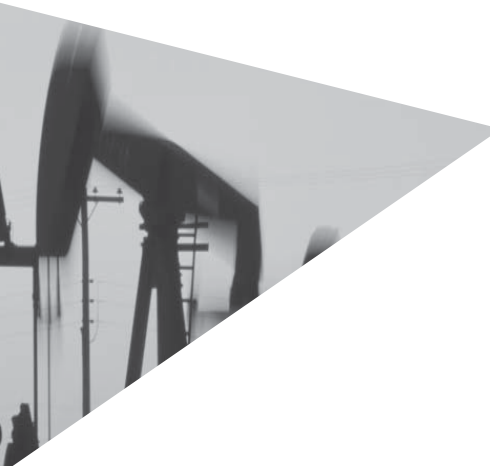


Investment and other uses of cash flow by the oil industry, 1996-2007

Prepared by Ernst & Young LLP
for the American Petroleum Institute

July 2008



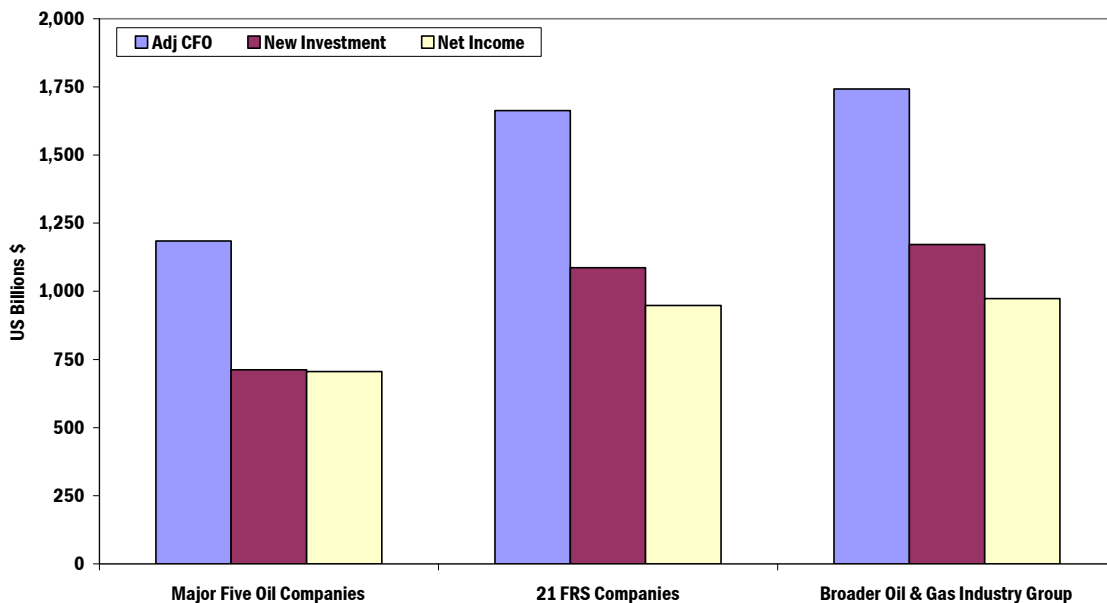
Executive Summary

Ernst & Young LLP was engaged by the American Petroleum Institute to prepare an analysis of the oil industry’s historical investment trends and other uses of cash flow. This report updates the initial 2006 E&Y report for data through 2007.

With recent record oil and gas prices, cash flow from operations has increased, enabling oil companies to make investments in new production capacity, facilities, and technology. A historical perspective on the industry’s investment trends plus the key considerations underlying the significant long-lived investments is important to understanding the current and future investment spending of the industry. This report summarizes available public information about the oil industry’s investment since 1996.

The absolute amount of “new investment” is defined as capital expenditures on property, plant and equipment (PP&E), plus exploration expenses and research and development (R&D) expenditures. In the period 1996 through 2007, the five major oil companies (i.e., BP, Chevron, ConocoPhillips, Exxon Mobil, and Royal Dutch Shell) had \$712 billion in new investment, compared to net income of \$705 billion and cash flow from operations

Figure 1.
New Investment, Adjusted Cash Flow, and Net Income,
1996 through 2007



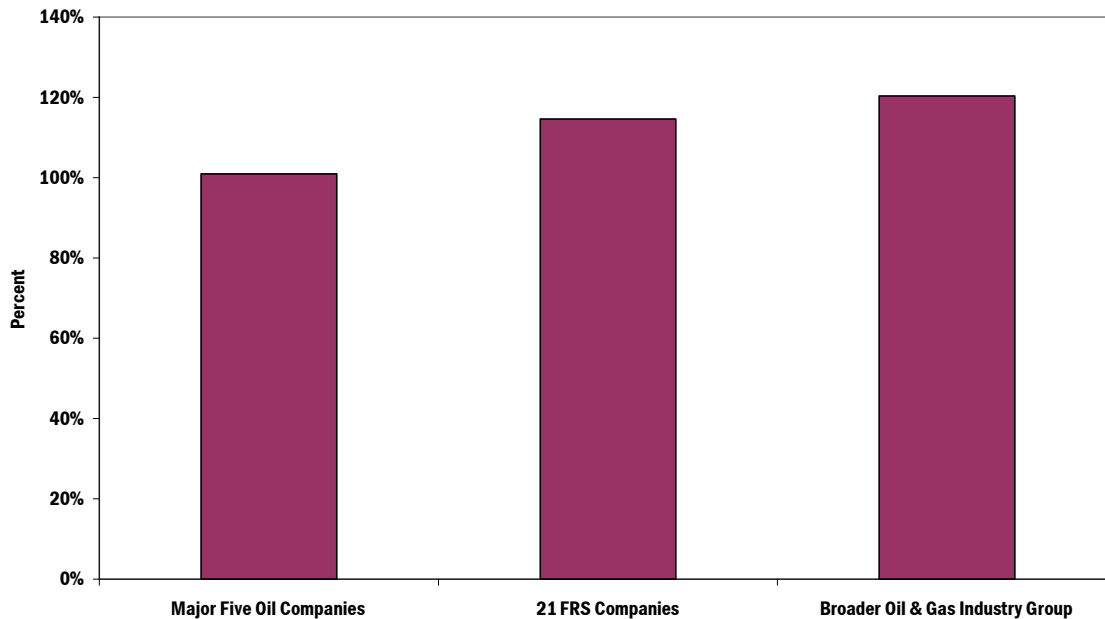
Source: John S. Herold, Inc. data, calculations by E&Y

of \$1.18 trillion. Twenty-one large oil and gas companies that currently report to the U.S. Department of Energy in the Financial Reporting System (FRS) had new investments of \$1.09 trillion over the same period, as compared to net income of \$948 billion and cash flows of \$1.66 trillion. A broader grouping of the industry (see Appendix), which

includes 41 of the largest U.S. oil and gas companies (i.e., the five biggest majors, along with the other major integrated companies, the large and medium-sized independent E&P companies, and the larger independent refiners and diversified natural gas companies), had new investments of \$1.17 trillion over the same period, compared to net income of \$974 billion and cash flows of \$1.74 trillion. Investment by the five major oil companies accounted for 61 percent of the broader industry group's investment during this period.

Figure 2 shows the relationship between new investment and net income for the three groups of oil and gas companies during the past 12 years. Total new investment exceeded cumulative net income for the five major oil companies, 21 companies currently included in the DOE's FRS system, and a broader industry grouping.

Figure 2.
New Investment as a Percent of Net Income,
1996 through 2007



Source: John S. Herold, Inc. data, calculations by E&Y

The 21 FRS companies and the broader industry grouping respectively had modest net income increases of 1.8% and 1.4% in 2007 compared to in 2006, while the five major oil companies had a slight 0.2% decline in net income. Still, new investment by the five major oil companies exceeded \$95 billion in 2007 and was 80% of net income, up from 76% in 2006. Data for 21 large companies that currently report on the FRS show new investments of \$156 billion in 2007, at 90% of net income, unchanged from 2006. The broader grouping of the industry made aggregate new investments in 2006 of \$169 billion, or 96% of net income during that year. In 2007, their investment spending of \$174 billion was 97% of net income, up from the 96% in 2006. All three groupings had increases in their cash flows from the same period.

High oil and gas prices in recent years have increased oil and gas companies' cash flows from operations and net income, which has facilitated the record levels of investment spending. The extra cash flow has also been used to strengthen companies' balance sheet through net changes in debt and stock activity, as well as retained as increased cash balances that can be used for future investments.

New investment exceeded net income every year between 1996 and 2003, with the exception of 2000 when the industry experienced a rise in net income following the slump in prices during the 1998-1999 periods. Cash flows and net income increased faster than investment with the sharp rise in oil prices in 2003-5, causing the ratio of investment to net income to decline. Since 2005, the ratio has increased and, though in 2007 new investment as a percentage of net income remained unchanged for the 21 FRS companies, it was higher for the major five oil companies and the broader grouping than in 2006. In 2007, investment of the broader group increased 3.3% while net income rose 1.4% compared to the previous year.

The International Energy Agency estimates that through 2030 investments in oil and gas exploration and production, refining, transportation, and infrastructure, will require \$9.6 trillion, averaging over \$380 billion annually. Higher levels of projected investment are driven partially by higher costs of materials, equipment, and personnel.

Surveys of capital expenditures by the oil and gas industry predicted investment spending in 2007 at their highest level in recent years, with projections for continued growth in 2008.

Sustained high world oil and gas prices are stimulating record levels of investment by the oil and gas industry, and if prices remain high, continued investment in enhanced recovery, new exploration, unconventional oil (e.g., oil sands, heavy and/or shale oil), and alternative fuel technologies will accelerate further.

Investment and Other Uses of Cash Flow By the Oil Industry, 1996 - 2007

Ernst & Young LLP was engaged by the American Petroleum Institute to prepare an analysis of the oil industry's historical investment trends and other uses of cash flow. This report updates the initial 2006 E&Y report for data through 2007.

With recent record oil and gas prices, oil companies have maintained cash flow levels from which to make investments in new production and capacity, facilities, and technology. A historical perspective on the industry's investment trends plus the key considerations underlying the significant long-lived risky investments is important to understanding the current and future investment spending of the industry. This report summarizes available public information about the oil industry's investment since 1996.

Key Considerations in the Oil Industry's Investment Decisions

The oil industry's investment decisions are based on economic considerations similar to other businesses' investment decisions. Risk and return to the investors are critical to choosing the type of investments made, whether they are investments in additional oil exploration, alternative non-oil energy investments, or non-energy investments. If the risk and return profile for major capital expenditures in the oil industry are not as attractive as other industries, then capital will flow more to those more attractive investment choices.

The oil industry is facing major challenges with its future investments necessary to meet the world's growing energy needs. The Organization for Economic Cooperation and Development's (OECD) International Energy Administration (IEA) forecasts that total energy investment is projected to be about \$22 trillion (in 2006 dollars) for the period 2006-2030 and that oil and gas investments will need to be \$9.6 trillion.¹ As existing and future supply facilities become obsolete or resources are depleted, new exploration and development will need to replace existing oil reserves, plus add significant new oil reserves.

The increased demand for energy occurs at the same time that U.S. oil companies are facing significant constraints on their potential investment opportunities. Most of the new oil reserves will be discovered outside of the U.S., and often countries are putting restrictions or onerous licensing terms on U.S. investments. In addition, much of the oil and gas exploration that is available involves increasingly larger investments, with multi-year planning and multi-year construction before production can occur. The oil and gas industry faces significant geo-political risks, regulatory risks and environmental risks, in addition to the general economic and operational risks associated with oil exploration, development and production.

¹ International Energy Agency, World Energy Outlook 2007, p. 94.

Although the oil industry has overcome and expanded investment during the past thirty years in the face of these challenges and risks, it is important to review the history of the industry and its investments. Assumptions of future oil prices, short-term constraints on investment opportunities, and multi-year planning, permitting and construction affect recent uses of cash flow for investment. The original E&Y report described in more detail the four key drivers of investment spending: prospect availability, expected future oil prices, expected costs, and the efficiency of exploration and development efforts, as well as some of the short-term constraints.

Oil and Gas Industry Investments and Uses of Cash Flow

Oil and gas companies can use their available cash flow in a number of different ways. Cash flow is the difference between revenues and actual cash expenses, before capital expenditures or changes in financing. Companies can make investments, make acquisitions, repay debt, pay dividends, repurchase equity shares or increase their accumulated cash balance out of cash flow. To the extent that companies borrow additional funds, issue new equity shares or sell existing assets, those additional funds can also be used for investment, acquisitions, dividends, share repurchases or to increase cash balances. Additional activity may include asset sales and purchases, and impairments.

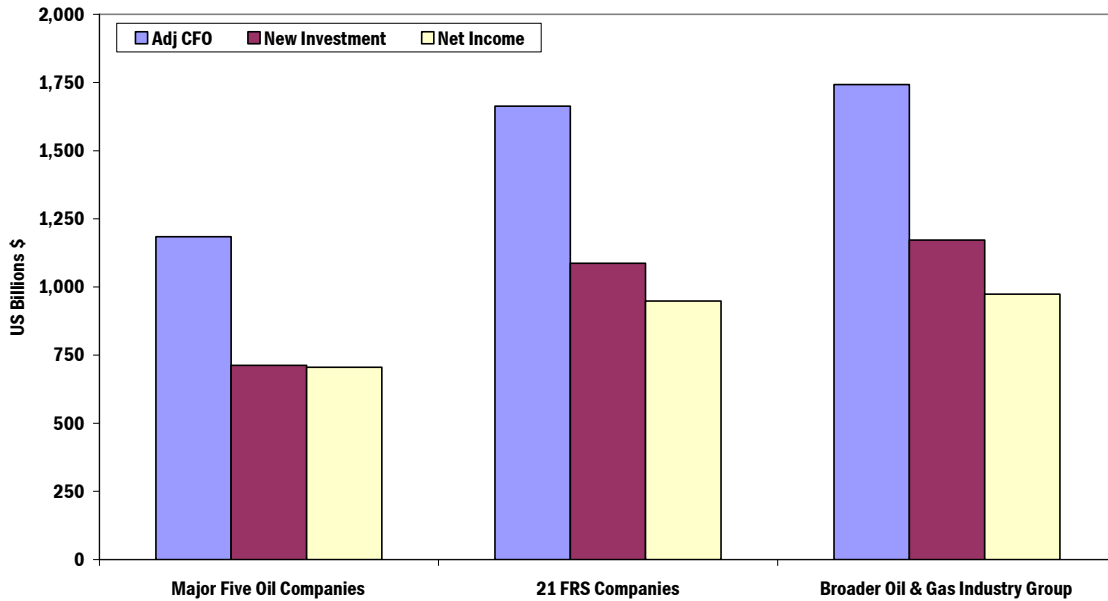
As described above, investment decisions are long-term in nature and are limited by short-term capacity constraints. By contrast, cash flow is more volatile, associated with changes in oil and gas prices. Companies often increase their cash balances during periods of rising oil and gas prices to have available funds to invest in future years.

It is worth noting two aspects of the financial data. First, net income is generally lower than cash flow due to the deduction for past and current tangible investments and depletion of oil reserves. Second, some investments, such as exploration expenses and research and development costs, are subtracted as out-of-pocket expenses in arriving at cash flow and net income. To look more broadly at investment, we have included spending on exploration and research and development in the measure of new investment. When we present investment as a percentage of cash flow, we include the exploration and R&D spending in both the numerator and denominator.

Comparison of Investment, Cash Flow and Net Income

The absolute amount of “new investment” is defined as capital expenditures on property, plant and equipment (PP&E), plus exploration expenses and research and development (R&D) expenditures. In the period 1996 through 2007, the five major oil companies (i.e., BP, Chevron, ConocoPhillips, Exxon Mobil, and Royal Dutch Shell) had \$712 billion in new investment, compared to net income of \$705 billion and cash flow from operations of \$1.18 trillion, as shown in Figure 1.

Figure 1.
New Investment, Adjusted Cash Flow, and Net Income,
1996 through 2007

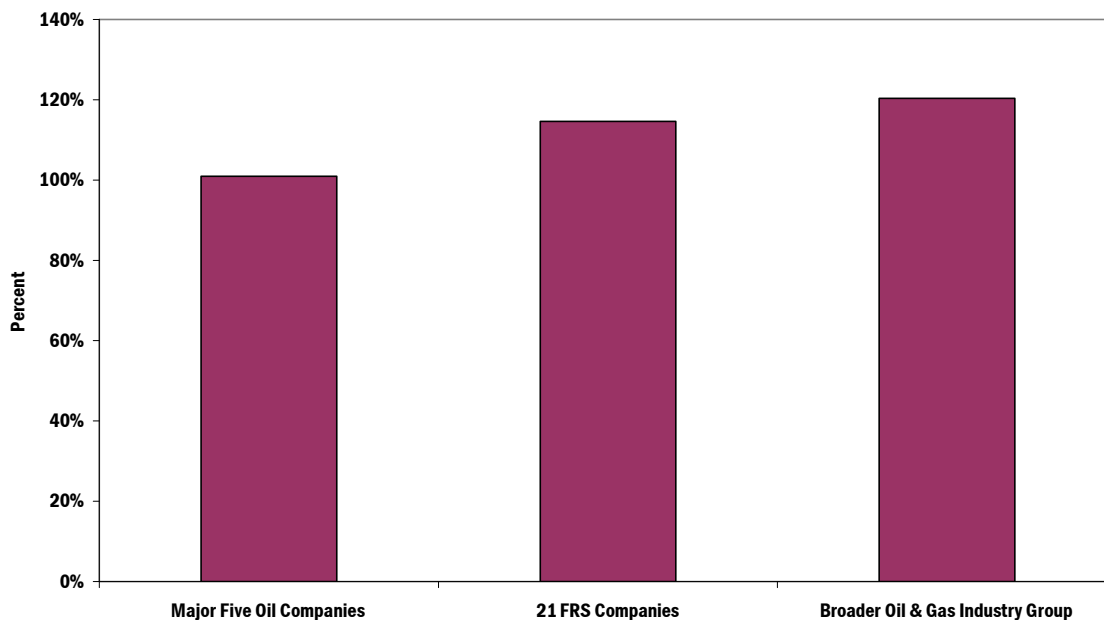


Source: John S. Herold, Inc. data, calculations by E&Y

Twenty-one of the large oil and gas companies that currently report to the U.S. Department of Energy in the Financial Reporting System (FRS) had new investments of \$1.09 trillion over the same period, as compared to net income of \$948 billion and cash flows of \$1.66 trillion. A broader grouping of the industry, which includes 41 of the largest U.S. oil and gas companies (i.e., the five biggest majors, along with the other major integrated companies, the large and medium-sized independent E&P companies, and the larger independent refiners and diversified natural gas companies), had new investments of \$1.17 trillion over the same period, compared to net income of \$974 billion and cash flows of \$1.74 trillion. Investment by the five major oil companies accounted for 61 percent of the broader industry group's investment during this period.

Figure 2 shows the relationship between new investment and net income for the three groups of oil and gas companies during the past 12 years. Total new investment exceeded cumulative net income for the five major oil companies, 21 of the companies currently included in the DOE's FRS system, and a broader industry grouping.

Figure 2.
New Investment as a Percent of Net Income,
1996 through 2007



Source: John S. Herold, Inc. data, calculations by E&Y

Table 1 shows the new investment as a share of net income for the three groups. New investment exceeded net income every year between 1996 and 2003, with the exception of 2000 when the industry experienced a rise in net income following the slump in prices during the 1998-1999 periods. Cash flows and net income increased faster than investment with the sharp rise in oil prices in 2003-5, causing the ratio of investment to net income to decline. Since 2005 the ratio has increased and, though in 2007 new investment as a percentage of net income remained unchanged for the 21 FRS companies, it was higher for the major five oil companies and the broader grouping than in 2006. New investment for the broader industry grouping was 97% of net income in 2007, up from 96% in 2006.

Table 1. New Investment Share of Net Income, 1996 - 2007

(Billions of US Dollars)

Five Major Oil Companies

| Use of Cash Flow | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|-------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| New Investment | 48.6 | 52.9 | 54.2 | 41.7 | 39.4 | 50.2 | 53.1 | 55.5 | 60.6 | 68.8 | 91.4 | 95.7 |
| Net Income | 31.8 | 34.1 | 15.6 | 22.9 | 49.3 | 39.8 | 27.3 | 56.5 | 79.8 | 108.7 | 119.9 | 119.6 |
| Investment as % of Net Income | 153% | 155% | 347% | 182% | 80% | 126% | 195% | 98% | 76% | 63% | 76% | 80% |

21 Large Oil Companies in Current FRS Database

| Use of Cash Flow | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|-------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| New Investment | 59.9 | 69.6 | 70.3 | 61.1 | 60.3 | 81.8 | 79.5 | 84.3 | 95.9 | 114.4 | 153.6 | 156.2 |
| Net Income | 36.31 | 36.90 | 16.30 | 29.69 | 63.82 | 51.64 | 36.66 | 74.16 | 106.89 | 151.53 | 170.58 | 173.64 |
| Investment as % of Net Income | 165% | 189% | 431% | 206% | 94% | 158% | 217% | 114% | 90% | 75% | 90% | 90% |

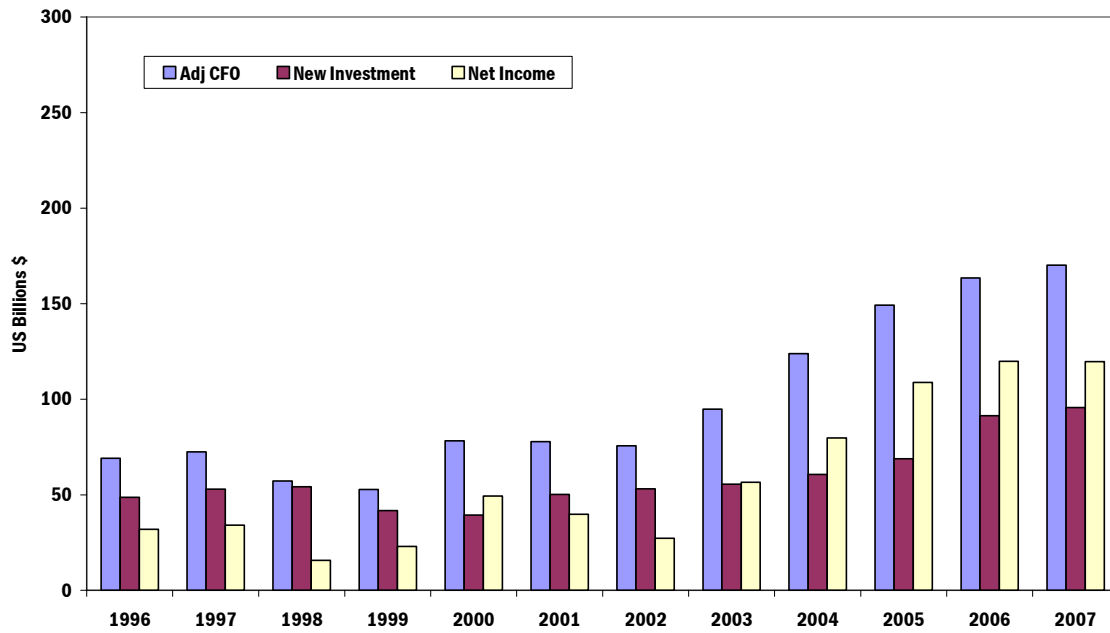
Broader Oil Industry Grouping

| Use of Cash Flow | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|-------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| New Investment | 62.1 | 72.8 | 74.6 | 63.4 | 64.1 | 88.4 | 84.6 | 90.7 | 103.4 | 124.7 | 168.7 | 174.2 |
| Net Income | 37.1 | 36.7 | 14.7 | 30.0 | 65.5 | 53.1 | 37.3 | 76.1 | 110.1 | 157.2 | 176.6 | 179.1 |
| Investment as % of Net Income | 167% | 198% | 508% | 211% | 98% | 167% | 227% | 119% | 94% | 79% | 96% | 97% |

Source: John S. Herold, Inc. data, calculations by E&Y

Figure 3 shows the five major oil companies' cash flow, new investment, and net income from 1996 through 2007. With 10% growth in net income between 2005 and 2006, new investment by the five major oil companies increased at 33% during that period. However, in 2007 the five majors saw a 0.2% decline in net income as compared to 2006. Consequently, new investment and cash flow grew at more modest 4.7% and 4.1% rates respectively. New investment exceeded \$95 billion in 2007, and as a percent of net income was 80% compared with 76% in 2006.

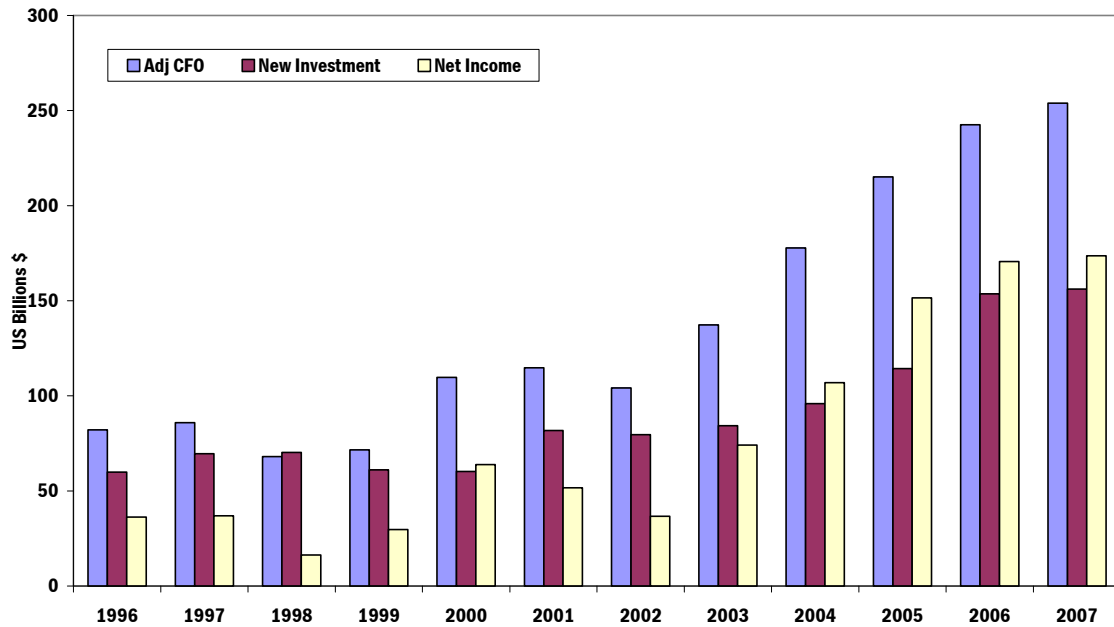
Figure 3.
New Investment, Adjusted Cash Flow, and Net Income
Big Five Majors, 1996-2007



Source: John S. Herold, Inc. data, calculations by E&Y

Figure 4 shows the cash flow, new investment and net income from 1996 through 2007 for 21 companies currently reporting in the DOE's FRS system. Data for 21 of the large companies that currently report on the FRS shows new investments of \$156 billion in 2007. In 2007, their investment spending as percent of net income remained unchanged from the previous year at 90%.

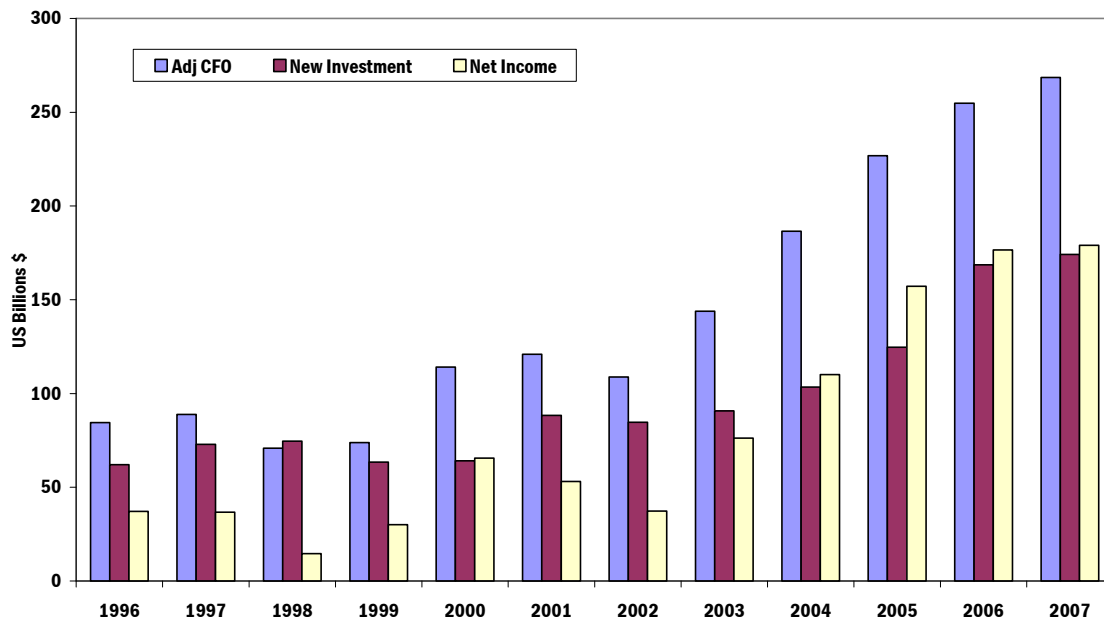
Figure 4.
New Investment, Adjusted Cash Flow, and Net Income
Twenty-One FRS-Reporting Companies, 1996-2007



Source: John S. Herold, Inc. data, calculations by E&Y

Figure 5 shows the cash flow, new investment and net income from 1996 through 2007 for the broader grouping of oil and gas companies. A broader grouping of the industry made aggregate new investment in 2006 of \$169 billion. Despite a marginal net income increase of 1.4% in 2007 as compared to 2006, their investment spending in 2007 still grew by 3.3% and was 97% of net income, up from the 96% in 2006.

Figure 5.
New Investment, Adjusted Cash Flow, and Net Income
Broader Industry Sample, 1996-2007



Source: John S. Herold, Inc. data, calculations by E&Y

Composition of Cash Flow

The composition of the sources and uses of the oil and gas industry’s cash flow is available by company from the John S. Herold, Inc. database. Table 2 shows the uses of cash flow for the five major oil companies, 21 of the large U.S. oil and gas companies that are currently in the DOE’s FRS companies, and a broader measure of the oil and gas industry that includes an additional 20 large and medium-sized companies.

The composition of uses of cash flow has fluctuated over the past 12 years. Table 3 shows the composition of spending from cash flow for the three groups. In 2007, the companies in the broader industry grouping spent 65% of their cash flow on PP&E, exploration, and R&D, exceeding spending in both 2004 and 2005.

In 2007, new investment by the broader group increased 3.3% while net income rose 1.4% compared to the previous year. In 2007, companies reduced their borrowing while still supporting an increase in investment, and maintaining financing levels for share repurchases and dividends payout. The "other" category includes asset acquisitions not otherwise included in PP&E (cash outflows) as well as asset sales (cash inflows).

Table 2. Historical Uses of Cash Flow by Oil Companies, 1996 - 2007

(Billions of US Dollars)

Five Major Oil Companies

| Use of Cash Flow | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|--------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|
| PP&E | 42.6 | 46.0 | 46.5 | 35.8 | 34.4 | 44.7 | 47.6 | 49.5 | 53.8 | 62.3 | 82.9 | 86.3 |
| Exploration | 4.9 | 5.1 | 5.7 | 4.4 | 3.5 | 3.9 | 3.8 | 4.2 | 5.0 | 4.3 | 6.0 | 6.3 |
| R&D | 1.1 | 1.8 | 2.0 | 1.4 | 1.4 | 1.6 | 1.7 | 1.8 | 1.9 | 2.1 | 2.5 | 3.1 |
| <i>New Investment Subtotal</i> | <i>48.6</i> | <i>52.9</i> | <i>54.2</i> | <i>41.7</i> | <i>39.4</i> | <i>50.2</i> | <i>53.1</i> | <i>55.5</i> | <i>60.6</i> | <i>68.8</i> | <i>91.4</i> | <i>95.7</i> |
| Net Changes in Debt | 3.0 | 1.2 | -4.6 | -3.3 | 11.7 | 3.4 | -4.9 | 14.8 | 10.4 | 10.5 | -13.6 | 0.2 |
| Net Changes in Stock | 0.7 | 4.2 | 0.6 | 0.0 | 5.1 | 11.1 | 6.7 | 7.2 | 18.4 | 37.8 | 56.8 | 55.3 |
| Dividends Payout | 15.8 | 16.9 | 17.8 | 19.8 | 19.4 | 20.2 | 21.2 | 23.3 | 25.7 | 32.0 | 31.0 | 33.0 |
| Cash Buildup | 5.2 | -2.9 | -6.2 | 2.3 | 13.5 | -5.5 | -1.9 | 5.7 | 19.7 | 15.8 | -4.5 | 4.9 |
| Other | -4.4 | 0.0 | -4.5 | -7.7 | -10.9 | -1.4 | 1.4 | -11.7 | -10.9 | -15.8 | 2.3 | -19.0 |
| Total | 69.1 | 72.4 | 57.2 | 52.8 | 78.2 | 77.9 | 75.6 | 94.8 | 123.9 | 149.2 | 163.5 | 170.1 |

21 Large Oil Companies in Current FRS Database

| Use of Cash Flow | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|--------------------------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| PP&E | 52.7 | 61.4 | 61.0 | 54.1 | 53.5 | 74.3 | 72.1 | 76.4 | 86.9 | 105.3 | 142.1 | 142.1 |
| Exploration | 5.9 | 6.2 | 7.1 | 5.6 | 4.7 | 5.3 | 5.1 | 5.4 | 6.4 | 6.1 | 8.3 | 10.1 |
| R&D | 1.3 | 2.0 | 2.2 | 1.4 | 2.0 | 2.2 | 2.3 | 2.5 | 2.7 | 3.0 | 3.2 | 4.0 |
| <i>New Investment Subtotal</i> | <i>59.9</i> | <i>69.6</i> | <i>70.3</i> | <i>61.1</i> | <i>60.3</i> | <i>81.8</i> | <i>79.5</i> | <i>84.3</i> | <i>95.9</i> | <i>114.4</i> | <i>153.6</i> | <i>156.2</i> |
| Net Changes in Debt | 3.4 | -1.7 | -11.9 | -7.2 | 14.4 | -6.0 | -11.4 | 17.7 | 16.0 | 9.6 | -38.7 | -1.6 |
| Net Changes in Stock | 0.2 | 4.5 | -0.4 | -3.6 | 6.6 | 14.3 | 6.0 | 8.7 | 20.5 | 42.2 | 64.1 | 69.8 |
| Dividends Payout | 17.6 | 19.0 | 20.1 | 23.6 | 23.5 | 25.1 | 26.0 | 28.9 | 33.9 | 40.1 | 40.4 | 44.0 |
| Cash Buildup | 5.9 | -6.2 | -6.2 | 4.1 | 14.9 | -6.3 | 0.4 | 8.5 | 20.9 | 17.8 | -7.6 | 21.9 |
| Other | -4.8 | 0.7 | -3.8 | -6.5 | -10.0 | 5.9 | 3.6 | -10.9 | -9.4 | -8.9 | 30.7 | -36.4 |
| Total | 82.1 | 86.0 | 68.1 | 71.6 | 109.6 | 114.8 | 104.2 | 137.3 | 177.8 | 215.2 | 242.5 | 253.9 |

Broader Oil Industry Grouping

| Use of Cash Flow | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|--------------------------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| PP&E | 54.7 | 64.3 | 64.9 | 56.1 | 57.0 | 80.3 | 76.7 | 82.1 | 93.6 | 114.7 | 156.2 | 159.1 |
| Exploration | 6.1 | 6.5 | 7.4 | 5.8 | 5.1 | 5.9 | 5.6 | 6.0 | 7.1 | 7.0 | 9.3 | 11.2 |
| R&D | 1.3 | 2.0 | 2.2 | 1.4 | 2.0 | 2.2 | 2.3 | 2.5 | 2.7 | 3.0 | 3.2 | 4.0 |
| <i>New Investment Subtotal</i> | <i>62.1</i> | <i>72.8</i> | <i>74.6</i> | <i>63.4</i> | <i>64.1</i> | <i>88.4</i> | <i>84.6</i> | <i>90.7</i> | <i>103.4</i> | <i>124.7</i> | <i>168.7</i> | <i>174.2</i> |
| Net Changes in Debt | 2.6 | -2.5 | -13.8 | -5.8 | 14.4 | -7.1 | -12.2 | 18.3 | 15.3 | 8.7 | -41.3 | -4.5 |
| Net Changes in Stock | -0.2 | 4.1 | -0.1 | -4.8 | 6.6 | 14.1 | 5.7 | 8.1 | 19.8 | 42.5 | 65.2 | 70.2 |
| Dividends Payout | 17.8 | 19.6 | 20.3 | 23.7 | 23.7 | 25.4 | 26.2 | 29.0 | 34.1 | 40.3 | 40.8 | 44.4 |
| Cash Buildup | 6.2 | -6.3 | -6.3 | 4.3 | 15.0 | -6.3 | 0.5 | 8.6 | 21.5 | 18.7 | -7.8 | 23.9 |
| Other | -3.9 | 1.1 | -3.9 | -7.0 | -9.7 | 6.5 | 3.9 | -10.8 | -7.4 | -8.0 | 29.3 | -39.6 |
| Total | 84.5 | 88.8 | 70.8 | 73.9 | 114.1 | 120.9 | 108.8 | 143.9 | 186.6 | 226.9 | 254.8 | 268.6 |

Source: John S. Herold, Inc. data, calculations by E&Y

Table 3. Composition of Uses of Cash Flow by Oil Companies, 1996 - 2007

(Percent of Adjusted Cash Flow)

Five Major Oil Companies

| Use of Cash Flow | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|--------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| PP&E | 62% | 64% | 81% | 68% | 44% | 57% | 63% | 52% | 43% | 42% | 51% | 51% |
| Exploration | 7% | 7% | 10% | 8% | 5% | 5% | 5% | 4% | 4% | 3% | 4% | 4% |
| R&D | 2% | 2% | 3% | 3% | 2% | 2% | 2% | 2% | 2% | 1% | 2% | 2% |
| <i>New Investment Subtotal</i> | <i>70%</i> | <i>73%</i> | <i>95%</i> | <i>79%</i> | <i>50%</i> | <i>64%</i> | <i>70%</i> | <i>59%</i> | <i>49%</i> | <i>46%</i> | <i>56%</i> | <i>56%</i> |
| Net Changes in Debt | 4% | 2% | -8% | -6% | 15% | 4% | -7% | 16% | 8% | 7% | -8% | 0% |
| Net Changes in Stock | 1% | 6% | 1% | 0% | 6% | 14% | 9% | 8% | 15% | 25% | 35% | 33% |
| Dividends Payout | 23% | 23% | 31% | 37% | 25% | 26% | 28% | 25% | 21% | 21% | 19% | 19% |
| Cash Buildup | 8% | -4% | -11% | 4% | 17% | -7% | -2% | 6% | 16% | 11% | -3% | 3% |
| Other | -6% | 0% | -8% | -15% | -14% | -2% | 2% | -12% | -9% | -11% | 1% | -11% |
| Total | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |

21 Large Oil Companies in Current FRS Database

| Use of Cash Flow | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|--------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| PP&E | 64% | 71% | 90% | 76% | 49% | 65% | 69% | 56% | 49% | 49% | 59% | 56% |
| Exploration | 7% | 7% | 10% | 8% | 4% | 5% | 5% | 4% | 4% | 3% | 3% | 4% |
| R&D | 2% | 2% | 3% | 2% | 2% | 2% | 2% | 2% | 2% | 1% | 1% | 2% |
| <i>New Investment Subtotal</i> | <i>73%</i> | <i>81%</i> | <i>103%</i> | <i>85%</i> | <i>55%</i> | <i>71%</i> | <i>76%</i> | <i>61%</i> | <i>54%</i> | <i>53%</i> | <i>63%</i> | <i>62%</i> |
| Net Changes in Debt | 4% | -2% | -18% | -10% | 13% | -5% | -11% | 13% | 9% | 4% | -16% | -1% |
| Net Changes in Stock | 0% | 5% | -1% | -5% | 6% | 12% | 6% | 6% | 12% | 20% | 26% | 27% |
| Dividends Payout | 21% | 22% | 29% | 33% | 21% | 22% | 25% | 21% | 19% | 19% | 17% | 17% |
| Cash Buildup | 7% | -7% | -9% | 6% | 14% | -6% | 0% | 6% | 12% | 8% | -3% | 9% |
| Other | -6% | 1% | -6% | -9% | -9% | 5% | 3% | -8% | -5% | -4% | 13% | -14% |
| Total | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |

Broader Oil Industry Grouping

| Use of Cash Flow | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|--------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| PP&E | 65% | 72% | 92% | 76% | 50% | 66% | 71% | 57% | 50% | 51% | 61% | 59% |
| Exploration | 7% | 7% | 10% | 8% | 4% | 5% | 5% | 4% | 4% | 3% | 4% | 4% |
| R&D | 2% | 2% | 3% | 2% | 2% | 2% | 2% | 2% | 1% | 1% | 1% | 1% |
| <i>New Investment Subtotal</i> | <i>73%</i> | <i>82%</i> | <i>105%</i> | <i>86%</i> | <i>56%</i> | <i>73%</i> | <i>78%</i> | <i>63%</i> | <i>55%</i> | <i>55%</i> | <i>66%</i> | <i>65%</i> |
| Net Changes in Debt | 3% | -3% | -20% | -8% | 13% | -6% | -11% | 13% | 8% | 4% | -16% | -2% |
| Net Changes in Stock | 0% | 5% | 0% | -6% | 6% | 12% | 5% | 6% | 11% | 19% | 26% | 26% |
| Dividends Payout | 21% | 22% | 29% | 32% | 21% | 21% | 24% | 20% | 18% | 18% | 16% | 17% |
| Cash Buildup | 7% | -7% | -9% | 6% | 13% | -5% | 0% | 6% | 11% | 8% | -3% | 9% |
| Other | -5% | 1% | -5% | -10% | -9% | 5% | 4% | -8% | -4% | -4% | 11% | -15% |
| Total | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |

Source: John S. Herold, Inc. data, calculations by E&Y

Future Investment Prospects

Long-Term Prospects

Record high levels of oil and gas investments from 2003 to 2007 are consistent with and partially a result of the increased energy demand and increased investment needs forecast by the International Energy Agency. The IEA's World Energy Investment Outlook forecast increased energy demands from both developed and developing countries will necessitate about \$22 trillion (in 2006 dollars) from 2006-2030. Oil investment, largely for upstream developments (exploration and production) and for replacing capacity that will be obsolete over the projection period is forecast at \$5.4 trillion, one fourth of total energy investment. Investment in gas production is forecast at \$4.2 trillion over the same period.²

Companies will require financing, strong balance sheets, access to new oil and gas reserves, reduced uncertainties, and attractive price, tax and cost environments to meet these large future energy investment needs.

Short-Term Prospects

Several investment banks annually survey the oil and gas industry about their exploration and production (E&P) spending plans for the coming year, with one report estimating an increase in global E&P spending by over 20% in 2008. This represents the sixth consecutive year of double-digit growth.³

The surveys report a continued increase in the underlying oil price forecast used by companies in making their investment spending plans. Average oil price estimates underlying the investment spending forecast have increased during the last four years. Expected crude oil prices rose by 49% from \$57/bbl for the 2007 investment spending forecast to \$85/bbl for the 2008 forecast.⁴ This sharply exceeds the 14% increase from \$50/bbl to \$57/bbl in the 2006-2007 forecasts. The direction of commodity prices remains a significant factor in determining 2008 spending, along with cash flow and prospect availability. Spending plans continue to depend heavily on capacity constraints, as oil and gas companies remain very sensitive to increases in drilling costs.

² IEA, 2007, p. 95.

³ International Oil Daily, June 9, 2008 (reporting on Lehman Brothers Original E&P Spending Survey).

⁴ International Oil Daily, June 9, 2008.

Appendix: Description of Data Sources and Data

The data presented in this study comes from the John S. Herold database, collected from individual company consolidated financial statements.

Data Source

John S. Herold database – Founded in 1948, John S. Herold, Inc. is an independent research firm that specializes in the analysis of companies, transactions, and trends in the global energy industry. The Herold *Financial Database* provides comprehensive and dependable online financial and operating data and statistics on approximately 400 publicly-traded energy companies since 1992.

The initial E&Y study covered historical data beginning in 1992. Due to changes in data availability as a result of the dynamic state of oil and gas companies, this update is limited to companies with complete data from 1996 through 2007 to preserve consistent time trend analysis. This update also includes several additional companies to replace others that have been acquired. Some of the companies currently reporting to the FRS that have been acquired or do not have sufficient data available are excluded from the analysis.

Data Description

“New investment” includes expenditures on property, plant and equipment, plus exploration expenses, and research and development expenses.

Some analyses of new investment include spending on mergers and acquisitions. M&A is an important source of acquiring new oil and gas reserves for individual companies. This analysis does not include the spending on M&A in order to provide a conservative estimate of the net increase to the global capacity of oil and gas production. The available databases may result in inclusion of the spending to acquire oil reserves by one company without an offsetting decrease in the oil reserves by the acquired company if M&A spending were included. It is possible that this could result in an understatement of the net addition to global capacity of certain groups of oil companies.

Exploration expenses and research and development expenses are treated as expenses deducted before arriving at net cash flow. When comparisons are made of new investment that include exploration, research and development expenses, those expenses are added to both the numerator and the denominator to ensure consistency.

Table 4. Companies with Data Available from John S. Herold for 1996 - 2007

| | | | |
|----|----------------------------------|----|---------------------------------|
| * | Anadarko Petroleum Corp. | | Murphy Oil Corp. |
| * | Apache Corp. | | Newfield Exploration Co. |
| | Berry Petroleum Co. | | Noble Energy, Inc. |
| ** | BP plc | * | Occidental Petroleum Co. |
| | Cabot Oil & Gas Corp. | | Petroleum Development Corp. |
| * | Chesapeake Energy Corp. | | Pioneer Natural Resources Co. |
| ** | Chevron Corp. | | Pogo Producing Co. ⁵ |
| | Comstock Resources Inc. | | Range Resources Corp. |
| ** | ConocoPhillips | ** | Royal Dutch Shell plc |
| | CONSOL Energy Inc. | | Southwestern Energy Co. |
| | Denbury Resources, Inc. | | St. Mary Land & Exploration Co. |
| * | Devon Energy Corp. | | Stone Energy Corp. |
| * | Dominion Resources, Inc. | * | Sunoco, Inc. |
| * | EOG Resources, Inc. | | Swift Energy Co. |
| * | Equitable Resources Inc. | * | Tesoro Corp. |
| ** | Exxon Mobil Corp. | * | Total S.A. |
| | Forest Oil Corp. | | Unit Corp. |
| | Frontier Oil Corp. | * | Valero Energy Corp. |
| * | Hess Corp. (f.k.a. Amerada Hess) | * | Williams Companies Inc. (The) |
| | Holly Corp. | * | XTO Energy Inc. |
| * | Marathon Oil Corp. | | |

Note:

- * FRS respondent
- ** Major Five Company and FRS respondent

⁵ Pogo Producing Co. was acquired by Plains Exploration and Production Co. during the last quarter of 2007. For the purpose of this analysis, data from the prior three quarters have been cumulated.

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