

Dollars and Dynamics: Forging a Fair Value of the Family Firm

by

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

and

Mary Daugherty, Associate Professor of Finance, St. Thomas College

Agenda

- I. What is a business valuation: uses and motives
- II. Understanding the two most accepted valuation methods?
 - Income Method
 - Method of Multiples
- III. The Kohler Company: a case study about determining a private firm's control and minority values
- Lessons learned from the Kohler experience?

I. What is a Business Valuation?

What is a Business Valuation?

- **Definition:**

- A business valuation is an analytical process performed by a trained professional for estimating the price (fair market value) that a willing buyer would pay a willing seller for a specific business at a specific date.
- Financial Value vs. Strategic Value



- **Key Determinants:**

- A valuation is valid as of a specific date
- A valuation must include a precise definition of the entity being valued



Multiple Values

The cash generating capacity and the buyers planned use of the business assets determines the value placed on the business.

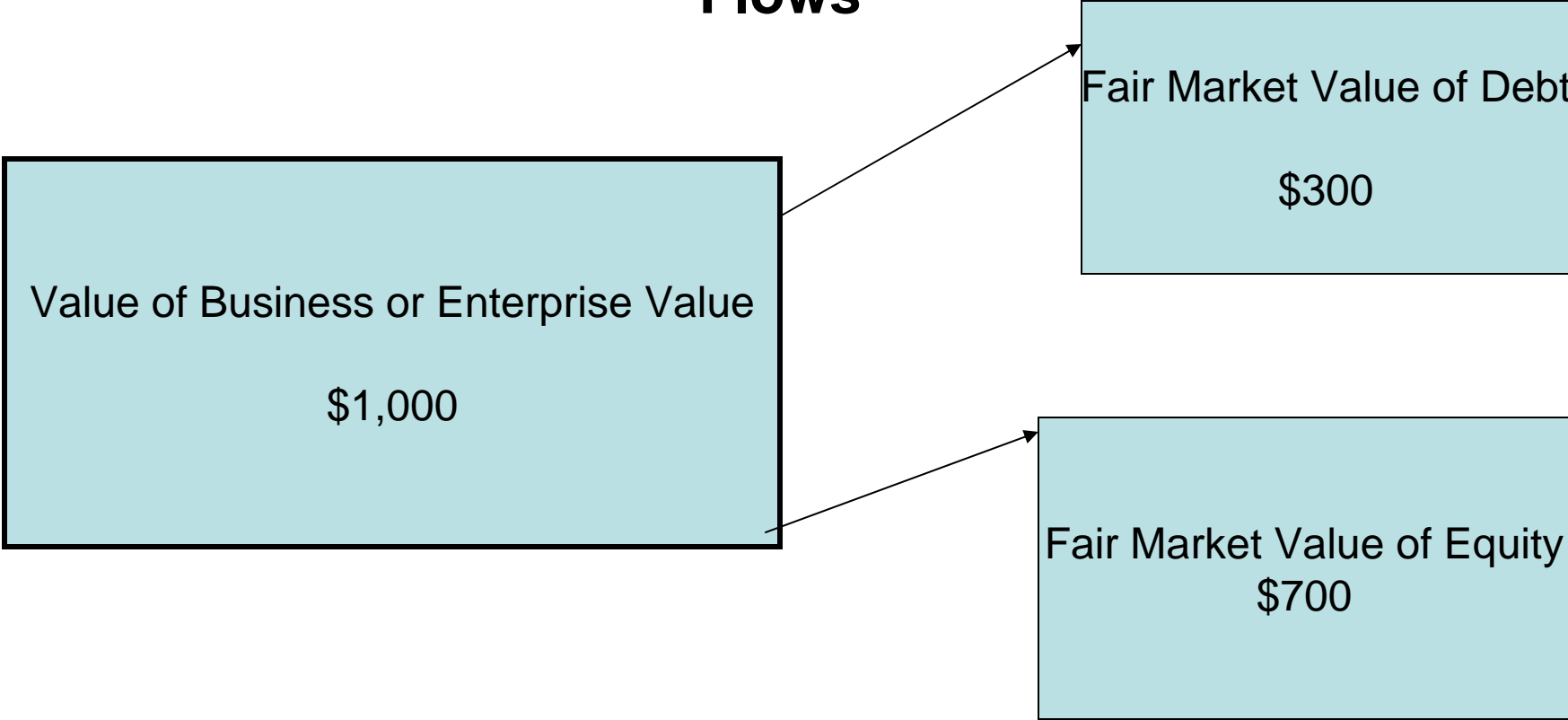


Strategic Value = \$1,000K

Fair Market Value = \$800K

Liquidation Value = \$100K

Business Value Belongs to the Owners of the Expected Cash Flows



Valuation Rules/Certifications

- U.S.
 - Internal Revenue Service Revenue Ruling 59-60
 - Financial Accounting Standards Board
141,142,157
- Who can value a business?
 - Courts: Daubert standard for expert qualifications
 - IRS: Increasing reliance on expert qualifications or certifications
 - Marketplace: Business brokers, investment bankers, CPAs

Sample Valuation Report

- Economic and Financial Conditions
 - National
 - Regional
- Industry Conditions
 - Industry Outlook
 - Competitive Conditions
- Company Financial Review
- Valuation Results
- Description of Valuation Methods

Reasons to Value a Business

**Selling a
Business**

**Buying a
Business**

**Financing
Expansion**

**Estate
Planning**

**Valuation is central
to almost all
Bet-Your-Business-Life
Issues for Business Owners**

**Protecting
Owner Income
and Equity**

**Retirement
Planning**

**Owner
Divorce**

**Adding/Modifying
Ownership**

II. What are Acceptable Valuation Methods?

Primary Valuation Approaches

- Income Method:
 - Discounted Free Cash Flow
- Market Methods:
 - Public Company Comparables
 - Private Company Comparables



Wall Street



No current transactions for firms like ours?

Valuing the firm using discounted free cash flow

Using the discounted free cash flow model to value the firm and its equity

- How is free cash flow to the firm defined?
- How does one project free cash flows?

Defining Free Cash Flow to Firm

		yr1
	Revenue	\$1,000
-	Operating Expenses	\$500
=	EBIT	\$500
-	Taxes @40%	\$200
=	NOPAT	\$300
-	New Capital Requirements	\$100
=	Free Cash Flow to Firm	\$200

Return on Equity

- What would a reasonable equity investor expect as a return on investment given the risks of the business and industry?

The Return on Equity Calculated

- Build-up Model For Cost of Equity
 - Risk free rate = 5%
 - + 1.0(Industry beta)* 7% (Equity risk premium) = 7%
 - + Financial risk premium = 4%; only if firm has debt
 - + Size premium = 9%; small firms are riskier than equivalent larger firms
 - + Firm-specific risk = 5%
- Equals Expected Return on Equity = 30%

WACC: Weighted Average Cost of Capital

- What it costs the firm to finance its operations on an after-tax basis

Calculating WACC

- Cost of Debt = Prime + 2% = 10.5%
- Tax rate = 40%
- After-tax Cost of Debt = $10.5\% * (1 - .4) = 6.30\%$
- Optimal Capital Structure
 - Debt = 50%
 - Equity = 50%
- WACC = $.5 * (6.30\%) + .5 * (30\%) = 18.15\%$

Simple Valuation Exercise

- Free Cash Flow to Firm is \$1,000
- Assume that this free cash flow is expected to remain constant at \$1,000 for a very long time. Then the value of this firm is easily calculated.
- Enterprise Value = $\$1,000 / .185 = \$5,405$

We now calculate equity value?

- Assume that the firm has debt that has a market value of \$2,702.
- Equity value = EV – Market value of debt
- $\$2,702 = \$5,405 - \$2,702$
- Shares outstanding: 2,702
- Value per share = \$1.00

Questions

- Is the per share value a minority or control value?
- Is the \$1.00 per share just calculated equivalent to the fair market value of a share if the firm in question were private?

Control vs. Minority Value

- Given our example, is each share worth \$1.00?
- Answer: Obviously not; the control shares have more value since they have access to cash flow that minority shares do not.
- Let us see how this happens.

Control has decision-making authority that minority owners do not have

- What examples can you give and does this authority have value?
 - Control dividend payout: Increase compensation and reduce dividend payout
 - Alter use of assets; divest assets; add assets
 - Make decisions about capital structure: Reverse split, issue new shares, decide not to borrow

Control vs. Minority Value

- Let us assume that an equivalent firm- same size, same industry segment etc- were just acquired and the buyer paid a 30% premium over the pre-announcement share price of \$1.00.

Control vs. Minority Value

- Hence the minority discount is equal to $1 - (\$1.00/\$1.30) = 23\%$
- In other words, the minority shares are worth about 77% of the control shares and we can see this if we multiply 77% by \$1.30 which equals \$1.00

Control vs. Minority Value

- For the moment assume:
 - Each share receives the same dividend
 - Each share carries one vote

Control vs. Minority Value

- Now let us apply the 23% discount to our example.

Control vs. Minority Value

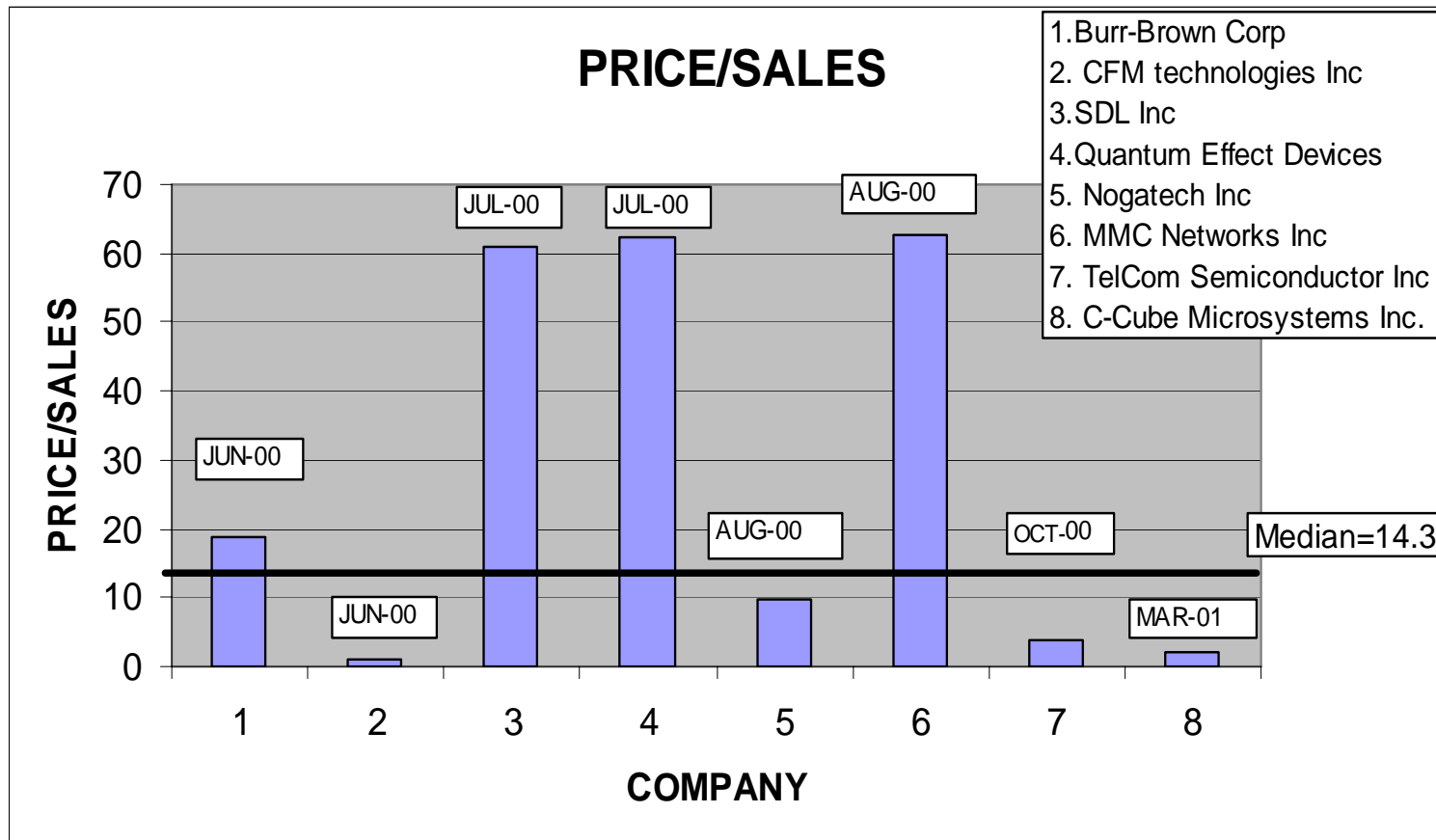
- Control per share value = $\$2,702/2,702$
= \$1.00
- Minority value per share = $\$1.00^* .77 =$
\$.77

Now let us calculate the value of equity using the method of comparables and see how this compares to the value obtained using free cash flow. Keep in mind we have not made any adjustments for lack of marketability, or lack of liquidity

Valuation Method: Method of Comparables

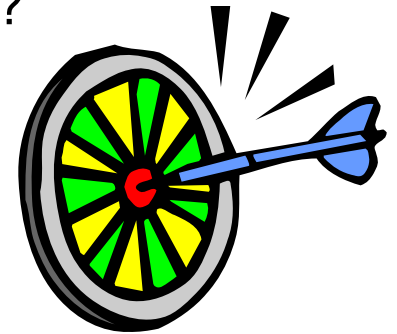
- What is a comparable: Firm in same industry segment, same size, same capital structure, same profit growth potential
- Valuation Metrics: Two widely used
 - Enterprise Value/Revenue
 - Enterprise Value/EBITDA

Market Method Example: Semiconductor Industry



Market Multiple Key Issues

- Key Issues:
 - How many transactions?
 - How comparable?
 - Any special circumstances, such as seller financing?
 - How current are the comparable transactions?
 - How similar are the comparables in revenue?
 - How “tight” are the comparable multiples?
- Key Points to Remember:
 - “If the comps don’t fit, you must not use it” BUT “If the comps are tight, the answer’s right”
 - Market multiples reflect buyer expectations of future cash generation of the business



Valuation Method: Method of Comparables Continued

	Col.1: Share price *# shares outstanding	Col. 2	Col.3 = Col. 1+ Col. 2	Col. 4	Col. 3/Col.4
Public Company Comparables	Market Value of Equity	Market Value of Debt	Enterprise Value	Revenue	EV/Revenue
Firm A	\$10,000	\$8,000	\$18,000	\$3,000	6
Firm B	\$6,000	\$3,000	\$9,000	\$2,500	3.6
Firm C	\$35,000	\$0	\$35,000	\$7,000	5
Firm D	\$12,000	\$9,000	\$21,000	\$4,000	5.25
Target: EV = Revenue * Median Multiple	\$2,423	\$2,702	\$5,125	\$1,000	
			Average Multiple		4.96
			Median Multiple		5.125

Weighted Equity Value Based on DCF and Comparables

			Weight	Weighted Value
	Minority Value per share using DCF	\$0.77	50%	\$0.39
	Enterprise Value Based on Public Firm Comparables	\$5,125		
minus	Market Value of Debt	\$2,702		
equals	Market Value of Equity	\$2,423		
	Number of shares outstanding	2702		
	Minority Value per share based on comparables	\$0.90	50%	\$0.45
	Weighted Minority Value per share			\$0.83

Comparison of Approaches

	Advantages	Disadvantages
Free Cash Flow	<ul style="list-style-type: none"> • Most accurate under most circumstances • Timely • Adjusts for detailed industry, size & geography of firm • IRS approved 	<ul style="list-style-type: none"> • Reflects a hypothetical transaction, although it does reflect current market conditions
Private Firm Comparables	<ul style="list-style-type: none"> • Accurate if multiple applies to a transaction that is a clone of the firm being valued • IRS approved 	<ul style="list-style-type: none"> • Not timely • Few firms to choose from • Can be misleading
Public Firm Comparables	<ul style="list-style-type: none"> • Timely • Many firms to select from • IRS approved 	<ul style="list-style-type: none"> • Often not accurate for smaller private firms

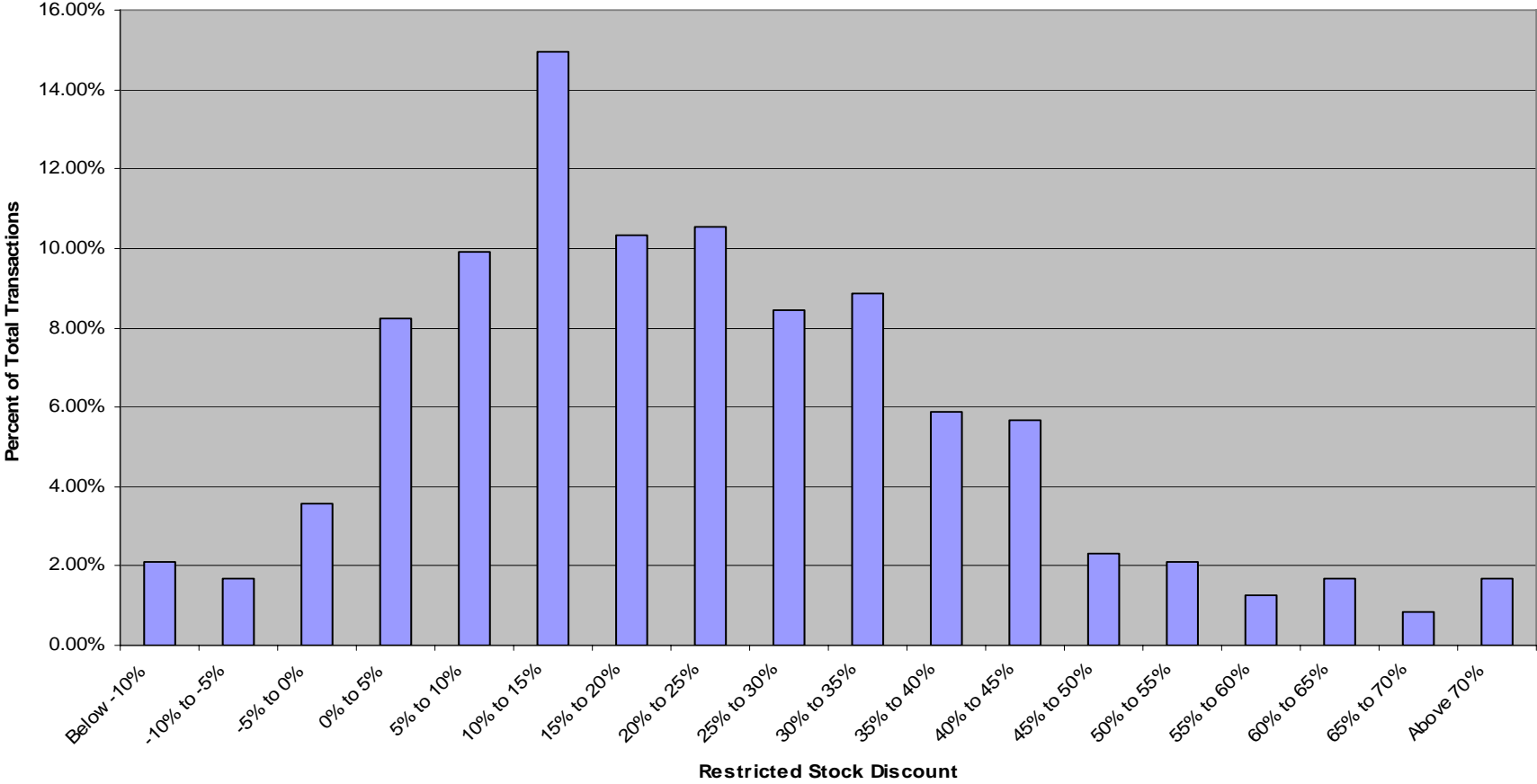
Equity Value Now Needs to Be Reduced for Lack of Marketability and Lack of Liquidity

- Lack of Marketability: Restriction on transfer. Typically this only impacts minority shareholders. Why?
- Lack of liquidity: Costs associated with not being able to sell shares in a timely and cost-effective manner as would be the case if the shares were trading in a market.

Liquidity Discount

- Generally the terms lack of marketability and liquidity are used synonymously
- There is a difference however but we will follow the general convention and use the terms interchangeably.

Discount for Lack of Marketability, Minority Stock (1980 - 2005)



Liquidity Adjusted Equity Value

- Value/share before liquidity adjustment =
\$.83
- Liquidity Adjustment = 20%
- Liquidity adjusted value per share =
 $$.83 * (1 - .2) = $.66$

Which Assumptions are Crucial to Determining Value?

- Projections: Free cash flow
- Selection of comparable firms and transactions
- Cost of capital
- Minority discount %
- Marketability discount %

The Kohler Case

The fight to stay private

Background

- Herbert recapped the firm to ensure it would remain private
- Herbert forced a share buy back from non-family members at a fair value established by Herbert's appraiser.
- Dissenting shareholders brought a law suit claiming that the offer price was too low

Motives and Objectives: Kohler

- Herbert wanted to keep the firm private. Why?
- Did not issue bonds Why?
- Free cash flow was not used to increase dividend payout. Why?
- Herbert wanted low share value to limit estate tax on Frederic's estate

Motives and Objectives: Dissenting shareholders

- In 1997, shortly prior to recap, several family members sold shares to professional investors for over \$100,000 per share.
- Why would professionals purchase a minority ownership position in a firm they could never get control of at a price that is close to twice what Herbert believed the shares to be worth?

The Fair Value of Kohler

- Herbert: \$55,700/share
- Value based on expected dividend payout only is about \$20,000 to \$30,000 per share at most
- Dissenters = \$273,000/share
- Settlement: \$135,000 per share

Why Such a Discrepancy in Values?

- Sales and operating profits were far too low leading to greater free cash flow than Herbert assumed.
- Payments and perks to family members working in the company means some family members were receiving perks treated as expenses
- If the cost of capital was lower, then value would be higher

More Information

- Our website: www.axiomvaluation.com
 - Articles
 - Videos
- Books
 - What Every Business Owner Should Know About Valuing Their Business
 - (McGraw-Hill) Feldman, Sullivan, and Winsby
 - Principles of Private Firm Valuation
 - (Wiley) Feldman
 - Handbook of Finance, upcoming in 2008
 - (Wiley) Fabozzi, editor; Feldman chapter on Private Firm Valuation