

Pay me now (and later): bonus boosts before pension freezes and executive departures

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Netspar International Workshop
Amsterdam 2015

Introduction

- This paper looks at one of the most important components of the executive pay packages, the executives pensions.
- We ask whether managers manipulate their pension formulas before anticipated pension freezes, departures or retirement.

Introduction

- Most of the literature on executive compensation has focused on the components of annual direct compensation, such as restricted stock and stock options (Jensen and Murphy (1990), Yermack (1995)).
- The less visible components of executive pay packages, such as executive pensions have been less scrutinized (Sundaram and Yermack (2007)).
- However, executive annual pension accruals are large. They make 13% of the CEOs total annual compensation and they are 36% greater than the salary, for CEOs of companies in S&P 500 in 2006.

Executive Pensions

DB plans for top executives typically consist of two parts:

- 1 Regular qualified plans: tax deductible contributions, limits imposed by the IRS (e.g., \$ 195,000 in 2011);
- 2 Supplemental Executive Retirement Plans (also called SERPs);
 - By construction, SERPs are Defined Benefit Plans.
 - However, contributions are not tax deductible.
 - As a consequence, these plans are largely unfunded (there are no dedicated assets).
 - Not subject to the limitation on maximum benefit amount.

Pensions: Disclosures

- Regular DB Pensions are regulated by ERISA (1974), and have been reported for years in Form 5500, at plan level;
- SERPs have been hidden in executive compensation proxies. The PV of these pension liabilities were only hinted in age / service / salary combinations disclosed in matrices, applicable to all executives.
 - SEC changed the format in 2006. Current disclosures requires firms to report the PV of these benefits and also the yearly changes.

DB Pensions Decline

- DB Plans have been the traditional (and the main) source of retirement income for many years, starting in the 1970s.
- Under these arrangements sponsors promise a fixed annuity to employees at retirement. The annuity depends on total compensation before retirement, years in service and a benefit factor (which depends on the generosity of the sponsor).
- These plans are funded, as dedicated assets accumulate in these plans, and strict funding rules enforce full funding requirements.

DB Pensions Decline

- The cost of maintaining these plans has increased over time, and the plans themselves became bigger and starting to have an impact on the operating activity.
- As plan closures proved complex, companies started to freeze these plans and offer alternative arrangements to participants.
- More often than not, these transitions have been costly to participants (especially for the older groups).

What happens to SERPs?

SERPs generally get frozen with regular pensions.

However, executives isolate themselves from the rest of the employees. Their pensions receive a boost right before the anticipated cessation of benefits.

How is this achieved?

- 1 An increase in the service years;
- 2 A boost in salary;
- 3 A boost in bonuses;

Examples:

Goodyear Tire & Rubber Company awarded its CEO, Mr. Keegan, and an annual bonus of \$12.3 million in 2007, the year before the company froze its DB plans. Mr. Keegan also received a service credit of 2.5 years for pension purposes for each year he was employed.

The CEO of Delta Air Lines Inc., Leo Mullin, received an additional 22 years of service credit in 2002, when he had been employed by the company for only five years and eight months. The company replaced its DB plans with a cash balance plan later that year.

Research Design and Findings

We use forthcoming pension freeze (in the subsequent year) to predict executive bonuses while controlling for various known determinants of annual bonuses.

- We find that, on average, top executives receive boosts in annual bonuses of 20-27% before pension freezes.

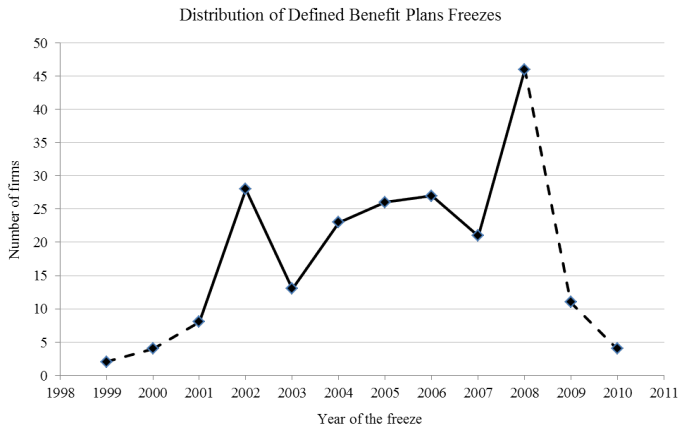
We run a similarly exercise prior to anticipated executive departures (e.g., retirement) when executives have strong incentives to boost annual bonuses.

- We find similar effects, supporting a manipulation rather than an optimal contracting argument.

Data Sources

- Primary sources:
 - 1 ExecuComp (Annual Compensation Table and Pension Benefit Table) from S&P
 - 2 Financial data from Compustat and stock return data from CRSP
- Sample period: 1999 - 2010
- Sources of DB plan freezes: Form 5500 and its paper attachments.
- Final sample: 1,224 firms with DB pension plans and all firm/executive characteristics needed, of which 213 were frozen (hard freeze) over our sample period.

Sample of Freezes



Univariate statistics

	Pre Freeze(1) =1			Pre Freeze(1) = 0		
	N	mean	p50	N	mean	p50
Bonus (log)	1302	5.175	5.760	64,012	4.903	5.505
Equity (log)	1302	5.238	6.188	64,002	5.081	6.038
Salary (log)	1302	6.046	6.105	64,012	5.945	5.951
Sales (log) LAG	1302	8.203	8.163	64,012	7.834	7.727
ROA	1302	0.014	0.024	64,012	0.035	0.036
ROA LAG	1302	0.033	0.031	64,012	0.036	0.037
Negative Income	1302	0.250	0.000	64,012	0.156	0.000
Income Increase	1302	0.561	1.000	64,012	0.601	1.000
Return	1302	-0.006	-0.016	64,012	0.144	0.088
Lagged Return	1302	0.099	0.025	64,012	0.133	0.065
Return Volatility	1302	0.115	0.091	64,012	0.107	0.091
MB	1302	2.028	1.730	64,012	2.749	1.970
Leverage	1302	0.252	0.228	64,012	0.260	0.249
Pension Obligation	1253	0.210	0.107	57,873	0.151	0.091
Underfunded	1253	0.512	1.000	57,873	0.426	0.000
Lagged Ind Median Cash Flow Volatility	1302	0.75	0.76	64,012	0.76	0.75
Service Years	317	18.998	19.000	19,025	18.426	18.000

Baseline Specification: Bonus Regressions

	All Firms with DBPs		Firms that Froze DBPs	
	(1)	(2)	(3)	(4)
Pre Freeze(1)	0.213** (0.097)	0.195** (0.092)	0.260*** (0.099)	0.266*** (0.096)
Salary (log)	0.832*** (0.045)	0.755*** (0.038)	0.930*** (0.075)	0.792*** (0.054)
Sales (log)	0.324*** (0.024)	0.050 (0.070)	0.323*** (0.047)	-0.086 (0.114)
ROA	0.535** (0.267)	0.512* (0.302)	1.308** (0.635)	1.186* (0.629)
Lagged ROA	0.677*** (0.240)	0.660** (0.286)	0.639 (0.535)	0.480 (0.541)
Negative Income	-0.613*** (0.077)	-0.545*** (0.076)	-0.536*** (0.151)	-0.637*** (0.154)
Income Increase	0.634*** (0.040)	0.618*** (0.039)	0.573*** (0.084)	0.557*** (0.086)
Return	0.584*** (0.040)	0.567*** (0.040)	0.616*** (0.078)	0.545*** (0.081)
Lagged Return	0.340*** (0.033)	0.311*** (0.037)	0.373*** (0.071)	0.297*** (0.074)
MB	0.004 (0.005)	-0.012*** (0.004)	0.005 (0.011)	-0.012 (0.008)
Leverage	0.281 (0.176)	-0.447* (0.248)	0.729* (0.373)	-0.497 (0.547)
Return Volatility	-3.692*** (0.430)	-3.927*** (0.428)	-5.677*** (0.914)	-5.617*** (1.011)
CEO Dummy	0.222*** (0.042)	0.278*** (0.037)	0.018 (0.073)	0.131** (0.059)
Constant	-2.828*** (0.263)	-0.036 (0.578)	-3.158*** (0.454)	1.332 (0.978)
Year Fixed Effect	Yes	Yes	Yes	Yes
Industry Fixed Effect	Yes	No	Yes	No
Firm Fixed Effect	No	Yes	No	Yes

Executive bonuses in years around pension freeze

	All Firms with DBPs		Firms that Froze DBPs	
	(1)	(2)	(3)	(4)
Pre Freeze(3)	0.038 (0.110)	0.050 (0.121)	0.066 (0.120)	0.077 (0.124)
Pre Freeze(2)	0.185 (0.113)	0.157 (0.126)	0.268** (0.127)	0.242* (0.127)
Pre Freeze(1)	0.325*** (0.101)	0.294*** (0.110)	0.462*** (0.121)	0.448*** (0.121)
Freeze	0.350*** (0.126)	0.311** (0.138)	0.451*** (0.140)	0.432*** (0.145)
Post Freeze(1)	0.080 (0.151)	0.089 (0.161)	0.259 (0.164)	0.272 (0.172)
Post Freeze(2)	-0.086 (0.177)	-0.118 (0.190)	0.068 (0.195)	0.049 (0.204)

Control Sample / Endogeneity concerns

First Stage: Probit	
ROA	-0.476* (0.290)
ROA lag	-0.032 (0.318)
Total Assets lag	0.050** (0.021)
Return	-0.039 (0.108)
Return lag	-0.042 (0.081)
M/B	-0.020** (0.008)
Leverage	-0.079 (0.191)
Industry Cash Flow Volatility	0.163 (0.230)
Underfunded	0.079 (0.067)
Relative Pension Size	0.554*** (0.108)
Constant	-2.815*** (0.399)

Second Stage: OLS	
Pre Freeze(1)	0.218** (0.085)
Salary (ln)	1.018*** (0.070)
Sales (ln) lag	0.242*** (0.034)
ROA	-0.715 (0.613)
ROA lag	0.487 (0.846)
Negative Income	-0.887*** (0.142)
Income Increase	0.771*** (0.105)
Return	0.977*** (0.124)
Return lag	0.451*** (0.116)
M/B	-0.002 (0.017)
Leverage	-0.472 (0.289)
Return Volatility	-4.741*** (0.791)
CEO Dummy	-0.034 (0.119)

Equity Awards and Pension Freezes

- To distinguish between other performance related effects on bonuses (possibly omitted unobserved variables), we turn our attention to equity awards.
- Good performance is typically accompanied by an overall increase in compensation.
- Most importantly, equity awards are not included in the covered compensation component of the pension formula.
- If results are driven but other factors we should see increases in equity awards as well.

Equity Awards and Pension Freezes

	All Firms with DBPs		Firms that Froze DBPs	
	(1)	(2)	(3)	(4)
Pre Freeze (1)	-0.093 (0.135)	-0.093 (0.131)	-0.054 (0.133)	-0.073 (0.132)
Salary (ln)	0.438*** (0.031)	0.216*** (0.075)	0.506*** (0.062)	0.027 (0.160)
Sales (ln) lag	0.957*** (0.078)	0.983*** (0.076)	0.799*** (0.140)	0.806*** (0.130)
ROA	0.472 (0.318)	0.513* (0.311)	0.878 (1.044)	0.36 (0.967)
ROA lag	0.765*** (0.264)	0.683*** (0.256)	1.286* (0.655)	0.732 (0.750)
Negative Income	0.008 (0.073)	-0.004 (0.069)	0.162 (0.158)	0.066 (0.141)
Income Increase	0.094** (0.043)	0.032 (0.038)	0.176** (0.082)	0.119 (0.080)
Return	0.051 (0.046)	0.072 (0.045)	0.001 (0.109)	-0.011 (0.104)
Return lag	0.104** (0.044)	0.098** (0.041)	0.129 (0.108)	0.125 (0.092)
M/B	0.033*** (0.008)	0.019*** (0.007)	0.042** (0.019)	0.024 (0.015)
Leverage	-0.104 (0.222)	-0.312 (0.286)	-0.735 (0.450)	-0.907 (0.624)
Return Volatility	-1.046** (0.460)	-1.329*** (0.446)	-1.268 (1.000)	-2.510** (0.971)
CEO Dummy	0.939*** (0.072)	0.894*** (0.070)	1.050*** (0.136)	1.041*** (0.128)

Post Freeze Performance

Regression Specification	ROA		Return	
	OLS (1)	PSM (2)	OLS (3)	PSM (4)
Post Freeze(1)	0.001 (0.005)	0.003 (0.006)	0.069** (0.032)	0.025 (0.040)
Post Freeze(1) * Lag2 Excess Bonus	0.002 (0.002)	0.008 (0.005)	-0.002 (0.013)	0.002 (0.022)
Lag2 Excess Bonus	0.001 (0.000)	-0.003 (0.002)	-0.005** (0.003)	-0.007 (0.020)
Sales (log)	0.019*** (0.005)	0.001 (0.003)		
Cash Flow Volatility	-0.003*** (0.001)	-0.004*** (0.001)		
Market Capitalization (log)			0.269*** (0.014)	0.014 (0.016)
Return Volatility			0.509** (0.233)	0.152 (0.671)
Constant	-0.095** (0.038)	0.054 (0.053)	-2.061*** (0.123)	-0.594 (0.359)

Channels for bonus enhancement

- 1 Setting high target bonus *ex-ante*;
- 2 Manipulate performance outcomes *ex-post* (through higher discretionary accruals);

Target Bonuses and Pension Freezes

	<i>Bonus</i>	<i>Bonus</i>	<i>TargetBonus</i>	<i>TargetBonus</i>
	(1)	(2)	(3)	(4)
Pre Freeze(1)	0.185 (0.137)	0.170 (0.149)	0.322* (0.180)	0.224* (0.126)
Salary (log)	1.105*** (0.061)	1.002*** (0.063)	0.961*** (0.101)	1.001*** (0.064)
Sales (log) lag	0.239*** (0.030)	0.039 (0.159)	0.180*** (0.057)	0.370* (0.192)
ROA	0.853* (0.465)	0.627 (0.524)	0.126 (0.630)	-0.483 (0.576)
ROA lag	-0.032 (0.422)	-0.051 (0.545)	0.037 (0.535)	-0.843* (0.506)
Negative Income	-0.818*** (0.121)	-0.749*** (0.131)	-0.312** (0.147)	-0.222** (0.112)
Income Increase	0.536*** (0.062)	0.534*** (0.064)	-0.084 (0.075)	0.001 (0.058)
Return	0.456*** (0.076)	0.449*** (0.083)	-0.021 (0.086)	-0.007 (0.077)
Return lag	0.314*** (0.059)	0.281*** (0.067)	0.088 (0.073)	0.150*** (0.058)
M/B	-0.003 (0.008)	-0.011 (0.007)	0.006 (0.012)	-0.011 (0.008)
Leverage	0.379 (0.238)	-0.166 (0.508)	0.299 (0.394)	0.175 (0.496)
Return Volatility	-3.742*** (0.610)	-3.561*** (0.703)	-0.331 (0.855)	-1.204 (0.733)
	0.147*** (0.054)	0.211*** (0.054)	0.346*** (0.074)	0.327*** (0.050)

Executive annual bonuses and retirement ages

	Bonus	Bonus	Bonus	Bonus	Equity	Equity	Equity	Equity
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Pre Depart(1)	-0.329*** (0.088)	-0.289*** (0.077)	-0.259*** (0.072)	-0.245*** (0.070)	-0.058 (0.096)	-0.077 (0.090)	-0.055 (0.085)	-0.082 (0.084)
Age 59+	-0.138*** (0.036)				-0.330*** (0.049)			
Pre Depart(1)*Age59+	0.391*** (0.133)				-0.070 (0.146)			
Age61		-0.162*** (0.043)				-0.427*** (0.063)		
Pre Depart(1)*Age61		0.411*** (0.141)				-0.030 (0.162)		
Age63			-0.195*** (0.058)				-0.612*** (0.083)	
Pre Depart(1)*Age63			0.433*** (0.166)				-0.113 (0.199)	
Age63To65				-0.103 (0.064)				-0.259*** (0.084)
Pre Depart(1)*Age63To65				0.437** (0.184)				-0.297 (0.220)

Executive bonuses and equity before retirement or separation

	CEO only				CEO only			
	(1) Bonus	(2) Bonus	(3) Bonus	(4) Bonus	(5) Equity	(6) Equity	(7) Equity	(8) Equity
Pre Depart(1)	-0.689*** (0.224)	-0.254* (0.135)	-0.351*** (0.126)	-0.358*** (0.123)	-0.369 (0.225)	-0.411*** (0.155)	-0.381*** (0.146)	-0.447*** (0.141)
Retired	-0.299** (0.130)				-0.387*** (0.145)			
Pre Depart(1)*Retired	0.651** (0.282)				0.109 (0.280)			
Resigned		-0.402* (0.207)				0.052 (0.226)		
Pre Depart(1)*Resigned		-0.232 (0.314)				0.007 (0.336)		
Unknown			-0.240 (0.350)				-0.185 (0.328)	
Pre Depart(1)*Unknown			0.011 (0.530)				-0.151 (0.522)	
Deceased				0.073 (0.437)				-1.159* (0.623)
Pre Depart(1)*Deceased				-0.110 (0.578)				2.040*** (0.560)
(...)								

Conclusions

- The paper looks at undocumented angle of the executives's compensation: pensions.
- We find that bonuses increase significantly before freezes and planned departures (such as retirements).
- Our results are consistent with a deliberate manipulation of compensation packages before such events.
- Alternatively, boards allow these discrete jumps as an incentive device for executives to implement cost cuts measures.
 - The later hypothesis is, however, inconsistent with excess bonuses before anticipated retirements.