

SUPREME COURT OF THE STATE OF NEW YORK
COUNTY OF NEW YORK

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OASIS INVESTMENTS II MASTER FUND LTD.,
derivatively on behalf of nominal defendant FANG
HOLDINGS LIMITED,

Index No.: 652607/2023

Justice Andrew Borrok

Plaintiff,

Mot. Seq. No. 22

-against-

VINCENT TIANQUAN MO, RICHARD JIANGONG
DAI, ACE SMART INVESTMENTS LIMITED,
NEXT DECADE INVESTMENTS LIMITED,
MEDIA PARTNER TECHNOLOGY LIMITED,
and TRUE KNIGHT LIMITED,

Defendants.

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AFFIRMATION OF BORIS J. STEFFEN, CPA, CIRA, ASA, ABV, CDBV, CGMA

I, Boris J. Steffen, with a business address of 2360 Corporate Circle, Suite 340, Henderson, NV 89074, hereby affirms the following under the penalty of perjury under the laws of New York, pursuant to CPLR 2106:

1. I have been asked to provide this affirmation as an expert by Reid Collins & Tsai LLP (“Reid Collins”) who are the attorneys of the plaintiff in a derivative litigation against Defendants Vincent Tianquan Mo (“Mo”), Richard Jiangong Dai (“Dai”), Ace Smart Investments Limited (“Ace”), Next Decade Investments Limited (“Next Decade”), Media Partner Technology Limited (“Media Partner”), True Knight Limited (“True Knight”) and nominal Defendant Fang Holdings Limited (“Fang”) (collectively (“Defendants”), which subsequently settled (the “Proceeding”).

Instructions

2. In connection with its fee application, Reid Collins & Tsai LLP has asked me to assess the credibility and reliability of the Fairness Opinion (and associated supporting materials) issued by Roth Capital Partners, LLC (“Roth”) on December 22, 2022, in connection with the April 2023 take-private merger transaction of China Index Holdings Limited (the “Roth Fairness Opinion”), for purposes of determining the equity value of China Index Holdings Limited.

Qualifications

3. I am a Managing Director in the Litigation and Fiduciary Services and Corporate Restructuring practices of Province, LLC. As an expert in accounting, finance, valuation, solvency and damages analyses, I have served as a consulting and testifying expert, and led investigations, for holders of interests and claims in disputes involving mergers, acquisitions, divestitures and restructurings in excess of \$240B. Matters in which I have consulted or testified have included antitrust and competition policy, appraisal, bankruptcy and restructuring, bribery, corruption and financial statement fraud, breach of contract, intellectual property, international trade and arbitration, mergers and acquisitions, securities and utility regulation.

4. Province is a leading financial advisory firm with offices located in Detroit, MI, Greenwich, CT, New York, NY, Las Vegas, NV, Los Angeles, CA, and Miami, FL. Province has extensive experience representing official creditors’ committees, debtors, creditors, trustees, and others in a wide variety of cases. The firm’s services include an integrated set of solutions encompassing corporate advisory, creditor and investor services, trust and liquidation, litigation and fiduciary services, and performance improvement.

5. I have consulted for numerous privately owned and publicly traded enterprises as well as governmental agencies in the U.S. and abroad. The industries in which I have consulted include aerospace, aggregates, asbestos, automotive, batteries, beef processing, biotechnology,

business services, cable network, chemical, consumer product, construction, defense, document management, electronic imaging, financial services & banking, food & beverage, gaming, genomics, healthcare, HVAC, independent power, information technology, insurance, internet, newspaper, magazine, pharmaceutical, oil & gas, paper and industrial packaging, printing, pumps & controls, plumbing, renewable energy, real estate, retail, securities, semiconductor, software, steel, telecom, tobacco, electric utility and water.

6. Matters in which I have testified as an expert witness in valuation issues include the lack of reasonably equivalent value received by the left-behind bondholders in the Incora uptier litigation, the fair value of BMC Software's equity before the Delaware Court of Chancery, the accounting for and value of Constellation Mystic Power, LLC's power plants before the Federal Energy Regulatory Commission, the value the merger premium and cognizability of merger synergies expected in the merger of Great Plains Energy Incorporated and Westar Energy, Inc. before the Corporation Commission of the State of Kansas, the value of the merger premium and cognizability of the expected merger synergies in the proposed merger of Public Service Electric and Gas Company and Exelon Corporation before the New Jersey Board of Public Utilities, and the cognizability and value of the merger synergies expected in the first attempt of Office Depot and Staples to merge.

7. Prior to joining Province, I was a Senior Managing Director with B. Riley Financial. Previously, I was the Southeast leader of the Financial Investigations & Dispute Advisory Services practice of RSM US LLP, a Managing Director with Gavin / Solmonese, a Principal and Director with Navigant Economics, LLC (fka Chicago Partners), a Partner with Bates White, LLC, a Senior Consultant with the Antitrust, Finance and Damages Practice of the Economics and Policy Group of LECG, Inc. and a Senior Staff member of the Federal Trade

Commission, Bureau of Competition. I also served as the Manager of Acquisitions in Corporate Development for U.S. Generating, Inc. and a Group Leader/Accountant and Auditor in Corporate Finance for Inland Steel Industries, Inc.

8. I earned a Master of Management degree, with specializations in accounting and finance, in 1988 from the J.L. Kellogg Graduate School of Management of Northwestern University in Evanston, Illinois. In 1978, I received a Bachelor of Music degree in Applied Music, and in 1985, a Bachelor of Science degree in finance, with honor, both from DePaul University in Chicago, Illinois, where I was also elected to Beta Gamma Sigma. I am a Certified Public Accountant (“CPA”), Chartered Global Management Accountant (“CGMA”) and Accredited in Business Valuation (“ABV”) by the American Institute of Certified Public Accountants (“AICPA”). I was awarded the Accredited Senior Appraiser (“ASA”) certificate from the American Society of Appraisers and the Certified Insolvency and Restructuring Advisor (“CIRA”) and Certificate in Distressed Business Valuation (“CDBV”) from the Association of Insolvency and Restructuring Advisors (“AIRA”).

9. I am a Coordinating Editor of the American Bankruptcy Institute (“ABI”) Journal, Value & Cents column, and a Co-Editor of the Association of Insolvency & Restructuring Advisors (“AIRA”) Journal. I have given lectures, spoken on panels and or published articles pertaining to valuation, mergers and acquisitions, merger synergies, accounting, antitrust, corporate finance, due diligence and insolvency for the University of San Diego School of Law, American University Washington College of Law, AIRA Journal, ABI Journal, Delaware Bankruptcy Inns of Court, Financier Worldwide, Incremental Advantage, Insol International, Law360, International Legal Alliance Summit & Awards, and National Conference of Bankruptcy Judges.

10. I am also a member of the Board of Directors and the President-Elect of the Association of Insolvency & Restructuring Advisors, and a member of the AICPA's Business Valuation/Forensic and Litigation Services section, American Society of Appraisers, American Bankruptcy Institute and Insol International, and an Associate member of the Antitrust Law, Business Law and Litigation sections of the ABA. I am also a past Co-Chair of the American Bar Association ("ABA") Section of Litigation, Expert Witness Committee, Appraisal & Valuation Subcommittee (2013 – 2021).

Documents Reviewed

11. Opinion of Roth Capital Partners, LLC, dated as of December 22, 2022.
12. Discussion Materials prepared by Roth Capital Partners, LLC for discussion with the Special Committee, dated December 22, 2022.
13. China Index Holdings Limited, SEC Form Schedule 13E-3 filed January 20, 2023.
14. China Index Holdings Limited, SEC Form Schedule 13E-3/A filed February 24, 2023.
15. China Index Holdings Limited, SEC Form Schedule 13E-3/A filed April 17, 2023.
16. Annual Report on Form 10-F for the fiscal year ended December 1, 2021, filed with the SEC on April 26, 2022.
17. China Index Holdings Limited, SEC Form 6-K for the month of December 2022.
18. S&P Capital IQ Global Market Intelligence.

Summary of Opinion

19. The conceptual and methodological flaws inherent to the analyses reported in the Roth Fairness Opinion renders its findings, indications and opinions of value unreliable for determining the fair value of the equity of the minority holders in China Index Holdings Limited. Correcting these errors indicates that the valuation methodologies and key assumptions used by

Roth¹ resulted in a significant understatement of CIH's Enterprise Value and Implied Equity Value per ADS.

Opinions

A. Roth's Discounted Cash Flow ("DCF") Analysis

1. The DCF Method

20. In a DCF analysis, the enterprise value ("EV") of a firm is calculated as equal to the present value of its expected future unlevered free cash flows, discounted to present value using a risk-adjusted discount rate.² The first step in the analysis is to calculate the cash flows for each year of the discrete projection period, which typically extends until the point in time that the firm is expected to reach a steady state of operation, often five years. At this point, the cash flows are checked for reasonableness, considering the historical financial performance of the subject firm and its future prospects given industry conditions and the economic environment. The normalized cash flows in the post-projection base period are then used to calculate a terminal value in perpetuity. In valuation practice, the cash flows for the discrete projection period and the terminal value are then discounted to present value at the valuation date.

2. The Roth Fairness Opinion DCF analysis

21. Roth estimated the DCF value of the Company using management projections for the three-year period 2023-2025, discounted to present value using a weighted average cost of capital in a range from 17.8% to 21.8%, and a growth rate of from 2.0% to 4.0% in perpetuity for

¹ Roth Fairness Opinion, p. 11.

² Robert W. Holthausen, Mark E. Zmijewski, *Corporate Valuation: Theory, Evidence & Practice*, 2nd Ed. (Westmont: Cambridge Business Publishers, LLC), pp. 10-15.

the terminal value.³ From these inputs, Roth selected a weighted average cost of capital (“WACC”) of 19.8 percent and long-term growth rate of 3.0 percent.

a. The Financial Statements and Projections Underlying the Roth DCF are not Reasonable or Reliable

22. Roth failed to evaluate the reasonableness of the management projections it relied on to prepare its fairness opinion. Rather, as Roth disclosed, “Roth assumes no responsibility for independent investigation or verification of such information and has relied on such information being complete and accurate in all material respects.”⁴ As shown in Table A below, however, comparative analysis of CIH’s historical income statement for the period 2020 through 2022⁵ with the three-year means and medians of the historical income statement for the same period provided in the income statement provided in support of the Roth fairness opinion⁶ shows that each of revenue, gross profit, operating income, EBITDA and Net Income are significantly understated in the Roth report income statement despite that they should match the numbers reported by S&P CapIQ.

23. The differences are especially significant for 2022,⁷ the last twelve months prior to the start of the projections Roth used in its DCF analysis, and with respect to the decrease between CIH’s LTM September 2022 actual revenue of \$70.3 million and 2023’s projected revenue of \$50.7 million. Variances of this size, equal to approximately \$20 million, or 28 percent, (at times referred to as a “cliff” in valuation practice) indicate that the source financial statements Roth

³ Roth Fairness Opinion, pp. 11, 13, 14, 18, 19,20, 27,

⁴ Id., p. 2.

⁵ Reported by S&P Capital IQ

⁶ Roth Fairness Opinion, p. 27.

⁷ EBITDA was understated by 30.7 percent in 2022, and over the 2020 – 2022 period, by an average of 14.7 percent, and a median of 8.7 percent, significant by either measure.

relied on and the projections they support are likely downward biased and not reliable or reasonable for purposes of performing a valuation.

Table A

Comparative Analysis of CIH Operating Results Relied on by Roth with Operating Results Reported by S&P Capital IQ						
	(A)	(B)	(C)	(D)		
For the Fiscal Period Ending	12 months	12 months	Last 12 months	Three-Year		
	Dec-31-2020	Dec-31-2021	Sep-30-2022	Mean/Median		
<i>Currency in millions</i>	USD	USD	USD	USD	USD	
REVENUE						
(1) Revenue per S&P Capital IQ	\$ 97.4	\$ 97.7	\$ 70.3	\$ 88.5	\$ 97.4	
(2) Revenue per Roth Fairness Opinion 1	91.3	89.2	61.9	80.8	89.2	
(3) Difference with Roth over/(under)	(6.1)	(8.5)	(8.4)	(7.7)	(8.4)	
(4) Percent Difference over/(under)	-6.3%	-8.7%	-12.0%	-8.7%	-8.7%	
GROSS PROFIT						
(5) Gross Profit per S&P Capital IQ	\$ 81.7	\$ 81.0	\$ 58.2	\$ 73.6	\$ 81.0	
(6) Gross Profit per Roth Fairness Opinion 1	76.2	73.4	49.1	66.2	73.4	
(7) Difference with Roth over/(under)	(5.5)	(7.6)	(9.1)	(7.4)	(7.6)	
(8) Percent Difference over/(under)	-6.8%	-9.4%	-15.6%	-10.6%	-9.4%	
OPERATING INCOME/EBIT						
(9) Operating Income (EBIT) per S&P Capital IQ	\$ (34.8)	\$ 48.3	\$ 30.5	\$ 14.7	\$ 30.5	
(10) Operating Income (EBIT) per Roth Fairness Opinion 1	(32.6)	44.1	21.3	10.9	21.3	
(11) Difference with Roth over/(under)	2.2	(4.2)	(9.2)	(3.7)	(4.2)	
(12) Percent Difference over/(under)	-6.3%	-8.7%	-30.2%	-15.1%	-8.7%	
EBITDA						
(13) EBITDA per S&P Capital IQ	(34.6)	48.5	30.7	\$ 14.9	\$ 30.7	
(14) EBITDA per Roth Fairness Opinion 1	(32.5)	44.3	21.3	11.0	21.3	
(15) Difference with Roth over/(under)	2.1	(4.2)	(9.4)	(3.8)	(4.2)	
(16) Percent Difference over/(under)	-6.1%	-8.7%	-30.7%	-15.1%	-8.7%	
NET INCOME						
(17) Net Income per S&P Capital IQ	\$ (48.7)	\$ 43.9	\$ 24.3	\$ 6.5	\$ 24.3	
(18) Net Income per Roth Fairness Opinion 1	(46.0)	40.1	17.0	3.7	17.0	
(19) Difference with Roth over/(under)	2.7	(3.8)	(7.3)	(2.8)	(3.8)	
(20) Percent Difference over/(under)	-5.5%	-8.7%	-30.0%	-14.7%	-8.7%	

b. The Cost of Equity and WACC used in Roth's DCF Analysis are Significantly Overstated

24. The discount rate, referred to as the cost of capital when it is used to discount cash flows expected in the future to present value, is calculated by determining the firm's weighted average cost of capital. The WACC is equal to the weighted average of the returns required on the debt and equity securities used to finance the firm, weighted by the market values in the capital structure.⁸

25. For a firm with two capital structure components, the WACC is calculated with the formula:

$$\text{WACC} = (R_e * W_e) + [(R_d * (1 - t)) * W_d]$$

Where:

R_e = cost of common equity

W_e = Percentage of common equity in the capital structure

R_d = Pre-tax cost of debt

W_d = Percentage of debt in the capital structure

t = Tax rate

26. Using the Capital Asset Pricing Model ("CAPM"), modified to account for the size effect, the cost of equity of a firm is calculated using the formula:

$$R_e = R_f + \beta (RP_m) + RP_s$$

Where:

R_f = Risk-free rate of interest

β = Equity Beta

RP_m = Equity risk premium

RP_s = Risk premium for small size

⁸ Shannon P. Pratt, Roger J. Grabowski, *Cost of Capital: Applications and Examples, 5th Ed.* (Hoboken: John Wiley & Sons, Inc.), p. 548. Richard A. Brealey, Stewart C. Meyers, Franklin Allen, *Principles of Corporate Finance, 9th Ed.* (New York: McGraw-Hill/Irwin), p. 488.

27. Roth calculated CIH's WACC and cost of equity using the two-component capital structure model of the WACC together with the modified CAPM.⁹ Based on the inputs used to calculate CIH's cost of equity, however, as shown in Table B, Roth overstated CIH's cost of equity by 656 basis points, or 6.56 percent. The risk-free rate was overstated by 58 basis points, the equity risk premium was overstated by 115 basis points, and the size premium was overstated by 483 basis points.

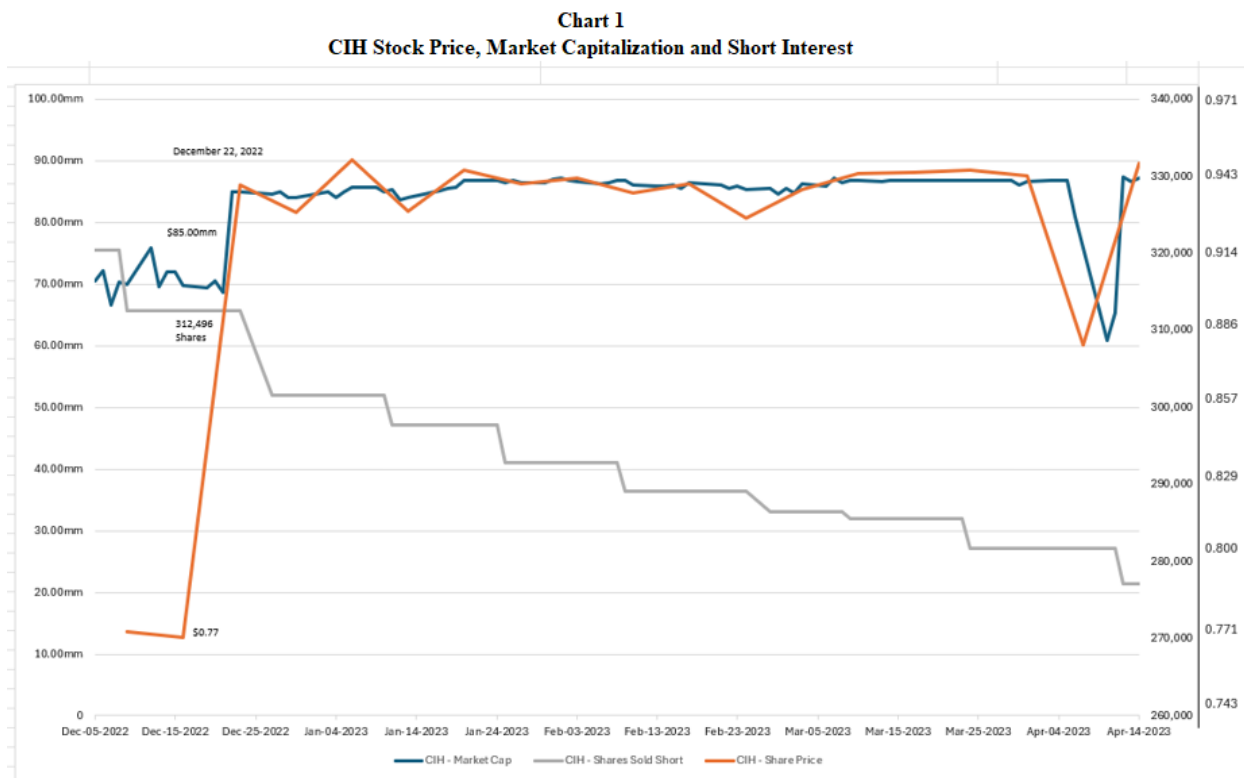
Table B
Corrections to Roth Cost of Equity Calculation Inputs

	(A)
ROTH EQUITY BETA as of 01/01/23	
(1) Roth Unelevered Equity Beta	0.73
(2) Roth Levered Equity Beta	0.69
(3) Difference with Roth Levered Beta over/(under)	0.04
(4) Percent Difference over/(under)	5.8%
RISK FREE RATE as of 12/19/22	
(5) Risk Free Rate per Kroll Cost of Capital Navigator	3.6%
(6) Risk Free Rate per Roth Fairness Opinion	4.2%
(7) Difference with Roth over/(under)	0.58%
(8) Basis Point Difference over/(under)	58.0
EQUITY RISK PREMIUM as of 12/31/22	
(9) Equity Risk Premium per Kroll Cost of Capital Navigator	6.4%
(10) Equity Risk Premium per Roth Fairness Opinion	7.5%
(11) Difference with Roth over/(under)	1.15%
(12) Basis Point Difference over/(under)	115.0
SIZE PREMIUM as of 12/31/22	
(13) Size Premium per Kroll Cost of Capital Navigator	6.4%
(14) Size Premium per Roth Fairness Opinion	11.2%
(15) Difference with Roth over/(under)	4.83%
(16) Basis Point Difference over/(under)	483.0
(17) Total Basis Points over (under)	656.0
(18) Percent over (under)	6.56%

28. Specifically, Roth used the Spot 2-year Treasury yield as of 12/19/22 for the risk-free rate ignoring that the risk-free rate should approximate the length of the cash flows being valued, in this case, the Spot 30-year Treasury rate with a 3.62 yield. Moreover, Roth used a

⁹ Roth Fairness Opinion, pp. 19.d

backward-looking historical equity risk premium rather than the forward-looking supply side equity risk premium of 6.35 percent. Roth’s size premium overstatement was due to its error in selecting a size premium of 11.17 percent from Kroll’s 10Z decile. As of December 30, 2022, however, the last trading day prior to Roth’s valuation date of January 1, 2023,¹⁰ Chart 1 below shows CIH’s market capitalization was \$84.1 million, placing it in Kroll’s decile 10Y, with a size premium of 6.37 percent.



29. Roth’s equity beta was also incorrect. Roth estimated CIH’s bottoms up beta¹¹ using a set of comparable companies that are not comparable to CIH as is required with the bottoms up

¹⁰ Ibid.

¹¹ Roth Fairness Opinion, pp.19-20.

method.¹² Compounding this error, Roth calculated CIH's cost of equity using its estimate of CIH's unlevered rather than levered beta.

30. Incorporating these corrections in Table C below shows that in contrast to Roth's 20.5 percent cost of equity and 19.8 WACC calculations, CIH's cost of equity was 14.4 percent and its WACC, 14.0 percent.

Table C
Corrections to Roth Fairness Opinion
Weighted Average Cost of Capital ("WACC") Analysis

<i>\$ in '000s</i>	(A)
As of January 1,	2023
(1) Equity Market Risk Premium ($R_m - R_f$)	6.40%
(2) Equity Beta	0.69
(3) Adjusted Market Risk Premium	4.42%
(4) (+) Risk-free Rate of Interest (R_f)	3.60%
(5) (+) Size Premium	6.40%
(6) Cost of Equity	14.42%
(7) Equity to Capital Ratio (x) $E/(E + D)$	94.9%
(8) Weighted Cost of Equity	13.68%
(9) Pre-Tax Cost of Debt (K_d)	8.50%
(10) Marginal Tax Rate	23.90%
(11) After-Tax Cost of Debt	6.47%
(12) Debt to Capital Ratio (x) $D/(D + E)$	5.1%
(13) Weighted Cost of Debt	0.33%
(14) WACC - Weighted Average Cost of Capital	14.01%

¹² Aswath Damodaran, *Investment Valuation: Tools and Techniques for Determining the Value of Any Asset*, 3rd Ed. (Hoboken: John Wiley & Sons, Inc.), pp. 197-203. Robert W. Holthausen, Mark E. Zmijewski, *Corporate Valuation: Theory, Evidence & Practice*, 2nd Ed. (Westmont: Cambridge Business Publishers, LLC), pp. 462-3.

c. Roth's Implied Equity Value per ADS Estimate is Unreliable

31. The effects of Roth's errors in calculating CIH's cost of equity carried over to its calculation of CIH's WACC, which Roth used to calculate the present value of CIH's cash flows and terminal value, resulting in a significant understatement of CIH's Implied Equity Value per ADS.

32. Table D below incorporates the corrections to Roth's cost of equity and WACC discussed in the preceding paragraphs. As identified in the shaded cells, discounting CIH's cash flow and terminal value by the corrected WACC of 14.0 percent, terminal value increases by 48 percent, to \$66.4 million from \$44.8 million in the Roth report; the present value of the terminal value increases by 83 percent, to \$47.8 million from \$26.1 million; the sum of PV of Cash Flows increases by 7.0 percent, from \$21.4 million to \$22.9 million; while Implied EV increases by 48.8 percent, from \$47.5 million to \$70.7 million, for an increase of \$23.2 million. This flows down to Implied Equity Value, which also increases by \$23.2 million, or 23.9 percent. Notably, each of these figures was based on utilizing the projections provided to Roth, which may have been understated. I note that the value resulting from the modified DCF analysis could be higher, potentially substantially so.

Table D
Implied EqV per ADS Corrected for Roth Fairness Opinion WACC and Terminal Value

(A)	(B)	(C)	(D)	(E)	(F)
Cash Flow Projections (in millions)	FY 2023E	FY 2024E	FY 2025E	Perpetuity Method DCF	
(1) Revenue	\$50.7	\$44.3	\$38.8	WACC	14.0%
(2) EBITDA	\$13.9	\$11.4	\$9.4		
(3)				Perpetual Growth	3.0%
(4) EBIT	\$13.7	\$11.3	\$9.3	Terminal Value	\$66.4
(5) NOPAT	\$10.4	\$8.6	\$7.0	PV of Terminal Value	\$47.8
(6) D&A	\$0.2	\$0.2	\$0.2		
(7) Capex	(\$0.2)	(\$0.2)	(\$0.2)	Sum of PV of Cash Flows	\$22.9
(8) (Increase/Decrease in NWC	\$0.6	\$0.3	\$0.3		
(9) Unlevered Free Cash Flow	\$11.0	\$8.9	\$7.3	Implied EV	\$70.7
(10) PV of Free Cash Flow				(-) Debt	(\$4.9)
(11)				(+) Cash	\$54.6
(12) End of Year Discount Period	1.0	2.0	3.0	Implied Equity Value	\$120.4
(13) Mid-Year Discount Period	0.5	1.5	2.5	ADS Outstanding	92.0
(14)				Implied EqV per ADS	\$1.31
(15) PV Factor @ 14.0 percent	0.9366	0.8216	0.7207		
(16) PV of Cash Flows	10.3	7.3	5.3		
(17) Sum of PV of Cash Flows	\$22.9				
(18) Terminal Value	\$66.4				
(19) PV Factor @ 14.0 percent	0.7207				
(20) PV of Terminal Value	\$47.8				

B. Roth's Comparable Companies and Precedent Transactions Analyses are Flawed and May Understate CIH's Equity Value.

1. Overview of Methodologies

33. The comparable companies method relies on the prices of comparable publicly traded companies to estimate the fair value of the equity of the firm being valued,¹³ while the precedent transactions method relies on the prices at which comparable companies have been sold.¹⁴ The selection of companies under either method requires that the microeconomic and

¹³ Shannon P. Pratt, Robert F. Reilly, and Robert R. Schweihs, *Valuing a Business: The Analysis and Appraisal of Closely Held Companies*, 4th Ed. (New York: McGraw-Hill, Inc.), p. 226.

¹⁴ *Ibid.*, p. 260.

investment characteristics underlying the comparable companies are sufficiently similar to that of the subject company.¹⁵

34. Consequently, where reasonable and reliable forecasts of projected cash flows are available, comparable-based methodologies are less precise and less reliable than the discounted cash flow approach because they are based on market multiples derived from the characteristics of the companies chosen for the sample set, rather than those of the company being valued, and require subjective adjustments when attempting to create comparability. Dispersion in the sample set's characteristics introduces further subjectivity and unreliability into the analysis. It is also understood that a subject company can be unique or diversified enough that there are no other companies that are sufficiently comparable from a valuation perspective.¹⁶

2. The Comparable Company Method

35. The first step is to identify publicly traded firms comparable to the subject company with respect to indicia potentially including size in market capitalization, revenues or assets, product and geographic markets, growth in revenues, cash flows or earnings, profitability, capital structure, maturity, operating status and ownership. Next, market multiples are calculated from the guideline company trading prices and earnings measures (Revenue, EBITDA, EBIT, book value, net income), adjusting for differences if any with the subject firm due to items including accounting principles, non-recurring or unusual charges, and non-operating or excess assets. The market multiples from the guideline companies are then applied to the earnings measures of the subject firm to calculate value.

¹⁵ Ibid., pp 230, 260.

¹⁶ James R. Hitchner, *Financial Valuation: Applications and Models*, 3rd Ed. (New Jersey: John Wiley & Sons, Inc.), p. 263.

3. The Precedent Transactions Method

36. The precedent transaction method references the merger and acquisition market for prices investors are willing to pay for control of companies having investment characteristics comparable to the firm being valued.¹⁷ Comparable transactions are those involving firms operating within the same industry as the company being valued and similar with respect to size, growth, risk, products, markets, and cyclicalities, and relevant with respect to transaction date, type, approach, consideration, interest and completion.

37. Implementing the precedent transaction method requires (1) identifying precedent transactions, (2) selecting and calculating appropriate market-based pricing multiples based on precedent transaction trading prices and earnings fundamentals, and (3) applying the precedent transaction market-based pricing multiples to the subject firm's earnings measures. Data permitting, the earnings measures and or multiples selected should be adjusted for differences with the subject firm due to accounting principles, nonrecurring or unusual charges, and non-operating or excess assets, as well as for differences in economic and industry conditions between the date of the selected transactions and valuation.

4. The Roth Comparable Companies Analysis

38. Roth compared CIH's implied offer multiple with trading multiples of what Roth considered comparable publicly traded companies. In its set of comparable companies, Roth included companies in real estate services, internet and direct marketing retail, internet and infrastructure services, and application software industries.¹⁸

¹⁷ Robert W. Holthausen, Mark E. Zmijewski, *Corporate Valuation: Theory, Evidence & Practice*, 2nd Ed. (Westmont: Cambridge Business Publishers, LLC), pp. 17, 612-15.

¹⁸ Roth Fairness Opinion, pp. 11.

a. Roth's Comparable Companies are not Comparable to CIH

39. As CIH reported to the SEC, as of December 22, 2022,¹⁹ “CIH operates a leading *real estate information and analytics service platform in China* in terms of *geographical coverage* and volume of data points. Its services *span across database, analytics and promotions services for China's real estate markets*. CIH serves a substantial base of *real estate participants in China*, including *real estate developers, brokers and agents, property management companies, financial institutions and individual professionals*, with an authoritative, comprehensive and seasonable collection of real estate data, complemented by a variety of powerful analytical and marketing tools.....”

40. Based on the foregoing, CIH's line of business was the provision of real estate information and related analytics services, while its geographic market was China. Regardless, Tables E, F and Appendix A below show that the set of fourteen publicly traded companies Roth selected is irrelevant due to characteristic differences in size of market capitalization, EBIT and EBITDA, primary industry focus, geographic market participation, lines of business, profitability (as indicated by negative EBIT and EBITDA), being privately held and not publicly traded, and missing data. The amount of dispersion between the high and low of the multiples bears this out.

¹⁹ CIH's Form 6-K filed with the SEC, p. 4.

TABLE E
ANALYSIS OF ROTH FAIRNESS OPINION PUBLIC COMPANIES

(SMM)	Company	Ticker	Market Data		Financial Data			Valuation Multiples				
			Price 12/30/2022	Market Cap 12/30/2022	TEV 12/30/2022	Revenue FY2022	EBITDA FY2022	EBIT FY2022	TEV/Revenue LTM 12/30/2022	TEV/EBITDA LTM 12/30/2022	TEV/EBIT LTM 12/30/2022	P/TangBV LTM 12/30/2022
	Leju Holdings Limited (OTCEM:LEJU.Y)	LEJU.Y	1.3	18.2	NA	343,182.2	(93,042.4)	(105,624.8)	NM	0.9x	0.8x	0.2x
	Urbanimmersive Inc. (TSXV:UI)	UI	0.2	7.5	NA	6,528.3	(1,062.5)	(1,688.0)	1.8x	NM	NM	NM
	P.E. Analytics Limited (NSEI:PROPEQUITY)	PROPEQUITY	1.6	17.1	NA	3,232.4	1,491.3	1,468.3	3.1x	7.2x	7.3x	2.3x
	e-Seikatsu Co.,Ltd. (TSE:3796)	3796	3.5	24.0	NA	21,677.1	5,343.6	1,478.4	1.0x	3.8x	11.4x	6.0x
	Property Data Bank, Inc. (TSE:4389)	4389	7.4	86.3	NA	NA	NA	NA	NA	NA	NA	NA
	Doma Holdings Inc. ⁽¹⁾	DOMA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Voxtur Analytics Corp. (TSXV:VXTR)	VXTR	0.2	111.5	NA	46,288.6	(32,900.5)	(40,022.8)	1.3x	NM	NM	NM
	Douglas Elliman Inc. (NYSE:DOUG)	DOUG	3.9	330.7	NA	1,153,177.0	3,471.0	(4,541.0)	0.2x	3.5x	8.0x	1.8x
	Fang Holdings Limited (OTCPK:SFUN.Y)	SFUN.Y	0.6	5.4	NA	80,481.0	(16,534.0)	(39,975.0)	2.4x	8.9x	15.7x	0.0x
	E-House (China) Enterprise Holdings Limited (SEHK:2048)	2048	0.1	141.3	NA	749,162.2	(395,271.8)	(455,078.9)	1.1x	NM	NM	NM
	Compass, Inc. (NYSE:COMP)	COMP	2.3	1,014.7	NA	6,018,000.0	(441,700.0)	(518,600.0)	0.2x	NM	NM	3.0x
	Redfin Corporation ⁽²⁾	RDFN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Anywhere Real Estate Inc. (NYSE:HOUS)	HOUS	6.4	699.6	3,991.6	6,885,000.0	(24,000.0)	(238,000.0)	0.5x	5.3x	10.5x	NM
	Zillow Group, Inc. (NASDAQGS:ZG)	ZG	31.2	7,592.8	7,494.8	1,958,000.0	87,000.0	(93,000.0)	0.7x	NM	NM	3.6x
	Average								1.2x	4.9x	8.9x	2.4x
	Median								1.0x	4.6x	9.2x	2.3x
	High								3.1x	8.9x	15.7x	6.0x
	Low								0.2x	0.9x	0.8x	0.0x

TABLE F
ANALYSIS OF ROTH FAIRNESS OPINION PUBLIC COMPANIES

Company	REASON FOR EXCLUSION							
	Size of Business (i.e., Market Cap., Revenue, EBITDA, Assets, etc.)		Primary Industry	Geographic Market	Lines of Business	Negative EBITDA/EBIT	Privately Held	Missing Data
Leju Holdings Limited (OTCEM:LEJU.Y)	X	X			X	X		
Urbanimmersive Inc. (TSXV:UI)	X	X		X	X	X		
P.E. Analytics Limited (NSEI:PROPEQUITY)	X	X		X				
e-Seikatsu Co.,Ltd. (TSE:3796)	X	X		X	X			
Property Data Bank, Inc. (TSE:4389)	NM	X		X	X		X	X
Doma Holdings Inc. ⁽¹⁾	NM	X		X	X			X
Voxtur Analytics Corp. (TSXV:VXTR)		X		X	X	X		X
Douglas Elliman Inc. (NYSE:DOUG)	X	X		X	X			
Fang Holdings Limited (OTCPK:SFUN.Y)		X			X	X		
E-House (China) Enterprise Holdings Limited (SEHK:2048)	X	X			X	X		X
Compass, Inc. (NYSE:COMP)		X		X	X	X		X
Redfin Corporation ⁽²⁾	NM	X		X	X		X	X
Anywhere Real Estate Inc. (NYSE:HOUS)	X	X		X	X	X		
Zillow Group, Inc. (NASDAQGS:ZG)	X	X		X	X	X		X

(1) Doma Holdings Inc. was delisted in September of 2024, subsequent to the acquisition by Title Resources Group

(2) Redfin Corporation was delisted in July of 2025, subsequent to the acquisition by Rocket Companies

b. Roth Failed to Correctly Apply the Comparable Company Method

41. Correctly applying the comparable company method expressly requires (i) market multiples are calculated from the guideline company trading prices and earnings measures, and (ii) the market multiples from the guideline companies are then applied to the earnings measures of the subject firm to calculate value for comparison purposes. Inexplicably, Roth simply Compared CIH's implied offer multiple to multiples of what it considered comparable publicly traded companies.²⁰

²⁰ Roth Fairness Opinion, p. 11.

42. Table G below compares the Roth implied offer Revenue and EBITDA multiples²¹ with the Revenue and EBITDA multiples implied by the Roth public companies.²² Columns D and E calculate implied enterprise values using the Revenue and EBITDA multiples of Roth's public companies.

Table G
CIH Enterprise Value Based on Roth Public Companies Multiples

	(A)		(B)		(C)		(D)		(E)	
	Roth Implied Offer		Roth ² Public Companies Multiples		Roth ² Public Companies Multiples		Roth Public Companies Multiples Implied Enterprise Value			
	Revenue ¹	Multiple	Median	Mean	Median	Mean	Median	Mean	Median	Mean
Enterprise Value to Revenue										
(1) Enterprise Value / LTM Revenue	\$71.8	0.6x	0.9X	1.3X			\$64.6	\$93.3		
(2) Enterprise Value / 2022E Revenue	\$61.9	0.7x	0.6X	0.6X			\$37.1	\$37.1		
(3) Enterprise Value / 2023E Revenue	\$50.7	0.8x	0.7X	1.0X			\$35.5	\$50.7		
Enterprise Value to EBITDA										
(4) Enterprise Value / LTM EBITDA	\$30.7	1.4x	6.6x	6.3x			\$202.6	\$193.4		
(6) Enterprise Value / 2022E EB/TOA	\$21.5	2.0x	8.1x	8.7x			\$174.2	\$187.1		
(7) Enterprise Value / 2023E EB/TOA	\$13.9	3.1x	14.1x	18.4x			\$196.0	\$255.8		
(8) Roth Offer Implied Enterprise Value	\$42.3									
Enterprise Value Based on Median of Roth Enterprise Value / Revenue Multiples	\$43.9									
Enterprise Value Based on Median of Roth Enterprise Value / EBITDA	\$194.7									

¹ Roth Fairness Opinion, p. 9

² Roth Fairness Opinion, p. 17

43. Comparing the Roth Offer Implied Enterprise Value,²³ Enterprise Value Based on the Median of the Roth Enterprise Value/Revenue Multiples,²⁴ and Enterprise Value Based on the Median of the Roth Enterprise Value/ EBITDA multiples²⁵ indicates that the Roth Offer Implied Enterprise Value completely ignores that the enterprise value of CIH may have been as high as

²¹ Column A

²² Columns B and C

²³ Row 8.

²⁴ Row 9.

²⁵ Row 10.

approximately \$195 million rather than \$42.3 million had Roth not completely ignored and given zero weight to the Enterprise Value/ EBITDA multiples in its own Public Companies Valuation Analysis absent any explanation.²⁶

5. Roth's Precedent Transactions Analysis

44. Roth compared CIH's implied offer multiple with multiples paid in what Roth considered comparable precedent transactions. In its set of comparable transactions, Roth included companies in real estate advertising, analytics, and insight and online marketplace industries dating from 12/20/2017 to the present.

a. The Target Companies in Roth's Precedent Transactions Analysis are not Comparable to CIH

45. Tables H and I and Appendix B below show that the target companies in the set of twelve precedent transactions Roth selected are dissimilar due to characteristic differences in primary industry, geographic market, lines of business, composition of consideration, missing data and stale transaction date, as well as size of implied equity value and enterprise value. That the set is dissimilar is also illustrated by the dispersion between the high and low multiples, and between the average and median multiples.

²⁶ Roth Fairness Opinion, p. 15.

TABLE H
ANALYSIS OF ROTH FAIRNESS OPINION PRECEDENT TRANSACTIONS

(SMM)	Buyer Company	Target	Close Date	% Cash	% Stock	Valuation			Valuation Multiples		
						Implied Equity Value	Implied Enterprise Value	Implied EV/EBIT	Implied EV/EBITDA	Implied EV/Revenue	
	Shanghai Ziyong Information Technology Co., Ltd. (28775866)	Shanghai Tianji Network Service Co., Ltd.	4/27/2022	100.0%	NA	\$10	\$46	NA	NA	8.4x	
	Urbanimmersive Inc. (TSXV:UI)	Virtual Access Tours LP	12/3/2021	46.6%	53.4%	\$1	\$1	NA	NA	2.2x	
	Stone Point Capital LLC; Insight Venture Management, LLC; Trident VIII, L.P.	CoreLogic, Inc. (CLGX)	6/4/2021	100.0%	NA	\$5,852	\$7,680	22.9x	15.4x	4.7x	
	Frontier Digital Ventures Limited (4973368)	YAPO.cl SpA	2/24/2021	100.0%	NA	\$19	\$18	NA	14.2x	2.6x	
	General Atlantic Service Company, LP	58.com Inc.	9/17/2020	100.0%	NA	\$9,002	\$7,986	10.9x	9.8x	3.7x	
	Ringier Axel Springer Media AG (4646940)	MZN Property S.A.	4/28/2020	100.0%	NA	\$21	\$21	38.0x	35.7x	2.5x	
	Aeria Investment No. 2 KK	Invest Online, Inc.	10/31/2019	100.0%	NA	\$7	\$7	NA	NA	0.6x	
	Kennedy-Wilson Holdings, Inc. (NYSE:KW)	Meyers Research, LLC	3/6/2012	NA	NA	NA	NA	NA	NA	NA	
	Nine Entertainment Co. Holdings Limited (ASX:NEC)	Fairfax Media Limited (FXJ)	12/7/2018	3.1%	96.9%	\$1,606	\$1,848	13.1x	11.4x	1.5x	
	XTech Corporation	Excite Japan Co., Ltd.	11/27/2018	100.0%	NA	\$49	\$20	NA	NA	0.4x	
	Moody's Corporation (NYSE:MCO)	Reis, Inc. (:WRP)	10/15/2018	100.0%	NA	\$275	\$263	283.3x	37.8x	5.5x	
	Polinvest 7 S.a.r.l	Digitree Group S.A.	2/20/2018	100.0%	NA	\$15	\$13	10.6x	8.6x	1.1x	
	Average							63.1x	19.0x	3.0x	
	Median							18.0x	14.2x	2.5x	
	High							283.3x	37.8x	8.4x	
	Low							10.6x	8.6x	0.4x	

TABLE I
ANALYSIS OF ROTH FAIRNESS OPINION PRECEDENT TRANSACTIONS

		Reason for Exclusion						
Buyer	Target	Size(i.e., Implied Equity Offer, Implied Enterprise Value)	Target Primary Industry	Target Geographic Market	Target Lines of Business	Transaction Consideration	Missing Data	Out of Date
Shanghai Ziyong Information Technology Co., Ltd. (28775866)	Shanghai Tianji Network Service Co., Ltd.	X	X		X			
Urbanimmersive Inc. (TSXV:UI)	Virtual Access Tours LP	X	X	X	X	X		
Stone Point Capital LLC; Insight Venture Management, LLC; CoreLogic, Inc. (CLGX)	CoreLogic, Inc. (CLGX)	X	X	X				
Frontier Digital Ventures Limited (4973368)	YAPO.cl SpA	X	X	X	X			
General Atlantic	58.com Inc.	X	X					
Ringier Axel Springer Media AG (4646940)	MZN Property S.A.	X	X	X	X			
Aeria Investment	Invest Online, Inc.	X	X	X	X			
Kennedy-Wilson Holdings, Inc. (NYSE:KW)	Meyers Research, LLC	NM	NM	NM	NM	NM	X	X
Nine Entertainment Co. Holdings Limited (ASX:NEC)	Fairfax Media Limited (FXJ)	X	X	X	X	X		
XTech Corporation	Excite Japan Co., Ltd.	X	X	X	X			
Moody's Corporation (NYSE:MCO)	Reis, Inc. (:WRP)	X		X				
Polinvest 7	Digitree Group	X	X	X	X			

b. Roth Failed to Correctly Apply the Precedent Transactions Method

46. Correctly applying the precedent transaction method requires (1) selecting and calculating appropriate market-based pricing multiples based on precedent transaction prices and earnings fundamentals, and (2) applying the precedent transaction pricing multiples to the subject firm's earnings measures. Notwithstanding that this is a long-established practice in the financial

community, Roth just compared CIH's implied offer multiple to multiples paid in what it regarded as precedent transactions.²⁷

47. Table J below compares the Roth implied offer Revenue and EBITDA multiples²⁸ with the Revenue and EBITDA multiples implied by the Roth precedent transactions.²⁹ Columns D and E then calculate implied enterprise values using the Revenue and EBITDA multiples of Roth's precedent transactions.

Table J
CIH Enterprise Value Based on Roth Precedent Transaction Multiples

	(A)	(B)	(C)	(D)	(E)	
	Roth Implied Offer		Roth Precedent Transaction Multiples ²		Roth Precedent Transaction Multiples Implied Enterprise Value	
Enterprise Value to Revenue	Revenue ¹	Multiple	Median	Mean	Median	Mean
(1) Enterprise Value / LTM Revenue	\$71.8	0.6x	2.6X	3.0X	\$186.7	\$215.4
	Roth Implied Offer		Roth Precedent Transaction Multiples ²		Roth Precedent Transaction Multiples Implied Enterprise Value	
Enterprise Value to EBITDA	EBITDA ¹	Multiple	Median	Mean	Median	Mean
(2) Enterprise Value / LTM EBITDA	\$30.7	1.4x	14.2x	19.1x	\$435.9	\$586.4
(3) Roth Offer Implied Enterprise Value	\$42.3					
(4) Enterprise Value Based on Median of Roth Enterprise Value / LTM Revenue Multiple	\$201.0					
(5) Enterprise Value Based on Median of Roth Enterprise Value / LTM EBITDA	\$511.2					

¹ Roth Fairness Opinion, p. 9

² Roth Fairness Opinion, p. 17

48. Comparing the Roth Offer Implied Enterprise Value,³⁰ Enterprise Value based on the median of the Roth Enterprise Value/ LTM Revenue Multiples,³¹ and the median of the Roth Enterprise Value/ LTM EBITDA multiples,³² indicates that the Roth Offer Implied Enterprise Value completely ignores that the enterprise value of CIH may have been as high as approximately

²⁷ Roth Fairness Opinion, p. 17.

²⁸ Column A

²⁹ Columns B and C

³⁰ Row 3.

³¹ Row 4.

³² Row 10.

\$201 million based on the Enterprise Value to LTM Revenue multiple, and as high as approximately \$511 million based on the Enterprise Value to LTM EBITDA multiple if Roth had not completely ignored and given zero weight to the Enterprise Value to LTM Revenue and Enterprise Value to LTM EBITDA multiples in its own Precedent Transactions analysis absent any explanation.³³

6. Roth's Premium Analyses Are Unreliable

a. The Premiums Paid Method

49. The premiums paid method “analyses the premiums over the market prices that have been paid by purchasers to acquire publicly traded target companies in precedent M&A transactions. The price offered by the purchaser is compared to the historical trading prices of the target at various points in time prior to the announcement. Various points in time and averages are used in an effort to address the fact that the share price may have increased as a result of speculative trading or company-specific information that may have impacted the target share price prior to public announcement.”³⁴

50. Theoretical explanations for premiums paid include controls premiums, synergies, and supply and demand of the target stock. However, target shareholders may also expect a premium for minority interest transactions in certain situations, such as parent-initiated going-private transactions. Premiums paid analysis is more technical and not as fundamental as the other valuation methods discussed previously, as it has no direct relation to the company outlook or business prospects. Criteria for selecting transactions comparable to the one being analyzed include transaction type (acquisition, MOE, going private, etc.); transaction status

³³ Roth Fairness Opinion, p. 17.

³⁴ <https://macabacus.com/valuation/premiums-paid> viewed December 17, 2025

(completed/announced); consideration (cash, stock, cash/stock); industry/geography, (e.g. U.S. industrial deals); time (e.g. last 3 years); size (e/g/ deals > \$100mm); and approach (friendly/hostile).”³⁵

b. The Roth Premiums Paid Analysis

51. Roth screened for U.S. listed public company take-private transactions covering the trailing 36 months and then analyzed the share price premiums 1-day, 1-week and 1-month prior to the announcement of the transaction where the buyer sought ownership in excess of 90%.³⁶ In particular, Roth looked at U.S. listed Take-Privates,³⁷ and Global Majority Shareholder Purchasing Remaining Shares,³⁸ Regardless, the Roth Fairness Opinion’s conceptual and methodological errors are so numerous as to render its findings and conclusions spurious.

52. Critically, unlike in an appraisal where the goal is to calculate the fair value of the equity of the subject firm based on its long-term operative reality and prospects as a standalone enterprise, the premiums paid method has no direct relation to the subject company’s outlook or business prospects. Rather, as a subset of the precedent transactions method, its focus is on the premiums paid by purchasers over the market prices of publicly traded firms in precedent transactions. Consequently, a premiums paid analysis is not, and should not, be used as a primary method to value a company or its equity. Further, premiums paid are a function of the value of control, synergies, and the supply and demand of the target company’s stock. It has also been noted that premiums paid can be a function of CEO Hubris.³⁹

³⁵ Ibid.

³⁶ Roth Fairness Opinion, p. 11.

³⁷ Id., pp. 21-3.

³⁸ Id., pp. 24-5.

³⁹ Hayward, M. L. A., & Hambrick, D. C. (1997). Explaining the premiums paid for large acquisitions: Evidence of CEO hubris. *Administrative science quarterly*, 42(1), 103-127.

53. Turning to Roth's U.S. Listed Take-Privates analysis, while CIH operates a leading real estate information and analytics service platform in China, the transactions listed are all for U.S. listed companies in industries having little in common with CIH, such as banking, financial services, pharmaceuticals, building products, security, energy, motorsports and therapeutics, to name a few.

54. The same disparity exists between the value of the CIH transaction and the values of the Roth U.S. Listed Take-Privates transactions. The value of the CIH transaction was \$16.4 million. In contrast, the median transaction value of the Roth premiums analysis was \$279.25 million, and the mean, \$369.85 million. In turn, the maximum of the transaction values was \$3.294 billion, while the minimum of the transaction values was \$2.99 million. Also significant, the percentage sought in the CIH transaction represented a minority interest of 17.8 percent, while nearly all of the transactions relied on by Roth were for controlling interests of 100 percent, with one for 95.9 percent, a second for 93.4 percent and a third for 99.7 percent.

55. Roth's Global Majority Shareholder Purchasing Remaining Shares premium analysis suffers from the same maladies. The transactions listed represent a collection of firms spanning the globe rather than ones focused on China, including Dubai, Singapore, Japan, Canada, Nigeria, Sweden and Sri Lanka, and in industries not comparable with CIH, including property development, department stores, ceramic manufacturing, gem mining, communications, paint manufacturing, gaming, and financial services.

56. The value of the CIH transaction and the range of values of the selected Global Majority Shareholder Purchasing Remaining Shares transactions also differ considerably, as do the percentages sought. Roth calculated that the median transaction value of its premium analysis was \$16.43 million, derived from the Banca Investis transaction, a bank under Italian law, and just

one of over 70 transactions Roth listed, while the mean was \$57.69 million. The maximum of the transaction values was \$579.24 million, while the minimum of the transaction values was \$0.06 million. Further, while as referenced above the percentage sought in the CIH transaction was 17.8 percent, the percentages sought in the Global Majority Shareholder Purchasing Remaining Shares transactions ranged from a minimum of 0.3 percent to a maximum of 50 percent, with a median and mean of 29.4 percent and 27.3 percent respectively.

57. The reliability of Roth's premiums analysis is also questionable as it implicitly assumed that CIH's stock price reflected its intrinsic, or true value, notwithstanding that the price of CIH's shares was likely depressed due to (1) CIH's association with Fang, (2) Fang's failure to timely file its Form 20F annual report for the year ended December 31, 2020, which it misleadingly explained away in part as due to its assessment of its ability to continue as a going concern, (3) Fang's public announcement that it had been informed by the NYSE that it faced possible discretionary suspension and delisting if it did not timely file its annual report with the SEC, and (4) the subsequent suspension of trading and delisting of Fang's ASDSs by the NYSE.⁴⁰

Conclusions

58. The conceptual and methodological flaws inherent to the analyses reported in the Roth Fairness Opinion renders its findings, indications and opinions of value under the discounted cash flow method wholly unreliable and irrelevant for determining the fair value of the equity of the minority holders in China Index Holdings Limited. Roth's conceptual and methodological flaws surrounding its premium analyses also make such analyses unreliable and irrelevant. Roth also made errors in conducting its market approach analyses (guideline public companies, precedent transactions). Correcting these errors indicates that the valuation methodologies and

⁴⁰ See Complaint ¶¶102-138.

key assumptions used by Roth resulted in a significant understatement of CIH's Enterprise Value and Implied Equity Value per ADS. Specifically, correcting the errors in Roth's Comparable Company valuation suggests an enterprise value of as much as approximately \$195 million (or \$2.12 per share), while correcting the errors in Roth's Precedent Transactions valuation points to an enterprise value between approximately \$201 million and \$511 million (or \$2.19 per share and \$5.56 per share, respectively).

59. I did not undertake an independent valuation of CIH's enterprise value, or the present value of post-merger CIH shares, because the information necessary to conduct such an analysis was not available. Plaintiff's counsel informed me that Defendants have not produced all the information I would need to conduct such an independent valuation of CIH.

I affirm this 30 day of December, 2025, under the penalties of perjury under the laws of New York.

Dated: December 30, 2025



Miramar, Florida

Boris J. Steffen

Appendix A
Roth Comparable Companies

Company	Geographic Market	Primary Industry	Lines of Business
Leju Holdings Limited	China	Real Estate Services	Provides online to offline (O2O) real estate services in the People's Republic of China. The company offers real estate e-commerce and online advertising services through its online platform, various mobile applications, and Weixin mini programs. Its O2O services for new residential properties include selling discount coupons; facilitating online property viewing, physical property visits, marketing events, and pre-sale customer support; and issuing commission coupons, as well as provides information platform to individual brokers. The company also provides advertisement placement services to advertisers, primarily property developers through online cross-media and cross-platform product portfolio; and brand promotion services to advertisers, including real estate developers and home furnishing suppliers. In addition, it offers Leju Finance, an online platform that provides information and news on the real estate industry, market, and developers featuring their financial performances. The company was incorporated in 2013 and is headquartered in Beijing, the People's Republic of China. Leju Holdings Limited operates as a subsidiary of E-House (China) Enterprise Holdings Limited
Urbanimmersive Inc.	Canada	Real Estate Services	Real estate photography services, offering cutting-edge 3D digital twin and floor plan solutions transforming the way properties are marketed and viewed.
P. E. Analytics limited	India	Real Estate Services	P.E. Analytics Limited provides data and analytics to the real estate industry to its subscribers in India. The company owns and operates PropEquity, an online subscription based real estate data and analytics platform. Its real-estate business intelligence platform provides real time information and tools to search, analyze, compare, chart, and audit for various verticals under residential, commercial, and retail sectors. It also offers customized research and consulting services, such as location advisory, development and strategic consulting, research, and city reports to real estate private equity funds, lenders, developers, REITs, the retail industry, and banks and financial institutions, as well as other allied industries, such as faucets, paints, elevators, etc.; and real-time construction progress alerts, project and developer alerts for defaults and delays, actionable intelligence, developer record checks, legal checks, comparisons of nearby projects, and historical price changes under PropAlert name. In addition, it provides collateral risk management tool, which provides a retail and construction finance valuation services, project monitoring and land loan verification services, and project approval process; residential and commercial indices based on transaction prices; APF and realty services, and catchment area analysis, a real estate geospatial tool that facilitates a deeper exploration with Google Map API and PropEquity real estate data. The company was founded in 2007 and is based in Gurugram, India.
e-Seikatsu Co., Ltd.	Japan	Internet Services and Infrastructure	e-Seikatsu Co.,Ltd. provides cloud-based software and applications in Japan. It offers real estate business support solutions as Software as a Service (SaaS) on a subscription basis. The company also provides solution services, including setup, implementation, and operation support for SaaS, system and application development, and consulting services. It serves real estate companies. The company was incorporated in 2000 and is headquartered in Minato, Japan.
Property Data Bank	Japan	Application Software	Property Data Bank, Inc. provides cloud services in Japan. It offers cloud and information management services related to the operations and management of assets, facilities, and real estate; and solutions for system integration of cloud services. The company also provides real estate document management services, printing services, store sales forecast cloud services, data science services, and web and mobile applications; and contract development services, etc. Property Data Bank, Inc. was incorporated in 2000 and is headquartered in Minato, Japan.
Doma Holdings Inc.	Japan	Real Estate Services	Doma Holdings Inc. offers real estate and title services. Doma Holdings Inc. operates as a subsidiary of Re Closing Buyer Corp.

Roth Comparable Companies

Company	Geographic Market	Primary Industry	Lines of Business
Voxtur Analytics Corp.	US / CA	Application Software	<p>Voxtur Analytics Corp. operates as a real estate technology company in the United States and Canada. The company offers ReboGateWay Pro, a live format for automatic property updates and alerts on changes within farms/lists; Title Toolbox, a tool that provides property data in a live format for automatic property updates and alerts; Investor Toolbox, an access to all property and farming tools; Lender Toolbox provides targeted data to pinpoint homeowners to exact lending program criteria for various lending options; Premier Lists, a custom data list service designed to create prospect list for a specific area; TaxExpress, a tax certificate solution; and O and E QuickCheck, a data intelligence report for real estate that evaluate loans or portfolios and close, Voxtur Verify and Data Connect. It also provides Anow SaaS Appraiser product, tool for appraisers and analysts to manage valuation orders, employees, scheduling, accounting, client communication, and reporting; Voxtur Direct, an appraisal management solution; and Reports Now, an automated report builder. In addition, the company offers AOL, a full-coverage title alternative; residential and commercial services; default to manage loan portfolio; insured title products that protect purchasers and lenders against defects in title; and uninsured title products. Further, it provides Real Property Tax Analytics for transparency and insight; ApexSketch, a line of software applications designed to build floorplan sketches; ApexSketch Portal which allow users to save Property Sketch Data; GeoViewport to aggregate visual property data into one location; StreetScape, a visual and data intelligence product; Apex Professional Services; consulting practice focused on property assessment; and technology-enabled solutions related to property tax. The company is based in London, Canada.</p>
Douglas Elliman Inc.	US	Real Estate Services	<p>Douglas Elliman Inc. engages in the real estate services and property technology investment business in the United States. It operates in Real Estate Brokerage; and Corporate Activities and Other; and Estate, Trust & Probate segments. The company also provides residential real estate brokerage services; and ancillary services, such as property management, title, escrow services and support clients on nuanced landscape of trust, conservatorship, and probate real estate transactions. The company also offers its services internationally. Douglas Elliman Inc. was founded in 1911 and is headquartered in Miami, Florida.</p>
Fang Holdings Limited	China	Interactive Media and Services	<p>Fang Holdings Limited operates a real estate Internet portal in the People's Republic of China. The company offers marketing services, listing services, lead generation services, financial services, and other services. The Company also provides secured loans in the form of entrusted loans and mortgage loans and unsecured loans primarily to home buyers, real estate developers and other borrowers that meet its credit assessment requirements. Its websites and mobile apps support active online communities and networks of users seeking information and other value-added services related to the real estate and home-related sectors. The company was formerly known as SouFun Holdings Limited and changed its name to Fang Holdings Limited in September 2016. Fang Holdings Limited was incorporated in 1999 and is based in Beijing, China.</p>
E-House Enterprise Holdings	China	Real Estate Services	<p>E-House (China) Enterprise Holdings Limited, an investment holding company, provides real estate transaction services in China. It operates through Real Estate Agency Services in the Primary Market; Real Estate Data and Consulting Services; Real Estate Brokerage Network Services; and Digital Marketing Services segments. The company offers real estate agency services, such as formulating and executing marketing and sales strategies for real estate projects, promoting projects to prospective purchasers, and facilitating sales transactions. It also provides a range of data, real estate rating and ranking, and real estate consulting services; real estate brokerage network services under the Fangyou brand; and digital marketing services comprising e-commerce, online advertising, listing, hotel management, conference, and real estate education services. In addition, the company offers online real estate marketing and commercial services; develops technology; and operates a transaction platform. It serves real estate developers and brokerage firms, banks, investors, and government. E-House (China) Enterprise Holdings Limited was founded in 2000 and is headquartered in Shanghai, China</p>

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Roth Comparable Companies

Company	Geographic Market	Primary Industry	Lines of Business
Compass, Inc.	US	Real Estate Services	Compass, Inc. provides real estate brokerage services in the United States. It operates the Compass Platform, a technology platform that provides an integrated suite of cloud-based software for customer relationship management, marketing, client service, brokerage services, and other functionalities for the real estate industry; and the CIRE platform, a multi-tenant technology platform for affiliates and its agents. The company also offers mobile apps that allow agents to manage their business anytime and anywhere, as well as designs consumer-grade user interfaces, automated and simplified workflows for agent-client interactions, and insight-rich dashboards and reports. In addition, it provides full-service title, escrow, and settlement services to the agents' clients, real estate companies, and financial institutions relating to the closing of home purchases as well as the refinancing of home loans; and Compass Concierge, a program in which provides home sellers access to capital to front the cost of home improvement services. The company was formerly known as Urban Compass, Inc. and changed its name to Compass, Inc. in January 2021. Compass, Inc. was incorporated in 2012 and is headquartered in New York, New York.
Redfin Corporation	US / CA	Real Estate Services	Redfin Corporation operates as a residential real estate brokerage company in the United States and Canada. The company operates an online real estate marketplace and provides real estate services, including assisting individuals in the purchase or sell of home. It also provides title and settlement services; and originates, sells, and services mortgages. In addition, the company uses digital platforms to connect consumers with rental properties and for other advertising. The company was formerly known as Appliance Computing Inc. and changed its name to Redfin Corporation in May 2006. Redfin Corporation was incorporated in 2002 and is headquartered in Seattle, Washington. As of July 1, 2025, Redfin Corporation operates as a subsidiary of Rocket Companies, Inc.
Anywhere Real Estate Inc.	US	Real Estate Services	Anywhere Real Estate Inc., through its subsidiaries, provides residential real estate services in the United States and internationally. It operates through three segments: Anywhere Brands, Anywhere Advisors, and Anywhere Integrated Services. The company franchises the Better Homes and Gardens Real Estate, Century 21, Coldwell Banker, Coldwell Banker Commercial, Corcoran, ERA, and Sotheby's International Realty brands; and provides global relocation services under Cartus brand, as well as lead generation activities. It also operates a full-service residential real estate brokerage business under the Coldwell Banker, Corcoran, and Sotheby's International Realty brand names to assist home buyers and sellers in listing, marketing, selling, and finding homes; and involved in real estate auction joint venture. In addition, the company provides full-service title, escrow, and settlement services to consumers, real estate companies, corporations, and financial institutions. The company was formerly known as Realogy Holdings Corp. and changed its name to Anywhere Real Estate Inc. in June 2022. Anywhere Real Estate Inc. was incorporated in 2006 and is headquartered in Madison, New Jersey.
Zillow Group, Inc.	US	Real Estate Services	Zillow Group, Inc. operates real estate brands in mobile applications and Websites in the United States. The company offers premier agent and rentals marketplaces, new construction marketplaces, advertising, display advertising, and business technology solutions, as well as dotloop, a real estate transaction management SaaS solution. It also provides mortgage originations and the sale of mortgages, and advertising to mortgage lenders and other mortgage professionals; and title and escrow services. In addition, the company's brand portfolio includes Zillow Premier Agent, Zillow Home Loans, Zillow Rentals, Trulia, StreetEasy, HotPads, and Out East; and a suite of marketing software and technology solutions for the real estate industry, including ShowingTime+, Spruce, and Follow Up Boss. Zillow Group, Inc. was incorporated in 2004 and is headquartered in Seattle, Washington.
China Index Holdings	China	Research and Consulting Services	Real estate information and analytics service platform in China in terms of geographical coverage and volume of data points. Its services span across database, analytics and promotions services for China's real estate markets.

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Appendix B
Roth Precedent Transactions

Company	Geographic Market	Primary Industry Classification	Lines of Business
Shanghai Tianji Network Service Co., Ltd.	China	Interactive Media and Services	Shanghai Tianji Network Service Co., Ltd. operates online platforms and database for real estate industry. It offers online networks and data analytics services to the real estate industry in China. It also offers real estate intermediary and e-commerce services, which provides internet service tools and marketing solutions to businesses. The company was founded in 2008 and is based in Shanghai, China. Shanghai Tianji Network Service Co., Ltd. operates as a subsidiary of Shanghai Tianji Investment Development Co., Ltd.
Virtual Access Tours LP	US	Advertising	Virtual Access Tours is a local marketing company based in New Jersey that specializes in providing a range of premium services to the real estate industry. Their experienced and professional staff, including talented photographers, are dedicated to delivering extraordinary results and providing top-notch customer service. In addition to photography, Virtual Access Tours also offers services beyond just point and shoot photography, ensuring that clients receive more than just high-quality results.
CorreLogic, Inc.	US	IT Consulting and Other Services	CoreLogic is a California-based corporation that provides financial, property, and consumer information, analytics, and business intelligence. They analyze information assets and data to offer clients analytics and customized data services. CoreLogic also develops proprietary research and tracks trends in various categories such as consumer credit, capital markets, real estate, fraud, regulatory compliance, natural hazards, and disaster projections. With reported revenue of 1.6 billion in 2020, CoreLogic is a Fortune 1000 company.
YAPO.cl SpA	Chile	Interactive Media and Services	YAPO.cl SpA operates an online classifieds website for cars and real estate. The company was founded in 2011 and is based in Las Condes, Chile. YAPO.cl SpA operates as a subsidiary of Adevinta ASA.
58.com Inc.	China	Interactive Media and Services	58.com Inc. operates various multi-category online classifieds platforms and vertical listing platforms that enable local businesses and consumers to connect, share information, and conduct business in the People's Republic of China. The company operates multi-content category online classified platforms primarily under the 58 and Ganji names; Anjuke, an online real estate listing platform; ChinaHR, an online recruitment platform that focuses on white collar jobs; and Jia Xiao Yi Dian Tong, an online platform for driver's license examination preparation and other related services. It also operates Zhuan Zhuan, an online used goods trading and service platform; and 58 Town, a rural version of 58.com. The company's platform offers content in the categories, including real estate, jobs, automotive, yellow pages, and used goods. 58.com Inc. was founded in 2005 and is headquartered in Beijing, the People's Republic of China.
MZN Property	Poland	Interactive Media and Services	MZN Property S.A. operates as a publisher of specialized real estate services in Poland and internationally. It operates Morizon.pl, Domy.pl, oferty.net, and NoweInwestycje.pl that provide information related to flats, houses, plots, and commercial properties that are for sale or rental. The company also develops Agency5000, a software for real estate agencies and developers. MZN Property S.A. was founded in 1996 and is based in Warsaw, Poland. As of April 28, 2020, MZN Property S.A. operates as a subsidiary of Ringier Axel Springer Media AG.
Invest Online, Inc.	Japan	Interactive Media and Services	Invest Online is a real estate platform that offers investment consulting services to investors.

Roth Precedent Transactions

Company	Geographic Market	Primary Industry Classification	Lines of Business
Meyers Research	US	Research and Consulting Services	<p>Meyers Research, LLC provides data and analytics for residential real estate development and new home construction. The company offers community development services that include site specific analysis, strategic planning, and real estate development for stand-alone subdivisions, master planned communities, and urban high rise condominiums; resort and international development services for timeshares, custom lot developments, attached and detached homes, second home market, and fractionals; and litigation support and expert witness services for single family, for-sale condominiums, multi-family, land, and mixed use developments. It also offers institutional advisory and portfolio analysis services for entitlements, financial modeling, and market feasibility; multi-family, urban, and mixed use services for ground up construction, value add products, senior apartments, condo reversions, and affordable apartments; and commercial analysis services for neighborhood/community/regional retail, office, industrial, self-storage, mixed-use, and boat docks developments. In addition, the company has capital investments in homebuilding joint ventures, community development, and entitlement projects in the Western United States. It serves homebuilders; land developers; hotel and resort developers, and operators; multifamily developers; commercial, retail, and industrial owners/operators; property managers; private equity firms; commercial banks; investment banks; asset managers; financial advisors; various municipalities; economic development agencies; planning firms; law firms; and academic institutions. Meyers Research, LLC was formerly known as Meyers LLC and its name was changed to Meyers Research, LLC as a result of its acquisition by Kennedy-Wilson Holdings, Inc. in March 2012. The company was founded in 2006 and is based in Beverly Hills, California.</p>
Fairfax Media Limited	Australia and New sealand	Publishing	<p>Fairfax Media Limited operates as a multi-platform media company in Australia and New Zealand. It operates in Domain Group, Metropolitan Media, Australian Community Media, New Zealand Media, Radio, and Other segments. The company publishes metropolitan newspapers, digital media, and transactions, including The Sydney Morning Herald, The Age, The Australian Financial Review, BrisbaneTimes.com.au, and WAToday.com.au; and lifestyle products under the Good Food, Essential Baby, Essential Kids, and Traveller brands. It also invests in online dating, weather, e-health, online education, and employment services; and services focused on sports, food and wine, business, parenting, and the arts. In addition, the company offers 160 regional publications, including The Canberra Times, Newcastle Herald, The Examiner, The Border Mail, The Courier, and Illawarra Mercury, as well as 130 community-based Websites; and a portfolio of agricultural publications, such as The Land, Queensland Country Life, and Stock and Land. Further, it provides events services under the AgQuip and CRT Farmfest Field Days names; stuff.co.nz, a digital destination; The Dominion Post, The Press, and The Sunday Star-Times a portfolio of regional and community newspapers, magazines, and agricultural publications; neighbourly.co.nz, a hyper-local social network; and stuff-fibre.co.nz, an Internet service provider service. Additionally, the company operates a commercial radio station in Sydney and Melbourne, as well as other news, talk, and sports radio stations; and offers real estate media and services comprising residential, commercial, and rural property marketing solutions and search tools, and information for buyers, investors, sellers, renters, and agents through listings portals on desktop and mobile, and social media and print magazines. The company was incorporated in 1990 and is headquartered in Sydney, Australia. Fairfax Media Limited is a subsidiary of Nine Entertainment Co. Holdings Limited.</p>
Excite Japan Co., Ltd.	Japan	Interactive Media and Services	<p>Excite Japan Co., Ltd. owns and operates an online portal that offers online searching service, e-mail, blog, weather information, subway navigation and news. Its portal publishes news covering overseas, domestic, entertainment, sports, trend, column, and interview. The company's portal also offers blogs, phone fortune telling, marriage, friends, trouble consultation, love consultation, radio talk, e-recipe, children's wear, translation, study abroad, and real estate. Excite Japan Co., Ltd. was founded in 1997 and is based in Tokyo, Japan.</p>

Roth Precedent Transactions

Company	Geographic Market	Primary Industry Classification	Lines of Business
Reis	US	Research and Consulting Services	Reis provides commercial real estate (“CRE”) market information and analytical tools to real estate professionals. Reis maintains a proprietary database of information on all commercial properties in metropolitan markets and neighborhoods throughout the U.S. This information is used by CRE investors, lenders and other professionals to make informed buying, selling and financing decisions. In addition, Reis data is used by debt and equity investors to assess, quantify and manage the risks of default and loss associated with individual mortgages, properties, portfolios and real estate backed securities. Reis currently provides its information services to many of the nation’s leading lending institutions, equity investors, brokers and appraisers.
Digtree Group	US / CA	Real Estate Services	Digitree Group S.A. provides advertising services in Poland. It operates through SARE, Digital Media, E-Commerce Software House, and Agency Digital segments. The company offers contact lead generation and verification, strategic consulting, digital marketing, databases, SEM and SEO, influence campaigns, mailing campaigns, display campaigns, databases and WWW monetization, creation and copy, mobile campaigns, and ecommerce implementations. The company was formerly known as SARE S.A. Digitree Group S.A. was founded in 2005 and is headquartered in Rybnik, Poland. Digitree Group S.A. operates as a subsidiary of Polinvest 7 S.a.r.l.
China Index Holdings	China	Research and Consulting Services	Real estate information and analytics service platform in China in terms of geographical coverage and volume of data points. Its services span across database, analytics and promotions services for China’s real estate markets.