FOLEY **EXECUTIVE BRIEFING SERIES**

New Stock Option Rules for Early Stage Companies

Dr. Stanley Jay Feldman, Axiom Valuation Solutions and Associate Professor of Finance, Bentley College

Ken Appleby, Foley & Lardner

Jack Malley, First Jensen Group

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Agenda

I. Overview of Fair Value Changes Relevant for Early Stage Companies

II. Update on Final 409A Regulations

III. Valuation of Early Stage Companies for 409A and 123R Expense Calculations

IV. What is a CFO to Do?

I. Overview of Fair Value Changes Relevant for Early Stage Companies

Dr. Stanley Jay Feldman

Why the Fair Value Standard for Private Firms? Background and Context

- Globalization: Integration of advanced and developing economies
- Globalization requires integrated capital markets to efficiently finance cross-border economic activity
- Integrated capital markets require consistent financial reporting standards
- Financial experts have generally concluded that statement of financial condition is best represented when assets and liabilities are marked to market

Why the Fair Value Standard for Private Firms?

- Venture and private equity funded firms have exit strategies that require that their reported historical financial performance be consistent with accepted financial reporting standards.
- Since fair value is by its nature is a market measure, it has become a de-facto reporting standard for both public and private firms.

Defining Fair Value

- Fully informed willing buyers and willing sellers.
  - Hypothetical transaction
- Although the focus of 123R and 409A is on estimating the fair value of a share of common stock, the valuation process requires that the valuation analyst estimate the fair value of other elements of the capital structure
- Fair value of a share of common stock of a private firm is its value in a liquid informed market adjusted for its lack of marketability and lack of liquidity

II. Update on Final 409A Regulations

Ken Appleby

Section 409A – An Overview

- Most far reaching benefits legislation since ERISA – Impact is felt in all types of benefits and many types of transactions
- Intended to address perceived abuses in executive compensation practices but goes well beyond that in application
- Replaces informal rules with specific legal rules

Section 409A – An Overview

- Documentary or operational violations will result in ineffective deferrals and severe penalties on executives and other employees
- Scope of new law is broad – any plan providing for the deferral of compensation, unless expressly excluded
- New rules are in addition to traditional concepts of constructive receipt, economic equivalence, etc.

Section 409A – An Overview

- Effective January 1, 2005
- Good faith compliance required until January 2008 given absence of guidance
- Documentary compliance required by end of 2007
- Final regulations effective January 2008
- Imposes reporting requirements on employers

409A and Equity Based Compensation Plans

- 409A applies to all deferrals of compensation not excluded by statute or regulation
  - Deferral arises from legally binding right during a taxable year to compensation that is or may be payable in a later year
  - Legally binding right may be subject to a substantial risk of forfeiture and still constitute a deferral

409A and Equity Based Compensation Plans

- Equity based compensation plans may involve 409A compensation deferrals
  - Restricted stock – no deferral as taxable when the restriction lapses
  - Restricted stock unit plans - deferral if delivery of the shares is deferred after right vests
  - Options and SARs – can result in deferral once exercisable
  - Equity based contract rights – generally involve deferral
  - Partnership and LLC carried interests have not been dealt with yet

409A and Equity Based Compensation Plans

- Application of 409A to Options/SARs
  - Statute – ISO and 423 Plan options are not subject to 409A
  - Legislative History – "409A does not cover grants of stock options where the exercise price can never be less than the fair market value of the underlying stock at the date of grant"
  - Notice 2005-1 – SARs are subject to 409A unless tied to public company stock and settled in stock; FMV NQOs excluded

409A and Equity Based Compensation Plans

- Application of 409A to Options/SARs
  - October 05 Proposed Regulations
    - The four tests for exclusion
    - NQOs and SARs not subject to 409A if:
      - Granted at FMV or higher
      - Number of shares is fixed
      - No other income deferral feature
      - Tied to service recipient stock

409A and Equity Compensation Plans

- Application of 409A to Options/SARs
  - October 05 Proposed Regulations - Definition of Service Recipient Stock
    - Common stock
      - If private, tied to most widely held common
      - If public, the common which is registered
    - Services are provided to the entity issuing the stock or an affiliate
    - No preferences as to liquidation or dividends
    - No put or call rights which are not section 83 lapse restrictions and not based on FMV
    - If issuer is investment vehicle, grants are only to direct service providers

409A and Equity Compensation Plans

- Application of 409A to Options/SARs
  - Final Regulations
    - Similar to proposed regulations in that NQOs and SARs excluded if four tests of proposed regulations are met
    - Broader affiliate definition, but anti-abuse rules added
    - No upstream grants
    - Service recipient stock definition expanded
      - Companies may issue options and SARs on any common shares (but see valuation issues below)
      - Common may be non-voting
      - Liquidations preferences are allowed
      - Rights of first refusal are allowed

409A and Equity Compensation Plans

- Application of 409A to Options/SARs
  - Other deferral features which would bring an option or SAR under 409A
    - A right to dividends during the option period (unless in separate plan)
    - A right to receive other than cash or stock on exercise
    - A right to exchange an option or SAR for tax deferred rights

409A and Equity Compensation Plans

- Options and SARs – Valuation Issues
  - Public Companies
    - Plan should specify how exercise price is determined based on reported prices
      - May use closing price on day before or day of grant
      - May use mean of high and low prices on either day
      - May use an average selling price over specified period within 30 days after grant date
      - May use an average selling price over a specified period prior to the date of grant, but only if grantee, number of shares, and method are specified before beginning of specified period
      - May use averaging as required by foreign law up to 30 days

409A and Equity Based Compensation Plans

- Options and SARS – Valuation Issues
  - Public Companies
    - Need proper, timely administrative process, particularly regarding grant date
      - Risk if administrative process fails
      - No ISO safe harbor for good faith

409A and Equity Based Compensation Plans

- Options and SARs -Valuation Issues
  - Private Companies – Basic Standard
    - “reasonable application of reasonable valuation method”
    - Not reasonable if valuation does not take into account all available information material to the value of the employer
    - Must consider all factors that would be considered in a formal valuation

409A and Equity Based Compensation Plans

- Options and SARs -Valuation Issues
  - Private Companies – Presumptions
    - Formal current valuation satisfying ESOP rules
    - Formula value, but only if also applied to 10% shareholders
    - Good faith internal valuation meeting formal valuation standard
      - Business must be less than 10 years old
      - No put or call right
      - No reasonably anticipated future change in control

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409A and Equity Compensation Plans

- Options and SARs – Modifications
  - Changes in terms may result in new grant and application of 409A
  - Acceptable changes
    - Acceleration of vesting
    - Adding cash-less exercise
    - Grantor exercising discretion regarding transferability
    - Waiving or reducing exercise window following termination
    - Tolling exercise window under limited circumstances
    - Substitutions meeting 1.424-1 requirements following corporate transaction

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409A and Equity Compensation Plans

- Options and SARs – Modifications
  - Prohibited Changes
    - Any direct or indirect reduction in exercise price
    - Extending original exercise period, unless underwater
    - Adding any new deferral feature
    - Exchanging right for a right to compensation in the future

Note – 409A rules do not line up with accounting rules for determining whether a new grant has occurred

409A and Equity Compensation Plans

- Equity Based Contract Rights
  - Generally subject to 409A requirements
    - Time and form of payment must be specified when right granted
    - Payment may be accelerated only based on permitted events (e.g., termination of employment, CIC)
    - Limited ability to extend initial deferral period

409A and Equity Compensation Plans

- Foreign Employees
  - 409A applies if employees subject to US tax
  - 409A does not apply to broad based foreign retirement plans if:
    - Employee not eligible under US qualified plan;
    - Deferrals are non-elective, apply only to foreign income, and do not exceed Section 415 caps

409A and Equity Compensation Plans

- Transitional Rules – before 12/31/07 may:
  - Amend plans to satisfy 409A requirements, if applicable
  - Fix below market options, except for 16A executives
    - Add fixed payment term
    - Set exercise price to FMV on date of grant

409A and Equity Based Compensation Plans

- Some Closing Thoughts - Public Companies –
  - By end of 2007
    - Eliminate any deferral features in existing option, SAR or restricted stock plans or amend to comply with 409A
    - Incorporate 409A FMV language and consider need to use 409A definitions of disability, change in control, termination of service
    - Incorporate procedures for determining exercise price into option/SAR plan documents and establish good administrative practices
    - Bring other equity based plans into documentary compliance with 409A

409A and Equity Compensation Plans

- Some Closing Thoughts – Private Companies
  - By end of 2007 -
    - Bring all plans subject to 409A into documentary compliance
    - Review exercise price of all prior option and SAR grants (get appraisals)
      - Restate exercise price to FMV on date of grant
      - Substitute restricted stock or other excluded right
      - Substitute 409A compliant rights

409A and Equity Based Compensation Plans

- Some Closing Thoughts – Private Companies
  - Going forward
    - Obtain current appraisals for all future grants, or
    - Consider advisability of using traditional Options/SARs and consider increased use of restricted stock or contract rights
    - Create administrative procedures to promptly document all grants

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III. Valuation of Early Stage Companies: Establishing the Fair Value of a Private Firm's Common Stock

Dr. Stanley Jay Feldman

The Basic Value Identity (ownership%, value %)

Fair Value of Enterprise =

- Fair Value of Debt (0%,10%)
- Fair Value of Equity
  - Series A
  - Series B
  - Series C
  - Common (50%, 20%)
    - Warrants
    - Options

Twin Objectives: Pre-IPO

- Objective 1: A low fair value of common resulting in a low strike price is desirable since it supports the alignment of managers and owners and minimizes the cost associated with expensing of options.
- Objective 2: Maximize the value of the enterprise for purposes of capital raising.

Achieving The Twin Objectives

- Developing a fair value methodology where the bulk of the enterprise value shows up in the preferred stock
- The fair value of the common stock, while it retains far less value, nevertheless should properly reflect the probability of achieving the embedded growth opportunity that is the basis for its current capital structure.
  - Liquidation preference model does not meet the fair value standard in this setting

Measuring Fair Value of Common

- Step1: Estimate firm's enterprise value
- Step2: Use a model, e.g. contingent claims, to allocate equity between preferred and common
- Step3: Make adjustments for lack of liquidity and marketability
- Step 4: Subtract value of previously issued warrants and options from value in step3 to arrive at the fair value of common, i.e., the strike price.

Enterprise Valuation Method Depends on Stage of Enterprise Development

Stage	Description	Valuation Approach
1	Early Start up	Real Option; Asset
2	Middle stage start-up; nor revenue or expense history	Real Option, and possibly income method depending upon facts
3	Late-stage start-up: product development milestones reached	Income and/or Market Methods
4	Initial product revenue; evidence that firm is on growth curve	Income and/or Market Methods
5	Expected positive cash flow emerges	Income and/or Market Methods
6	Established a profitable history	Income and/or Market Methods

Contingent Claims Model Approach

- Well accepted model in corporate finance
- AICPA practice guide reviews its use in 409A and 123R settings

Contingent Claims Model Approach

- Step 2: Estimate the value of common
- Value of a call option on the enterprise value
    - exercise price = preferred shareholders initial investment and accumulated unpaid dividends through the redemption date
  - less the value of the preferred stock's convertibility option
  - = value of common before the value of previously issued warrants and options have been subtracted from the common equity pie.

Stage 2 Biotech Firm
Enterprise Model: Compound Call Option

Summary Report Table 1: Fair Value of H3Capital Structure

Row			Total	Shares in Class	Per Share	Source
1	Total Fair Value of H3		$28,348,134			Table 5-10; Row 1
2	Value of Debt		$28,896			Table 5-10; Row 2
3	Value of Equity (R1 - R2)		$28,319,239			Table 5-10; Row 3
4	Liquidity Discount *		20%			Table 5-10; Row 7
5	Value of Equity adjusted for Liquidity (R3 * (1 - R4))		$22,655,391			Table 5-10; Row 9A
6	Value of Preferred adjusted for Liquidity (see Allocation Model in Table 5-10, Row 9B)	$20,601,268				Table 5-10; Row 9B
7	Value of Common adjusted for Liquidity but before any Warrants and Employee Stock Options (R5 - R6)	$2,054,123				Row 5 - Row 6
8	Value of Warrants to purchase Common Stock	$27,123		72,002		Table 5-10; Row 10
9	Value of Employee Stock Options issued in 2002	$54,717		139,230		Table 5-10; Row 12
10	Value of Employee Stock Options issued in 2003	$1,897		5,000		Table 5-10; Row 14
11	Value of Employee Stock Options issued in 2004	$83,762		233,600		Table 5-10; Row 16
12	Value of Employee Stock Options issued in 2005	$81,841		240,568		Table 5-10; Row 18
13	Value of Employee Stock Options issued in 2006	$128,664		394,800		Table 5-10; Row 20
14	Total Value of Warrants (Common) and Employee Stock Options (R8 + R9 + R10 + R11 + R12 + R13)	$378,003				Row 8 + Sum of Row 9 to Row 13
15	Value of Common adjusted for Liquidity, Warrants and Employee Stock Options (R7 - R14)	$1,676,119		4,546,462	$0.37	Table 5-10; Row 21
16	Total Allocated Value (R6 + R14 + R15)		$22,655,391			Row 6 + Row 14 + Row 15

* See Feldman, Principles of Private Firm Valuation (Wiley, 2005) for discussion of the size of the liquidity discount

Key Input for 409A and 123R: Volatility

- Volatility is the standard deviation of returns on the firm's common stock
- Although the value of a call option increases with volatility, this is not necessarily the case in the contingent claims world since the value of the preferred stock convertibility option increases with volatility

Measuring Volatility for a Private Firm

- Method 1: Selecting a set of peer public firms, calculate the return standard deviation, delever, calculate the median, and relever using the target firm's capital structure
- Method 2: CAPM-based: Convert equity cost of capital into volatility
- Method 3: See Cochrane ,"The risk and return on venture capital", *Journal of Financial Economics, 2004*

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Example: Volatility of Peer Public Firms

Name of Firm	Ticker	Unlevered Annual Standard Deviation of Returns	Comparable Target Indications
Anadys Pharmaceuticals Inc.	ANDS	95.34%	CMV
ViroPharma Inc.	VPHM	299.58%	HIV
VaxGen Inc.	VXGN.PK	165.55%	Smallpox
AVANT Immunotherapeutics	AVAN	74.35%	HIV
Hemipherx BioPharma	HEB	168.49%	HIV
Orchestra Therapeutics	OCHT.OB	53.80%	HIV
CytRx Corp.	CYTR	214.67%	CMV & HIV
Panacos Pharmaceuticals Inc.	PANC	186.56%	HIV
Achillion Pharmaceuticals, Inc.	ACHN	63.95%	HIV
Incyte Corp.	INCY	46.67%	HIV
Idenix Pharmaceuticals	IDIX	55.35%	HIV
Adventrx Pharmaceuticals Inc.	ANX	185.34%	HIV
Progenics Pharmaceuticals Inc.	PGNX	120.94%	HIV
Pharmexa A/S	PHARMX.CO	36.06%	HPV & HIV
Omrix Biopharmaceuticals Inc.	OMRI	216.07%	Smallpox
Vertex Pharmaceuticals Inc.	VRTX	60.64%	HIV
Gilead Sciences	GILD	36.25%	CMV & HIV
Average		**122.33%**	
Median		**95.34%**	

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CAPM-based Volatility Measure

CAPM – Capital Asset Pricing Model

1	CAPM Estimated Beta	4.33
2	CAPM Estimated Beta Squared	18.74
3	S&P 500 Annual Return Standard Deviation	12.73%
4	S&P 500 Annual Return Standard Deviation Adjusted for Capital Structure	9.79%
5	S&P 500 Annual Return Variance	0.96%
6	H3 Return Variance Based on CAPM: R5*R2	17.95%
7	H3 CAPM Annual Return Standard Deviation	42.37%
8	Average: Comparables	122.33%
9	**Final Average Unlevered Volatility**	**82.35%**

H3 D/E Ratio	0.05
H3 Levered Volatility	**84.62%**

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Summary

- Fair value is a market-based measure that is a de-facto standard for financial reporting purposes.
- Implementation of the fair value standard requires the use of a complex set of valuation models.
- 409A and 123R require both independence and transparency.
- The fair value of common should reflect the growth opportunity inherent in the expected performance of the firm. If not, the common stock value will be below fair value.

IV. What is a CFO to Do?

Jack Malley

What's A CFO To Do?

- Start training for a new career
- Go work for a publicly-held company

- Go work for a one owner company
- Deal with it

If Your Company Will Be Heading To A Liquidity Event In The Next Few Years, Understand The SEC's Viewpoint

- Valuations are important – don't want to see sharp increases in stock price leading up to IPO, unless there is a valid reason – leads to high comp expense
  - *Some companies have had monthly valuations leading up to IPO!*
- Don't believe that a valuation is not necessary just because your last funding round was flat with the previous round
  - Inside round
  - What happened to the comparables?
- Understand the valuation report and its assumptions
  - Inconsistencies between the nature and stage of development of the company and the selection of appropriate assumptions in the valuation
  - Inappropriate allocation of the enterprise's value to the various classes of debt and equity securities
  - Inappropriate liquidity discounts taken in valuing equity securities
- Read SAB 107 – Interaction of FAS123R w/ SEC Rules

Dealing With It…

- Review all employment contracts & offer letters
  - Review for deferred compensation awards
  - Ensure that stock compensation award terms are consistent with compensation committee or board of director votes
    - Verifying the grant date is critical
      - Date valid when all ordinary and necessary corporate actions have been taken
    - Grant award should ID who, how many, price, when, vesting
  - Streamline timing of awards
    - Company milestones
    - Salary reviews
- Build a solid cap table
  - Grantee, grant date, #, vesting, exercise Px
  - Marry it to the board minutes

Get an Appraisal

Not Req'd but Provides Safe Harbor

- Get familiar with AICPA Technical Practice Aid and methods prescribed

"Valuation of Privately-Held-Company Equity Securities Issued as Compensation"

AICPA Practice Aid Recommended Valuation Methods

Stage	Funding	Revenues	Expenses	P&L	R&D	Valuation Method
1	Seed or 1st	None	Limited	Loss	R	Asset-Based
2	2nd or 3rd	None	Substantive	Loss	R&D	Market (primary) Asset-Based (Alternate)
3	Later rounds	None	Substantive	Loss	Late D	Market (primary) Income (Alternate)
4	Mezzanine	Some	Substantive	Loss	Late D	Either Market or Income
5	N/A	Substantive	Substantive	Breakeven	N/A	Either Market or Income
6	N/A	Substantive	Substantive	Profit	N/A	Either Market or Income

Get an Appraisal

Not Req'd but Provides Safe Harbor

- Understand Fair Value
  - Meaning of IRS Rev Rul 59-60 "fair market value" is consistent with TPA fair value (TPA pg 7, footnote 8 & pg 81, footnote 1)
- Do it yourself - Do you have sufficient knowledge, experience, and skill? Final IRS Regs say:
  - *"…whether a reasonable individual, upon being apprised of such person's relevant knowledge, experience, education and training, would reasonably rely on the advice of such person with respect to valuation in deciding whether to accept an offer to purchase or sell the stock being valued."*
  - *"Significant experience generally means at least five years of relevant experience in business valuation or appraisal, financial accounting, investment banking, private equity, secured lending, or other comparable experience in the line of business or industry in which the service recipient operates."*
- Hire an appraisal firm
  - Make sure they follow the TPA
  - Ensure valuation can be used for FAS 123R purposes
  - Provide business plans, historical financials, competitive environment, cap table

Will Your Appraisal Pass the Audit Test?

- Will the valuation specialist accept responsibility for their report, their conclusion and all underlying assumptions?
- What are the qualifications of the valuation expert?
- Did management provide all necessary information to the valuation expert and was the input utilized?
- Did management review the valuation report?
  - Forecast used
  - Understand probabilities of IPO, M&A, Liquidation and Status Quo
  - Discount and premium rates (industry risk, size of company, etc.)
  - Assumed liquidity dates

Will Your Appraisal Pass the Audit Test?

- New Risk Assessment Standards, effective years started after 12/15/06, require that auditors:
  - Obtain a greater understanding of an entity and its environment, including internal control and;
  - Perform a more rigorous risk assessment for material misstatements in the financial statements due to fraud or error.
  - Auditors must consider the potential for misstatement, not whether a misstatement has occurred and the reason the internal control system failed to detect misstatements that audit entries are being proposed to correct.
  - Auditors must also consider whether the client is capable of performing the accounting functions and preparing financial statements, *inclusive of notes*, in accordance with generally accepted accounting principles (GAAP) and *has the skills to prevent, detect or correct misstatements*.

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Will Your FAS 123R Calculation Pass the Audit Test?

- Most companies using Black-Scholes-Merton Model vs. Lattice Model
- Cost methods
  - If used minimum value method on pre-2006 grants, then must use the "Prospective" method (§83)
    - Continue minimum value method on pre-2006 awards
    - Use FAS123R method on
      - Post-2005 grants
      - Pre-2006 grants that have been modified, repurchased or cancelled in FY beginning after 12/15/05
  - If used fair value method of FAS123, use either
    - Modified retrospective method (§76)
      - Must adjust prior financials based upon original fair value calculations!
    - Modified prospective method (§74)
      - Book comp expense as old awards vest based upon original grant date fair value calculation

Will Your FAS 123R Calculation Pass the Audit Test?

- Grant date
  - Mutual understanding between employer & employee (§A77)
  - Past practice is key
- Recognize over requisite service period
  - Usually the straight line over vesting period
  - Cumulative comp exp must at least = cumulative amount vested (§42 and §A97-A104)
- Volatility
  - Comparable public companies (§A43)
  - Industry sector index (§A45 & A46)
  - Look back over term (§A48)
- Term
  - SAB 107 might accept (vesting term + original contract term) / 2 (§D, Question 6)
  - E.g., 25% vest each year, 10 year contractual term
    - (4 yr*25% + 3 yr*25% + 2 yr*25% + 1 yr*25% + 10) / 2 = 6.25 years
- Pre-Vesting Forfeiture Rate
  - Adjust cumulative affect of rate change each reporting period (§43)

New Stock Option Rules for Early Stage Companies

Dr. Stanley Jay Feldman, Axiom Valuation Solutions and Associate Professor of Finance, Bentley College
stan@axiomvaluation.com

Ken Appleby, Foley & Lardner
kappleby@foley.com

Jack Malley, FirstJensenGroup
jmalley@firstjensengroup.com