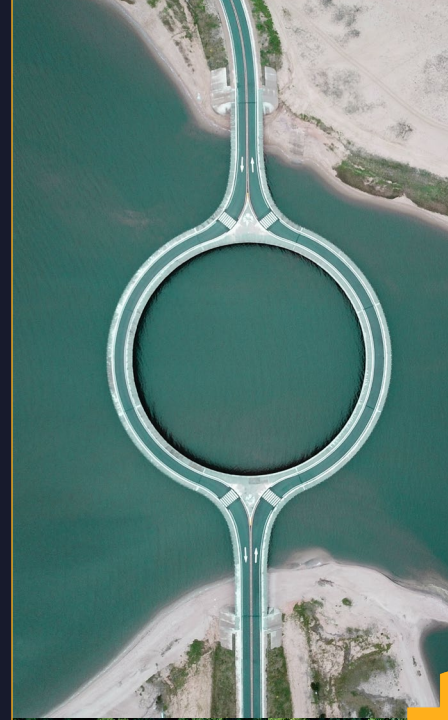


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# Valuation Multiples by Industry

-Quarterly Report-  
Full Year Review @ 30 December 2022

20 March 2023





# Important Notice

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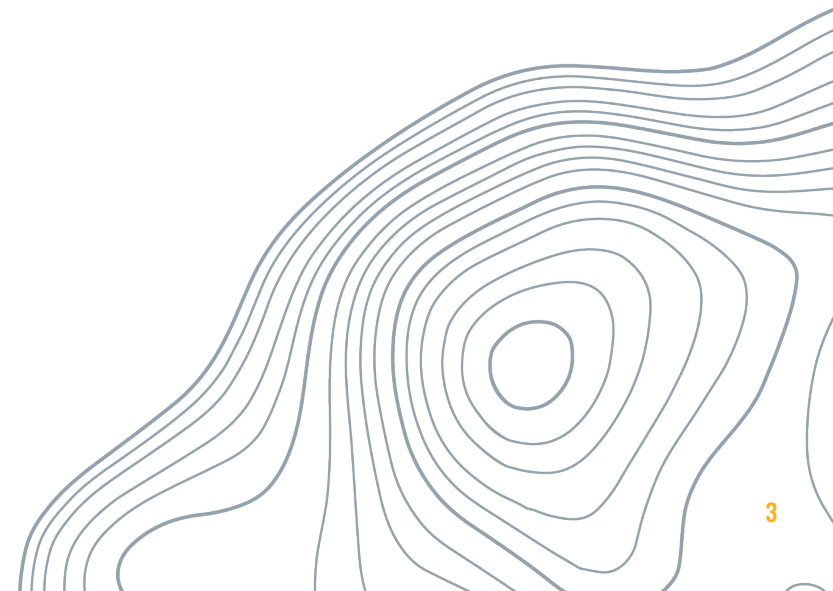
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# Introduction







# Introduction

## Background to this Report

Welcome to the first edition of Interpath’s US Valuation Multiples by Industry quarterly report, which summarises median valuation multiples of US publicly-listed companies. The analysis is summarised by sector, industry group, and industry, based on prevailing market data and historical (trailing) last-twelve-months (“LTM”) financial data. In this December edition (Annual Review) we consider how industry valuation multiples evolved during calendar year 2022.

The purpose of this report is to summarise, detail, and visualise differences in valuation multiples across industries and sectors, resulting from changes in company fundamentals and underlying market sentiment.

Our analysis of industry valuation multiples covers enterprise value (“EV”) multiples derived from LTM revenue, EBIT(DA), and total assets, in addition to market capitalisation (“MktCap”)-to-book-value multiples (“MktCap/BV” or “P/B”) for financials.

## Background to Data

Our valuation multiples exclude negative multiples, initial outliers, and NA data. EV comprises the aggregate market value of equity, and the book values of all non-common equity and debt (including mezzanine), less cash and cash equivalents.

Valuation multiples, financial statement data, and company-related information is sourced from S&P Capital IQ (“CapIQ”), using data provided by S&P Global Market Intelligence, a division of S&P Global, a leading provider of ratings, data, research, and S&P Dow Jones Indices. Median multiples data is aggregated at sector, industry group, and industry level, using sector, industry group, and industry classifications provided by CapIQ.

The information and analysis presented within this report is based on month-end valuation multiples, updated to reflect information up to and including 30 December 2022. US valuation multiples are based on analysis of multiples derived from the constituent companies within the S&P Composite 1500.

For more information, please see the About the Data section of this report.




## Limitations

The data and any conclusions expressed in this report are provided purely for information purposes only – they do not represent the views or opinions of any specific colleagues, or of Interpath Ltd – they merely represent analysis of data provided via CapIQ. While we make every effort to ensure that the information and assessment we are sharing is accurate, we welcome any comments, suggestions, or corrections.

Interpath does not take any responsibility for the data and analysis presented within this report and/or for any conclusions derived from this report. Due to rounding differences, some calculations may not appear to correspond exactly.

We hope you find this report helpful. Please contact us if you have any questions, or if you would like us to perform further analysis.

Thank you for your time.

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# Summary of US Valuation Multiples





# Executive Summary

## Market Overview

According to the Financial Times, global stocks and bonds lost nearly \$35tn in value in 2022. The three main US equity indices suffered their worst year since 2008. The Dow was the best performing of the three, although down around 8.8%. The S&P 500 ended the year down 19.4%, while the more tech-weighted Nasdaq plunged 33.1% for the year.

With the S&P 500 finishing December at 3,839.50, the index recorded its fourth-worst year since it launched in 1957. The S&P Composite 1500 also finished the year around 19% down, replicating the performance of the S&P 500 index.

Despite the yearly index losses, the Dow and S&P 500 were able to interrupt the previous three-quarter losing streak by posting relative gains for the final quarter of 2022. Unfortunately for the Nasdaq, being heavily weighted towards tech stocks such as Apple, Tesla, and Microsoft, meant that the index ended Q4 2022 with its fourth consecutive negative quarter (the first time since 2001).

Throughout 2022, sticky inflation and aggressive rate hikes from the Federal Reserve weighed heavily on investor sentiment, significantly impacting growth and technology stocks. The second half of 2022 saw investors agonise about the impact of high inflation, slowing growth, and tightening monetary policy, which was duly reflected by the lower valuation multiples seen across almost all US sectors and industries.

## Market Multiples

From a sector perspective, Real Estate exhibits the highest median EBITDA multiple (16x), however, Consumer Staples, Healthcare, Information Technology, and Utilities, all had median EBITDA multiples of above 12x, illustrating the markets preference for defensive stocks where companies have pricing power and sectors where consumer expenditure is non-discretionary.

When we consider valuation multiples on an industry level, Software exhibited the highest median EBITDA multiple (26x) and the third highest revenue multiple (8x). As expected, industries with the highest multiples were derived from the sectors with the highest multiples; for example, Beverages, Water Utilities, Healthcare Technology, and Life Sciences Tools and Services completed the remaining top 5 median industry EBITDA multiples.

## Overview of US Valuation Multiples

With over 95% of industries reporting reduced multiples for September, the month lived up to its historical reputation as the worst month of the year for equity returns. Although December saw some improvement in industry multiples compared with our September analysis, most industries still ended the year with lower multiples than they started with. Of the 56 non-financial industries detailed in our analysis, as at 30 December 2022, we note the following:

- When compared with median multiples from the previous month, 30 November 2022:
  - 7 industries reported higher EV/Revenue multiples;
  - 11 industries reported higher EBITDA multiples;
  - 8 industries reported higher EBIT multiples; and
  - 5 industries reported higher EV/Total Assets multiples.
- When compared with median multiples from the previous quarter, 30 September 2022:
  - 36 industries reported higher EV/Revenue multiples;
  - 42 industries reported higher EBITDA multiples;
  - 40 industries reported higher EBIT multiples; and
  - 44 industries reported higher EV/Total Assets multiples.
- When compared with median multiples at 31 January 2022:
  - 7 industries reported higher EV/Revenue multiples;
  - 14 industries reported higher EBITDA multiples;
  - 14 industries reported higher EBIT multiples; and
  - 11 industries reported higher EV/Total Assets multiples.

In relation to the Financials sector specifically, as at 30 December 2022:

- When compared with median multiples from the previous month, 30 November 2022, each industry within the sector experienced a decline in their median P/B multiple;
- When compared with median multiples from the previous quarter, 30 September 2022, each industry reported an increase in their median P/B multiple; and
- When compared with median multiples at 31 January 2022, only the Insurance industry experienced an increase in its median P/B multiple.



# Summary of US Valuation Multiples

## Summary of US Valuation Multiples by Sector

The table below provides a summary of median valuation multiples by sector for publicly-listed companies trading on US stock exchanges, as at 30 December 2022.

Sector	EV/Rev	EV/EBITDA	EV/EBIT	EV/TotAss
Communication Services	2.08	8.33	16.06	0.95
Consumer Discretionary 1	0.95	6.25	9.51	1.01
Consumer Discretionary 2	1.47	8.26	13.27	1.24
Consumer Staples	1.92	12.43	18.58	1.63
Energy	1.57	4.85	5.72	0.99
Health Care	2.85	12.49	18.77	1.47
Industrials 1	1.80	11.48	15.89	1.36
Industrials 2	1.02	7.30	14.57	1.06
Information Technology	2.70	12.44	17.44	1.57
Materials	1.16	8.01	10.80	1.13
Real Estate	9.91	16.22	28.51	1.14
Utilities	4.02	12.93	22.59	0.95

Sector	P/B
Financials	1.26

## Summary of US Valuation Multiples by Industry Group

The table below provides a summary of median valuation multiples by industry group for publicly-listed companies trading on US stock exchanges, as at 30 December 2022.

Industry Group	EV/Rev	EV/EBITDA	EV/EBIT	EV/TotAss
Media and Entertainment	2.01	8.58	15.38	1.04
Telecommunication Services	2.18	6.72	19.29	0.87
Automobiles and Components	0.77	7.54	13.67	0.81
Consumer Durables and Apparel	1.05	5.64	8.45	1.15
Consumer Services	2.59	10.55	15.96	1.35
Retailing	0.79	5.50	9.46	1.07
Food and Staples Retailing	0.64	9.64	17.66	1.28
Food, Beverage and Tobacco	2.28	13.17	17.99	1.65
Household and Personal Products	2.90	15.67	20.23	3.05
Energy	1.57	4.85	5.72	0.99
Health Care Equipment and Services	2.19	13.15	20.68	1.40
Pharmaceuticals, Biotechnology and Life Sciences	4.11	11.53	16.55	1.63
Capital Goods	1.80	11.48	15.89	1.36
Commercial and Professional Services	1.17	9.34	17.65	1.24
Transportation	0.94	5.59	11.70	0.96
Semiconductors and Semiconductor Equipment	3.27	9.81	13.50	1.81
Software and Services	4.02	16.92	22.94	1.88
Technology Hardware and Equipment	1.90	10.28	15.58	1.15
Materials	1.16	8.01	10.80	1.13
Real Estate	9.91	16.22	28.51	1.14
Utilities	4.02	12.93	22.59	0.95

Industry Group	BV
Banks	1.22
Diversified Financials	1.13
Insurance	1.70





# Summary of US Valuation Multiples

## Summary of US Valuation Multiples by Industry

The table below provides a summary of median valuation multiples by industry for publicly-listed companies trading on US stock exchanges, as at 30 December 2022.

Industry	EV/Rev	EV/EBITDA	EV/EBIT	EV/TotAss
Entertainment	3.53	15.86	26.60	1.18
Interactive Media and Services	2.24	11.76	17.93	1.62
Media	1.57	7.43	11.16	0.85
Diversified Telecommunication Services	1.98	6.33	12.75	0.72
Wireless Telecommunication Services	3.38	10.18	20.27	1.12
Auto Components	0.76	7.21	15.54	0.89
Automobiles	0.95	8.74	12.12	0.76
Household Durables	0.78	4.50	5.42	0.83
Leisure Products	1.32	7.58	10.09	1.25
Textiles, Apparel and Luxury Goods	1.14	6.10	10.17	1.25
Diversified Consumer Services	1.54	7.86	11.93	1.00
Hotels, Restaurants and Leisure	2.93	11.05	18.32	1.40
Internet and Direct Marketing Retail	1.61	10.95	15.38	1.49
Multiline Retail	0.69	6.81	17.83	1.16
Specialty Retail	0.73	4.90	8.92	1.05
Food and Staples Retailing	0.64	9.64	17.66	1.28
Beverages	4.16	20.01	22.77	2.77
Food Products	2.13	12.47	17.92	1.33
Tobacco	4.10	10.79	12.85	2.86
Household Products	3.51	17.37	20.65	3.19
Personal Products	2.28	11.07	16.61	2.89

Industry	EV/Rev	EV/EBITDA	EV/EBIT	EV/TotAss
Energy Equipment and Services	1.51	9.24	20.22	0.99
Oil, Gas and Consumable Fuels	1.57	3.62	5.00	0.98
Health Care Equipment and Supplies	3.75	16.61	25.14	1.62
Health Care Providers and Services	1.18	9.67	14.18	1.25
Health Care Technology	1.97	19.89	41.32	1.52
Biotechnology	4.06	9.10	9.60	1.63
Life Sciences Tools and Services	4.72	18.74	24.60	2.59
Pharmaceuticals	3.22	10.36	16.19	1.23
Aerospace and Defence	2.55	14.56	18.19	1.40
Building Products	1.29	7.46	10.09	1.30
Construction and Engineering	1.04	9.98	19.68	1.22
Electrical Equipment	2.22	13.25	18.11	1.56
Machinery	2.19	12.63	16.42	1.41
Trading Companies and Distributors	0.99	9.46	11.26	1.04
Commercial Services and Supplies	1.44	9.39	20.46	0.98
Professional Services	1.11	9.30	17.00	1.38
Air Freight and Logistics	0.91	5.51	9.46	1.49
Airlines	0.85	5.25	15.88	0.46
Road and Rail	1.35	5.93	11.78	1.07

Industry	EV/Rev	EV/EBITDA	EV/EBIT	EV/TotAss
Semiconductors and Semiconductor Equipment	3.27	9.81	13.50	1.81
IT Services	3.02	12.72	19.95	1.48
Software	7.83	25.90	29.57	2.07
Communications Equipment	2.39	14.01	25.82	1.48
Electronic Equipment, Instruments and Components	1.44	9.25	13.52	1.15
Technology Hardware, Storage and Peripherals	1.09	8.22	10.73	1.11
Chemicals	1.49	9.87	13.29	1.21
Containers and Packaging	1.45	8.73	11.84	1.32
Metals and Mining	0.75	6.10	7.97	0.95
Paper and Forest Products	0.79	3.43	4.46	0.93
Equity Real Estate Investment Trusts (REITs)	10.29	17.22	30.88	1.16
Real Estate Management and Development	0.58	5.33	8.08	0.72
Electric Utilities	4.19	12.17	22.50	0.93
Gas Utilities	3.14	12.94	21.35	1.00
Multi-Utilities	4.14	13.05	22.44	0.97
Water Utilities	8.77	19.94	31.82	1.35

Industry	P/B
Banks	1.26
Thriffs and Mortgage Finance	1.07
Capital Markets	1.68
Consumer Finance	1.05
Mortgage Real Estate Investment Trusts (REITs)	0.63
Insurance	1.70

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# Top 10 – US Valuation Multiples by Industry





# Top 10 – US Valuation Multiples by Industry

## Industry Valuation Multiples – US Top 10

The tables below provide a summary of the top 10 median industry valuation multiples for publicly-listed companies trading on US stock exchanges, as at 30 December 2022.

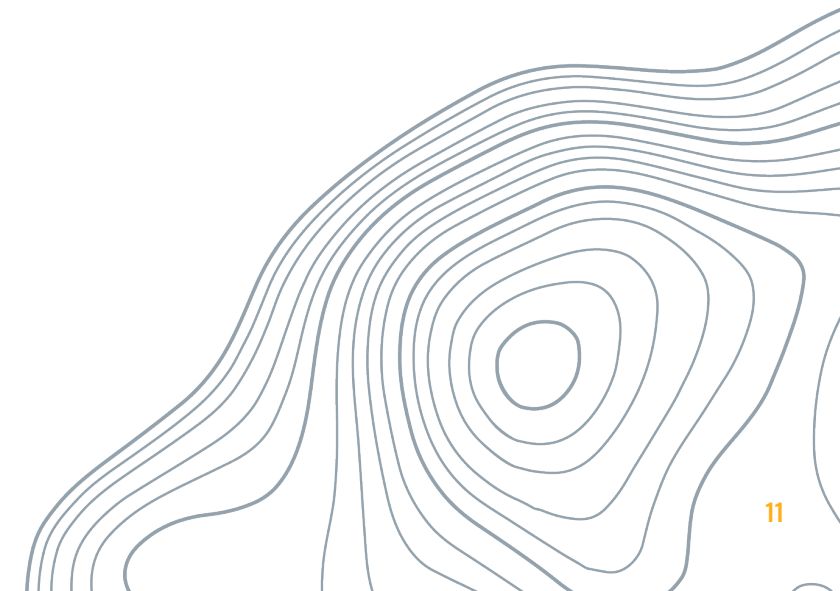
Rank	Industry	EV/Rev
1	Equity Real Estate Investment Trusts (REITs)	10.29
2	Water Utilities	8.77
3	Software	7.83
4	Life Sciences Tools and Services	4.72
5	Electric Utilities	4.19
6	Beverages	4.16
7	Multi-Utilities	4.14
8	Tobacco	4.10
9	Biotechnology	4.06
10	Health Care Equipment and Supplies	3.75

Rank	Industry	EV/EBITDA
1	Software	25.90
2	Beverages	20.01
3	Water Utilities	19.94
4	Health Care Technology	19.89
5	Life Sciences Tools and Services	18.74
6	Household Products	17.37
7	Equity Real Estate Investment Trusts (REITs)	17.22
8	Health Care Equipment and Supplies	16.61
9	Entertainment	15.86
10	Aerospace and Defence	14.56

Rank	Industry	P/B
1	Insurance	1.70
2	Capital Markets	1.68
3	Banks	1.26

Rank	Industry	EV/EBIT
1	Health Care Technology	41.32
2	Water Utilities	31.82
3	Equity Real Estate Investment Trusts (REITs)	30.88
4	Software	29.57
5	Entertainment	26.60
6	Communications Equipment	25.82
7	Health Care Equipment and Supplies	25.14
8	Life Sciences Tools and Services	24.60
9	Beverages	22.77
10	Electric Utilities	22.50

Rank	Industry	EV/TotAss
1	Household Products	3.19
2	Personal Products	2.89
3	Tobacco	2.86
4	Beverages	2.77
5	Life Sciences Tools and Services	2.59
6	Software	2.07
7	Semiconductors and Semiconductor Equipment	1.81
8	Biotechnology	1.63
9	Interactive Media and Services	1.62
10	Health Care Equipment and Supplies	1.62



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# US Valuation Multiples by Industry





# US Valuation Multiples by Industry – Communication Services

## Communication Services – 2022 Sector Commentary

A January 2023 report provided by S&P Dow Jones Indices indicated that the Communication Services sector was the worst performing sector during 2022, ending 2022 down over 40%. According to a December 2022 report by Left Brain Investment Research (the “LB Report”), Meta, Google, and Netflix all lost more than 35% in stock value over 2022.

The lacklustre performance from these stocks was also reflected in industry multiples – for example, Interactive Media and Services experienced the biggest drop in EV/EBITDA multiples compared with other industries within the sector, dropping around 7x, from an EBITDA multiple of 19x in January to 12x by December 2022.

The rapid reversal in interest rate policy over the year hit the sector hard – as investor sentiment evolved, stocks within the sector were some of the most affected by the move away from long duration assets.

Both Media and Diversified Telecommunication Services appeared to exhibit relatively stable EBITDA multiples throughout the year, although Diversified Telecommunications had a greater range of company EBITDA multiples. Entertainment experienced a large drop in median EBITDA multiples during the first half of the year, however, the multiple recovered by the year end, as some of the pessimism concerning the industry waned a little.

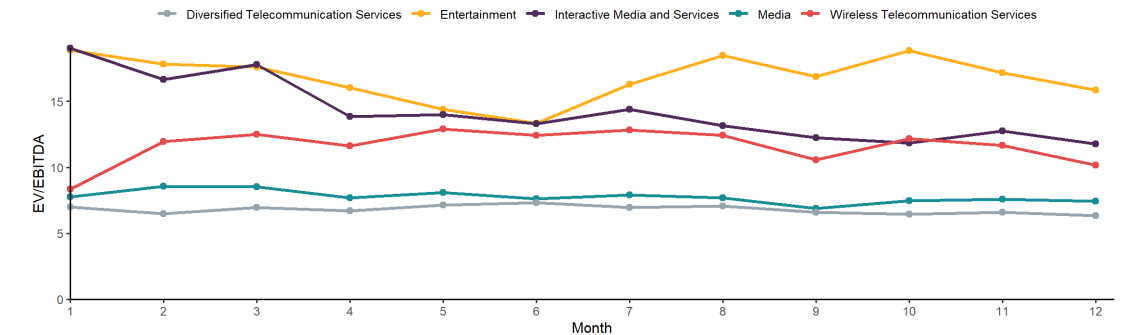
## Communication Services – Summary of Valuation Multiples

The table below summarises median industry valuation multiples for the sector, as at 30 December 2022.

Industry	EV/Rev	EV/EBITDA	EV/EBIT	EV/TotAss
Entertainment	3.53	15.86	26.60	1.18
Interactive Media and Services	2.24	11.76	17.93	1.62
Media	1.57	7.43	11.16	0.85
Diversified Telecommunication Services	1.98	6.33	12.75	0.72
Wireless Telecommunication Services	3.38	10.18	20.27	1.12

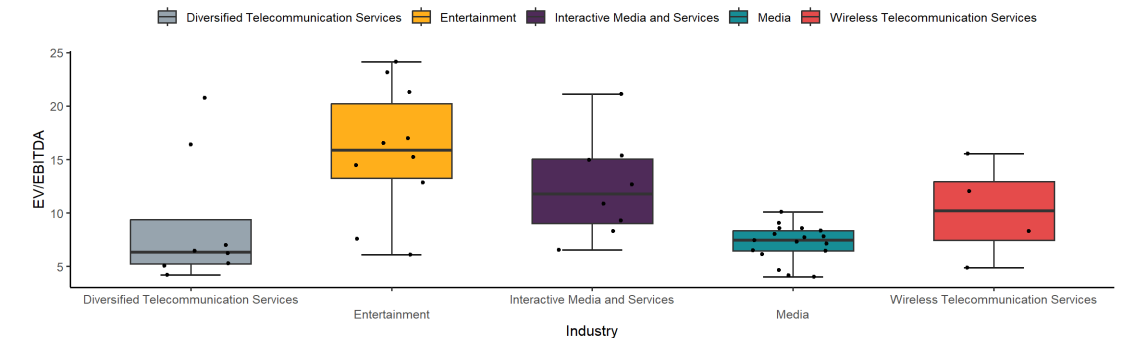
## Communication Services – EV/EBITDA Multiples

The following chart summarises the monthly changes in median EV/EBITDA multiples of the various industries within the sector.



## Communication Services – EV/EBITDA Boxplots

The boxplot below summarises EV/EBITDA multiples by industry, for companies operating within the sector, as at 30 December 2022.



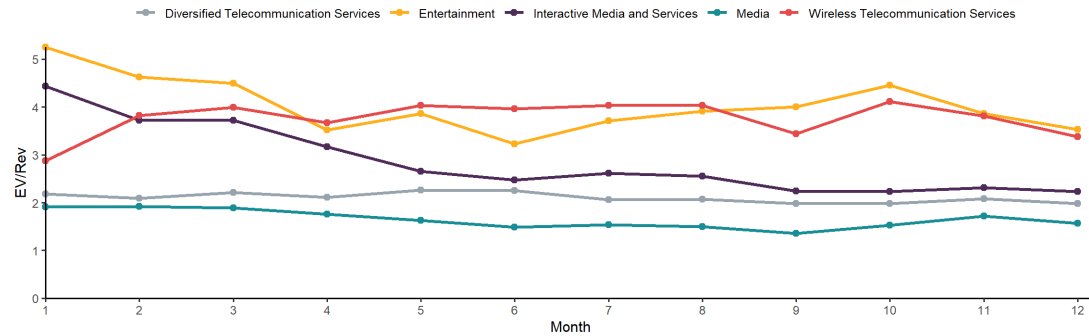




# US Valuation Multiples by Industry – Communication Services

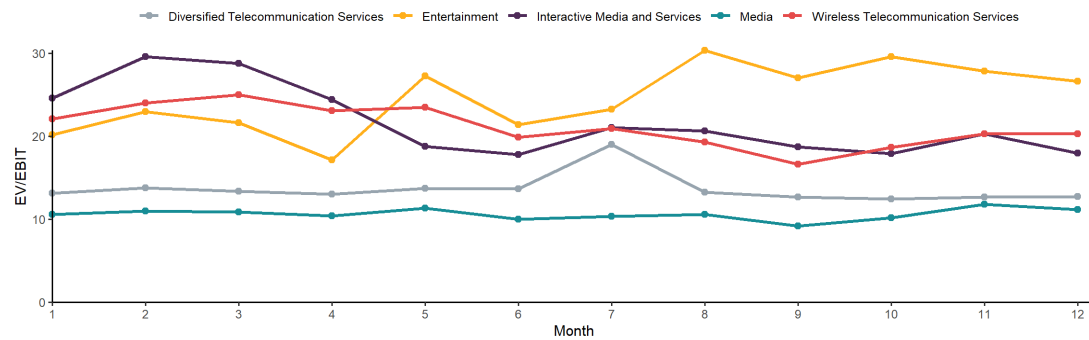
## Communication Services – EV/Revenue Multiples

The following chart summarises the monthly changes in median EV/Revenue multiples of various industries within the sector.



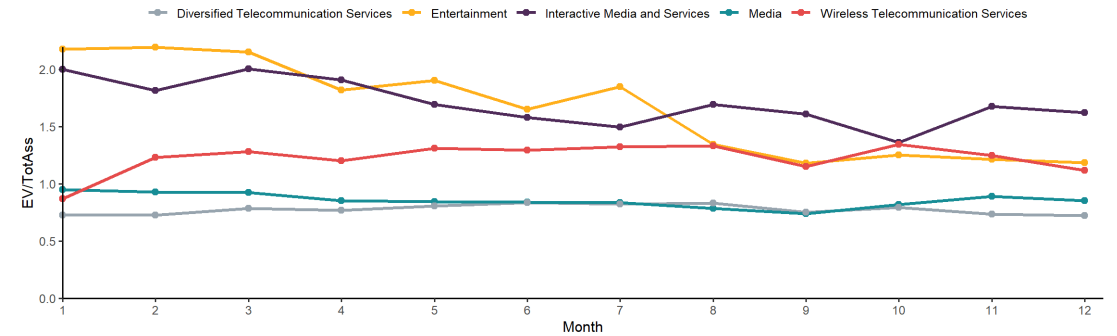
## Communication Services – EV/EBIT Multiples

The following chart summarises the monthly changes in median EV/EBIT multiples of the various industries within the sector.



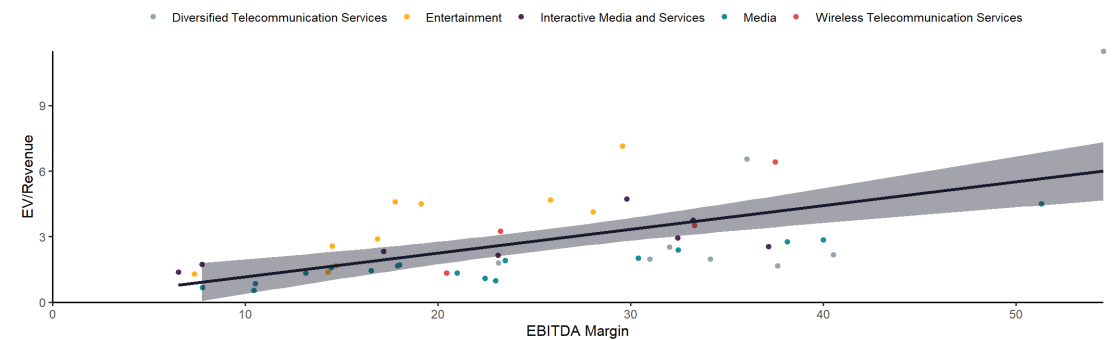
## Communication Services – EV/Total Assets Multiples

The following chart summarises the monthly changes in median EV/Total Assets multiples of the various industries within the sector.



## Communication Services – EV/Revenue vs EBITDA Margin

The following chart illustrates a regression analysis of the relationship between EV/Revenue multiples (y-axis) and EBITDA margin (x-axis) for the sector, as at 30 December 2022.





# US Valuation Multiples by Industry – Consumer Discretionary 1

## Consumer Discretionary 1 – 2022 Sector Commentary

From a stock market perspective, the Consumer Discretionary (Retail) sector was the second worst performing sector within the S&P 500 during 2022, losing nearly 38% for the year. The sector was hit by inflation in two major ways: firstly, inflation impacted the consumer directly – as consumers spent a greater percentage of their incomes on non-discretionary items such as food and energy, available discretionary income decreased.

Secondly, inflation in labour costs put retailers in a difficult position – they either had to raise prices or suffer lower margins. With the ongoing supply chain constraints and the shift from goods to services/travel, companies within the Consumer Discretionary sector were seemingly unable to keep up with changing consumer tastes. For example, Household Durables (down from 6.7x to 4.5x) and Leisure Products (down from 9.2x to 7.6x) experienced the largest drop in median multiples for the sector, although Textiles, Apparel and Luxury Goods experienced the second largest percentage drop of the sector, declining to 6.1x EBITDA by the end of the year.

The changes in EBITDA multiples illustrates the sector’s susceptibility to cost inflation and changing consumer incomes, however, we note that Auto components ended the year relatively flat, which likely demonstrates investors confidence in auto component companies ability to pass on increased costs to their end clients.

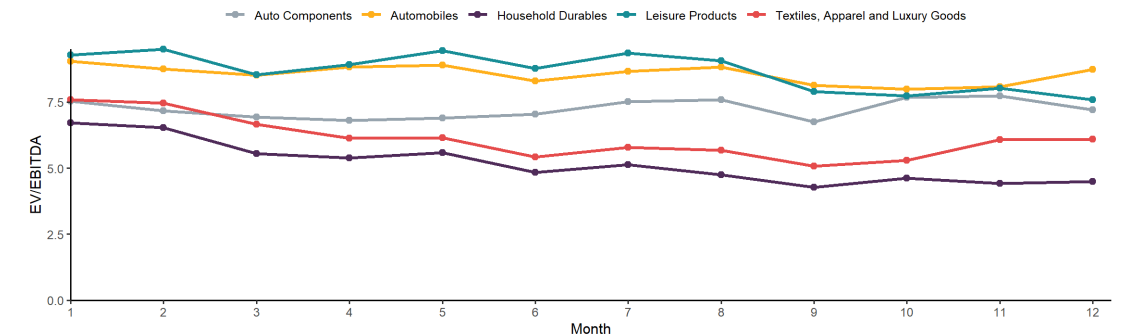
## Consumer Discretionary 1 – Summary of Valuation Multiples

The table below summarises median industry valuation multiples for the sector, as at 30 December 2022.

Industry	EV/Rev	EV/EBITDA	EV/EBIT	EV/TotAss
Auto Components	0.76	7.21	15.54	0.89
Automobiles	0.95	8.74	12.12	0.76
Household Durables	0.78	4.50	5.42	0.83
Leisure Products	1.32	7.58	10.09	1.25
Textiles, Apparel and Luxury Goods	1.14	6.10	10.17	1.25

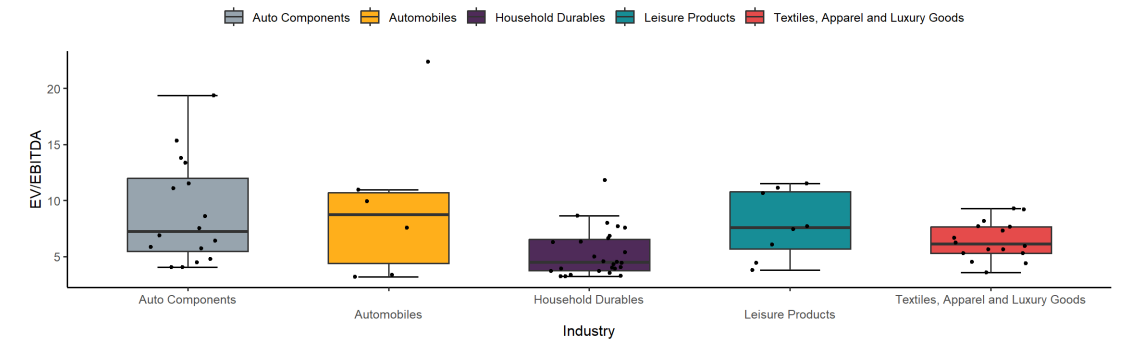
## Consumer Discretionary 1 – EV/EBITDA Multiples

The following chart summarises the monthly changes in median EV/EBITDA multiples of the various industries within the sector.



## Consumer Discretionary 1 – EV/EBITDA Boxplots

The boxplot below summarises EV/EBITDA multiples by industry, for companies operating within the sector, as at 30 December 2022.

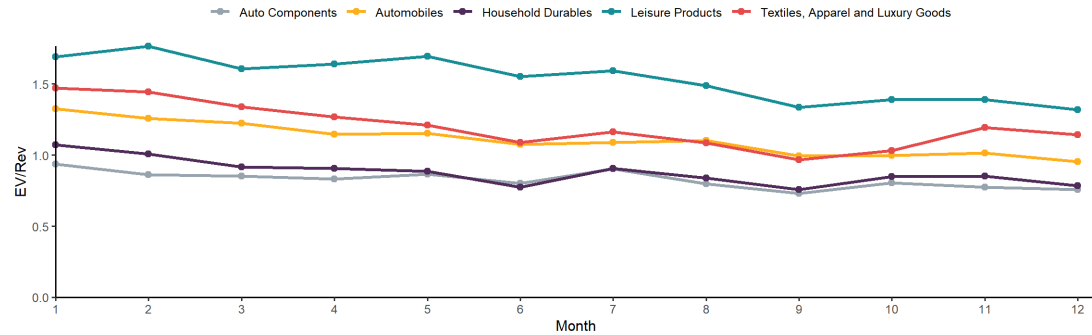




# US Valuation Multiples by Industry – Consumer Discretionary 1

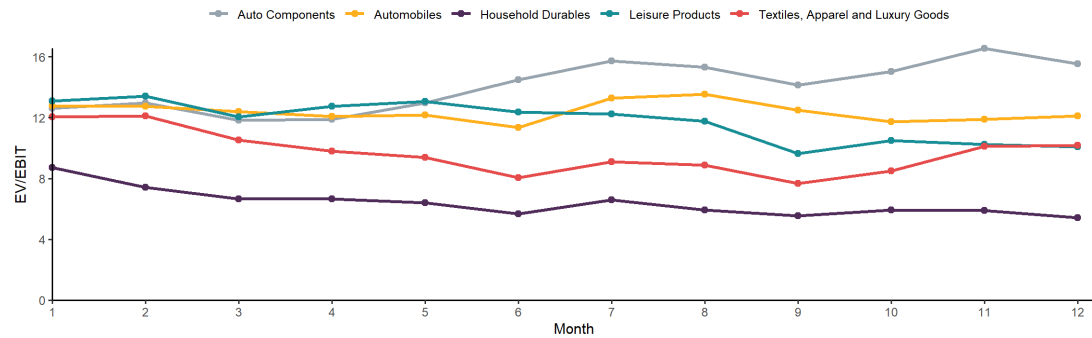
## Consumer Discretionary 1 – EV/Revenue Multiples

The following chart summarises the monthly changes in median EV/Revenue multiples of the various industries within the sector.



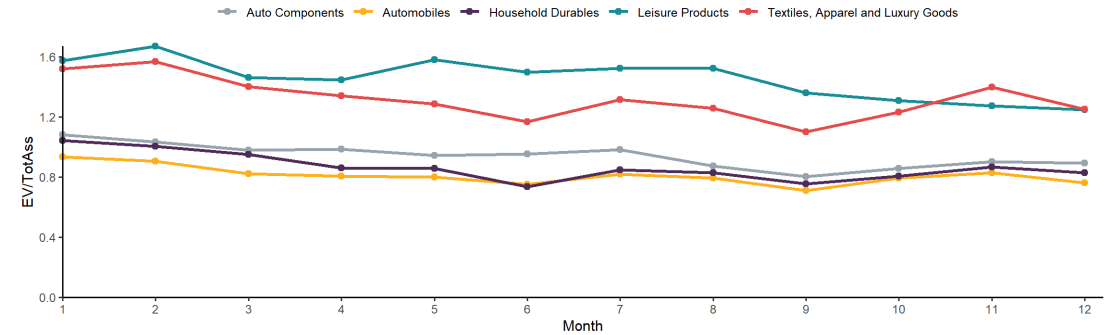
## Consumer Discretionary 1 – EV/EBIT Multiples

The following chart summarises the monthly changes in median EV/EBIT multiples of the various industries within the sector.



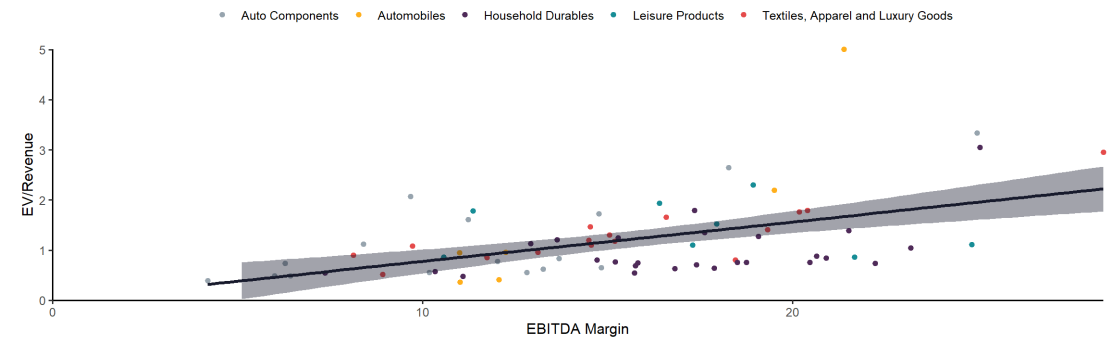
## Consumer Discretionary 1 – EV/Total Assets Multiples

The following chart summarises the monthly changes in median EV/Total Assets multiples of the various industries within the sector.



## Consumer Discretionary 1 – EV/Revenue vs EBITDA Margin

The following chart illustrates a regression analysis of the relationship between EV/Revenue multiples (y-axis) and EBITDA margin (x-axis) for the sector, as at 30 December 2022.





# US Valuation Multiples by Industry – Consumer Discretionary 2

## Consumer Discretionary 2 – 2022 Sector Commentary

Hotel, Restaurants and Leisure experienced the largest drop in EBITDA multiples for the sector, down around 3.3x, from 14.3x to 11.0x; however, despite the change in EBITDA multiples through the year, the industry still commands the highest EBITDA multiple for all industries within the Consumer Discretionary sector.

Our analysis indicated that Hotel, Restaurants and Leisure appears to have the greatest EBITDA margins within the Consumer Discretionary 2 sector, as illustrated by the industry having the highest median Revenue multiple (2.9x) of industries within this sector.

During 2022, Speciality retail was the only industry within the sector to experience a very modest increase in median EBITDA multiple – the industry also appeared to exhibit the most stable median EBITDA multiple for the sector.

Although the median EBITDA multiple of the Internet and Direct Marketing Retail industry appears to have been volatile during the year, this volatility in the median multiple is likely explained by the relatively low number of comparable companies within the sample, meaning that changes in only a few company multiples can have a large impact on the calculated median.

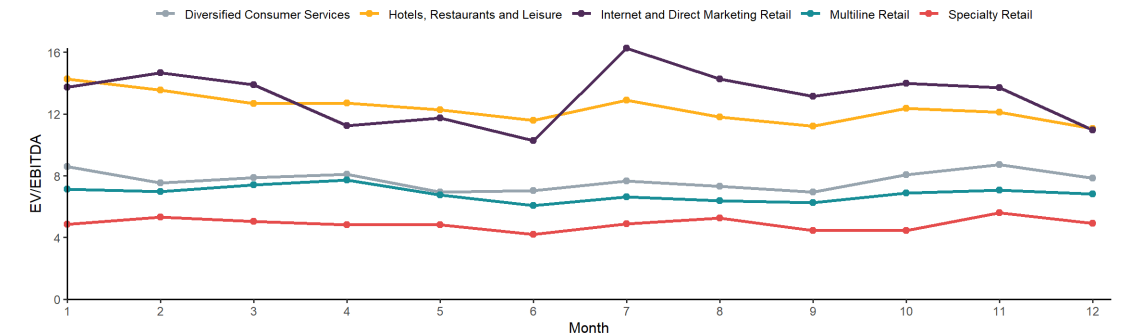
## Consumer Discretionary 2 – Summary of Valuation Multiples

The table below summarises median industry valuation multiples for the sector, as at 30 December 2022.

Industry	EV/Rev	EV/EBITDA	EV/EBIT	EV/TotAss
Diversified Consumer Services	1.54	7.86	11.93	1.00
Hotels, Restaurants and Leisure	2.93	11.05	18.32	1.40
Internet and Direct Marketing Retail	1.61	10.95	15.38	1.49
Multiline Retail	0.69	6.81	17.83	1.16
Specialty Retail	0.73	4.90	8.92	1.05

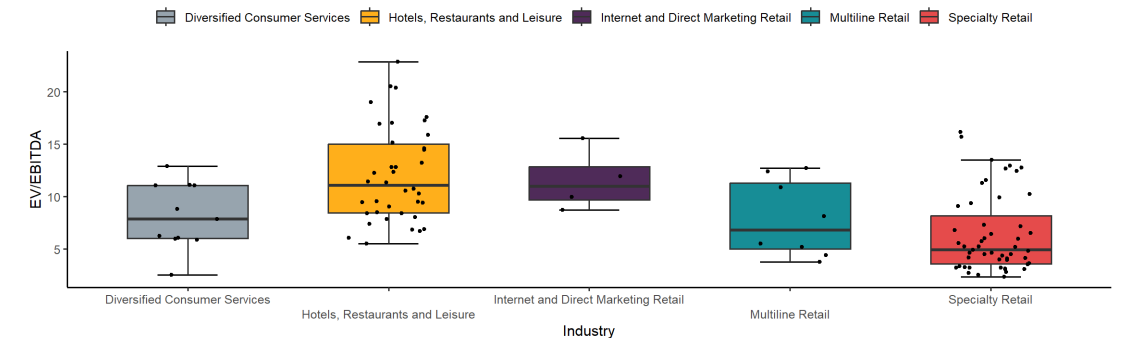
## Consumer Discretionary 2 – EV/EBITDA Multiples

The following chart summarises the monthly changes in median EV/EBITDA multiples of the various industries within the sector.



## Consumer Discretionary 2 – EV/EBITDA Boxplots

The boxplot below summarises EV/EBITDA multiples by industry, for companies operating within the sector, as at 30 December 2022.





# US Valuation Multiples by Industry – Consumer Discretionary 2

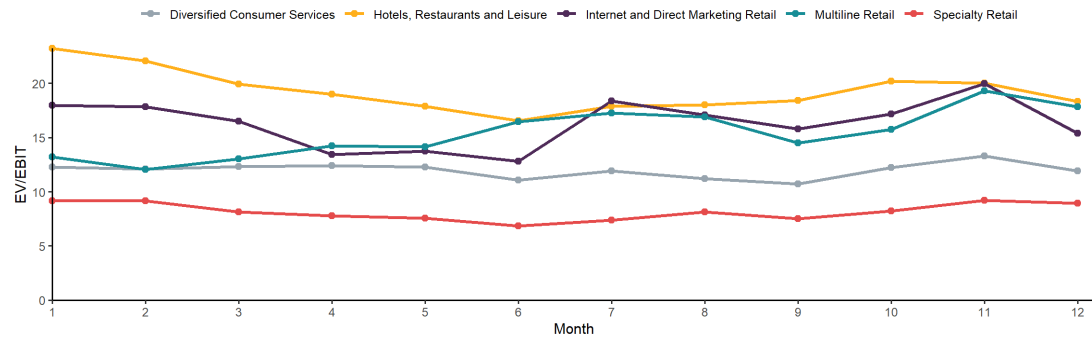
## Consumer Discretionary 2 – EV/Revenue Multiples

The following chart summarises the monthly changes in median EV/Revenue multiples of the various industries within the sector.



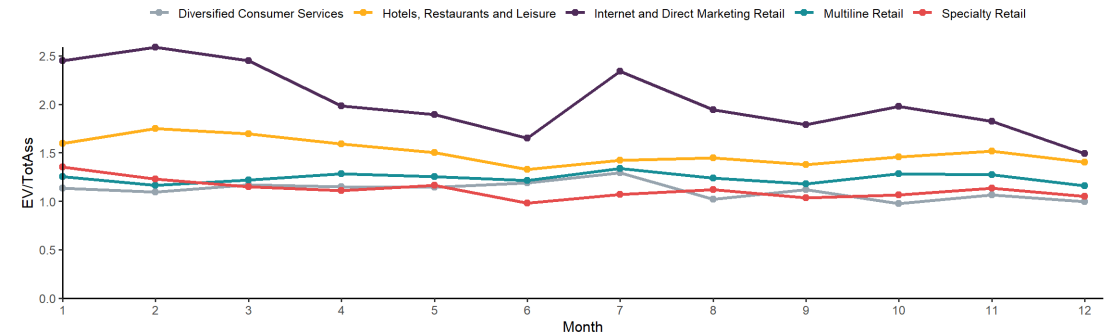
## Consumer Discretionary 2 – EV/EBIT Multiples

The following chart summarises the monthly changes in median EV/EBIT multiples of the various industries within the sector.



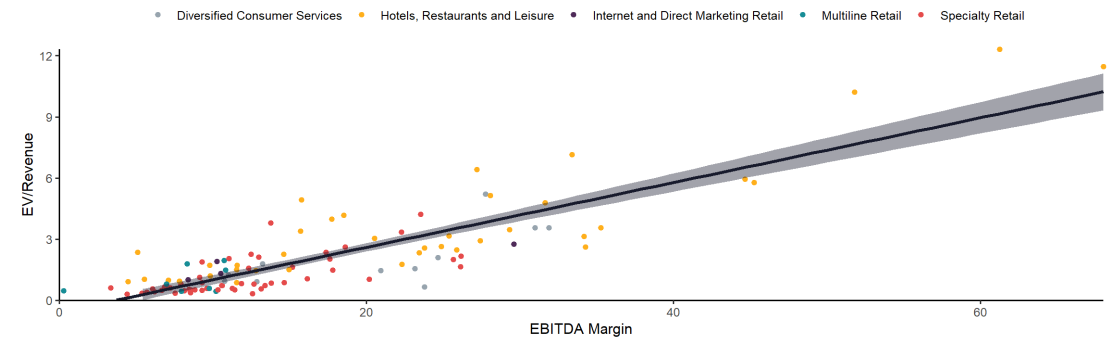
## Consumer Discretionary 2 – EV/Total Assets Multiples

The following chart summarises the monthly changes in median EV/Total Assets multiples of the various industries within the sector.



## Consumer Discretionary 2 – EV/Revenue vs EBITDA Margin

The following chart illustrates a regression analysis of the relationship between EV/Revenue multiples (y-axis) and EBITDA margin (x-axis) for the sector, as at 30 December 2022.







# US Valuation Multiples by Industry – Consumer Staples

## Consumer Staples – 2022 Sector Commentary

While Consumer Staples is generally deemed as a safe haven for investors in times of slowing economic growth, the performance of the S&P 500's Consumer Staples sector was relatively flat for 2022, down around 3%.

America's low unemployment rate and consumers' levels of savings mitigated some of the effects of higher prices at grocery stores; and as consumers became more accustomed to price increases, many companies within the sector were able to raise prices without significantly impacting their customer numbers.

Most industries within the sector exhibited very small increases in median EBITDA multiples, which likely reflects the constituent companies' market position, and their ability to effectively pass on cost inflation to their end clients. For example, Food Products ended the year slightly up, moving from a median EBITDA multiple of 12.2x to 12.5x. Food and Staples Retailing also ended the year with a slightly higher median EBITDA multiple, moving from 9.5x to 9.6x.

Personal Products was the only industry within the sector to experience a decline in its median EBITDA multiple (down 2.8x, from 13.9x to 11.1x), whereas Beverages ended the year with the second highest EBITDA multiple amongst all industries within our analysis (20.0x).

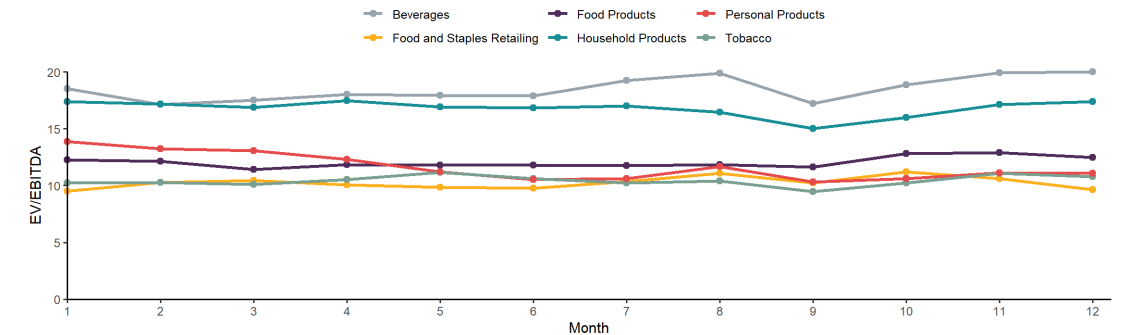
## Consumer Staples – Summary of Valuation Multiples

The table below summarises median industry valuation multiples for the sector, as at 30 December 2022.

Industry	EV/Rev	EV/EBITDA	EV/EBIT	EV/TotAss
Food and Staples Retailing	0.64	9.64	17.66	1.28
Beverages	4.16	20.01	22.77	2.77
Food Products	2.13	12.47	17.92	1.33
Tobacco	4.10	10.79	12.85	2.86
Household Products	3.51	17.37	20.65	3.19
Personal Products	2.28	11.07	16.61	2.89

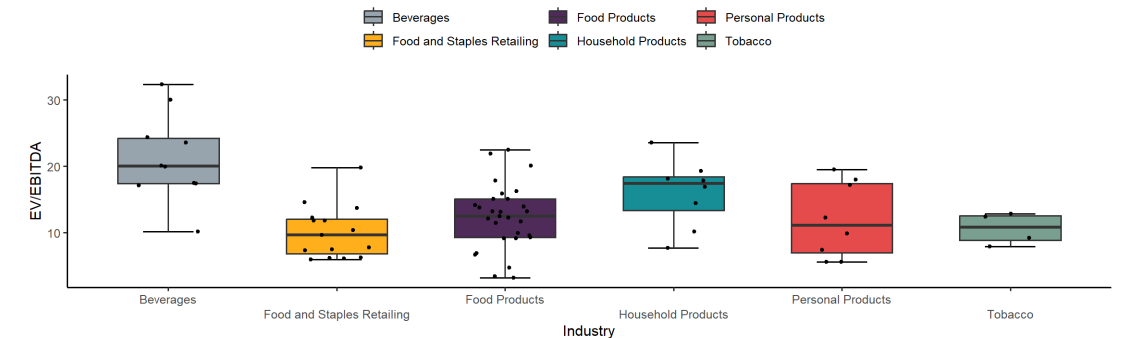
## Consumer Staples – EV/EBITDA Multiples

The following chart summarises the monthly changes in median EV/EBITDA multiples of the various industries within the sector.



## Consumer Staples – EV/EBITDA Boxplots

The boxplot below summarises EV/EBITDA multiples by industry, for companies operating within the sector, as at 30 December 2022.

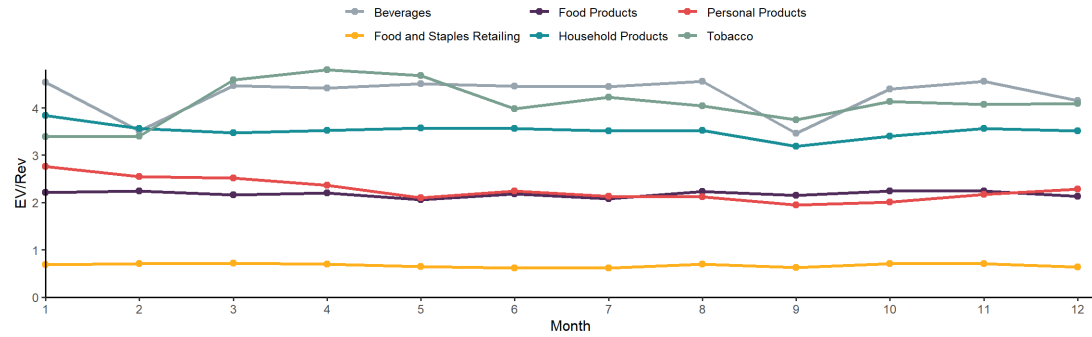




# US Valuation Multiples by Industry – Consumer Staples

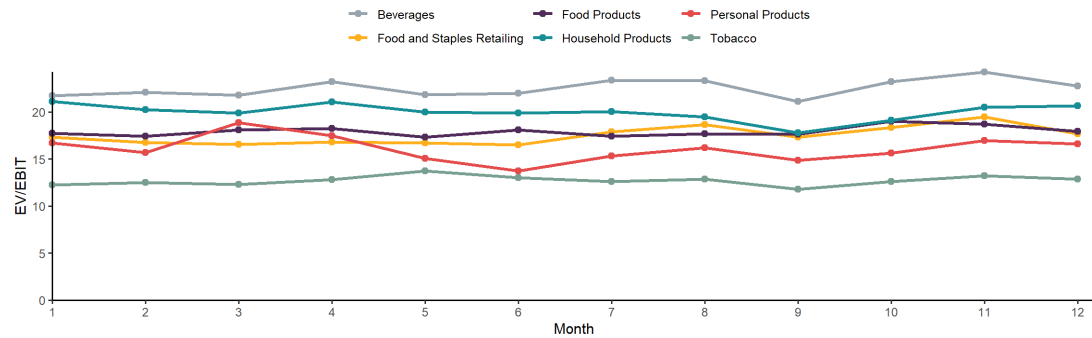
## Consumer Staples – EV/Revenue Multiples

The following chart summarises the monthly changes in median EV/Revenue multiples of the various industries within the sector.



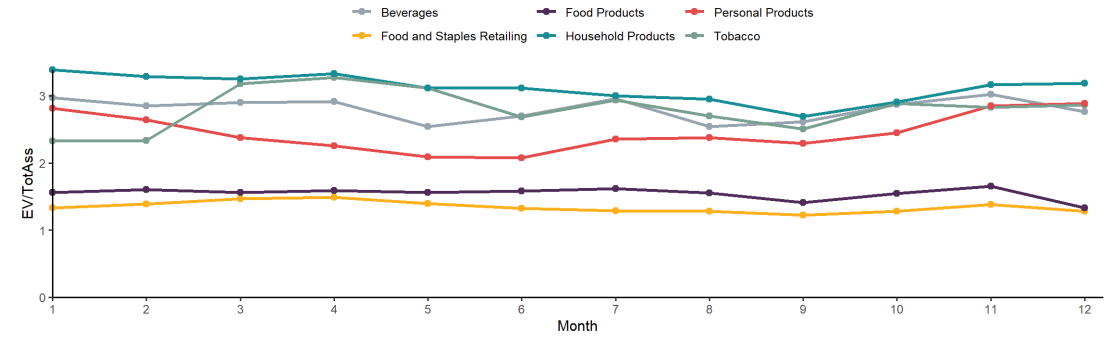
## Consumer Staples – EV/EBIT Multiples

The following chart summarises the monthly changes in median EV/EBIT multiples of the various industries within the sector.



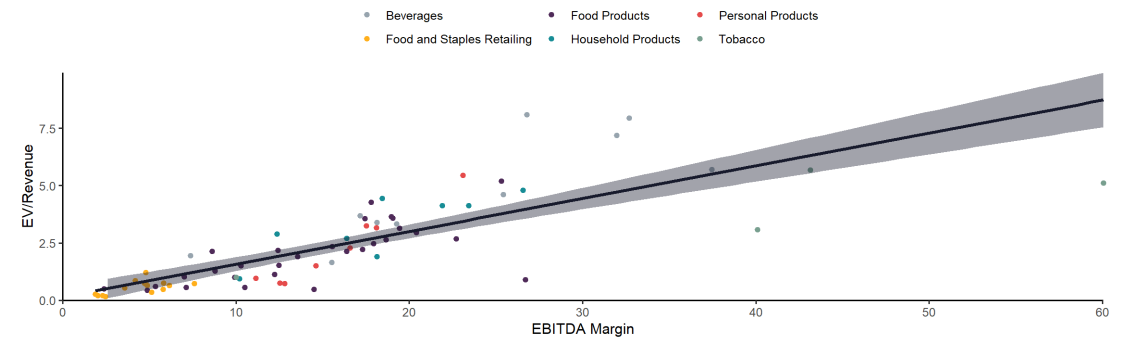
## Consumer Staples – EV/Total Assets Multiples

The following chart summarises the monthly changes in median EV/Total Assets multiples of the various industries within the sector.



## Consumer Staples – EV/Revenue vs EBITDA Margin

The following chart illustrates a regression analysis of the relationship between EV/Revenue multiples (y-axis) and EBITDA margin (x-axis) for the sector, as at 30 December 2022.





# US Valuation Multiples by Industry – Energy

## Energy – 2022 Sector Commentary

Of all the sectors within the S&P 500, Energy was deemed to be the best performing for 2022, ending the year 59% up. According to the LB Report, seven of the top ten performers in the S&P 500 were derived from oil/gas.

Companies within the sector have concentrated on capital discipline and providing meaningful shareholder return, which has led to a relatively significant rise in the MktCaps and EVs of companies operating within the sector, however, the oversized nature of industry profits has led to EBITDA multiples declining.

For example, Chevron saw its MktCap increase by about 25%, however, with EBITDA increasing significantly more (around 87%), the Company actually experienced a decline in its LTM EBITDA multiple.

This pattern was reflected throughout Oil, Gas and Consumable Fuels – the industry saw its median EBITDA multiple decline from 8.8x in January to 3.6x by December 2022, while Energy Equipment and Services experienced only a modest decline in its median EBITDA multiple, falling from 10.0x to 9.2x.

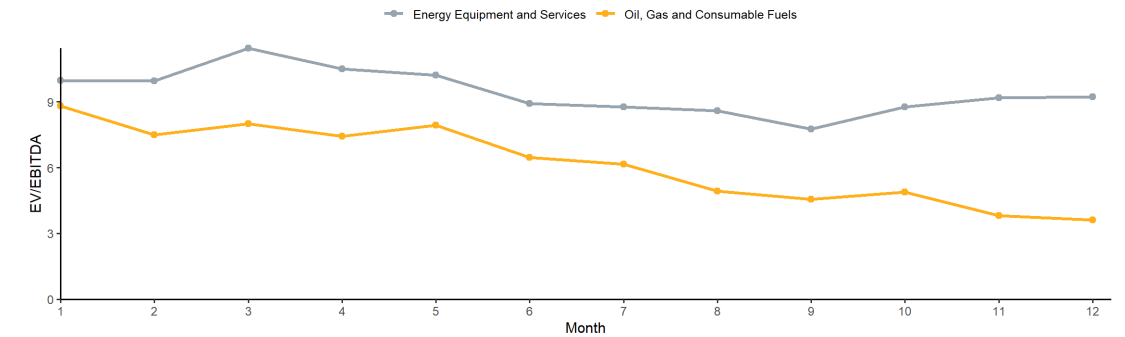
## Energy – Summary of Valuation Multiples

The table below summarises median industry valuation multiples for the sector, as at 30 December 2022.

Industry	EV/Rev	EV/EBITDA	EV/EBIT	EV/TotAss
Energy Equipment and Services	1.51	9.24	20.22	0.99
Oil, Gas and Consumable Fuels	1.57	3.62	5.00	0.98

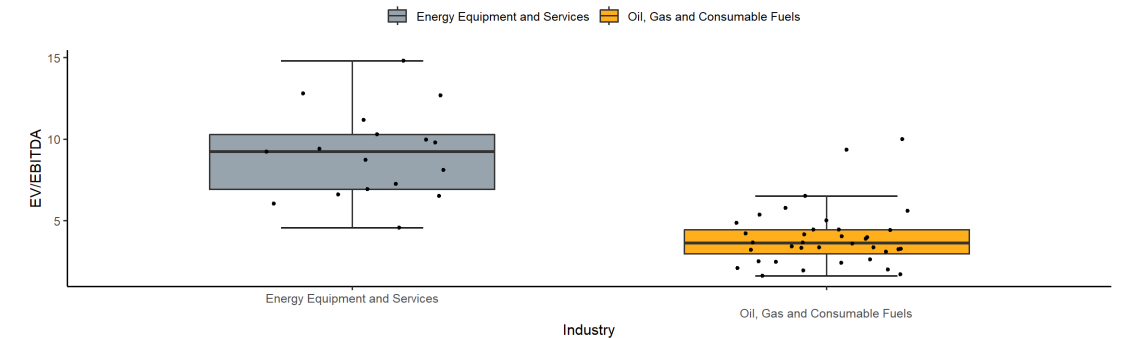
## Energy – EV/EBITDA Multiples

The following chart summarises the monthly changes in median EV/EBITDA multiples of the various industries within the sector.



## Energy – EV/EBITDA Boxplots

The boxplot below summarises EV/EBITDA multiples by industry, for companies operating within the sector, as at 30 December 2022.

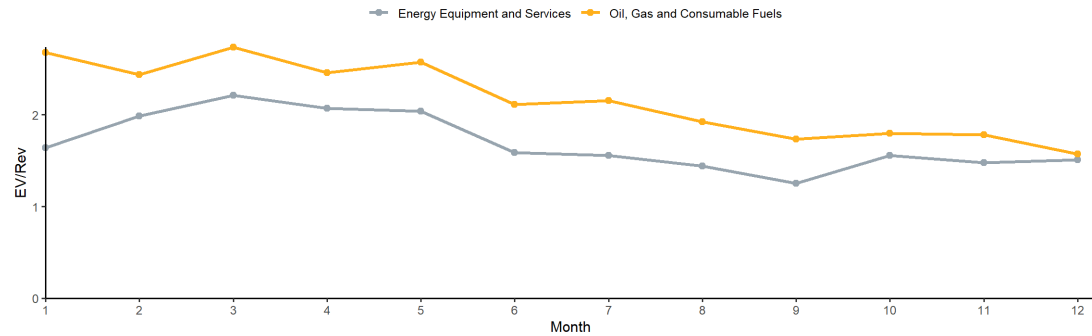




# US Valuation Multiples by Industry – Energy

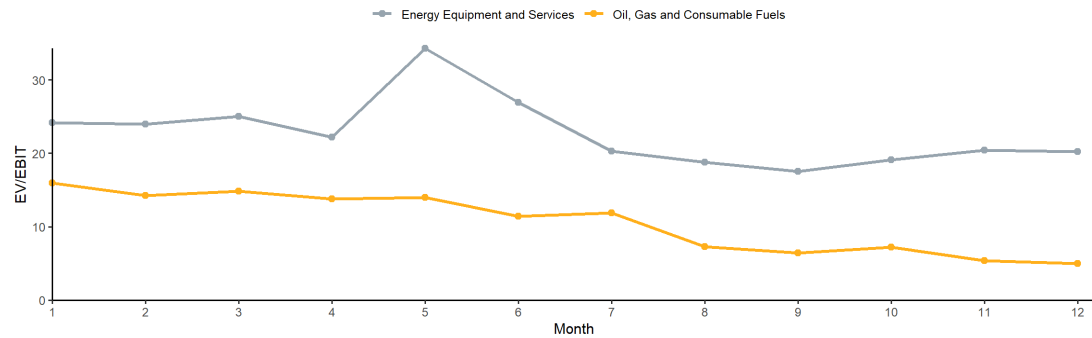
## Energy – EV/Revenue Multiples

The following chart summarises the monthly changes in median EV/Revenue multiples of the various industries within the sector.



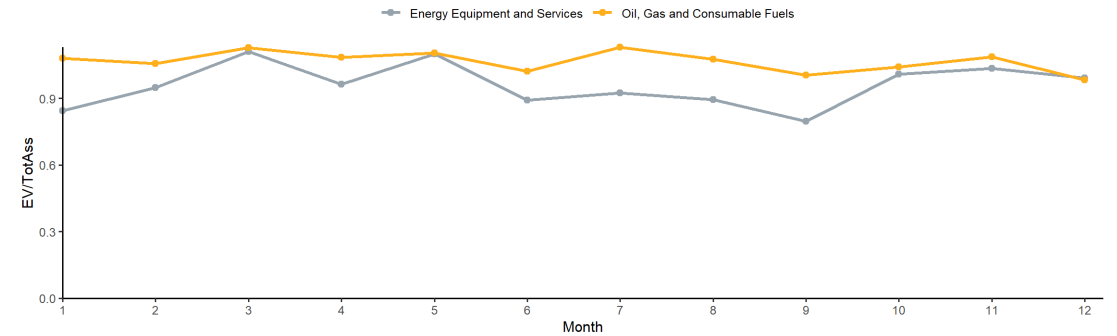
## Energy – EV/EBIT Multiples

The following chart summarises the monthly changes in median EV/EBIT multiples of the various industries within the sector.



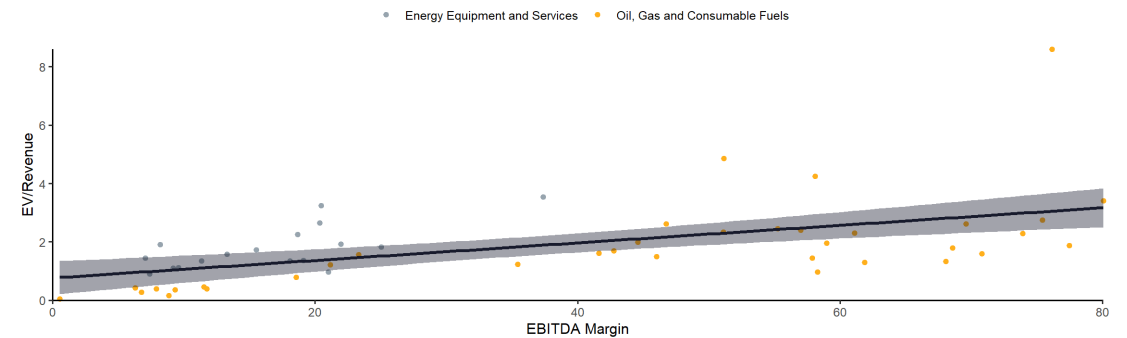
## Energy – EV/Total Assets Multiples

The following chart summarises the monthly changes in median EV/Total Assets multiples of the various industries within the sector.



## Energy – EV/Revenue vs EBITDA Margin

The following chart illustrates a regression analysis of the relationship between EV/Revenue multiples (y-axis) and EBITDA margin (x-axis) for the sector, as at 30 December 2022.





# US Valuation Multiples by Industry – Health Care

## Health Care – 2022 Sector Commentary

The S&P 500's Health Care sector performed relatively well compared to the overall index, losing just over 3% of value for 2022. Large-cap pharmaceutical companies and managed care providers who offer relatively steady business revenues and limited cost pressures provided comparative safety amongst a backdrop of weakening growth and rising costs, leading to the sector's outperformance compared to the index as a whole.

Although Life Sciences Tools and Services experienced the largest drop in industry multiples for the sector (dropping 3.0x, from 21.8x to 18.7x), the industry still ended the year with the fifth highest multiple of all industries within our analysis.

Health Care Equipment and Supplies saw its median EBITDA multiple decline by around 2.4x, from 19.0x to 16.6x. Although Health Care Technology ended the year down 2.8x (and with the fourth highest multiple of all industries within our analysis), the low sample size was likely responsible for much of the volatility in the median EBITDA multiple.

Health Care Providers and Services experienced the smallest decline in its median EBITDA multiple of this sector – having spent most of 2022 at around 10.5x EBITDA, a drop during July and August meant that the industry ended 2022 with a median EBITDA multiple of 9.7x.

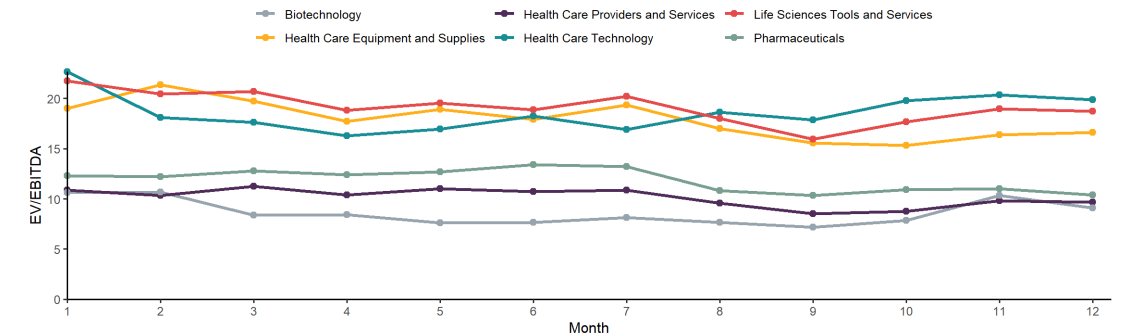
## Health Care – Summary of Valuation Multiples

The table below summarises median industry valuation multiples for the sector, as at 30 December 2022.

Industry	EV/Rev	EV/EBITDA	EV/EBIT	EV/TotAss
Health Care Equipment and Supplies	3.75	16.61	25.14	1.62
Health Care Providers and Services	1.18	9.67	14.18	1.25
Health Care Technology	1.97	19.89	41.32	1.52
Biotechnology	4.06	9.10	9.60	1.63
Life Sciences Tools and Services	4.72	18.74	24.60	2.59
Pharmaceuticals	3.22	10.36	16.19	1.23

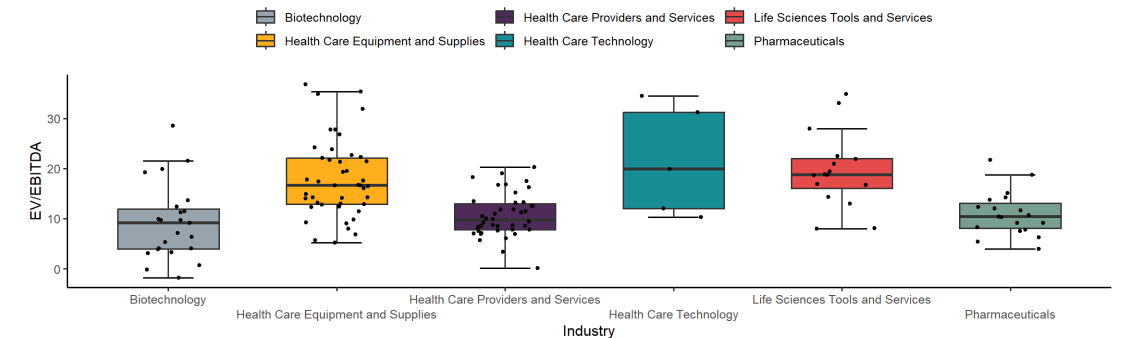
## Health Care – EV/EBITDA Multiples

The following chart summarises the monthly changes in median EV/EBITDA multiples of the various industries within the sector.



## Health Care – EV/EBITDA Boxplots

The boxplot below summarises EV/EBITDA multiples by industry, for companies operating within the sector, as at 30 December 2022.



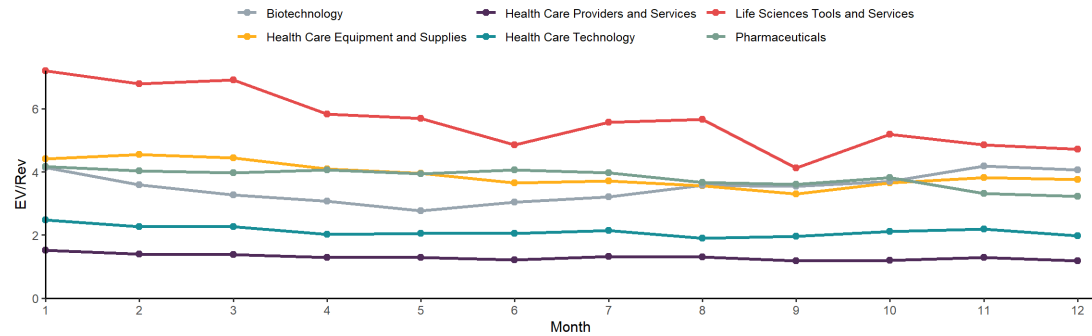




# US Valuation Multiples by Industry – Health Care

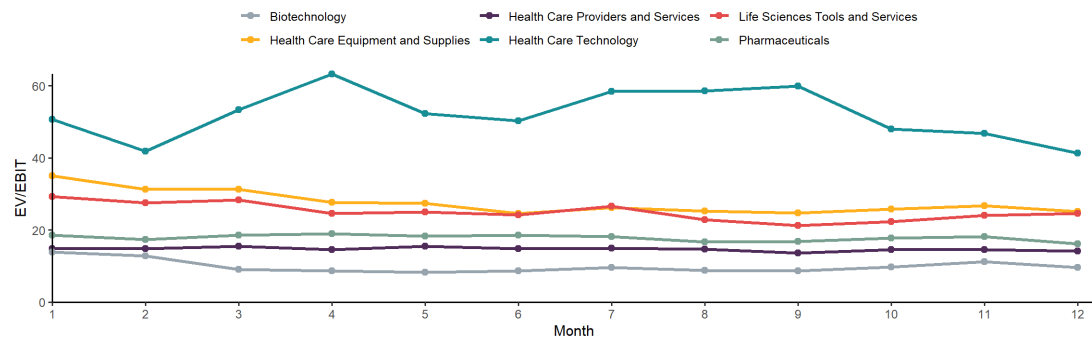
## Health Care – EV/Revenue Multiples

The following chart summarises the monthly changes in median EV/Revenue multiples of the various industries within the sector.



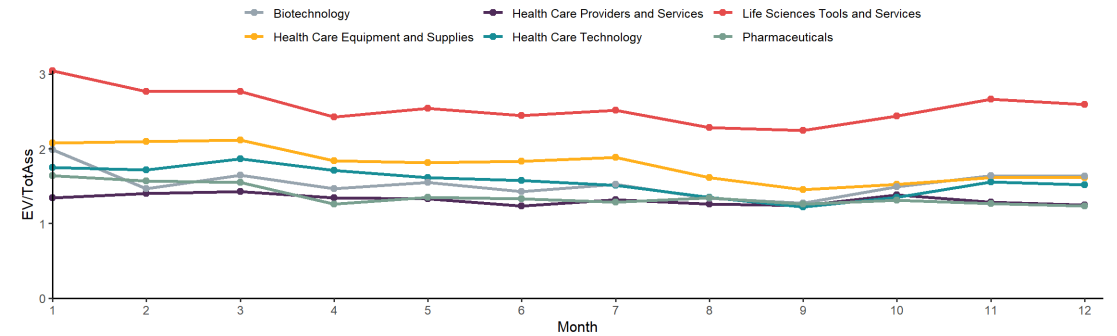
## Health Care – EV/EBIT Multiples

The following chart summarises the monthly changes in median EV/EBIT multiples of the various industries within the sector.



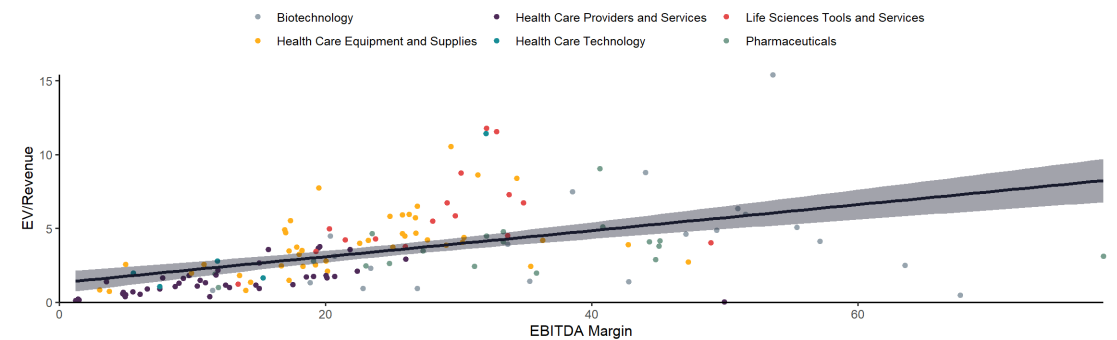
## Health Care – EV/Total Assets Multiples

The following chart summarises the monthly changes in median EV/Total Assets multiples of the various industries within the sector.



## Health Care – EV/Revenue vs EBITDA Margin

The following chart illustrates a regression analysis of the relationship between EV/Revenue multiples (y-axis) and EBITDA margin (x-axis) for the sector, as at 30 December 2022.





# US Valuation Multiples by Industry – Industrials 1

## Industrials 1 – 2022 Sector Commentary

High inflation and the responding interest rate policies weighed heavily on the Industrials sector. In addition, the rising trade and geopolitical tensions between China and the West, plus the pandemic-related supply problems causing unprecedented disruption for manufacturers, highlighted the sector’s vulnerabilities.

Of the six industries within this sector, Aerospace and Defence, and Construction and Engineering were the only industries to end the year with higher EBITDA multiples compared to January.

Aerospace and Defence ended the year with the tenth highest median EBITDA multiple across all industries we analysed, having seen an increase in its median EBITDA multiple of around 1.9x, from 12.6x to 14.6x. However, Construction and Engineering saw a more modest increase in its median EBITDA multiple, gaining 0.9x and ending the year at 10.0x EBITDA.

Building Products experienced a continuous decline in its median EBITDA multiple during the year, ending December 4.1x lower than in January (at 7.5x). Trading Companies and Distributors ended the year a little better than Building Products, having only experienced a drop of around 0.8x, ending 2022 with a median EBITDA multiple of 9.5x.

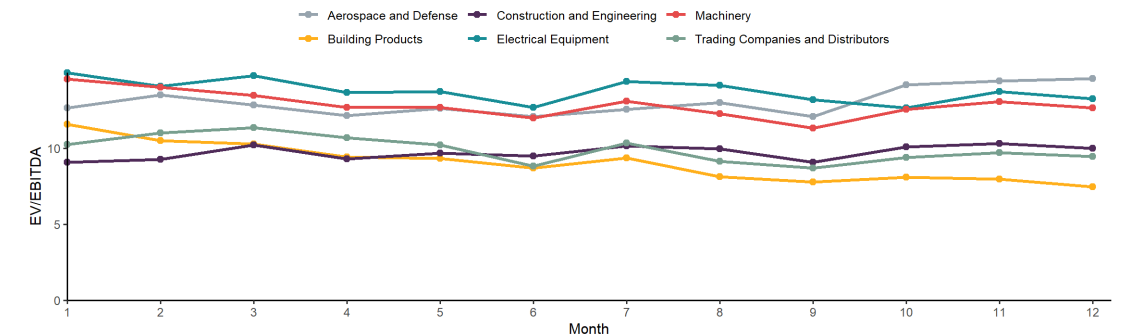
## Industrials 1 – Summary of Valuation Multiples

The table below summarises median industry valuation multiples for the sector, as at 30 December 2022.

Industry	EV/Rev	EV/EBITDA	EV/EBIT	EV/TotAss
Aerospace and Defence	2.55	14.56	18.19	1.40
Building Products	1.29	7.46	10.09	1.30
Construction and Engineering	1.04	9.98	19.68	1.22
Electrical Equipment	2.22	13.25	18.11	1.56
Machinery	2.19	12.63	16.42	1.41
Trading Companies and Distributors	0.99	9.46	11.26	1.04

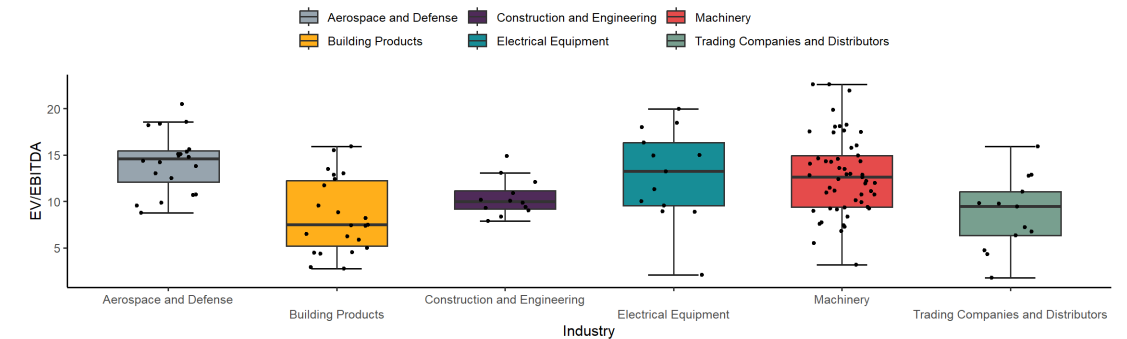
## Industrials 1 – EV/EBITDA Multiples

The following chart summarises the monthly changes in median EV/EBITDA multiples of the various industries within the sector.



## Industrials 1 – EV/EBITDA Boxplots

The boxplot below summarises EV/EBITDA multiples by industry, for companies operating within the sector, as at 30 December 2022.

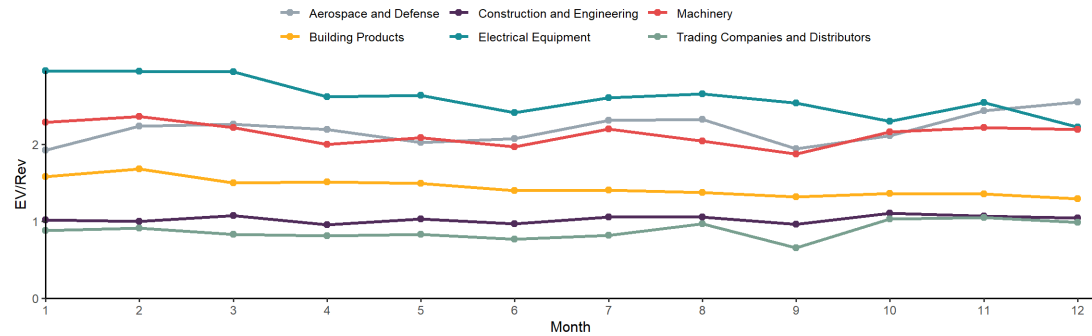




# US Valuation Multiples by Industry – Industrials 1

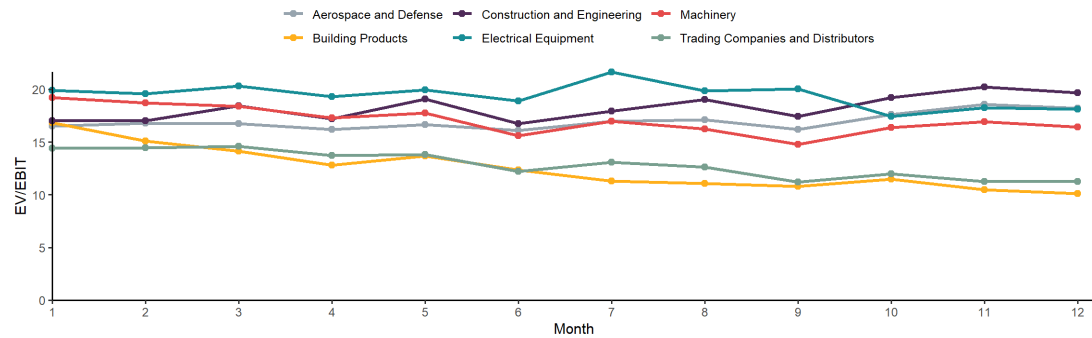
## Industrials 1 – EV/Revenue Multiples

The following chart summarises the monthly changes in median EV/Revenue multiples of the various industries within the sector.



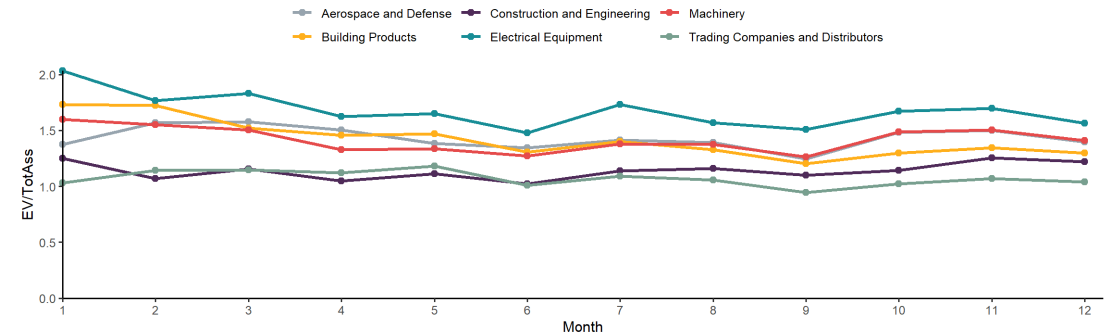
## Industrials 1 – EV/EBIT Multiples

The following chart summarises the monthly changes in median EV/EBIT multiples of the various industries within the sector.



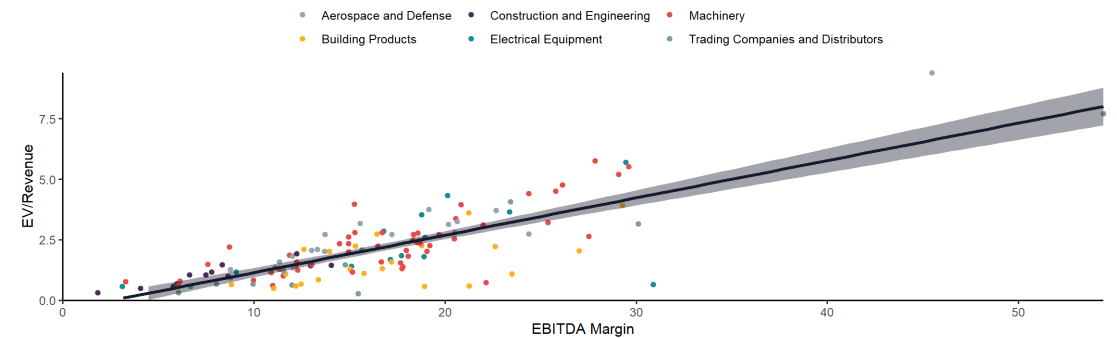
## Industrials 1 – EV/Total Assets Multiples

The following chart summarises the monthly changes in median EV/Total Assets multiples of the various industries within the sector.



## Industrials 1 – EV/Revenue vs EBITDA Margin

The following chart illustrates a regression analysis of the relationship between EV/Revenue multiples (y-axis) and EBITDA margin (x-axis) for the sector, as at 30 December 2022.





# US Valuation Multiples by Industry – Industrials 2

## Industrials 2 – 2022 Sector Commentary

Airlines experienced the largest drop in median EBITDA multiples across all industries we reviewed for 2022, falling from its initial peak of 21.3x in January to 5.3x in December – a drop of around 16.1x. Whilst travel demand returned with a vengeance during 2022, creating a summer of congested airports and lost baggage, new headwinds have complicated matters somewhat: the conflict in Ukraine and the corresponding spike in oil prices has kept much of the added revenue from hitting the bottom line, as fuel accounts for as much as 30% of an airline’s total costs.

On top of that, industry consolidation within the Airlines industry has created a small group of competitors such that four airlines control about 80% of the US market – adding to the volatility to the industry’s EBITDA multiple. For example, after Delta Air Lines released its accounts in January (which were better than both revenue and earnings estimates), the company’s share price suffered a drop on weaker outlook.

Other industries within the sector experienced less severe reductions in their median EBITDA multiples – Commercial Services and Supplies fell by 2.4x; Professional Services was down 2.0x; Air Freight and Logistics declined by 3.4x; and Road and Rail ended the year with its median EBITDA multiple down 2.6x compared to January.

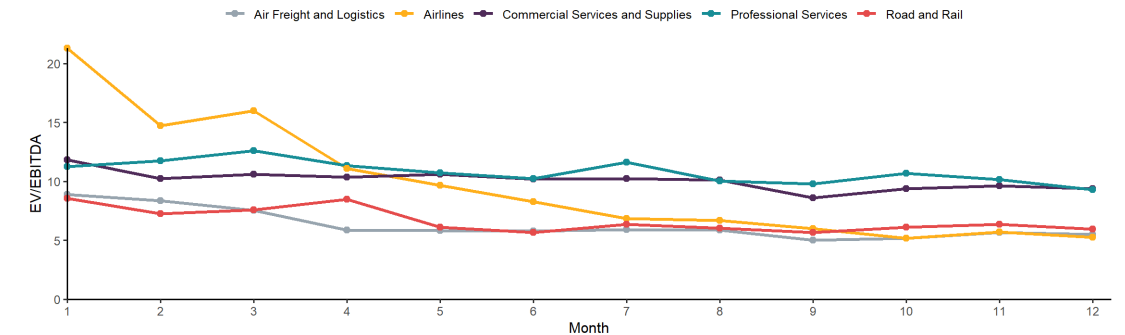
## Industrials 2 – Summary of Valuation Multiples

The table below summarises median industry valuation multiples for the sector, as at 30 December 2022.

Industry	EV/Rev	EV/EBITDA	EV/EBIT	EV/TotAss
Commercial Services and Supplies	1.44	9.39	20.46	0.98
Professional Services	1.11	9.30	17.00	1.38
Air Freight and Logistics	0.91	5.51	9.46	1.49
Airlines	0.85	5.25	15.88	0.46
Road and Rail	1.35	5.93	11.78	1.07

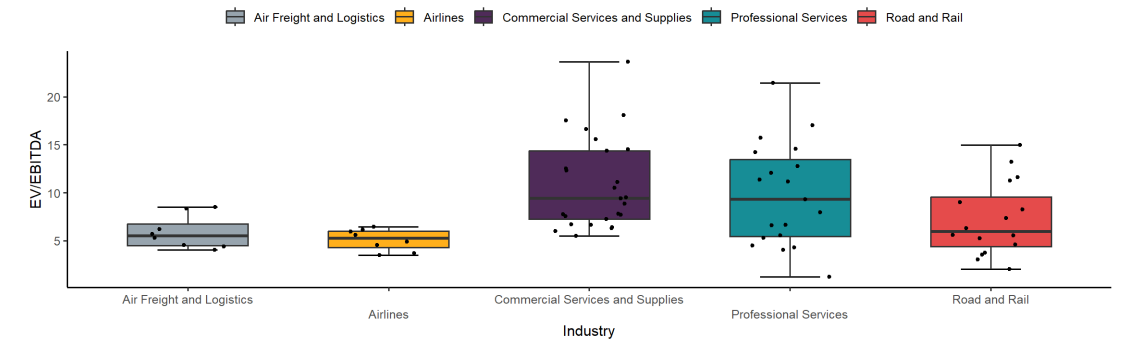
## Industrials 2 – EV/EBITDA Multiples

The following chart summarises the monthly changes in median EV/EBITDA multiples of the various industries within the sector.



## Industrials 2 – EV/EBITDA Boxplots

The boxplot below summarises EV/EBITDA multiples by industry, for companies operating within the sector, as at 30 December 2022.

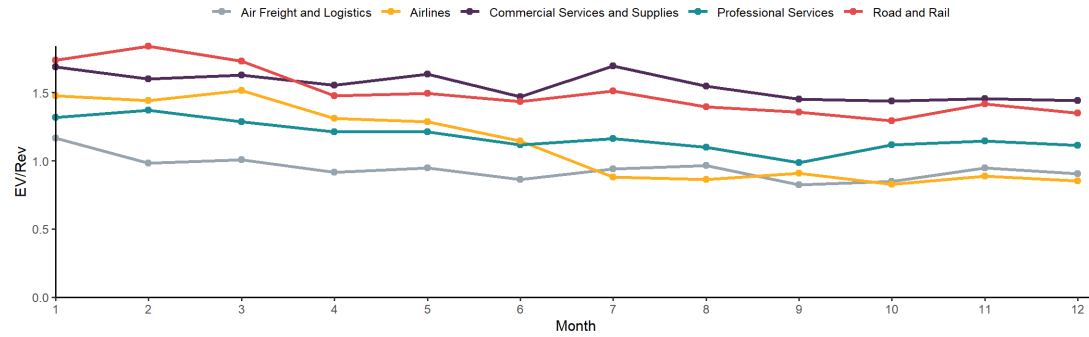




# US Valuation Multiples by Industry – Industrials 2

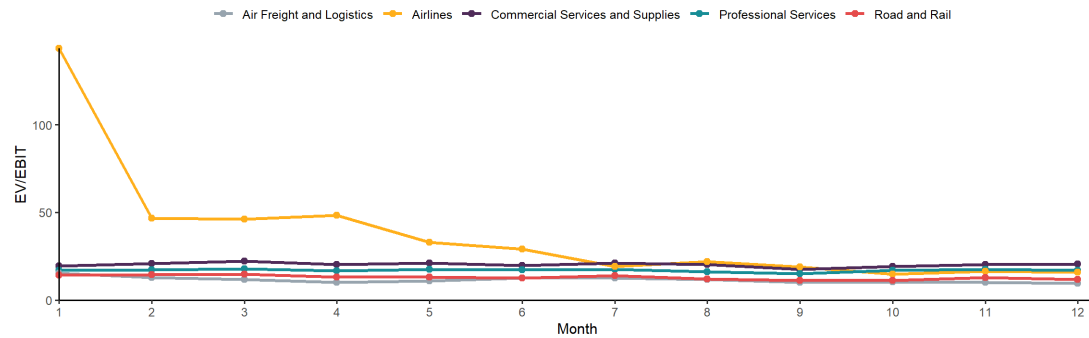
## Industrials 2 – EV/Revenue Multiples

The following chart summarises the monthly changes in median EV/Revenue multiples of the various industries within the sector.



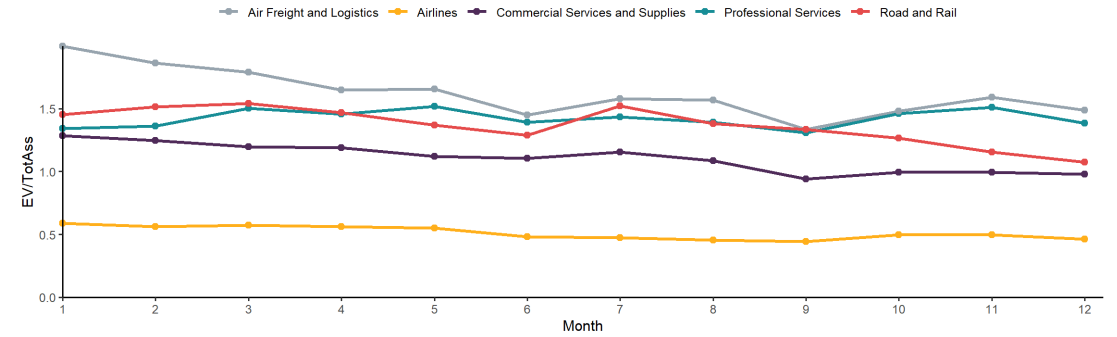
## Industrials 2 – EV/EBIT Multiples

The following chart summarises the monthly changes in median EV/EBIT multiples of the various industries within the sector.



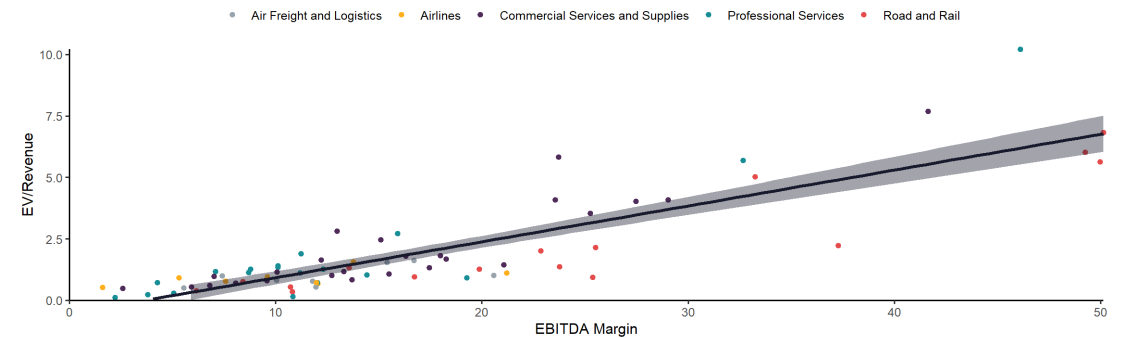
## Industrials 2 – EV/Total Assets Multiples

The following chart summarises the monthly changes in median EV/Total Assets multiples of the various industries within the sector.



## Industrials 2 – EV/Revenue vs EBITDA Margin

The following chart illustrates a regression analysis of the relationship between EV/Revenue multiples (y-axis) and EBITDA margin (x-axis) for the sector, as at 30 December 2022.





# US Valuation Multiples by Industry – Information Technology

## Information Technology – 2022 Sector Commentary

During 2022, Information Technology was one of the worst performing sectors within the S&P 500, as the industry’s stocks tumbled 29% for the year (accounting for almost half of the S&P 500’s overall decline). The rise in interest rates during the year burst the Information Technology bubble. In addition, as supply constraints waned through 2022, semiconductor stocks (who had benefited from the shortages during the pandemic) experienced a sustained sell-off throughout the year. This led to the Semiconductors and Semiconductor Equipment industry having the largest drop (of 6.3x) in median EBITDA multiples within the sector, falling from 16.2x in January to 9.8x in December.

Software and IT Services were also significantly impacted by the sector’s outlook, as median EBITDA multiples fell by 4.1x and 3.2x respectively, reflecting the negative impact of interest rates on high growth assets over the year. Notwithstanding the change in multiples through the year, Software was still able to end 2022 with the highest median EBITDA multiple of all industries within our analysis.

The rest of the industries within the sector – Communications Equipment (down 0.7x); Electronic Equipment, Instruments and Components (down 1.6x); and Technology Hardware, Storage and Peripherals (down 1.0x) – saw smaller declines in their median EBITDA multiple, at an average decrease of 1.1x.

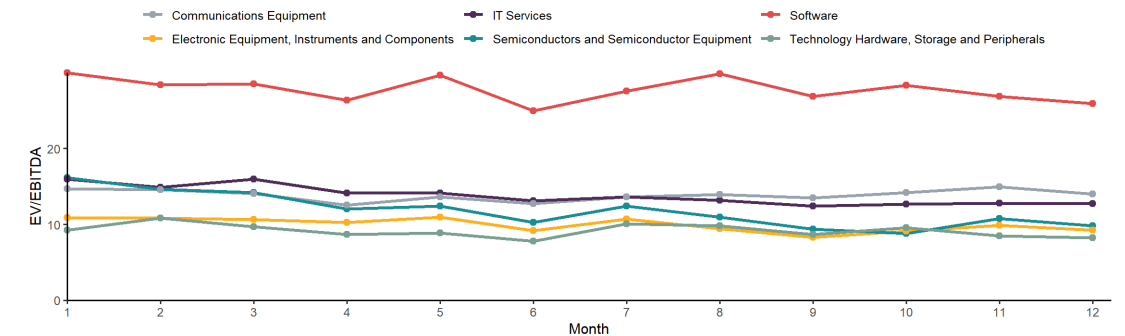
## Information Technology – Summary of Valuation Multiples

The table below summarises median industry valuation multiples for the sector, as at 30 December 2022.

Industry	EV/Rev	EV/EBITDA	EV/EBIT	EV/TotAss
Semiconductors and Semiconductor Equipment	3.27	9.81	13.50	1.81
IT Services	3.02	12.72	19.95	1.48
Software	7.83	25.90	29.57	2.07
Communications Equipment	2.39	14.01	25.82	1.48
Electronic Equipment, Instruments and Components	1.44	9.25	13.52	1.15
Technology Hardware, Storage and Peripherals	1.09	8.22	10.73	1.11

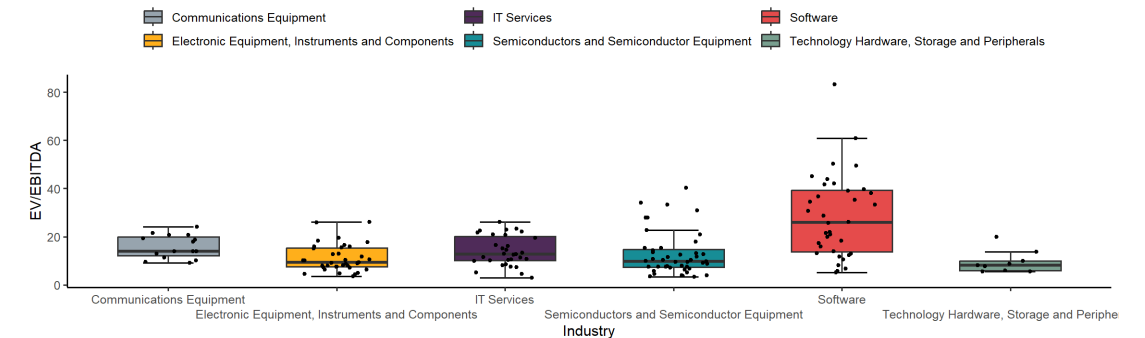
## Information Technology – EV/EBITDA Multiples

The following chart summarises the monthly changes in median EV/EBITDA multiples of the various industries within the sector.



## Information Technology – EV/EBITDA Boxplots

The boxplot below summarises EV/EBITDA multiples by industry, for companies operating within the sector, as at 30 December 2022.

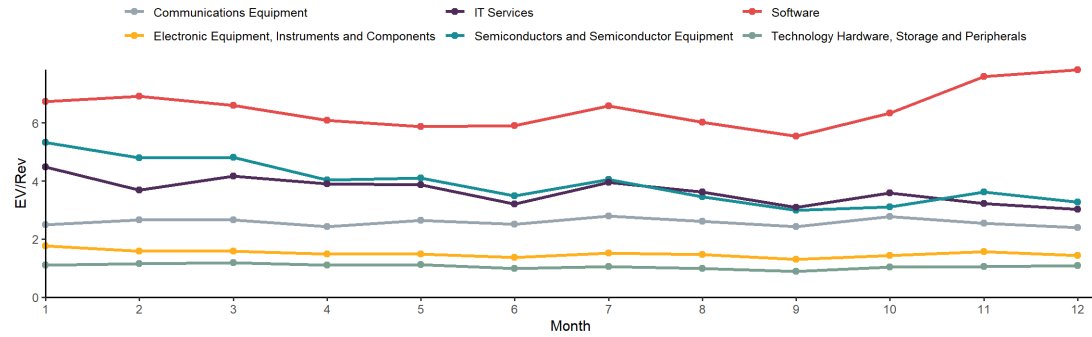




# US Valuation Multiples by Industry – Information Technology

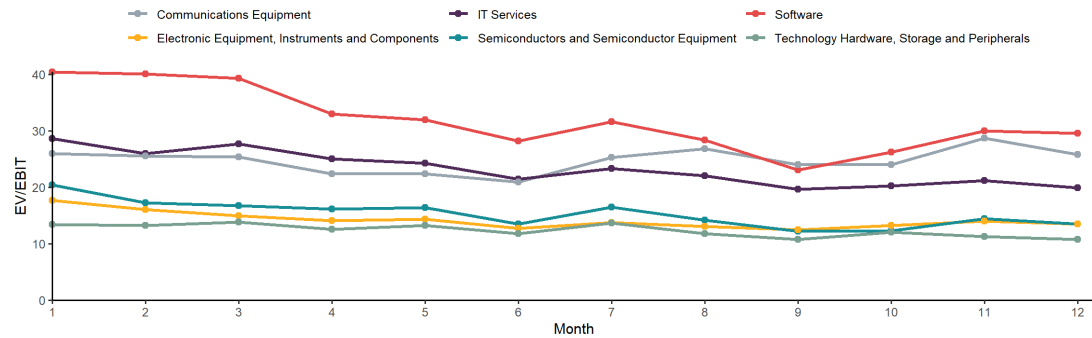
## Information Technology – EV/Revenue Multiples

The following chart summarises the monthly changes in median EV/Revenue multiples of the various industries within the sector.



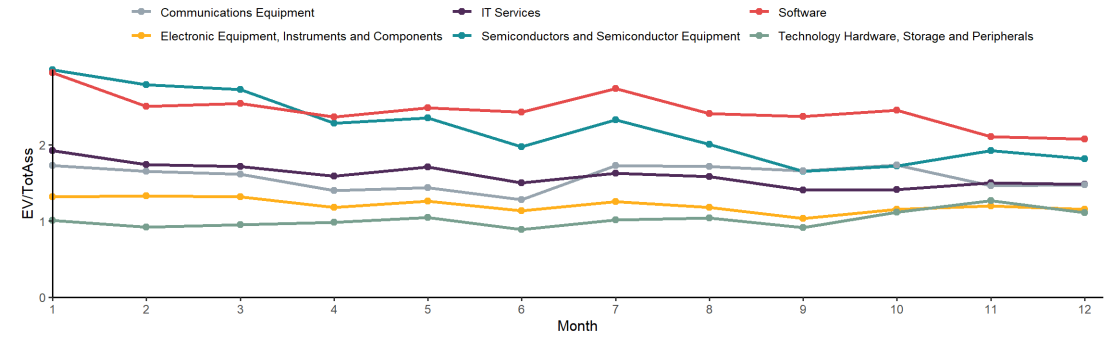
## Information Technology – EV/EBIT Multiples

The following chart summarises the monthly changes in median EV/EBIT multiples of the various industries within the sector.



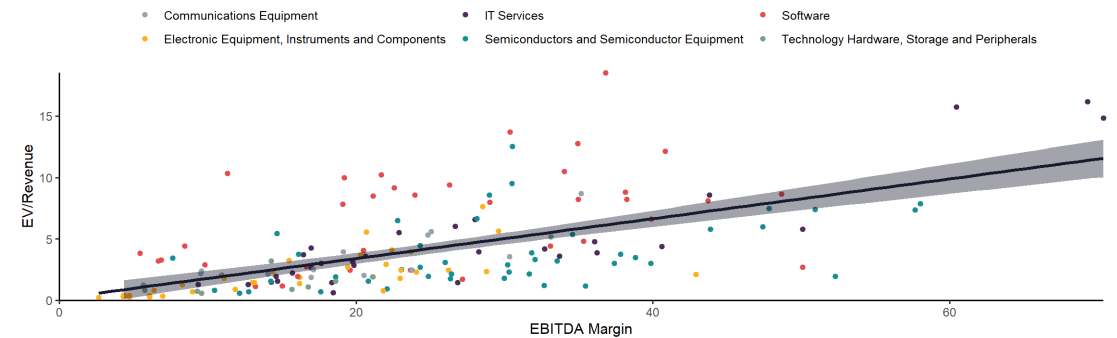
## Information Technology – EV/Total Assets Multiples

The following chart summarises the monthly changes in median EV/Total Assets multiples of the various industries within the sector.



## Information Technology – EV/Revenue vs EBITDA Margin

The following chart illustrates a regression analysis of the relationship between EV/Revenue multiples (y-axis) and EBITDA margin (x-axis) for the sector, as at 30 December 2022.







# US Valuation Multiples by Industry – Materials

## Materials – 2022 Sector Commentary

Industries within the sector exhibited varying trends regarding the evolution of their year end median EBITDA multiple. For example, both Chemicals (9.9x) and Metals and Mining (6.1x) saw increases in their median EBITDA multiple when compared with January, whilst Containers and Packaging (8.7x), and Paper and Forest Products (3.4x), experienced decreases in their median EBITDA multiple.

Despite ending the year with higher median EBITDA multiples, Chemicals and Metals and Mining both saw a reduction in their median EBITDA multiple during the middle of 2022. However, both reverted back in the last quarter to a level even slightly higher than in January, especially Metals and Mining, which saw a 2.1x jump in the last quarter, possibly due to better-than-expected results caused by increasing prices resulting from China's reopening, and the effects of softening US inflation expectations weakening the dollar.

The rise in median EBITDA multiples in the final quarter of 2022 was widespread across the sector. Whilst Containers and Packaging, and Paper and Forest Products saw declines in their median EBITDA multiples for the year, both industries experienced a slight increase in their median EBITDA multiple for the last quarter, up by 0.4x and 0.3x, respectively.

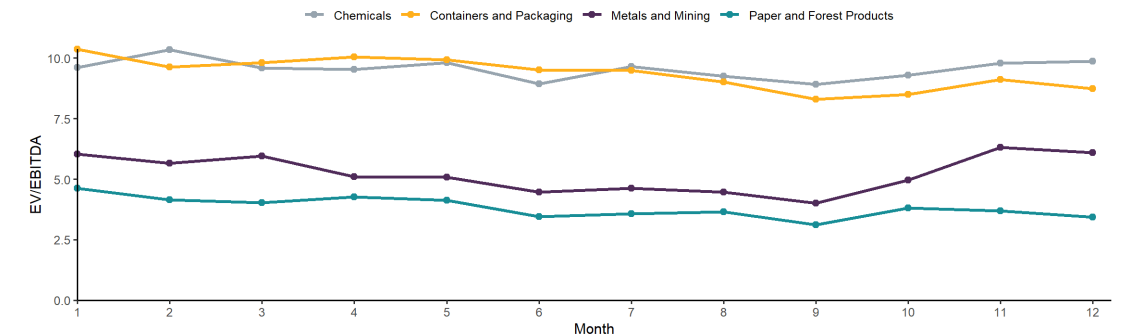
## Materials – Summary of Valuation Multiples

The table below summarises median industry valuation multiples for the sector, as at 30 December 2022.

Industry	EV/Rev	EV/EBITDA	EV/EBIT	EV/TotAss
Chemicals	1.49	9.87	13.29	1.21
Containers and Packaging	1.45	8.73	11.84	1.32
Metals and Mining	0.75	6.10	7.97	0.95
Paper and Forest Products	0.79	3.43	4.46	0.93

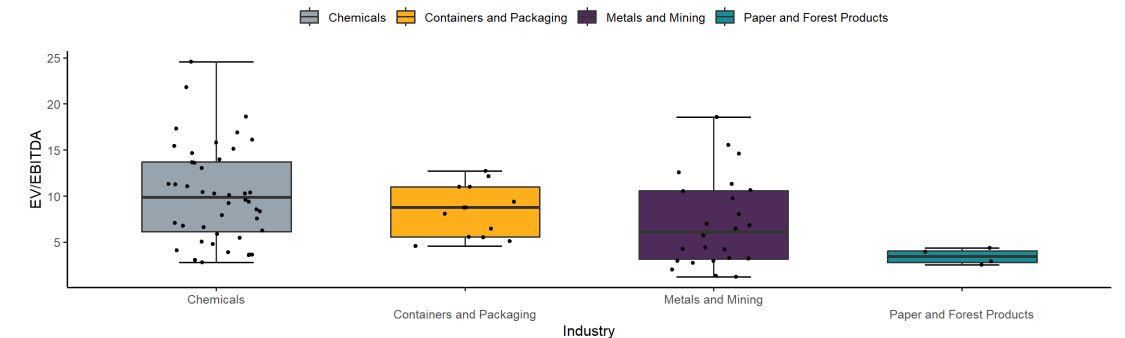
## Materials – EV/EBITDA Multiples

The following chart summarises the monthly changes in median EV/EBITDA multiples of the various industries within the sector.



## Materials – EV/EBITDA Boxplots

The boxplot below summarises EV/EBITDA multiples by industry, for companies operating within the sector, as at 30 December 2022.

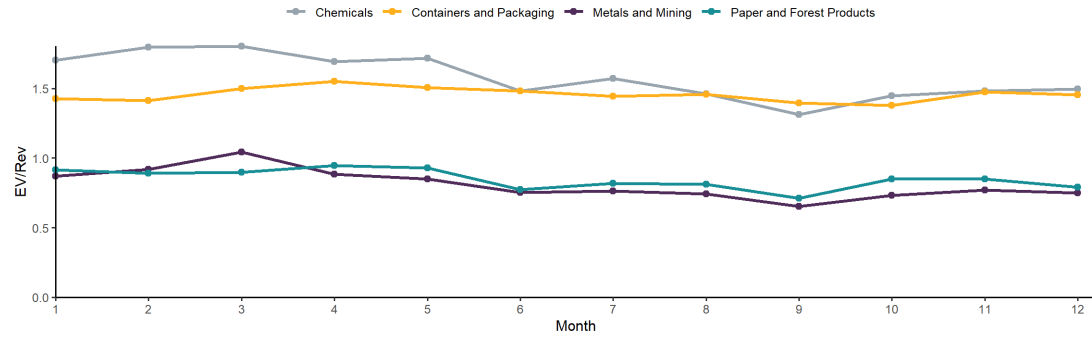




# US Valuation Multiples by Industry – Materials

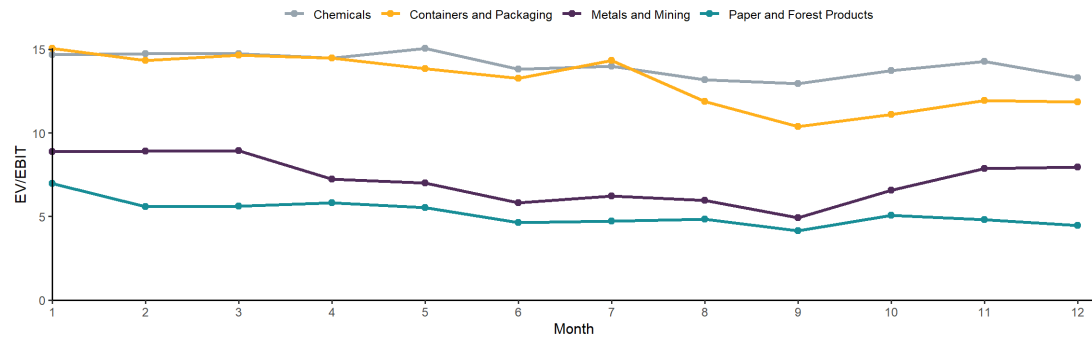
## Materials – EV/Revenue Multiples

The following chart summarises the monthly changes in median EV/Revenue multiples of the various industries within the sector.



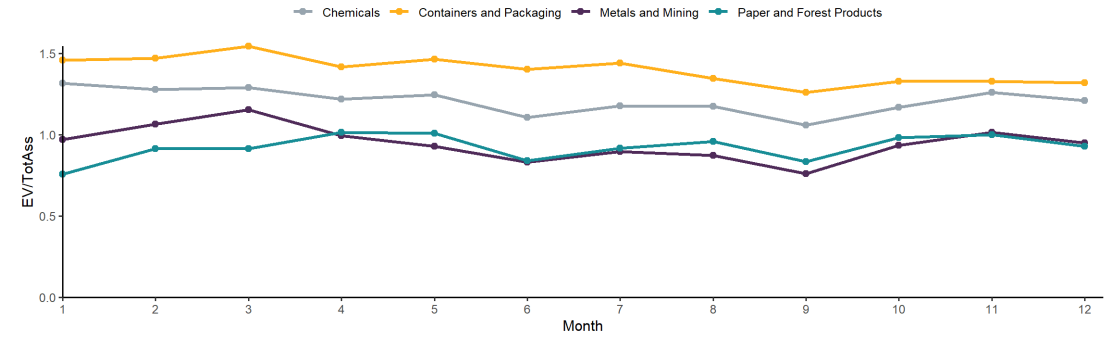
## Materials – EV/EBIT Multiples

The following chart summarises the monthly changes in median EV/EBIT multiples of the various industries within the sector.



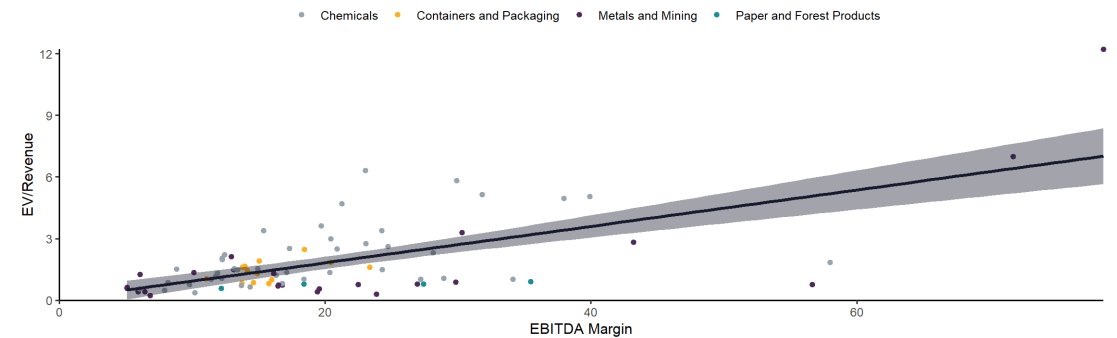
## Materials – EV/Total Assets Multiples

The following chart summarises the monthly changes in median EV/Total Assets multiples of the various industries within the sector.



## Materials – EV/Revenue vs EBITDA Margin

The following chart illustrates a regression analysis of the relationship between EV/Revenue multiples (y-axis) and EBITDA margin (x-axis) for the sector, as at 30 December 2022.





# US Valuation Multiples by Industry – Real Estate

## Real Estate – 2022 Sector Commentary

Higher borrowing costs and concerns about affordability weighed significantly on housing demand from first-time buyers. With less buyers available, many places across the US experienced excess supply, causing numerous offers to fall below initial asking prices; accordingly, both industries within the sector saw a decline in their median EBITDA multiple.

Equity Real Estate Investment Trusts (REITs) started 2022 with a median EBITDA multiple of 21.5x in January, and remained at over 21.0x until April. The industry experienced declining multiples after the first quarter, subsequently ending the year with a median EBITDA multiple of 17.2x, a drop of 4.3x compared to January. Notwithstanding this drop in median EBITDA multiples, Equity REITs ended the year with the seventh highest median EBITDA multiple of all the industries within our analysis.

The Real Estate Management and Development industry experienced the biggest drop in its median multiple in the first month of the year, falling by 1.7x, from 7.6x in January to 5.9x in February. From around May 2022, the median EBITDA multiple for Real Estate Management and Development remained steady at around 5.3x, closing the year at 5.3x – a 2.3x fall compared to January.

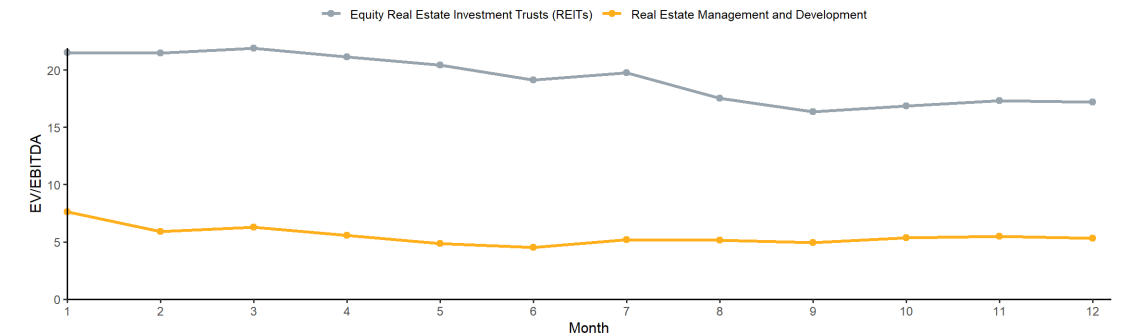
## Real Estate – Summary of Valuation Multiples

The table below summarises median industry valuation multiples for the sector, as at 30 December 2022.

Industry	EV/Rev	EV/EBITDA	EV/EBIT	EV/TotAss
Equity Real Estate Investment Trusts (REITs)	10.29	17.22	30.88	1.16
Real Estate Management and Development	0.58	5.33	8.08	0.72

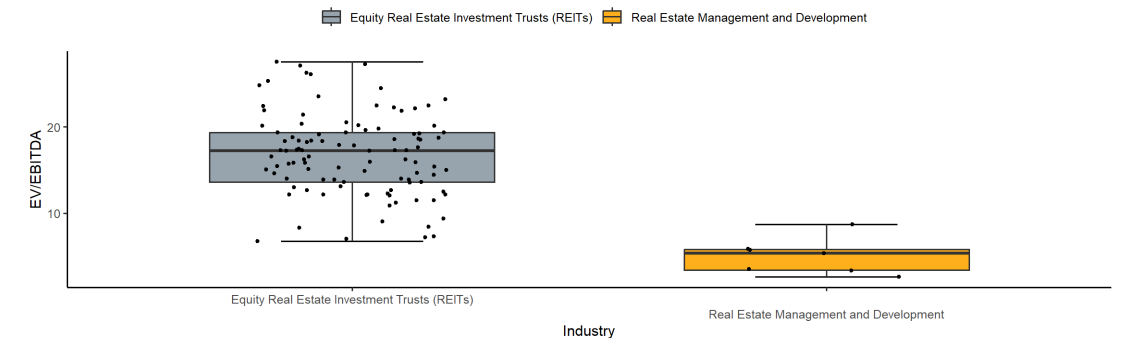
## Real Estate – EV/EBITDA Multiples

The following chart summarises the monthly changes in median EV/EBITDA multiples of the various industries within the sector.



## Real Estate – EV/EBITDA Boxplots

The boxplot below summarises EV/EBITDA multiples by industry, for companies operating within the sector, as at 30 December 2022.





# US Valuation Multiples by Industry – Real Estate

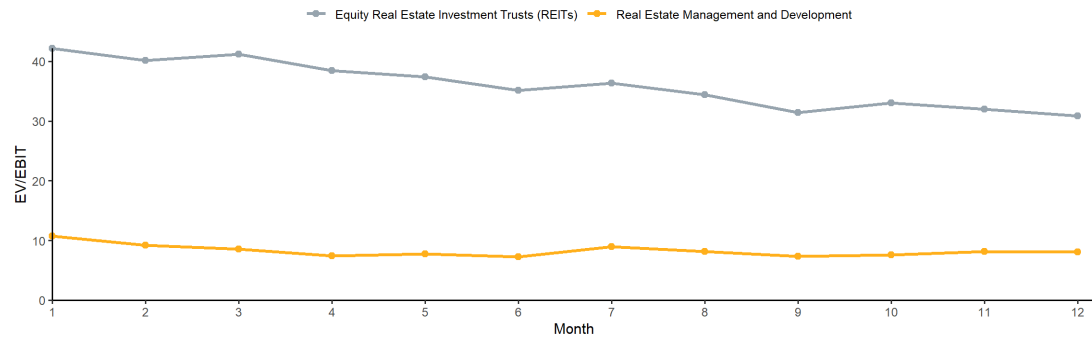
## Real Estate – EV/Revenue Multiples

The following chart summarises the monthly changes in median EV/Revenue multiples of the various industries within the sector.



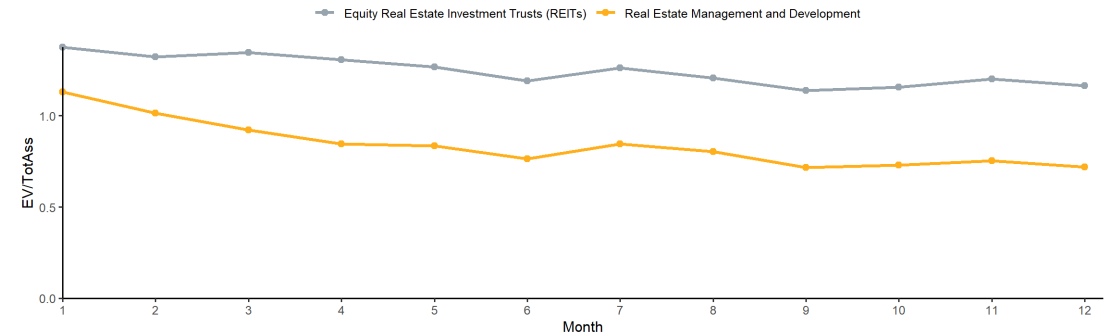
## Real Estate – EV/EBIT Multiples

The following chart summarises the monthly changes in median EV/EBIT multiples of the various industries within the sector.



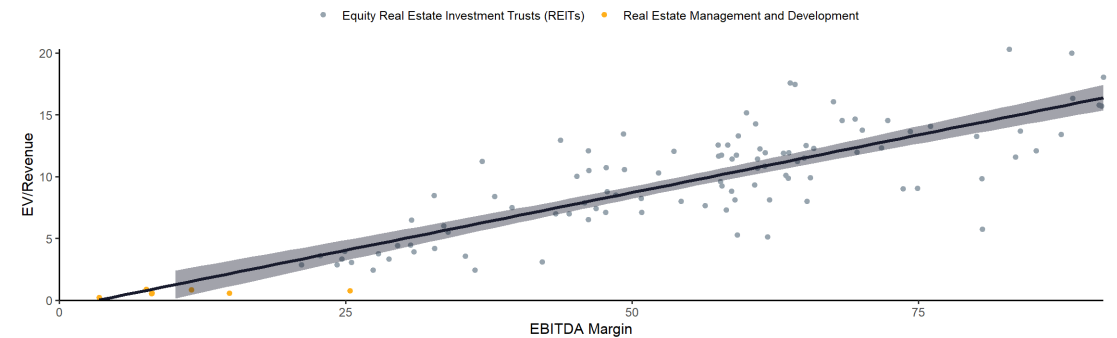
## Real Estate – EV/Total Assets Multiples

The following chart summarises the monthly changes in median EV/Total Assets multiples of the various industries within the sector.



## Real Estate – EV/Revenue vs EBITDA Margin

The following chart illustrates a regression analysis of the relationship between EV/Revenue multiples (y-axis) and EBITDA margin (x-axis) for the sector, as at 30 December 2022.





# US Valuation Multiples by Industry – Utilities

## Utilities – 2022 Sector Commentary

Although Energy was the only sector within the S&P 500 to post positive returns for 2022, when you include dividends into the analysis, the Utilities sector posted a positive return for 2022, gaining 1.6%.

In comparison to Information Technology and other high growth segments that surged during the pandemic, Utilities started the year relatively undervalued. However, with ongoing inflation resulting in interest rate hikes during 2022, investors turned to the Utilities sector for its defensive characteristics, bringing the sector up from one of the weakest-performing sectors to one of the strongest by mid-year.

With the exception of Multi-Utilities (which exhibited a slight decline of 0.1x in its EBITDA multiple), all industries within Utilities saw an increase in their year end median EBITDA multiple when compared to January.

Electric Utilities experienced the highest increase in its median EBITDA multiple (up 0.8x), from 11.4x in January to 12.2x in December. Gas Utilities followed (up 0.5x), from 12.5x to 12.9x; with Water Utilities gaining 0.3x, rising from 19.6x to 19.9x, and ending the year with the third highest median EBITDA multiple amongst all industries within our analysis.

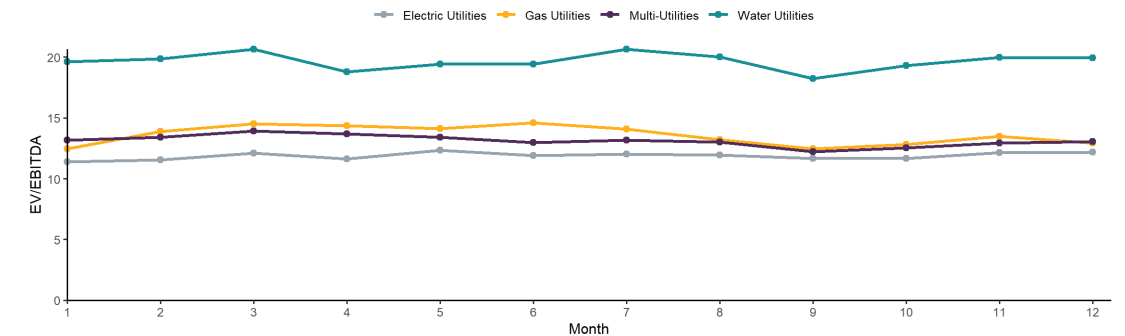
## Utilities – Summary of Valuation Multiples

The table below summarises median industry valuation multiples for the sector, as at 30 December 2022.

Industry	EV/Rev	EV/EBITDA	EV/EBIT	EV/TotAss
Electric Utilities	4.19	12.17	22.50	0.93
Gas Utilities	3.14	12.94	21.35	1.00
Multi-Utilities	4.14	13.05	22.44	0.97
Water Utilities	8.77	19.94	31.82	1.35

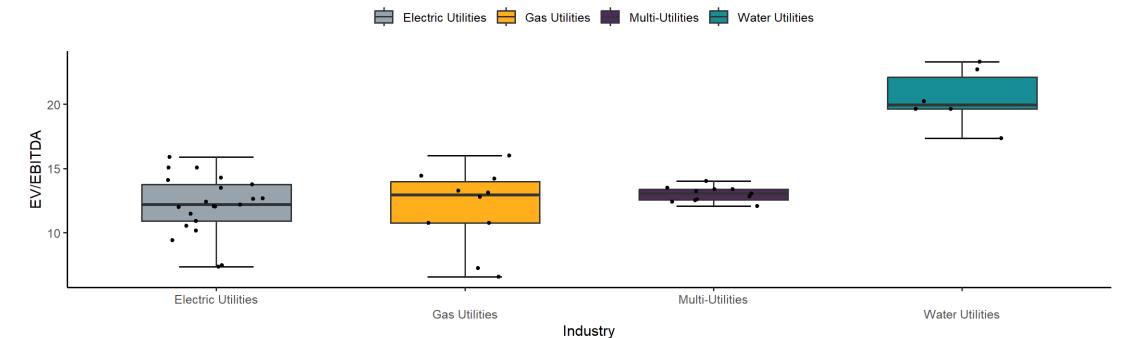
## Utilities – EV/EBITDA Multiples

The following chart summarises the monthly changes in median EV/EBITDA multiples of the various industries within the sector.



## Utilities – EV/EBITDA Boxplots

The boxplot below summarises EV/EBITDA multiples by industry, for companies operating within the sector, as at 30 December 2022.

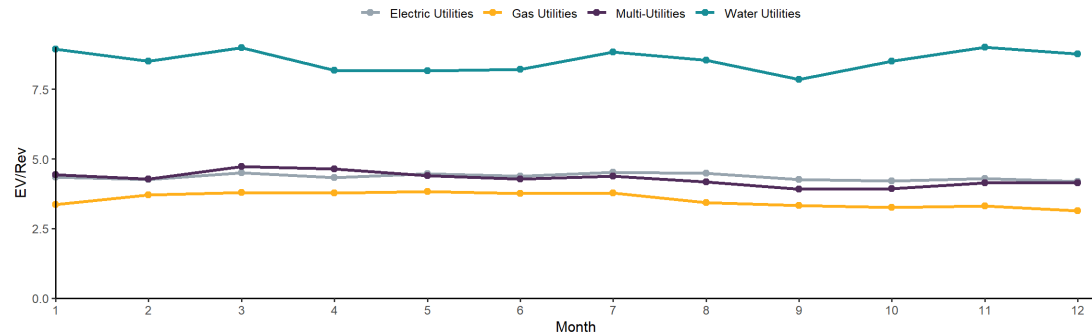




# US Valuation Multiples by Industry – Utilities

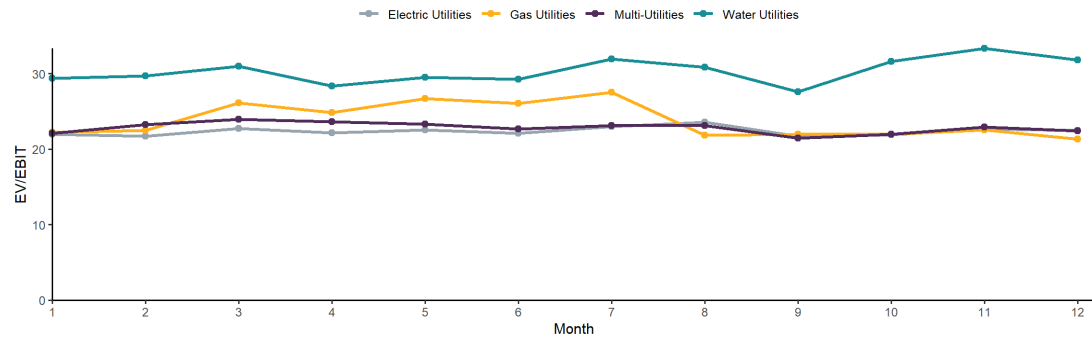
## Utilities – EV/Revenue Multiples

The following chart summarises the monthly changes in median EV/Revenue multiples of the various industries within the sector.



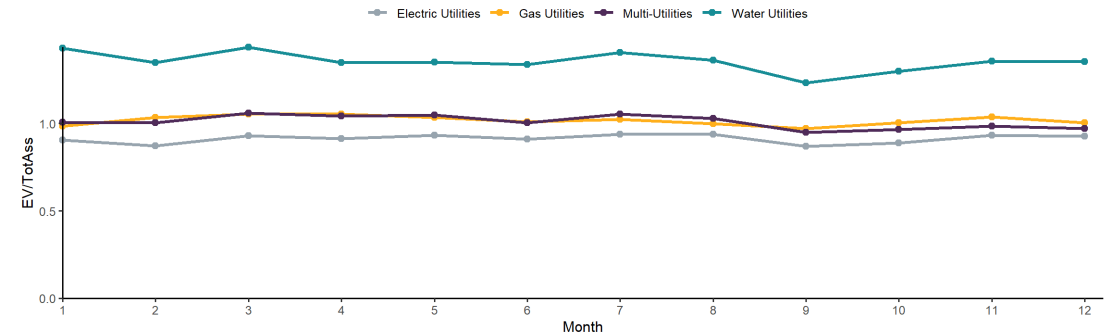
## Utilities – EV/EBIT Multiples

The following chart summarises the monthly changes in median EV/EBIT multiples of the various industries within the sector.



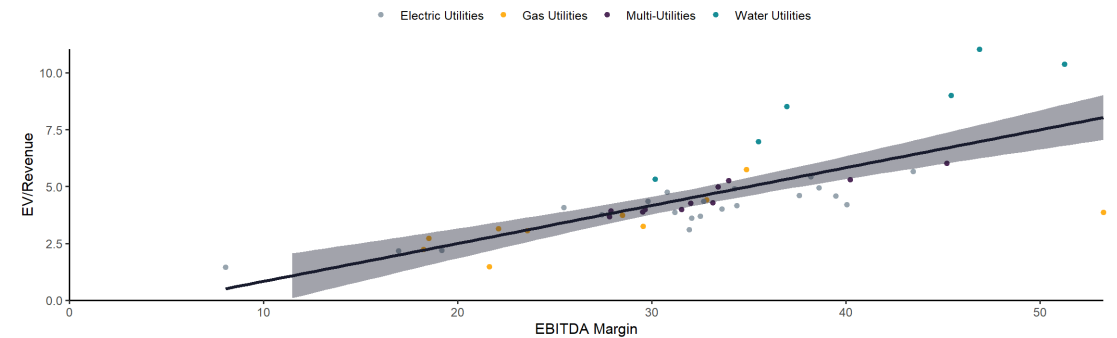
## Utilities – EV/Total Assets Multiples

The following chart summarises the monthly changes in median EV/Total Assets multiples of the various industries within the sector.



## Utilities – EV/Revenue vs EBITDA Margin

The following chart illustrates a regression analysis of the relationship between EV/Revenue multiples (y-axis) and EBITDA margin (x-axis) for the sector, as at 30 December 2022.





# US Valuation Multiples by Industry – Financial

## Financials – 2022 Sector Commentary

As with almost all other sectors within the S&P 500, Financials also provided negative returns for investors, with the S&P 500's Financials sector experiencing a drop of more than 12% during 2022. Exceptional changes in interest rates over a short time frame caused significant market volatility, which affected Capital Markets somewhat.

Consumer Finance saw the largest drop in its median P/B multiple, down 0.6x for the year, falling from 1.7x in January to 1.1x in December. Capital Markets followed, with its median multiple down 0.3x, starting the year at 2.0x and ending at 1.7x price-to-book.

Banks (1.3x), Thrifts and Mortgage Finance (1.1x), and Mortgage REITs (0.6x) all experienced smaller declines in their median P/B multiple, decreasing by around 0.1x or less when compared to their January multiple.

Insurance was the only industry within the sector to exhibit growth in its median P/B multiple for the year, reflecting the industry's positive correlation with rising interest rates. The industry posted an increase of 0.5x in its median P/B multiple, rising from 1.2x in January to 1.7x in December, with most of that rise attributed to the large jump in its median P/B multiple during the third quarter of the year (0.6x).

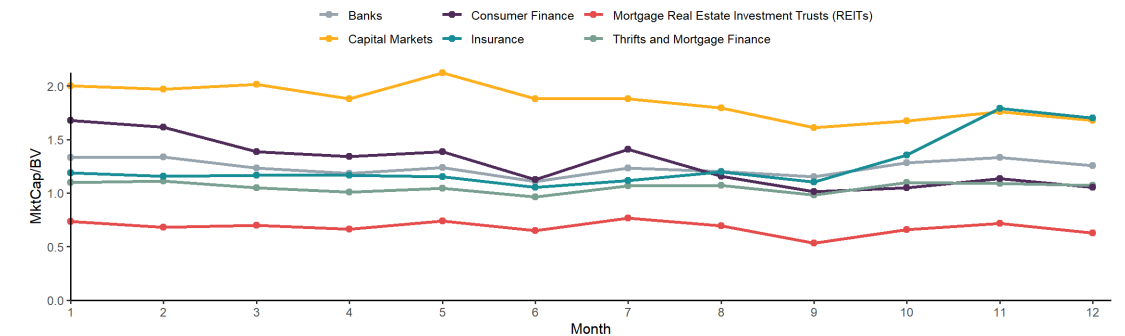
## Financials – Summary of Valuation Multiples

The table below summarises the median industry P/B valuation multiple for the sector, as at 30 December 2022.

Industry	MktCap/ BV
Banks	1.26
Thrifts and Mortgage Finance	1.07
Capital Markets	1.68
Consumer Finance	1.05
Mortgage Real Estate Investment Trusts (REITs)	0.63
Insurance	1.70

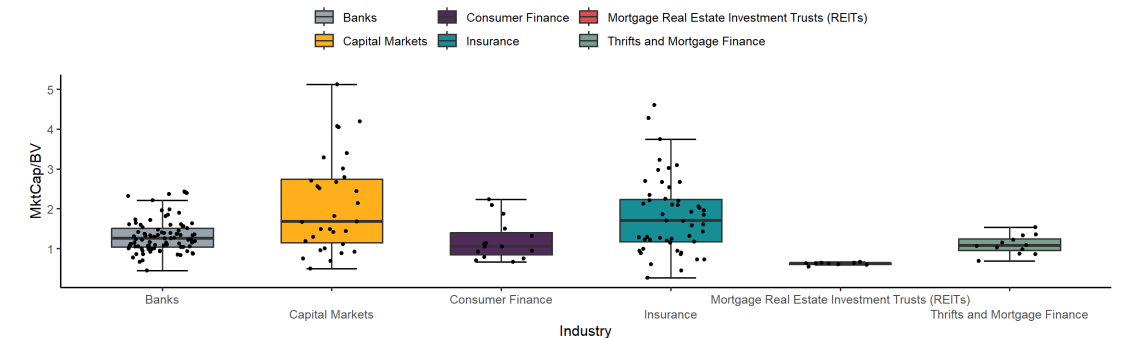
## Financials – MktCap/BV Multiples

The following chart summarises the monthly changes in the median P/B multiple of the various industries within the sector.



## Financials – MktCap/BV Boxplots

The boxplot below summarises P/B multiples by industry, for companies operating within the sector, as at 30 December 2022.





interpath

# About the Data





# About the Data

## About the Data

Due to the omission of negative multiples and outliers from our analysis, the number of companies used to determine the median valuation multiple within the same industry may differ, which may result in inconsistent (or potentially misleading) conclusions.

### About US Valuation Multiples

US median valuation multiples are determined using constituents data of the S&P Composite 1500 index ("S&P 1500").

The S&P 1500 includes all stocks contained with the S&P 500, S&P MidCap 400, and S&P SmallCap 600 indices. The S&P 1500 index covers approximately 90% of the total market capitalization of US stocks, making it a useful proxy for all tradeable US stocks.

## Overview of Interpath Data

We calculate the following median multiples:

- EV/Revenue (EV/Rev);
- EV/EBITDA;
- EV/EBIT;
- EV/Total Assets (EV/TotAss); and
- MktCap/Book Value (P/B).

Our valuation multiples exclude negative multiples, initial outliers, and NA data.

Median multiples are calculated for groupings comprising of at least 4 companies (irrespective of whether that multiple is ultimately included in the calculation of the median).

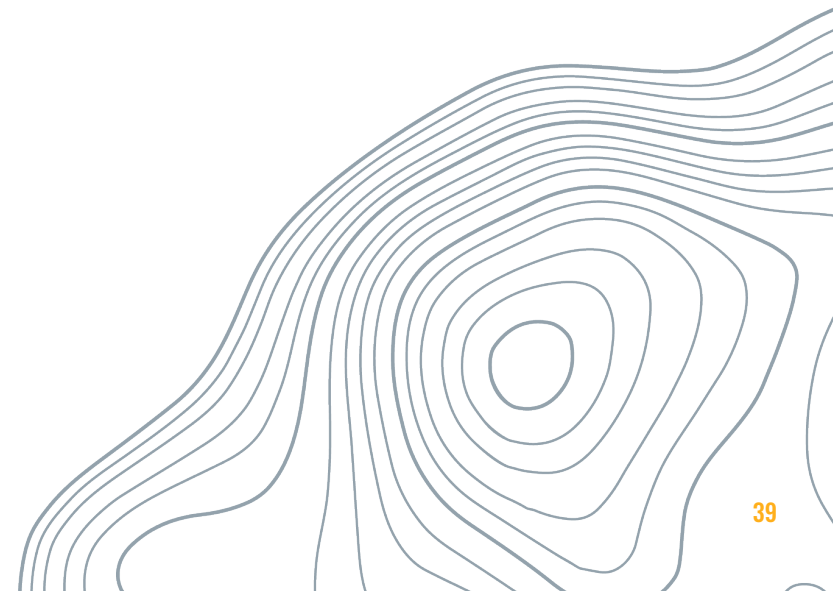
## Overview of Interpath Data

We calculate the following median multiples:

- EV/Revenue (EV/Rev);
- EV/EBITDA;
- EV/EBIT;
- EV/Total Assets (EV/TotAss); and
- MktCap/Book Value (P/B).

Our valuation multiples exclude negative multiples, initial outliers, and NA data.

Median multiples are calculated for groupings comprising of at least 4 companies (irrespective of whether that multiple is ultimately included in the calculation of the median).



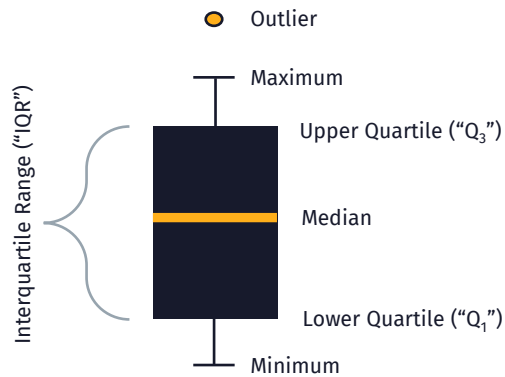


# About the Data – Charts and Graphs

## About Boxplots

Boxplots can help with visualising differences in data among various samples or groups. In addition to illustrating the distribution of data and its skewness, boxplots provide statistical information, including medians, ranges, and outliers.

The diagram below illustrates the component parts of a boxplot.



Maximum is calculated as:  $Q_3 + (1.5 * IQR)$

Minimum is calculated as:  $Q_1 - (1.5 * IQR)$

When reviewing a boxplot, an outlier is generally defined as any data point that is above/below the maximum/minimum value, for example:  $Outlier < Q_1 - (1.5 * IQR)$  and  $Outlier > Q_3 + (1.5 * IQR)$ .

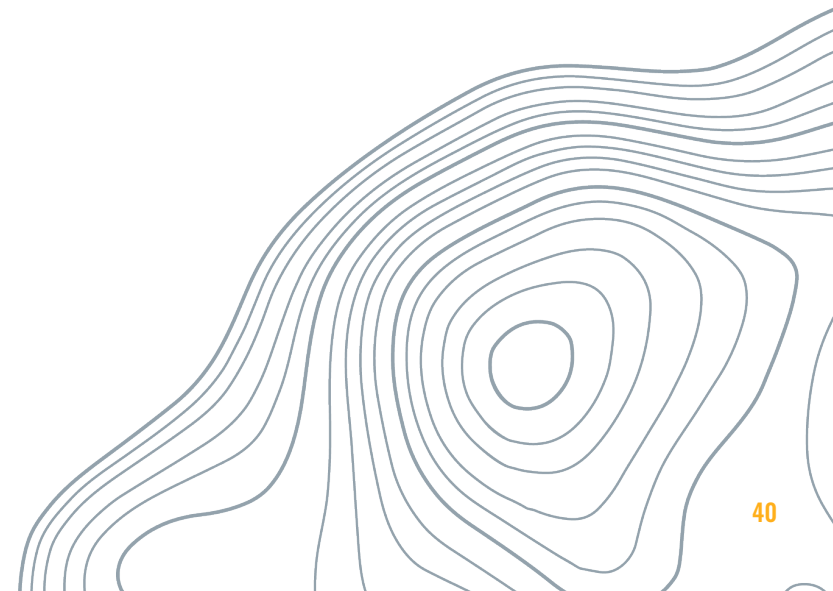
## Overview of Regression Analysis

Revenue multiples are generally useful for valuing firms with negative earnings, cyclical businesses, and firms operating in mature industries.

Generally, revenue multiples are less volatile than other multiples such as P/E, however, the revenue multiple can be manipulated by utilising aggressive or misleading revenue recognition practices. In addition, because the revenue multiple inherently excludes firm costs, the multiple does not adequately capture differences in cost structure and overall firm profitability, which can lead to ascribing comparatively high values to firms with high revenues but low (or negative) profitability relative to other firms within the same industry.

To consider the potential impact that firm profitability and operating risk can have on the revenue multiple of a particular sector, we provide regression analysis of EV/Revenue (y-axis) vs EBITDA margin (x-axis).

The shaded area within each regression chart, represents a 95% confidence interval.





# About the Data – Number of Companies (Sector and Industry Group)

## Data Summary of US Valuation Multiples by Sector - # Companies

The table below provides a summary of the number of firms included in each dataset used for calculating median US valuation multiples by sector, as at 30 December 2022.

Sector	Rev	EBITDA	EBIT	TotAss
Communication Services	48	49	44	46
Consumer Discretionary 1	72	73	71	74
Consumer Discretionary 2	115	114	106	111
Consumer Staples	76	76	71	75
Energy	56	59	50	61
Health Care	172	153	145	164
Industrials 1	133	133	125	131
Industrials 2	67	76	76	76
Information Technology	187	170	161	185
Materials	77	83	80	84
Real Estate	115	111	101	112
Utilities	47	42	45	47

Sector	P/B
Financials	207

## Data Summary of US Valuation Multiples by Industry Group - # Companies

The table below provides a summary of the number of firms included in each dataset used for calculating median US valuation multiples by industry group, as at 30 December 2022.

Industry Group	Rev	EBITDA	EBIT	TotAss
Media and Entertainment	37	37	35	35
Telecommunication Services	11	12	10	12
Automobiles and Components	21	22	21	21
Consumer Durables and Apparel	52	50	52	53
Consumer Services	50	49	44	48
Retailing	64	65	58	59
Food and Staples Retailing	15	15	14	14
Food, Beverage and Tobacco	44	45	41	44
Household and Personal Products	17	16	16	17
Energy	56	59	50	61
Health Care Equipment and Services	101	93	86	96
Pharmaceuticals, Biotechnology and Life Sciences	74	60	59	73
Capital Goods	133	133	125	131
Commercial and Professional Services	40	44	45	43
Transportation	30	32	28	33
Semiconductors and Semiconductor Equipment	48	44	44	46
Software and Services	78	66	61	75
Technology Hardware and Equipment	66	62	58	59
Materials	77	83	80	84
Real Estate	115	111	101	112
Utilities	47	42	45	47

Industry Group	P/B
Banks	97
Diversified Financials	60
Insurance	50



# About the Data – Number of Companies (Industry)

## Data Summary of US Valuation Multiples by Industry - # Companies

The table below provides a summary of the number of firms included in each dataset used for calculating median US valuation multiples by industry as at 30 December 2022.

Industry	Rev	EBITDA	EBIT	TotAss
Entertainment	10	10	8	10
Interactive Media and Services	8	8	8	8
Media	17	17	17	17
Diversified Telecommunication Services	7	8	7	7
Wireless Telecommunication Services	4	4	3	4
Auto Components	16	16	16	16
Automobiles	5	6	6	5
Household Durables	28	26	28	28
Leisure Products	8	8	7	7
Textiles, Apparel and Luxury Goods	16	16	17	17
Diversified Consumer Services	11	11	8	10
Hotels, Restaurants and Leisure	39	38	33	38
Internet and Direct Marketing Retail	4	4	5	4
Multiline Retail	8	8	7	8
Specialty Retail	51	51	48	50
Food and Staples Retailing	15	15	14	14
Beverages	12	10	8	12
Food Products	31	29	28	29
Tobacco	4	4	4	4
Household Products	8	8	8	8
Personal Products	9	8	8	9

Industry	Rev	EBITDA	EBIT	TotAss
Energy Equipment and Services	16	17	12	18
Oil, Gas and Consumable Fuels	39	36	35	43
Health Care Equipment and Supplies	55	44	40	51
Health Care Providers and Services	41	42	39	42
Health Care Technology	5	5	5	5
Biotechnology	31	23	23	30
Life Sciences Tools and Services	18	16	12	19
Pharmaceuticals	21	19	20	21
Aerospace and Defence	21	20	19	22
Building Products	22	22	22	21
Construction and Engineering	12	12	10	12
Electrical Equipment	16	13	13	16
Machinery	53	53	49	50
Trading Companies and Distributors	12	13	12	11
Commercial Services and Supplies	25	25	24	23
Professional Services	17	19	20	19
Air Freight and Logistics	8	8	7	8
Airlines	10	8	7	10
Road and Rail	16	16	16	15

Industry	Rev	EBITDA	EBIT	TotAss
Semiconductors and Semiconductor Equipment	48	44	44	46
IT Services	31	31	30	31
Software	45	36	31	43
Communications Equipment	17	15	13	15
Electronic Equipment, Instruments and Components	37	36	35	36
Technology Hardware, Storage and Peripherals	9	9	8	8
Chemicals	42	44	42	43
Containers and Packaging	13	13	13	13
Metals and Mining	20	24	21	23
Paper and Forest Products	4	4	4	4
Equity Real Estate Investment Trusts (REITs)	105	103	93	103
Real Estate Management and Development	7	7	7	7
Electric Utilities	20	21	19	20
Gas Utilities	9	10	8	10
Multi-Utilities	14	11	13	14
Water Utilities	6	6	6	6

Industry	BV
Banks	89
Thriffs and Mortgage Finance	12
Capital Markets	31
Consumer Finance	15
Mortgage Real Estate Investment Trusts (REITs)	9
Insurance	50

**interpath**

# About Interpath

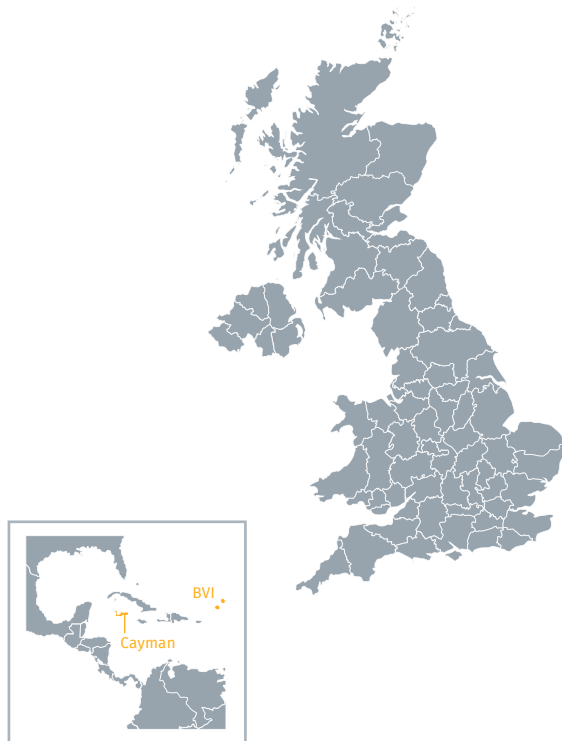




# About Interpath

Interpath is a team of over 600 people, offering a broad range of advisory and restructuring services to businesses across the globe. We are a new independent professional services practice borne from a 50-year Big 4 legacy.

We help clients *navigate what's next* in their business. Whether that's the next challenge or the next opportunity, we help individuals, teams and whole organisations create value.



600+  
People



100+  
MD & Directors

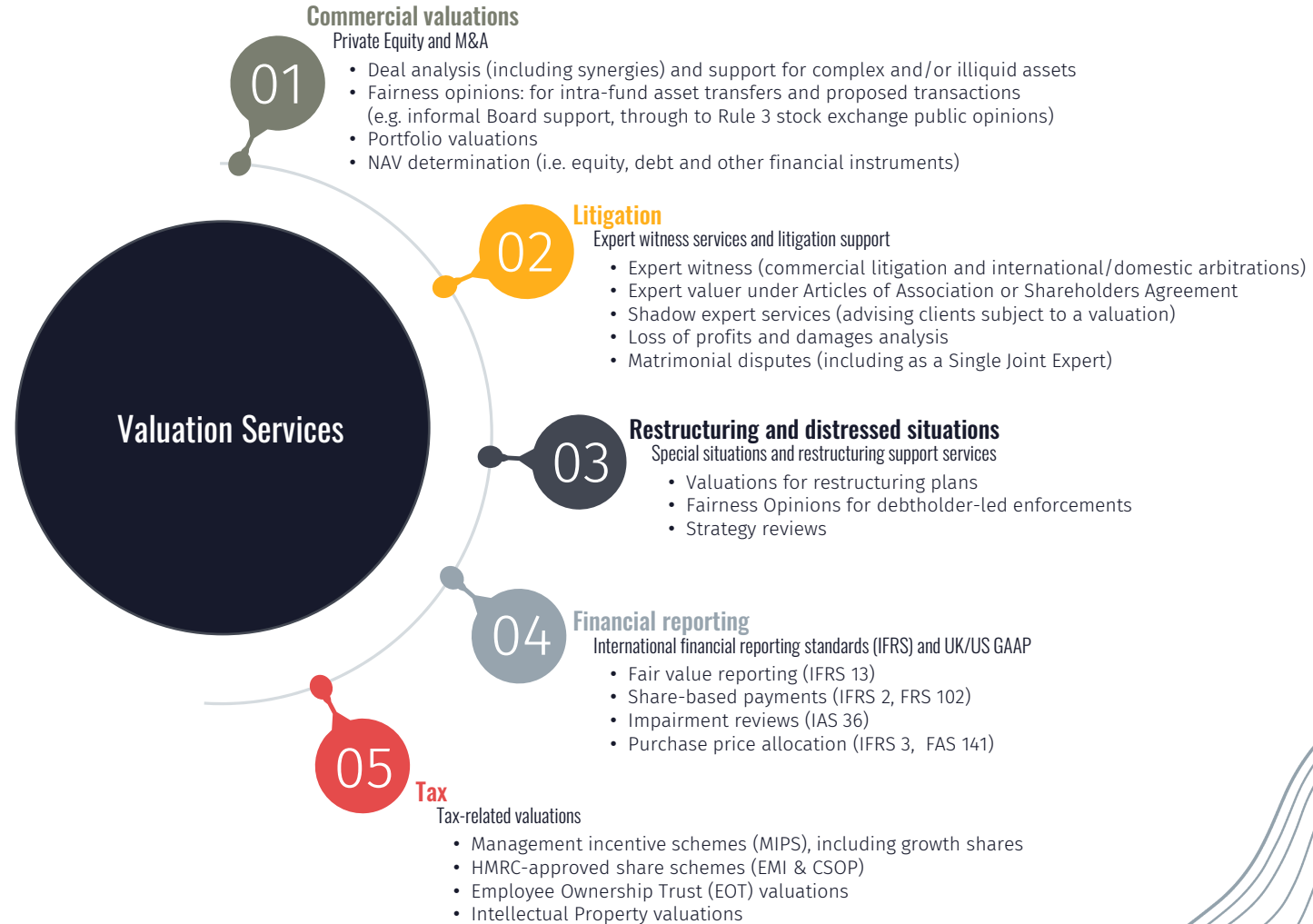
## Interpath Advisory

- We help our clients create, defend, preserve, sustain and grow value through the cycle. We work with businesses and their stakeholders across all areas of the market, from regional SMEs all the way up to large, complex multi-national organisations.
- We offer the full spectrum of restructuring services from business performance improvement and value creation through to stress, distress and insolvency offerings.
- Our advisory practice consists of corporate finance, transaction services, valuations, debt advisory, tax, pensions, forensic accounting and e-discovery services.
- In the UK we have 11 offices across the country with our headquarters at 10 Fleet Place, London.
- We have recently acquired a restructuring and advisory practice in BVI and Cayman, and have announced our expansion into Ireland, with further geographical growth planned in the Middle East, Europe and Asia.
- We have a similar-sized sister-company, Riveron Consulting in the US and collaborate closely across key sectors.





# About Interpath - Valuation Services





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