies remained high in 2007, as they generally accounted for approximately 75% of both revenues and net incomes. For this group of firms, oil production led the way as the most profitable segment of the market, even though oil and gas production growth was not strong. The refining segment of the market performed relatively poorly.

Independent oil and natural gas producers are small relative to the integrated oil companies, and their financial performance was weaker, with more than half of the firms reporting declines in net income.

Independent refiners and marketers also experienced a difficult year that was reflected in profits in 2007. The combination of high crude oil prices that raised their costs and the inability to quickly pass cost increases on to consumers lowered refining margins, resulting in generally declining profits.

The potential volatility of the world oil and financial markets, coupled with the weakness of the U.S. and other economies, makes any profit forecast for 2008 highly speculative. While continued high oil prices are likely — the price of oil reached \$110 per barrel in the first quarter of 2008 — the ability of the industry to pass those prices on to consumers of gasoline and other products during 2008 is uncertain due to possibly weakening demand.

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Introduction

The average spot market price for West Texas Intermediate (WTI), a reference grade of U.S. crude oil, was up 9.5% in 2007 compared to 2006, while the New York Mercantile Exchange (NYMEX) futures price for WTI approached \$100 per barrel (p/b) in December 2007. Refinery capacity utilization rates approached 90% or more for much of the year, while oil supply disruptions from Nigeria, Venezuela, and the Persian Gulf remained both a threat and a sometime reality. As the strength of product demand began to weaken in the latter stages of the year, responding to high petroleum product prices as well as a possible slow down of economic growth, refinery margins began to narrow, suggesting that the companies were less able to pass through the increased cost of crude oil to consumers. However, even in the face of uncertainty and weakening markets, the oil industry enjoyed record revenues and profits in 2007.

In 2007, the oil industry recorded revenues of approximately \$1.9 trillion, of which 78% was accounted for by the five major integrated oil companies. Profits for the industry totaled over \$155 billion, 75% of which were earned by the five major oil companies, with the largest, ExxonMobil, earning over 25% of the total profit.¹ Although the financial results for the industry were at record levels, the performance of different sectors of the industry varied, as did the performance of individual companies within those sectors, leaving some firms as relative under-performers compared to the industry leaders.

This report analyzes the industry's profit performance in 2007.² While recent profit levels in the oil industry are of interest to policy makers, investors, and analysts, among others, the financial results of 2007 should be put in a longer term perspective to understand the performance of the industry. For example, as recently as 2002, the financial picture in the oil industry was far different, with declining earnings in key sectors, such as refining. The oil industry historically has been cyclic, with periods of high earnings often followed by sharp declines, driven by movements in the world price of crude oil. For this reason, projections of future industry performance, based on current performance, are unlikely to be reliable.

¹ The oil industry is composed of thousands of firms involved in all aspects of the exploration, development, transportation, refining, and marketing of oil based products. In this report, the oil industry refers to the firms listed in **Tables 1** through **6**.

² This report explicitly analyzes the key firms in the production, refining, and marketing components of the industry.

Integrated Oil Company Profits

Integrated oil companies operate in both the upstream (exploration and production) and the downstream (refining and marketing) segments of the industry. Among the integrated oil companies listed in **Table 1**, the five largest companies are usually identified as the major oil companies, or the super-majors. ExxonMobil is the largest such company; its profits in 2007 were over 90% of the profits earned by both of its largest international competitors, Royal Dutch Shell and BP.

**Table 1. Financial Performance
of the Integrated Oil Companies, 2007**

(millions of dollars)

Company	Revenue	% Change	Net Income	% Change	% Return on Sales	% Return on Equity
ExxonMobil	404,552	7.1	40,610	2.8	10.0	33.4
Royal Dutch Shell	355,782	11.6	27,564	8.7	7.1	22.2
BP	291,438	6.2	17,287	-22.3	5.9	18.5
Chevron	220,904	5.1	18,688	9.0	8.5	24.2
ConocoPhillips	194,495	3.2	11,891	-23.5	6.1	13.4
Marathon	65,207	-0.4	3,956	-24.4	6.1	20.6
Amerada Hess	31,924	11.2	1,832	-4.6	5.7	18.8
Occidental	18,784	9.4	5,400	28.8	28.7	23.7
Murphy	18,438	28.9	766	18.8	4.1	15.1
Total	1,601,524	7.1	127,994	-2.9	8.0	22.7

Source: *Oil Daily*, Profit Profile Supplement, vol. 58, no. 52, March 17, 2008, p. 6, and company annual reports.

Note: Percent change values reflect changes from 2006.

Revenue growth among the integrated oil companies in 2007 was driven by increases in the price of crude oil, especially in the last two quarters of the year. Even though five of the nine companies experienced a decline in oil production, and one of the nine experienced a decline in natural gas production, as shown in **Table 2**, their revenues increased on average by 7.1% in 2007. With output declining, it is likely that revenue growth was based on increasing prices.

**Table 2. Upstream Financial Performance
of the Integrated Oil Companies, 2007**

(millions of dollars)

Company	Net Income	% Change	Oil Production	% Change	Natural Gas Production	% Change
ExxonMobil	8,204	31.9	2,517	-6.0	10,414	12.0
Royal Dutch Shell	4,867	37.6	1,798	-14.2	9,185	9.6
BP	7,648	51.1	2,469	2.2	8,337	1.0
Chevron	4,839	66.3	1,748	-3.5	5,083	4.8
ConocoPhillips	2,608	25.0	1,005	-12.5	4,981	-7.7
Marathon	465	51.5	190	-10.4	984	12.6
Amerada Hess	583	66.6	260	7.4	681	4.8
Occidental	2,599	82.8	464	1.8	782	19.8
Murphy	268	194.5	113	36.1	71	26.8
Total	32,081	45.9	10,564	-5.2	40,518	5.5

Source: *Oil Daily*, Profit Profile Supplement, vol.58, no. 52, March 17, 2008, p. 6.

Note: Percent change values reflect changes from 2006.

Two profit rates, return on sales and return on equity, are presented in **Table 1**. In a report that appears periodically, most recently after the oil companies announced their third quarter earnings in 2007, the American Petroleum Institute (API) compared the returns earned in the oil industry to other American industries.³ The API comparisons are based on returns on revenue. They found that the oil and natural gas industries earned 7.6 percent on revenues, compared to 5.8 percent for all U.S. manufacturing industries. Although this result implies a 31 percent margin over the returns earned by all U.S. manufacturing industries, it is less than the 9.2 percent earned by all U.S. manufacturing industries excluding the automobile and auto parts industries, that had a negative 26 percent return for the third quarter of 2007.

Calculating return on revenues dilutes the effect of growing total profits of the oil industry due to higher prices and growing revenues, another standard percentage measure of profitability, return on equity, is presented in **Table 1**. This measure indicates the success of the companies, and industry, in earning profit by utilizing the invested capital of the owners, i.e., the shareholders of the company. This measure is widely used by investors and financial analysts in evaluating the performance of firms seeking access to capital markets. By this measure, the integrated oil companies returned 22.7% in 2007, over twice the return on revenue. The industry leader,

³ American Petroleum Institute, *Putting Earnings into Perspective*, 2008, p.2.

ExxonMobil, earned 33.4%. These rates of return are likely to assure these firms', and the industry's, position as a desirable investment as long as the price of oil remains high.

Table 3. Downstream Financial Performance of the Integrated Oil Companies, 2007

(millions of dollars)

Company	Net Income	% Change	Product Sales	% Change
ExxonMobil	9,573	13.2	7,099	-2.0
Royal Dutch Shell	6,951	-1.1	6,625	2.2
BP	2,617	-50.5	5,624	-3.1
Chevron	3,502	-11.9	3,484	-3.8
ConocoPhillips	5,923	32.2	3,245	-6.6
Marathon	2,077	-25.7	1,410	-1.1
Amerada Hess	300	-23.9	451	-1.7
Occidental	N.A.	N.A.	N.A.	N.A.
Murphy	206	85.6	458	19.0
Total	31,149	-4.2	28,396	-1.7

Source: *Oil Daily*, Profit Profile Supplement, vol. 58, no. 52, March 17, 2008. p. 6.

Note: Percent change values reflect changes from 2006.

Table 2 and **Table 3** separate the upstream and downstream performance of the integrated oil companies in 2007. **Table 1** and **Table 2** show that upstream net income growth led overall corporate net income growth for most of the companies, and they earned almost 80% of their total net income from upstream activities. Oil and gas production declined for each product, almost 3% in oil, and less than one half of one percent in natural gas. Four of the five largest oil producers had declining output. In natural gas, only BP and Shell experienced declining output in 2007.

Table 3 presents financial results for the downstream activities of the integrated oil companies for 2007. Net incomes declined by more than twice as much as product sales, suggesting that profit margins per barrel of crude oil refined had declined. In the fourth quarter of 2007, only ExxonMobil and ConocoPhillips were able to produce positive net income growth, with all the other firms showing negative net income growth, or in the case of BP, financial losses from downstream activities.

Crude oil prices increased rapidly during the second half of 2007, and reached over \$110 per barrel in March 2008. During this period gasoline price increases were thought by many to have lagged behind crude oil price increases. A potential weakening of the demand for gasoline in the United States was thought to be responsible for the lag. With a perception of weakening demand, passing through

cost increases to consumers was not thought to be economically feasible. The result was a decline in refining margins.

Independent Oil and Gas Producers

Table 4 presents data for 2007 for the independent oil and gas producers. Although they are large companies, with revenues of more than \$10 billion in 2007 for the industry leaders, their total revenues are only about 5% of the integrated oil companies. Their net incomes, however, were approximately 15% of the net incomes of the integrated companies.

Although all of the companies in this category experienced increases in revenue, six out of ten experienced negative net income growth. All of the companies, except Andarko and Newfield experienced increases in production of oil and natural gas, or both. With prices for both oil and natural gas rising late in 2007, these companies seemingly should have performed better with respect to net income growth.

A possible explanation for the declining net income experienced by some companies might be the large outlays the companies made investing in unconventional oil asset exploration and development. Many of these companies are involved in shale oil work in Texas, Arkansas, and South Dakota.

**Table 4. Financial Performance
of the Independent Oil and Gas Producers, 2007**
(millions of dollars)

Company	Revenue	% Change	Net Income	% Change
EnCana	21,466	30.8	3,959	-30.0
Devon	11,362	16.3	3,596	26.8
Andarko	15,892	55.3	3,778	-20.4
Apache	9,978	20.4	2,807	10.2
Chesapeake	7,800	6.5	1,229	-35.5
XTO	5,513	20.5	1,691	20.5
EOG	4,191	7.1	1,083	-16.0
Noble	3,272	11.3	944	39.1
Pioneer	1,833	22.2	373	-49.6
Newfield	1,783	6.6	450	-23.9
Total	83,070	24.7	19,910	-12.8

Source: *Oil Daily*, Profit Profile Supplement, vol. 58, no. 52, March 17, 2008, p.7.

Note: Percent change values reflect changes from 2006.

Independent Refiners and Marketers

Valero is the leading firm among the group of independent refiners and marketers. Valero accounted for over one half of the sector's revenue, and two thirds of its net income. Valero is the largest refiner in the United States, with a total capacity of over 2.2 million barrels per day, approximately 13% of the total U.S. capacity.

Independent refiners experienced the same pressure on refining margins as the integrated oil companies. The difference was that these companies produce no crude oil and therefore were not positioned to take advantage of the increases in the price of crude oil during the second half of 2007.

Table 5. Financial Performance of Independent Refiners and Marketers, 2007

(millions of dollars)

Company	Revenue	% Change	Net Income	% Change
Valero	95,327	8.8	5,234	-4.2
Sunoco	44,728	15.5	891	-9.0
Tesoro	21,915	21.1	566	-29.3
Western	7,305	74.0	239	16.6
Frontier	5,188	8.2	499	31.7
Holly	4,791	19.1	334	25.1
Alon	4,542	46.8	103	-34.4
Total	183,796	14.5	7,866	-4.7

Source: *Oil Daily*, Profit Profile Supplement, vol.58, no.52, March 17, 2008. p.7.

Note: Percentage change values reflect changes from 2006.

The severity of the economic pressure on refiners in the fourth quarter of 2007 is shown in **Table 6**. Although revenues for the group grew by 53.4%, net incomes declined by two thirds. Four of the seven companies in the group not only had negative growth in net income in the fourth quarter of 2007, but generated losses from business operations. Valero, the sector's leading firm, earned 53% of the revenue, but fully 97% of the earned net income.

Not only was the cost of crude oil rising for the independent refiners, but relatively weaker demand conditions made it harder for the firms to quickly pass cost increases on to consumers. Valero was able to remain profitable because it was able to purchase and utilize lower cost heavy, sour crude oil at its refineries.

Table 6. Financial Performance of Independent Refiners and Marketers, Fourth Quarter, 2007

(millions of dollars)

Company	Net Income	% Change	Revenues	% Change
Valero	567	-49.1	28,671	52.2
Sunoco	-9	-102.6	13,162	45.7
Tesoro	-40	-125.3	6,533	62.5
Western	-25	-149	2,418	144.9
Frontier	43	-17.3	1,319	21.4
Holly	50	4.2	1,440	53.5
Alon	-40	-281.9	1,146	36.9
Total	586	-66.9	53,543	53.4

Source: *Oil Daily*, Profit Profile Supplement, vol.58, no.52. March 17, 2008. p. 7.

Note: Percentage change values reflect changes from the fourth quarter of 2006.

2008 Profit Outlook

Crude oil prices spot prices reached \$110 per barrel in the first quarter of 2008. Should the price of crude oil remain at, or above, \$100 per barrel for large portions of the year, the profits of oil producing firms should be high. However, the economic conditions will likely be difficult for firms that refine crude oil, but do not have their own supplies. It is likely that a greater effort will be made by refiners to adapt technologies that allow them to use heavy, sour, oil stocks. These lower quality crude oils are more readily available than high quality oils and sell at a price discount relative to the reference oils, West Texas Intermediate, for example.

Another key factor in the industry's profitability is whether demand for petroleum products continues to grow in the United States and the rest of the world. U.S. gasoline demand is arguably beginning to weaken as a result of high prices.⁴ Some projections see \$4 per gallon gasoline in the second and third quarters of 2008. While prices at that level might allow refiners to recover the cost of crude oil, they might also reduce demand, putting downward pressure on price.

Demand for petroleum products outside the United States remains strong, and will likely remain strong as consumers in developing nations use their higher incomes to fuel additional consumption. A world-wide economic slowdown is the most likely factor that would lead to slower demand growth.

⁴ See, *Lundberg Letter*, Volume XXXV, Number 5, March 14, 2008, for varying interpretations as to whether U.S. gasoline demand has actually begun declining.

Conclusion

The oil industry, in general, continued to generate high profits, as it has since 2004. However, it might be that the first sign of problems, in at least part of the industry, have arisen. Weakening demand for petroleum products, specifically the U.S. demand for gasoline, has put pressure on the downstream side of the industry. While demand growth, political uncertainty, the weak U.S. dollar, tight spare capacity, and other factors make it likely that the price of crude oil will remain high in 2008, the weakening U.S. economy, coupled with the demand reducing effects of higher prices, may make it more difficult to raise petroleum product prices.

New capacity investments in refineries, one possible source of gasoline price relief for consumers, are likely to be slowed by the poor profit performance of the refining sector. If new capacity does not come on line the need for imported gasoline will remain a key factor in avoiding shortages in the U.S. market.