Industry Multiples in Europe

Q1 2023

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Foreword

Michael Weaver

Managing Director and
EMEA Valuation Advisory
Services Leader

Dear readers,

We are pleased to launch the sixth edition of our Industry Multiples in Europe quarterly report. This report provides valuable insights into trading multiples for various key industries in Europe as of March 31, 2023. Our analysis uses constituents of the STOXX® Europe Total Market Index (STOXX® Europe TMI), which covers about 95% of the free float in Europe, distributed among several industries and sectors, following the definitions by the Global Industry Classification Standard (GICS).

In 2023, the global economy still faces a lot of uncertainty, with the challenges faced over the past three years, such as COVID-19 and the war in Ukraine, still reverberating in today's economy as many economies are still absorbing the shocks. While it seems that recovery is on the way, the forces that shaped the world in 2022 are likely to continue. Inflation has started to soften in many regions, but the rapid rise in interest rates to fight inflation led to other impacts, as seen with the recent turbulence in the banking sector. Equity markets are still volatile in 2023. The daily average of the volatility index on the EURO STOXX 50® index (VSTOXX®) during the first three months of 2023 was lower than the 2022 overall daily average. However, the 2023 year-to-date daily average is still more than 30% higher than the overall daily average of 2019 (before the COVID-19 pandemic started).

According to the *World Economic Outlook* report, released by the International Monetary Fund (IMF) in April 2023, global growth is projected to reach 2.8% in 2023, below the estimated growth in 2022 of 3.4%. The projected 2023 real growth is also the lowest since 2001, with the exception of the Global Financial Crisis and COVID-19 economic contractions in 2009 and 2020, respectively. For the eurozone, growth is estimated to decelerate from 3.5% in 2022 to 0.8% in 2023, followed by 1.4% in 2024. For the UK, IMF estimates real GDP to contract by 0.3% in 2023, a sharp decline from the real growth of 4.0% in 2022, to be followed by an increase of 1.0% in 2024.

In terms of inflation, according to the IMF's report, although global inflation has started to decrease, reflecting mostly the sharp reversal in energy and food price trends, it is now forecast to do so at a slower pace than initially anticipated. The IMF's estimate for global inflation is 7.0% in 2023, down from 8.7% in 2022, to be followed by 4.9% in 2024. Inflation is expected to be above central banks' targets for most economies at least until 2025. For the eurozone, inflation is expected to be 5.3% in 2023 and 2.9% in 2024. For the UK, the estimate is 6.8% in 2023 and 3.0% in 2024.

The STOXX® Europe TMI increased by 7.5% since the beginning of 2023. In terms of EV/EBITDA, multiples have generally remained relatively stable during the first quarter of 2023, with a few industries presenting significant variations. For example, the median EV/EBITDA multiple of semiconductors and semiconductor equipment increased to 15x (from 10x in Q4 2022) due to results above market expectations stemming from the demand and positive performance in the auto segment, as well as a significant backlog.[1]

[1] Barclays—"European Technology Hardware and Semiconductors – March 2023."
Sources: International Monetary Fund—*World Economic Outlook* (April 2023); Kroll analysis

Foreword (cont'd)

Our report provides a detailed overview of the EV/revenues, EV/EBITDA, P/E and P/B multiples of companies in the STOXX® Europe TMI covering nonfinancial industries and market capitalization/revenues, P/TBV, P/E and P/B multiples covering financial industries for which such data is available. We also provide an eight-quarter look back at the trends of these multiples for the industries covered.

We hope you find this report helpful for understanding the range of trading multiples for major industries in Europe. If you would like to receive further information or discuss any of the findings, please contact us.

Summary: Median Multiples by Sector/Industry Groups

As of March 31, 2023

Sector/Industry Group	EV/Revenues	EV/EBITDA	P/E	P/B
Communication Services	**2.0x**	**7.1x**	**18.1x**	**1.9x**
Media and Entertainment	2.2x	8.3x	18.5x	2.0x
Telecommunication Services	2.0x	5.9x	17.7x	1.7x
Consumer Discretionary	**1.2x**	**8.4x**	**14.9x**	**1.9x**
Automobiles and Components	0.7x	6.1x	10.5x	0.9x
Consumer Durables and Apparel	1.3x	9.1x	14.1x	1.9x
Consumer Services	1.8x	10.4x	22.2x	2.2x
Consumer Discretionary Distribution and Retail[1]	0.9x	8.1x	14.9x	2.4x
Consumer Staples	**1.3x**	**9.9x**	**18.9x**	**2.1x**
Consumer Staples Distribution and Retail[1]	0.5x	6.1x	14.1x	1.8x
Food, Beverage and Tobacco	1.5x	9.2x	18.9x	2.0x
Household and Personal Products	2.5x	14.1x	24.0x	3.4x
Energy	**1.2x**	**4.0x**	**6.8x**	**1.3x**
Health Care	**3.4x**	**14.7x**	**31.1x**	**3.3x**
Health Care Equipment and Services	2.6x	14.2x	29.7x	3.1x
Pharmaceuticals, Biotechnology and Life Sciences	4.3x	15.7x	31.9x	3.6x
Industrials	**1.1x**	**9.0x**	**17.7x**	**2.4x**
Capital Goods	1.2x	9.6x	18.4x	2.4x
Commercial and Professional Services	1.0x	8.9x	17.8x	2.6x
Transportation	1.0x	6.0x	12.5x	2.0x
Information Technology	**2.3x**	**14.6x**	**23.9x**	**3.5x**
Semiconductors and Semiconductor Equipment	4.2x	14.6x	22.7x	4.2x
Software and Services	2.0x	14.1x	24.5x	3.5x
Technology Hardware and Equipment	2.0x	16.0x	24.1x	3.1x
Materials	**0.9x**	**5.4x**	**9.1x**	**1.3x**
Real Estate	**12.6x**	**21.5x**	**16.2x**	**0.7x**
Utilities	**2.2x**	**9.5x**	**19.9x**	**1.8x**
Electric, Gas and Water Utilities[2]	1.3x	8.2x	15.9x	1.8x
Independent Power and Renewable Electricity Producers[2]	6.0x	16.9x	28.7x	1.9x

Financials Sector/Industry Group	Market Cap/Revenues	P/TBV	P/E	P/B
Financials	**2.0x**	**1.3x**	**10.0x**	**1.1x**
Banks	2.1x	0.9x	7.4x	0.8x
Financial Services[1]	2.5x	2.1x	13.4x	1.5x
Insurance	0.8x	2.3x	12.8x	1.4x

[1] Reflects revisions to the GICS structure that took effect on March 17, 2023. Comparisons to prior periods may not be meaningful due to the shifting composition of the structure. For more information see https://www.msci.com/our-solutions/indexes/gics.
[2] According to GICS nomenclature, these are classified as "Industry," which is one level below "Industry Group."

Country Snapshot: France

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The CAC 40 index reflects the performance of the 40 largest and most actively traded shares listed on the Euronext Paris and is the most widely used indicator of the Paris stock market. It is typically used as the benchmark stock market index in France. The percentage of French companies in the STOXX® Europe TMI is 8%, with 98% of the constituents of the CAC 40 being comprised within the European index.

In the first quarter of 2023, the CAC 40 increased by 13.1% (in price terms). For comparison, the STOXX® Europe TMI increased by 7.5%. France's real GDP is expected to grow by 0.7% in 2023 and 1.3% in 2024, according to the IMF's latest *World Economic Outlook* report.

CAC 40 Spotlight

5Y Evolution: CAC 40 and STOXX® Europe TMI

Stock market performance in Q1 2023

+13%

+8%
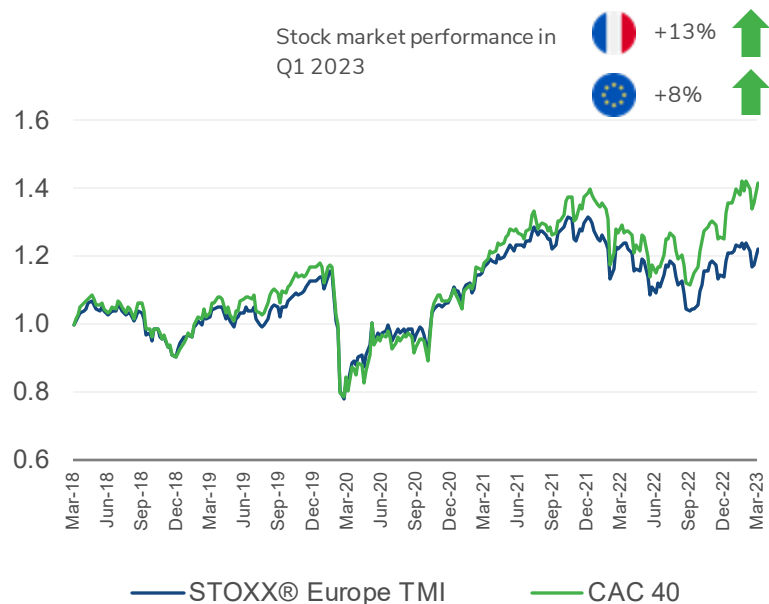
Top Five Industries

Industry	Market Cap (€ bn)[1]	% of CAC 40	Number of Companies
Consumer Durables and Apparel	691	29%	3
Capital Goods	399	17%	9
Household and Personal Products	220	9%	1
Pharmaceuticals, Biotechnology and Life Sciences	137	6%	2
Energy	133	6%	1

CAC 40 Market Cap[1]

€2,393 bn

[1] As of the report reference date.

Sources: Capital IQ; International Monetary Fund—*World Economic Outlook* (April 2023); Kroll analysis

Country Snapshot: Germany

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The DAX is a total return index of 40 select German blue chip stocks traded on the Frankfurt Stock Exchange and is typically used as the benchmark stock market index in Germany. The percentage of German companies in the STOXX ® Europe TMI is 10%, with all of the constituents of the DAX being comprised within the European index.

In the first quarter of 2023, the DAXK ("DAX" in price terms) increased by 11.9%. For comparison, the STOXX® Europe TMI increased by 7.5%. Germany's real GDP is expected to decrease by 0.1% in 2023 and grow by 1.1% in 2024, according to the IMF's latest *World Economic Outlook* report.

DAX Spotlight

5Y Evolution: DAXK and STOXX® Europe TMI[1]

Stock market performance in Q1 2023

+12% ⬆

+8% ⬆

STOXX® Europe TMI   DAXK
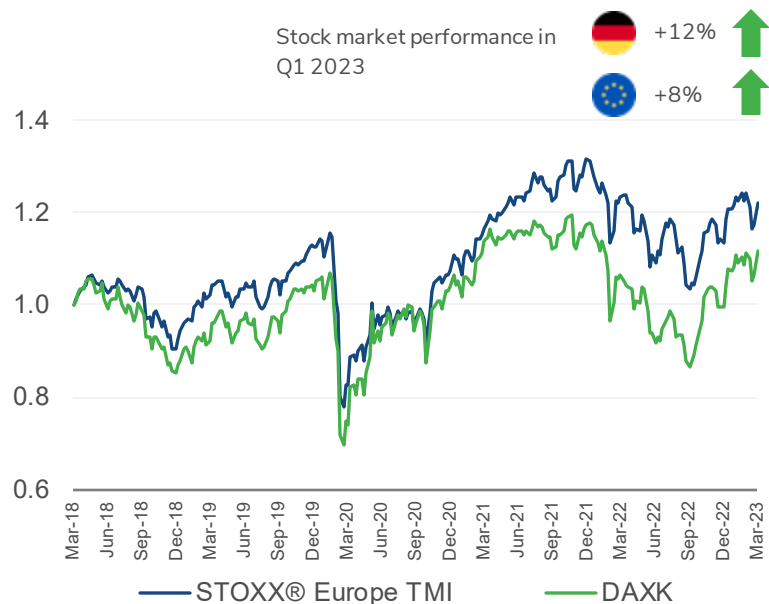
Top Five Industries

Industry	Market Cap (€ bn)[2]	% of DAX	Number of Companies
Automobiles and Components	350	21%	6
Capital Goods	292	17%	7
Pharmaceuticals, Biotechnology and Life Sciences	166	10%	4
Insurance	152	9%	3
Software and Services	136	8%	1

DAX Market Cap[2]

€1,690 bn

[1] Although the DAX (total return index) is more widely recognized, for consistency, we refer to the DAXK (price index).
[2] As of the report reference date.
Sources: Capital IQ; International Monetary Fund—*World Economic Outlook* (April 2023); Kroll analysis

# Country Snapshot: Italy 🇮🇹

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The FTSE MIB index consists of the 40 most liquid and capitalized stocks listed on the Borsa Italiana. It is typically used as the benchmark stock market index in Italy. The percentage of Italian companies in the STOXX® Europe TMI is 6%, with all of the constituents of the FTSE MIB being comprised within the European index.

In the first quarter of 2023, the FTSE MIB increased (in price terms) by 14.4%. For comparison, the STOXX® Europe TMI increased by 7.5%. Italy's real GDP is expected to grow by 0.7% in 2023 and 0.8% in 2024, according to the IMF's latest *World Economic Outlook* report.

FTSE MIB Spotlight

5Y Evolution: FTSE MIB and STOXX® Europe TMI

Stock market performance in Q1 2023

🇮🇹 +14% ⬆

🇪🇺 +8% ⬆

STOXX® Europe TMI —— FTSE MIB
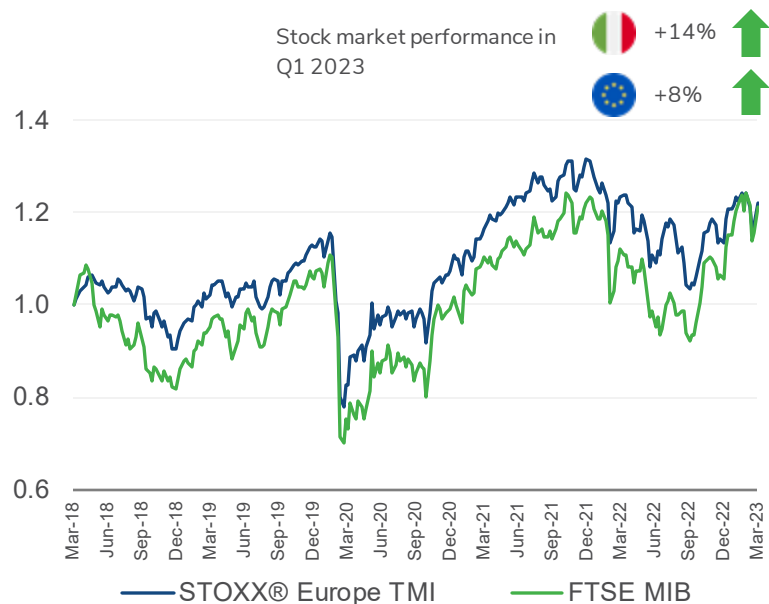
Top Five Industries

Industry`	Market Cap (€ bn)[1]	% of FTSE MIB	Number of Companies
Utilities	106	18%	7
Automobiles and Components	103	17%	3
Banks	102	17%	6
Energy	61	10%	3
Semiconductors and Semiconductor Equipment	44	7%	1

FTSE MIB Market Cap[1]

€598 bn

[1] As of the report reference date.

Sources: Capital IQ; International Monetary Fund—*World Economic Outlook* (April 2023); Kroll analysis

Country Snapshot: Spain

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The IBEX 35 is the official index of the Spanish Continuous Exchange. The index comprises the 35 most liquid stocks traded on the continuous market. It is typically used as the benchmark stock market index in Spain. The percentage of Spanish companies in the STOXX® Europe TMI is 4%, with all of the constituents of the IBEX 35 being comprised within the European index.

In the first quarter of 2023, the IBEX 35 increased (in price terms) by 12.2%. For comparison, the STOXX® Europe TMI increased by 7.5%. Spain's real GDP is expected to grow by 1.5% in 2023 and 2.0% in 2024, according to the IMF's latest *World Economic Outlook* report.

IBEX 35 Spotlight

5Y Evolution: IBEX 35 and STOXX® Europe TMI

Stock market performance in Q1 2023

+12%

+8%

STOXX® Europe TMI   IBEX 35
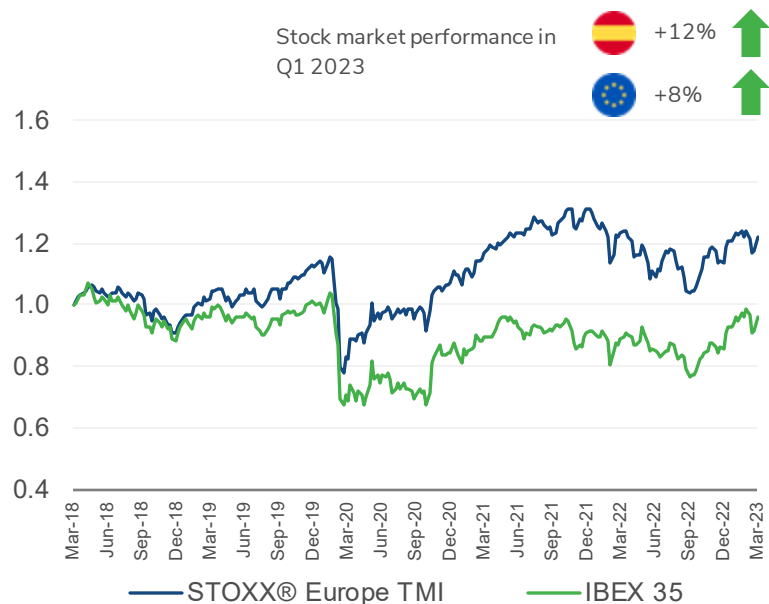
Top Five Industries

Industry	Market Cap (€ bn)[1]	% of IBEX 35	Number of Companies
Utilities	157	26%	8
Banks	135	23%	6
Retailing	96	16%	1
Telecommunication Services	48	8%	2
Transportation	34	6%	3

IBEX 35 Market Cap[1]

€598 bn

[1] As of the report reference date.

Sources: Capital IQ; International Monetary Fund—*World Economic Outlook* (April 2023); Kroll analysis

Country Snapshot: United Kingdom

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The FTSE 100 index is a capitalization-weighted index of the 100 most highly capitalized companies traded on the London Stock Exchange. It is typically used as the benchmark stock market index in the UK. The percentage of UK companies in the STOXX® Europe TMI is 14%, with 95% of the constituents of the FTSE 100 being comprised within the European index.

In the first quarter of 2023, the FTSE 100 increased (in price terms) by 2.4%. For comparison, the STOXX® Europe TMI increased by 7.5%. The UK's real GDP is expected to decrease by 0.3% in 2023 and to grow by 1.0% in 2024, according to the IMF's latest *World Economic Outlook* report.

FTSE 100 Spotlight

5Y Evolution: FTSE 100 and STOXX® Europe TMI

Stock market performance in Q1 2023

+2%

+8%

STOXX® Europe TMI   FTSE 100
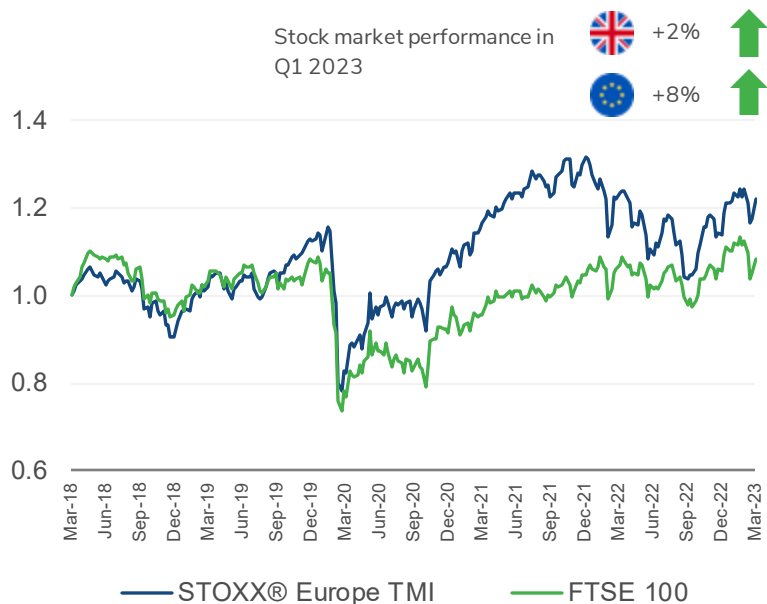
Top Five Industries

Industry	Market Cap (€ bn)[1]	% of FTSE 100	Number of Companies
Materials	308	13%	12
Energy	284	12%	2
Pharmaceuticals, Biotechnology and Life Sciences	264	11%	2
Banks	234	10%	5
Food, Beverage and Tobacco	211	9%	5

FTSE 100 Market Cap[1]

€2,387 bn

[1] As of the report reference date. Exchange rate as of March 31, 2023, provided by Capital IQ.
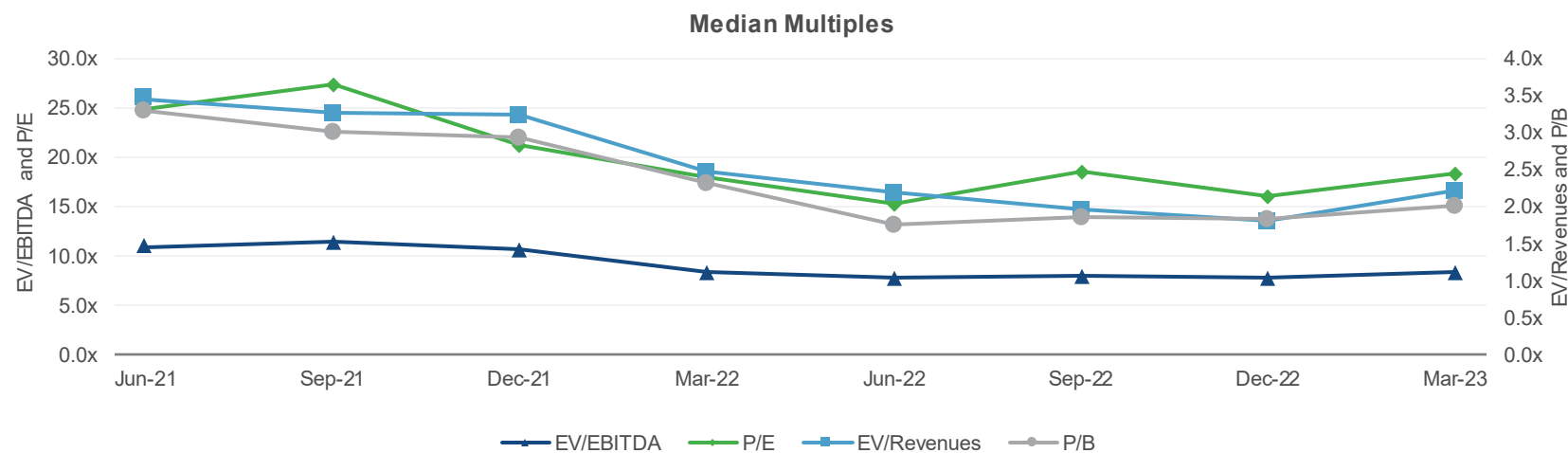Sources: Capital IQ; International Monetary Fund—*World Economic Outlook* (April 2023); Kroll analysis

Media and Entertainment

Q1 2023

Media and Entertainment

As of March 31, 2023

	EV/Revenues	EV/EBITDA	P/E	P/B
Number of Companies	55	55	55	55
Number of Outliers[1]	6	8	17	9
Number of Observations (final)[2]	49	47	38	46
High	13.8x	63.8x	136.8x	12.0x
Third Quartile	4.1x	13.7x	29.9x	3.3x
Mean	3.3x	11.6x	27.4x	3.2x
Median	2.2x	8.3x	18.5x	2.0x
First Quartile	1.1x	5.5x	11.7x	1.4x
Low	0.5x	3.1x	6.9x	0.6x

Median Multiples

[1] Outliers have been excluded from the concluded multiples. Please refer to "Criteria" for outlier criteria and definitions.

[2] A sector/industry group must have a minimum of five company participants to be calculated.

Sources: Capital IQ; Bloomberg; Kroll analysis.
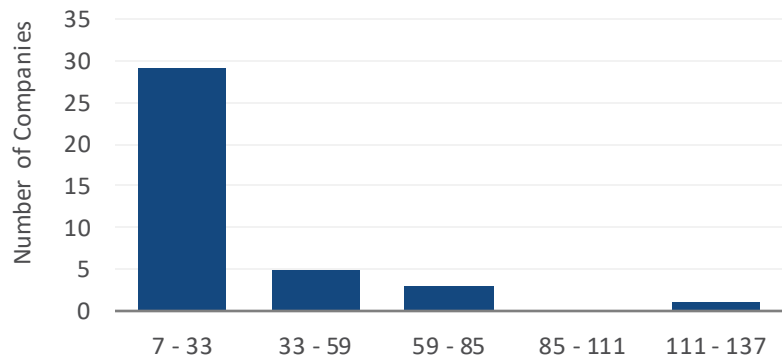
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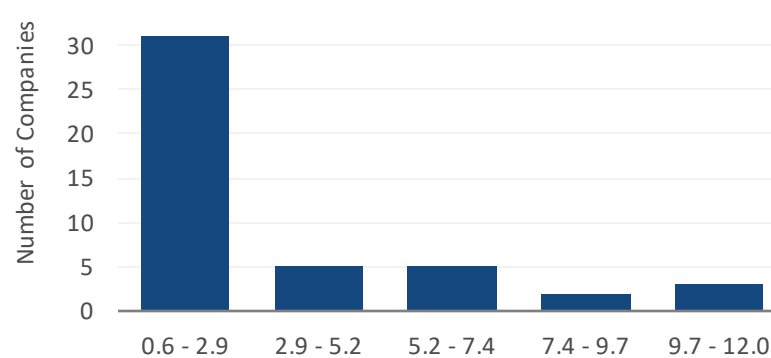
As of March 31, 2023
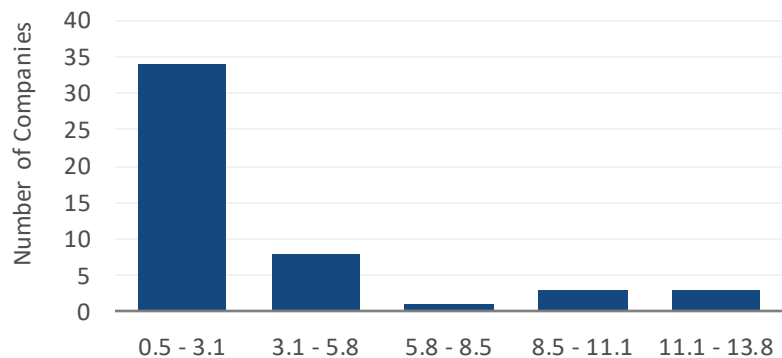
EV/Revenues
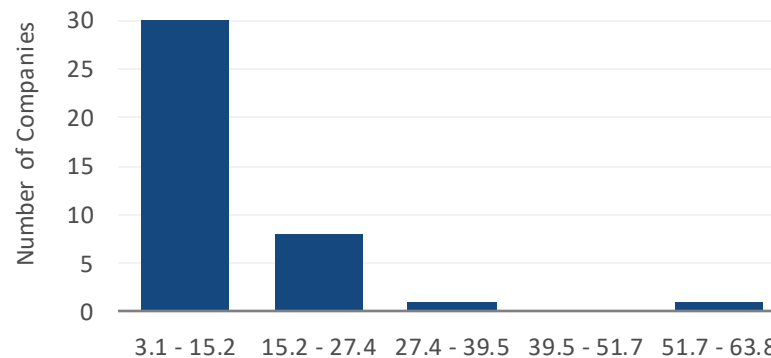
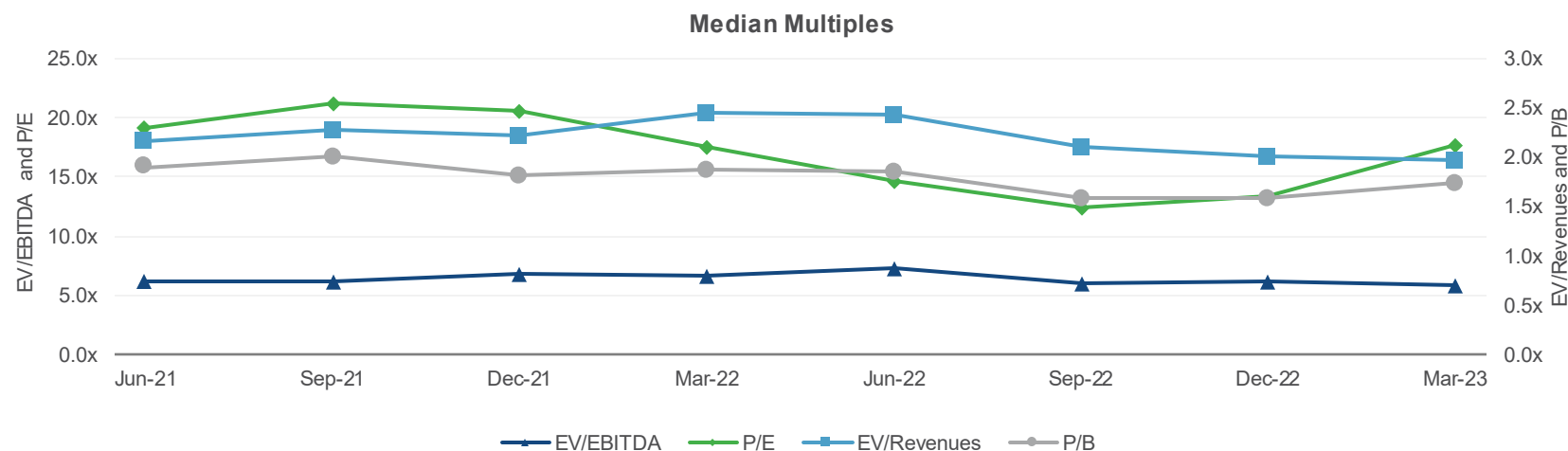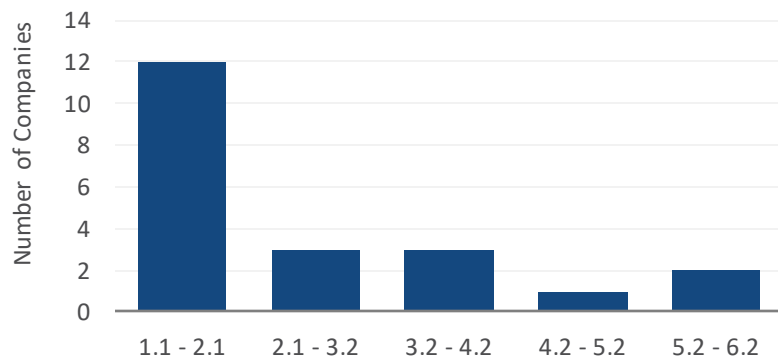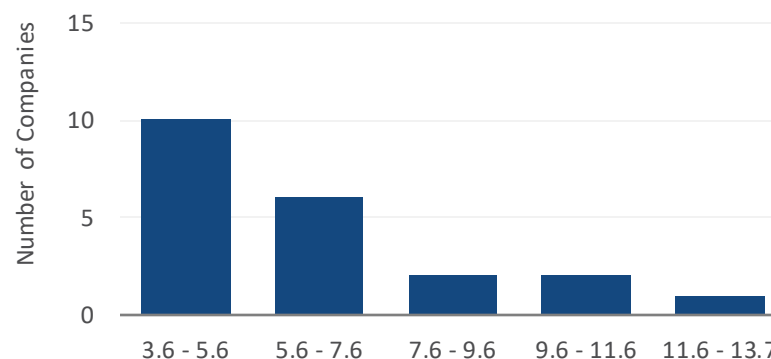**EV/EBITDA**

P/E

P/B

Telecommunication Services

Q1 2023

KROLL

Telecommunication Services

As of March 31, 2023

	EV/Revenues	EV/EBITDA	P/E	P/B
Number of Companies	25	25	25	25
Number of Outliers[1]	4	4	7	5
Number of Observations (final)[2]	21	21	18	20
High	6.2x	13.7x	37.6x	6.7x
Third Quartile	3.3x	7.4x	23.8x	2.5x
Mean	**2.5x**	**6.4x**	**19.4x**	**2.0x**
Median	**2.0x**	**5.9x**	**17.7x**	**1.7x**
First Quartile	1.4x	4.2x	11.4x	1.0x
Low	1.1x	3.6x	6.4x	0.7x

Median Multiples

[1] Outliers have been excluded from the concluded multiples. Please refer to "Criteria" for outlier criteria and definitions.

[2] A sector/industry group must have a minimum of five company participants to be calculated.

Sources: Capital IQ; Bloomberg; Kroll analysis.

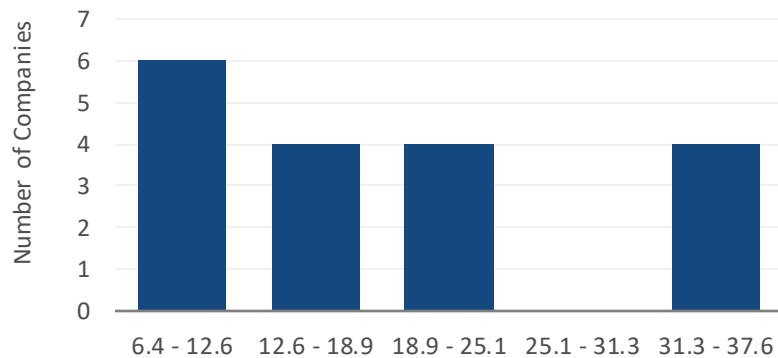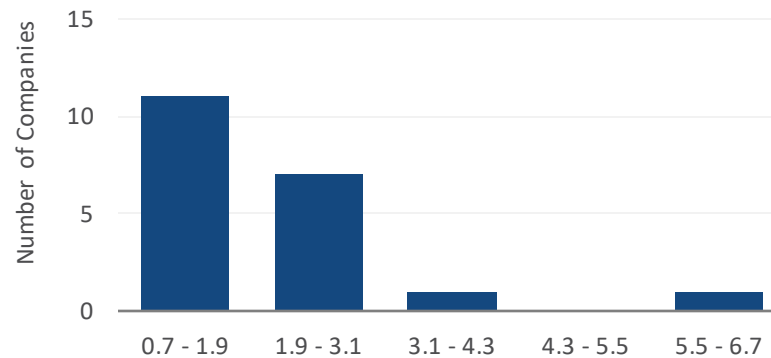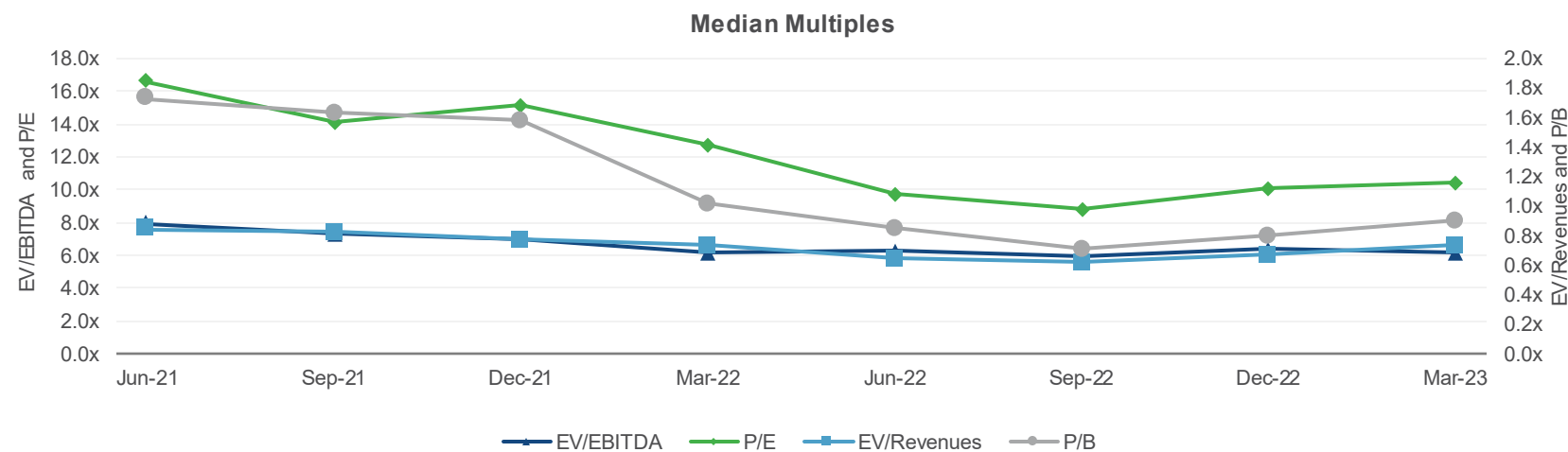# Telecommunication Services

As of March 31, 2023

Automobiles and Components

Q1 2023

KROLL

Automobiles and Components

As of March 31, 2023

	EV/Revenues	EV/EBITDA	P/E	P/B
Number of Companies	26	26	26	26
Number of Outliers[1]	5	6	11	6
Number of Observations (final)[2]	21	20	15	20
High	1.3x	8.0x	46.2x	2.8x
Third Quartile	0.8x	6.7x	14.3x	1.2x
Mean	**0.7x**	**6.1x**	**13.0x**	**1.1x**
Median	**0.7x**	**6.1x**	**10.5x**	**0.9x**
First Quartile	0.5x	5.0x	6.3x	0.8x
Low	0.3x	4.2x	4.1x	0.6x

Median Multiples

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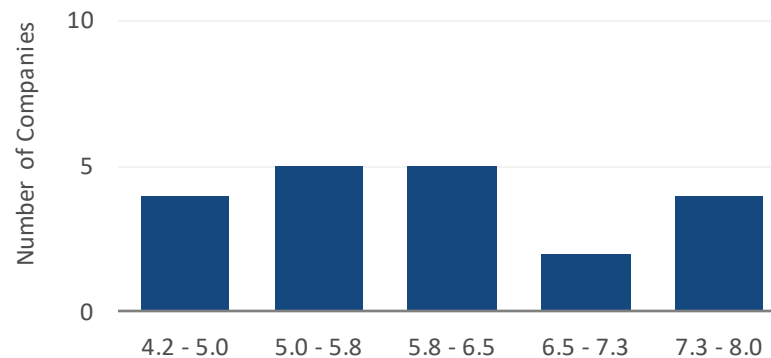Sources: Capital IQ; Bloomberg; Kroll analysis.

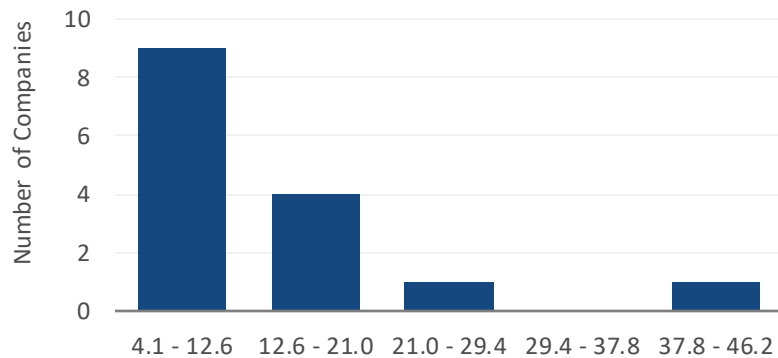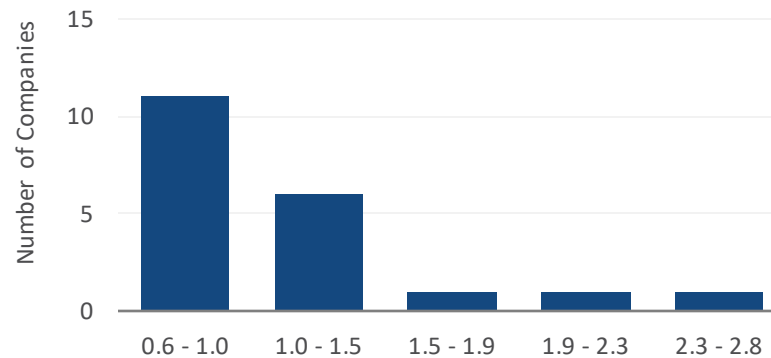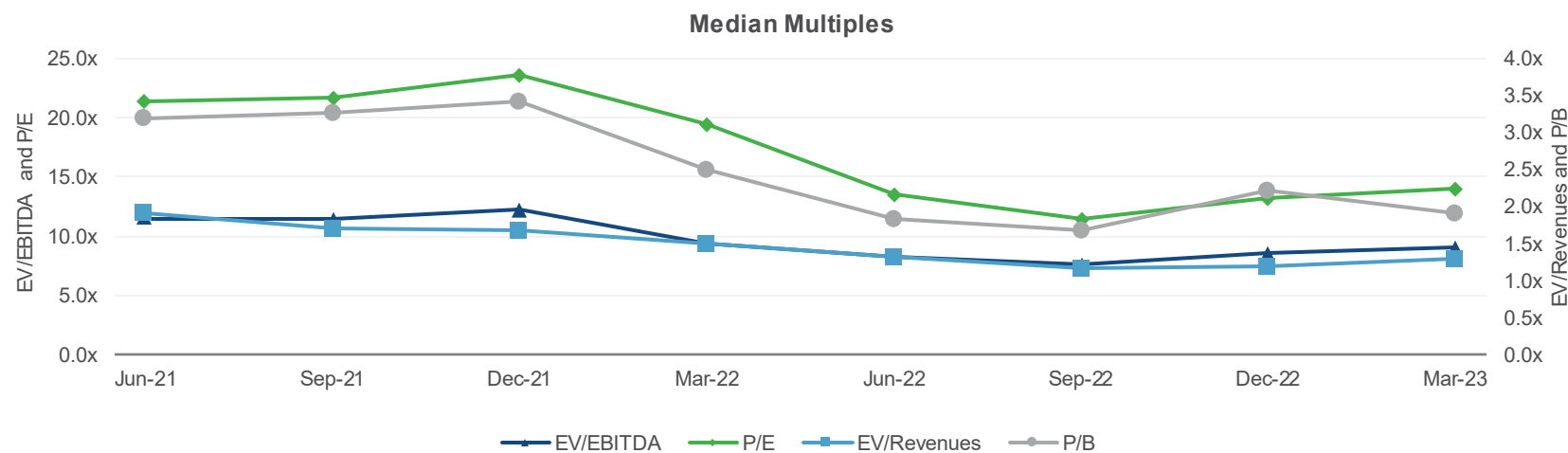# Automobiles and Components
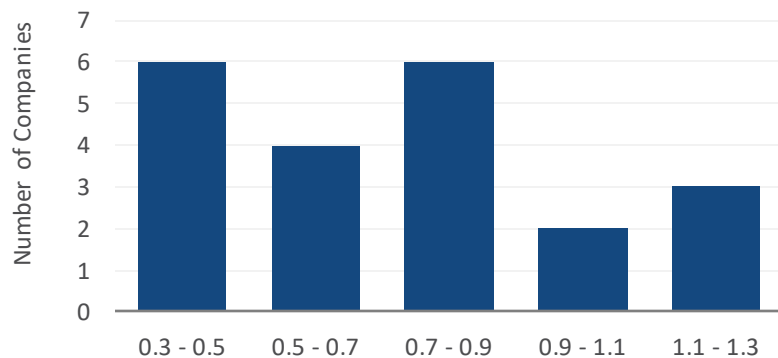
As of March 31, 2023

Consumer Durables and Apparel

Q1 2023

KROLL

Consumer Durables and Apparel

As of March 31, 2023

	EV/Revenues	EV/EBITDA	P/E	P/B
Number of Companies	56	56	56	56
Number of Outliers[1]	6	6	13	8
Number of Observations (final)[2]	50	50	43	48
High	7.3x	26.3x	51.7x	12.7x
Third Quartile	1.8x	10.9x	20.6x	4.5x
Mean	1.8x	10.0x	16.3x	3.1x
Median	1.3x	9.1x	14.1x	1.9x
First Quartile	0.8x	7.2x	8.8x	1.0x
Low	0.5x	3.6x	5.6x	0.6x

Median Multiples

[1] Outliers have been excluded from the concluded multiples. Please refer to "Criteria" for outlier criteria and definitions.
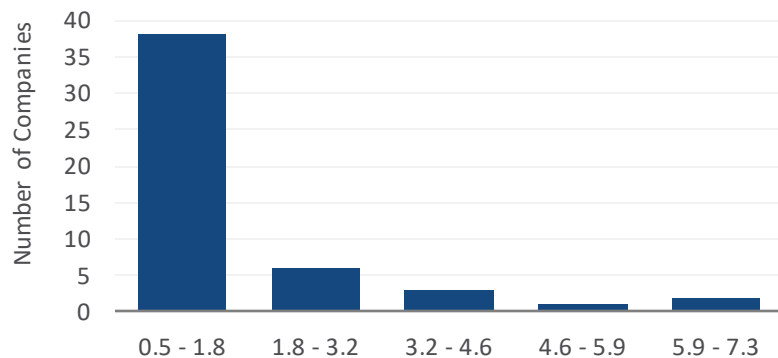
[2] A sector/industry group must have a minimum of five company participants to be calculated.

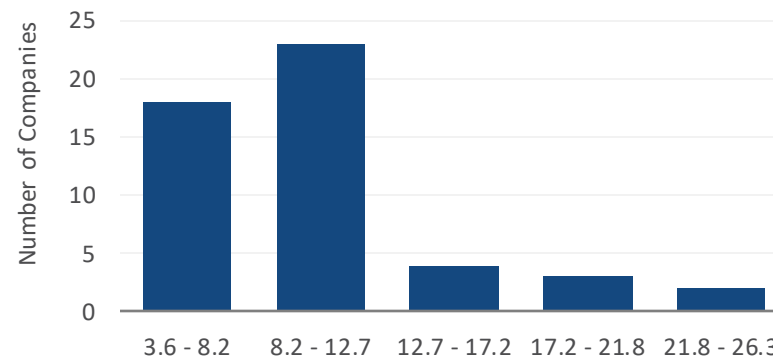Sources: Capital IQ; Bloomberg; Kroll analysis.

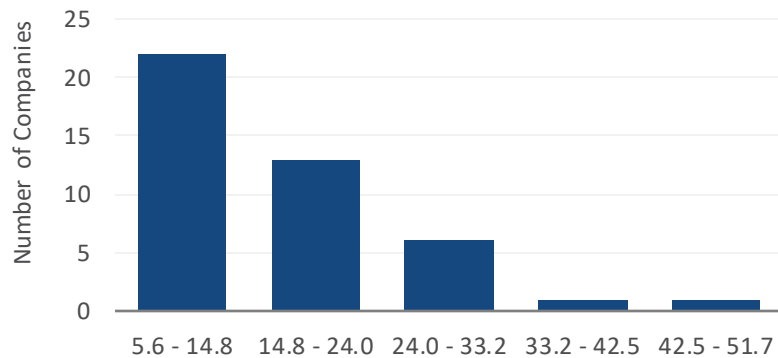# Consumer Durables and Apparel
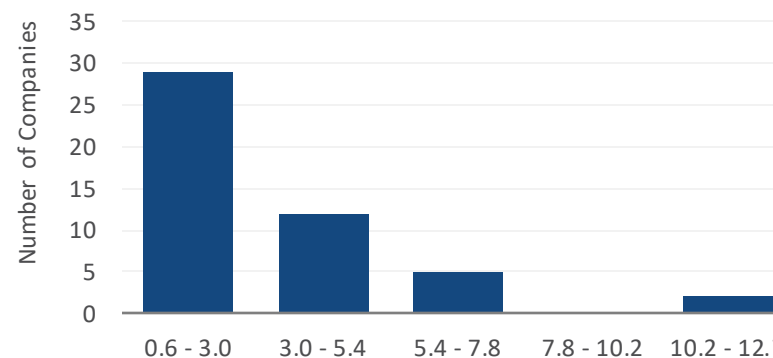
As of March 31, 2023

EV/Revenues

EV/EBITDA

P/E

P/B

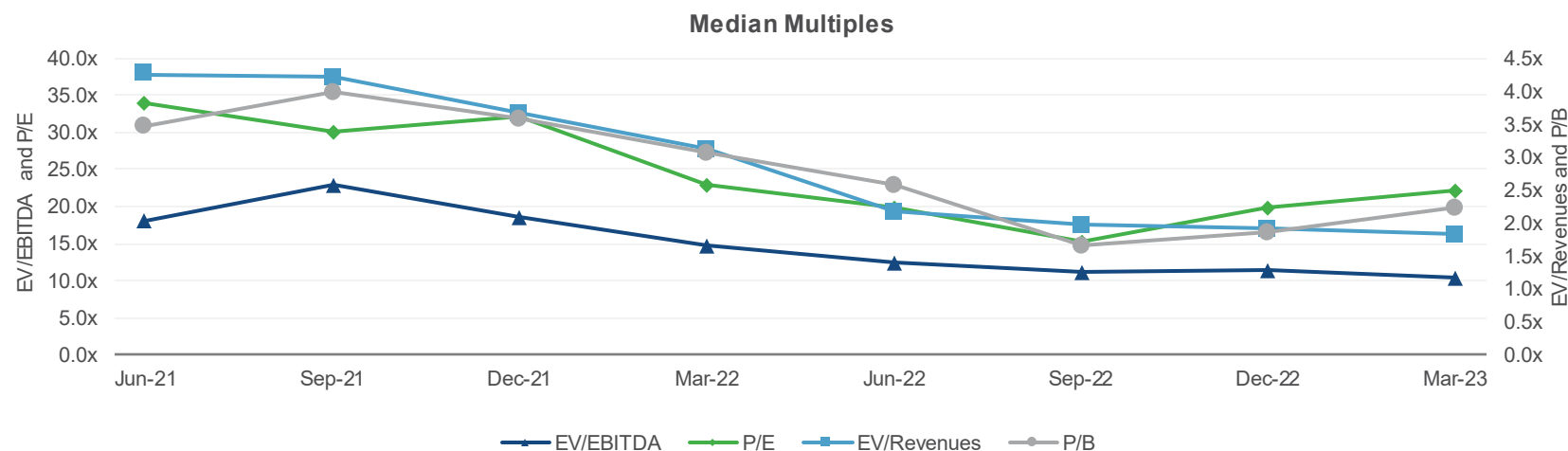# Consumer Services

Q1 2023

KROLL

Consumer Services

As of March 31, 2023

	EV/Revenues	EV/EBITDA	P/E	P/B
Number of Companies	44	44	44	44
Number of Outliers[1]	6	8	17	7
Number of Observations (final)[2]	38	36	27	37
High	5.8x	23.8x	67.7x	7.9x
Third Quartile	2.7x	13.8x	29.2x	3.2x
Mean	2.2x	11.0x	25.3x	2.8x
Median	1.8x	10.4x	22.2x	2.2x
First Quartile	1.2x	8.1x	15.1x	1.4x
Low	0.7x	5.1x	8.6x	0.5x

Median Multiples

[1] Outliers have been excluded from the concluded multiples. Please refer to "Criteria" for outlier criteria and definitions.
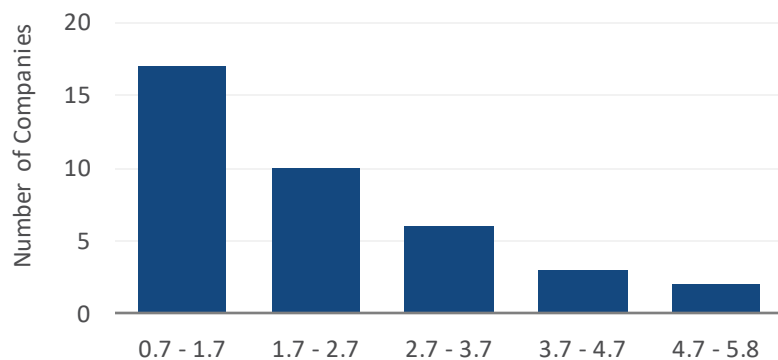
[2] A sector/industry group must have a minimum of five company participants to be calculated.

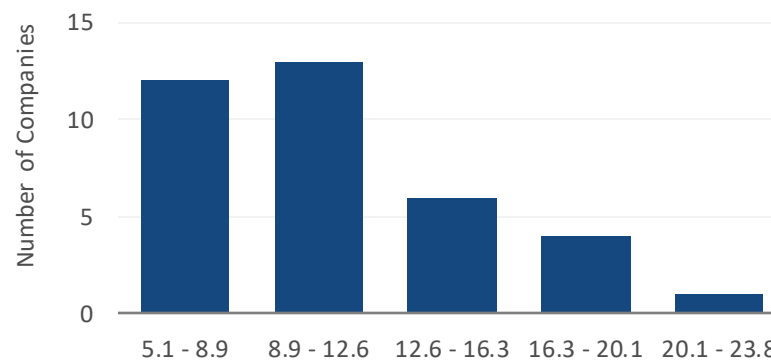Sources: Capital IQ; Bloomberg; Kroll analysis.
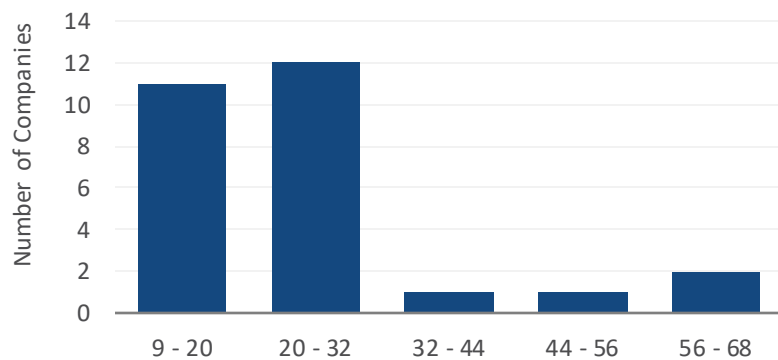
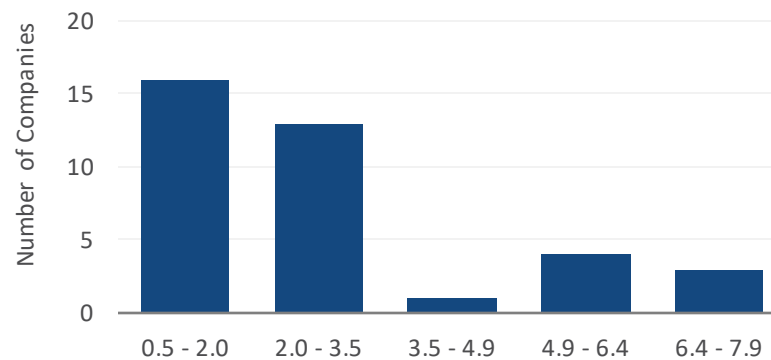# Consumer Services

As of March 31, 2023

EV/Revenues

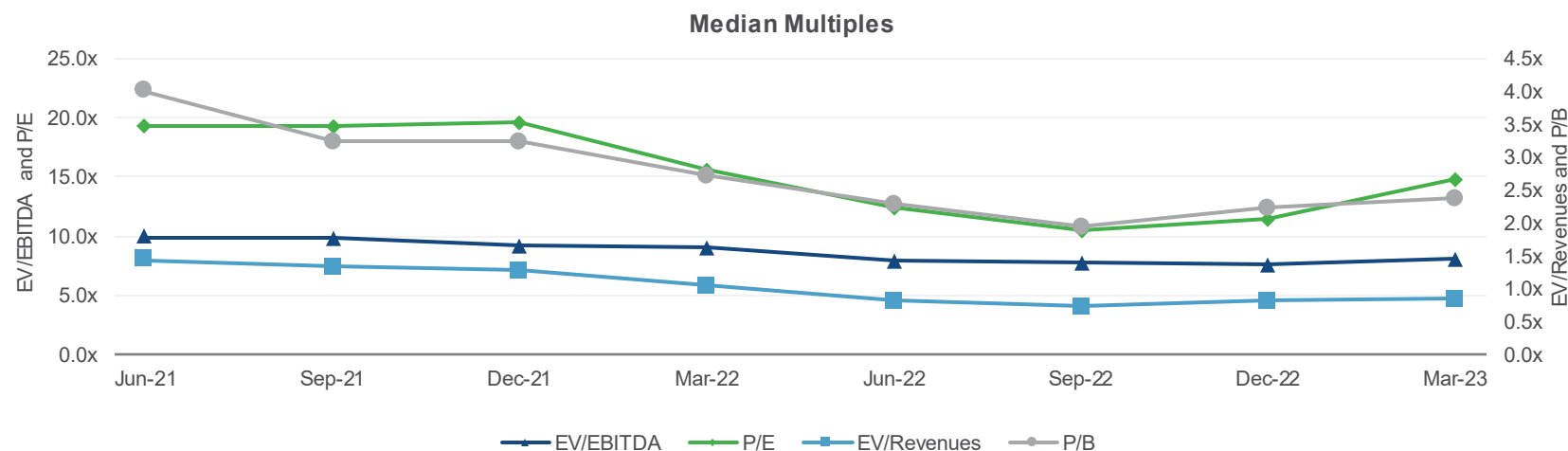**EV/EBITDA**

P/E

P/B

Consumer Discretionary Distribution and Retail

Q1 2023

KROLL

Consumer Discretionary Distribution and Retail

As of March 31, 2023

	EV/Revenues	EV/EBITDA	P/E	P/B
Number of Companies	54	54	54	54
Number of Outliers[1]	6	10	17	9
Number of Observations (final)[2]	48	44	37	45
High	2.2x	29.8x	45.5x	7.1x
Third Quartile	1.5x	10.5x	17.5x	3.7x
Mean	1.0x	9.3x	16.3x	2.7x
Median	0.9x	8.1x	14.9x	2.4x
First Quartile	0.5x	5.9x	11.5x	1.2x
Low	0.2x	4.0x	7.5x	0.6x

Median Multiples

[1] Outliers have been excluded from the concluded multiples. Please refer to "Criteria" for outlier criteria and definitions.
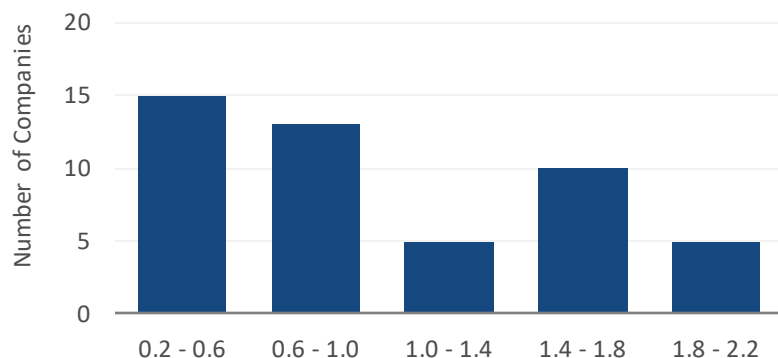[2] A sector/industry group must have a minimum of five company participants to be calculated.
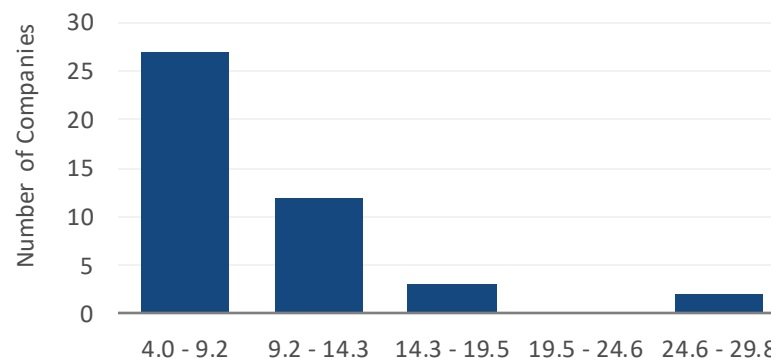Sources: Capital IQ; Bloomberg; Kroll analysis.

Consumer Discretionary Distribution and Retail
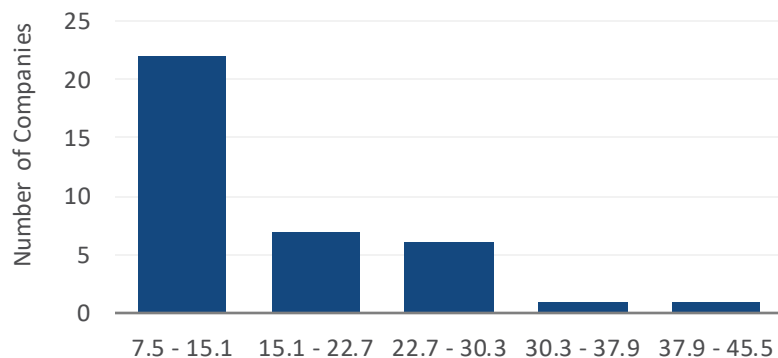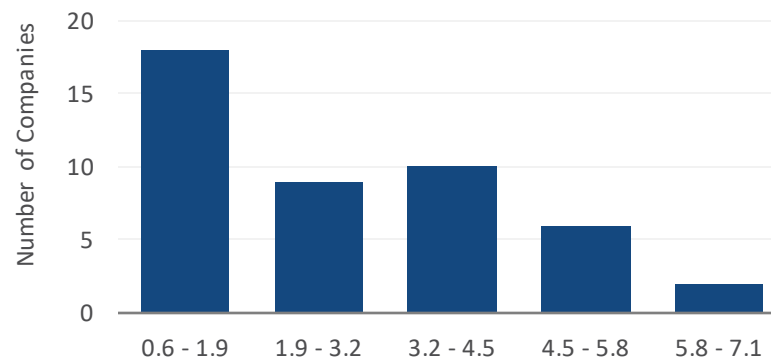
As of March 31, 2023

EV/Revenues
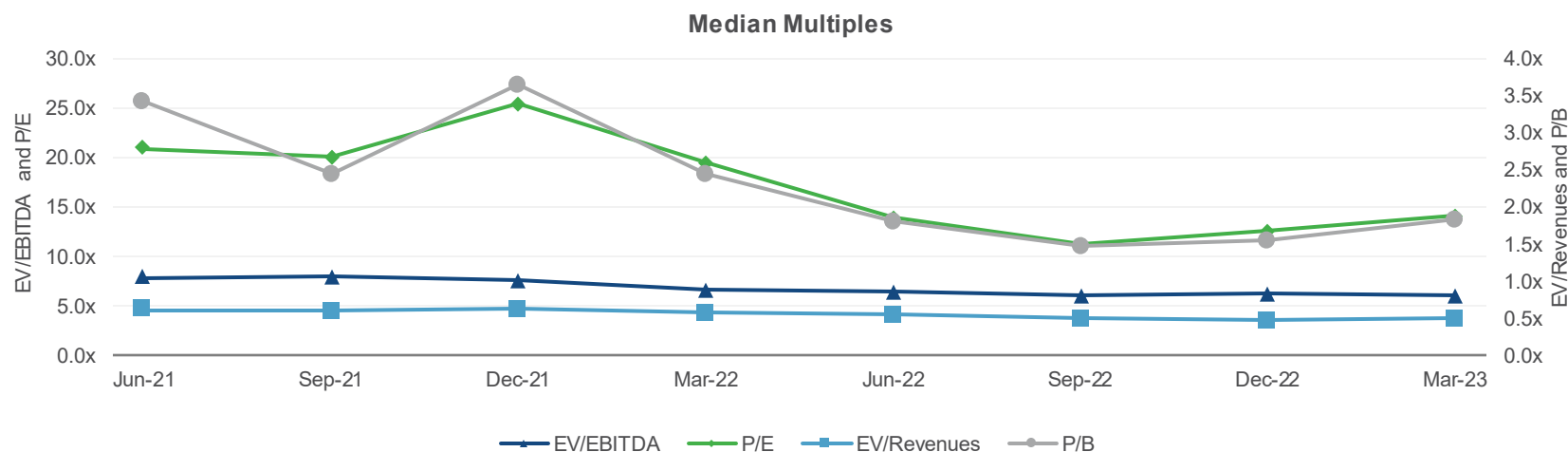
EV/EBITDA

P/E

P/B

Consumer Staples Distribution and Retail

Q1 2023

KROLL

Consumer Staples Distribution and Retail

As of March 31, 2023

	EV/Revenues	EV/EBITDA	P/E	P/B
Number of Companies	19	19	19	19
Number of Outliers[1]	2	4	6	3
Number of Observations (final)[2]	17	15	13	16
High	1.9x	20.1x	35.1x	8.6x
Third Quartile	0.6x	10.0x	27.3x	3.4x
Mean	0.6x	8.4x	18.6x	2.6x
Median	0.5x	6.1x	14.1x	1.8x
First Quartile	0.4x	5.7x	12.5x	1.3x
Low	0.2x	4.2x	9.8x	0.7x

Median Multiples

[1] Outliers have been excluded from the concluded multiples. Please refer to "Criteria" for outlier criteria and definitions.
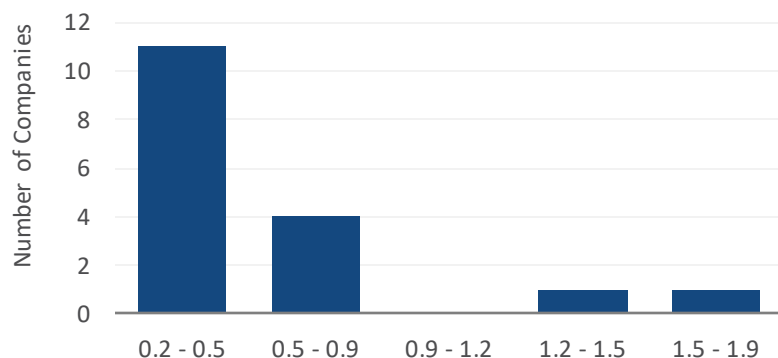
[2] A sector/industry group must have a minimum of five company participants to be calculated.

Sources: Capital IQ; Bloomberg; Kroll analysis.

Consumer Staples Distribution and Retail

As of March 31, 2023

EV/Revenues
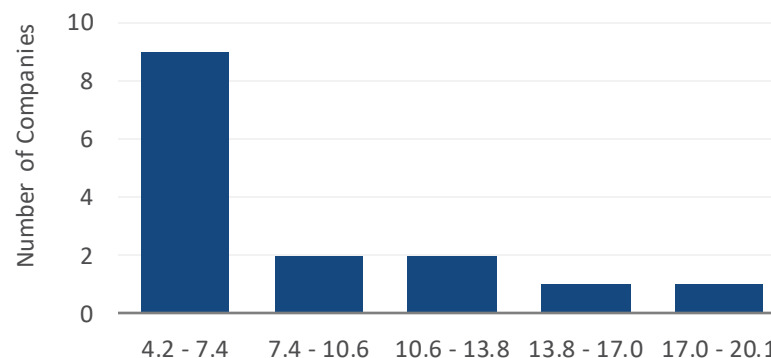
EV/EBITDA

P/E
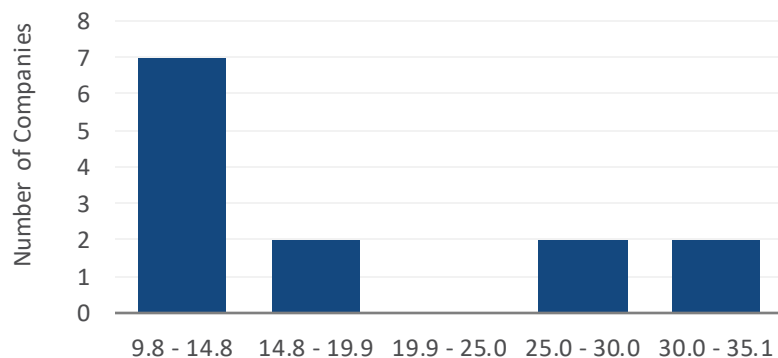
P/B
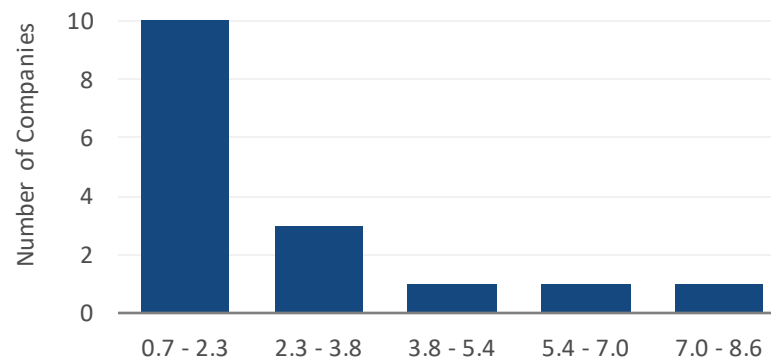
Food, Beverage and Tobacco

Q1 2023

KROLL

Food, Beverage and Tobacco

As of March 31, 2023

	EV/Revenues	EV/EBITDA	P/E	P/B
Number of Companies	51	51	51	51
Number of Outliers[1]	6	7	9	6
Number of Observations (final)[2]	45	44	42	45
High	5.6x	17.2x	37.8x	6.5x
Third Quartile	2.4x	12.0x	23.3x	3.1x
Mean	**1.8x**	**10.0x**	**19.1x**	**2.4x**
Median	**1.5x**	**9.2x**	**18.9x**	**2.0x**
First Quartile	0.9x	7.4x	13.8x	1.3x
Low	0.4x	5.0x	8.1x	0.5x

Median Multiples

[1] Outliers have been excluded from the concluded multiples. Please refer to "Criteria" for outlier criteria and definitions.

[2] A sector/industry group must have a minimum of five company participants to be calculated.
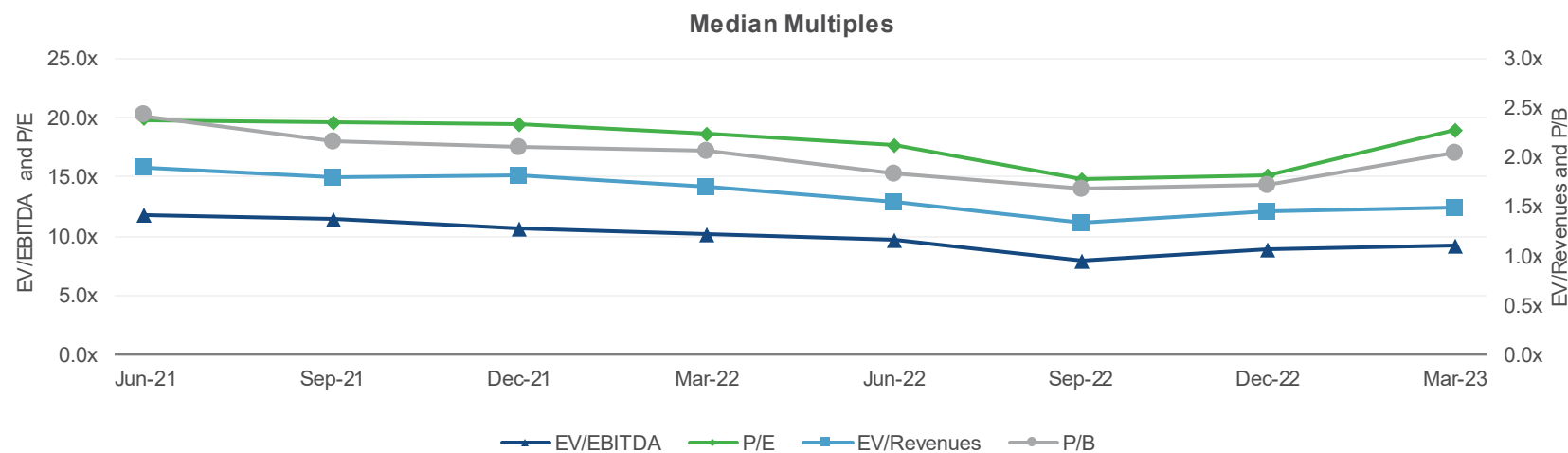
Sources: Capital IQ; Bloomberg; Kroll analysis.

Food, Beverage and Tobacco

As of March 31, 2023
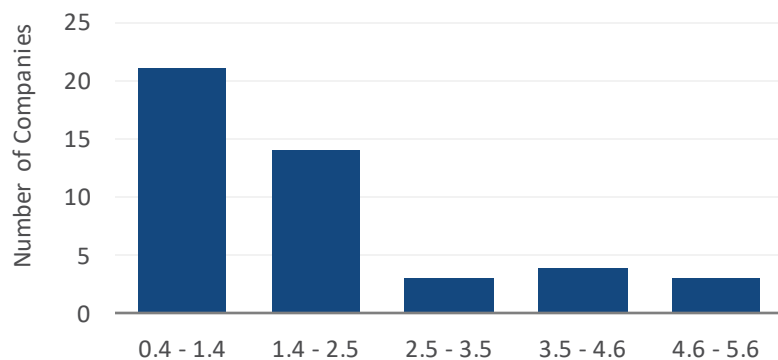
EV/Revenues

EV/EBITDA

P/E

P/B

Household and Personal Products

Q1 2023

Household and Personal Products

As of March 31, 2023

	EV/Revenues	EV/EBITDA	P/E	P/B
Number of Companies	12	12	12	12
Number of Outliers[1]	2	2	3	2
Number of Observations (final)[2]	10	10	9	10
High	6.1x	23.8x	37.6x	8.1x
Third Quartile	3.6x	15.1x	31.6x	6.0x
Mean	**3.0x**	**15.2x**	**25.4x**	**4.1x**
Median	**2.5x**	**14.1x**	**24.0x**	**3.4x**
First Quartile	1.7x	12.6x	18.6x	2.2x
Low	1.2x	11.8x	17.7x	1.5x
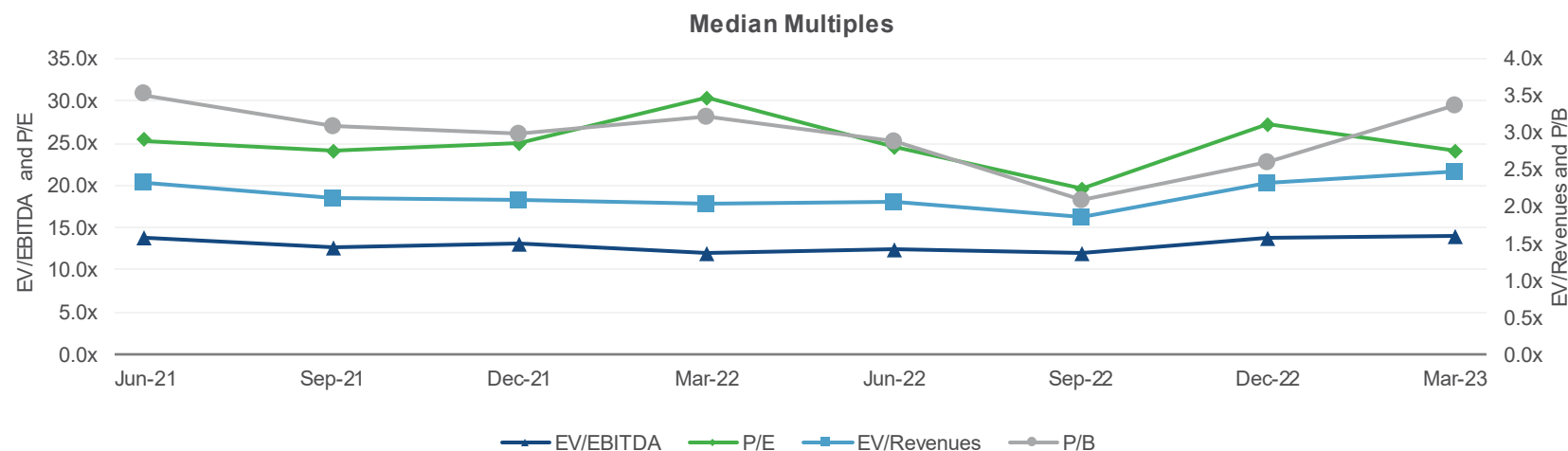
Median Multiples

[1] Outliers have been excluded from the concluded multiples. Please refer to "Criteria" for outlier criteria and definitions.

[2] A sector/industry group must have a minimum of five company participants to be calculated.
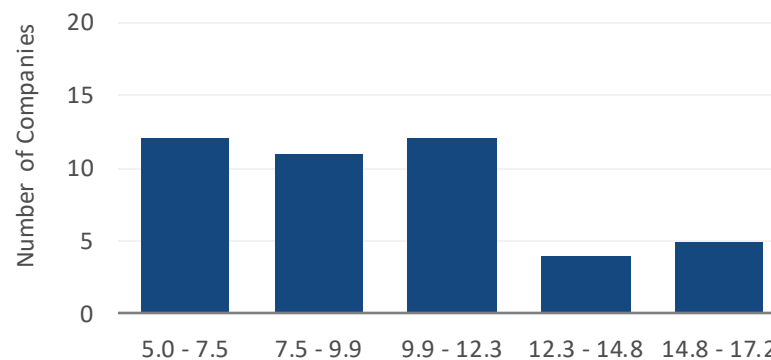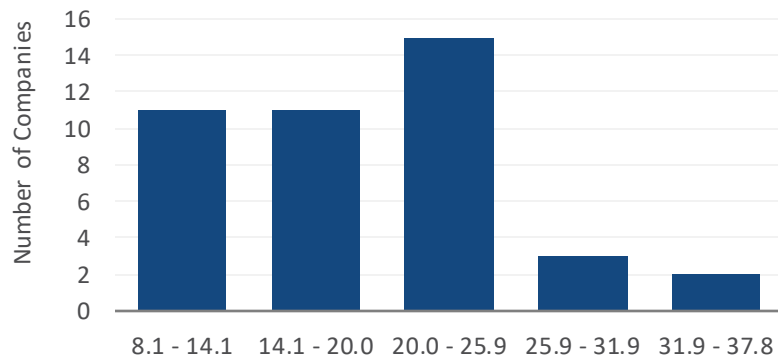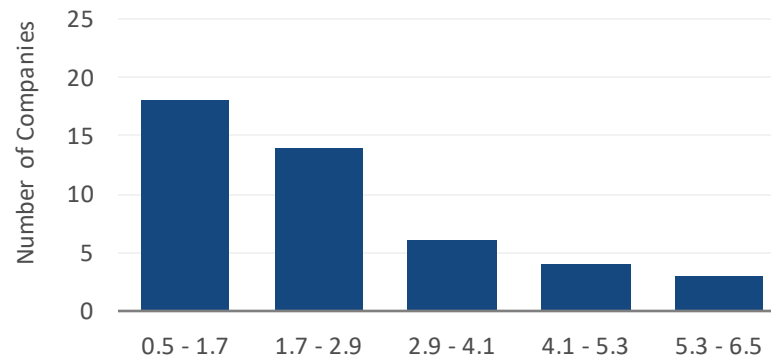
Sources: Capital IQ; Bloomberg; Kroll analysis.

Household and Personal Products

As of March 31, 2023
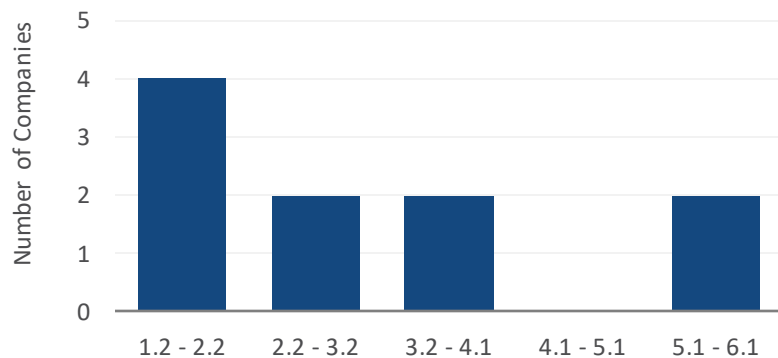
EV/Revenues
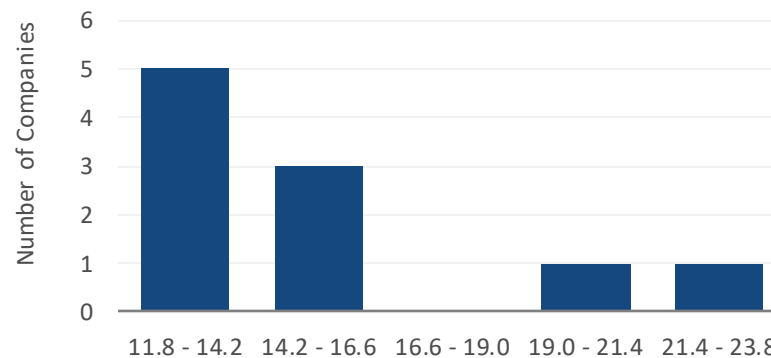
EV/EBITDA

P/E

P/B

Energy

Q1 2023

KROLL
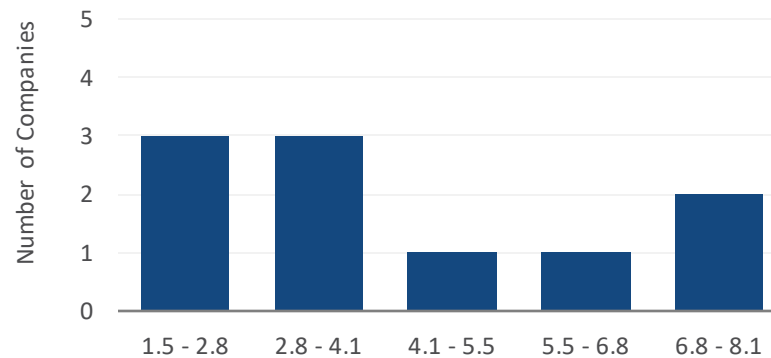
Energy

As of March 31, 2023

	EV/Revenues	EV/EBITDA	P/E	P/B
Number of Companies	65	65	65	65
Number of Outliers[1]	9	10	22	10
Number of Observations (final)[2]	56	55	43	55
High	10.6x	20.4x	32.6x	4.5x
Third Quartile	2.0x	7.3x	15.1x	1.6x
Mean	1.8x	5.6x	10.8x	1.4x
Median	1.2x	4.0x	6.8x	1.3x
First Quartile	0.5x	2.2x	4.3x	0.8x
Low	0.2x	0.9x	2.8x	0.5x
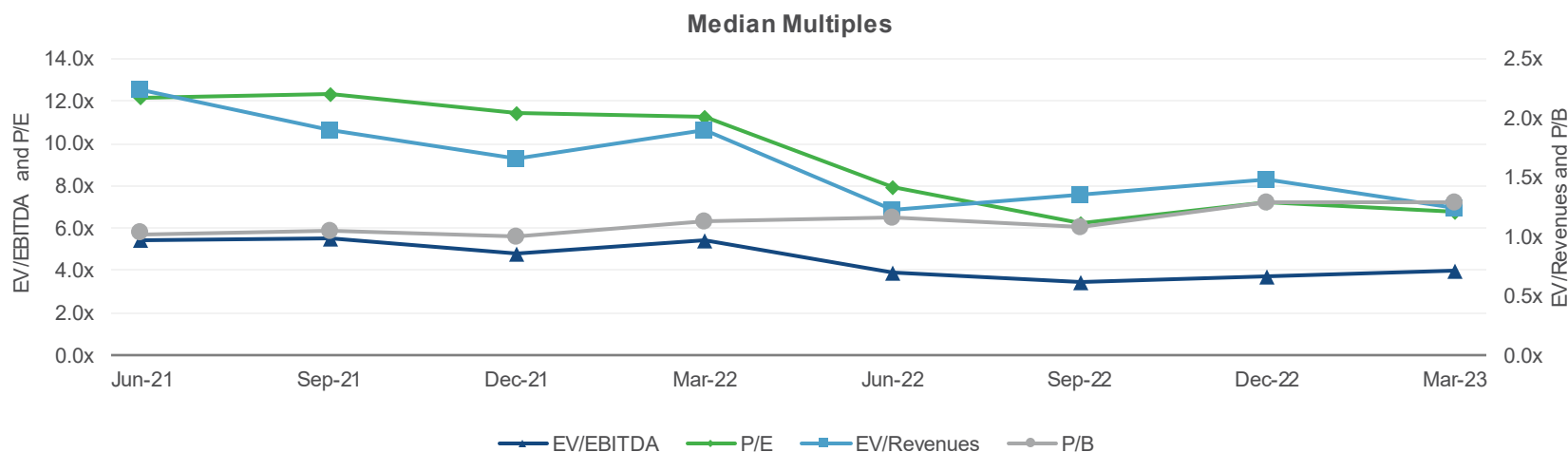
Median Multiples

[1] Outliers have been excluded from the concluded multiples. Please refer to "Criteria" for outlier criteria and definitions.

[2] A sector/industry group must have a minimum of five company participants to be calculated.

Sources: Capital IQ; Bloomberg; Kroll analysis.

Energy

As of March 31, 2023

Financials

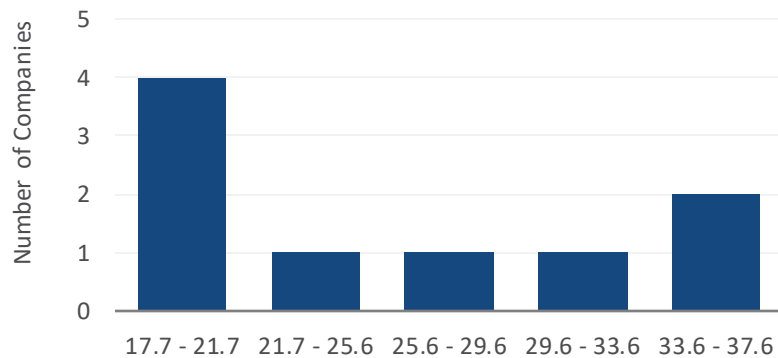Q1 2023

KROLL

Financials

As of March 31, 2023

	Market cap/Revenues	P/TBV	P/E	P/B
Number of Companies	195	195	195	195
Number of Outliers[1]	35	37	36	22
Number of Observations (final)[2]	160	158	159	173
High	7.1x	9.3x	62.9x	4.8x
Third Quartile	2.9x	2.8x	15.4x	1.7x
Mean	**2.4x**	**2.1x**	**13.0x**	**1.4x**
Median	**2.0x**	**1.3x**	**10.0x**	**1.1x**
First Quartile	1.4x	0.9x	6.6x	0.8x
Low	0.4x	0.4x	3.9x	0.4x
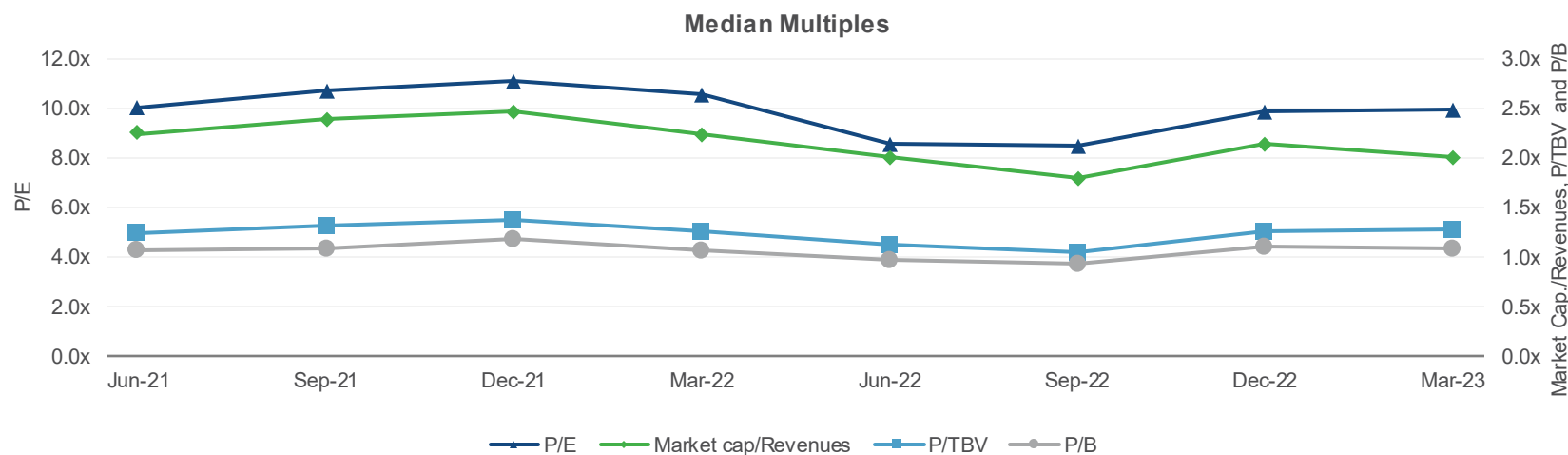
Median Multiples

[1] Outliers have been excluded from the concluded multiples. Please refer to "Criteria" for outlier criteria and definitions.

[2] A sector/industry group must have a minimum of five company participants to be calculated.

Sources: Capital IQ; Bloomberg; Kroll analysis.

Financials

As of March 31, 2023

Market Cap./Revenues

P/TBV

P/E
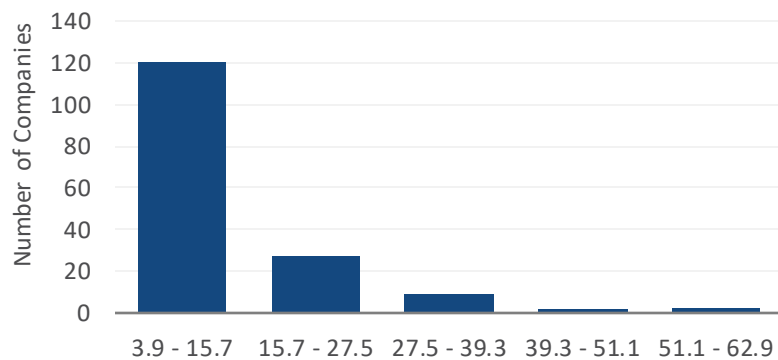
P/B
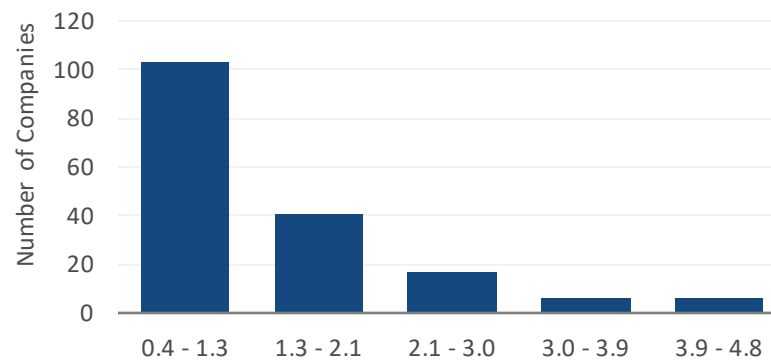
Health Care Equipment and Services

Q1 2023

Health Care Equipment and Services
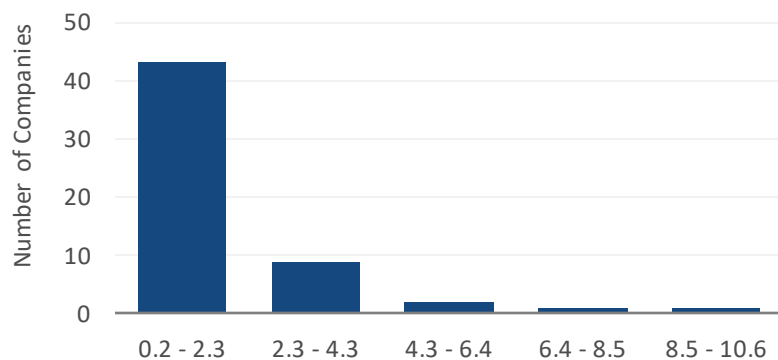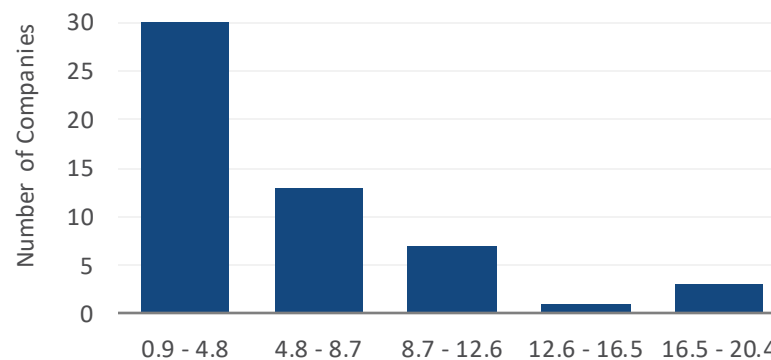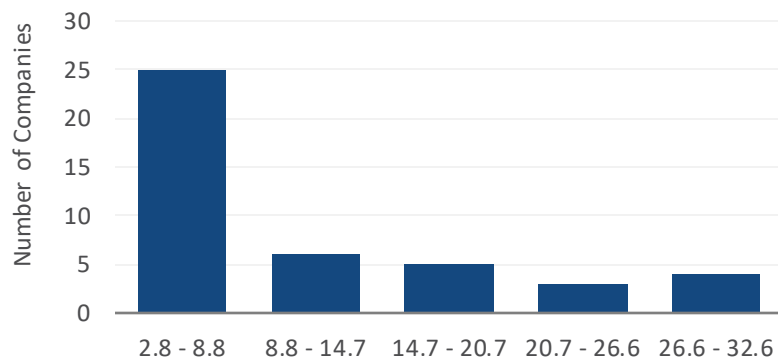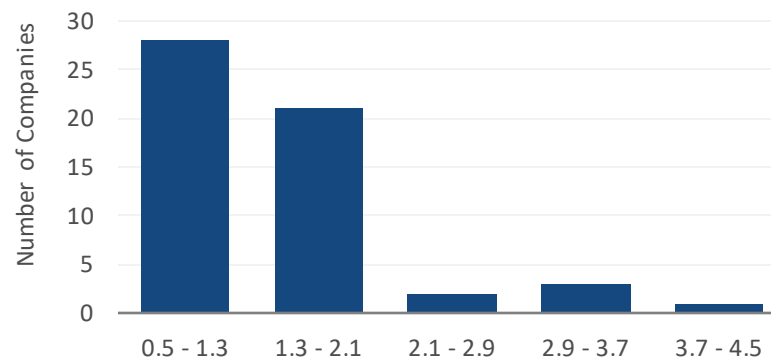
As of March 31, 2023

	EV/Revenues	EV/EBITDA	P/E	P/B
Number of Companies	47	47	47	47
Number of Outliers[1]	7	9	14	9
Number of Observations (final)[2]	40	38	33	38
High	10.1x	56.2x	119.9x	11.8x
Third Quartile	4.0x	17.9x	41.2x	4.4x
Mean	**3.2x**	**16.4x**	**37.9x**	**3.4x**
Median	**2.6x**	**14.2x**	**29.7x**	**3.1x**
First Quartile	1.5x	10.4x	24.3x	1.6x
Low	0.3x	8.4x	10.2x	0.7x
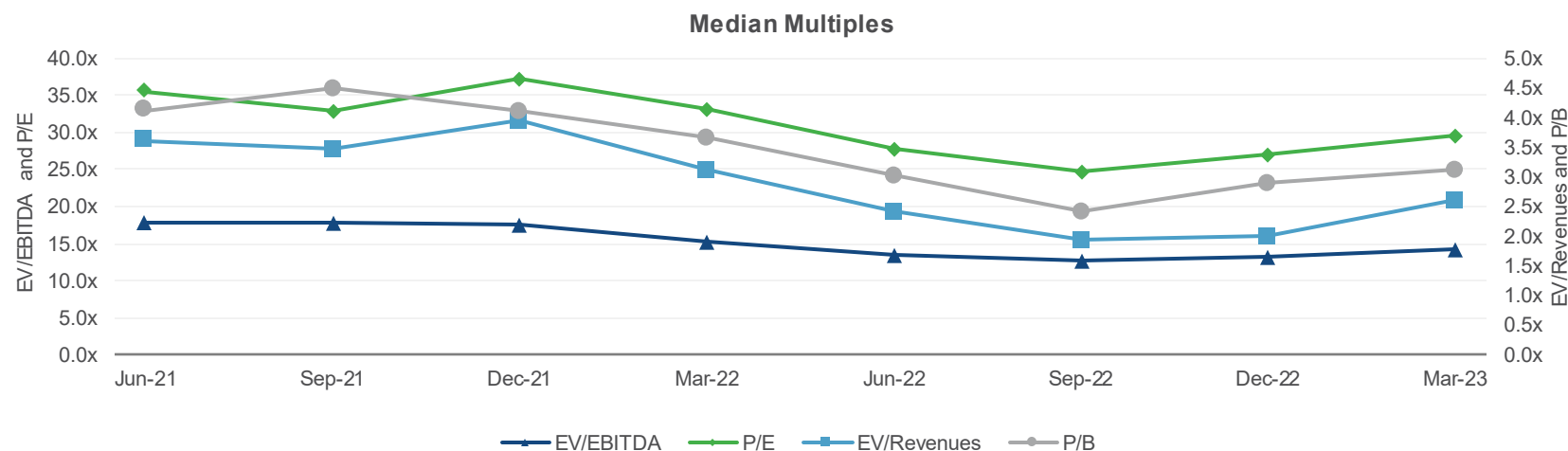
Median Multiples

[1] Outliers have been excluded from the concluded multiples. Please refer to "Criteria" for outlier criteria and definitions.

[2] A sector/industry group must have a minimum of five company participants to be calculated.

Sources: Capital IQ; Bloomberg; Kroll analysis.

Health Care Equipment and Services
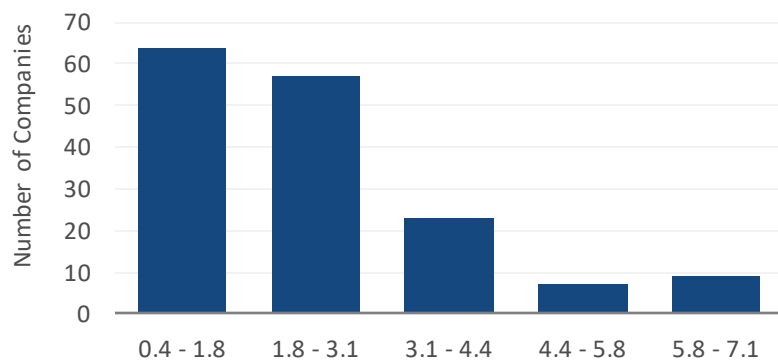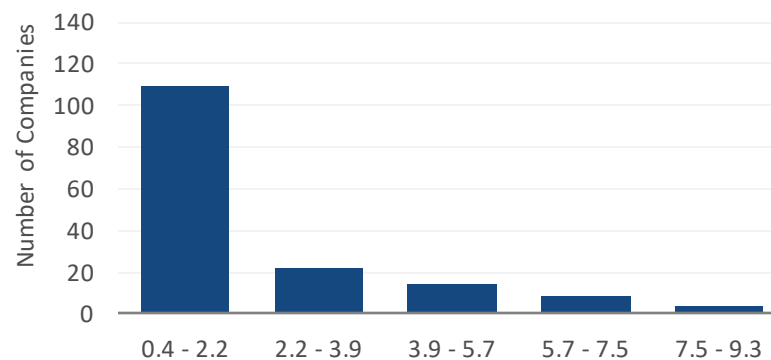
As of March 31, 2023

EV/Revenues
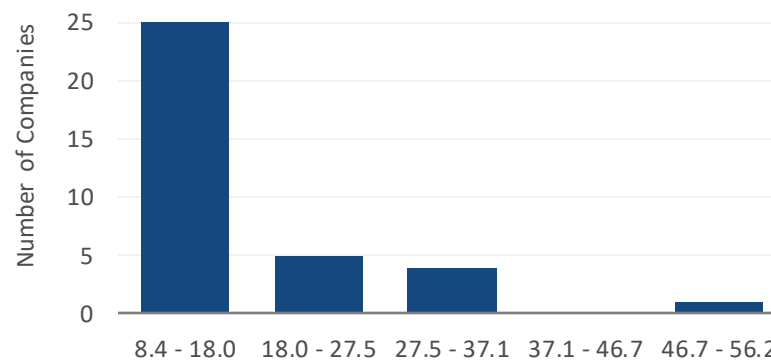
EV/EBITDA

P/E
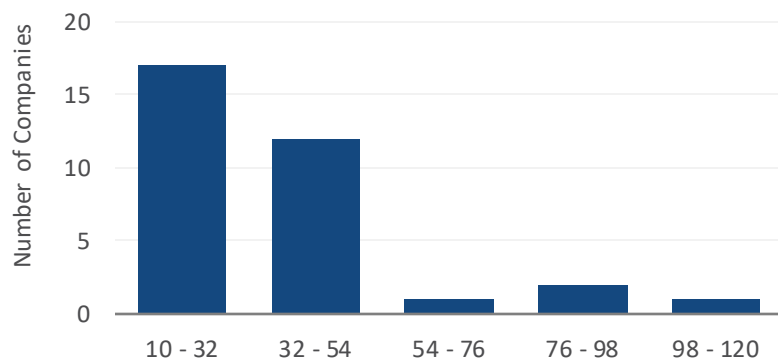
P/B
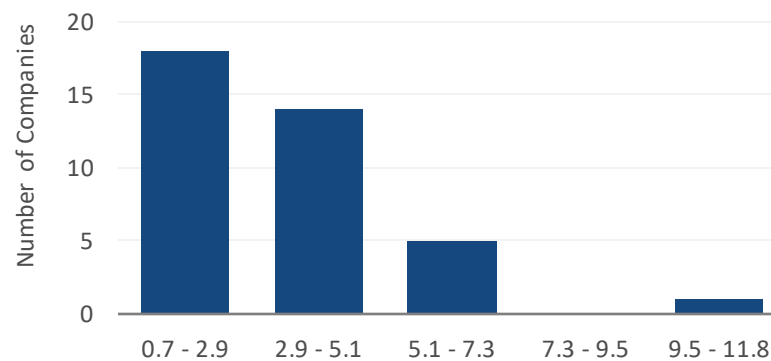
Pharmaceuticals, Biotechnology and Life Sciences

Q1 2023

KROLL

Pharmaceuticals, Biotechnology and Life Sciences

As of March 31, 2023

	EV/Revenues	EV/EBITDA	P/E	P/B
Number of Companies	77	77	77	77
Number of Outliers[1]	13	29	35	14
Number of Observations (final)[2]	64	48	42	63
High	33.9x	59.5x	99.1x	14.9x
Third Quartile	7.7x	24.4x	42.9x	5.7x
Mean	**6.8x**	**19.0x**	**35.3x**	**4.4x**
Median	**4.3x**	**15.7x**	**31.9x**	**3.6x**
First Quartile	2.6x	10.9x	19.5x	2.1x
Low	1.9x	7.2x	10.9x	0.9x
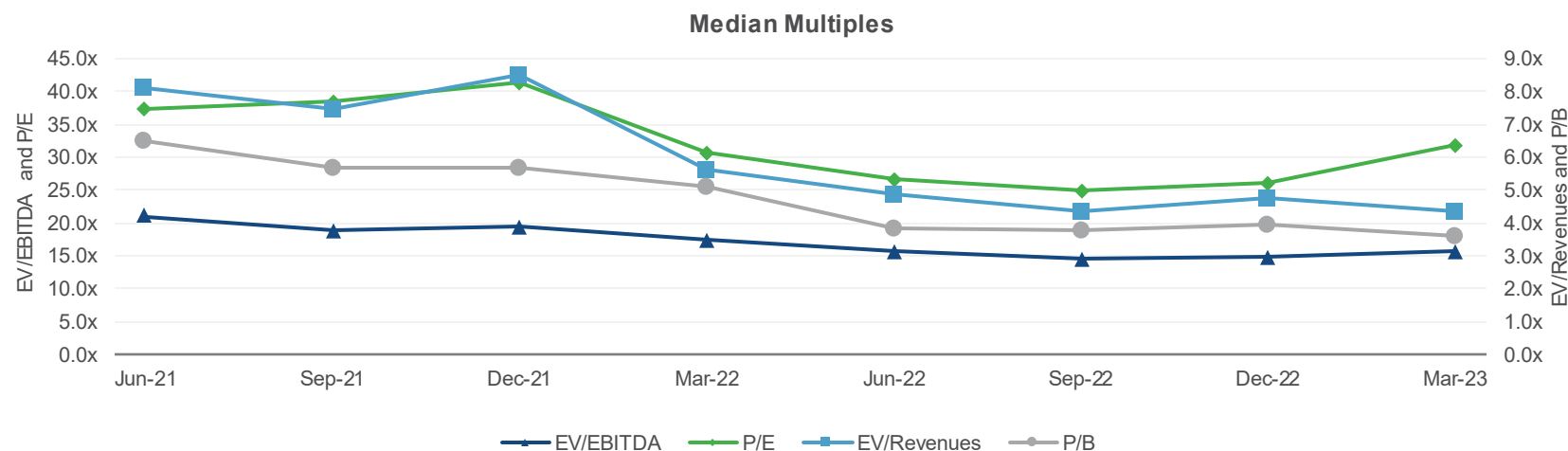
Median Multiples

[1] Outliers have been excluded from the concluded multiples. Please refer to "Criteria" for outlier criteria and definitions.

[2] A sector/industry group must have a minimum of five company participants to be calculated.

Sources: Capital IQ; Bloomberg; Kroll analysis.

Pharmaceuticals, Biotechnology and Life Sciences
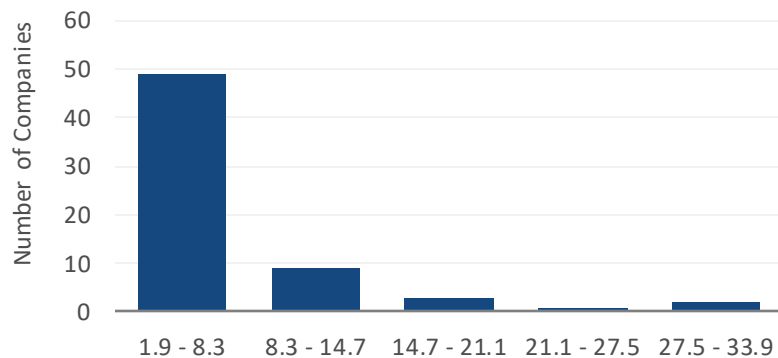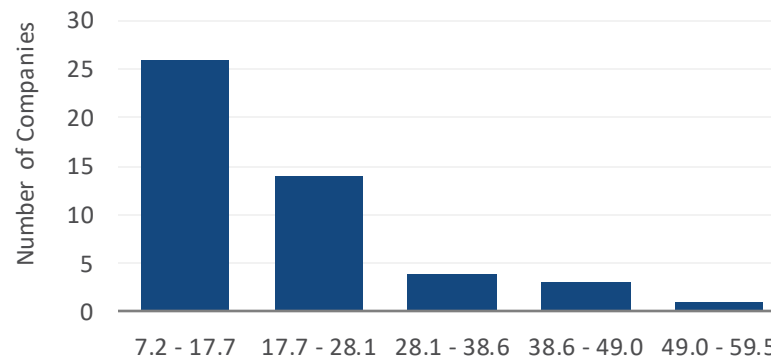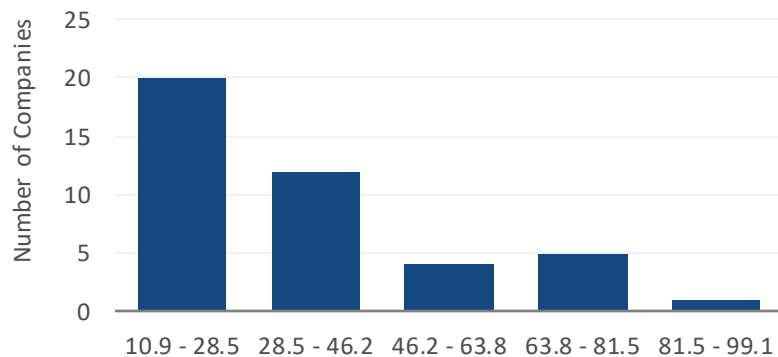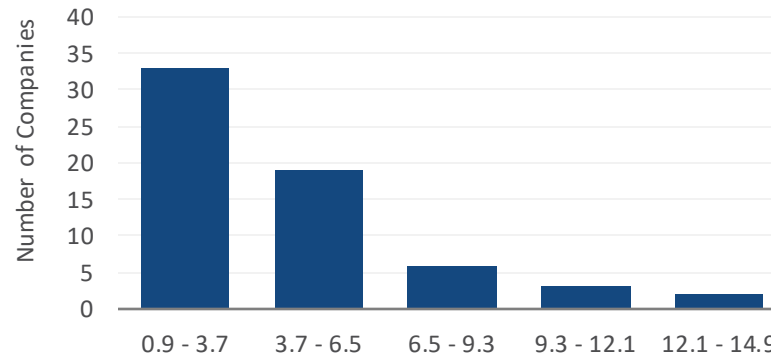
As of March 31, 2023
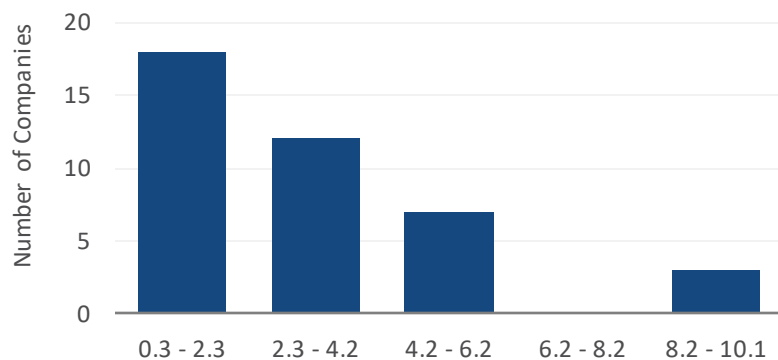
Capital Goods

Q1 2023

Capital Goods

As of March 31, 2023

	EV/Revenues	EV/EBITDA	P/E	P/B
Number of Companies	226	226	226	226
Number of Outliers[1]	25	31	44	27
Number of Observations (final)[2]	201	195	182	199
High	5.7x	25.4x	64.3x	8.1x
Third Quartile	2.1x	13.9x	27.0x	3.6x
Mean	**1.6x**	**10.9x**	**21.2x**	**2.9x**
Median	**1.2x**	**9.6x**	**18.4x**	**2.4x**
First Quartile	0.8x	7.1x	13.8x	1.5x
Low	0.3x	4.0x	7.5x	0.9x
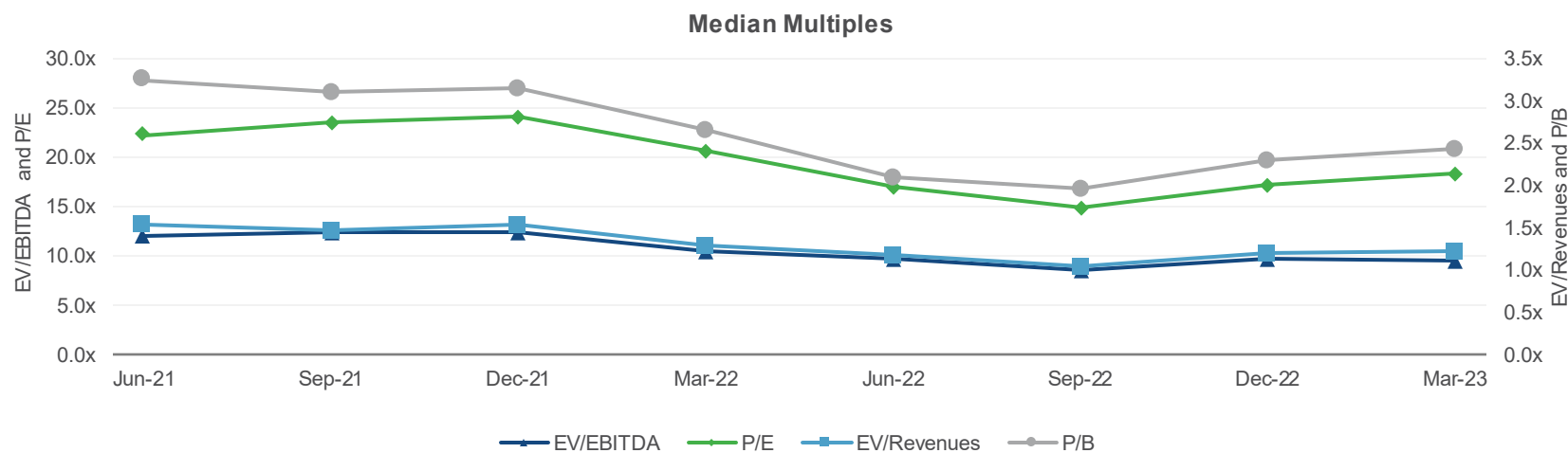
Median Multiples

[1] Outliers have been excluded from the concluded multiples. Please refer to "Criteria" for outlier criteria and definitions.

[2] A sector/industry group must have a minimum of five company participants to be calculated.

Sources: Capital IQ; Bloomberg; Kroll analysis.

Capital Goods

As of March 31, 2023
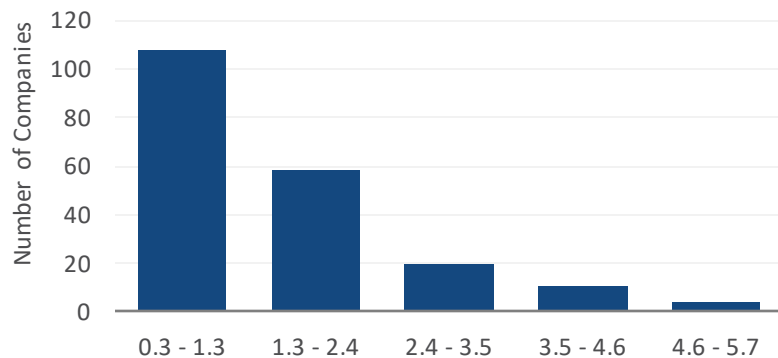
EV/Revenues
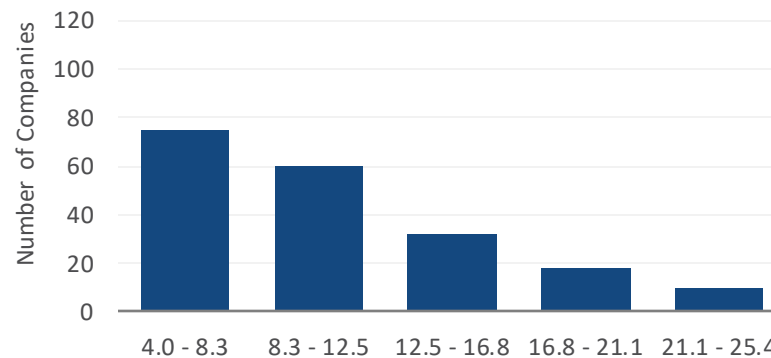
EV/EBITDA

P/E
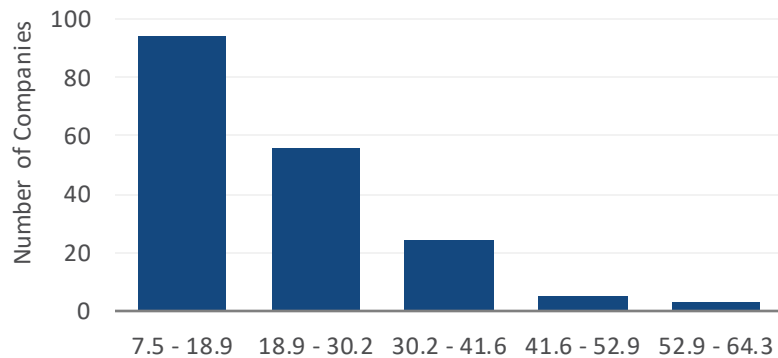
P/B

Commercial and Professional Services

Q1 2023

KROLL

Commercial and Professional Services

As of March 31, 2023

	EV/Revenues	EV/EBITDA	P/E	P/B
Number of Companies	51	51	51	51
Number of Outliers[1]	6	9	11	7
Number of Observations (final)[2]	45	42	40	44
High	6.5x	22.1x	35.2x	12.9x
Third Quartile	2.4x	11.6x	25.8x	3.7x
Mean	1.8x	9.7x	19.7x	3.4x
Median	1.0x	8.9x	17.8x	2.6x
First Quartile	0.7x	6.2x	12.6x	1.7x
Low	0.3x	4.4x	7.5x	0.9x
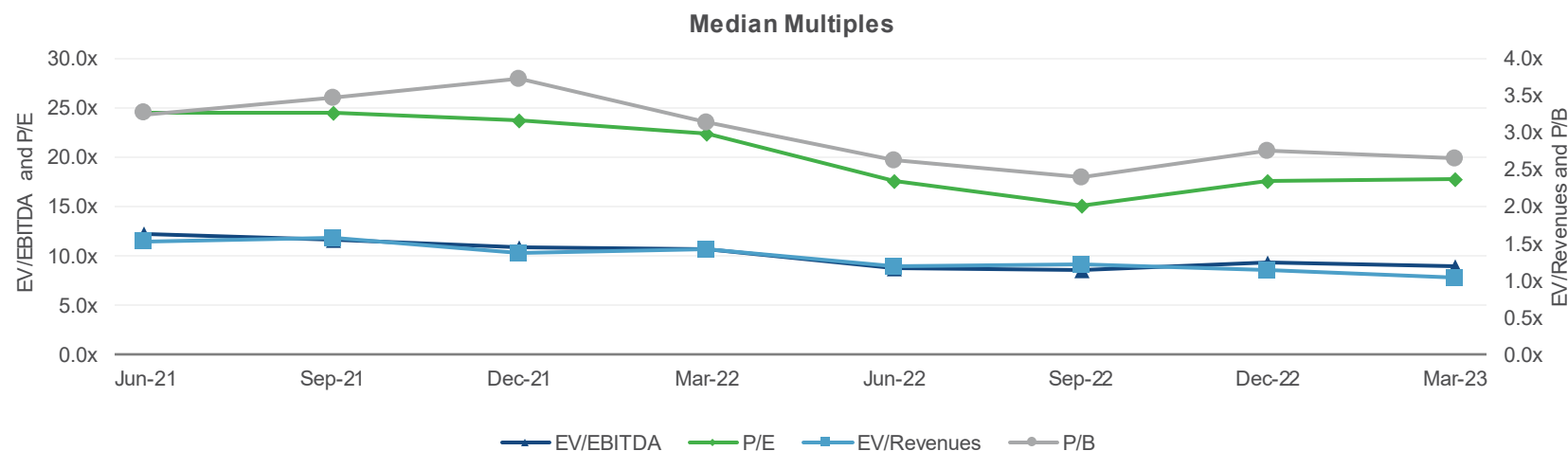
Median Multiples

[1] Outliers have been excluded from the concluded multiples. Please refer to "Criteria" for outlier criteria and definitions.

[2] A sector/industry group must have a minimum of five company participants to be calculated.

Sources: Capital IQ; Bloomberg; Kroll analysis.

Commercial and Professional Services

As of March 31, 2023
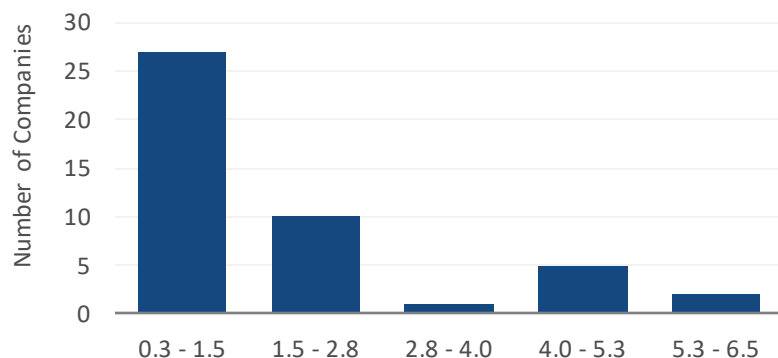
EV/Revenues
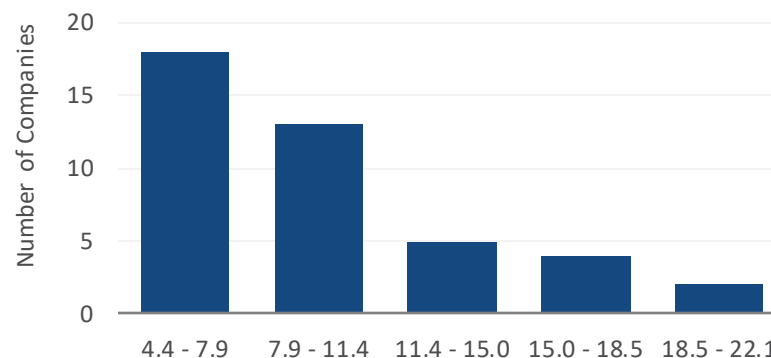
EV/EBITDA

P/E
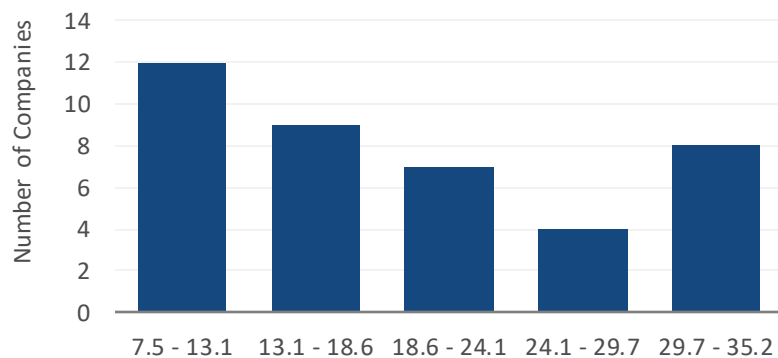
P/B
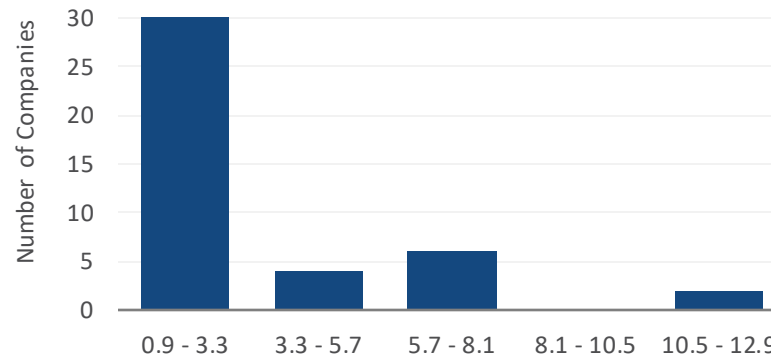
Transportation

Q1 2023

KROLL

Transportation

As of March 31, 2023

	EV/Revenues	EV/EBITDA	P/E	P/B
Number of Companies	43	43	43	43
Number of Outliers[1]	7	7	10	7
Number of Observations (final)[2]	36	36	33	36
High	5.9x	13.6x	42.6x	7.5x
Third Quartile	1.5x	9.0x	19.9x	3.5x
Mean	1.4x	6.8x	14.9x	2.6x
Median	1.0x	6.0x	12.5x	2.0x
First Quartile	0.6x	4.3x	8.0x	1.2x
Low	0.3x	1.9x	2.5x	0.6x
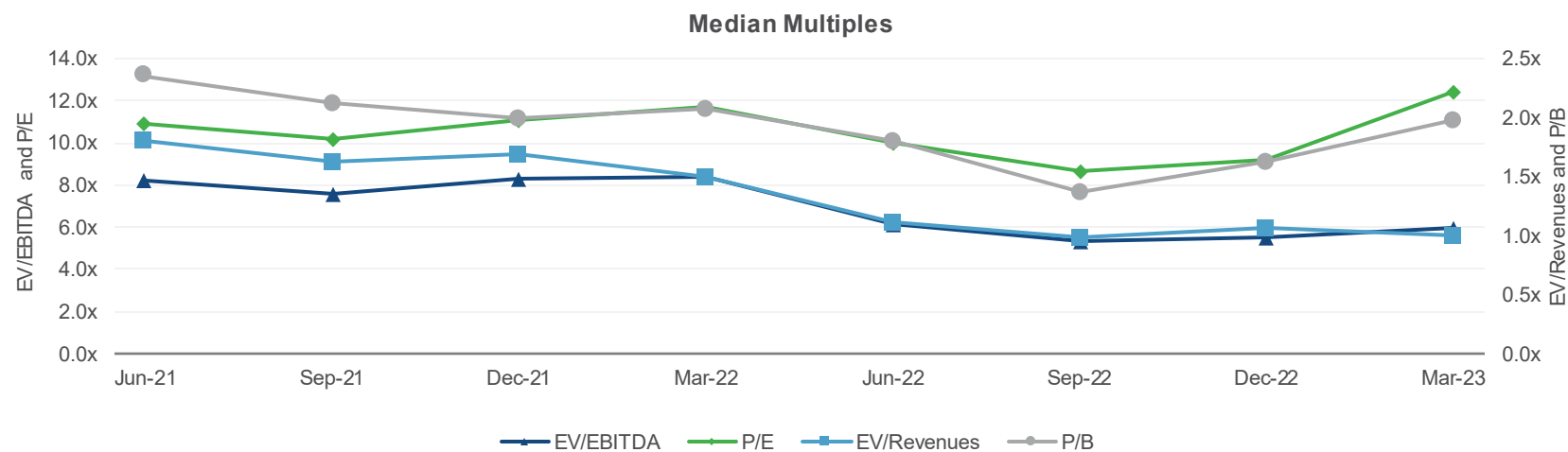
Median Multiples

[1] Outliers have been excluded from the concluded multiples. Please refer to "Criteria" for outlier criteria and definitions.

[2] A sector/industry group must have a minimum of five company participants to be calculated.

Sources: Capital IQ; Bloomberg; Kroll analysis.

Transportation
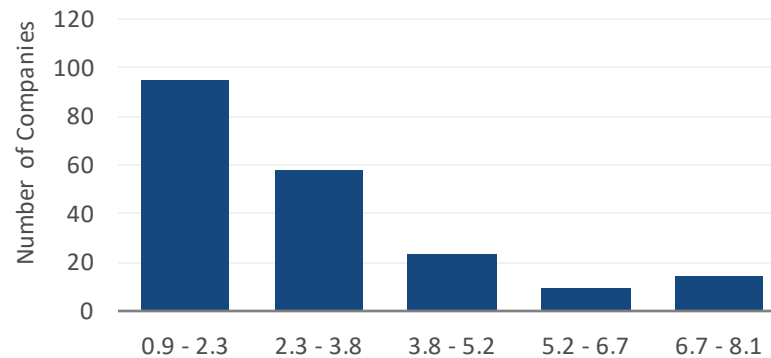
As of March 31, 2023

EV/Revenues
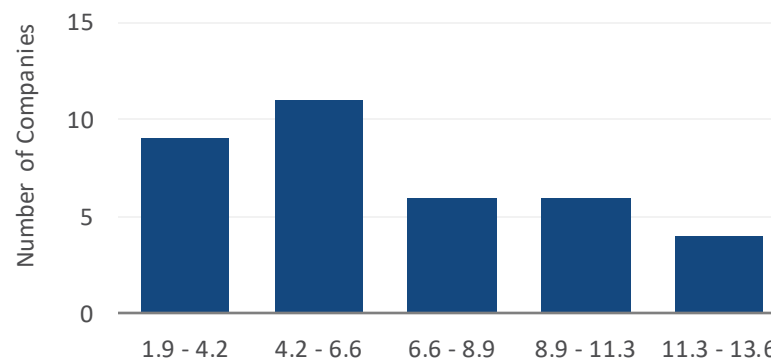
EV/EBITDA

P/E
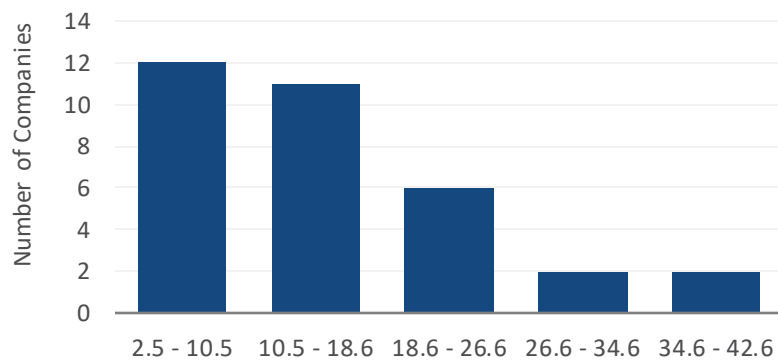
P/B
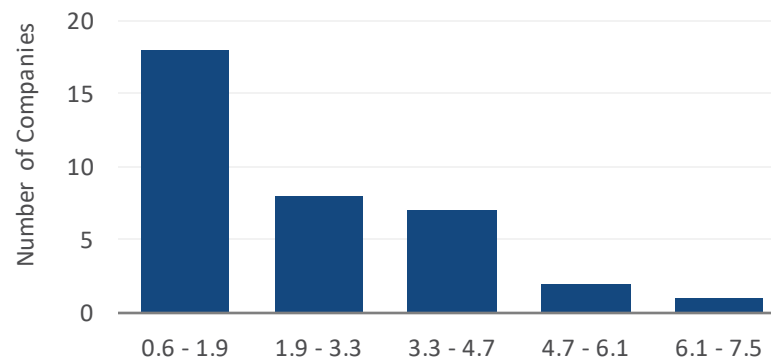
# Semiconductors and Semiconductor Equipment

Q1 2023

KROLL

Semiconductors and Semiconductor Equipment

As of March 31, 2023

	EV/Revenues	EV/EBITDA	P/E	P/B
Number of Companies	20	20	20	20
Number of Outliers[1]	2	5	7	2
Number of Observations (final)[2]	18	15	13	18
High	11.5x	34.7x	38.9x	21.0x
Third Quartile	6.3x	20.5x	29.0x	5.8x
Mean	4.7x	16.5x	23.6x	5.3x
Median	4.2x	14.6x	22.7x	4.2x
First Quartile	2.7x	8.5x	16.6x	2.5x
Low	1.2x	4.1x	8.9x	1.0x

Median Multiples

[1] Outliers have been excluded from the concluded multiples. Please refer to "Criteria" for outlier criteria and definitions.

[2] A sector/industry group must have a minimum of five company participants to be calculated.

Sources: Capital IQ; Bloomberg; Kroll analysis.

Semiconductors and Semiconductor Equipment
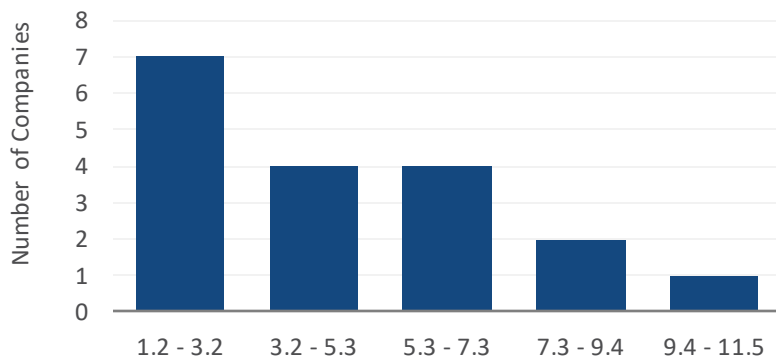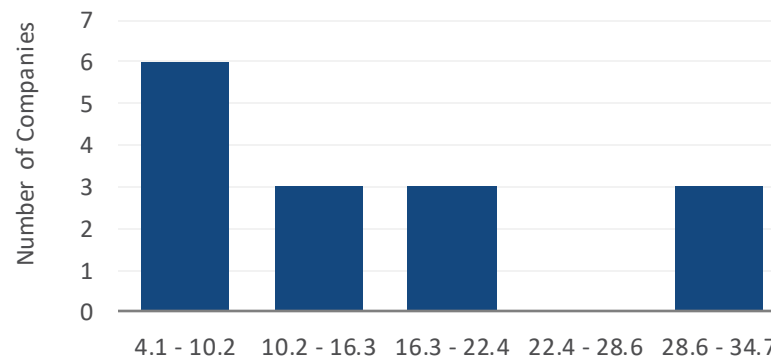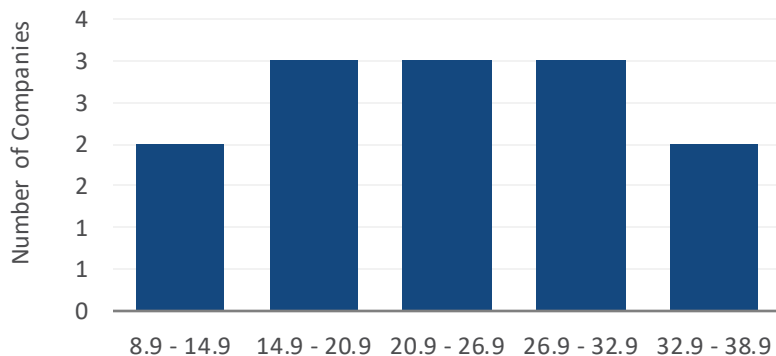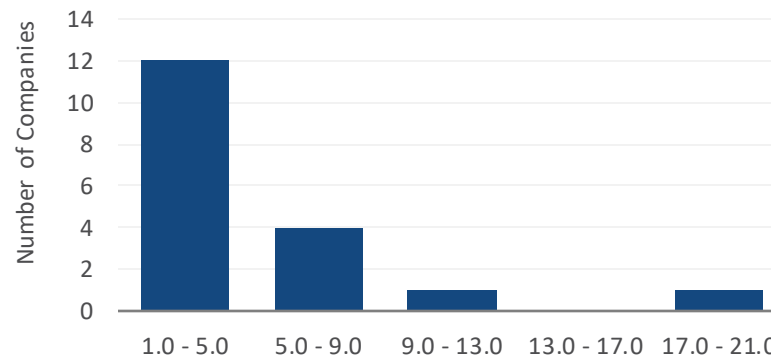
As of March 31, 2023

Software and Services

Q1 2023

KROLL

Software and Services

As of March 31, 2023

	EV/Revenues	EV/EBITDA	P/E	P/B
Number of Companies	63	63	63	63
Number of Outliers[1]	8	11	17	8
Number of Observations (final)[2]	55	52	46	55
High	11.3x	35.9x	92.9x	23.4x
Third Quartile	4.7x	18.8x	47.8x	7.3x
Mean	**3.2x**	**15.5x**	**36.2x**	**5.9x**
Median	**2.0x**	**14.1x**	**24.5x**	**3.5x**
First Quartile	1.2x	10.1x	19.3x	2.1x
Low	0.6x	5.7x	13.3x	0.9x
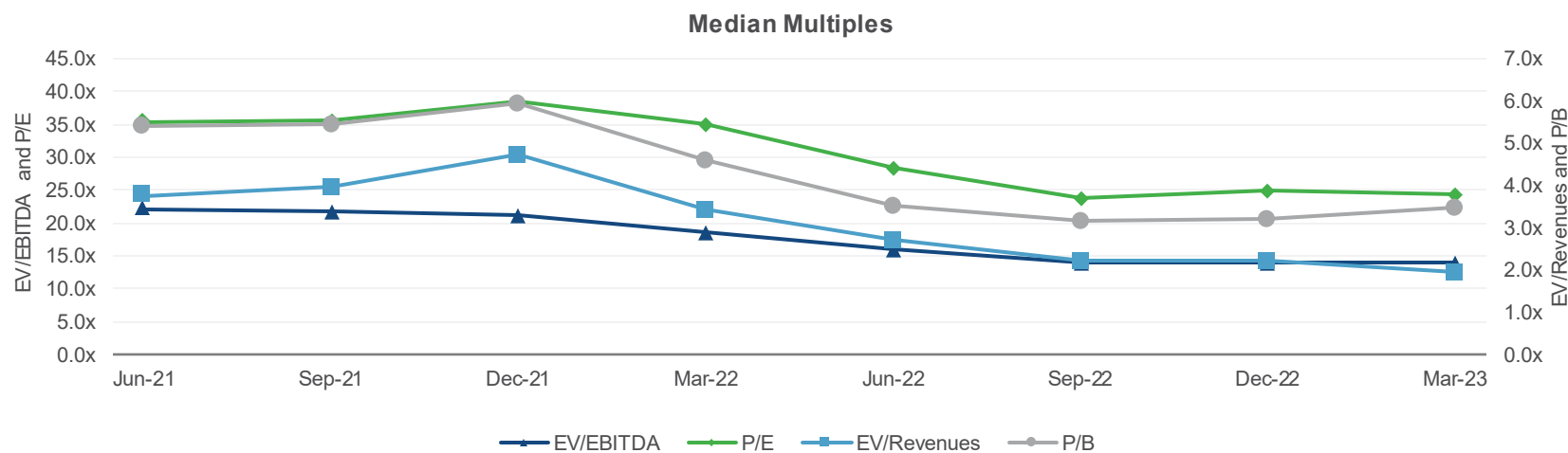
Median Multiples

[1] Outliers have been excluded from the concluded multiples. Please refer to "Criteria" for outlier criteria and definitions.

[2] A sector/industry group must have a minimum of five company participants to be calculated.

Sources: Capital IQ; Bloomberg; Kroll analysis.

Software and Services

As of March 31, 2023
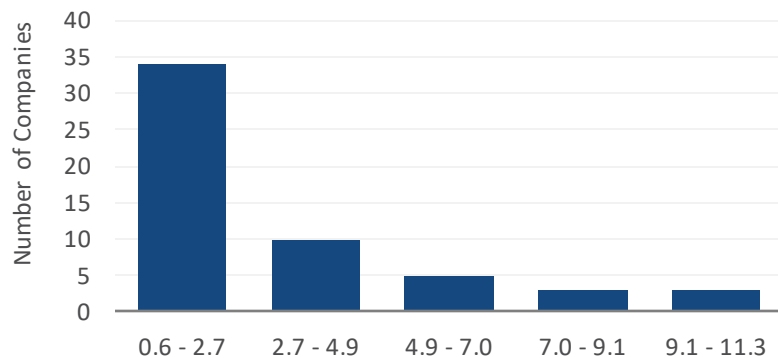
EV/Revenues
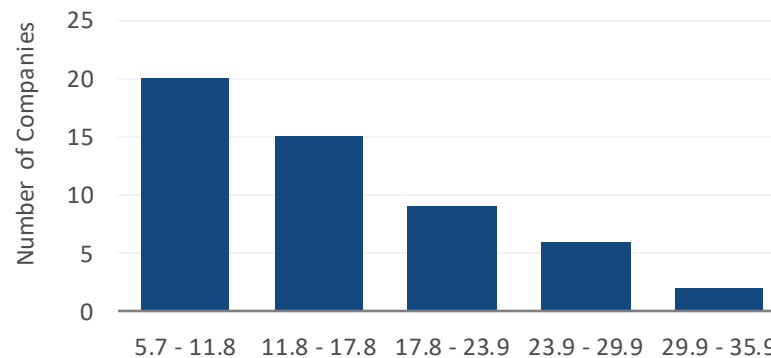
EV/EBITDA

P/E
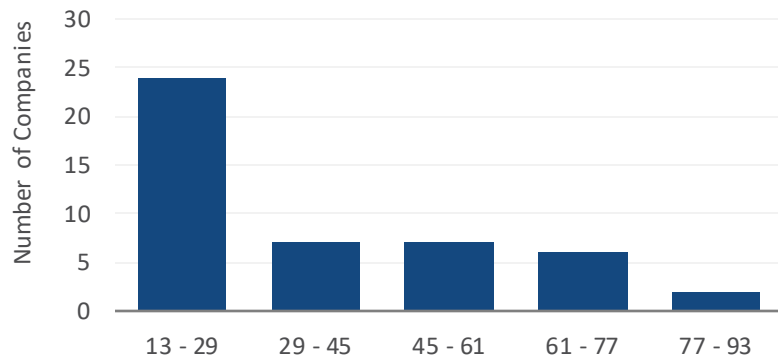
P/B
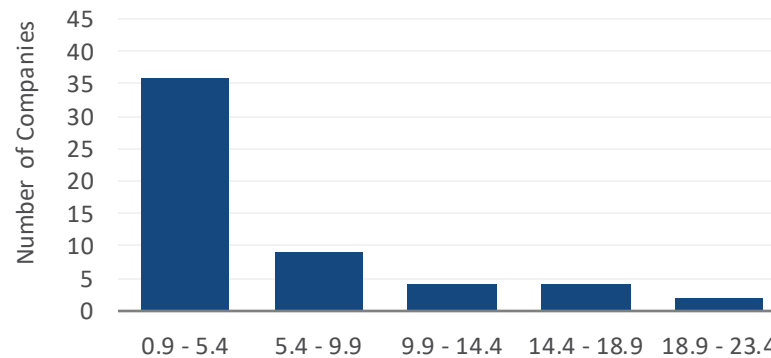
Technology Hardware and Equipment

Q1 2023

Technology Hardware and Equipment
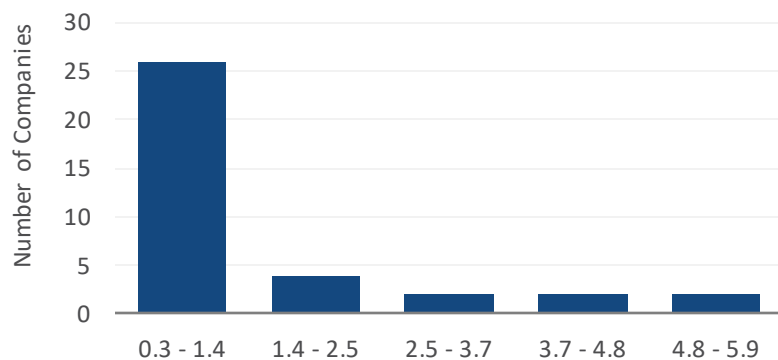
As of March 31, 2023

	EV/Revenues	EV/EBITDA	P/E	P/B
Number of Companies	46	46	46	46
Number of Outliers[1]	6	8	10	6
Number of Observations (final)[2]	40	38	36	40
High	5.6x	23.9x	72.4x	9.5x
Third Quartile	3.2x	20.2x	34.1x	5.1x
Mean	**2.3x**	**15.1x**	**26.8x**	**3.8x**
Median	**2.0x**	**16.0x**	**24.1x**	**3.1x**
First Quartile	1.2x	10.7x	17.3x	2.2x
Low	0.4x	5.2x	9.2x	1.0x
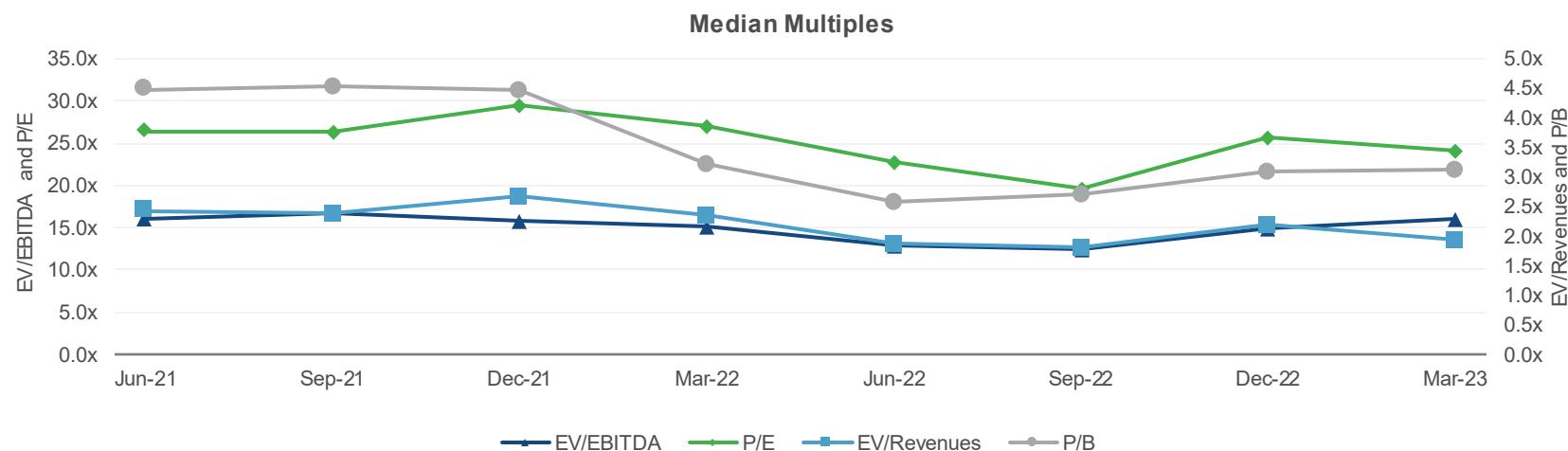
Median Multiples

[1] Outliers have been excluded from the concluded multiples. Please refer to "Criteria" for outlier criteria and definitions.

[2] A sector/industry group must have a minimum of five company participants to be calculated.
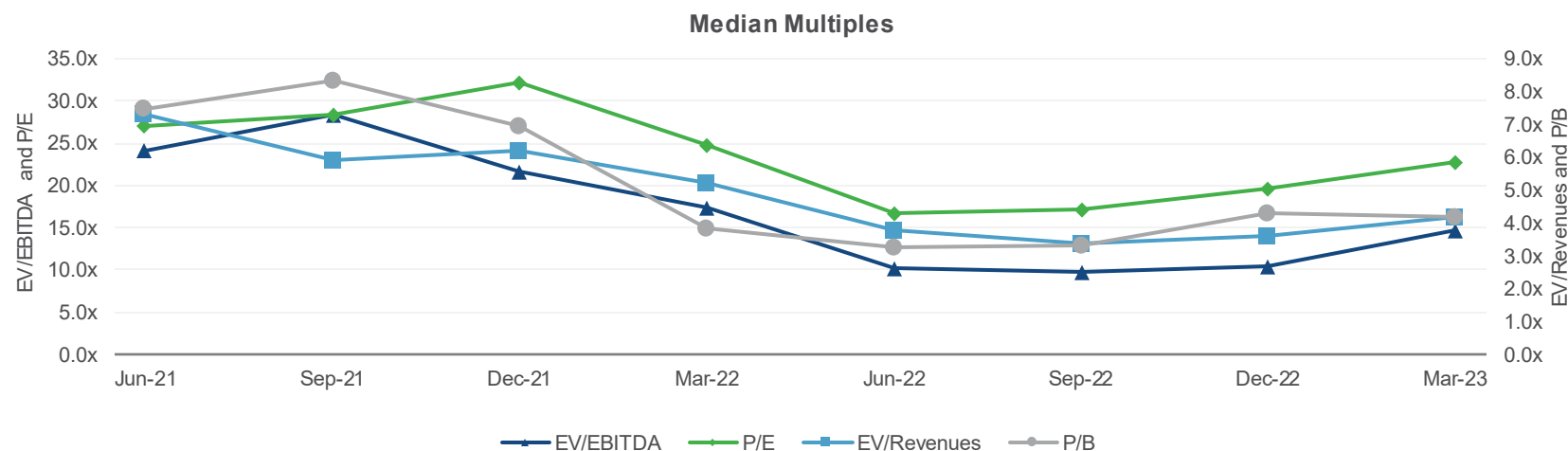
Sources: Capital IQ; Bloomberg; Kroll analysis.

Technology Hardware and Equipment
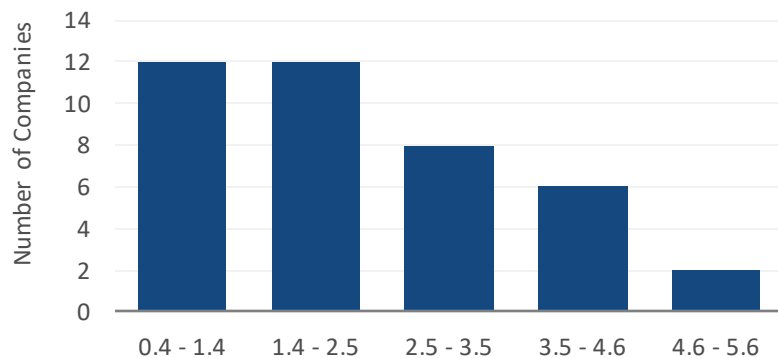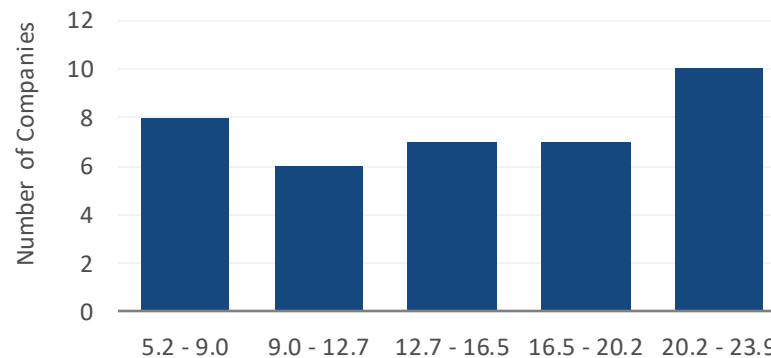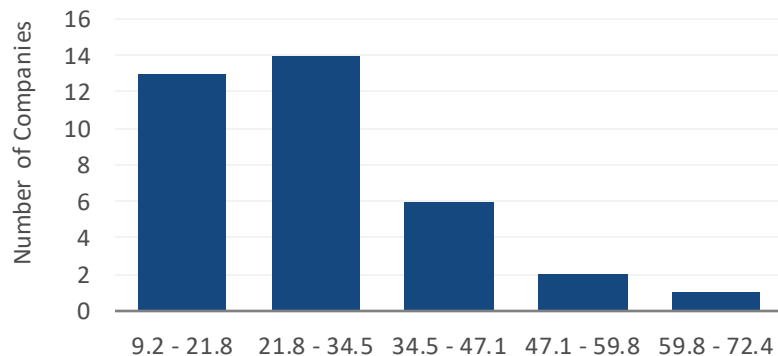
As of March 31, 2023

Materials

Q1 2023

KROLL

Materials

As of March 31, 2023

	EV/Revenues	EV/EBITDA	P/E	P/B
Number of Companies	103	103	103	103
Number of Outliers[1]	13	12	20	12
Number of Observations (final)[2]	90	91	83	91
High	4.0x	21.3x	49.3x	4.6x
Third Quartile	1.5x	8.6x	16.7x	2.0x
Mean	**1.2x**	**7.2x**	**13.1x**	**1.6x**
Median	**0.9x**	**5.4x**	**9.1x**	**1.3x**
First Quartile	0.7x	4.0x	6.8x	1.0x
Low	0.3x	1.7x	2.6x	0.5x
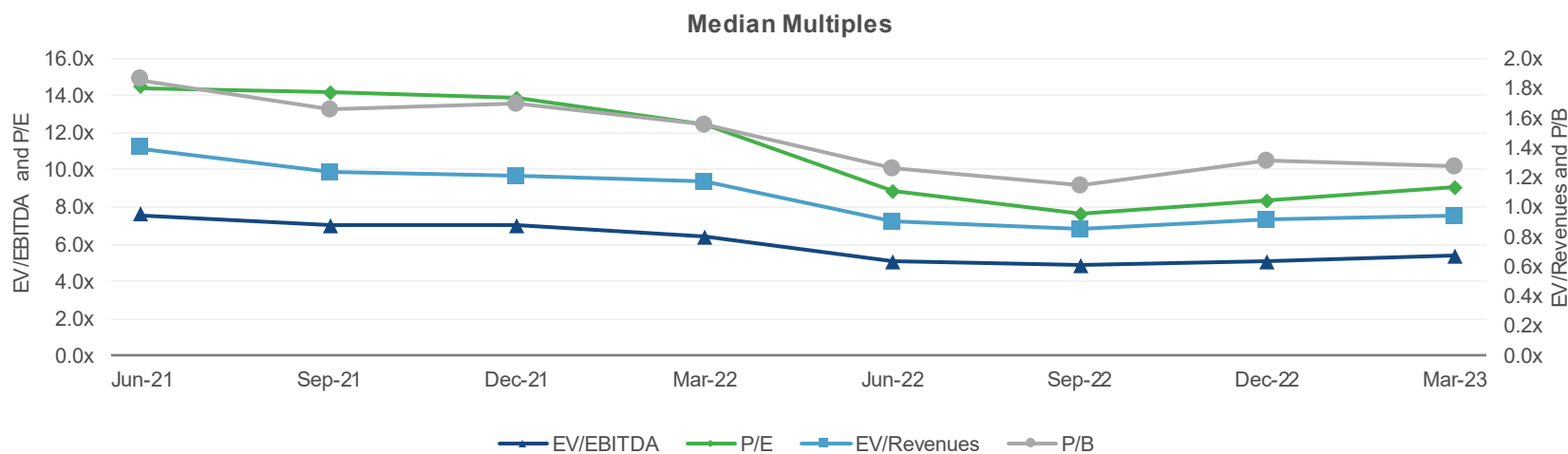
Median Multiples

[1] Outliers have been excluded from the concluded multiples. Please refer to "Criteria" for outlier criteria and definitions.

[2] A sector/industry group must have a minimum of five company participants to be calculated.

Sources: Capital IQ; Bloomberg; Kroll analysis.

Materials

As of March 31, 2023
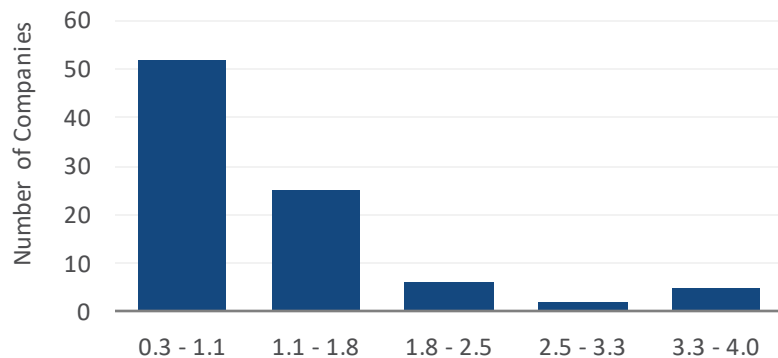
EV/Revenues
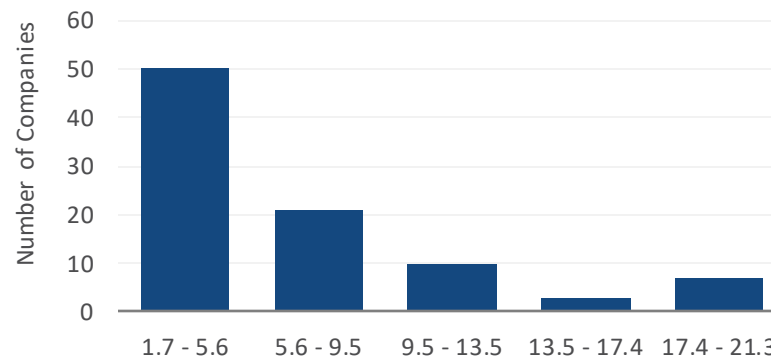
EV/EBITDA

P/E
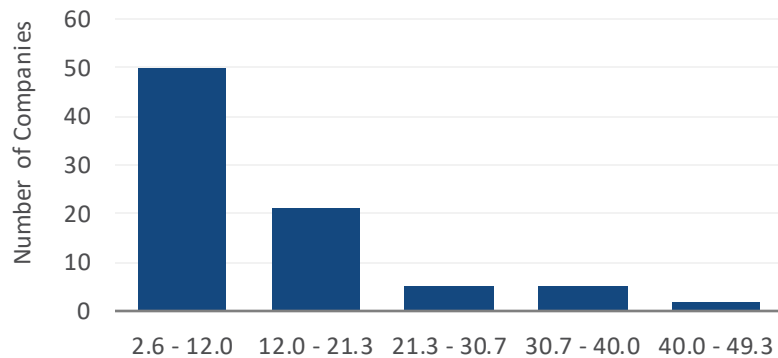
P/B
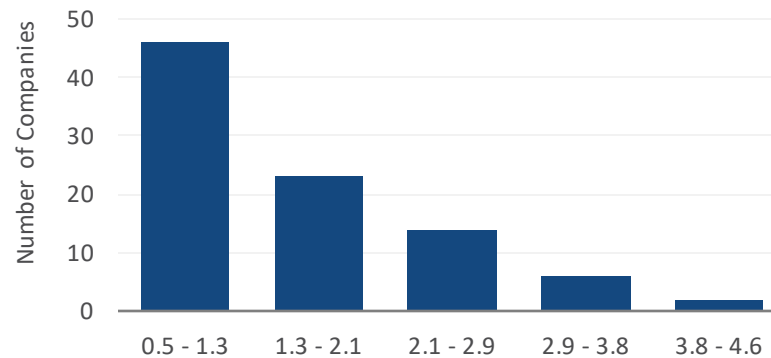
Real Estate

Q1 2023

KROLL

Real Estate

As of March 31, 2023

	EV/Revenues	EV/EBITDA	P/E	P/B
Number of Companies	87	87	87	87
Number of Outliers[1]	11	15	18	11
Number of Observations (final)[2]	76	72	69	76
High	20.7x	39.9x	57.1x	1.4x
Third Quartile	16.6x	25.1x	20.7x	0.9x
Mean	**13.0x**	**21.6x**	**17.8x**	**0.7x**
Median	**12.6x**	**21.5x**	**16.2x**	**0.7x**
First Quartile	9.9x	17.5x	11.7x	0.5x
Low	1.5x	6.1x	7.5x	0.4x
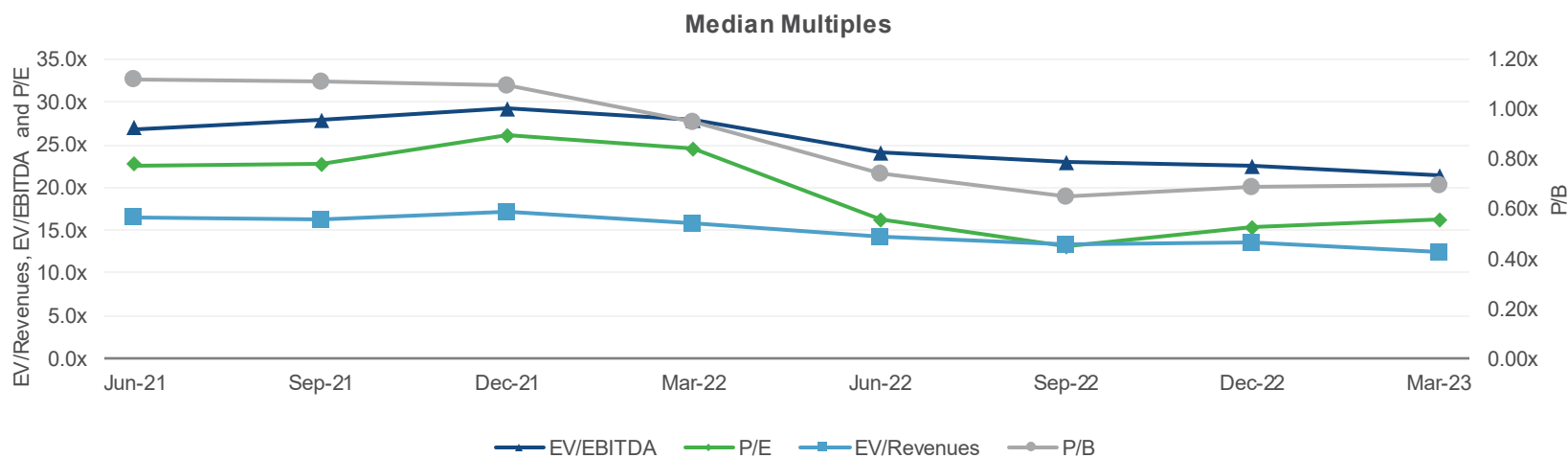
Median Multiples

[1] Outliers have been excluded from the concluded multiples. Please refer to "Criteria" for outlier criteria and definitions.

[2] A sector/industry group must have a minimum of five company participants to be calculated.

Sources: Capital IQ; Bloomberg; Kroll analysis.

Real Estate

As of March 31, 2023
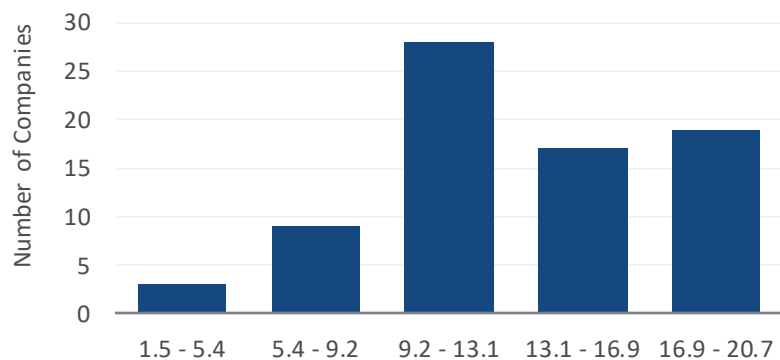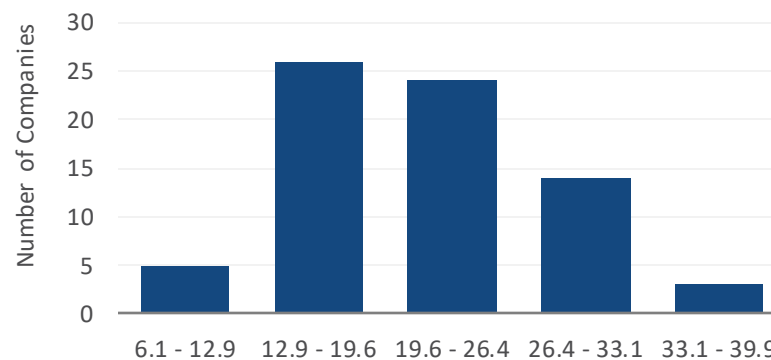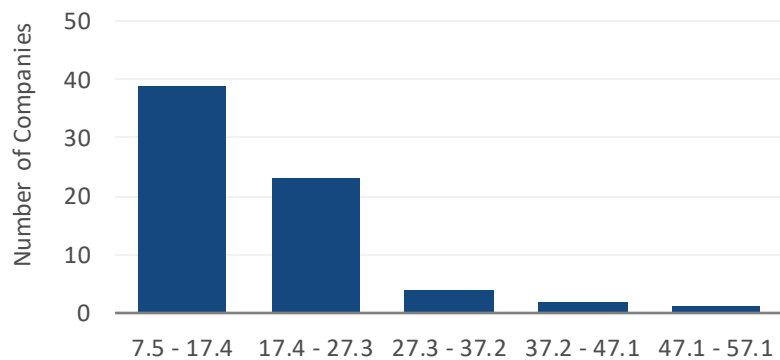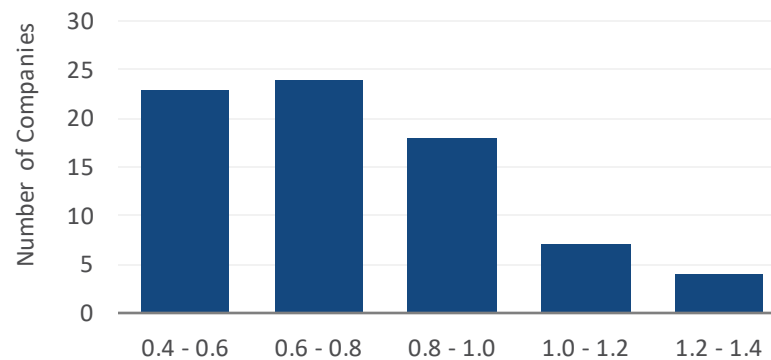
# Electric, Gas and Water Utilities

Q1 2023

KROLL

Electric, Gas and Water Utilities

As of March 31, 2023

	EV/Revenues	EV/EBITDA	P/E	P/B
Number of Companies	34	34	34	34
Number of Outliers[1]	4	5	8	5
Number of Observations (final)[2]	30	29	26	29
High	7.4x	19.4x	48.2x	6.1x
Third Quartile	4.0x	11.6x	22.4x	2.1x
Mean	**2.4x**	**9.4x**	**19.4x**	**1.9x**
Median	**1.3x**	**8.2x**	**15.9x**	**1.8x**
First Quartile	0.6x	6.6x	12.2x	1.3x
Low	0.2x	4.5x	6.6x	0.7x
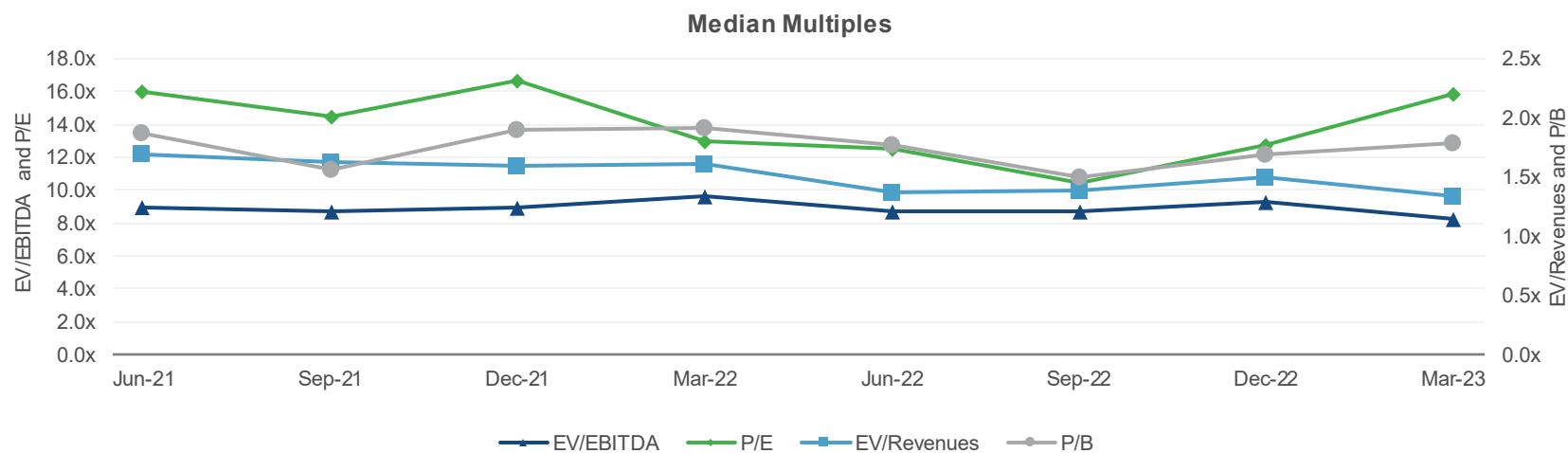
Median Multiples

[1] Outliers have been excluded from the concluded multiples. Please refer to "Criteria" for outlier criteria and definitions.

[2] A sector/industry group must have a minimum of five company participants to be calculated.

Sources: Capital IQ; Bloomberg; Kroll analysis.

Electric, Gas and Water Utilities
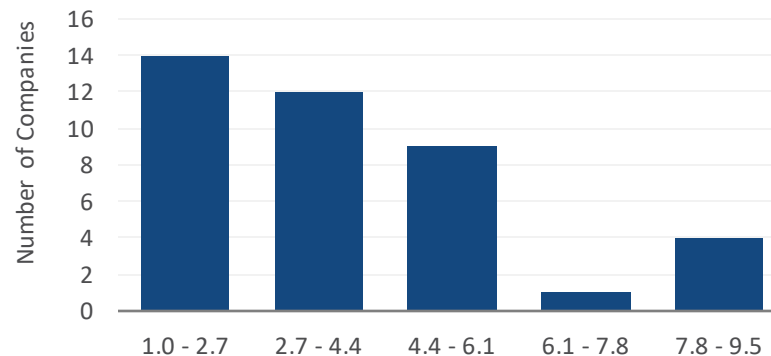
As of March 31, 2023
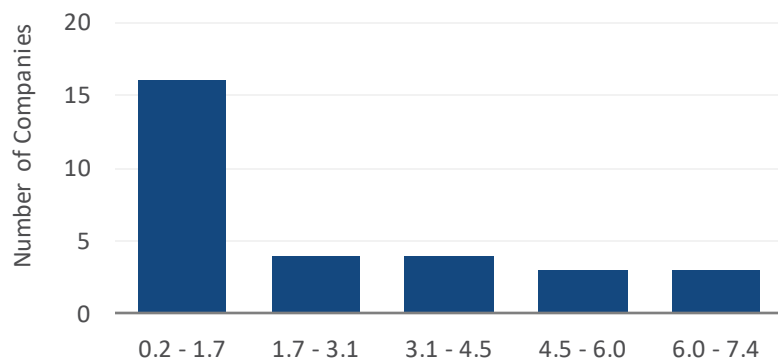
EV/Revenues
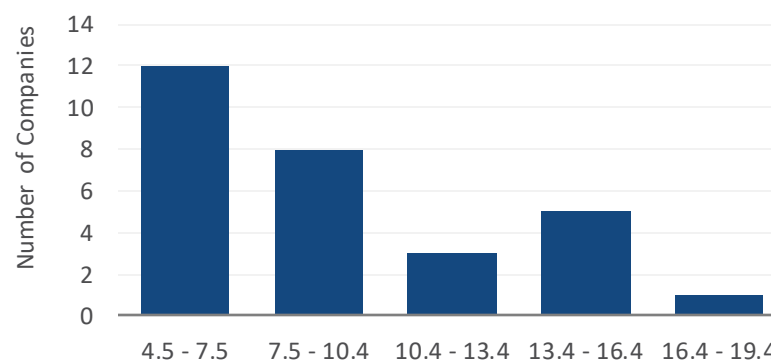
EV/EBITDA

P/E
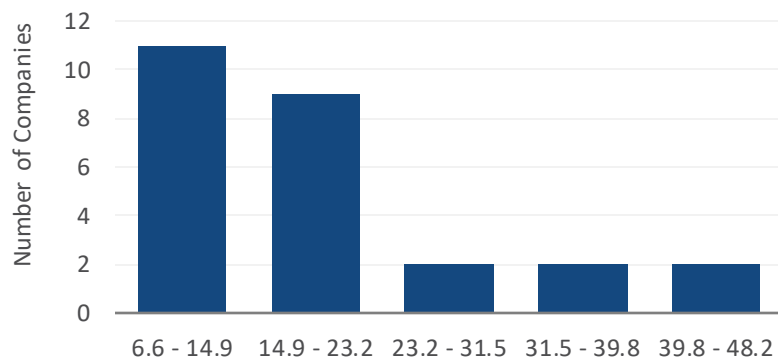
P/B
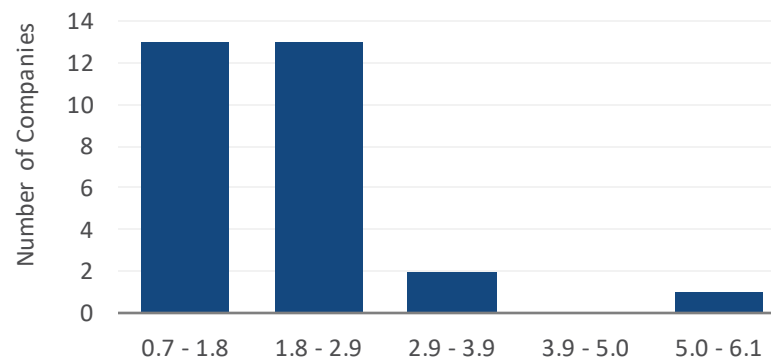
Independent Power and Renewable Producers

Q1 2023

KROLL

Independent Power and Renewable Producers

As of March 31, 2023

	EV/Revenues	EV/EBITDA	P/E	P/B
Number of Companies	14	14	14	14
Number of Outliers[1]	2	3	3	2
Number of Observations (final)[2]	12	11	11	12
High	13.8x	34.3x	61.5x	3.4x
Third Quartile	9.4x	19.5x	48.0x	2.1x
Mean	**7.0x**	**16.5x**	**32.8x**	**1.8x**
Median	**6.0x**	**16.9x**	**28.7x**	**1.9x**
First Quartile	4.9x	11.0x	18.1x	1.3x
Low	0.7x	6.6x	12.1x	0.9x
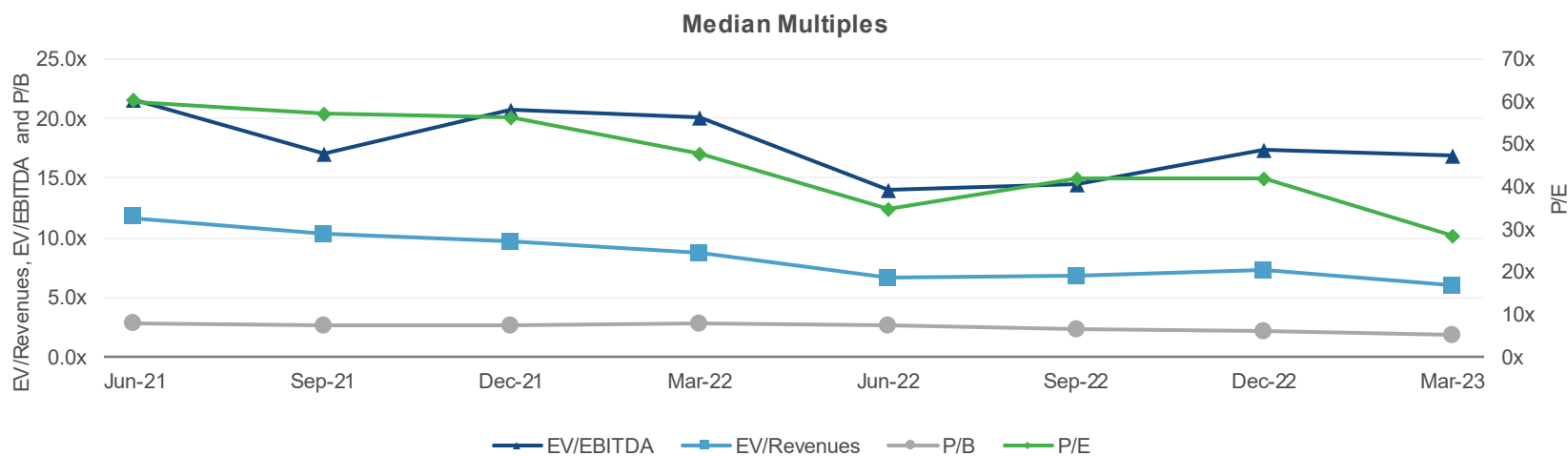
Median Multiples

[1] Outliers have been excluded from the concluded multiples. Please refer to "Criteria" for outlier criteria and definitions.

[2] A sector/industry group must have a minimum of five company participants to be calculated.

Sources: Capital IQ; Bloomberg; Kroll analysis.

Independent Power and Renewable Producers

As of March 31, 2023

EV/Revenues
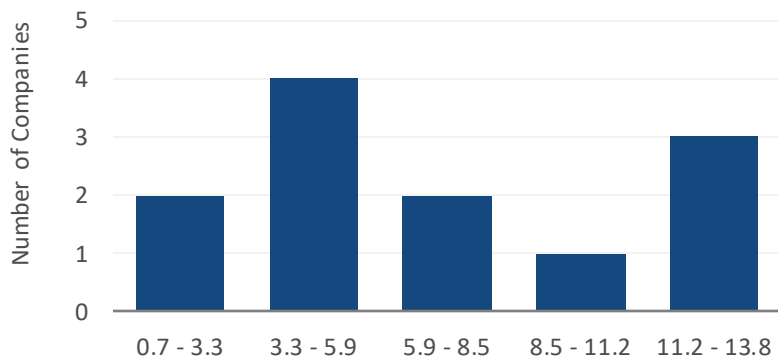
EV/EBITDA
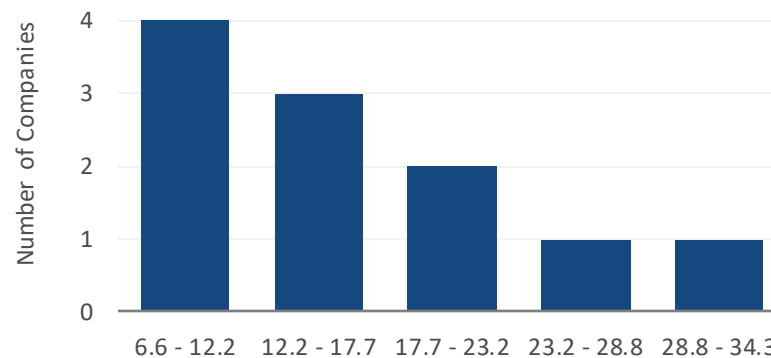
P/E
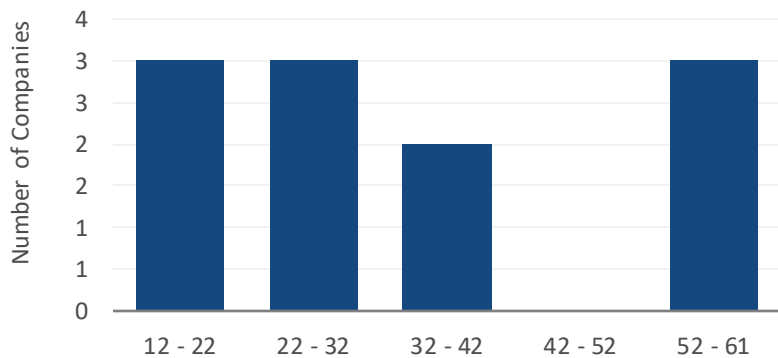
P/B
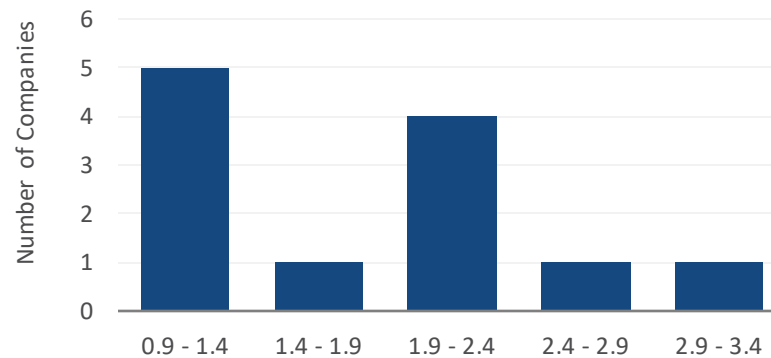
Criteria

- For all reported multiples, we have considered the constituents of the STOXX® Europe TMI as of the report reference date. The STOXX® Europe TMI represents the Western and Eastern Europe region as a whole, covering approximately 95% of the free-float market capitalization of European companies.[1] Companies were grouped by sectors, industry groups or industries, as defined by the Global Industry Classification Standard, considering that each grouping would have enough constituents and granularity to attain the objective of this report.[2]

- Companies are only considered in the computation of the different multiples if the following criteria are met: market capitalization is above the fifth percentile, at least 25% free float, and average daily volume is above 0.1% of the float (data derived from Standard & Poor's Capital IQ and Bloomberg databases).

- Observations deemed to be outliers have been excluded from the above analysis. Outlier criteria include: (i) negative multiples, (ii) multiples below the fifth percentile and (iii) multiples above the 95th percentile.

- EV = Enterprise Value = Market value of equity plus book value of debt, minority interests, preferred stock, less cash and cash equivalents, loans and notes receivables, and long- and short-term investments.[3] Revenues = Revenue for latest 12 months. EBITDA = Earnings before interest, taxes, depreciation and amortization for latest 12 months (provided by Capital IQ, adjusted for non-recurring items). P/E = Share price divided by earnings per share on a diluted basis. P/B = Share price/book value per share on a diluted basis where book value per share equals total book value of equity divided by diluted number of shares. P/TBV = Share price/book value minus intangible assets, per share on a diluted basis.

- Multiples have been computed in companies' filing currencies and considering figures last fully reported as at the publication of this report.

[1] Although most of the companies in the STOXX® Europe TMI Index prepare financial statements in accordance with IFRS, some use other accounting standards, such as U.S. GAAP and other local standards. Generally, since only a small proportion of the companies in the index do not use IFRS, the inclusion of those companies did not have a material impact on the statistics reported. Companies filing in accordance with U.S. GAAP accounted for approximately 1% of the total number of companies in the index. Companies following other reporting standards were treated using a similar approach as those filing in accordance with IFRS. Companies filing in accordance with Belgium, Denmark, Luxembourg, Poland and Switzerland GAAP represented approximately 4% of the total number of companies in the index. Swiss GAAP companies do not capitalize operating lease obligations in their balance sheets, unlike companies reporting under IFRS or US GAAP. We have not made a specific lease adjustment to multiples of companies reporting under Switzerland GAAP, as the impact of such adjustment would be insignificant due to the low number of such companies in the STOXX® Europe TMI Index.
[2] The GICS structure is comprised of 11 sectors, 25 industry groups, 76 industries and 170 sub-industries.
[3] Book value of debt includes lease liabilities.

Industry Definitions

The industry classification for the companies represented in this report is based on the GICS. A summary of the sectors, as well as a brief description of those relevant industry groups that are part of a particular sector, according to the GICS guidelines, is found below:

Communication Services	
Media and Entertainment	Companies providing advertising, marketing or public relations services. Owners and operators of television or radio broadcasting systems, including programming and services. Publishers of newspapers, magazines and books in print or electronic formats. Companies that engage in producing and selling entertainment products and services, including gaming products and mobile applications.
Telecommunication Services	Providers of primarily cellular or wireless telecommunication services and operators of primarily fixed-line telecommunications networks.
Consumer Discretionary	
Automobiles and Components	Companies related to the production of passenger automobiles and light trucks, motorcycles, scooters or three-wheelers, as well as companies manufacturing parts and components for those vehicles, including tires and rubber.
Consumer Durables and Apparel	Manufacturers of electric household appliances and related products. Includes manufacturers of durable household products, power and hand tools, including garden improvement tools, but excludes TVs and other audio and video products. Manufacturers of apparel, accessories and luxury goods. Includes companies primarily producing designer handbags, wallets, luggage, jewelry and watches and manufacturers of textile and related products.
Consumer Services	Owners and operators of leisure and accommodation activities such as hotels, bars and restaurants, cruise ships, leisure facilities, casinos and gaming facilities, among others.
Consumer Discretionary Distribution and Retail	Companies involved in owning and operating department stores, general merchandise stores and specialty stores. It also includes distributors and wholesalers of general merchandise and online retailers.

Industry Definitions

Consumer Staples	
Consumer Staples Distribution and Retail	Owners and operators of food and drug retail stores, pharmacies, hypermarkets and super centers selling food and a wide-range of consumer staple products. Distributors of food products to other companies and not directly to the consumer.
Food, Beverage and Tobacco	Producers of beer and malt liquors, distillers, vintners, producers of alcoholic and non-alcoholic beverages, including mineral waters. Producers of agricultural products and producers of packaged foods, including dairy products, fruit juices, meats, poultry, fish and pet foods. Manufacturers of cigarettes and other tobacco products
Household and Personal Products	Producers of non-durable household products, including detergents, soaps, diapers and other tissue and household paper products not included elsewhere. Manufacturers of personal and beauty care products, including cosmetics and perfumes.
Energy	
Energy	Companies engaged in exploration and production, refining and marketing, and storage and transportation of oil and gas and coal and consumable fuels. It also includes companies that offer oil and gas equipment and services.
Financials	
Banks	Commercial banks whose revenues are derived primarily from conventional banking operations, have significant business activity in retail banking and small and medium corporate lending, and provide a diverse range of financial services. This also includes regional banks that tend to operate in limited geographic regions and excludes investment banks.
Financial Services	Financial exchanges for securities, commodities, derivatives and other financial instruments, and providers of financial decision support tools and products including ratings agencies. Providers of a diverse range of financial services and/or with some interest in a wide range of financial services including banking, insurance, and capital markets, but with no dominant business line.
Consumer Finance	Providers of consumer finance services, including personal credit, credit cards, lease financing, travel-related money services and pawn shops.

Industry Definitions

Financials (cont.)	
Capital Markets	Financial institutions primarily engaged in diversified capital markets activities, including a significant presence in at least two of the following areas: large/major corporate lending, investment banking, brokerage and asset management. Includes financial exchanges for securities, commodities, derivatives and other financial instruments.
Insurance	Companies providing insurance and reinsurance services of any kind as well as insurance and reinsurance brokerage firms.

Health Care	
Health Care Equipment and Services	Companies including health care providers and services, companies that manufacture and distribute health care equipment and supplies and health care technology companies.
Pharmaceuticals, Biotechnology and Life Sciences	Companies involved in the research, development, production and marketing of pharmaceuticals and biotechnology products.

Industrials	
Capital Goods	Companies related to the manufacturing or distribution of goods. The sector is diverse, containing companies that manufacture machinery used to create capital goods, electrical equipment, aerospace and defense, engineering and construction projects.
Commercial and Professional Services	Companies involved in supporting businesses with specialized skills such as human capital management, research and consulting services, office services, security and protection services, environmental and maintenance services.
Transportation	Companies involved in providing mainly goods and passenger transportation through air, sea or land. Companies owning and operating the infrastructures needed for transportation, such as airports, ports, railtracks or roads.

Industry Definitions

Information Technology	
Semiconductors and Semiconductor Equipment	Manufacturers of semiconductors, semiconductor equipment and related products, including manufacturers of solar modules and cells as well as manufacturers of the raw material and equipment used in the solar power industry.
Software and Services	Companies offering software and information technology services as well as infrastructure for the internet, including data centers, cloud networking and storage infrastructure.
Technology Hardware and Equipment	Companies involved in manufacturing communication equipment, cellular phones, personal computers, computer components, peripherals, electronic equipment and components as well as technology distributors.
Materials	
Materials	Companies that manufacture chemicals, construction materials, glass, paper, forest products and related packaging products, and metals, minerals and mining companies, including producers of steel.
Real Estate	
Real Estate	Companies engaged in real estate development and operation. It also includes companies offering real estate-related services and Equity Real Estate Investment Trusts (REITs).
Utilities	
Electric, Gas and Water Utilities	Companies involved in producing or distributing electricity, in the distribution of gas, in redistributing water to the end-consumer, as well as utility companies with significantly diversified activities in addition to core electric utility, gas utility and/or water utility operations.
Independent Power and Renewable Electricity Producers	Independent power producers and energy traders and companies that engage in generation and distribution of electricity using renewable sources.

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