Executive Compensation

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2010

Agenda

- Optimal contracts
- Bonus Plans
- Executive Stock Option Plans
  - Valuing ESOs
  - Option Fragility
- Compensation Controversy

Optimal compensation contracts

- A principal (shareholder) needs an agent (manager) to run the firm
  - the manager is both risk averse and effort averse
  - managerial effort is unobservable to the principal
- Since stock value is correlated with managerial effort, stock compensation induces effort
  - This creates “pay-performance” sensitivity
  - However, stock prices also reflect exogenous factors, which confounds the true correlation between effort and performance

Optimal compensation contracts

- <u>Pay-performance sensitivity</u>: You should make the sensitivity of the manager’s payment to stock <u>greater</u>
  - the lower the manager’s effort aversion and risk aversion
  - the lower the stock price volatility (the better the performance signal)
- <u>Relative performance evaluation</u>: You should subtract the performance of rival firms (relative performance evaluation) to reduce manager’s exposure to exogenous risk factors

Pre-1995: CEOs paid like "bureaucrats"

- Low pay-performance sensitivity until mid-1990s
  - Jensen-Murphy (1989): A $1,000 increase in market value of a typical large US firm increased pay by $3.25
  - Much higher sensitivity in LBO firms
- Relative performance evaluation unpopular
- Appears that firing rate "too low"

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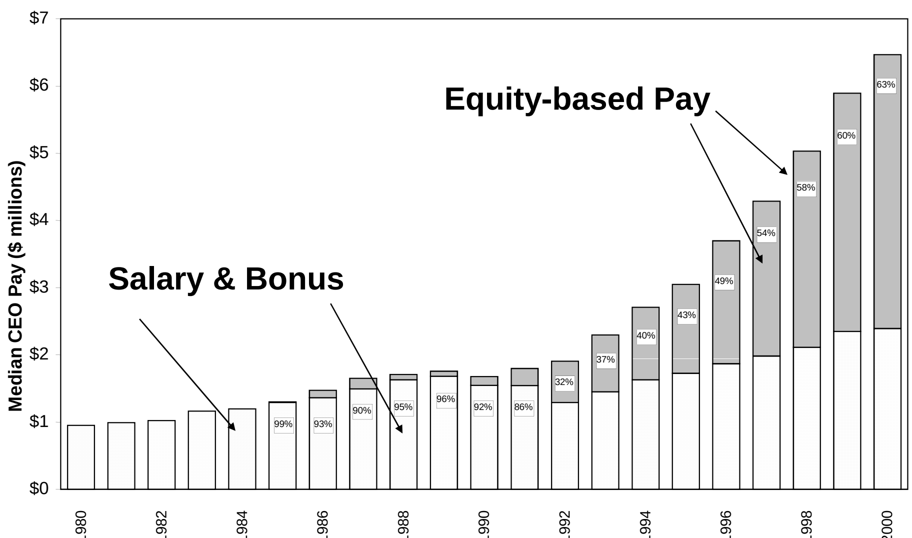
Rise of equity-based pay in the US



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Rise in equity-based pay, world

	Share of equity-based pay			Share of at-risk pay		
	1996	**2001**	**Change**	**1996**	**2001**	**Change**
Europe (9)*	6%	18%	**12%**	24%	37%	**13%**
Asia (6)*	6%	24%	**18%**	23%	39%	**16%**
Latin America (4)*	0%	21%	**21%**	26%	45%	**19%**
Aus.-NZ-Can. (3)*	8%	20%	**12%**	27%	46%	**19%**
US (1)*	32%	51%	**19%**	51%	68%	**17%**
Average (of 23 countries)	6%	22%	**16%**	26%	42%	**16%**

***** *Number of Countries

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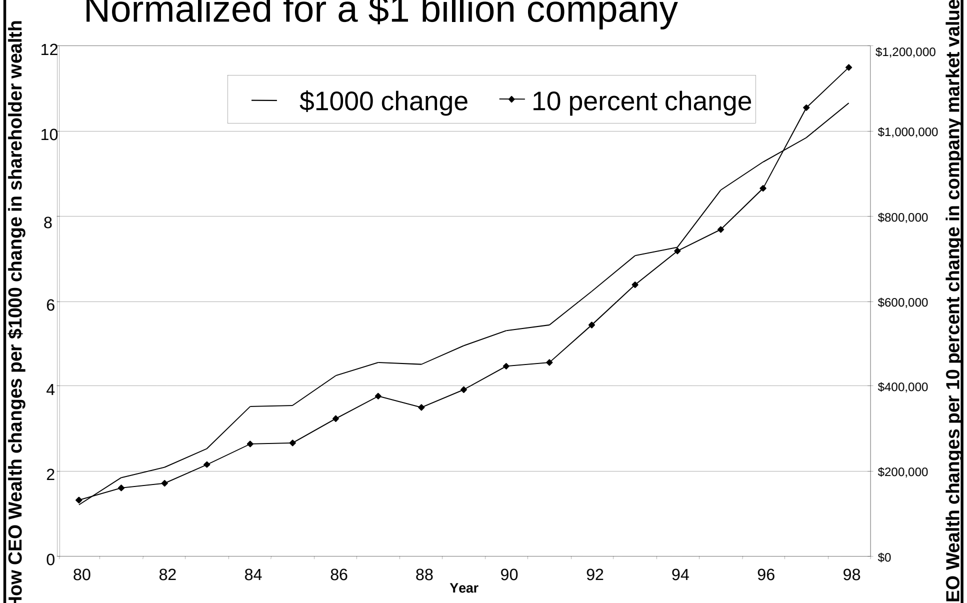
Pay-performance sensitivity

Link: CEO wealth to stock-price-performance

Normalized for a $1 billion company



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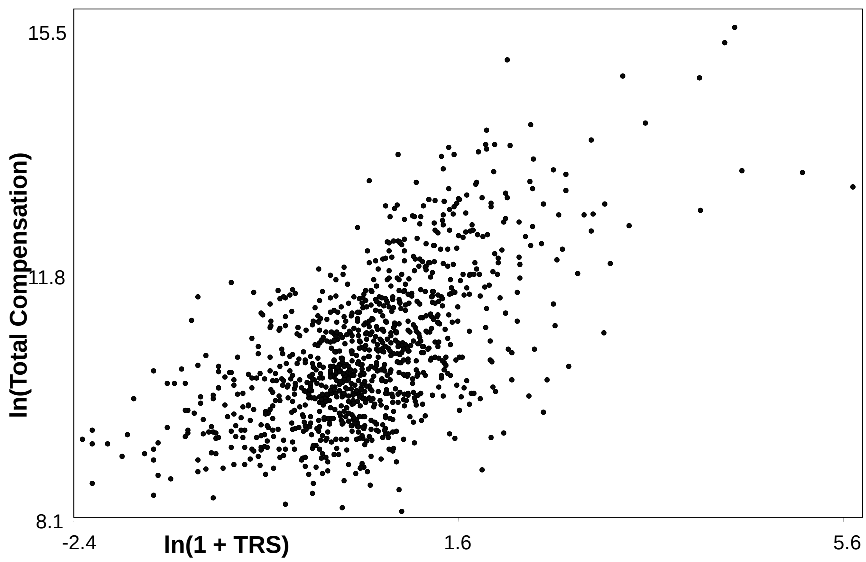
Total Compensation & future 5-Year TRS



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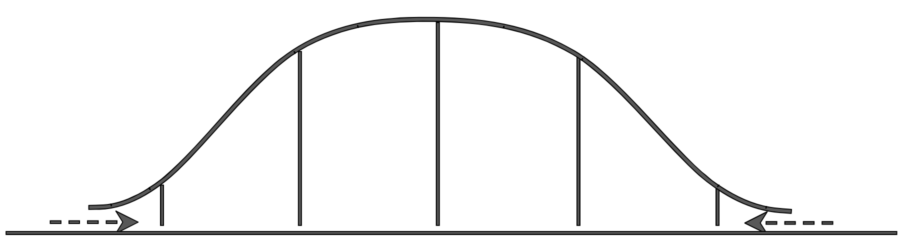
Life cycle compensation



	Start-Up	Growth	Mature	Decline	Turnaround
Salary	L	L	A	H	L/A
Annual Incentive	N	H	A	A/L	L/H
Long Term Incentive/ Stock Grants	N	N/H	A	H	H
Stock Options	H	H	A	A/L	H
Benefits	N/L	L/A	A/H	H	A
Perquisites	N	L/A	A/H	H	L

N=None L=Low A=Average H=High

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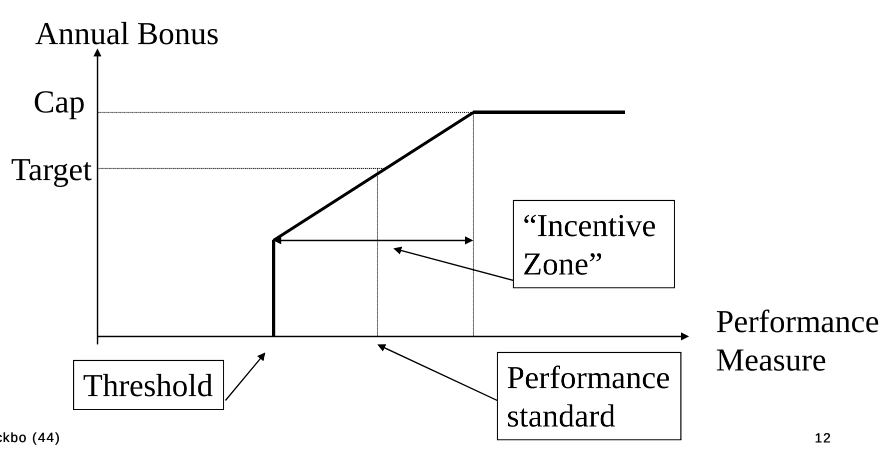
Typical annual bonus plan



Typical plan characteristics

- Fixed bonus pool, individual performance counts for max 25% of CEO's bonus
- At least two accounting measures used
- A single performance standard per measure
- 80/120 plans: Threshold at 80, cap at 120

Use of accounting numbers

- Accounting numbers are "backward looking" and short-run
- Managers may avoid actions that reduce current profits and increase future profits
- Manipulations of "accruals" and shifting earnings across periods

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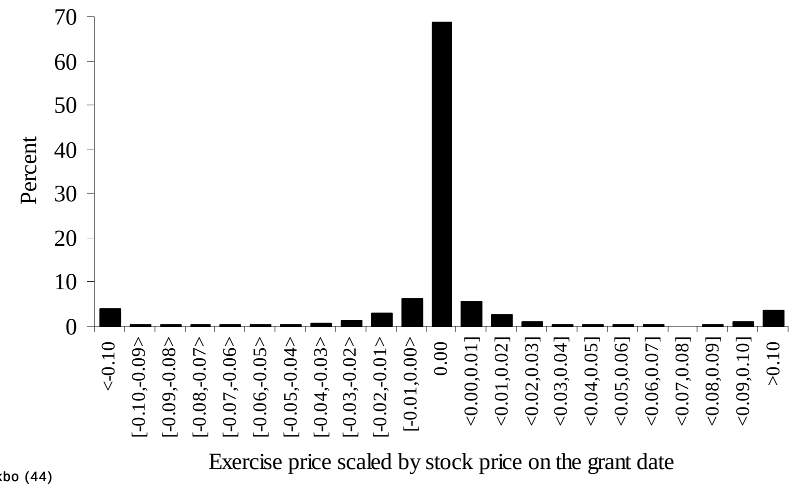
Standard features of exec.options

- Expires in ten years, no dividend protection
- Non-tradable, are “vested” (exercisable) over time (25% in first year, etc.)
- Forfeited if executive leaves firm unless exec has an “accelerated vesting” severance arrangement
- Exercise price equal to stock price on grant date (in 95% of cases)
- Only 1 in 1000 firms grant index options

Empirical distribution of exercise price relative to market price



Tax issues

- Options defer taxable income
- The option granting is not a taxable event for either firm or recipient
- Suppose the option is exercised at time t
  - Non-qualified option: S_t-X is taxable personal income to owners and tax deduction to firm
  - Qualified option: Owners pays no tax now, only when stock is sold later; company gets no tax deduction.
  - Most options are non-qualified

Accounting issues

- For options with fixed exercise price and expiration date, issuer incur an accounting charge equal to S_0-X amortized over option life time
- Thus, there is no accounting charge for options issued at-the-money
  - This may explain some of the popularity of standardized broad-based option programs
- 2005: public companies are required to record “fair market value” of option grants as an expense on income statements
  - Impacts neither cash flow nor tax burden of firm

Option expensing

- “Without blushing, almost all CEOs have told their shareholders that options are cost-free. For these CEOs, I have a proposition: Berkshire Hathaway will sell you insurance, carpeting or any of our products in exchange for options identical to those you grant yourselves. It’ll all be cash-free…. Call me collect, we can do business”

  Warren Buffet, *The New York Times*, 07/24/02

Incentive effects of options

- Pay increase dollar for dollar with stock price
- Dividends: Incentive to avoid dividends and favor stock repurchases
- Risk: Increases risk-taking compared to outright stock ownership (volatility effect)
- Fragility: Loss of incentive when "underwater" unless repricing

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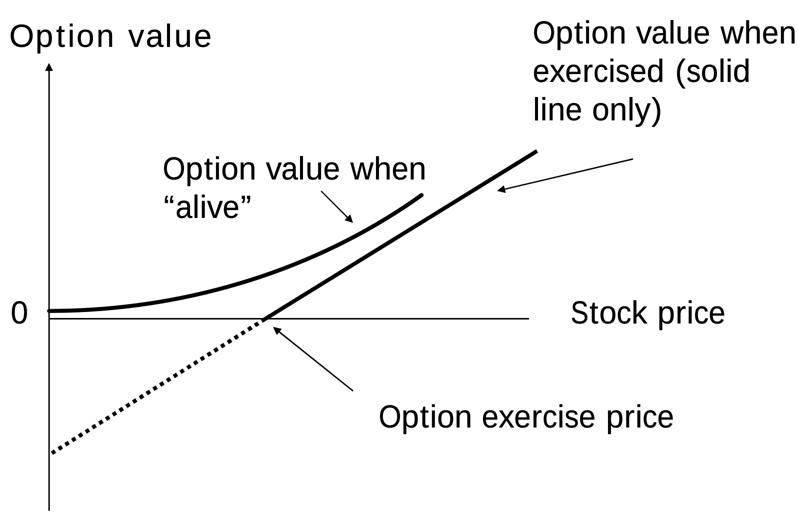
Incentive effect of option v. stock



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Valuing Executive Stock Options

- Value of option to executive is generally lower than the cost to firm of issuing option
- The firm's opportunity cost of granting the option is the market value of the option
- Company executives values the option less due to restrictions/lack of diversification
- However, executives may value the option more than market if they have inside information

Use of Black-Scholes formula

- Assumes constant dividend and volatility
- Does not account for forfeiture (which reduces the cost of option to firm)
- Assumes "European" option, while option is "American" upon vesting
- Executive's valuation will depend on her risk aversion while B-S holds for risk neutral investors

Executive Value vs. Company Cost

- Company Cost: Black-Scholes is a reasonable starting point, after downward adjustment for early exercise and forfeiture
- Executive Value: Black-Scholes is not a reasonable starting point because
  - Options are not tradable
  - Executives are risk-averse and undiversified.

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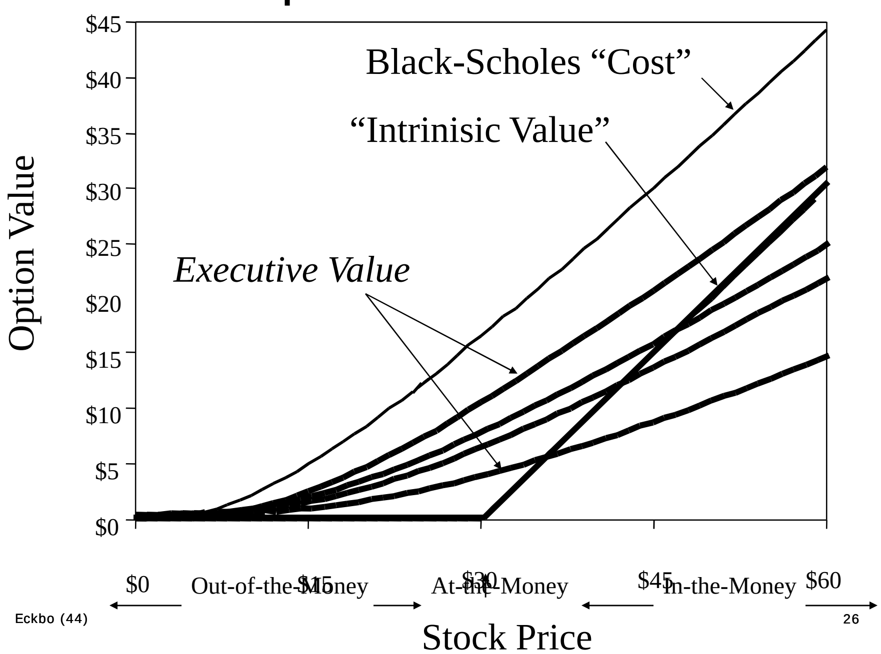
Option Value Lines



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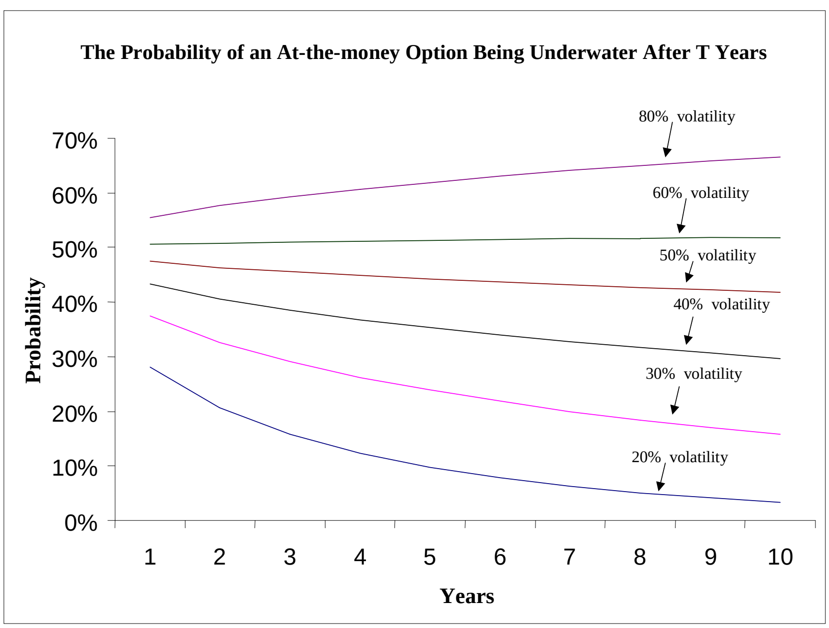
Repricing: How often do options fall underwater?

- Data: ExecuComp, which has about 1500 companies per year. Nearly 5 execs per company
- ExecuComp gives details on yearly grants, but less information on holdings
- Use yearly grants to build up holdings over time
- Fairly precise measures of whole portfolio, including exercise prices, maturities, number of stock and options, etc.



Based on expected returns of 12.5% per year

% of Executive Options Underwater

Fraction Underwater	1998	1999	2000
NASDAQ	34.3%	28.8%	37.0%
NYSE	34.9%	46.0%	35.4%
NASDAQ (value-weighted)	18.6%	10.3%	45.9%
NYSE (value-weighted)	21.2%	33.8%	35.4%
Fraction 25% (or more) Underwater			
NASDAQ	17.4%	14.1%	22.5%
NYSE	14.1%	20.2%	16.6%
NASDAQ (value -weighted)	7.7%	3.8%	27.1%
NYSE (value-weighted)	5.5%	12.2%	14.1%
Fraction 50% (or more) Underwater			
NASDAQ	6.6%	5.8%	11.6%
NYSE	4.2%	5.6%	6.7%
NASDAQ (value-weighted)	2.8%	1.1%	19.7%
NYSE (value-weighted)	1.1%	1.8%	4.6%

Summary on options

- Option fragility is significant
  - Nearly one-third of options underwater at the height of the bull market
  - Options are fragile in bear and bull markets
  - Incentive declines from this are significant
- Companies manage option fragility by granting more options when the stock price declines
  - A type of back-door repricing

Restricted stock grants

- Shares are forfeited if employment terminated before a certain time
  - This restriction allows favorable tax treatment (you do not pay taxes until the restriction elapses)
- Accounting “benefit”
  - The “cost” is amortized over vesting period and recorded as the (low) grant-date stock price even if prices have increased since grant

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ESO repricing

- Executives seen as benefiting both from stock price increases and declines
- BUT: Deep out-of-the-money options no longer provide incentives
- Characteristics of repricers:
  - Small, young, rapidly growing firms experiencing a sudden deep price drop
  - Small boards of directors
  - 40% exclude CEO

Setting the compensation <u>level</u>

- Is the market for CEOs competitive?
- Is the compensation committee sufficiently independent of the CEO?
- Does the CEO have information about the true value of the firm that the board and outside investors do not have?
- Is there a clear link between CEO effort and firm value?

Are compensation committees independent?

- “They really are not. They bring in outside experts..who tell them that compensation for the peer group CEOs has increased. Then the top HR guy, who’s usually a stooge for the CEO, says, “By the way, the CEO really would appreciate if he was in the top end of the range, because it is important that the outside world knows that the board supports him.” That’s a lot of pressure”

Edgar S. Woolard Jr., former CEO of DuPont (2002)

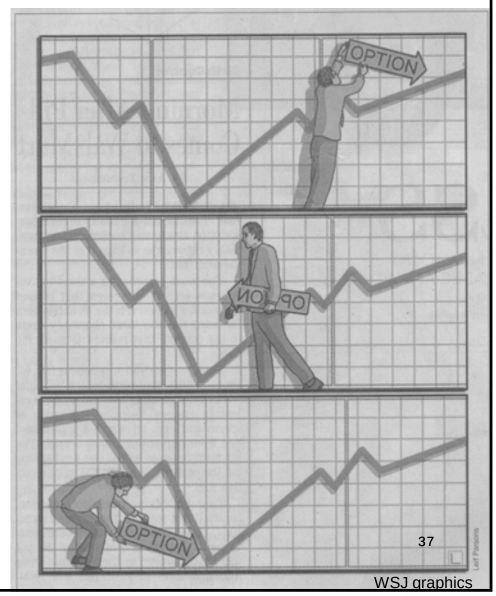
Is there a compensation spiral?

- “We no longer base the compensation of the CEO on what other CEOs are getting. Instead, we use the pay of the senior vice presidents—the people who actually run the business—as a benchmark..The CEO isn’t going to overpay the SVPs, because he has to make a return on them. So that avoids the upward spiral”

Edgar S. Woolard Jr., former CEO of DuPont (2002)

Backdating of option grants

- Backdating is the practice of marking a document with a date that precedes the actual date.
- In the context of option grants, the official grant date is chosen to be a date from the past with a lower stock price.



WSJ graphics

Is backdating of option grants illegal?

- Not if the following conditions hold:
  - no documents have been forged
  - the practice is disclosed to shareholders
  - accounting earnings are adjusted accordingly
  - taxes are paid accordingly
- Of course, if these conditions hold, the motivations for backdating are diminished.
- 29% of US firms that granted options to top executives between 1996 and 2005 backdated or manipulated at least one of these grants.
  - This amounts to more than 2,000 firms

Example: Apple Computer Inc. grant dated January 12, 2000

CUPERTINO, California -- January 19, 2000 -- Apple today announced that its Board of Directors has unanimously voted to grant the Company's CEO Steve Jobs stock options to purchase ten million shares of Apple common stock and to give him a Gulfstream V airplane in recognition of his service to the Company during the past two and a half years.

"Steve's stock options were granted a week ago at the then-market price, and will gain value only as Apple's stock price rises, to the benefit of all shareholders," said Apple Board member Jerry York. "This grant reflects Steve's and the Board's confidence in the future value of Apple."

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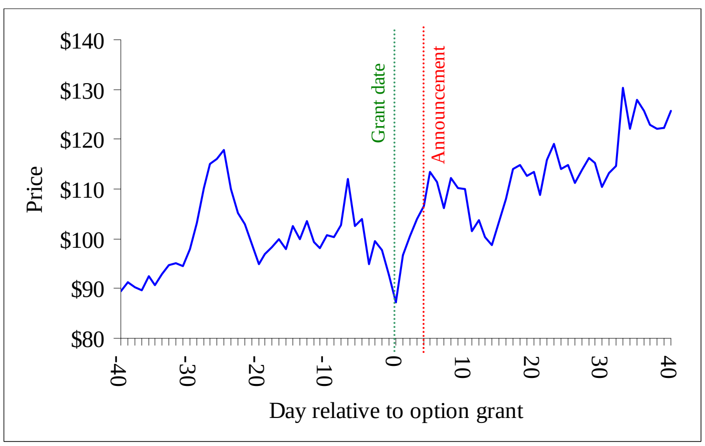
Example: Apple Computer Inc. grant dated January 12, 2000 (cont'd.)



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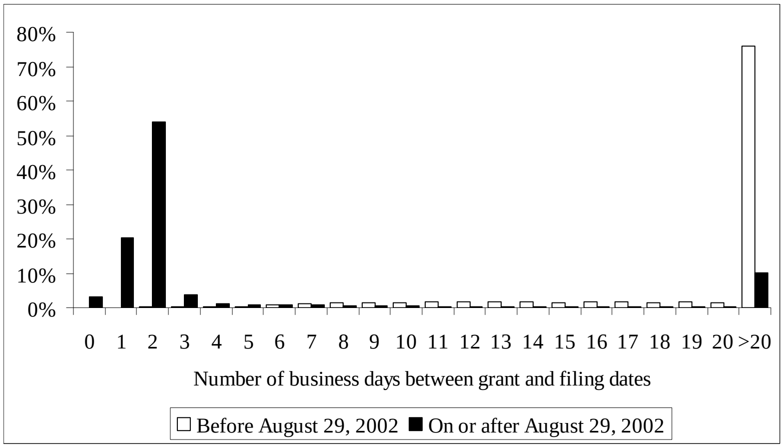
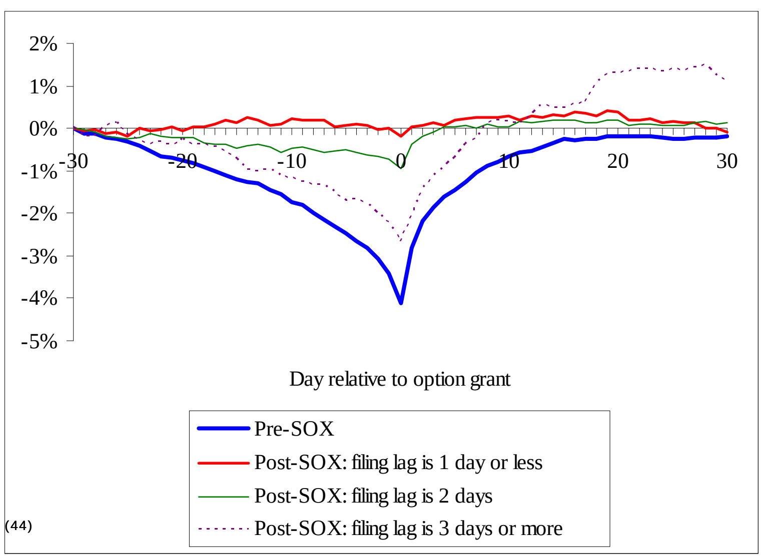
Empirical distribution of lag between grant and filing dates



Abnormal stock returns around at-the-money grants



What about option exercises?

- There is evidence that exercises of options in which the acquired shares are (i) not sold have been backdated to low prices to minimize personal taxes and (ii) sold to the company have been backdated to high prices to maximize the proceeds from the share sales.
- See graphs on next slide…

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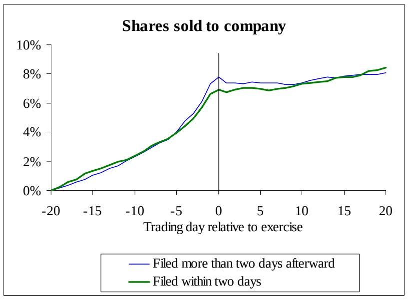
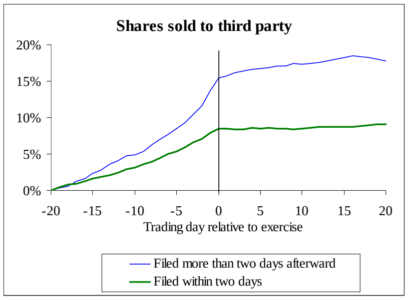
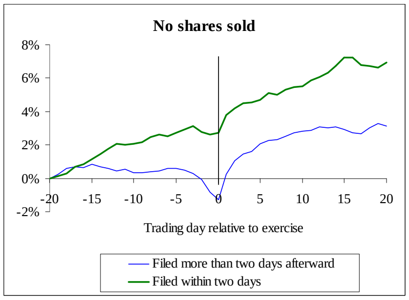
Returns around exercises







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