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VALCON 2025

Tricks of the Trade, or Tricking the Trade?

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2025

Tricks of the Trade or Tricking the Trade?

A PANEL DISCUSSION ON SUBJECTIVITY, JUDGMENT, AND MANIPULATION IN VALUATION

Introduction and Overview

Valuation often hinges on critical company-specific statistical and methodological decisions, raising questions about their necessity or potential for manipulation. This session will examine such topics as mean vs. median, discounts for lack of marketability, premiums for control, and size premiums and company-specific premiums, and will offer insights into how these decisions shape valuation outcomes.

Panel Members

Edmond Esses, The Brattle Group

Charles Parekh, HKA

Daniel J. Saval, Kobre & Kim LLP

Teri Stratton, Hilco Group

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Case Study: Proxima Systems

- On January 1, 2024 (the "Dividend Date"), Proxima Systems[1] paid a $25 MM distribution to most of its shareholders, principally entities affiliated with the its sponsor
- On April 1, 2025, Proxima entered chapter 7 liquidation for a Chapter 7 Trustee was appointed
  - The Ch. 7 Trustee is examining causes of action and asks the panel to provide a financial opinion as the solvency of Proxima as of the Dividend Date
- As of the Dividend Date, Proxima Systems ("Proxima") was a projected high-growth enterprise software company developing AI-powered process automation and data analytics platforms tailored for financial institutions and digital-first enterprises. The company's flagship product suite—ProximaIQ, FlowSense, and LedgerVision—offers a full-stack solution for workflow optimization, regulatory compliance automation, and predictive financial insights.
  - All facts and figures that follow are as of the Dividend Date

Notes:
1. Proxima Systems and comparable companies are fictional companies created with the assistance of ChatGPT.

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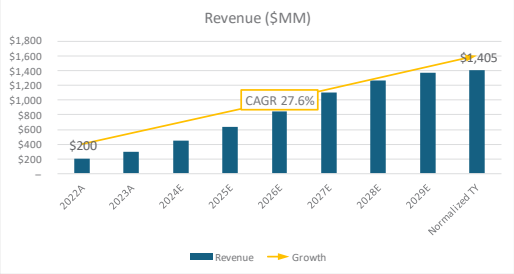
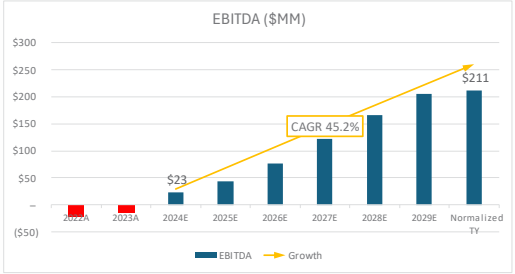
Management Projections

- Management's revenue projections are driven by aggressive customer acquisition, deepening enterprise penetration, and international market expansion and EBITDA growth supported by margin expansion and operational efficiency.
  - By the terminal year, normalized revenue and EBITDA are projected to reach $1.4 BN and $211 MM respectively, reflecting a mature and scalable operating model.





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CAGR and Semi-Log Regression

- CAGR (Compound Annual Growth Rate):
  - Measures the mean annual growth rate of an investment or value over a time period, assuming compounding.
- Semi-Log Regression:
  - A statistical method that uses logarithms to linearize exponential growth and estimate average growth rates over time.
  - **Semi-Log Regression Formula:** $\ln(R_t) = \alpha + \beta t$
  - Where $\boldsymbol{R_t}$= revenue at time t, $\boldsymbol{\alpha}$ = intercept, $\boldsymbol{\beta}$= growth rate, $\boldsymbol{t}$= time.

Aspect	CAGR	Semi-Log Regression
Data Requirement	Only start and end values needed	Uses all data points across the years
Sensitivity	Ignores interim fluctuations	Captures overall trend, handles noise
Assumptions	Assumes constant annual growth	Can accommodate variable growth rates
Output	Point-to-point average growth rate	Trend line showing average growth
Use Case	Quick, simple growth estimate	Detailed analysis and forecasting

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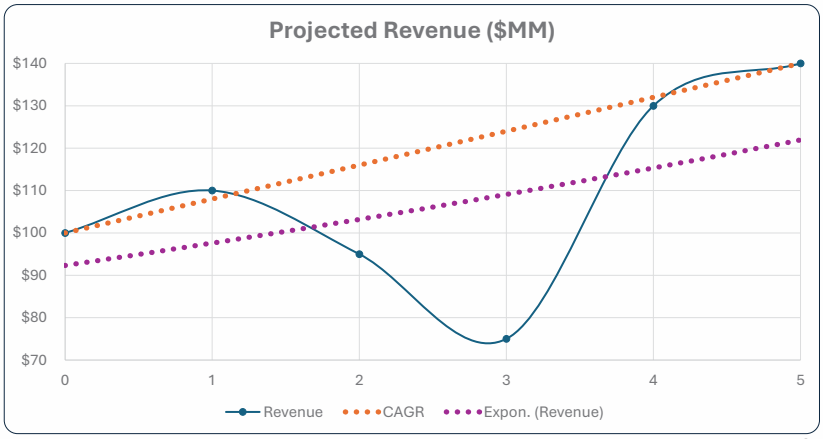
CAGR and Semi-Log Regression (cont.)

Year	Revenue ($MM)
0	$100
1	$110
2	$95
3	$75
4	$130
5	$140

CAGR	6.96%
Log Reg.	5.56%



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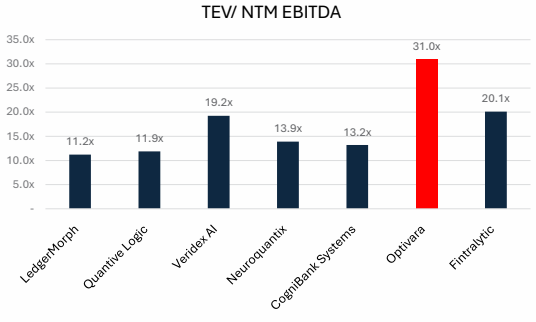
Comparable Company Analysis

($MM) Company	Ent. Value	Revenue NTM	Revenue 3-Year CAGR	EBITDA NTM	EBITDA 3-Year CAGR	TEV/ NTM EBITDA
LedgerMorph	$1,555.0	$318.9	14.9%	$138.7	31.5%	11.2x
Quantive Logic	1,279.4	388.1	18.2%	107.6	32.3%	11.9x
Veridex AI	931.5	512.0	20.3%	48.4	29.2%	19.2x
Neuroquantix	810.1	495.0	28.3%	58.3	23.7%	13.9x
CogniBank Systems	686.7	194.5	13.9%	52.0	29.4%	13.2x
Optivara	220.0	82.6	21.2%	7.1	17.3%	NMI
Fintralytic	138.7	36.4	21.8%	6.9	46.8%	20.1x
First Quartile						**12.2x**
Mean						**14.9x**
Median						**13.6x**
Third Quartile						**17.9x**



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Potential Challenges to Management Projections and Valuation Methodology

The Daubert Standard: *Daubert v. Merrell Dow Pharmaceuticals Inc.*, 509 U.S. 579 (1993)
Evaluating the reliability and relevance of expert witness testimony

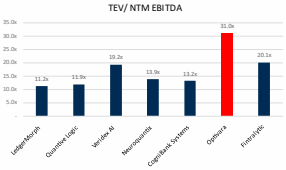
Management Projections

Aggressive growth forecasts:

- 27.6% revenue growth & 45.2% EBITDA CAGR in a nascent market
- Proxima's projections warrant caution especially given the company's 15-month liquidation timeline
- To the extent the projections lack supporting evidence or are based on unreasonable assumptions, they may be subject to a Daubert challenge or rejected as unreliable

Comparable Company Analysis

Valuation multiples selection:



- 12.2X first quartile, 14.9X mean, 13.6X median, and 17.9X third quartile
- The comparable company set not only differs from Proxima in size and growth but also in risk profile and rapid liquidation timeline
- The multiples are relatively high and have a broad range— from 11.2X to 20.1X—calling into question the reliability of using a mean and potentially doing this analysis altogether

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Income Approach – Capturing Alpha

- In the context of the **Capital Asset Pricing Model (CAPM)**, alpha (α) represents the excess return of an investment relative to the return predicted by CAPM
  - CAPM assumes investors are only compensated for systematic or undiversifiable risk (known as "market risk")
  - However, research shows that the market prices other risks as well (i.e., other risks are systematic)
- Valuation may look to "capture" the alpha (*i.e.*, the potential compensation for risks that CAPM doesn't capture) through a statistical approach or a company specific approach
  - **Expanded (or Modified) CAPM**
  - **Build-up Method**

CAPM	$= r_f + \beta(r_m - r_f)$
Expanded CAPM	$= r_f + \beta(r_m - r_f)$ + Small-cap stock premium + C-SRP
Build-Up Method	$= r_f$ + Equity risk premium + Small-cap stock premium + Industry risk premium + C-SRP

Size Effect

- The size effect is an observed phenomenon where smaller companies tend to yield higher returns than larger ones, primarily because they carry greater risk.
  - Small-cap stocks historically outperform large-cap stocks, especially over long periods.
  - The effect is not limited to micro-caps – it applies to all but the largest firms
- A size premium may help adjust for the extra risk when estimating the cost of equity for small or privately held firms.
  - The size effect is empirically observed but debated – unclear if due to size alone or correlated factors like liquidity
  - The concept of investment "popularity" adds a behavioral lens: less "popular" small-cap stocks may offer higher returns due to lower pricing

Companies Ranked by Market Value of Common Equity

Decile	Low End Breakpoint ($M)	High End Breakpoint ($M)	Size Premium
Mid Cap (3–5)	1,988	20,178	0.52%
Low Cap (6–8)	731	1,985	1.02%
Micro Cap (9–10)	1	730	2.66%
Breakdown of CRSP Deciles 1 - 10			
1	47,157	1,522,711	-0.01%
2	20,191	46,949	0.33%
3	9,988	20,178	0.48%
4	6,197	9,937	0.50%
5	3,988	6,181	0.74%
6	2,482	3,985	1.00%
7	1,423	2,465	1.19%
8	731	1,417	0.88%
9	305	730	1.72%
10	1	304	4.47%
Breakdown of CRSP 10th Decile			
10A	132	304	3.06%
10b	221	304	2.38%
10c	132	221	4.17%
10d	1	132	7.42%
10y	68	132	9.98%
10z	1	67	10.57%

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Company-Specific Risk Premia

- Company-specific risk (C-SRP) represents an adjustment to the cost of equity capital to account for risks unique to the subject company that are not captured by market-based models.
  - May be applied under both Modified CAPM and Build-Up Method
- Types of Adjustments:
  - Risk Differences: When the subject company has operational, financial, or structural risks not shared by guideline public companies.
  - Forecast Biases: Adjusts for overly optimistic or narrow cash flow projections that fail to reflect downside scenarios.
  - Other Specific Risks: Includes lack of customer diversification, financial distress, reliance on key individuals, or geographic vulnerabilities.
- C-SRP should not be used as a shortcut for uncertainty or as a means to manipulate outcomes.

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Valuation Discounts and Premiums

- **Premium for control**: the additional amount a buyer is willing to pay over the market price of a publicly traded company's shares in order to acquire a controlling interest—typically more than 50% ownership
- **Discount for lack of control (DLOC)**: a reduction in value of an equity interest to reflect the absence of some or all powers of control of an entity's operations
  - Data available for estimating a lack of control discount are limited and interpretations can vary markedly
  - The discount generally relates to a lack of liquidity
  - Calculated as "1 – [1/(1 + Control premium)]"
- **Discount for lack of marketability (DLOM)**: quantifies a reduction in value to reflect the absence of a liquid market for private company shares
  - Most common in non-controlling interests in private companies
  - Methods to quantify:
    - Restricted stock and Pre-IPO studies
    - Option pricing models

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Premium for Control vs. Discount for Lack of Marketability

Scenario	Premium for Control?	DLOM?
Private minority stake	❌ No	✅ Yes
Private controlling stake	✅ Yes	✅ Yes
Public minority stake (restricted shares)	❌ No	✅ Yes (limited)
Public controlling acquisition	✅ Yes	❌ No (liquid)
Private equity acquiring full company	✅ Yes	❌ No (if exiting soon via IPO/M&A)

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Potential Challenges to Cost of Capital Analysis

CAPM	$= r_f + \beta(r_m - r_f)$	• Proxima's highly volatile beta conditions as an AI enterprise software company
Expanded CAPM	$= r_f + \beta(r_m - r_f)$ + Small-cap stock premium + C-SRP	• Questionable reliability of small-cap stock premium calculations when data sources are not peer-reviewed • Questionable reliability of company-specific premiums without empirical evidence
Build-Up Method	$= r_f$ + Equity risk premium + Small-cap stock premium + Industry risk premium + C-SRP	• Based on its product lines, should Proxima Systems be considered an enterprise software company, AI company, or fintech company? • What standards are present in an expert's methodology for calculating industry risk premiums when knowledge of the industry is subjective?
Control Premium & DLOM		• Potentially framed as a subjective/arbitrary analysis, particularly given the immaturity of the AI market? • Is there empirical support for the magnitude of the DLOM discount?

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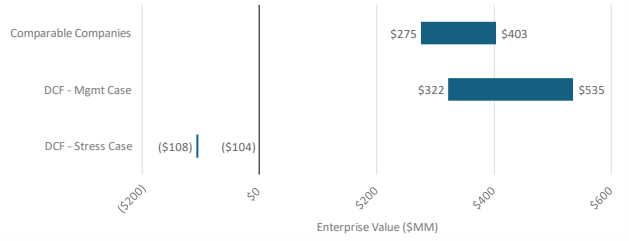
Valuation Results: Proxima Systems

WACC		DCF ($MM) Mgmt Case	Stress Case
Risk Free Rate (20 year U.S. Treasury)	4.8%		
Levered Beta	1.6		
ERP	5.50%		
CAPM	**13.6%**	**$554.5**	**($107.8)**
Small-cap stock premium (9th decile)	1.7%		
C-SRP	4.0%		
Expanded CAPM	**19.5%**	**$288.8**	**($108.6)**
Small-cap stock premium (9th decile)	1.7%		
Industry risk premium	2.0%		
C-SRP	4.0%		
Build-up Method	**18.0%**	**$322.2**	**($104.5)**

Comparable Companies ($MM)

	TEV/NTM	Enterprise Value
Low	12.2x	$274.9
Mean	14.9x	$335.8
Median	13.6x	$304.9
High	17.9x	$402.8



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The Court's Perspective

"At best, the valuation of an enterprise like Mirant Group is an exercise in educated guesswork. At worst it is not much more than crystal ball gazing. There are too many variables, too many moving pieces in the calculation of value of Mirant Group for the court to have great confidence that the result of the process will prove accurate in the future."

***In re Mirant*, 334 B.R. 800, 848 (Bankr. N. D. Tex. 2005) (opinion on total enterprise value)**

Potential Challenges for Judges in Financial Valuation Disputes

- **Quantitative Expertise**
- **Competing Experts**
- **Methodology Variability**

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Faculty

Edmond Esses, CFA, CIRA is a principal with The Brattle Group in New York and an expert in financial restructuring, with more than 15 years of experience in bankruptcy litigation and other complex financial disputes. He provides expert testimony and consulting services in complex and contentious bankruptcy, restructuring, distressed and special situations. He also has advised on restructurings (both in and out of court), and has served as a financial advisor and expert witness in high-profile cases, including providing loss valuation and loan re-underwriting analysis. As an expert witness, Mr. Esses focuses on value and solvency disputes, such as avoidance actions, intercreditor disputes, transfers of value and related-party transactions. His expertise extends to business valuation, fraudulent transfers, preference analysis, cash-flow assessments and capital structure analysis. Mr. Esses's experience includes representing Puerto Rico's Debt Recovery Authority in the territory's plan of adjustment and serving as financial advisor to groups of RMBS trustees in multi-year litigations related to the Lehman Brothers and Residential Capital bankruptcies. He has also consulted on several U.S. Securities and Exchange Commission (SEC) investigations. Prior to joining Brattle, Mr. Esses was a senior director in the Complex Financial Situations practice at a global financial and risk advisory firm. He also worked at an asset-management firm, where he specialized in securities analysis and valuation. Mr. Esses received his B.B.A. in finance from Baruch College Zicklin School of Business.

Dr. Charles Parekh is a partner with HKA in Chicago and an economist with more than 20 years of experience. He has been appointed as a damages and valuation expert on more than 20 occasions. Dr. Parekh has testified as an economics and statistics expert and has been cross-examined in litigation and depositions in federal, bankruptcy and state courts. He has prepared numerous expert reports and has worked on behalf of defense and plaintiff clients on disputes of up to $12 billion. Dr. Parekh has an extensive background in economic and public finance and public policy analysis across the health care, education, statistical sampling and structured-finance sectors. Prior to joining HKA, he was a managing director for NERA Economic Consulting and Kroll. Dr. Parekh specializes in the application of economic and statistical analysis to finance, health care and public policy issues. He has undertaken expert appointments on the economic and financial effects of health care regulations on patients, the use of statistical sampling to extrapolate results to a larger population, and the statistical need to randomly test students for drugs and alcohol, and he testified on behalf of creditors in the Lehman Brothers bankruptcy. Dr. Parekh is a member of the American Bar Association, ABI, American Economic Association, Association of Public Policy Analysis and Management, Association for Education Finance and Policy, and the Chicago Bar Association. He received his B.A. in economics from Colgate University, his Master's in public policy analysis from the Harris School of Public Policy at the University of Chicago, and his Ph.D. in public finance from New York University.

Daniel J. Saval is a partner with Kobre & Kim LLP in New York. He has experience acting for a range of stakeholders, on both the debtor and creditor sides, in complex disputes and investigations in the context of in-court and out-of-court restructurings. Mr. Saval regularly "first chairs" hotly contested matters in major chapter 11 cases in bankruptcy courts across the country. His practice also encompasses cross-border asset-tracing and recovery, which typically involves litigation proceedings in multiple foreign jurisdictions. Mr. Saval frequently designs and executes global strategies for monetizing claims arising from distressed or defaulted debt, often in cases involving fraud or other mis-

conduct. He is a Fellow of INSOL International and currently serves as vice chair of INSOL's Asset Tracing & Recovery Committee. Before joining Kobre & Kim, Mr. Saval was part of the Bankruptcy & Corporate Restructuring and International Disputes practices at Brown Rudnick LLP. Before that, he clerked for Hon. Barbara A. Lenk of the Massachusetts Appeals Court. Mr. Saval received his B.A. in 1998 from the University of Pennsylvania and his J.D. in 2002 from Northeastern University School of Law.

Teri L. Stratton, CIRA is a senior managing director and head of Special Situations at Hilco Corporate Finance in Los Angeles. She is an investment banker with more than 20 years of experience in advising on distressed sell-side and buy-side mergers and acquisitions transactions, recapitalizations and restructuring transactions to middle-market companies across many industries, including consumer, energy and industrials. Ms. Stratton speaks frequently on various M&A and restructuring topics. Prior to joining Hilco Corporate Finance in 2022, she spent 12 years at Piper Sandler and 10 years at Macquarie Capital Advisors (and predecessor firms) in the restructuring group. Prior to her investment banking career, Ms. Stratton had eight years of experience in corporate banking, serving in both credit administration and special assets. She is a member of the Turnaround Management Association, the Association of Insolvency and Restructuring Advisors and ABI. Ms. Stratton received her Bachelor's degree in economics from the University of California at Los Angeles and her M.B.A. in finance with honors from the Anderson School at UCLA.