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European Capital Market Study

as of June 30, 2023

Analysis of cost of capital parameters and sector multiples for the capital markets in Europe

Volume 12, August 2023

ValueTrust is a brand of PVT Financial Advisors SE

Content & contacts

Overview

Table of contents

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1

Preface & people

The Capital Market Study for the second quarter of 2023 analyzes cost of capital, shareholder returns, valuation multiples and recent trends in Europe

European Capital Market Study

Dear business partners and friends of ValueTrust,

We are pleased to release our twelfth edition of **the ValueTrust European Capital Market Study for Q2 2023**. Within this Study, we provide certain cost of capital inputs required to perform an enterprise valuation in Europe. The Study also shows trends of the analyzed data over time.

In this Study we provide:

- The relevant parameters used to calculate the cost of capital under the CAPM, including **risk-free rate**, **market risk premium** and **beta**.
- **Implied and historical market/sector returns**.
- Capital structure-adjusted implied sector returns, which serve as an indicator for the **unlevered cost of equity** (the **relevered cost of equity** can be calculated by adapting the company specific debt situation to the **unlevered cost of equity,** serving as an alternative to the CAPM).
- An analysis of empirical (ex-post) cost of equity in the form of **total shareholder returns** consisting of capital gains and dividends (total shareholder returns can be used as a plausibility check for the implied (ex-ante) returns).
- **A trading multiples overview**.

We examine the relevant cost of capital parameters for the **European capital market** in form of the STOXX Europe 600. This index includes the countries Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, Luxembourg, Netherlands, Norway, Poland, Portugal, Spain, Sweden, Switzerland as well as the UK and has been subdivided **into ten sector indices by industry**[1)]: Financials, Consumer Cyclicals, Consumer Non-Cyclicals, Healthcare, Technology, Utilities, Energy, Basic Materials, Industrials and Real Estate.

Historical data was compiled between the reference dates **June 30, 2017,** and **June 30, 2023,** and is **updated semi-annually** with the objective to track capital market performance over time.

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1. Based on Thomson Reuters Business Classification

Experienced financial experts from ValueTrust contributed to this Study

European Capital Market Study

Prof. Dr. Christian Aders

Senior Managing Director, ValueTrust

- More than 30 years of experience in corporate valuation and financial advisory
- Previously Partner at KPMG and Managing Director at Duff & Phelps
- Honorary professor for "Practice of transaction-oriented company valuation and value-oriented management" at LMU Munich
- Member of the DVFA Expert Group "Fairness Opinions" and "Best Practice Recommendations Corporate Valuation“
- Co-Founder of the European Association of Certified Valuators and Analysts (EACVA e.V.)

Benedikt Brambs

Managing Director, ValueTrust Switzerland

- More than 15 years of experience in transaction and strategy consulting projects
- Business enterprise valuations, intangible asset analyses, business modelling and portfolio assessments
- Company strategy, operational efficiency and commercial due diligence projects
- Company performance, market, industry and competitive landscape analysis as decision support
- Strategic planning, mergers and acquisitions, legal compliance, financial reporting, tax and reorganizations

Fredrik Müller

Vice President, ValueTrust

- More than 6 years of project experience in corporate valuation and financial advisory
- Extensive experience in valuation and value management projects in various industries

Disclaimer

This Study presents an empirical analysis which serves the purpose of illustrating the cost of capital of the European capital market. The available information and the corresponding exemplifications do not allow for a complete presentation of a proper derivation of cost of capital. Furthermore, the market participant must consider that the company specific cost of capital can vary widely due to individual corporate circumstances.

The listed information is not specific to anyone and consequently, it cannot be directed to an individual or juristic person. Although we are always striving for reliable, accurate and current information, we cannot guarantee that the data is applicable in current and future valuation analyses. The same applies to the underlying data from the data provider S&P Capital IQ and Refinitiv Eikon Aggregates App.

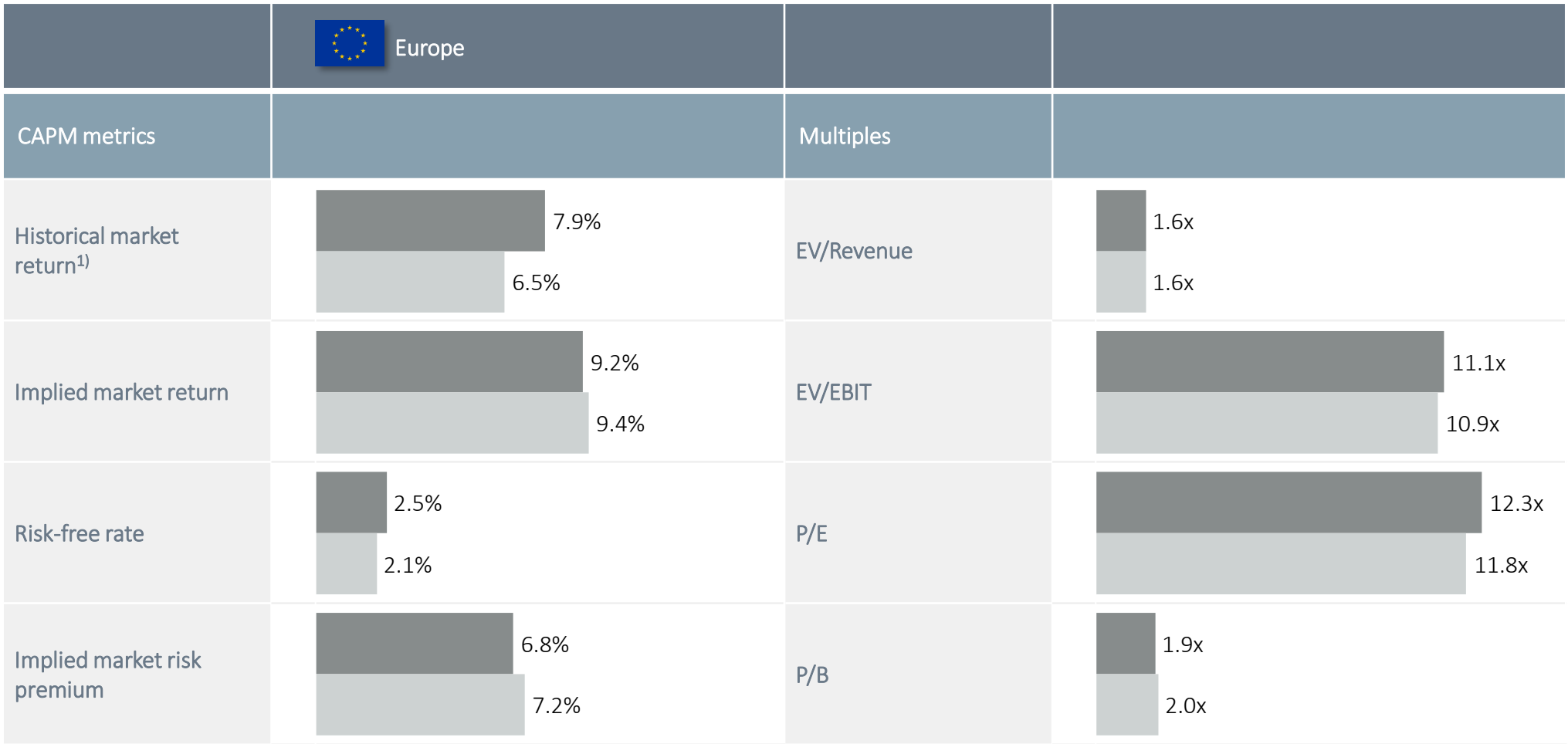
We recommend a self-contained, technical, and detailed analysis of the specific situation and we dissuade from acting solely based on the information provided.

ValueTrust and its co-authors do not assume any responsibility or liability for the up-to-datedness, completeness or accuracy of this Study or its contents.

2 Executive summary

The implied market risk premium decreased 40 basis points to 6.8% in the last 6 months due to lower implied market returns and a higher risk-free rate

Market risk premium and trading multiples for Europe, Q2 2023



1. Arithmetic return of the STOXX Europe 600 between 2008 and 2023.

The Real Estate sector shows the lowest historical returns, impacted by sharp interest rate hikes, and the implied levered cost of equity is also among the lowest, indicating weak future growth potential

Cost of equity by sector and methodology for Europe, Q2 2023

Sectors	Implied levered cost of equity	Levered cost of equity (CAPM) [1]	1 / PE-ratio (1yf)	Total shareholder return (Ø 6y) [2]
Financials	12.8%	11.0%	13.0%	9.3%
Consumer Cyclicals	9.2%	10.5%	7.8%	17.8%
Consumer Non-Cyclicals	7.6%	6.9%	6.0%	7.0%
Healthcare	8.1%	7.4%	6.1%	11.5%
Technology	6.9%	9.9%	5.5%	17.3%
Utilities	8.6%	7.1%	7.6%	12.1%
Energy	14.9%	10.3%	15.4%	14.2%
Basic Materials	9.1%	10.1%	8.3%	14.6%
Industrials	7.5%	10.2%	5.9%	15.9%
Real Estate	7.0%	9.4%	7.9%	1.8%

1. Based on 5-year sector beta, risk-free rate of 2.46% and implied market risk premium of 6.8% for the European market;
2. Total shareholder returns can be viewed as historic, realized cost of equity. However, it has to be considered that total shareholder returns vary widely, depending on the relevant time period.

The Technology sector has the highest P/E multiples and low implied levered cost of equity

Trading multiples by sector for Europe, Q2 2023

Sectors	EV/Revenue	EV/EBIT	P/E	P/BV
Financials	n.a.	n.a.	7.7x	0.9x
Consumer Cyclicals	1.3x	11.6x	12.9x	2.0x
Consumer Non-Cyclicals	1.8x	14.1x	16.6x	3.3x
Healthcare	3.5x	14.0x	16.3x	3.7x
Technology	2.7x	16.3x	18.2x	2.8x
Utilities	1.4x	11.9x	13.2x	1.6x
Energy	0.7x	4.7x	6.5x	1.2x
Basic Materials	1.0x	9.7x	12.1x	1.6x
Industrials	1.5x	14.0x	16.9x	3.2x
Real Estate	16.1x	22.8x	12.6x	0.7x
Europe (All)	1.6x	11.1x	12.3x	1.9x

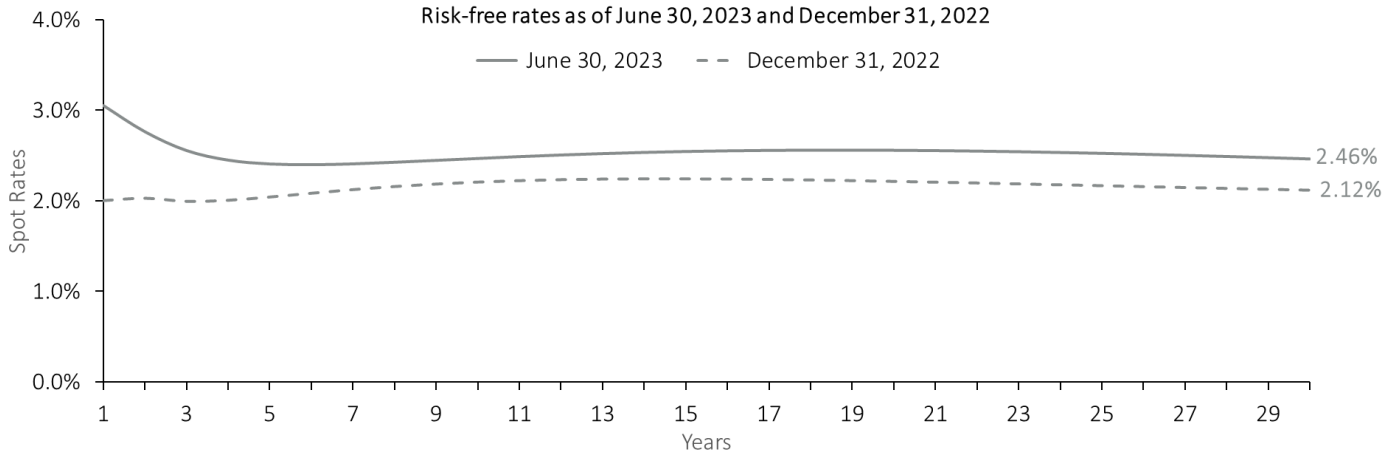
3

Risk-free rate

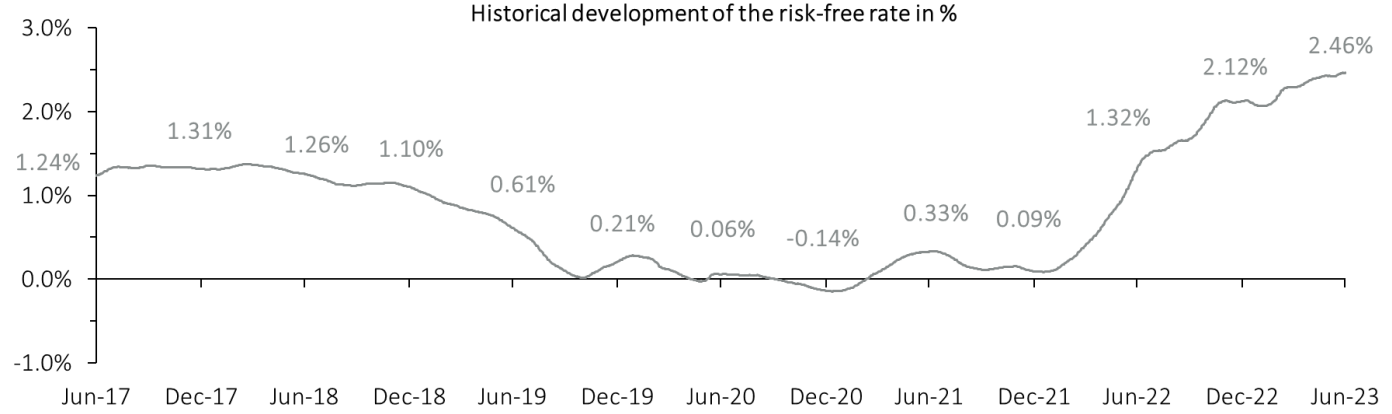
Europe’s risk-free rate increased by almost 34 basis points in the last 6 months, whereby its curve increased strongest at the short end of the curve, leading to an inverted interest rate curve

Interest rate curve based on long-term bonds and historical development of the risk-free rate in Europe (Svensson Method)

Interest rate curve based on long-term bonds (IDW S1)



Historical development of the risk-free rate in %



Note: Interest rate as of reference date using 3-month average yield curves in accordance with IDW S 1.

4

Market returns and market risk premium
a. Implied returns (ex-ante analysis)

The implied market risk premium decreased 40 basis points to 6.8% in the last 6 months due to a lower implied market return and a higher risk-free rate

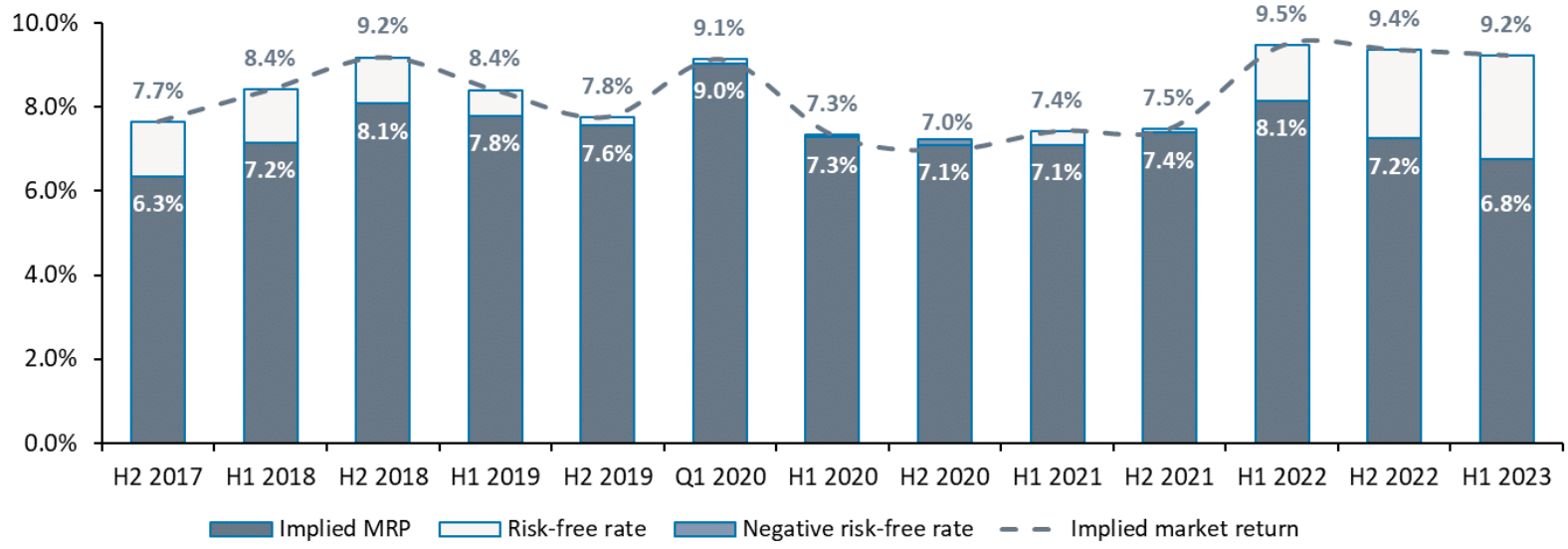
Implied market risk premium for Europe since June 30, 2017

Knowing the **implied market return** and the daily measured risk-free rate of the European capital market, we can determine the implied **market risk premium**.

In the years from **June** 2017 to June 2023 the **implied market returns** ranged from **7.0% to 9.5%**. Subtracting the risk-free rate from the implied market return, we derive a **market risk premium** within the range of **6.3% to 9.0%.**

The **implied market return lies at 9.2%** as of the reference date **June 30, 2023**. Taking the **risk-free rate of 2.46%** into account, we determine an **implied market risk premium of 6.8%**. To determine the appropriate market risk premium for valuation purposes, it is important to take also the analysis of historical returns as well as volatility (see p. 17) into account. Especially in times of crisis it can make sense to apply an average market risk premium over several periods instead of a reference date value.

Implied market risk premium - Europe



4

Market returns and market risk premium
b. Historical returns (ex-post analysis)

The European capital market had long-term historical returns over an investment period of 15 years between 6.9% (geometric mean) and 7.9% (arithmetic mean)

Arithmetic and geometric mean of historical market returns as of June 30, 2023, over 15 years, 2008-2023

In addition to the ex-ante analysis above, we also analyze **historical (ex-post) returns.** Historical returns over a **long-term observation period**, indicate an expected **return potential** of the European capital markets. The analysis of historical returns can be used for **plausibility checks of the cost of capital**, more specifically **return requirements**, which were evaluated through the CAPM.

To enable a precise analysis of the historical returns of the European capital market, we use the so-called **return triangle**.[1)] It helps present the **annually realized returns** from **different investment periods** in a simple and understandable way. Especially the **different buying and selling points in time** and the different annual holding periods are illustrated comprehensively. To calculate the **average annual returns** over several years, we use both the **geometric and arithmetic mean**.

In this Study, we analyze the so-called **total shareholder returns,** which include the **returns on investments** and the **dividend yields**.

As only **total return indices** capture both return on investments and dividend yields, our analysis is based on the **STOXX Europe 600.** The relevant total return index for **Europe is called the STOXX Europe 600 Gross Return ("STOXX Europe 600 GR").**

The **observation period** is **15 years**. All ex-post returns are calculated using the **data as of the reference date June 30, 2023.**

The following slide serves as an introduction by showing the historical development of the **STOXX Europe 600 GR** as of **June 2017.** Additionally, the EURO STOXX 50 Volatility ("**VSTOXX**") is displayed for the same period. The VSTOXX serves as an indicator for the **stock market's expectations of volatility** and can thus be used as a risk measure. The **VSTOXX** is often named the "fear index", higher levels are typically associated with more turbulent markets.

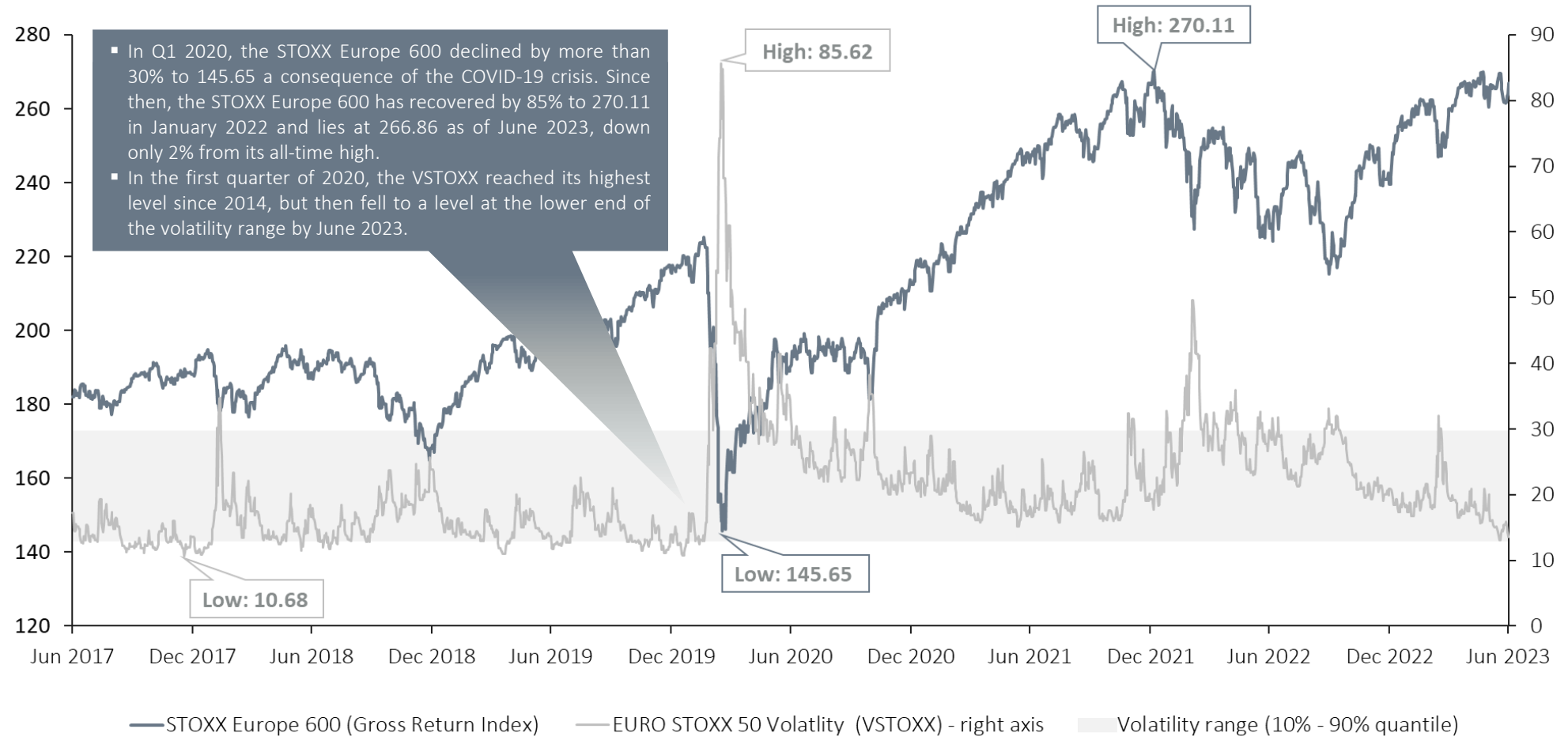
The following slides show the historical shareholder returns for different holding periods between June 30, 2008, and June 30, 2023, based on the arithmetic and geometric mean. For the longest **observation period** of **15 years** the average historical mean of the market return amounts to **7.9%.** Using geometrical averaging, we obtain a market return of **6.9%**.

Please note that the historical market return calculations are based on actual index data points, whereas the implied market return and all sector calculations are based on the Refinitiv Eikon Aggregates App. Therefore, the comparability can be impeded by different aggregation and composition methodologies.

1. The German Stock Institute e.V. (DAI) developed the return triangle for DAX and EURO STOXX

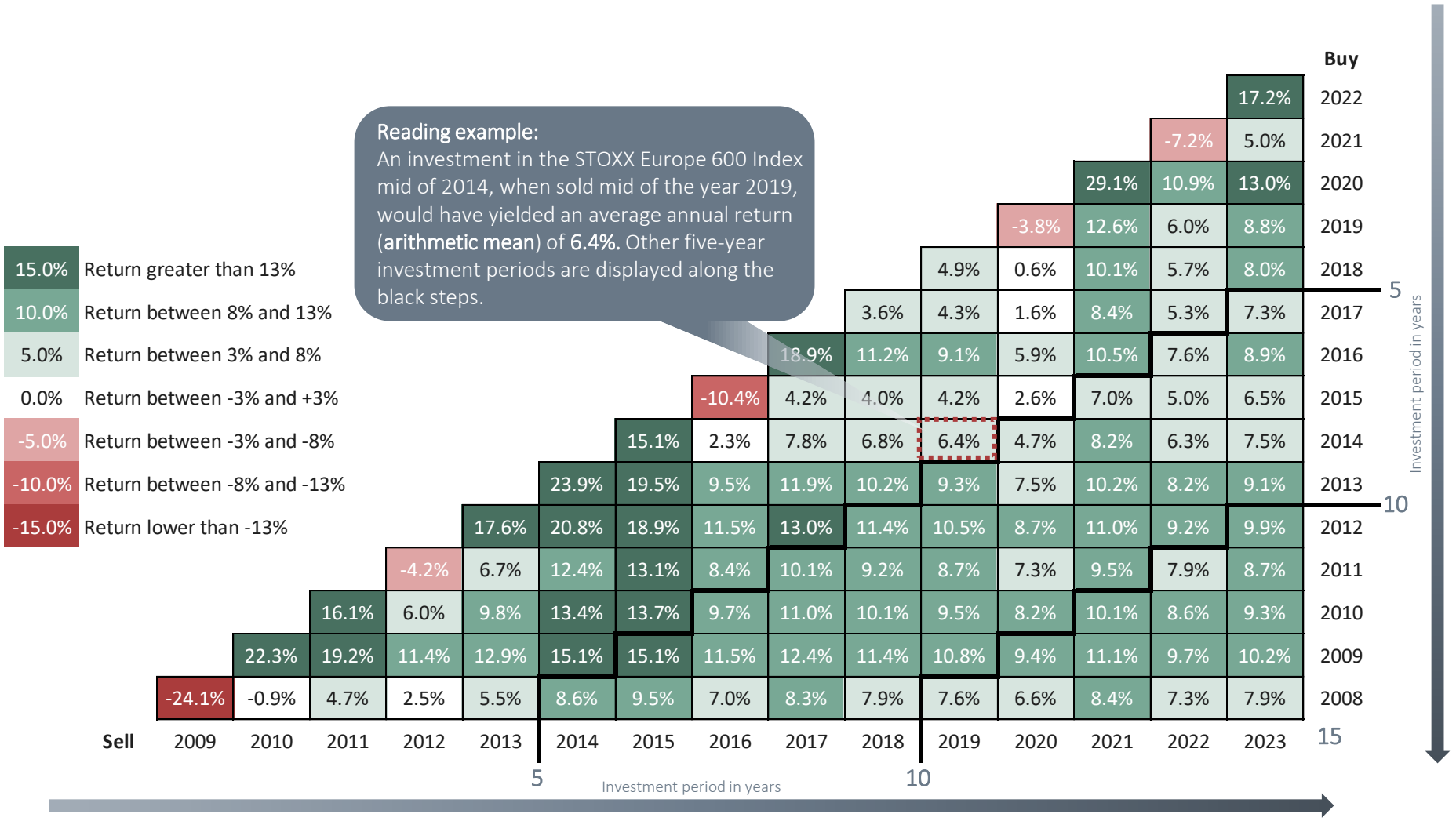
The performance of the STOXX Europe 600 increased significantly after the COVID-19 crisis, and the index was close to its all-time high, while volatility declined

Historical development of STOXX Europe 600 GR vs VSTOXX



The strong performance of the STOXX Europe 600 in the last 12 months (17.2%) resulted in a significant improvement of the arithmetic mean return of an investment in 2017 from 5.3% to 7.3%

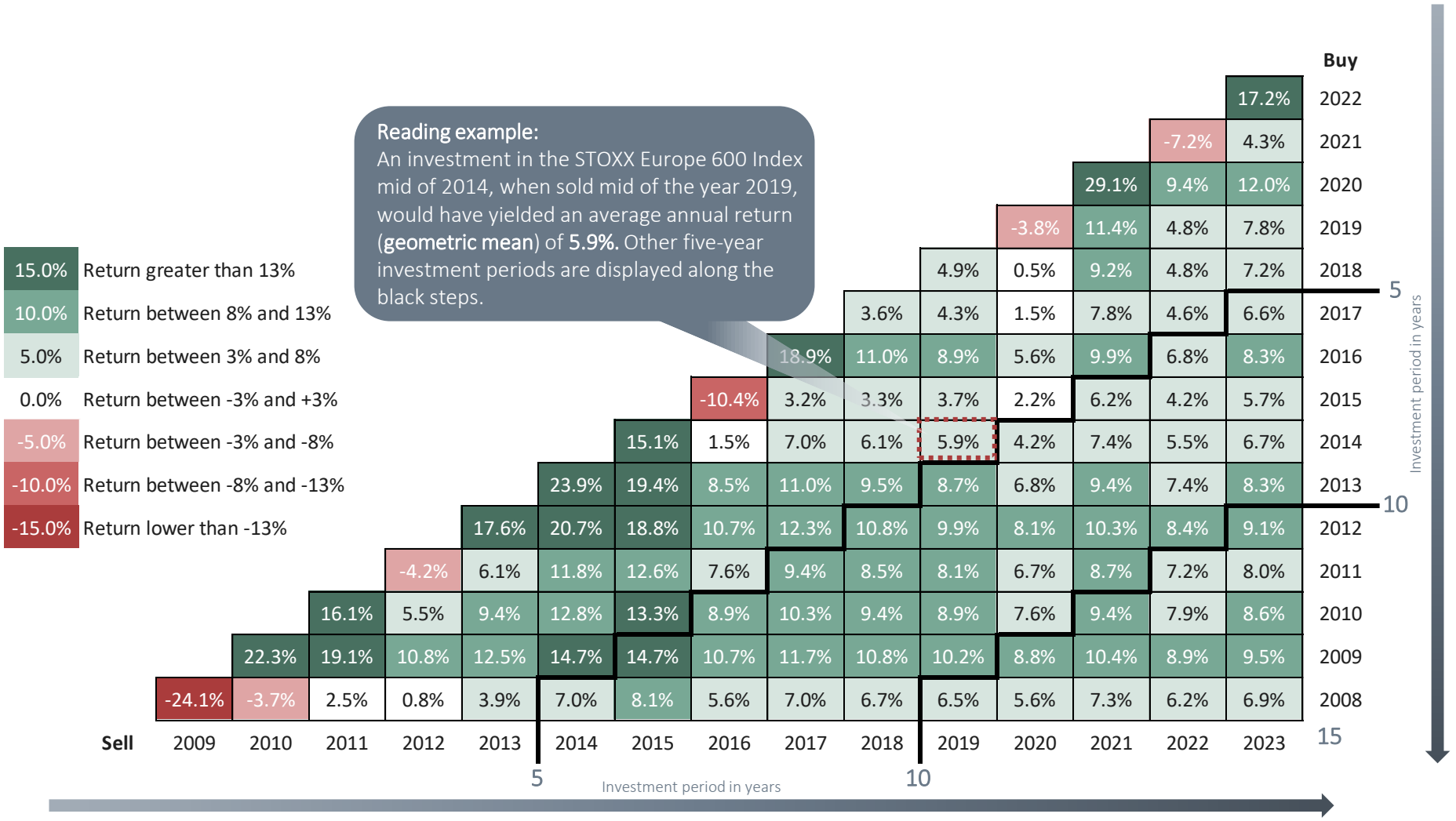
Arithmetic mean of historical market returns as of June 30, 2023, STOXX Europe 600 Performance Index, 2008-2023



Source: https://www.dai.de/files/dai_usercontent/dokumente/renditedreieck/2015-12-31%20DAX-Rendite-Dreieck%2050%20Jahre%20Web.pdf

The strong performance of the STOXX Europe 600 in the last 12 months (17.2%) improved the geometric mean return of an investment in 2017 by 2%-points to 6.6%

Geometric mean of historical market returns as of June 30, 2023, STOXX Europe 600 Performance Index, 1998-2023



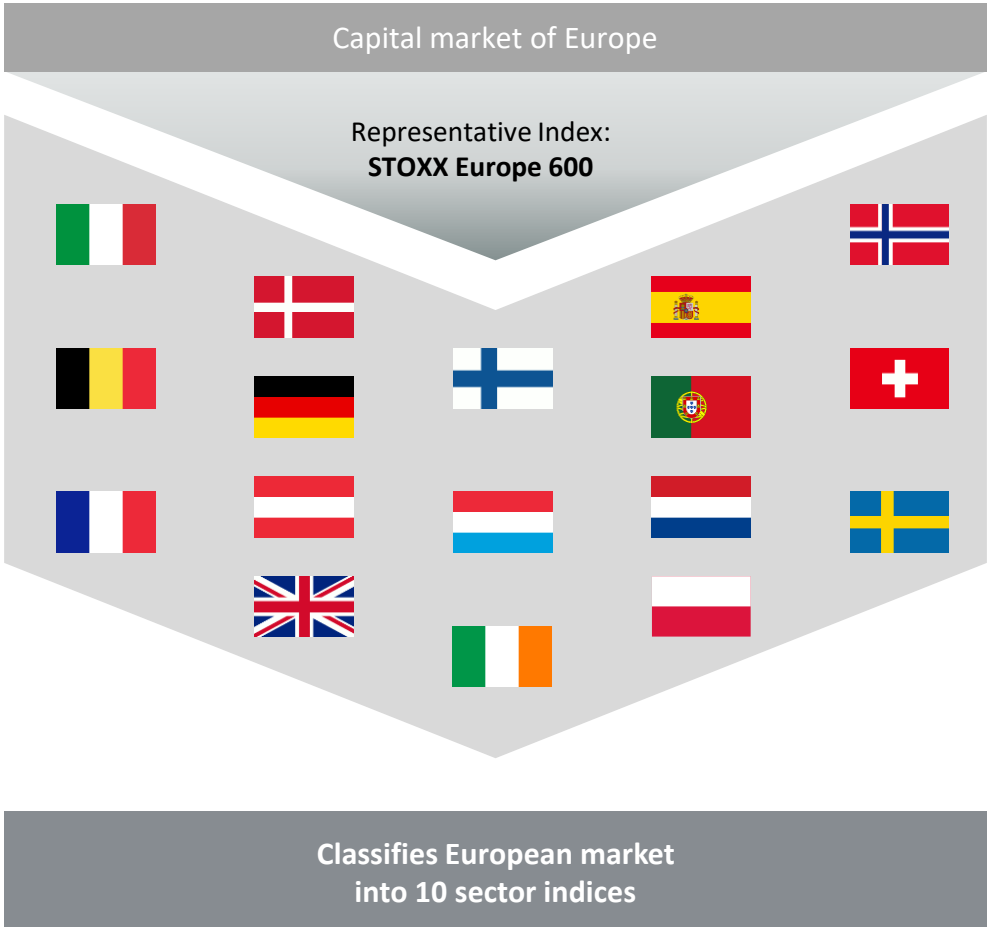
Source: https://www.dai.de/files/dai_usercontent/dokumente/renditedreieck/2015-12-31%20DAX-Rendite-Dreieck%2050%20Jahre%20Web.pdf

5

Sector classification of European companies
based on STOXX® industry classification

The chosen capital market index for Europe comprises 600 listed companies that are allocated to ten sector indices

Sector indices for Europe



The sector indices aim to cover the **entire capital market of Europe**. Therefore, this Study contains all equities of the **STOXX Europe 600** as listed in the Refinitiv Eikon Aggregates App.[1)] The STOXX Europe 600 Index represents large, mid and small capitalization companies across **17 countries of the European region**: Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Norway, Poland, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

The **ten sector indices** for this Study are:

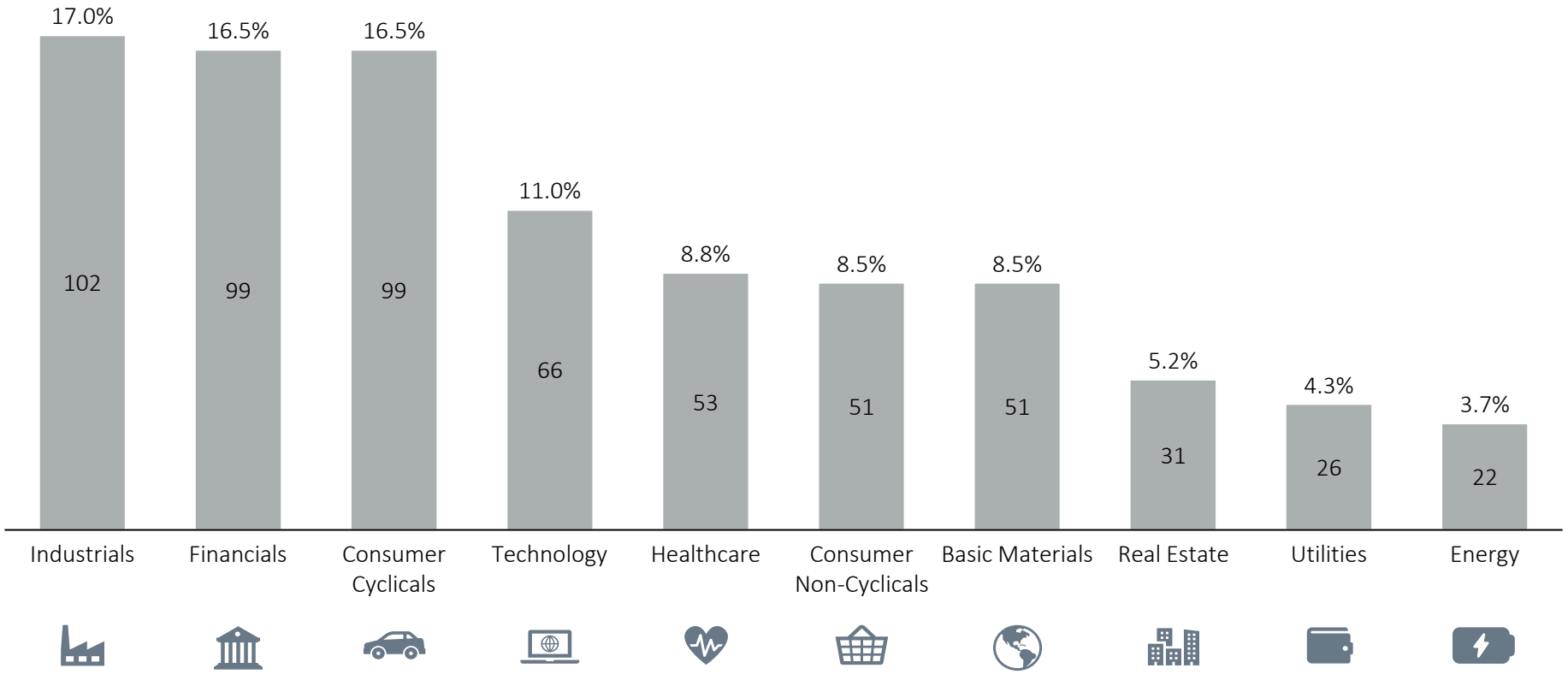
- Financials
- Consumer Cyclicals
- Consumer Non-Cyclicals
- Healthcare
- Technology
- Utilities
- Energy
- Basic Materials
- Industrials
- Real Estate

} sector indices

1. The Refinitiv Eikon Aggregates App offers analyst forecasts and historical values of key financials on an aggregated sector level

The Industrials, Financials and Consumer Cyclicals sectors represent about half of the European companies included in the STOXX Europe 600

Sector indices of STOXX Europe 600 as of June 30, 2023 (Number and percentage distribution of the 600 companies)



6 Betas

The highest betas are observed in the Consumer Cyclicals and Energy sectors, the lowest in the Utilities and Consumer Non-Cyclicals

Levered and unlevered beta factors by sector as of June 30, 2023 (5-years monthly)

Sector	Beta levered [1)]	Beta unlevered
Financials	1.25	n.a.
Consumer Cyclicals	1.18	0.71
Consumer Non-Cyclicals	0.66	0.45
Healthcare	0.73	0.52
Technology	1.10	0.63

Sector	Beta levered	Beta unlevered
Utilities	0.69	0.43
Energy	1.16	0.80
Basic Materials	1.13	0.81
Industrials	1.14	0.65
Real Estate	1.03	0.68

Sector specific debt ratio, leverage and rating

		Financials [2)]	Consumer Cyclicals	Consumer Non-Cyclicals	Healthcare	Technology	Utilities	Energy	Basic Materials	Industrials	Real Estate
5-years 2018-2023 monthly	Debt ratio [3)]	67.1%	48.8%	48.9%	38.5%	51.4%	59.8%	37.4%	34.7%	53.8%	44.9%
	Leverage	204.1%	95.2%	95.8%	62.5%	105.8%	148.6%	59.8%	53.2%	116.6%	81.6%
	Rating	BBB+	BBB+	BBB	A-	A-	BBB-	BBB+	BBB+	BBB	BBB-

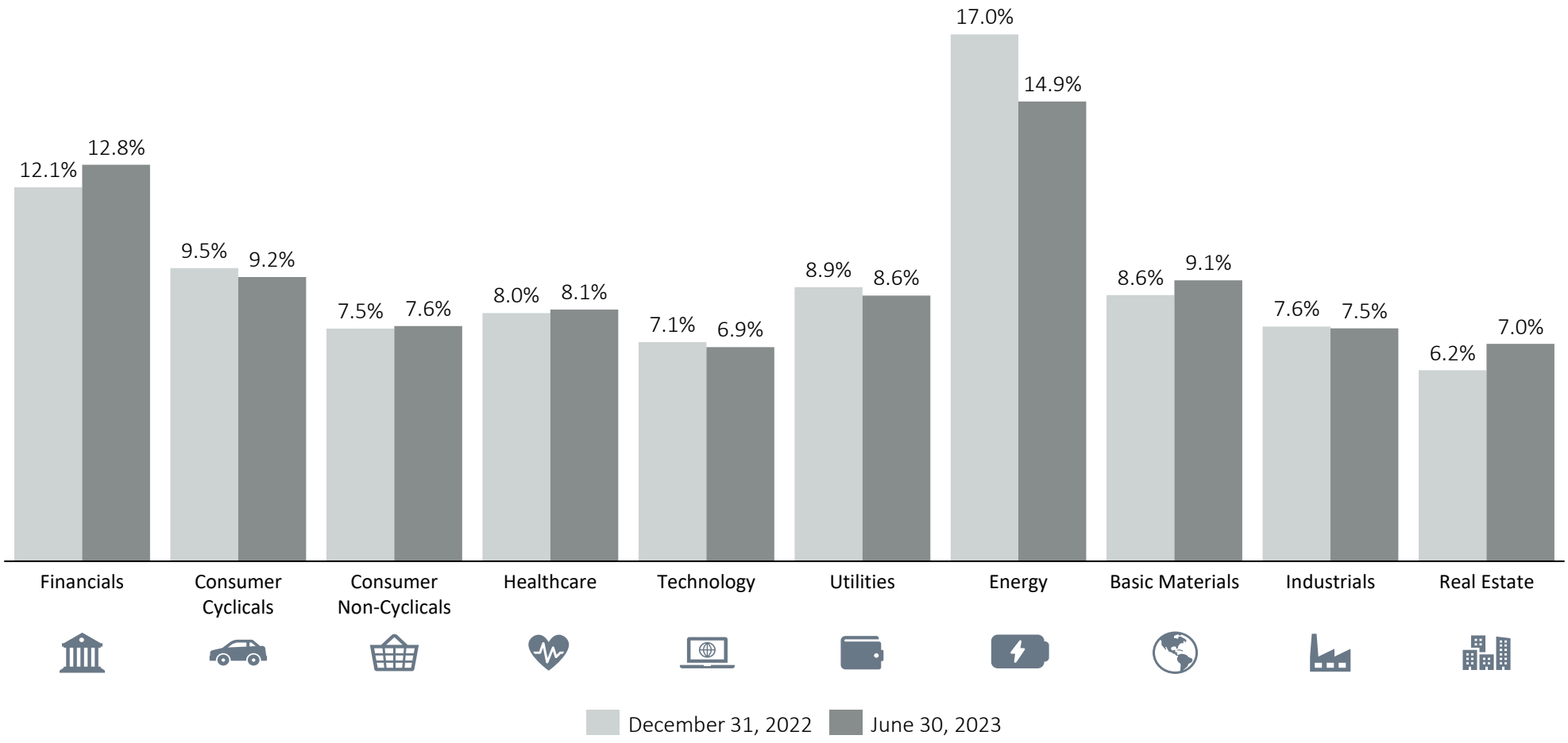
1. The levered beta of the market does empirically not necessarily exactly amount to 1.00 due to the exclusion of statistically insignificant betas. We observe a levered beta for the market of 1.00.
2. The debt illustration of the companies of the Financials sector only serves informational purposes. We will not implement an adjustment to the company's specific debt (unlevered) because a bank's indebtedness is part of its operational activities and economic risk. Therefore, a separation of operational and financial obligations is not possible. In addition, bank specific regulations about the minimum capital within financial institutions let us assume that the indebtedness degree is widely comparable. For that reason, it is possible to renounce the adaptation of levered betas.
3. The debt ratio corresponds to the debt-to-total capital ratio.

7

Sector returns
a. Implied returns (ex-ante analysis)

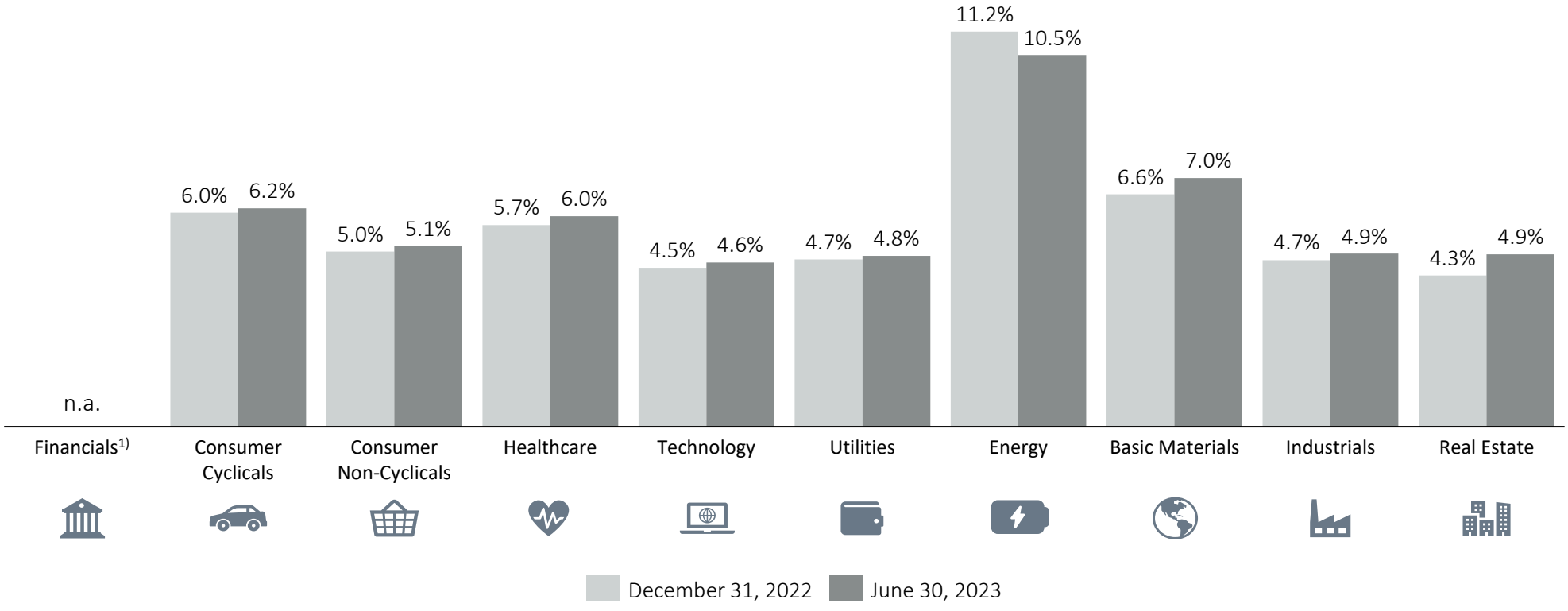
Overall, implied levered returns were relatively stable the past 6 months and decreased only in the Energy sector

Implied levered returns by sector, June 30, 2023, vs. December 31, 2022



In line with the implied levered returns, implied unlevered returns also increased over the past 6 months due to higher market capitalization with the exception of the Energy sector

Implied unlevered returns by sector, June 30, 2023 vs. December 31, 2022

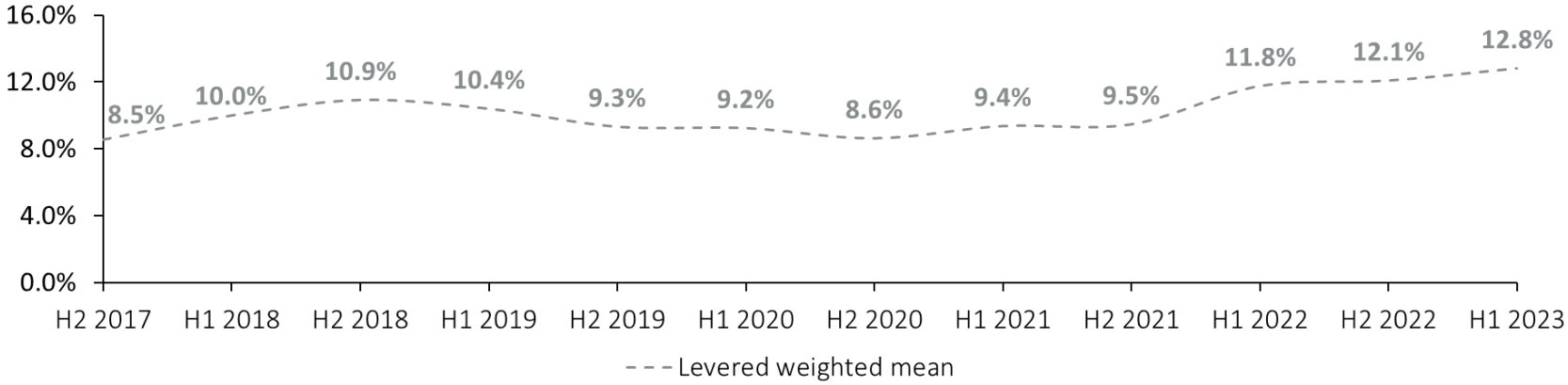


1. No unlevered returns are reported for the Financial sector, as debt is part of operating activities.

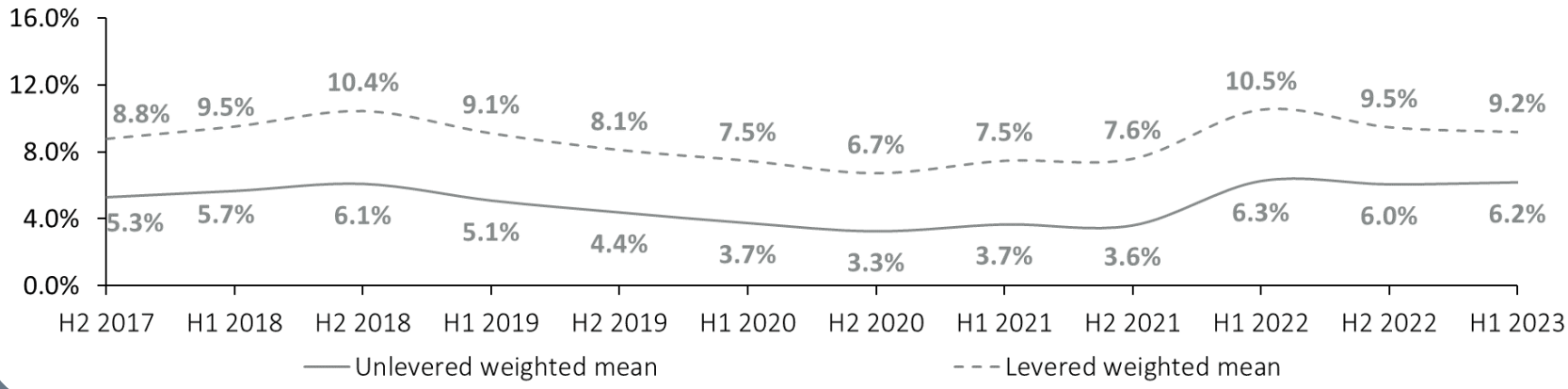
Implied sector returns increased in the Financials sector, as earnings estimates increased stronger than prices due to higher interest rates; the Consumer Cyclicals sector decreased in the last 6 months

Implied levered and unlevered sector returns since 2017

Financials



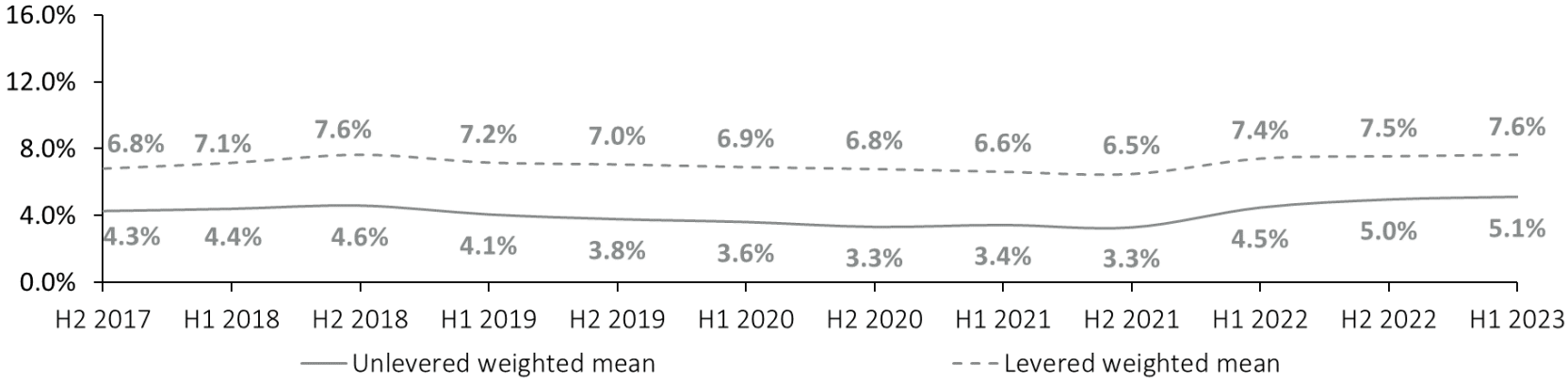
Consumer Cyclicals



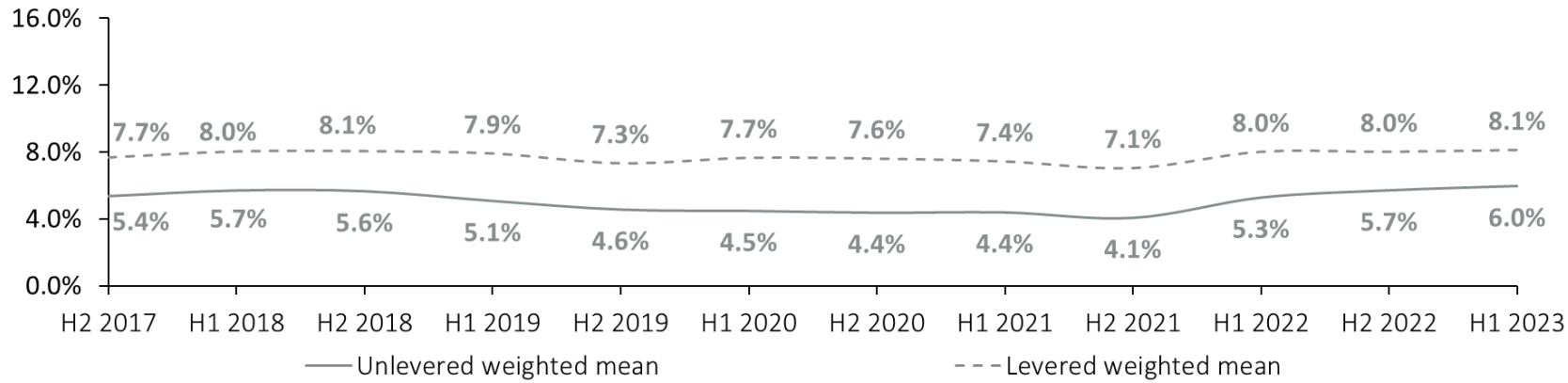
Implied sector returns for the Consumer Non-Cyclicals and Healthcare sectors remained at a constant level in the last 6 months and were also relatively stable since 2017

Implied levered and unlevered sector returns since 2017

Consumer Non-Cyclicals



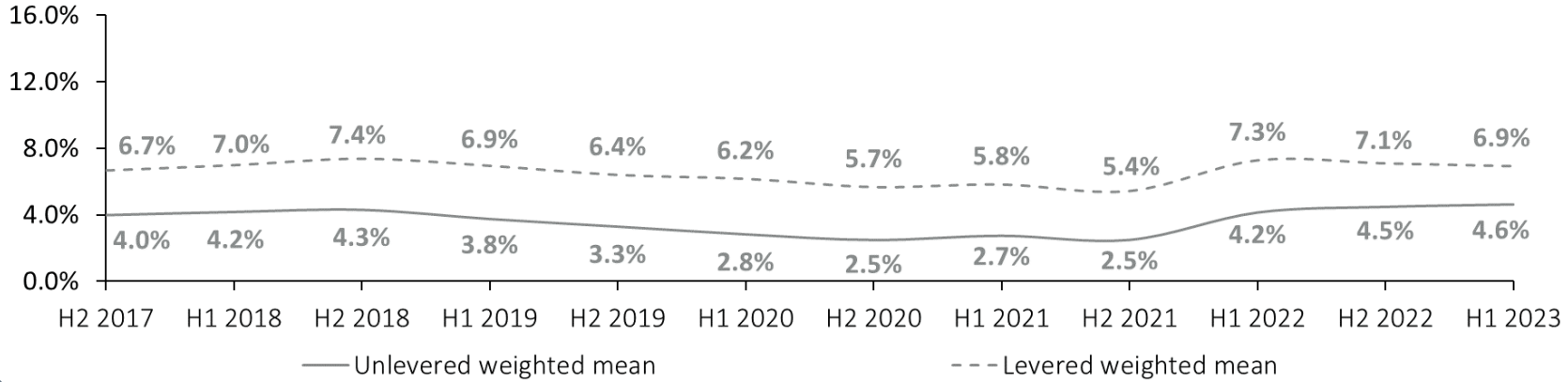
Healthcare



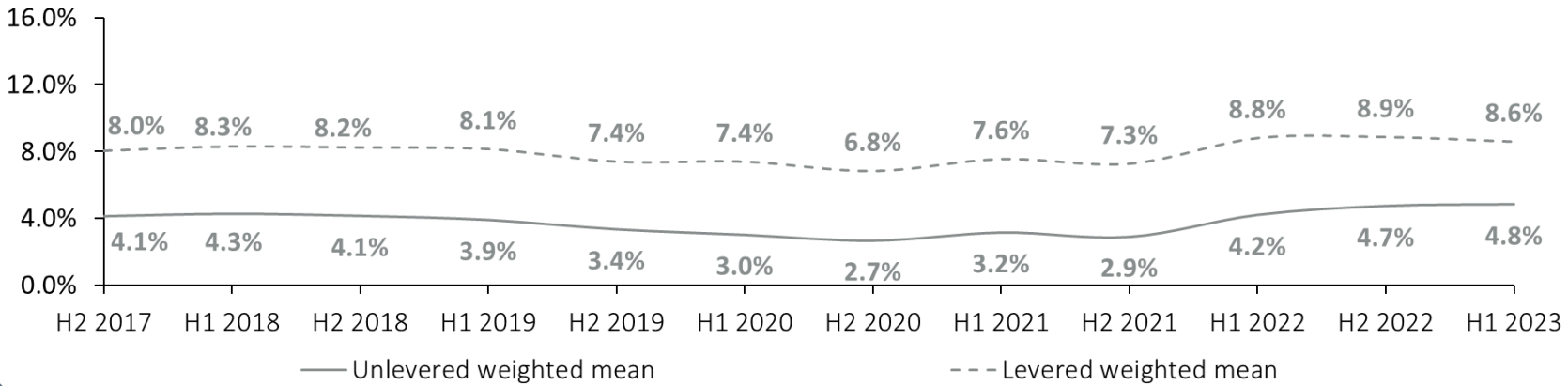
Implied levered sector returns slightly decreased in the Technology and Utilities sectors in the first half of 2023 due to higher prices relative to earnings estimates and thus increased P/E multiples

Implied levered and unlevered sector returns since 2017

Technology



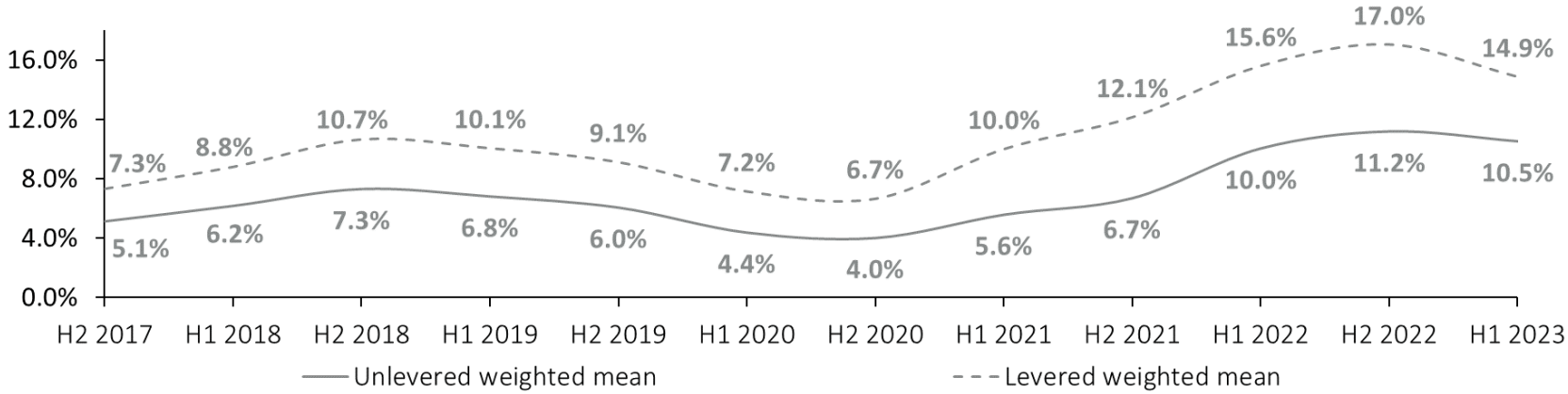
Utilities



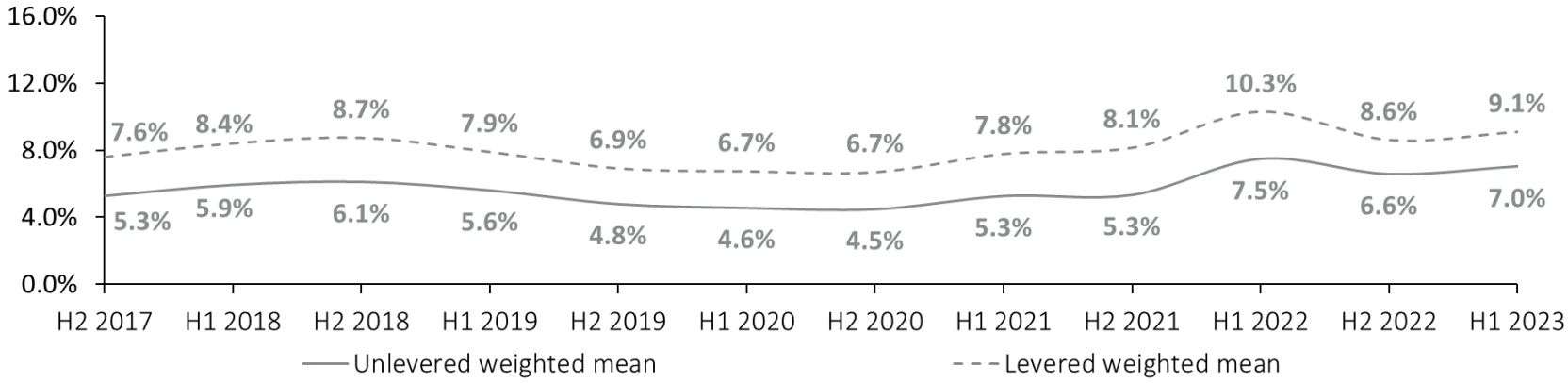
Implied levered sector returns decreased signififcantly in the Energy sector from all-time highs; Basic Materials increased in the first half of 2023 in line with lower P/E multiples

Implied levered and unlevered sector returns since 2017

Energy



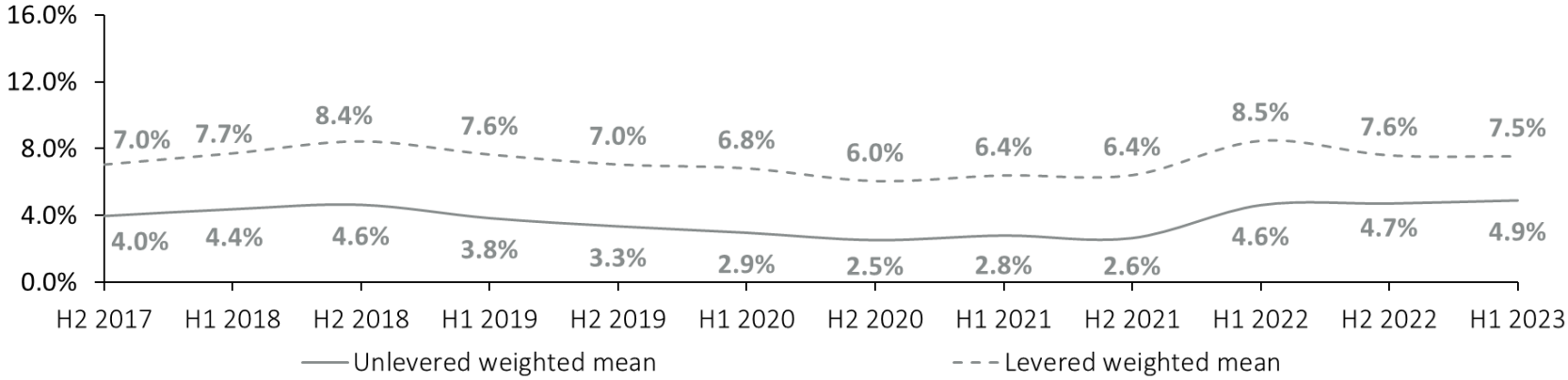
Basic Materials



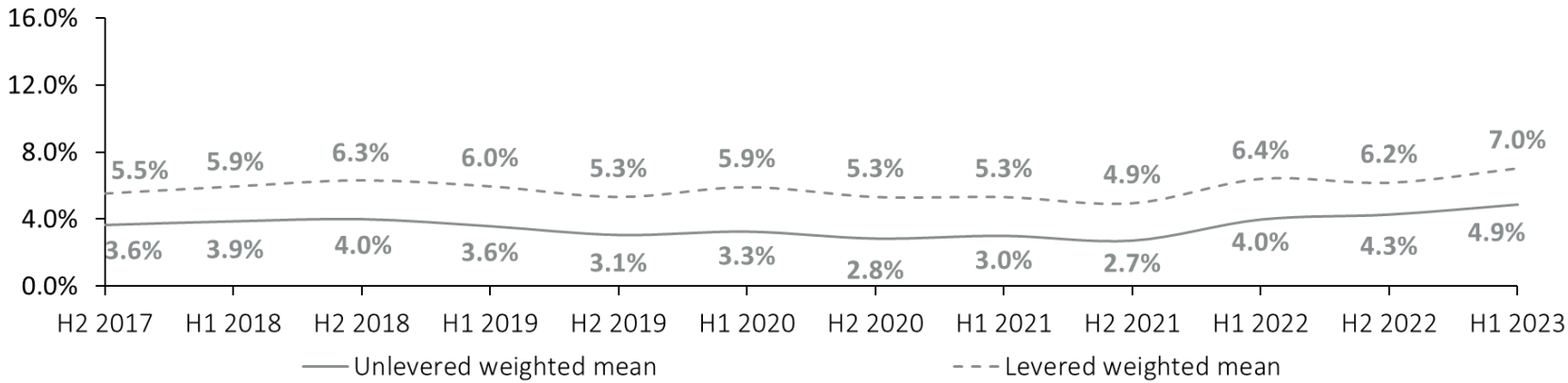
The implied sector returns remained constant in Industrials, whereas Real Estate showed a strong increase to all-time highs in the first half of 2023 due to lower prices and P/E multiples

Implied levered and unlevered sector returns since 2017

Industrials



Real Estate

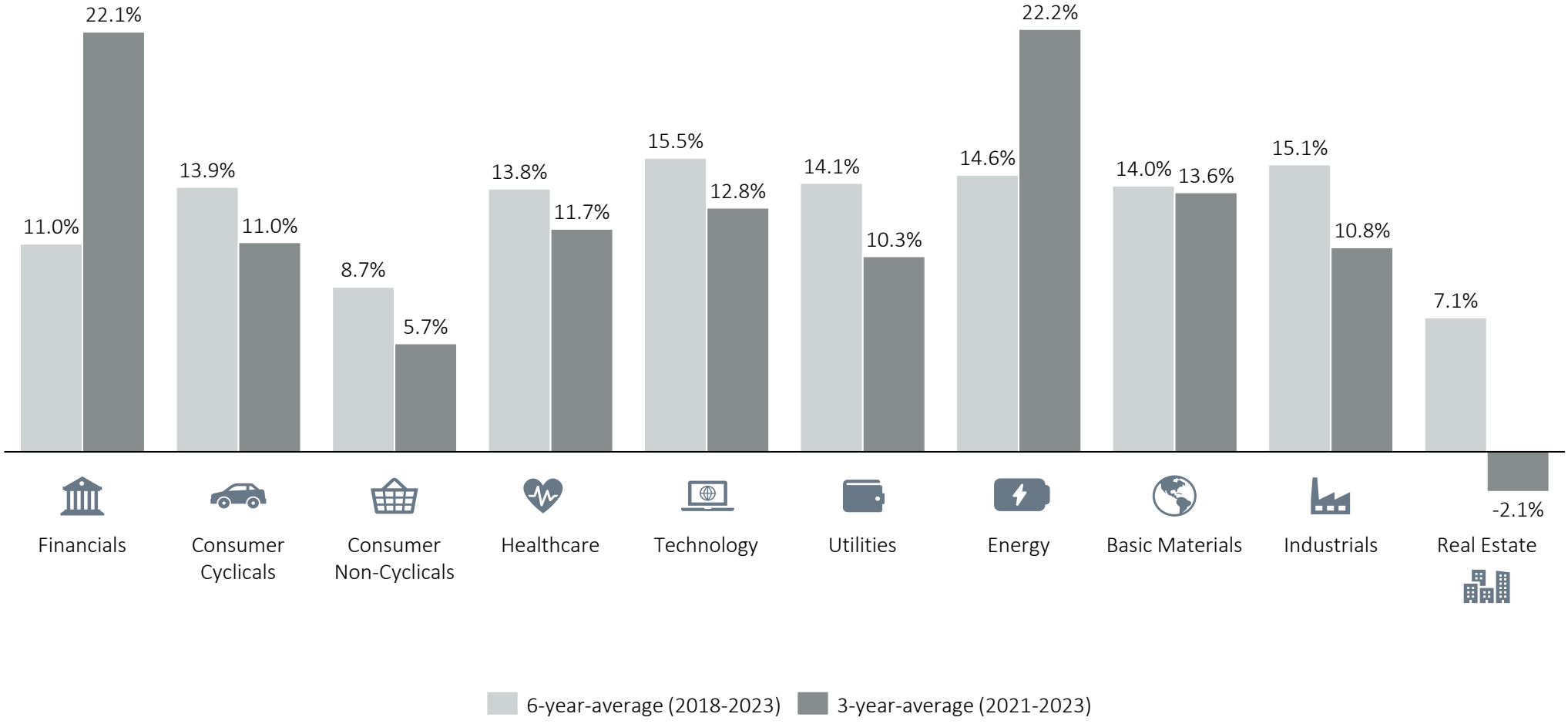


7

Sector returns
b. Historical returns (ex-post analysis)

Historical returns are volatile and show varying impacts of interest rate hikes on sectors; Real Estate returns have even been negative, while the Financial sector benefits from higher interest rates

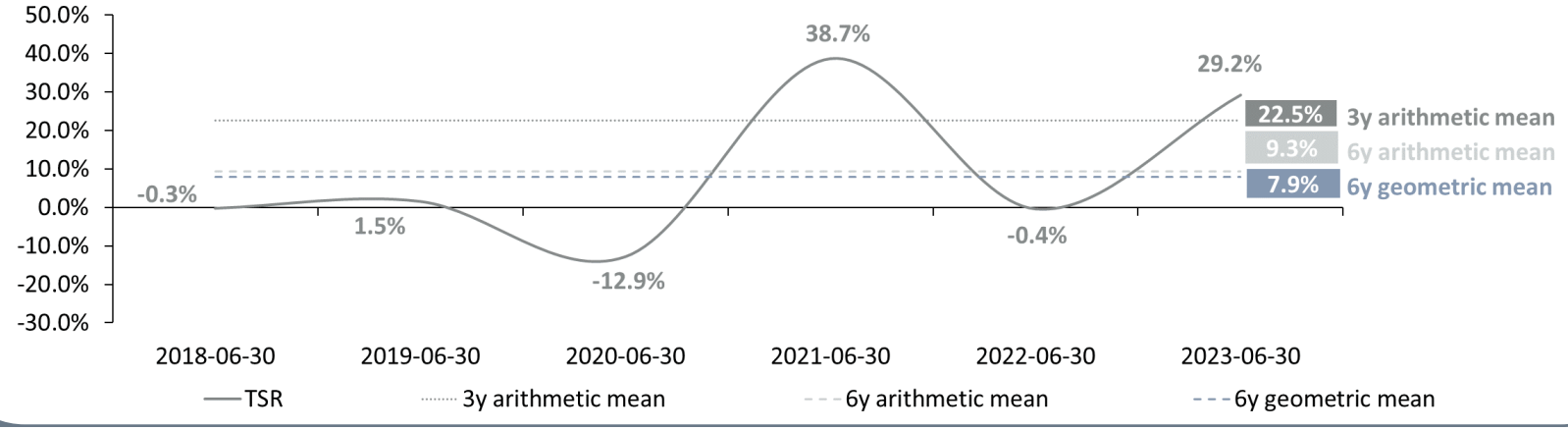
Three- and six-year-average historical sector returns as of June 30, 2023



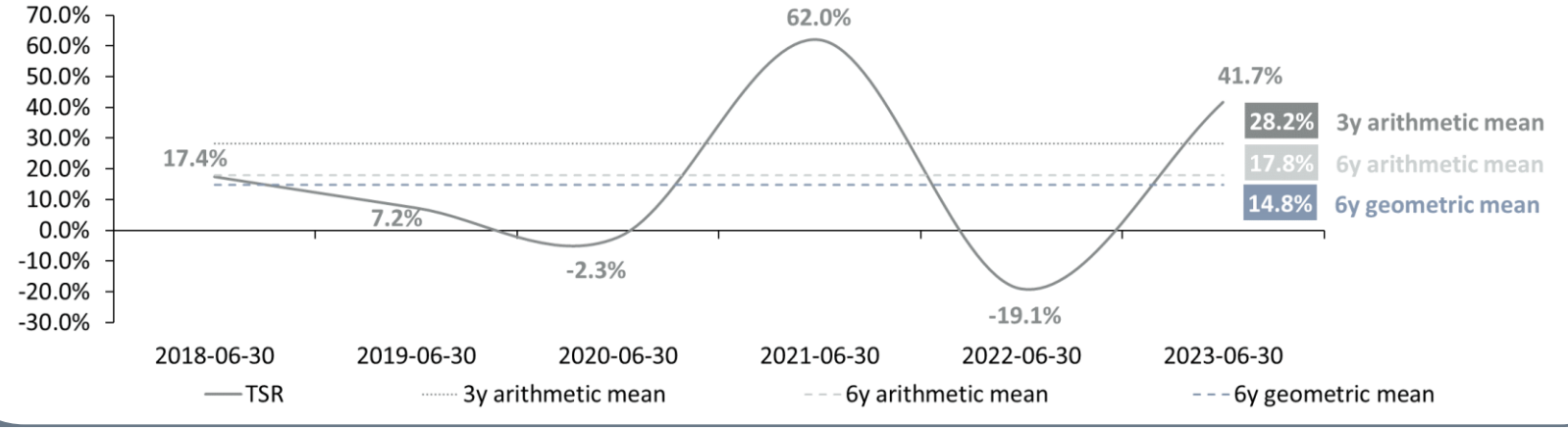
The Consumer Cyclical sector surged 41.7% over the past 12 months, the strongest performance of all sectors; the Financial sector also had a strong performance (29.2%)

Historical sector returns since 2017

Financials



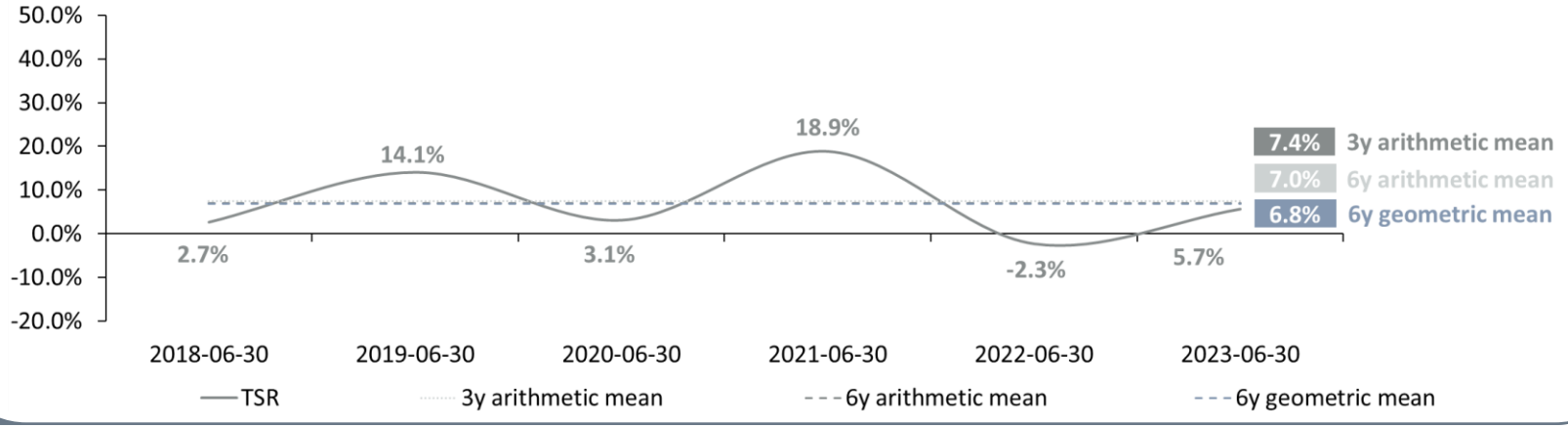
Consumer Cyclicals



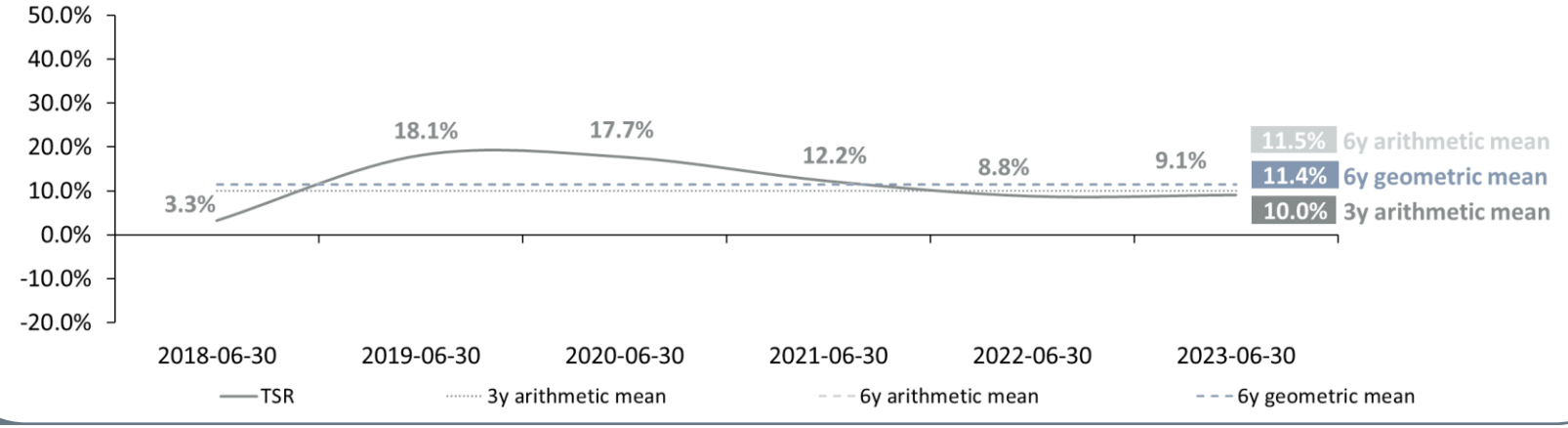
The Consumer Non-Cyclicals and the Healthcare sectors had a positive but relatively low performance over the last 12 months, showing generally lower volatility of returns over the last 6 years

Historical sector returns since 2017

Consumer Non-Cyclicals



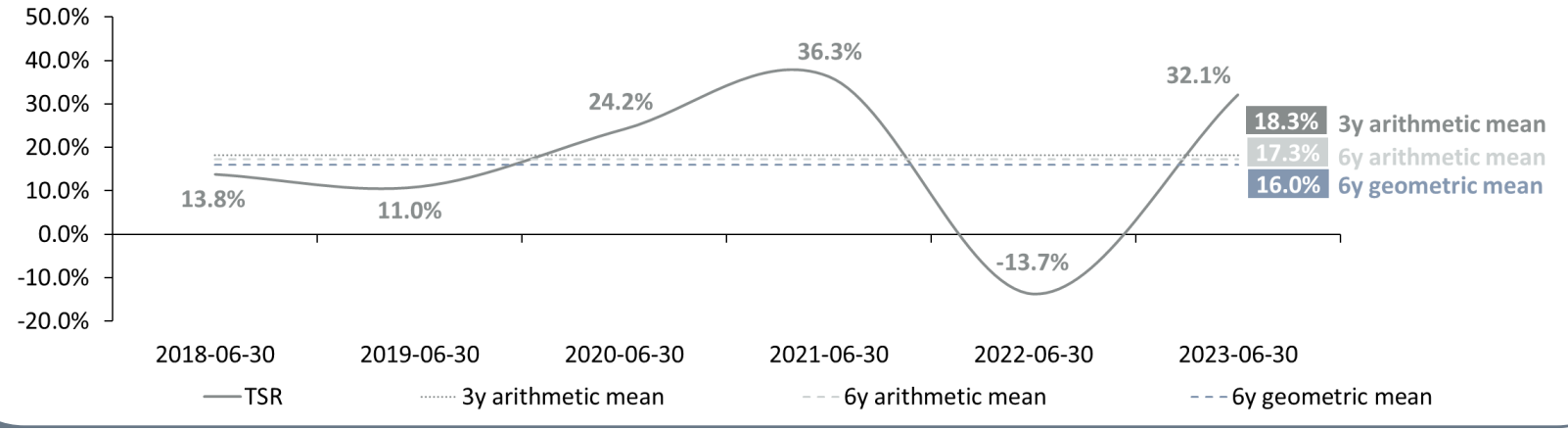
Healthcare



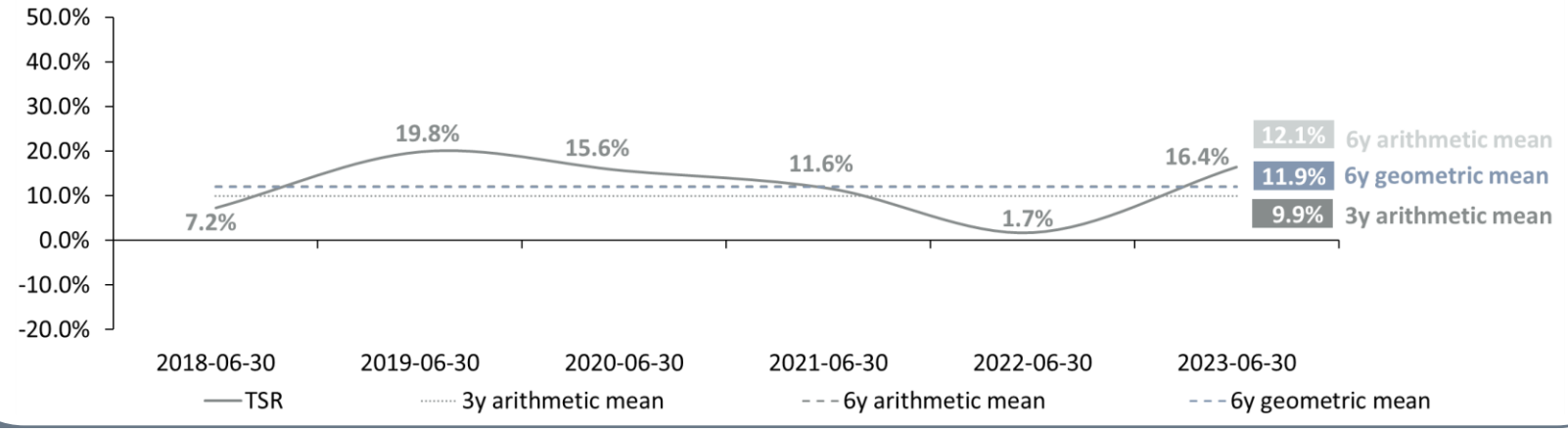
Technology has been among the best performing sectors in the recent past; the less volatile Utilities sector was in the middle of the historical 1-year return range

Historical sector returns since 2017

Technology



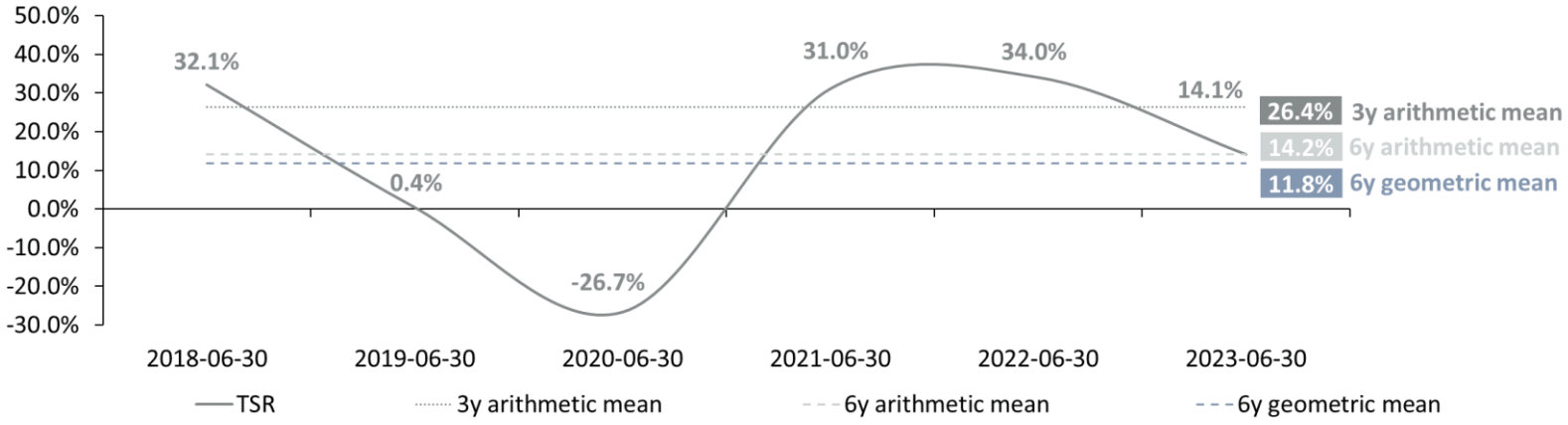
Utilities



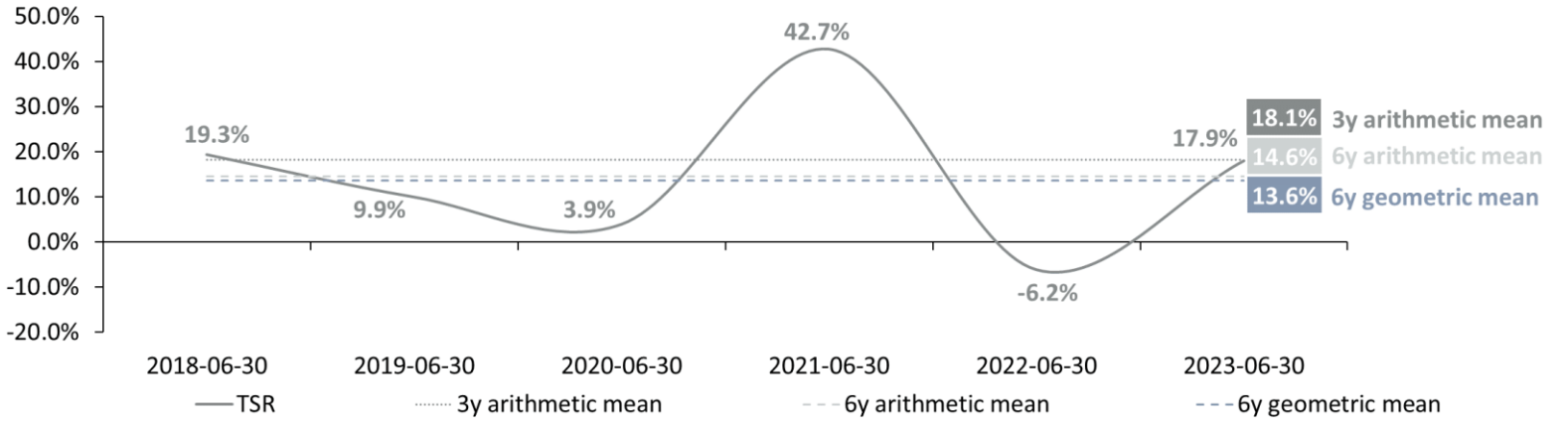
After a strong performance 2 years ago, performance of the Energy sector decreased significantly due to falling inflation and energy prices; the Basic Materials sector recovered

Historical sector returns since 2017

Energy



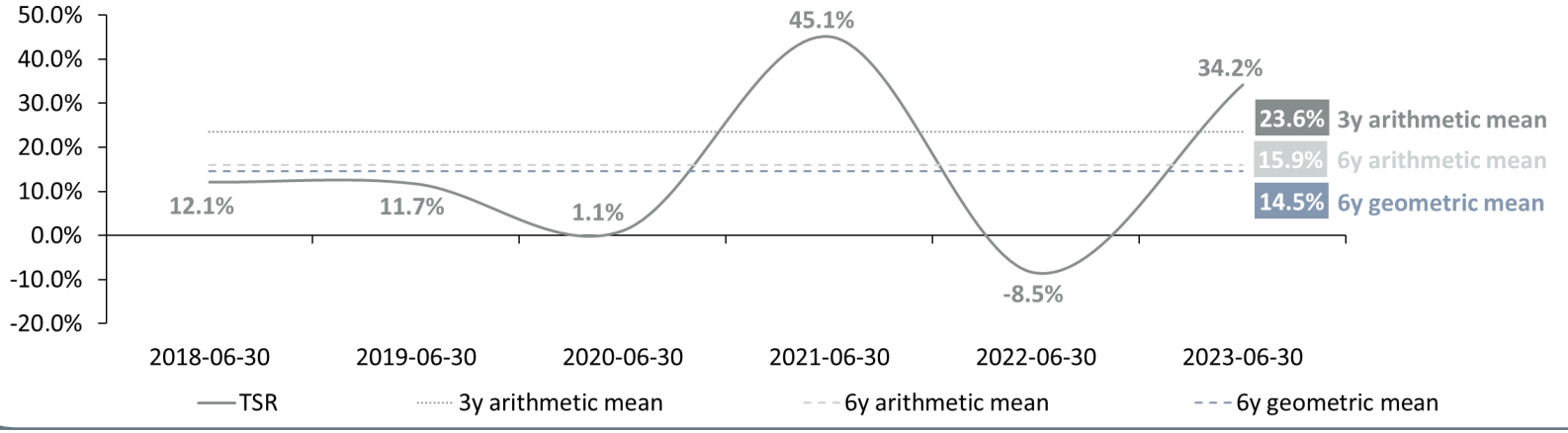
Basic Materials



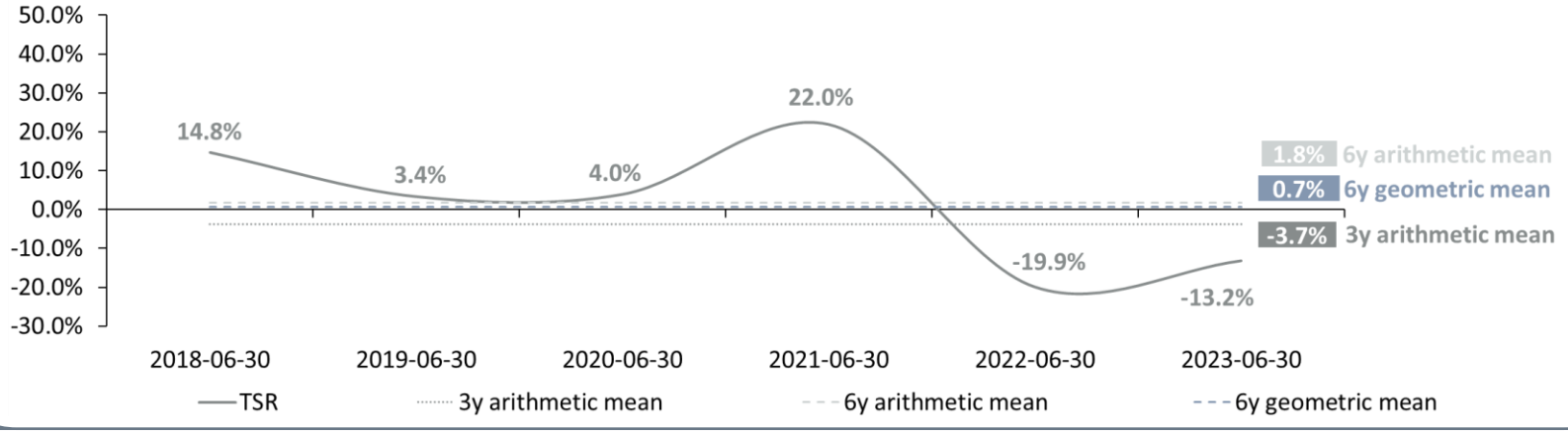
Real Estate had the worst sector performance due to the sharp rise in interest rates, whereas Industrials rose strongly (34.2%) after recession fears subsided

Historical sector returns since 2017

Industrials



Real Estate



8

Trading multiples

P/E multiples increased in Consumer Cyclicals, Consumer Non-Cyclicals, Healthcare and Technology, as market capitalization has risen faster than earnings estimates over the past 6 months

Median forward multiples by sector, June 30, 2023, and December 31, 2022

Sector	EV / Revenue	EV / EBIT	P / E	P / B
Financials[1)]	n.a.	n.a.	7.7x 8.1x	0.9x 1.0x
Consumer Cyclicals	1.3x 1.3x	11.6x 10.8x	12.9x 12.0x	2.0x 2.0x
Consumer Non-Cyclicals	1.8x 1.9x	14.1x 14.5x	16.6x 16.4x	3.3x 3.1x
Healthcare	3.5x 3.4x	14.0x 13.7x	16.3x 15.7x	3.7x 3.9x
Technology	2.7x 2.6x	16.3x 15.3x	18.2x 16.5x	2.8x 2.5x

June 30, 2023 December 31, 2022

1. For companies in the Financials sector, Revenue- and EBIT-Multiples are not meaningful and thus are not reported

In contrast to a slight overall increase, Real Estate's EV/EBIT and P/E multiples decreased, as market capitalization relative to earnings estimates declined more sharply over the past 6 months

Median forward multiples by sector, June 30, 2023, and December 31, 2022

Sector	EV / Revenue	EV / EBIT	P / E	P / B
Utilities	1.4x 1.5x	11.9x 12.1x	13.2x 12.6x	1.6x 1.6x
Energy	0.7x 0.7x	4.7x 4.1x	6.5x 5.8x	1.2x 1.4x
Basic Materials	1.0x 1.3x	9.7x 10.5x	12.1x 12.6x	1.6x 1.7x
Industrials	1.5x 1.4x	14.0x 13.8x	16.9x 15.9x	3.2x 3.1x
Real Estate	16.1x 16.8x	22.8x 23.5x	12.6x 13.6x	0.7x 0.6x
Europe	1.6x 1.6x	11.1x 10.9x	12.3x 11.8x	1.9x 2.0x

June 30, 2022 December 31, 2023

Overall, based on median sector multiples, Energy ranks lowest and Technology ranks highest, while Real Estate shows a mixed picture

Sector multiples ranking based on median, 1yf as of June 30, 2023

	EV/Revenue 1yf	EV/EBIT 1yf	P/E 1yf	P/B LTM	Ø Ranking
Financials	n.a.	n.a.	9	9	9.0
Consumer Cyclicals	7	7	6	5	6.4
Consumer Non-Cyclicals	4	3	3	2	3.3
Healthcare	2	5	4	1	2.7
Technology	3	2	1	4	2.6
Utilities	6	6	5	6	5.4
Energy	9	9	10	8	9.1
Basic Materials	8	8	8	7	7.9
Industrials	5	4	2	3	4.1
Real Estate	1	1	7	10	3.9

The Energy sector has the least expensive valuation level of all sectors

The P/B multiple of the Utilities sector ranks 6th highest in a sector comparison. Overall, the average ranking of the Utilities sector is 5.4, indicating a medium valuation level.

The Technology sector shows the highest multiples on average, followed by the Healthcare sector.

1. Multiples are ranked from highest to lowest values: 1 – highest (dark green), 9/10 – lowest (red)

Appendix
Background and approaches

Government bonds of European countries with AAA-rating (Germany, Luxembourg and the Netherlands) are used to derive risk-free rates for Europe

Risk-free rate

The **risk-free rate** is a return available on a security that the market generally regards as free from risk of default. It serves as an input parameter for the **CAPM** in order to determine the risk-adequate cost of capital.

The risk-free rate is a yield which is obtained from **long-term government bonds** of European countries with top-notch ratings. As of the reference date, the AAA-rated countries in the Eurozone included Germany, Luxembourg and the Netherlands. The European Central Bank (ECB) publishes – on a daily basis – the parameters needed to determine the yield curve using the **Svensson method**.[1)] By using interest rate data from different maturities, a **yield curve** can be estimated for fictitious zero-coupon bonds (spot rates) for a period of up to 30 years. Based on the respective yield curve, a **uniform risk-free rate** is derived under the assumption of present value equivalence to an infinite time horizon.

To compute the risk-free rate for a specific reference date we used an average value of the daily yield curves of the **past three months.** This method **avoids a misleading semblance of precision** and is recognized in court proceedings.[2)]

1. European Central Bank (https://www.ecb.europa.eu/stats/financial_markets_and_interest_rates/euro_area_yield_curves/html/index.en.html)
2. The Institute of Public Auditors (Institut der Wirtschaftsprüfer, IDW) in Germany also recommends this approach

The concept of implied cost of capital recently gained momentum

Market returns and market risk premium: Implied returns

The **future-oriented** computation of **implied market returns** and **market risk premiums** is based on profit estimates for public companies and return calculations. This approach is called ex-ante analysis and allows us to calculate the "**implied cost of capital**".

The **ex-ante method** offers an **alternative** to the **ex-post approach** of calculating the cost of capital by means of a regression analysis through the **CAPM**. The ex-ante analysis method seeks cost of capital which represent the **return expectations of market participants**. The approach assumes that the estimates of financial analysts reflect the expectations of the capital market.

The concept of **implied cost of capital** recently gained momentum. For example, when it was recognized by the German *Fachausschuss für Unternehmensbewertung* "**FAUB**".[1] It is acknowledged that implied cost of capital capture the **current capital market situation** and are thus able to reflect the effects of the current **low interest rate environment**.

Furthermore, recent **court rulings** with regards to appraisal proceedings appreciate the forward-looking nature of **implied cost of capital**. As of the **reference date**, it offers a more insightful perspective compared to the exclusive use of ex-post data.

In the analysis, we use – a simplified annual formula – the formula of the Residual Income Valuation Model by *Babbel*:[2]

$$r_t = \frac{NI_{t+1}}{MC_t} + \left(1 - \frac{BV_t}{MC_t}\right) * g$$

With the following parameter definitions:

r_t = Cost of equity at time t

NI_{t+1} = Expected net income in the following time period t+1[3]

MC_t = Market capitalization at time t

BV_t = Book value of equity at time t

g = Projected growth rate

By solving the model for the cost of capital, we obtain the implied return on equity.[4] Since *Babbel's* model does not need any explicit assumptions except for the growth rate it turns out to be **robust**. We source all data (i.e. expected annual net income, market capitalization, and book value of equity, etc.) of the analyzed companies from the data supplier Refinitiv Eikon. As a typified growth rate, we apply the European Central Bank target inflation rate of **2.0% as a typified growth rate**.

We determine the **implied market returns** for the STOXX Europe 600. We consider this index as a valid approximation for the European market. Subtracting the risk-free rate from the implied market returns results in the implied market risk premium.

To determine the appropriate market risk premium for valuation purposes, it is also important to take into account historical returns and volatility. Especially in times of crisis it may make sense to apply an average market risk premium over several periods instead of a reference date value.

1. cf. Castedello/Jonas/Schieszl/Lenckner, Die Marktrisikoprämie im Niedrigzinsumfeld – Hintergrund und Erläuterung der Empfehlung des FAUB (WPg, 13/2018, p. 806-825).
2. cf. Babbel, Challenging Stock Prices: Share prices and implied growth expectations (Corporate Finance, n. 9, 2015, p. 316-323, especially p. 319).
3. Analyst consensus forecasts for the next twelve months are applied.
4. cf. Reese, 2007, Estimation of the cost of capital for evaluation purposes; Aders/Aschauer/Dollinger, Die implizite Marktrisikoprämie am österreichischen Kapitalmarkt (RWZ, 6/2016, p. 195 – 202); ValueTrust, DACH Capital Market Study June 30, 2023.

Betas are calculated based on regressions and adjusted to take the capital structure into account

Betas

Beta is used in the **CAPM** and also referred to as beta coefficient or beta factor. Beta is a measure of **systematic risk** of a security of a specific company (**company beta**) or a specific sector (**sector beta**) in comparison to the market. A beta of less than 1 means that the security is theoretically less **volatile** than the market. A beta of greater than 1 indicates that the security's price is more volatile than the market.

Beta factors are estimated based on **historical returns of securities** in comparison to an **approximate market portfolio**. Since a company valuation is **forward-looking**, it has to be examined which risk factors from the past also apply to the future, and to which extent. In valuing non-listed companies or companies without meaningful share price performance, it is common practice to use a beta factor from a group of comparable companies ("**peer group beta**"), a suitable sector ("**sector beta**") or one single listed company in the capital market with a similar business model and similar risk profile ("**pure play beta**"). Within this Capital Market Study, we have used **sector betas** which are computed as **arithmetic means of the statistically significant beta factors of all companies** of a particular sector.

The calculation of beta factors is usually accomplished through a **linear regression analysis**.

It is important to set a time period over which the data is collected (**benchmark period**), and whether daily, weekly or monthly returns (**return interval**) are analyzed. In practice, it is common to use **observation periods of two years** with the regression of **weekly returns** or **five years** with the regression of **monthly returns**.

In the CAPM, company specific **risk premiums** include **business** risk, and financial **risk**. The beta factor of levered companies ("**levered beta**") is usually higher compared to a company with an identical business model but without debt (due to financial risk). Hence, **changes in the capital structure** require an **adjustment of the betas** and therefore of the company specific risk premiums.

Various adjustment formulas are available to calculate the **unlevered beta**. We prefer to use the **adjustment formula by Harris/Pringle** which assumes a value-based financing policy, stock-flow adjustments without time delay, uncertain tax shields and a so-called **debt beta**. We calculate the debt beta based on the respective company's rating or the average sector rating (if a company's rating is not available) through the application of the **credit spread** derived from the expected cost of debt. We do not adjust the credit spread for unsystematic risks. Capital market data, in particular historical market prices, is provided by the data supplier Refinitiv Eikon and its Aggregates App. Due to data availability, we only apply the five-year observation period.

Implied sector returns simplify the calculation of the levered cost of equity

Sector returns: Implied returns

Besides the future-oriented calculation of **implied market returns**, we also calculate **implied returns for sectors**. This offers an **alternative** to and a simplification of the **ex-post analysis** of the subject company's cost of capital via the **CAPM**. Using this approach, the calculation of sector betas via regression analyses are not necessary.

The **implied sector returns** can be used as an **indicator** for the **sector specific levered cost of equity, which** already consider **sector specific leverage**.

The following return calculations are again based on the Residual Income Valuation Model by *Babbel.*[1)] The required data (i.e. net income, market capitalization, and book value of equity) are sourced from the data provider S&P Capital IQ. With regards to profit growth, we assume a growth rate of 2.0%.

We unlever the implied returns with the following **equation** for the **cost of equity**[2)] to take into account the specific leverage[3)]:

$$r_E^L = r_E^U + \left(r_E^U - R_f\right) * \frac{D}{E}$$

with:

r_E^L = Levered cost of equity
r_E^U = Unlevered cost of equity
R_f = Risk-free rate
$\frac{D}{E}$ = Debt[4)]-to-equity ratio

The **implied unlevered sector returns** serve as an indicator for the **aggregated** and **unlevered cost of equity** for **specific sectors**. The process of relevering a company's cost of capital to reflect a company specific debt situation (cf. calculation example on the next slide) can be accomplished without using the CAPM.

1. cf. Babbel, Challenging Stock Prices: Share prices and implied growth expectations (Corporate Finance, n. 9, 2015, p. 316-323, especially p. 319); cf. Aders/Aschauer/Dollinger, Die implizite Marktrisikoprämie am österreichischen Kapitalmarkt (RWZ, 6/2016, p. 195-202).
2. In situations in which the debt betas in the market are distorted, we would have to adjust these betas to avoid unsystematic risks. For simplification reasons, we deviate from our typical analysis strategy to achieve the enterprise value (Debt beta > 0) and assume that the cost of debt are at the level of the risk-free rate. This process is designed by the so-called Practitioners formula (uncertain tax shields, debt beta = 0), cf. Pratt/Grabowski, Cost of Capital, 5th ed., 2014, p. 253.
3. We assume that the cash and cash equivalents are used entirely for operational purposes. Consequently, we do not deduct excess cash from the debt.
4. "Debt" is defined as all interest-bearing liabilities. The debt illustration of the companies in the Financials sector only serves an informational purpose. We will not implement an adjustment to these companies' specific debt (unlevered) because their indebtedness is part of their operational activities and economic risk.

An exemplary calculation of relevered cost of equity to adjust for the company specific capital structure

Sector returns: Implied returns

Calculation example:

As of the reference date June 30, 2023, we observe the sector specific, levered cost of equity of **9.1%** (market-value weighted mean) in the European Basic Materials sector. Taking the sector-specific leverage into account, we derive an unlevered cost of equity of **7.0%.** For the exemplary company X, which operates in the European Basic Materials sector, the following assumptions were made:

- Debt-to-equity ratio of X: **40%**
- Risk-free rate: **2.46%**

Based on these inputs, we can calculate the relevered cost of equity for company X with the adjustment formula:

$$r_E^L = 7.0\% + (7.0\% - 2.46\%) * 40\% = 8.8\%$$

8.8% is the company's relevered cost of equity. In comparison, the levered cost of equity of the Basic Materials sector is **9.1%**, reflecting the sectors' higher average leverage.

Historical sector returns are calculated using market-weighted aggregated sector indices

Sector returns: Historical returns

In addition to historical market returns, we calculate historical sector returns. Our analysis contains total shareholder returns including share price development and the dividend yield.

We calculate total annual shareholder returns as of June 30, for every market-value weighted sector index of STOXX Europe 600. Our calculations comprise the time period between 2018 and 2023.

Since total annual shareholder returns tend to fluctuate to a great extent, their explanatory power is limited. Therefore, we do not only calculate the 1-year market-value weighted means, but 3-year (2021-2023) as well as the 6-year (2018-2023) averages.

The multiples approach can be used for company valuation

Trading multiples

Besides income-based valuation models (earnings value, DCF), the **multiples approach** offers a practical approach for an enterprise value estimation. The multiples method estimates a subject company's value **relative** to another company's value. The enterprise value is derived by multiplying a reference value (revenue or earnings values are frequently used) of the company by the respective multiples of **comparable companies**.

Within this Study, we calculate the following **multiples for the sectors indices** as well as **for the European market**:

- Revenue-Multiples ("**EV**[1)]**/Revenue**")
- EBIT-Multiples ("**EV**[1)]**/EBIT**")
- Price-to-Earnings-Multiples ("**P/E**")
- Price-to-Book Value-Multiples ("**P/B**")

Multiples are presented for the reference dates June 30, 2023 and December 31, 2022. The reference values are based on one-year forecasts of analysts (so called forward multiples, in the following **"1yf"**). Solely the Price-to-Book Value-Multiples are calculated with book values as of the reference dates. We present **median** values.

We present historical multiples starting as of June 30, 2017 in the appendix and update the applied multiples **semi-annually at the predefined reference date (as of December 31 and as of June 30)**.

For the purpose of **simplification**, we exclude negative multiples and multiples in the highest quantile (95%). The multiples in the lowest quantile (5%) build the lower limit.

We source the data (i.e. market capitalization, revenue, EBIT, etc.) from the data provider Refinitiv Eikon. Based on the availability of data, especially in terms of forecasts, the number of companies underlying each specific multiple varies.

Additionally, we present a **ranking table** of the sector multiples. Sector multiples are sorted from highest to lowest for each analyzed multiple. The resulting score in the ranking is displayed in the table and visualized by a color code that assigns a dark **green color** to the **highest rank** and a **red color** to the **lowest rank**. Thus, a green colored high rank indicates a high valuation level, whereas a red colored low rank suggests a low valuation level. We then aggregate the rankings and calculate an average of all single rankings for each sector multiple. This is shown in the right column of the ranking table. This **average ranking** indicates the overall **relative valuation levels** of the sectors when using multiples.

1. Enterprise value

Appendix

Composition of the sectors as of June 30, 2023

Financials and Consumer Cyclicals

Europe Capital Market Study

Financials

3I GROUP PLC.
ABN AMRO BANK NV
ABRDN PLC
ADMIRAL GROUP PLC
AEGON
AGEAS SA
ALLIANZ SE
AMUNDI
ASR NEDERLAND
ASSICURAZIONI GENERALI
AVANZA BANK HOLDING AB
AVIVA PLC
AXA
AZIMUT
BALOISE HOLDING AG
BANCO BILBAO VIZCAYA ARGENTARIA SA
BANCO DE SABADELL SA
BANCO POPOLARE
BANCO SANTANDER SA
BANK OF IRELAND
BANK PKA.KASA OPIEKI SA
BANKINTER SA
BARCLAYS PLC
BAWAG PSK BK.AG
BEAZLEY PLC
BNP PARIBAS
BPER BANCA
BRIDGEPOINT GROUP WI
CAIXABANK SA
CLOSE BROTHERS GP.PLC
CNP ASSURANCES
COMMERZBANK AG
CREDIT AGRICOLE SA
DANSKE BANK A/S
DEUTSCHE BANK AG
DEUTSCHE BOERSE AG
DIRECT LINE IN.GP.PLC
DNB ASA
EQT AB
ERSTE GROUP BANK AG
EURAZEO SE
EURONEXT
FINECOBANK SPA
GJDG.FORSIKRING ASA
GROEP BRUSSEL LAMBERT NV
HANNOVER RUCK.AG
HARGREAVES LANSDOWN PLC
HELVETIA HOLDING AG
HISCOX DI LTD
HSBC HOLDINGS PLC
IG GROUP HOLDINGS PLC
INDUSTRIVARDEN AB
ING GROEP
INTERMEDIATE CAP.GP.PLC
INTESA SANPAOLO
INVESTOR AB
JULIUS BAER GRUPPE AG
KBC GROEP NV
KINNEVIK 'B'
LEGAL & GENERAL GP.PLC
LIFCO B
LLOYDS BANKING GP.PLC
LONDON STOCK EX.GP.PLC
M&G PLC
MAN GROUP PLC
MEDIOBANCA BC.FIN SA
MUENCHENER RUECK. AG
NATWEST GROUP PLC
NN GROUP
NORDEA BANK AB
PARTNERS GROUP HOLDING
PHNX.GHG.PLC
PKO BANK SA
PRUDENTIAL PLC
PZU GROUP SA
QUILTER PLC
RAIFFEISEN BANK INTL.AG
RINGKJOBING LANDBOBANK
SAMPO PLC
SANTANDER BP
SCHRODERS PLC
SCOR SE
SEB 'A' SA
SOCIETE GENERALE SA
SOFINA SA
ST JAMES S PLACE PLC
STD.CHARTERED PLC
STOREBRAND ASA
STORSKOGEN GROUP AB
SVENSKA HANDBKN.'A' PLC
SWEDBANK AB
SWISS LIFE HOLDING AG
SWISS RE AG
SYDBANK
TRYG A/S

Consumer Cyclicals (1/3)

ACCOR
ADIDAS AG
ALLEGRO EU SA
ASSA ABLOY AB
B&M EUR.VAL.RET.PLC
BARRATT DEVELOPMENTS PLC
BELLWAY PLC
BERKELEY GROUP HDG.PLC
BMW AG.
BOLLORE SE
BRUNELLO
BURBERRY GROUP PLC
CD PROJECT RED SA
CHRISTIAN DIOR SA
CMPG.DES ETS.MICH.SCA
COMPASS GROUP PLC
CONTINENTAL AG
COUNTRYSIDE PROPS.PLC
CTS EVENTIM AG
D IETEREN GROUP NV
DAIMLER AG
DAIMLER TRUCK HOLDING AG
DOMETIC GROUP
DOWLAIS GROUP
DR MARTENS PLC
DUFRY AG
ELECTROLUX AB
ENTAIN PLC
ESSILORLUXOTTICA SA
EVOLUTION AB
EXOR
FAURECIA SE
FERRARI NV
FLUIDRA SA
FLUTTER ENTM.PLC

Source: Refinitiv

Consumer Cyclicals (cont'd) and Consumer Non-Cyclicals

Europe Capital Market Study

Consumer Cyclicals (2/3)

GAMES WORKSHOP GP.PLC
GEBERIT AG
GRAFTON GROUP UTS.PLC
GREGGS PLC.
H&M HENNES & MAURITZ AB
HERMES INTERNATIONAL
HOWDEN JOINERY GP.PLC
HUSQVARNA AB
ICTL.HOTELS GROUP PLC
INCHCAPE PLC
INDITEX SA
INFORMA PLC
ITV PLC
JD SPORTS FASHION PLC
KERING SA
KINDRED GROUP PLC
KINGFISHER PLC
KINGSPAN GROUP PLC
LA FRANCAISE DES JEUX SA
LPP SA
LVMH
MARKS & SPENCER GP.PLC
MIPS AB
MONCLER
NDC.ENTM.GP.AB
NEXT PLC.
NOKIAN RENKAAT OYJ
OCADO GROUP PLC
PANDORA A/S
PEARSON PLC.
PERSIMMON PLC
PORSCHE AML.HLDG.SE
PROSIEBENSAT 1 MEDIA AG
PUBLICIS GROUPE SA
PUMA SE

Consumer Cyclicals (3/3)

RATIONAL AG
RENAULT SA
RHEINMETALL AG
RICHEMONT N SA
ROCKWOOL INTL.A/S
S4 CAP.ORD.SHS
SAINT GOBAIN
SCHIBSTED A
SEB SA
SIGNIFY NV
SODEXO
SSP GROUP
STELLANTIS NV
SWATCH GROUP AG
TAYLOR WIMPEY PLC
THULE GROUP
TRAVIS PERKINS PLC
TUI
UNIVERSAL MUSIC GROUP NV
VALEO SE
VISTRY GROUP PLC
VIVENDI SE
VOLKSWAGEN AG

Consumer Non-Cyclicals

AARHUSKARLSHAMN AB
ANHEUSER BUSCH INBEV SA
ASSOCIATED BRITISH FOODS PLC
BAKKAFROST ASA
BARRY CALLEBAUT AG
BEIERSDORF AG
BRITISH AMER.TOB.PLC
BRITVIC PLC
CARLSBERG AS
CARREFOUR SA
CHOC.LINDT &SPRUENGLI AG
CHR HANSEN HOLDING AS
COCA COLA HBC AG
COLRUYT
DANONE
DAVIDE CAMPARI MILANO NV
DCC PLC.
DIAGEO PLC
DINO POLSKA SA
ESSITY AB
GALENICA SANTE
GLANBIA PLC.
HEINEKEN HOLDING PLC
HEINEKEN NV
HELLOFRESH SE
IMPERIAL BRANDS PLC
INVESTMENT AB LATOUR
JDE PEETS NV
JERONIMO MARTINS SA
KERRY GROUP PLC
KESKO OYJ
KONINKLIJKE AHOLD DELHAIZE NV
L'OREAL
MELROSE INDUSTRIES
MOWI ASA
NESTLE AG
ORKLA ASA
PERNOD-RICARD
RECKITT BENCKISER GP.PLC
REMY COINTREAU
ROYAL UNIBREW A/S
SAINSBURY J PLC
SALMAR ASA
SIEMENS AG
SMITHS GROUP PLC
SWEDISH MATCH AB
TATE & LYLE PLC.
TESCO PLC
UNILEVER PLC

Source: Refinitiv

Healthcare and Technology

Europe Capital Market Study

Healthcare

ADDLIFE AB
ALCON AG
ALK-ABELLO A/S
AMBU 'B'A/S
AMPLIFON SPA
ARGENX SE
ASTRAZENECA PLC
BACHEM HOLDING AG
BAYER AG
BIOMERIEUX SA
CARL ZEISS MEDITEC AG
COLOPLAST A/S
CONVATEC GROUP PLC
DECHRA PHARMS.PLC
DEMANT A/S
DIASORIN
ELEKTA AB
EVOTEC SE
FRESENIUS
FRESENIUS MED.CARE AG
GENMAB A/S
GENUS PLC
GERRESHEIMER
GERRESHEIMER AG
GETINGE AB
GLAXOSMITHKLINE PLC
GN STORE NORD A/S
GRIFOLS SA
HIKMA PHARMS.PLC
IPSEN SA
KONINKLIJKE PHILIPS NV
LONZA GROUP AG
MERCK KGAA
NOVARTIS AG
NOVO NORDISK A/S
ORION OYJ
ORPEA SA
QIAGEN NV
RECORDATI INDUA.CHIMICA
ROCHE HOLDING AG
SANOFI
SARTORIUS AG
SARTORIUS STEDIM BIOTECH
SECTRA AB
SIEGFRIED HOLDING AG
SIEMENS HEALTHINEERS
SMITH & NEPHEW PLC
SONOVA HOLDING AG
STRAUMANN HOLDING AG
SWED.ORPHAN BIOVITRUM AB
UCB SA
VIFOR PHARMA
VITROLIFE AB

Technology

ADEVINTA ASA
ADYEN NV
ALLFUNDS GROUP PLC
ALTEN
AMADEUS IT GROUP
AMS OSRAM AG
ASM INTERNATIONAL
ASML HOLDING NV
ATOS
AUTO TRADER GROUP PLC
AUTO1 GROUP SE
AUTOSTORE HOLDINGS LTD
AVAST PLC
BE SEMICONDUCTOR INDS.
BECHTLE AG
BT GROUP PLC
CAPGEMINI SE
CELLNEX TELECOM
DASSAULT SYSTEMES SE
DELIVEROO PLC
DELIVERY HERO AG
DEUTSCHE TELEKOM AG
ELECTROCOMP.PLC
ELISA OYJ
EMBRACER GROUP
FREENET AG
HALMA PLC.
HEXAGON AB
INFINEON TECHNOLOGIES AG
INFRASTRUTTURE WIRELESS
JUST EAT TAKEAWAY COM NV
KONINKLIJKE KPN NV
LAGERCRANTZ GR
LOGITECH INTL.SA
MILLICOM INTL.CELU.SA
NEMETSCHEK AG
NOKIA OYJ
NORDIC SEMICONDUCTOR ASA
ORANGE SA
PROSUS NV
PROXIMUS SA
QT GROUP OYJ
REPLY SPA
RIGHTMOVE PLC
SAP AG
SCOUT24 SE
SES SA
SIMCORP A/S
SOFTCAT PLC
SOITEC
SOPRA STERIA GROUP
SPECTRIS PLC
STMICROELECTRONICS NV
SWISSCOM
TECAN GROUP AG
TELAB.LM ERIC.
TELE2 AB
TELECOM ITALIA
TELEFONICA SA
TELENOR ASA
TELIA COMPANY AB
TEMENOS AG
THE SAGE GROUP PLC
UBISOFT ENTERTAINMENT SA
VODAFONE GROUP PLC

Source: Refinitiv

Utilities, Energy and Basic Materials

Europe Capital Market Study

Utilities

A2A SPA
CENTRICA PLC
E ON SE
EDP ENERGIAS DE PORTL.SA
EDP RENOVAVEIS
ELIA GROUP SA
ENDESA SA
ENEL SPA
ENGIE
FORTUM OYJ
HERA SPA
IBERDROLA SA
ITALGAS
NATIONAL GRID PLC
NATURGY ENERGY GROUP SA
ORSTED A/S
PENNON GROUP PLC
RED ELECTRICA CORPN.SA
RWE AG
SEVERN TRENT PLC
SSE PLC
TERNA RETE ELETTRICA NAZ
UNIPER SE
UNITED UTILITIES GP.PLC
VEOLIA ENVIRONNEMENT
VERBUND AG

Energy

BP PLC
DET NORS.OLJESELSKAP ASA
ENAGAS SA
ENI
EQUINOR ASA
FRONTLINE
GALP ENERGIA SGPS
LUNDIN ENERGY AB
NESTE
OMV AG
PLKNC.NAFTOWY ORLEN
REPSOL YPF SA
ROYAL DUTCH SHELL
RUBIS
SIE.GAMESA RENWEN.SA
SIEMENS ENERGY AG
SNAM SPA
TECHNIP ENERG
TECHNIPFMC PLC
TENARIS SA

Basic Materials

AKZO NOBEL NV
ANGLO AMERICAN PLC
ANTOFAGASTA PLC.
ARCELORMITTAL
ARKEMA
BASF SE
BILLERUD KORSNAS AB
BOLIDEN AB
BRENNTAG SE
CLARIANT AG
COVESTRO AG
CRH PLC.
CRODA INTERNATIONAL PLC
DSM-FIRMENICH
EMS-CHEMIE HOLDING AG
EVONIK INDUSTRIES AG
EVRAZ PLC
FUCHS PETROLUB AG
GIVAUDAN SA
GLENCORE PLC
HEIDELBERGCEMENT AG
HENKEL PREFERENCE AG
HEXPOL AB
HOLCIM AG
HOLMEN AB
HUHTAMAKI OYJ
IMCD GROUP
JOHNSON MATTHEY PLC
KGHM POLSKA MIEDZ SA
L AIR LQE.SC.ANYME.POUR
LANXESS AG
MONDI PLC
NORSK HYDRO ASA
NOVOZYMES A/S
POLYMETAL INTL.PLC
RIO TINTO PLC
SCA AB
SIG COMBIBLOC SVS.AG
SIKA AG
SMITH (DS) PLC
SMURFIT KAPPA GROUP PLC
SOLVAY SA
STORA ENSO OYJ
SYMRISE AG
THYSSENKRUPP AG
UMICORE SA
UPM-KYMMENE OYJ
VIDRALA
VOESTALPINE AG

Source: Refinitiv

Industrials and Real Estate

Europe Capital Market Study

Industrials

A P MOLLER - MAERSK A/S
AALBERTS NV
ABB LTD N
ACCIONA SA
ACKERMANS & VAN HAAREN
ACS ACTIV.CONSTR.Y SERV.
ADDTECH AB
ADECCO SA
ADP
AENA SME SA
AFRY AB
AIR FRANCE KLM
AIRBUS SE
ALFA LAVAL AB
ALSTOM SA
ANDRITZ AG
ARCADIS NV
ASHTEAD GROUP PLC
ATLANTIA
ATLAS COPCO AB
AZELIS GROUP Group
BAE SYSTEMS PLC
BEIJER REF AB
BELIMO HOLDING AG
BOUYGUES SA
BUCHER INDUSTRIES AG
BUNZL PLC
BUREAU VERITAS INTL
CNH INDUSTRIAL NV
DEUTSCHE LUFTHANSA AG
DEUTSCHE POST AG
DIPLOMA PLC
DSV A/S
EDENRED SE
EIFFAGE
ELIS
EPIROC AB NPV A
EUROFINS SCIENTIFIC AG
EXPERIAN PLC
FERROVIAL SA
FLUGHAFEN ZURICH AG
GEA GROUP AG
GEORG FISCHER AG
GETLINK SE
HAYS PLC
IMI PLC
INDUTRADE AB
INPOST
INPOST SA
INTERPUMP GROUP
INTERROLL HOLDING AG
INTERTEK GROUP PLC
INTL.CONS.AIRL.GROUP SA
ISS AS
IVECO GROUP
IWG PLC
KION GP.AG PREREIN.
KNORR BREMSE AG
KONE OYJ
KUEHNE+NAGEL INTL.G
LEGRAND
LEONARDO SPA
MEGGITT PLC.
METSO OUTOTEC CORP.
MTU AERO ENGINES HLDG.AG
NEXI SPA
NIBE INDUSTRIER AB
NKT
POSTE ITALIANE
PRYSMIAN
RANDSTAD NV
RELX PLC
RENTOKIL INITIAL PLC
REXEL
ROLLS-ROYCE HOLDINGS PLC
ROTORK PLC
ROYAL MAIL PLC
RYANAIR HOLDINGS PLC
SAFRAN SA
SCHINDLER HOLDING AG
SCHNEIDER ELECTRIC SE
SECURITAS AB
SFS GRP
SGS SA
SKANSKA AB
SPIE SA
SPIRAX-SARCO ENGR.PLC
SUEZ CO.
SWECO AB
TELEPERFORMANCE
THALES SA
TOMRA SYSTEMS ASA
TRELLEBORG AB
VALMET OYJ
VAT GROUP
VINCI SA

Real Estate

AEDIFICA NV
ALLREAL HOLDING AG
ALSTRIA OFFICE REIT AG
BIG YELLOW GROUP PLC
BRITISH LAND CO.PLC
CASTELLUM AB
COFINIMMO
COVIVIO SA
DERWENT LONDON PLC
FABEGE AB
FASTIGHETS BALDER AB
GECINA
INMB.COLO.SOCIMI SA
KLEPIERRE
KOJAMO OYJ
LAND SECURITIES GP.PLC
LEG IMMOBILIEN SE
LONDONMETRIC PR.PLC
MERLIN PROPERTIES REIT
PSP SWISS PROPERTY AG
SAFESTORE HOLDINGS PLC
SAGAX AB
SEGRO PLC
SWISS PRIME SITE
TAG IMMOBILIEN AG
TRITAX BIG BOX REIT PLC
UNITE GROUP PLC

Source: Refinitiv

VALUETRUST

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