

# CROCI<sup>®</sup>

## FOCUS ON CROCI STRATEGIES

July 2024

### MARKETING MATERIAL

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**CROCI<sup>®</sup> STRATEGIES**  
**20 Years of Value Creation**

# CROCI IN SUMMARY

Harmonising valuations to allow portfolios to be entirely fundamental and entirely bottom-up.

## CROCI is active

### Discretionary approach to company analysis

- Investment universe, analysis methodology and investment strategies determined by the CROCI team
- High active share in CROCI strategies

## CROCI is systematic

### Rules-based implementation

- Company data is prepared by the CROCI team within defined parameters and is therefore harmonised and consistent
- Portfolio construction is carried out transparently according to the rules-based strategy

## CROCI is value-orientated

### Regular updating of company valuations

- Investment strategies are based on stocks that look attractive on CROCI valuations
- Portfolios are updated every quarter to ensure exposure to companies with cheap valuations

# CROCI® VALUATION STRATEGIES



Global/regional valuation-driven strategies with strong value and quality exposures

- **CROCI strategies have shown high alpha generation with live track record for over 20 years**
- Bottom-up fundamental approach to portfolio construction, combining active company research with systematic portfolio construction
- High active share and benchmark agnostic – entirely driven by stock selection; good downside and upside capture ratios.
- Proprietary and unique company analysis with a team of over 50 investment professionals performing due diligence on over 900 companies in a consistent and comparable fashion
- CROCI strategies are driven by both value and quality factors which has allowed outperformance even in periods when conventional value strategies struggle.

Source: DWS CROCI; Data as of 29<sup>th</sup> December 2023

Past performance is not a reliable indicator of future returns.

# CROCI STRATEGY PERFORMANCE IN DIFFERENT PERIODS

CROCI strategies have outperformed in most market environments



	<i>Pre-Crisis Market</i> <b>2004-2007*</b>	<i>Financial Crisis</i> <b>2008-2009</b>	<i>Rising Liquidity</i> <b>2010-2017</b>	<i>Growth/Momentum</i> <b>2018-2021</b>	<i>Rising interest rates</i> <b>2022-2023</b>	<i>Entire time period</i> <b>2004-2023</b>
<b>CROCI US</b>	14.6%	-6.0%	12.8%	11.6%	5.8%	10.2%
Rel. S&P 500	6.1%	5.3%	-0.4%	-5.4%	4.6%	1.2%
Rel. MSCI USA Value	5.1%	7.5%	1.0%	1.9%	5.4%	3.2%
<b>CROCI US Dividends</b>	15.2%	0.9%	16.4%	13.0%	3.5%	12.5%
Rel. S&P 500	6.7%	12.3%	3.2%	-4.0%	2.3%	3.5%
Rel. MSCI USA HDY	7.4%	9.5%	2.6%	3.7%	3.0%	4.6%
<b>CROCI Euro</b>	19.7%	-12.1%	10.4%	6.5%	1.2%	8.0%
Rel. EuroSTOXX 50	4.6%	2.8%	5.2%	-1.2%	-3.9%	2.6%
Rel. MSCI EMU Value	1.8%	4.7%	5.5%	3.7%	-4.5%	3.4%
<b>CROCI Japan</b>	13.3%	-18.0%	12.3%	7.9%	18.3%	8.7%
Rel. TOPIX 100	3.3%	3.8%	2.2%	1.4%	6.0%	2.8%
Rel. MSCI Japan Value	-0.4%	-1.5%	3.0%	5.5%	-1.2%	1.9%
<b>CROCI World</b>	21.6%	-0.8%	10.4%	11.0%	5.2%	11.0%
Rel. MSCI World	8.4%	11.4%	0.6%	-2.3%	4.6%	3.2%
Rel. MSCI World Value	7.8%	12.3%	1.7%	4.0%	3.1%	4.7%
<b>CROCI Global Dividends</b>	20.3%	-2.0%	11.2%	4.9%	6.4%	9.8%
Rel. MSCI World	7.1%	10.2%	1.3%	-8.4%	5.7%	3.3%
Rel. MSCI World HDY	5.4%	11.1%	2.6%	-2.3%	4.4%	2.0%
<b>CROCI Sectors Plus</b>	23.4%	-4.0%	12.5%	13.7%	8.0%	11.9%
Rel. MSCI World	9.0%	8.2%	2.7%	0.4%	7.4%	4.3%
Rel. MSCI World Value	9.9%	9.1%	3.8%	6.7%	5.9%	6.2%

Source: DWS CROCI, Bloomberg Finance LP; Data as of 15 April 2024.; Global strategy performance in USD terms \*From Mar 2005 for CROCI Sectors Plus; Past performance may not be a reliable indicator of future results. Performance before the live date of strategies is simulated. The Simulations apply an investment strategy retrospectively to data that was in part reconstructed and not necessarily available at the time. Consequently, there may be instances when realised returns would have shown variation from those simulated and the latter may have had the advantage of hindsight. Live date for CROCI World is 29 Nov. 2010, CROCI US Dividends 13 Mar. 2012, CROCI Global Dividends 15th Mar 2012

# CROCI®: A REAL ECONOMIC INVESTMENT PHILOSOPHY



CROCI aims to identify genuinely cheap stocks<sup>1</sup> in a consistent global framework

Fundamentals are the main driver of stock prices over the long term, so CROCI follows rigorous analysis to identify attractive stocks whatever the market condition – whilst steering clear of emotional biases.

## Rigorous & Fundamental

CROCI seeks to invest in only the most attractive companies from an economic valuation perspective, using portfolio construction which is entirely bottom-up and fundamental.

CROCI's measures of value are substantially different to conventional measures of value, which removes embedded sectoral biases from its portfolios.

## Emotion-free & Objective

CROCI provides advantages from the worlds of both active and passive: high conviction portfolios, but objective and without style drift.

CROCI was a pioneer in systematic active equity investment. Since 2004, there have been CROCI products running money in the US, Europe and Japan.

## Analytical & Comparable

Consistent coverage of over 850 companies globally with a dedicated team of around 50 analysts, who perform due diligence in a harmonized fashion on all companies to reach a comparable real economic valuation.

CROCI's objective analysis and bottom-up portfolio construction allow the strategies to focus exclusively on portfolio construction without any emotional biases.

## Long history

Long term, proven success in equity valuation and investment—2024 marks the 29th year of CROCI and 20th year of CROCI funds.

Robust long-term performance—CROCI strategies have outperformed their benchmark (and equivalent value benchmarks) since the financial crisis and before.

Source: DWS. <sup>1</sup>Where CROCI valuation of stocks appear to suggest they are undervalued when compared to the equity valuation

# REAL VALUE CAN APPEAR VERY DIFFERENT TO UNADJUSTED “VALUE” // DWS

Economic valuations can substantially change stock rankings, once the CROCI approach has been applied to reported pro-forma accounts

For example, of these ten companies in 2022 numbers:

- Meta moves to become the second cheapest, having been in the expensive half
- General Motors becomes the fourth most expensive, having been the second cheapest

		Valuation 2018 Accounting PE		Valuation 2018 Economic PE	
Amazon	Retailing	126.5	10	77.4	10
BP	Energy	3.4	1	7.5	1
Meta	Social Media	18.0	6	15.8	2
General Motors	Automobiles	5.7	2	28.4	7
Heineken	Food & Beverages	19.1	8	27.5	4
IBM	Information Technology	17.0	5	28.1	5
Johnson & Johnson	Household & Personal Products	19.1	7	24.0	3
LVMH	Luxury Goods	23.0	9	28.3	6
Orange	Telecommunications	8.9	3	75.6	9
Osaka Gas	Utilities	16.2	4	45.5	8

Source: DWS. Company data as of 3 Jan. 2024. Based on Company data for 2022. Company data taken from reported full year 2022 using average share price over the company's fiscal year. Data in brackets show rank of the stock. These examples are for illustrative purposes only and do not represent any investment recommendation or investment advice. Assessment of Real and Apparent Value is as per CROCI methodology. Investors may have a different view than what is presented above. Data adjustments can impact company financials in different ways, and to a greater extent at some than others. The proceeding portfolio study is provided for discussion and illustrative purposes only for characteristics that may be representative of future investments in the proposed strategy. This study doesn't represent all transactions done by DWS and is not representative of our investment experience as a whole nor is it representative of the transactions that would constitute assets in a future invested strategy. This information is intended for informational purposes only and does not constitute investment advice, a recommendation, an offer or solicitation. Past performance, whether live or simulated, is not a reliable indicator of future results. Please see page 'CROCI Glossary' for a full definition of the CROCI term Real Value

Yearly more than 70,000 working hours for detail analysis of more than 870 companies globally

## The CROCI Team of DWS consists of more than 60 specialists in 5 sub-teams



CROCI Company Analysis: 51 analysts in Europe and India



CROCI Thought Leadership: 2 specialists in Europe and India



CROCI Investment Strategies: 4 strategists in Europe and India



CROCI Portfolio Management: 4 portfolio managers in Europe and the US



IT / Business Management: 1 specialist in the US

# ACCOUNTING VS. ECONOMIC DATA



## Accounting Valuation

### Accounting P/E

Not comparable across industries and sectors, or over time

$$\text{Accounting P/E} = \frac{\text{Price/Book Value}}{\text{Return on Equity}}$$

## Economic Valuation

### Economic P/E

Seeks true consistency and comparability between stocks, sectors and countries

$$\text{Economic P/E} = \frac{\text{EV/NCI}}{\text{CROCI}}$$

## Accounting Valuation Inputs

### Market Capitalization

Only includes the value of the equity, but ignores debt and other calls on shareholders

### Book Value

Historical cost accounted. Ignores intangible economic assets, such as R&D and advertising of brands

### Return on Equity

Does not represent an inflation-adjusted return. For example, depreciation is not charged economically, and asset life is inconsistent

## Economic Valuation Inputs

### Enterprise Value

Includes not only financial debt but other liabilities, such as leases, warranties, pension under-funding

### Net Capital Invested

Adjusted for inflation, and also includes capitalized intangibles, such as R&D and advertising of brands

### Cash Return on Capital Invested (CROCI)

The cash return over the life of the assets. Depreciation is charged economically, with similar assets having similar lives

EV = CROCI Enterprise Value, NCI = CROCI Net Capital Invested, CROCI = Cash Return on Capital Invested

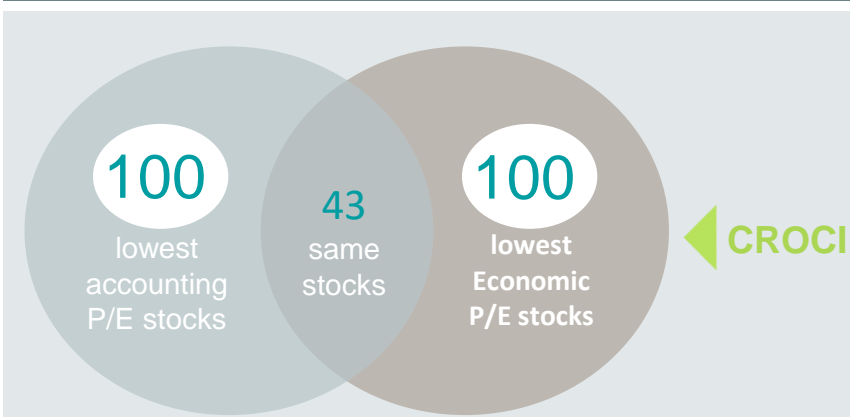
Source: DWS



# USING CROCI DATA INSTEAD OF ACCOUNTING DATA CAN RESULT IN VERY DIFFERENT PORTFOLIOS

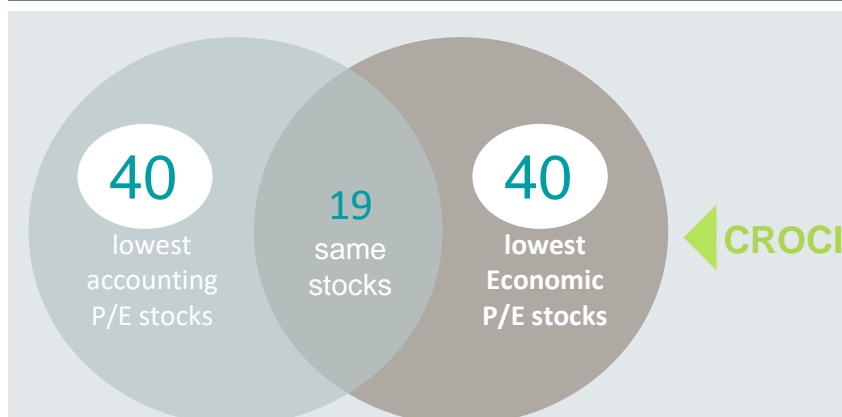
The overlap between portfolios seeking out the lowest accounting P/E and lowest Economic P/E is close to half<sup>1</sup>

## CROCI Developed Market Coverage (ex Financials)



100 stocks from CROCI Global coverage with lowest accounting P/E vs. 100 stocks with lowest Economic P/E

## CROCI US Coverage (ex Financials)



40 stocks from CROCI US Coverage with lowest accounting P/E vs. 40 stocks with lowest Economic P/E

- CROCI seeks to provide exposure to *real* value based on economically adjusted data
- Low-Economic-P/E portfolios are qualitatively distinct from traditional value portfolios with superior operational and financial characteristics<sup>2</sup>

1) A comparison of the companies that are in more than one of the 100 global and 40 U.S. stock strategy baskets using data as of 29 Dec. 2023.

U.S. baskets are composed of the 40 cheapest stocks as measured by trailing 12 month Economic P/E and the 40 cheapest stocks as measured by trailing 12 month accounting P/E, selected from CROCI coverage of US companies. Global baskets are composed of the 100 cheapest stocks as measured by trailing 12 month Economic P/E and the 100 cheapest stocks as measured by trailing 12 month accounting P/E, selected from CROCI coverage of developed markets.

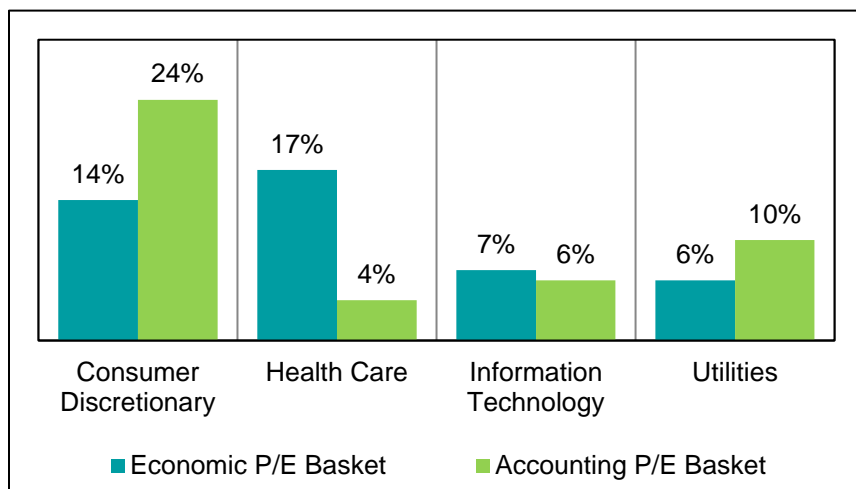
19 years of annual data from 2005-2023 shows that the overlap ranges between 40%-65% in U.S. basket with a mean of 54%, and between 38%-54%, with a mean of 46% in the Global basket. Source: DWS, 9 Jul. 2024

# GLOBAL CHARACTERISTICS CAN DIFFER GREATLY

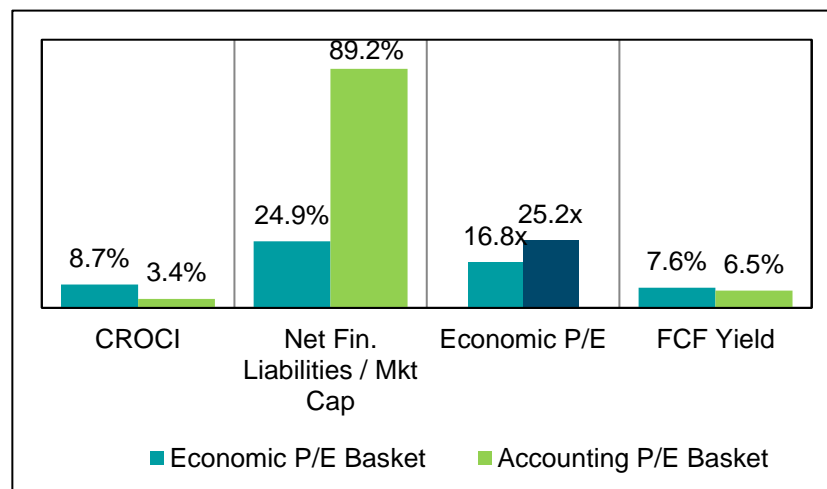
## Economic P/E portfolios vs. Accounting P/E portfolios

- The **Economic P/E** portfolio has a greater tilt towards sectors more traditionally thought of as “**growth**” (such as HC and IT) and much lower exposure to defensive sectors than the Accounting P/E portfolio
- The **Economic P/E** portfolio has **higher profitability**, **higher free cash flow** but **lower financial leverage** than the Accounting P/E portfolio

Selected Sector Weights (@29 Dec. 2023)



Selected Operational Characteristics (@29 Dec. 2023)

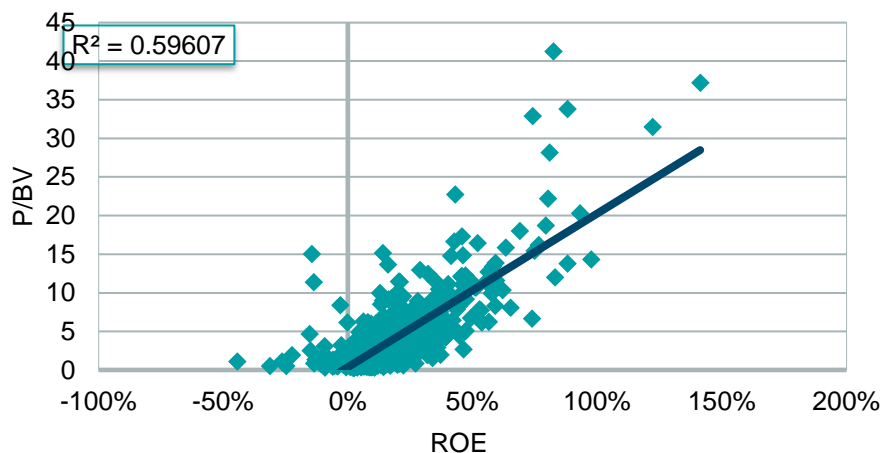


Source: DWS, 9 Jul. 2024. Economic P/E Basket and Accounting P/E Basket have been constructed from CROCI coverage of global developed markets, selecting 100 cheapest stocks as measured by trailing 12 month Economic P/E and the 100 cheapest stocks as measured by trailing 12 month accounting P/E respectively, using CROCI data as of 29 Dec. 2023. The comparisons between them may not be consistent over a longer period of time either historically or in the future. 19 years of annual data from 2005-2023 shows sharp differences between both operating characteristics and sector allocation over the whole period

# THE P/E RATIO DEMONSTRATES A STRONGER CORRELATION WHEN USING ECONOMIC DATA

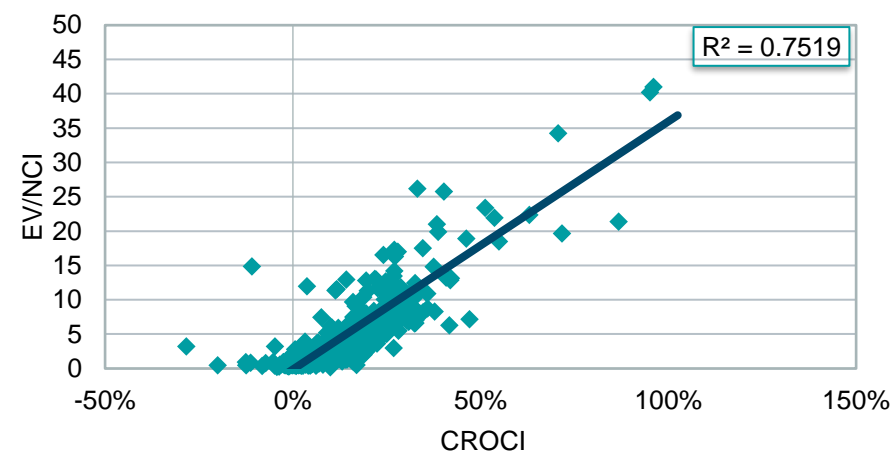
Accounting P/E = Reported Data

$$\text{Accounting P/E}^1 = \frac{\text{Price / Book Value}}{\text{Return on Equity}}$$



CROCI P/E = Adjusted Economic Data

$$\text{Economic P/E}^1 = \frac{\text{Enterprise Value / Net Capital Invested}}{\text{CROCI}}$$



The correlation between P/BV and ROE is weak as shown by the  $R^2$  of 0.60  
 This suggests that there is not a strong relationship between accounting valuation and accounting return

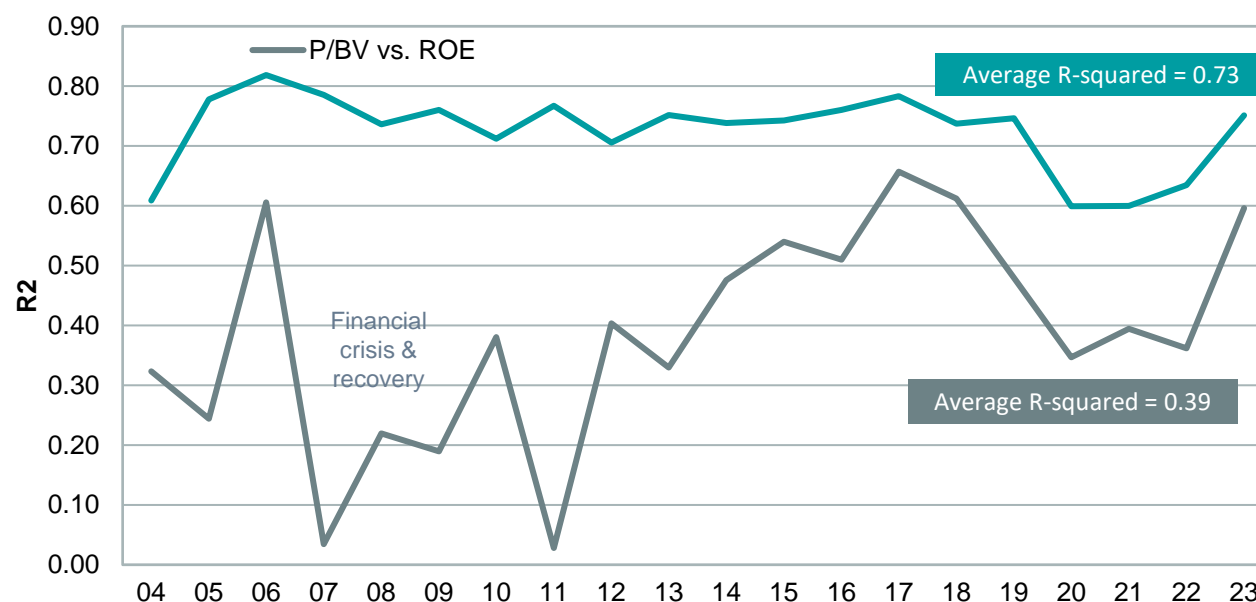
The correlation between EV/NCI and CROCI is much higher, as shown by the  $R^2$  of 0.75  
 This indicates that the relationship between CROCI valuation and CROCI return is much stronger than for Accounting data.  
 For a given level of cash return, there can be a higher degree of confidence over the associated level of price-to-book value.

<sup>1</sup> P/BV vs. ROE and EV/NCI vs. CROCI for 802 stocks in CROCI global universe over 2023 – using average share price where necessary. Data as seen on 11 Jan. 2024. Companies with negative P/BVs and where any metric is not available (together 33 companies) have been removed from both the analysis. Additionally, 3 outliers stocks are also removed. Past performance, whether live or simulated, is not a reliable indicator of future results. Source: DWS, 9 Jul. 2024.

# ECONOMIC P/E CORRELATION IS MORE STABLE OVER TIME

Accounting data is an unreliable way of selecting the best value stocks, given its low R-squared. Instead, the higher correlation of CROCI's economic data makes it a stronger stock selection framework

Time series of the Accounting P/E and Economic P/E component correlations since 2004<sup>1</sup>



	R-squared	
	P/BV vs. ROE	EV/NCI vs. CROCI
Dec-04	0.32	0.61
Dec-05	0.24	0.78
Dec-06	0.61	0.82
Dec-07	0.03	0.79
Dec-08	0.22	0.74
Dec-09	0.19	0.76
Dec-10	0.38	0.71
Dec-11	0.03	0.77
Dec-12	0.40	0.71
Dec-13	0.33	0.75
Dec-14	0.48	0.74
Dec-15	0.54	0.74
Dec-16	0.51	0.76
Dec-17	0.66	0.78
Dec-18	0.61	0.74
Dec-19	0.48	0.75
Dec-20	0.35	0.60
Dec-21	0.39	0.60
Dec-22	0.36	0.63
Dec-23	0.60	0.75
<b>Average</b>	<b>0.39</b>	<b>0.73</b>

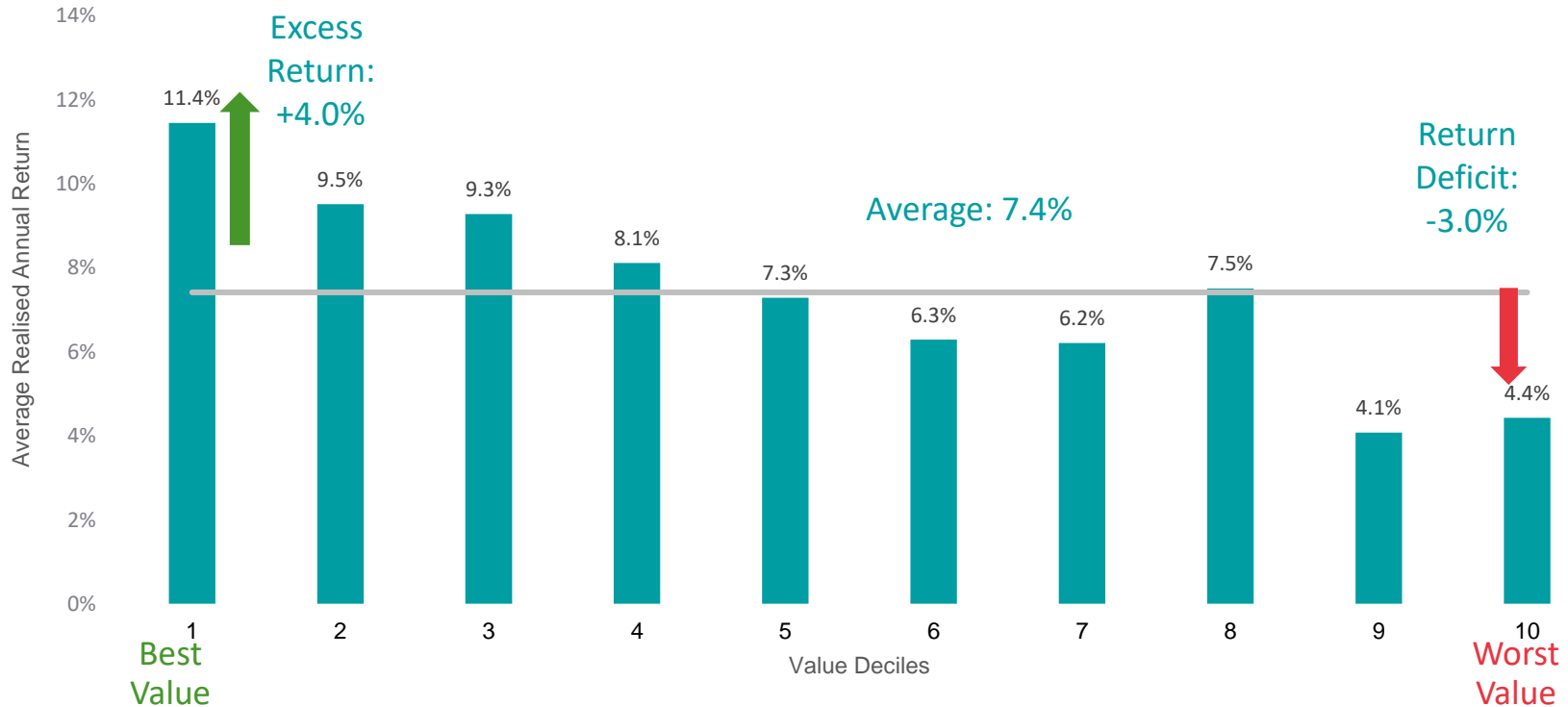
» The Accounting Data relationship is more volatile than for Economic Data

<sup>1</sup> P/BV vs. ROE and EV/NCI vs. CROCI for CROCI global universe each year – using average share price where necessary. Companies with negative P/BVs and where any metric is not available have been removed from both, along with extreme outliers. Past performance, whether live or simulated, is not a reliable indicator of future results. Source: DWS, 9 Jul. 2024

# CROCI IN PRACTICE

## Does Economic P/E Really Work?

Annualised 24 year returns of deciles constructed using annual CROCI Economic P/E ratios



Historically, low economic P/E stocks based on CROCI outperformed high economic P/E stocks

<sup>1</sup>Average realised annualised returns from 31 Dec. 1999 through 29 Dec. 2023. Grey line = average realised annual return of all stocks covered by CROCI.

An analysis of the performance by deciles of the CROCI coverage of Developed Markets (CROCI coverage of MSCI World Index until 31 Dec. 2017) by taking semi-annual construction of each decile and calculating equal-weighted returns for each year. Deciles are constructed semi-annually based on descending CROCI Economic P/E for each company. Past performance, whether live or simulated, is not a reliable indicator of future results. Performance does not include management fees. Source: DWS, 15 Jan 2024

# REAL VALUE HAS PERFORMED CONSISTENTLY

## Decile Analysis of CROCI Economic P/E — Global Developed Markets

Year	Lowest Eco P/E									Highest Eco P/E
	Decile = 1	Decile = 2	Decile = 3	Decile = 4	Decile = 5	Decile = 6	Decile = 7	Decile = 8	Decile = 9	Decile = 10
2000	12.4%	14.7%	10.7%	11.0%	9.5%	-13.2%	-3.3%	-4.6%	-21.3%	-26.4%
2001	7.8%	1.3%	0.2%	-1.4%	-12.7%	-9.9%	-13.8%	-17.8%	-14.1%	-28.6%
2002	2.5%	-2.1%	-4.0%	-8.2%	-9.5%	-15.2%	-12.7%	-14.7%	-22.7%	-27.5%
2003	52.8%	52.0%	43.8%	31.6%	33.6%	27.6%	28.4%	39.8%	29.0%	49.1%
2004	32.1%	22.6%	25.2%	17.9%	20.0%	15.7%	16.1%	14.3%	9.7%	14.0%
2005	19.0%	10.6%	9.4%	7.4%	9.1%	6.9%	7.6%	10.6%	4.6%	8.2%
2006	28.8%	29.0%	30.0%	26.4%	22.5%	22.1%	25.4%	19.7%	18.5%	10.1%
2007	13.5%	9.7%	8.8%	10.2%	6.5%	8.6%	8.7%	7.9%	7.1%	11.8%
2008	-34.9%	-39.2%	-38.1%	-43.1%	-38.1%	-34.1%	-36.1%	-32.7%	-33.8%	-34.6%
2009	55.9%	45.9%	43.4%	45.2%	37.3%	41.2%	28.8%	32.8%	29.3%	32.4%
2010	13.0%	14.1%	14.7%	14.8%	16.7%	16.8%	18.0%	20.6%	16.9%	19.8%
2011	-2.4%	-7.2%	-4.4%	-8.2%	3.0%	-2.6%	-7.7%	-2.2%	-4.6%	-16.2%
2012	10.3%	11.6%	18.7%	13.7%	13.4%	11.3%	21.5%	20.2%	16.4%	18.4%
2013	33.3%	30.4%	32.0%	35.7%	27.4%	29.1%	26.0%	26.0%	27.3%	32.7%
2014	6.0%	5.1%	0.7%	4.1%	1.5%	10.2%	6.9%	7.9%	9.7%	-2.2%
2015	-4.6%	-3.9%	-5.8%	2.2%	-3.2%	-0.5%	2.5%	7.7%	2.5%	2.3%
2016	6.8%	15.5%	9.2%	8.3%	13.3%	3.6%	6.2%	-1.9%	-2.1%	25.7%
2017	28.4%	26.5%	23.7%	27.2%	21.7%	20.1%	22.3%	23.3%	16.9%	25.7%
2018	-17.8%	-12.8%	-12.2%	-11.7%	-10.6%	-8.4%	-7.6%	-7.8%	-7.3%	-5.7%
2019	30.2%	22.2%	27.0%	27.9%	24.9%	27.4%	23.5%	27.8%	24.6%	16.7%
2020	6.3%	-2.4%	4.0%	3.7%	10.1%	7.8%	8.6%	14.1%	22.7%	27.7%
2021	12.5%	18.4%	19.7%	21.4%	13.6%	22.3%	18.0%	22.2%	16.8%	13.6%
2022	-8.1%	-13.6%	-13.8%	-10.5%	-10.6%	-13.4%	-16.9%	-14.7%	-21.9%	-16.8%
2023	15.3%	24.4%	21.3%	11.3%	9.7%	12.5%	12.2%	18.2%	13.0%	25.3%
CAGR (2000-23) <sup>1</sup>	11.4%	9.5%	9.3%	8.1%	7.3%	6.3%	6.2%	7.5%	4.1%	4.4%

An analysis of the performance by deciles of the entire CROCI global developed market coverage universe by taking semi-annual construction of each decile and calculating equal-weighted returns for each year. Deciles are constructed based on descending CROCI Economic P/E for each company as of the date of construction

Clear performance spread between CROCI P/E deciles at both ends...

### Volatility of Economic P/E Deciles — Global Developed Markets

Average Volatility by Decile over the period										
Period (2000-23) <sup>1</sup>	16.5%	16.2%	15.9%	15.9%	15.6%	15.6%	14.9%	15.5%	16.1%	18.7%

Lower Economic P/E deciles have not experienced above-average volatility

An analysis of annualised daily volatility of returns of each of the Economic P/E deciles selected from the CROCI global developed market coverage universe. The deciles are constructed semi-annually based on descending CROCI Economic P/E for each company as of the date of construction

<sup>1</sup> CAGR Returns and Average Volatilities are from 31 Dec. 1999 through 29 Dec. 2023

Past performance, whether live or simulated, is not a reliable indicator of future results. Performance does not include management fees. Source: DWS, 9 Jul. 2024.

# WHY NOW FOR CROCI® STRATEGIES



Current economic environment has historically been suited the CROCI strategies well

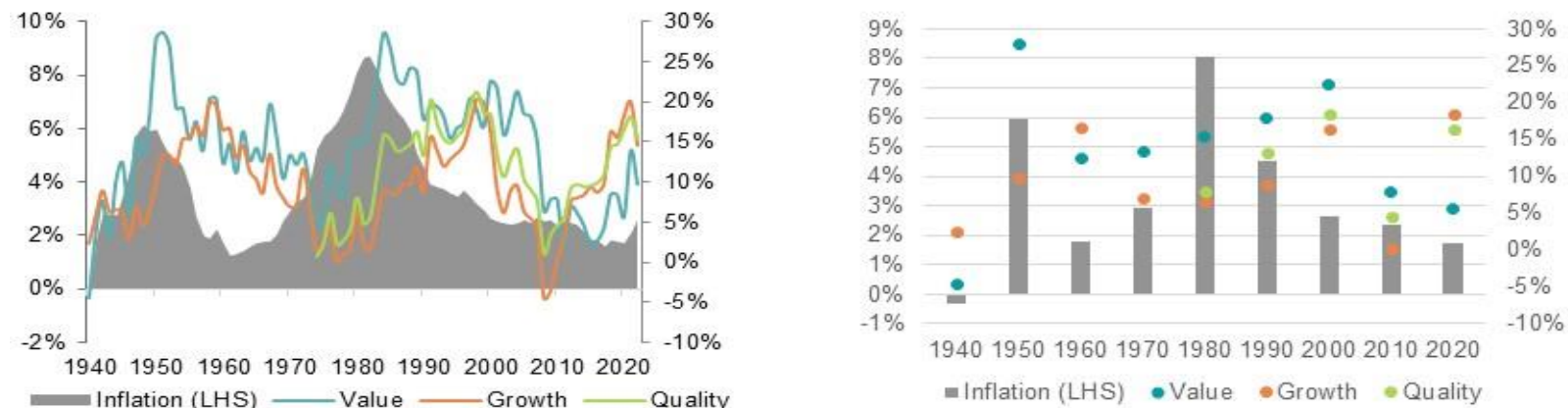
- 1. A return to inflation** Value and quality have generally outperformed growth in periods when inflation has been over 2% and where interest rates are higher. This is helped by CROCI strategies' high free cash flow generation.
- 2. Higher rates** Even if the consensus is that rates will be cut this year, it is a very different environment to the high liquidity market that started after the financial crisis. A higher interest rate environment has tended to focus investors on fundamentals rather than growth in the past.
- 3. Attractive valuation of the cheapest companies** There is wide dispersion of valuation in all developed markets, which has typically been a strong signal for CROCI strategies.

Source: DWS CROCI; Data as of 29<sup>th</sup> September 2023  
Past performance is not a reliable indicator of future returns.

# INFLATION AND ITS IMPACT ON VALUE

- Out of the nine decades we have the data for, Value outperformed (O/P) in six and underperformed (U/P) in three decades., and specifically outperformed in each decade between 1970 and 2010.
- Amongst the six O/P decades, three decades can be termed high inflationary (1941-50, 1971-80 and 1981-90), when trailing ten-year inflation remained above 4%. The other three decades can be termed moderate inflationary, with inflation between 2% to 4% (1961-70, 1991-00 and 2001-10).
- While it may be common knowledge that Value tends to outperform during expectations of high/moderate inflation, to the extent we have data, Quality has also tended to outperform Growth during these periods.
- Growth has O/P Value in three decades when inflation averaged below 2%. The data for Quality is only available for the 2011-20 period and it also O/P Value and only marginally lagged behind Growth.

US CPI overlaid with value, growth and quality factors (10Y trailing average used for all)



Source: DWS, Federal Reserve Economic Data, Fama French Three Factor Asset Pricing Method. Value is the bottom decile and growth is the top decile in price to book ratios, of U.S. stocks. Quality is the top decile in terms of ROE. Period on the x axis refers to the preceding decade. 1940 refers to 1931 to 1940 and so on. Years covered 1930 to 2022. Past performance may not be a reliable indicator of future results. Market and index performance data is sourced from Bloomberg Finance L.P. Company data is from the CROCI database. Unless stated this data is as of December 2022. Forecasts are based on assumptions, estimates, views and or analyses, which might prove inaccurate or incorrect.



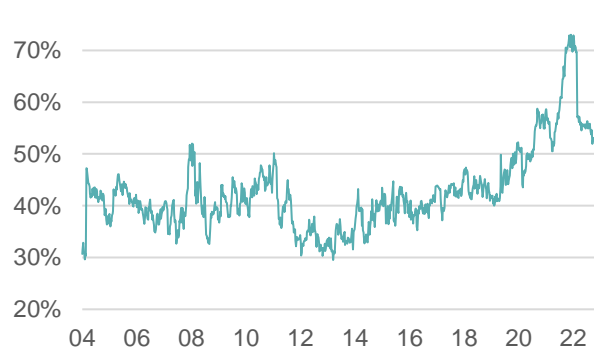
# DISPERSION OF VALUE IS STILL ATTRACTIVE

- There remains a substantial differential between the valuation of the cheapest companies on economic valuation and the market median. There are substantial areas of value in global and regional equities.
- The dispersion may have narrowed from the all-time wides that we saw in 2022 as the lowered earnings estimates for 2023 are taken into account, but are still a long way ahead of pre-pandemic highs.
- Japan has the second widest after Europe, but ahead of the US
- All three regions have long-term average dispersions in the low 40s, so their current levels dispersion remain compelling, given that above average dispersion tends to be a reliable leading indicator for performance of the CROCI strategies.

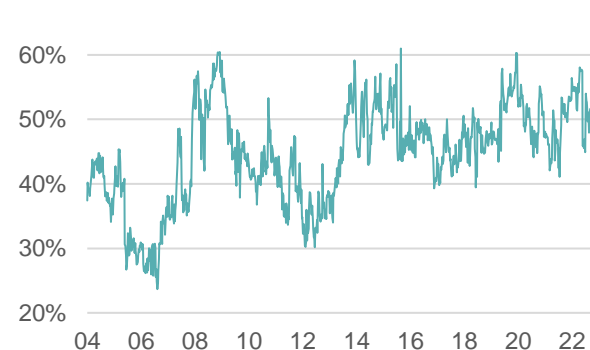
### U.S. Dispersion of Value



### Europe Dispersion of Value



### Japan Dispersion of Value



Source: DWS CROCI; Bloomberg. Charts show the percentage difference between the median valuation for the region and cheapest fifth percentile based on CROCI Economic PE, based on CROCI's coverage universe in the region. Data as available on 1st June 2023. Past performance may not be a reliable indicator of future results. Market and index performance data is sourced from Bloomberg Finance L.P. Company data is from the CROCI database. Unless stated this data is as of 1<sup>st</sup> December 2023. Forecasts are based on assumptions, estimates, views and or analyses, which might prove inaccurate or incorrect.

# OPERATIONAL CHARACTERISTICS OF CROCI STRATEGIES

- To assess the intrinsic appeal of quality value, we focus on the current valuation and the free cash flow generation of the concentrated CROCI strategies. The Economic PE for each of the strategies is at least 40% cheaper than the relevant market.
- For example, for each of the global strategies, free cash flow (FCF) yield is close to 7% with very low associated financial leverage, while global equities have a FCF yield of 4.0%.

2024E	Econ. PE	Discount to market	FCF Yield	Fin. Lev.
<b>CROCI US</b>	18.3	-45%	7.1%	21.9%
<b>CROCI US Dividends</b>	20.3	-39%	6.6%	20.5%
<b>CROCI Euro</b>	17.5	-43%	6.2%	34.6%
<b>CROCI Japan</b>	21.3	-41%	4.3%	12.5%
<b>CROCI World</b>	20.1	-37%	6.3%	20.8%
<b>CROCI Sectors Plus</b>	18.6	-41%	7.5%	18.8%
<b>CROCI Global Dividends</b>	18.5	-41%	6.9%	19.9%

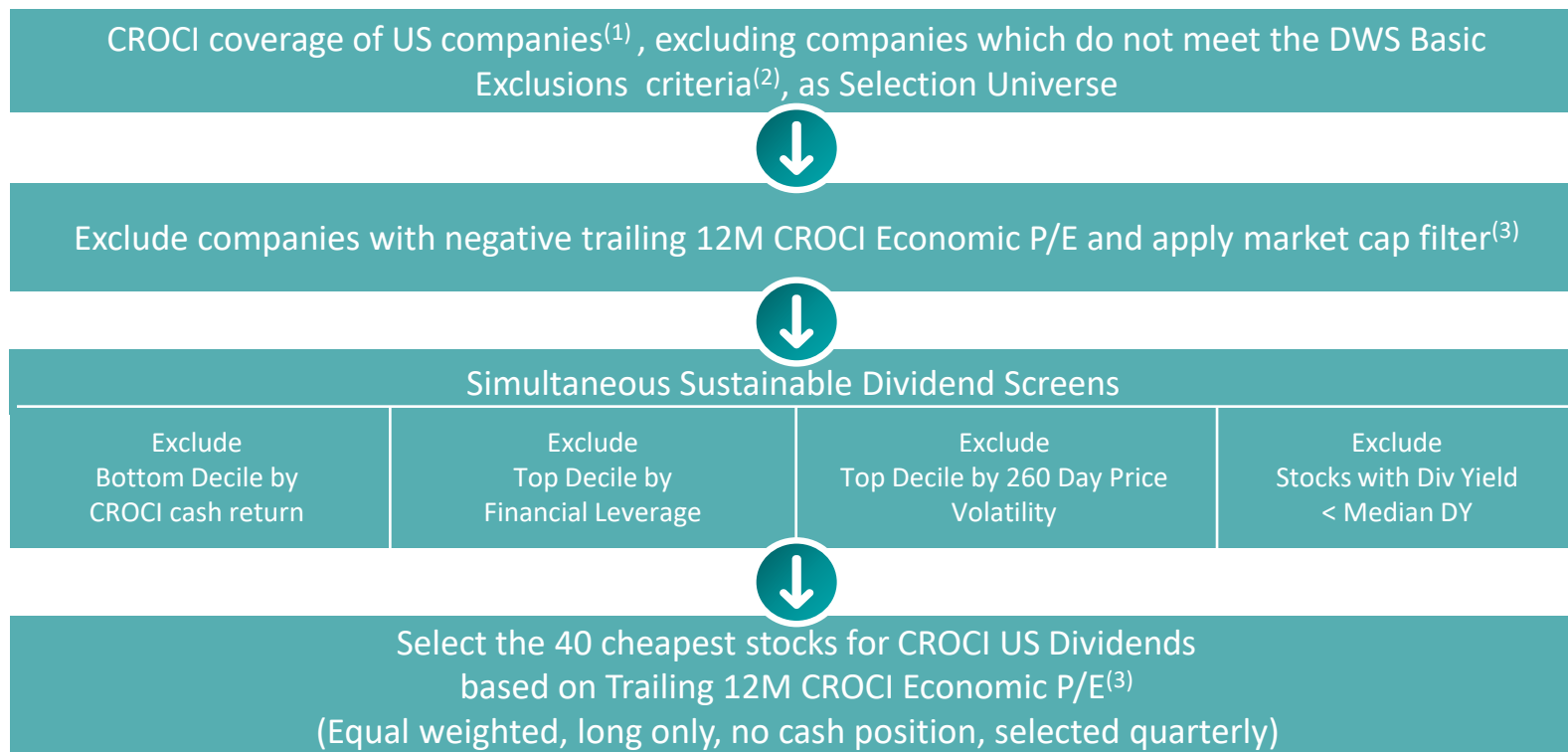
Source: DWS CROCI; Data as available on 4 April 2024. Past performance may not be a reliable indicator of future results. Market and index performance data is sourced from Bloomberg Finance L.P. Company data is from the CROCI database. Unless stated this data is as of 3 July 2023. Forecasts are based on assumptions, estimates, views and or analyses, which might prove inaccurate or incorrect. Forecasts are not a reliable indicator of future performance.

02

## CROCI STRATEGIES

Focus on CROCI US Dividends, CROCI Euro, CROCI Japan, CROCI Sectors Plus and CROCI Intellectual Capital

# CROCI US DIVIDENDS STRATEGY SELECTION METHODOLOGY



(1) Only companies in CROCI coverage are considered but excluding the companies from the Financials and Real estate sectors. Please refer to the appendix for details on the CROCI coverage.

(2) Effective 1st Jan. 2022, the Strategy incorporated environmental, social and governance (ESG) characteristics based on DWS Basic Exclusions, a DWS proprietary ESG assessment methodology, provided by DWS ESG Engine.

(3) Exclude bottom 10 percentile companies by market cap

(4) A 10-stock selection buffer is applied to reduce turnover (an existing constituent is only removed once its rank exceeds 50).

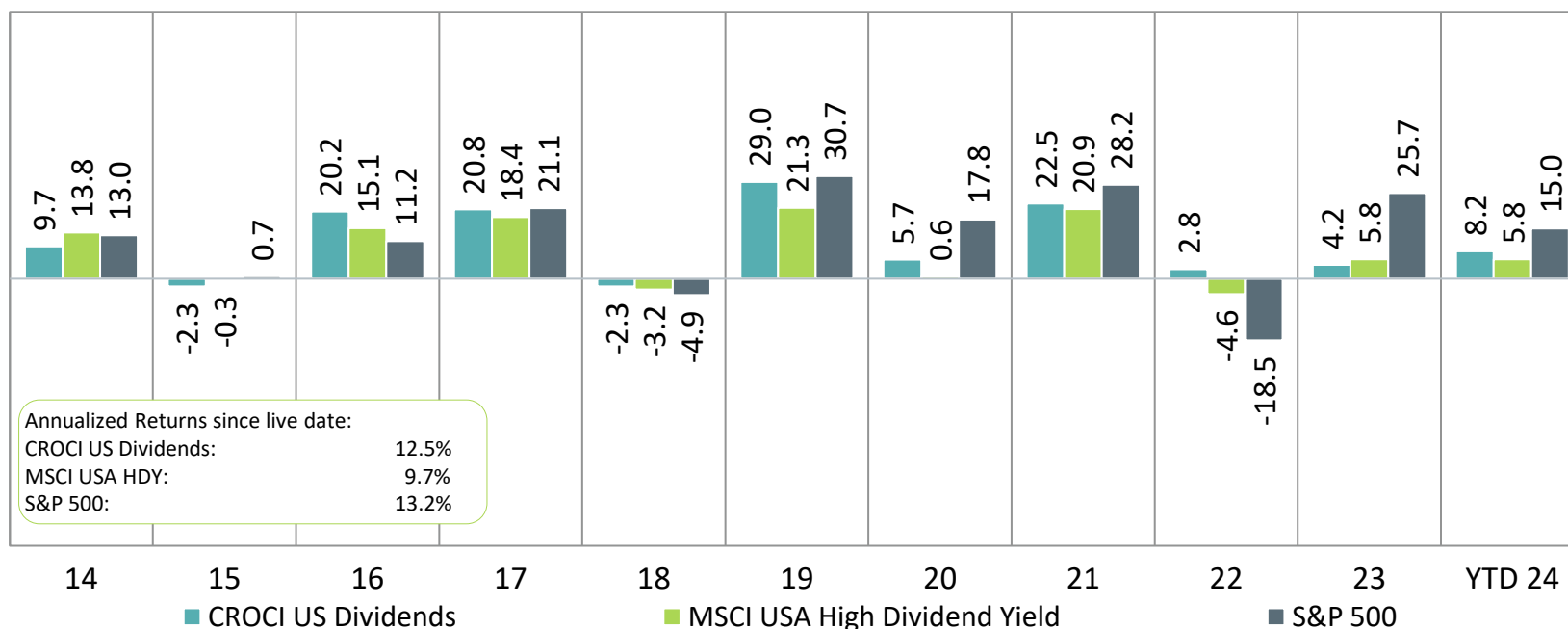
Source: DWS, 9 Jul. 2024

# CROCI US DIVIDENDS STRATEGY



## ANNUAL RETURNS %, 31 DEC. 2013 – 28 JUN. 2024<sup>(1)</sup>

In USD



(1) The CROCI US Dividends Strategy has been run on a live basis since 13 Mar. 2012. Performance data before this date is simulated and was calculated by means of retroactive application of the Strategy model. The Strategy underwent the following implementation changes on 2<sup>nd</sup> June 2014: 1) Introduction of selection buffers to reduce constituent turnover. Effective 1st Jan. 2022, the Strategy incorporated environmental, social and governance (ESG) characteristics based on DWS Basic Exclusions, a DWS proprietary ESG assessment methodology, provided by DWS ESG Engine.

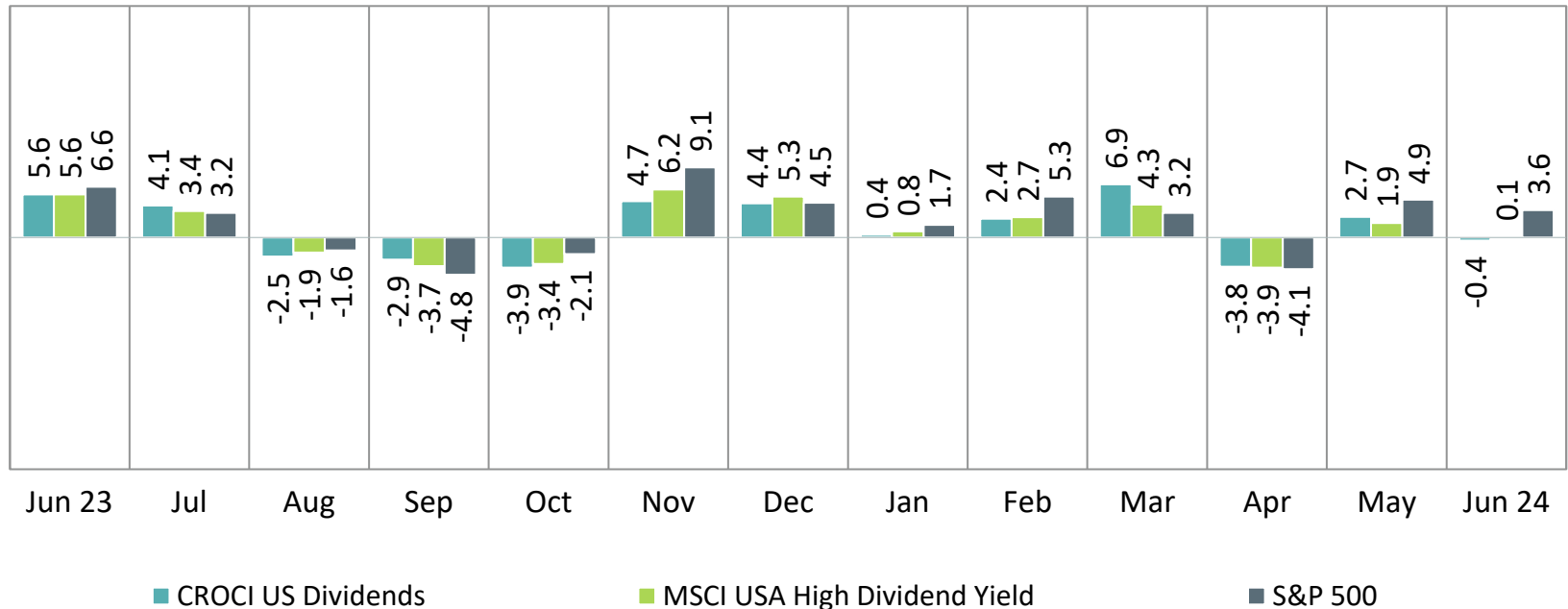
**Past performance, whether live or simulated, is not a reliable indicator of future results.** All returns include reinvested dividends (net of withholding tax) but do not include fees that might be charged on an investment product. It is not possible to invest directly in a strategy. The performance shown here is for model portfolios. The performance of any actual investment products may differ significantly. The CROCI team does not provide investment advice, stock recommendations or act in any other fiduciary capacity. Source: DWS, Bloomberg, 9 Jul. 2024

# CROCI US DIVIDENDS STRATEGY



## MONTHLY RETURNS %, JUN. 2023– JUN. 2024<sup>(1)</sup>

In USD



(1) The CROCI US Dividends Strategy has been run on a live basis since 13 Mar. 2012. Performance data before this date is simulated and was calculated by means of retroactive application of the Strategy model. The Strategy underwent the following implementation changes on 2<sup>nd</sup> June 2014: 1) Introduction of selection buffers to reduce constituent turnover. Effective 1st Jan. 2022, the Strategy incorporated environmental, social and governance (ESG) characteristics based on DWS Basic Exclusions, a DWS proprietary ESG assessment methodology, provided by DWS ESG Engine. **Past performance, whether live or simulated, is not a reliable indicator of future results.** All returns include reinvested dividends (net of withholding tax) but do not include fees that might be charged on an investment product. It is not possible to invest directly in a strategy. The performance shown here is for model portfolios. The performance of any actual investment products may differ significantly. The CROCI team does not provide investment advice, stock recommendations or act in any other fiduciary capacity. Source: DWS, Bloomberg, 9 Jul. 2024

# 2Q 2024: CROCI US DIVIDENDS VS. MSCI USA HDY

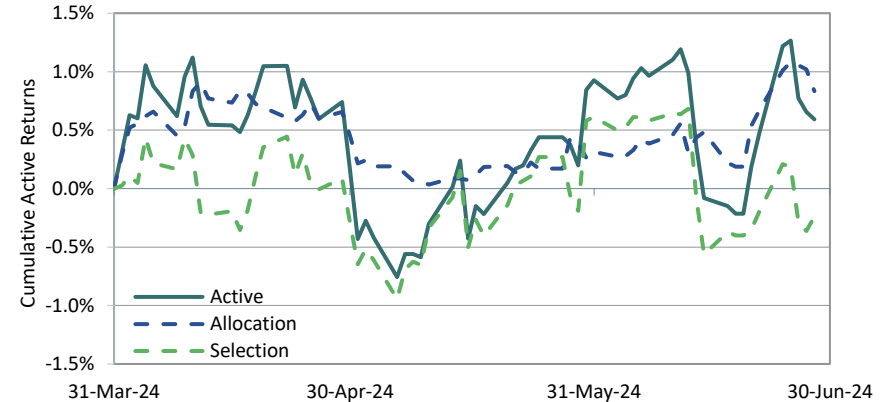


Total Return Attribution in USD, 31 Mar. 2023 - 28 Jun. 2024

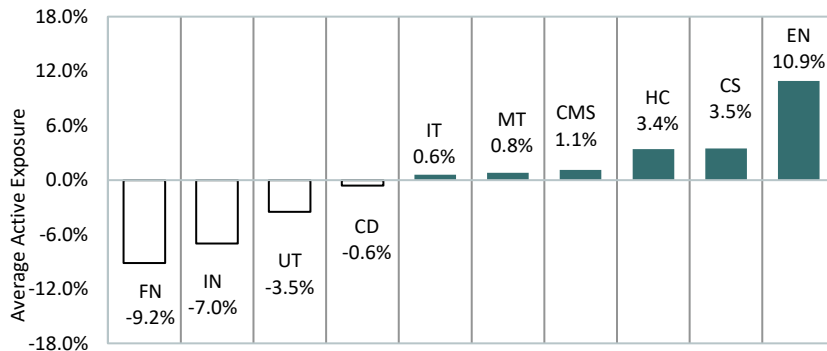
## RETURN ATTRIBUTION

Source of Return	Sector Allocation	Stock Selection	Total
Communication Services	0.0%	-0.2%	-0.2%
Consumer Discretionary	0.1%	0.7%	0.8%
Consumer Staples	0.0%	-1.4%	-1.4%
Energy	-0.1%	1.0%	1.0%
Financials	0.2%	0.0%	0.2%
Health Care	-0.1%	0.0%	-0.1%
Industrials	0.1%	-0.2%	-0.2%
Information Technology	0.7%	0.0%	0.7%
Materials	0.0%	-0.1%	-0.1%
Real Estate	0.0%	0.0%	0.0%
Utilities	-0.1%	0.0%	-0.1%
<b>Total Active (Local Currency)</b>	<b>0.8%</b>	<b>-0.2%</b>	<b>0.6%</b>

## CUMULATIVE ACTIVE RETURNS (%)

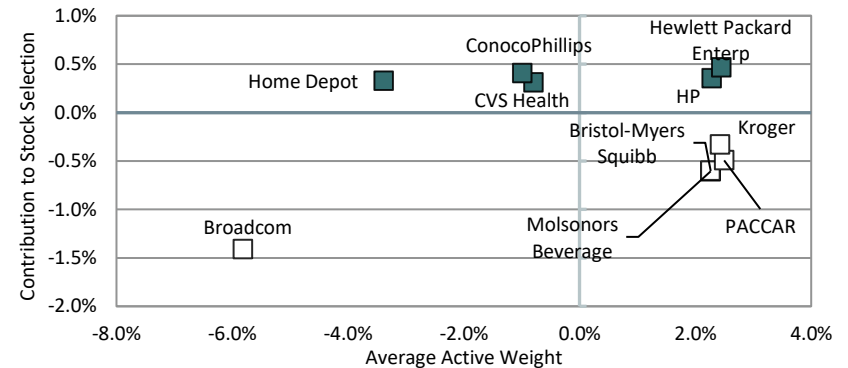


## AVERAGE ACTIVE EXPOSURE



Source: DWS, MSCI Barra, 9 Jul. 2024

## TOP VS. BOTTOM NAMES BY SELECTION EFFECT



The calculations presented here have been performed using MSCI Barra and may vary from the actual returns of the strategy due to different computational assumptions. **The CROCI US Dividends Strategy is live from 13 Mar. 2012.** Past performance, whether live or simulated, is not a reliable indicator of future results. All returns include reinvested dividends and do not include fees that might be charged on an investment product. All pro-forma performance data before respective live dates is simulated and was calculated by means of retroactive application of the Strategy models. It is not possible to invest directly in a strategy or index. The performance shown here is for model portfolios. The performance of any actual investment products may differ significantly. Allocations are subject to change without notice. This information is intended for informational purposes only and does not constitute investment advice, a recommendation, an offer or solicitation

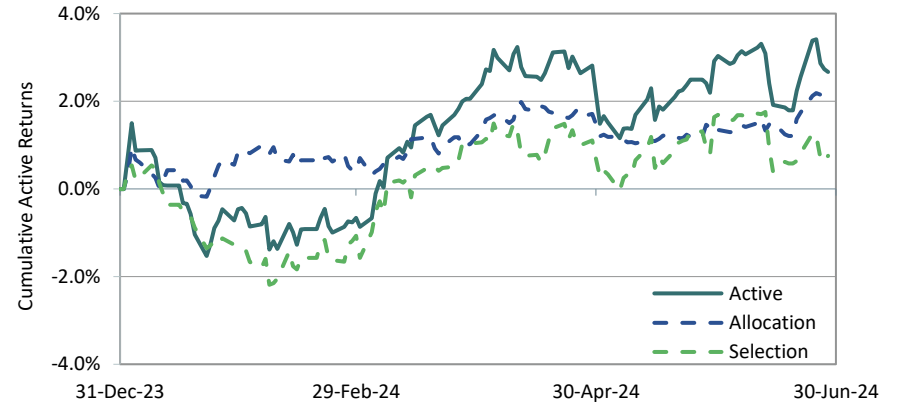
# 1H 2024: CROCI US DIVIDENDS VS. MSCI USA HDY

Total Return Attribution in USD, 31 Dec. 2023 – 28 Jun. 2024

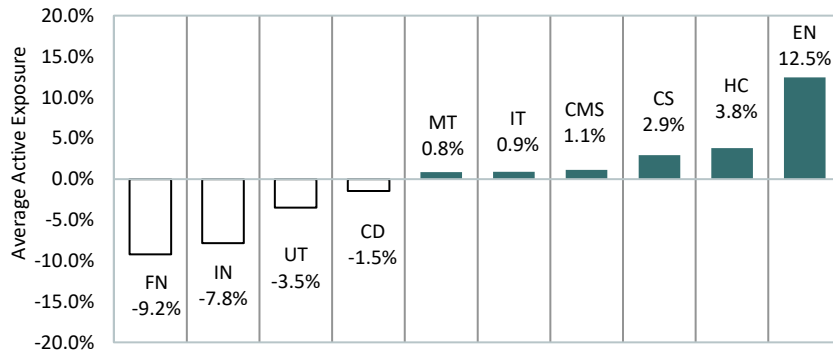
## RETURN ATTRIBUTION

Source of Return	Sector Allocation	Stock Selection	Total
Communication Services	0.0%	-0.5%	-0.6%
Consumer Discretionary	0.1%	1.8%	1.9%
Consumer Staples	0.0%	-1.9%	-1.9%
Energy	0.9%	1.4%	2.3%
Financials	0.1%	0.0%	0.1%
Health Care	-0.2%	0.1%	0.0%
Industrials	0.1%	0.9%	1.0%
Information Technology	0.8%	-1.2%	-0.4%
Materials	0.0%	0.1%	0.1%
Real Estate	0.0%	0.0%	0.0%
Utilities	0.1%	0.0%	0.1%
<b>Total Active (Local Currency)</b>	<b>1.9%</b>	<b>0.8%</b>	<b>2.7%</b>

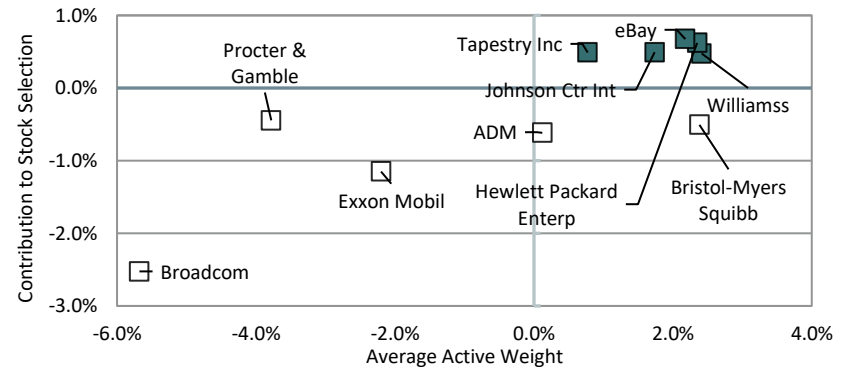
## CUMULATIVE ACTIVE RETURNS (%)



## AVERAGE ACTIVE EXPOSURE



## TOP VS. BOTTOM NAMES BY SELECTION EFFECT



Source: DWS, MSCI Barra, 9 Jul. 2024

The calculations presented herewith have been performed using MSCI Barra and may vary from the actual returns of the strategy due to different computational assumptions. **The CROCI US Dividends Strategy is live from 13 Mar. 2012.** Past performance, whether live or simulated, is not a reliable indicator of future results. All returns include reinvested dividends and do not include fees that might be charged on an investment product. All pro-forma performance data before respective live dates is simulated and was calculated by means of retroactive application of the Strategy models. It is not possible to invest directly in a strategy or index. The performance shown here is for model portfolios. The performance of any actual investment products may differ significantly. Allocations are subject to change without notice. This information is intended for informational purposes only and does not constitute investment advice, a recommendation, an offer or solicitation



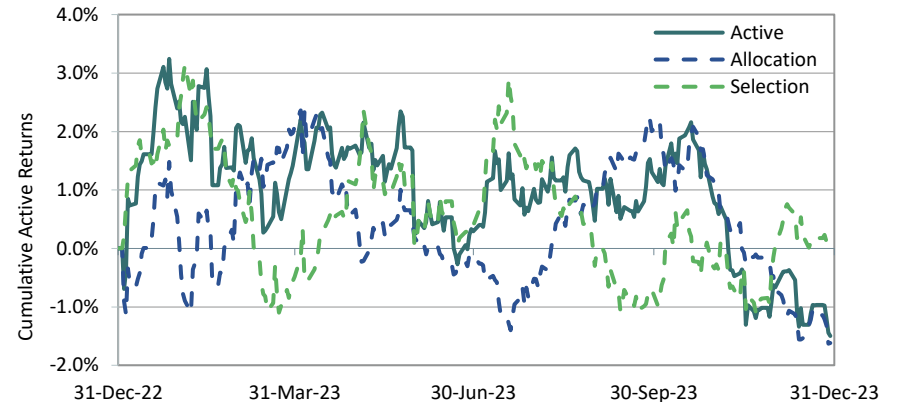
# 2023: CROCI US DIVIDENDS VS. MSCI USA HDY

Total Return Attribution in USD, 31 Dec. 2022 – 29 Dec. 2023

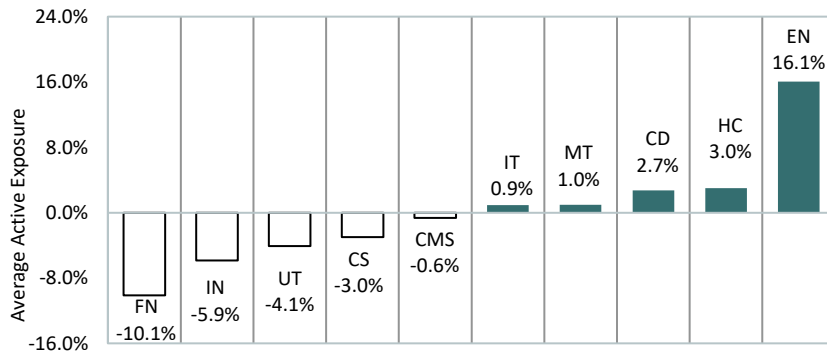
## RETURN ATTRIBUTION

Source of Return	Sector Allocation	Stock Selection	Total
Communication Services	-0.3%	0.3%	0.0%
Consumer Discretionary	0.2%	-1.6%	-1.4%
Consumer Staples	0.1%	-0.5%	-0.4%
Energy	-1.3%	2.8%	1.4%
Financials	-0.4%	0.0%	-0.4%
Health Care	-0.4%	0.3%	-0.1%
Industrials	-0.2%	0.4%	0.2%
Information Technology	0.1%	-2.0%	-1.9%
Materials	0.1%	0.6%	0.6%
Real Estate	0.0%	0.0%	0.0%
Utilities	0.5%	0.0%	0.5%
<b>Total Active (Local Currency)</b>	<b>-1.6%</b>	<b>0.1%</b>	<b>-1.5%</b>

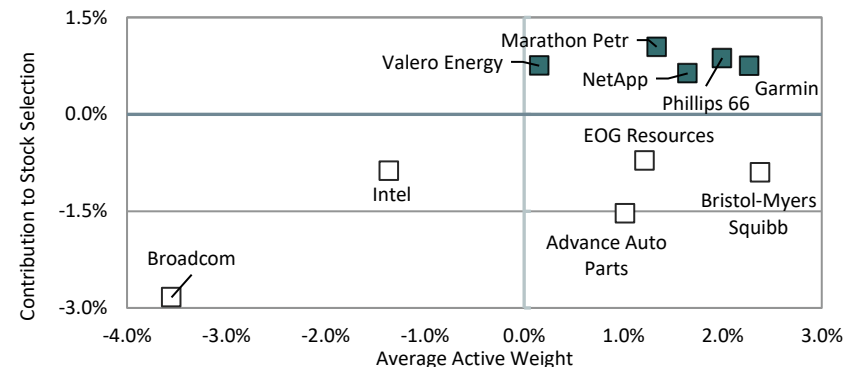
## CUMULATIVE ACTIVE RETURNS (%)



## AVERAGE ACTIVE EXPOSURE



## TOP VS. BOTTOM NAMES BY SELECTION EFFECT



Source: DWS, MSCI Barra, 9 Jul. 2024

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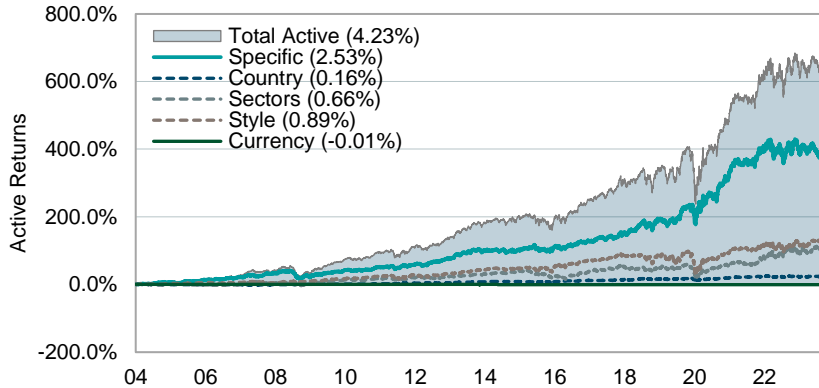
# CROCI US DIVIDENDS VS. MSCI USA HDY



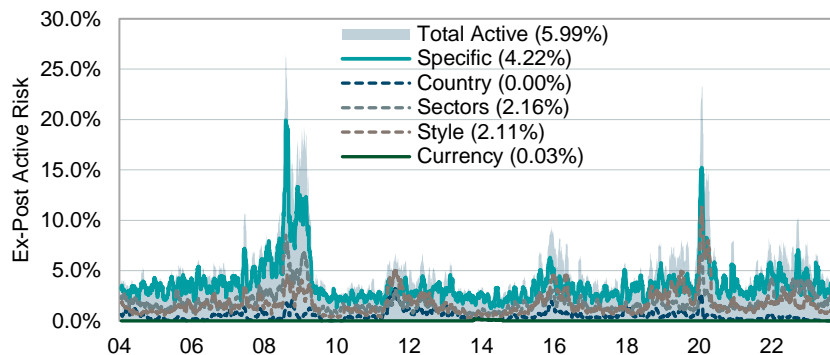
Multifactor Performance Attribution in USD, 12 Mar. 2004 - 29 Dec. 2023

Simulated data prior to: 13 Mar. 2012

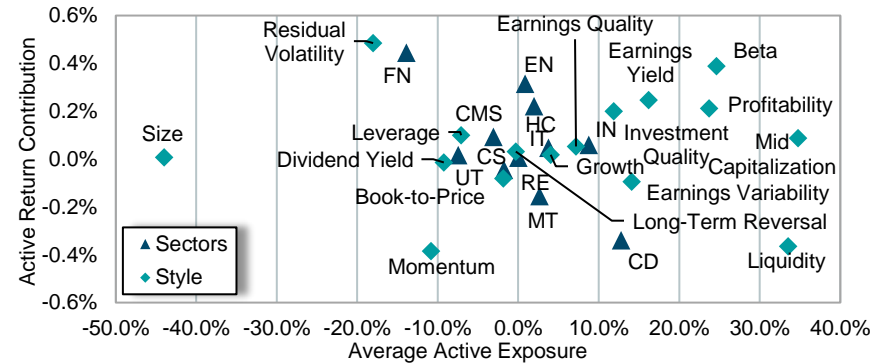
## CUMULATIVE ACTIVE RETURN ATTRIBUTION (%)



## ROLLING PERIOD EX-POST ACTIVE RISK (%)



## FACTOR ACTIVE RETURN CONTRIBUTION VS. AVERAGE EXPOSURE



## BEST-WORST POLICIES BY INFORMATION RATIO

Top Five (Ann. Contrib.)	Bottom Five (Ann. Contrib.)
Investment Quality(0.20%)	Momentum(-0.38%)
Earnings Yield(0.25%)	Liquidity(-0.36%)
Residual Volatility(0.48%)	Earnings Variability(-0.09%)
Leverage(0.10%)	Materials(-0.16%)
Health Care(0.22%)	Consumer Discretionary(-0.34%)

\*Average Active Exposure to Risk Factor is represented as negative (Red) or positive (Green)

Source: DWS, MSCI Barra, 9 Jul. 2024

The calculations presented here have been performed using MSCI Barra and may vary from the actual returns of the strategy due to different computational assumptions. **The CROCI US Dividends Strategy is live from 13 Mar. 2012.** Past performance, whether live or simulated, is not a reliable indicator of future results. All returns include reinvested dividends and do not include fees that might be charged on an investment product. All pro-forma performance data before respective live dates is simulated and was calculated by means of retroactive application of the Strategy models. It is not possible to invest directly in a strategy or index. The performance shown here is for model portfolios. The performance of any actual investment products may differ significantly. This information is intended for informational purposes only and does not constitute investment advice, a recommendation, an offer or solicitation

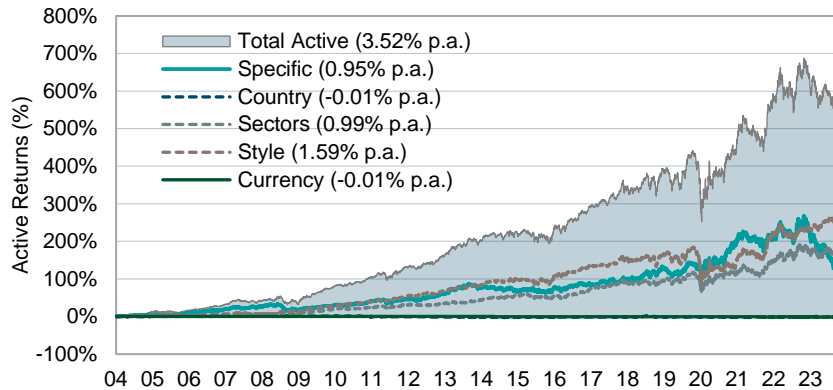
# CROCI US DIVIDENDS VS. S&P 500



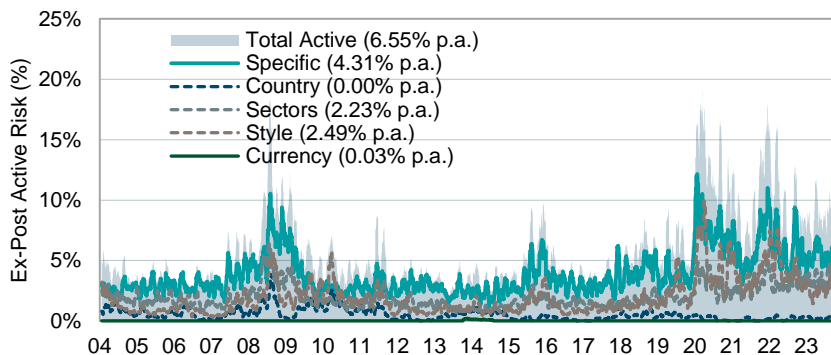
Multifactor Performance Attribution in USD, 12 Mar. 2004 - 29 Dec. 2023

Simulated data prior to: 13 Mar. 2012

## CUMULATIVE ACTIVE RETURN ATTRIBUTION (%)



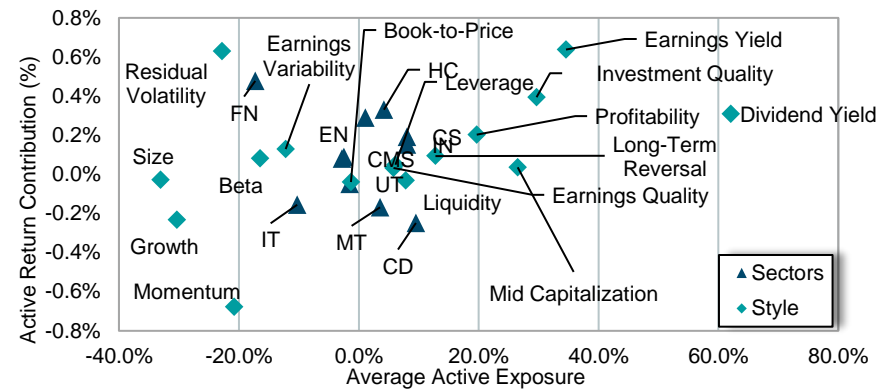
## ROLLING PERIOD EX-POST ACTIVE RISK (%)



Source: DWS, MSCI Barra, 9 Jul. 2024

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## FACTOR ACTIVE RETURN CONTRIBUTION VS. AVERAGE EXPOSURE



## BEST-WORST POLICIES BY INFORMATION RATIO

Top Five (Ann. Contrib.)	Bottom Five (Ann. Contrib.)
Investment Quality(0.39%)	Growth(-0.23%)
Earnings Yield(0.64%)	Momentum(-0.68%)
Residual Volatility(0.63%)	Materials(-0.17%)
Profitability(0.20%)	Consumer Discretionary(-0.25%)
Earnings Variability(0.13%)	Book-to-Price(-0.04%)

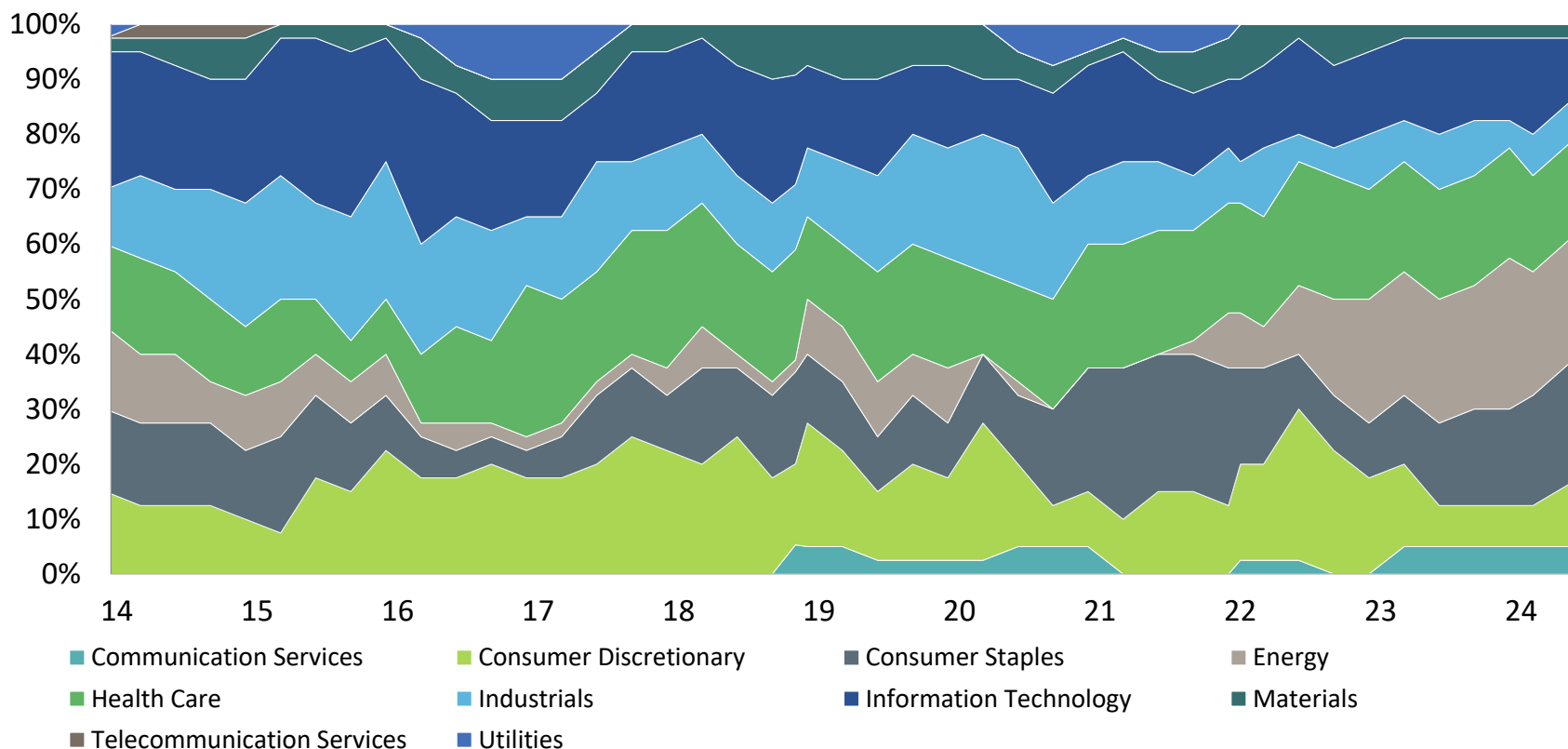
\*Average Active Exposure to Risk Factor is represented as negative (Red) or positive (Green)

# CROCI US DIVIDENDS STRATEGY



Simulated Data Prior to 13 Mar. 2012

SECTOR ALLOCATIONS, JAN. 2014 – JUN. 2024



(1) The CROCI US Dividends Strategy has been run on a live basis since 13 Mar. 2012. Performance data before this date is simulated and was calculated by means of retroactive application of the Strategy model. The Strategy underwent the following implementation changes on 2<sup>nd</sup> June 2014: 1) Introduction of selection buffers to reduce constituent turnover. Effective 1st Jan. 2022, the Strategy incorporated environmental, social and governance (ESG) characteristics based on DWS Basic Exclusions, a DWS proprietary ESG assessment methodology, provided by DWS ESG Engine

**Past performance, whether live or simulated, is not a reliable indicator of future results.** All returns include reinvested dividends (net of withholding tax) but do not include fees that might be charged on an investment product. It is not possible to invest directly in a strategy. The performance shown here is for model portfolios. The performance of any actual investment products may differ significantly. The CROCI team does not provide investment advice, stock recommendations or act in any other fiduciary capacity. Allocations are subject to change without notice. Source: DWS, 9 Jul. 2024

# CROCI STRATEGIES & INDICES



## Key Risks

- Any products linked to a CROCI Strategy or Index may not be capital protected and investor capital may be at risk up to a total loss. Prospective investors should be aware investments linked to the Strategies or Indices may go up or down in value.
- Past performance, whether live or simulated, is not an indicator of future performance and any forecast or projection may not be realised.
- The CROCI Strategies have been built on the premise that stocks with lower CROCI Economic P/E ratios may outperform stocks with higher CROCI Economic P/E ratios over time. Moreover, the CROCI Global Dividends Strategy and CROCI US Dividends Strategy make the assumption that Dividend Yield, Cash Returns, Financial Leverage and Price Volatility can impact the ability for companies to maintain their dividend payments as well as provide performance. These premises may not be correct and prospective investors should evaluate these assumptions prior to investing in the CROCI Strategies.
- There is no implied assurance that a stock selected for the CROCI Global Dividend Strategy or CROCI US Dividends Strategy will not cut its dividend while it is in the portfolio.
- The CROCI REW Indices have been built on the premise that portfolio weightings should be determined by the CROCI Equity Earnings of each company and that this will provide a value-added to the portfolio construction process. This premise may not be correct and prospective investors should evaluate this assumption prior to investing in any of the Indices.
- CROCI's coverage universe does not aim to provide waterfront coverage of entire benchmarks. Some sectors may have a larger proportion of CROCI coverage than others.
- CROCI represents one of many possible ways to analyse and value stocks. Potential investors must form their own view of the CROCI methodology and evaluate whether CROCI and investments associated with CROCI are appropriate for them. The CROCI Team does not provide investment advice.

# CROCI US SELECTION METHODOLOGY

CROCI coverage of US companies<sup>(1)</sup>, excluding companies which does not meet the DWS Basic Exclusions criteria<sup>(2)</sup>, as Selection Universe



Exclude companies with negative trailing 12M CROCI Economic P/E and apply market cap filter<sup>(3)</sup>



Select 40 cheapest stocks by Trailing 12M CROCI Economic P/E<sup>(4)</sup>



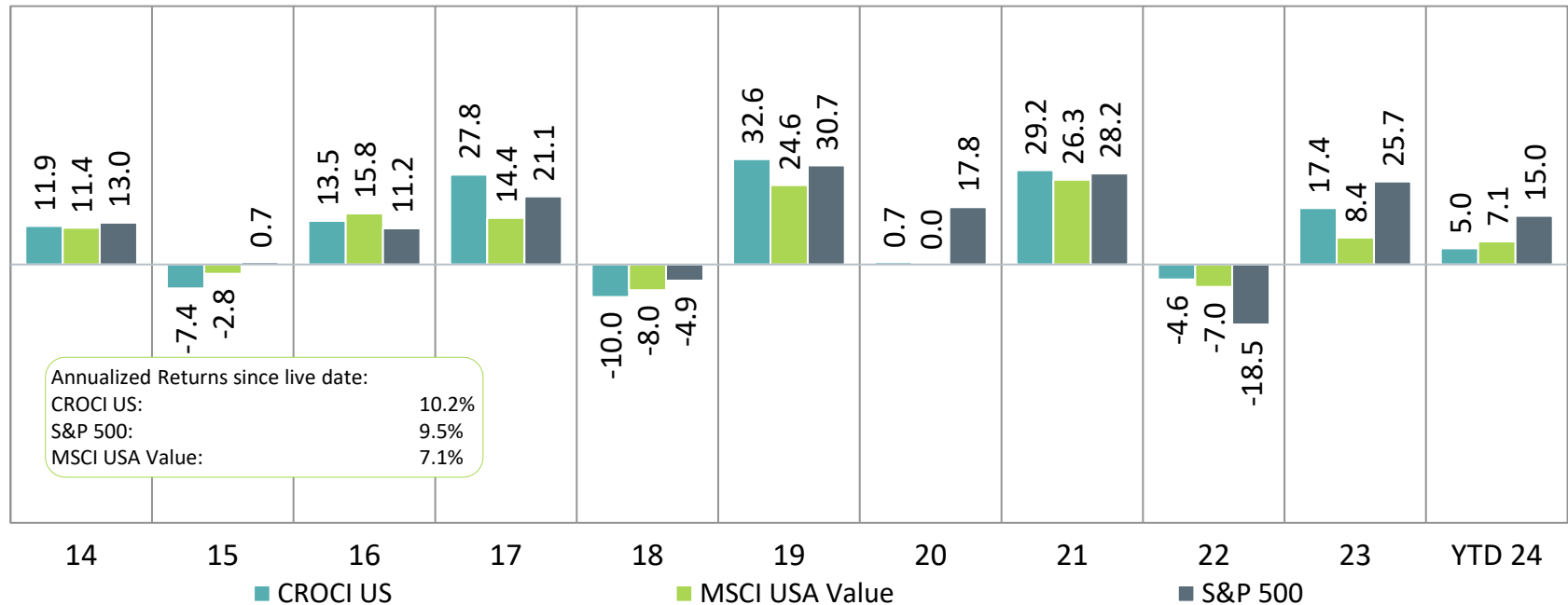
CROCI US Strategy  
Equal weighted, rebalanced quarterly

- (1) Only companies in CROCI coverage are considered but excluding the companies from the Financials and Real estate sectors. Please refer to the appendix for details on the CROCI coverage.
- (2) Effective 1st Jan. 2022, the Strategy incorporated environmental, social and governance (ESG) characteristics based on DWS Basic Exclusions, a DWS proprietary ESG assessment methodology, provided by DWS ESG Engine
- (3) Exclude bottom 25 percentile companies by market cap
- (4) A 5-stock selection buffer is applied to reduce turnover (an existing constituent is only removed once its rank exceeds 45).

Source: DWS, 10 Jul. 2023

## ANNUAL RETURNS %, 31 DEC. 2012 – 28 JUN. 2024<sup>(1)</sup>

In USD

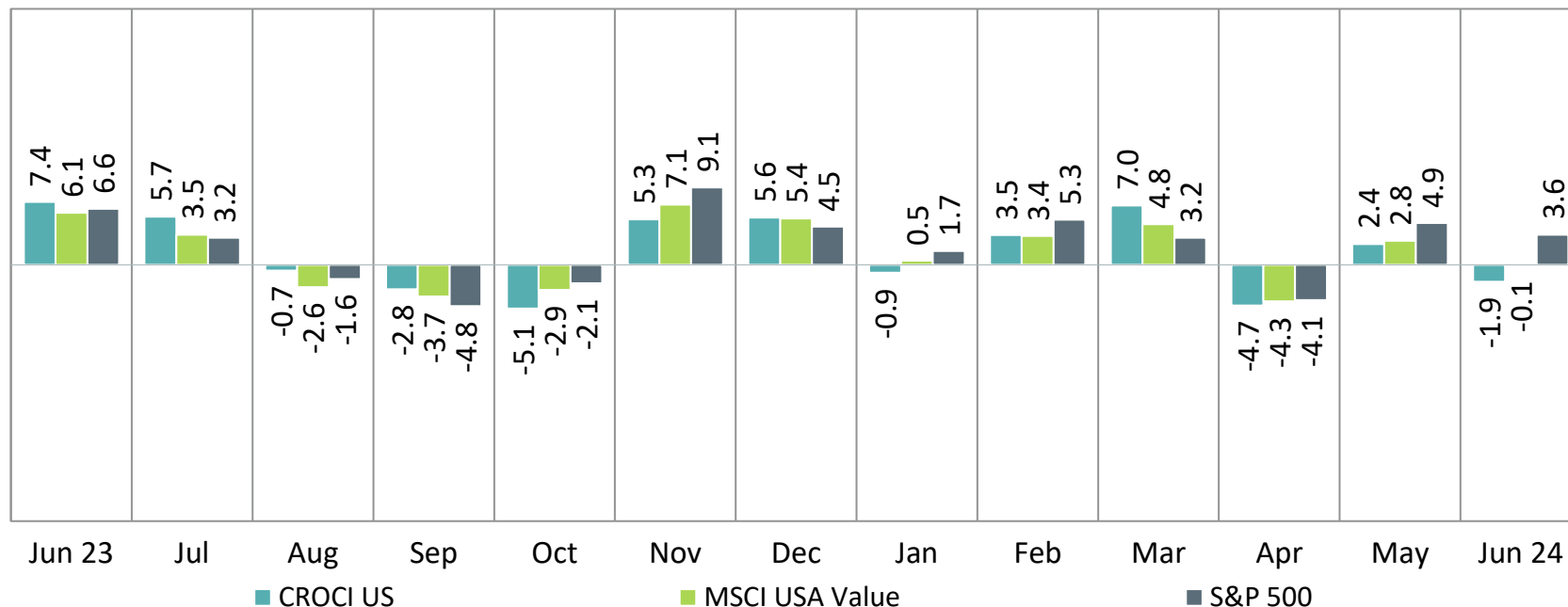


(1) The CROCI US Strategy has been run on a live basis since 2 Feb. 2004. Performance data before this date is simulated and was calculated by means of retroactive application of the Strategy model. The Strategy underwent the following implementation changes on 2<sup>nd</sup> June 2014: 1) Change of reconstitution frequency from monthly to quarterly; 2) Introduction of selection buffers to reduce constituent turnover. Effective 1st Jan. 2022, the Strategy incorporated environmental, social and governance (ESG) characteristics based on DWS Basic Exclusions, a DWS proprietary ESG assessment methodology, provided by DWS ESG Engine.

**Past performance, whether live or simulated, is not a reliable indicator of future results.** All returns include reinvested dividends (net of withholding tax) but do not include fees that might be charged on an investment product. It is not possible to invest directly in a strategy. The performance shown here is for model portfolios. The performance of any actual investment products may differ significantly. The CROCI team does not provide investment advice, stock recommendations or act in any other fiduciary capacity. Source: DWS, Bloomberg, 2<sup>nd</sup> April 2024

## MONTHLY RETURNS %, JUN. 2023– JUN. 2024<sup>(1)</sup>

In USD



(1) The CROCI US Strategy has been run on a live basis since 2 Feb. 2004. Performance data before this date is simulated and was calculated by means of retroactive application of the Strategy model. The Strategy underwent the following implementation changes on 2<sup>nd</sup> June 2014: 1) Change of reconstitution frequency from monthly to quarterly; 2) Introduction of selection buffers to reduce constituent turnover. Effective 1st Jan. 2022, the Strategy incorporated environmental, social and governance (ESG) characteristics based on DWS Basic Exclusions, a DWS proprietary ESG assessment methodology, provided by DWS ESG Engine.

**Past performance, whether live or simulated, is not a reliable indicator of future results.** All returns include reinvested dividends (net of withholding tax) but do not include fees that might be charged on an investment product. It is not possible to invest directly in a strategy. The performance shown here is for model portfolios. The performance of any actual investment products may differ significantly. The CROCI team does not provide investment advice, stock recommendations or act in any other fiduciary capacity. Source: DWS, Bloomberg, 2<sup>nd</sup> April 2024



# 2Q 2024: CROCI US VS. MSCI USA VALUE

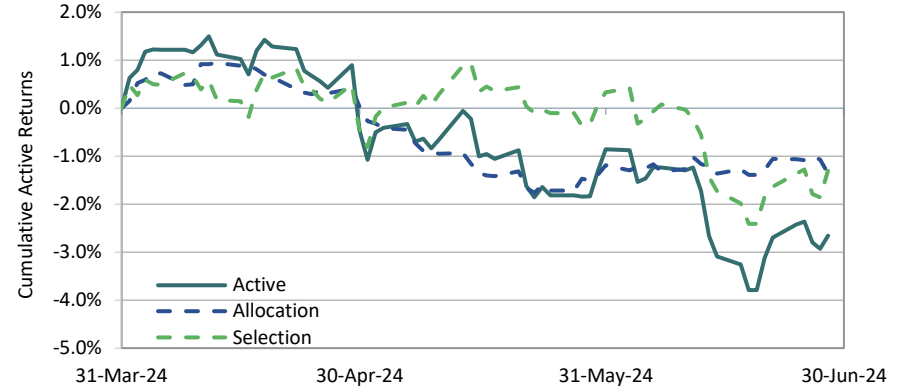


Total Return Attribution in USD, 31 Mar. 2023 - 28 Jun. 2024

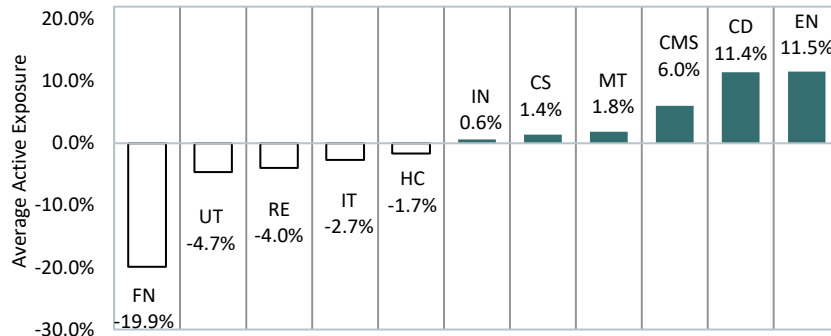
## RETURN ATTRIBUTION

Source of Return	Sector Allocation	Stock Selection	Total
Communication Services	-0.2%	0.0%	-0.3%
Consumer Discretionary	-0.6%	0.4%	-0.3%
Consumer Staples	0.0%	-1.0%	-1.0%
Energy	0.1%	-0.5%	-0.4%
Financials	-0.1%	0.0%	-0.1%
Health Care	0.1%	-0.4%	-0.3%
Industrials	0.0%	0.0%	0.0%
Information Technology	-0.1%	0.6%	0.6%
Materials	0.0%	-0.4%	-0.4%
Real Estate	-0.1%	0.0%	-0.1%
Utilities	-0.3%	0.0%	-0.3%
<b>Total Active (Local Currency)</b>	<b>-1.4%</b>	<b>-1.3%</b>	<b>-2.7%</b>

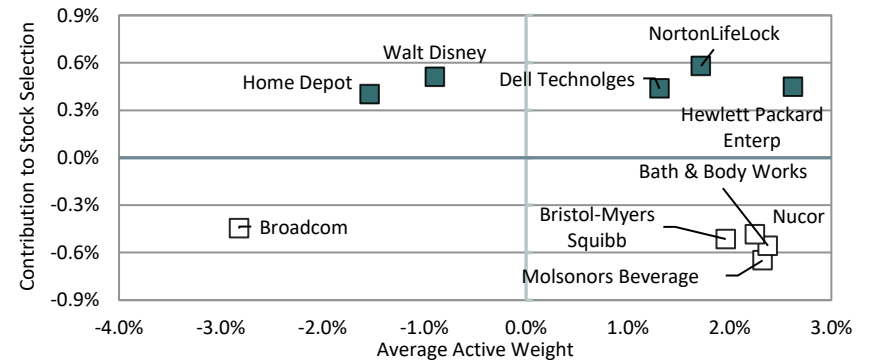
## CUMULATIVE ACTIVE RETURNS (%)



## AVERAGE ACTIVE EXPOSURE



## TOP VS. BOTTOM NAMES BY SELECTION EFFECT



Source: DWS, MSCI Barra, 9 Jul. 2024

The calculations presented herewith have been performed using MSCI Barra and may vary from the actual returns of the strategy due to different computational assumptions. **The CROCI US Strategy is live from 02 Feb. 2004.** Past performance, whether live or simulated, is not a reliable indicator of future results. All returns include reinvested dividends and do not include fees that might be charged on an investment product. All pro-forma performance data before respective live dates is simulated and was calculated by means of retroactive application of the Strategy models. It is not possible to invest directly in a strategy or index. The performance shown here is for model portfolios. The performance of any actual investment products may differ significantly. Allocations are subject to change without notice. This information is intended for informational purposes only and does not constitute investment advice, a recommendation, an offer or solicitation

# 1H 2024: CROCI US VS. MSCI USA VALUE

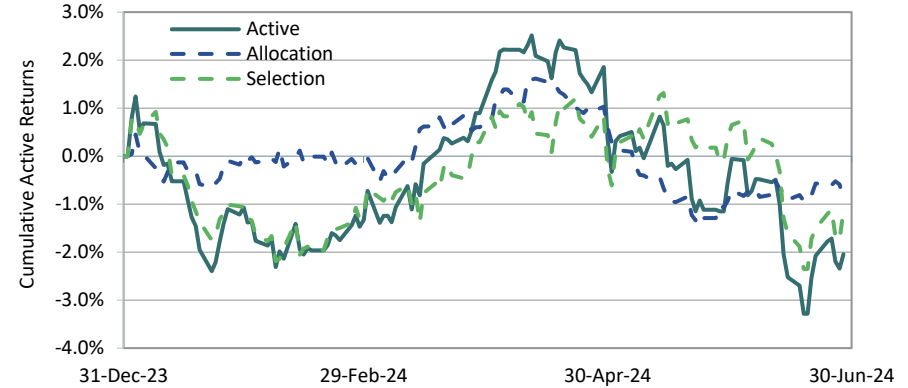


Total Return Attribution in USD, 31 Dec. 2023 – 28 Jun. 2024

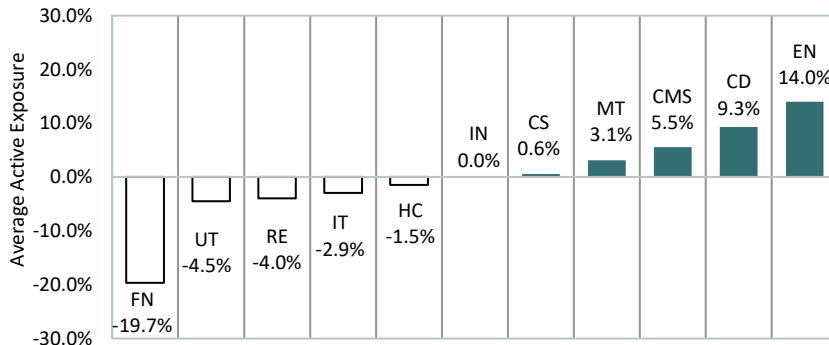
## RETURN ATTRIBUTION

Source of Return	Sector Allocation	Stock Selection	Total
Communication Services	-0.2%	-1.4%	-1.6%
Consumer Discretionary	-0.8%	1.0%	0.2%
Consumer Staples	0.0%	-1.9%	-2.0%
Energy	0.9%	0.5%	1.4%
Financials	-0.9%	0.0%	-0.9%
Health Care	0.1%	-0.3%	-0.1%
Industrials	0.0%	0.9%	0.9%
Information Technology	-0.1%	1.1%	0.9%
Materials	-0.2%	-1.0%	-1.2%
Real Estate	0.4%	0.0%	0.4%
Utilities	-0.2%	0.0%	-0.2%
<b>Total Active (Local Currency)</b>	<b>-0.9%</b>	<b>-1.1%</b>	<b>-2.0%</b>

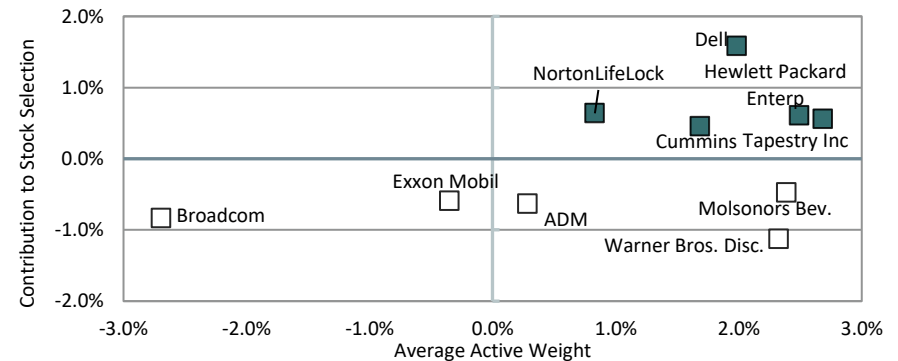
## CUMULATIVE ACTIVE RETURNS (%)



## AVERAGE ACTIVE EXPOSURE



## TOP VS. BOTTOM NAMES BY SELECTION EFFECT



Source: DWS, MSCI Barra, 9 Jul. 2024

The calculations presented herewith have been performed using MSCI Barra and may vary from the actual returns of the strategy due to different computational assumptions. **The CROCI US Strategy is live from 02 Feb. 2004.** Past performance, whether live or simulated, is not a reliable indicator of future results. All returns include reinvested dividends and do not include fees that might be charged on an investment product. All pro-forma performance data before respective live dates is simulated and was calculated by means of retroactive application of the Strategy models. It is not possible to invest directly in a strategy or index. The performance shown here is for model portfolios. The performance of any actual investment products may differ significantly. Allocations are subject to change without notice. This information is intended for informational purposes only and does not constitute investment advice, a recommendation, an offer or solicitation

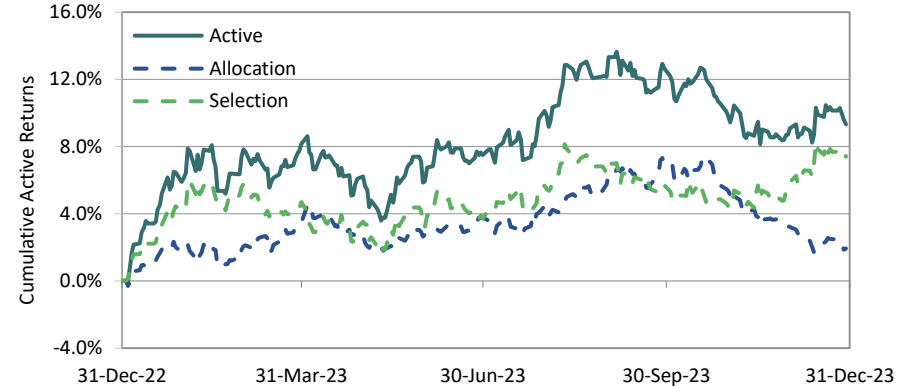
# 2023: CROCI US VS. MSCI USA VALUE

Total Return Attribution in USD, 31 Dec. 2022 – 29 Dec. 2023

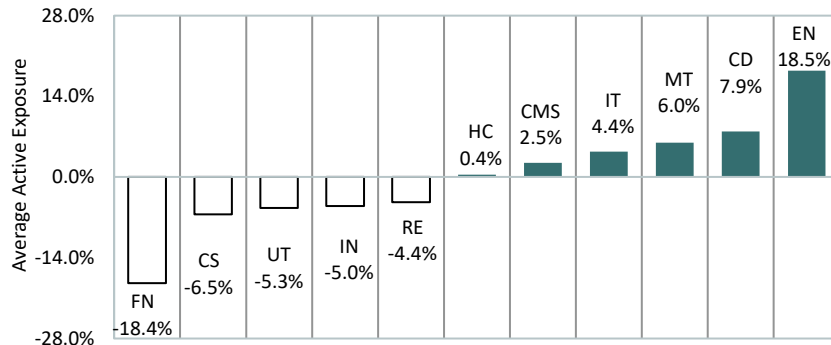
## RETURN ATTRIBUTION

Source of Return	Sector Allocation	Stock Selection	Total
Communication Services	0.1%	2.2%	2.2%
Consumer Discretionary	1.2%	2.0%	3.2%
Consumer Staples	0.8%	0.0%	0.8%
Energy	-1.6%	2.2%	0.6%
Financials	-0.9%	0.0%	-0.9%
Health Care	-0.2%	0.7%	0.4%
Industrials	-0.2%	-0.5%	-0.7%
Information Technology	1.7%	1.8%	3.5%
Materials	0.2%	-0.9%	-0.7%
Real Estate	-0.1%	0.0%	-0.1%
Utilities	1.0%	0.0%	1.0%
<b>Total Active (Local Currency)</b>	<b>1.9%</b>	<b>7.4%</b>	<b>9.3%</b>

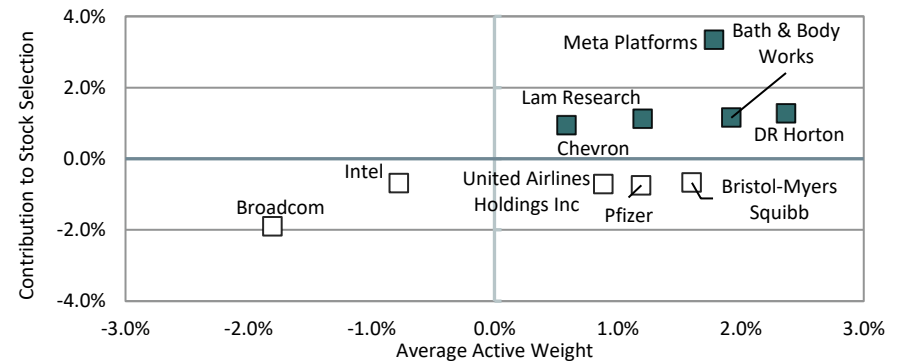
## CUMULATIVE ACTIVE RETURNS (%)



## AVERAGE ACTIVE EXPOSURE



## TOP VS. BOTTOM NAMES BY SELECTION EFFECT



Source: DWS, MSCI Barra, 16 Jan. 2024

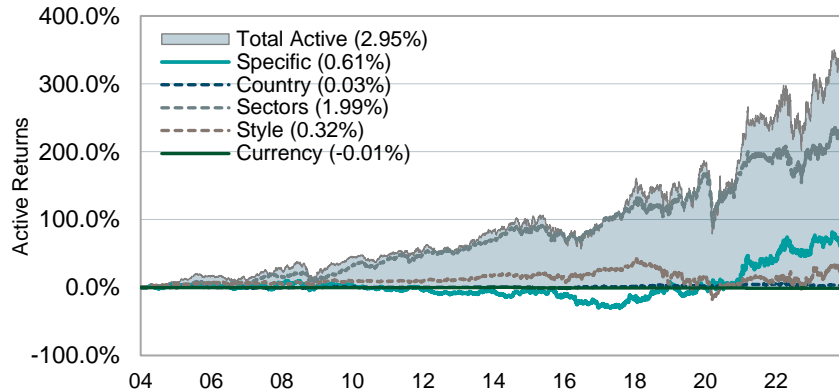
The calculations presented herewith have been performed using MSCI Barra and may vary from the actual returns of the strategy due to different computational assumptions. **The CROCI US Strategy is live from 02 Feb. 2004.** Past performance, whether live or simulated, is not a reliable indicator of future results. All returns include reinvested dividends and do not include fees that might be charged on an investment product. All pro-forma performance data before respective live dates is simulated and was calculated by means of retroactive application of the Strategy models. It is not possible to invest directly in a strategy or index. The performance shown here is for model portfolios. The performance of any actual investment products may differ significantly. Allocations are subject to change without notice. This information is intended for informational purposes only and does not constitute investment advice, a recommendation, an offer or solicitation

# CROCI US VS. MSCI USA VALUE

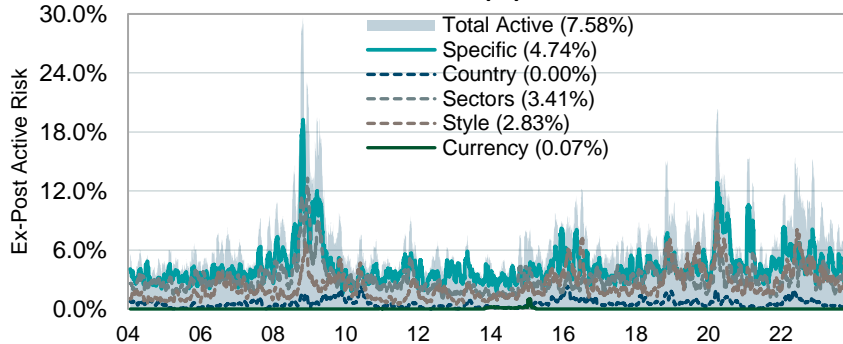
Multifactor Performance Attribution in USD, 31 Dec. 2003 - 29 Dec. 2023

Simulated data prior to: 02 Feb. 2004

## CUMULATIVE ACTIVE RETURN ATTRIBUTION (%)



## ROLLING PERIOD EX-POST ACTIVE RISK (%)

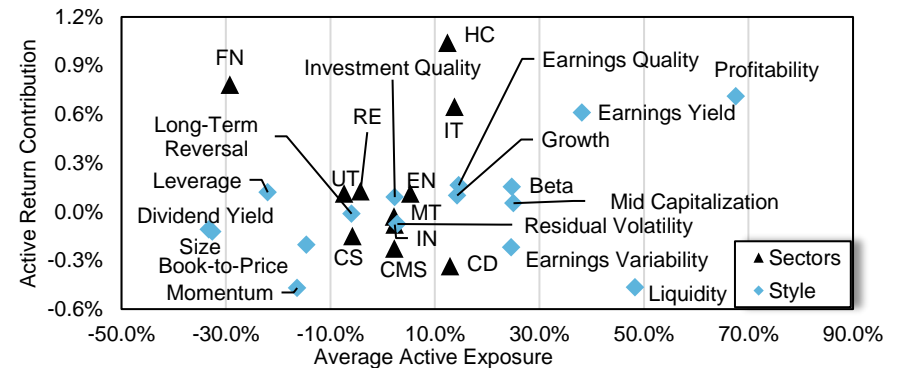


Source: DWS, MSCI Barra, 16 Jan. 2024

The calculations presented herewith have been performed using MSCI Barra and may vary from the actual returns of the strategy due to different computational assumptions.

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## FACTOR ACTIVE RETURN CONTRIBUTION VS. AVERAGE EXPOSURE

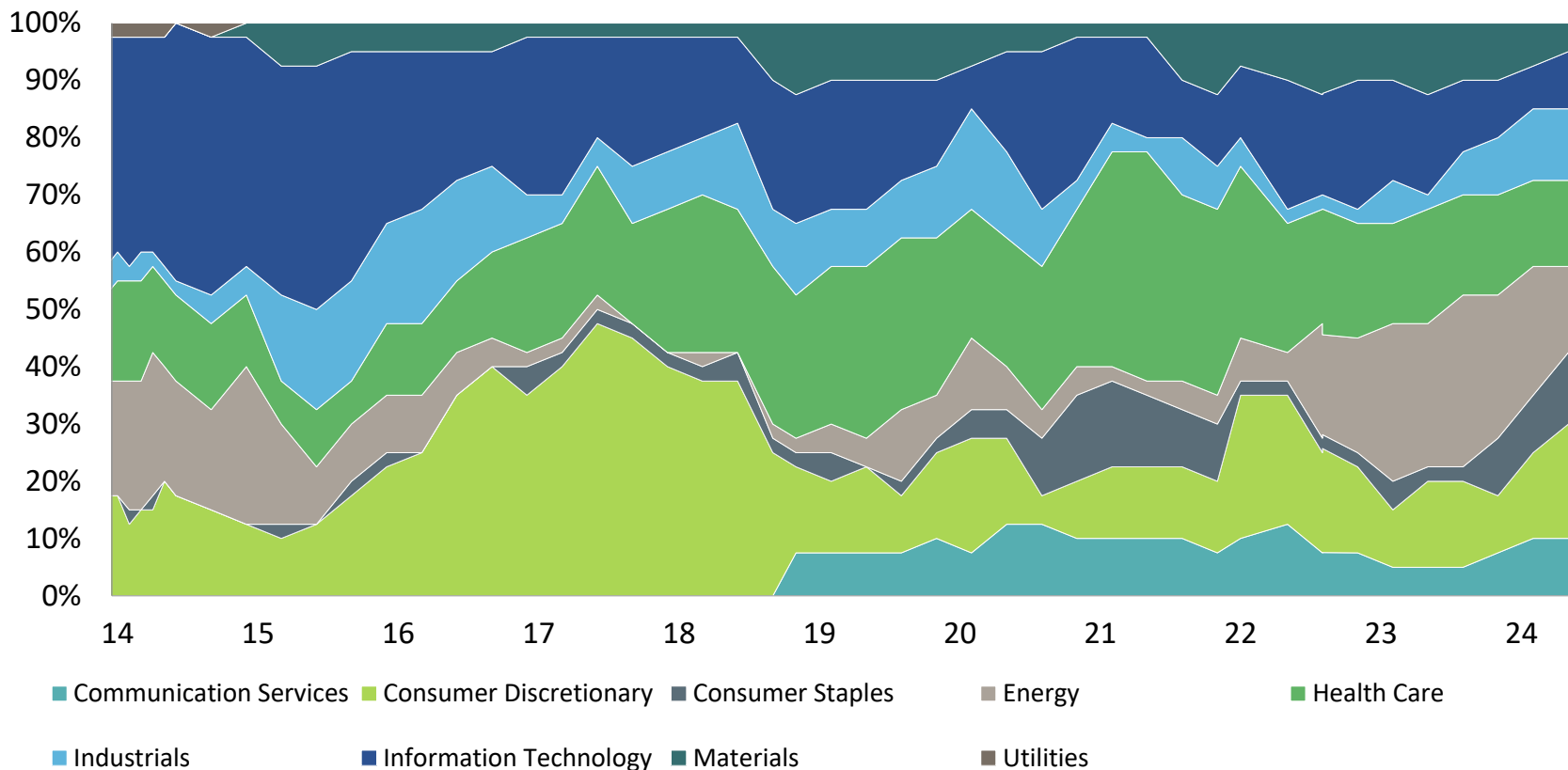


## BEST-WORST POLICIES BY INFORMATION RATIO

Top Five (Ann. Contrib.)	Bottom Five (Ann. Contrib.)
Profitability(0.71%)	Book-to-Price(-0.20%)
Earnings Quality(0.16%)	Earnings Variability(-0.22%)
Investment Quality(0.09%)	Momentum(-0.47%)
Earnings Yield(0.61%)	Liquidity(-0.47%)
Growth(0.10%)	Consumer Staples(-0.15%)

\*Average Active Exposure to Risk Factor is represented as negative (Red) or positive (Green)

## SECTOR ALLOCATIONS, JAN. 2013 – JUN. 2024



(1) The CROCI US Strategy has been run on a live basis since 2 Feb. 2004. Performance data before this date is simulated and was calculated by means of retroactive application of the Strategy model. The Strategy underwent the following implementation changes on 2<sup>nd</sup> June 2014: 1) Change of reconstitution frequency from monthly to quarterly; 2) Introduction of selection buffers to reduce constituent turnover. Effective 1st Jan. 2022, the Strategy incorporated environmental, social and governance (ESG) characteristics based on DWS Basic Exclusions, a DWS proprietary ESG assessment methodology, provided by DWS ESG Engine.

**Past performance, whether live or simulated, is not a reliable indicator of future results.** All returns include reinvested dividends (net of withholding tax) but do not include fees that might be charged on an investment product. It is not possible to invest directly in a strategy. The performance shown here is for model portfolios. The performance of any actual investment products may differ significantly. The CROCI team does not provide investment advice, stock recommendations or act in any other fiduciary capacity. Allocations are subject to change without notice. Source: DWS, Bloomberg, 2<sup>nd</sup> April 2024

# CROCI STRATEGIES & INDICES



## Key Risks

- Any products linked to a CROCI Strategy or Index may not be capital protected and investor capital may be at risk up to a total loss. Prospective investors should be aware investments linked to the Strategies or Indices may go up or down in value.
- Past performance, whether live or simulated, is not an indicator of future performance and any forecast or projection may not be realised.
- The CROCI Strategies have been built on the premise that stocks with lower CROCI Economic P/E ratios may outperform stocks with higher CROCI Economic P/E ratios over time. Moreover, the CROCI Global Dividends Strategy and CROCI US Dividends Strategy make the assumption that Dividend Yield, Cash Returns, Financial Leverage and Price Volatility can impact the ability for companies to maintain their dividend payments as well as provide performance. These premises may not be correct and prospective investors should evaluate these assumptions prior to investing in the CROCI Strategies.
- There is no implied assurance that a stock selected for the CROCI Global Dividend Strategy or CROCI US Dividends Strategy will not cut its dividend while it is in the portfolio.
- The CROCI REW Indices have been built on the premise that portfolio weightings should be determined by the CROCI Equity Earnings of each company and that this will provide a value-added to the portfolio construction process. This premise may not be correct and prospective investors should evaluate this assumption prior to investing in any of the Indices.
- CROCI's coverage universe does not aim to provide waterfront coverage of entire benchmarks. Some sectors may have a larger proportion of CROCI coverage than others.
- CROCI represents one of many possible ways to analyse and value stocks. Potential investors must form their own view of the CROCI methodology and evaluate whether CROCI and investments associated with CROCI are appropriate for them. The CROCI Team does not provide investment advice.

# CROCI EURO SELECTION METHODOLOGY

CROCI coverage of Eurozone companies<sup>(1)</sup>, excluding companies which do not meet the DWS Basic Exclusions criteria<sup>(2)</sup>, as Selection Universe



Exclude companies with negative trailing 12M CROCI Economic P/E and apply market cap filter<sup>(3)</sup>



Select 30 cheapest stocks by Trailing 12M CROCI Economic P/E<sup>(4)</sup>



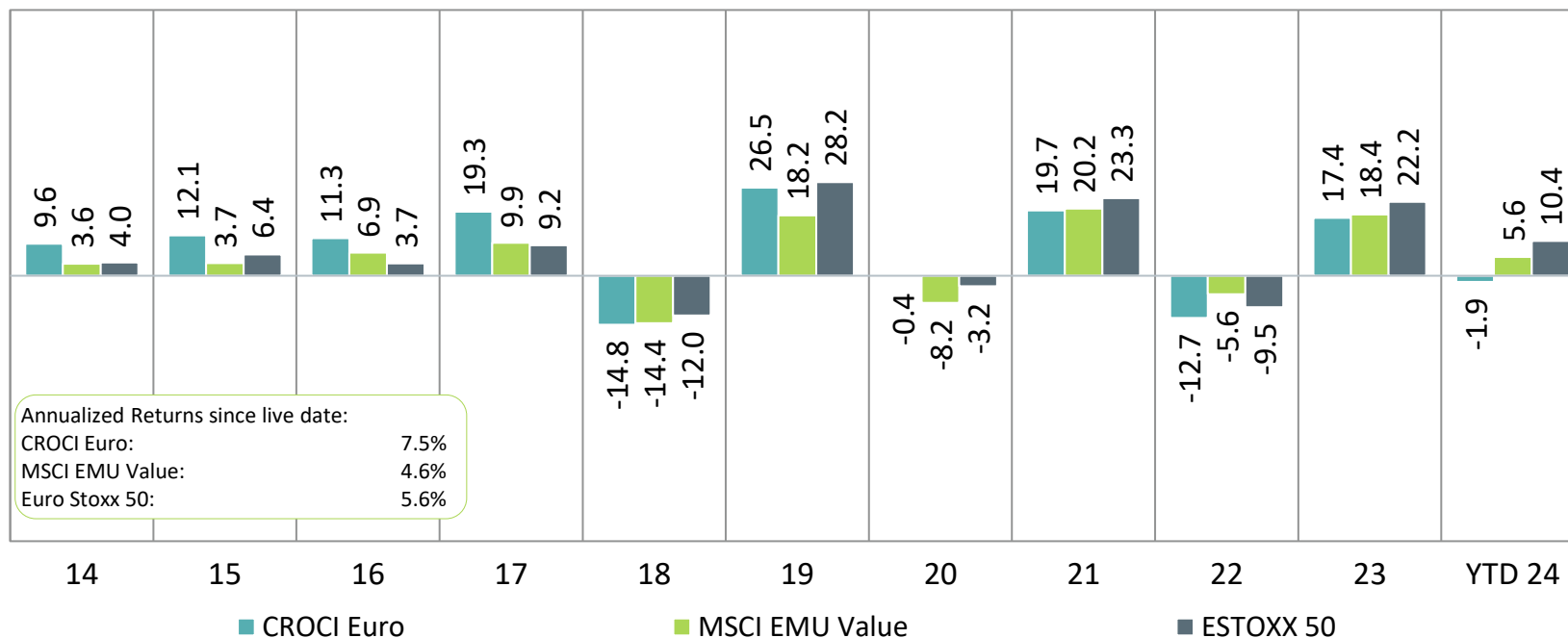
CROCI Euro Strategy  
Equal weighted, rebalanced quarterly

- (1) Only companies in CROCI coverage are considered but excluding the companies from the Financials and Real estate sectors. Please refer to the appendix for details on the CROCI coverage.
- (2) Effective 1st Jan. 2022, the Strategy incorporated environmental, social and governance (ESG) characteristics based on DWS Basic Exclusions, a DWS proprietary ESG assessment methodology, provided by DWS ESG Engine
- (3) Exclude bottom 25 percentile companies by market cap
- (4) A 5-stock selection buffer is applied to reduce turnover (an existing constituent is only removed once its rank exceeds 35).

Source: DWS, 9 Jul. 2024

## ANNUAL RETURNS %, 31 DEC. 2013 – 28 JUN. 2024<sup>(1)</sup>

In EUR



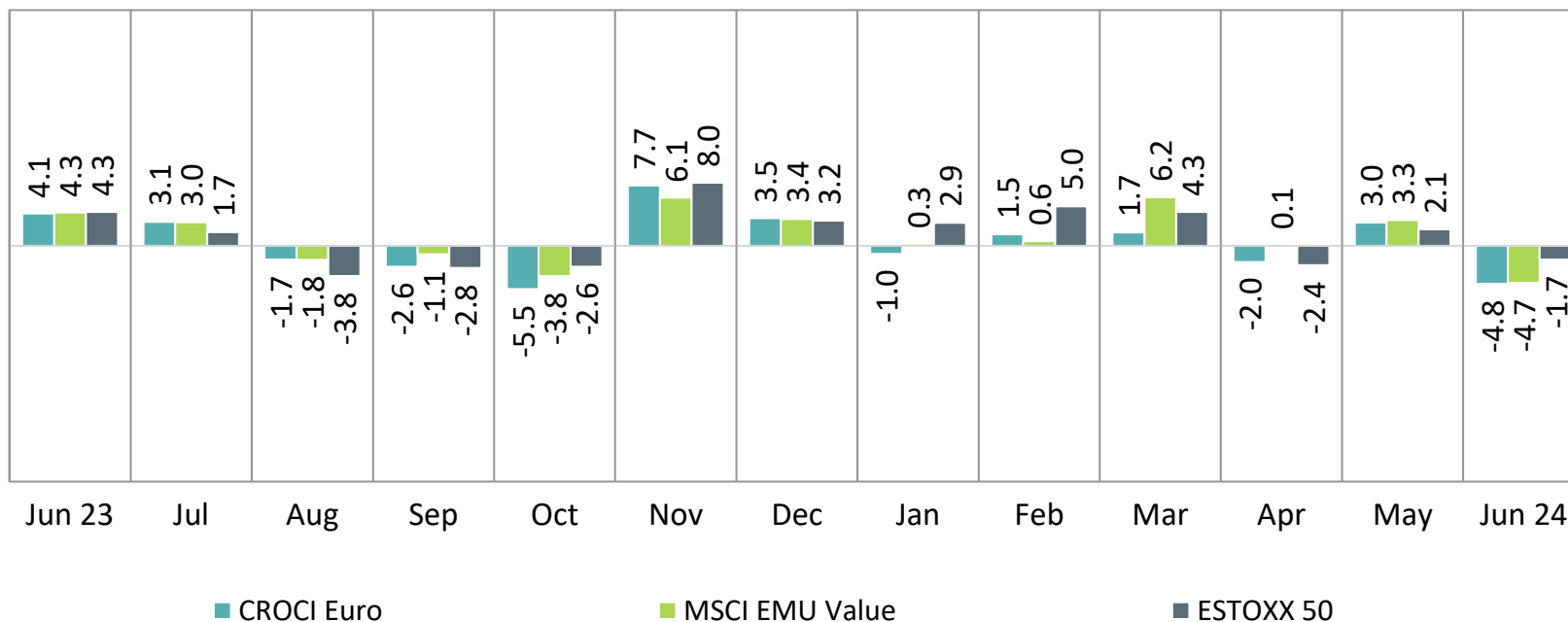
(1) The CROCI Euro Strategy has been run on a live basis since 2 Feb. 2004. Performance data before this date is simulated and was calculated by means of retroactive application of the Strategy model. The Strategy underwent the following implementation changes on 2<sup>nd</sup> June 2014: 1) Change of reconstitution frequency from monthly to quarterly; 2) Introduction of selection buffers to reduce constituent turnover. Effective 1st Jan. 2022, the Strategy incorporated environmental, social and governance (ESG) characteristics based on DWS Basic Exclusions, a DWS proprietary ESG assessment methodology, provided by DWS ESG Engine.

**Past performance, whether live or simulated, is not a reliable indicator of future results.** All returns include reinvested dividends (net of withholding tax) but do not include fees that might be charged on an investment product. It is not possible to invest directly in a strategy. The performance shown here is for model portfolios. The performance of any actual investment products may differ significantly. The CROCI team does not provide investment advice, stock recommendations or act in any other fiduciary capacity. Source: DWS, Bloomberg, 9 Jul. 2024



## MONTHLY RETURNS %, JUN. 2023- JUN. 2024<sup>(1)</sup>

In EUR



(1) The CROCI Euro Strategy has been run on a live basis since 2 Feb. 2004. Performance data before this date is simulated and was calculated by means of retroactive application of the Strategy model. The Strategy underwent the following implementation changes on 2<sup>nd</sup> June 2014: 1) Change of reconstitution frequency from monthly to quarterly; 2) Introduction of selection buffers to reduce constituent turnover. Effective 1st Jan. 2022, the Strategy incorporated environmental, social and governance (ESG) characteristics based on DWS Basic Exclusions, a DWS proprietary ESG assessment methodology, provided by DWS ESG Engine.

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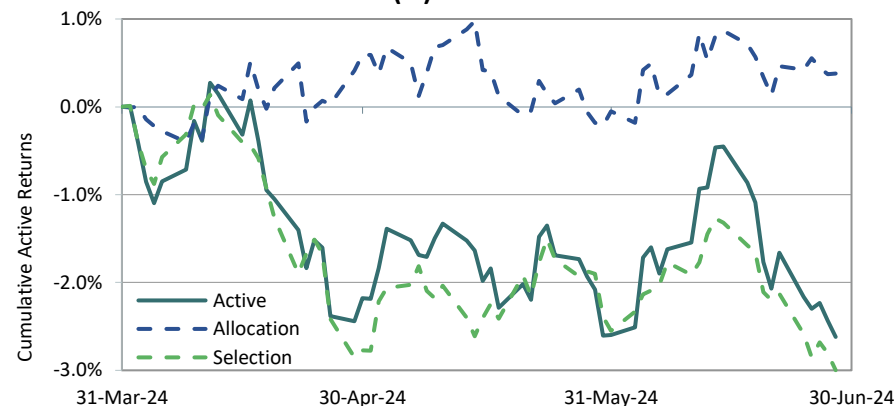
# 2Q 2024: CROCI EURO VS. MSCI EMU VALUE

Total Return Attribution in EUR, 31 Mar. 2023 - 28 Jun. 2024

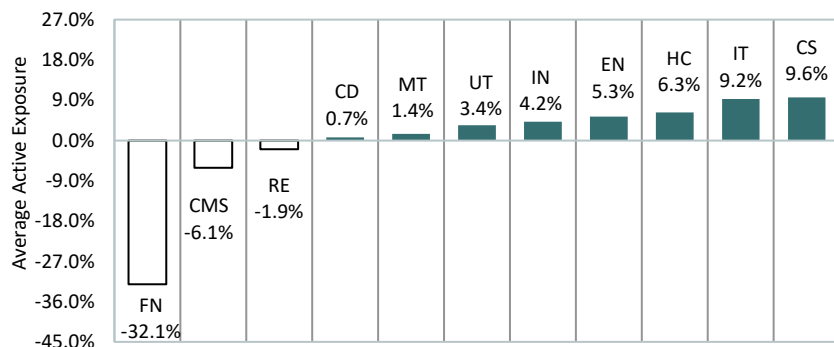
## RETURN ATTRIBUTION

Source of Return	Sector Allocation	Stock Selection	Total
Communication Services	-0.2%	0.0%	-0.2%
Consumer Discretionary	-0.1%	0.2%	0.1%
Consumer Staples	0.1%	-0.1%	0.0%
Energy	0.0%	-1.8%	-1.8%
Financials	-0.6%	0.0%	-0.6%
Health Care	0.3%	-0.3%	0.0%
Industrials	-0.1%	-0.9%	-1.0%
Information Technology	0.9%	-0.5%	0.4%
Materials	-0.1%	0.3%	0.2%
Real Estate	0.0%	0.0%	0.0%
Utilities	0.1%	0.1%	0.2%
<b>Total Active (Local Currency)</b>	<b>0.4%</b>	<b>-3.0%</b>	<b>-2.6%</b>

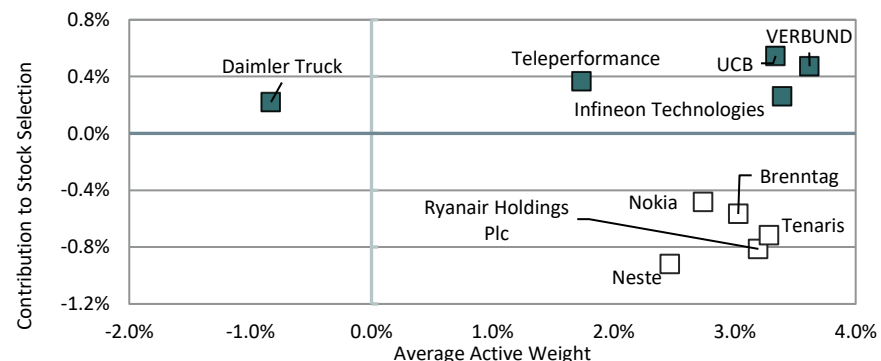
## CUMULATIVE ACTIVE RETURNS (%)



## AVERAGE ACTIVE EXPOSURE



## TOP VS. BOTTOM NAMES BY SELECTION EFFECT



Source: DWS, MSCI Barra, 9 Jul. 2024

The calculations presented herewith have been performed using MSCI Barra and may vary from the actual returns of the strategy due to different computational assumptions. **The CROCI Euro Strategy is live from 02 Feb. 2004.** Past performance, whether live or simulated, is not a reliable indicator of future results. All returns include reinvested dividends and do not include fees that might be charged on an investment product. All pro-forma performance data before respective live dates is simulated and was calculated by means of retroactive application of the Strategy models. It is not possible to invest directly in a strategy or index. The performance shown here is for model portfolios. The performance of any actual investment products may differ significantly. Allocations are subject to change without notice. This information is intended for informational purposes only and does not constitute investment advice, a recommendation, an offer or solicitation

# 1H 2024: CROCI EURO VS. MSCI EMU VALUE

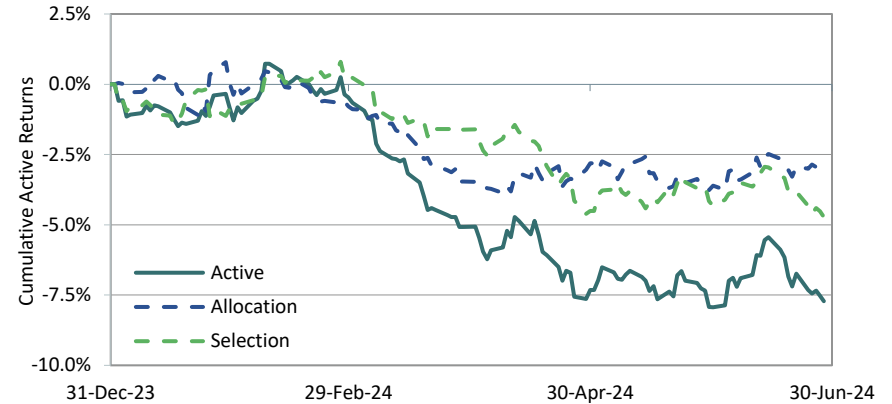


Total Return Attribution in EUR, 31 Dec. 2023 – 28 Jun. 2024

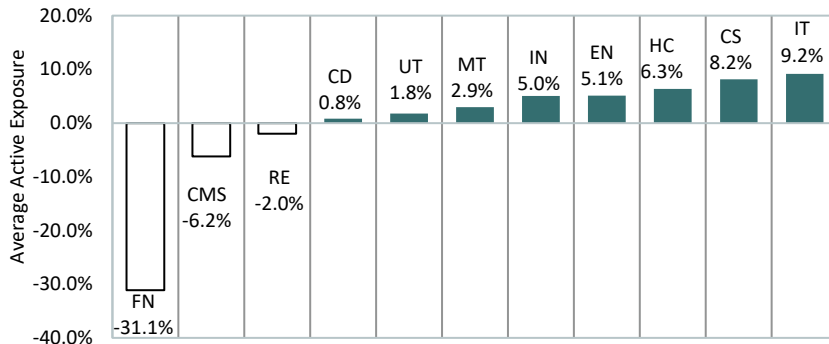
## RETURN ATTRIBUTION

Source of Return	Sector Allocation	Stock Selection	Total
Communication Services	-0.2%	0.0%	-0.2%
Consumer Discretionary	0.0%	-0.3%	-0.3%
Consumer Staples	-0.4%	-0.1%	-0.5%
Energy	-0.2%	-1.5%	-1.7%
Financials	-3.1%	0.0%	-3.1%
Health Care	-0.3%	1.4%	1.1%
Industrials	0.0%	-3.2%	-3.2%
Information Technology	1.1%	-2.1%	-1.0%
Materials	-0.4%	1.1%	0.8%
Real Estate	0.2%	0.0%	0.2%
Utilities	0.2%	0.0%	0.2%
<b>Total Active (Local Currency)</b>	<b>-3.0%</b>	<b>-4.7%</b>	<b>-7.7%</b>

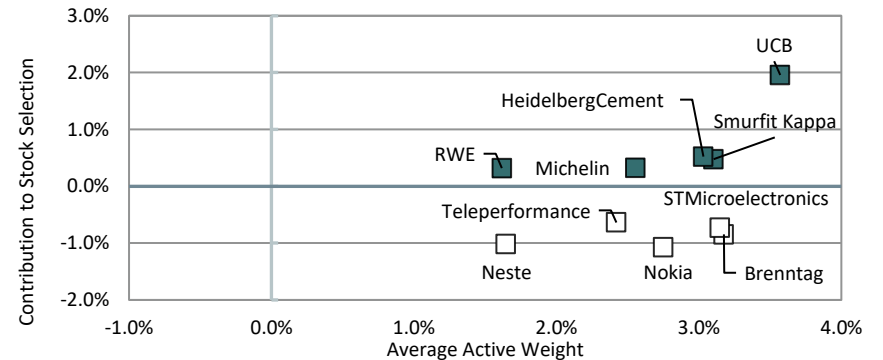
## CUMULATIVE ACTIVE RETURNS (%)



## AVERAGE ACTIVE EXPOSURE



## TOP VS. BOTTOM NAMES BY SELECTION EFFECT



Source: DWS, MSCI Barra, 9 Jul. 2024

The calculations presented herewith have been performed using MSCI Barra and may vary from the actual returns of the strategy due to different computational assumptions. **The CROCI Euro Strategy is live from 02 Feb. 2024.** Past performance, whether live or simulated, is not a reliable indicator of future results. All returns include reinvested dividends and do not include fees that might be charged on an investment product. All pro-forma performance data before respective live dates is simulated and was calculated by means of retroactive application of the Strategy models. It is not possible to invest directly in a strategy or index. The performance shown here is for model portfolios. The performance of any actual investment products may differ significantly. Allocations are subject to change without notice. This information is intended for informational purposes only and does not constitute investment advice, a recommendation, an offer or solicitation

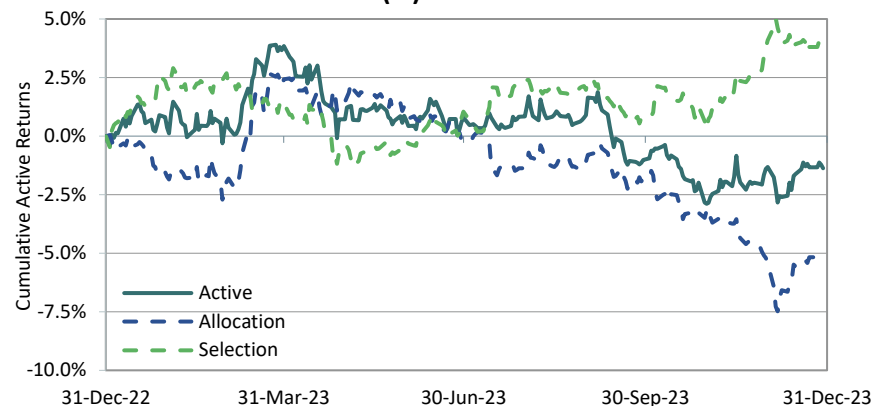
# 2023: CROCI EURO VS. MSCI EMU VALUE

Total Return Attribution in EUR, 31 Dec. 2022 – 29 Dec. 2023

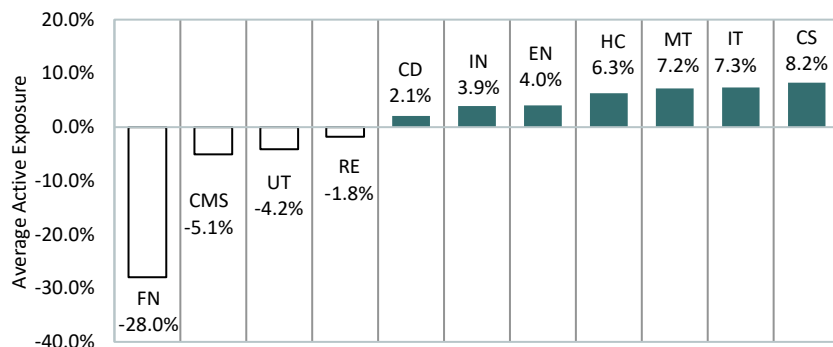
## RETURN ATTRIBUTION

Source of Return	Sector Allocation	Stock Selection	Total
Communication Services	0.0%	0.0%	0.0%
Consumer Discretionary	0.6%	-0.1%	0.5%
Consumer Staples	-1.1%	1.2%	0.1%
Energy	0.2%	-0.3%	-0.1%
Financials	-2.3%	0.0%	-2.3%
Health Care	-0.5%	-2.5%	-3.0%
Industrials	0.5%	1.3%	1.8%
Information Technology	-2.5%	1.9%	-0.7%
Materials	0.1%	1.4%	1.5%
Real Estate	-0.1%	0.0%	-0.1%
Utilities	0.0%	0.9%	0.9%
<b>Total Active (Local Currency)</b>	<b>-5.2%</b>	<b>3.8%</b>	<b>-1.4%</b>

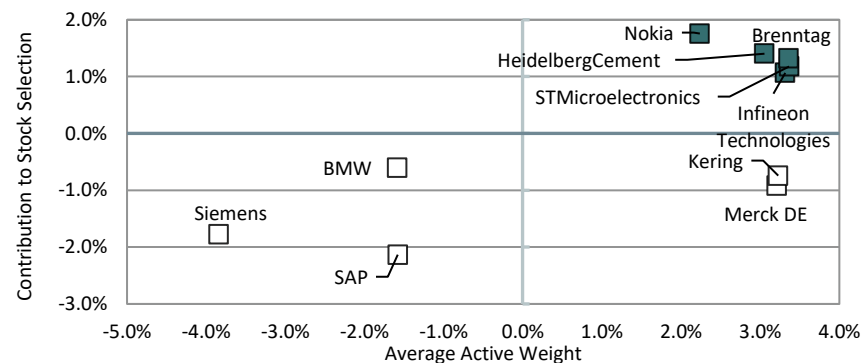
## CUMULATIVE ACTIVE RETURNS (%)



## AVERAGE ACTIVE EXPOSURE



## TOP VS. BOTTOM NAMES BY SELECTION EFFECT



Source: DWS, MSCI Barra, 9 Jul. 2024

The calculations presented herewith have been performed using MSCI Barra and may vary from the actual returns of the strategy due to different computational assumptions. **The CROCI Euro Strategy is live from 02 Feb. 2004.** Past performance, whether live or simulated, is not a reliable indicator of future results. All returns include reinvested dividends and do not include fees that might be charged on an investment product. All pro-forma performance data before respective live dates is simulated and was calculated by means of retroactive application of the Strategy models. It is not possible to invest directly in a strategy or index. The performance shown here is for model portfolios. The performance of any actual investment products may differ significantly. Allocations are subject to change without notice. This information is intended for informational purposes only and does not constitute investment advice, a recommendation, an offer or solicitation

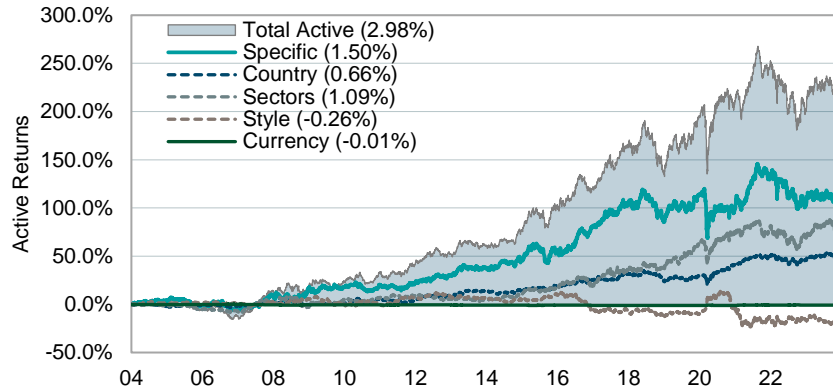
# CROCI EURO VS. MSCI EMU VALUE



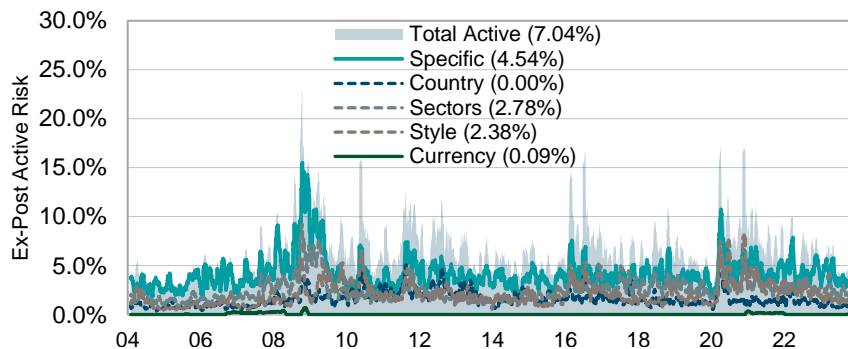
Multifactor Performance Attribution in EUR, 31 Dec. 2003 - 29 Dec. 2023

Simulated data prior to: 02 Feb. 2004

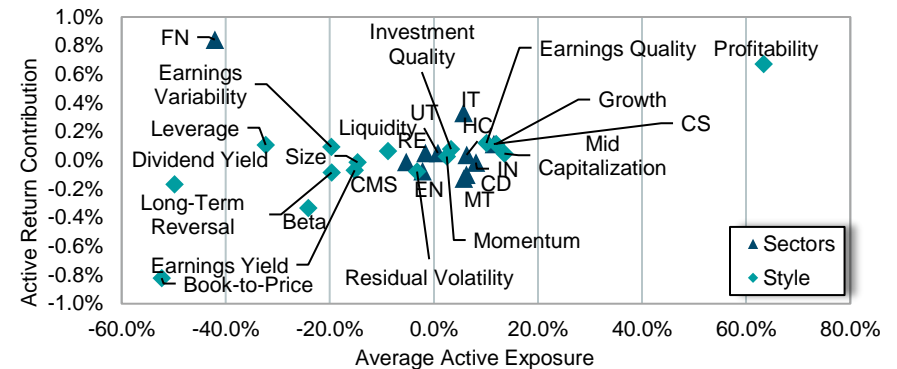
## CUMULATIVE ACTIVE RETURN ATTRIBUTION (%)



## ROLLING PERIOD EX-POST ACTIVE RISK (%)



## FACTOR ACTIVE RETURN CONTRIBUTION VS. AVERAGE EXPOSURE



## BEST-WORST POLICIES BY INFORMATION RATIO

Top Five (Ann. Contrib.)	Bottom Five (Ann. Contrib.)
Profitability(0.67%)	Book-to-Price(-0.82%)
Growth(0.11%)	Dividend Yield(-0.17%)
Investment Quality(0.08%)	Long-Term Reversal(-0.09%)
Earnings Quality(0.12%)	Consumer Discretionary(-0.13%)
Information Technology(0.33%)	Residual Volatility(-0.08%)

\*Average Active Exposure to Risk Factor is represented as negative (Red) or positive (Green)

Source: DWS, MSCI Barra, 9 Jul. 2024

The calculations presented herewith have been performed using MSCI Barra and may vary from the actual returns of the strategy due to different computational assumptions. **The CROCI Euro Strategy is live from 02 Feb. 2004.** Past performance, whether live or simulated, is not a reliable indicator of future results. All returns include reinvested dividends and do not include fees that might be charged on an investment product. All pro-forma performance data before respective live dates is simulated and was calculated by means of retroactive application of the Strategy models. It is not possible to invest directly in a strategy or index. The performance shown here is for model portfolios. The performance of any actual investment products may differ significantly. This information is intended for informational purposes only and does not constitute investment advice, a recommendation, an offer or solicitation

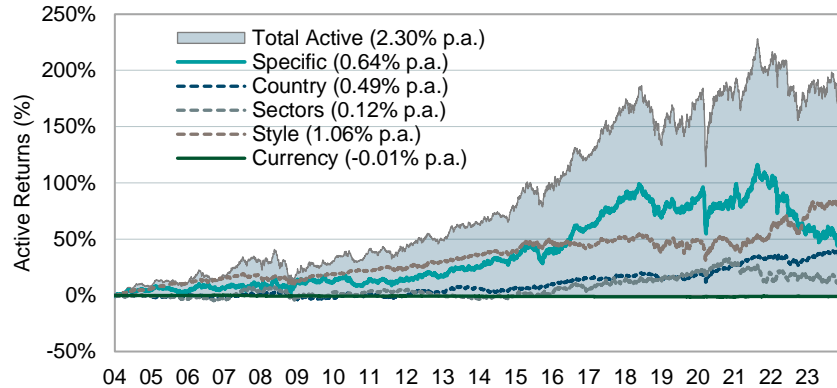
# CROCI EURO VS. EURO STOXX 50



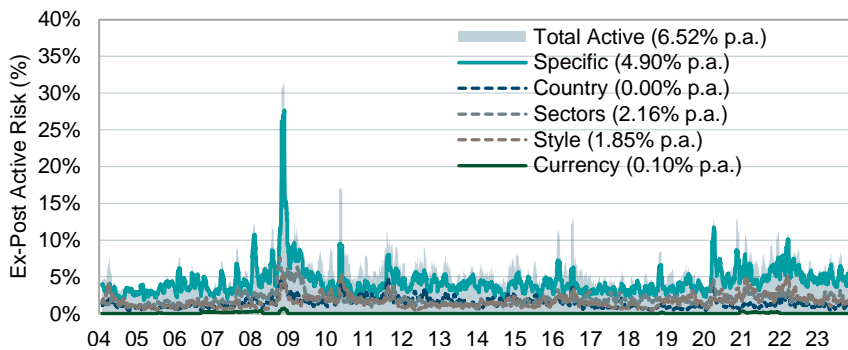
Multifactor Performance Attribution in EUR, 31 Dec. 2003 - 29 Dec. 2023

Simulated data prior to: 02 Feb. 2004

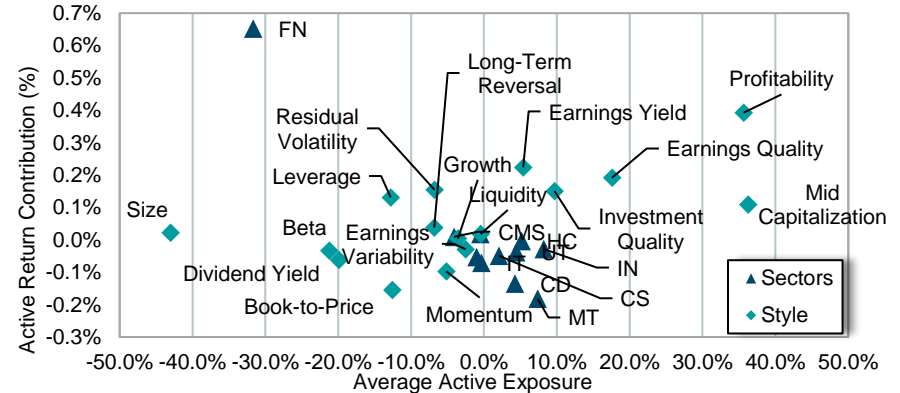
## CUMULATIVE ACTIVE RETURN ATTRIBUTION (%)



## ROLLING PERIOD EX-POST ACTIVE RISK (%)



## FACTOR ACTIVE RETURN CONTRIBUTION VS. AVERAGE EXPOSURE



## BEST-WORST POLICIES BY INFORMATION RATIO

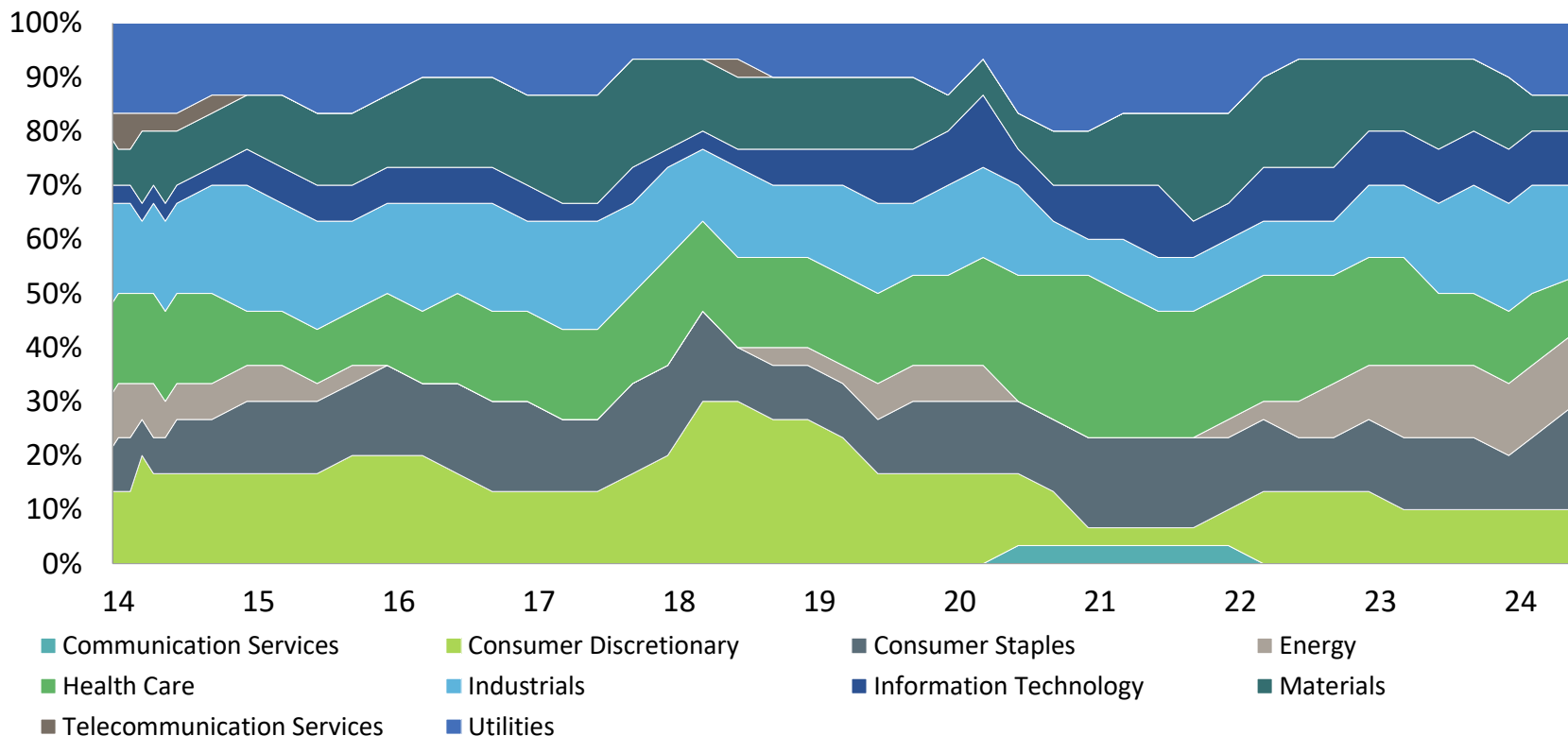
Top Five (Ann. Contrib.)	Bottom Five (Ann. Contrib.)
Investment Quality(0.15%)	Book-to-Price(-0.15%)
Profitability(0.39%)	Materials(-0.18%)
Earnings Quality(0.19%)	Consumer Discretionary(-0.13%)
Leverage(0.13%)	Dividend Yield(-0.06%)
Earnings Yield(0.22%)	Momentum(-0.10%)

\*Average Active Exposure to Risk Factor is represented as negative (Red) or positive (Green)

Source: DWS, MSCI Barra, 9 Jul. 2024

The calculations presented herewith have been performed using MSCI Barra and may vary from the actual returns of the strategy due to different computational assumptions. **The CROCI Euro Strategy is live from 02 Feb. 2004.** Past performance, whether live or simulated, is not a reliable indicator of future results. All returns include reinvested dividends and do not include fees that might be charged on an investment product. All pro-forma performance data before respective live dates is simulated and was calculated by means of retroactive application of the Strategy models. It is not possible to invest directly in a strategy or index. The performance shown here is for model portfolios. The performance of any actual investment products may differ significantly. This information is intended for informational purposes only and does not constitute investment advice, a recommendation, an offer or solicitation

## SECTOR ALLOCATIONS, JAN. 2014 – JUN. 2024

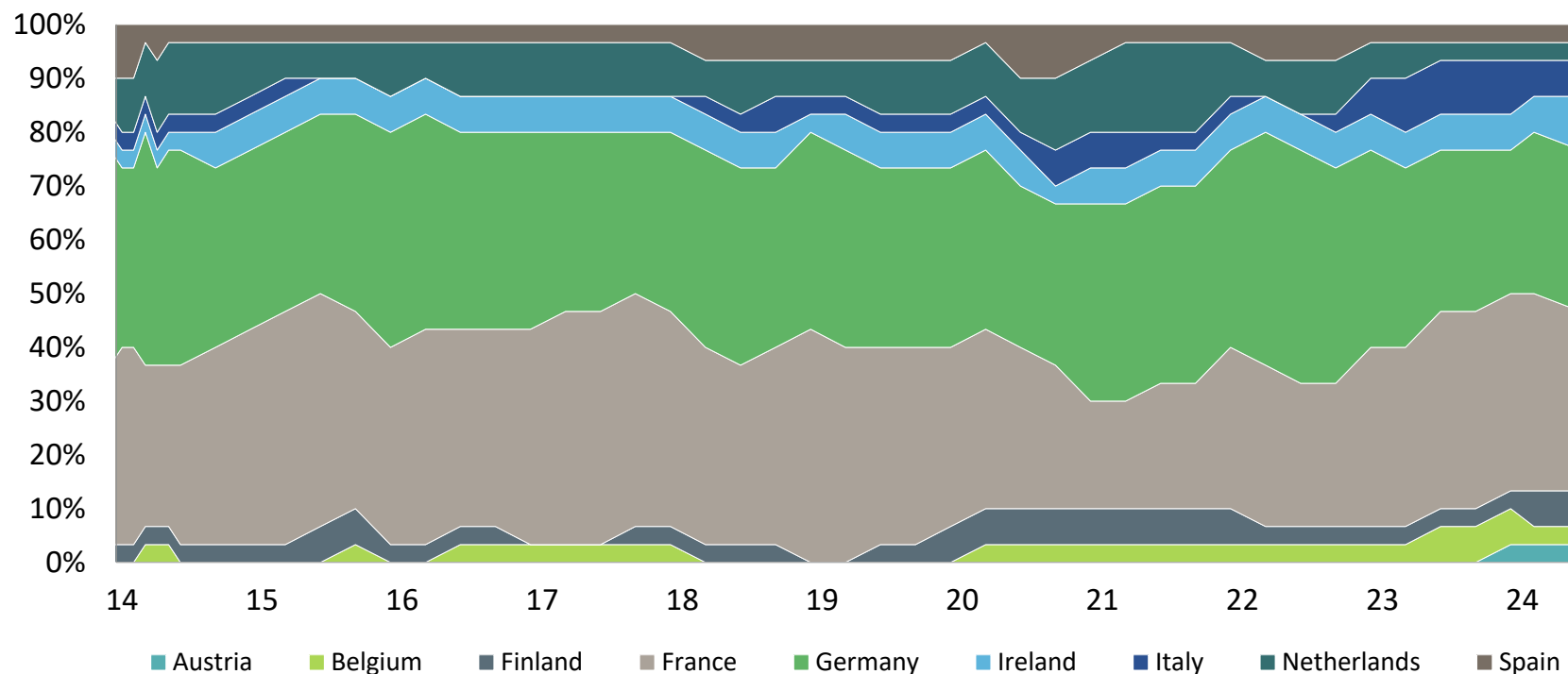


(1) The CROCI Euro Strategy has been run on a live basis since 2<sup>nd</sup> Feb. 2004. The Strategy underwent the following implementation changes on 2<sup>nd</sup> June 2014: 1) Change of reconstitution frequency from monthly to quarterly; 2) Introduction of selection buffers to reduce constituent turnover. Effective 1st Jan. 2022, the Strategy incorporated environmental, social and governance (ESG) characteristics based on DWS Basic Exclusions, a DWS proprietary ESG assessment methodology, provided by DWS ESG Engine. **Past performance is not a reliable indicator of future results.** All returns include reinvested dividends (net of withholding tax) but do not include fees that might be charged on an investment product. It is not possible to invest directly in a strategy. The performance shown here is for model portfolios. The performance of any actual investment products may differ significantly. The CROCI team does not provide investment advice, stock recommendations or act in any other fiduciary capacity. Allocations are subject to change without notice. Source: DWS, 9 Jul. 2024

# CROCI EURO STRATEGY



## COUNTRY ALLOCATIONS, JAN. 2014 – JUN. 2024



(1) The CROCI Euro Strategy has been run on a live basis since 2<sup>nd</sup> Feb. 2004. The Strategy underwent the following implementation changes on 2<sup>nd</sup> June 2014: 1) Change of reconstitution frequency from monthly to quarterly; 2) Introduction of selection buffers to reduce constituent turnover. Effective 1st Jan. 2022, the Strategy incorporated environmental, social and governance (ESG) characteristics based on DWS Basic Exclusions, a DWS proprietary ESG assessment methodology, provided by DWS ESG Engine. **Past performance is not a reliable indicator of future results.** All returns include reinvested dividends (net of withholding tax) but do not include fees that might be charged on an investment product. It is not possible to invest directly in a strategy. The performance shown here is for model portfolios. The performance of any actual investment products may differ significantly. The CROCI team does not provide investment advice, stock recommendations or act in any other fiduciary capacity. Allocations are subject to change without notice. Source: DWS, 9 Jul. 2024



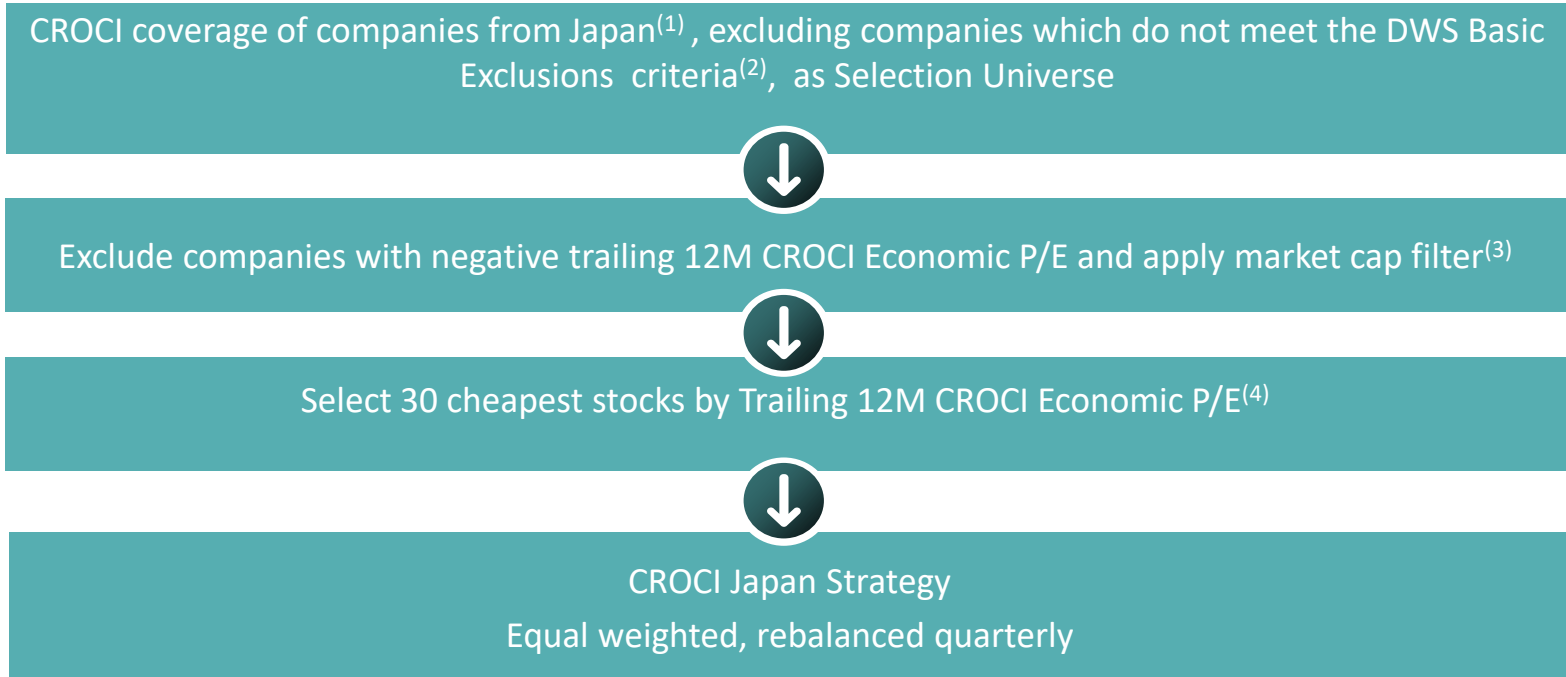
# CROCI STRATEGIES & INDICES



## Key Risks

- Any products linked to a CROCI Strategy or Index may not be capital protected and investor capital may be at risk up to a total loss. Prospective investors should be aware investments linked to the Strategies or Indices may go up or down in value.
- Past performance, whether live or simulated, is not an indicator of future performance and any forecast or projection may not be realised.
- The CROCI Strategies have been built on the premise that stocks with lower CROCI Economic P/E ratios may outperform stocks with higher CROCI Economic P/E ratios over time. Moreover, the CROCI Global Dividends Strategy and CROCI US Dividends Strategy make the assumption that Dividend Yield, Cash Returns, Financial Leverage and Price Volatility can impact the ability for companies to maintain their dividend payments as well as provide performance. These premises may not be correct and prospective investors should evaluate these assumptions prior to investing in the CROCI Strategies.
- There is no implied assurance that a stock selected for the CROCI Global Dividend Strategy or CROCI US Dividends Strategy will not cut its dividend while it is in the portfolio.
- The CROCI REW Indices have been built on the premise that portfolio weightings should be determined by the CROCI Equity Earnings of each company and that this will provide a value-added to the portfolio construction process. This premise may not be correct and prospective investors should evaluate this assumption prior to investing in any of the Indices.
- CROCI's coverage universe does not aim to provide waterfront coverage of entire benchmarks. Some sectors may have a larger proportion of CROCI coverage than others.
- CROCI represents one of many possible ways to analyse and value stocks. Potential investors must form their own view of the CROCI methodology and evaluate whether CROCI and investments associated with CROCI are appropriate for them. The CROCI Team does not provide investment advice.

# CROCI JAPAN SELECTION METHODOLOGY

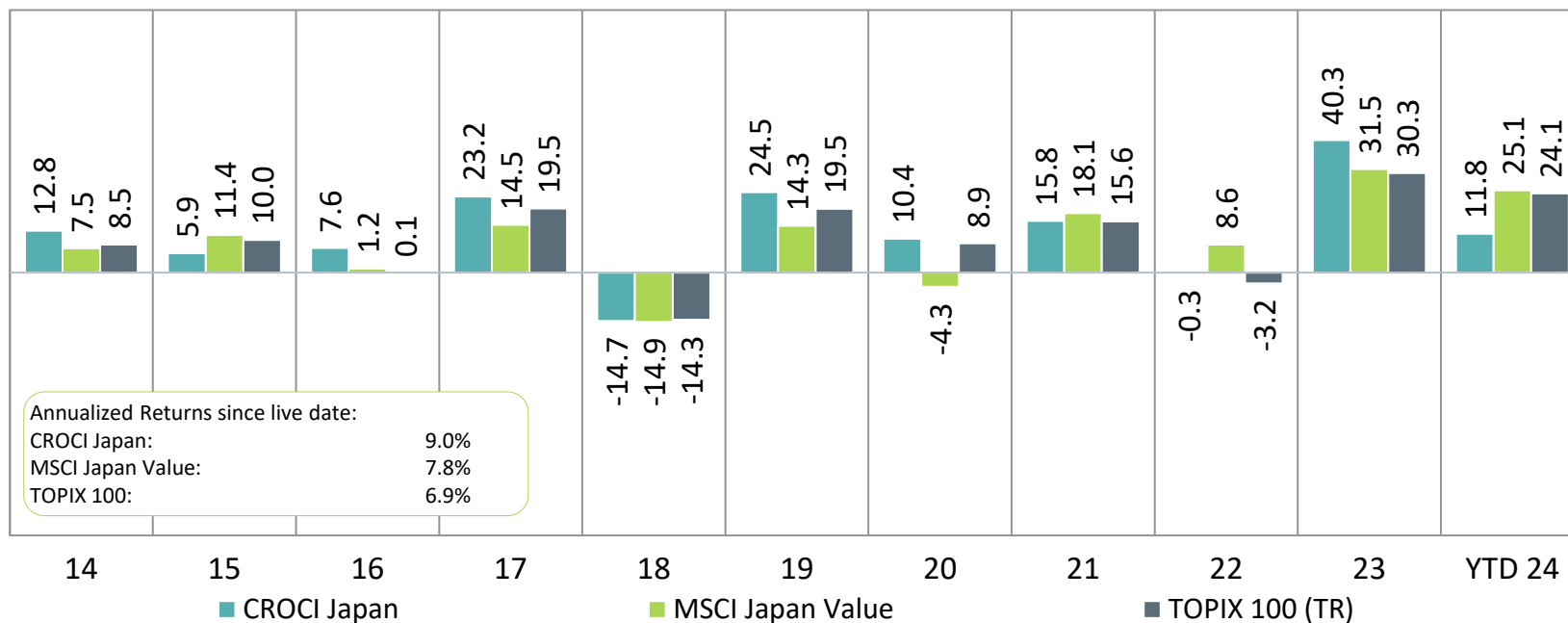


(1) Only companies in CROCI coverage are considered but excluding the companies from the Financials and Real estate sectors. Please refer to the appendix for details on the CROCI coverage.  
(2) Effective 1st Jan. 2022, the Strategy incorporated environmental, social and governance (ESG) characteristics based on DWS Basic Exclusions, a DWS proprietary ESG assessment methodology, provided by DWS ESG Engine  
(3) Exclude bottom 10 percentile companies by market cap  
(4) A 5-stock selection buffer is applied to reduce turnover (an existing constituent is only removed once its rank exceeds 35).

Source: DWS, 9 Jul. 2024

## ANNUAL RETURNS %, 31 DEC. 2013 – 28 JUN. 2024<sup>(1)</sup>

In JPY

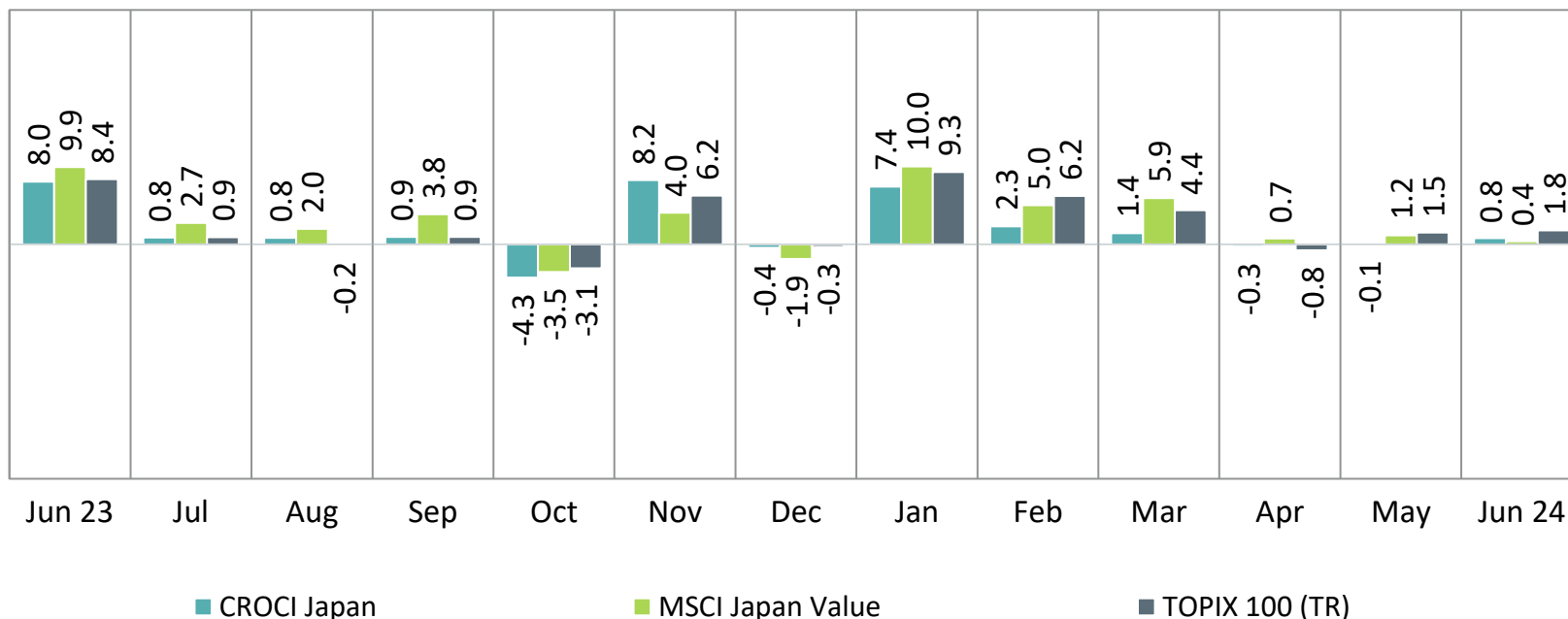


(1) The CROCI Japan Strategy has been run on a live basis since 2 Feb. 2004. Performance data before this date is simulated and was calculated by means of retroactive application of the Strategy model. The Strategy underwent the following implementation changes on 2<sup>nd</sup> June 2014: 1) Change of reconstitution frequency from monthly to quarterly; 2) Introduction of selection buffers to reduce constituent turnover. Effective 1st Jan. 2022, the Strategy incorporated environmental, social and governance (ESG) characteristics based on DWS Basic Exclusions, a DWS proprietary ESG assessment methodology, provided by DWS ESG Engine.

**Past performance, whether live or simulated, is not a reliable indicator of future results.** All returns include reinvested dividends (net of withholding tax) but do not include fees that might be charged on an investment product. It is not possible to invest directly in a strategy. The performance shown here is for model portfolios. The performance of any actual investment products may differ significantly. The CROCI team does not provide investment advice, stock recommendations or act in any other fiduciary capacity. Source: DWS, Bloomberg, 9 Jul. 2024

## MONTHLY RETURNS %, JUN. 2023- JUN. 2024<sup>(1)</sup>

In JPY



(1) The CROCI Japan Strategy has been run on a live basis since 2 Feb. 2004. Performance data before this date is simulated and was calculated by means of retroactive application of the Strategy model. The Strategy underwent the following implementation changes on 2<sup>nd</sup> June 2014: 1) Change of reconstitution frequency from monthly to quarterly; 2) Introduction of selection buffers to reduce constituent turnover. Effective 1st Jan. 2022, the Strategy incorporated environmental, social and governance (ESG) characteristics based on DWS Basic Exclusions, a DWS proprietary ESG assessment methodology, provided by DWS ESG Engine.

**Past performance, whether live or simulated, is not a reliable indicator of future results.** All returns include reinvested dividends (net of withholding tax) but do not include fees that might be charged on an investment product. It is not possible to invest directly in a strategy. The performance shown here is for model portfolios. The performance of any actual investment products may differ significantly. The CROCI team does not provide investment advice, stock recommendations or act in any other fiduciary capacity. Source: DWS, Bloomberg, 9 Jul. 2024

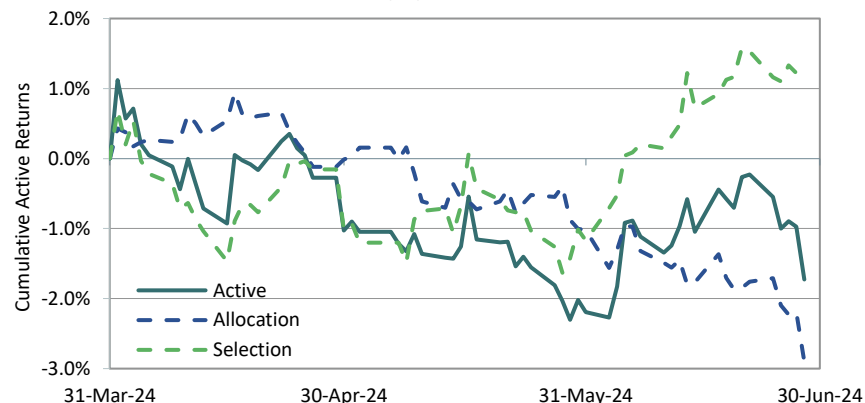
# 2Q 2024: CROCI JAPAN VS. MSCI JAPAN VALUE

Total Return Attribution in JPY, 31 Mar. 2023 - 28 Jun. 2024

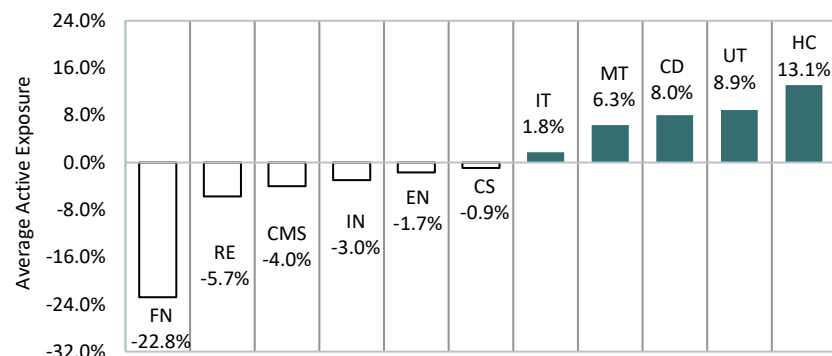
## RETURN ATTRIBUTION

Source of Return	Sector Allocation	Stock Selection	Total
Communication Services	0.0%	0.1%	0.1%
Consumer Discretionary	-0.8%	2.0%	1.2%
Consumer Staples	-0.2%	-0.6%	-0.8%
Energy	-0.1%	0.0%	-0.1%
Financials	-2.0%	0.0%	-2.0%
Health Care	-0.4%	-0.1%	-0.6%
Industrials	-0.1%	-0.1%	-0.2%
Information Technology	0.0%	0.0%	-0.1%
Materials	-0.3%	-0.5%	-0.7%
Real Estate	0.7%	0.0%	0.7%
Utilities	0.3%	0.5%	0.8%
<b>Total Active (Local Currency)</b>	<b>-2.9%</b>	<b>1.2%</b>	<b>-1.7%</b>

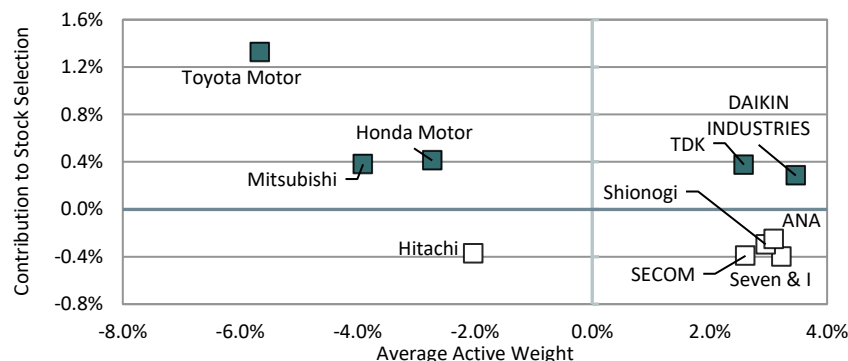
## CUMULATIVE ACTIVE RETURNS (%)



## AVERAGE ACTIVE EXPOSURE



## TOP VS. BOTTOM NAMES BY SELECTION EFFECT



Source: DWS, MSCI Barra, 9 Jul. 2024

The calculations presented herewith have been performed using MSCI Barra and may vary from the actual returns of the strategy due to different computational assumptions. **The CROCI Japan Strategy is live from 02 Feb. 2004.** Past performance, whether live or simulated, is not a reliable indicator of future results. All returns include reinvested dividends and do not include fees that might be charged on an investment product. All pro-forma performance data before respective live dates is simulated and was calculated by means of retroactive application of the Strategy models. It is not possible to invest directly in a strategy or index. The performance shown here is for model portfolios. The performance of any actual investment products may differ significantly. Allocations are subject to change without notice. This information is intended for informational purposes only and does not constitute investment advice, a recommendation, an offer or solicitation

# 1H 2024: CROCI JAPAN VS. MSCI JAPAN VALUE

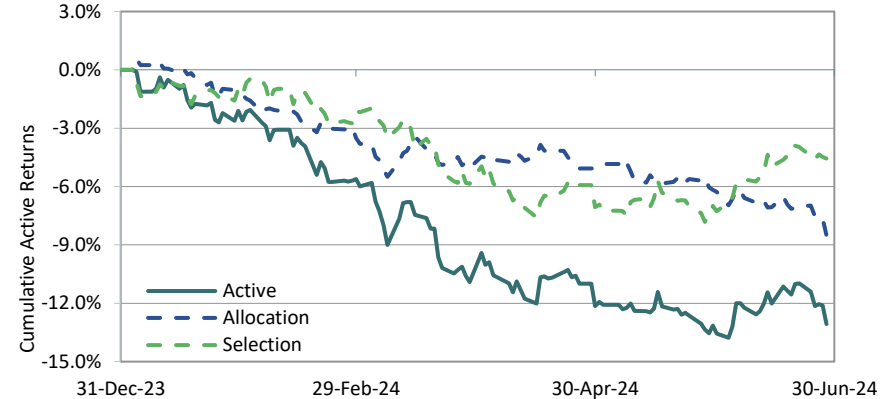


Total Return Attribution in JPY, 31 Dec. 2023 – 28 Jun. 2024

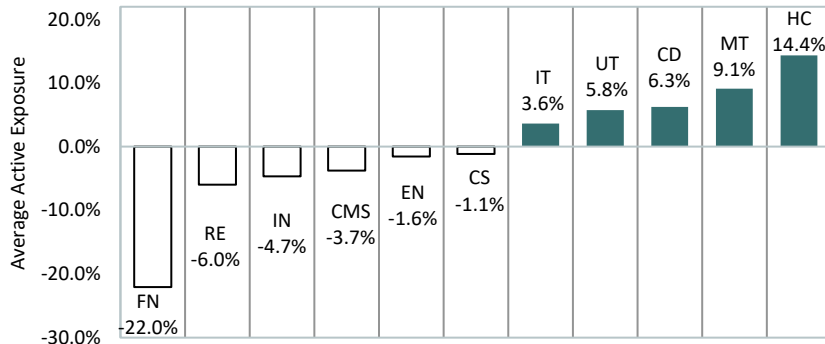
## RETURN ATTRIBUTION

Source of Return	Sector Allocation	Stock Selection	Total
Communication Services	0.3%	0.1%	0.5%
Consumer Discretionary	-0.5%	-0.8%	-1.3%
Consumer Staples	0.1%	-0.3%	-0.2%
Energy	-0.2%	0.0%	-0.2%
Financials	-3.9%	0.0%	-3.9%
Health Care	-3.5%	0.7%	-2.8%
Industrials	-0.3%	-3.5%	-3.8%
Information Technology	-0.5%	-1.0%	-1.5%
Materials	-1.8%	0.1%	-1.7%
Real Estate	1.1%	0.0%	1.1%
Utilities	0.7%	0.1%	0.8%
<b>Total Active (Local Currency)</b>	<b>-8.5%</b>	<b>-4.6%</b>	<b>-13.1%</b>

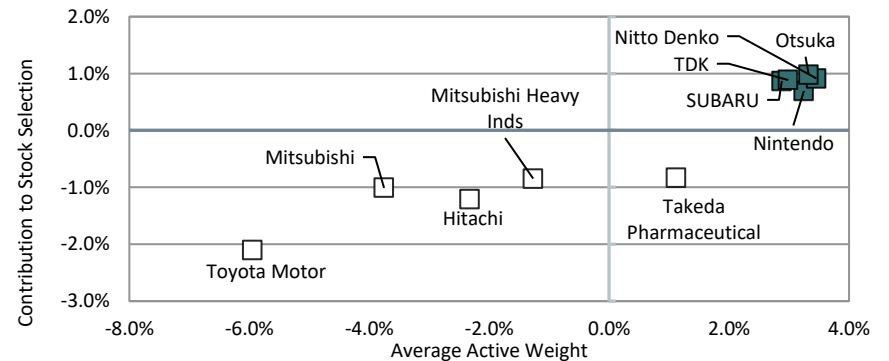
## CUMULATIVE ACTIVE RETURNS (%)



## AVERAGE ACTIVE EXPOSURE



## TOP VS. BOTTOM NAMES BY SELECTION EFFECT



Source: DWS, MSCI Barra, 9 Jul. 2024

The calculations presented herewith have been performed using MSCI Barra and may vary from the actual returns of the strategy due to different computational assumptions. **The CROCI Japan Strategy is live from 02 Feb. 2004.** Past performance, whether live or simulated, is not a reliable indicator of future results. All returns include reinvested dividends and do not include fees that might be charged on an investment product. All pro-forma performance data before respective live dates is simulated and was calculated by means of retroactive application of the Strategy models. It is not possible to invest directly in a strategy or index. The performance shown here is for model portfolios. The performance of any actual investment products may differ significantly. Allocations are subject to change without notice. This information is intended for informational purposes only and does not constitute investment advice, a recommendation, an offer or solicitation

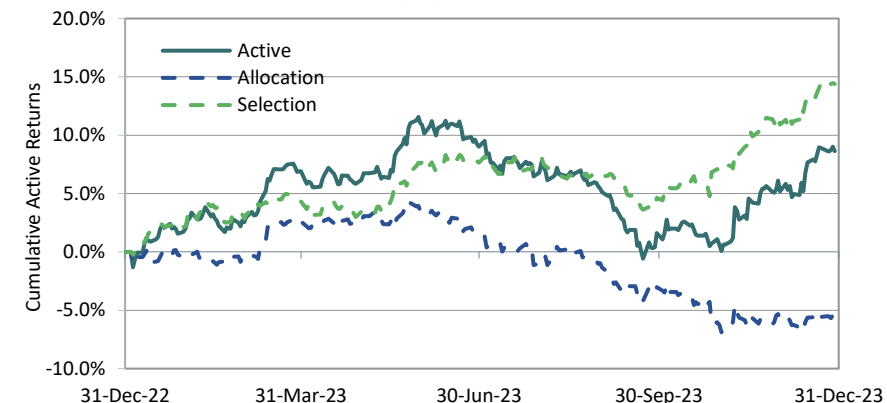
# 2023: CROCI JAPAN VS. MSCI JAPAN VALUE

Total Return Attribution in JPY, 31 Dec. 2022 – 29 Dec. 2023

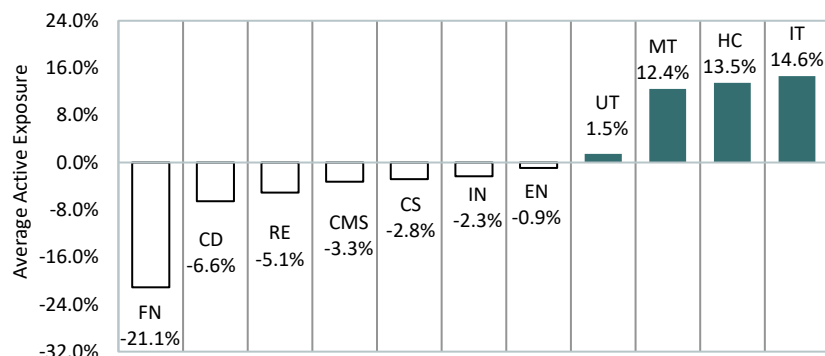
## RETURN ATTRIBUTION

Source of Return	Sector Allocation	Stock Selection	Total
Communication Services	0.5%	0.5%	1.0%
Consumer Discretionary	-0.9%	-0.7%	-1.6%
Consumer Staples	0.4%	-0.5%	-0.1%
Energy	-0.1%	0.0%	0.0%
Financials	0.2%	0.0%	0.2%
Health Care	-5.4%	3.9%	-1.6%
Industrials	0.4%	0.7%	1.1%
Information Technology	-0.2%	8.0%	7.8%
Materials	-1.3%	2.8%	1.5%
Real Estate	0.5%	0.0%	0.5%
Utilities	0.1%	-0.4%	-0.2%
<b>Total Active (Local Currency)</b>	<b>-5.8%</b>	<b>14.4%</b>	<b>8.6%</b>

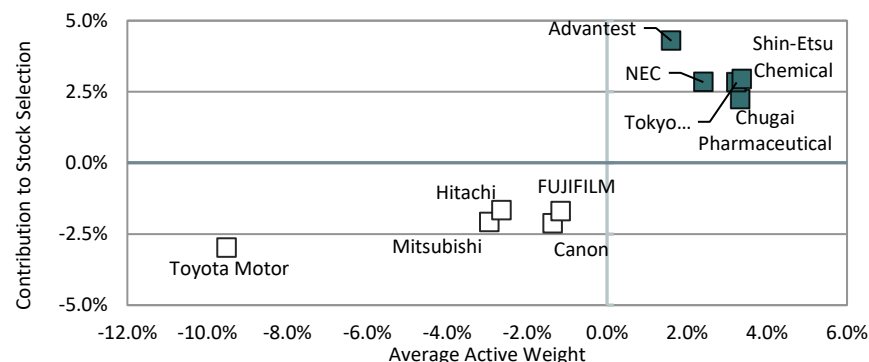
## CUMULATIVE ACTIVE RETURNS (%)



## AVERAGE ACTIVE EXPOSURE



## TOP VS. BOTTOM NAMES BY SELECTION EFFECT



Source: DWS, MSCI Barra, 9 Jul. 2024

The calculations presented herewith have been performed using MSCI Barra and may vary from the actual returns of the strategy due to different computational assumptions. **The CROCI Japan Strategy is live from 02 Feb. 2004.** Past performance, whether live or simulated, is not a reliable indicator of future results. All returns include reinvested dividends and do not include fees that might be charged on an investment product. All pro-forma performance data before respective live dates is simulated and was calculated by means of retroactive application of the Strategy models. It is not possible to invest directly in a strategy or index. The performance shown here is for model portfolios. The performance of any actual investment products may differ significantly. Allocations are subject to change without notice. This information is intended for informational purposes only and does not constitute investment advice, a recommendation, an offer or solicitation

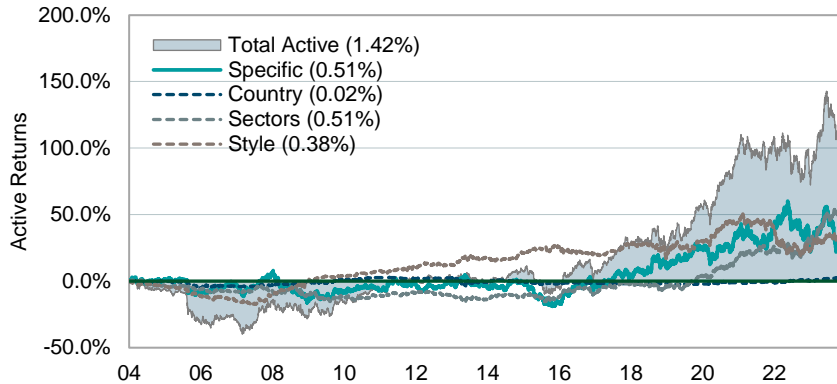
# CROCI JAPAN VS. MSCI JAPAN VALUE



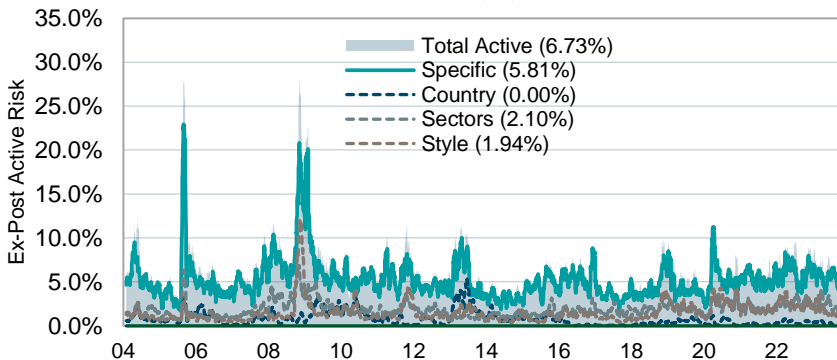
Multifactor Performance Attribution in JPY, 31 Dec. 2003 - 29 Dec. 2023

Simulated data prior to: 02 Feb. 2004

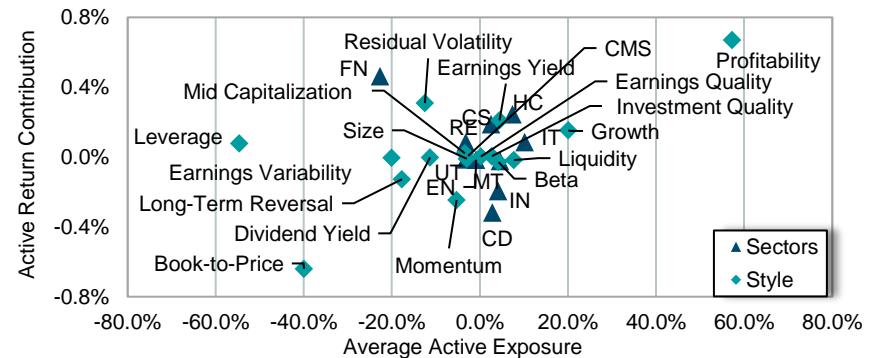
## CUMULATIVE ACTIVE RETURN ATTRIBUTION (%)



## ROLLING PERIOD EX-POST ACTIVE RISK (%)



## FACTOR ACTIVE RETURN CONTRIBUTION VS. AVERAGE EXPOSURE



## BEST-WORST POLICIES BY INFORMATION RATIO

Top Five (Ann. Contrib.)	Bottom Five (Ann. Contrib.)
Profitability(0.67%)	Book-to-Price(-0.64%)
Growth(0.15%)	Industrials(-0.20%)
Consumer Staples(0.19%)	Consumer Discretionary(-0.32%)
Earnings Yield(0.21%)	Momentum(-0.25%)
Residual Volatility(0.31%)	Long-Term Reversal(-0.13%)

\*Average Active Exposure to Risk Factor is represented as negative (Red) or positive (Green)

Source: DWS, MSCI Barra, 9 Jul. 2024

The calculations presented herewith have been performed using MSCI Barra and may vary from the actual returns of the strategy due to different computational assumptions. **The CROCI Japan Strategy is live from 02 Feb. 2004.** Past performance, whether live or simulated, is not a reliable indicator of future results. All returns include reinvested dividends and do not include fees that might be charged on an investment product. All pro-forma performance data before respective live dates is simulated and was calculated by means of retroactive application of the Strategy models. It is not possible to invest directly in a strategy or index. The performance shown here is for model portfolios. The performance of any actual investment products may differ significantly. This information is intended for informational purposes only and does not constitute investment advice, a recommendation, an offer or solicitation



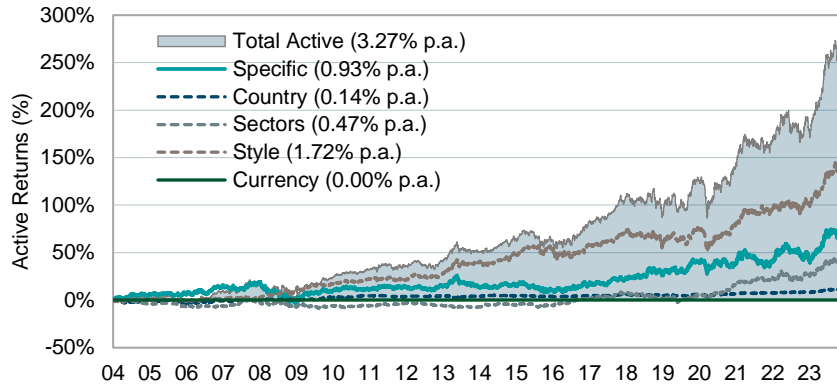
# CROCI JAPAN VS. TOPIX 100



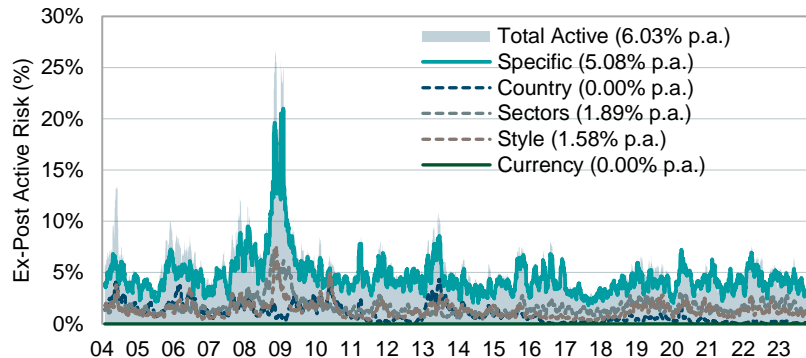
Multifactor Performance Attribution in JPY, 31 Dec. 2003 - 29 Dec. 2023

Simulated data prior to: 02 Feb. 2004

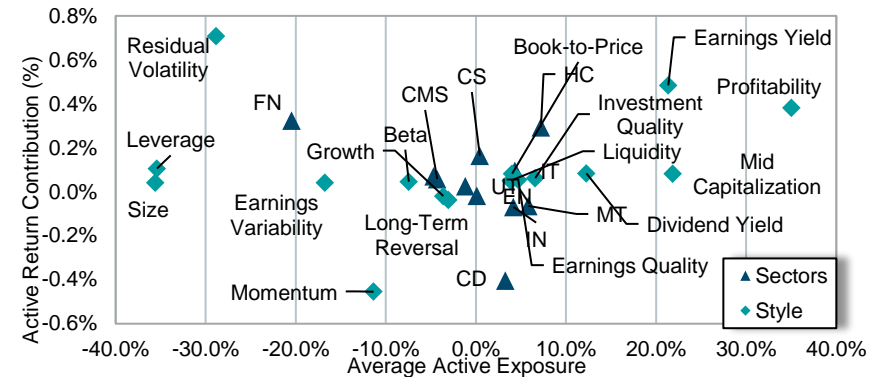
## CUMULATIVE ACTIVE RETURN ATTRIBUTION (%)



## ROLLING PERIOD EX-POST ACTIVE RISK (%)



## FACTOR ACTIVE RETURN CONTRIBUTION VS. AVERAGE EXPOSURE



## BEST-WORST POLICIES BY INFORMATION RATIO

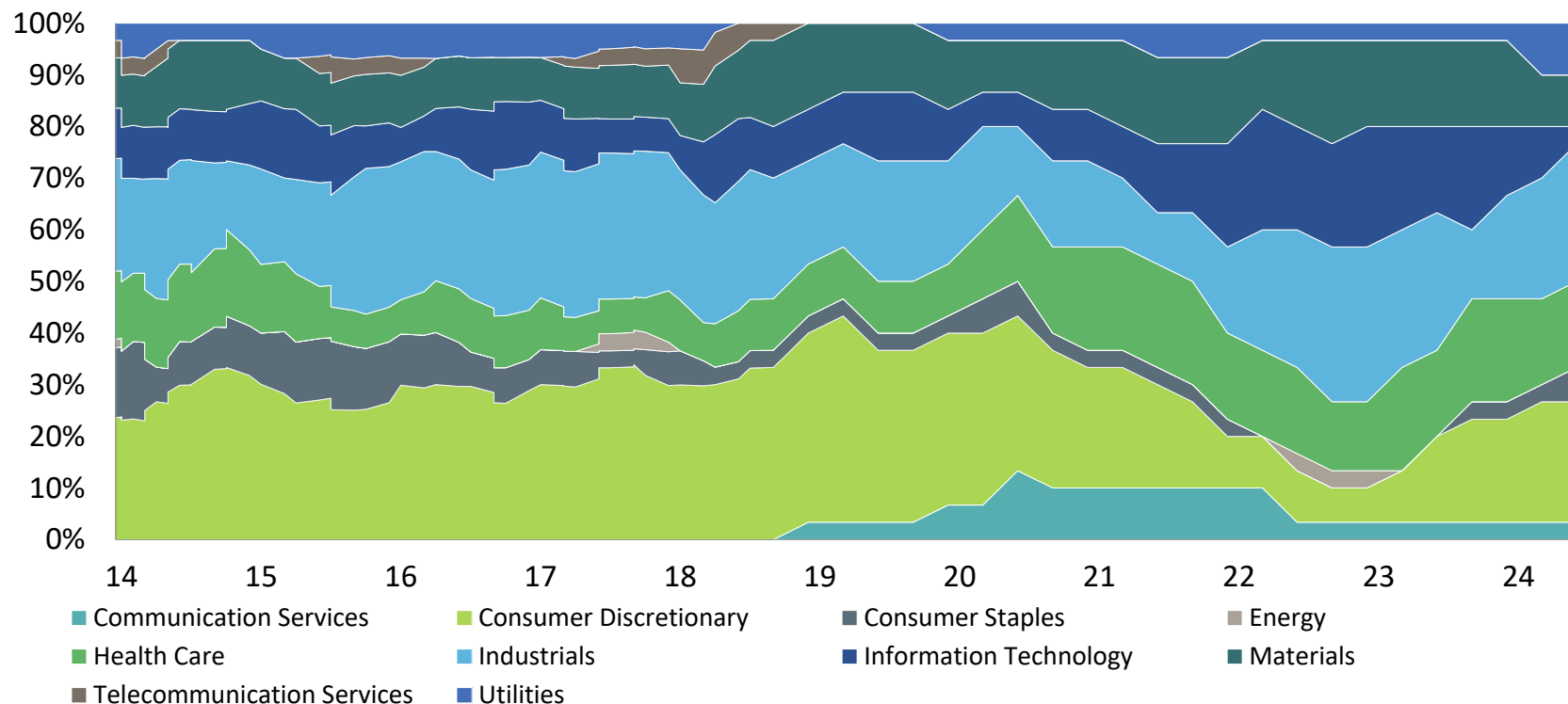
Top Five (Ann. Contrib.)	Bottom Five (Ann. Contrib.)
Earnings Yield(0.49%)	Momentum(-0.45%)
Profitability(0.38%)	Consumer Discretionary(-0.40%)
Residual Volatility(0.71%)	Long-Term Reversal(-0.04%)
Investment Quality(0.06%)	Growth(-0.02%)
Consumer Staples(0.16%)	Industrials(-0.07%)

\*Average Active Exposure to Risk Factor is represented as negative (Red) or positive (Green)

Source: DWS, MSCI Barra, 9 Jul. 2024

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## SECTOR ALLOCATIONS, JAN. 2014 – JUN. 2024



(1) The CROCI Japan Strategy has been run on a live basis since 2 Feb. 2004. Performance data before this date is simulated and was calculated by means of retroactive application of the Strategy model. The Strategy underwent the following implementation changes on 2<sup>nd</sup> June 2014: 1) Change of reconstitution frequency from monthly to quarterly; 2) Introduction of selection buffers to reduce constituent turnover. Effective 1st Jan. 2022, the Strategy incorporated environmental, social and governance (ESG) characteristics based on DWS Basic Exclusions, a DWS proprietary ESG assessment methodology, provided by DWS ESG Engine.

**Past performance, whether live or simulated, is not a reliable indicator of future results.** All returns include reinvested dividends (net of withholding tax) but do not include fees that might be charged on an investment product. It is not possible to invest directly in a strategy. The performance shown here is for model portfolios. The performance of any actual investment products may differ significantly. The CROCI team does not provide investment advice, stock recommendations or act in any other fiduciary capacity. Allocations are subject to change without notice. Source: DWS, Bloomberg, 9 Jul. 2024

# CROCI STRATEGIES & INDICES



## Key Risks

- Any products linked to a CROCI Strategy or Index may not be capital protected and investor capital may be at risk up to a total loss. Prospective investors should be aware investments linked to the Strategies or Indices may go up or down in value.
- Past performance, whether live or simulated, is not an indicator of future performance and any forecast or projection may not be realised.
- The CROCI Strategies have been built on the premise that stocks with lower CROCI Economic P/E ratios may outperform stocks with higher CROCI Economic P/E ratios over time. Moreover, the CROCI Global Dividends Strategy and CROCI US Dividends Strategy make the assumption that Dividend Yield, Cash Returns, Financial Leverage and Price Volatility can impact the ability for companies to maintain their dividend payments as well as provide performance. These premises may not be correct and prospective investors should evaluate these assumptions prior to investing in the CROCI Strategies.
- There is no implied assurance that a stock selected for the CROCI Global Dividend Strategy or CROCI US Dividends Strategy will not cut its dividend while it is in the portfolio.
- The CROCI REW Indices have been built on the premise that portfolio weightings should be determined by the CROCI Equity Earnings of each company and that this will provide a value-added to the portfolio construction process. This premise may not be correct and prospective investors should evaluate this assumption prior to investing in any of the Indices.
- CROCI's coverage universe does not aim to provide waterfront coverage of entire benchmarks. Some sectors may have a larger proportion of CROCI coverage than others.
- CROCI represents one of many possible ways to analyse and value stocks. Potential investors must form their own view of the CROCI methodology and evaluate whether CROCI and investments associated with CROCI are appropriate for them. The CROCI Team does not provide investment advice.

## Selection Methodology

CROCI coverage of Global Developed Markets<sup>(1)</sup>, excluding companies which has DWS ESG Basic Green rating<sup>(2)</sup> as 'ban', as Selection Universe as Selection Universe



Exclude companies with negative trailing 12M CROCI Economic P/E and retain largest companies by market cap<sup>(3)</sup>



Sector Filter: Retain only the cheapest 25 companies by trailing 12M CROCI Economic P/E in each GICS sector



Select 100 companies by trailing 12M CROCI Economic P/E  
Subject to region neutrality relative to the broader equity market<sup>(4)</sup>  
(Equal weighted, long only, no cash position, selected quarterly)

(1) Only companies in CROCI coverage are considered but excluding the companies from the Financials and Real estate sectors. Please refer to the appendix for details on the CROCI coverage.

(2) DWS Basic Green rating is DWS proprietary ESG assessment methodology, provided by DWS ESG Engine. Effective 1st Jan. 2022, the CROCI World Strategy incorporated environmental, social and governance (ESG) characteristics and qualifies in accordance with transparency pursuant to Article 8 of Regulation (EU) 2019/2088 on sustainability related disclosures in the financial services sector.

(3) Exclude bottom 25 percentile companies (bottom 15 percentile for existing constituents) by market cap

(4) A 20% - stock selection buffer is applied on each regional target number of shares to reduce turnover

Source: DWS, 29 Jul. 2022

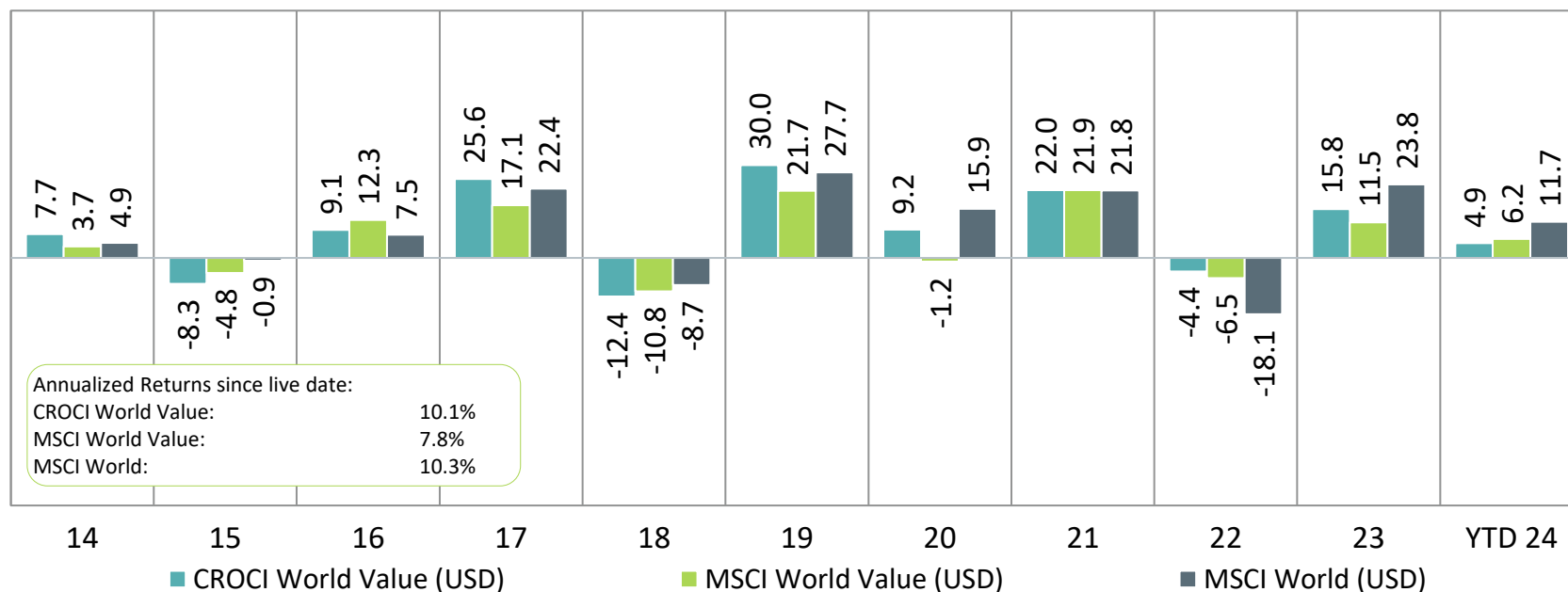
# CROCI WORLD STRATEGY



Live since 29 Nov. 2010

## ANNUAL RETURNS, 31 DEC. 2012 – 28 JUN. 2024<sup>(1)</sup>

In USD



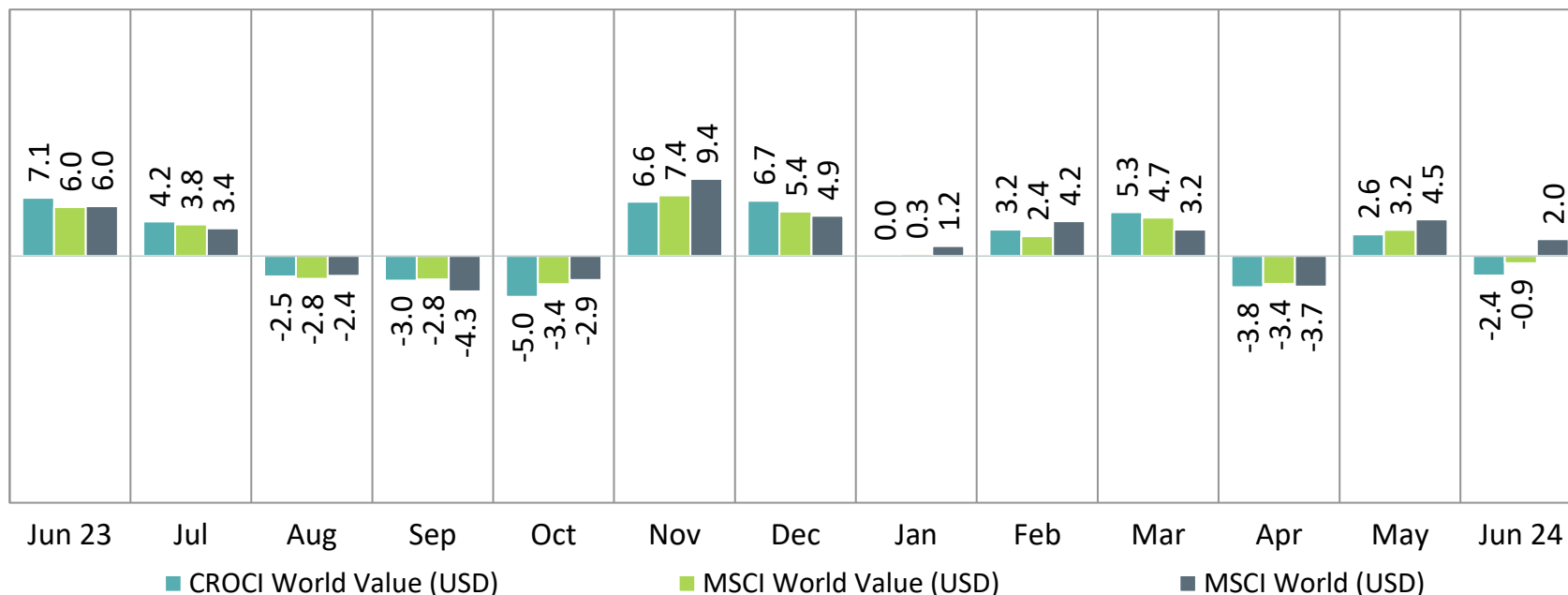
(1) The CROCI World Strategy has been run on a live basis since 29<sup>th</sup> Nov. 2010. Performance data before this date is simulated and was calculated by means of retroactive application of the Strategy model. The Strategy underwent the following implementation changes on 2<sup>nd</sup> June 2014: 1) Introduction of selection buffers to reduce constituent turnover . 2) Reconstitution frequency changed from monthly to quarterly. Effective 1<sup>st</sup> Jan. 2022, the Strategy incorporated environmental, social and governance (ESG) characteristics and qualifies in accordance with transparency pursuant to Article 8 of Regulation (EU) 2019/2088 on sustainability related disclosures in the financial services sector.

**Past performance, whether live or simulated, is not a reliable indicator of future results.** All returns include reinvested dividends (net of withholding tax) but do not include fees that might be charged on an investment product. It is not possible to invest directly in a strategy. The performance shown here is for model portfolios. The performance of any actual investment products may differ significantly. The CROCI team does not provide investment advice, stock recommendations or act in any other fiduciary capacity. Source: DWS, Bloomberg, 29 Dec. 2023

Live since 29 Nov. 2010

## MONTHLY RETURNS, JUN. 2023– JUN. 2024<sup>(1)</sup>

In USD



(1) The CROCI World Strategy has been run on a live basis since 29<sup>th</sup> Nov. 2010. Performance data before this date is simulated and was calculated by means of retroactive application of the Strategy model. The Strategy underwent the following implementation changes on 2<sup>nd</sup> June 2014: 1) Introduction of selection buffers to reduce constituent turnover . 2) Reconstitution frequency changed from monthly to quarterly. Effective 1<sup>st</sup> Jan. 2022, the Strategy incorporated environmental, social and governance (ESG) characteristics and qualifies in accordance with transparency pursuant to Article 8 of Regulation (EU) 2019/2088 on sustainability related disclosures in the financial services sector.

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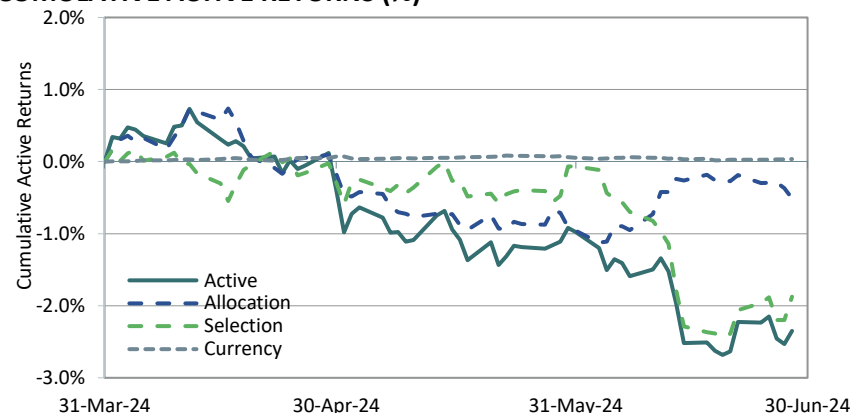
# 2Q 2024: CROCI WORLD VALUE VS. MSCI WORLD VALUE

Total Return Attribution in USD, 31 Mar. 2023 - 28 Jun. 2024

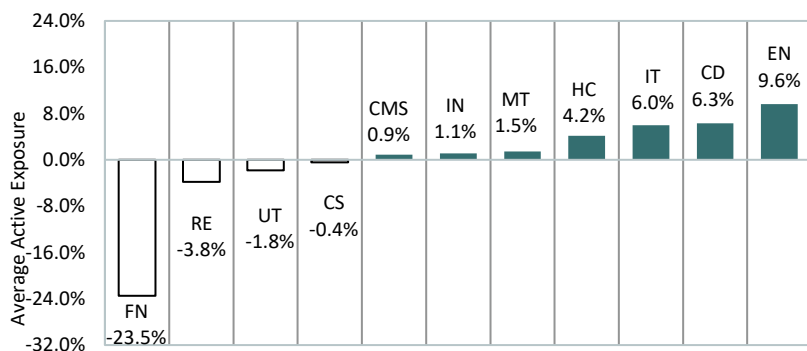
## RETURN ATTRIBUTION

Source of Return	Sector Allocation	Stock Selection	Total
Communication Services	0.0%	0.0%	0.0%
Consumer Discretionary	-0.5%	0.0%	-0.5%
Consumer Staples	0.0%	-0.8%	-0.9%
Energy	-0.1%	-0.3%	-0.3%
Financials	-0.3%	0.0%	-0.3%
Health Care	0.0%	-0.1%	-0.1%
Industrials	0.0%	-0.4%	-0.4%
Information Technology	0.6%	-0.1%	0.5%
Materials	0.0%	-0.4%	-0.4%
Real Estate	0.0%	0.0%	0.0%
Utilities	-0.1%	0.0%	0.0%
<b>Total Active (Local Currency)</b>	<b>-0.5%</b>	<b>-1.9%</b>	<b>-2.4%</b>
Currency			0.0%
<b>Total Active</b>			<b>-2.3%</b>

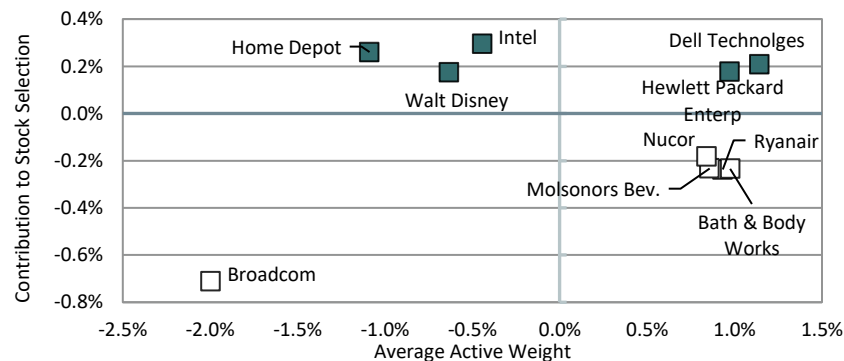
## CUMULATIVE ACTIVE RETURNS (%)



## AVERAGE ACTIVE EXPOSURE



## TOP VS. BOTTOM NAMES BY SELECTION EFFECT



Source: DWS, MSCI Barra, 9 Jul. 2024

The calculations presented herewith have been performed using MSCI Barra and may vary from the actual returns of the strategy due to different computational assumptions. **The CROCI World Strategy is live from 29 Nov. 2010.** Past performance, whether live or simulated, is not a reliable indicator of future results. All returns include reinvested dividends and do not include fees that might be charged on an investment product. All pro-forma performance data before respective live dates is simulated and was calculated by means of retroactive application of the Strategy models. It is not possible to invest directly in a strategy or index. The performance shown here is for model portfolios. The performance of any actual investment products may differ significantly. Allocations are subject to change without notice. This information is intended for informational purposes only and does not constitute investment advice, a recommendation, an offer or solicitation

# 1H 2024: CROCI WORLD VS. MSCI WORLD VALUE

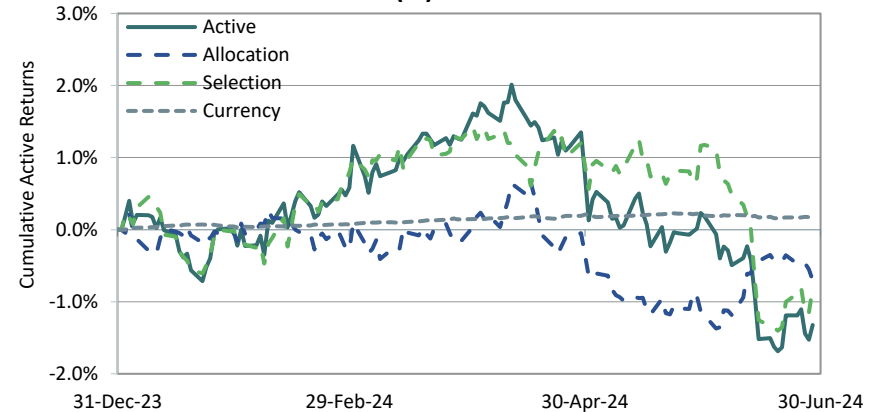


Total Return Attribution in USD, 31 Dec. 2023 – 28 Jun. 2024

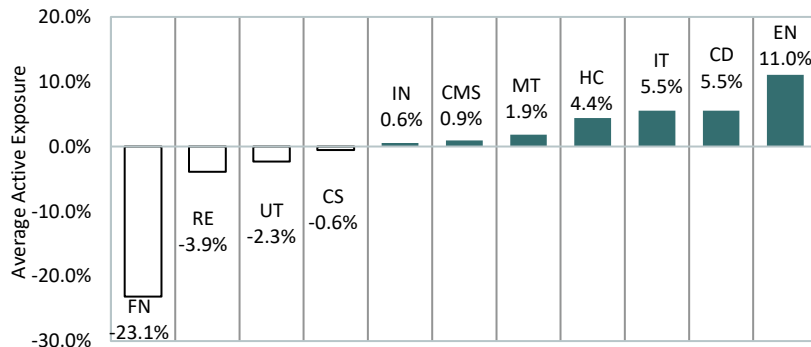
## RETURN ATTRIBUTION

Source of Return	Sector Allocation	Stock Selection	Total
Communication Services	0.0%	-0.2%	-0.3%
Consumer Discretionary	-0.4%	0.6%	0.2%
Consumer Staples	0.0%	-0.9%	-0.9%
Energy	0.2%	-0.1%	0.1%
Financials	-1.3%	0.0%	-1.3%
Health Care	-0.2%	0.4%	0.2%
Industrials	0.0%	0.1%	0.1%
Information Technology	0.7%	-0.3%	0.4%
Materials	-0.1%	-0.2%	-0.3%
Real Estate	0.4%	0.0%	0.4%
Utilities	0.1%	-0.1%	0.0%
<b>Total Active (Local Currency)</b>	<b>-0.7%</b>	<b>-0.8%</b>	<b>-1.5%</b>
Currency			0.2%
<b>Total Active</b>			<b>-1.3%</b>

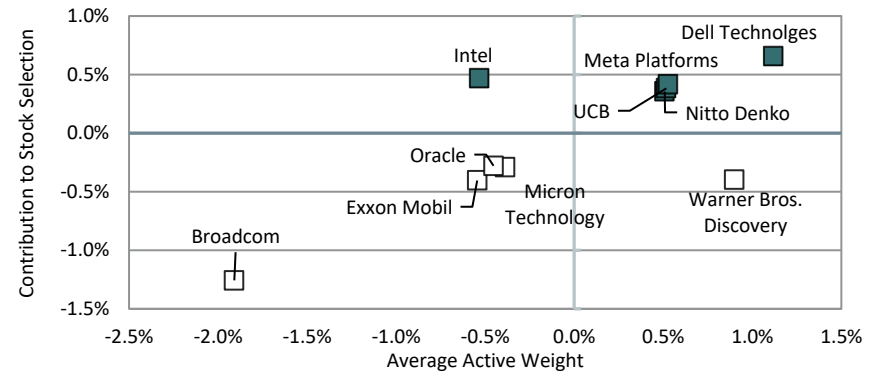
## CUMULATIVE ACTIVE RETURNS (%)



## AVERAGE ACTIVE EXPOSURE



## TOP VS. BOTTOM NAMES BY SELECTION EFFECT



Source: DWS, MSCI Barra, 9 Jul. 2024

The calculations presented herewith have been performed using MSCI Barra and may vary from the actual returns of the strategy due to different computational assumptions. **The CROCI World Strategy is live from 29 Nov. 2010.** Past performance, whether live or simulated, is not a reliable indicator of future results. All returns include reinvested dividends and do not include fees that might be charged on an investment product. All pro-forma performance data before respective live dates is simulated and was calculated by means of retroactive application of the Strategy models. It is not possible to invest directly in a strategy or index. The performance shown here is for model portfolios. The performance of any actual investment products may differ significantly. Allocations are subject to change without notice. This information is intended for informational purposes only and does not constitute investment advice, a recommendation, an offer or solicitation



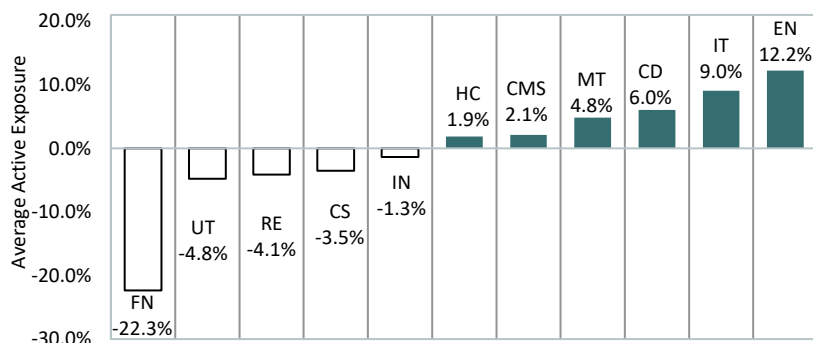
# 2023: CROCI WORLD VS. MSCI WORLD VALUE

Total Return Attribution in USD, 31 Dec. 2022 – 29 Dec. 2023

## RETURN ATTRIBUTION

Source of Return	Sector Allocation	Stock Selection	Total
Communication Services	-0.1%	2.0%	1.9%
Consumer Discretionary	1.1%	-1.2%	0.0%
Consumer Staples	0.5%	-0.6%	-0.1%
Energy	-1.1%	0.8%	-0.3%
Financials	-1.2%	0.0%	-1.2%
Health Care	-0.2%	0.9%	0.6%
Industrials	-0.1%	0.7%	0.6%
Information Technology	2.7%	-0.7%	2.0%
Materials	0.0%	0.5%	0.5%
Real Estate	0.1%	0.0%	0.1%
Utilities	0.6%	-0.2%	0.4%
<b>Total Active (Local Currency)</b>	<b>2.3%</b>	<b>2.3%</b>	<b>4.5%</b>
Currency			-0.1%
<b>Total Active</b>			<b>4.4%</b>

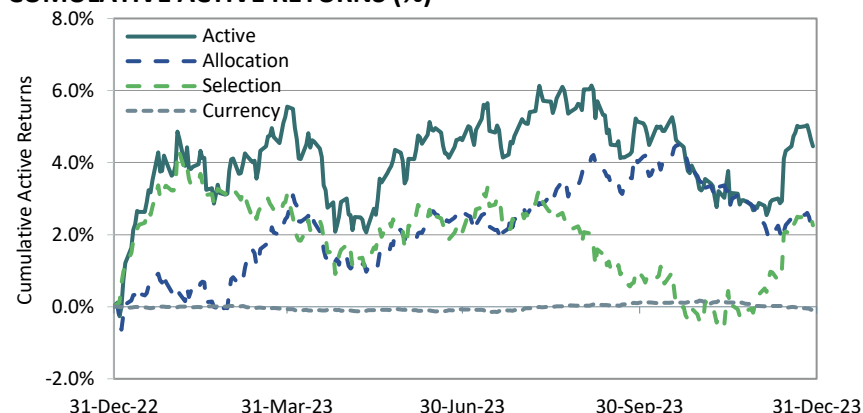
## AVERAGE ACTIVE EXPOSURE



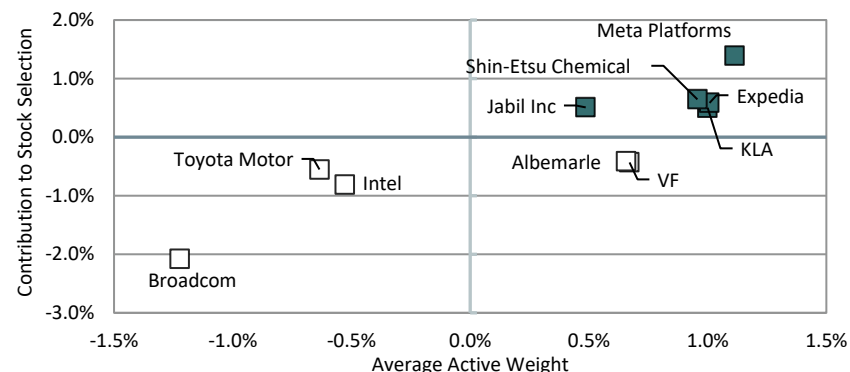
Source: DWS, MSCI Barra, 16 Jan. 2024

The calculations presented herewith have been performed using MSCI Barra and may vary from the actual returns of the strategy due to different computational assumptions. **The CROCI World Strategy is live from 29 Nov. 2010.** Past performance, whether live or simulated, is not a reliable indicator of future results. All returns include reinvested dividends and do not include fees that might be charged on an investment product. All pro-forma performance data before respective live dates is simulated and was calculated by means of retroactive application of the Strategy models. It is not possible to invest directly in a strategy or index. The performance shown here is for model portfolios. The performance of any actual investment products may differ significantly. Allocations are subject to change without notice. This information is intended for informational purposes only and does not constitute investment advice, a recommendation, an offer or solicitation

## CUMULATIVE ACTIVE RETURNS (%)



## TOP VS. BOTTOM NAMES BY SELECTION EFFECT



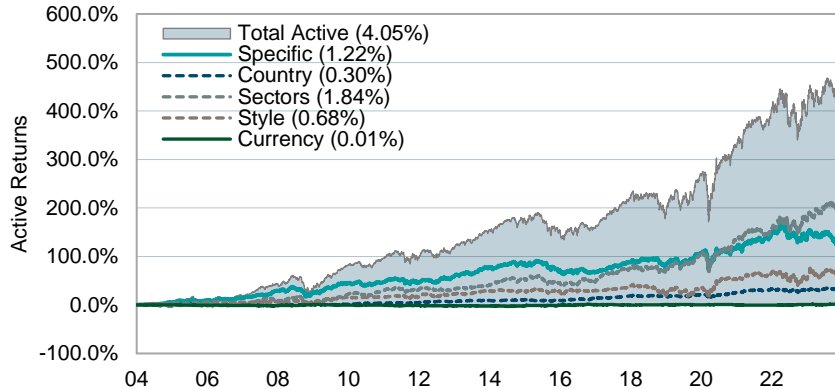
# CROCI WORLD VS. MSCI WORLD VALUE



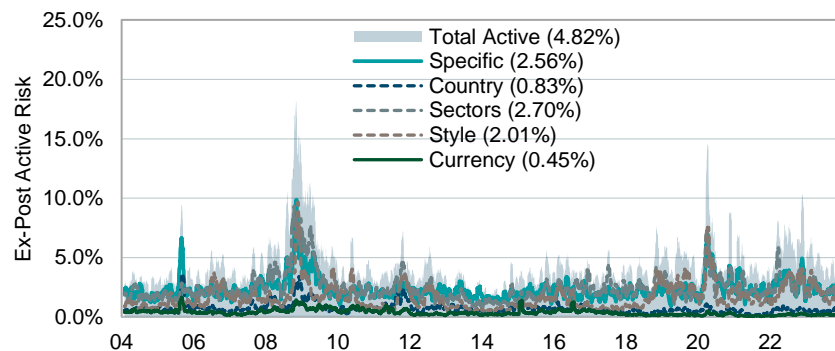
Multifactor Performance Attribution in USD, 31 Dec. 2003 - 29 Dec. 2023

Simulated data prior to: 29 Nov. 2010

## CUMULATIVE ACTIVE RETURN ATTRIBUTION (%)



## ROLLING PERIOD EX-POST ACTIVE RISK (%)

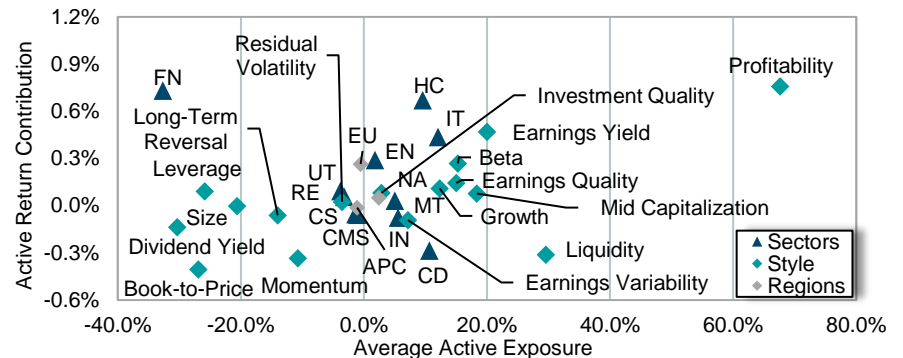


Source: DWS, MSCI Barra, 16 Jan. 2024

The calculations presented herewith have been performed using MSCI Barra and may vary from the actual returns of the strategy due to different computational assumptions.

The CROCI World Strategy is live from 29 Nov. 2010. Past performance, whether live or simulated, is not a reliable indicator of future results. All returns include reinvested dividends and do not include fees that might be charged on an investment product. All pro-forma performance data before respective live dates is simulated and was calculated by means of retroactive application of the Strategy models. It is not possible to invest directly in a strategy or index. The performance shown here is for model portfolios. The performance of any actual investment products may differ significantly. Allocations are subject to change without notice. This information is intended for informational purposes only and does not constitute investment advice, a recommendation, an offer or solicitation

## FACTOR ACTIVE RETURN CONTRIBUTION VS. AVERAGE EXPOSURE



## BEST-WORST POLICIES BY INFORMATION RATIO

Top Five (Ann. Contrib.)	Bottom Five (Ann. Contrib.)
Profitability(0.76%)	Book-to-Price(-0.41%)
Earnings Yield(0.47%)	Momentum(-0.33%)
Investment Quality(0.08%)	Liquidity(-0.31%)
Growth(0.11%)	Earnings Variability(-0.09%)
Earnings Quality(0.14%)	Consumer Discretionary(-0.29%)

\*Average Active Exposure to Risk Factor is represented as negative (Red) or positive (Green)

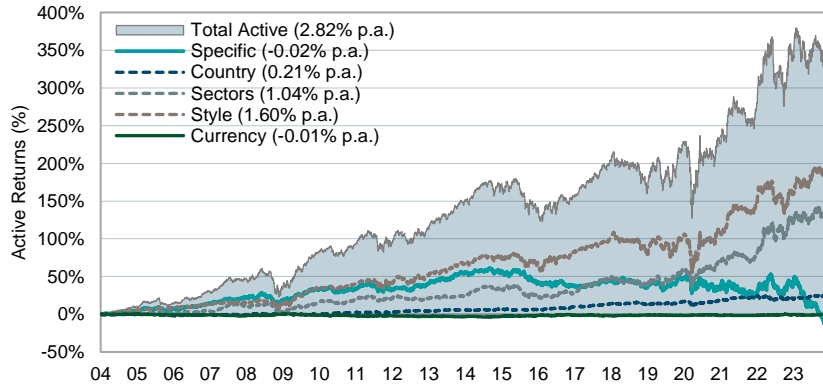
# CROCI WORLD VS. MSCI WORLD



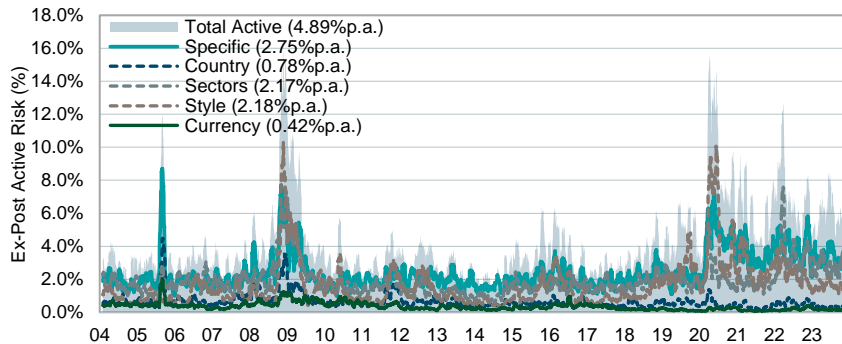
Multifactor Performance Attribution in USD, 31 Dec. 2003 - 29 Dec. 2023

Simulated data prior to: 29 Nov. 2010

## CUMULATIVE ACTIVE RETURN ATTRIBUTION (%)



## ROLLING PERIOD EX-POST ACTIVE RISK (%)

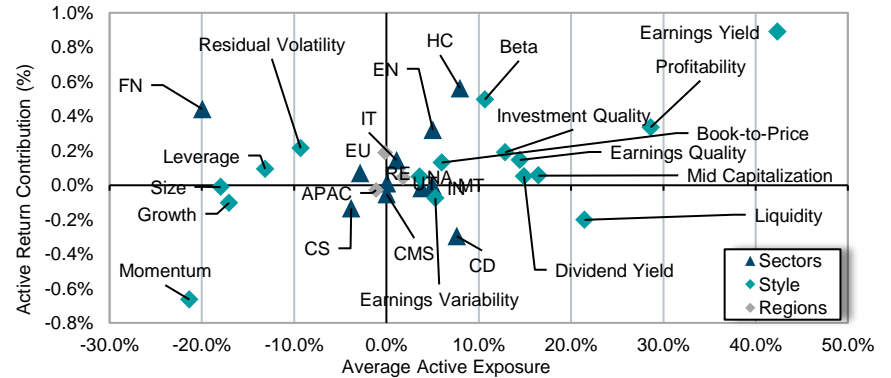


Source: DWS, MSCI Barra, 8 Apr. 2024

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## FACTOR ACTIVE RETURN CONTRIBUTION VS. AVERAGE EXPOSURE



## BEST-WORST POLICIES BY INFORMATION RATIO

Top Five (Ann. Contrib.)	Bottom Five (Ann. Contrib.)
Investment Quality(0.19%p.a.)	Momentum(-0.66%p.a.)
Earnings Yield(0.89%p.a.)	Growth(-0.10%p.a.)
Profitability(0.34%p.a.)	Consumer Discretionary(-0.30%p.a.)
Earnings Quality(0.15%p.a.)	Consumer Staples(-0.13%p.a.)
Health Care(0.56%p.a.)	Earnings Variability(-0.07%p.a.)

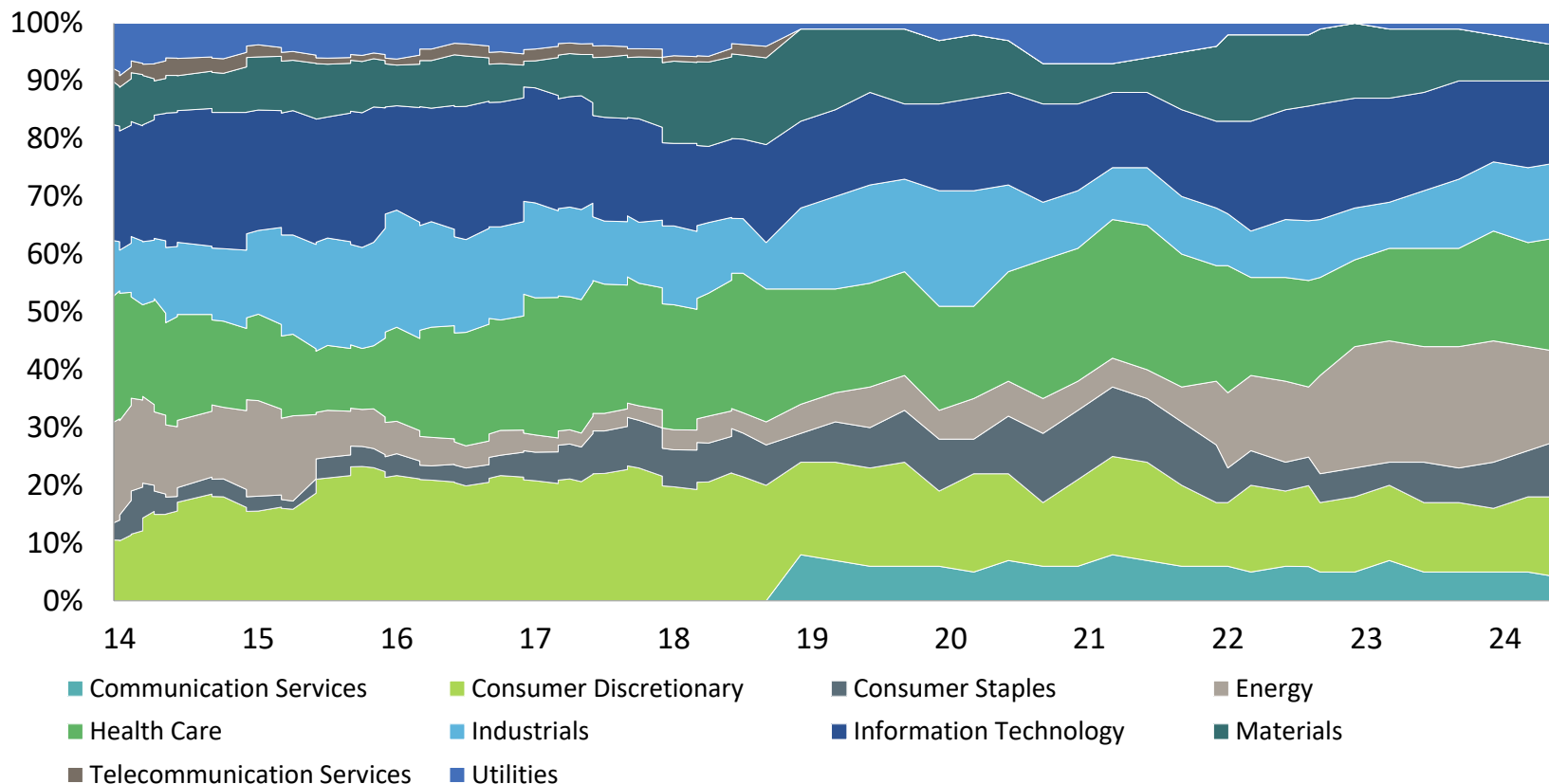
\*Average Active Exposure to Risk Factor is represented as negative (Red) or positive (Green)

# CROCI WORLD STRATEGY



Live since 29 Nov. 2010

SECTOR ALLOCATIONS, DEC. 2012 – JUN. 2024



(1) The CROCI World Strategy has been run on a live basis since 29<sup>th</sup> Nov. 2010. Performance data before this date is simulated and was calculated by means of retroactive application of the Strategy model. The Strategy underwent the following implementation changes on 2<sup>nd</sup> June 2014: 1) Introduction of selection buffers to reduce constituent turnover . 2) Reconstitution frequency changed from monthly to quarterly. Effective 1<sup>st</sup> Jan. 2022, the Strategy incorporated environmental, social and governance (ESG) characteristics and qualifies in accordance with transparency pursuant to Article 8 of Regulation (EU) 2019/2088 on sustainability related disclosures in the financial services sector. Allocations are subject to change without notice.

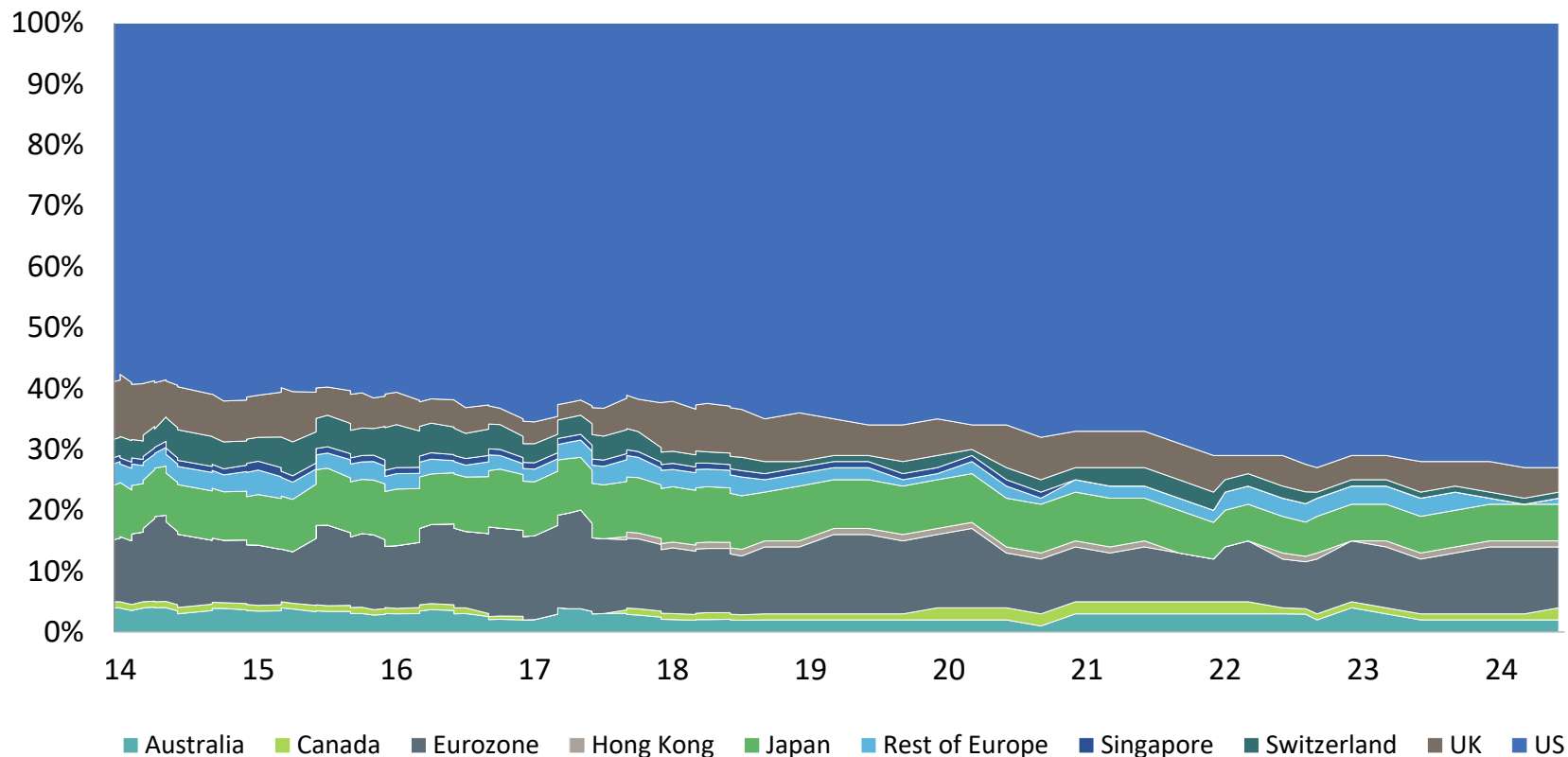
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# CROCI WORLD STRATEGY



Live since 29 Nov. 2010

COUNTRY ALLOCATIONS, DEC. 2012 – JUN. 2024



(1) The CROCI World Strategy has been run on a live basis since 29<sup>th</sup> Nov. 2010. Performance data before this date is simulated and was calculated by means of retroactive application of the Strategy model. Effective 1<sup>st</sup> Jan. 2022, the Strategy incorporated environmental, social and governance (ESG) characteristics and qualifies in accordance with transparency pursuant to Article 8 of Regulation (EU) 2019/2088 on sustainability related disclosures in the financial services sector. Allocations are subject to change without notice

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# CROCI STRATEGIES & INDICES



## Key Risks

- Any products linked to a CROCI Strategy or Index may not be capital protected and investor capital may be at risk up to a total loss. Prospective investors should be aware investments linked to the Strategies or Indices may go up or down in value.
- Past performance, whether live or simulated, is not an indicator of future performance and any forecast or projection may not be realised.
- The CROCI Strategies have been built on the premise that stocks with lower CROCI Economic P/E ratios may outperform stocks with higher CROCI Economic P/E ratios over time. Moreover, the CROCI Global Dividends Strategy and CROCI US Dividends Strategy make the assumption that Dividend Yield, Cash Returns, Financial Leverage and Price Volatility can impact the ability for companies to maintain their dividend payments as well as provide performance. These premises may not be correct and prospective investors should evaluate these assumptions prior to investing in the CROCI Strategies.
- There is no implied assurance that a stock selected for the CROCI Global Dividend Strategy or CROCI US Dividends Strategy will not cut its dividend while it is in the portfolio.
- CROCI's coverage universe does not aim to provide waterfront coverage of entire benchmarks. Some sectors may have a larger proportion of CROCI coverage than others.
- CROCI represents one of many possible ways to analyse and value stocks. Potential investors must form their own view of the CROCI methodology and evaluate whether CROCI and investments associated with CROCI are appropriate for them. The CROCI Team does not provide investment advice.

CROCI Coverage of US, Europe and Japan<sup>(1)</sup>, excluding companies which do not meet the DWS Basic Exclusions criteria<sup>(2)</sup>, as Selection Pool <sup>(1)</sup>



Exclude companies with negative Trailing 12M CROCI Economic P/E<sup>(3)</sup>



Identify the 3 Cheapest Sectors by Median Trailing 12M CROCI Economic P/E<sup>(4)</sup>



For each of these three sectors, select the 10 cheapest stocks based on Trailing 12M CROCI Economic P/E<sup>(4)</sup>

(Equal weighted, long only, no cash position, selected quarterly)

(1) Only companies in CROCI coverage are considered but excluding the companies from the Financials and Real estate sectors. Please refer to the appendix for details on the CROCI coverage.

(2) Effective 1st Jan. 2022, the Strategy incorporated environmental, social and governance (ESG) characteristics based on DWS Basic Exclusions, a DWS proprietary ESG assessment methodology, provided by DWS ESG Engine

(3) After excluding companies for negative Trailing 12M CROCI Economic P/E, the largest companies by market cap are retained, with a stock buffer (an existing constituent is only removed once its market cap rank is below the specified threshold).

(4) Stocks buffer of 5 (i.e. a stock must be one of cheapest 10 in its sector in order to enter the portfolio, but will only be replaced if it is no longer among the 15 cheapest in its sector ) and Sector buffer of 1 (i.e. a sector must be one of the three sectors with the lowest median economic P/E in order to enter the portfolio, but must have a higher median economic P/E than the fourth-ranked sector to be replaced) are applied to reduce turnover

Source: DWS, 9 Jul. 2024

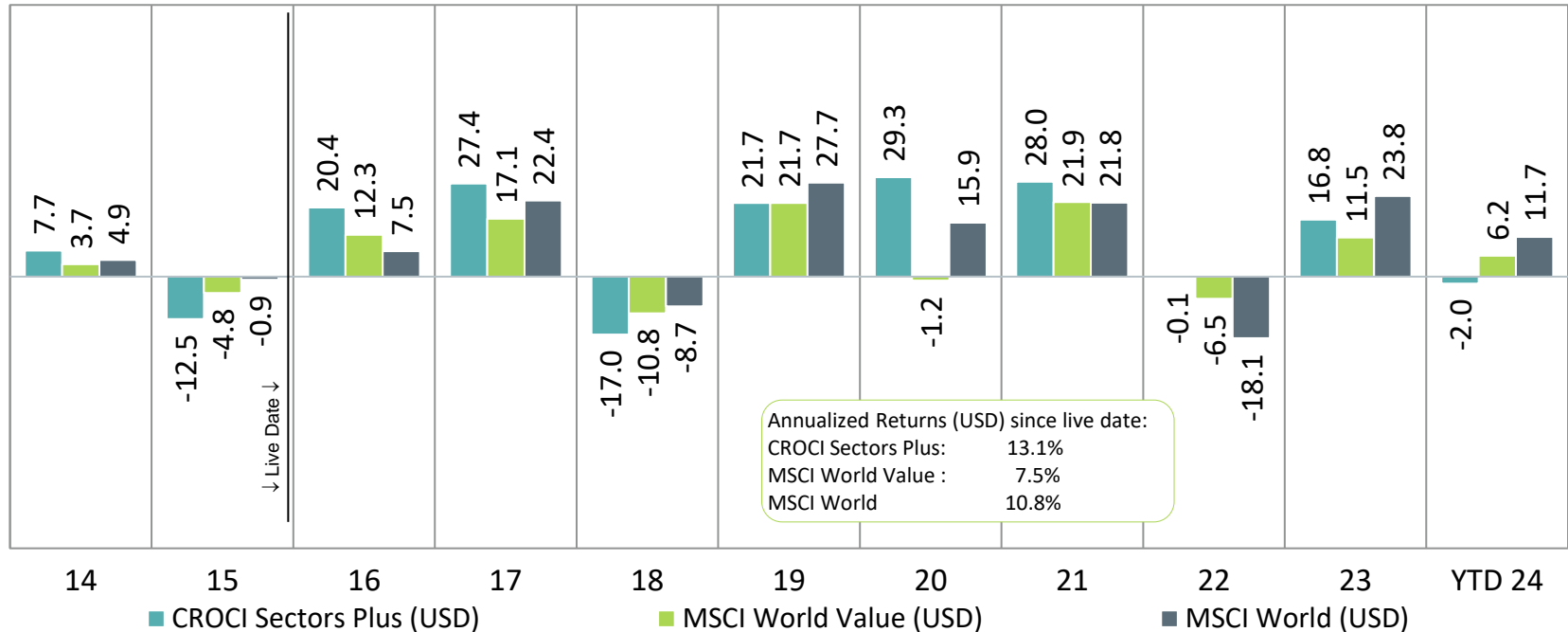
# CROCI SECTORS PLUS STRATEGY



Simulated Data Prior to 18 Nov. 2015

## ANNUAL RETURNS %, 31 DEC. 2014 – 28 JUN. 2024<sup>(1)</sup>

In USD



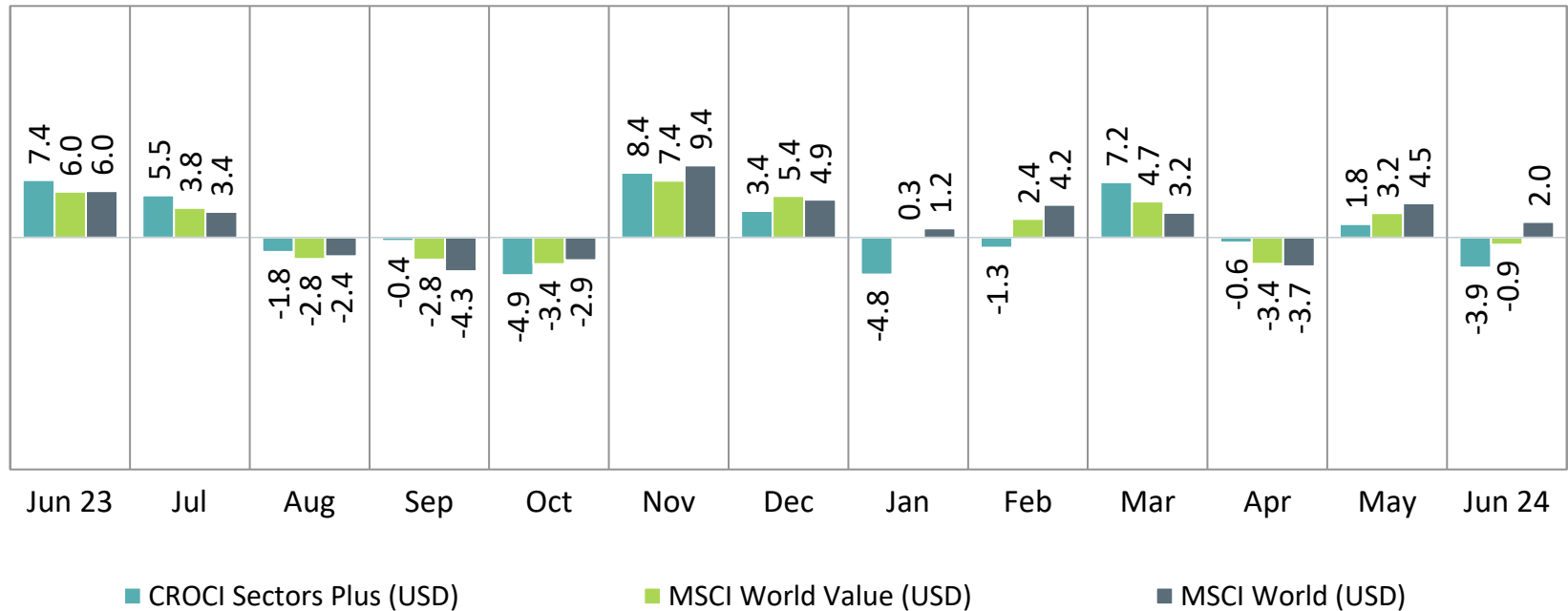
(1) The CROCI Sectors Plus Strategy is live from 18 Nov. 2015. Performance data before this date is simulated and was calculated by means of retroactive application of the Strategy model. Effective 1st Jan. 2022, the Strategy incorporated environmental, social and governance (ESG) characteristics based on DWS Basic Exclusions, a DWS proprietary ESG assessment methodology, provided by DWS ESG Engine.

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## MONTHLY RETURNS %, JUN. 2023- JUN. 2024<sup>(1)</sup>

In USD



(1) The CROCI Sectors Plus Strategy is live from 18 Nov. 2015. Performance data before this date is simulated and was calculated by means of retroactive application of the Strategy model. Effective 1st Jan. 2022, the Strategy incorporated environmental, social and governance (ESG) characteristics based on DWS Basic Exclusions, a DWS proprietary ESG assessment methodology, provided by DWS ESG Engine.

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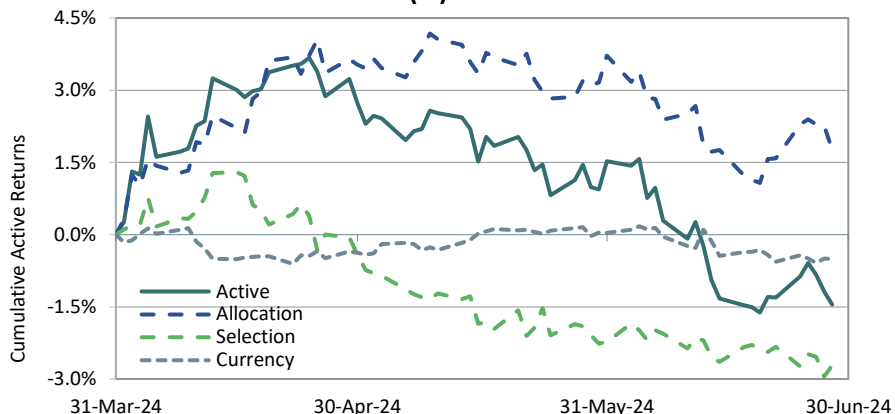
# 2Q 2024: CROCI SECTORS PLUS VS. MSCI WORLD VALUE

Total Return Attribution in USD, 31 Mar. 2023 - 28 Jun. 2024

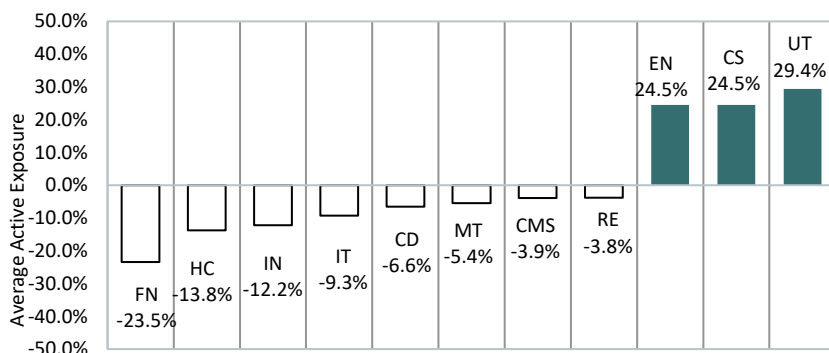
## RETURN ATTRIBUTION

Source of Return	Sector Allocation	Stock Selection	Total
Communication Services	0.1%	0.0%	0.1%
Consumer Discretionary	0.5%	0.0%	0.5%
Consumer Staples	0.2%	-2.2%	-2.0%
Energy	0.1%	-0.7%	-0.5%
Financials	-0.3%	0.0%	-0.3%
Health Care	0.3%	0.0%	0.3%
Industrials	0.2%	0.0%	0.2%
Information Technology	-0.6%	0.0%	-0.6%
Materials	0.1%	0.0%	0.1%
Real Estate	0.0%	0.0%	0.0%
Utilities	1.1%	0.2%	1.3%
<b>Total Active (Local Currency)</b>	<b>1.8%</b>	<b>-2.7%</b>	<b>-0.9%</b>
Currency			-0.5%
<b>Total Active</b>			<b>-1.5%</b>

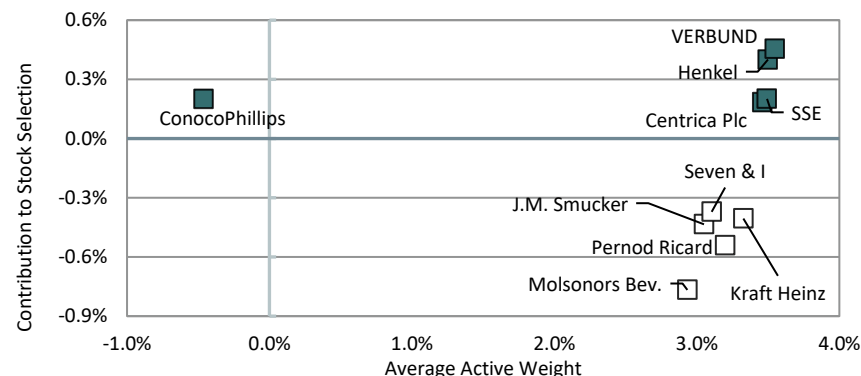
## CUMULATIVE ACTIVE RETURNS (%)



## AVERAGE ACTIVE EXPOSURE



## TOP VS. BOTTOM NAMES BY SELECTION EFFECT



Source: DWS, MSCI Barra, 9 Jul. 2024

The calculations presented herewith have been performed using MSCI Barra and may vary from the actual returns of the strategy due to different computational assumptions. **The CROCI Sectors Plus Strategy is live from 18 Nov. 2015.** Past performance, whether live or simulated, is not a reliable indicator of future results. All returns include reinvested dividends and do not include fees that might be charged on an investment product. All pro-forma performance data before respective live dates is simulated and was calculated by means of retroactive application of the Strategy models. It is not possible to invest directly in a strategy or index. The performance shown here is for model portfolios. The performance of any actual investment products may differ significantly. Allocations are subject to change without notice. This information is intended for informational purposes only and does not constitute investment advice, a recommendation, an offer or solicitation

# 1H 2024: CROCI SECTORS PLUS VS. MSCI WORLD VALUE

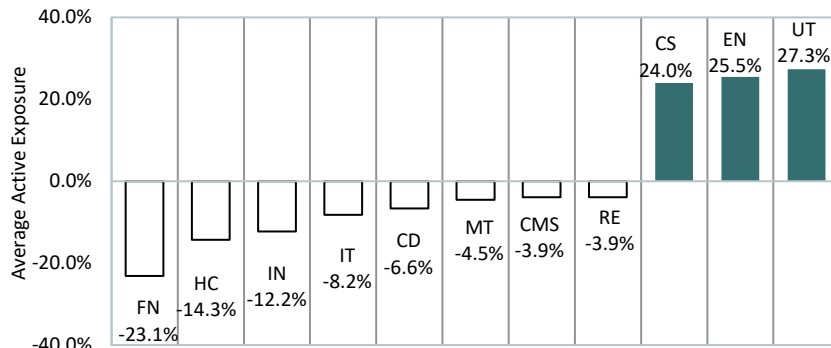


Total Return Attribution in USD, 31 Dec. 2023 – 28 Jun. 2024

## RETURN ATTRIBUTION

Source of Return	Sector Allocation	Stock Selection	Total
Communication Services	0.1%	0.0%	0.1%
Consumer Discretionary	0.4%	0.0%	0.4%
Consumer Staples	-0.5%	-3.2%	-3.7%
Energy	0.8%	0.7%	1.4%
Financials	-1.2%	0.0%	-1.2%
Health Care	0.8%	0.0%	0.8%
Industrials	-0.1%	0.0%	-0.1%
Information Technology	-2.3%	0.5%	-1.8%
Materials	-0.2%	0.2%	0.0%
Real Estate	0.4%	0.0%	0.4%
Utilities	-1.0%	-1.9%	-2.9%
<b>Total Active (Local Currency)</b>	<b>-3.0%</b>	<b>-3.7%</b>	<b>-6.7%</b>
Currency			-1.5%
<b>Total Active</b>			<b>-8.2%</b>

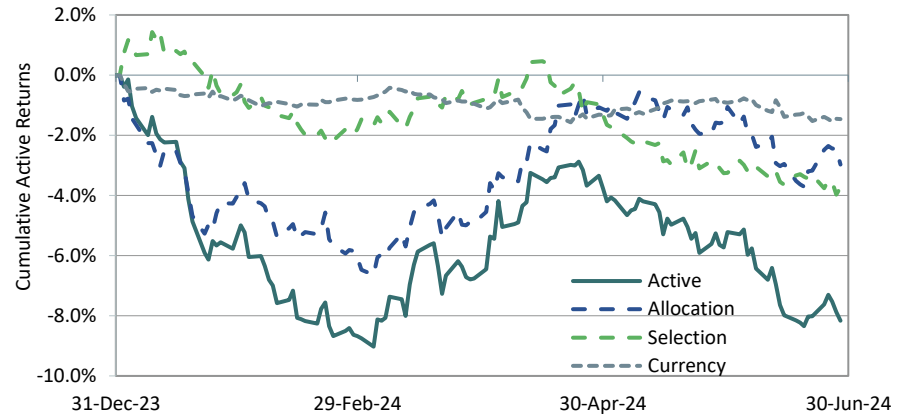
## AVERAGE ACTIVE EXPOSURE



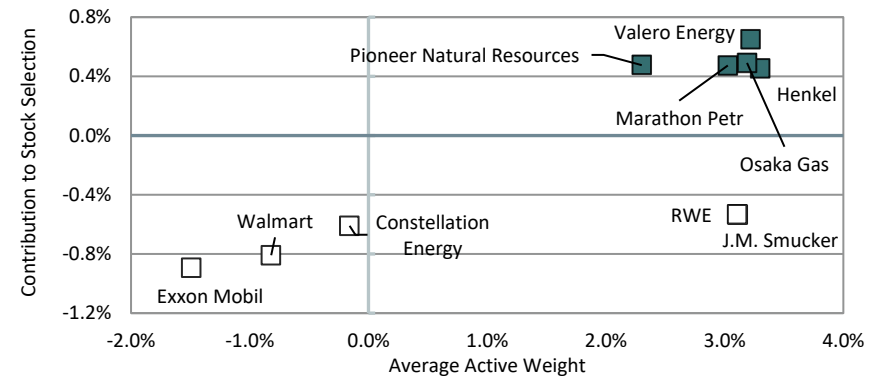
Source: DWS, MSCI Barra, 9 Jul. 2024

The calculations presented herewith have been performed using MSCI Barra and may vary from the actual returns of the strategy due to different computational assumptions. **The CROCI Sectors Plus Strategy is live from 18 Nov. 2015.** Past performance, whether live or simulated, is not a reliable indicator of future results. All returns include reinvested dividends and do not include fees that might be charged on an investment product. All pro-forma performance data before respective live dates is simulated and was calculated by means of retroactive application of the Strategy models. It is not possible to invest directly in a strategy or index. The performance shown here is for model portfolios. The performance of any actual investment products may differ significantly. Allocations are subject to change without notice. This information is intended for informational purposes only and does not constitute investment advice, a recommendation, an offer or solicitation

## CUMULATIVE ACTIVE RETURNS (%)



## TOP VS. BOTTOM NAMES BY SELECTION EFFECT



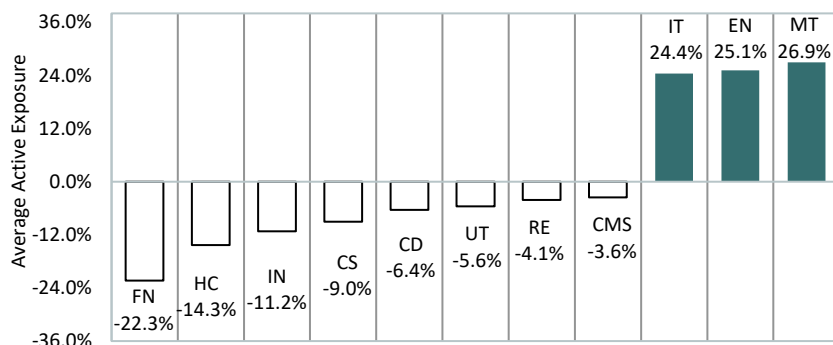
# 2023: CROCI SECTORS PLUS VS. MSCI WORLD VALUE

Total Return Attribution in USD, 31 Dec. 2022 – 29 Dec. 2023

## RETURN ATTRIBUTION

Source of Return	Sector Allocation	Stock Selection	Total
Communication Services	-0.1%	0.0%	-0.1%
Consumer Discretionary	-0.9%	0.0%	-0.9%
Consumer Staples	1.3%	0.0%	1.3%
Energy	-2.0%	1.8%	-0.2%
Financials	-1.2%	0.0%	-1.2%
Health Care	2.4%	0.0%	2.4%
Industrials	-0.9%	0.0%	-0.9%
Information Technology	6.9%	-1.9%	5.0%
Materials	0.0%	0.9%	0.8%
Real Estate	0.1%	0.0%	0.1%
Utilities	0.7%	0.0%	0.7%
<b>Total Active (Local Currency)</b>	<b>6.2%</b>	<b>0.8%</b>	<b>7.0%</b>
Currency			-1.8%
<b>Total Active</b>			<b>5.3%</b>

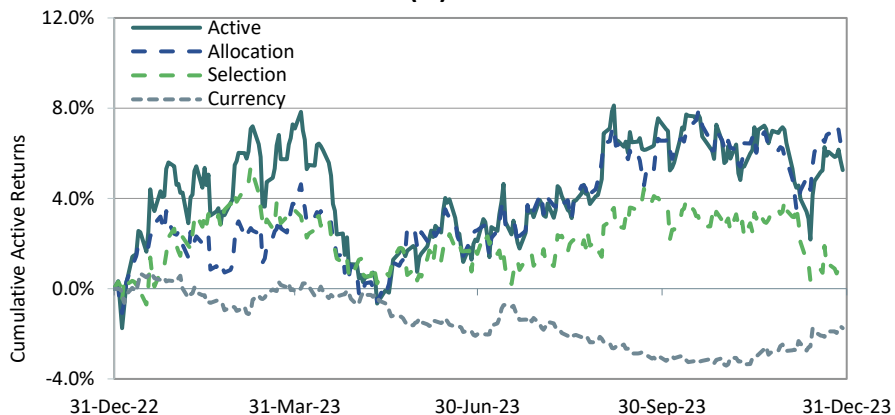
## AVERAGE ACTIVE EXPOSURE



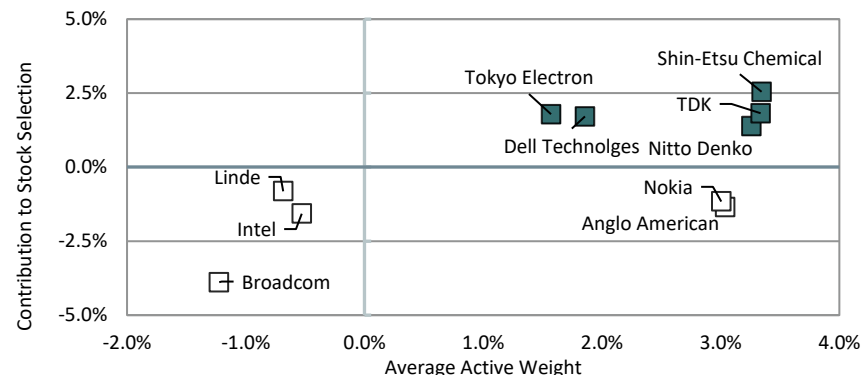
Source: DWS, MSCI Barra, 9 Jul. 2024

The calculations presented here have been performed using MSCI Barra and may vary from the actual returns of the strategy due to different computational assumptions. **The CROCI Sectors Plus Strategy is live from 18 Nov. 2015.** Past performance, whether live or simulated, is not a reliable indicator of future results. All returns include reinvested dividends and do not include fees that might be charged on an investment product. All pro-forma performance data before respective live dates is simulated and was calculated by means of retroactive application of the Strategy models. It is not possible to invest directly in a strategy or index. The performance shown here is for model portfolios. The performance of any actual investment products may differ significantly. Allocations are subject to change without notice. This information is intended for informational purposes only and does not constitute investment advice, a recommendation, an offer or solicitation

## CUMULATIVE ACTIVE RETURNS (%)



## TOP VS. BOTTOM NAMES BY SELECTION EFFECT



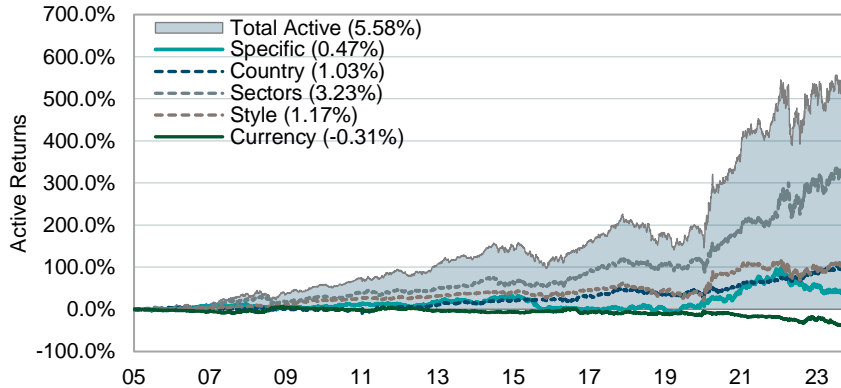
# CROCI SECTORS PLUS VS. MSCI WORLD VALUE



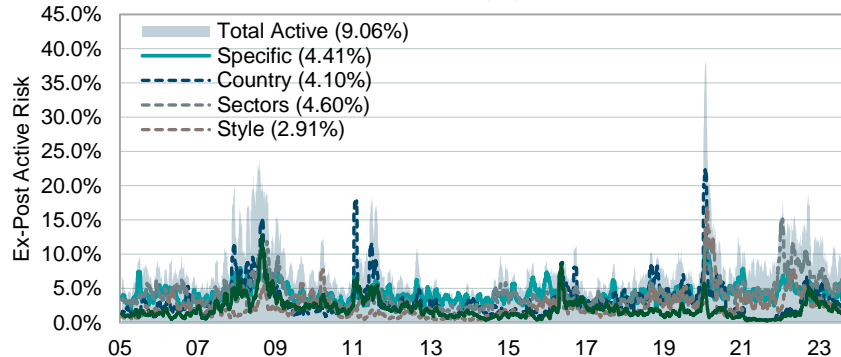
Multifactor Performance Attribution in USD, 6 Mar. 2005 - 29 Dec. 2023

Simulated data prior to: 18 Nov. 2015

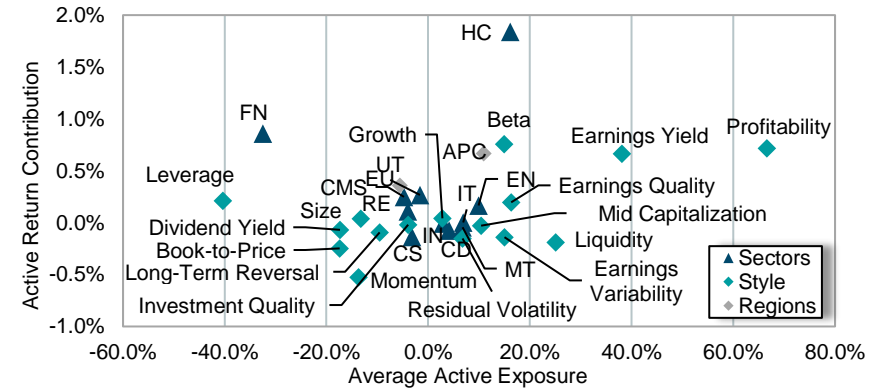
## CUMULATIVE ACTIVE RETURN ATTRIBUTION (%)



## ROLLING PERIOD EX-POST ACTIVE RISK (%)



## FACTOR ACTIVE RETURN CONTRIBUTION VS. AVERAGE EXPOSURE



## BEST-WORST POLICIES BY INFORMATION RATIO

Top Five (Ann. Contrib.)	Bottom Five (Ann. Contrib.)
Profitability(0.72%)	Book-to-Price(-0.25%)
Earnings Quality(0.20%)	Momentum(-0.53%)
Health Care(1.84%)	Earnings Variability(-0.14%)
Earnings Yield(0.66%)	Liquidity(-0.19%)
Financials(0.86%)	Residual Volatility(-0.15%)

\*Average Active Exposure to Risk Factor is represented as negative (Red) or positive (Green)

Source: DWS, MSCI Barra, 9 Jul. 2024

The calculations presented herewith have been performed using MSCI Barra and may vary from the actual returns of the strategy due to different computational assumptions.

The CROCI Sectors Plus Strategy is live from 18 Nov. 2015. Past performance, whether live or simulated, is not a reliable indicator of future results. All returns include reinvested dividends and do not include fees that might be charged on an investment product. All pro-forma performance data before respective live dates is simulated and was calculated by means of retroactive application of the Strategy models. It is not possible to invest directly in a strategy or index. The performance shown here is for model portfolios. The performance of any actual investment products may differ significantly. This information is intended for informational purposes only and does not constitute investment advice, a recommendation, an offer or solicitation.

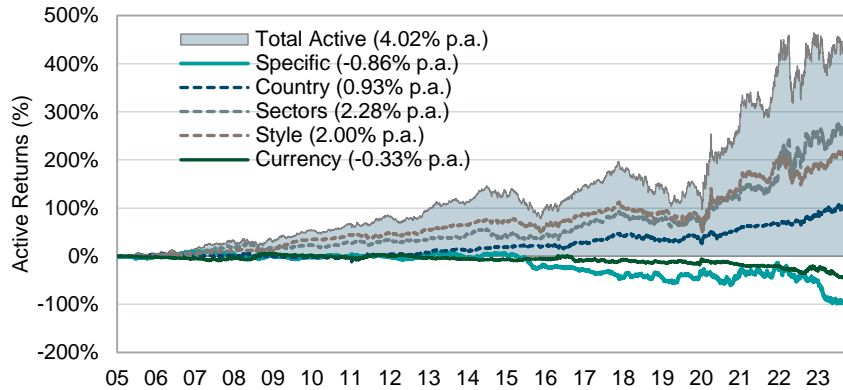
# CROCI SECTORS PLUS VS. MSCI WORLD



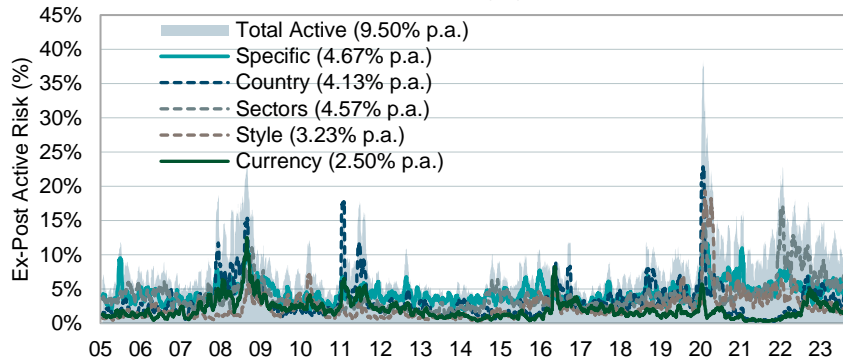
Multifactor Performance Attribution in USD, 6 Mar. 2005 - 29 Dec. 2023

Simulated data prior to: 18 Nov. 2015

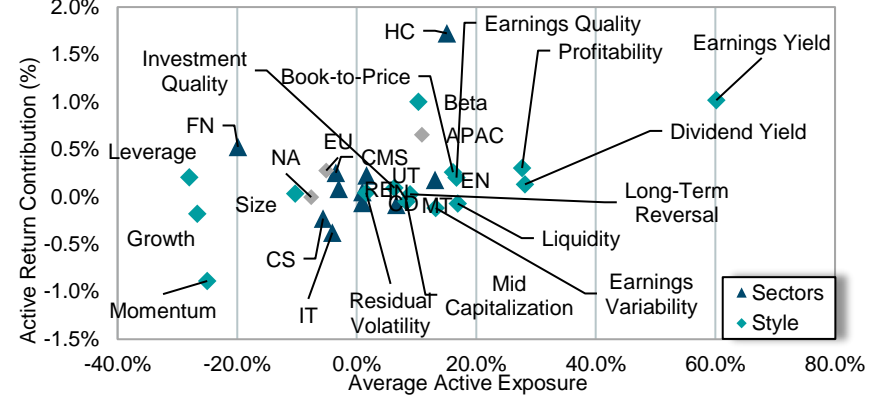
## CUMULATIVE ACTIVE RETURN ATTRIBUTION (%)



## ROLLING PERIOD EX-POST ACTIVE RISK (%)



## FACTOR ACTIVE RETURN CONTRIBUTION VS. AVERAGE EXPOSURE



## BEST-WORST POLICIES BY INFORMATION RATIO

Top Five (Ann. Contrib.)	Bottom Five (Ann. Contrib.)
Earnings Quality(0.20%)	Growth(-0.18%)
Health Care(1.72%)	Momentum(-0.89%)
Earnings Yield(1.02%)	Earnings Variability(-0.12%)
Profitability(0.30%)	Consumer Staples(-0.23%)
Investment Quality(0.09%)	Information Technology(-0.38%)

\*Average Active Exposure to Risk Factor is represented as negative (Red) or positive (Green)

Source: DWS, MSCI Barra, 9 Jul. 2024

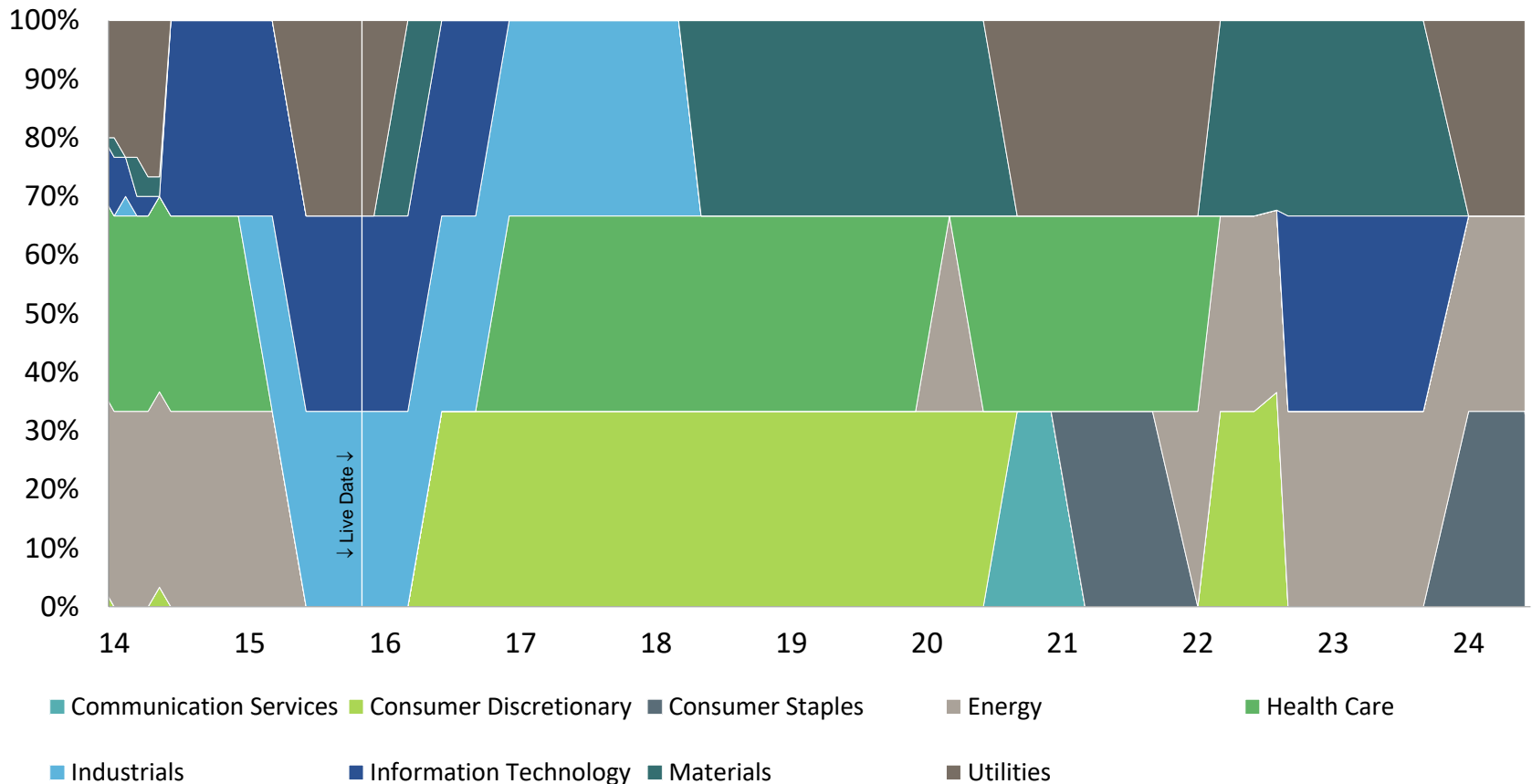
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# CROCI SECTORS PLUS STRATEGY

Simulated Data Prior to 18 Nov. 2015

SECTOR ALLOCATIONS, JAN. 2014 – JUN. 2024



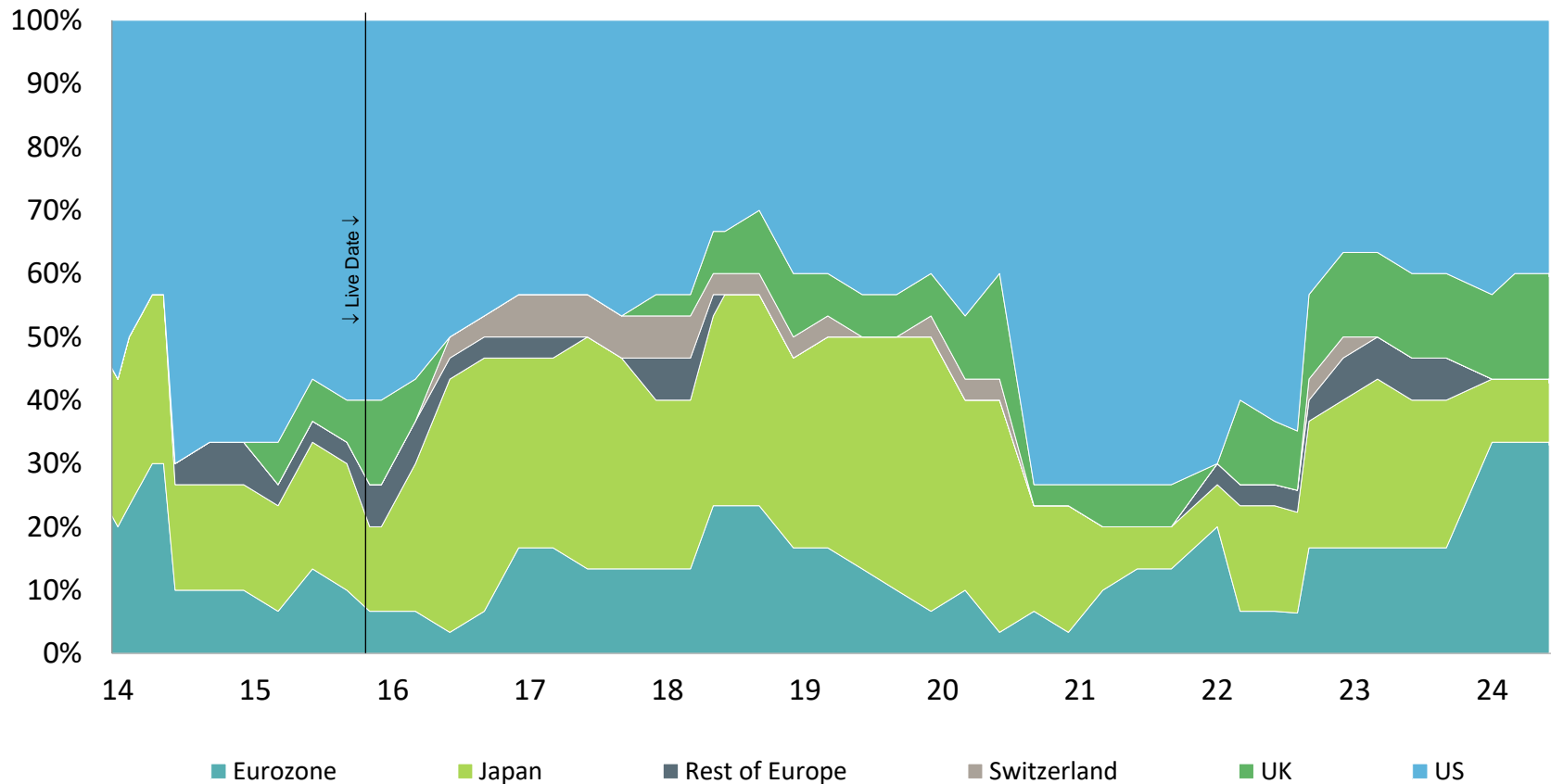
Source: DWS, Bloomberg, 9 Jul. 2024

(1) The CROCI Sectors Plus Strategy is live from 18 Nov. 2015. All pro-forma data before respective live dates is simulated and was calculated by means of retroactive application of the Strategy models. **The data shown here is for model portfolios.** It is not possible to invest directly in a strategy or index. Allocations are subject to change without notice. This information is intended for informational purposes only and does not constitute investment advice, a recommendation, an offer or solicitation

# CROCI SECTORS PLUS STRATEGY

Simulated Data Prior to 18 Nov. 2015

COUNTRY ALLOCATIONS, JAN. 2014 – JUN. 2024



Source: DWS, Bloomberg, 9 Jul. 2024

(1) The CROCI Sectors Plus Strategy is live from 18 Nov. 2015. All pro-forma data before respective live dates is simulated and was calculated by means of retroactive application of the Strategy models. **The data shown here is for model portfolios.** It is not possible to invest directly in a strategy or index. Allocations are subject to change without notice. This information is intended for informational purposes only and does not constitute investment advice, a recommendation, an offer or solicitation



# CROCI STRATEGIES & INDICES



## Key Risks

- Any products linked to a CROCI Strategy or Index may not be capital protected and investor capital may be at risk up to a total loss. Prospective investors should be aware investments linked to the Strategies or Indices may go up or down in value.
- Past performance, whether live or simulated, is not an indicator of future performance and any forecast or projection may not be realised.
- The CROCI Strategies have been built on the premise that stocks with lower CROCI Economic P/E ratios may outperform stocks with higher CROCI Economic P/E ratios over time. Moreover, the CROCI Global Dividends Strategy and CROCI US Dividends Strategy make the assumption that Dividend Yield, Cash Returns, Financial Leverage and Price Volatility can impact the ability for companies to maintain their dividend payments as well as provide performance. These premises may not be correct and prospective investors should evaluate these assumptions prior to investing in the CROCI Strategies.
- There is no implied assurance that a stock selected for the CROCI Global Dividend Strategy or CROCI US Dividends Strategy will not cut its dividend while it is in the portfolio.
- The CROCI REW Indices have been built on the premise that portfolio weightings should be determined by the CROCI Equity Earnings of each company and that this will provide a value-added to the portfolio construction process. This premise may not be correct and prospective investors should evaluate this assumption prior to investing in any of the Indices.
- CROCI's coverage universe does not aim to provide waterfront coverage of entire benchmarks. Some sectors may have a larger proportion of CROCI coverage than others.
- CROCI represents one of many possible ways to analyse and value stocks. Potential investors must form their own view of the CROCI methodology and evaluate whether CROCI and investments associated with CROCI are appropriate for them. The CROCI Team does not provide investment advice.

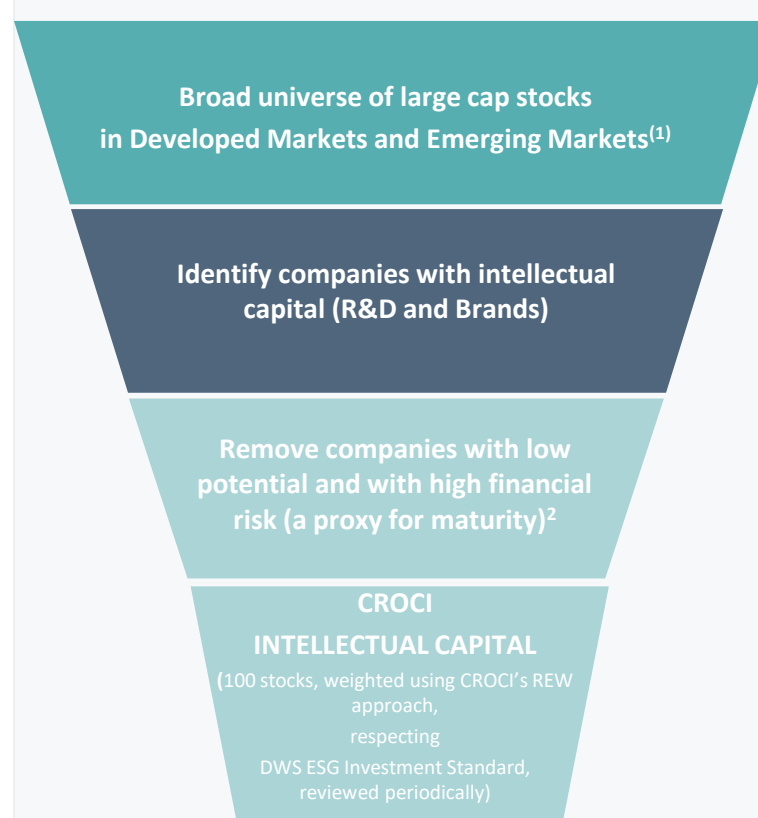
# CROCI INTELLECTUAL CAPITAL STRATEGY

## Selection Methodology

### Strategy Description

- **Investment Objective:** to invest in firms that have strong intellectual capital, in any region or industry – but without limiting to exposure to only fashionable short-term trends
- Strategy is weighted by CROCI economic earnings in order to avoid discrimination against innovative but “expensive” companies
- Remove companies which are on the ‘banned list’ under the DWS ESG Investment Standard framework<sup>3</sup>
- Benchmark: MSCI World NR
- Performance drivers: exposure to intellectual capital and CROCI real earnings weightings
- Investment style: thematic with a modest value/quality tilt
- Holdings: 100
- Market capitalization: focus on large and mid caps
- Derivatives: no tactical use of derivatives

### Portfolio Construction



(1) That are included in the CROCI database

(2) Lowest risk-adjusted profitability by region and highest financial leverage by region

(3) DWS ESG Investment Standard for the companies is provided by DWS ESG Engine

(4) No assurance can be made that the stated investment objectives will be achieved.

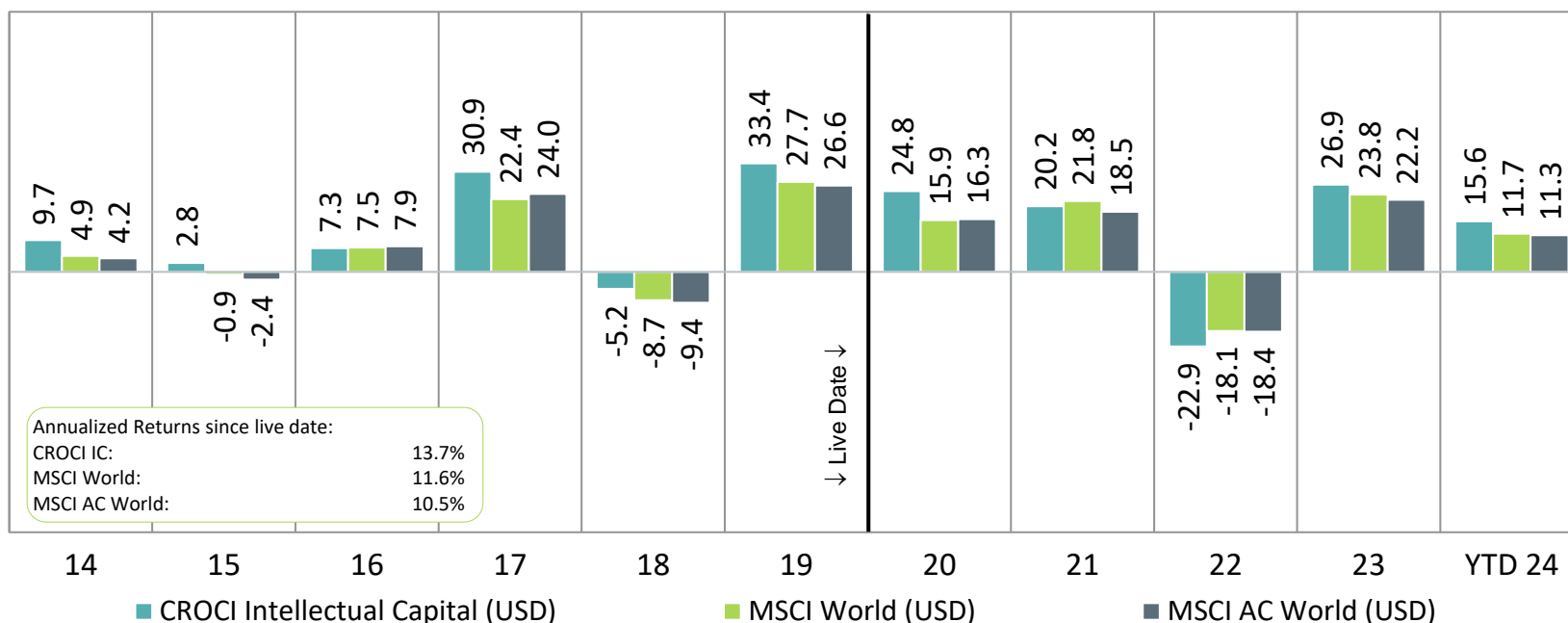
Source: DWS

# CROCI INTELLECTUAL CAPITAL STRATEGY

Simulated data prior to 15 Apr. 2019

## ANNUAL RETURNS %, 31 DEC. 2013 – 28 JUN. 2024<sup>(1)</sup>

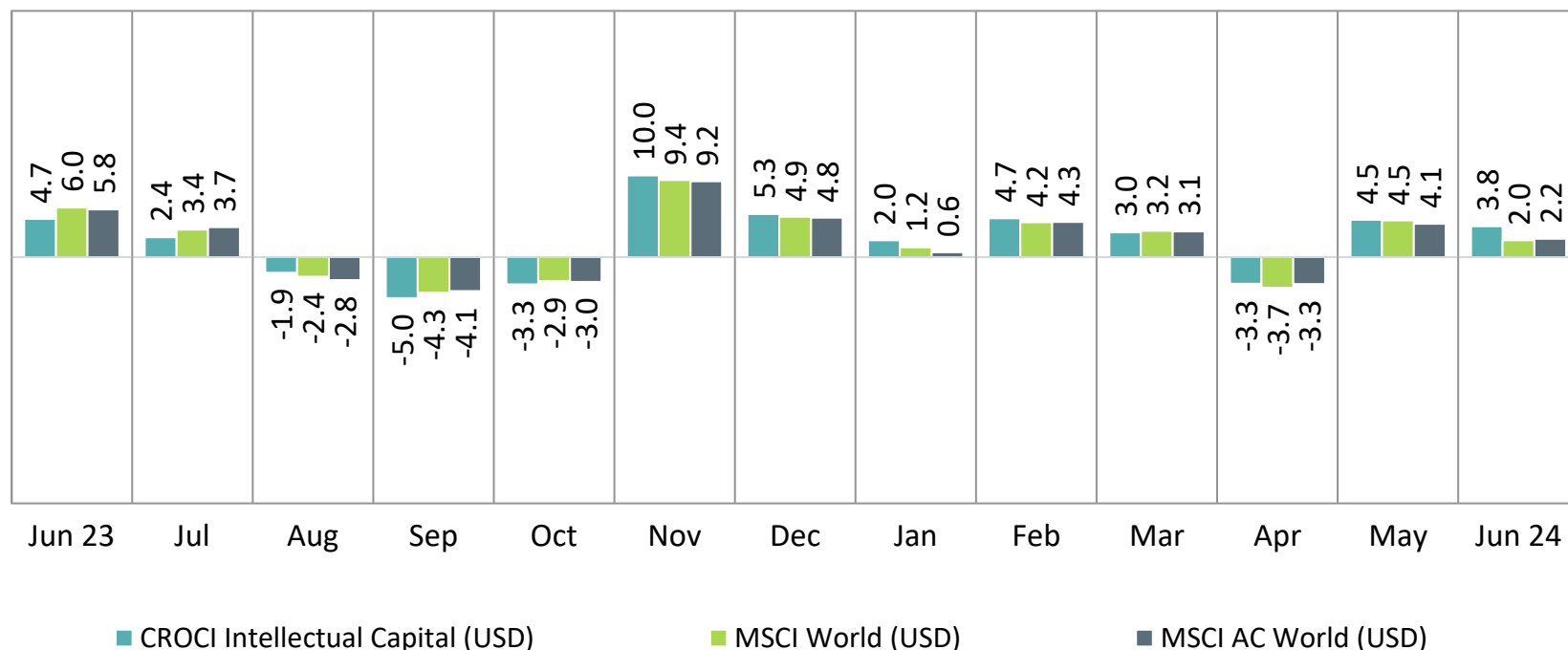
In USD



(1) The CROCI Intellectual Capital Strategy has been run on a live basis since 15<sup>th</sup> Apr. 2019. Performance data before this date is simulated and was calculated by means of retroactive application of the Strategy model. **Past performance, whether live or simulated, is not a reliable indicator of future results.** All returns include reinvested dividends (net of withholding tax) but do not include fees that might be charged on an investment product. It is not possible to invest directly in a strategy. The performance shown here is for model portfolios. The performance of any actual investment products may differ significantly. The CROCI team does not provide investment advice, stock recommendations or act in any other fiduciary capacity. Source: DWS, Bloomberg, 9 Jul. 2024

## MONTHLY RETURNS %, JUN. 2023- JUN. 2024<sup>(1)</sup>

In USD



(1) The CROCI Intellectual Capital Strategy has been run on a live basis since 15<sup>th</sup> Apr. 2019. Performance data before this date is simulated and was calculated by means of retroactive application of the Strategy model. **Past performance, whether live or simulated, is not a reliable indicator of future results.** All returns include reinvested dividends (net of withholding tax) but do not include fees that might be charged on an investment product. It is not possible to invest directly in a strategy. The performance shown here is for model portfolios. The performance of any actual investment products may differ significantly. The CROCI team does not provide investment advice, stock recommendations or act in any other fiduciary capacity. Source: DWS, Bloomberg, 9 Jul. 2024

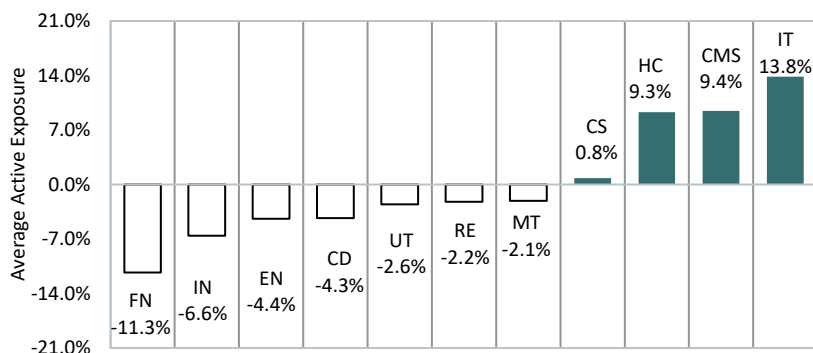
# 2Q 2024: CROCI INTELLECTUAL CAPITAL VS. MSCI WORLD

Total Return Attribution in USD, 31 Mar. 2023 - 28 Jun. 2024

## RETURN ATTRIBUTION

Source of Return	Sector Allocation	Stock Selection	Total
Communication Services	0.5%	0.9%	1.3%
Consumer Discretionary	0.2%	0.1%	0.3%
Consumer Staples	0.0%	-0.3%	-0.3%
Energy	0.2%	0.0%	0.2%
Financials	0.3%	-0.4%	0.0%
Health Care	-0.2%	-0.2%	-0.4%
Industrials	0.3%	0.1%	0.4%
Information Technology	1.3%	-0.3%	1.0%
Materials	0.1%	0.0%	0.0%
Real Estate	0.1%	0.0%	0.1%
Utilities	0.0%	0.0%	0.0%
<b>Total Active (Local Currency)</b>	<b>2.9%</b>	<b>-0.2%</b>	<b>2.7%</b>
Currency			-0.3%
<b>Total Active</b>			<b>2.3%</b>

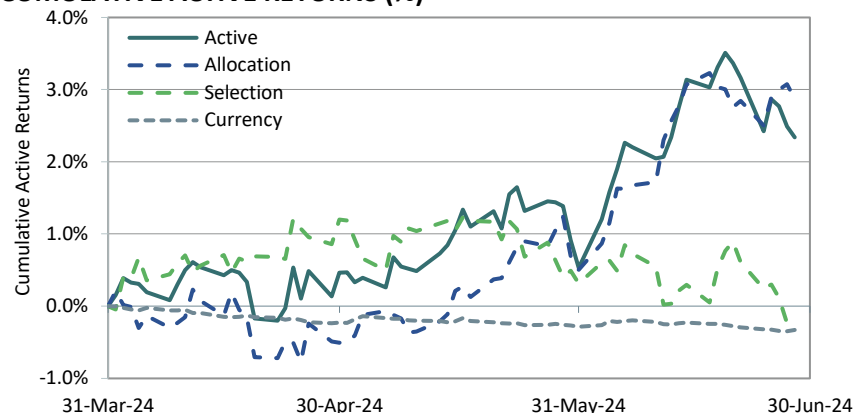
## AVERAGE ACTIVE EXPOSURE



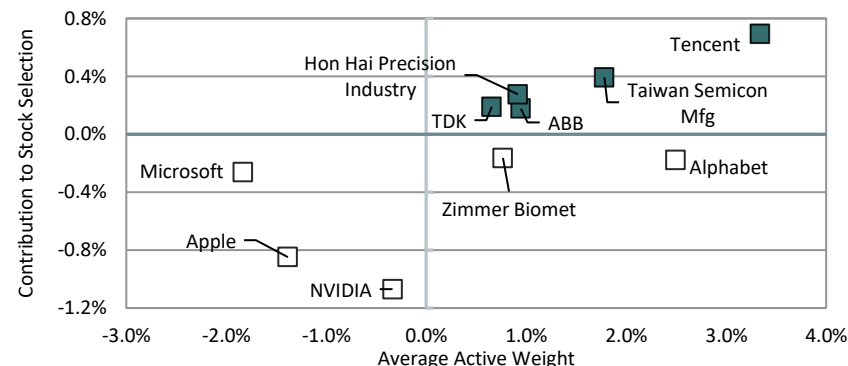
Source: DWS, MSCI Barra, 9 Jul. 2024

The calculations presented herewith have been performed using MSCI Barra and may vary from the actual returns of the strategy due to different computational assumptions. **The CROCI Intellectual Capital Strategy is live from 15 Apr. 2019.** Past performance, whether live or simulated, is not a reliable indicator of future results. All returns include reinvested dividends and do not include fees that might be charged on an investment product. All pro-forma performance data before respective live dates is simulated and was calculated by means of retroactive application of the Strategy models. It is not possible to invest directly in a strategy or index. The performance shown here is for model portfolios. The performance of any actual investment products may differ significantly. Allocations are subject to change without notice. This information is intended for informational purposes only and does not constitute investment advice, a recommendation, an offer or solicitation

## CUMULATIVE ACTIVE RETURNS (%)



## TOP VS. BOTTOM NAMES BY SELECTION EFFECT



# 1H 2024: CROCI INTELLECTUAL CAPITAL VS. MSCI WORLD

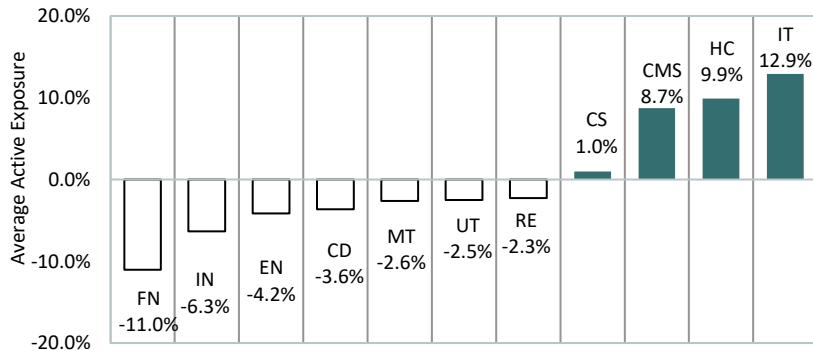


Total Return Attribution in USD, 31 Dec. 2023 – 28 Jun. 2024

## RETURN ATTRIBUTION

Source of Return	Sector Allocation	Stock Selection	Total
Communication Services	0.7%	1.1%	1.8%
Consumer Discretionary	0.3%	-0.1%	0.2%
Consumer Staples	-0.1%	-0.5%	-0.6%
Energy	0.2%	-0.1%	0.2%
Financials	0.1%	-0.4%	-0.3%
Health Care	-0.3%	-0.1%	-0.4%
Industrials	0.2%	0.3%	0.5%
Information Technology	1.7%	1.0%	2.7%
Materials	0.2%	0.0%	0.2%
Real Estate	0.4%	0.0%	0.4%
Utilities	0.2%	0.0%	0.2%
<b>Total Active (Local Currency)</b>	<b>3.8%</b>	<b>1.1%</b>	<b>5.0%</b>
Currency			-1.1%
<b>Total Active</b>			<b>3.9%</b>

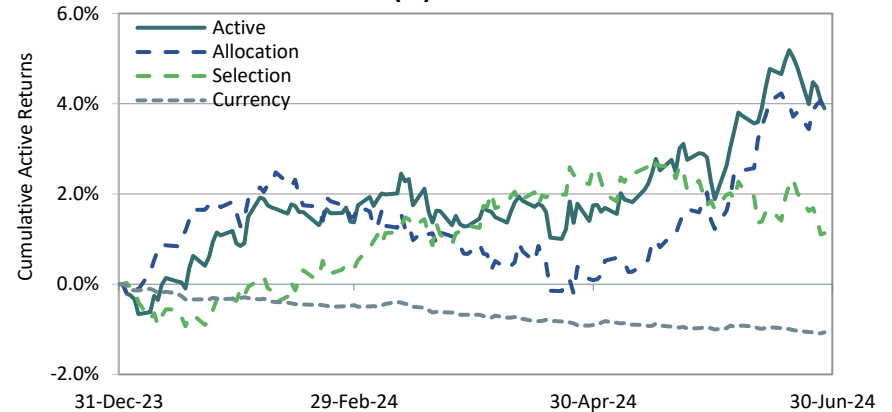
## AVERAGE ACTIVE EXPOSURE



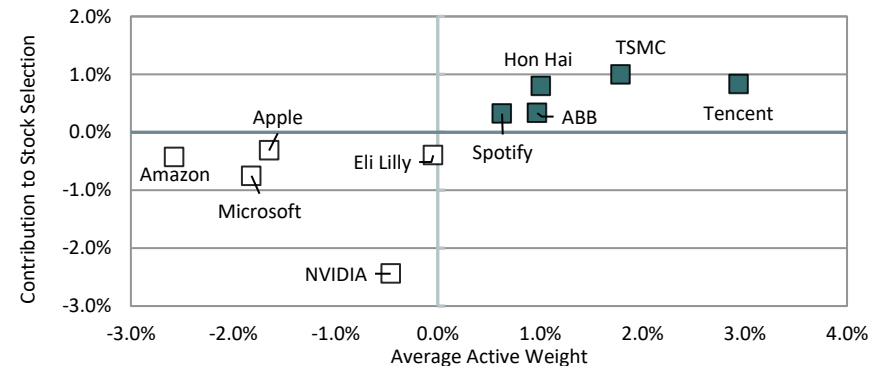
Source: DWS, MSCI Barra, 9 Jul. 2024

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## CUMULATIVE ACTIVE RETURNS (%)



## TOP VS. BOTTOM NAMES BY SELECTION EFFECT



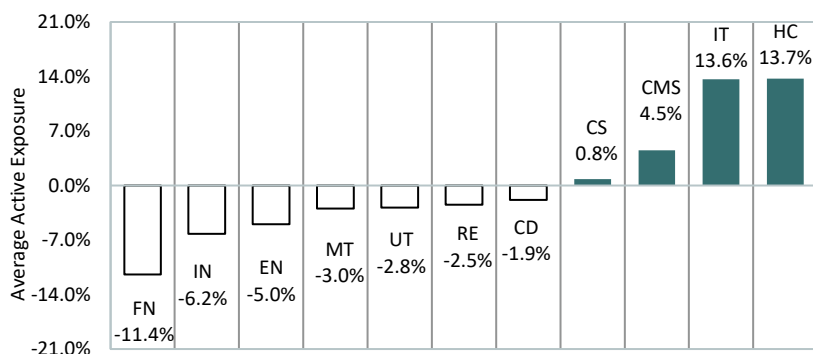
# 2023: CROCI INTELLECTUAL CAPITAL VS. MSCI WORLD TR

Total Return Attribution in USD, 31 DEC. 2022 – 29 Dec. 2023

## RETURN ATTRIBUTION

Source of Return	Sector Allocation	Stock Selection	Total
Communication Services	1.1%	-0.1%	1.0%
Consumer Discretionary	-0.2%	0.0%	-0.1%
Consumer Staples	-0.2%	-0.4%	-0.5%
Energy	1.2%	0.0%	1.2%
Financials	1.2%	-0.4%	0.8%
Health Care	-2.8%	0.8%	-2.1%
Industrials	0.1%	0.5%	0.6%
Information Technology	4.4%	-2.9%	1.5%
Materials	0.3%	0.5%	0.8%
Real Estate	0.3%	0.0%	0.3%
Utilities	0.8%	0.0%	0.8%
<b>Total Active (Local Currency)</b>	<b>6.2%</b>	<b>-2.0%</b>	<b>4.3%</b>
Currency			-1.0%
<b>Total Active</b>			<b>3.3%</b>

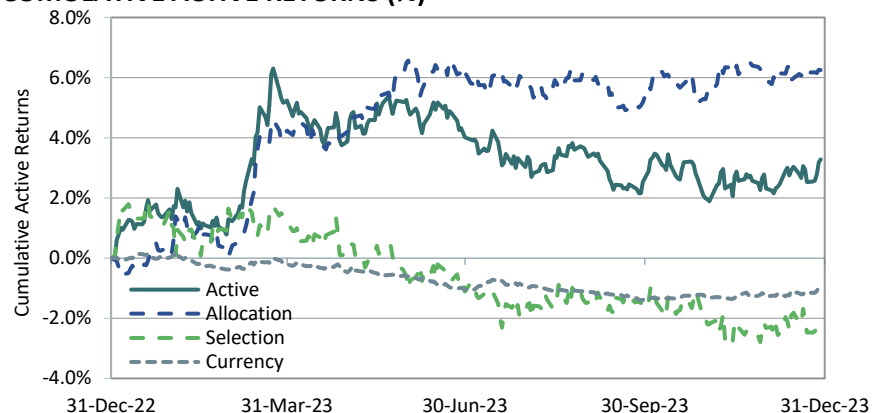
## AVERAGE ACTIVE EXPOSURE



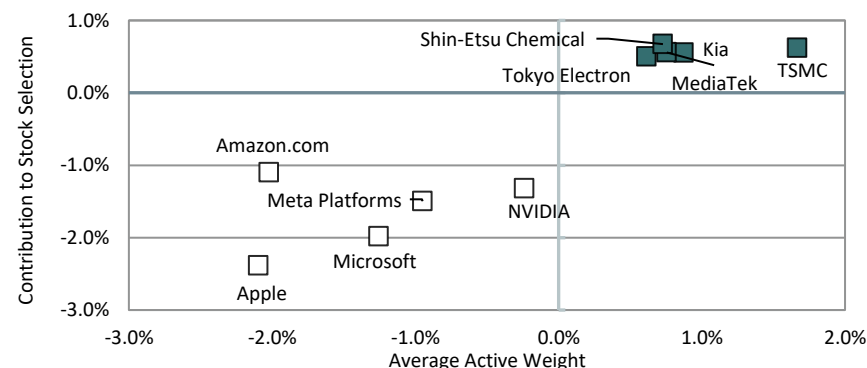
Source: DWS, MSCI Barra, 9 Jul. 2024

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## CUMULATIVE ACTIVE RETURNS (%)



## TOP VS. BOTTOM NAMES BY SELECTION EFFECT



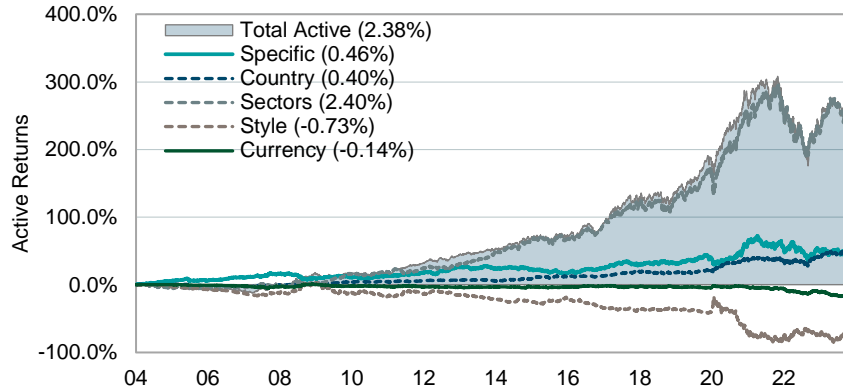
# CROCI INTELLECTUAL CAPITAL VS. MSCI WORLD TR



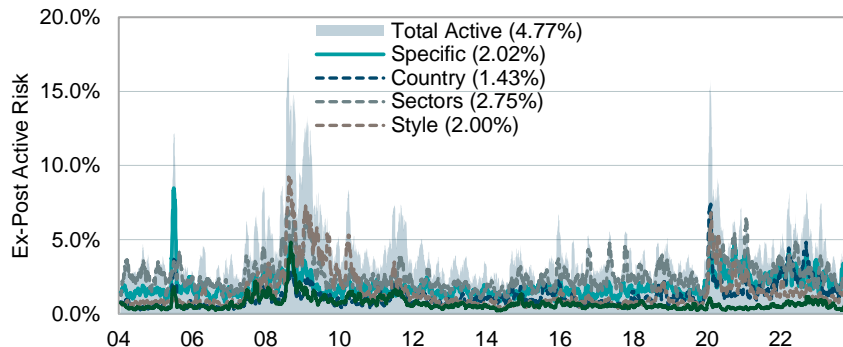
Multifactor Performance Attribution in USD, 27 Feb. 2004 - 29 Dec. 2023

Simulated data prior to: 15 Apr. 2019

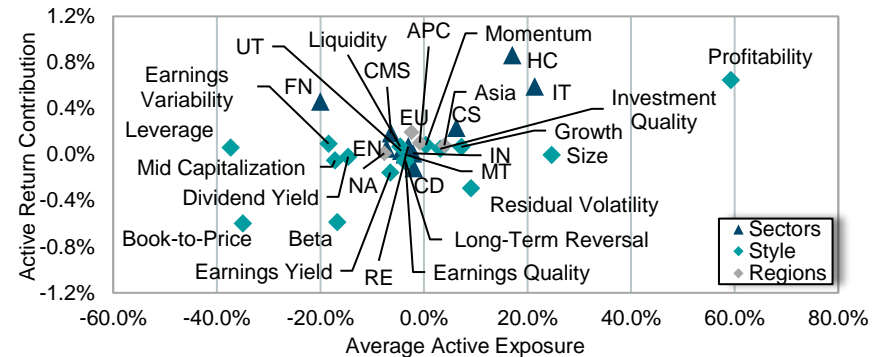
## CUMULATIVE ACTIVE RETURN ATTRIBUTION (%)



## ROLLING PERIOD EX-POST ACTIVE RISK (%)



## FACTOR ACTIVE RETURN CONTRIBUTION VS. AVERAGE EXPOSURE



## BEST-WORST POLICIES BY INFORMATION RATIO

Top Five (Ann. Contrib.)	Bottom Five (Ann. Contrib.)
Profitability(0.65%)	Book-to-Price(-0.60%)
Growth(0.07%)	Residual Volatility(-0.29%)
Consumer Staples(0.23%)	Earnings Yield(-0.15%)
Health Care(0.86%)	Earnings Quality(-0.06%)
Communication Services(0.19%)	Consumer Discretionary(-0.12%)

\*Average Active Exposure to Risk Factor is represented as negative (Red) or positive (Green)

Source: DWS, MSCI Barra, 9 Jul. 2024

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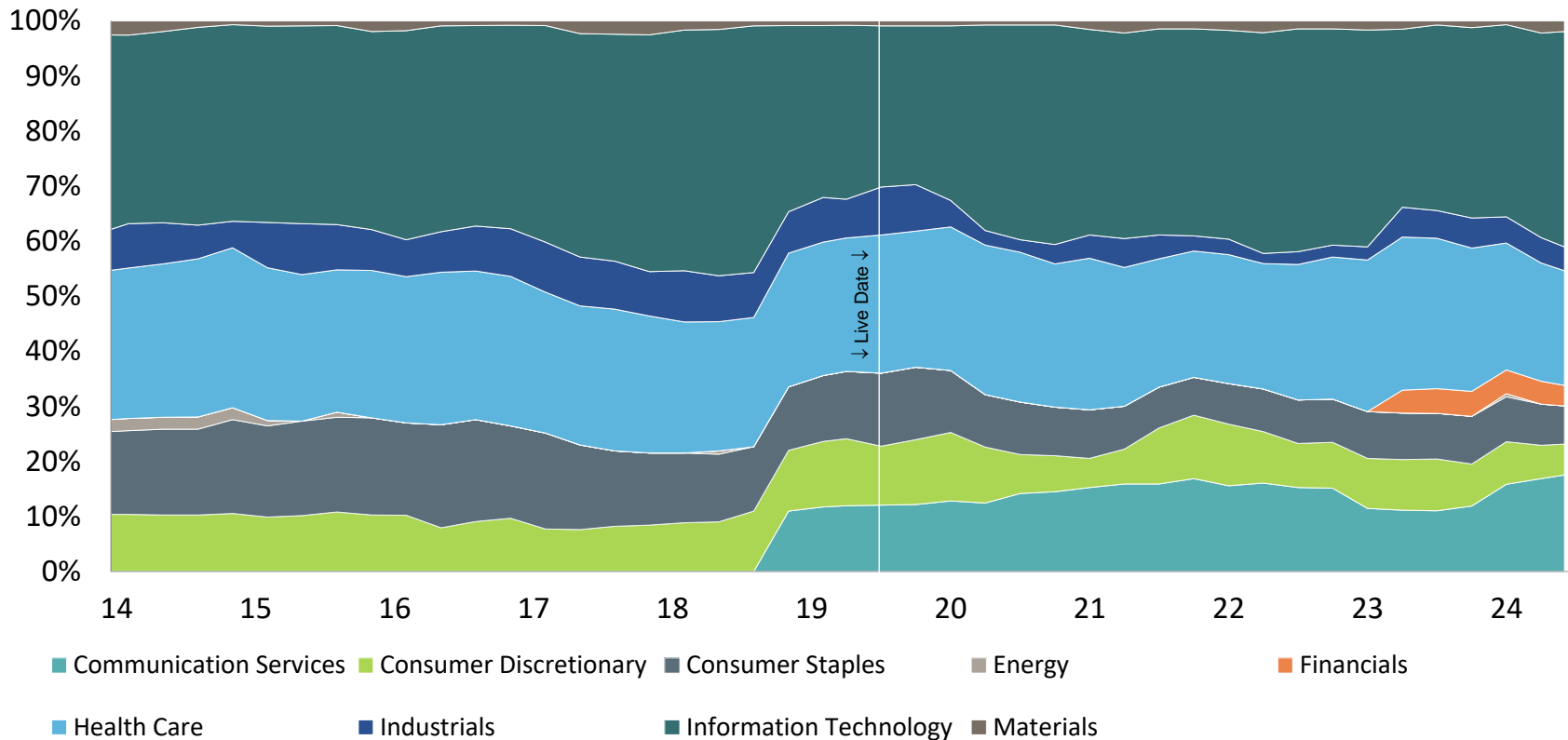


# CROCI INTELLECTUAL CAPITAL STRATEGY



Simulated data prior to 15 Apr. 2019

SECTOR ALLOCATIONS, JAN. 2014 – JUN. 2024



(1) The CROCI Intellectual Capital Strategy has been run on a live basis since 15<sup>th</sup> Apr. 2019. Performance data before this date is simulated and was calculated by means of retroactive application of the Strategy model. **Past performance, whether live or simulated, is not a reliable indicator of future results.** All returns include reinvested dividends (net of withholding tax) but do not include fees that might be charged on an investment product. It is not possible to invest directly in a strategy. The performance shown here is for model portfolios. The performance of any actual investment products may differ significantly. The CROCI team does not provide investment advice, stock recommendations or act in any other fiduciary capacity. Allocations are subject to change without notice.

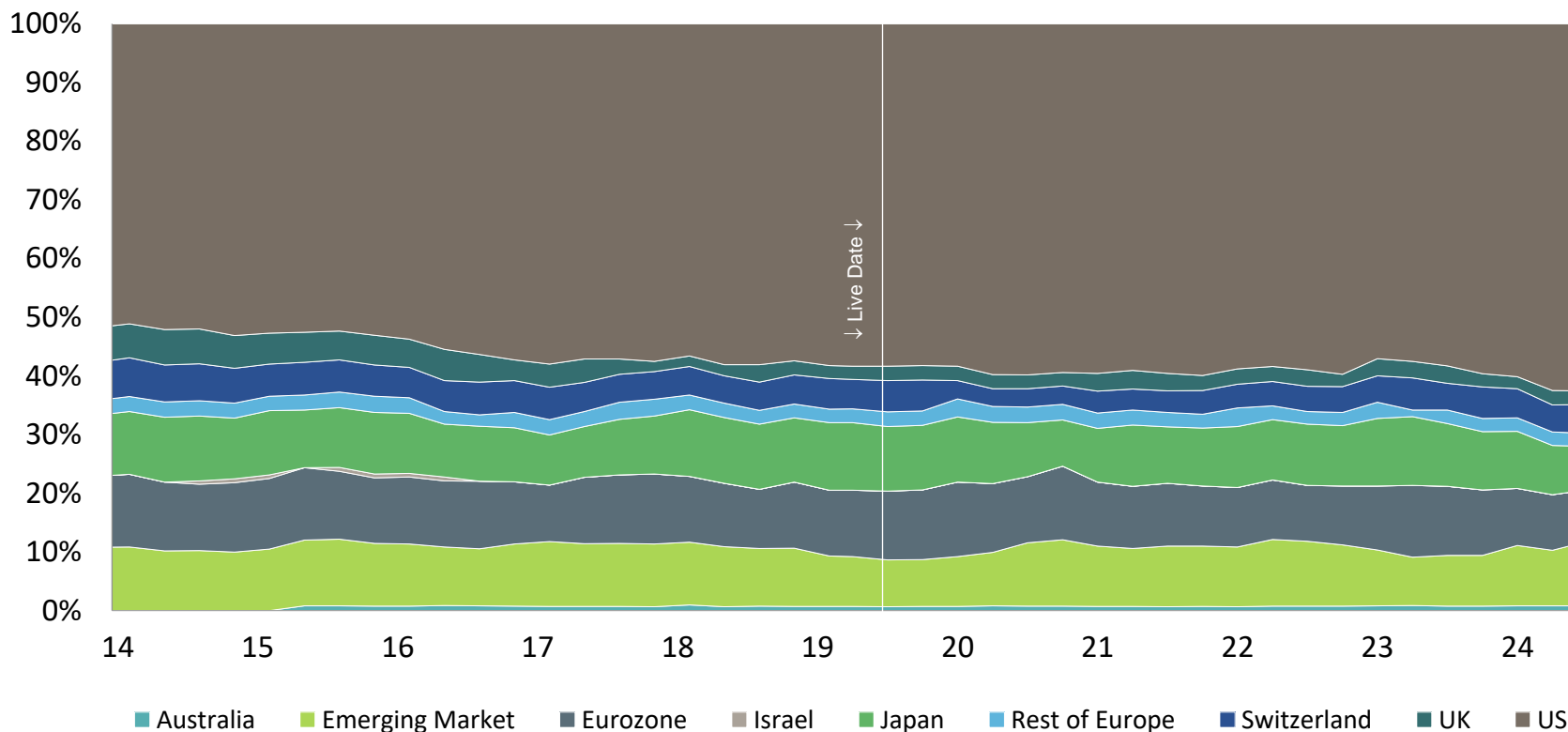
Source: DWS, Bloomberg, 9 Jul. 2024

# CROCI INTELLECTUAL CAPITAL STRATEGY



Simulated data prior to 15 Apr. 2019

COUNTRY ALLOCATIONS, JAN. 2014 – JUN. 2024



(1) The CROCI Intellectual Capital Strategy has been run on a live basis since 15<sup>th</sup> Apr. 2019. Performance data before this date is simulated and was calculated by means of retroactive application of the Strategy model. **Past performance, whether live or simulated, is not a reliable indicator of future results.** All returns include reinvested dividends (net of withholding tax) but do not include fees that might be charged on an investment product. It is not possible to invest directly in a strategy. The performance shown here is for model portfolios. The performance of any actual investment products may differ significantly. The CROCI team does not provide investment advice, stock recommendations or act in any other fiduciary capacity. Allocations are subject to change without notice.

Source: DWS, Bloomberg, 9 Jul. 2024

# CROCI INTELLECTUAL CAPITAL

## Key Risks

Any products linked to a CROCI Strategy may not be capital protected and investor capital may be at risk up to a total loss. Prospective investors should be aware investments linked to the Strategy may go up or down in value.

Past performance is not a reliable indicator of future performance.

**The CROCI Intellectual Capital Strategy has been built on the premises that**

- 1) Both R&D and Brands are forms of intellectual capital and these are captured as capitalised intangibles in the CROCI model;**
- 2) Companies with intellectual capital may outperform companies without intellectual capital;**
- 3) Financial Leverage and Risk-Adjusted CROCI can impact the ability for companies to maintain or grow their intellectual capital as well as provide performance;**
- 4) CROCI equity earnings are a suitable basis for the construction of portfolio weightings.**

**These premises may not be correct and prospective investors should evaluate these assumptions prior to investing in the Strategy.**

- The Strategy shown in this deck only selects from companies under CROCI coverage including Financials. However, this Strategy excludes any companies without capitalised intangibles in the CROCI model (either in form of R&D or Brands), and therefore excludes large parts of entire sectors that have low exposure to intangible assets such as Financials and Utilities.
- The CROCI coverage universe does not aim to provide waterfront coverage of entire benchmarks. Some sectors may have a larger proportion of CROCI coverage than others.
- The performance of the CROCI Intellectual Capital Strategy is subject to fluctuations between the USD and other currencies (performance displayed here is unhedged).

**CROCI represents one of many possible ways to analyse and value stocks. Potential investors must form their own view of the CROCI methodology and evaluate whether CROCI and investments associated with CROCI are appropriate for them. The CROCI Team does not provide investment advice.**

The background of the slide is a photograph of a beach at sunset. The sky is a mix of orange, yellow, and grey, with numerous birds in flight. In the foreground, the dark silhouette of a person is visible on the left, looking out at the ocean. The overall mood is serene and contemplative.

# 03 THE PEOPLE BEHIND THE CROCI WAY

The Team

# CROCI – FROM CONCEPT TO INVESTMENT SOLUTION

CROCI Company Analysis	
<b>Virginie Galas (Head)</b>	(1995)
Bharat Shah	(2002)
Yogendar Khairari	(2003)
Venkat Bijjaram	(2004)
Gyanendra Jaiswal	(2005)
Mahesh Rathi	(2005)
Janamejay Kumar	(2007)
Abhishek Mittal	(2012)
Tathagat Kumar	(2017)
Krithika Ekambaram	(2014)
Ramnarayan Ramesh	(2018)
<b>Plus 36 CROCI offshore analysts</b>	

CROCI Investment Strategies	
<b>Dirk Schlueter (Head)</b>	(2012)
Vikash Sonika	(2006)
Pragya Patwari	(2015)
Ajmal Mohamed	(2015)

CROCI Data Science & Technology	
Michael Yakir	(2001)

Head of DWS Mumbai	
Mital Parekh	(2002)

Portfolio Management of DWS CROCI Funds	
<b>Jacques Lajard-de-Puyjalon</b>	<b>(2012)</b>
Laura Young	(2021)
Adam Freeman	(2022)
Roopal Pareek	(2015)
Di Kumble - Americas	(2003)

CROCI Thought Leadership	
<b>Colin McKenzie (Head)</b>	<b>(1998)</b>
Jay Joshi	(2021)

CROCI Product Specialists	
Colin McKenzie	(1998)
Markus Doerr	(1997)

## CROCI SENIOR TEAM MEMBERS



### Colin McKenzie, CROCI Product Specialist, Head of CROCI Intelligence

- Responsible for all intellectual content (including Market Analysis and Thought Leadership) that the CROCI Team publishes; responsible for client development in Europe, Middle East and Japan
- Joined the CROCI Team in 2000; over his time with CROCI, he has been a European and Global Strategist, as well as playing a key role in the development of the CROCI model and company analysis. Before joining the CROCI Team, he worked in Emerging Markets Equity Sales
- Specialising in company & sector valuation, he publishes regular reports on market and sector trends.
- MA in Mathematics & Philosophy from Oxford University



### Virginie Galas, Head of CROCI Company Analysis

- Responsible for the CROCI® database and team, i.e., over 900 stocks worldwide covered by a team of around 50 people. Turning accounting data into economic data to calculate a meaningful and comparable return and P/E for each stock individually is at the heart of the 'CROCI® process'
- Virginie has 19 years experience in financial analysis. She joined Deutsche Bank in 1995 after two years at SG Warburg. From 1997 to 2002, she was head analyst on European luxury and cosmetic stocks for which she was ranked second in Institutional Investor Surveys for several years in a row. She has a Master Degree of Economics - option Finance - from University of Paris Dauphine where she now teaches a post graduate Finance course; she has a post graduate of "Banque et Finance" from University Paris I Sorbonne where she also had License courses in Philosophy



### Dirk Schlueter, Head of CROCI Investment Strategies

- Responsible for the research and development related to the systematic and rules-based CROCI investment strategies (model portfolio construction based on the underlying CROCI company research)
- Dirk has been a member of the CROCI Team for over 11 years. He has been involved in CROCI Research and Thought Leadership publications, as well as business development (especially in German-speaking countries).
- Prior to joining the company, Dirk was a College Lecturer in Mathematics at the University of Oxford. Dirk holds a D.Phil. (Doctor of Philosophy) in Mathematics from University of Oxford (Merton College) and MMath (Distinction) and BA (First Class) in Mathematics from University of Cambridge (Trinity College)

Source: DWS

# 04 APPENDIX

## CROCI Economic P/E

Calculated as  $(EV/NCI) / CROCI$ , Economic P/E is a measure of valuation, calculated according to the CROCI methodology, that seeks to allow a fair comparison of the market valuation of companies regardless of industry or sector

## CROCI EV/ NCI

Used as the economic version of an asset multiple, e.g. Price-to-Book Value. Over time, this ratio should converge to 1x, according to economic theory (Tobin)

- **CROCI Enterprise Value (EV)**  
A measure of the market value of the firm, which includes not only financial liabilities (eg debt) but also operational liabilities (e.g. warranties, pension funding, specific provisions, etc.)
- **CROCI Net Capital Invested (NCI)**  
An approximation of the replacement value (at current costs) of net assets

## CROCI

Cash Return On Capital Invested, the economic version of Return on Equity. A measure of cash earnings yield, standardised for all companies, regardless of their business or location. Also described as the Cash IRR



## Real Investor

Definition: An investor whose investments are driven principally by the careful analysis of company fundamentals, including their economic cash returns and their economic valuation. Specifically, a Real Investor has two characteristics:

1. **Fundamental:** any investment is informed or driven by the interplay between the cash flow generation, the capital intensity and the valuation of that company
2. **Skeptical of reported financial statements as a guide to investing:**

Real Investors believe that the income statement and balance sheet in a company's accounts are not necessarily designed to be helpful to equity investors, and that a synthesis of all the notes to the accounts and diligent restatement of the accounts must happen in order to render valuations comparable and meaningful; and

Real Investors look to economic value to inform investment, and believe that the reported financial statement data may not be representative of the economic reality of a company

Since CROCI makes adjustments to financial statements in order to include all relevant information in the notes to the accounts, and to restate the accounts in order to render economic valuations, which are meaningful and comparable, CROCI may be one valuable approach

## Real Value

Definition: Economic value as calculated by the CROCI process via the adjustments to and normalisations of reported financial statements, conducted by CROCI's team of company analysts

Notes: The CROCI process seeks to make company financial data more consistent, comparable and economically meaningful through a series of reviews and adjustments. This contrasts with more conventional definitions of "Value" that tend to be based on accounting measures such as equity or profits

The principal indicator of Real Value is CROCI's **Economic P/E**. An attractive Economic P/E ratio suggests that the market is undervaluing the cash flow being produced by the operating assets, all other things being equal

The term Real Value can therefore be used attributively to refer to companies with the lowest CROCI Economic P/E

# CHEAPEST COMPANIES BY EC. P/E & AC. P/E

## Overlap, Sector & Operational Characteristics Differences

Companies Overlap: Cheapest by Economic P/E and by Accounting P/E																					
CROCI Coverage	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Avg.	Median
Developed Market	49	53	49	38	44	47	42	41	43	42	44	45	46	44	44	54	53	51	43	46	44
US	26	24	25	17	16	23	22	23	23	19	24	21	18	18	19	24	25	21	19	21	22

### Sector Weight Difference Ec. P/E Portfolio vs. Acc. P/E Portfolio - Period 2005 to 2023

GICS Sector	CROCI Developed Market Coverage		CROCI US Coverage	
	Average	Median	Average	Median
Communication Services <sup>(1)</sup>	-5.9%	-5.0%	-2.2%	-2.5%
Consumer Discretionary	-3.6%	-4.0%	-5.3%	-5.0%
Consumer Staples	-1.0%	-1.0%	-1.4%	0.0%
Energy	-1.8%	-1.0%	-0.4%	0.0%
Financials & Real Estate	0.0%	0.0%	0.0%	0.0%
Health Care	10.7%	11.0%	10.3%	10.0%
Industrials	-0.4%	1.0%	0.1%	0.0%
Information Technology	7.3%	6.0%	5.7%	7.5%
Materials	-0.3%	0.0%	-2.2%	-2.5%
Utilities	-4.9%	-3.0%	-4.1%	-2.5%

### Difference in Operational Characteristics Ec. P/E Portfolio vs. Acc. P/E Portfolio - Period 2005 to 2023

Operational Characteristics	CROCI Developed Market Coverage		CROCI US Coverage	
	Average	Median	Average	Median
CROCI	4.8%	5.0%	6.1%	6.4%
Net Fin. Liabilities / Mkt Cap	-40.4%	-40.8%	-31.9%	-29.4%
Economic P/E	-4.6x	-4.9x	-3.0x	-3.0x
FCF Yield	1.0%	0.7%	0.8%	0.4%

(1) Since September 2018, Telecommunication Services has been reclassified to Communication Services

Past performance, whether live or simulated, is not a reliable indicator of future results. Source: DWS, 9 Jul. 2024

# THE CROCI COMPANY DATABASE

## Comprehensive Coverage Across Major Markets

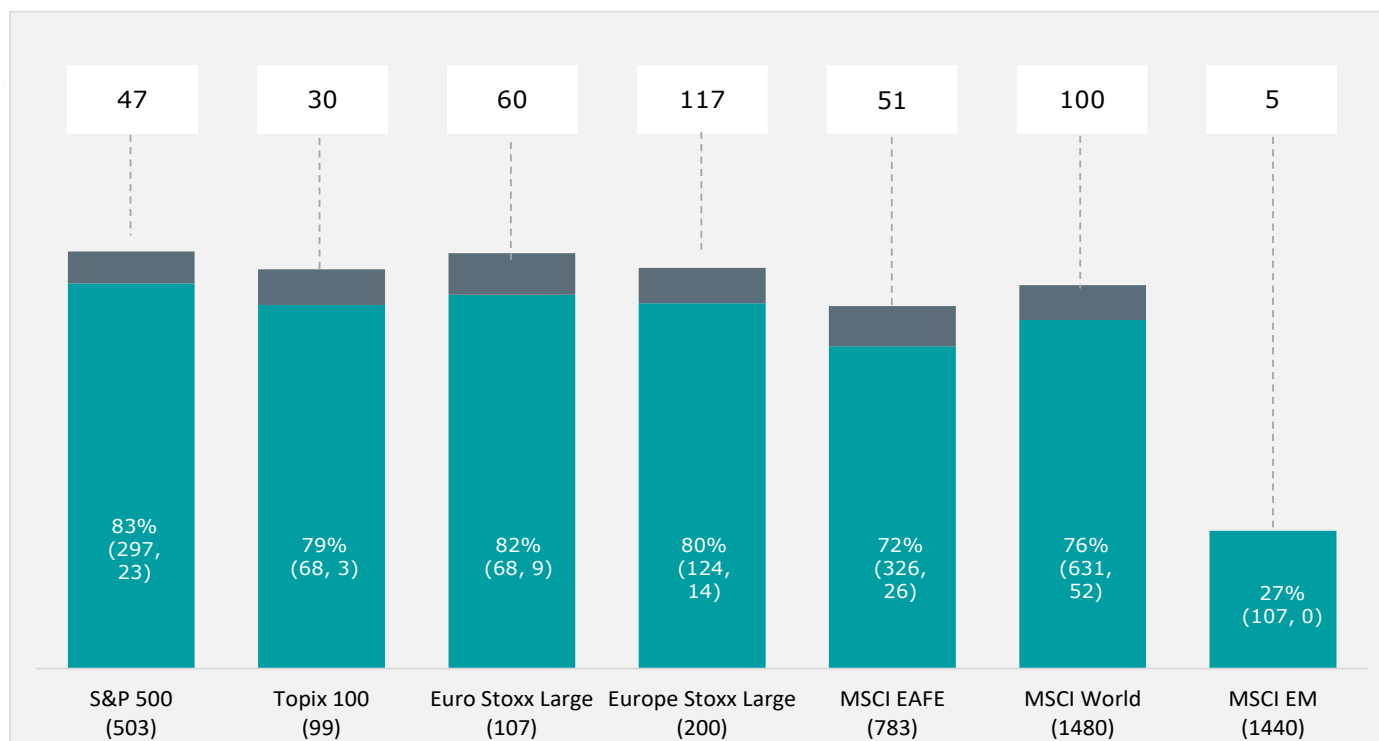
Total Number of Companies in CROCI Coverage	US	Japan	Euro Region	Europe	Developed Mkts ex N. America	Developed Markets	Emerging Markets
	367	101	137	255	403	783	112

Number of companies in CROCI coverage outside index

Percentage of CROCI Coverage in each index by Market Capitalisation including Financials (shaded blue) and Non-Financials (shaded Teal)

(Number of Companies in CROCI Coverage from index- Non-Financials, Financials)

(Number of Companies in index)



Source: DWS, Bloomberg, Factset

Data as of 29 Dec. 2023

# PERFORMANCE OVER THE PAST 10 YEARS (12-MONTH PERIODS)



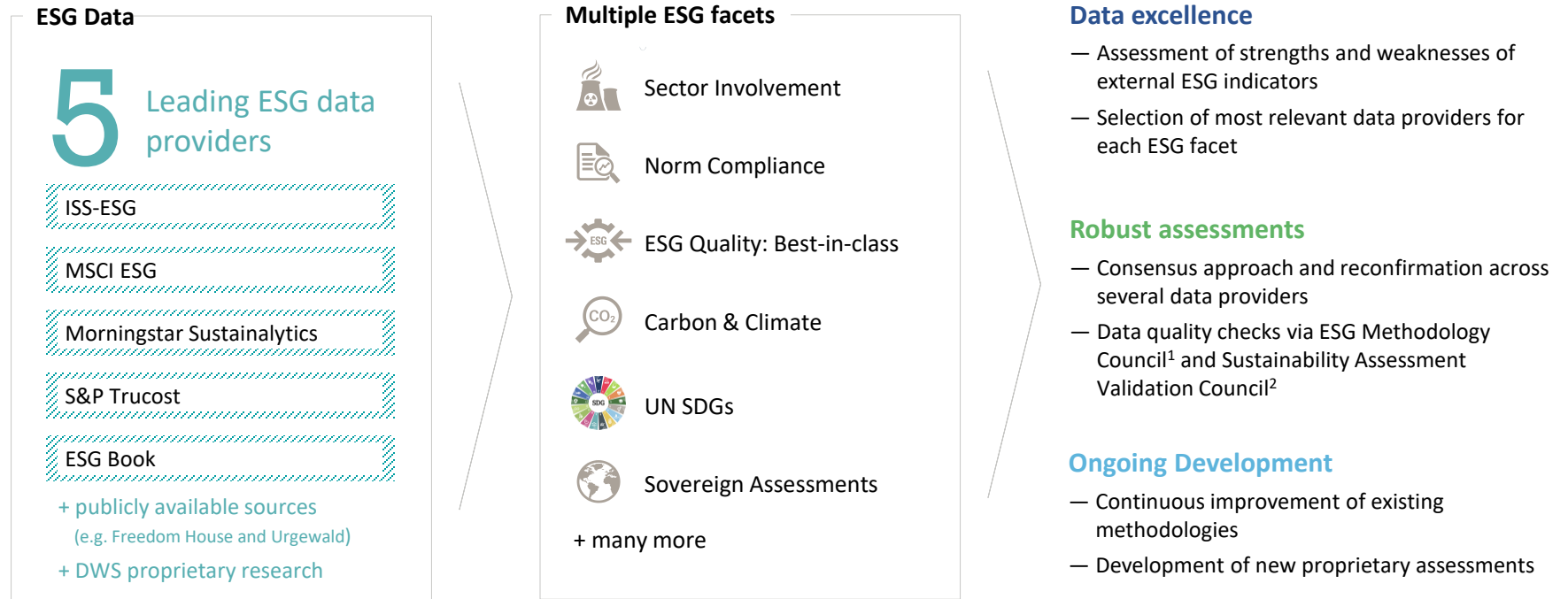
As of 28 JUN. 2024

Name	Currency	06/23 - 06/24	06/22 - 06/23	06/21 - 06/22	06/20 - 06/21	06/19 - 06/20	06/18 - 06/19	06/17 - 06/18	06/16 - 06/17	06/15 - 06/16	06/14 - 06/15
CROCI US Dividends Strategy	USD	12.2%	6.8%	2.0%	37.6%	1.1%	10.4%	10.0%	23.5%	5.5%	3.4%
CROCI Euro Strategy	EUR	2.0%	18.3%	-12.5%	22.1%	2.4%	-2.9%	7.7%	24.7%	-0.1%	12.8%
CROCI Japan Strategy	JPY	18.4%	32.5%	2.8%	32.7%	8.7%	-4.9%	11.4%	36.0%	-21.7%	28.3%
CROCI Sectors Plus USD Strategy	USD	7.8%	18.1%	-4.6%	44.2%	21.5%	-5.4%	6.9%	32.6%	-9.0%	-4.3%
CROCI Intellectual Capital USD Strategy	USD	23.4%	18.9%	-18.4%	38.5%	15.6%	10.4%	12.6%	24.4%	1.5%	4.9%

Source: DWS, Bloomberg. Past performance, whether live or simulated, is not a reliable indicator of future results. All returns include reinvested dividends and do not include fees that might be charged on an investment product. All pro-forma performance data before respective live dates is simulated and was calculated by means of retroactive application of the Strategy models. It is not possible to invest directly in a strategy or index. The performance shown here is for model portfolios. The performance of any actual investment products may differ significantly

# The DWS ESG Engine

## How we create robust ESG assessments



**Flexibility**  
in ESG criteria

Broad coverage with  
**3000+ data points**

ESG data **fully integrated**  
(e.g. BRS Aladdin, MSCI Barra)

**Dedicated and thematic ESG**  
investment strategies

<sup>1</sup> The ESG Methodology Council (EMC) is co-chaired by the head of CIO for Responsible Investments and the head of ESG Advisory and ESG Product Methodology. The EMC meets weekly to discuss the implementation of the assessment methodologies in the ESG Engine, among others.

<sup>2</sup> The Sustainability Assessment Validation Council (SAVC), chaired by the Global Head of Research, consists of ESG specialists from DWS's research department and reviews ESG Engine assessments before they become effective. The council applies corrective adjustments if a result is found materially incorrect, especially due to current insights gained from engagements and company disclosure reviews.

For illustrative purposes only. Source: DWS International GmbH as of June 2024.

# DWS Basic Exclusions

## Overview of DWS Basic Exclusions which is applied by DWS funds

		<b>DWS Basic Exclusions</b> [transparent pursuant to Article 8 of the Regulation (EU) 2019/2088]
	<b>DWS ESG Assessment methodology / exclusion criteria</b>	<b>Assessment<sup>1</sup> or revenue threshold<sup>2</sup></b>
<b>DWS Group policies</b>	DWS Coal Policy (coal mining and power generation from coal $\geq$ 25% revenue; coal expansion plans) <sup>3</sup>	Non-compliant
	DWS Controversial Weapons Policy (cluster munition, anti-personnel mines, biological and chemical weapons) <sup>4</sup>	Non-compliant
<b>Controversial sectors (excl. climate)</b>	Other controversial weapons (depleted uranium weapons, nuclear weapons) <sup>4</sup>	No involvement
	Manufacturing of products and/or provision of services in the defense industry	$\geq$ 10%
	Manufacturing and/or distribution of civil handguns or ammunition	$\geq$ 5%
<b>Climate-related assessments</b>	Manufacturing of tobacco products	$\geq$ 5%
	Mining of oil sand	$\geq$ 5%
<b>General ESG assessments</b>	DWS Climate and Transition Risk Assessment (corporates & sovereigns)	No F
<b>General ESG assessments</b>	Freedom House Status (sovereigns)	No "Not free"
<b>Regulatory metrics</b>	Good Governance Assessment measured by DWS Norm Assessment (corporates)	No F / M
	<b>Principal adverse impact indicators (PAII)<sup>5</sup></b>	PAII #4 / #10 / #14 / #16 <sup>8</sup>
	<b>Share of sustainable investments (SFDR)<sup>6</sup></b>	Individual per fund
	<b>Share of sustainable investments (EU Tax)<sup>7</sup></b>	0%

For illustrative purposes only. Please refer to the explanation of ESG filter terminologies regarding the footnote 1) – 8).

Source: DWS Investment GmbH; as of June 2024.

# Glossary for ESG filter terminologies



## 1) DWS Assessment scheme

The ESG database derives "A" to "F" letter coded assessments within different categories. Within each category, issuers receive one of six possible scores, with "A" being the highest score and "F" being the lowest score. If an issuer's score in one category is not considered eligible, the portfolio management is prohibited from investing in that issuer, even if it is eligible according to the other categories. For exclusion purposes, each letter score is considered individually and may result in exclusion of an issuer.

## 2) Revenue threshold

Shown is the %-revenue threshold which, when it is greater or equal to, triggers an exclusion. The focus is usually on manufacturing or production, for example, in the case of oil sands, the extraction of oil.

## 3) Coal

The filter excludes companies with coal expansion plans, such as additional coal extraction, production or use, based on an internal identification methodology. The aforementioned coal-related exclusions refer exclusively to so-called thermal coal, i.e. coal used in power plants for power generation.

**4) DWS Controversial Weapons Policy (DWS CW Policy)** predominantly covers Controversial Conventional Weapons (CCW). Other controversial weapons (CW) do not constitute controversial conventional weapons in the sense of this policy, however DWS deems these weapons controversial and excludes manufacturers with a nexus to those weapons from financial products applying certain ESG Filters.

**Controversial weapons** in DWS Basic Exclusion filter include CCW (cluster munition, anti-personnel mines as well as biological and chemical weapons), as well as depleted uranium weapons and nuclear weapons. Controversial weapons are any ownership interest, regardless of revenue. An ownership is identified as a weapons manufacturer (F), component manufacturer (E) or a relevant ownership structure with an "E" or "F" graded company (D).

## 5) Principles adverse impact indicators (PAIIs)

Depending on the asset class of the fund and its product strategy, actively managed funds reporting under Article 8 or 9 SFDR can consider different PAIIs. For example, PAI 16 is only taken into account by funds investing in sovereign issuers.

## 6) Share of sustainable investments according to SFDR Art. 2(17)

The methodology for determining the share of sustainable investments follows four steps. In order to identify sustainable investments, the first step is to examine whether a company has a positive contribution to the UN SDGs through its business activities. The measurement of business activities is usually based on a company's revenues, partly also based on a company's capital expenses (capex) or operating expenses (opex). The second step is to prove that the company does not have a negative impact on any social or environmental objective when carrying out its business activities (DNSH assessment). If this is the case, the third step is to examine whether the company meets principles of good governance: It will exemplarily be considered whether the company has the worst norm assessment (so-called "minimum safeguards"). One example is the fight against corruption. If this is also the case, the positive contribution of the company identified in the first step can ultimately be taken into account. Thus, the company's share of sustainable investments would contribute to the share of sustainable investments in the portfolio.

## 7) Share of sustainable investments according to EU Taxonomy

The EU taxonomy aims to provide clarity on which economic activities are to be considered environmentally sustainable. For this purpose, a list of criteria for companies is used to define which economic activities or revenues contribute to the one of the six EU environmental goals. Due to a lack of data availability, DWS currently does not set a minimum percentage for environmentally sustainable investments according to EU Taxonomy in its actively managed funds.

## 8) Investee countries subject to social violations (no. 16).

# ESG IMPLEMENTATION IN CROCI STRATEGY



## Additional Key Risks

### ESG

Environmental, social and governance – a collective term referring to all aspects considered conducive to sustainability

#### DWS ESG Engine

The DWS ESG Engine is a DWS proprietary software system that uses data from five leading ESG data providers (ISS-ESG, MSCI, ESG Book, Morningstar Sustainalytics and S&P Trucost), as well as ESG data from publicly available sources and proprietary DWS research.

#### DWS ESG Assessment

This sustainability indicator measures the weight of those companies in the fund or benchmark that are identified as ESG leaders or laggards. ESG leaders and laggards are identified in the DWS ESG Engine using a best-in-class ESG approach, which takes into account a wide range of environmental, social and corporate governance criteria (e. g. resource management, contribution to climate change, product responsibility, corporate ethics). Best-in-class means that issuers are rated relative to their reference group. The reference group is determined by the region (developed countries vs. emerging countries) and industry (not applicable to countries). The DWS ESG quality assessment ranks issuers on a scale of A-F, whereas a grade of A and B identifying ESG leaders and a grade of E and F ESG laggards.

#### DWS Basic Exclusion Filter

The implementation of DWS Basic Exclusions, seeks to eliminate securities from the investment universe if the issuer of the security does not meet the DWS Engine's DWS Basic Exclusions criteria. Hence the investor is not exposed to the financial return of the excluded securities. The impact of the exclusion on the investor's portfolio return cannot be guaranteed. Financial return considerations do, under no circumstance, influence the ESG exclusion process. It is possible that the information or data on which an exclusion is based is wrong, not available or not available in time. In the event of delayed information, the exclusion is not performed, but will be once the information is confirmed. Potential investors should confirm that the ESG rule framework that DWS applies is consistent with their expectations and views concerning ESG.



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