

# Returns for Domestic Nonfinancial Business

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**R**OUGHLY once a year, the Bureau of Economic Analysis publishes aggregate rates of return for domestic nonfinancial corporations along with various Q-ratios, which generally indicate the financial market value of assets relative to depreciated replacement-cost value. This year, for the first time, BEA includes additional information on the rates of return for major industries for 1997–2005.

Taken together, these broad measures of profitability may be useful to economists and policy makers. These returns show which industries are gaining in returns and the relative volatility of returns, allowing for better comparisons.

The returns for nonfinancial corporations are based on preliminary estimates from the national income and product accounts (NIPAs) and the fixed assets accounts. The industry returns estimates are calculated using data from the annual industry accounts, the NIPAs, and the fixed asset accounts, another step toward fulfilling BEA's goal of providing more information that integrates data from across BEA's major accounts. To calculate the Q-ratios, additional data were drawn from the Federal Reserve Board's flow of funds accounts.

## Nonfinancial corporate returns

**Aggregate returns.** In 2006, the profitability of domestic nonfinancial corporations increased, continuing an upward trend that began in 2002. Before subtracting corporate profits taxes, the rate of return on capital for nonfinancial corporations increased to 10.3 percent in 2006 from 9.5 percent in 2005 (table 1 and chart 1). After subtracting corporate profits taxes, the rate increased to 7.7 percent in 2006 from 7.1 percent in 2005.

The return is calculated as the ratio of the net operating surplus to produced assets. For nonfinancial corporations, the net operating surplus is the return accruing to capital after labor costs and intermediate inputs are deducted from receipts. The net operating surplus can be measured as the sum of corporate profits, net interest, and business current transfer payments (table 2).<sup>1</sup> Produced assets refer to the net stock of capital plus inventories valued at current cost.

1. Corporate profits and net interest are based on tabulations of "company" data rather than "establishment" data. As a result, net operating surplus of nonfinancial corporations includes the income earned by the corporations' financial services-producing establishments, and it excludes income earned by the nonfinancial establishments of financial corporations.

**Table 1. Rates of Return and Shares of Net Value Added for Domestic Nonfinancial Corporations and Nonfinancial Industries, 1997–2006**

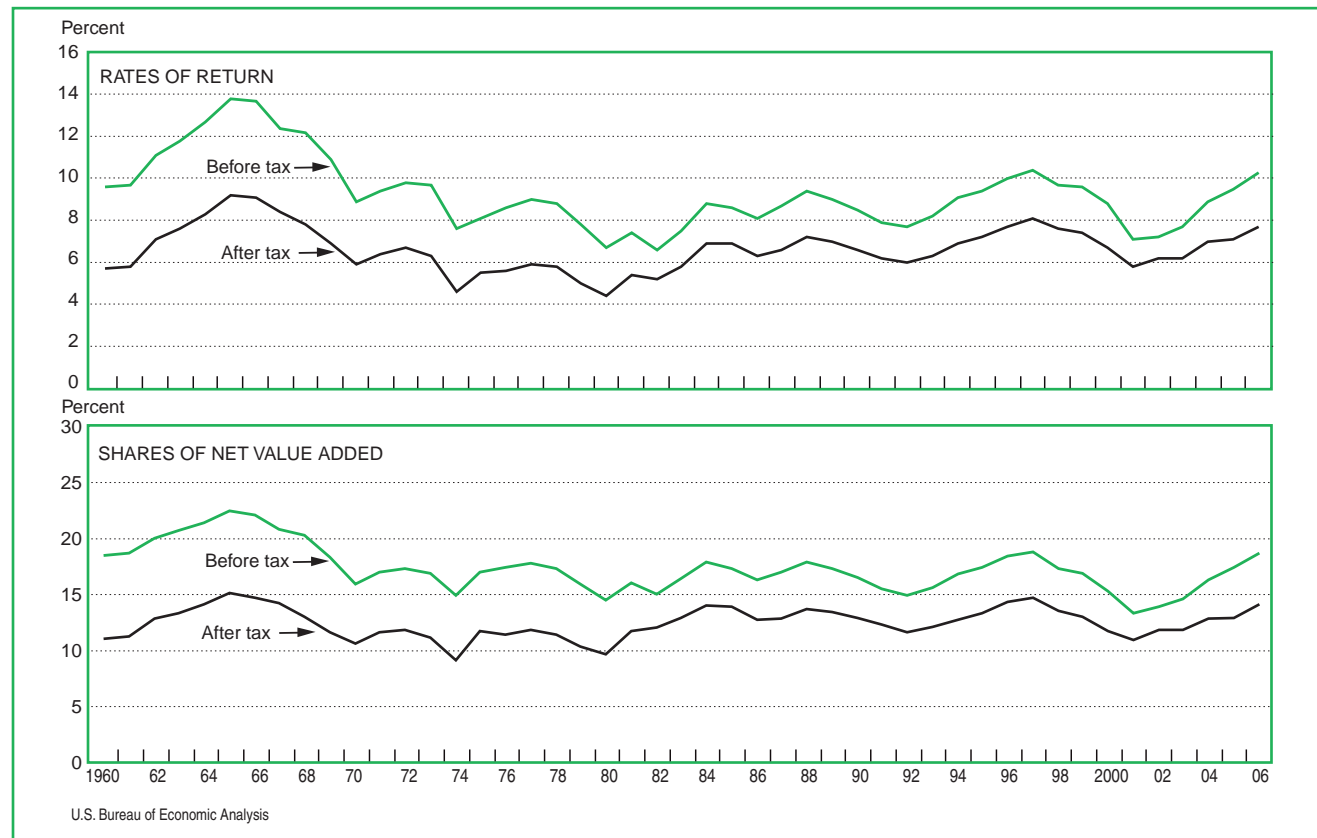
[Percent]							
	Nonfinancial corporations	Nonfinancial industries					
		Total	Mining, construction, utilities	Manufacturing	Wholesale and retail trade	Other industries <sup>1</sup>	Addendum: ICT-producing industries <sup>2</sup>
Rates of return							
1997 .....	10.4	14.9	10.4	16.4	14.3	16.3	22.0
1998 .....	9.7	14.0	9.2	16.3	12.5	15.3	18.8
1999 .....	9.6	13.6	9.8	15.3	12.1	14.9	14.6
2000 .....	8.8	12.3	11.0	13.7	10.2	13.1	4.6
2001 .....	7.1	11.7	11.0	11.2	10.9	12.6	-0.7
2002 .....	7.2	11.9	9.9	11.6	11.7	12.9	5.0
2003 .....	7.7	12.8	11.7	11.3	12.1	14.1	7.6
2004 .....	8.9	13.9	13.4	13.5	12.1	14.9	9.4
2005 .....	9.5	14.3	14.9	14.5	12.5	14.5	12.7
2006 .....	10.3	.....	.....	.....	.....	.....	.....
Shares of net value added							
1997 .....	18.7	20.2	32.1	28.1	19.7	16.2	22.7
1998 .....	17.2	22.0	28.8	27.8	17.5	20.1	18.9
1999 .....	16.8	21.3	29.2	26.5	16.9	19.4	14.5
2000 .....	15.2	19.5	30.6	23.8	14.8	17.4	4.6
2001 .....	13.2	19.3	31.2	21.5	15.8	17.4	-0.9
2002 .....	13.8	19.7	29.4	22.2	16.8	18.0	6.2
2003 .....	14.5	20.7	32.9	21.4	17.3	19.3	9.2
2004 .....	16.2	22.1	36.3	24.8	17.4	20.0	10.8
2005 .....	17.3	22.9	39.4	26.3	18.3	19.7	13.9
2006 .....	18.6	.....	.....	.....	.....	.....	.....

NOTE: Nonfinancial industries' rates of return for 2006 will be available from the December 2007 update of the annual industry accounts.

1. Consists of agriculture, forestry, fishing and hunting; transportation and warehousing; information; rental and leasing services and lessors of intangible assets; professional, scientific, and technical services; administrative and waste management services; educational services; health care and social assistance; arts, entertainment, and recreation; accommodation and food services; and "other

services, except government."

2. Information-communication-technology (ICT) producing industries: Consists of computer and electronic products; publishing industries (includes software); information and data processing services; and computer systems design and related services. Computer and electronic products are included in manufacturing; the other ICT-producing industries are included in "other" industries.

**Chart 1. Rates of Return and Shares of Value Added in 1960–2006****Table 2. Net Operating Surplus and Produced Assets of Domestic Nonfinancial Corporations and Nonfinancial Industries, 1997–2006**

[Billions of dollars]

	Nonfinancial corporations	Nonfinancial industries					
		Total	Mining, construction, utilities	Manufacturing	Wholesale and retail trade	Other industries <sup>1</sup>	Addendum: ICT-producing industries <sup>2</sup>
Net operating surplus							
1997 .....	736.3	1,278.1	164.0	320.1	202.9	591.1	71.3
1998 .....	717.4	1,257.5	151.7	331.3	188.1	586.4	65.8
1999 .....	742.7	1,288.5	166.7	322.4	192.4	607.0	55.4
2000 .....	716.5	1,243.7	194.5	300.2	174.2	574.9	19.2
2001 .....	611.8	1,243.9	208.5	251.1	192.5	591.8	-3.2
2002 .....	650.8	1,301.6	197.5	261.5	210.4	632.3	22.5
2003 .....	709.2	1,435.7	240.4	255.1	225.3	714.9	33.8
2004 .....	850.4	1,643.3	294.4	313.2	239.8	795.9	42.3
2005 .....	972.2	1,816.6	367.5	351.6	268.1	829.5	59.4
2006 .....	1,138.8	.....	.....	.....	.....	.....	.....
Produced assets, average of year-end values							
1997 .....	7,056.0	8,580.9	1,584.2	1,951.6	1,422.5	3,622.8	323.7
1998 .....	7,381.8	9,011.4	1,649.8	2,030.7	1,500.7	3,830.3	349.3
1999 .....	7,720.3	9,483.3	1,694.8	2,112.6	1,595.2	4,080.8	378.5
2000 .....	8,171.7	10,074.4	1,776.0	2,195.8	1,702.5	4,400.3	417.5
2001 .....	8,645.2	10,587.0	1,897.3	2,236.9	1,762.6	4,690.2	448.8
2002 .....	9,001.6	10,919.2	1,985.8	2,247.2	1,801.0	4,885.2	451.8
2003 .....	9,211.0	11,252.7	2,057.6	2,255.9	1,867.4	5,071.8	445.3
2004 .....	9,565.8	11,850.0	2,194.3	2,311.8	1,985.6	5,358.4	451.0
2005 .....	10,204.0	12,736.3	2,463.6	2,418.4	2,141.7	5,712.6	466.7
2006 .....	11,031.5	.....	.....	.....	.....	.....	.....

NOTE. Nonfinancial industries' net operating surplus will be available from the December 2007 update of the annual industry accounts.

1. Consists of agriculture, forestry, fishing and hunting; transportation and warehousing; information; rental and leasing services and lessors of intangible assets; professional, scientific, and technical services; administrative and waste management services; educational services; health care and social assistance; arts, entertainment, and recreation; accommodation and food services; and "other

services, except government."

2. Information-communication-technology (ICT) producing industries: Consists of computer and electronic products; publishing industries (includes software); information and data processing services; and computer systems design and related services. Computer and electronic products are included in manufacturing; the other ICT-producing industries are included in "other" industries.

**Q-type ratios.** “Tobin’s Q,” or simply “Q,” is the ratio of financial-market valuation of corporate assets to the current-cost value of the assets. A value of Q above 1 indicates that financial-markets value of corporate assets is above the replacement costs, reflecting the perceived potential for positive returns on the assets. Such a situation may induce businesses to invest in newly produced physical assets instead of acquiring existing assets at financial-market costs; alternatively, it may induce financial investors to reduce the prices that they offer for financial assets. Similarly, a value of Q below 1 indicates that the cost of purchasing existing physical assets (companies) at financial market prices would be less than the replacement costs of assets.

Three Q-type ratios for domestic nonfinancial corporations are defined as follows:

- Q1 is calculated as the market value of outstanding equity divided by the net stock of produced assets.<sup>2</sup>
- Q2 adds the book value of outstanding corporate bonds to the numerator used in Q1.<sup>3</sup> The inclusion of bonds makes Q2 a more complete measure of invested capital, but including them at historical cost is clearly inconsistent with the underlying rationale for Q, which is to provide a comparison of market valuation with replacement cost.
- Q3 adds an estimate of the market value of outstanding corporate bonds and net liquid assets to the numerator used in Q1. It also subtracts land from the numerator (because land is not included in the denominator).<sup>4</sup>

All three ratios trace similar patterns (chart 2 and table 3). They reached record levels in 1999; all three dropped sharply in 2000 and continued decreasing until 2002. In 2003–2004, all three ratios rose. In 2005–2006, all three ratios decreased.

2. The market value of outstanding equity is the market value of all assets owned by U.S. firms, including assets held outside the United States, while the net stock of produced assets includes only inventories and assets in the United States and capitalized in the national accounts.

3. “Outstanding bonds” is a gross estimate; it is not net of financial assets and debt held by nonfinancial corporations.

4. The market value of bonds outstanding is approximated by a procedure developed by James Tobin and Dan Sommers. In brief, the process begins with published book values of bonds outstanding and an assumption that a bond matures in 10 years and carries a coupon rate equal to the Baa rate that prevailed in the year the bond was issued. The value of land is estimated as the difference between the value of real estate and the value of structures and of equipment and software. Net liquid assets is estimated as financial assets less liabilities other than municipal securities, corporate bonds, and mortgages. The data are from the Board of Governors of the Federal Reserve System, *Flow of Funds Accounts of the United States*, statistical release Z.1 and “Selected Interest Rates,” statistical release H.15 (Washington, DC: Board of Governors). The data are available on the Federal Reserve’s Web site at <[www.federalreserve.gov/releases/Z1/](http://www.federalreserve.gov/releases/Z1/)> and <[www.federalreserve.gov/releases/h15/](http://www.federalreserve.gov/releases/h15/)>.

## Nonfinancial industry returns

Aggregate returns can also be calculated using data from BEA’s annual industry accounts, which provide annually updated data on 65 industries. Like rates of return of nonfinancial corporations, the rate of return of nonfinancial industries is also calculated as the ratio of net operating surplus to produced assets (table 2).

Specifically, the net operating surplus includes corporate profits, net interest, business current transfer payments, as well as proprietors’ income, which mainly reflects the income of the unincorporated self-employed. In addition, real estate, which includes owner-occupied housing, is excluded from the nonfinancial industry data—the net operating surplus and

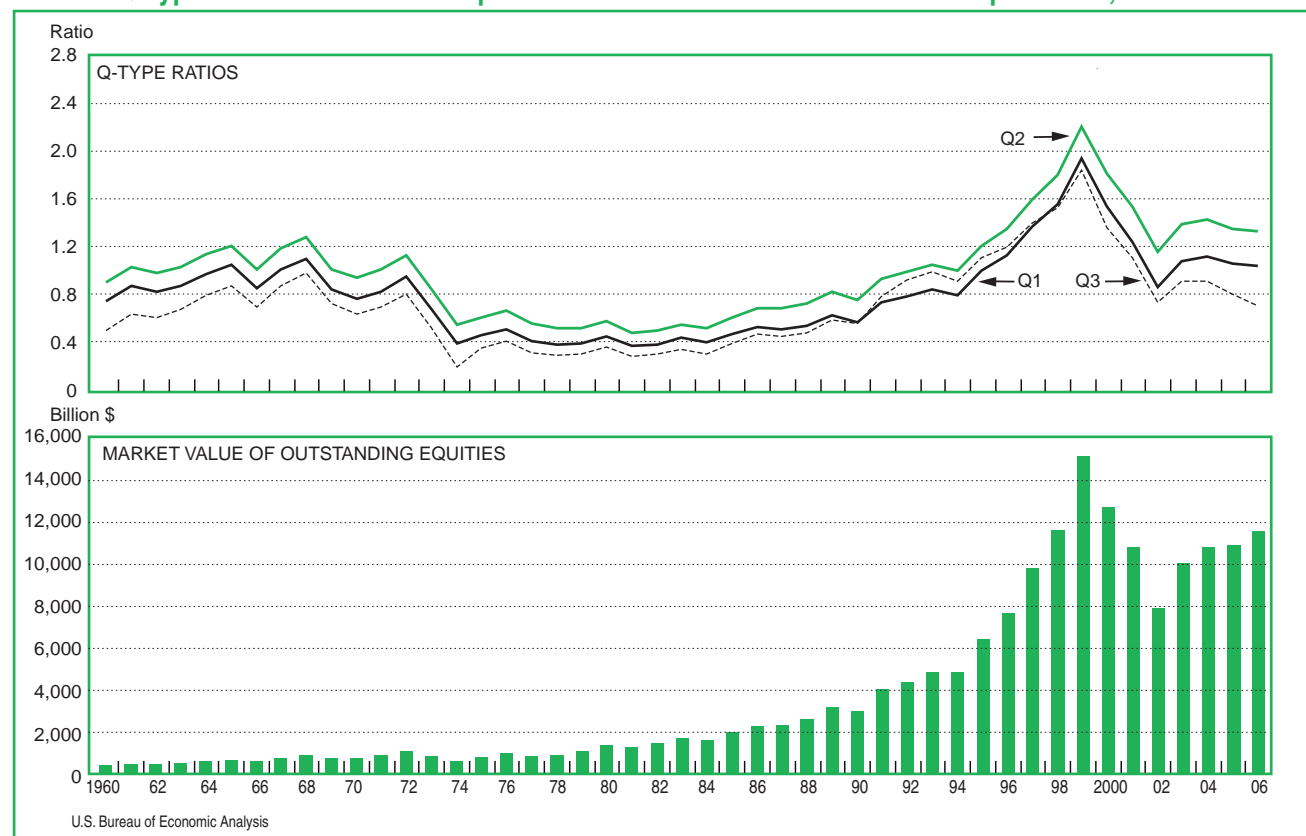
**Table 3. Q-Type Ratios, 1960–2006**

	Q1 ratio <sup>1</sup>	Q2 ratio <sup>2</sup>	Q3 ratio <sup>3</sup>
1960 .....	0.75	0.91	0.50
1961 .....	0.88	1.04	0.64
1962 .....	0.83	0.99	0.61
1963 .....	0.88	1.04	0.68
1964 .....	0.98	1.15	0.80
1965 .....	1.06	1.22	0.88
1966 .....	0.86	1.02	0.70
1967 .....	1.02	1.20	0.88
1968 .....	1.11	1.29	0.99
1969 .....	0.85	1.02	0.73
1970 .....	0.77	0.95	0.64
1971 .....	0.83	1.02	0.70
1972 .....	0.96	1.14	0.81
1973 .....	0.68	0.85	0.52
1974 .....	0.39	0.55	0.19
1975 .....	0.46	0.61	0.35
1976 .....	0.51	0.67	0.41
1977 .....	0.41	0.56	0.31
1978 .....	0.38	0.52	0.29
1979 .....	0.39	0.52	0.30
1980 .....	0.45	0.58	0.36
1981 .....	0.37	0.48	0.28
1982 .....	0.38	0.50	0.30
1983 .....	0.44	0.55	0.34
1984 .....	0.40	0.52	0.30
1985 .....	0.47	0.61	0.39
1986 .....	0.53	0.69	0.47
1987 .....	0.51	0.69	0.45
1988 .....	0.54	0.73	0.48
1989 .....	0.63	0.83	0.59
1990 .....	0.57	0.76	0.56
1991 .....	0.74	0.94	0.79
1992 .....	0.79	1.00	0.93
1993 .....	0.85	1.06	1.00
1994 .....	0.80	1.01	0.92
1995 .....	1.01	1.22	1.12
1996 .....	1.14	1.36	1.21
1997 .....	1.38	1.61	1.41
1998 .....	1.57	1.82	1.54
1999 .....	1.96	2.23	1.86
2000 .....	1.55	1.83	1.37
2001 .....	1.25	1.55	1.12
2002 .....	0.87	1.17	0.74
2003 .....	1.09	1.40	0.92
2004 .....	1.13	1.44	0.92
2005 .....	1.07	1.36	0.81
2006 .....	1.05	1.34	0.71

1. Q1 is the market value of outstanding equity divided by the net stock of produced assets valued at current cost.

2. Q2 is the market value of outstanding equity plus book value of outstanding corporate bonds divided by the net stock of produced assets valued at current cost.

3. Q3 is the market value of outstanding equity plus book value of outstanding corporate bonds plus net liquid assets and less the value of land divided by the net stock of produced assets valued at current cost.

**Chart 2. Q-Type Ratios and Market Capitalization of Domestic Nonfinancial Corporations, 1960–2006**

produced assets—to allow for a better comparison with the nonfinancial corporate returns data, which do not reflect homeownership.

The pretax rate of return for nonfinancial industries rose to 14.3 percent in 2005 from 13.9 percent in 2004. The annual industry accounts do not provide after-tax data. The industry rate of return for 2006 will be included with the December 2007 update of the annual industry accounts.

The inclusion of proprietors' income in industry net operating surplus clearly accounts for most of the difference between the industry rate of return and the corporation rate of return. However, several definitional and statistical differences between the annual industry accounts and the NIPAs also affect the estimates. Notably, the annual industry accounts include adjustments that (1) exclude the financial services-producing establishments of primarily nonfinancial corporations and (2) include the nonfinancial services-producing establishments of primarily financial corporations as well as a share of the NIPA statistical discrepancy.<sup>5</sup>

5. For more information, see Brian C. Moyer, Mark A. Planting, Mahnaz Fahim-Nader, and Sherlene K. S. Lum, "Preview of the Comprehensive Revision of the Annual Industry Accounts," *SURVEY OF CURRENT BUSINESS* 84 (March 2004) and Ann M. Lawson, Brian C. Moyer, Sumiye Okubo, and Mark A. Planting, "Integrating Industry and National Economic Accounts: First Steps and Future Improvements," in *A New Architecture for the U.S. National Accounts*. (Chicago: The University of Chicago Press): 215–261.

Despite the difference between the industry rate and the pretax corporation rate, the annual pattern of change of both is similar (chart 3).

### Specific industry groups

Returns were also calculated for four broad nonfinancial industry groups for 1997–2005: Mining, construction, and utilities; manufacturing; wholesale and retail trade; and other nonfinancial industries. Returns were also calculated for the information-communication-technology (ICT) industries subset.<sup>6</sup>

**ICT-producing industries.** The pattern of the rates of return for ICT-producing industries was similar to the pattern of returns for nonfinancial industries overall, but were generally more volatile (table 1). The return for ICT-producing industries declined to –0.7 percent in 2001 from 22.7 percent in 1997. Although ICT-producing industries accounted for only 5 percent of nonfinancial industries' net operating surplus, these industries significantly deepened the decline in nonfinancial industries' overall rate of return (chart 3).

Also of note, the return to ICT-producing industries fell below the nonfinancial industry average in 2000

6. The subset of ICT-producing industries consists of computer and electronic products; publishing industries (includes software); information and data processing services; and computer design and related services. Computer and electronic products are included in the manufacturing group; the other ICT-producing industries are included in the other nonfinancial industries group.

and has remained there through 2005. The produced assets of ICT-producing industries grew rapidly in 1998–2001, rising 38.7 percent. In 2002–2005, produced assets grew only 4.0 percent growth.

**Specific industries.** The rates of return for the mining, construction, and utilities industry group in 1997–99 were 4 percentage points or more below the nonfinancial industry average. Returns rose to within 2 percentage points of the industry average in 2000 and have remained in that range. Produced assets rose 19.9 percent in 1997–2001 and then accelerated to 29.8 percent in 2001–2005.

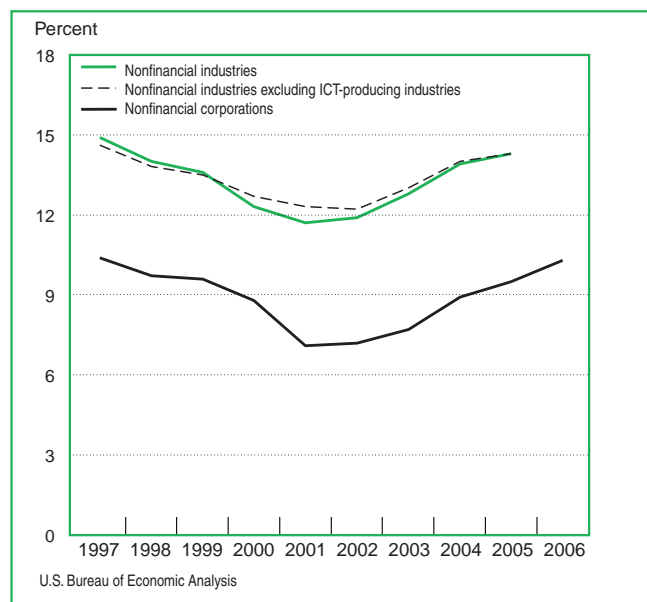
Returns for the manufacturing, wholesale and retail trade, and “other” nonfinancial industry groups followed patterns similar to the returns for nonfinancial

corporations overall, declining steadily from 1997 through 2000 (chart 4).

Returns for the manufacturing group and “other” nonfinancial industry group continued to decline in 2001. In 2002–2005, returns for all three industry groups increased largely uninterrupted, but none have surpassed their 1997 levels.

In contrast, the return for the mining, construction, and utilities industry group, which was lowest among the four groups in 1997, decreased only in 1998 and 2002 and surpassed its 1997 level in 2003, 2004, and 2005. These more recent increases largely reflected the runup in both corporate profits before tax and proprietors’ income in the oil and gas extraction industry within mining.

**Chart 3. Rates of Returns for Domestic Nonfinancial Corporations and Nonfinancial Industries, 1997–2006**



**Chart 4. Rates of Return for Domestic Nonfinancial Industry Groups, 1997–2005**

