Rewarding Illusory Alpha: Governance and the Crisis

Patrick Bolton
Columbia University

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Outline

1. **Main Causes of the Crisis**
2. **Compensation and Risk-taking**
   - Compensation before and during the crisis
   - Short-term compensation and risk-taking
   - Leverage, compensation and risk-taking
3. **Proposal for reforming executive compensation at highly levered (financial) institutions**
4. **Conclusion: Governance and Financial Regulation**

Causes of the Crisis

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- Real Estate Bubble
- Excess Leverage
- Fragility of originate-distribute banking model
- "Laissez-faire" (efficient markets) ideology & regulatory forbearance
- **Excess risk-taking incentives in banking**
- **Governance and risk-management failures in the financial industry**

Incentives and Risk Taking

Incentives and Risk Taking

Modern agency theory of executive pay, ***Holmstrom and Tirole (1993)*** **:**

Stock-based compensation aligns CEO and shareholders' **long-term objectives**:

- Stock price an *unbiased estimate of fundamentals*
- Induces managers to focus on long-run value
- Performance measure that cannot be *manipulated* easily

Incentives and Risk Taking

Caveats:

- No leverage
- No Stock-options
- No endogenous choice of risk or volatility of earnings
- Complete markets ⇔ Risk-neutral investors
- No speculative bubbles

Incentives and Risk Taking

Bolton, Scheinkman and Xiong (2006) :

- Differences of opinion + short-sales constraints => ***speculative bubbles***
- Endogenous choice of volatility
- **Short-termist incentives**: play into the bubble & feed the speculative option value with volatility

Bolton, Scheinkman and Xiong (2004) :

Earnings manipulation that destroys long-run fundamental value to drive up short-term stock performance

(see also Peng and Roell, 2008a,b,c)

Enron and *Corporate Scandals* of 2002

Analysis by ***Financial Times*** of the 25 largest bankruptcies in 2001 – 2002:

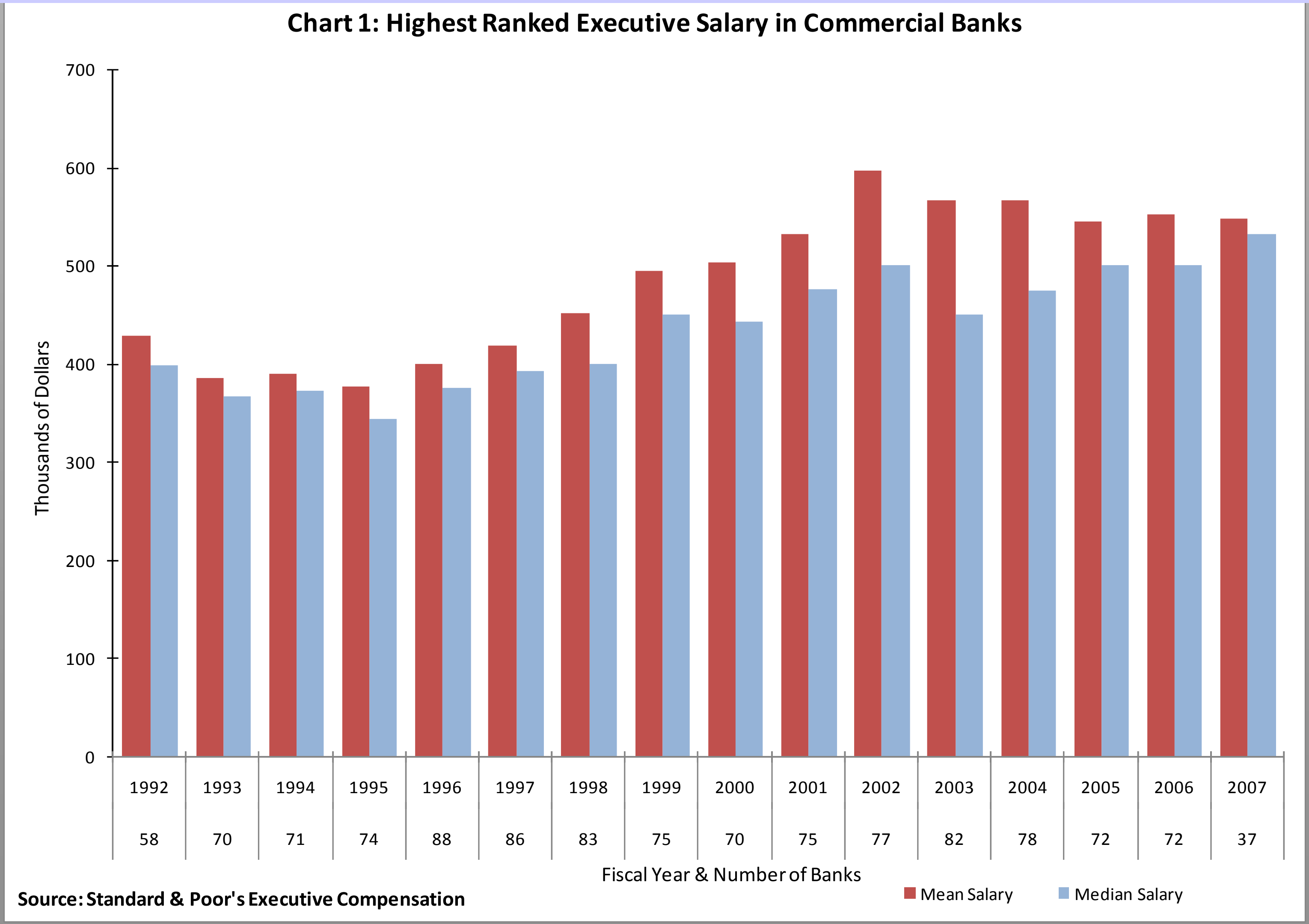
- 52 executives and directors walked away with pay > **$10M**, 31 > **$25M**, 16 > **$50M**, 8 > **$100M**
- Ken Lay (CEO, Enron), **$247M**,
- Gary Winnick (CEO, global crossing), **$512M**.

Rewarding **beta** & CEO compensation in Practice

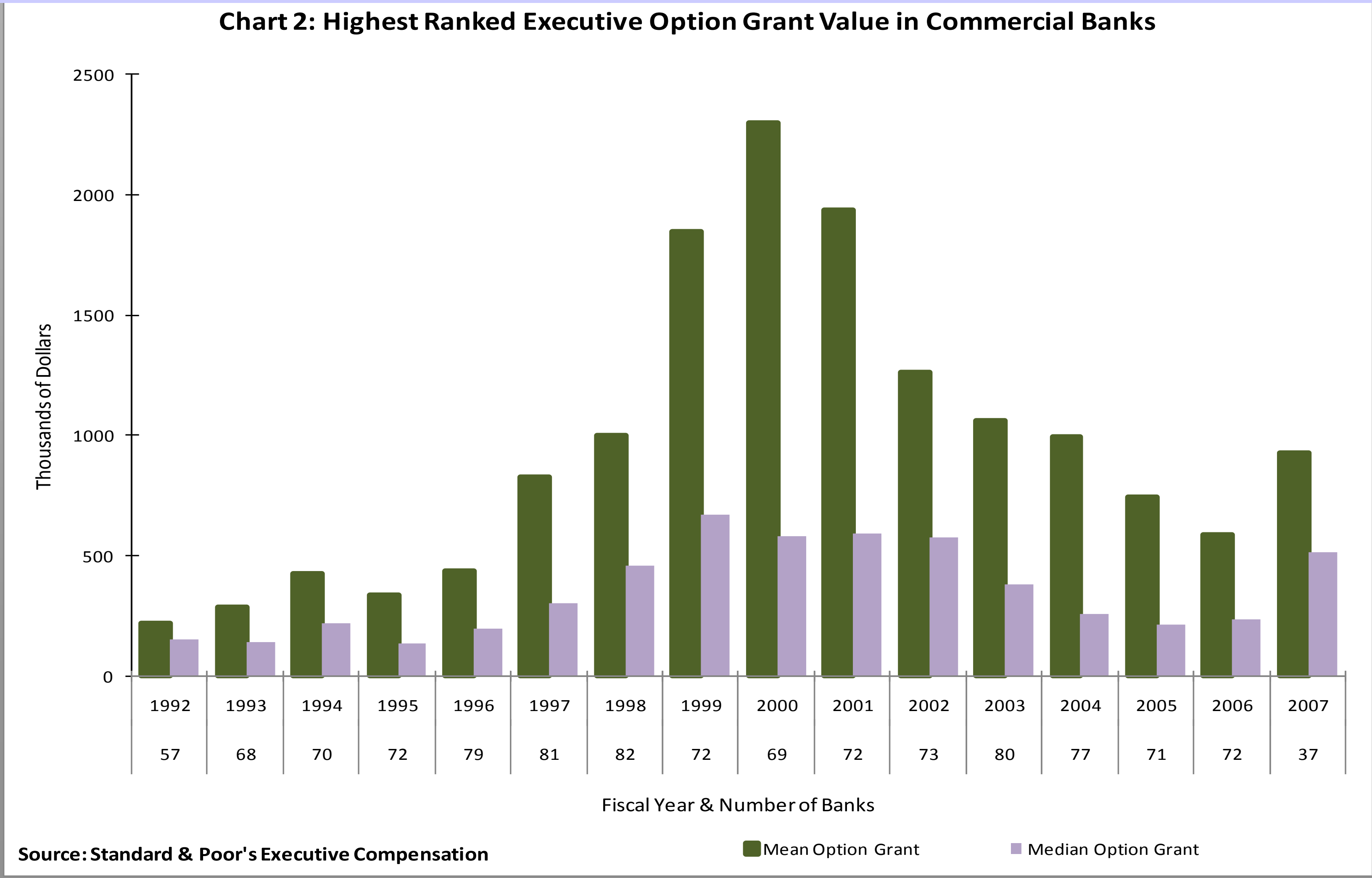
- CEOs are awarded ***at-the-money*** **options**
- No ***indexing*** of performance relative to a market benchmark
- No correction for **beta =>**
- **Stellar stock performance may simply be a reflection of a high "beta loading"**
- This is particularly problematic if CEO can vest his stock-options before the **boom** is over

Compensation and the Crisis: What do we know?

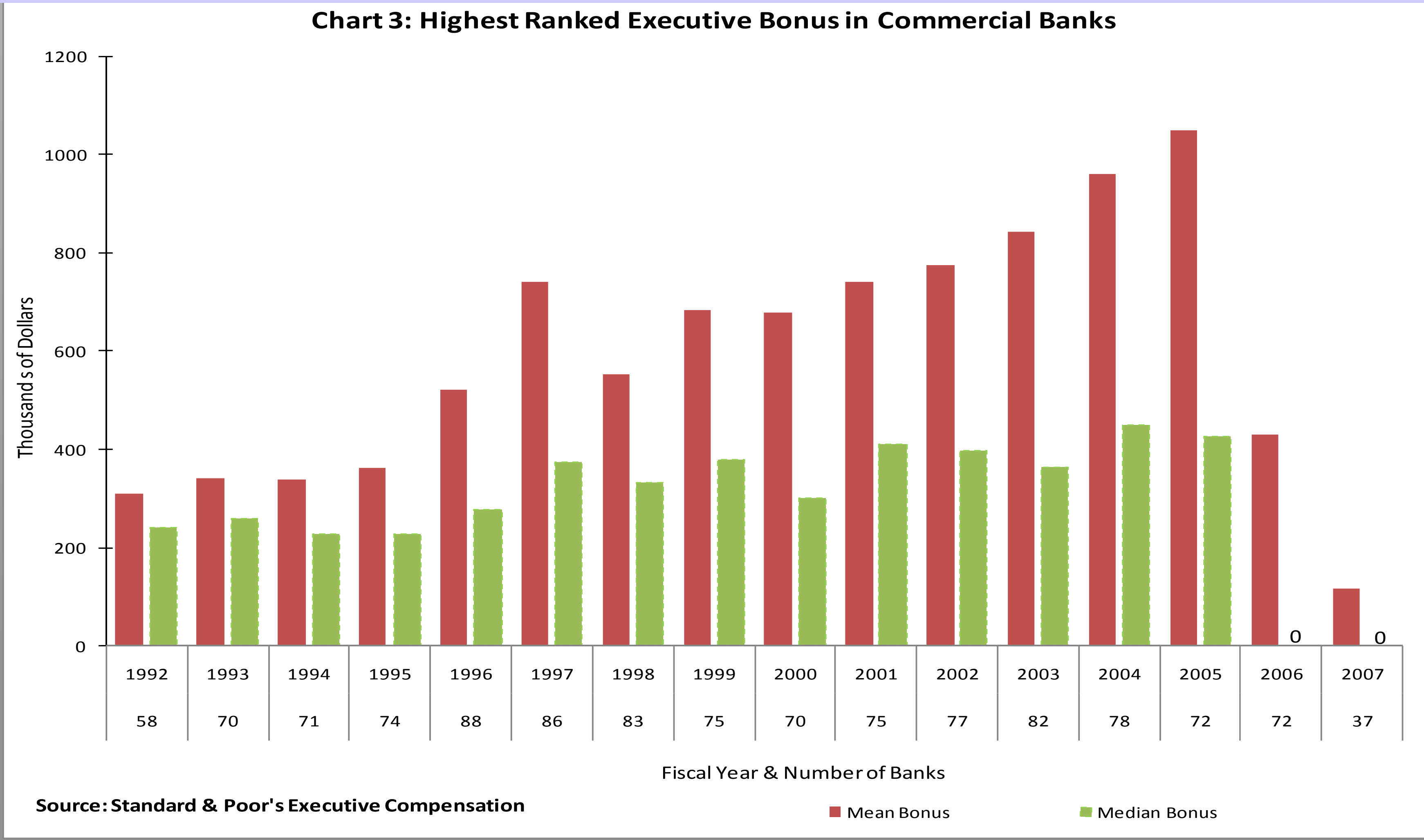
Compensation in Banks: What do we know?



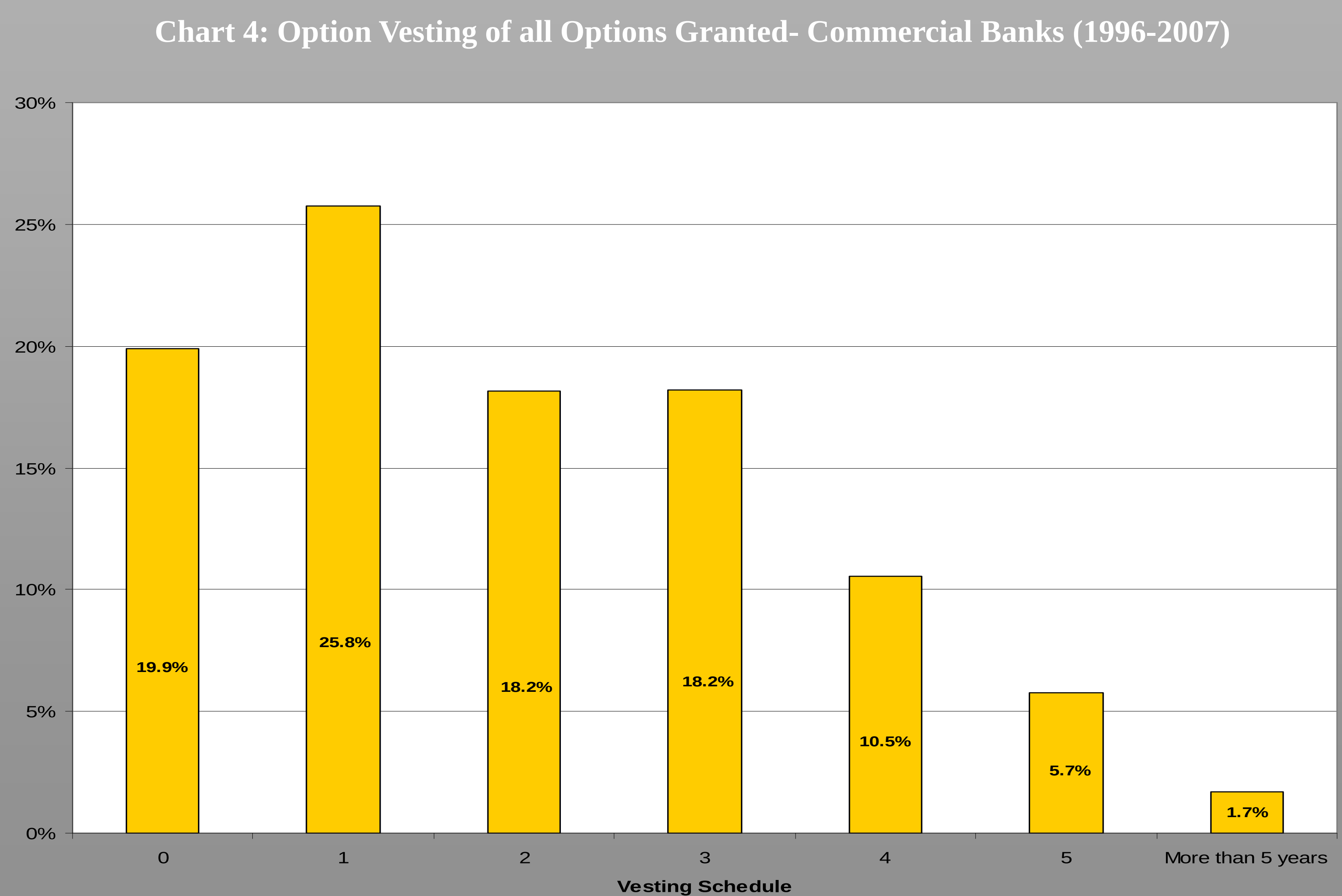
Compensation in Banks: What do we know?



Compensation in Banks: What do we know?



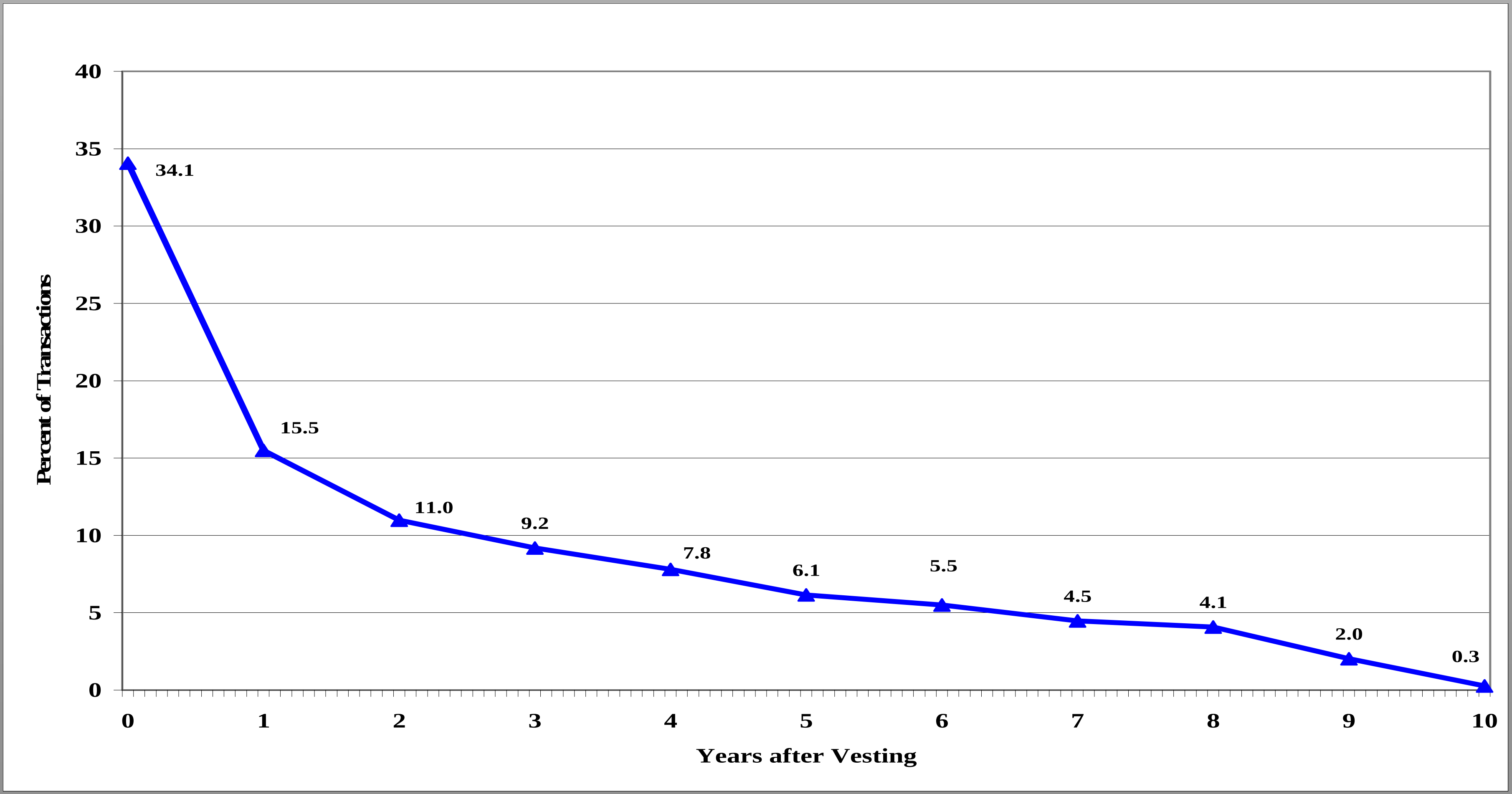
Stock option grants are characterized by **short vesting**



Source: Thomson Reuters Insiders

Large portion of options exercised shortly after they vest

Chart 5: Time Until Exercise - Commercial Bank Vested in the Money Options (7,254 Transactions)



Source: Thomson Reuters Insiders

Compensation and the Crisis: What do we know?

1. **Fahlenbrach and Stulz (2009)**

2. **Bebchuk, Cohen and Spamann (2009)**

3. **Chen, Hong and Scheinkman (2009)**

Compensation and the Crisis: What do we know?

1. **Fahlenbrach and Stulz (2009):**

- Look at up to 95 BHCs and IBs in 2006
- Regress **buy-and-hold returns** from July 1, 2007 to December, 31, 2008 on five measures of **CEO incentives**:
  - Cash bonus/salary
  - $-ownership & $-equity risk sensitivity
  - %-ownership & %-equity risk sensitivity

Fahlenbrach and Stulz (2009)

- Investigate **insider trading** of bank CEOs in 2007-2008
- Estimate $-loss of CEOs on their stock holdings
- On average, CEOs lost **$28.7M** on shares not sold
- Median loss **$5.1M**
- ¾ of CEOs did not sell any shares

Fahlenbrach and Stulz (2009)

Cross-sectional regressions of buy-and-hold returns from July 2007 to December 2008

	(1)	(2)	(3)	(4)	(5)
Cash bonus / salary	-0.010**				
	(0.004)				
Ownership ($)		-0.078***			
		(0.022)			
Ownership (%)			-0.025		
			(0.027)		
Equity risk ($)				-0.013	
				(0.017)	
Equity risk (%)					0.030*
					(0.018)

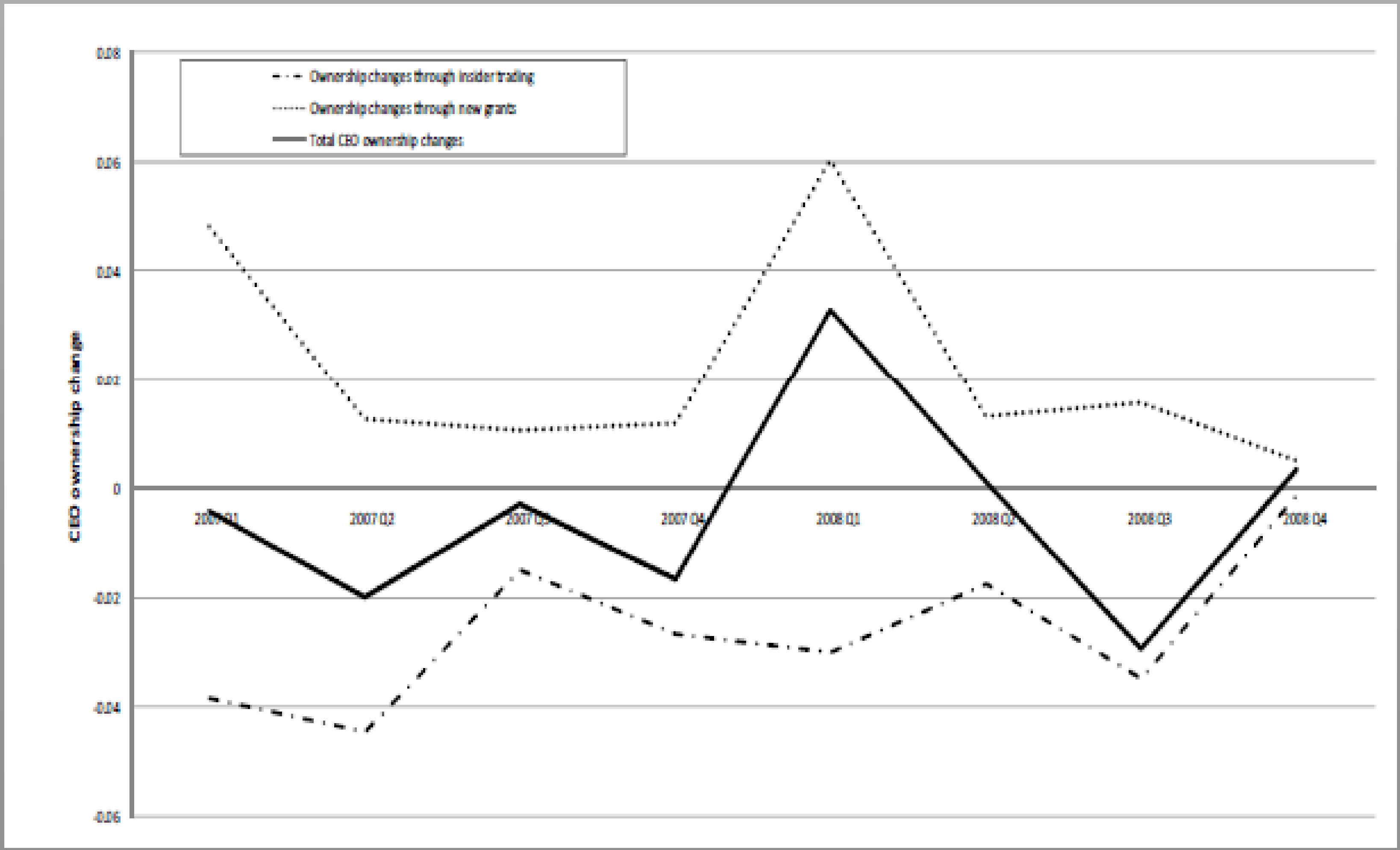
Fahlenbrach and Stulz (2009)

Cross-sectional regressions of buy-and-hold returns from July 2007 to December 2008

	(6)	(7)	(8)	(9)
Cash bonus / salary	-0.003	-0.003	0.014	0.015
	(0.005)	(0.005)	(0.025)	(0.025)
Ownership ($)	-0.062*		-0.079**	
	(0.030)		(0.035)	
Ownership (%)		-0.036		-0.049
		(0.030)		(0.032)
Equity risk ($)	0.025		0.030	
	(0.020)		(0.024)	
Equity risk (%)		0.022		0.023
		(0.019)		(0.022)
Stock return in 2006	-0.148	-0.147	-0.295	-0.310
	(0.279)	(0.280)	(0.302)	(0.304)
Book-to-market	-0.607***	-0.601***	-0.583**	-0.577**
	(0.234)	(0.234)	(0.240)	(0.240)
Log (market value)	-0.027	-0.064**	0.014	-0.035
	(0.032)	(0.026)	(0.042)	(0.036)
Tier 1 capital ratio			0.038**	0.039**
			(0.018)	(0.018)

Fahlenbrach and Stulz (2009)

CEO insider trading



Fahlenbrach and Stulz (2009)

MAIN CONCLUSIONS:

- No evidence that CEO incentive misalignment caused worse performance
- Banks where CEOs had better incentives performed significantly worse than other banks
- **Possible explanation: CEOs with better incentives took greater risks**

Bebchuk, Cohen and Spamann (2009)

- Looks at executive compensation at **Bear Stearns** and **Lehman Brothers** from 2000 to 2008
- Top executive teams at Bear Stearns and Lehman Brothers obtained between **$1.4 billion** and **$1 billion** respectively from cash bonuses and equity sales.

Bebchuk, Cohen and Spamann (2009)

TOTAL CASH FLOWS FROM BONUSES AND EQUITY SALES 2000-2008

	Bear Stearns		**Lehman**	
	CEO	Executives 2-5*	CEO	Executives 2-5*
Bonus	$87,509,569	$239,337,718	$70,594,415	$102,407,231
Sales of stock	$289,088,081	$817,237,620	$470,695,782	$389,315,896
Stock remaining	$11,656,420	$17,494,360	$0	$0
TOTAL	**$388,254,069**	**$1,074,069,697**	**$541,290,197**	**$491,723,127**
Total Top-5	**$1,462,323,766**		**$1,033,013,324**	

Bebchuk, Cohen and Spamann (2009)

ESTIMATED VALUE OF INITIAL HOLDINGS

	Bear Stearns		Lehman	
	CEO	Executives 2-5*	CEO	Executives 2-5*
Initial stock	$360,277,489	$437,934,567	$194,570,847	$194,778,981
Initial options	-	-	$106,197,280	$105,654,222
TOTAL	**$360,277,489**	**$437,934,567**	**$300,768,127**	**$300,433,203**
Total Top-5	**$798,212,056**		**$601,201,330**	

Bebchuk, Cohen and Spamann (2009)

MAIN CONCLUSIONS:

- Performance-based compensation at Bear Stearns and Lehman did not result in an **alignment** of executives' interests with long-term shareholder value
- The opportunity to cash out large amounts of shares and options tilted executives incentives towards short-term stock prices

Cheng, Hong and Scheinkman (2009)

- **Does CEO compensation lead to excess risk-taking?**
- **Panel** of finance cos. from 1992 to 2008
- **Residual compensation:** regress total compensation on **firm size** and **sub-industry classification**
- **Two sub-periods:** 1992-2000 and 2000-2008
- Regression is for sub-sub-periods 1992-94 & 98-2000
- Log (average compensation) against log (market cap.) & sub-industry dummies (Primary dealers, Insurers)

Cheng, Hong and Scheinkman (2009)

- Sub-periods 95-2000 & 2001-08 are used to compute **risk-measures (beta, return volatility, tail cumulative return performance)**
- **Regress these risk-measures on lagged residual compensation**
- **RESULTS:**

1. Residual pay in the two cross sections is **highly correlated** (0.61)
2. Firms with **high residual compensation**: **Bear Stearns, Lehman, Citicorp., Countrywide, AIG**

Cheng, Hong and Scheinkman (2009)

Residual comp. highly correlated with subsequent risk-taking

OLS Coefficient on Residual Executive Compensation

LHS	Early Period	Late Period
CRSP VW Beta	0.2079*** [0.0502] (0.1048) N=137	0.1717*** [0.0503] (0.1122) N=139
Return Volatility	0.0365*** [0.0135] (0.0764) N=137	0.1037** [0.0454] (0.0688) N=139
Cumulative Excess Returns	0.9773** [0.4161] (0.0685) N=147	-0.3205*** [0.1019] (0.0693) N=151
Exposure to ABX		0.1429*** [0.0533] (0.1094) N=108

Cheng, Hong and Scheinkman (2009)

Risk-taking and Governance : standard governance measures are not correlated with risk-taking

LHS	Gov. Variable	Early Period	Late Period
CRSP VW Beta	G-Index	0.0044 [0.0125]	0.0072 [0.0101]
	E-Index	-0.0246 [0.0243]	0.0159 [0.0213]
	% Outside Directors		0.1818 [0.2087]
	Board Size		-0.0012 [0.0081]
Return Volatility	G-Index	-0.0024 [0.0024]	-0.0011 [0.0085]
	E-Index	-0.0125** [0.0058]	-0.0143 [0.0168]
	% Outside Directors		0.0753 [0.1904]
	Board Size		-0.0068 [0.0061]
Cumulative Excess Returns	G-Index	-0.0610 [0.0706]	0.0099 [0.0312]
	E-Index	0.0393 [0.1591]	0.0573 [0.0571]
	% Outside Directors		-0.2608 [0.3662]
	Board Size		0.0165 [0.0153]

Cheng, Hong and Scheinkman (2009)

MAIN CONCLUSIONS:

- Important heterogeneity in risk-taking
- Correlated with compensation
- **“Say on Pay”** may not be effective

Bolton, Mehran, and Shapiro (2009)

- Model of **Executive Compensation** and **Leverage**
- With standard compensation packages, CEOs choose **excessive** risk (from a social welfare point of view)
- The ability to lever the firm amplifies risk-taking
- Shareholders incentives to rein in risk-taking depend on:
  - **observability** of risk choice,
  - **verifiability** of incentive contract,
  - **deposit insurance**,
  - investors' **misperceptions of risk**

Bolton, Mehran, and Shapiro (2009)

- **We propose:**
- Tying CEO compensation to a measure of default risk (**CDS spread**)

$$Compensation = \bar{w} + s_E P_E + s_D(\bar{P} - P_{CDS})$$

- **Empirical evidence**: using a SEC regulation on increasing compensation transparency in 2007, we have some evidence that the market (CDS spread) believes tying compensation to debt-like compensation (deferred compensation and pension) leads to lower risk

Bolton, Mehran, and Shapiro (2009)

Summary Statistics of CEO Compensation Disclosed in the Proxy Statement (2006-2009) for the 27 banks with CDS spreads

Variable	Mean	Median	Standard Deviation
CEO Total Wealth ($MM)	287.26	95.24	839.37
PV of CEO Stock Holdings ($MM)	230.81	39.87	837.14
PV of CEO Option Holdings ($MM)	35.13	21.59	30.83
PV of CEO Deferred Compensation Balance ($MM)	10.70	4.82	17.71
PV of CEO Pension Balance ($MM)	10.61	6.14	11.77
Share of Total Wealth as Deferred Compensation (%)	7%	6%	8%
Share of Total Wealth as Pension (%)	11%	11%	10%
CEO Debt/Equity Ratio	0.26	0.29	0.22
CEO (Deferred Comp)/Equity Ratio	0.10	0.07	0.12
CEO Pension/Equity Ratio	0.16	0.14	0.14

Bolton, Mehran, and Shapiro (2009)

Cross-section Regression of Cumulative CDS Abnormal Spread Changes on Newly Disclosed Debt-like CEO Compensation

Event: first-time disclosure (SEC Proxy Statement filing) of CEO pensions and deferred compensation, starting after December, 2006.

Dependant Variable: Cumulative CDS Abnormal Spread Changes (CASC) over event day 0 and 1

	M1	M2	M3	M4
Constant	0.016*	0.016	0.011	0.021**
	(1.83)	(1.69)	(1.16)	(2.49)
CEO Debt/Equity Ratio	-0.055**			
	(2.77)			
CEO (Deferred Comp)/Equity Ratio		-0.058		
		(1.36)		
CEO Pension/Equity Ratio		-0.052		
		(1.14)		
High CEO Debt/Equity Ratio			-0.021*	
			(1.9)	
High CEO (Deferred Comp)/Equity Ratio				-0.026*
				(1.84)
High CEO Pension/Equity Ratio				-0.018
				(1.34)
R-squared	13%	13%	11%	33%

Robust t statistics in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%

Governance and Financial Regulation

- Encourage greater use of deferred compensation
- Tying CEO compensation to CDS spreads?
- Bonus payments to traders & mid-level managers and risk-adjustment of returns?
- Greater disclosure of bonus payments to regulators.
- SOX internal controls (section 404) and coordination with systemic risk regulation?
- Regulatory limits on dividend payments that mimic covenants in corporate debt?
- Board representation for regulators?