Understanding Your Investment Value

MGMT 6260
ESHIP FINANCE
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Prof. Brett Orzechowski

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AGENDA

1 **WELCOME BACK! (5 min.)**
Financials and equations. HBR Readings. NYC.

2 **UNDERSTANDING VALUE I (30 min.)**
Methods of valuation and choices.

3 **EXERCISE No. I: REVIEW (25 min.)**
Who did you choose -- and which variables?

4 **BREAK (5 min.)**
Stretch the legs.

5 **UNDERSTANDING VALUE II (25 min.)**
Accounting, Benchmarking + LTV

6 **TEAM, SIM + HBR (10 min.)**
Looking ahead to the next few weeks and beyond.

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UNDERSTANDING VALUE

PART I

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METHODS OF VALUATION

Not an exhaustive list

- * COMPARABLE TRANSACTIONS
- COST-TO-DUPLICATE
- * RISK-FACTOR SUMMATION
- VENTURE CAPITAL
- * BERKUS METHOD
- BOOK VALUE
- * SCORECARD VALUATION
- DISCOUNTED CASH FLOW

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METHODS OF VALUATION

COMPARABLE TRANSACTIONS	*One of the most popular as the investor is going on current comparison to other companies within a sector and potential earnings based on sales.*
COST-TO-DUPLICATE	*How much would it cost to recreate your startup by Company X — minus any intangible assets. This may include R+D, prototype costs, or patent costs. The equation: Fair market value + physical assets.*
RISK-FACTOR SUMMATION	*Also known as the quarter-million-reduction method. Assess each potential risk and increase/decrease in $250,000 multiples.*
VENTURE CAPITAL	*The 10X return method -- investors will want an exit within several years. Determine the anticipated ROI (10x) and post-money valuation. Then reductions occur. More in a minute.*

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METHODS OF VALUATION

BERKUS METHOD	*Super favorable for startups and investors alike by assigning dollar amounts to five KPIs found in early-stage startups.*
BOOK VALUE	*Your accountant loves this one because it's an asset-based valuation (similar to cost-to-duplicate). The book (balance sheets, etc.) is your total assets - liabilities.*
SCORECARD VALUATION	*Algorithmic-friendly valuation method for pre-revenue businesses. Comparing your startup to others that are already funded but yours is pre-money valuation of comparable companies. Also helpful with benchmarking.*
DISCOUNTED CASH FLOW	*See Series B from first lecture. Forecasted future cash flows and then a discount rate, or an ROI. Helpful for downrounds, too.*

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METHOD: COMPARABLE TRANSACTIONS

COMPARABLE TRANSACTIONS

You can also find revenue multiples for similar companies in your sector. This is usually the "x" factor. Ratios are needed multipliers for anything to compare companies. That's why benchmarking is important and so is a ratio concept like multiple of revenue.

MULTIPLE OF REVENUE

Multiple of revenue is used to measure a company's value based on its net sales or gross revenue. It is used in the valuation of any given business.

It just measures the revenue of a company, which some consider a poor indicator of value.

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METHOD: COMPARABLE TRANSACTIONS

SAAS COMPANY: RATIO X

The selling price of a start-up SaaS company is $6,000,000. Their annual revenue is $1,650,000.

FORMULA

$6,000,000 (selling price) / $1,650,000 (annual revenue)

MULTIPLE OF REVENUE

3.63x

COMPARABLE TRANSACTIONS

Now take the next steps for five more companies of the same industry and the average ***multiple of revenue*** *equals 2.75x. (example)*

EXAMPLE

To estimate the value of a comparable startup SaaS company that has an annual revenue of $3,500,000, multiply the revenue by the average revenue multiple of 2.75x.

The result is an estimated valuation of $9,625,000.

Would you make this investment on the original SaaS platform?

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METHOD: RISK-FACTOR SUMMATION

RISK-FACTOR SUMMATION

This offers some flexibility in your methodology, but allows you to dig deeper into your research. Remember, investors de-risk potential investments. For example, low-risk elements received a double-plus grade (++), which means you add $500,000 to your valuation. High-risk elements get a double-minus grade (--), and you subtract $500,000.

APPROACH

Simple approach is to start at the given valuation and increase/decrease based on this methodology using standard research methods to adjust accordingly. This allows startups to have adequate answers and investors to make the case for adjustments.

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METHOD: RISK-FACTOR SUMMATION

COMPETITION	LITIGATION	MANUFACTURING
CAPITAL RAISING	INTERNATIONAL	REPUTATION
TECH	STAGE/MATURITY	LUCRATIVE EXIT
POLITICAL/LEGISLATIVE	MANAGEMENT	SALES/MARKETING

SIMPLE EXAMPLE: (+) GRADE: ADD $250,000 | (-) GRADE: SUBTRACT $250,000

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METHOD: BERKUS

BERKUS METHOD

Key performance indciators (KPI) are favored and flexible. Similar to other methods, you assign dollar amounts to each metrics found in early-stage startups. This allows founders and investors avoid faulty valuations based on projected revenues, which few new businesses meet in the expected time period.

INDICATOR EXAMPLE

- **IDEA**
- **PROTOTYPE**
- **QUALITY MANAGEMENT TEAM**
- **STRATEGIC RELATIONSHPS**
- **PRODUCT ROLLOUT/SALES**

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METHOD: BERKUS EXAMPLE + FUNCTION

INDICATOR	FUNCTION	VALUE ASSIGNED: ADD UP TO
IDEA	BASIC VALUE	$500,000 FOR EACH INDICATOR
PROTOTYPE	REDUCE TECH RISK	
QUALITY MANAGEMENT	REDUCE EXECUTION RISK	
STRATEGIC RELATIONSHPS	REDUCE MARKET RISK	
PRODUCT ROLLOUT/SALES	REDUCE PRODUCTION RISK	

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METHOD: SCORECARD VALUATION

SCORECARD VALUATION

Mostly for pre-revenue businesses and a useful benchmarking unit by comparing the startup to others that are funded and within the same sector. Basically, find the average pre-money valuation of comparable companies. Then, compare on basic sliding scale measures.

SCORECARD SYSTEM

- **Strength of the team: 0-30%**
- **Size of the opportunity: 0-25%**
- **Product or service: 0-15%**
- **Competitive environment: 0-10%**
- **Marketing, sales, partnerships: 0-10%**
- **Need for additional investment: 0-5%**
- **Other: 0-5%**

You will notice this follows a basic business plan approach and is clear in execution.

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SEED ROUND EXERCISE

WHO AND HOW MUCH?

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BREAK

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UNDERSTANDING VALUE
PART II

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THREE NUMERICAL APPROACHES

Startups should explore all three but focus one.

ACCOUNTING

BENCHMARKING

LTV

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ACCOUNTING

Easy to understand multiples over basic accounting principles and metrics.

ACCOUNTING

PRICE/EARNINGS
PRICE/CASH FLOW
PRICE/SALES
EV/EBITDA
PRICE TO BOOK
(LTM)

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ACCOUNTING

Easy to understand multiples over basic accounting principles and metrics.

PRICE/EARNINGS

Price per share and the earnings (also known as the net income or profit, essentially the revenue minus cost of sales, operating expenses, and taxes) per share.

- *Starting off point for valuing nearly all companies*
- *When you want to quickly perform a relative valuation analysis of multiple companies to see what others are seeing*

PRICE/CASH FLOW

Measures cash a company is generating relative to its market value. Price-to-cash-flow or P/CF is a good alternative to P/E as cash flows are less susceptible to manipulation than earnings. Cash flow does not incorporate non-cash expense items like depreciation or amortization (income statement metrics), which can be subject to various accounting rules.

- *Particularly useful for stocks that have positive cash flow but are not profitable*

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ACCOUNTING

Easy to understand multiples over basic accounting principles and metrics.

PRICE/SALES

Stock price divided by sales per share. The price-to-sales valuation ratio is used as a comparative price metric for companies that don't have positive net income - often young companies or those in trouble.

- *Used for fledgling companies that have yet to turn a profit as they are still in investment mode and cyclical companies like railroads or airlines, which may go through periods of unprofitable times.*

EV/EBITA

The ratio of enterprise value to earnings before interest, taxes, depreciation, and amortization. Enterprise value (EV) is market capitalization + preferred shares + minority interest + debt - total cash.

- *Good for capital intensive industries where balance sheets hide a lot of the funding - airlines, railroads, etc.*

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ACCOUNTING

Easy to understand multiples over basic accounting principles and metrics.

PRICE TO BOOK

Book value is the value of an asset according to its balance sheet account - in other words, it is a company's value if it liquidated its assets and paid back all its liabilities.

P/B is an indicator of market sentiment regarding the relationship between a company's required rate of return and its actual rate of return. A ratio >1 means that the market thinks that future profitability will be greater than the required rate of return - assuming that book value reflects the fair values of the asset.

LTM

You know this one.

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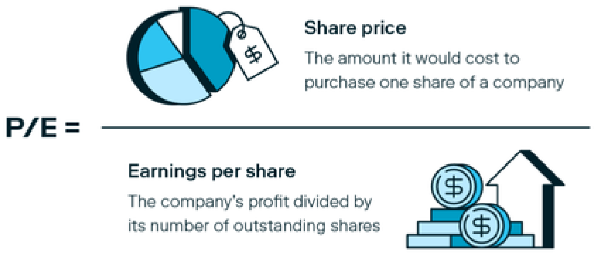
BENCHMARKING

Easy to understand multiples over basic accounting principles and metrics.

PE

To arrive at a company's PE ratio, you'll need to first know its EPS, which is calculated by dividing the company's net profits by the number of shares of common stock it has outstanding. Once you have that, you can divide the company's current share price by its EPS.



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BENCHMARKING

Easy to understand multiples over basic accounting principles and metrics.

PLEASE NOTE

What is an example of an industry benchmark?

Performance metrics on a product-by-product basis that can be used for product development. Marketing — Budget allocation, customer satisfaction ratings, and advertising channels

A benchmark is composed of 3 basic elements: the metric, the benchmark value, and the comparison group. You will need a strong definition of each to determine the value of a benchmark to your organization and should expect any quality benchmark report to outline them.

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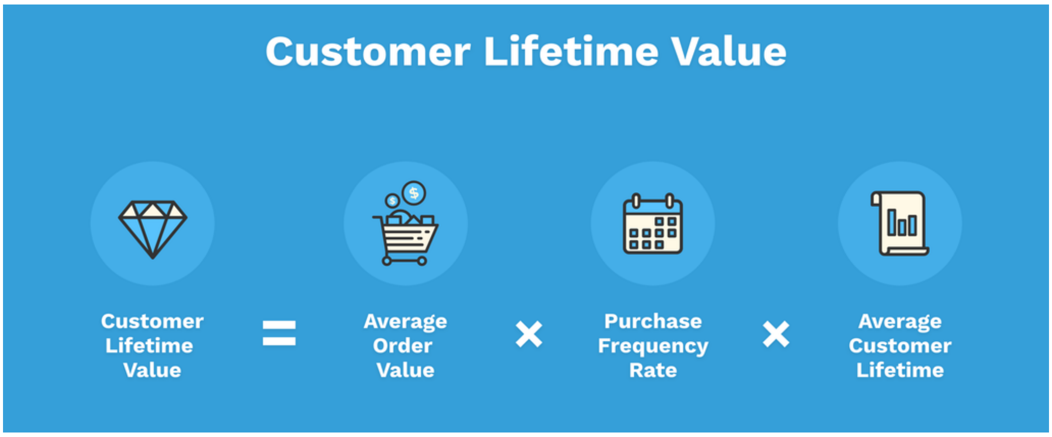
LTV: THE BASICS



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LTV: METHOD ONE

LTV

LTV = Average Revenue Per Customer * Customer Lifetime.

*If a customer spends $50 a month, on average, on your SaaS product over their entire relationship with your business, which lasts 6 months, then the LTV is $50 * 6 months = $300.*

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LTV: METHOD TWO

LTV

LTV = Average Revenue Per Customer / Churn Rate.

Churn rate is the number of subscribers who canceled their subscription during a specific period of time. For example, if you had 200 subscribers in the previous year and lost 10, the churn rate is 5%.

The higher the customer churn rate is, the lower the lifetime value will be. If the average revenue per customer is $50, and the churn rate is 5%, then the LTV is $50 / 0.05 = $1,000.

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LTV: METHOD THREE

LTV

LTV = (Average Revenue Per Customer * Gross Margin %) / Revenue Churn Rate.

The variables in this equation are:

- *Average revenue per customer = MRR (Monthly Recurring Revenue) / Total Number of Accounts*
- *Gross Margin = Total Revenue – Cost of Goods*
- *Revenue Churn Rate = (Revenue Lost in a Specific Period – Upsells in that Specific Period) / Revenue at the Beginning of the Period.*

*This formula helps you see the LTV in gross profit terms, not in revenue terms. If the average revenue per customer is $50, the gross margin is 10%, and the revenue churn rate is 5%, the LTV would be ($50 * 0.10) / 0.05 = $100.*

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MY GIFT TO YOU

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