Equity Valuation Report

Arjun Amladi, Shaunak Bhattacharyya, Irene Do, Krish Doshi, Sujay Maddela, Sanders Zhang

	Current Price (5/5/23)	DCF Valuation	Relative Valuation	Market Valuation	Recommendation
Garmin Ltd.	**$103.78**	**$70.02**	**$132.48**	**$114.33**	**Sell**
Boston Beer Co.	**$310.31**	**$287.12**	**$348.05**	**$267.05**	**Sell**
Samsung Electronics Co.	**₩ 65,100.00**	**₩ 79,736.30**	**₩ 162,913.84**	**₩ 218,270.85**	**Buy**
Netflix	**$322.76**	**$259.81**	**$274.27**	**$271.83**	**Sell**
C3 AI	**$18.70**	**$25.09**	**$20.87**		**Buy**
Chegg	**$10.14**	**$11.79**	**$10.37**	**$20.85**	**Buy**

Garmin Ltd.

I. Company Overview

Garmin Ltd. is a consumer technology company headquartered in Kansas, U.S., and domiciled in Switzerland. They are a designer and manufacturer of wireless positioning devices that are designed for outdoor usage. The company operates in five main segments: fitness, outdoor, aviation, marine, and automotive. Products include wearable devices, hand-held navigation tools, and other sensor-based electronics. They sell their products through diverse channels, including independent retailers, distributors, repair shops, and OEMs. Garmin does most of its business in the U.S. and also has a large commercial presence in Asia and Europe. The stock is trading at $103.78 as of May 5th, 2023, down from $106.03 a year prior.

II. DCF Valuation

We implemented a 2-stage DCF model as follows:

"A Mature Firm Suffering From An Identity Crisis"

Garmin Ltd. manufactures GPS-enabled technology for oudoor, aviation, automotive, marine, and sport applications. They are an active player in the wearable device market, which is expected to grow at a CAGR of 14.6% from 2023-2030. This growth is based on favorable tailwinds like increased health conciousness, changing lifestyle patterns, and increased spending on personal care. However, Garmin ill equipped to capitalize on this growth, given their weak economic moat (vertical integration, manufacturing expertise). Furthermore, their largest competitors, Apple, Samsung and Huaweii, benefit from their phone-smartwatch ecosystems which promote increased connectivity. Lastly, Starlink and other LEO satellites may render Garmin's GPS-technology obsolete. Garmin will invest heavily in producing more products and aggresively marketing said products (R&D and marketing) to prevent inveyitable market share loss, which will result in margin erosion. Furthermore, management is interested in pursuing auto OEM contracts, which are a less profitable business that will decrease consolidated margins. This is based on a misguided attempt to pursue growth. Unfortunately, this growth will not materialize, becuase their auto OEM business (infotainment systems, navigation, etc.) is redundant, and most auto manufacturers will want to develop / have developed these capabilities in-house. They have a high capital intensity model relative to the sector, and will become slightly less efficient over the projection period. The company is fairly mature, and will continue to become safer. In short, Garmin is mature company masquerading as a growth company. Their focus should be on scaling down reinvestment and instead management has expressed an intention to continue to spend aggresively to create new products and enter new markets.

The Assumptions

	Base year	*Next year*	*Years 2-5*	*Years 6-10*	*After year 10*	*Link to story*
Revenues (a)	$4,860,286.00	2.9%	6.00%		3.37%	Results in a 1.5% loss in market share by year 10
Operating margin	26.54%	20.1%			19.00%	Margins decline, to reflect management's focus on growing lower margin business lines and increased R&D spend, neither of which will result in the growth they are seeking
Tax rate	9.66%		9.66%		18.00%	Swiss median tax rate
Reinvestment (c)		1.31	1.29	1.27	36.20%	Company will continue to invest in products/projects that cannot compete
Return on capital	18.13%	Marginal ROIC =	8.55%		9.31%	Lower return on capital reflects weak competitive advantage and spending on bad (NPV negative) projects
Cost of capital (d)			9.77%		9.31%	Decreases to reflect maturation

The Cash Flows

	Revenues	*Operating Margin*	*EBIT*	*EBIT (1-t)*	*Reinvestment*	*FCFF*
1	$5,001,234.29	20.10%	$1,005,248.09	$909,737.13	$107,594.12	$802,143.02
2	$5,301,308.35	19.88%	$1,053,900.10	$952,116.60	$232,615.55	$719,501.05
3	$5,619,386.85	19.77%	$1,110,952.78	$1,003,659.25	$246,572.48	$757,086.76
4	$5,956,550.06	19.66%	$1,171,057.74	$1,057,959.39	$261,366.83	$796,592.56
5	$6,313,943.07	19.55%	$1,234,375.87	$1,115,162.39	$281,411.81	$833,750.57
6	$6,659,568.31	22.02%	$1,466,175.62	$1,300,113.12	$272,145.86	$1,027,967.26
7	$6,989,083.75	21.26%	$1,486,022.97	$1,292,919.09	$259,460.98	$1,033,458.12
8	$7,298,141.03	20.51%	$1,496,705.54	$1,277,241.84	$243,352.19	$1,033,889.65
9	$7,582,476.61	19.75%	$1,497,843.87	$1,253,222.62	$223,886.28	$1,029,336.34
10	$7,838,006.07	19.00%	$1,489,221.15	$1,221,161.35	$201,204.30	$1,019,957.05
Terminal year	$8,102,146.88	19.00%	$1,539,407.91	$1,262,314.48	$456,928.01	$805,386.47

The Value

Terminal value	$13,558,694.77		
PV(Terminal value)	$5,404,863.09		
PV (CF over next 10 years)	$5,447,304.37		
Value of operating assets =	$10,852,167.46		
Adjustment for distress	$0.00	Probability of failure =	0.00%
- Debt & Minority Interests	$114,541.00		
+ Cash & Other Non-operating assets	$2,660,842.00		
Value of equity	$13,398,468.46		
- Value of equity options	$0.00		
Number of shares	191,359.48		
Value per share	$70.02	Stock was trading at =	$103.78

The DCF output indicates that Garmin should be trading at $70.02, suggesting that the stock is **overvalued** by 48%.

III. Relative Valuation

For Garmin's relative valuation, 15 companies were used as comparables. Examples include Apple, Samsung, Casio, Fortive, and Sonos. We screened by market capitalization (small to mega cap), industry (consumer electronics, sensor-technology, wearable devices) and region (Americas, APAC, Europe). The EV/Sales multiple was used to avoid needing to resolve differences in calculating non-GAAP metrics like EBITDA or EBIT across the sample pool. We regressed EV/Sales against EBITDA Margin. After-tax operating margin (NOPAT) is a direct driver of EV/Sales, with increased profitability resulting in a higher multiple. We used EBITDA margin as a proxy, which allowed me to avoid different tax rates across countries. Additionally, due to the limited sample size, single-regression was used.

Regression Statistics	
Multiple R	0.842872366
R Square	0.710433825
Adjusted R Square	0.688159504
Standard Error	1.488642791
Observations	15

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	-0.956194472	0.711712354	-1.34351254	0.202088769
X Variable 1	23.054483	4.082214398	5.647543404	7.96249E-05

EV/Sales = -0.956194472 + 23.054483 * EBITDA Margin

EBITDA Margin	24.5%
Implied EV/Sales	**4.69**
Implied EV	$ 22,805,209.73
- Debt	$ (114,541.00)
+ Cash	$ 2,660,842.00
Equity Value	**$ 25,351,510.73**
Implied Price/Share	**$ 132.48**

Based on the single-regression, Garmin should trade at 4.69x EV/Sales, resulting in a relative share price of $132.48. The stock is **undervalued** and has 27% upside potential.

IV. Market Valuation

The Market-wide Regressions of Multiples – Global companies in January 2023 model was used with the figures below:

Market Valuation	Regression Used: Global Firms in Jan of 2023
Inputs	
Expected Revenue Growth (2-5)	6.00%
Operating Margin	20.10%
DFR	0.005734554
Tax Rate	9.66%
Implied EV/Sales	**3.98**
Implied EV	$ 19,331,702.82
- Debt	$ (114,541.00)
+ Cash	$ 2,660,842.00
Implied Equity Val	**$ 21,878,003.82**
Implied Share Price	**$ 114.33**

EV / Sales = 2.69 + (2.50 * g) + (8.10 * Oper Margin) + (2.10 * DFR) - (5.10 * Tax Rate)

The market valuation model resulted in a 3.98x EV/Sales multiple, implying a share price of $114.33. This indicates that Garmin is **undervalued** with an upside of 10.2%.

V. Analysis & Recommendation

Company	Price as of 5/5/2023	DCF Valuation	Relative Valuation	Market Valuation	Recommendation
Garmin Ltd.	$ 103.78	$ 70.02	$ 132.48	$ 114.33	SELL

The intrinsic valuation suggests that Garmin is overvalued, while the relative and market valuation suggest it is undervalued. The market valuation is the least informative, since it is based on a regression of all global companies and is not tailored to Garmin's characteristics. The relative valuation is slightly more valid, although it still lacks specificity. Most of Garmin's competitors are private, and those that are public are larger consumer electronics companies with different product mixes. The DCF allows us to account for different stages of revenue growth, reinvestment, and capital efficiency over time. The discrepancy between intrinsic valuation and relative and market valuation is likely due to differences in opinion over Garmin's staying power, which we feel is weak given their lack of a meaningful moat, and management's strategy with regards to growing the auto OEM business line, which we think will be unfruitful and erode margins. Therefore, we assign a **SELL** recommendation.

The Boston Beer Company, Inc.

I. Company Overview

The Boston Beer Company (NYSE: SAM) is a high-end alcoholic beverage company and one of the largest craft brewers in the United States. The company's brands include Truly Hard Seltzers, Twisted Tea, Samuel Adams, Angry Orchards Hard Cider and Dogfish Head Craft Brewery, and other local craft beer brands. The company has four primary breweries located in Boston, MA, Cincinnati, OH, Milton, DE, and Breinigsville, PA. The brewery in Delaware also produces a small number of distilled spirits and all the breweries except the one in Pennsylvania have on-site tap rooms. Additionally, the company owns five smaller breweries focused on brewing and packaging beers for retail sales, an apple orchard and cidery in Walden, NY, a restaurant in Rehoboth, DE, and a boutique inn in Lewes, DE.

II. DCF Valuation

A two-stage Discounted Cash Flow valuation was implemented as follows:

Boston Beer Company	May-23
Navigating Boston Beer Company's Journey Through Competition and Change	
Boston Beer Company is one of the oldest alcoholic beverage manufacturers and distributors in the US. The company primarily operates in the "High End" beer category but is shifting gradually to the "Beyond Beer" category (hard seltzer, flavored malt beverages, ciders, etc.) given the stiff competition in the beer market and the decrease in overall demand for beer. Over 84% of the company's 2022 volume is in the Beyond Beer category and the company has 25% market share in that category. The company has a healthy balance sheet, with a strong cash balance and low debt. The company expects the Beyond Beer category to grow going forward, with the shift in consumers' preferences towards healthier, low-calorie alcoholic beverages. One of the major risks that the company faces is competition, not just in the beer category but also in the Beyond Beer category, from domestic and international names such as AB InBev, Molson Coors, Constellation Brands, and Mark Anthony Brands. Furthermore, the company's growth prospects are shaken by the decelating growth trends in the market for hard seltzers in 2021-2022 which impacted the company's volume of production and shipment and increased supply chain costs in the form of destruction of inventory, write-offs of third-party production prepayment, and termination of various third-party contracts.	

The Assumptions

	Base year	*Next year*	*Years 2-5*	*Years 6-10*	*After year 10*	*Link to story*
Revenues (a)	$2,090.33	-2.0%	8.00%		2.50%	Decrease in revenue next year due to anticipated decline in shipping and volume, reduction in discretionary spending, and stringent monetary policy. Future growth driven by growth in Beyond Beer category, increases in demand, and favoravle macroeconomic condiations.
Operating margin (b)	6.03%	5.0%			15.00%	Margins initially decrease due to increased costs, supply chin issues, and stiff competition. Gradually increase later aided by improving revenues and reversal of supply chain issues.
Tax rate	26.40%		26.40%		25.00%	US marginal tax rate over time
Reinvestment (c)		2.20	1.80	1.80	32.72%	Slight decrease assuming company will take on leverage to spurt growth
Return on capital	9.83%	Marginal ROIC =	49.40%		7.64%	Low company debt with steady invested capital base leading to high marginal ROIC
Cost of capital (d)			7.58%		7.64%	Mature company that has long-term cost of capital equal to ROIC. Driven by interest rate decreses in the future to further macroeconomic recovery and expected increases in capital investment.

The Cash Flows

	Revenues	*Operating Margin*	*EBIT*	*EBIT (1-t)*	*Reinvestment*	*FCFF*
1	$2,048.53	5.00%	$102.43	$75.39	$0.00	$75.39
2	$2,212.41	7.00%	$154.87	$113.98	$91.05	$22.94
3	$2,389.40	8.00%	$191.15	$140.69	$98.33	$42.36
4	$2,580.55	9.00%	$232.25	$170.94	$106.20	$64.74
5	$2,787.00	10.00%	$278.70	$205.12	$114.69	$90.43
6	$2,979.30	11.41%	$340.00	$251.19	$106.83	$144.36
7	$3,152.10	12.31%	$387.99	$287.74	$96.00	$191.74
8	$3,300.25	13.21%	$435.83	$324.43	$82.30	$242.13
9	$3,419.06	14.10%	$482.19	$360.29	$66.00	$294.29
10	$3,504.54	15.00%	$525.68	$394.26	$47.49	$346.77
Terminal year	$3,592.15	15.00%	$538.82	$404.12	$132.24	$271.88

The Value

Terminal value	$5,289.49	
PV(Terminal value)	$2,542.53	
PV (CF over next 10 years)	$896.76	
Value of operating assets =	$3,439.29	
Adjustment for distress	$0.00	Probability of failure = 0.00%
- Debt & Minority Interests	$55.60	
+ Cash & Other Non-operating assets	$180.56	
Value of equity	$3,564.25	
- Value of equity options	$28.88	
Number of shares	12.31	
Value per share	$287.12	Stock was trading at = $310.31

The DCF valuation yielded an implied stock price of **$287.12**, which is 7.47% lower than the current trading price of $310.31.

III. Relative Valuation

The Relative Valuation used a set of 57 comparable companies in the breweries industry. Although it would be preferable to have a set of publicly traded companies in the US ast most of the operations of the Boston Beer Company is in the US, there are only a couple of publicly traded breweries in the US. The dataset was cleaned to remove the companies for which the metrics under consideration were not available. EV/Sales was used as earnings were not constant.

Regression Equation:

TEV/Sales = 0.36 + 0.96*(5-Year Beta) + 0.07*(EBITDA Margin)

Regression Statistics	
Multiple R	0.5371
R Square	0.2885
Adjusted R Square	0.2621
Standard Error	1.1645
Observations	57

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	0.3604	0.3616	0.9966	0.3234	-0.3646	1.0854
5 Year Beta	0.9625	0.4398	2.1886	0.0330	0.0808	1.8443
EBITDA Margin %	0.0681	0.0166	4.1126	0.0001	0.0349	0.1013

TEV / Sales		2.05
Sales	$	2,070.22
TEV	$	4,243.95
- Debt	$	51.94
+ Cash	$	122.56
Equity Value	$	4,314.57
- Value of Options	$	28.88
Value of Common Stock	$	4,285.69
# Shares		12.31
Implied Share Price	$	348.05

The R-square of this regression is 28.85%. The Boston Beer Company's TEV/Sales was calculated to be 2.05x which led to a predicted share price of **$348.05**, implying that the current share price is undervalued by 12.16% . The average TEV/EBITDA of the comparables was 1.89x which led to a predicted share price of $321.15, implying that the current share price is undervalued by 3.49%.

IV. Market Valuation

The Market Valuation used Prof. Damodaran's market-wide regression of multiples for US companies as of January 2023. The regression equation is as follows:

EV/EBITDA= 23.93 + 25.40 g - 8.20 DFR - 34.40Tax Rate

g	8.00%
Debt	$ 51.94
MV of Equity	$ 3,820.95
DFR	0.013
Tax Rate	26.40%
Market TEV/EBITDA	16.77042825
Market TEV	$ 3,246.59
- Debt	$ 51.94
+ Cash	$ 122.56
Market Value of Equity	$ 3,317.21
- Value of Options	$ 28.88
Market Value of Common Stock	$ 3,288.33
# Shares	12.31
Implied Share Price	$ 267.05

Using the above equation, the share price was calculated to be **$267.05**, implying that the current share price is overvalued by 13.94%.

V. Analysis & Recommendation

Method	Value/Share
DCF	$287.12
TEV/EBITDA Regression	$348.05
Avg. TEV/EBITDA of comparables	$321.15
Market TEV/EBITDA Regression	$267.05
Current Price	$310.31

All methods except for Relative Valuation conclude that the Boston Beer Company stock is overvalued. The DCF value is believed to be the most precise, as it accurately captures the firm's idiosyncratic risks and opportunities. The company's current market in US is saturated and has a lot of competition from other international breweries. Furthermore, the consumers are shifting away from the traditional beer industry due to health reasons, which defeats Boston Beer Company's moat.

Hence, a **SELL** recommendation is applied on the stock of Boston Beer Company.

Samsung Electronics Co.

I. Company Overview

Samsung Electronics Co. is an international electronics company based in South Korea. Their products are primarily within the Technology Hardware, Storage, and Peripherals Industry and they have 4 main streams of revenue: Electronics, Auto Parts, Software (System & Application), and Electronics (Consumer & Office). Their largest market resides in the Americas, and their other consumer groups are located in Korea, China, Asia & Africa (excluding Korea & China), and Europe.

Samsung is known for its innovation and it is the market share leader in the TV Market and holds a strong market share of 20.3% in the smartphone market. Competitors of Samsung include Apple, LG Electronics, and Nokia. While it may be difficult for Samsung to sustain growth in the industry due to the market saturation and company maturity, they are in a dominant market position and continue to release innovative products.

As of May 5, 2023, Samsung's share price was **₩ 65,100.00**

II. DCF Valuation

We implemented a 2-stage DCF model as follows:

The Assumptions						
	Base year	*Next year*	*Years 2-5*	*Years 6-10*	*After year 10*	*Link to story*
Revenues (a)	₩ 302,231,360,000,000.00	22.4%	4.00%		2.66%	Samsung's innovation will continue to progress and dominate the market. Competitors cater to different consumer groups and market share is unlikely to change signficantly. However, high growth is limited given Samsung's maturity and the crowded industry.
Operating margin (b)	14.35%	15.0%			21.00%	Margins before and during COVID have hovered around 20% with the recent year having a lower margin due to higher operating expenses, specifically in SG&A and R&D expenses. After year 10, expect margin to converges to industry averages Samsung is present in (electronics, auto parts, etc.).
Tax rate	25.20%		25.20%		25.20%	Global/US marginal tax rate over time
Reinvestment (c)		0.80	0.81	0.85	30.95%	Similar to past and current years but slowly increasing due to the need for innovation/high R&D investment to stay competitive in the electronics/tech sector.
Return on capital	10.32%	Marginal ROIC =	25.39%		8.60%	Samsung wil continue to have strong innovation and presence in the market, past innovations have clearly paid off, for example Samsung has been the lead TV company for 17 consecutive years.
Cost of capital (d)			13.23%		8.60%	Cost of capital in the long term similar to firms in the same industries. Currently higher due to large amount of equity over relatively risk free debt.

The Cash Flows						
	Revenues	*Operating Margin*	*EBIT*	*EBIT (1-t)*	*Reinvestment*	*FCFF*
1	₩ 370,052,077,184,000.00	15.00%	₩ 55,507,811,577,600.00	₩ 41,519,843,060,044.80	₩ 84,775,896,480,000.00	-₩ 43,256,053,419,955.20
2	₩ 384,854,160,271,360.00	21.00%	₩ 80,819,373,656,985.60	₩ 60,452,891,495,425.20	₩ 18,274,176,651,061.70	₩ 42,178,714,844,363.50
3	₩ 400,248,326,682,214.00	21.00%	₩ 84,052,148,603,265.00	₩ 62,871,007,155,242.20	₩ 19,005,143,717,104.20	₩ 43,865,863,438,138.00
4	₩ 416,258,259,749,503.00	21.00%	₩ 87,414,234,547,395.60	₩ 65,385,847,441,451.90	₩ 19,765,349,465,788.30	₩ 45,620,497,975,663.60
5	₩ 432,908,590,139,483.00	21.00%	₩ 90,910,803,929,291.50	₩ 68,001,281,339,110.00	₩ 19,588,623,988,211.90	₩ 48,412,657,350,898.10
6	₩ 449,066,470,357,849.00	21.00%	₩ 94,303,958,775,148.30	₩ 70,539,361,163,810.90	₩ 19,009,270,845,136.50	₩ 51,530,090,318,674.50
7	₩ 464,625,725,422,808.00	21.00%	₩ 97,571,402,338,789.70	₩ 72,983,408,949,414.70	₩ 18,305,005,958,775.00	₩ 54,678,402,990,639.70
8	₩ 479,480,739,116,026.00	21.00%	₩ 100,690,955,214,365.00	₩ 75,316,834,500,345.30	₩ 17,476,486,697,903.60	₩ 57,840,347,802,441.70
9	₩ 493,527,606,849,169.00	21.00%	₩ 103,640,797,438,325.00	₩ 77,523,316,483,867.50	₩ 16,525,726,744,874.20	₩ 60,997,589,738,993.30
10	₩ 506,665,311,743,494.00	21.00%	₩ 106,399,715,466,134.00	₩ 79,586,987,168,668.00	₩ 15,456,123,405,088.20	₩ 64,130,863,763,579.90
Terminal year	₩ 520,152,742,342,106.00	21.00%	₩ 109,232,075,891,842.00	₩ 81,705,592,767,098.00	₩ 25,284,850,958,616.00	₩ 56,420,741,808,482.00

The Value			
Terminal value	₩ 949,844,138,189,932.00		
PV(Terminal value)	₩ 310,441,760,382,564.00		
PV (CF over next 10 years)	₩ 191,885,574,695,744.00		
Value of operating assets =	₩ 502,327,335,078,307.00		
Adjustment for distress	₩ -	Probability of failure =	0.00%
- Debt & Minority Interests	₩ 10,383,282,000,000.00		
+ Cash & Other Non-operating assets	₩ 49,680,710,000,000.00		
Value of equity	₩ 541,624,763,078,307.00		
- Value of equity options	₩ -		
Number of shares	₩ 6,792,700,000.00		
Value per share	₩ 79,736.30	Stock was trading at =	₩65,100.00

According to the DCF Valuation above, Samsung's stock should be priced at **₩ 79,736.30**, indicating that the stock is <u>undervalued</u>.

III. Relative Valuation

For Samsung's relative valuation, 50 companies were used as comparables. Since Samsung primarily operates in the Technology Hardware, Storage, and Peripherals Industry and is a large company with a latest Market Capitalization of approximately $326.8 billion, comparables that primarily operate in the same industry with a Market Capitalization of at least $10 billion were used. Some of the comparables used were Apple Inc., Cisco Systems Inc., and the Xiaomi Corporation.

The EV/EBITDA multiple was used since Samsung's earnings are stable and because it encompasses more factors than other multiples like the P/E ratio. The regression ran EV/EBITDA against Market Cap/Forward Total Revenues since it had a high t Stat.

Regression Statistics	
Multiple R	0.646203637
R Square	0.41757914
Adjusted R Square	0.405693
Standard Error	7.640161671
Observations	51

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	9.307607244	1.50080394	6.20174761	1.1429E-07
Market Cap/Forward Total Revenues	2.291744317	0.38664926	5.92719175	3.0295E-07

The single variable regression yielded the equation:

EV/EBITDA = 9.31 + 2.29*(Market Cap/Forward Total Revenue)
(1.58)

Using this equation, Samsung's EV/EBITDA multiple was 12.93 and the Relative Price per Share was **₩ 162,913.84**, indicating that the stock is underpriced with an upside of 161.50%.

IV. Market Valuation

The *Market-wide Regressions of Multiples –Global companies in January 2023* model was used with the figures below:

Market Valuation	Regression used: Global Firms in January 2023
g	4%
Total Debt	₩ 10,333,242,000,000.00
MV of Equity	₩ 442,204,770,000,000.00
DFR	0.022833976
Effective Tax Rate	25.20%

EV/EBITDA = 25.62 + 9.20*g - 11.40*DFR - 32.70*Tax Rate
(0.04) (0.024) (0.252)

This model yielded a multiple of 17.48 and a price per share of **₩ 218,270.85**, indicating that the stock is very undervalued with an upside of 235.29%. Hence, the market valuation points to the same recommendation as the DCF Valuation and the Relative Valuation, to buy, however the higher number from this model is likely due to the fact that we predict Samsung to have positive long term growth higher than Capital IQ's estimate of -5.48% and because they have a low leverage ratio of 2.8% compared to Capital IQ's calculated industry average leverage ratio of 4%.

V. Analysis & Recommendation

	Price on 3/23/2023	**DCF Valuation**	**Relative Valuation**	**Market Valuation**	**Recommendation**
Samsung Electronics Co.	₩ 65,100.00	₩ 79,736.30	₩ 162,913.84	₩ 218,270.85	Buy

All 3 valuations indicate that Samsung is currently underpriced, however we believe that the DCF Valuation is the most accurate indicator of Samsung's true value since it is more thorough in terms of growth stages (having multiple) and it analyzes key financial figures in the model like capitalizing R&D expenses. Thus, we believe Samsung Electronics Co. is very underpriced and give a **BUY** recommendation. The tech market has had substantial growth and is likely to expand further, given the modernization of school, work, and more.

Netflix

I. Company Overview

Netflix Inc. is a global entertainment company headquartered in Los Gatos, California. Since its establishment in 1997, Netflix has transformed the way people consume television shows and movies through its subscription-based streaming service. With a focus on innovation and technology, Netflix offers a diverse range of content, including original series, documentaries, and feature films. Operating in over 190 countries, Netflix's success stems from its commitment to quality content creation, personalized user experience, and strategic international expansion. With millions of subscribers worldwide, Netflix continues to lead the digital streaming industry by delivering captivating entertainment experiences. As of 5th May, 2023, the company had a closing stock price of $322.76, as compared to $180.87 a year prior.

II. DCF Valuation

We implemented a 2-stage DCF with the following assumptions:

Netflix	May-23

"A mature firm failing to show it's moat against rising competition"

Netflix is a subscription based streaming service that allows its members to watch TV shows and movies without commercials on an internet-connected device. It is a mature market company that is facing problems with retaining market share because of emerging completion when the production houses like Disney and HBO launch their streaming platforms. After two excellent years of the pandemic, Netflix saw a drop in subscribers and market share from 49% to 44%. Currently, the company struggles to differentiate itself from competition through a tangible MOAT and are shifting their focus towards investing heavily in their original content. My expectations for the company are that while their revenue will grow, it is inevitable that they will lose some more market share till they stabilise at 35% in year 10. This is mainly because in the coming years, consumers will be put in a position where they have to pick between a few streaming services instead of having all. Some services offer the original shows of 2000s and 2010s that attract a set of consumers while the other services offer live sports and streams that attract another set. Netflix will primarily focus on creation of content for the millennial population.

Netflix will lose market share also because it has been unable to mitigate a few problems:
1. Ads - advertisements are a great cash source and Netflix is the only streaming service that doesn't have ads - every time this has been proposed, Netflix has faced severe backlash
2. Cheaper subscriptions or price bundles - while some companies have tie-ups to push their brand like Hulu and Spotify, others offer a much cheaper subscription plan than Netflix - and this is not the best position in a recessionary cash-tied environment
3. Password sharing - this is a very big struggle for Netflix. If they find a way around this issue, they could sincerely multiply their subscriber base very fast.

Operating margin is currently at 17% and Netflix aims to enhance this and reach 25% in the next decade. This will be possible through being more selective while selecting which Originals they want to produce to reduce costs. Compounded annual growth is an average of the Industry Growth US (around 30%) which is 45% of the Netflix subscriber base and Global Average (10%0 which is 55%. Sales to Capital ratio starts at 1.20 and reduces to 0.90. This is because they want to differentiate through original content in the future and so will reinvest more money into the company instead of returning money to share holders.Hence, since Netflix has not seen a significant subscriber growth since exactly one year ago in 2022, and seen a decline as well, it is hard for me to justify their share price at $323. My valuation is in line with what their price was around $200 one year ago. So now, I have a sell recommendation for an overvalued stock.

The Assumptions

	Base year	*Next year*	*Years 2-5*	*Years 6-10*	*After year 10*	*Link to story*
Revenues (a)	$3,16,15,550.00	8.5%	20.00%		2.00%	Based on growth current rate + g(future years)
Operating margin (b)	22.21%	17.8%			25.00%	Margins improve as they aim to beocme more selective in the projects they decide to produce and thereby acheively higher profitability
Tax rate	15.00%		15.00%		25.00%	Found in the 10k based on what the company expectations are
Reinvestment (c)		#REF!	1.20	0.90	25.19%	Reinvestment increases as Netflix shifts it's MOAT to original content and that requires more reinvestment
Return on capital	15.82%	Marginal ROIC =	19.21%		7.94%	Reduces since after year 10, Netflix is very mature and has significant invested capital over time
Cost of capital (d)			11.61%		7.94%	Reduces as Netflix gets a more global horizon and benefits from economies of scale

The Cash Flows

	Revenues	*Operating Margin*	*EBIT*	*EBIT (1-t)*	*Reinvestment*	*FCFF*
1	$3,42,89,400.78	17.82%	$61,09,221.56	$51,92,838.33	$57,14,900.13	-$5,22,061.80
2	$4,11,47,280.94	20.21%	$83,16,317.33	$70,68,869.73	$68,57,880.16	$2,10,989.57
3	$4,93,76,737.12	21.41%	$1,05,70,731.66	$89,85,121.91	$82,29,456.19	$7,55,665.73
4	$5,92,52,084.55	22.61%	$1,33,94,259.04	$1,13,85,120.19	$98,75,347.42	$15,09,772.76
5	$7,11,02,501.46	23.80%	$1,69,24,368.11	$1,43,85,712.89	$1,29,56,455.82	$14,29,257.07
6	$8,27,63,311.70	25.00%	$2,06,90,827.92	$1,71,73,387.18	$1,17,70,782.11	$54,02,605.07
7	$9,33,57,015.60	25.00%	$2,33,39,253.90	$1,89,04,795.66	$95,43,161.59	$93,61,634.06
8	$10,19,45,861.03	25.00%	$2,54,86,465.26	$2,01,34,307.55	$63,43,298.02	$1,37,91,009.53
9	$10,76,54,829.25	25.00%	$2,69,13,707.31	$2,07,23,554.63	$23,92,329.54	$1,83,31,225.09
10	$10,98,07,925.83	25.00%	$2,74,51,981.46	$2,05,88,986.09	$24,40,176.13	$1,81,48,809.96
Terminal year	$11,20,04,084.35	25.00%	$2,80,01,021.09	$2,10,00,765.82	$52,89,865.44	$1,57,10,900.37

The Value				
Terminal value	$26,44,93,272.24			
PV(Terminal value)	$9,74,21,652.77			
PV (CF over next 10 years)	$2,92,13,114.58			
Value of operating assets =	$12,66,34,767.35			
Adjustment for distress	$0.00		Probability of failure =	0.00%
- Debt & Minority Interests	$1,43,53,076.00			
+ Cash & Other Non-operating assets	$51,47,176.00			
Value of equity	$11,74,28,867.35			
- Value of equity options	$17,62,647.06			
Number of shares	4,45,200.00			
Value per share	$259.81		Stock was trading at =	$322.76

The DCF output indicates that Netflix should be trading at $259.81, suggesting that the stock is **overvalued** by 24.23%. Therefore, on the DCF front, I propose a **sell** recommendation.

III. Relative Valuation

Next, for Netflix's relative valuation, 16 companies were used as comparables which included Disney, Baidu, Discovery, Alphabet, Meta, and Tencent Holdings. They were screened by industry (Media and Entertainment), region (Global), and Market Capitalisation of over $30 billion. The Total Enterprise Value/ EBITDA multiple was used for relative valuation because it normalizes for differences in capital structure, taxation, and fixed asset accounting for companies. This would provide us with a cleared insight on understanding the relative valuation and minimizing the discrepancies between comparables. Hence, I regressed EV/EBITDA against EBITDA Margin and Market Capitalization/ Forward Total Revenues.

Regression Statistics	
Multiple R	0.96083129
R Square	0.92319677
Adjusted R Square	0.91138089
Standard Error	2.60715126
Observations	16

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	16.2632788	1.878769501	8.656345978	9.3353E-07
EBITDA Margin % [LTM]	-0.40417931	0.06198777	-6.520307323	1.9412E-05
Market Cap / Forward Total Revenues - Capital IQ [NTM] (x)	1.72759779	0.193470963	8.929493932	6.5816E-07

Relative Valuation			
TEV/EBITDA = = 16.26 - 0.404(EBITDA margin) + 1.76(Market Cap/FT Revenues)			
So Relative EV/EBITDA Netflix =	23.3118778		
EBITDA of Netflix =	56,32,831		
Relative EV of Netflix =	131311868		
Cash	5147176		
Debt	14353076		
Relative Equity Value	122105968		
Number of Shares	445200		
Relative Price per Share	274.2721652		
Actual Price per Share	322.76		
% Overvalued or Undervalued	17.68%	Overvalued	**Sell**

The Regression yielded the equation:

EV/EBITDA = = 16.26 - 0.404 (EBITDA margin) + 1.76 (Market Cap/FT Revenues)

Using this equation, Netflix's EV/EBITDA was **23.31**, Relative Price per Share of **$274.27**, indicating that the stock is overvalued by 17.68%.

IV. Market Valuation

The Market-wide Regressions of Multiples – Global companies in January 2023 model was used with the figures below:

Market Valuation			
TEV/EBITDA = = 23.93 + 25.40 (growth) + 8.20(DFR) -34.40 (tax rate)			
g	20%		
Total Debt	14120930		
MV of Equity	144178020		
DFR	8.92%		
Effective Tax Rate	15%		
Market EV/EBITDA Netflix	23.11852562		
Market EV of Netflix	130222747.8		
Cash	5147176		
Debt	14353076		
Market Equity Value Netflix	121016847.8		
Number of Shares	445200		
Market Price per Share	271.8258037		
Actual Price per Share	322.76		
% Overvalued or Undervalued	18.74%	Overvalued	**Sell**

The market valuation model resulted in a 23.11 EV/EBITDA multiple, implying a share price of $271.82. This indicates that Netflix is **overvalued** by 18.74%.

V. Analysis & Recommendation

Company	Price on 5/5/23	DCF Valuation	Relative Valuation	Market Valuation	Recommendation
Netflix. INC	$322.76	$259.81	$274.27	$271.82	**SELL**

Based on the three different valuation models that I have used, I conclude that Netflix stock is overvalued as of May 5th, 2023. I believe my DCF value is the closest to the true price since it incorporates future expectations, major assumptions and fundamentals while focusing on the company itself without including the competitors. The coming future for Netflix is full of challenges that include problems with password sharing, increasing competition from production houses, dropping subscribers, the lack of a user-facing MOAT, and backlash to potentially having advertisements on the platform. Unless Netflix mitigates these issues in the near future, I see a fall in the market share of the company that peaked during the pandemic. All things considered, I conclude with a **SELL** recommendation.

C3 AI

I. Company Overview

C3 AI is a provider of enterprise AI solutions that are scalable and reduces consolidations costs to a minimum. Typically, enterprise software applications are scattered and difficult to deploy as a single, functional unit. C3 has broken this industry standard through its model-driven architecture that eliminates the need to stitch together multiple cloud or enterprise solutions. Where competitors have failed to implement the insights of artificial intelligence as a feature of their services, C3's robust platform places it as a trailblazer in this emerging AI-as-a-service industry. C3's debt-free capital structure provides breathing room for the company's financing needs, and its unique, scalable solutions will garner a first-mover advantage in this emerging AI-as-a-service industry.

II. DCF Valuation

We implemented a 2-stage DCF with the following assumptions:

C3 AI						May-23
The Disruption Platform Rolls on						
C3 AI's enterprise AI solutions are highly scalable and provide extensive cost-reduction benefits for companies in all sectors looking to consolidate and simplify their application deployment. The company has broken down the industry standard of stitching together multiple cloud or enterprise software solutions to provide a unique model-driven architecture that reduces the complexities of an application by 100 times or more. The future-proof nature of C3's applications ensure a long-term relationship with its clients even with the advent of new innovations in the computing space. Its revenues have staggered due to macroeconomic headwinds in the tech industry and overall investor disapointment in C3's client retention. However, C3's debt-free capital structure provides breathing room for the company's financing needs, and its unique, scalable solutions will garner a first-mover advantage in this emerging AI-as-a-service industry.						
The Assumptions						
	Base year	*Next year*	*Years 2-5*	*Years 6-10*	*After year 10*	*Link to story*
Revenues (a)	$266,702.00	30.0%	25.00% →		3.37%	Consumption-based model that will heighten client retention
Operating margin (b)	32.45%	35.0%	→		35.00%	Sustained margins from C3's uniqe position as an of AI-as-a-service company within a broader market of Enterprise Software companies
Tax rate	25.00%		25.00% →		25.00%	Global/US marginal tax rate over time
Reinvestment (c)		0.30	0.80	1.20	36.21%	With greater experience in the industry, expected R&D expenses will slowly diminish resulting in more efficient growth as well
Return on capital	6.65%	w	32.00%		9.31%	First-mover advantage within industry
Cost of capital (d)			11.63% →		9.31%	Cost of capital close to median company
The Cash Flows						
	Revenues	*Operating Margin*	*EBIT*	*EBIT (1-t)*	*Reinvestment*	*FCFF*
1	$346,712.60	35.00%	$121,349.41	$121,349.41	$266,702.00	-$145,352.59
2	$433,390.75	35.00%	$151,686.76	$151,686.76	$108,347.69	$43,339.08
3	$541,738.44	35.00%	$189,608.45	$189,608.45	$135,434.61	$54,173.84
4	$677,173.05	35.00%	$237,010.57	$183,646.77	$169,293.26	$14,353.51
5	$846,466.31	35.00%	$296,263.21	$222,197.41	$141,077.72	$81,119.69
6	$1,021,468.14	34.36%	$351,001.94	$263,251.46	$145,834.86	$117,416.60
7	$1,188,465.92	34.68%	$412,174.81	$309,131.11	$139,164.82	$169,966.29
8	$1,331,357.56	35.00%	$465,975.14	$349,481.36	$119,076.36	$230,405.00
9	$1,433,840.14	35.00%	$501,844.05	$376,383.04	$85,402.15	$290,980.89
10	$1,482,189.23	35.00%	$518,766.23	$389,074.67	$40,290.91	$348,783.76
Terminal year	$1,532,168.65	35.00%	$536,259.03	$402,194.27	$145,639.94	$256,554.33
The Value						
Terminal value			$4,319,096.54			
PV(Terminal value)			$1,530,109.69			
PV (CF over next 10 years)			$474,310.28			
Value of operating assets =			$2,004,419.97			
Adjustment for distress			$0.00		Probability of failure =	0.00%
- Debt & Minority Interests			$49,387.00			
+ Cash & Other Non-operating assets			$772,440.00			
Value of equity			$2,727,472.97			
- Value of equity options			$90.15			
Number of shares			108,710.00			
Value per share			$25.09		Stock was trading at =	$18.70

III. Relative Valuation

For C3 AI's relative valuation, 16 comparable companies in the Enterprise Software Services industry were used. Given C3's majority presence in the United States and parts of Europe, public companies in the U.S. and Europe were selected. Given the recency of the Enterprise Software Services industry, there were few public companies in the space with a majority being private startups. Additionally, C3 stands alone as the largest AI provider in this field, explaining the lack of close comparables. The EV/Sales multiple was chosen since companies typically have negative EBIT or EBITDA within this industry, and this multiple would normalize earnings discrepancies. Forward looking metrics for sales were used since C3 does not have stable, predictable historical sales numbers.

Regression Statistics	
Multiple R	0.563572343
R Square	0.317613785
Adjusted R Square	0.268871913
Standard Error	2.292274858
Observations	16

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	2.251283645	0.85526631	2.6322604	0.01969941
Est. Annual Revenue Growth - 1 Yr	0.106667579	0.0417863	2.55269288	0.02299696

EV/Sales = 2.251283645 + .0.106667579 * g

Relative EV/Sales of C3 =	2.283283919
Relative Equity Value	$ 2,269,231.33
Relative Price per Share	20.87417283
Upside	12%

Given the small sample size of companies used in the comparables analysis, simple regression was used with one variable (Estimated Annual Revenue Growth). Since the revenue growth rate is a direct driver of the EV/Sales multiple, and the regression equation indicates a higher multiple from a higher growth percentage. Based on the regression, C3 should trade at 2.28x EV/Sales, resulting in a relative share price of $20.87. The stock is undervalued and has a 12% upside potential.

IV. Market Valuation

We used the US Companies Market Regression in January 2023:

EV/Sales = 2.32 + 2.60 g + 10.60 Oper Margin - 1.40 DFR - 3.50 Tax rate

Market Valuation	
g	25%
Total Debt	$ 49,387.00
MV of Equity	$ 2,032,877.00
DFR	0.023717934
Effective Tax Rate	25.00%
Market EV/Sales	5.771794892
Market EV of C3	$ 3,908,503.93
Market Equity Value	$ 4,631,556.93
Market Price per Share	$ 42.60
Upside	56.11%

The market valuation model resulted in a 5.77x EV/Sales multiple, which implies a share price of $42.60. This method indicates that C3 AI is undervalued with an upside of 56.11%.

V. Analysis & Recommendation

The implied share prices from intrinsic valuation, relative valuation, and market valuation suggest that C3 AI is undervalued. Although we agree with this conclusion, the DCF is the method of valuation that is most robust of all. The market valuation fails to consider the complexities of the Enterprise Software market due to its broad scope. The relative valuation's comparable companies are similar, yet too distinct to be considered viable competitors given C3's unique service offerings. The DCF accounts for efficiencies in capital investment, different revenue and operating margin assumptions, and focuses in on company fundamentals. C3 AI is positioned to dominate this emerging Enterprise AI solutions market as a company with no direct competitors on the horizon. If the company manages to focus on client retention and establishing credibility as a new product offering, it has a sizeable competitive moat on its hands. C3 AI is underpriced, and we give it a **BUY** recommendation.

Chegg

I. Company Overview

Chegg is an online education platform that primarily provides subscription services to students in the U.S. These subscription services include Chegg Study, Chegg Math, and Chegg Writing. Students will receive step-by-step solutions and reasonings for various subjects when paying for the membership. In addition to its online subscription service, Chegg also has a smaller product offering of printed and electronic textbooks. Chegg has also recently begun expanding into language classes through an acquisition of Busuu in 2022. Finally, it is important to note that Chegg recently announced that AI was materially impacting the company's ability to attract new customers. As of 5/5/23, the stock is trading at $10.14, down from $16.23 one month ago.

II. DCF Valuation

We implemented a 2-stage DCF with the following assumptions:

Chegg	May-23
Online Education Platform Under Attack from AI	
Chegg is an online education services platform with a small segment in publishing. Chegg finally became proftable on the GAAP financials this year, despite negative revenue growth. The ending of the COVID pandemic hurt Chegg's top line. During COVID, students flocked to Chegg, causing revenues to grow at over 25% year over year. Chegg is expected to continue growing after 2023, but at a rate more similar to that of a startup beginning to mature. Chegg has a strong hold on the education services market but will face pressure from new competitors like ChatGPT.	

The Assumptions

	Base year	*Next year*	*Years 2-5*	*Years 6-10*	*After year 10*	*Link to story*
Revenues (a)	$766,897.00	-1.8%	12.00%		2.50%	Expecting the company to return to positive revenue growth starting after 2023. Chegg faces significant compeitition from the introduction of Chat-GPT and AI, decreasing ability to increase revenues from new customers. Thus, growth rates are positive again, but lower than historical ones.
Operating margin (b)	17.72%	16.0%			20.00%	Margins have hit around 24% over the past few years, with 2022 being an anomaly since operating expenses increased. However, margins will decline as a result of AI eating into Chegg's market
Tax rate	5.84%		5.84%		25.00%	Low effective tax rate due to significant deferred tax assets. Expected to reach Global/US marginal tax rate over time
Reinvestment (c)		0.57	0.87	1.51	29.59%	Chegg and other companies in the space have low sales/capital ratios of around 0.5. They are growth companies heavily investing in R&D with debt and are not yet or barely profitable. As Chegg's R&D pays off over the forecast period, it will reach a sales/capital ratio in between that of a tech and education company
Return on capital	7.83%	Marginal ROIC =	25.97%		8.44%	Return to revenue growth after 2023 without much change in reinvestment rate
Cost of capital (d)			11.42%		8.44%	Cost of capital close nearing industry average but reflects a growth firm's risk

The Cash Flows

	Revenues	*Operating Margin*	*EBIT*	*EBIT (1-t)*	*Reinvestment*	*FCFF*
1	$753,250.00	16.00%	$120,520.00	$120,520.00	$0.00	$120,520.00
2	$843,640.00	17.00%	$143,418.80	$136,616.73	$103,896.55	$32,720.18
3	$944,876.80	17.50%	$165,353.44	$155,696.80	$116,364.14	$39,332.66
4	$1,058,262.02	18.00%	$190,487.16	$179,362.71	$130,327.83	$49,034.88
5	$1,185,253.46	18.50%	$219,271.89	$206,466.41	$84,100.29	$122,366.12
6	$1,304,955.17	19.43%	$253,567.19	$229,042.17	$79,272.66	$149,769.52
7	$1,411,941.92	19.72%	$278,372.14	$240,780.77	$70,852.15	$169,928.61
8	$1,500,862.49	20.00%	$300,172.50	$248,134.59	$58,887.80	$189,246.80
9	$1,566,855.41	20.00%	$313,371.08	$247,036.69	$43,703.92	$203,332.77
10	$1,605,968.04	20.00%	$321,193.61	$240,895.21	$25,902.40	$214,992.80
Terminal year	$1,646,057.02	20.00%	$329,211.40	$246,908.55	$73,059.18	$173,849.38

The Value

Terminal value	$2,926,757.18		
PV(Terminal value)	$1,076,623.33		
PV (CF over next 10 years)	$668,285.26		
Value of operating assets =	$1,744,908.59		
Adjustment for distress	$0.00	Probability of failure =	0.00%
- Debt & Minority Interests	$1,201,968.00		
+ Cash & Other Non-operating assets	$1,057,650.00		
Value of equity	$1,600,590.59		
- Value of equity options	$1,394.52		
Number of shares	135,629.51		
Value per share	$11.79	Stock was trading at =	$10.14

The DCF indicates Chegg's price per share is **$11.79**, indicating the stock is 16.27% undervalued. Some important assumptions to note from above include the expectation that the revenue growth rate will return to positive in the next two years. However, the recent entry of AI into the market will cause downward pressure on the revenue growth rate and operating margins, meaning these metrics will be below that of historical years.

III. Relative Valuation

For Chegg's relative valuation, 13 comparable companies in the Online Education sector were used. There are only a few comparable companies in the sector that are public and U.S. based. The majority of companies in the sector are start-ups with no positive EBIT and revenues below 100 million. The multiple we chose to use was EV/Sales, since we lose fewer firms in our relative valuation because revenues cannot be negative even if EBIT is. Furthermore, equity value and net income based multiples will not be helpful since Chegg does not issue dividends. We used LTM Sales metrics, since the company has stable and predictable historical sales.

Regression Statistics	
Multiple R	0.688876515
R Square	0.474550853
Adjusted R Square	0.426782748
Standard Error	2.253712332
Observations	13

	Coefficients	*Standard Erroi*	*t Stat*	*P-value*
Intercept	0.381053487	0.88112489	0.43246252	0.67376151
Annual Revenue Growth - 2 yr %	0.243505308	0.07725668	3.1518996	0.00921095

$$EV/Sales = 0.381053487 + 0.243505308 * g$$

Implied EV/Sales	1.84
Implied EV	$1,412,689.72
Implied Equity Value	$1,406,274.46
Implied Price per share	$ 10.37

Since there are few comparable companies, the regression uses one variable, the projected Annual Revenue Growth for the next 2 years. The annual revenue growth rate is a direct driver of EV/Sales. The growth rate anticipates the rate at which the market expects sales to grow, with a higher growth rate correlating with a higher multiple.

The median EV/Sales multiple is 1.3x, while the average is 2.3x. Chegg's implied EV/Sales of 1.84 is above the median but below the average. The median is a better metric since outliers like Duolingo have much higher multiples. The regression indicates Chegg's price per share is **$10.37**, indicating the company is 2.27% undervalued.

IV. Market Valuation

We used the US Companies Market Regression in January 2023:

US Market Regression			
EV/Sales = 2.32 + 2.60 g + 10.60 Oper Margin - 1.40 DFR - 3.50 Tax Rate			
g	12.00%		
Oper Margin	17.72%		
DFR	0.44		
Tax rate	5.84%		
Implied EV/Sales	3.70		
Implied EV	$ 2,834,478.11		
Implied Equity Value	$ 2,828,062.85		
Implied Price per share	$ 20.85		

The market regression found a share price of **$20.85**, indicating Chegg is 105.62% undervalued. Compared to the overall market, Chegg is greatly overvalued. This market valuation is not particularly useful since it is incorporating all companies with different levels of risk.

V. Analysis & Recommendation

Company	Price as of 5/5/23	DCF Valuation	Relative Valuation	Market Valuation	Recommendation
Chegg	$10.14	$11.79	$10.37	$20.85	Buy

Based off of the intrinsic valuation and sector relative valuation, Chegg is a **BUY**. The market regression should be ignored since it incorporates all U.S. companies and is not tailored to Chegg's specific characteristics. Towards the end of June, Chegg made a public press report stating that AI and Chat-GPT was eating into its revenue growth, since it was difficult to attract new customers. Our DCF already reflects the impact of AI in our assumptions, finding a price per share of $11.79. Meanwhile, the sector relative valuation finds Chegg slightly less undervalued. This can be explained by the fact that the Chegg press report is very new and the market has overreacted Thus, all online education company multiples are currently lower and have not been recorrected. Despite this impact on the multiple, Chegg is still relative priced at $10.37, slightly above the current share price of $10.14. The fact that both the relative and intrinsic valuation provide proof Chegg is undervalued makes the stock a safe **BUY**.