

**Table 7**  
**Correlation of Changes in Executive Wealth with Firm Performance, 1936-2005**

	Dollar change in wealth for \$1000 change in firm market value (Jensen-Murphy)	Dollar change in wealth for a 1 percent increase in firm's rate of return (Equity at Stake)
1936 – 1940	1.14 (0.66)	18,075 (5,122)
1941 – 1949	0.380 (0.121)	7,738 (1,867)
1950 - 1959	0.359 (0.096)	23,378 (2,865)
1960 - 1969	0.292 (0.125)	40,269 (7,067)
1970 - 1979	0.128 (0.048)	22,822 (3,710)
1980 - 1989	0.258 (0.072)	37,086 (5,151)
1990 - 1999	0.774 (0.270)	135,527 (22,986)
2000 - 2005	0.474 (0.092)	151,508 (30,123)

Note. Based on the three-highest paid executives in the 50 largest firms in 1940, 1960, and 1990 (a total of 101 firms). The change in executive wealth is defined as the sum of total compensation (salary, bonuses, and stock options granted during the year) and the revaluation of stock and stock option holdings. The Jensen-Murphy statistic is calculated by regressing the dollar change in each executive's wealth on the dollar change in the executive's firm market value during the year (measured in thousands). The Equity at Stake is calculated by regressing the dollar change in each executive's wealth on the percentage change in the executive's firm value, measured by the firm's rate of return. Results are based on median regressions estimated separately for each decade. Bootstrapped standard errors are given in parentheses and are clustered by firm. The year 1946 is excluded because the distribution of rates of return is unusually low and highly skewed in that year, possibly due to the end of World War II (see footnote 42 for more details).

**Table 8**  
**Pay-to-Performance Correlations by Type of Wealth**

	Dollar change in compensation for \$1000 dollar change in firm market value (Jensen-Murphy)			Dollar change in compensation for a 1 percent increase in firm's rate of return (Equity at Stake)		
	Compensation	Option Holdings	Stock Holdings	Compensation	Option Holdings	Stock Holdings
1936 - 1940	0.051 (0.030)	0 --	1.015 (0.487)	276 (891)	0 --	18,132 (3,878)
1941 - 1949	0.118 (0.061)	0 --	0.315 (0.094)	516 (595)	0 --	5058 (1,131)
1950 - 1959	0.061 (0.016)	0 --	0.195 (0.036)	1,170 (638)	0 --	11,602 (2,423)
1960 - 1969	0.010 (0.007)	0.043 (0.010)	0.167 (0.080)	-472 (657)	6,654 (1,623)	21,939 (3,680)
1970 - 1979	-0.003 (0.004)	0.032 (0.014)	0.084 (0.034)	5 (610)	4,201 (922)	12,374 (2,395)
1980 - 1989	0.035 (0.015)	0.099 (0.021)	0.094 (0.027)	3,509 (1,284)	10,496 (1,955)	13,825 (2,260)
1990 - 1999	0.109 (0.017)	0.357 (0.046)	0.219 (0.098)	16,839 (4,076)	57,587 (9,680)	37,408 (7,907)
2000 - 2005	0.011 (0.037)	0.263 (0.045)	0.167 (0.053)	8,951 (11,242)	84,901 (22,390)	44,401 (6,783)

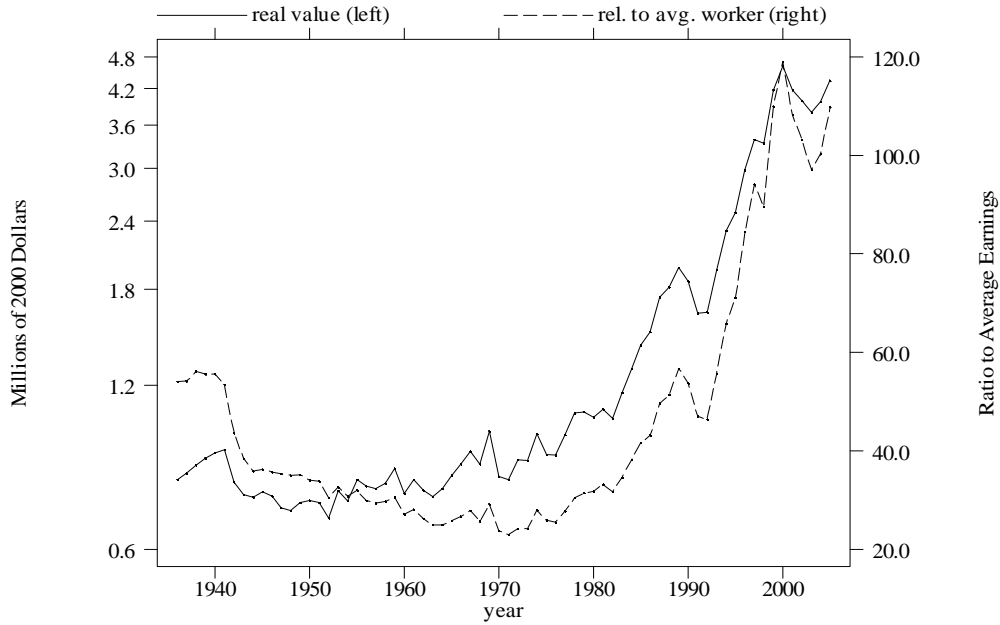
Note. Based on the three-highest paid executives in the 50 largest firms in 1940, 1960, and 1990 (a total of 101). Compensation is the sum of salaries, bonuses, and the Black-Scholes value of stock option grants. Option holdings are the revaluation of stock options held at the end of the previous year. Stock holdings are the revaluation of company stock held at the end of the previous year. The Jensen-Murphy statistic is calculated by regressing the dollar change in the corresponding remuneration measure on the dollar change in the executive's firm market value during the year (measured in thousands). The Equity at Stake is calculated by regressing the dollar change in the corresponding remuneration measure on the percentage change in the executive's firm value, measured by the firm's rate of return. Estimates are based on median regressions estimated separately for each type of wealth in each decade. Totals across each row do not add up to the correlation of changes in total wealth reported in Table 6 because the estimates are based on median regressions. Bootstrapped standard errors are given in parentheses and are clustered by firm. The year 1946 is excluded because the distribution of rates of return is unusually low and highly skewed in that year, possibly due to the end of World War II (see footnote 42 for more details).

**Table 9**  
**The Strength of Managerial Incentives:**  
**Change in Wealth Due to Raising the Firm's Rate of Return from the 50<sup>th</sup> to the 70<sup>th</sup> Percentile**

	Median Across Executives		
	\$ change in wealth	Percent change in wealth =	Elasticity =
		(1)	(2)
	total comp.+ $\Delta$ wealth at rate of return <sup>50th</sup>	rate of return <sup>70th</sup> – rate of return <sup>50th</sup>	
	(1)	(2)	(3)
1936 – 1940	278,611	29.6	2.07
1941 – 1949	103,838	9.8	0.68
1950 - 1959	246,359	27.7	1.93
1960 - 1969	624,862	51.9	3.63
1970 - 1979	353,664	30.4	2.12
1980 - 1989	652,647	30.3	2.11
1990 - 1999	2,212,950	55.8	3.90
2000 - 2005	3,851,259	60.9	4.26

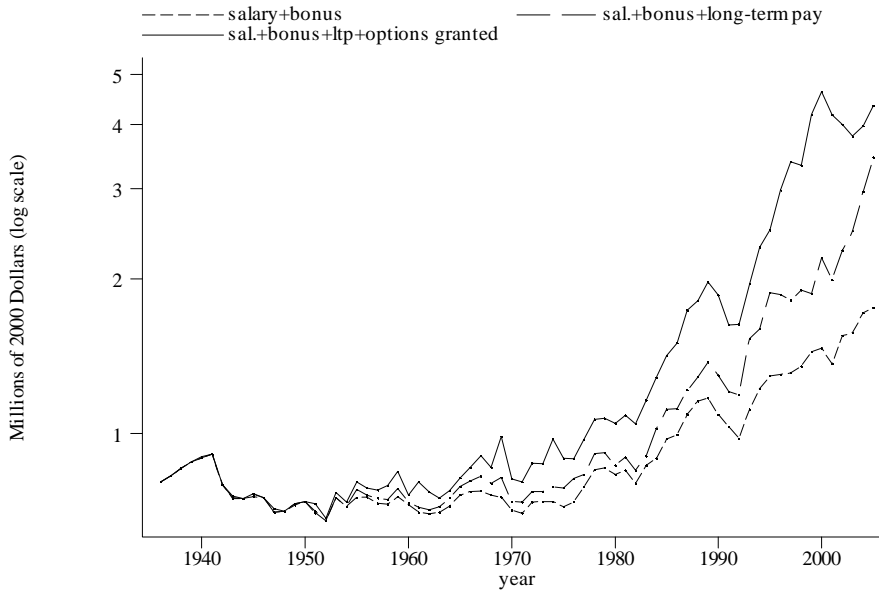
Note. Based on the three-highest paid executives in the 50 largest firms in 1940, 1960, and 1990 (a total of 101). The dollar change in wealth is defined as the revaluation of stock and option holdings assuming a rate of return at the 70<sup>th</sup> percentile (22.7%) minus the revaluation evaluated at the 50<sup>th</sup> percentile rate of return (8.4%). Col. (1) shows the median of this value across executives in each decade. The percent change in wealth is the dollar change in wealth for each individual executive divided by the total change in an executive's wealth at median firm performance, defined as the revaluation of stock and option holdings at the 50<sup>th</sup> percentile rate of return plus salaries, bonuses and stock option grants. Col. (2) presents the median of this value across executives in each decade. Col. (3) approximates an elasticity of changes in wealth to changes in firm performance by dividing col. (2) by the percentage difference in firm value between the 50<sup>th</sup> and 70<sup>th</sup> percentiles of firm performance (22.7 – 8.4 = 14.3%). The year 1946 is excluded because the distribution of rates of return is unusually low and highly skewed in that year, possibly due to the end of World War II (see footnote 42 for more details).

**Figure 1**  
**Median Value of Total Compensation, 1936-2005**



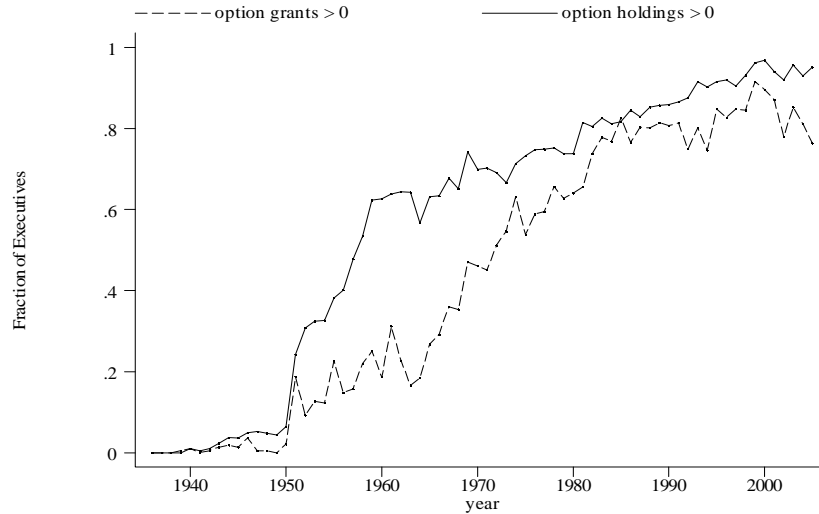
Note: Total compensation is composed of salary, bonuses, long-term bonus payments, and stock option grants. Relative compensation is defined as total compensation divided by total wage and salary accruals per full-time equivalent employee from table 6.6 of the National Income and Product Accounts. Based on the three highest-paid officers in the largest 50 firms in 1940, 1960 and 1990 (a total of 101 firms).

**Figure 2**  
**Structure of Total Compensation, 1936-2005**



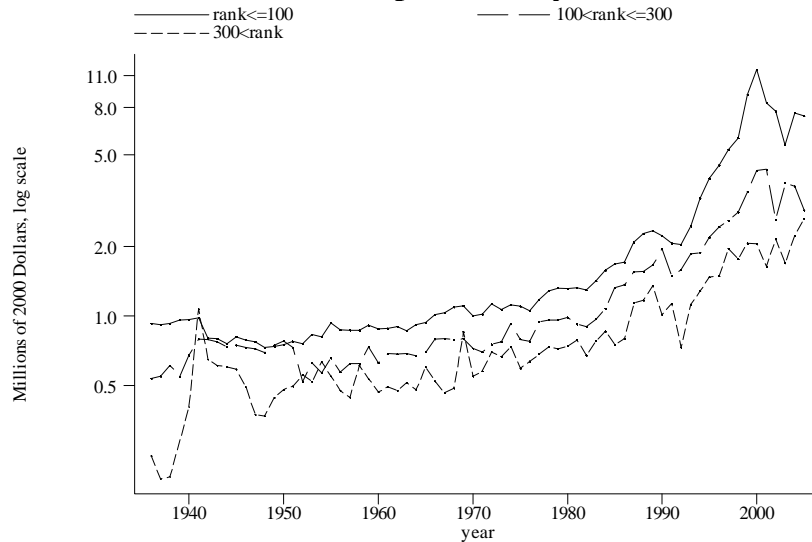
Note: Each line shows the median value of compensation defined as an increasing number of types: salary and current bonuses (paid out in stock or in cash); salary, current bonuses, and long-term incentive payments (paid out in stock or in cash); and salary, current and long-term bonuses, and the Black-Scholes value of stock options granted. Based on the three highest-paid officers in the largest 50 firms in 1940, 1960 and 1990 (a total of 101 firms).

**Figure 3**  
**Fraction of Top Executives Granted and Holding Stock Options**



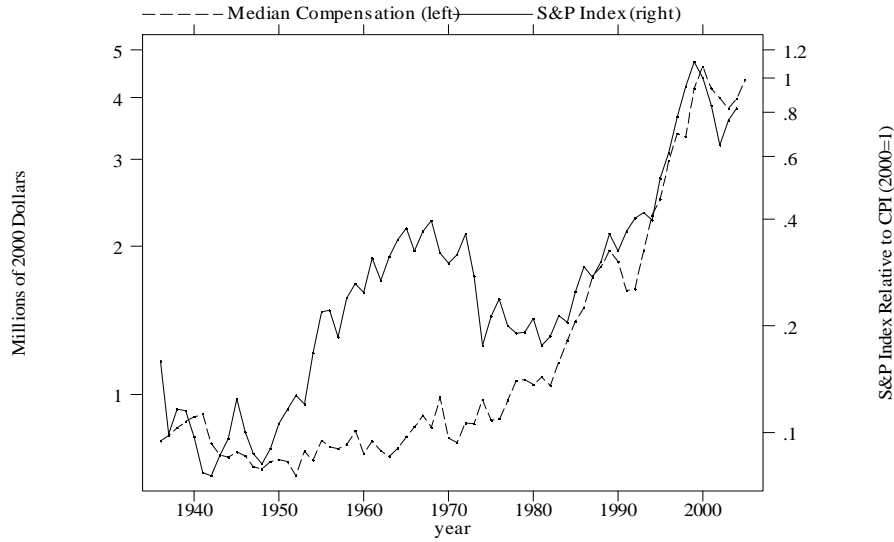
Note: Based on the three highest-paid officers in the largest 50 firms in 1940, 1960 and 1990 (a total of 101 firms). Option grants>0 shows the fraction of executives in the year that were granted at least one stock option. Option holdings>0 shows the fraction of executives in the year that held at least one stock option. When not explicitly listed in proxy statements, stock option holdings are calculated based on the history of stock option grants and stock option exercises for each individual. The fraction of executives granted options includes imputations for cases when the annual grants are not listed, but the cumulative number options awarded to each individual over a multi-year period is reported. See Appendix Section 2.3 for details on the imputation.

**Figure 4**  
**Median Total Compensation by Firm Size**



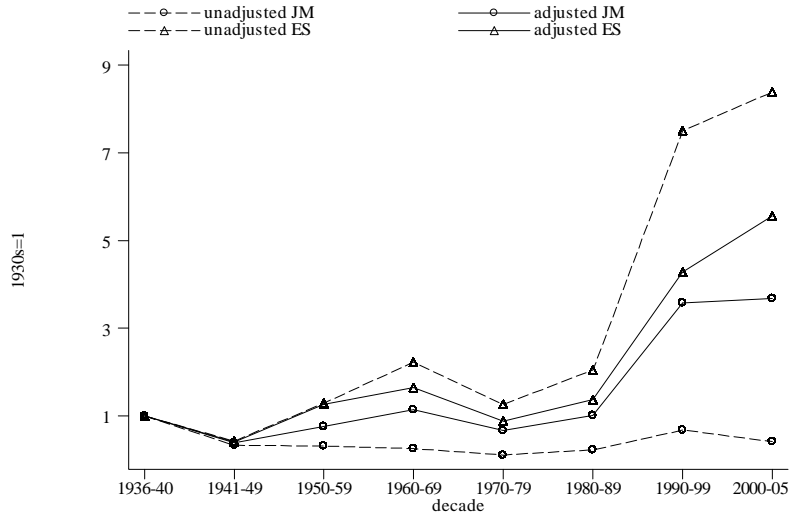
Note: Total compensation is composed of salary, bonuses, long-term bonus payments, and stock option grants. Based on the three highest-paid officers in the largest 50 firms in 1940, 1960 and 1990 (a total of 101 firms). Rank<=100 is the median total compensation across all executives in the sample in firms ranked among the top 100 according to market value in the year; 100<rank=300 is median total compensation for the executives in firms ranked 101 to 300; 300<rank is median total compensation for the executives in all firms in the sample that ranked below 300 in the year. Rankings by market value are based on all firms appearing in the CRSP database, which includes all publicly-traded firms in the NYSE, AMEX and NASDAQ stock markets. Market value for each firm is measured at the end of the fiscal year.

**Figure 5**  
**Total Compensation and the S&P Index**



Note: Total compensation is composed of salary, bonuses, long-term bonus payments, and stock option grants. Based on the three highest-paid officers in the largest 50 firms in 1940, 1960 and 1990 (a total of 101 firms). The S&P index is expressed relative to the CPI and equals 1 in 2000.

**Figure 6**  
**Unadjusted and Size-Adjusted Indexes of Pay-to-Performance**



Note. Based on the three-highest paid executives in the 50 largest firms in 1940, 1960, and 1990 (a total of 101 firms). All measures are indexed to 1 for the 1936-40 period. Results are based on median regressions estimated separately for each decade. The unadjusted ES is the value of equity at stake and the unadjusted JM is the Jensen-Murphy statistic estimated from equations 2 and 3 in the text. The Jensen-Murphy statistic is calculated by regressing the dollar change in the corresponding remuneration measure on the dollar change in the executive's firm market value during the year (measured in thousands). The Equity at Stake is calculated by regressing the dollar change in the corresponding remuneration measure on the percentage change in the executive's firm value, measured by the firm's rate of return. To control for the effect of changes in firm size on these statistics, the adjusted JM and ES statistics are computed from similar regressions that include controls for firm size and their interaction with firm performance. Size adjustments are described in detail in Section 5.4 and Appendix Section 4. The year 1946 is excluded because the distribution of rates of return is unusually low and highly skewed in that year, possibly due to the end of World War II (see footnote 42 for more details).