

Group Project Cover Sheet – Financial Instruments & Markets

	Name	Student ID	Contribution			Signature
1	Peter Misiun	20886060	1	2	3	Peter Misiun
2	Ryan Sheik	20972312	1	2	3	Ryan Sheik
3			1	2	3	
4			1	2	3	
<p>Comments:</p> <ul style="list-style-type: none"> - Ryan Sheik worked mainly on question one and some of question two. - Peter Misiun worked mainly on question two and three. 						

Contribution Key: (1) Did less than fair share, (2) Did fair share, (3) Did more than fair share. Recall that there is a **50% penalty** if you did not contribute your fair share to completion of the project. Please use the comments section to note any comments you have on the way in which your team worked on the project, the structure of the project, and possible improvements for the project in future sessions.

Qn.	Max. Mark	Assessed Mark	Comments
<p>Feedback:</p>			

Question 1: CSGP Events and Technical Analysis

Part a)

The daily share price of CoStar Group (CSGP) between the specified date range from 1st August 2024 until July 31st, 2025, illustrates pertinent sensitivity company-specific news collectively with broader market sentiment. An examination of the candlestick chart identifies several critical dates on which company-specific news announcements generated substantial market reactions, resulting in significant price volatility. This candlestick chart will observe three such instances, deducing the direction and magnitude of daily share price changes whilst dissecting reasons regarding the market's reaction to company-specific news.



Figure 1, CSGP candlestick chart, new stories (TradingView.com)

October 22-23, 2024: Poor Earnings and Analyst Downgrade

On October 22nd, 2024, CoStar Group revealed its third-quarter financial result, which were met with grave investor concern. Although the announcement conveyed adjusted earnings per share of \$0.22 exceeding estimated return per share (\$0.16), the reported revenue of \$692.6 million was below company expectations. Of greater consequence, net new bookings – an integral indicator of future growth - had declined by 34% from the former financial quarter. A record low in net new bookings collectively with lacklustre guidance for the 4th quarter, initiated a sharp negative reaction from the market. Furthermore, the RBC Capital Market (a global investment bank) downgraded the status of

the CSGP stock from ‘Outperform’ to ‘Sector Perform’, indicative of reduced confidence in the company’s future performance in the upcoming quarters (Investing.com, 2024, October 23).

The markets’ reaction was instant and detrimental. On October 23rd, 2024, the daily share price plummeted by ~10%, with the closing price reaching its lowest point in the 2024 financial year at \$69.90. The candlestick chart visually illustrates this timeframe through a long, red candle, which indicated a significant price drop of approximately \$77.57 to the closing price of \$69.90. For a growth-centred stock like CoStar, who often trades at a high price-to-earnings ratio, consistent growth is rather an expectation than a goal. A sharp drop in net bookings directly jeopardising future recurring revenue, and while CEO Andy Florence credited the decline to a temporary strategic shift by the company, the market reacted instinctively to the announced results. Broader global economic circumstances, like the sluggish real estate market alongside rising interest rates further amplified the discouraging sentiment (Frankel, 2024, October 23).

February 18, 2025: Buyback and Renewed Confidence

In contrast to the previous quarter, CoStar’s announcements on February 18, 2025, aided in restoring investor confidence. On this day, combining its fourth-quarter and full-year 2024 financial year results, the company’s Board of Directors implemented an extensive \$500 million stock buyback program. This measure is often interpreted by the stock market as an indicator from management level that believe the company’s shares are undervalued. Through reducing the number of shares available via the stock buyback program, this initiative can increase earnings per shares and thus exhibit confidence in future cash flow and profitability (CoStar Group, Inc., 2025, February 18).

This news was received with considerable optimism. The candlestick chart displays a significant green candle moving in an upward magnitude around this date, hence indicating a strong rally where the closing price was noticeably higher compared to the opening price. The stock, which began trading at around \$74, surged to finish the day close of \$80. From an investors perspective, who would have been concerned by previous quarters’ results, the buyback program provided tangible assertion of the company believing in the stocks’ long-term value. This influential use of capital, coupled with earnings that exceeded the now lowered expectations from the previous financial quarter, provided a firm basis for the CSGP stock to rebound. The magnitude of the daily share price increase infers company-specific news not only halted the prior downwards financial trend but also attracted new buyers who viewed the buyback program as a strong indicator for positive future returns (NASDAQ, 2025, February 18).

July 22-23, 2025: Strong Earnings and Upgraded Guidance

The most evident upward movement observed within the specified timeframe occurred following CoStar's second-quarter 2025 earnings report published on the 22nd of July 2025. The company announced the second quarter retaining a double-digit growth, with revenue of \$781 million surpassing market expectations. Furthermore, CoStar published a record \$93 million dollars accrued through net new booking, a 65% sequential increase that directly addressed concerns that had plunged the stock prices downwards in October 2024 (Seeking Alpha, 2025, July 23). Additionally, success brought within CoStar's investment in the Homes.com tech platform saw a 56% increase in members, validating the strategic direction of the company. As a result of the strong results, CoStar raised its full-year revenue and profit guidance (CoStar Group, Inc., 2025, February 18).

The market reacted with a strong bullish sentiment. On July 23, 2025, the stock experienced a sharp increase, rising from an opening price near \$83 to finish the day above \$91. This is illustrated by the notably large green candlestick at the end of the chart, which represents the highest point of the recorded period and a significant single-day gain and an upward magnitude in the financial performance of CoStar Group. A trickle of positive news followed through releasing positive earnings reports to investors. The market's enthusiastic response reflects a renewed conviction in CoStar's growth narrative and executing the company strategic initiatives in an effective manner.

Part b)



Figure 2 CSGP candlestick chart, technical analysis (TradingView.com)



Figure 3, CSGP candlestick chart, Bollinger bands (TradingView.com)

Based upon the principles of technical analysis, which posits that historical price alongside volume data can be used to forecast future market trends, observing the candlestick bar chart for CoStar Group (CSGP) from 1st of August 2024 up until 31st of July provides a foundational framework for potential future price movement. Our analysis integrates a broad range of integral technical concepts, like the trend analysis, support and resistance levels, chart patterns and Bollinger bands to construct a comprehensive outlook in relation to CSGP's potential stock.

Referring to figure 2, the key fundamental aspect is of the candlestick chart is the trend structure (blue lines). Upon observing the candlestick chart, from August to late October 2024, we can see a noticeable downward trend in terms of the daily share pricing, defined through a consistent series of lower highs and lower lows (referring to daily share pricing). This period of decline reached its lowest point for the year when the stock hit its annual bottom. However, a notable turnaround took place at that time, and from late October 2024 through July 2025, the stock entered a new, sustained upward trend. This bullish phase is marked by a series of progressively higher peaks and troughs, reflecting a fundamental change in market sentiment from negative to positive and providing the main foundation for a more positive market growth.

Using this trend structure, critical price levels of support and resistance have been established (purple boxes), acting as important indicators for future daily share pricing. An influential support level was

forged at the \$69.90 mark in which the price floor validated during the sharp sell-off by investors in October 2024. The price floor, which aligns with both psychological and technical support levels, initiated through buying demand to overcome selling pressure, instigating a trend reversal. As long as the price stays at this level, the bullish thesis remains intact. Conversely, a primary resistance level was identified at around \$80 - \$83. This zone acted as a price ceiling where selling pressure is expected to be strong. A breakout above this level would be a powerful bullish signal, whereas a failure to overcome the breakout could potentially deviate to a price rejection.

We see this area of resistance being overcome during May-July 2025, in which a ‘cup and handle pattern’ was formed. This is presented through a rounding bottom returning to previous resistance or ‘cup’ later accompanied by a ‘handle’ showing a minor short term price consolidation/pullback. This pattern indicates higher future prices as selling pressure at the end of the ‘handle’ slows making way for higher prices. We see this pattern taking the price gain from the low to the high of the rounding bottom or ‘cup’ and seeing this same growth once price breaks out of this structure (yellow arrows shown on figure 2). As we see this upward movement complete, significant gains are seen and selling pressure increases significantly. As this movement is complete towards the end of our time period, this presents the notion to investors to sell and secure profits as selling pressure will most likely increase in the future, leading to lower prices (Bennet, 2025).

The Bollinger bands can also give a strong indication of whether investors should buy, sell or hold CSGP. This technical analysis tool sees three lines, being a simple moving average (blue line) and a higher (red line) and lower (green line) moving averages, being two standard deviations away from the simple moving average. In figure 3, we see that when the Bollinger bands condense (yellow circles), it is followed by upward price movement. As at the end of July 2025, we see the Bollinger bands spread increasingly apart accompanied by strong upward price movements, the notion to sell and take profits by investors becomes increasingly prevalent. This is due to this tool presenting when prices are ‘overheated’ in the short term. This further solidifies the notion that investors should sell CSGP at the end of our time period (July 2025), as future negative price movements are likely to be seen (Hayes, 2020).

Condensing these technical indicators provides a negative outlook for CoStar Group’s stock within the short-term following July 31st, 2025. This is presented through the analysis of strong short term price movements leading up to July 31st, 2025, signifying that a pullback is likely to occur as investors take profit and drive the stock price down.

The above analysis exhibits the notion that markets are not perfectly efficient. This shows semi-strong market efficiency is supported as we see large price swings occurring when new company information is released, showing that new information is what drives price changes and that all publicly available information is already priced in (Maverick, 2024). In addition to this, the use of technical analysis (trends, chart patterns, Bollinger bands) challenges weak form efficiency (all past price data is reflected within stock prices), as investors can exploit past price action to create predictive buy/sell signals to achieve profit (Maverick, 2024).

Question 2: CSGP Thorough Analysis

Part i)

CoStar Group, Inc. (CSGP) is a company that provides commercial real estate information, analytics, online marketplaces and 3D digital twin technology. The primary industry CSGP is associated with is its real estate information and analytics services, in which extensive research and data analysis is provided for both commercial and residential properties to assist in making crucial decisions (CoStar Group, 2025).

Peer companies of CoStar Group include:

- KE Holdings Inc. (BEKE)
- Jones Lang LaSalle Incorporated (JLL)
- CBRE Group, Inc. (CBRE)

Comparison of key financial ratios (Recorded 4/09/2025) (Investing.com, 2025)

	CSGP	BEKE	JLL	CBRE
Price-to-Earnings (P/E) (TTM)	347.4	38.16	25.21	43.82
Price-to-Sales (P/S) (TTM)	13.51	1.43	0.53	1.18
Price-to-Book (P/B) (MRQ)	4.57	2.09	1.85	5.47
Return on Equity (ROE) (TTM)	1.3%	5.6%	8.27%	12.95%

Net Profit Margin (TTM)	3.57%	3.78%	2.29%	2.86%
Current Ratio (MRQ)	5.83	1.48	1.1	1.13
Debt-to-Equity (D/E) (MRQ)	12.95%	31.91%	57.4%	108.18%

Figure 4, CSGP + peer companies' key financial ratios (Investing.com, 2025)

Valuation:

- **CSGP Price-to-Earnings: 347.4.**
 - This presents CSGP trading at very high multiples (more expensive) compared to peers (P/E: 25.21 - 43.82), as investors are more willing to pay for each dollar of a company's earnings.
- **CSGP Price-to-Sales: 13.51.**
 - This presents CSGP trading at very high multiples (more expensive) compared to peers (P/S: 0.53 - 1.43), as investors are more willing to pay for each dollar of a company's revenue.
- **CSGP Price-to-Book: 4.57**
 - P/B of peers are relatively similar to CSGP, sitting between 1.85 - 5.47. This suggests investors are willing to pay similar amounts for each dollar of net assets, with JLL (P/B: 1.85) suggesting better value relative to book assets compared to the other companies.

Profitability:

- **CSGP Return on Equity: 1.3%.**
 - The values present CSGP as having the weakest returns compared to peers (ROE: 5.6% - 12.95%). This presents CSGP's peers as more effective at generating profit from shareholders' equity.
- **CSGP Net Profit Margin: 3.57%.**
 - NPM are similar amongst peers, presenting values of 2.29% - 3.78%. This shows CSGP and its peers have similar profitability after business related expenses are deducted.

Balance Sheet and Liquidity:

- **CSGP Current Ratio: 5.83.**
 - This value presents CSGP as having much stronger liquidity compared to its peers (CR: 1.1 - 1.48). This shows CSGP as being more equipped at using short-term assets to pay off short-term liabilities.
- **CSGP Debt-to-Equity: 12.95%.**
 - The values present CSGP as being much healthier than that of peers (D/E: 31.91% - 108.18%). This shows CSGP has much less debt compared to shareholders' equity relative to the peer companies, showing CSGP as better suited to finance its operations.

Overall, the values above present CSGP as trading at a premium valuation, with stronger liquidity, lower debt but at a caveat of lower profitability compared to its peers. BEKE presents itself to be a middle ground of sorts compared to CSGP and its peers. This is shown with a lower valuation, a higher ROE but with slightly more debt compared to CSGP. JLL and CBRE present themselves as cheaper and more profitable compared to peers, but with much higher leverage and weaker liquidity.

Part ii)

In this specific analysis, we believe the NASDAQ Composite Index would be the most appropriate primary benchmark to compare CSGP against, a choice we believe has several key details that make it an apt choice over other potential benchmarks such as the S&P 500 or sector specific ETFs like the Real Estate Select Sector SPDR Fund (XLRE). Whilst CoStar Group operates primarily within the real-estate sector, it functions as a technology and data analytics company at its core. Revenue for CSGP is generated through a subscription-based income stream offering access to its online marketplaces in addition to information, a business model tailored towards growth-oriented, technology-centred companies that dominate the NASDAQ exchange. Moreover, as CSGP is listed within the NASDAQ exchange itself, the Composite Index naturally reflects the specific investor sentiment and pool the investor base most pertinent to the stock. On the other hand, other benchmarks such as the XLRE are weighted favourably toward Real Estate Investment Trusts (REITs) alongside property management firms that are asset-loaded and are more sensitive to interest rate and property value fluctuations than CoStar's platform-based business model (Yahoo Finance, 2025a). The S&P 500, usually a more generalised market indicator as it covers a multitude of sectors, therefore would dilute the comparison and fail to capture the specific dynamics of the technology and growth stock environment in which CSGP primarily operates in.

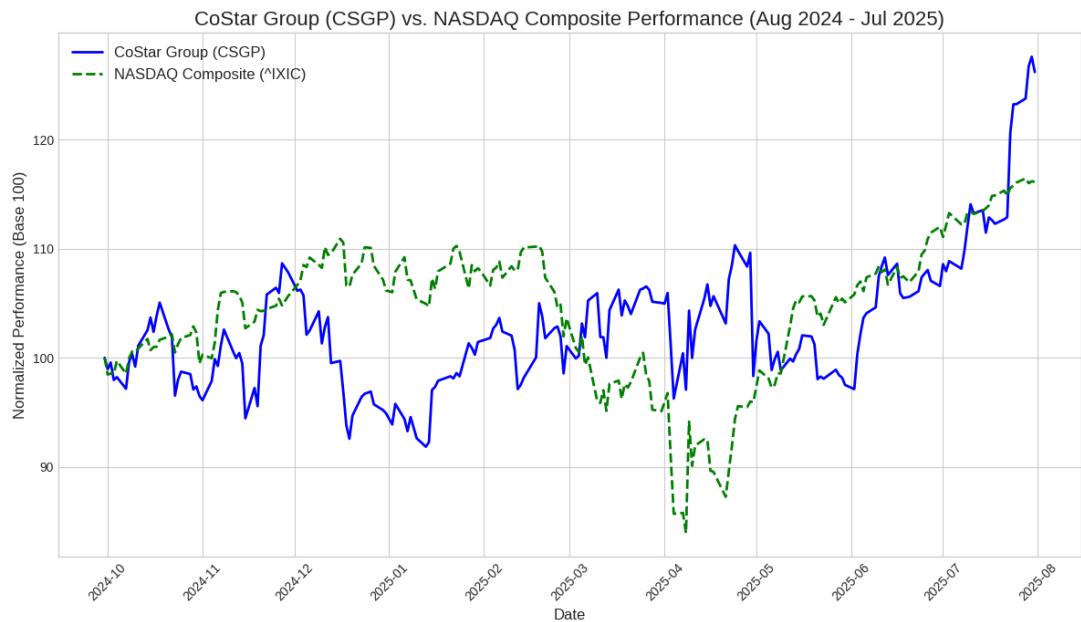


Figure 5, CoStar Group (CSGP) vs. NASDAQ Composite Performance Comparison, August 2024 - July 2025. Data source: Yahoo Finance (2025)

Through using a graphic of CoStar's share price from August 1st, 2024, up until the 31st of July 2025, we can visualise the outperformance of CSGP's stock like we have identified in question one.

Throughout the course of the specified date range, CSGP conveyed a total return of 26.18% whilst the NASDAQ Composite yielded a lower return of 16.13%. We can visualise the outperformance in the above chart where CSGP (blue line) ends substantially above the benchmark's line. The divergence becomes further contrasted in contrast to the XLRE benchmark, which produces a negative yield of 7.30% during this period of time due to broader economic factors like interest rate hikes and further proves suffice evidence to believe CSGP's business model is not akin to broader real estate market trends.

An extensive driver for the outperformance of CSGP share price movement is rather due to company-specific factors as opposed to broader market trends. We have inferred a generally positive consensus for technology-based stocks, highlighted through the NASDAQ's 16.13% gain during the timeframe, hence providing a favourable fortune for CSGP, however does not capture the true extent in relation to the outperformance of the CSGP in respect to NASDAQ composite index. As implied within the first question, the most evident daily changes in stock price movements were in principle to corporate announcements made by CSGP. The sharp decline in late October 2024 was a market response into CSGP posting less than desirable performance within the third quarter of 2024 as a result of less net new bookings and poor guidance, on the other hand exceeding market expectations in February and June 2025 respectively through the implementation of a publicly announced \$500 million stock buyback program. These events demonstrated the market's intense focus on CoStar's ability to

execute its growth strategy, particularly the expansion of its Homes.com platform. Therefore, while the rising tide of the tech market lifted many boats, CoStar Group's ability to navigate its specific challenges and deliver exceptional growth allowed it to significantly outpace its benchmark and the broader market (Yahoo Finance, 2025b).

Part iii)

We will be using the Price-to-Earnings (P/E ratio) to determine if CSGP is over, under or fairly valued. Based on the values presented in the first part of this question, we see CSGP having a P/E ratio much higher than that of its peers (25.21 - 43.82), immediately presenting the notion that CSGP is overvalued.

Despite this value however, the method of comparables can be employed to better gauge CSGP's relative valuation (Curtin University, 2025). To do this the following steps are required:

- **Get earnings per share of CSGP:** 0.26 (TTM)
- **Get mean of P/E of comparable companies:** $(25.21 + 43.82 + 38.16)/3 = 35.73$
- **Calculate intrinsic value:** $0.26 * 35.73 = 9.29$.

As we see CSGP currently trading at \$89.10 per share, this further solidifies the argument that CSGP's stock is overvalued as the actual stock price is almost 10 times higher than its intrinsic value compared to its peer companies, presenting significant overvaluation when comparing P/E.

The reasoning behind using the P/E ratio to determine whether CSGP's stock is over, under or fairly valued is because it connects the stock price to the company's earnings, uncovering how expensive the stock is in relation to the company's profitability. This value can then be compared to other companies occupying a similar niche in order to assess relative valuation.

Some limitations of using the P/E ratio is that it doesn't account for differences in growth rates, showing how if forecasted future earnings growth are strong, a higher P/E ratio might be justified. Furthermore, using the P/E ratio becomes misleading for specific companies with low or negative earnings as it leads to extremely high values (dividing by low earnings) or negative values (dividing by negative earnings). This therefore presents how using the P/E ratio to determine the suitable valuation of companies can sometimes be unsuitable and therefore doesn't represent the true valuation of said company.

Question 3: Ethics

Part a)

Ron Chen's actions contravene Standard IV(A) - Loyalty of the Standards of Professional Conduct of the CFA Institute. This standard states that employees must "*act for the benefit of their employer and not deprive their employer of the advantage of their skills and abilities, divulge confidential information, or otherwise cause harm to their employer*" (Curtin University, 2025).

Ron is shown to contravene this standard as he has not yet received written consent to perform external work which could potentially compete with his employer's business. This is shown as although Ron has communicated his desire to arrange external work managing his family members' investment portfolios, he is yet to receive written confirmation from his employer to permit this. As Ron proceeds with his request without written confirmation; Ron's duty of loyalty is being violated as he is depriving his employer of his skills and abilities, performing a task which could potentially cause harm and compete with his employer's business.

Part b)

Teresa Thomas' should not disclose information of the politician's stock portfolio as this follows Standard III(E) - Preservation of Confidentiality of the Standards of Professional Conduct of the CFA Institute. This standard states that employees must "*keep information about current, former, and prospective clients confidential unless:*

1. *The information concerns illegal activities on the part of the client or prospective client.*
2. *Disclosure is required by law.*
3. *The client or prospective client permits disclosure of the information.*" (Curtin University, 2025).

As this mandate has come from the headquarters of the politician's party and not a legal entity, Teresa should not disclose information about her client's confidential information. Although the headquarters have stated that this information is required for legal reasons, it is Teresa's duty to further investigate this request with the help of legal professionals to determine whether this request holds validity and the confidential information is required to be disclosed. If Teresa were to disclose the politician's stock portfolio based purely from the request by the party's headquarters, it would violate her duty to preserve client confidentiality.

Part c)

Lisa Smiths' actions contravene Standard II(A) - Material Non-public Information, Standard III(C) - Suitability and Standard V(A) - Diligence and Reasonable Basis of the Standards of Professional Conduct of the CFA Institute.

Standard II(A) states that individuals that “*possess material non-public information that could affect the value of an investment must not act or cause others to act on the information*” (Curtin University, 2025). As the information Lisa overheard regarding market manipulation was non-public material and could influence a stock's price, acting on this information to sell client holdings violated said standard.

Standard III(C) states that members must “*make a reasonable inquiry into a client's or prospective client's investment experience, risk and return objectives, and financial constraints prior to making any investment recommendation or taking investment action*” (Curtin University, 2025). As Lisa made the decision to sell without the assessment of her client's risk tolerance, portfolio and financial constraints, she violated this standard. Furthermore, although her actions were made with the intent to help her clients, these actions might not have been desired by all clients. This is because clients were potentially subject to transaction costs, tax implications and the risk of missing out on profit based on said portfolio change.

Standard V(A) states that members must “*have a reasonable and adequate basis, supported by appropriate research and investigation, for any investment analysis, recommendation, or action*” (Curtin University, 2025). Lisa violated this standard as the decision to sell the specific stock was not supported by appropriate research. In making changes to client portfolios based purely on overheard information, the decision to sell lacked a reasonable and adequate basis.

References

- Ashish Deswal. (2025). *How does CSGP stack up against its peers?* Trefis.
<https://www.trefis.com/data/companies/CSGP/no-login-required/3b7sl2xl/How-Does-CSGP-Stack-Up-Against-Its-Peers->
- Bennet, J. (2025, September 19). *Cup and handle pattern: How to trade it in 2025.* Daily Price Action. <https://dailypriceaction.com/blog/cup-and-handle-pattern/>
- CB Richard (CBRE) financial ratios – Investing.com AU. (2025, October). *Investing.com Australia.*
<https://au.investing.com/equities/cbre-ratios>
- CoStar (CSGP) financial ratios. (2025, May 6). *Investing.com.*
<https://www.investing.com/equities/costar-group-ratios>
- CoStar Group. (2019). *CoStar Group | The leader in commercial real estate information and online marketplaces.* <https://www.costargroup.com/>
- CoStar Group, Inc. (2024, October 22). *CoStar Group third quarter revenue increased 11% year-over-year; Net income increased 176% and EBITDA increased 320% from the second quarter* [Press release]. <https://investors.costargroup.com/news-releases/news-release-details/costar-group-third-quarter-revenue-increased-11-year-over-year>
- CoStar Group, Inc. (2025, February 18). *CoStar Group 2024 full year revenue increased 11% year-over-year; Q4 24 net income increased 13%, EBITDA increased 43% & adjusted EBITDA increased 47% from Q3 24* [Press release]. <https://investors.costargroup.com/news-releases/news-release-details/costar-group-2024-full-year-revenue-increased-11-year-over-year>
- CoStar Group, Inc. (2025, July 22). *CoStar Group Q2 revenue increases 15% year-over-year; Achieves all-time high net new bookings of \$93 million* [Press release].
<https://investors.costargroup.com/news-releases/news-release-details/costar-group-q2-revenue-increases-15-year-over-year-achieves-all>
- Credaily. (2024, October 23). *CoStar stock falls 10% after less bookings leads to downgrade.*
<https://www.credaily.com/briefs/costar-stock-falls-10-percent-after-less-bookings-leads-to-downgrade/>
- Hayes, A. (2020, May 7). *Bollinger bands: What they are, and what they tell investors.* Investopedia.
<https://www.investopedia.com/terms/b/bollingerbands.asp>
- Investing.com. (2024, October 23). *RBC downgrades CoStar stock as core bookings slump and demand weakens.* <https://www.investing.com/news/company-news/rbc-downgrades-costar-stock-as-core-bookings-slump-and-demand-weakens-93CH-3676735>

Jones Lang LaSalle (JLL) financial ratios – Investing.com AU. (2025, October). *Investing.com Australia*. <https://au.investing.com/equities/jones-lang-lasalle-inc-ratios>

Ke Holdings Inc (BEKE) financial ratios – Investing.com AU. (2025, October). *Investing.com Australia*. <https://au.investing.com/equities/ke-holdings-inc-ratios>

Maverick, J. B. (2024, June 22). *The weak, strong and semi-strong efficient market hypotheses*. Investopedia. <https://www.investopedia.com/ask/answers/032615/what-are-differences-between-weak-strong-and-semistrong-versions-efficient-market-hypothesis.asp>

NASDAQ. (2025, February 18). *CoStar Group issues FY25 outlook, approves stock buyback plan \$500 mln*. <https://www.nasdaq.com/articles/costar-group-issues-fy25-outlook-approves-stock-buyback-plan-500-mln>

Seeking Alpha. (2024, October 22). *CoStar Group, Inc. (CSGP) Q3 2024 earnings call transcript*. <https://seekingalpha.com/article/4728470-costar-group-inc-csgp-q3-2024-earnings-call-transcript>

Seeking Alpha. (2025, July 23). *CoStar raises 2025 revenue growth guidance to 15% with \$3.135B-\$3.155B target driven by record bookings*. https://seekingalpha.com/news/4470406-costar-raises-2025-revenue-growth-guidance-to-15-percent-with-3_135b-3_155b-target-driven-by