The Zions Bancorp ESOARS Auctions of 2006, 2007 and 2008

by

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Purpose

- My only goal is to expose this audience to these auctions.
- (Relatively) Good models of (common?) value
  - Private information?
- Seller's incentives are conflicting
  - Low value for accounting (and their business of doing these auctions for others)
  - High value because they receive the proceeds.
- Rely mostly on work of CVI – see refs at end.

Outline

- Background
  - Accounting
  - Employee stock options
  - FASB 123R
- ESOARS
  - Employee Stock Option Appreciation Rights
- Auctions
- Questions

Accounting

- Fundamental Accounting Identity (balance sheet):

$$\text{Assets}_t - \text{Liabilities}_t = \text{Equities}_t$$

- And the related (income statement):

$$\Delta\text{Assets} - \Delta\text{Liabilities} = \Delta\text{Equities}$$

Δequities represent either contributions from/ distributions to owners OR income/loss.

- Ponzi schemes

Working the Identity

- Economic concepts
- Accounting conventions (GAAP)
- Context

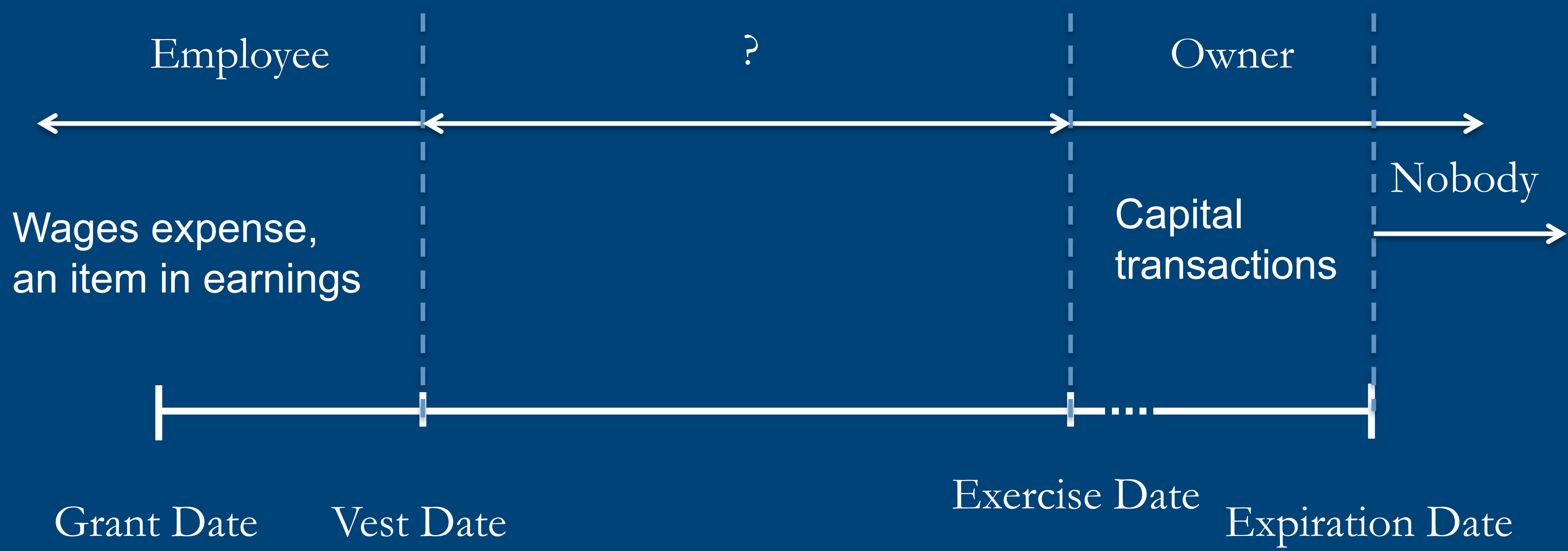
DRIVE

- Recognition
- Classification
- Valuation

Employee Stock Options

- Right to buy stock at a specific price, usually the stock price on the grant date.
- Issued by corporations to employees.
- Vesting requirements.
- Expiration dates.
- Redemption rules.
- Cannot be sold by the employee.

Employee Stock Option Timeline



FASB 123R: Grant Date Accounting

Expense P x Q over vesting period

Adjust total amount expensed to $P \times Q_A$: Adjustment is $P \times (Q_A - Q)$

Grant Date

Vest Date

Expiration Date

Q realized (Q_A)

1. Grant Date Fair Value of a Vested Option (P)
2. Quantity Expected To Vest (Q)

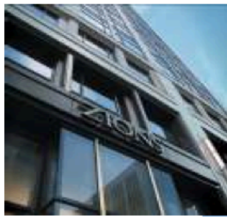
Treat exercise or expiration as a capital event

Zion’s Bancorporation Auctions

- Zions proposed establishing grant date value of a vested option (P) by auctioning ESOARs – tracking securities that would pay investors 10% of the cash employees obtained through exercising their options.
- In June 2006 ran an auction with standard-looking rules – like Treasury auctions. Go down demand curve until market clears, price is first rejected bid.

Auction Rules: Mimics Treasury

- Bids: Price and quantity to be acquired at that price.
- Prices arrayed from highest to lowest in a simulated demand curve for the security.
- The actual sale price is determined as the highest price such that the aggregate of the offers at and above that price just consumes the supply.
- If total demand at the sale price exceeds supply, then the highest offers are satisfied first.



June 2006 ESOARS Auction Results

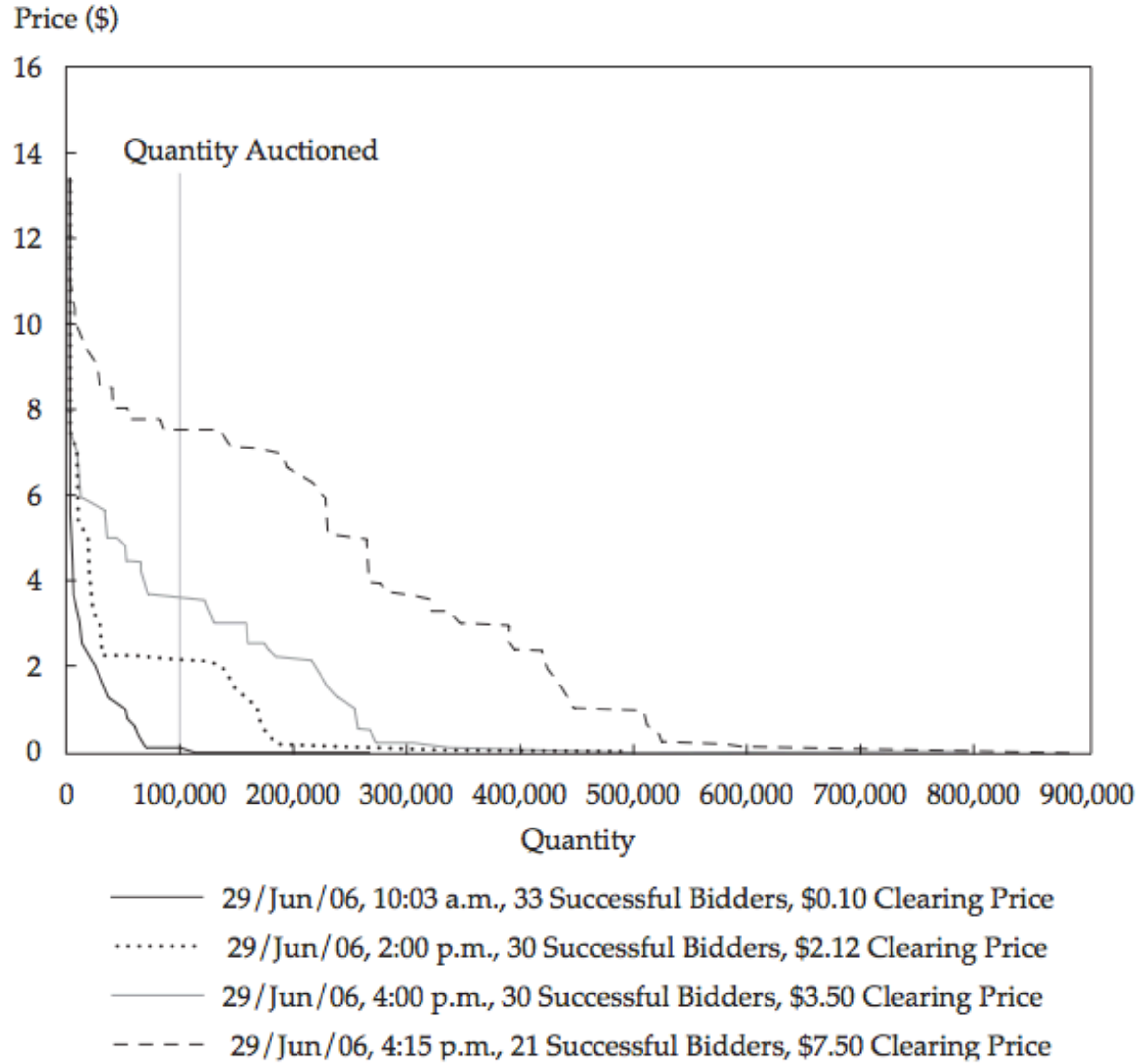
Reference ESOs	936,024
ESO Strike Price	$81.15
ESOARS Assigned	93,603
Vesting / Expiration	3 Years / 7 Years
Market Clearing Price	$7.50
Proceeds	$702,075
Active Bidders	57
Winning Bidders	21
Institutional Bidders	5
Total Bids Received	1,041

ESOARS™ Employee Stock Option Appreciation Rights Securities

ZIONS BANK®

Source: Zions Presentation on internet.

Figure 1. Evolution of the 2006 ESOARS Auction Aggregate Demand Curve



Source: Mazumdar et al, 2009.

From Zions' SEC Submission

- Expected life of their options was 4 years
- Annual dividend yield was 2%
- Interest rate was about 5%
- Volatility used in BS was 18% per year
  - close to both the historical volatility and the current implied volatility in the market.

Reasonableness Checks

- Using the Black-Scholes model, the life of the option on grant date would have to be about 2.2 years to recover the auction value of $7.50
  - Implies ESOs would have to be exercised immediately upon vesting
- Alternatively, holding other parameters constant, the implied volatility which recovers the auction price is about 10% per year.
  - Only one company in the S&P 500 at the time had an implied volatility lower than 10%
  - Zions implied volatility ranked 79th out of the S&P 500.

May 2007 ESOARS Auction Results

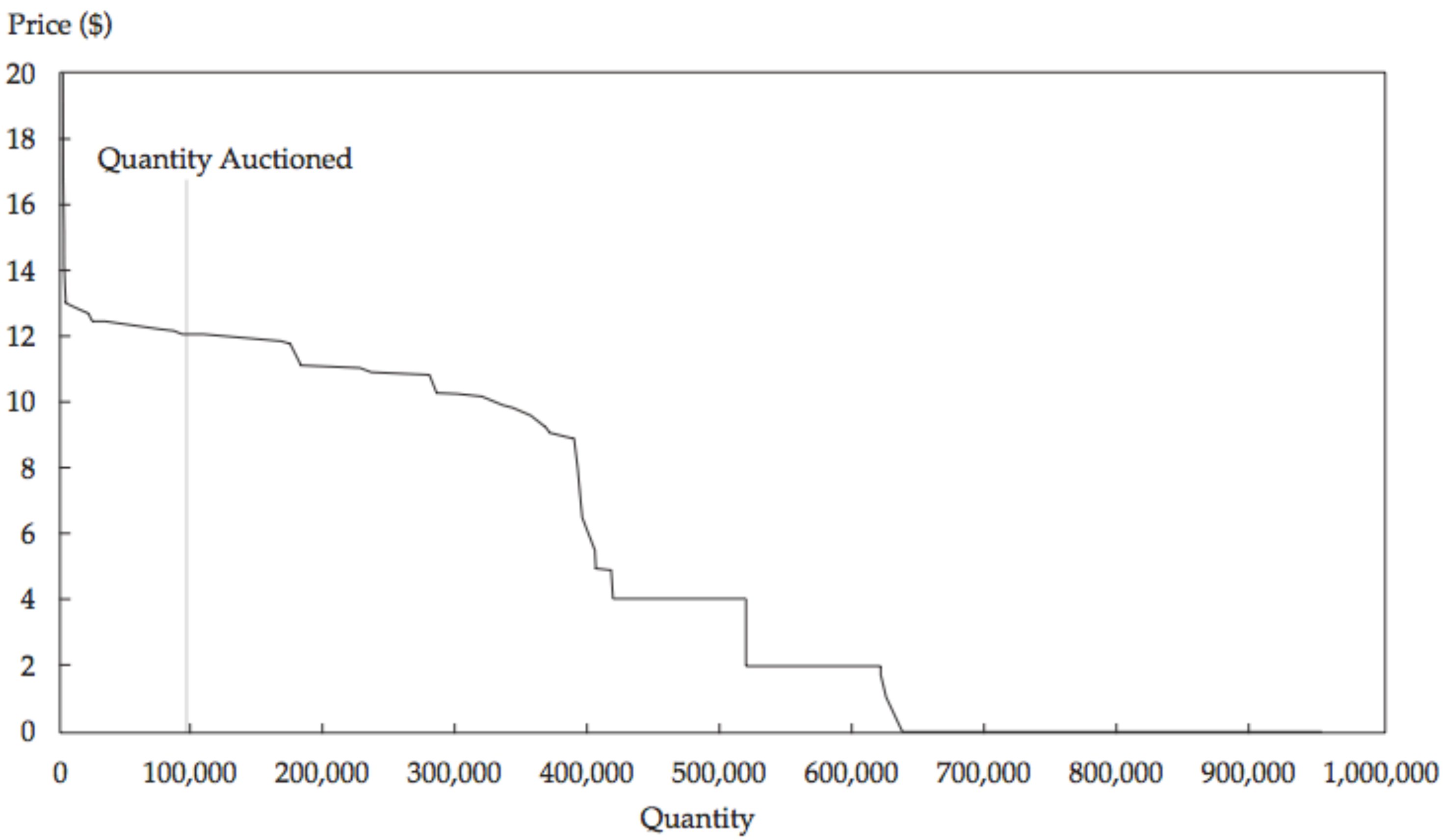
Reference ESOs	994,180
ESO Strike Price	$83.25
ESOARS Assigned	99,418
Vesting / Expiration	3 Years / 7 Years
Market Clearing Price	$12.06
Proceeds	$1.2 million
Active Bidders	43
Winning Bidders	21
Institutional Bidders	12
Total Bids Received	874

ESOARS™ EMPLOYEE STOCK OPTION APPRECIATION RIGHTS SECURITIES

ZIONS BANK®

Source: Zions Presentation on internet.

Figure 2. Final Aggregate Demand Curve for the 2007 ESOARS Auction
(21 successful bidders, $12.06 clearing price)



Source: Mazumdar et al, 2009.

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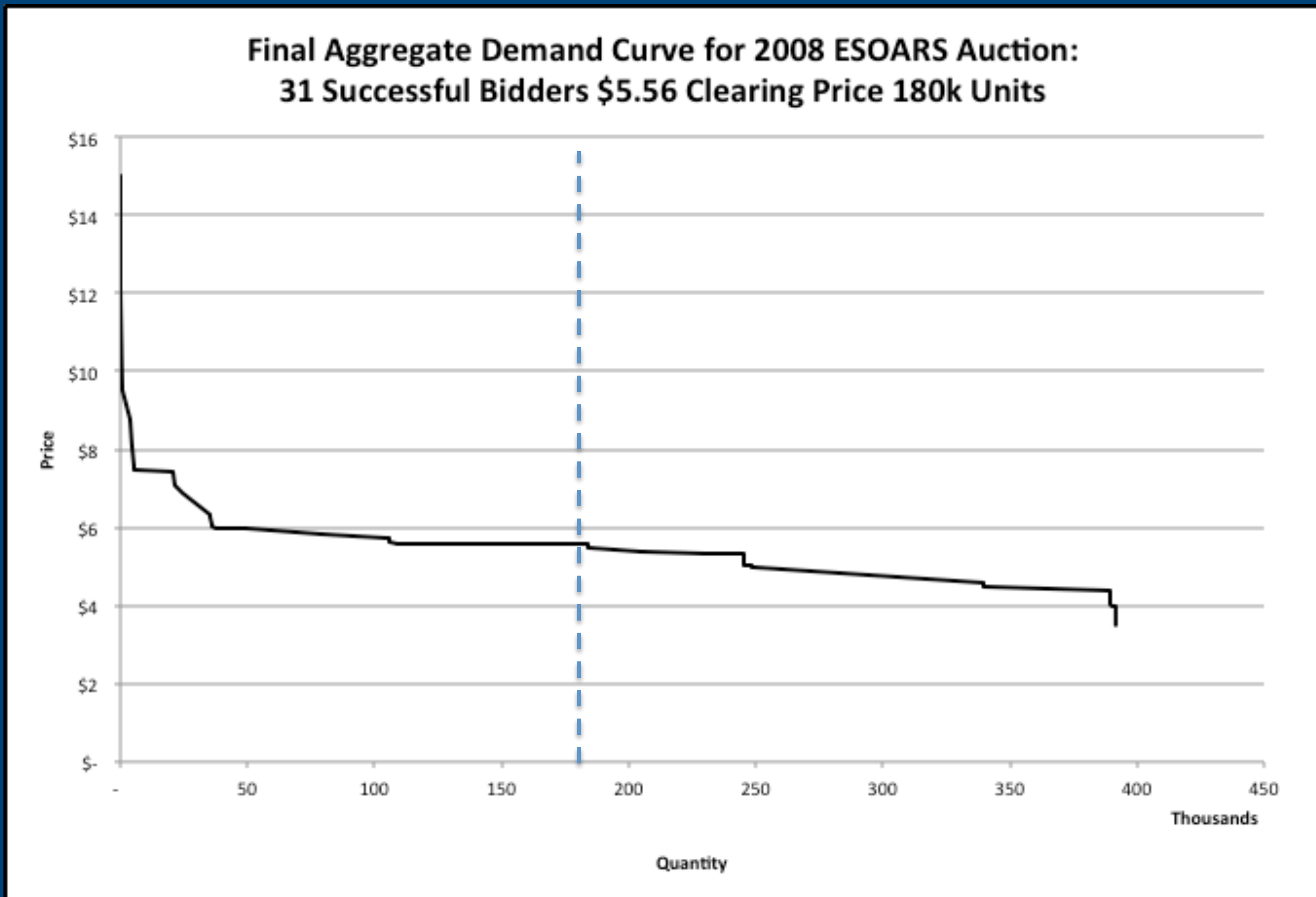
April 2008 ESOARS Auction Results

- Units offered: 180,000
- Strike price: $47.29
- Clearing price: $5.56
- Proceeds: $1,000,800



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Source: Yahoo! Finance

Questions

- Why would a company do this?
  - Expensive
  - Already short options to their employees
  - No one besides Zions did (to the best of my knowledge)
- Why would a bidder enter?
  - Only one reason: To benefit from mispricing.
  - Is that reasonable here?

References

- Auction results: https://www.auctions.zionsdirect.com/archive/esoars
- Zions' PowerPoints accessed through
- Mazumdar, Sumon C., Nanda, Vikram K. and Surana, Rahul, Using Auctions to Price Employee Stock Options: The Case of Zions Bancorporation ESOARS (December 15, 2009). Financial Analysts Journal, Vol. 65, No. 6, 2009.
- Zions stock chart through http://finance.yahoo.com/ accessed Sept. 6, 2011
- Zions Bancorporation ESOARS: An Evaluation, Compensation Valuation Inc., March 30, 2007.