European Capital Market Study

June 30, 2021

Analysis of cost of capital parameters and multiples for European capital markets

June 30, 2021

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1 Preface & people

European Capital Market Study
Preface

Dear business partners and friends of ValueTrust,

We are pleased to release our eighth edition of the **ValueTrust European Capital Market Study.** With this study, we provide a data compilation of **capital market parameters** that enables an enterprise valuation in Europe. The purpose of the study is to serve as a tool and data source as well as to show trends in the parameters analysed.

In this study, we analyse the relevant parameters to calculate the cost of capital with the Capital Asset Pricing Model **(risk-free rate, market risk premium and beta)**. Additionally, we determine **implied** as well as **historical market and sector returns**. Moreover, this study includes 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 unlevered cost of equity to the company specific debt situation**. This procedure serves as an alternative to the CAPM.

Furthermore, we provide an analysis of empirical (ex-post) cost of equity in the form of **total shareholder returns,** which consist of capital gains and dividends. The total shareholder returns can be used as a plausibility check of the implied (ex-ante) returns. Lastly, **trading multiples** frame the end of this study.

We examine the before mentioned 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, Basic Materials, Consumer Cyclicals, Real Estate, Industrials, Consumer Non-Cyclicals, Healthcare, Technology, Utilities and Energy.

Mostly, the historical data has been compiled from the reference dates between June 30, 2015 and June 30, 2021.

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1) Based on Thomson Reuters Business Classification.

European Capital Market Study
People

Prof. Dr. Christian Aders

Senior Managing Director

- More than 25 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.)

Florian Starck
Steuerberater

Senior Managing Director

- More than 20 years of project experience in corporate valuation and financial advisory
- Previously employed in leading positions at KPMG and Duff & Phelps
- Extensive experience in complex company evaluations for business transactions, financial restructuring, court and arbitration proceedings and value-based management systems

Marion Swoboda-Brachvogel
Director

- More than 15 years of project experience in financial advisory, investment banking and investment management
- Previously with McKinsey & Company, Unicredit, C.A. Cheuvreux and B&C Industrieholding
- Extensive experience in the valuation of listed and private companies in various industries and in advising on strategic and financial issues

Fredrik Müller
Associate

- Almost 5 years of project experience in corporate valuation and financial advisory
- Extensive experience in valuation and value management projects in various industries

European Capital Market Study
Disclaimer

This study presents an empirical analysis, which serves the purpose of illustrating the cost of capital of European capital markets. Nevertheless, the available information and the corresponding exemplifications do not allow a complete presentation of a proper derivation of costs of capital. Furthermore, the market participant has to take into account that the company specific costs of capital can vary widely due to individual corporate situations.

The listed information is not specified to anyone, and consequently, it cannot be directed to an individual or juristic person. Although we are always endeavored to present information that is reliable, accurate, and current, we cannot guarantee that the data is applicable to valuation in the present as well as in the future. The same applies to our underlying data from the data provider S&P Capital IQ and Thomson Reuters Aggregates App.

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

ValueTrust does not assume any liability for the up-to-datedness, completeness or accuracy of this study or its contents.

2 Executive summary

Executive Summary (1/2)

Cost of equity per sector according to four different methodologies

	Implied levered cost of equity	Levered cost of equity (CAPM) 1)	1/PE-ratio (1yf)	Total shareholder return 2) (Ø 6y)
Financials	9.4%	9.6%	9.1%	9.2%
Basic Materials	7.8%	7.1%	5.6%	17.1%
Consumer Cyclicals	7.5%	8.3%	5.3%	17.9%
Real Estate	5.3%	5.6%	5.0%	10.9%
Industrials	6.4%	8.1%	4.5%	17.9%

1) Based on 5-year sector beta, risk-free rate of 0.33% and market risk premium of 7.1% 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.

Executive Summary (2/2)

Cost of equity per sector according to four different methodologies

	Implied levered cost of equity	Levered cost of equity (CAPM) 1)	1/PE-ratio (1yf)	Total shareholder return 2) (Ø 6y)
Consumer Non-Cyclicals	6.6%	5.3%	5.3%	11.6%
Healthcare	7.4%	6.0%	5.9%	10.7%
Technology	5.8%	7.2%	4.3%	17.5%
Utilities	7.6%	4.9%	5.8%	11.1%
Energy	10.0%	9.3%	6.4%	9.8%

1) Based on 5-year sector beta, risk-free rate of 0.33% and market risk premium of 7.1% 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.

3 Risk-free rate

Risk-Free Rate
Background & approach

The **risk-free rate** is a return available on a security that the market generally regards as free of 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 rating. 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)]

Additionally, we illustrate the monthly development of the risk-free rates since June 30, 2015 for the European capital markets.

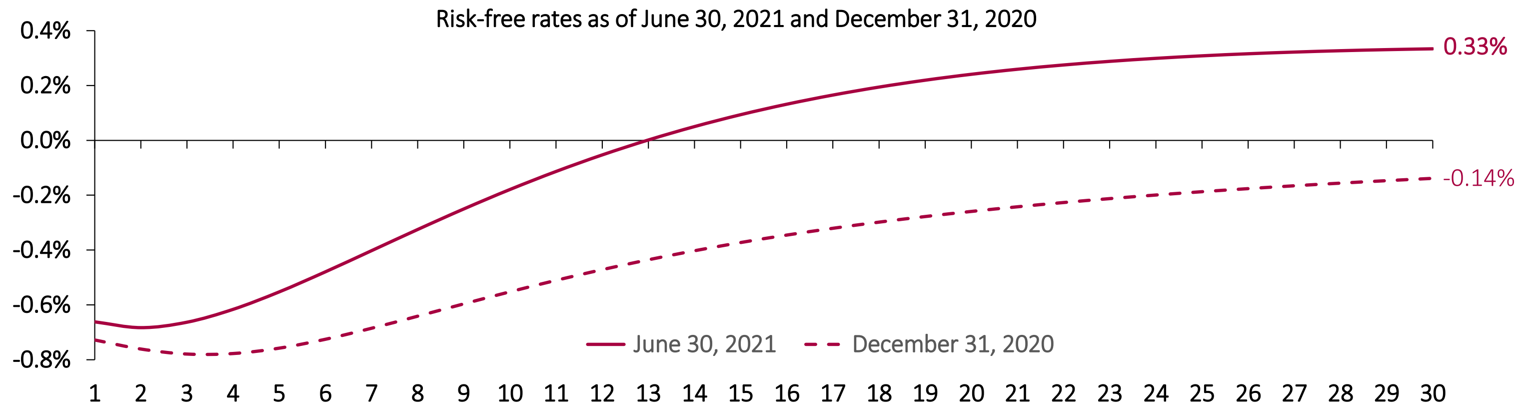
1) European Central Bank (https://www.ecb.europa.eu/stats/financial_markets_and_interest_rates/euro_area_yield_curves/html/index.en.html).

2) The Institute of Public Auditors (Institut der Wirtschaftsprüfer, IDW) in Germany also recommends this approach.

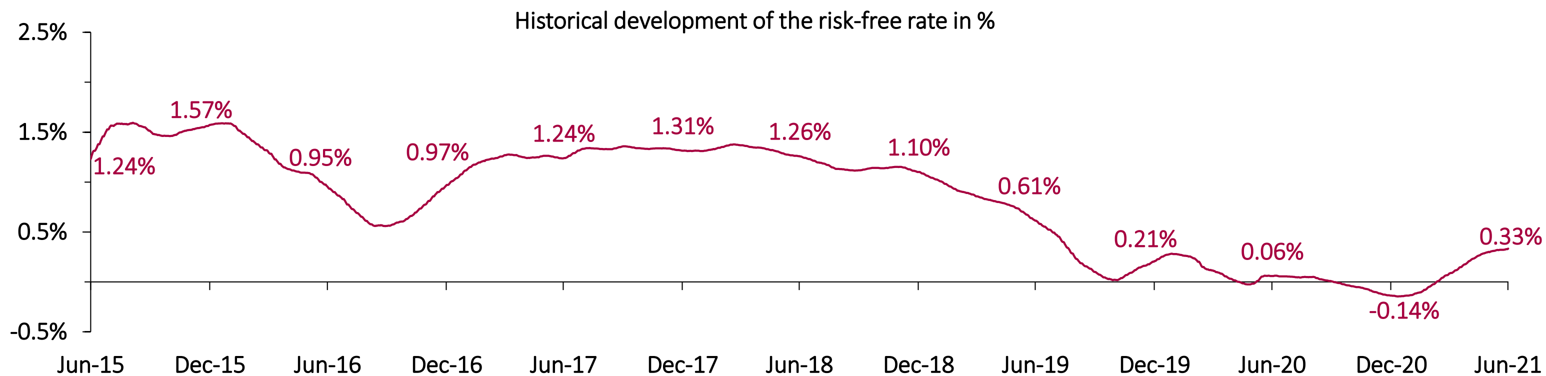
Risk-Free Rate – Europe

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)

Implied Market Returns and Market Risk Premium
Background & approach

The **future-oriented** computation of **implied market returns** and **market risk premiums** is based on earnings estimates for public companies and return calculations. This approach is called ex-ante analysis and allows to calculate the “**implied cost of capital**”. It is to be distinguished from the **ex-post analysis**.

Particularly, the **ex-ante method** offers an **alternative** to the **ex-post approach** of calculating the costs of capital by means of the regression analysis through the **CAPM**. The ex-ante analysis method seeks costs of capital which represent the **return expectations of market participants**. Moreover, it is supposed that the estimates of financial analysts reflect the expectations of the capital market.

The concept of **implied cost of capital** gained in momentum in recent times. For example, 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**.

As of the **reference date**, it offers a more insightful perspective in comparison to the exclusive use of ex-post data.

For the following analysis, we use – simplified to annually – the formula of the Residual Income Valuation Model by *Babbel*:[2]

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

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

Through dissolving the model to achieve 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 our data (i.e. the expected annual net income, the market capitalizations, and the book value of equity, etc.) of the analyzed sectors from the data supplier Thomson Reuters. Additionally, we apply the European Central Bank target inflation rate of **2.0% as a typified growth rate**.

Henceforth, we determine the **implied market returns** for the STOXX Europe 600. We consider this index as a valid approximation for the total European market. The result builds the starting point for the calculation of the **implied market risk premium** of the European capital market.

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.

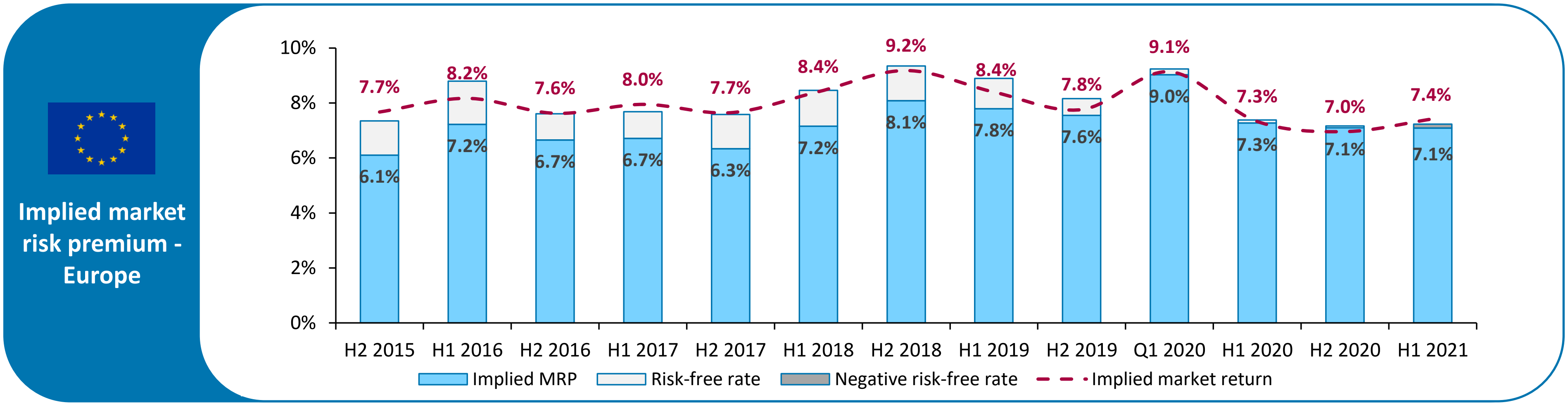
4) cf. Reese, 2007, Estimation of the costs of capital for evaluation purposes; Aders/Aschauer/Dollinger, Die implizite Marktrisikoprämie am österreichischen Kapitalmarkt (RWZ, 6/2016, p. 195 – 202); ValueTrust, DACH Capital Market Study December 31, 2020.

Implied Market Returns and Market Risk Premium
European Market – STOXX Europe 600

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 2015 to June 2021 the **implied market returns** ranged from **7.0% to 9.2%**. Subtracting the risk-free rate from the implied market return, we derive a **market risk premium** within the range of **6.1% to 9.0%.**

The **implied market return lies at 7.4%** as of the reference date June 30, 2021. Taking the **risk-free rate of 0.33%** into account, we determine an **implied market risk premium of 7.1%**. 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. 18) 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.



4 Market returns and market risk premium

b. Historical returns (ex-post analysis)

Historical Market Returns
Background & approach

Besides analyzing the implied market returns through the ex-ante analysis, we analyze **historical (ex-post) returns**. Once this analysis is performed over a **long-term observation period**, an expected **return potential** of the European capital market is assessable. Therefore, the analysis of historical returns can be used for **plausibility checks of the costs of capital**, more specifically **return requirements**, which were evaluated through the CAPM.

To further enable a precise analysis of the historical returns of the European capital market, we use the so-called **return triangle**.[1)] It helps to 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**. For our analysis, it is needful to focus on **total return indices** because they include the price and dividend yields. Since the **STOXX Europe 600** is a performance index, it only includes price yields. Hence, we need its total return index. The relevant total return index for Europe is called the STOXX Europe 600 Gross Return ("**STOXX Europe 600 GR**").

The following slide serves as an introduction by showing the historical development of the **STOXX Europe 600 GR** since **June 2015**. 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 "fear index", high levels are typically associated with more turbulent markets.

The observation period for the total shareholder returns analysis amounts to 15 years. Therefore, the analysed data of the STOXX Europe 600 GR Return reaches back to June 30, 2006.

The following slides illustrate how the two calculation methods (arithmetic and geometric mean) differ from each other for the period between June 30, 2006 and June 30, 2021. For the longest **observation period** of **15 years** the average historical mean of the market return amounts to **7.3%.** Using geometrical averaging, we obtain a market return of **5.8%**.

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 Thomson Reuters 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.

Historical Market Returns and Volatility – European Market
STOXX Europe 600 GR vs. VSTOXX since June 2015

- In Q1 2020, the STOXX Europe 600 declined by nearly 30% to 167.1 as of March 31, 2020 as a consequence of the COVID-19 crisis. Since then, the STOXX Europe 600 has recovered by 49% to 249.04 as of June 30, 2021 and hit a new all time high.
- In the first quarter of 2020, the VSTOXX reached its highest point since 2014, but decreased to a level close to the 6-year average at the end of June 2021.

Historical development of STOXX Europe 600 GR vs VSTOXX

Historical Market Returns (Arithmetic Mean) – European Market

STOXX Europe 600 GR Return Triangle as of June 30, 2021

Reading example:
An investment in the STOXX Europe 600 Index mid of 2013, when sold mid of the year 2017, would have yielded an average annual return (arithmetic mean) of 11.9%. Other five-year investment periods are displayed along the black steps.

15.0%	Return greater than 13%
10.0%	Return between 8% and 13%
5.0%	Return between 3% and 8%
0.0%	Return between -3% and +3%
-5.0%	Return between -3% and -8%
-10.0%	Return between -8% and -13%
-15.0%	Return lower than -13%

Buy \ Sell	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
2020															29.1%
2019														-3.8%	12.6%
2018													4.9%	0.6%	10.1%
2017												3.6%	4.3%	1.6%	8.4%
2016											18.9%	11.2%	9.1%	5.9%	10.5%
2015										-10.4%	4.2%	4.0%	4.2%	2.6%	7.0%
2014									15.1%	2.3%	7.8%	6.8%	6.4%	4.7%	8.2%
2013								23.9%	19.5%	9.5%	11.9%	10.2%	9.3%	7.5%	10.2%
2012							17.6%	20.8%	18.9%	11.5%	13.0%	11.4%	10.5%	8.7%	11.0%
2011						-4.2%	6.7%	12.4%	13.1%	8.4%	10.1%	9.2%	8.7%	7.3%	9.5%
2010					16.1%	6.0%	9.8%	13.4%	13.7%	9.7%	11.0%	10.1%	9.5%	8.2%	10.1%
2009				22.3%	19.2%	11.4%	12.9%	15.1%	15.1%	11.5%	12.4%	11.4%	10.8%	9.4%	11.1%
2008			-24.1%	-0.9%	4.7%	2.5%	5.5%	8.6%	9.5%	7.0%	8.3%	7.9%	7.6%	6.6%	8.4%
2007		-25.4%	-24.8%	-9.1%	-2.8%	-3.1%	0.4%	3.7%	5.1%	3.4%	5.0%	4.8%	4.8%	4.2%	6.0%
2006	26.5%	0.5%	-7.7%	-0.2%	3.1%	1.8%	4.1%	6.6%	7.5%	5.7%	6.9%	6.6%	6.5%	5.8%	7.3%

5 10 15
Investment period in years

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

Historical Market Returns (Geometric Mean) – European Market

STOXX Europe 600 GR Return Triangle as of June 30, 2021

Reading example:
An investment in the STOXX Europe 600 Index mid of 2013, when sold mid of the year 2017, would have yielded an average annual return (arithmetic mean) of 11.0%. Other five-year investment periods are displayed along the black steps.

15.0%	Return greater than 13%
10.0%	Return between 8% and 13%
5.0%	Return between 3% and 8%
0.0%	Return between -3% and +3%
-5.0%	Return between -3% and -8%
-10.0%	Return between -8% and -13%
-15.0%	Return lower than -13%

Buy \ Sell	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
2020															29.1%
2019														-3.8%	11.4%
2018													4.9%	0.5%	9.2%
2017												3.6%	4.3%	1.5%	7.8%
2016											18.9%	11.0%	8.9%	5.6%	9.9%
2015										-10.4%	3.2%	3.3%	3.7%	2.2%	6.2%
2014									15.1%	1.5%	7.0%	6.1%	5.9%	4.2%	7.4%
2013								23.9%	19.4%	8.5%	11.0%	9.5%	8.7%	6.8%	9.4%
2012							17.6%	20.7%	18.8%	10.7%	12.3%	10.8%	9.9%	8.1%	10.3%
2011						-4.2%	6.1%	11.8%	12.6%	7.6%	9.4%	8.5%	8.1%	6.7%	8.7%
2010					16.1%	5.5%	9.4%	12.8%	13.3%	8.9%	10.3%	9.4%	8.9%	7.6%	9.4%
2009				22.3%	19.1%	10.8%	12.5%	14.7%	14.7%	10.7%	11.7%	10.8%	10.2%	8.8%	10.4%
2008			-24.1%	-3.7%	2.5%	0.8%	3.9%	7.0%	8.1%	5.6%	7.0%	6.7%	6.5%	5.6%	7.3%
2007		-25.4%	-24.8%	-11.6%	-5.3%	-5.1%	-1.7%	1.6%	3.2%	1.6%	3.2%	3.3%	3.4%	2.8%	4.5%
2006	26.5%	-2.9%	-10.6%	-3.3%	0.3%	-0.5%	1.9%	4.5%	5.6%	3.9%	5.2%	5.0%	5.0%	4.4%	5.8%

Investment period in years: 5, 10, 15

Following: 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

Sector Indices of the European Capital Market
Methodology & approach

The sector indices aim to cover the **whole capital market of Europe**. Therefore, this capital market study contains all equities of the **STOXX Europe 600** as listed in the Thomson Reuters 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.

Compared to the previous studies, the sector classification by Thomson Reuters changed, such that the Telecommunications sector was reclassified as part of the Technology sector and the Real Estate was set up as a separate sector of companies which were previously included in the Financials sector. Therefore, the analyses on the following slides reflect the new sector split.

The **ten sector indices** for this study are defined according to the Thomson Reuters Business Classification:

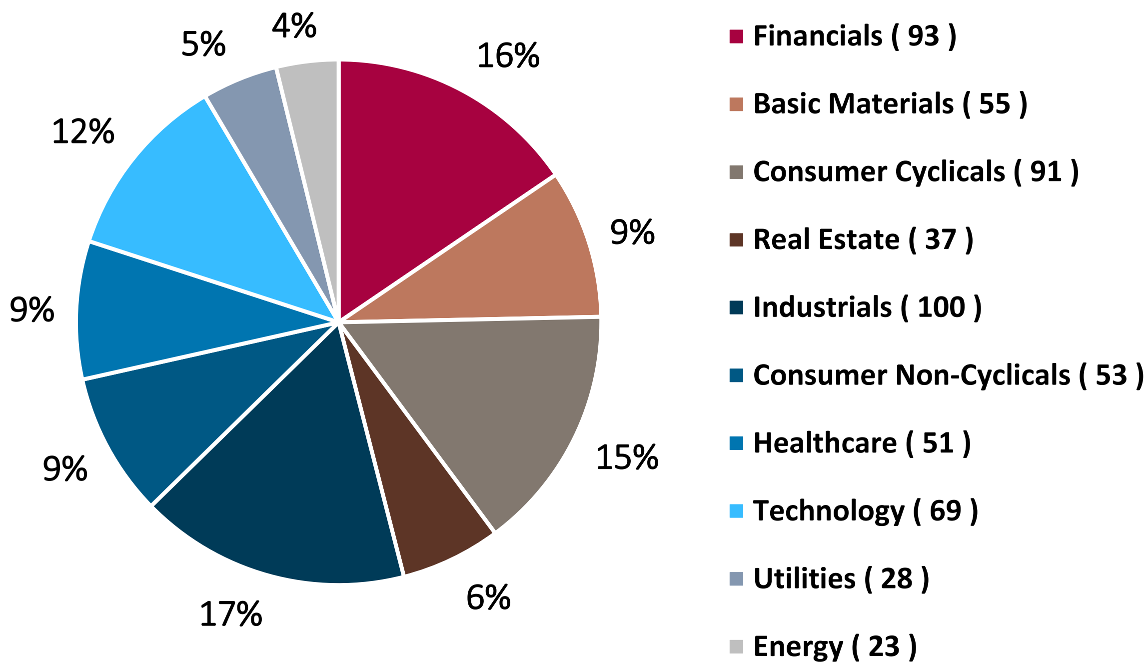
- Financials
- Basic Materials
- Consumer Cyclicals
- Real Estate
- Industrials
- Consumer Non-Cyclicals
- Healthcare
- Technology
- Utilities
- Energy

} **sector indices**

1) The Thomson Reuters Aggregates App offers analyst forecasts and historical values of key financials on an aggregated sector level.

Sector Indices of Europe as of June 30, 2021
Sector distribution and number of companies

Sector classification of the STOXX Europe 600



The chart shows the percentage distribution of the 600 listed companies in the 10 industries based on the STOXX Europe 600 as listed in the Thomson Reuters Aggregates App (the numerical amounts are listed behind the sector names).

The ten defined sectors can be classified in **two different dimensions**:

- Six different sectors represent a share of less than 10%,
- Four sectors represent a share between 10% and 20%.

Companies within the **Financials and Industrials** sectors represent **33% of the entire market** measured by the number of companies included in the STOXX Europe 600 index.

6 Betas

Betas
Background & approach

Beta is used in the **CAPM** and is also known as the 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 on the basis of **historical returns of securities** in comparison to an **approximate market portfolio**. Since the company valuation is **forward-looking**, it has to be examined whether or what potential risk factors prevailing in the past do also apply for the future. By valuing non-listed companies or companies without meaningful share price performance, it is common 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 a similar risk profile ("**pure play beta**").

The estimation of beta factors is usually accomplished through a **linear regression analysis**. Furthermore, it is important to set a time period, in 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 a **five-year observation period** with the regression of **monthly returns**.

In the CAPM, company specific **risk premiums** include besides the **business risk** also the **financial risk**. The beta factor for 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.

In order to calculate the **unlevered beta,** adjustment formulas have been developed. 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 sector rating through the application of the **credit spread** derived from the expected cost of debt. The **debt beta** is then derived by dividing the **sector credit spread** by the current **European market risk premium**. For simplification reasons, we do not adjust the credit spread for unsystematic risks.

In this study, we use levered sector betas as determined in the Thomson Reuters Aggregates App. Due to data availability, we only apply the five-year observation period and then calculate unlevered betas.

Betas

Sector specific levered and unlevered betas (5 years monthly) as of June 30, 2021

Sector	Beta levered [1]	Beta unlevered
Financials	1.31	n.a.
Basic Materials	0.95	0.68
Consumer Cyclicals	1.13	0.67
Real Estate	0.75	0.52
Industrials	1.09	0.61

Sector	Beta levered	Beta unlevered
Consumer Non-Cyclicals	0.70	0.47
Healthcare	0.80	0.56
Technology	0.97	0.58
Utilities	0.65	0.42
Energy	1.26	0.85

Sector specific debt ratio, leverage and rating

		Financials [2]	Basic Materials	Consumer Cyclicals	Real Estate	Industrials	Consumer Non-Cyclicals	Healthcare	Technology	Utilities	Energy
5-years 2021-2016 monthly	Debt ratio [3]	68.0%	35.0%	48.8%	45.1%	54.6%	47.8%	39.4%	50.6%	58.6%	38.6%
	Leverage	212.3%	53.9%	95.2%	82.2%	120.5%	91.5%	65.0%	102.4%	141.4%	62.8%
	Rating	A-	BBB+	BBB+	BBB-	BBB	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 0.99.

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)

Implied Sector Returns
Background & approach

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

The **implied sector returns** shown on the following slides can be used as an **indicator** for the **sector specific levered costs of equity**. Those already consider a **sector specific leverage**. Because of this, another simplification is to renounce making adjustments with regards to the capital structure risk.

Comparable to the calculation of the implied market returns, the following return calculations are based on the Residual Income Valuation Model by *Babbel.*[1)] The required data (i.e. net income, market capitalization, and book values of equity) are sourced from the data provider Thomson Reuters on an aggregated sector level. Regarding the profit growth, we assume for all sectors for simplification purposes a growth rate of 2.0%.

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

$$\mathrm{r}_{\mathrm{E}}^{\mathrm{L}} = \mathrm{r}_{\mathrm{E}}^{\mathrm{U}} + \left(\mathrm{r}_{\mathrm{E}}^{\mathrm{U}} - \mathrm{R}_{\mathrm{f}}\right) * \frac{\mathrm{D}}{\mathrm{E}}$$

with:

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

The **implied unlevered sector returns** serve as an indicator for an **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 worked out 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); 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 costs of capital 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 of the “Financials" sector only serves an informational purpose. 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.

Implied Sector Returns

Exemplary calculation to adjust for the company specific capital structure

Calculation example:

As of the reference date June 30, 2021, we observe sector specific, levered cost of equity of **7.8%** (market-value weighted mean) in the European Basic Materials sector. Taking the sector-specific leverage into account, we derive unlevered cost of equity of **5.3%.** For the exemplary company X, which operates in the European Basic Materials sector, the following assumptions have been made:

- The debt-to-equity ratio of the exemplary company X: **40%**
- The risk-free rate: **0.33%**

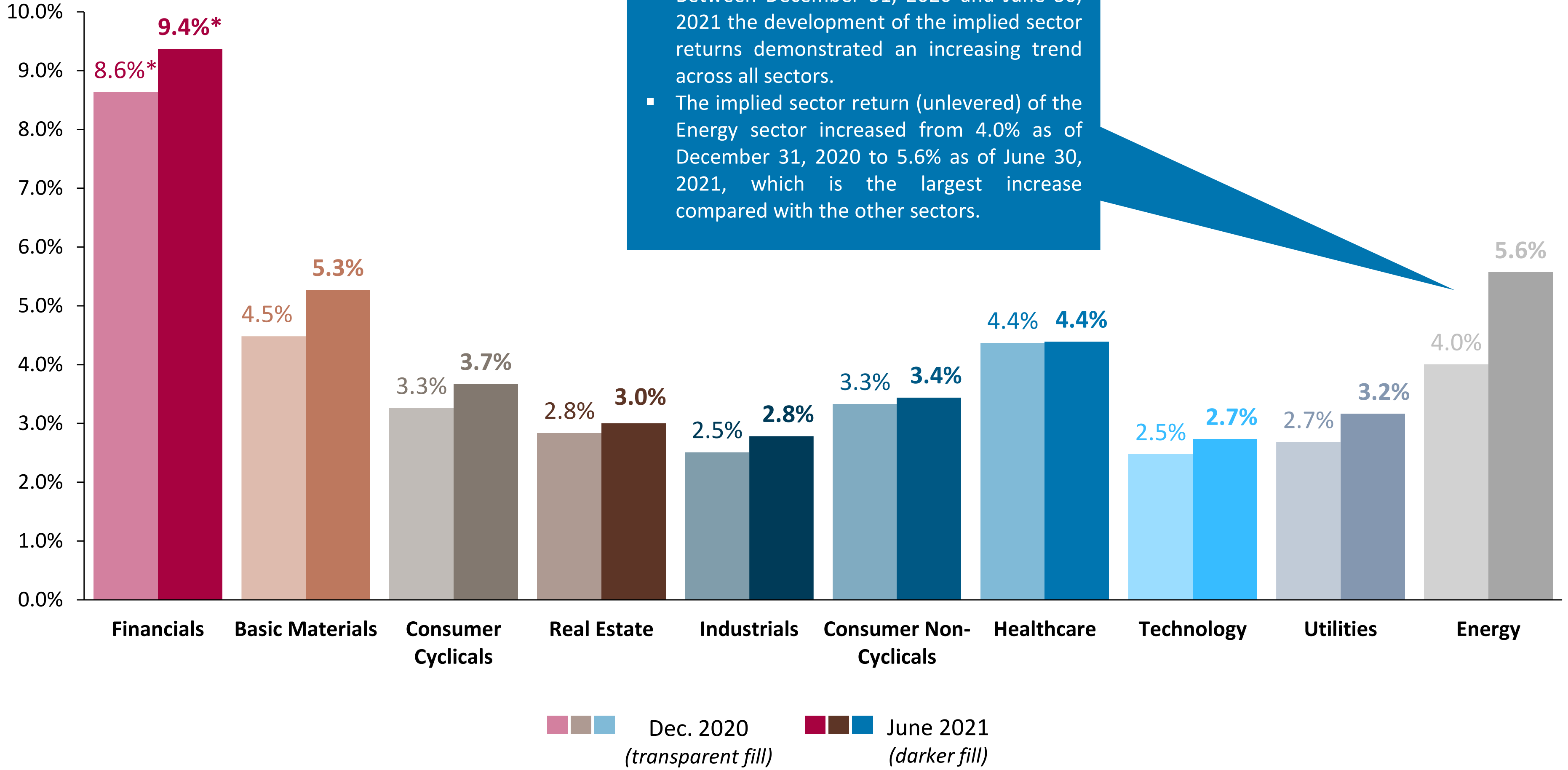
Based on these numbers, we can calculate the relevered costs of equity of company X with the adjustment formula:

$$\mathbf{r_E^L} = 5.3\% + (5.3\% - 0.33\%) * 40\% = 7.3\%$$

Thus, **7.3%** is the company's relevered cost of equity. In comparison, the levered cost of equity of the Basic Materials sector is **7.8%**, reflecting the sectors' higher average leverage.

Implied Sector Returns (unlevered)*
Overview as of June 30, 2021 vs. Dec. 31, 2020

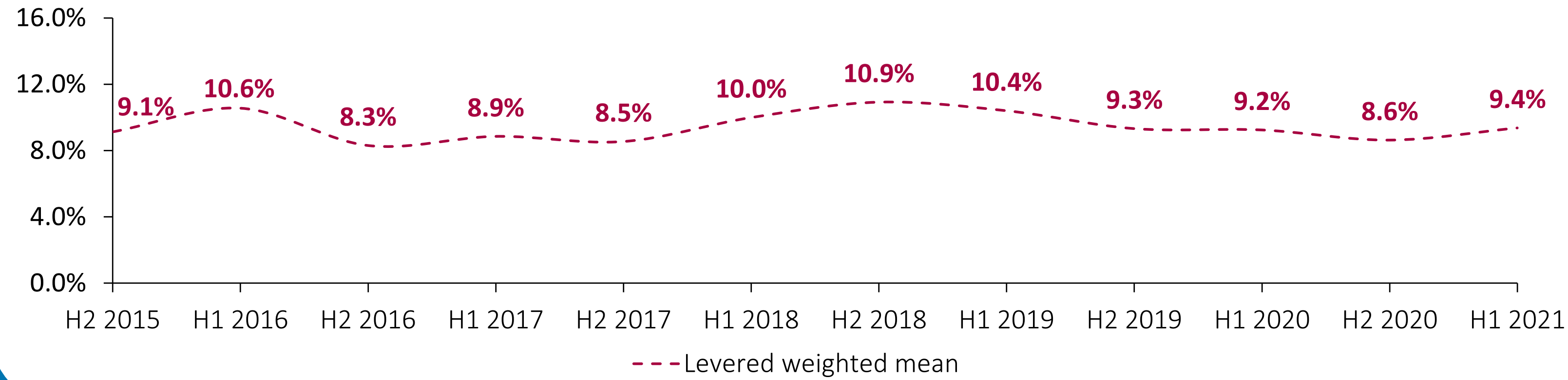
- Between December 31, 2020 and June 30, 2021 the development of the implied sector returns demonstrated an increasing trend across all sectors.
- The implied sector return (unlevered) of the Energy sector increased from 4.0% as of December 31, 2020 to 5.6% as of June 30, 2021, which is the largest increase compared with the other sectors.



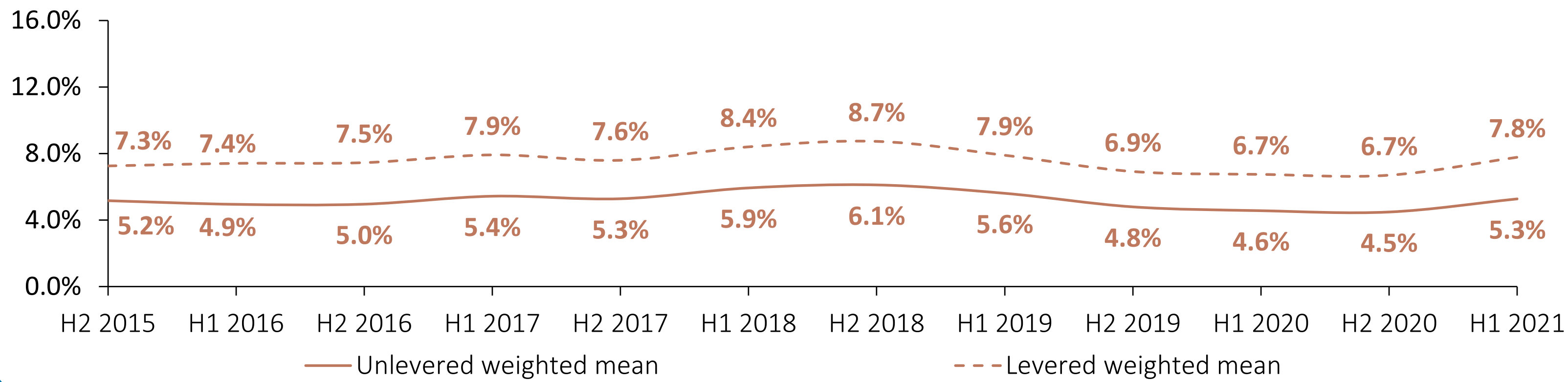
* The returns for the Financials sector refer to levered sector returns. For all other sectors unlevered returns are displayed.

Implied Sector Returns
Financials, Basic Materials

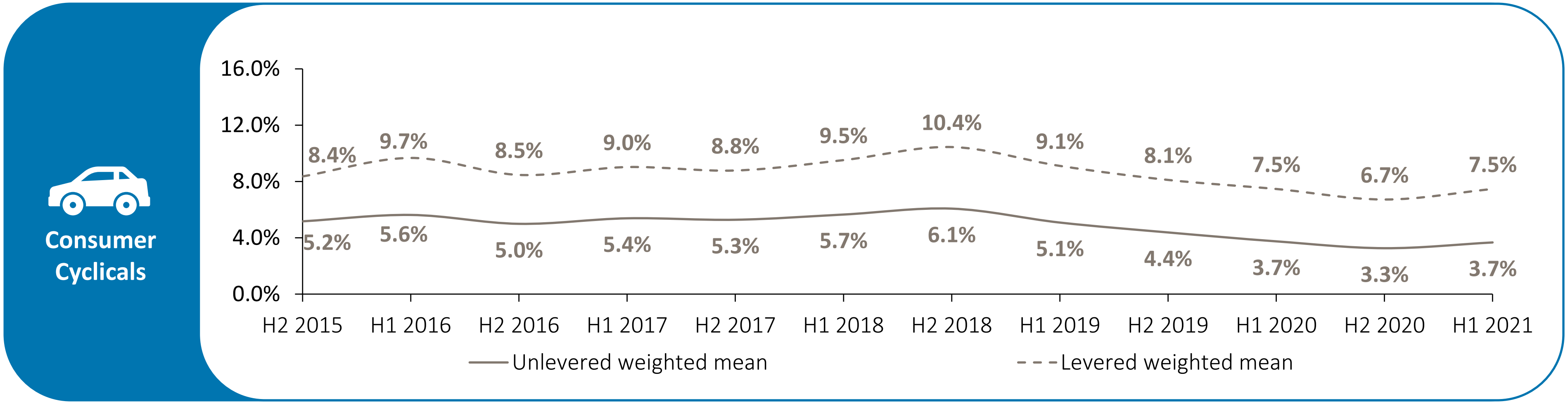
Financials

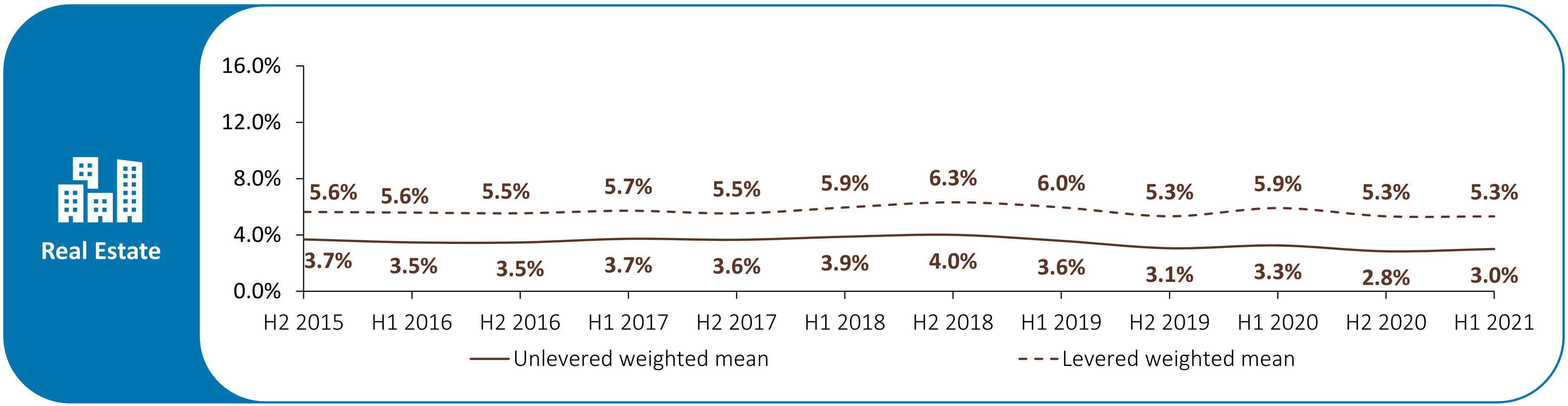


Basic Materials

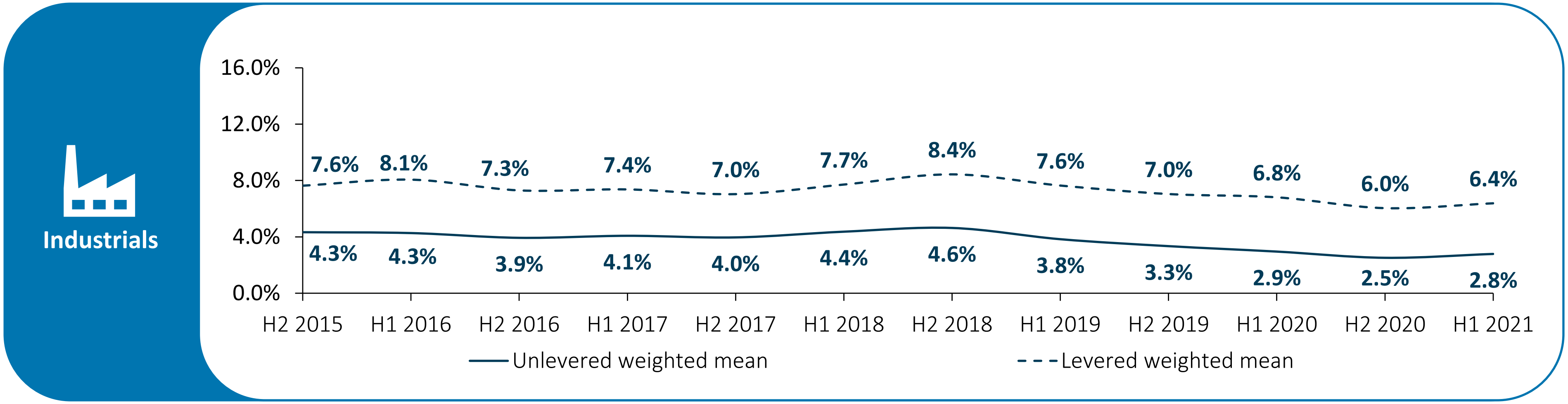


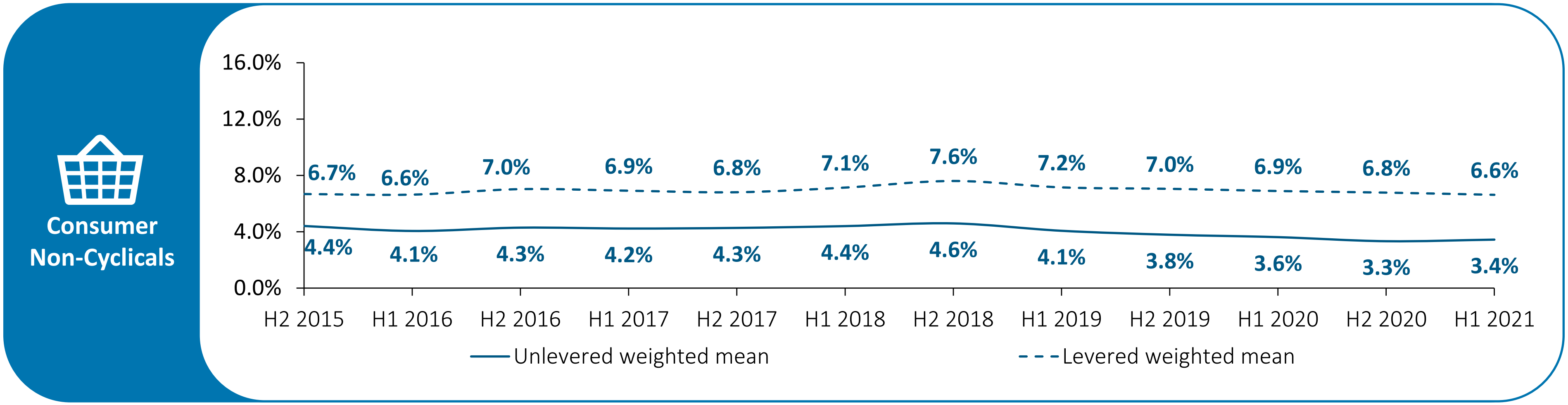
Implied Sector Returns
Consumer Cyclicals, Real Estate



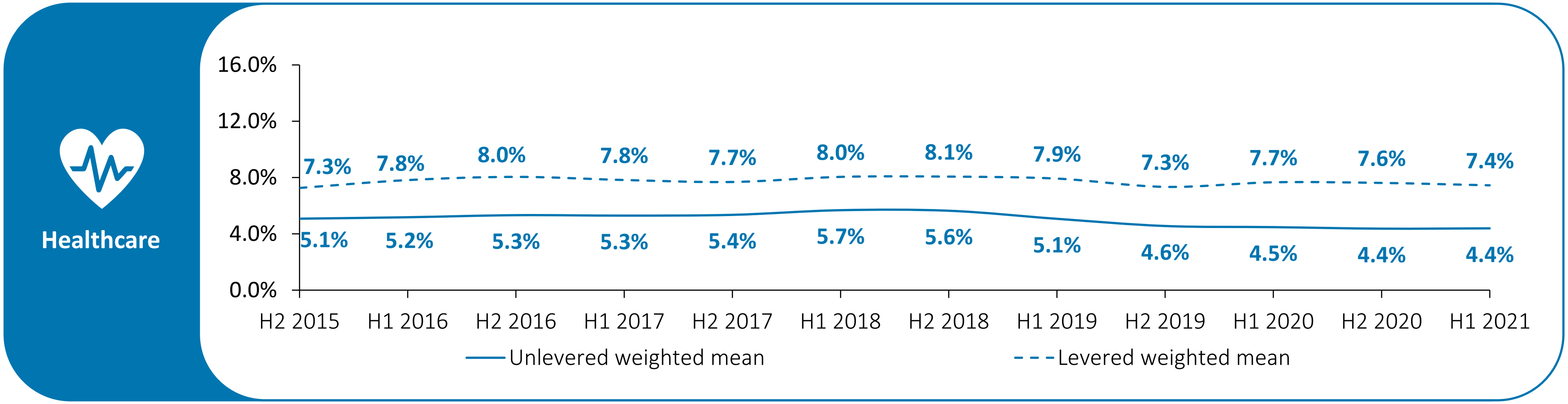


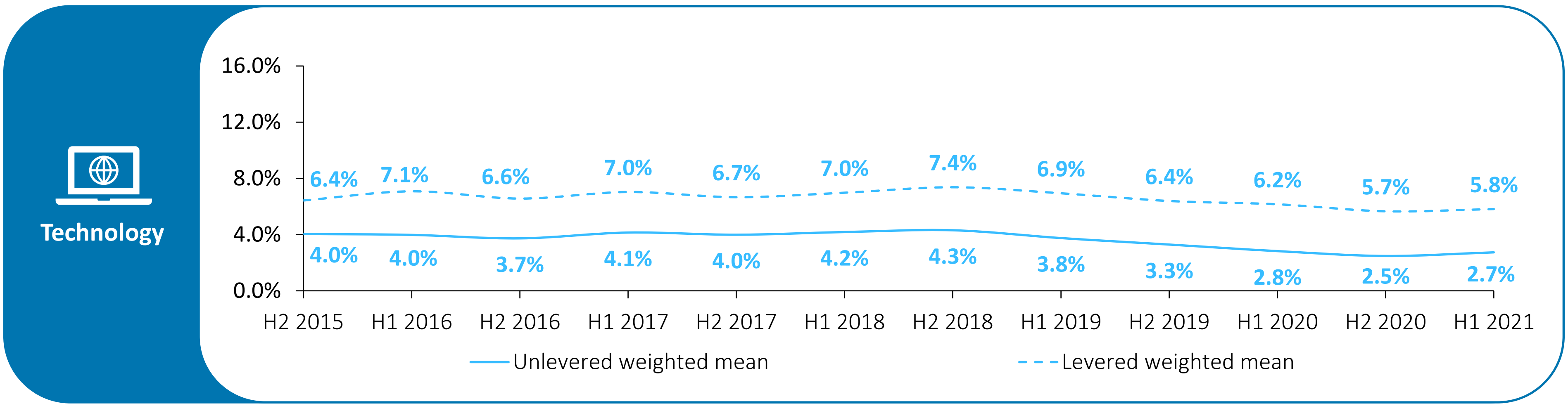
Implied Sector Returns
Industrials, Consumer Non-Cyclicals





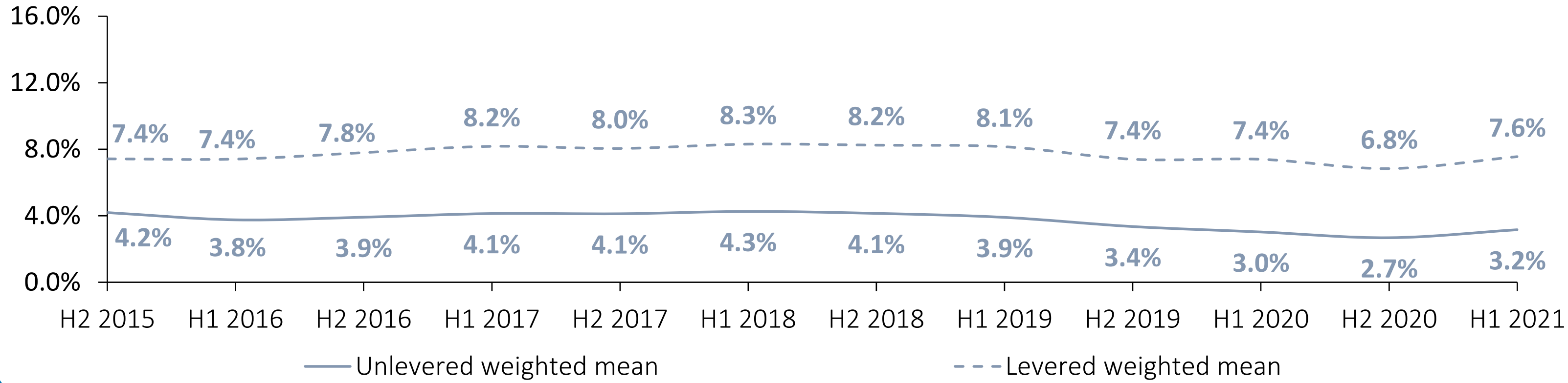
Implied Sector Returns
Healthcare, Technology



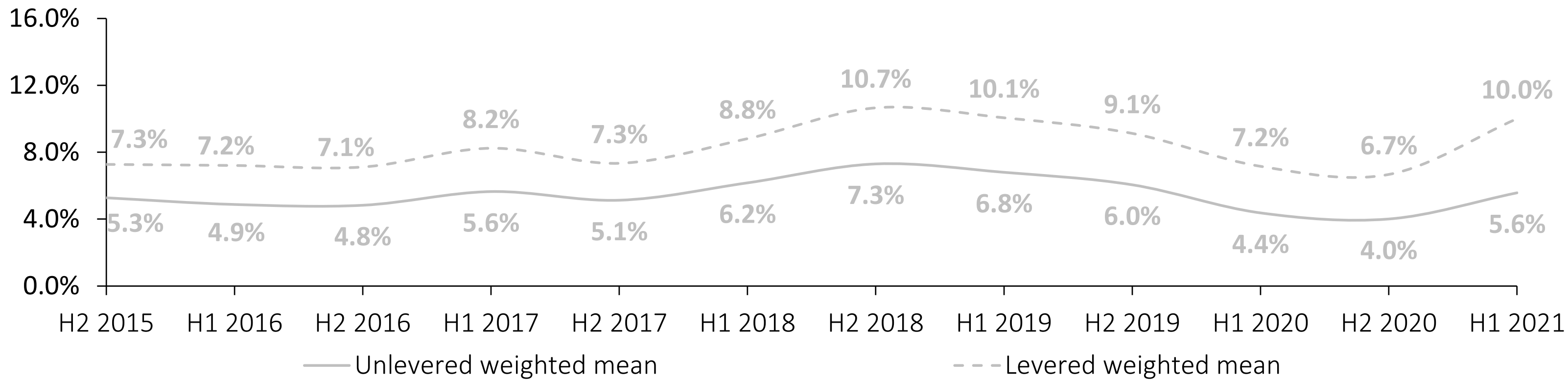


Implied Sector Returns
Utilities, Energy

Utilities



Energy



7 Sector returns

b. Historical returns (ex-post analysis)

Historical Sector Returns
Background & approach

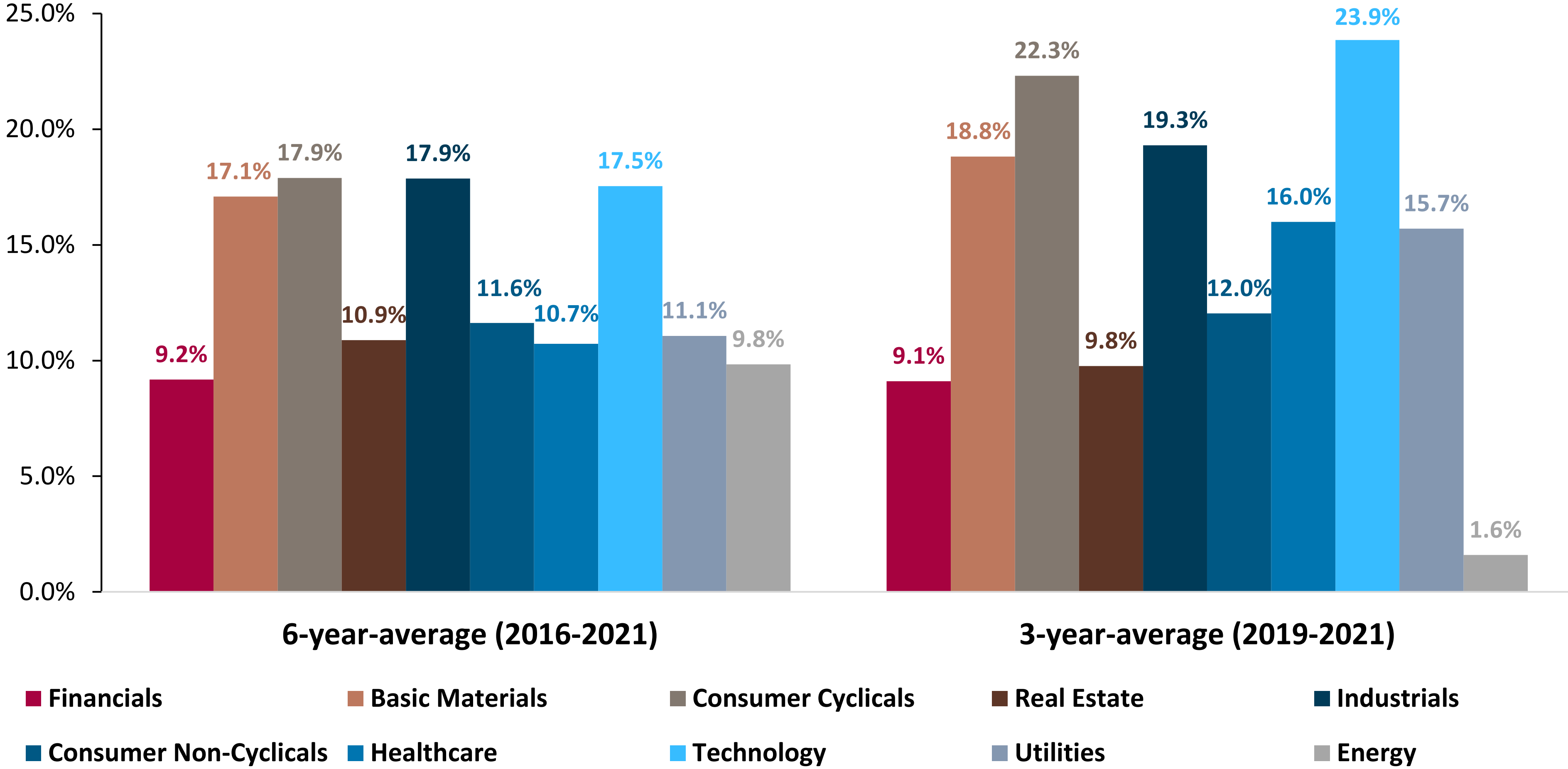
In **addition** to the **determination of historical market returns**, we calculated the **historical sector returns p.a.** This option is an **alternative approach,** like the implied sector returns, for the ex-post analysis of the determination of costs of capital based on regression analyses following the **CAPM**.

Our analysis contains so-called **total shareholder returns** (TSR) p.a. analogous to the return triangles for the European total return indices. This means, we consider the **share price development** as well as the **dividend yield**, whereas the share price development generally represents the main component of the total shareholder returns.

We derive the **annual total shareholder returns between June 30, 2016 and June 30, 2021** for every STOXX Europe 600 sector. Since annual total 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, we additionally calculate the 3-year (2019-2021) and the 6-year (2016-2021) averages.

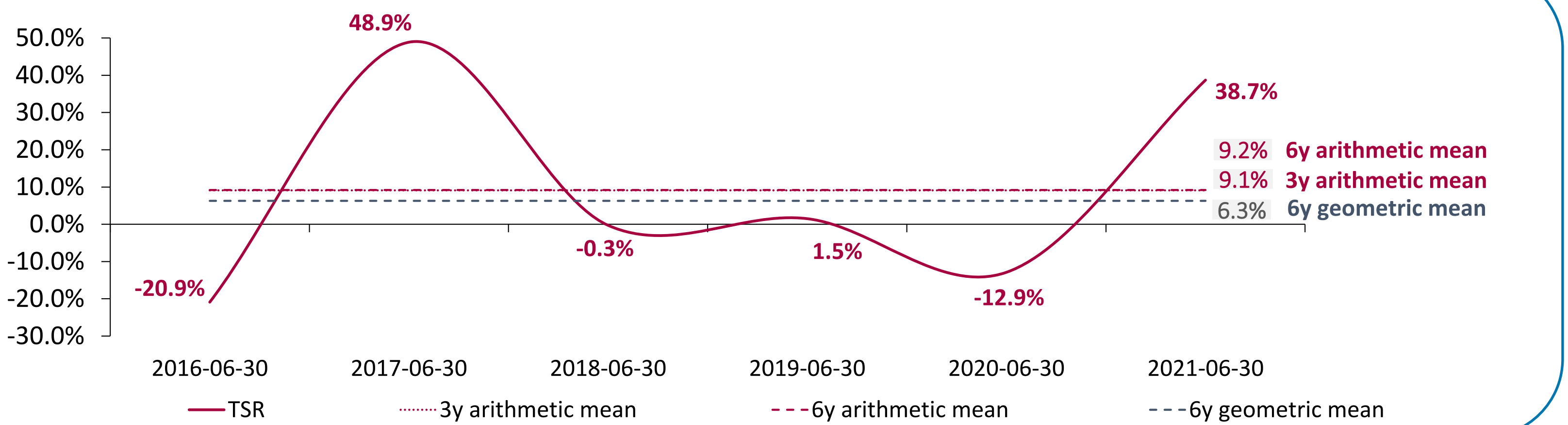
Historical Sector Returns

Average total shareholder returns as of June 30, 2021

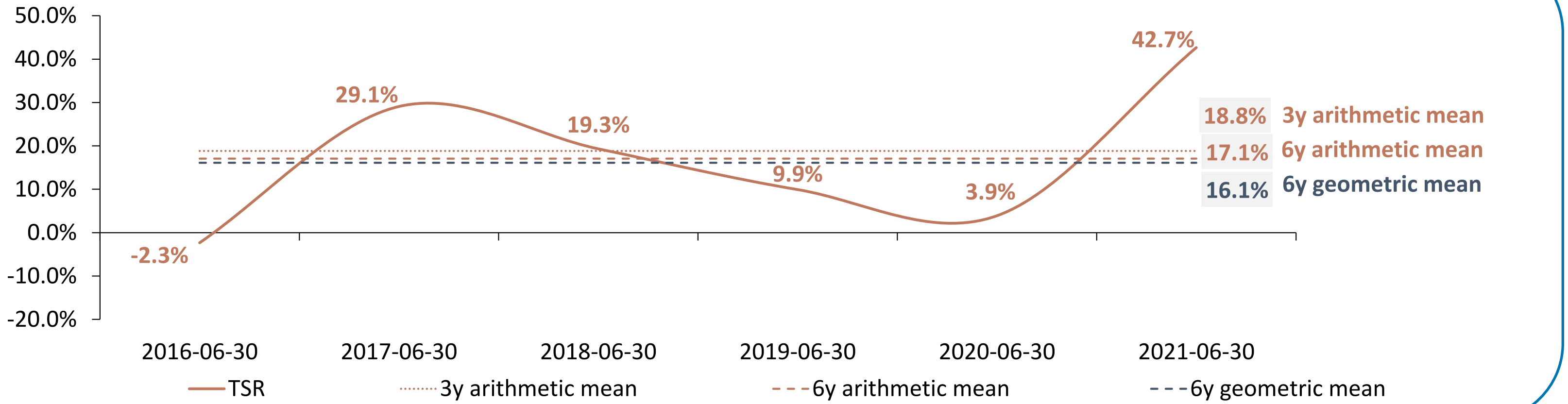


Total Shareholder Returns
Financials, Basic Materials

Financials

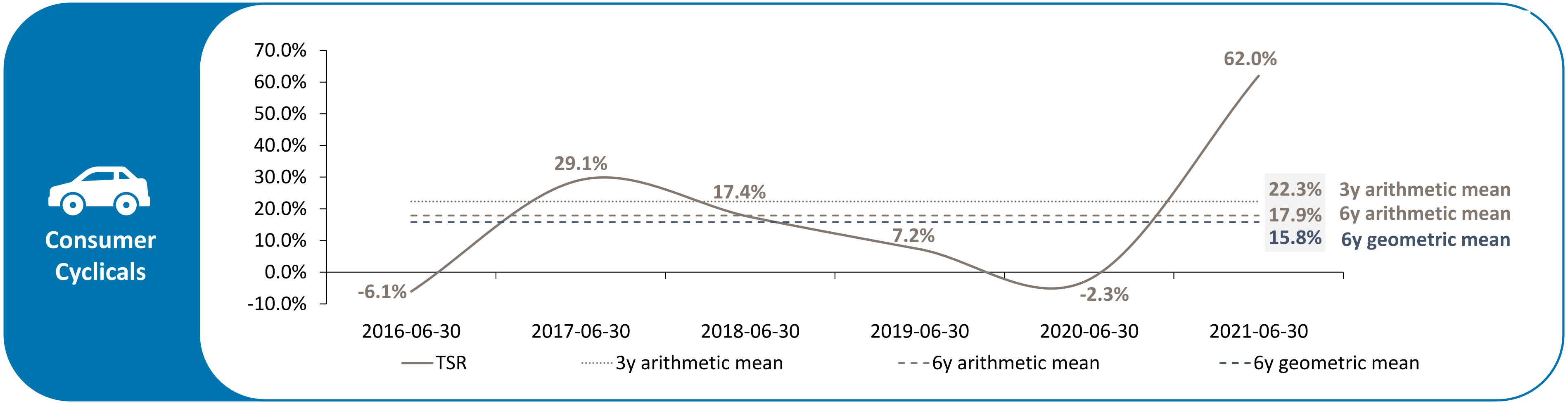


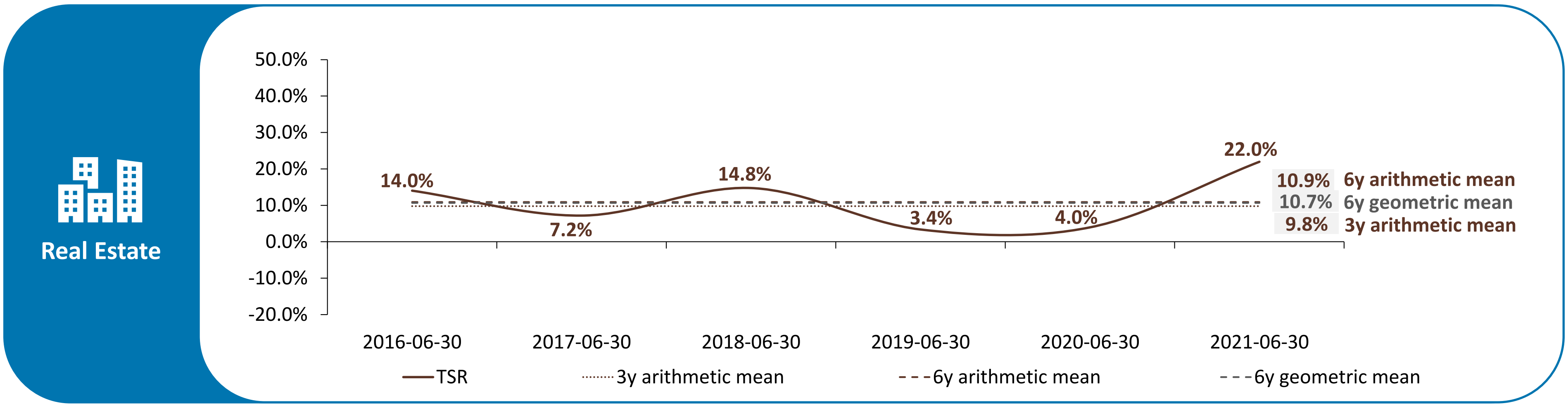
Basic Materials



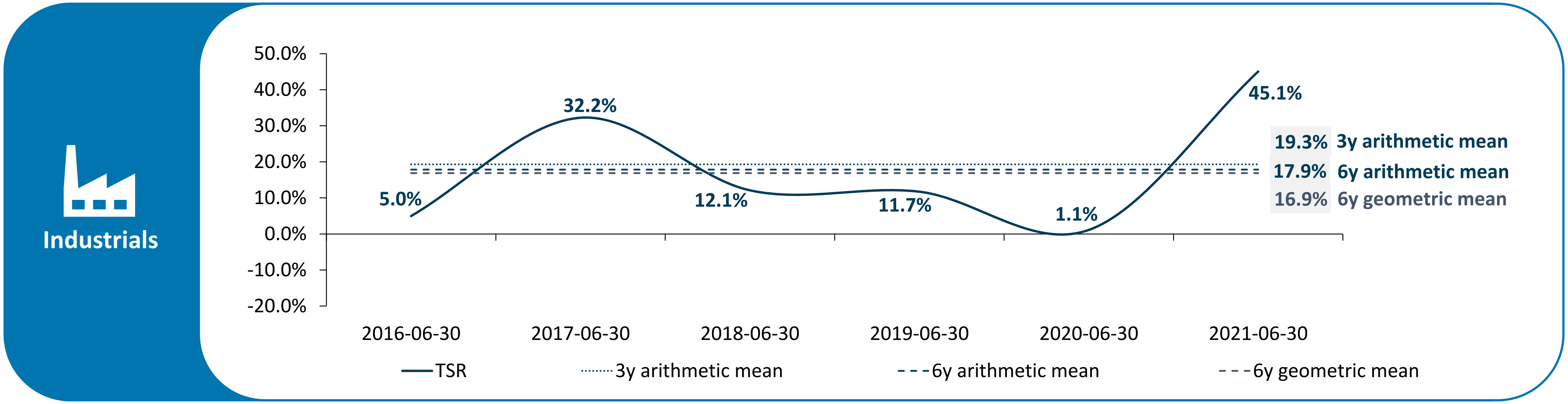
Total Shareholder Returns

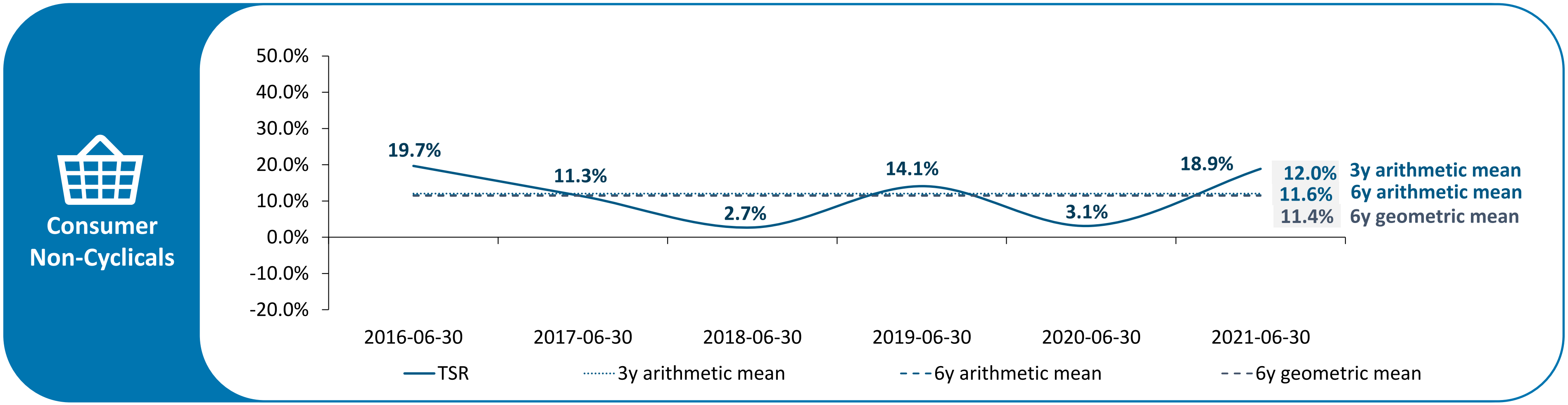
Consumer Cyclicals, Real Estate





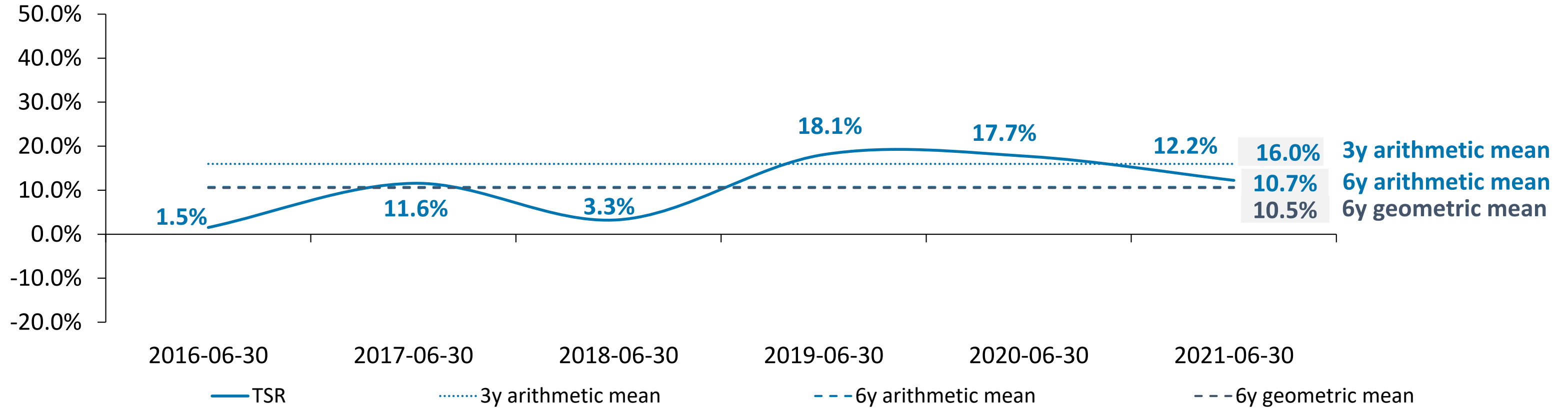
Total Shareholder Returns
Industrials, Consumer Non-Cyclicals



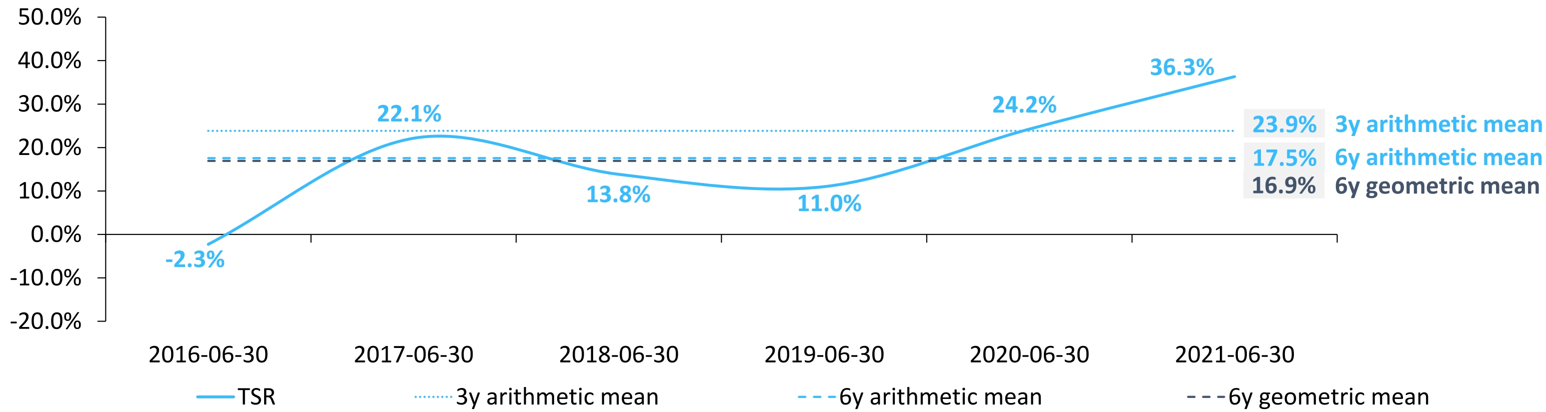


Total Shareholder Returns
Healthcare, Technology

Healthcare

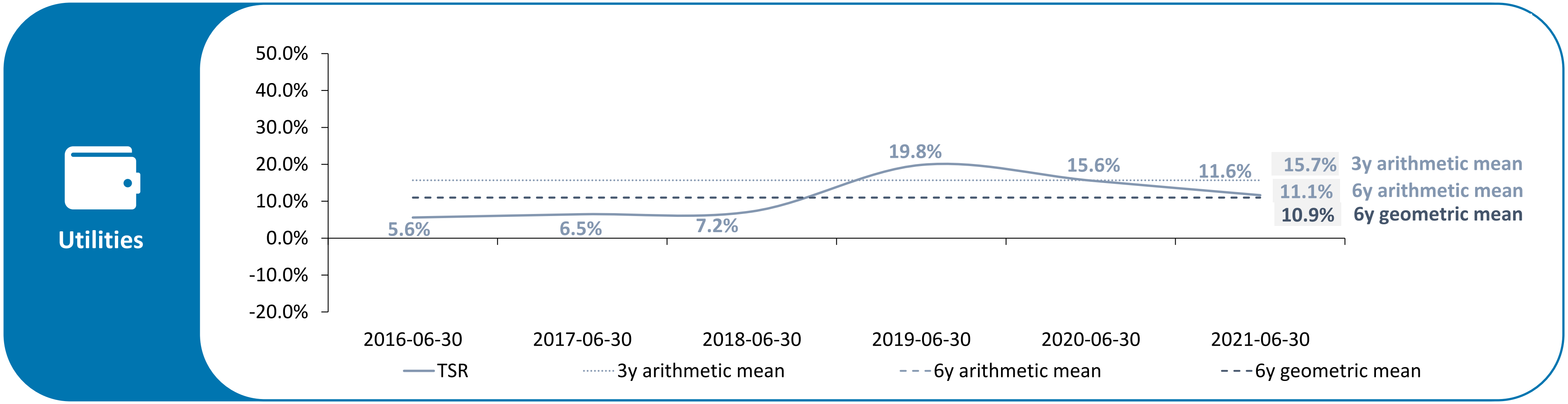


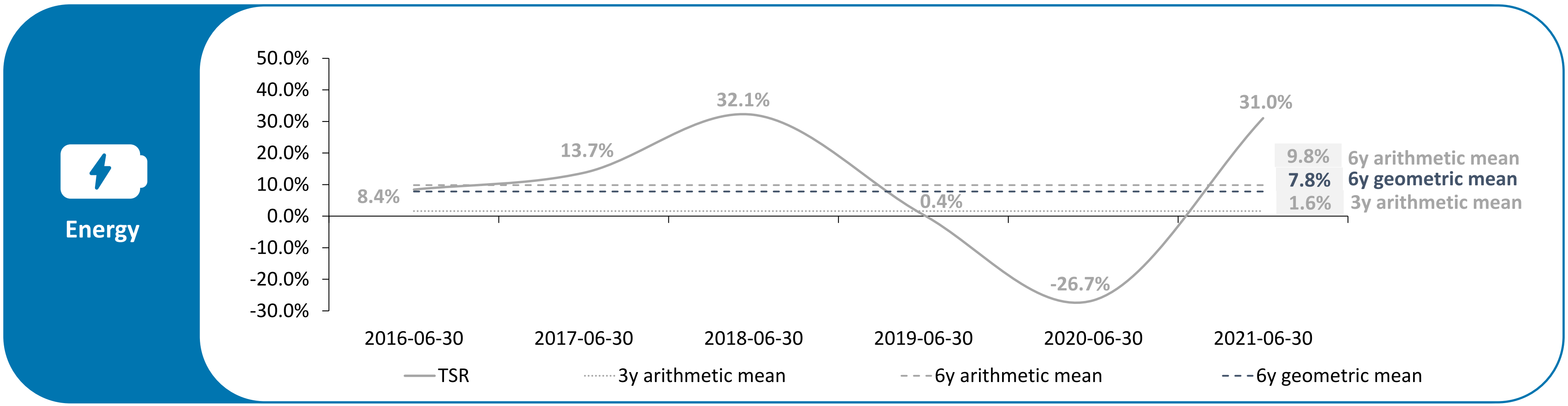
Technology



Total Shareholder Returns

Utilities, Energy





8 Trading multiples

Trading Multiples
Background & approach

Besides absolute valuation models (earnings value, DCF), the **multiples approach** offers a practical way for an enterprise value estimation. The multiples method estimates a company's value **relative** to another company's value. Following this approach, the enterprise value results from the product of a reference value (revenue or earnings values are frequently used) of the company with the respective multiples of **similar companies**.

Within this capital market study, we analyze **multiples for the STOXX Europe 600 sectors**. We will look at the following multiples:

- Revenue-Multiples („**EV**[1]**/Revenue**")
- EBIT-Multiples („**EV**[1]**/EBIT**")
- Price-to-Earnings-Multiples („**P/E**")
- Price-to-Book Value-Multiples („**EqV**[2]**/BV**")

Multiples are presented for the reference date June 30, 2021. 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 date.

To calculate the multiples, we source the data from the data provider Thomson Reuters. We provide a tabular illustration of the sector specific weighted averages of the multiples as of June 30, 2021 on the following slide.

Additionally, we present a **ranking table** of the sector multiples. In a first step, the 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 **red color** to the **highest rank** and a dark **green color** to the **lowest rank**. Thus, a red colored high rank indicates a high valuation level, whereas a green colored low rank suggests a low valuation level. In a second step, we 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.
2) Equity Value.

Trading Multiples (1/2)

Sector multiples as of June 30, 2021 (1/2)

Sector	EV / Revenue	EV / EBIT	P / E	P / BV
Financials	n.a.	n.a.	13.0x 10.5x	0.8x
Basic Materials	2.1x 1.9x	16.6x 11.0x	25.8x 14.4x	2.4x
Consumer Cyclicals	1.9x 1.7x	23.7x 15.5x	28.6x 17.7x	2.7x
Real Estate	14.9x 20.6x	23.5x 27.2x	11.1x 20.7x	1.0x
Industrials	2.1x 1.8x	24.7x 18.1x	32.1x 22.2x	4.2x

LTM-Multiples *(dark blue fill)*   1yf-Multiples *(light blue fill)*

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

Trading Multiples (2/2)

Sector multiples as of June 30, 2021 (2/2)

Sector	EV / Revenue	EV / EBIT	P / E	P / BV
Consumer Non-Cyclicals	2.3x 2.3x	18.8x 17.0x	26.7x 19.7x	3.7x
Healthcare	4.2x 3.8x	20.4x 15.5x	22.6x 18.3x	4.2x
Technology	3.4x 3.3x	23.2x 20.4x	29.9x 24.3x	3.5x
Utilities	1.9x 1.7x	20.7x 14.5x	19.4x 16.0x	1.9x
Energy	1.2x 0.8x	29.2x 8.8x	18.9x 10.6x	1.3x
Europe (All)	2.2x 2.0x	18.8x 14.4x	22.1x 16.3x	2.1x

LTM-Multiples
(dark blue fill)

1yf-Multiples
(light blue fill)

Trading Multiples

Sector multiples ranking as of June 30, 2021 (LTM, 1yf)

	EV/Revenue		EV/EBIT		P/E		P/BV	Ø Ranking
	LTM	1yf	LTM	1yf	LTM	1yf	LTM	
Financials	n.a.	n.a.	n.a.	n.a.	9	10	10	9.7
Basic Materials	5	5	9	8	5	8	6	6.6
Consumer Cyclicals	7	8	3	6	3	6	5	5.4
Real Estate	1	1	4	1	10	3	9	4.1
Industrials	6	6	2	3	1	2	2	3.1
Consumer Non-Cyclicals	4	4	8	4	4	4	3	4.4
Healthcare	2	2	7	5	6	5	1	4.0
Technology	3	3	5	2	2	1	4	2.9
Utilities	8	7	6	7	7	7	7	7.0
Energy	9	9	1	9	8	9	8	7.6

The Financials sector continues to have the least expensive valuation level of all sectors.

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

Global oil demand disruptions led to disparities in global oil production due to the Covid-19 crisis, which impacted performance. As a result, LTM multiples are highest as EBIT declined disproportionately compared to market cap.

The EqV/BV-Multiple of the Utilities sector ranks 7th highest in a sector comparison. Overall, the average ranking of the Utilities sector is 7.0, indicating a low valuation level.

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

Appendix

Composition of the sectors as of June 30, 2021

Appendix
Composition of the STOXX sectors as of June 30, 2021

Financials

3I GROUP PLC.
ABN AMRO BANK NV
ABRDN PLC.
ADMIRAL GROUP PLC.
AEGON
AGEAS SA
ALLIANZ SE
AMUNDI
ASHMORE GROUP PLC.
ASR NEDERLAND
ASSICURAZIONI GENERALI
AVANZA BANK HOLDING AB
AVIVA PLC.
AXA
BALOISE HOLDING AG
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
BBV.ARGT.SA
BNP PARIBAS
CAIXABANK SA
CEMBRA MONEY BANK N ORD
CLOSE BROTHERS GP.PLC.
COMMERZBANK AG
CREDIT AGRICOLE SA
CREDIT SUISSE GROUP AG
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
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
MUNCH.RVRS.GESELL.AG IN
NATIXIS
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
SAMPO PLC.
SCHRODERS PLC.
SCOR SE
SEB 'A' SA
SOCIETE GENERALE SA
SOFINA SA
ST JAMES S PLACE PLC.
STD.CHARTERED PLC.
STOREBRAND ASA
SVENSKA HANDBKN.'A' PLC.
SWEDBANK AB
SWISS LIFE HOLDING AG
SWISS RE AG
TRYG A/S
UBS GROUP
UNICREDIT
VIRGIN MONEY UK PLC.
ZURICH INSURANCE GP.AG

Basic Materials (1/2)

AIR LIQUIDE
AKZO NOBEL NV
ANGLO AMERICAN PLC.
ANTOFAGASTA PLC.
ARCELORMITTAL
ARKEMA
BASF SE
BHP GROUP PLC.
BILLERUD KORSNAS AB
BOLIDEN AB
BRENNTAG SE
CLARIANT AG
CORBION
COVESTRO AG
CRH PLC.
CRODA INTERNATIONAL PLC.
EMS-CHEMIE HOLDING AG
EVONIK INDUSTRIES AG
EVRAZ PLC.
FUCHS PETROLUB AG
GIVAUDAN SA
GROEP BRUSSEL LAMBERT NV
HEIDELBERGCEMENT AG
HENKEL PREFERENCE AG.
HEXPOL AB
HOLCIM AG
HOLMEN AB
HUHTAMAKI OYJ
IMCD GROUP
JOHNSON MATTHEY PLC.
KGHM POLSKA MIEDZ SA
KONINKLIJKE DSM
LANXESS AG
LINDE PLC.
LUNDBERGFORETAGEN AB

Appendix
Composition of the STOXX sectors as of June 30, 2021

Basic Materials (2/2)
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
VICTREX PLC.
VOESTALPINE AG
WIENERBERGER AG
YARA INTERNATIONAL ASA

Consumer Cyclicals
ACCOR
ADIDAS AG
ASSA ABLOY AB
B&M EUR.VAL.RET.PLC.
BARRATT DEVS.P L C
BELLWAY PLC.
BERKELEY GROUP HDG.PLC.
BMW AG.
BOLLORE SE
BURBERRY GROUP PLC.
CARNIVAL PLC.
CD PROJECT RED SA
CHRISTIAN DIOR SA
CMPG.DES ETS.MICH.SCA
COMPASS GROUP PLC.
CONTINENTAL AG
COUNTRYSIDE PROPS.PLC.
CTS EVENTIM AG
DAIMLER AG
DOMETIC GROUP
DR MARTENS PLC.
DUFRY AG
ELECTROLUX AB
ENTAIN PLC.
ESSILORLUXOTTICA SA
EVOLUTION AB
EXOR
FAURECIA SE
FERGUSON PLC.
FERRARI NV
FLUIDRA SA
FLUTTER ENTM.PLC.
FUTURE PLC.
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
LVMH
MARKS & SPENCER GP.PLC.
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
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
STELLANTIS NV
SWATCH GROUP AG
TAYLOR WIMPEY PLC.
THULE GROUP
TRAVIS PERKINS PLC.
TUI AG
VALEO SE
VISTRY GROUP PLC.
VIVENDI SE
VOLKSWAGEN AG
WH SMITH PLC.
WHITBREAD PLC.
WPP PLC.
ZALANDO

Appendix
Composition of the STOXX sectors as of June 30, 2021

Real Estate

AEDIFICA
ALLREAL HOLDING AG
ALSTRIA OFFICE REIT AG
AROUNDTOWN
ASSURA PLC.
BRITISH LAND CO.PLC.
CASTELLUM AB
COFINIMMO
COVIVIO SA
DERWENT LONDON PLC.
DT.WHN.SE
ENTRA
FABEGE AB
FASTIGHETS BALDER AB
GECINA
GRAND CITY PROPERTIES SA
INMB.COLO.SOCIMI SA
KLEPIERRE
KOJAMO OYJ
LAND SECURITIES GP.PLC.
LEG IMMOBILIEN SE
LONDONMETRIC PR.PLC.
MERLIN PROPERTIES REIT
PRIMARY HLTH.PROPS.PLC.
PSP SWISS PROPERTY AG
SAGAX AB
SAMHALLS.I NRDN.AB
SEGRO PLC.
SWISS PRIME SITE
TAG IMMOBILIEN AG
TRITAX BIG BOX REIT PLC.
UNITE GROUP PLC.
VONOVIA SE PRE
WALLENSTAM AB
WAREHOUSES DE PAUW NV
WFD UNIBAIL RODAMCO NV
WIHLBORGS FASTIGHETER AB

Industrials (1/2)

A P MOLLER - MAERSK A/S
AALBERTS NV
AB SKF
ABB LTD N
ACCIONA SA
ACKERMANS & VAN HAAREN
ACS ACTIV.CONSTR.Y SERV.
ADDTECH AB
ADECCO SA
ADP
AENA SME SA
AFRY AB
AIRBUS SE
ALFA LAVAL AB
ALSTOM SA
ANDRITZ AG
ASHTEAD GROUP PLC.
ATLANTIA
ATLAS COPCO AB
BAE SYSTEMS PLC.
BEIJER REF AB
BELIMO HOLDING AG
BOUYGUES SA
BUCHER INDUSTRIES AG
BUNZL PLC.
BUREAU VERITAS INTL.
CNH INDUSTRIAL NV
DASSAULT AVIATION
DEUTSCHE LUFTHANSA AG
DEUTSCHE POST AG
DIPLOMA PLC.
DSV PANALPINA A/S
EASYJET PLC.
EDENRED
EIFFAGE
ELIS
EPIROC AB NPV A
EUROFINS SCIENTIFIC AG
EXPERIAN PLC.
FERROVIAL SA
FLUGHAFEN ZURICH AG
GEA GROUP AG
GEORG FISCHER AG
GETLINK SE
HALMA PLC.
HAYS PLC.
IMI PLC.
INDUTRADE AB
INPOST SA
INTERPUMP GROUP
INTERTEK GROUP PLC.
INTL.CONS.AIRL.GROUP SA
ISS AS
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
POSTE ITALIANE
PRYSMIAN
RANDSTAD NV
RELX PLC.
RENTOKIL INITIAL PLC.

Appendix
Composition of the STOXX sectors as of June 30, 2021

Industrials (2/2)

REXEL
ROLLS-ROYCE HOLDINGS PLC
ROTORK PLC.
ROYAL MAIL PLC.
RYANAIR HOLDINGS PLC.
SAFRAN SA
SANDVIK AB
SCHINDLER HOLDING AG
SCHNEIDER ELECTRIC SE
SECURITAS AB
SGS SA
SKANSKA AB
SPIE SA
SPIRAX-SARCO ENGR.PLC.
STADLER RAIL AG
SUEZ CO.
SWECO AB
TELEPERFORMANCE
THALES SA
TOMRA SYSTEMS ASA
TRELLEBORG AB
VALMET OYJ
VAT GROUP
VINCI SA
VOLVO AB
WARTSILA OYJ ABP
WEIR GROUP PLC.
WENDEL
WIZZ AIR HOLDINGS PLC.
WOLTERS KLUWER NV

Consumer Non-Cyclicals

AARHUSKARLSHAMN AB
ANHEUSER BUSCH INBEV SA
ASSOCIATED BRIT.FDS.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
HOMESERVE PLC.
ICA GRUPPEN AB
IMPERIAL BRANDS PLC.
INVESTMENT AB LATOUR
JDE PEETS NV
JERONIMO MARTINS SA
KERRY GROUP PLC.
KESKO OYJ
KON.AHOLD DLHZ.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.
WM MSN.SPMKTS.P L C
ZUR ROSE

Healthcare (1/2)

ALCON AG
AMBU 'B'A/S
AMPLIFON SPA
ARGENX SE
ASTRAZENECA PLC.
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
GALAPAGOS
GENMAB A/S
GENUS PLC.
GERRESHEIMER AG
GETINGE AB
GLAXOSMITHKLINE PLC.
GN STORE NORD A/S
GRIFOLS SA
HIKMA PHARMS.PLC.
IDORSIA LIMITED
IPSEN SA
KON.PHILIPS ELTN.NA
LONZA GROUP AG
MERCK KGAA
MORPHOSYS AG
NOVARTIS AG
NOVO NORDISK A/S
ORION OYJ

Appendix
Composition of the STOXX sectors as of June 30, 2021

Healthcare (2/2)
ORPEA SA
QIAGEN NV
RECORDATI INDUA.CHIMICA
ROCHE HOLDING AG
SANOFI
SARTORIUS AG
SARTORIUS STEDIM BIOTECH
SIEGFRIED HOLDING AG
SIEMENS HEALTHINEERS
SMITH & NEPHEW PLC.
SONOVA HOLDING AG
STRAUMANN HOLDING AG
SWED.ORPHAN BIOVITRUM AB
UCB SA
UDG HEALTHCARE PUB.LTD.
VIFOR PHARMA

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

Utilities
A2A SPA
CENTRICA PLC.
E ON SE
EDP ENERGIAS DE PORTL.SA
EDP RENOVAVEIS
ELECTRICITE DE FRANCE
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.
SCATEC ASA
SEVERN TRENT PLC.
SSE PLC.
TERNA RETE ELETTRICA NAZ
UNIPER SE
UNITED UTILITIES GP.PLC.
VEOLIA ENVIRONNEMENT
VERBUND AG

Appendix
Composition of the STOXX sectors as of June 30, 2021

Energy

BP PLC.
DET NORS.OLJESELSKAP ASA
ENAGAS SA
ENI
EQUINOR ASA
GALP ENERGIA SGPS
GLENCORE PLC
KONINKLIJKE VOPAK NV
LUNDIN ENERGY AB
NEL ASA
NESTE
OMV AG
PLKNC.NAFTOWY ORLEN
REPSOL YPF SA
ROYAL DUTCH SHELL
RUBIS
SIE.GAMESA RENWEN.SA
SIEMENS ENERGY AG
SNAM SPA
TECHNIPFMC PLC.
TENARIS SA
TOTALENERGIES SE
VESTAS WINDSYSTEMS A/S

ValueTrust

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