

Note on Rates of Return for Domestic Nonfinancial Corporations, 1960–98

FOR DOMESTIC NONFINANCIAL corporations, property income's rate of return decreased to 9.6 percent in 1998 from 9.9 percent in 1997 (chart 1 and table 1). Though lower than in 1997 and in 1996, the rate of return was higher than in any other year since 1969. Property income's share of domestic income dropped to 18.5 percent from 19.4 percent; nevertheless, the share was well above its average level for the past quarter century.

The rate of return is defined here as the ratio of profits and interest payments to the value of structures, equipment, and inventories. For pur-

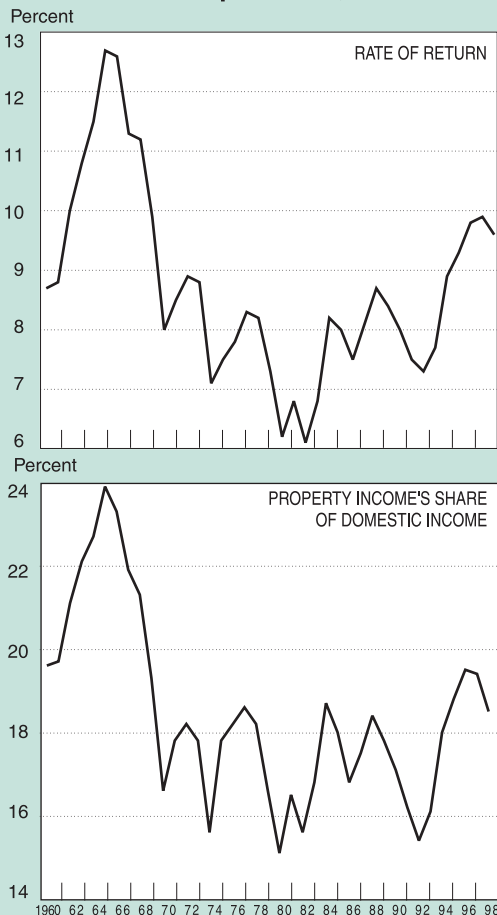
poses of this note, the numerator—corporate profits with inventory valuation and capital consumption adjustments plus net interest—is termed “property income” (table 2).¹ In addition, the denominator—the

1. Corporate profits and net interest are based on tabulations of “company” data rather than “establishment” data. As a result, property income for domestic nonfinancial corporations may include income earned by financial

NOTE.—This note was prepared by Daniel Larkins.

CHART 1

Rate of Return and Property Income's Share of Domestic Income, Domestic Nonfinancial Corporations, 1960–98



U.S. Department of Commerce, Bureau of Economic Analysis

Table 1.—Rate of Return and Income Share, Domestic Nonfinancial Corporations, 1960–98

[Percent]

Year	Rate of return					Share of domestic income		
	Property income					Property income		
	Total	Profits from current production		Net interest	Total	Profits from current production	Net interest	
		Total	Profits tax liability					Profits after tax
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
1960	8.7	8.0	3.8	4.2	0.7	19.6	18.1	1.5
1961	8.8	8.0	3.8	4.3	0.8	19.7	18.0	1.7
1962	10.0	9.2	3.9	5.3	0.9	21.1	19.3	1.8
1963	10.8	9.9	4.1	5.8	0.9	22.1	20.3	1.8
1964	11.5	10.6	4.2	6.5	0.9	22.7	20.9	1.8
1965	12.7	11.7	4.4	7.2	1.0	23.9	22.0	1.9
1966	12.6	11.5	4.5	7.0	1.1	23.3	21.3	2.1
1967	11.3	10.1	3.9	6.3	1.2	21.9	19.5	2.3
1968	11.2	9.9	4.3	5.6	1.3	21.3	18.9	2.5
1969	9.9	8.4	3.9	4.5	1.5	19.3	16.3	3.0
1970	8.0	6.2	2.9	3.3	1.8	16.6	12.8	3.8
1971	8.5	6.7	2.9	3.8	1.8	17.8	14.1	3.7
1972	8.9	7.2	3.0	4.2	1.7	18.2	14.7	3.5
1973	8.8	7.0	3.2	3.8	1.8	17.8	14.2	3.7
1974	7.1	5.1	2.9	2.2	1.9	15.6	11.3	4.3
1975	7.5	5.8	2.5	3.3	1.7	17.8	13.8	4.1
1976	7.8	6.4	2.8	3.5	1.5	18.2	14.7	3.4
1977	8.3	6.8	2.9	3.9	1.5	18.6	15.3	3.4
1978	8.2	6.7	2.9	3.8	1.6	18.2	14.8	3.5
1979	7.3	5.6	2.6	2.9	1.7	16.6	12.7	3.9
1980	6.2	4.3	2.2	2.1	1.9	15.1	10.4	4.7
1981	6.8	4.7	1.9	2.8	2.1	16.5	11.4	5.1
1982	6.1	3.9	1.3	2.6	2.2	15.6	9.9	5.7
1983	6.8	4.8	1.6	3.2	2.0	16.8	11.8	5.0
1984	8.2	6.0	1.9	4.2	2.2	18.7	13.7	5.0
1985	8.0	5.8	1.7	4.2	2.2	18.0	13.1	4.9
1986	7.5	5.2	1.7	3.5	2.3	16.8	11.7	5.1
1987	8.1	5.7	2.1	3.7	2.3	17.5	12.4	5.1
1988	8.7	6.2	2.1	4.0	2.5	18.4	13.0	5.4
1989	8.4	5.5	2.0	3.5	2.9	17.8	11.7	6.2
1990	8.0	5.2	1.8	3.4	2.8	17.1	11.1	6.0
1991	7.5	5.0	1.6	3.4	2.5	16.2	10.8	5.4
1992	7.3	5.4	1.7	3.7	1.9	15.4	11.4	4.0
1993	7.7	6.1	1.8	4.2	1.7	16.1	12.7	3.5
1994	8.9	7.3	2.1	5.1	1.6	18.0	14.8	3.3
1995	9.3	7.7	2.2	5.5	1.6	18.8	15.5	3.3
1996	9.8	8.2	2.3	6.0	1.5	19.5	16.5	3.0
1997	9.9	8.5	2.4	6.1	1.4	19.4	16.7	2.7
1998	9.6	8.3	2.2	6.0	1.3	18.5	15.9	2.5
Average:								
1960–69	10.8	9.7	4.1	5.7	1.0	21.5	19.5	2.0
1970–79	8.0	6.4	2.9	3.5	1.7	17.5	13.8	3.7
1980–89	7.5	5.2	1.9	3.4	2.3	17.1	11.9	5.2
1990–98	8.7	6.9	2.0	4.8	1.8	17.7	13.9	3.7

Source: Table 2.

NOTE.—Columns 1–5 are percentages of the net stock of reproducible tangible wealth (averages of end-of-year values for adjacent years) valued at current cost. Columns 6–8 are percentages of domestic income.

current-cost value for domestic nonfinancial corporations of the net stock of structures and equipment plus the replacement-cost value of inventories—is termed “reproducible tangible wealth.” (In other contexts, different definitions of property income and reproducible tangible wealth may be appropriate.)

establishments of those corporations; similarly, it may exclude income earned by nonfinancial units of financial corporations.

For a discussion of the industrial distribution of NIPA series, see Eugene P. Seskin and Robert P. Parker, “A Guide to the NIPA’s,” SURVEY 78 (March 1998): 42–43. For a discussion of definitions and classifications underlying the NIPA’s, see U.S. Department of Commerce, Bureau of Economic Analysis, *National Income and Product Accounts of the United States, 1929–94*, vol. 1 (Washington, DC: U.S. Government Printing Office, April 1998). For a discussion of the wealth estimates, which are on an establishment basis, see Arnold J. Katz and Shelby W. Herman, “Improved Estimates of Fixed Reproducible Tangible Wealth, 1929–95,” SURVEY OF CURRENT BUSINESS 77 (May 1997).

Table 2.—Property Income of Domestic Nonfinancial Corporations and Related Series, 1960–98

(Billions of dollars)

Year	Property income					Domestic income	Reproducible tangible wealth ¹
	Total	Profits from current production			Net interest		
		Total	Profits tax liability	Profits after tax			
1960	44.1	40.7	19.2	21.5	3.5	225.3	512.8
1961	45.6	41.6	19.5	22.2	4.0	230.9	524.6
1962	53.6	49.1	20.6	28.4	4.5	253.7	542.5
1963	59.7	54.9	22.8	32.1	4.8	270.8	561.2
1964	66.5	61.2	24.0	37.2	5.3	293.2	590.5
1965	77.5	71.4	27.2	44.2	6.1	324.0	632.2
1966	83.4	76.1	29.5	46.6	7.4	357.4	692.0
1967	81.8	73.0	27.8	45.2	8.8	374.1	750.6
1968	87.6	77.5	33.6	43.9	10.1	410.8	819.6
1969	85.6	72.5	33.3	39.1	13.2	444.5	902.8
1970	75.4	58.3	27.2	31.1	17.1	454.0	983.7
1971	86.9	68.8	29.9	38.8	18.1	488.9	1,067.8
1972	99.5	80.4	33.8	46.6	19.2	546.6	1,164.7
1973	109.6	87.1	40.2	46.9	22.5	615.5	1,327.6
1974	103.1	74.8	42.2	32.6	28.3	659.9	1,597.4
1975	126.0	97.3	41.5	55.8	28.7	706.3	1,772.7
1976	145.9	118.4	53.0	65.4	27.5	803.3	1,950.1
1977	170.1	139.4	59.9	79.5	30.6	912.6	2,170.7
1978	190.3	154.0	67.1	86.9	36.3	1,043.2	2,457.9
1979	192.3	147.2	69.6	77.6	45.1	1,160.4	2,825.3
1980	188.3	130.1	67.0	63.1	58.2	1,246.8	3,223.9
1981	232.3	160.3	63.9	96.4	71.9	1,403.7	3,589.1
1982	224.6	142.1	46.3	95.8	82.5	1,441.6	3,764.8
1983	258.1	181.5	59.4	122.0	76.6	1,538.6	3,860.3
1984	326.9	239.0	73.7	165.4	87.8	1,748.6	4,085.0
1985	334.1	243.5	69.9	173.6	90.6	1,856.0	4,264.1
1986	324.1	226.0	75.6	150.5	98.1	1,927.3	4,388.8
1987	363.8	258.6	93.5	165.1	105.3	2,079.3	4,619.9
1988	415.3	294.3	101.7	192.6	121.0	2,262.0	4,902.6
1989	422.7	276.7	98.8	178.0	145.9	2,372.7	5,149.6
1990	422.8	275.3	95.7	179.6	147.5	2,478.8	5,377.0
1991	403.4	269.7	85.4	184.3	133.7	2,493.9	5,439.4
1992	399.8	295.6	91.1	204.5	104.2	2,595.1	5,574.7
1993	441.0	346.4	105.0	241.4	94.5	2,731.6	5,845.2
1994	533.4	437.1	128.8	308.3	96.3	2,960.1	6,178.6
1995	591.5	487.4	136.7	350.6	104.2	3,147.5	6,505.8
1996	649.7	548.5	151.5	397.0	101.2	3,329.4	6,791.8
1997	691.1	594.2	169.8	424.4	96.9	3,562.3	7,122.8
1998	694.2	598.7	160.4	438.2	95.6	3,760.8	7,387.0

1. Structures, equipment, and inventories, valued at current cost at end of year. Structures and equipment are from U.S. Department of Commerce, Bureau of Economic Analysis, *Fixed Reproducible Tangible Wealth of the United States, 1925–96*, CD-ROM (Washington, DC: Bureau of Economic Analysis, 1998) and from unpublished BEA data. Inventories are from legal-form and industry detail underlying NIPA table 5.13.

NOTE.—Property income is profits from current production plus net interest. Profits from current production is corporate profits with inventory valuation adjustment and capital consumption adjustment. Profits after tax is also shown with inventory valuation adjustment and capital consumption adjustment.

The measure of rate of return used here has several useful features. First, it captures the return to investment, regardless of the mix of equity and debt used to finance the investment. Second, the numerator is not affected by inventory profits or by depreciation schedules used in preparing the underlying tax returns. Third, because the components of the denominator are measured at current cost, the ratio is an estimate of the current average profitability of investment. (See the box “Alternative Measures of Rates of Return” on page 10 of the June 1997 SURVEY.)

The ratio of property income to domestic income is property income’s “share” of domestic income—that is, the portion of domestic income that is not labor income.

Q-type ratios

Another ratio of analytical interest is “Tobin’s-Q,” or simply “Q,” which compares the valuation of assets in financial markets with the current replacement cost of assets.² A value of Q above 1 indicates that newly produced physical assets may be purchased more cheaply than (the ownership claims to) existing assets. Such a situation may induce businesses to purchase newly produced physical assets instead of acquiring existing assets; alternatively, it may induce financial investors to reduce the prices they will offer for financial assets. A value of Q below 1 indicates that existing physical assets may be acquired more cheaply than newly produced assets. Such a situation may induce businesses to purchase existing assets instead of newly produced physical assets; alternatively, it may induce financial investors to raise the prices they will offer for financial assets.

Q may be calculated in a variety of ways, but the general pattern of the ratio over time is relatively insensitive to the precise formula used to calculate it. In the numerator, all analysts would include the market value of equities outstanding. Many analysts would also include the value of corporate bond obligations, thereby making the ratio invariant to shifts in the mix of equity and debt used to finance investment. Further, the numerator could include all corporate debt, not just bonds.³

The denominator of Q should certainly include the net stock of reproducible tangible wealth valued at current cost; estimates for this series were used in calculating the rate of return. The denominator might also include other assets, such as land and financial assets; it might also include intellectual property (including software) that may not be capitalized. (All of these items are reflected in the market value of equities outstanding.)

2. See William C. Brainard and James Tobin, “Pitfalls in Financial Model Building,” *American Economic Review* 58 (May 1968): 99–122. For additional references, see footnote 13 on page 10 of the June 1998 SURVEY.

3. Financial assets and liabilities mentioned in this paragraph are available from the Federal Reserve Board, *Flow of Funds Accounts of the United States*, Federal Reserve Statistical Release Z.1 (Washington, DC: Board of Governors of the Federal Reserve System).

It should be noted that the market value of equities outstanding reflects domestic and foreign assets owned by domestic nonfinancial corporations, while the net stock of reproducible tangible wealth includes the domestic wealth of domestic and foreign corporations.

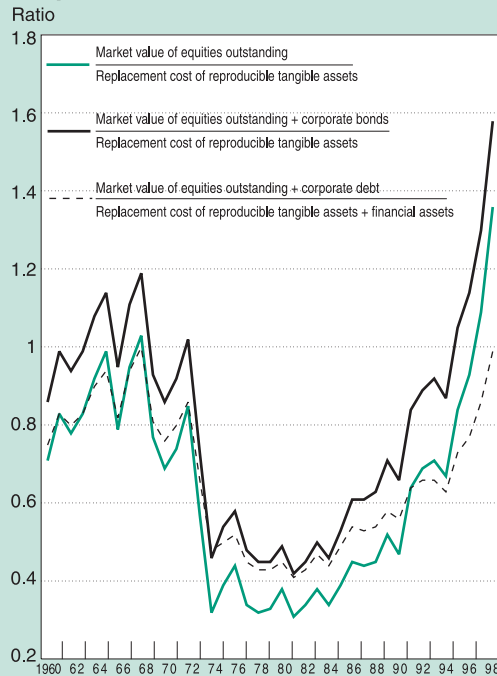
Moreover, the other series that have been suggested for inclusion in the numerator and denominator (such

as corporate bonds and land) generally are either not available or are available on a historical-cost basis. The use of historical-cost estimates is inconsistent with the underlying rationale for Q—a comparison of market valuation and replacement costs.⁴ Analysts may differ on whether it is preferable to use some historical-cost components or to omit them and to thereby exclude some potentially important variables.

Fortunately, ratios constructed from various definitions all display quite similar patterns over time, and in light of the difficulties involved in measuring both the numerators and the denominators, the patterns of movement may be more important than the levels of the ratios. Three variants of the measure for domestic nonfinancial corporations are shown in **chart 2**; other variants would show much the same overall picture.⁵ All the ratios drop sharply in the early 1970's, stay relatively low until the early 1980's, and then increase more or less rapidly through 1998. In recent years, the increases have been particularly dramatic. Two of the ratios reached record highs in 1998. The narrowest measure—the market value of equities outstanding divided by the replacement cost of reproducible tangible wealth—increased to 1.36 from 1.09. A broader measure that includes corporate bonds in the numerator increased to 1.58 from 1.30. The broadest measure, which includes corporate debt in the numerator and financial assets in the denominator, increased to 0.99 from 0.85.

CHART 2

Q-type Ratios, Domestic Nonfinancial Corporations, 1960–98



U.S. Department of Commerce, Bureau of Economic Analysis

4. Some data are available to shed light on the difference between historic values and market values of corporate bonds. According to the *Merril Lynch Bond Indices: December 1998 Results 20* (January 19, 1999), the market value of investment grade domestic corporate bonds at the end of 1998 was approximately 8 percent higher than par value.

5. For example, a variant incorporating a rough adjustment to convert corporate bonds to market valuation has very little effect on either the shape or the level of the ratios.