

**Average Federal Tax Rates for All Households,
by Comprehensive Household Income Quintile, 1979-2016**

Year	Lowest Quintile	Second Quintile	Middle Quintile	Fourth Quintile	Highest Quintile	All Quintiles	81st - 90th Percentiles	91st - 95th Percentiles	96th - 99th Percentiles	Top 1%
Average Total Federal Tax Rate (percent)										
1979	9.3	15.0	19.1	21.7	27.1	22.4	23.6	25.2	27.1	35.1
1980	8.9	14.7	19.0	21.8	26.9	22.4	24.0	25.5	27.4	33.1
1981	9.6	15.2	19.4	22.3	26.6	22.6	24.5	25.8	27.2	30.5
1982	9.8	14.0	18.1	20.6	24.2	20.8	22.6	23.7	24.5	26.8
1983	11.1	14.0	17.5	20.1	23.6	20.5	22.0	22.9	23.5	26.8
1984	12.1	14.9	18.0	20.3	23.7	20.8	22.1	23.0	23.5	27.0
1985	11.8	15.1	18.2	20.5	23.7	20.9	22.3	23.2	23.6	26.1
1986	11.7	15.0	18.2	20.6	23.5	21.0	22.5	23.4	23.5	24.7
1987	10.7	14.3	17.8	20.4	25.6	21.8	22.8	24.5	25.9	30.1
1988	10.2	14.7	18.2	20.8	25.4	21.9	23.1	24.4	25.5	28.6
1989	9.6	14.3	18.1	20.8	25.0	21.6	23.0	24.2	25.3	27.9
1990	10.7	15.0	18.2	20.8	24.9	21.7	23.0	24.1	25.2	27.7
1991	10.2	14.5	17.8	20.5	25.2	21.6	22.9	24.2	25.5	28.9
1992	10.0	13.9	17.7	20.3	25.4	21.6	22.7	24.1	25.6	29.6
1993	10.0	13.8	17.6	20.3	26.5	22.1	22.7	24.4	26.4	33.2
1994	8.2	13.5	17.8	20.7	27.1	22.5	23.1	24.8	26.7	34.4
1995	7.6	13.8	17.8	20.7	27.5	22.7	23.3	25.2	27.2	34.9
1996	6.8	13.7	17.8	20.7	27.7	22.9	23.2	25.1	27.4	34.8
1997	7.0	14.0	18.1	20.7	27.7	23.0	23.5	25.2	27.6	33.8
1998	6.9	13.4	17.4	20.6	27.4	22.7	23.4	25.2	27.4	32.4
1999	7.2	13.7	17.5	20.7	27.8	23.1	23.7	25.5	28.0	32.6
2000	6.6	13.6	17.3	20.7	27.8	23.1	23.7	25.5	28.0	32.3
2001	6.1	11.7	15.7	19.3	26.6	21.6	22.5	24.6	26.8	32.0
2002	5.6	11.0	15.1	18.5	25.9	20.8	21.8	23.8	26.1	31.9
2003	5.7	10.1	14.3	17.8	24.8	19.9	20.8	22.7	25.1	30.3
2004	5.3	10.3	14.6	18.0	25.1	20.3	20.9	22.9	25.4	30.0
2005	5.5	10.5	14.8	18.3	25.5	20.8	21.0	23.0	25.9	30.2
2006	5.9	10.6	14.9	18.3	25.5	20.9	21.2	23.1	25.9	29.8
2007	5.3	11.0	14.8	18.1	24.8	20.5	20.9	22.7	25.4	28.2
2008	0.9	7.8	12.2	16.0	23.7	18.5	19.3	21.8	24.6	28.1
2009	-0.3	7.2	11.8	15.5	23.2	17.9	18.9	21.2	24.2	28.7
2010	0.1	7.8	12.1	16.0	24.0	18.6	19.4	21.7	24.8	29.2
2011	0.6	7.7	12.0	15.7	23.5	18.3	18.9	21.2	24.3	29.0
2012	0.9	7.7	12.2	15.9	24.0	18.9	19.2	21.6	24.8	28.5
2013	2.3	9.1	13.7	17.4	26.3	20.7	20.9	23.2	26.3	33.6
2014	1.9	9.0	14.0	17.8	26.7	21.2	21.2	23.4	26.7	33.6
2015	1.5	9.2	14.0	17.9	26.7	21.1	21.3	23.6	26.7	33.3
2016	1.7	9.4	13.9	17.9	26.5	21.0	21.2	23.6	26.8	33.3
Average Individual Income Tax Rate (percent)										
1979	-0.2	4.1	7.4	10.1	15.9	11.1	12.3	14.1	16.8	22.6
1980	*	4.5	7.9	10.7	16.6	11.8	13.1	15.1	17.9	22.9
1981	0.4	4.9	8.2	11.0	16.7	12.1	13.5	15.4	18.2	21.9
1982	0.4	4.3	7.4	10.0	15.3	11.1	12.2	13.8	16.6	20.6
1983	0.4	3.9	6.7	9.0	14.1	10.3	11.1	12.6	14.8	19.7
1984	0.8	4.1	6.6	8.8	13.9	10.1	10.7	12.3	14.5	19.5
1985	0.6	4.1	6.5	8.8	14.0	10.2	10.8	12.4	14.6	19.1
1986	0.4	4.0	6.5	8.8	14.2	10.4	10.8	12.4	14.8	18.6
1987	-0.7	3.2	5.8	8.1	14.9	10.3	10.6	12.8	15.9	21.8
1988	-1.4	3.2	5.9	8.2	14.9	10.5	10.6	12.5	15.6	21.1
1989	-1.9	3.0	5.9	8.3	14.7	10.3	10.7	12.6	15.6	20.4
1990	-1.2	3.4	6.0	8.2	14.5	10.2	10.6	12.3	15.3	20.3
1991	-2.1	3.0	5.8	8.1	14.4	9.9	10.4	12.2	15.0	21.0
1992	-2.7	2.6	5.5	7.8	14.6	10.0	10.2	12.1	15.1	21.6
1993	-3.2	2.5	5.4	7.7	14.9	10.1	10.0	11.9	15.2	23.7
1994	-5.1	2.0	5.4	7.8	15.1	10.1	10.2	12.2	15.4	23.7
1995	-5.7	2.1	5.4	7.8	15.6	10.3	10.4	12.4	15.9	24.4
1996	-6.4	2.0	5.4	7.9	16.1	10.7	10.4	12.6	16.4	24.8
1997	-6.2	2.3	5.6	8.0	16.4	11.1	10.7	12.9	16.8	24.4
1998	-6.1	1.7	5.1	7.9	16.6	11.0	10.8	13.2	17.2	23.9
1999	-5.7	1.7	5.1	8.0	17.2	11.5	11.0	13.5	17.7	24.5
2000	-6.1	1.8	5.1	8.1	17.6	11.8	11.3	13.7	18.1	24.7
2001	-6.5	0.5	4.0	7.1	16.5	10.5	10.3	12.9	17.1	24.6
2002	-7.0	*	3.6	6.7	15.6	9.7	9.8	12.3	16.3	24.2
2003	-7.0	-0.9	2.8	5.9	13.8	8.5	8.5	10.9	14.6	21.0
2004	-7.2	-0.7	3.0	5.9	14.0	8.8	8.6	10.9	15.0	20.2
2005	-7.5	-0.7	3.0	6.0	14.2	9.1	8.6	10.9	15.3	19.8
2006	-7.5	-0.6	3.0	6.0	14.3	9.2	8.7	11.0	15.3	19.5
2007	-7.5	-0.2	3.3	6.2	14.5	9.4	8.9	11.2	15.6	19.5
2008	-11.6	-2.7	1.4	4.8	14.1	8.0	7.9	10.8	15.4	20.5
2009	-12.8	-2.8	1.4	4.7	13.4	7.5	7.7	10.3	14.7	21.1
2010	-12.9	-2.4	1.7	5.1	13.8	7.9	8.2	10.8	15.2	20.2
2011	-11.1	-1.5	2.7	6.0	14.2	8.7	8.9	11.3	15.7	20.3
2012	-10.9	-1.5	2.8	6.1	14.7	9.2	9.1	11.6	16.1	19.9
2013	-11.0	-1.3	2.9	6.2	15.5	9.6	9.3	11.6	16.1	23.7
2014	-11.5	-1.6	2.8	6.4	16	10	9.4	11.9	16.6	24

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2015	-11.6	-1.3	3.0	6.6	16.2	10.1	9.7	12.2	16.9	24.0
2016	-10.9	-1.2	3.1	6.7	16.0	10.0	9.7	12.3	16.9	23.7

Average Payroll Tax Rate (percent)

1979	6.0	7.7	8.5	8.5	5.5	6.9	7.9	7.1	4.4	1.0
1980	6.0	7.6	8.5	8.5	5.6	7.0	7.9	7.0	4.7	1.1
1981	6.7	8.2	9.0	9.1	6.1	7.5	8.6	7.7	5.2	1.3
1982	7.1	8.0	8.9	9.0	6.3	7.6	8.6	8.1	5.6	1.6
1983	7.4	7.9	8.8	9.0	6.3	7.5	8.8	7.9	5.7	1.5
1984	7.6	8.4	9.1	9.2	6.4	7.7	9.0	8.1	5.8	1.4
1985	7.8	8.7	9.4	9.5	6.5	7.9	9.3	8.4	6.0	1.4
1986	8.0	8.7	9.4	9.7	6.1	7.8	9.5	8.6	5.8	1.1
1987	7.8	8.5	9.3	9.7	6.7	8.1	9.6	8.7	6.1	1.6
1988	8.1	8.9	9.7	10.1	6.6	8.2	9.9	9.0	6.2	1.3
1989	8.3	8.9	9.7	10.0	6.6	8.2	9.7	8.8	6.1	1.5
1990	8.6	9.2	9.8	10.1	6.9	8.4	10.0	9.1	6.5	1.6
1991	8.8	9.0	9.6	10.1	7.4	8.7	10.0	9.4	7.2	2.2
1992	9.0	8.8	9.6	10.0	7.2	8.5	10.1	9.3	7.1	1.9
1993	9.1	8.6	9.6	10.0	7.3	8.5	10.0	9.3	7.3	2.1
1994	9.0	8.6	9.6	10.1	7.5	8.6	10.1	9.5	7.3	2.7
1995	9.2	8.8	9.6	10.1	7.3	8.5	9.9	9.5	7.0	2.4
1996	9.4	9.0	9.6	10.0	6.9	8.3	9.8	9.1	6.7	2.3
1997	9.4	9.1	9.8	10.0	6.7	8.2	9.9	9.0	6.5	2.1
1998	9.5	9.2	9.7	10.1	6.6	8.2	10.0	9.0	6.4	2.0
1999	9.2	9.3	9.8	10.1	6.5	8.1	10.0	8.9	6.4	2.0
2000	9.3	9.2	9.7	10.1	6.3	8.0	9.9	9.0	6.4	2.0
2001	9.4	9.1	9.7	10.2	7.2	8.5	10.3	9.6	7.1	2.4
2002	9.4	8.9	9.5	9.9	7.4	8.5	10.2	9.6	7.4	2.5
2003	9.3	8.8	9.3	9.9	7.3	8.4	10.1	9.6	7.4	2.4
2004	9.3	8.6	9.3	9.8	6.7	8.1	9.9	9.4	6.9	2.0
2005	9.4	8.7	9.3	9.7	6.2	7.7	9.7	8.9	6.3	1.7
2006	9.7	8.7	9.2	9.6	6.0	7.5	9.6	8.7	6.2	1.6
2007	9.8	9.0	9.3	9.6	5.8	7.5	9.5	8.6	6.0	1.6
2008	9.8	8.8	9.2	9.6	6.6	8.0	9.7	9.2	6.8	2.0
2009	9.8	8.4	8.9	9.3	7.2	8.3	9.7	9.3	7.5	2.5
2010	9.9	8.4	8.7	9.2	6.8	7.9	9.5	9.1	7.2	2.2
2011	8.5	7.3	7.6	8.0	5.9	6.9	8.3	7.9	6.2	2.1
2012	8.5	7.3	7.6	8.0	5.6	6.7	8.3	7.9	6.0	1.7
2013	9.9	8.4	8.8	9.2	6.7	7.9	9.4	9.1	6.9	2.4
2014	9.8	8.5	9.0	9.3	6.4	7.7	9.4	8.8	6.7	2.1
2015	9.8	8.5	8.9	9.3	6.5	7.8	9.4	9.0	6.6	2.2
2016	9.5	8.6	8.9	9.3	6.6	7.8	9.4	8.9	6.7	2.3

Average Corporate Income Tax Rate (percent)

1979	1.5	1.8	2.0	2.2	5.0	3.4	2.6	3.1	5.2	11.0
1980	1.2	1.5	1.7	1.9	4.1	2.8	2.2	2.8	4.2	8.6
1981	1.0	1.1	1.4	1.5	3.2	2.2	1.7	2.1	3.3	6.9
1982	0.7	0.7	0.9	0.9	1.9	1.4	1.1	1.2	1.8	4.3
1983	0.9	0.9	1.1	1.2	2.5	1.8	1.4	1.6	2.4	5.1
1984	1.0	1.0	1.3	1.4	2.8	2.0	1.6	1.8	2.6	5.6
1985	0.8	1.0	1.1	1.3	2.6	1.9	1.4	1.7	2.4	5.1
1986	0.9	0.9	1.2	1.3	2.6	1.9	1.4	1.6	2.4	4.6
1987	1.1	1.3	1.5	1.7	3.3	2.4	1.8	2.2	3.3	6.2
1988	1.1	1.2	1.5	1.6	3.2	2.4	1.8	2.1	3.1	5.8
1989	1.0	1.2	1.4	1.6	3.1	2.3	1.8	2.1	3.0	5.8
1990	1.0	1.1	1.3	1.5	3.0	2.2	1.7	2.0	2.9	5.6
1991	0.9	1.0	1.3	1.4	2.7	2.0	1.5	1.8	2.6	5.4
1992	1.0	1.0	1.3	1.5	3.0	2.2	1.6	2.0	2.8	5.7
1993	1.1	1.2	1.4	1.6	3.5	2.5	1.8	2.3	3.3	7.0
1994	1.2	1.2	1.6	1.7	3.7	2.7	1.9	2.3	3.4	7.7
1995	1.2	1.3	1.6	1.8	4.0	2.8	2.1	2.5	3.7	7.7
1996	1.2	1.3	1.6	1.8	4.0	2.9	2.2	2.6	3.7	7.5
1997	1.1	1.2	1.6	1.8	4.0	2.9	2.1	2.6	3.7	7.0
1998	1.0	1.1	1.4	1.6	3.6	2.6	1.8	2.3	3.2	6.3
1999	1.0	1.1	1.4	1.6	3.5	2.5	1.8	2.3	3.2	5.9
2000	1.0	1.1	1.4	1.5	3.3	2.4	1.8	2.1	3.0	5.4
2001	0.7	0.8	1.0	1.1	2.5	1.8	1.2	1.4	2.1	4.8
2002	0.6	0.7	0.9	1.0	2.3	1.6	1.1	1.3	1.9	4.9
2003	0.8	0.9	1.1	1.2	3.1	2.2	1.4	1.6	2.5	6.7
2004	1.0	1.0	1.2	1.4	3.8	2.6	1.6	2.0	3.0	7.5
2005	1.2	1.3	1.6	1.8	4.7	3.3	2.1	2.6	3.9	8.4
2006	1.3	1.3	1.7	1.9	4.9	3.5	2.3	2.8	4.0	8.5
2007	1.1	1.2	1.4	1.6	4.1	3.0	1.9	2.4	3.4	7.0
2008	0.7	0.7	0.9	1.0	2.7	1.9	1.1	1.4	2.0	5.3
2009	0.6	0.6	0.7	0.8	2.2	1.5	0.9	1.1	1.6	5.0
2010	0.8	0.7	0.9	1.0	3.0	2.1	1.2	1.5	2.0	6.6
2011	0.7	0.7	0.9	1.0	2.9	2.0	1.2	1.4	2.0	6.4
2012	0.8	0.8	0.9	1.1	3.3	2.3	1.3	1.6	2.3	6.7

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2013	0.9	0.9	1.1	1.3	3.6	2.5	1.6	1.9	2.8	7.3
2014	1.0	0.9	1.1	1.3	3.8	2.7	1.7	2.1	3.0	7.3
2015	0.9	0.9	1.1	1.2	3.5	2.5	1.5	1.9	2.7	6.9
2016	0.9	0.9	1.0	1.2	3.5	2.5	1.5	1.9	2.7	7.1

Average Excise Tax Rate (percent)

1979	1.9	1.3	1.1	0.9	0.7	1.0	0.9	0.8	0.7	0.5
1980	1.6	1.1	0.9	0.8	0.6	0.8	0.7	0.7	0.6	0.4
1981	1.5	1.0	0.9	0.7	0.6	0.8	0.7	0.6	0.5	0.4
1982	1.7	1.1	0.9	0.8	0.6	0.8	0.7	0.6	0.5	0.3
1983	2.4	1.3	1.0	0.9	0.7	0.9	0.8	0.7	0.6	0.4
1984	2.6	1.4	1.1	1.0	0.7	1.0	0.8	0.8	0.7	0.4
1985	2.6	1.4	1.1	0.9	0.7	0.9	0.8	0.7	0.6	0.4
1986	2.4	1.3	1.1	0.9	0.6	0.9	0.8	0.7	0.6	0.4
1987	2.6	1.4	1.1	0.9	0.7	0.9	0.8	0.8	0.6	0.4
1988	2.4	1.4	1.1	0.9	0.6	0.9	0.8	0.7	0.6	0.4
1989	2.2	1.2	1.0	0.9	0.6	0.8	0.8	0.7	0.6	0.3
1990	2.3	1.2	1.0	0.9	0.6	0.9	0.8	0.7	0.6	0.3
1991	2.6	1.4	1.2	1.0	0.7	1.0	0.8	0.7	0.6	0.4
1992	2.7	1.5	1.2	1.0	0.7	1.0	0.9	0.8	0.6	0.3
1993	3.0	1.5	1.2	1.0	0.7	1.0	0.9	0.8	0.7	0.4
1994	3.1	1.7	1.3	1.1	0.7	1.1	0.9	0.8	0.7	0.4
1995	2.8	1.6	1.3	1.1	0.7	1.0	0.9	0.8	0.6	0.3
1996	2.7	1.5	1.2	0.9	0.6	0.9	0.8	0.7	0.6	0.3
1997	2.6	1.5	1.1	0.9	0.6	0.9	0.8	0.7	0.6	0.3
1998	2.5	1.4	1.2	0.9	0.6	0.9	0.8	0.7	0.6	0.3
1999	2.6	1.6	1.3	1.0	0.6	1.0	0.9	0.8	0.6	0.3
2000	2.4	1.4	1.1	0.9	0.5	0.9	0.8	0.7	0.5	0.2
2001	2.5	1.4	1.1	0.9	0.5	0.9	0.8	0.6	0.5	0.2
2002	2.5	1.4	1.1	0.9	0.5	0.9	0.7	0.6	0.5	0.3
2003	2.6	1.4	1.1	0.9	0.5	0.8	0.7	0.6	0.5	0.3
2004	2.2	1.3	1.0	0.9	0.5	0.8	0.7	0.6	0.5	0.3
2005	2.4	1.3	1.0	0.8	0.5	0.8	0.7	0.6	0.5	0.2
2006	2.4	1.2	0.9	0.7	0.4	0.7	0.6	0.5	0.4	0.2
2007	1.8	1.0	0.8	0.7	0.4	0.6	0.6	0.5	0.4	0.1
2008	2.0	1.0	0.8	0.6	0.4	0.6	0.5	0.5	0.4	0.2
2009	2.1	1.0	0.8	0.6	0.4	0.6	0.5	0.5	0.4	0.2
2010	2.4	1.1	0.8	0.6	0.4	0.6	0.5	0.4	0.4	0.2
2011	2.4	1.1	0.9	0.7	0.4	0.7	0.5	0.5	0.4	0.2
2012	2.5	1.2	0.9	0.7	0.4	0.7	0.6	0.5	0.4	0.2
2013	2.5	1.2	0.9	0.7	0.4	0.7	0.6	0.5	0.4	0.2
2014	2.6	1.2	1.0	0.8	0.5	0.7	0.7	0.6	0.4	0.2
2015	2.4	1.2	1.0	0.8	0.4	0.7	0.7	0.6	0.4	0.2
2016	2.2	1.1	0.9	0.7	0.4	0.7	0.6	0.5	0.4	0.2

Source: Congressional Budget Office, <https://www.cbo.gov/publication/54646> (Last accessed July 19, 2019).

Notes: Effective tax rates are calculated by dividing taxes by comprehensive household income; * = between -0.05 and 0.05 percent.

Comprehensive household income equals pretax cash income plus income from other sources. Pretax cash income is the sum of wages, salaries, self-employment income, rents, taxable and nontaxable interest, dividends, realized capital gains, cash transfer payments, and retirement benefits plus taxes paid by businesses (corporate income taxes and the employer's share of Social Security, Medicare, and federal unemployment insurance payroll taxes) and employee contributions to 401(k) retirement plans. Other sources of income include all in-kind benefits (Medicare, Medicaid, employer-paid health insurance premiums, food stamps, school lunches and breakfasts, housing assistance, and energy assistance).

Income categories are defined by ranking all people by their comprehensive household income adjusted for household size—that is, divided by the square root of the household's size. (A household consists of the people who share a housing unit, regardless of their relationships.) Quintiles, or fifths, contain equal numbers of people. Households with negative income (business or investment losses larger than other income) are excluded from the lowest income category but are included in totals.

Individual income taxes are attributed directly to households paying those taxes. Social insurance, or payroll, taxes are attributed to households paying those taxes directly or paying them indirectly through their employers. Corporate income taxes are attributed to households according to their share of capital income. Federal excise taxes are attributed to them according to their consumption of the taxed good or service.