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ABSTRACT

We empirically examine two competing views of CEO pay. In the contracting view, pay is used to solve an agency problem: the compensation committee optimally chooses pay contracts which give the CEO incentives to maximize shareholder wealth. In the skimming view, pay is the result of an agency problem: CEOs have managed to capture the pay process so that they set their own pay, constrained somewhat by the availability of cash or by a fear of drawing shareholders' attention. To distinguish these views, we first examine how CEO pay responds to luck, observable shocks to performance beyond the CEO's control. Using several measures of luck, such as changes in oil price for the oil industry, we find substantial pay for luck. Pay responds about as much to a "lucky" dollar as to a general dollar. Most importantly, we find that better governed firms pay their CEOs less for luck. Our second test examines how much CEOs are charged for the options they are granted. Since options never appear on balance sheets, they might offer an appealing way to skim. Here again we find a crucial role for governance: CEOs in better governed firms are charged more for the options they are given. These results suggest that both views of CEO pay matter. In poorly governed firms, the skimming view fits better (pay for luck and little charge for options) while in well governed firms, the contracting view fits better (filtering out of luck and charging for options).

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Table 1: Pay for Luck for Oil CEOs
(Luck Measure is log Price of Crude Oil)
Dependent Variable: Ln (Total Compensation)[a]

Specification:	General (1)	Luck (2)	General (3)	Luck (4)
Acc. Rate of Return	.82 (.16)	2.15 (1.04)	—	—
Ln(Sh. Wealth)	—	—	.38 (.03)	.35 (.17)
Age	.05 (.02)	.07 (.03)	.05 (.02)	.05 (.02)
$Age^2 * 100$	-.04 (.02)	-.05 (.02)	-.04 (.02)	-.04 (.02)
Tenure	.01 (.01)	.01 (.01)	.01 (.01)	.01 (.01)
$Tenure^2 * 100$	-.03 (.02)	-.03 (.01)	-.03 (.02)	-.03 (.02)
Firm Fixed Effects	Yes	Yes	Yes	Yes
Year Quadratic	Yes	Yes	Yes	Yes
Sample Size	827	827	827	827
Adjusted R^2	.70	—	.75	—

[a]Notes:

1. Dependent variable is the logarithm of total compensation. Performance measure is accounting rate of return in columns (1) and (2) and the logarithm of shareholder wealth in columns (3) and (4). All nominal variables are expressed in 1977 dollars.
2. Summary statistics for the sample of oil firms are available in Appendix Table A1.
3. The luck regression (columns 2 and 4) instrument for performance with the logarithm of the price of a barrel of crude oil in that year, expressed in 1977 dollars.
4. Each regression includes firm fixed effects and a quadratic in year.
5. Standard errors are in parentheses.

Table 3: Pay for Luck[a]

Dep. Var.:	Cash Comp		Ln(Cash)		Ln(Tot Comp)		Ln(Cash)		Ln(Tot Comp)	
Spec.:	General	Luck	General	Luck	General	Luck	General	Luck	General	Luck
Panel A: Luck Measure is Exchange Rate Shock										
Income	.17 (.02)	.35 (.16)	—	—	—	—	—	—	—	—
$\frac{Income}{Assets}$	—	—	2.13 (.16)	2.94 (1.28)	2.36 (.28)	4.39 (2.17)	—	—	—	—
Ln(Shareholder Wealth)	—	—	—	—	—	—	.22 (.02)	.32 (.13)	.31 (.03)	.57 (.23)
Sample Size	1737	1737	1729	1729	1722	1722	1713	1713	1706	1706
Adjusted R^2	.75	—	.75	—	.58	—	.75	—	.59	—
Panel B: Luck Measure is Mean Industry Performance										
Income	.21 (.02)	.34 (.10)	—	—	—	—	—	—	—	—
$\frac{Income}{Assets}$	—	—	2.18 (.12)	4.02 (.53)	2.07 (.21)	4.00 (.86)	—	—	—	—
Ln(Shareholder Wealth)	—	—	—	—	—	—	.20 (.01)	.22 (.12)	.25 (.02)	.29 (.19)
Sample Size	4684	4684	4648	4648	4624	4624	4608	4608	4584	4584
Adjusted R^2	.77	—	.81	—	.70	—	.82	—	.71	—

[a]Notes:

1. Dependent variable is the level of salary and bonus in columns (1) and (2), the logarithm of salary and bonus in columns (3), (4), (7) and (8) and the logarithm of total compensation in columns (5), (6), (9) and (10). Performance measure is operating income before extraordinary items in columns (1) and (2) (in millions), operating income to total assets in columns (3) to (6) and the logarithm of shareholder wealth in columns (7) to (10). All nominal variables are expressed in real dollars.
2. In the luck regressions in Panel A, the performance measure is instrumented with current and lagged appreciation and depreciation dummies and current and lagged exchange rate index growth. First-stage regressions are presented in Appendix Table A2.
3. In the luck regressions in Panel B, the performance measure is instrumented with the total assets-weighted average performance measure in the firm's 2-digit industry (the firm itself is excluded from the mean calculation).
4. Each regression includes firm fixed effects, year fixed effects and demographic controls (quadratics in age and tenure).
5. Standard errors are in parentheses.

Table 4: Large Shareholders and Pay for Luck
(Luck Measure is Mean Industry Performance)
Dependent Variable: Ln(Total Compensation)[a]

Governance Measure:	Large Shareholders				Large Shareholders on Board			
Spec.:	General (1)	Luck (2)	General (3)	Luck (4)	General (5)	Luck (6)	General (7)	Luck (8)
$\frac{Income}{Assets}$	2.18	4.59	—	—	2.14	4.49	—	—
	(.238)	(.912)			(.217)	(.882)		
Governance* $\frac{Income}{Assets}$	-.094	-.416	—	—	-.181	-1.48	—	—
	(.094)	(.204)			(.176)	(.396)		
ln(Shareholder Wealth)	—	—	.249	.383	—	—	.258	.318
			(.018)	(.219)			(.017)	(.199)
Governance* ln(Shareholder Wealth)	—	—	.001	-.066	—	—	-.019	-.076
			(.007)	(.036)			(.016)	(.053)
Governance	-.009	.018	-.017	.411	-.006	.084	.100	.480
	(.011)	(.018)	(.049)	(.240)	(.021)	(.033)	(.108)	(.356)
Sample Size	4610	4610	4570	4570	4621	4621	4581	4581
Adj. R^2	.695		.706		.694		.706	

[a]Notes:

1. Dependent variable is the logarithm of total compensation. Performance measure is operating income to total assets. All nominal variables are expressed in real dollars.
2. In all the luck regressions, both the performance measure and the interaction of the performance measure with the governance measure are instrumented. The instruments are the asset-weighted average performance in the 2-digit industry and the interactions of the industry performance with that governance measure.
3. "Large Shareholders" indicates the number of blocks of at least five percent of the firm's common shares, whether the block holder is or is not a director. "Large Shareholders on Board" indicates the number of blocks of at least five percent of the firm's common shares that are held by directors of the board.
4. Each regression includes firm fixed effects, year fixed effects, a quadratic in age and a quadratic in tenure.
5. Standard errors are in parentheses.

Table 5: Tenure, Large Shareholders and Pay for Luck
(Luck Measure is Mean Industry Performance Mean Industry Performance)
Dependent Variable: Ln(Total Compensation)[a]

	Any Large Shareholder on the Board?							
	No		Yes		No		Yes	
Spec.:	Gen (1)	Luck (2)	General (3)	Luck (4)	General (5)	Luck (6)	General (7)	Luck (8)
$\frac{Income}{Assets}$	2.14 (.30)	3.35 (.96)	1.28 (.65)	2.47 (2.60)	—	—	—	—
CEO Tenure* $\frac{Income}{Assets}$	.00 (.02)	.13 (.05)	.063 (.045)	-.006 (.131)	—	—	—	—
Ln (Sh. Wealth)	—	—	—	—	.24 (.02)	.26 (.24)	.27 (.05)	.53 (.32)
CEO Tenure* Ln (Sh. Wealth)	—	—	—	—	.003 (.001)	.009 (.005)	-.005 (.003)	-.013 (.010)
CEO Tenure	.01 (.00)	-.00 (.01)	.010 (.011)	.016 (.016)	-.002 (.01)	-.045 (.04)	.044 (.020)	.084 (.059)
Sample Size	3884	3884	740	740	3841	3841	743	743
Adjusted R^2	.7030		.757		.715		.700	

[a]Notes:

1. Dependent variable is the logarithm of total compensation. All nominal variables are expressed in real dollars.
2. In all the luck regressions, both the performance measure and the interaction of the performance measure with the CEO tenure are instrumented. The instruments are the asset-weighted average performance in the 2-digit industry and the interactions of the industry performance with the CEO tenure.
3. Sample in columns (1), (2), (5) and (6) is the set of firm-year observations for which there is no large shareholder sitting on the board of directors; sample in columns (3), (4), (7) and (8) is the set of firm-year observations for which there is at least one large shareholder sitting on the board of directors.
4. Each regression includes firm fixed effects, year fixed effects, a quadratic in age and a quadratic in tenure.
5. Standard errors are in parentheses.

Table 6: Corporate Governance and Pay for Luck
(Luck Measure is Mean Industry Performance)
Dependent Variable: Ln(Total Compensation)[a]

Governance Measure:	Board Size				Fraction Insiders			
Spec.:	General (1)	Luck (2)	General (3)	Luck (4)	General (5)	Luck (6)	General (7)	Luck (8)
$\frac{Income}{Assets}$	2.61	5.19	—	—	2.30	2.27	—	—
	(.558)	(1.62)			(.453)	(1.24)		
Governance* $\frac{\textbf{Income}}{\textbf{Assets}}$	-.045	-.093	—	—	-.482	4.51	—	—
	(.043)	(.094)			(.853)	(2.69)		
ln(Sh. Wealth)	—	—	.216	.099	—	—	.241	.241
			(.034)	(.210)			(.029)	(.215)
Governance*	—	—	.002	.013	—	—	.027	.126
ln(Sh. Wealth)			(.002)	(.006)			(.05)	(.190)
Governance	.012	.015	-.013	-.080	.158	-.315	-.066	-.742
	(.005)	(.007)	(.016)	(.041)	(.129)	(.271)	(.407)	(1.29)
Sample Size	4624	4624	4584	4584	4624	4624	4584	4584
Adj. R^2	.695		.706		.695		.706	

Governance Measure:	Governance Index			
Spec.:	General (9)	Luck (10)	General (11)	Luck (12)
$\frac{Income}{Assets}$	2.07	4.23	—	—
	(.210)	(.865)		
Governance* $\frac{\textbf{Income}}{\textbf{Assets}}$	.007	-.216	—	—
	(.057)	(.134)		
ln(Sh. Wealth)	—	—	.249	.252
			(.016)	(.232)
Governance*	—	—	-.003	-.033
ln(Sh. Wealth)			(.004)	(.015)
Governance	-.016	.000	.010	.210
	(.007)	(.011)	(.027)	(.103)
Sample Size	4610	4610	4551	4551
Adj. R^2	.695		.705	

[a]Notes:

1. Dependent variable is the logarithm of total compensation. All nominal variables are deflated. Each regression includes firm fixed effects, year fixed effects, a quadratic in age and a quadratic in tenure.
2. "Board Size" indicates the number of members of the board of directors, as listed in the proxy statement near the start of the fiscal year. "Fraction Insiders" is the fraction of inside and "grey" directors on the board of directors. "Governance Index" is the unweighted average of 4 standardized governance variables (number of large shareholders, number of large shareholders on board, minus board size and one minus fraction insiders).
3. In all the luck regressions, both the performance measure and the interaction of the performance measure with the governance measure are instrumented. The instruments are the asset-weighted average performance in the 2-digit industry and the interactions of the industry performance with that governance measure.
4. Standard errors are in parentheses.