



Monthly Europe Equity Market Insight

December-2022

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Investment strategies definitions

BIQ	Quality BIQ	Profitability, profitability growth and safety
	Momentum BIQ	Price Momentum and Sentiment
	Stability BIQ	A composite of low beta, low price volatility and total shareholder yield
	Value BIQ	Industry specific composite value score. In most industries more emphasis on cash flow value
Academic	Dividend Yield	LTM dividend yield
	Growth	Composite growth in historical and forward-looking earnings and revenue growth
	High volatility	High volatility
	Low Volatility	Low volatility
	Price Momentum	Price momentum on different time horizons (risk-adjusted)
	Classic Quality	Rentability, debt burden and variation in earnings
	Sentiment	A composite measure of analyst revision and recommendation changes
Cap-Size	Deep value	Blend of book and earning measures
	Size: Large Cap	Size: Large Cap
Multi-factor	Size: Mid Cap	Size: Mid Cap
	BIQ-QARP	A multi-factor model emphasizing quality, valuation and safety in earnings.
Cycle model	BIQ-Score	A multi-factor model focusing on classic empirically validated factors
	Expansion	Multi-factor, emphasis on factors that work in expansion ie. low quality, value and momentum
	Recession	Multi-factor, emphasis on factors that work in recession ie. high quality, low volatility, large cap
	Recovery	Multi-factor, emphasis on factors that work in recovery ie. value, high risk, low quality, small cap
Sustainable Target	Slowdown	Multi-factor, emphasis on factors that work in slowdown ie. high quality, growth, large cap
	ESG	Highest ESG
	Low Carbon	Lowest Carbon
	SDG	Highest SDG



Performance

Investable portfolios

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Investable Portfolios - methodology



Portfolios are rebalanced every 2. month



Sector neutral



Size adjusted



Regional neutral



Single Stock capped



Liquidity

Investable Portfolios - methodology

All **Investable** portfolios have been constructed the following

- Portfolios are rebalanced every 2. month
- Sector neutral
- Size adjusted (zSIZE +/-0.20), except the cap portfolios
- Regional neutral
- Single Stock capped at +/-1% active weight
- All companies has a minimum USD 10 m daily traded

	#Stocks
Global	200
US	125
EU	125
JP	80
EM	125

Definition of sustainability



Exclude controversial industries



Low carbon emissions



High ESG Rating



Impact Investing



Norm based screening

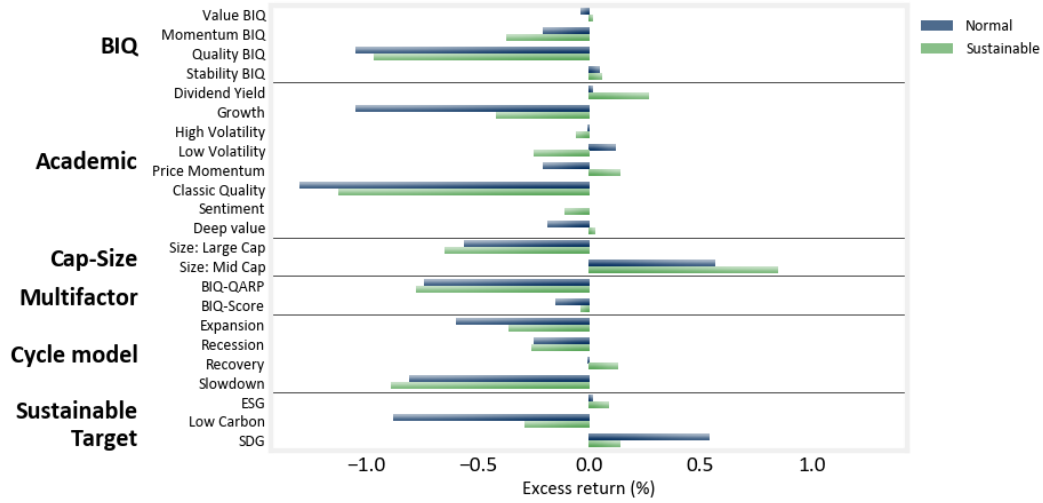
Sustainability

It is hard to define sustainability unambiguously. As it has multiple dimensions and to some extent is individual. At BankInvest we have created the following definition:

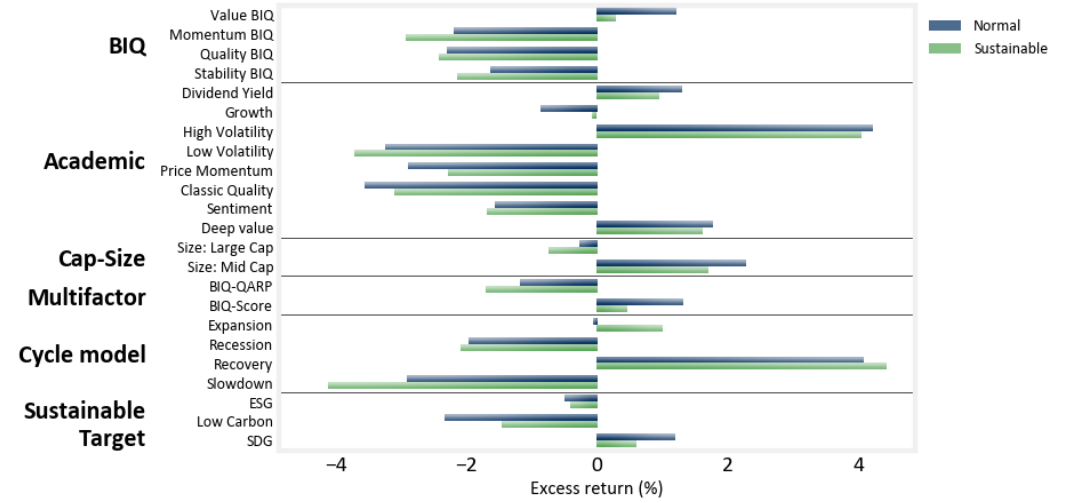
- Exclusion of: tobacco, fossil fuels, weapons and nuclear power
- A sustainable portfolio must not emit more than half as much CO2 as its benchmark
- The individual companies cannot have a CCC or B ESG rating (MSCI). The overall portfolio must have an AA rating except the EM portfolios that have an A.
- Minimum 20% of the revenue in the portfolio must have a positive effect on the UN's global sustainability goals
- All companies must obey the UN's global compact principles

EU style factors

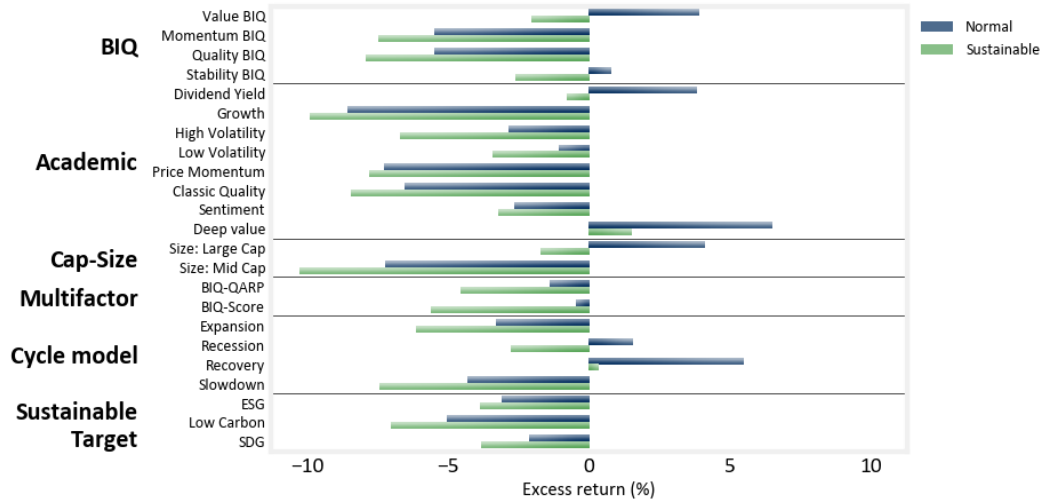
Month-to-date



Quarter-to-date



Year-to-date



EU: Portfolios

Benchmark: MSCI EUROPE NR

			Month-to-date			Quarter-to-date			Year-to-date		
Factor group	Factor name	Date	Factor	Bm	Excess	Factor	Bm	Excess	Factor	Bm	Excess
BIQ	Value BIQ	2022-12-30	-3.57 %	-3.53 %	-4 bps	10.78 %	9.57 %	121 bps	-5.61 %	-9.51 %	390 bps
	Momentum BIQ	2022-12-30	-3.74 %	-3.53 %	-21 bps	7.38 %	9.57 %	-219 bps	-15.02 %	-9.51 %	-551 bps
	Quality BIQ	2022-12-30	-4.58 %	-3.53 %	-105 bps	7.26 %	9.57 %	-231 bps	-15.02 %	-9.51 %	-551 bps
	Stability BIQ	2022-12-30	-3.48 %	-3.53 %	5 bps	7.93 %	9.57 %	-164 bps	-8.69 %	-9.51 %	81 bps
Academic	Dividend Yield	2022-12-30	-3.51 %	-3.53 %	2 bps	10.88 %	9.57 %	131 bps	-5.69 %	-9.51 %	382 bps
	Growth	2022-12-30	-4.58 %	-3.53 %	-105 bps	8.69 %	9.57 %	-87 bps	-18.12 %	-9.51 %	-861 bps
	High Volatility	2022-12-30	-3.54 %	-3.53 %	-1 bps	13.78 %	9.57 %	422 bps	-12.39 %	-9.51 %	-288 bps
	Low Volatility	2022-12-30	-3.41 %	-3.53 %	12 bps	6.31 %	9.57 %	-325 bps	-10.57 %	-9.51 %	-106 bps
	Price Momentum	2022-12-30	-3.74 %	-3.53 %	-21 bps	6.68 %	9.57 %	-289 bps	-16.78 %	-9.51 %	-728 bps
	Classic Quality	2022-12-30	-4.83 %	-3.53 %	-130 bps	5.99 %	9.57 %	-357 bps	-16.06 %	-9.51 %	-655 bps
	Sentiment	2022-12-30	-3.53 %	-3.53 %	-0 bps	7.99 %	9.57 %	-157 bps	-12.18 %	-9.51 %	-267 bps
	Deep value	2022-12-30	-3.72 %	-3.53 %	-19 bps	11.34 %	9.57 %	178 bps	-2.98 %	-9.51 %	652 bps
Cap-Size	Size: Large Cap	2022-12-30	-4.09 %	-3.53 %	-56 bps	9.30 %	9.57 %	-27 bps	-5.38 %	-9.51 %	412 bps
	Size: Mid Cap	2022-12-30	-2.96 %	-3.53 %	57 bps	11.85 %	9.57 %	228 bps	-16.75 %	-9.51 %	-724 bps
Multifactor	BIQ-QARP	2022-12-30	-4.27 %	-3.53 %	-74 bps	8.39 %	9.57 %	-118 bps	-10.90 %	-9.51 %	-139 bps
	BIQ-Score	2022-12-30	-3.68 %	-3.53 %	-15 bps	10.88 %	9.57 %	132 bps	-9.96 %	-9.51 %	-46 bps
Cycle model	Expansion	2022-12-30	-4.12 %	-3.53 %	-60 bps	9.50 %	9.57 %	-6 bps	-12.82 %	-9.51 %	-331 bps
	Recession	2022-12-30	-3.78 %	-3.53 %	-25 bps	7.60 %	9.57 %	-197 bps	-7.95 %	-9.51 %	156 bps
	Recovery	2022-12-30	-3.54 %	-3.53 %	-1 bps	13.64 %	9.57 %	408 bps	-3.99 %	-9.51 %	552 bps
	Slowdown	2022-12-30	-4.34 %	-3.53 %	-81 bps	6.66 %	9.57 %	-291 bps	-13.82 %	-9.51 %	-432 bps
Sustainable Target	ESG	2022-12-30	-3.51 %	-3.53 %	2 bps	9.07 %	9.57 %	-50 bps	-12.61 %	-9.51 %	-310 bps
	Low Carbon	2022-12-30	-4.41 %	-3.53 %	-88 bps	7.23 %	9.57 %	-234 bps	-14.58 %	-9.51 %	-507 bps
	SDG	2022-12-30	-2.99 %	-3.53 %	54 bps	10.77 %	9.57 %	120 bps	-11.64 %	-9.51 %	-213 bps

EU: Sustainable portfolios

Benchmark: MSCI EUROPE NR

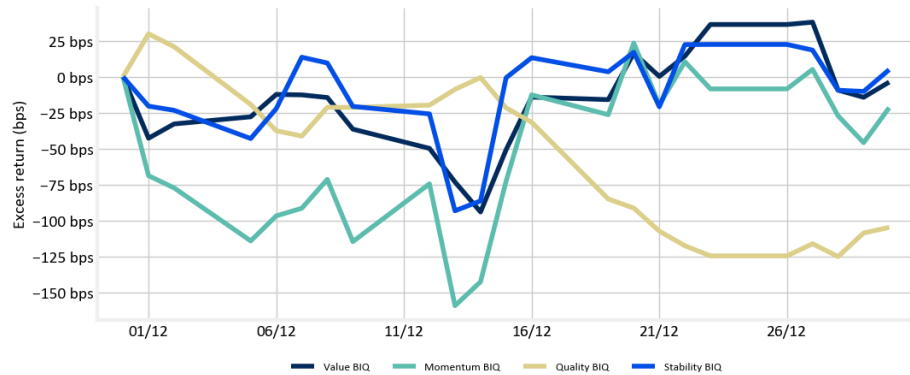
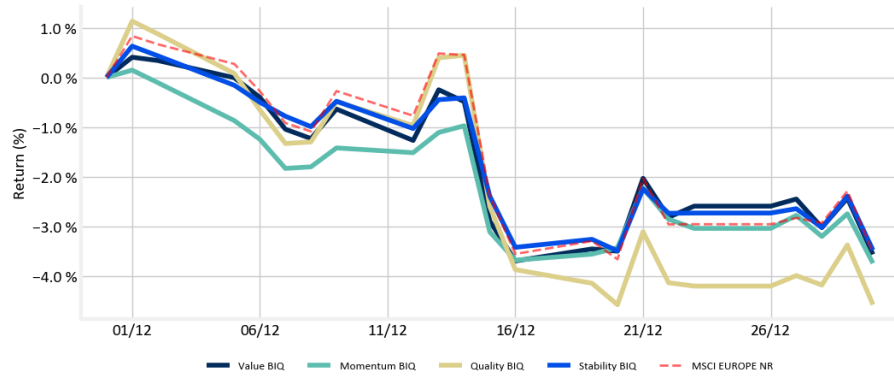
			Month-to-date			Quarter-to-date			Year-to-date		
Factor group	Factor name	Date	Factor	Bm	Excess	Factor	Bm	Excess	Factor	Bm	Excess
BIQ	Value BIQ	2022-12-30	-3.51 %	-3.53 %	2 bps	9.85 %	9.57 %	29 bps	-11.57 %	-9.51 %	-206 bps
	Momentum BIQ	2022-12-30	-3.90 %	-3.53 %	-37 bps	6.63 %	9.57 %	-294 bps	-16.99 %	-9.51 %	-748 bps
	Quality BIQ	2022-12-30	-4.50 %	-3.53 %	-97 bps	7.13 %	9.57 %	-243 bps	-17.46 %	-9.51 %	-795 bps
	Stability BIQ	2022-12-30	-3.47 %	-3.53 %	6 bps	7.43 %	9.57 %	-214 bps	-12.10 %	-9.51 %	-260 bps
Academic	Dividend Yield	2022-12-30	-3.26 %	-3.53 %	27 bps	10.51 %	9.57 %	95 bps	-10.30 %	-9.51 %	-80 bps
	Growth	2022-12-30	-3.95 %	-3.53 %	-42 bps	9.49 %	9.57 %	-7 bps	-19.44 %	-9.51 %	-993 bps
	High Volatility	2022-12-30	-3.59 %	-3.53 %	-6 bps	13.62 %	9.57 %	405 bps	-16.21 %	-9.51 %	-671 bps
	Low Volatility	2022-12-30	-3.78 %	-3.53 %	-25 bps	5.84 %	9.57 %	-372 bps	-12.93 %	-9.51 %	-342 bps
	Price Momentum	2022-12-30	-3.39 %	-3.53 %	14 bps	7.28 %	9.57 %	-228 bps	-17.33 %	-9.51 %	-782 bps
	Classic Quality	2022-12-30	-4.66 %	-3.53 %	-113 bps	6.45 %	9.57 %	-311 bps	-17.96 %	-9.51 %	-845 bps
	Sentiment	2022-12-30	-3.64 %	-3.53 %	-11 bps	7.88 %	9.57 %	-169 bps	-12.73 %	-9.51 %	-322 bps
	Deep value	2022-12-30	-3.50 %	-3.53 %	3 bps	11.19 %	9.57 %	162 bps	-7.97 %	-9.51 %	154 bps
Cap-Size	Size: Large Cap	2022-12-30	-4.18 %	-3.53 %	-65 bps	8.83 %	9.57 %	-74 bps	-11.22 %	-9.51 %	-171 bps
	Size: Mid Cap	2022-12-30	-2.68 %	-3.53 %	85 bps	11.28 %	9.57 %	171 bps	-19.79 %	-9.51 %	-1028 bps
Multifactor	BIQ-QARP	2022-12-30	-4.31 %	-3.53 %	-78 bps	7.86 %	9.57 %	-170 bps	-14.08 %	-9.51 %	-457 bps
	BIQ-Score	2022-12-30	-3.57 %	-3.53 %	-4 bps	10.03 %	9.57 %	46 bps	-15.14 %	-9.51 %	-564 bps
Cycle model	Expansion	2022-12-30	-3.89 %	-3.53 %	-36 bps	10.56 %	9.57 %	100 bps	-15.64 %	-9.51 %	-614 bps
	Recession	2022-12-30	-3.79 %	-3.53 %	-26 bps	7.47 %	9.57 %	-209 bps	-12.30 %	-9.51 %	-279 bps
	Recovery	2022-12-30	-3.40 %	-3.53 %	13 bps	14.00 %	9.57 %	443 bps	-9.15 %	-9.51 %	36 bps
	Slowdown	2022-12-30	-4.42 %	-3.53 %	-89 bps	5.43 %	9.57 %	-413 bps	-16.97 %	-9.51 %	-746 bps
Sustainable Target	ESG	2022-12-30	-3.43 %	-3.53 %	9 bps	9.16 %	9.57 %	-41 bps	-13.36 %	-9.51 %	-386 bps
	Low Carbon	2022-12-30	-3.82 %	-3.53 %	-29 bps	8.11 %	9.57 %	-146 bps	-16.54 %	-9.51 %	-704 bps
	SDG	2022-12-30	-3.39 %	-3.53 %	14 bps	10.17 %	9.57 %	61 bps	-13.35 %	-9.51 %	-384 bps



EU: BIQ (pure)

Benchmark: MSCI EUROPE NR

Month-to-date

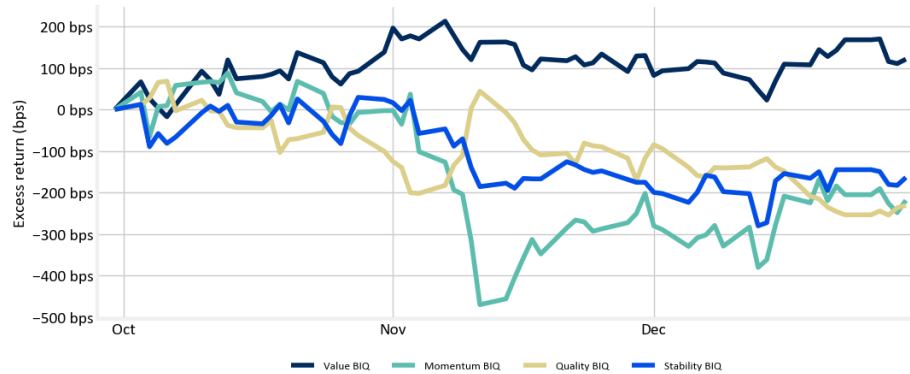
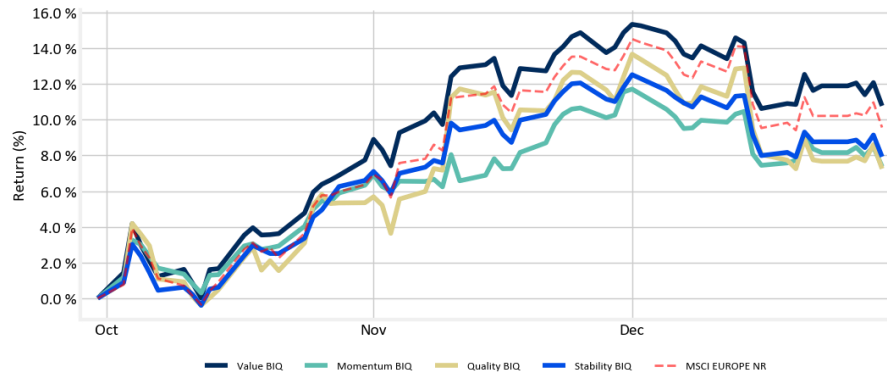


	Factor	Bm	Excess
Value BIQ	-3.57 %	-3.53 %	-4 bps
Momentum BIQ	-3.74 %	-3.53 %	-21 bps
Quality BIQ	-4.58 %	-3.53 %	-105 bps
Stability BIQ	-3.48 %	-3.53 %	5 bps

EU: BIQ (pure)

Benchmark: MSCI EUROPE NR

Quarter-to-date

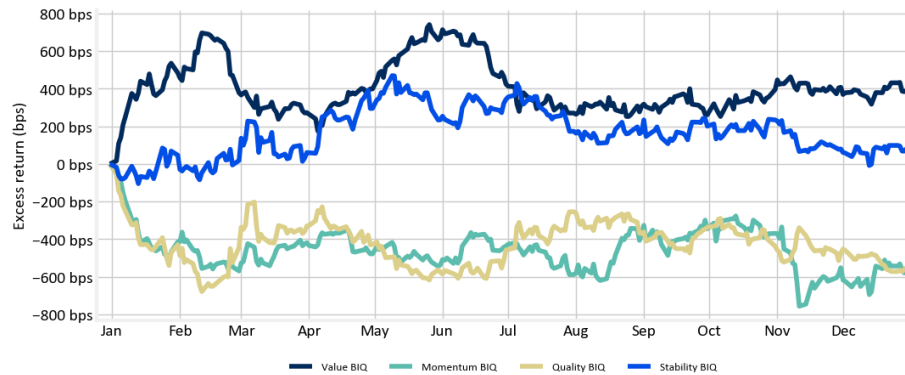
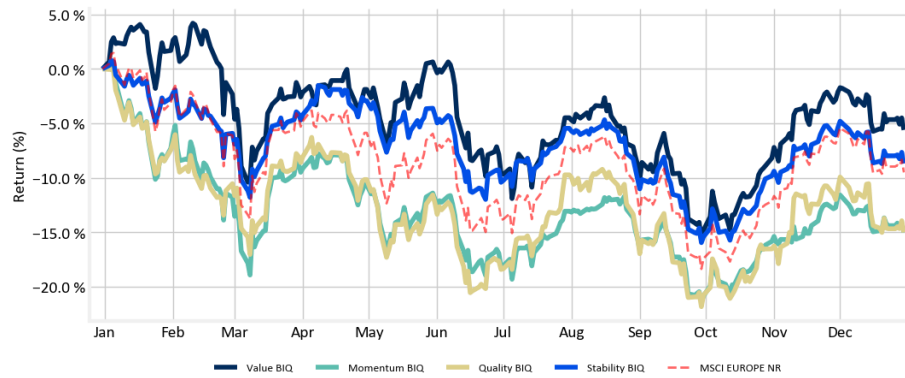


	Factor	Bm	Excess
Value BIQ	10.78 %	9.57 %	121 bps
Momentum BIQ	7.38 %	9.57 %	-219 bps
Quality BIQ	7.26 %	9.57 %	-231 bps
Stability BIQ	7.93 %	9.57 %	-164 bps

EU: BIQ (pure)

Benchmark: MSCI EUROPE NR

Year-to-date

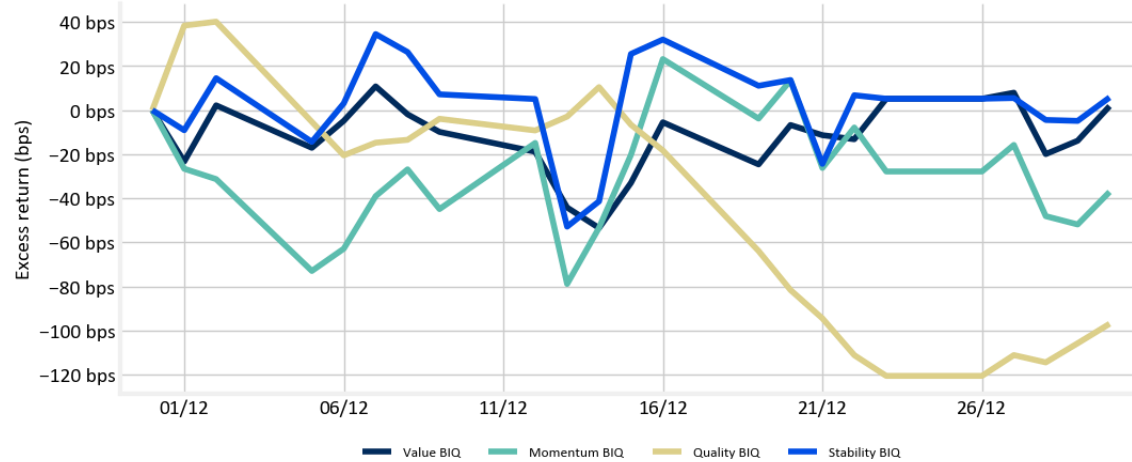
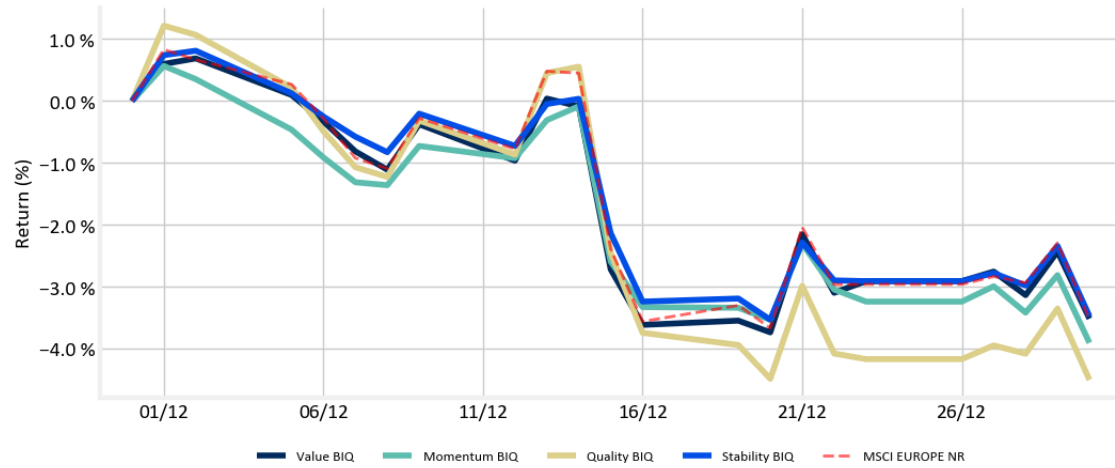


	Factor	Bm	Excess
Value BIQ	-5.61 %	-9.51 %	390 bps
Momentum BIQ	-15.02 %	-9.51 %	-551 bps
Quality BIQ	-15.02 %	-9.51 %	-551 bps
Stability BIQ	-8.69 %	-9.51 %	81 bps

EU: BIQ (sustainable)

Benchmark: MSCI EUROPE NR

Month-to-date



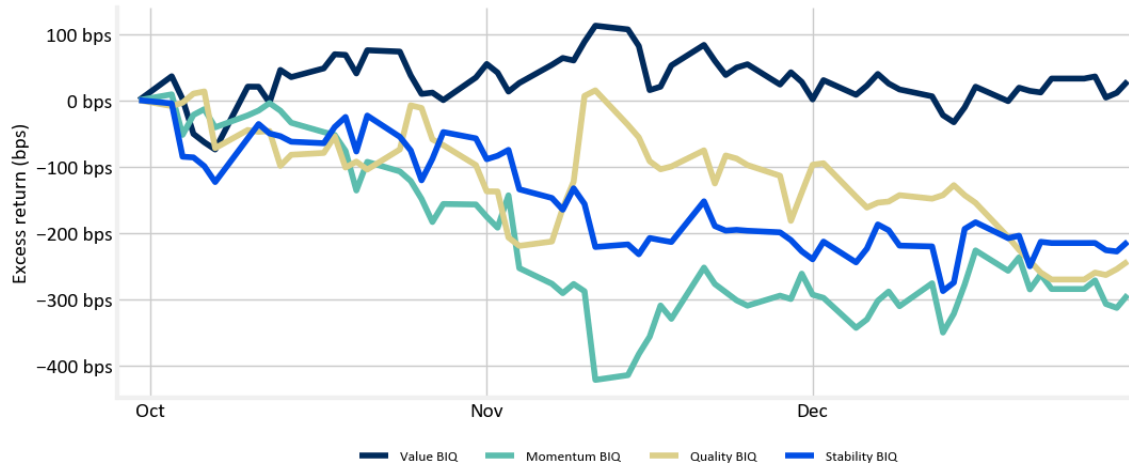
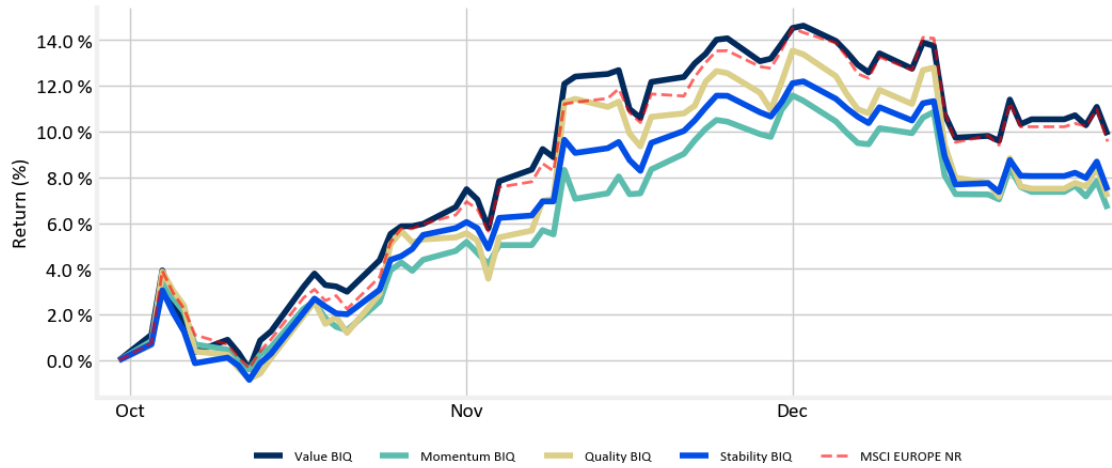
	Factor	Bm	Excess
Value BIQ	-3.51 %	-3.53 %	2 bps
Momentum BIQ	-3.90 %	-3.53 %	-37 bps
Quality BIQ	-4.50 %	-3.53 %	-97 bps
Stability BIQ	-3.47 %	-3.53 %	6 bps



EU: BIQ (sustainable)

Benchmark: MSCI EUROPE NR

Quarter-to-date



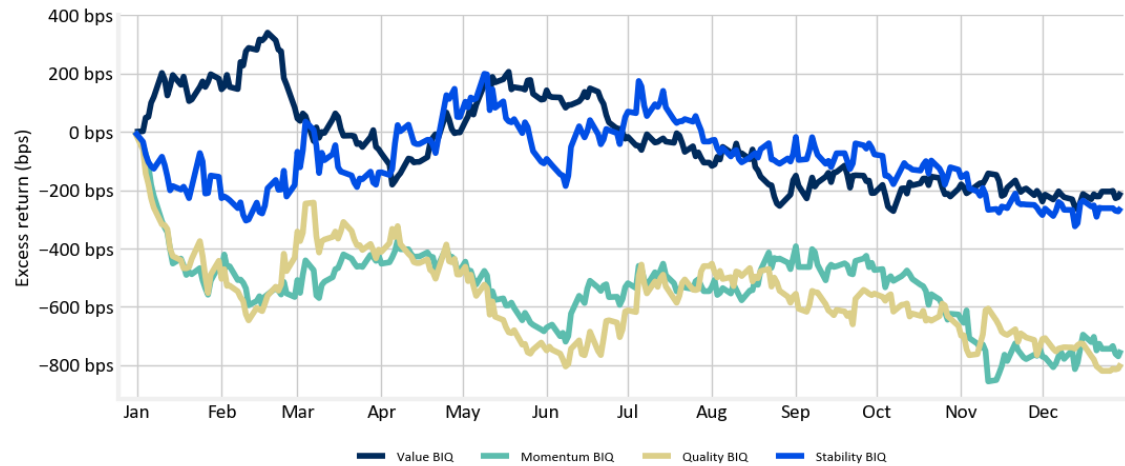
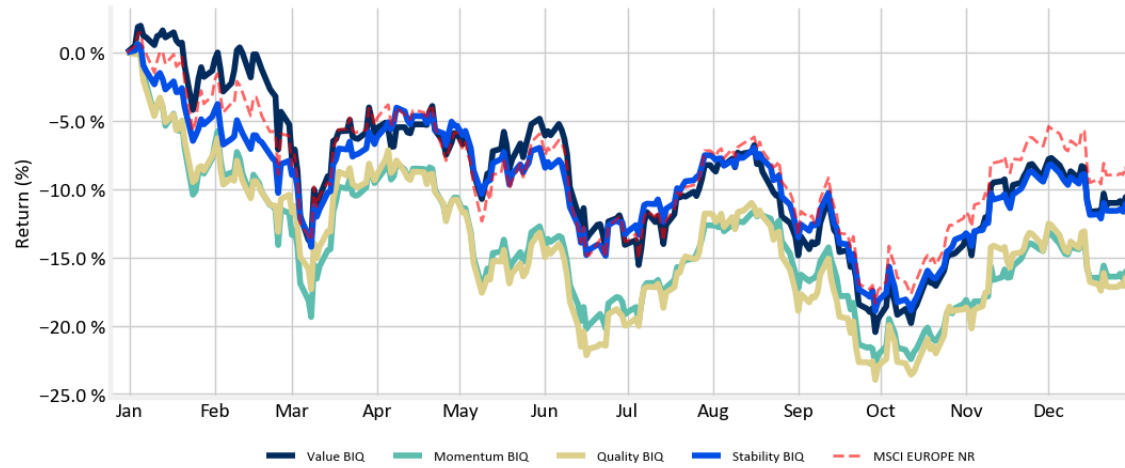
	Factor	Bm	Excess
Value BIQ	9.85 %	9.57 %	29 bps
Momentum BIQ	6.63 %	9.57 %	-294 bps
Quality BIQ	7.13 %	9.57 %	-243 bps
Stability BIQ	7.43 %	9.57 %	-214 bps



EU: BIQ (sustainable)

Benchmark: MSCI EUROPE NR

Year-to-date



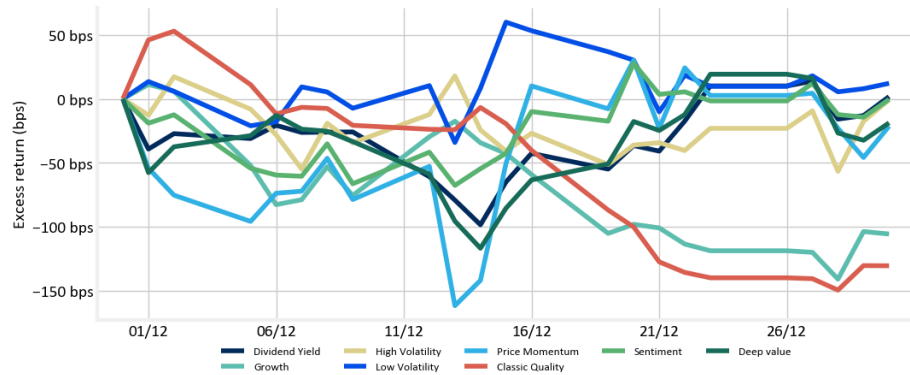
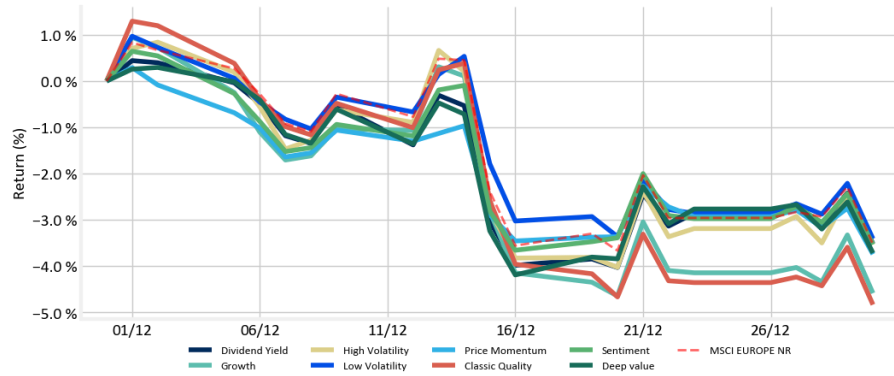
	Factor	Bm	Excess
Value BIQ	-11.57 %	-9.51 %	-206 bps
Momentum BIQ	-16.99 %	-9.51 %	-748 bps
Quality BIQ	-17.46 %	-9.51 %	-795 bps
Stability BIQ	-12.10 %	-9.51 %	-260 bps



EU: Academic (pure)

Benchmark: MSCI EUROPE NR

Month-to-date

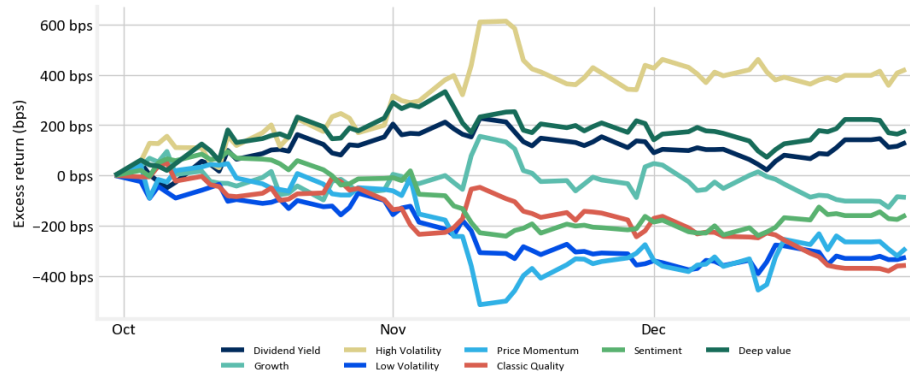
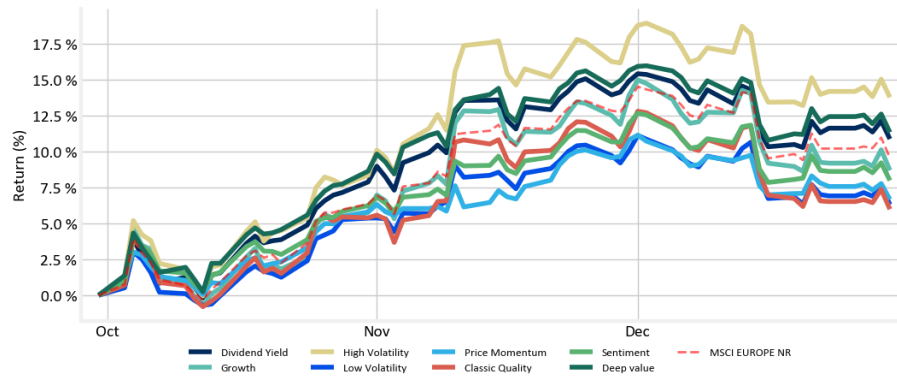


	Factor	Bm	Excess
Dividend Yield	-3.51 %	-3.53 %	2 bps
Growth	-4.58 %	-3.53 %	-105 bps
High Volatility	-3.54 %	-3.53 %	-1 bbps
Low Volatility	-3.41 %	-3.53 %	12 bps
Price Momentum	-3.74 %	-3.53 %	-21 bps
Classic Quality	-4.83 %	-3.53 %	-130 bps
Sentiment	-3.53 %	-3.53 %	-0 bps
Deep value	-3.72 %	-3.53 %	-19 bps

EU: Academic (pure)

Benchmark: MSCI EUROPE NR

Quarter-to-date

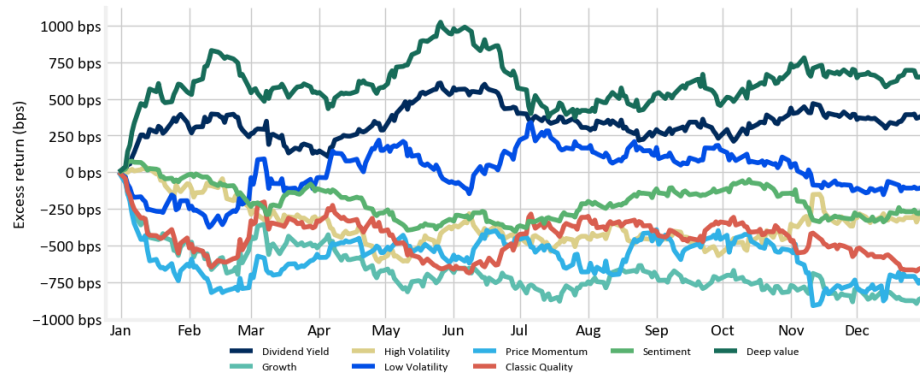
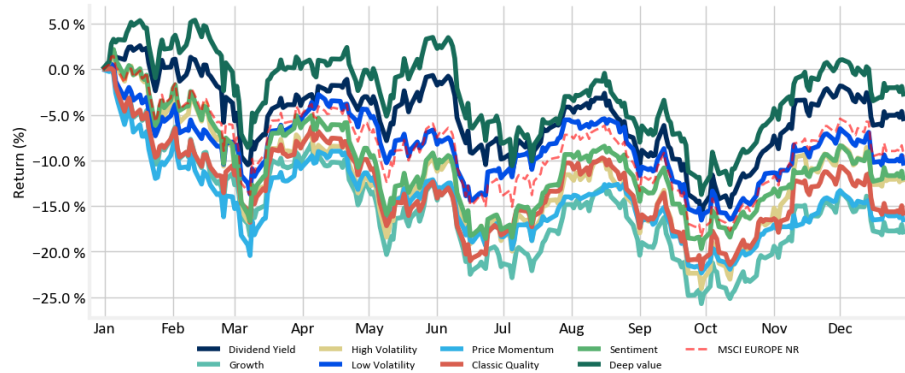


	Factor	Bm	Excess
Dividend Yield	10.88 %	9.57 %	131 bps
Growth	8.69 %	9.57 %	-87 bps
High Volatility	13.78 %	9.57 %	422 bps
Low Volatility	6.31 %	9.57 %	-325 bps
Price Momentum	6.68 %	9.57 %	-289 bps
Classic Quality	5.99 %	9.57 %	-357 bps
Sentiment	7.99 %	9.57 %	-157 bps
Deep value	11.34 %	9.57 %	178 bps

EU: Academic (pure)

Benchmark: MSCI EUROPE NR

Year-to-date

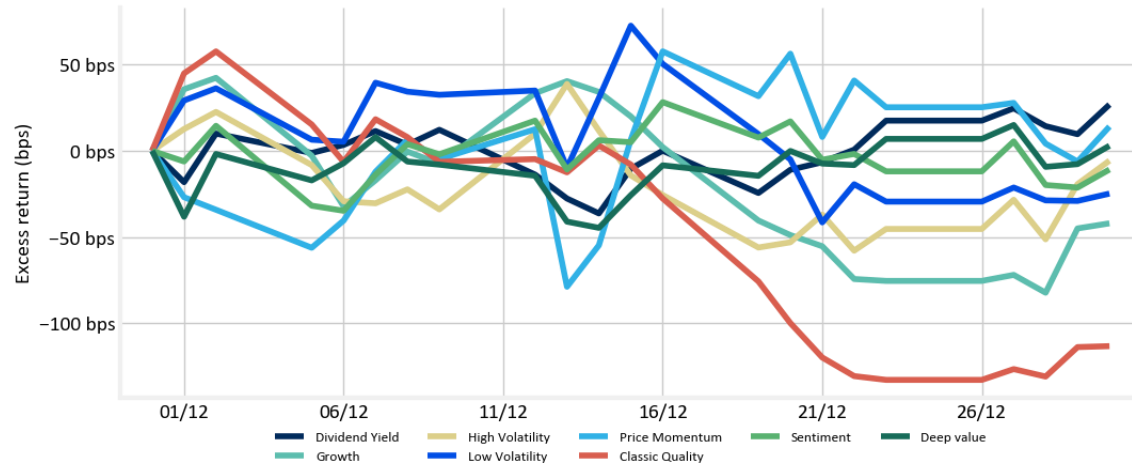
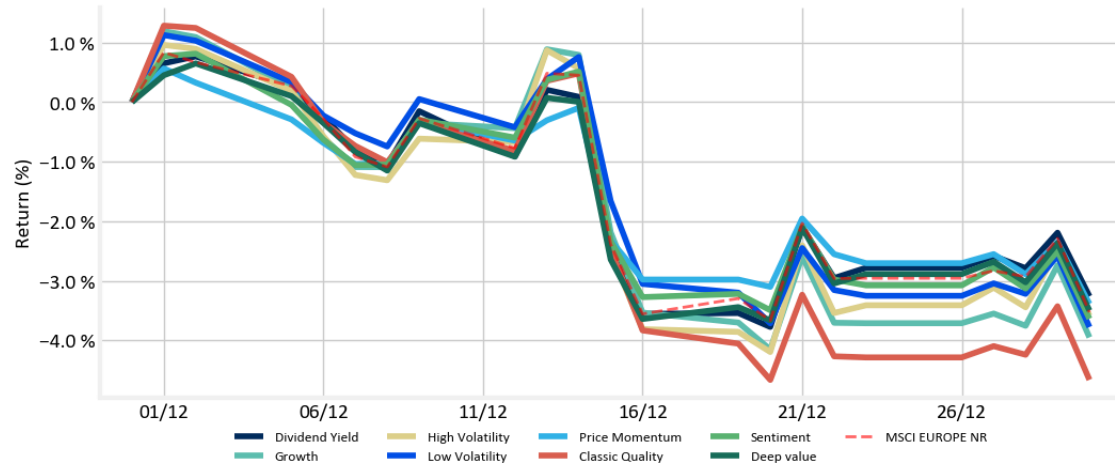


	Factor	Bm	Excess
Dividend Yield	-5.69 %	-9.51 %	382 bps
Growth	-18.12 %	-9.51 %	-861 bps
High Volatility	-12.39 %	-9.51 %	-288 bps
Low Volatility	-10.57 %	-9.51 %	-106 bps
Price Momentum	-16.78 %	-9.51 %	-728 bps
Classic Quality	-16.06 %	-9.51 %	-655 bps
Sentiment	-12.18 %	-9.51 %	-267 bps
Deep value	-2.98 %	-9.51 %	652 bps

EU: Academic (sustainable)

Benchmark: MSCI EUROPE NR

Month-to-date



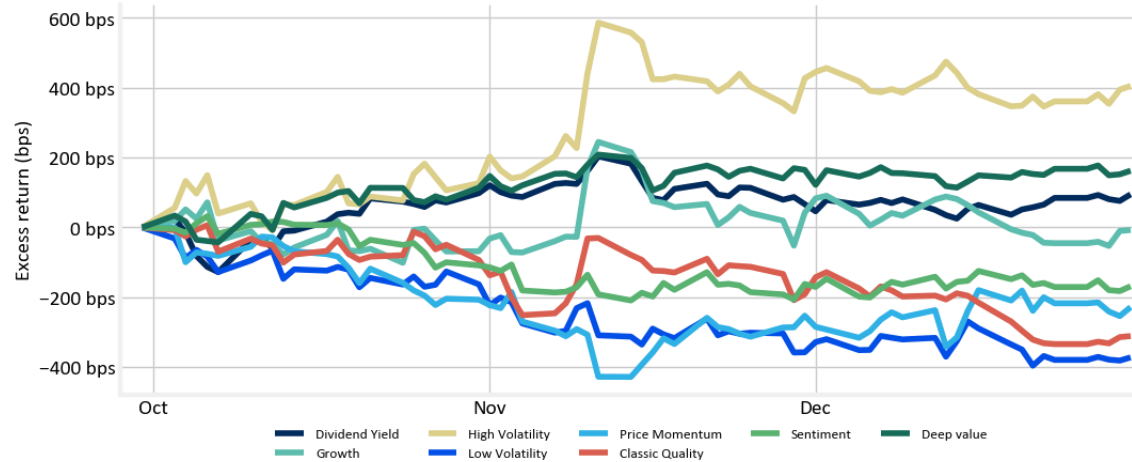
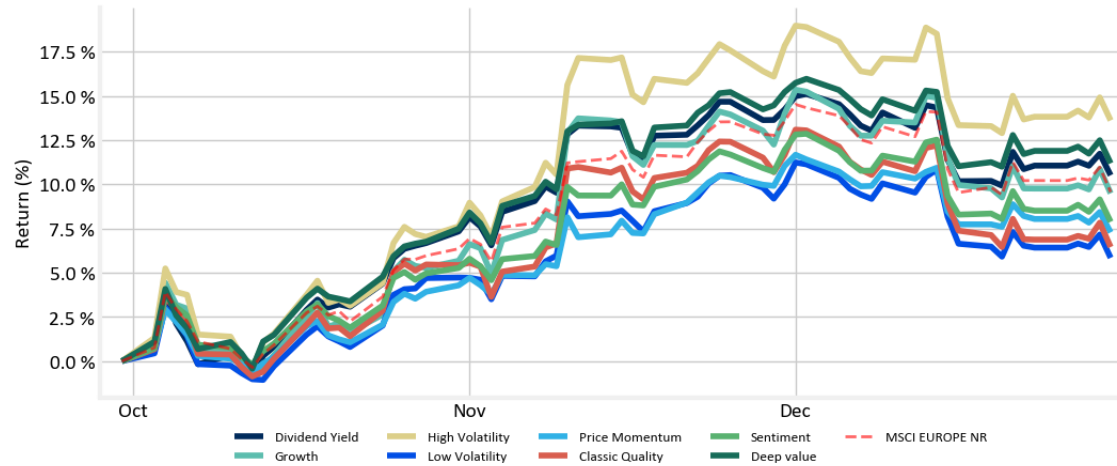
	Factor	Bm	Excess
Dividend Yield	-3.26 %	-3.53 %	27 bps
Growth	-3.95 %	-3.53 %	-42 bps
High Volatility	-3.59 %	-3.53 %	-6 bps
Low Volatility	-3.78 %	-3.53 %	-25 bps
Price Momentum	-3.39 %	-3.53 %	14 bps
Classic Quality	-4.66 %	-3.53 %	-113 bps
Sentiment	-3.64 %	-3.53 %	-11 bps
Deep value	-3.50 %	-3.53 %	3 bps



EU: Academic (sustainable)

Benchmark: MSCI EUROPE NR

Quarter-to-date



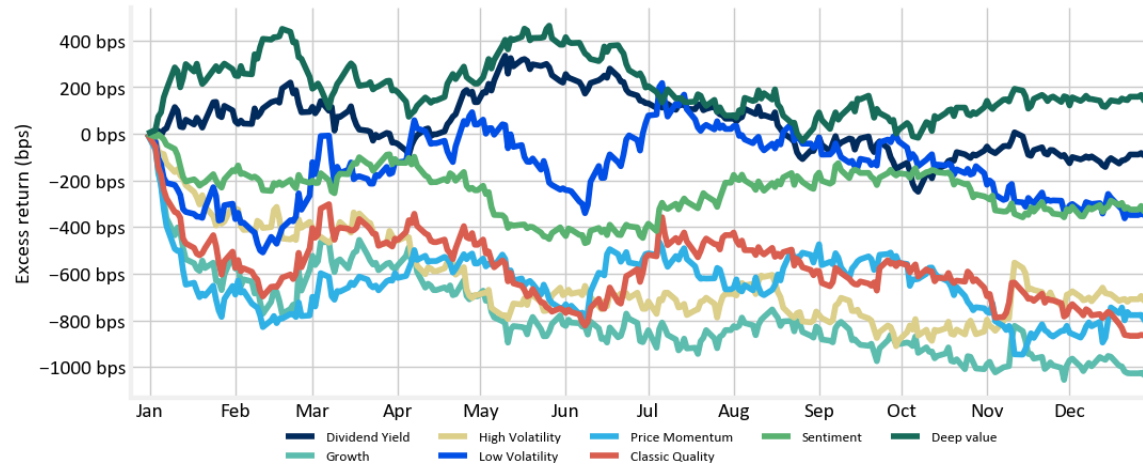
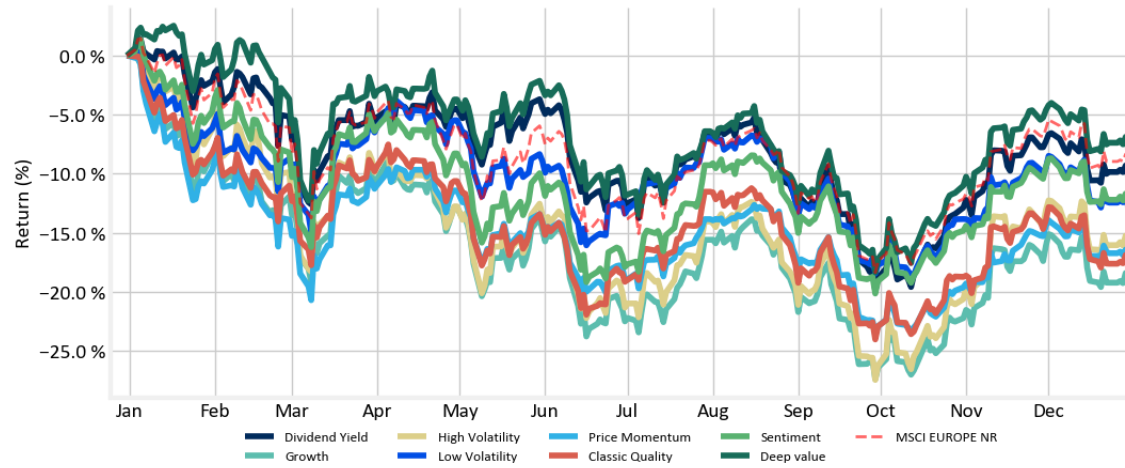
	Factor	Bm	Excess
Dividend Yield	10.51 %	9.57 %	95 bps
Growth	9.49 %	9.57 %	-7 bps
High Volatility	13.62 %	9.57 %	405 bps
Low Volatility	5.84 %	9.57 %	-372 bps
Price Momentum	7.28 %	9.57 %	-228 bps
Classic Quality	6.45 %	9.57 %	-311 bps
Sentiment	7.88 %	9.57 %	-169 bps
Deep value	11.19 %	9.57 %	162 bps



EU: Academic (sustainable)

Benchmark: MSCI EUROPE NR

Year-to-date



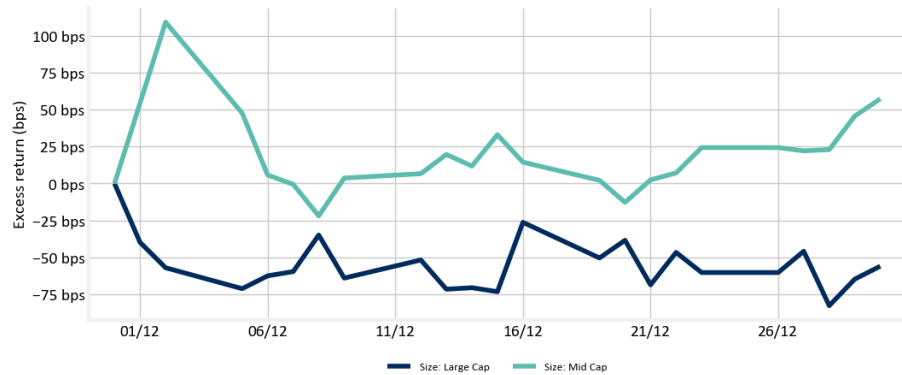
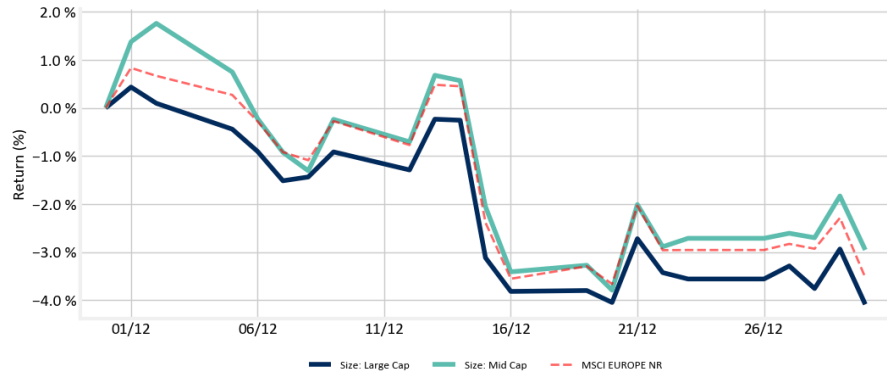
	Factor	Bm	Excess
Dividend Yield	-10.30 %	-9.51 %	-80 bps
Growth	-19.44 %	-9.51 %	-993 bps
High Volatility	-16.21 %	-9.51 %	-671 bps
Low Volatility	-12.93 %	-9.51 %	-342 bps
Price Momentum	-17.33 %	-9.51 %	-782 bps
Classic Quality	-17.96 %	-9.51 %	-845 bps
Sentiment	-12.73 %	-9.51 %	-322 bps
Deep value	-7.97 %	-9.51 %	154 bps



EU: Cap-Size (pure)

Benchmark: MSCI EUROPE NR

Month-to-date

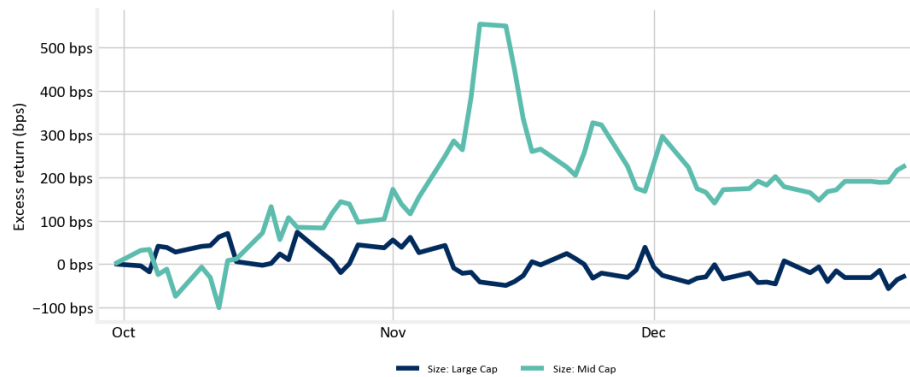
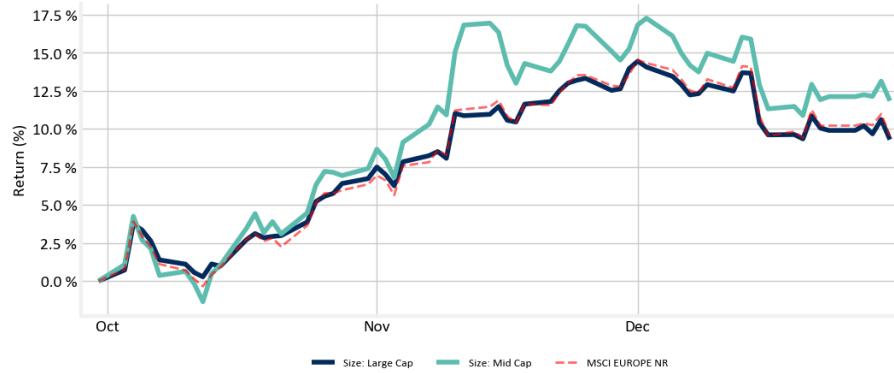


	Factor	Bm	Excess
Size: Large Cap	-4.09 %	-3.53 %	-56 bps
Size: Mid Cap	-2.96 %	-3.53 %	57 bps

EU: Cap-Size (pure)

Benchmark: MSCI EUROPE NR

Quarter-to-date

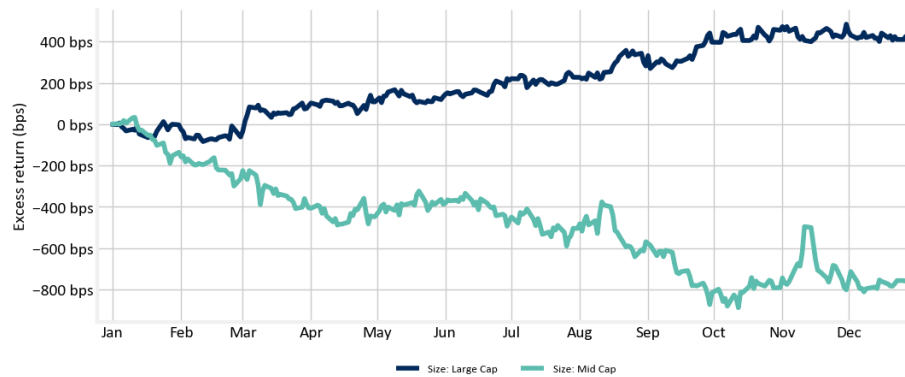
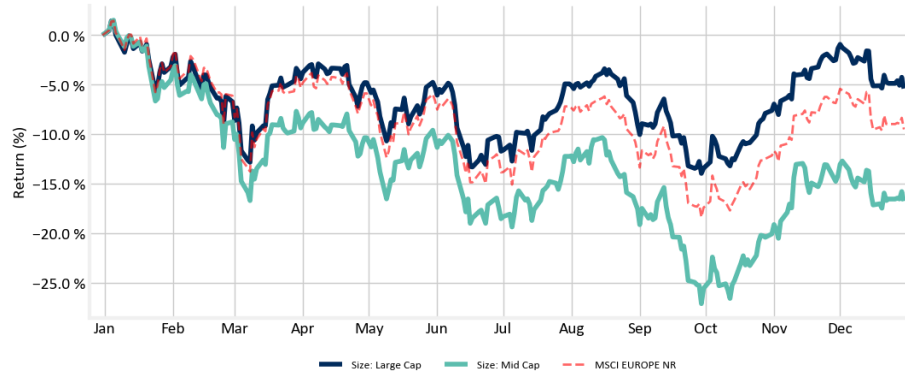


	Factor	Bm	Excess
Size: Large Cap	9.30 %	9.57 %	-27 bps
Size: Mid Cap	11.85 %	9.57 %	228 bps

EU: Cap-Size (pure)

Benchmark: MSCI EUROPE NR

Year-to-date

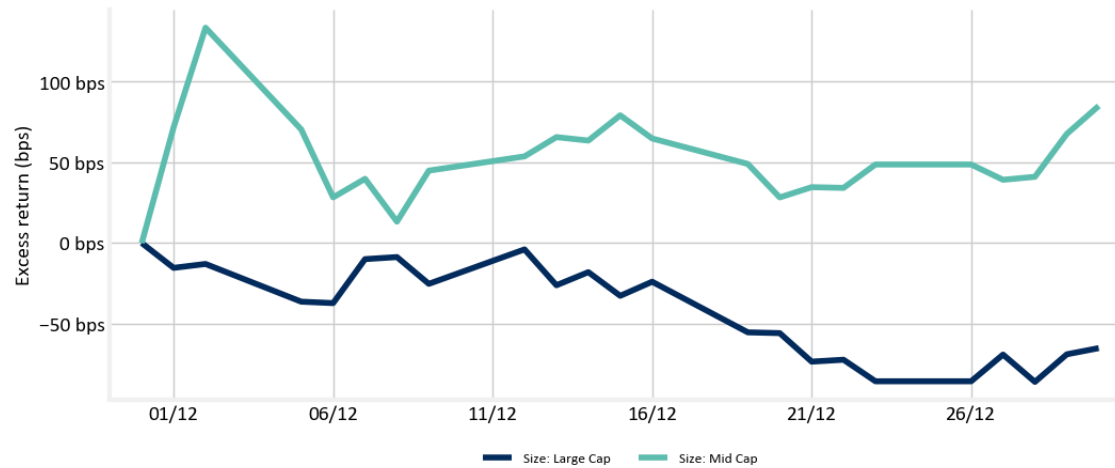
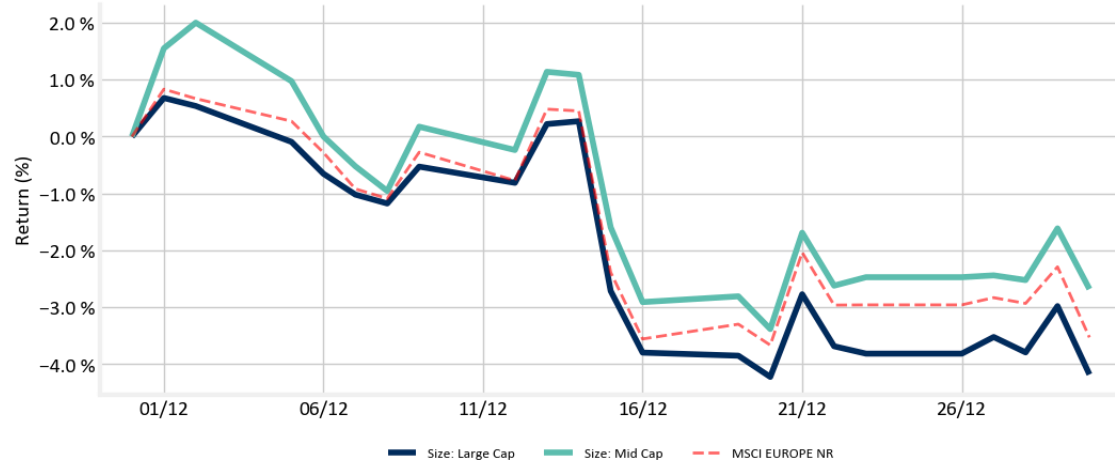


	Factor	Bm	Excess
Size: Large Cap	-5.38 %	-9.51 %	412 bps
Size: Mid Cap	-16.75 %	-9.51 %	-724 bps

EU: Cap-Size (sustainable)

Benchmark: MSCI EUROPE NR

Month-to-date



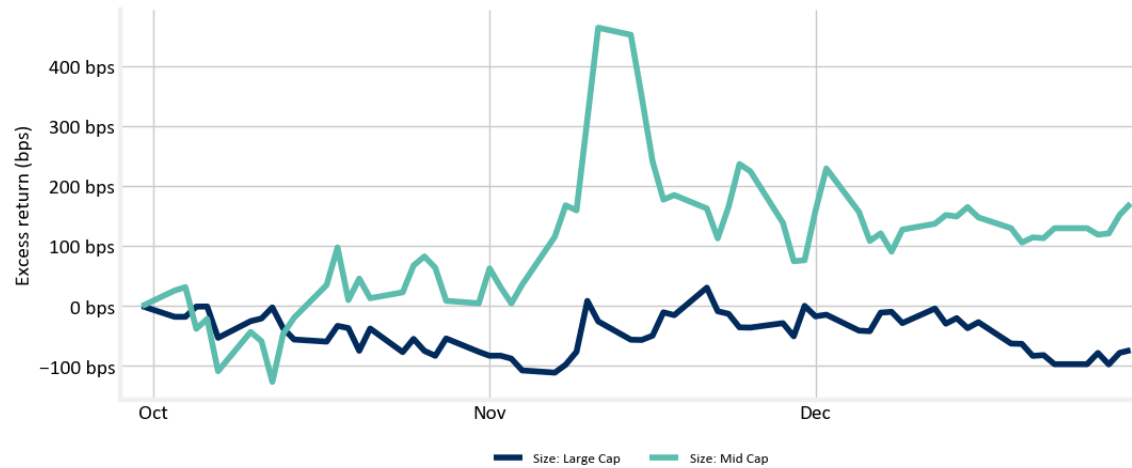
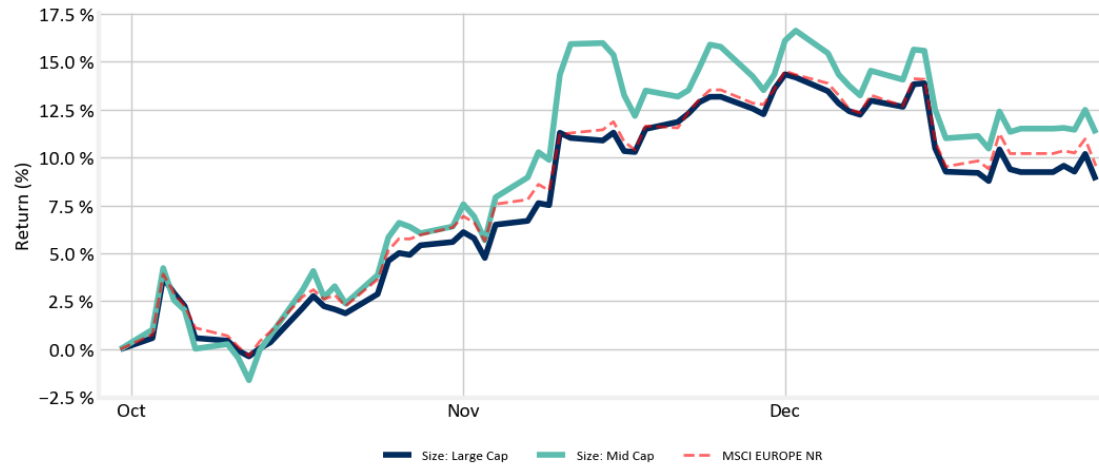
	Factor	Bm	Excess
Size: Large Cap	-4.18 %	-3.53 %	-65 bps
Size: Mid Cap	-2.68 %	-3.53 %	85 bps



EU: Cap-Size (sustainable)

Benchmark: MSCI EUROPE NR

Quarter-to-date



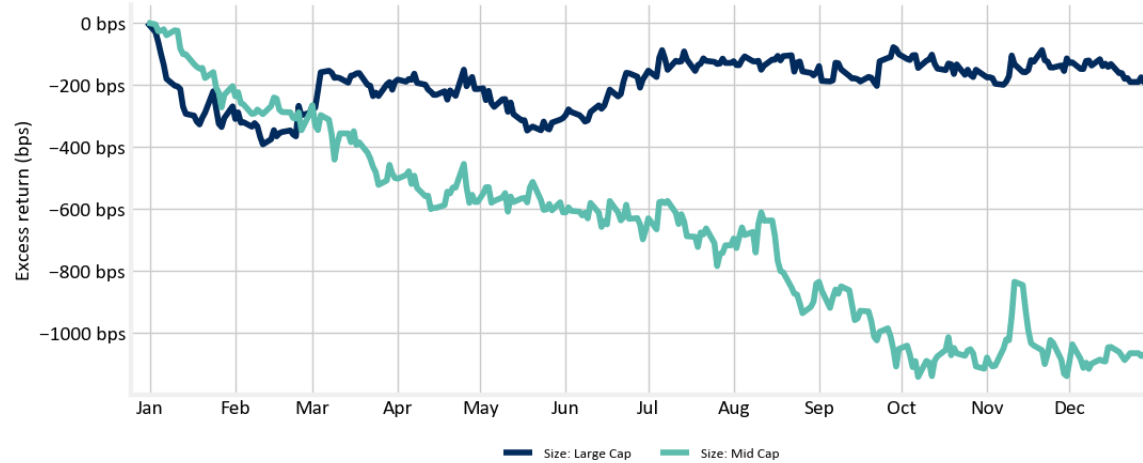
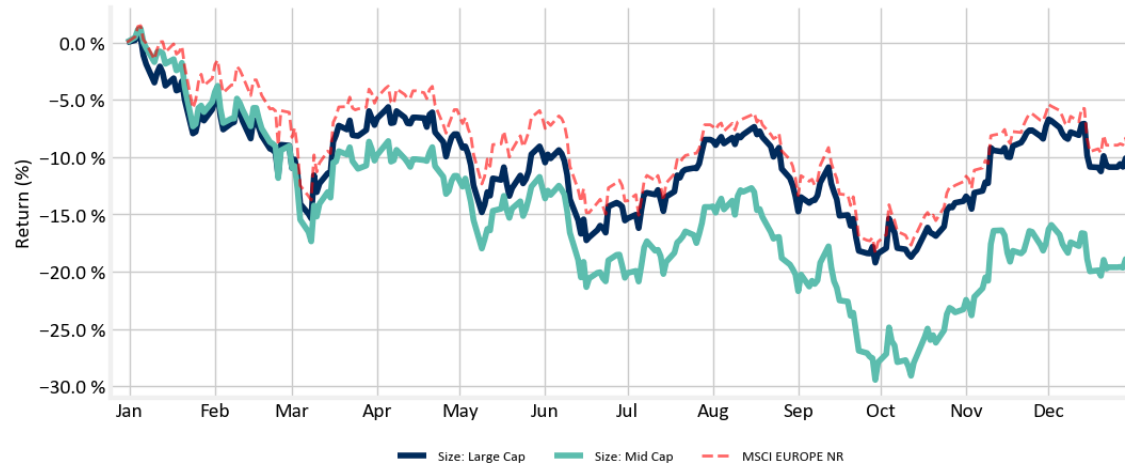
	Factor	Bm	Excess
Size: Large Cap	8.83 %	9.57 %	-74 bps
Size: Mid Cap	11.28 %	9.57 %	171 bps



EU: Cap-Size (sustainable)

Benchmark: MSCI EUROPE NR

Year-to-date



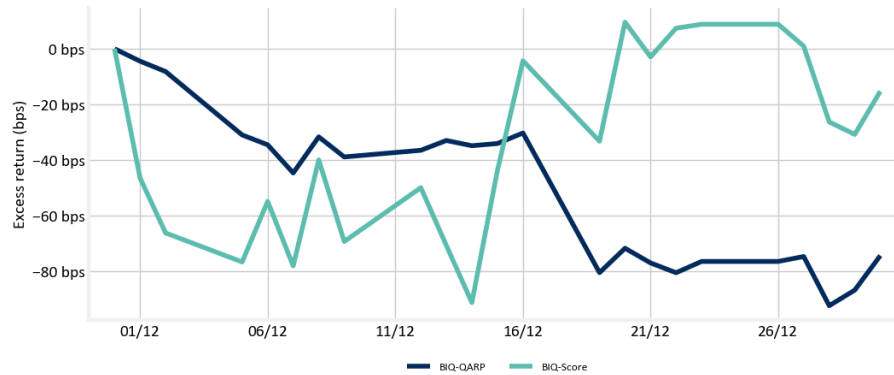
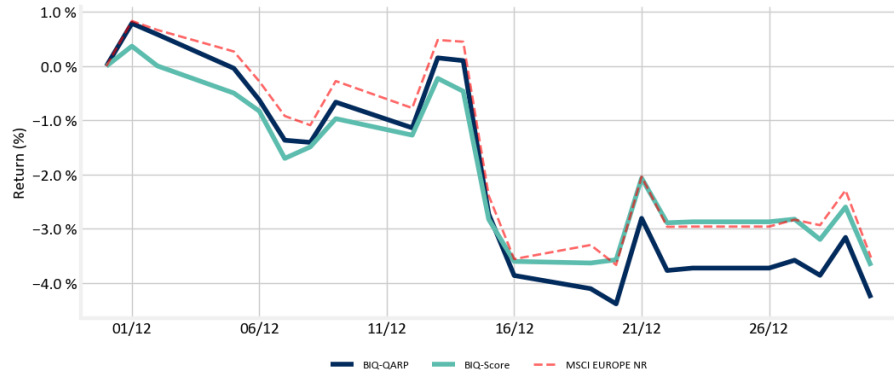
	Factor	Bm	Excess
Size: Large Cap	-11.22 %	-9.51 %	-171 bps
Size: Mid Cap	-19.79 %	-9.51 %	-1028 bps



EU: Multifactor (pure)

Benchmark: MSCI EUROPE NR

Month-to-date

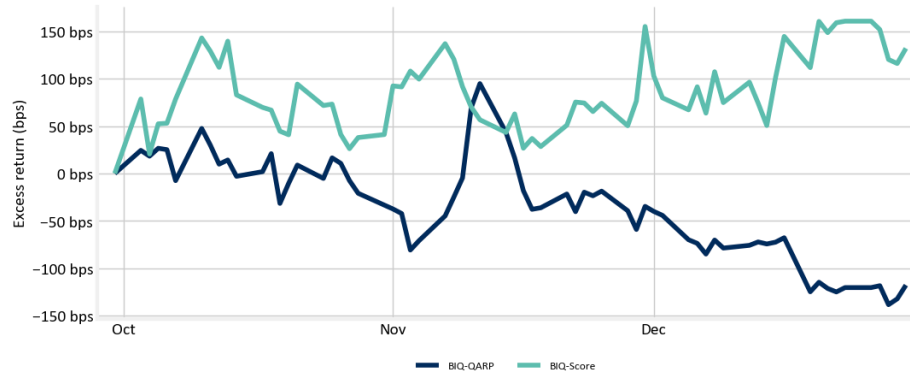
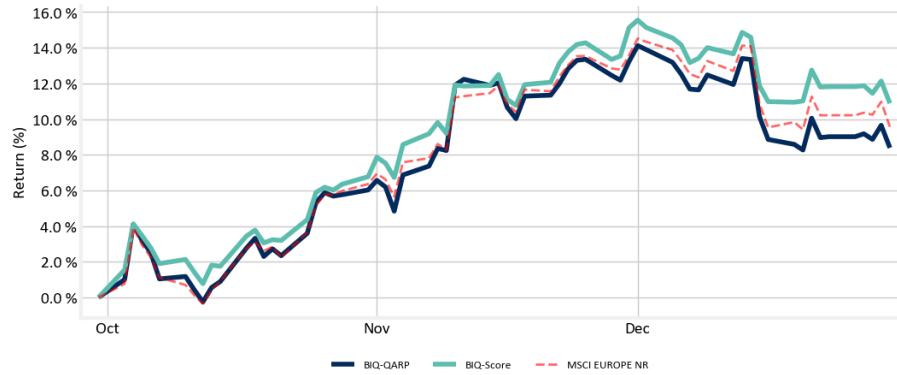


	Factor	Bm	Excess
BIQ-QARP	-4.27 %	-3.53 %	-74 bps
BIQ-Score	-3.68 %	-3.53 %	-15 bps

EU: Multifactor (pure)

Benchmark: MSCI EUROPE NR

Quarter-to-date

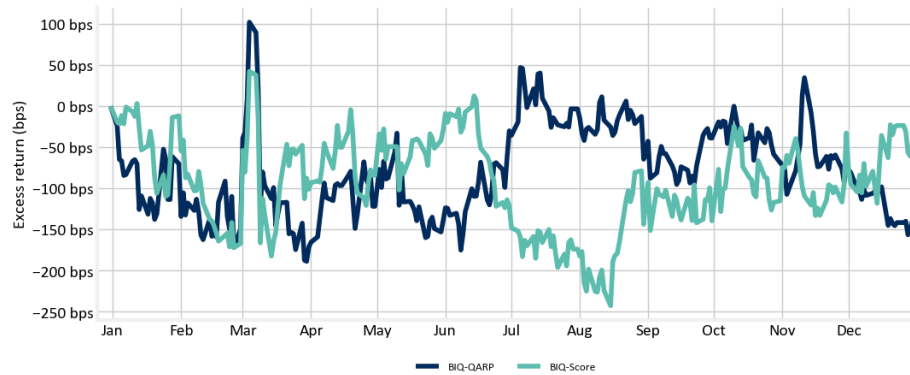
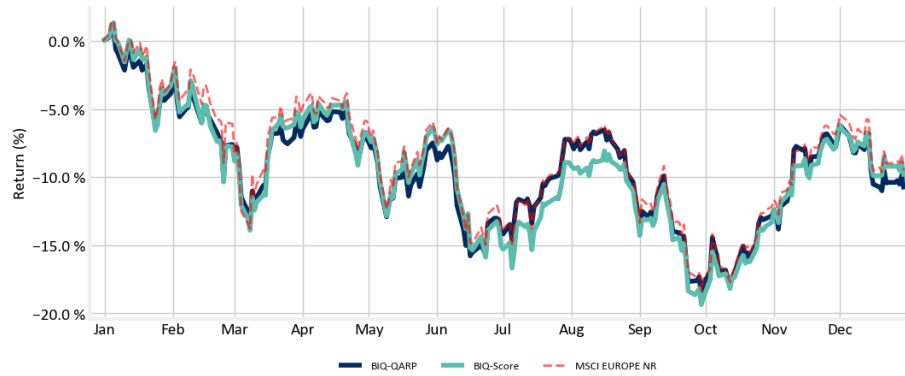


	Factor	Bm	Excess
BIQ-QARP	8.39 %	9.57 %	-118 bps
BIQ-Score	10.88 %	9.57 %	132 bps

EU: Multifactor (pure)

Benchmark: MSCI EUROPE NR

Year-to-date

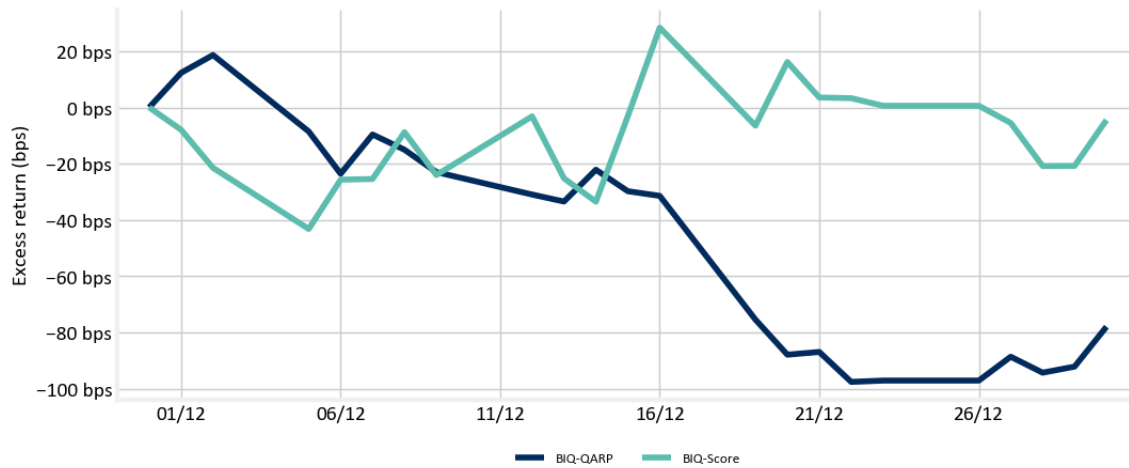
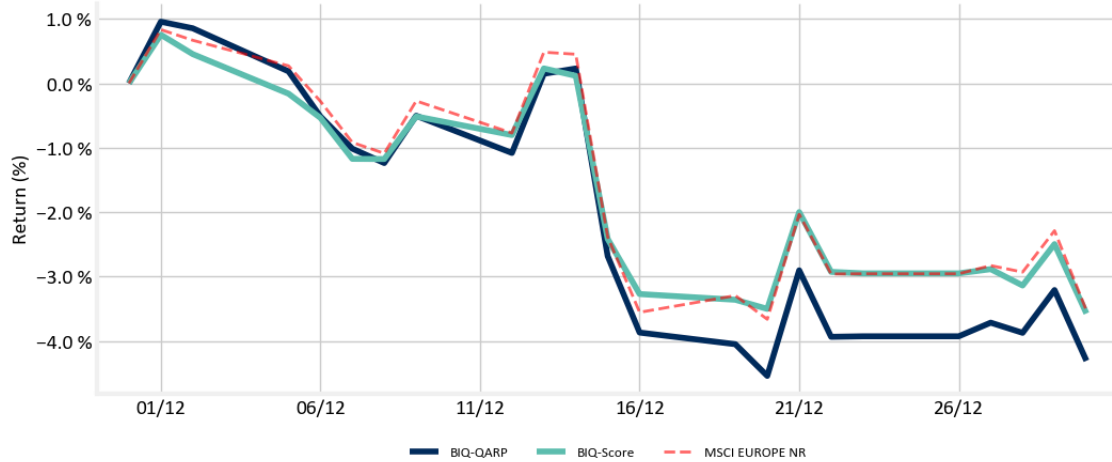


	Factor	Bm	Excess
BIQ-QARP	-10.90 %	-9.51 %	-139 bps
BIQ-Score	-9.96 %	-9.51 %	-46 bps

EU: Multifactor (sustainable)

Benchmark: MSCI EUROPE NR

Month-to-date



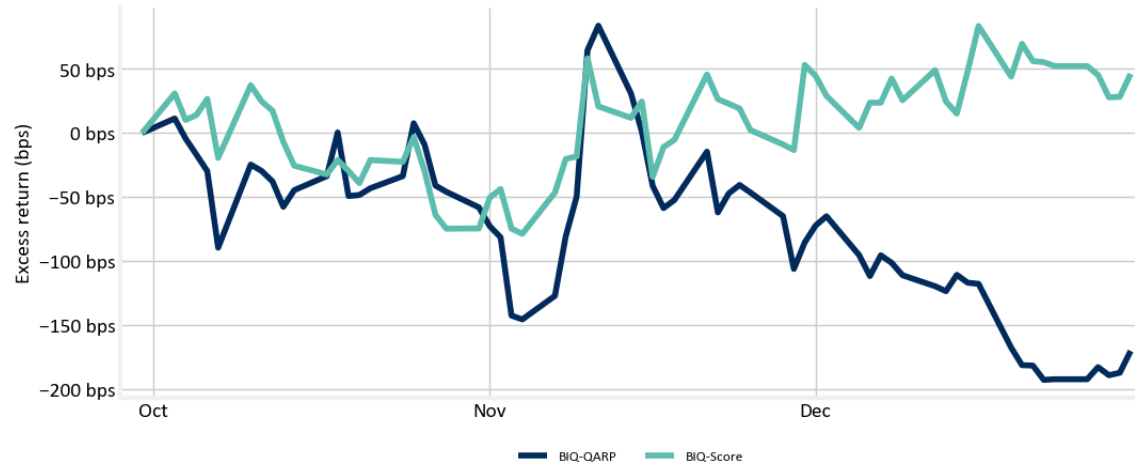
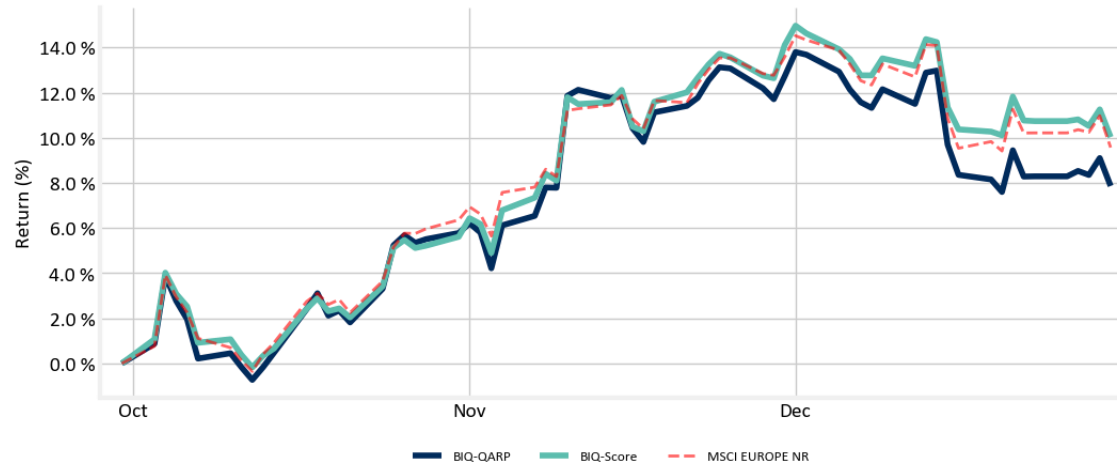
	Factor	Bm	Excess
BIQ-QARP	-4.31 %	-3.53 %	-78 bps
BIQ-Score	-3.57 %	-3.53 %	-4 bps



EU: Multifactor (sustainable)

Benchmark: MSCI EUROPE NR

Quarter-to-date



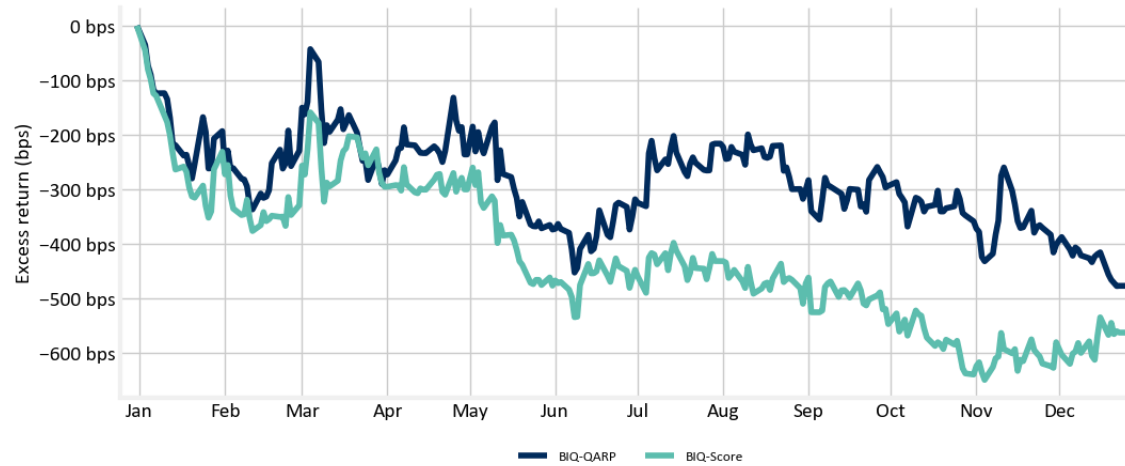
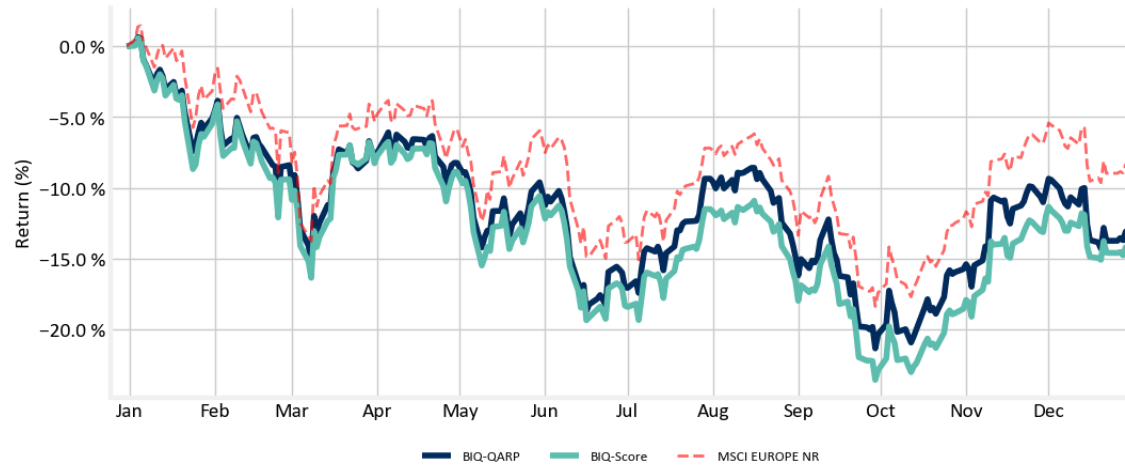
	Factor	Bm	Excess
BIQ-QARP	7.86 %	9.57 %	-170 bps
BIQ-Score	10.03 %	9.57 %	46 bps



EU: Multifactor (sustainable)

Benchmark: MSCI EUROPE NR

Year-to-date



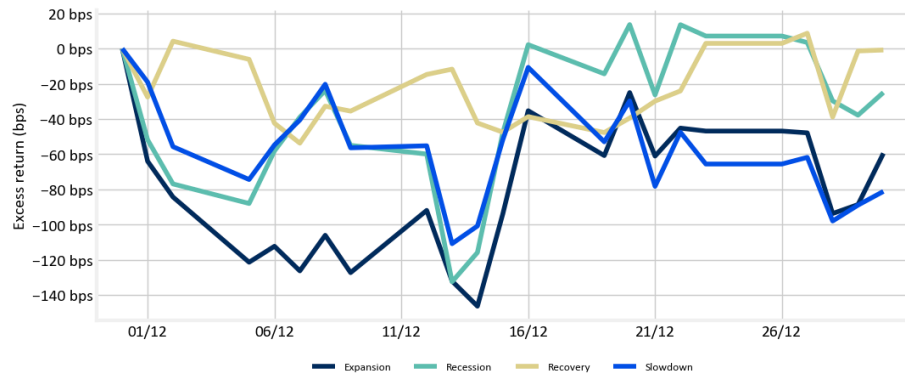
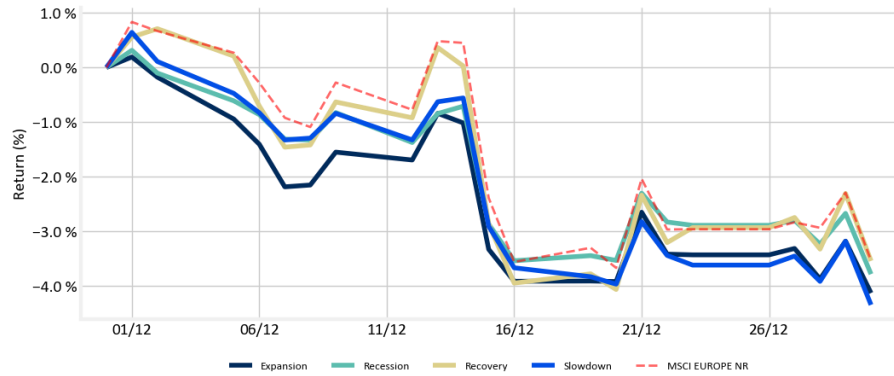
	Factor	Bm	Excess
BIQ-QARP	-14.08 %	-9.51 %	-457 bps
BIQ-Score	-15.14 %	-9.51 %	-564 bps



EU: Cycle model (pure)

Benchmark: MSCI EUROPE NR

Month-to-date

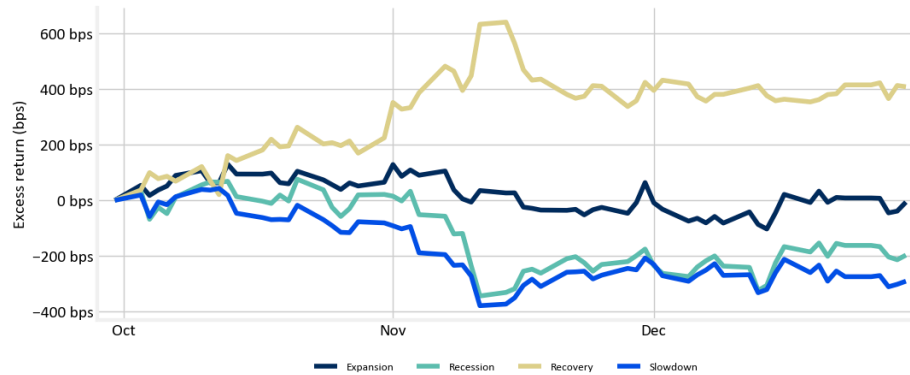
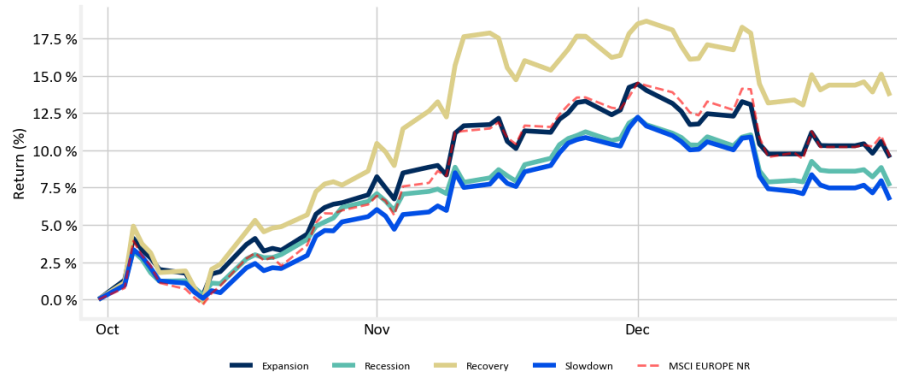


	Factor	Bm	Excess
Expansion	-4.12 %	-3.53 %	-60 bps
Recession	-3.78 %	-3.53 %	-25 bps
Recovery	-3.54 %	-3.53 %	-1 bps
Slowdown	-4.34 %	-3.53 %	-81 bps

EU: Cycle model (pure)

Benchmark: MSCI EUROPE NR

Quarter-to-date

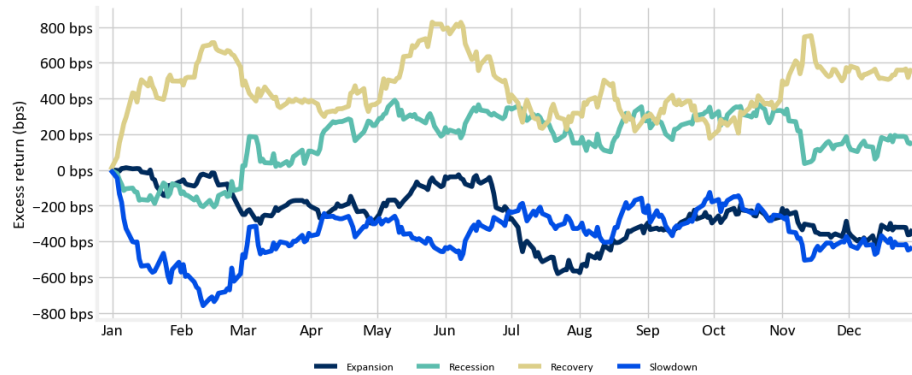
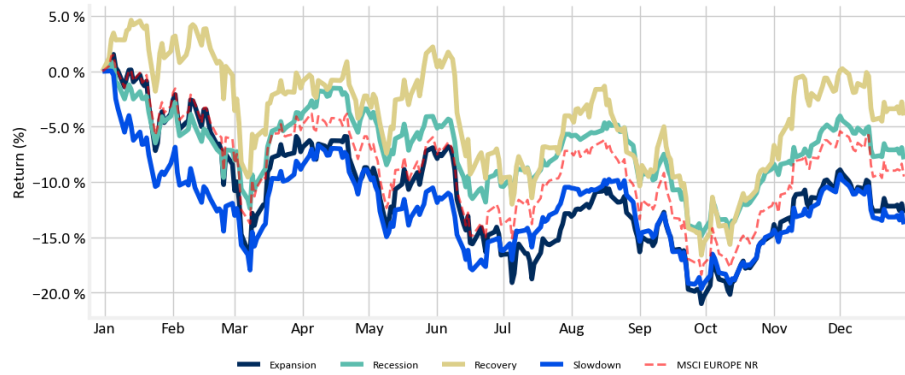


	Factor	Bm	Excess
Expansion	9.50 %	9.57 %	-6 bps
Recession	7.60 %	9.57 %	-197 bps
Recovery	13.64 %	9.57 %	408 bps
Slowdown	6.66 %	9.57 %	-291 bps

EU: Cycle model (pure)

Benchmark: MSCI EUROPE NR

Year-to-date

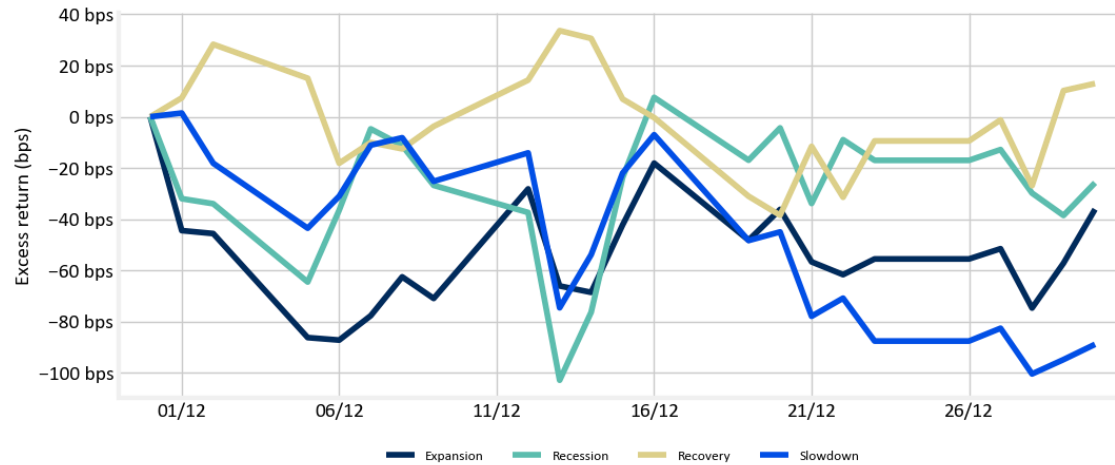
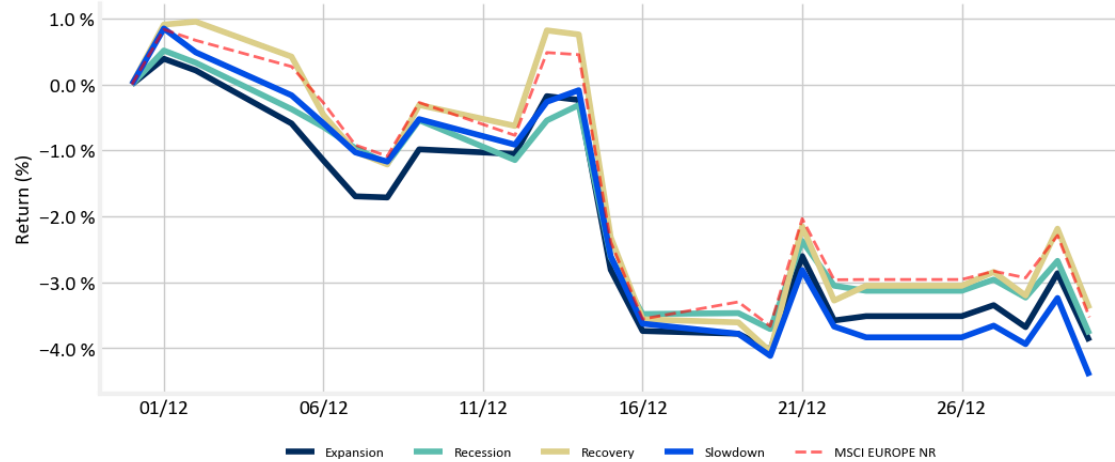


	Factor	Bm	Excess
Expansion	-12.82 %	-9.51 %	-331 bps
Recession	-7.95 %	-9.51 %	156 bps
Recovery	-3.99 %	-9.51 %	552 bps
Slowdown	-13.82 %	-9.51 %	-432 bps

EU: Cycle model (sustainable)

Benchmark: MSCI EUROPE NR

Month-to-date



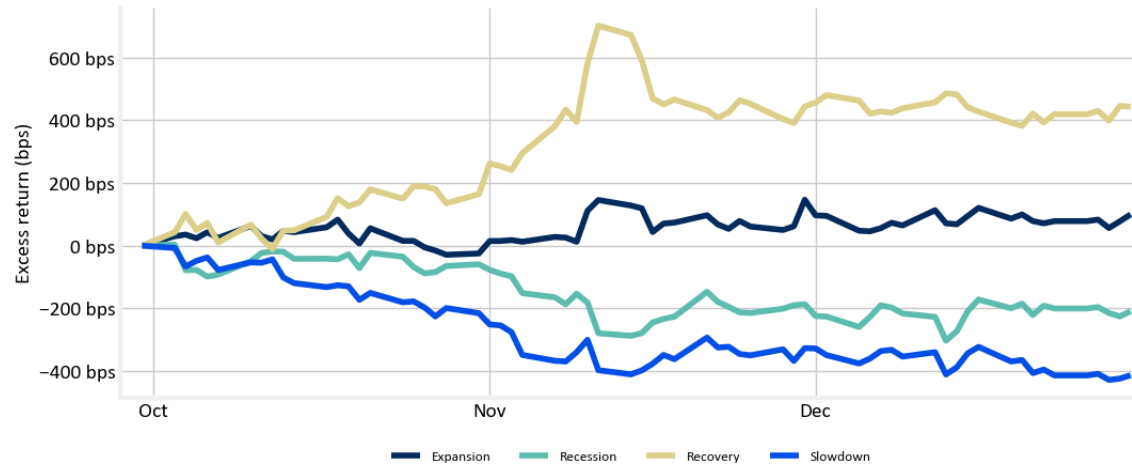
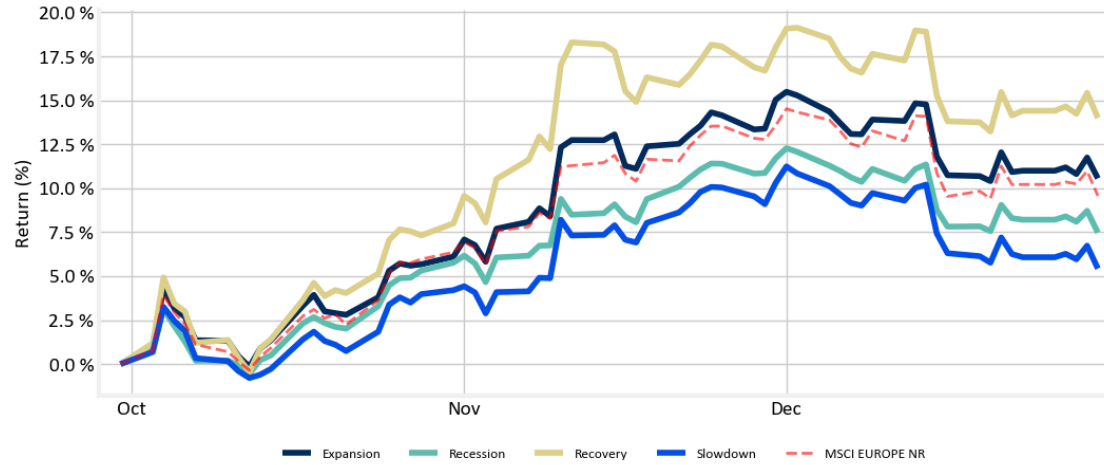
	Factor	Bm	Excess
Expansion	-3.89 %	-3.53 %	-36 bps
Recession	-3.79 %	-3.53 %	-26 bps
Recovery	-3.40 %	-3.53 %	13 bps
Slowdown	-4.42 %	-3.53 %	-89 bps



EU: Cycle model (sustainable)

Benchmark: MSCI EUROPE NR

Quarter-to-date



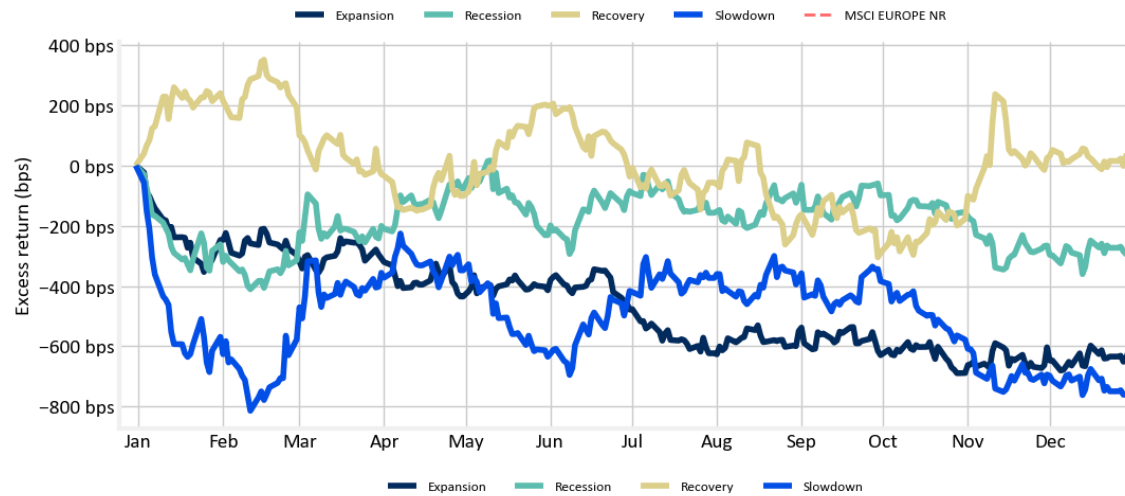
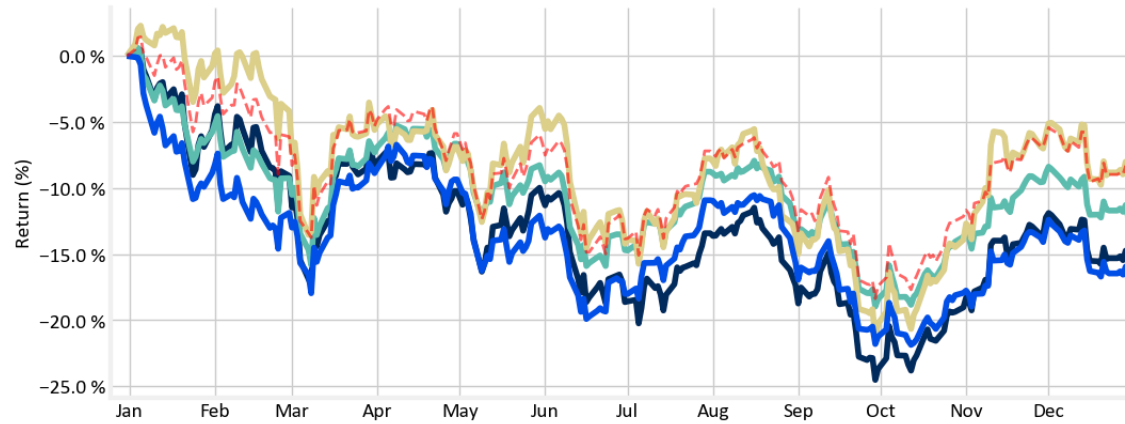
	Factor	Bm	Excess
Expansion	10.56 %	9.57 %	100 bps
Recession	7.47 %	9.57 %	-209 bps
Recovery	14.00 %	9.57 %	443 bps
Slowdown	5.43 %	9.57 %	-413 bps



EU: Cycle model (sustainable)

Benchmark: MSCI EUROPE NR

Year-to-date



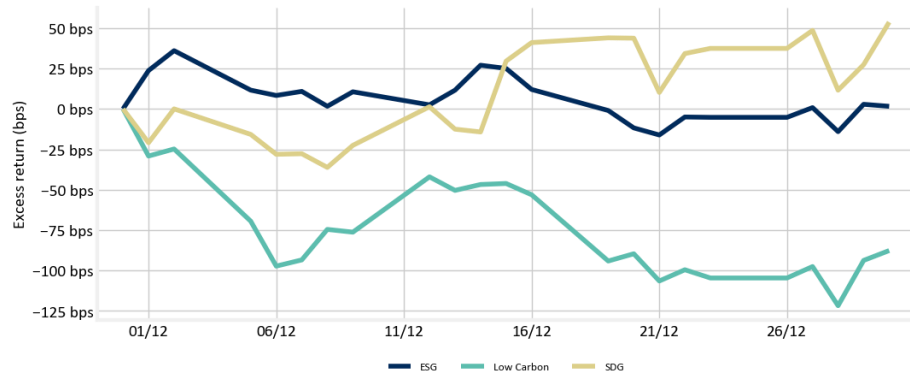
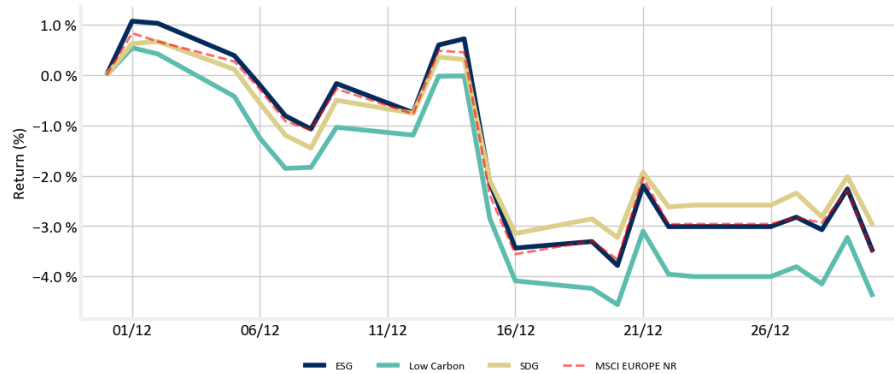
	Factor	Bm	Excess
Expansion	-15.64 %	-9.51 %	-614 bps
Recession	-12.30 %	-9.51 %	-279 bps
Recovery	-9.15 %	-9.51 %	36 bps
Slowdown	-16.97 %	-9.51 %	-746 bps



EU: Sustainable Target (pure)

Benchmark: MSCI EUROPE NR

Month-to-date

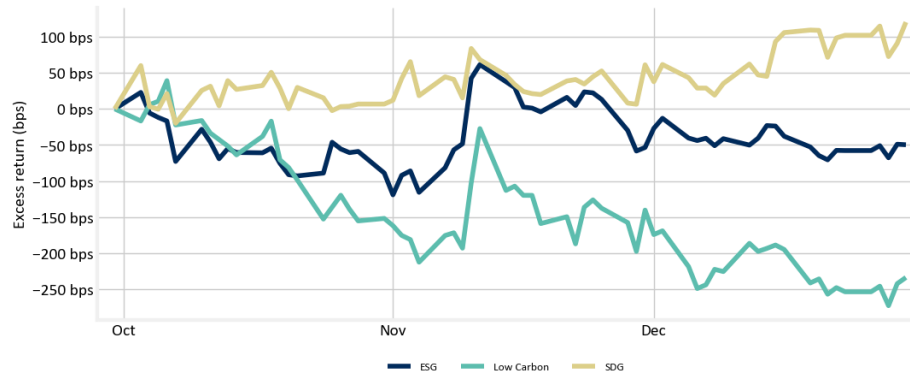
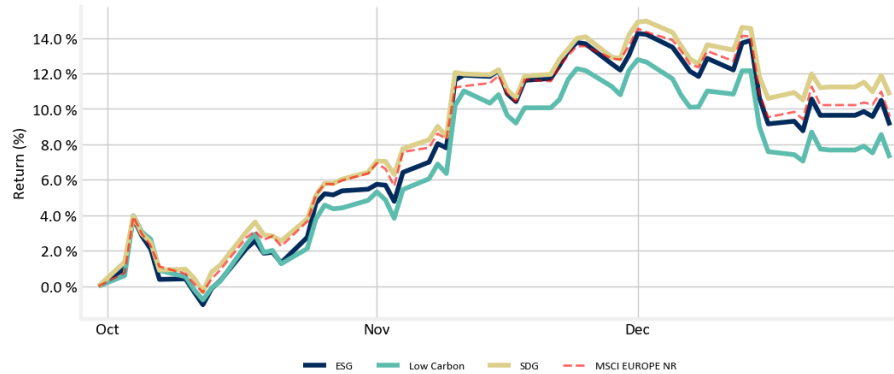


	Factor	Bm	Excess
ESG	-3.51 %	-3.53 %	2 bps
Low Carbon	-4.41 %	-3.53 %	-88 bps
SDG	-2.99 %	-3.53 %	54 bps

EU: Sustainable Target (pure)

Benchmark: MSCI EUROPE NR

Quarter-to-date

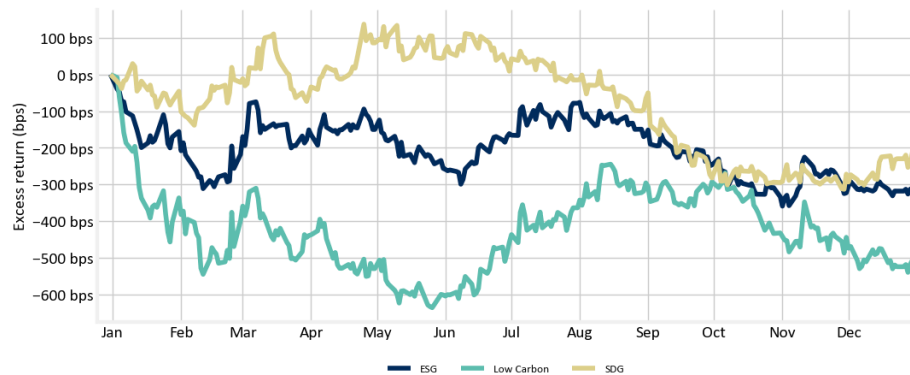
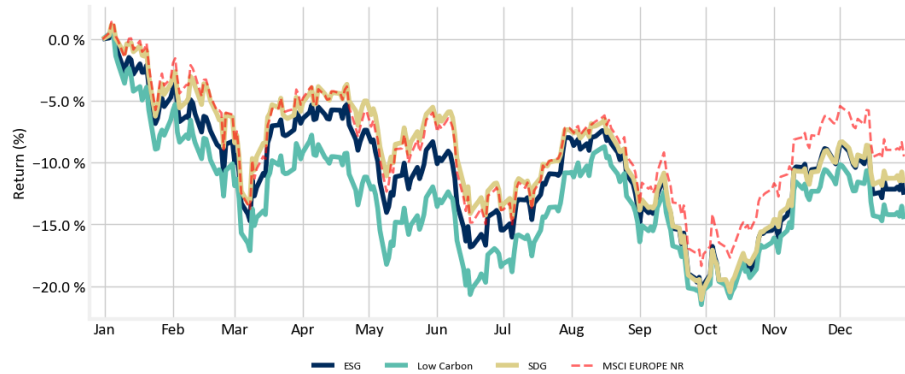


	Factor	Bm	Excess
ESG	9.07 %	9.57 %	-50 bps
Low Carbon	7.23 %	9.57 %	-234 bps
SDG	10.77 %	9.57 %	120 bps

EU: Sustainable Target (pure)

Benchmark: MSCI EUROPE NR

Year-to-date

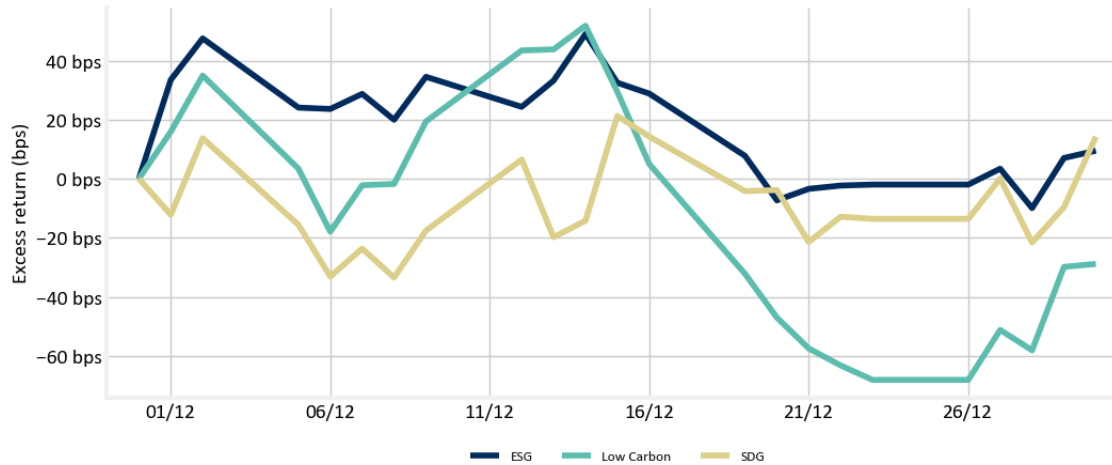
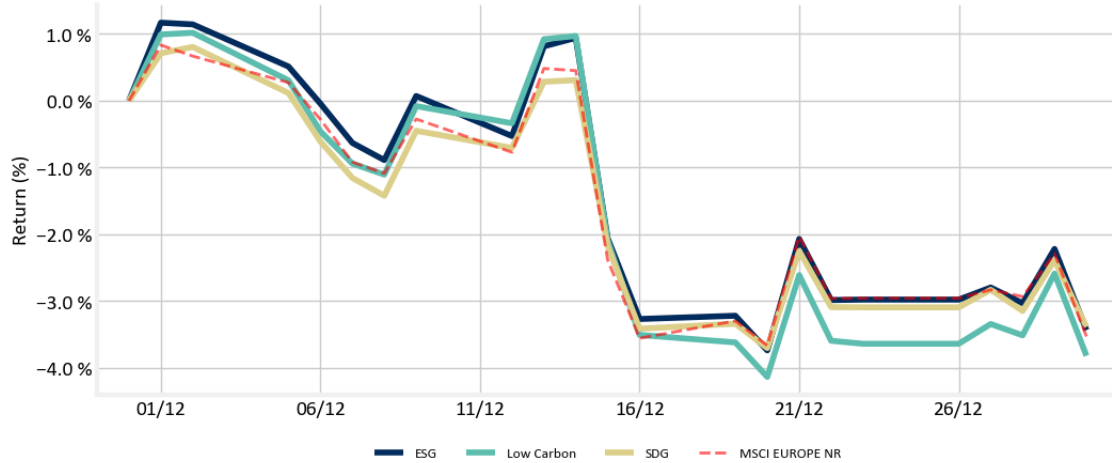


	Factor	Bm	Excess
ESG	-12.61 %	-9.51 %	-310 bps
Low Carbon	-14.58 %	-9.51 %	-507 bps
SDG	-11.64 %	-9.51 %	-213 bps

EU: Sustainable Target (sustainable)

Benchmark: MSCI EUROPE NR

Month-to-date



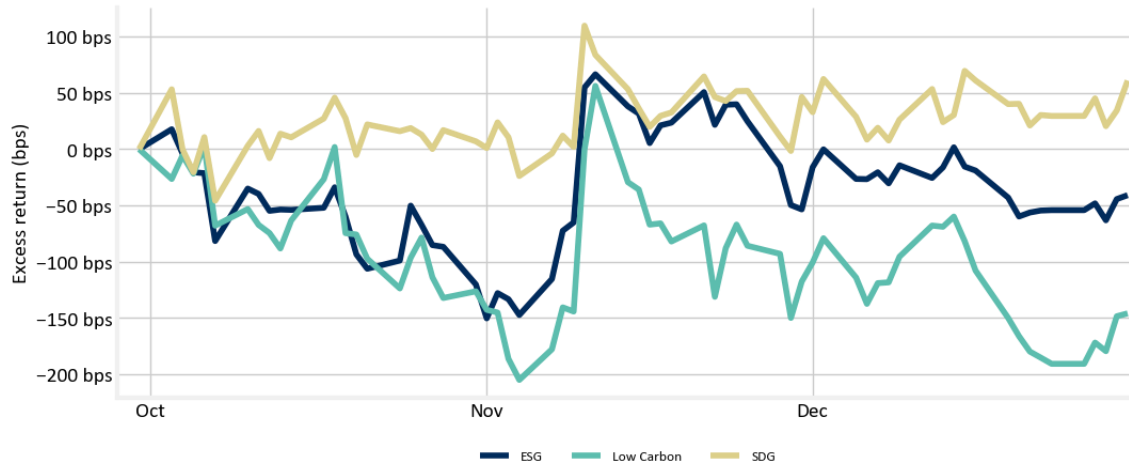
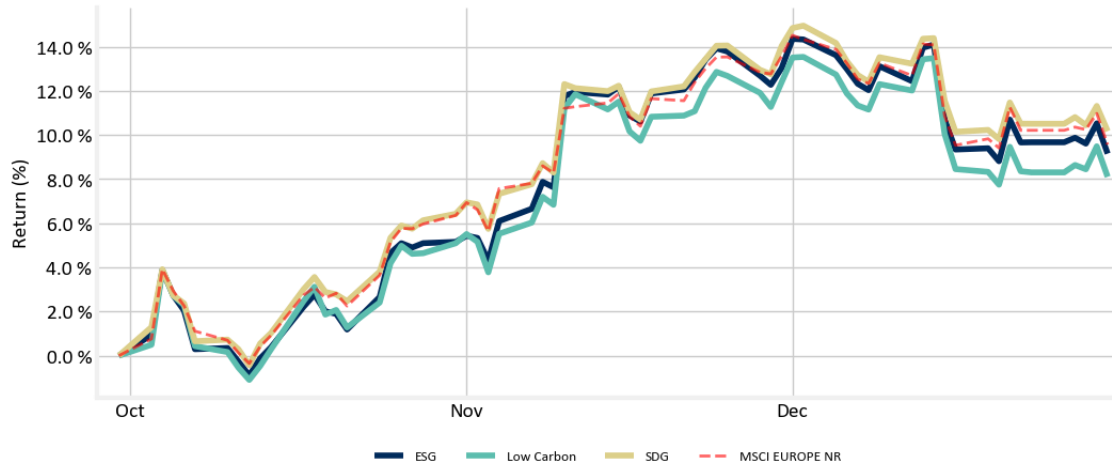
	Factor	Bm	Excess
ESG	-3.43 %	-3.53 %	9 bps
Low Carbon	-3.82 %	-3.53 %	-29 bps
SDG	-3.39 %	-3.53 %	14 bps



EU: Sustainable Target (sustainable)

Benchmark: MSCI EUROPE NR

Quarter-to-date



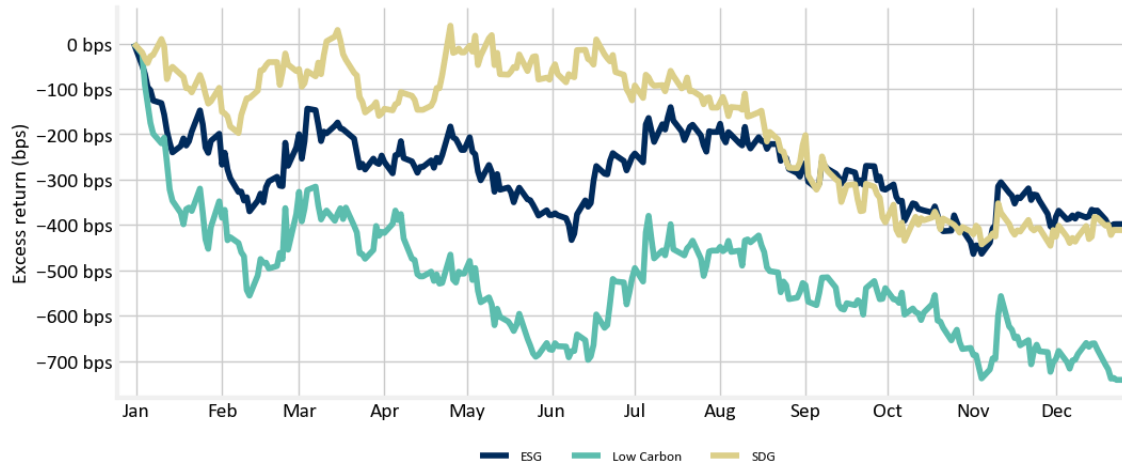
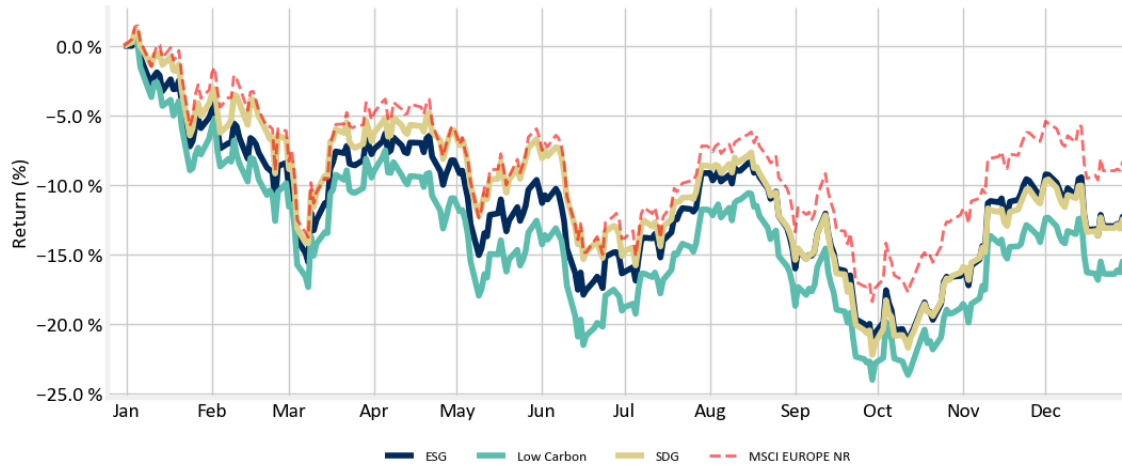
	Factor	Bm	Excess
ESG	9.16 %	9.57 %	-41 bps
Low Carbon	8.11 %	9.57 %	-146 bps
SDG	10.17 %	9.57 %	61 bps



EU: Sustainable Target (sustainable)

Benchmark: MSCI EUROPE NR

Year-to-date



	Factor	Bm	Excess
ESG	-13.36 %	-9.51 %	-386 bps
Low Carbon	-16.54 %	-9.51 %	-704 bps
SDG	-13.35 %	-9.51 %	-384 bps





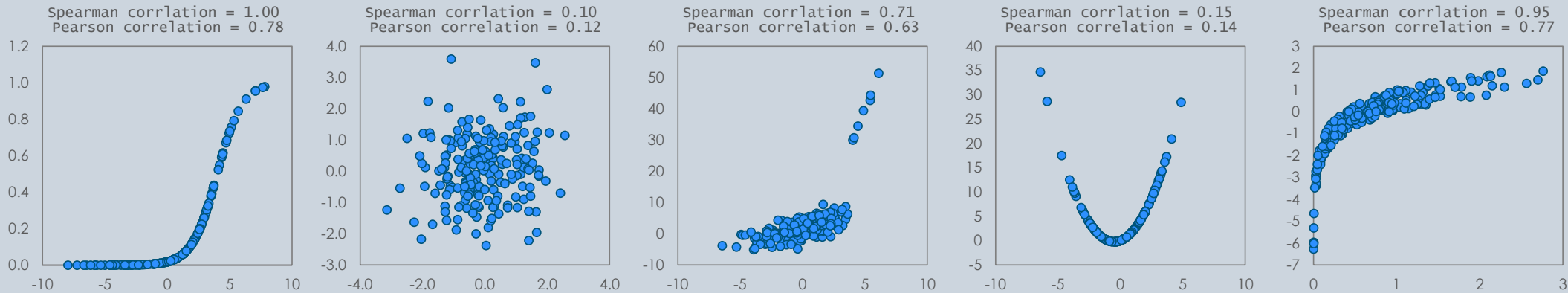
Rank Correlations

BANKINVEST

Handler
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Methodology

Rank correlation, or Spearman correlation, measures the rank relationship between two variables. Instead of assessing the linear relationship as a "normal" (Pearson) correlation coefficient, the Spearman correlation measures the ordinal relationship. A few examples:



When evaluating the rank correlation between two factors, we try to **quantify the level of co-variation and underlying commonalities**. At a given point in time all N stocks are ranked from 1 to N on factor loadings, and the correlation between rankings are calculated.

The **benefit** of using this kind of correlation measure is that we are capable of giving a current state of factor-correlation. We are not dependent on factor time series. On huge market rotations we do not need to wait until the new relationships materialize in the time series.

Europe Factor Correlations

	Value BIQ	Momentum BIQ	Quality BIQ	Stability BIQ	Dividend Yield	Growth	Profitability Growth	High Volatility	Price Momentum	Classic Quality	Profitability	Sentiment	Deep Value	Safety	Leverage	Size: Large Cap	BIQ-Score	BIQ-QARP
Value BIQ	100	1	-11	27	61	-18	29	9	6	-29	-17	-2	80	-25	-5	2	51	30
Momentum BIQ	1	100	-16	2	2	2	4	3	82	-19	-22	73	8	-17	-12	16	21	-22
Quality BIQ	-11	-16	100	7	-13	24	45	-25	-8	75	85	-17	-31	76	-14	20	54	84
Stability BIQ	27	2	7	100	52	-25	9	-76	7	6	-2	-7	20	14	13	14	11	18
Dividend Yield	61	2	-13	52	100	-24	14	-17	6	-25	-23	-4	61	-17	5	1	20	9
Growth	-18	2	24	-25	-24	100	11	19	4	18	29	3	-19	8	-6	7	34	11
Profitability Growth	29	4	45	9	14	11	100	-4	18	12	32	-14	22	8	-15	24	69	38
High Volatility	9	3	-25	-76	-17	19	-4	100	1	-30	-13	4	16	-38	-19	-13	4	-19
Price Momentum	6	82	-8	7	6	4	18	1	100	-16	-13	27	13	-14	-21	29	28	-12
Classic Quality	-29	-19	75	6	-25	18	12	-30	-16	100	65	-13	-38	77	-30	12	20	62
Profitability	-17	-22	85	-2	-23	29	32	-13	-13	65	100	-22	-38	52	-8	16	51	74
Sentiment	-2	73	-17	-7	-4	3	-14	4	27	-13	-22	100	0	-11	2	-6	7	-20
Deep Value	80	8	-31	20	61	-19	22	16	13	-38	-38	0	100	-40	-11	-3	28	0
Safety	-25	-17	76	14	-17	8	8	-38	-14	77	52	-11	-40	100	-5	16	12	68
Leverage	-5	-12	-14	13	5	-6	-15	-19	-21	-30	-8	2	-11	-5	100	-13	-19	-10
Size: Large Cap	2	16	20	14	1	7	24	-13	29	12	16	-6	-3	16	-13	100	25	16
BIQ-Score	51	21	54	11	20	34	69	4	28	20	51	7	28	12	-19	25	100	64
BIQ-QARP	30	-22	84	18	9	11	38	-19	-12	62	74	-20	0	68	-10	16	64	100

Rankcorrelation matrix

A snapshot of the current factor rank correlations.

On the following slide is the changes in one month and three months horizon shown to illustrate the changes in the relationship between the factors.

Changes in Europe factor correlations

1-month changes

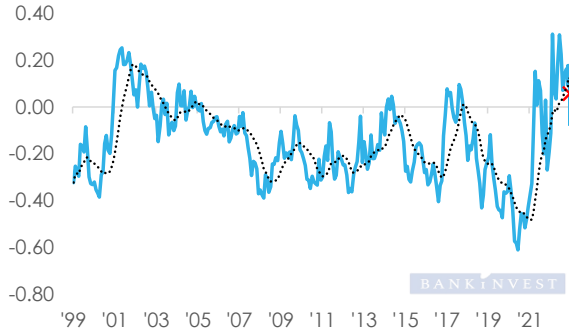
	Value BIQ	Momentum BIQ	Quality BIQ	Stability BIQ	Dividend Yield	Growth	Profitability Growth	High Volatility	Price Momentum	Classic Quality	Profitability	Sentiment	Deep Value	Safety	Leverage	Size: Large Cap	BIQ-Score	BIQ-QARP
Value BIQ		-14	-1	0	0	-3	-1	1	-9	0	1	-14	-1	0	1	-2	-3	1
Momentum BIQ	-14		-8	-14	-10	1	-5	11	-1	-7	-3	-6	-11	-5	1	1	-13	-11
Quality BIQ	-1	-8		0	0	-2	1	-1	1	-1	2	-13	0	-2	4	-1	2	-1
Stability BIQ	0	-14	0		0	-1	1	1	-17	1	2	-8	-1	0	0	1	-4	0
Dividend Yield	0	-10	0	0		-2	1	1	-4	1	2	-13	-2	1	1	1	-2	2
Growth	-3	1	-2	-1	-2		0	-3	-1	-1	-3	4	-1	-1	3	-2	-1	-3
Profitability Growth	-1	-5	1	1	1	-3		-2	7	-1	-1	-18	-1	0	4	-1	0	-1
High Volatility	1	11	-1	1	1	-1	-2		13	-1	-2	4	1	0	-1	0	2	1
Price Momentum	-9	-1	1	-17	-4	4	7	13		-3	1	-10	-4	0	-6	10	-2	-5
Classic Quality	0	-7	-1	1	1	-1	-1	-1	-3		0	-6	1	1	1	-1	0	-1
Profitability	1	-3	2	2	2	-3	-1	-2	1	0		-3	0	1	2	-1	3	2
Sentiment	-14	-6	-13	-8	-13	4	-18	4	-10	-6	-3		-15	-7	9	-14	-20	-11
Deep Value	-1	-11	0	-1	-2	-1	-1	1	-4	1	0	-15		0	0	0	-5	0
Safety	0	-5	-2	0	1	-1	0	0	0	1	1	-7	0		1	-1	1	-2
Leverage	1	1	4	0	1	3	4	-1	-6	1	2	9	0	1		2	1	2
Size: Large Cap	-2	1	-1	1	1	-2	-1	0	10	-1	-1	-14	0	-1	2		-1	-3
BIQ-Score	-3	-13	2	-4	-2	-1	0	2	-2	0	3	-20	-5	1	1	-1		2
BIQ-QARP	1	-11	-1	0	2	-3	-1	1	-5	-1	2	-11	0	-2	2	-3	2	

3-month changes

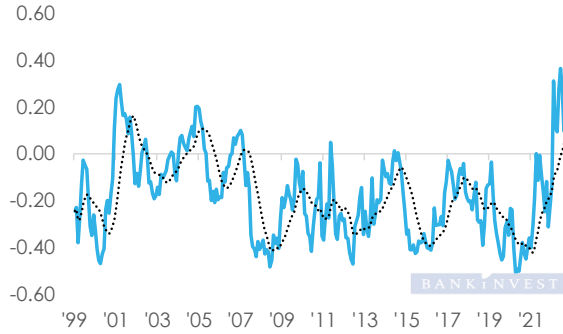
	Value BIQ	Momentum BIQ	Quality BIQ	Stability BIQ	Dividend Yield	Growth	Profitability Growth	High Volatility	Price Momentum	Classic Quality	Profitability	Sentiment	Deep Value	Safety	Leverage	Size: Large Cap	BIQ-Score	BIQ-QARP
Value BIQ		-12	-4	-4	1	4	-6	4	-8	-3	-3	-10	-2	-2	3	-2	-5	-4
Momentum BIQ	-12		-11	-27	-7	3	-10	22	-6	-8	-8	-6	0	-3	-8	-2	-16	-13
Quality BIQ	-4	-11		-8	-9	-4	0	3	-1	4	2	-13	1	1	-1	2	2	2
Stability BIQ	-4	-27	-8		-5	-5	-8	-1	-27	-3	-3	-19	2	-4	0	0	-14	-6
Dividend Yield	1	-7	-9	-5		-6	-8	2	-11	-4	-5	-1	2	-5	6	-2	-7	-7
Growth	4	3	-4	-5	-6		0	-2	8	-5	-5	7	0	-3	7	-1	5	-2
Profitability Growth	-6	-10	0	-8	-8	-2		0	2	2	1	-19	-3	3	0	3	0	0
High Volatility	4	22	3	-1	2	8	0		22	1	3	13	-3	2	1	4	11	4
Price Momentum	-8	-6	-1	-27	-11	3	2	22		-3	-2	-17	4	4	-20	12	-8	-4
Classic Quality	-3	-8	4	-3	-4	-5	2	1	-3		1	-5	5	5	-2	-5	1	3
Profitability	-3	-8	2	-3	-5	-5	1	3	-2	1		-9	1	3	-1	0	1	2
Sentiment	-10	-6	-13	-19	-1	7	-19	13	-17	-5	-9		-3	-2	11	-21	-19	-14
Deep Value	-2	0	1	2	2	0	-3	-3	4	5	1	-3		3	-2	1	-2	-1
Safety	-2	-3	1	-4	-5	-3	3	2	4	5	3	-2	3		-2	3	3	1
Leverage	3	-8	-1	0	6	7	0	1	-20	-2	-1	11	-2	-2		1	-3	0
Size: Large Cap	-2	-2	2	0	-2	-1	3	4	12	-5	0	-21	1	3	1		2	1
BIQ-Score	-5	-16	2	-14	-7	5	0	11	-8	1	1	-19	-2	3	-3	2		0
BIQ-QARP	-4	-13	2	-6	-7	-2	0	4	-4	3	2	-14	-1	1	0	1	0	

Selected correlation charts in Europe

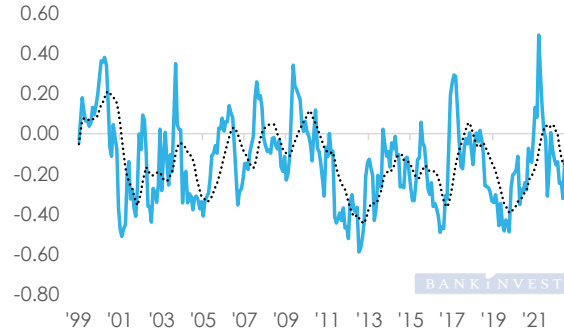
Price Momentum vs. Value BIQ
Rank Correlation in Europe



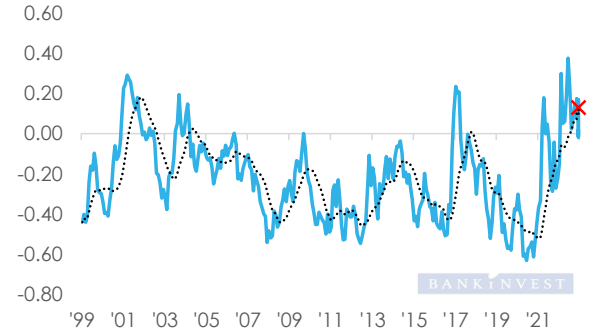
Price Momentum vs. Dividend Yield
Rank Correlation in Europe



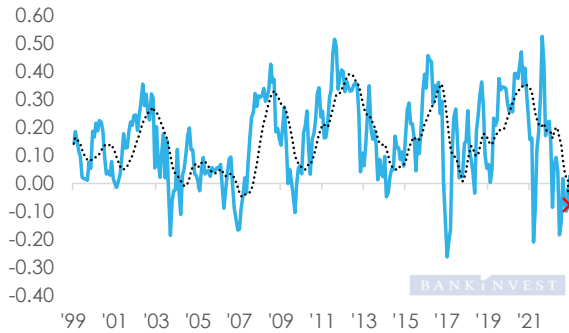
Price Momentum vs. High Volatility
Rank Correlation in Europe



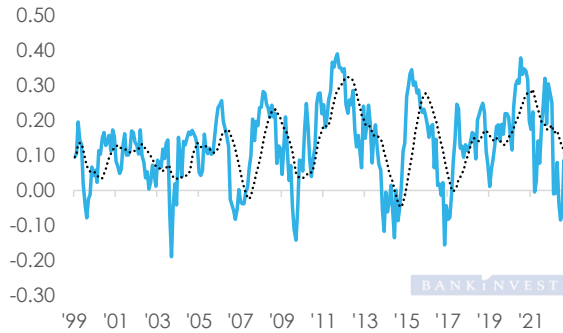
Price Momentum vs. Deep Value
Rank Correlation in Europe



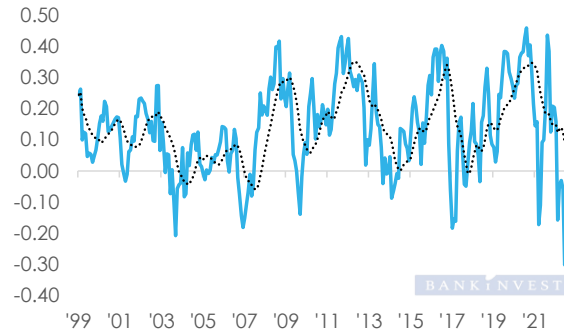
Price Momentum vs. Quality BIQ
Rank Correlation in Europe



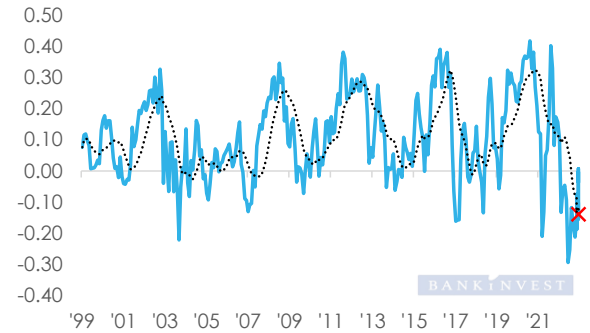
Price Momentum vs. Growth
Rank Correlation in Europe



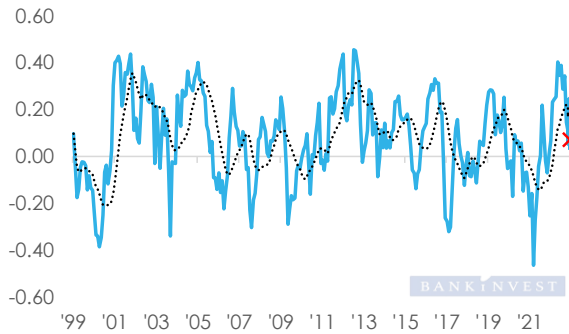
Price Momentum vs. Classic Quality
Rank Correlation in Europe



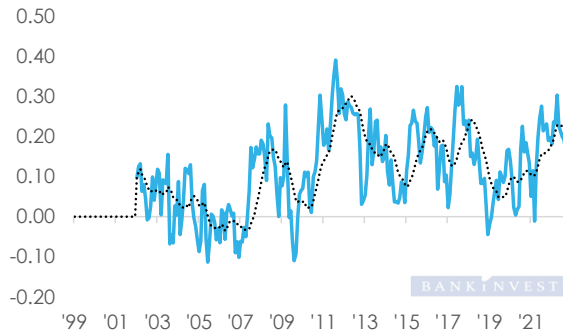
Price Momentum vs. Safety
Rank Correlation in Europe



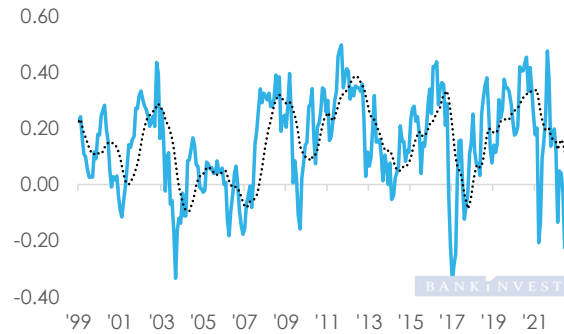
Price Momentum vs. Stability BIQ
Rank Correlation in Europe



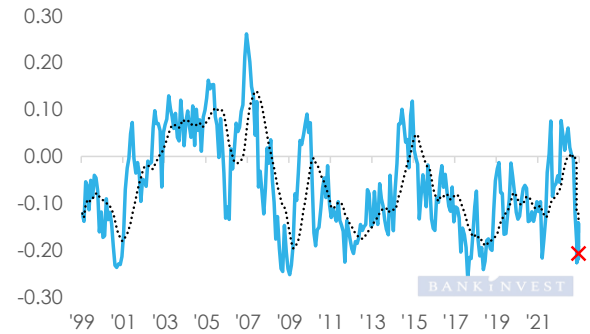
Price Momentum vs. Profitability Growth
Rank Correlation in Europe



Price Momentum vs. Profitability
Rank Correlation in Europe

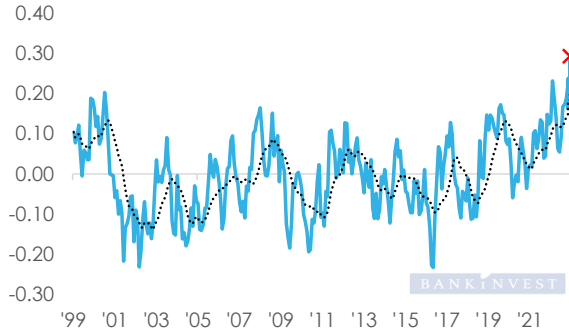


Price Momentum vs. Leverage
Rank Correlation in Europe

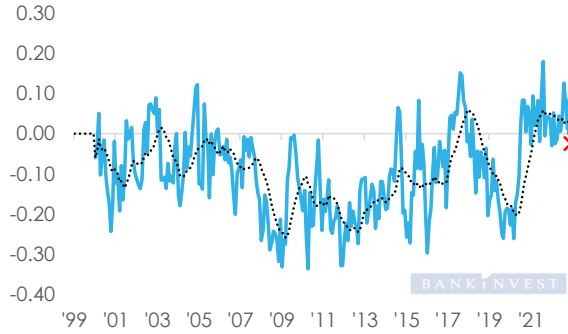


Selected correlation charts in Europe

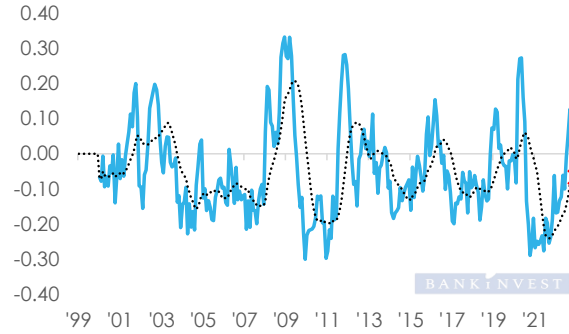
Price Momentum vs. Size: Large Cap
Rank Correlation in Europe



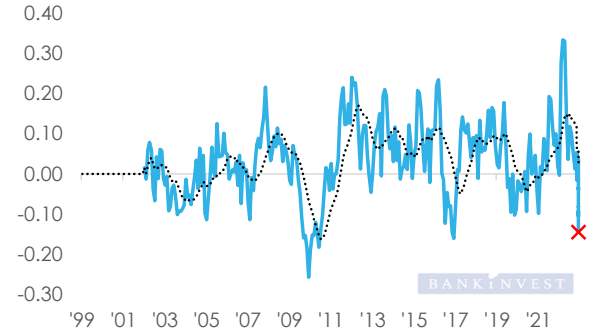
Sentiment vs. Value BIQ
Rank Correlation in Europe



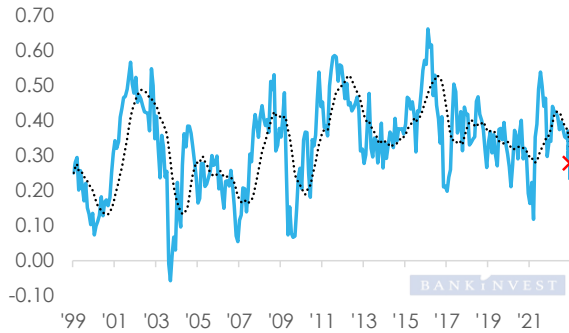
Sentiment vs. Stability BIQ
Rank Correlation in Europe



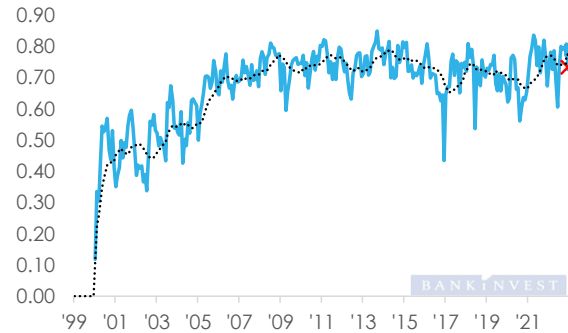
Sentiment vs. Profitability Growth
Rank Correlation in Europe



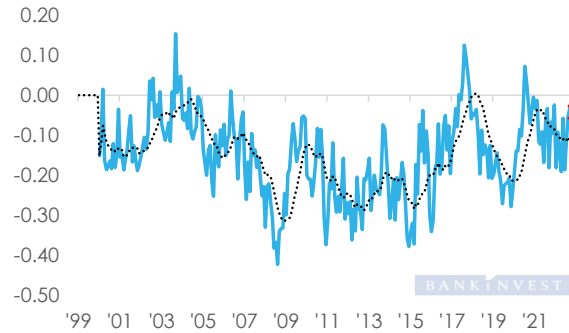
Price Momentum vs. BIQ-Score
Rank Correlation in Europe



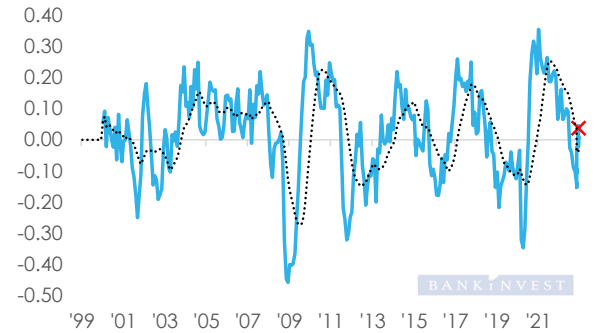
Sentiment vs. Momentum BIQ
Rank Correlation in Europe



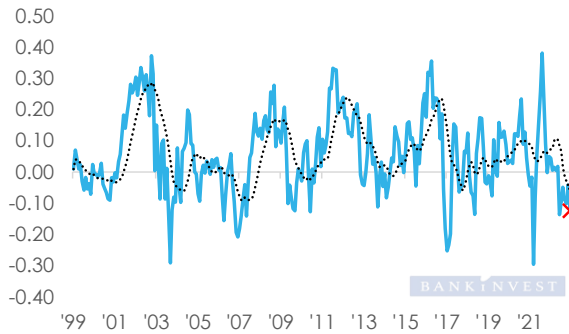
Sentiment vs. Dividend Yield
Rank Correlation in Europe



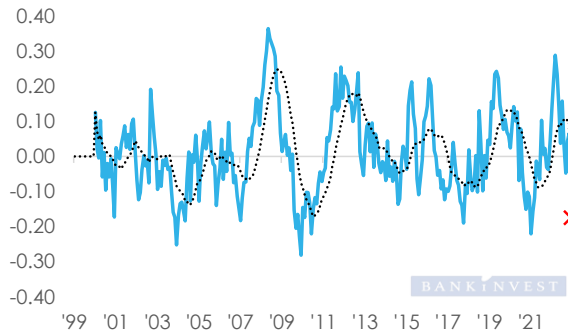
Sentiment vs. High Volatility
Rank Correlation in Europe



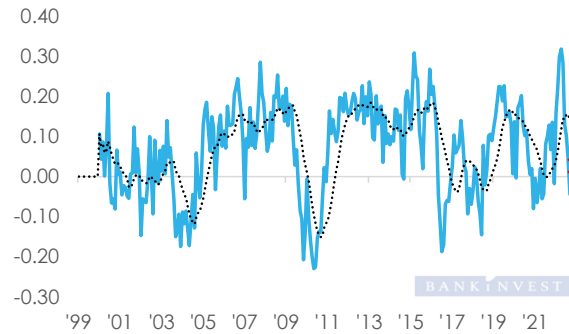
Price Momentum vs. BIQ-QARP
Rank Correlation in Europe



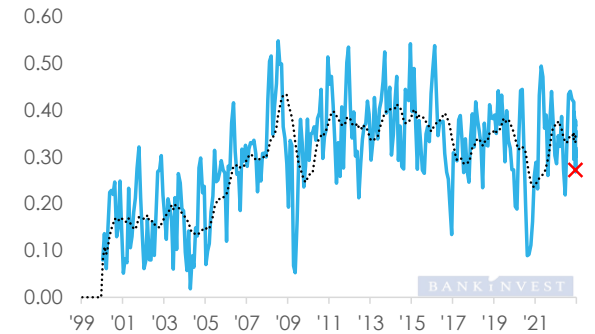
Sentiment vs. Quality BIQ
Rank Correlation in Europe



Sentiment vs. Growth
Rank Correlation in Europe

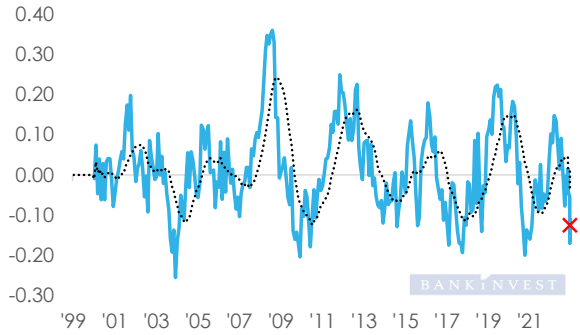


Sentiment vs. Price Momentum
Rank Correlation in Europe

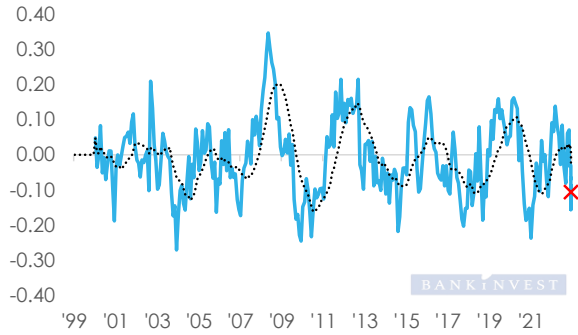


Selected correlation charts in Europe

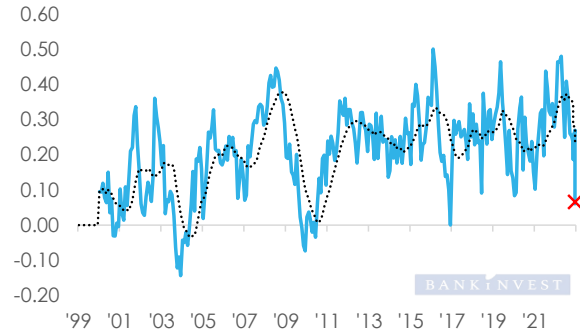
Sentiment vs. Classic Quality
Rank Correlation in Europe



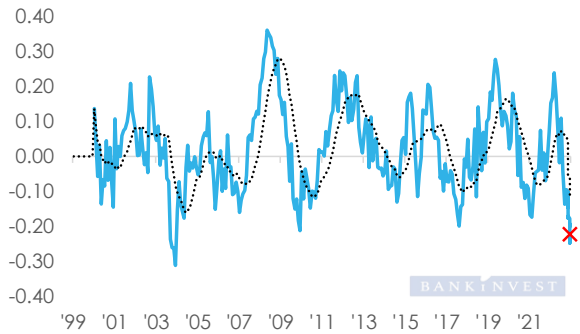
Sentiment vs. Safety
Rank Correlation in Europe



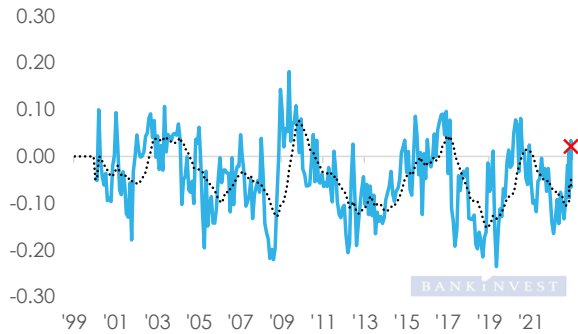
Sentiment vs. BIQ-Score
Rank Correlation in Europe



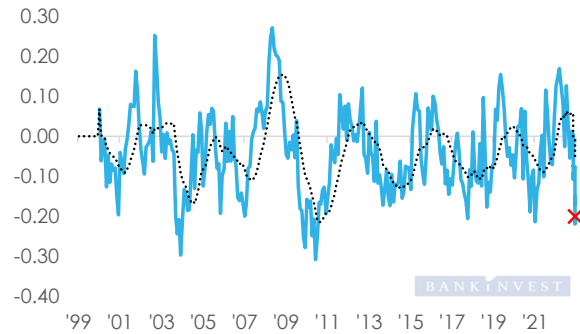
Sentiment vs. Profitability
Rank Correlation in Europe



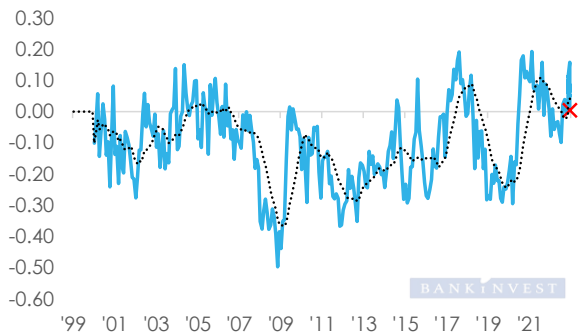
Sentiment vs. Leverage
Rank Correlation in Europe



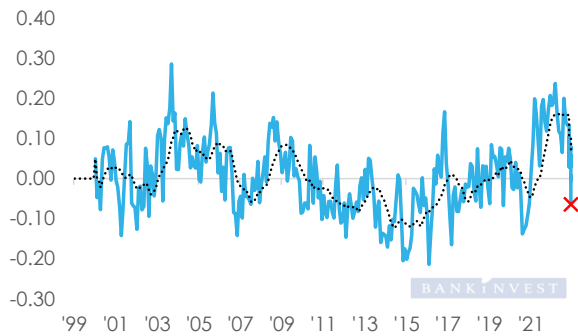
Sentiment vs. BIQ-QARP
Rank Correlation in Europe



Sentiment vs. Deep Value
Rank Correlation in Europe



Sentiment vs. Size: Large Cap
Rank Correlation in Europe





Valuation charts

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Methodology

- To express the valuation level we use blended **12 month forward Price/Earnings** (FPE NTM).
- The aggregation method used is **weighted harmonic mean**, which is preferred when dealing with averages of rates. This method mitigates the impact of outliers.
- FPE values are **winsorized at 3 and 100**.
- Negative values are set to the largest value.
- Missing values are replaced by the associated regional-industry average.
- Factors are formed daily by sorting stocks on the factor score and **equal weighting the top quintile**.
- Confidence intervals are calculated with rolling 7 years monthly data

Overall market valuation

Broad Market - est P/E (NTM)



Broad Market(EU) vs. Broad Market(Global)
est P/E (NTM)

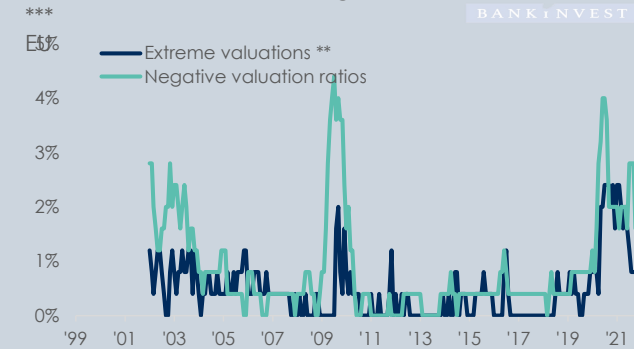


Broad Market - Valuation Dispersion *



* Dispersion measures the mean absolute deviation from the median. In other words a measure of the difference between the most expensive and the least expensive stocks in the selected universe.

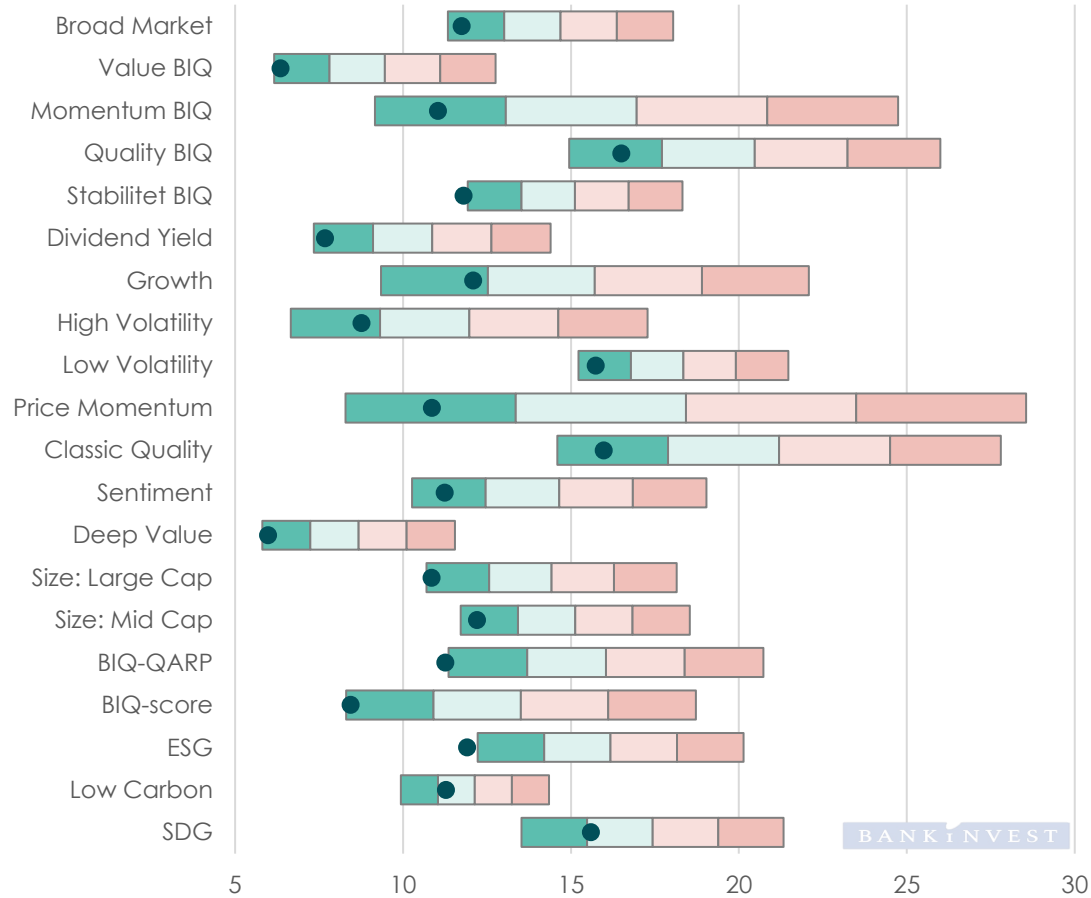
Broad Market - Extreme & negative P/E ratios



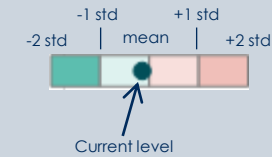
** An extreme valuation is defined as: estimate P/E (NTM) > 100.

*** In terms of number of stocks in the universe. 5% extreme valuations means that 5% of the stocks in the selected universe are above est P/E 100.

Factor valuation overview



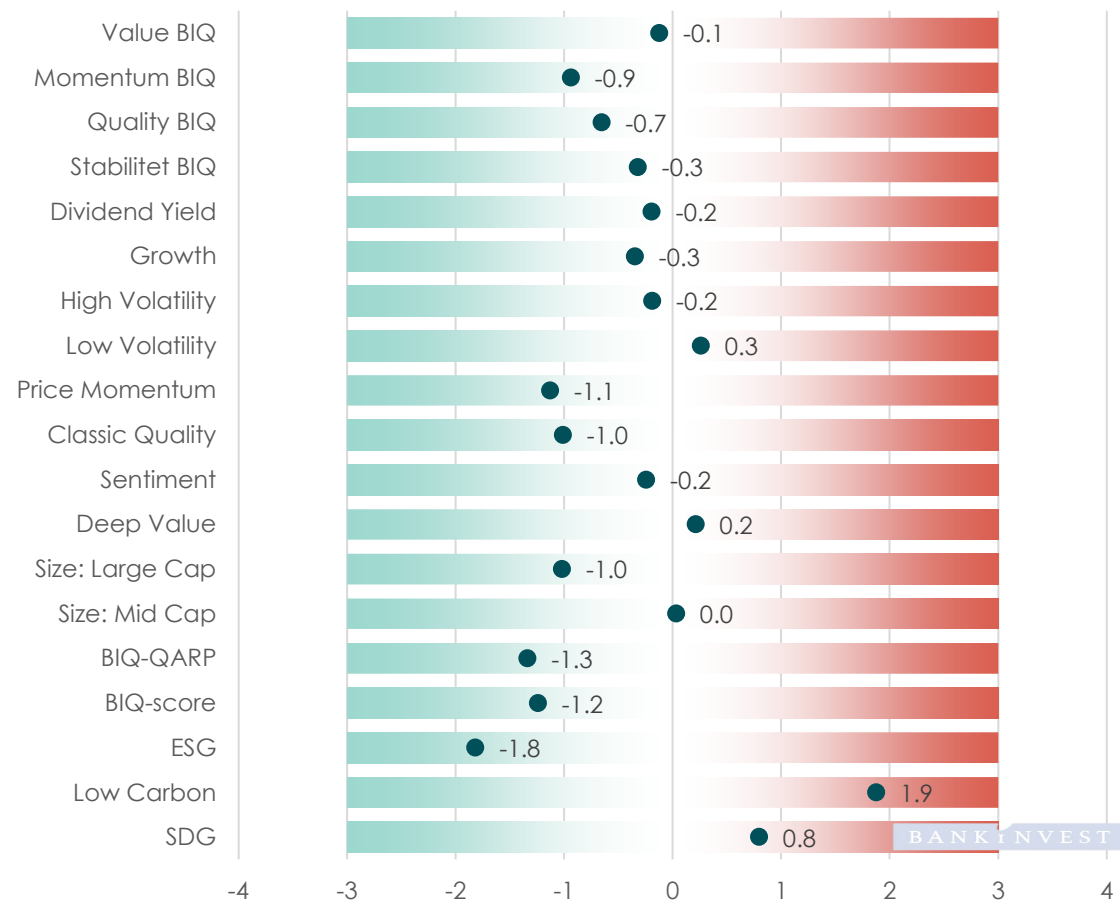
- Absolute valuation levels compared.
- The bar visualizes the given factor's historical confidence intervals, i.e., "valuation range":



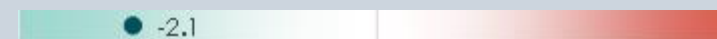
corresponding to the chart figures:



Factor relative valuation overview



- Relative valuation vs. the broad market.
- How is that premium/discount compared to the factor's own historical premium/discount?
- E.g. this factor trades -2.1 standard deviations below is historical average premium to the market:



Corresponding to the relative valuation chart figures:



Factor valuation charts

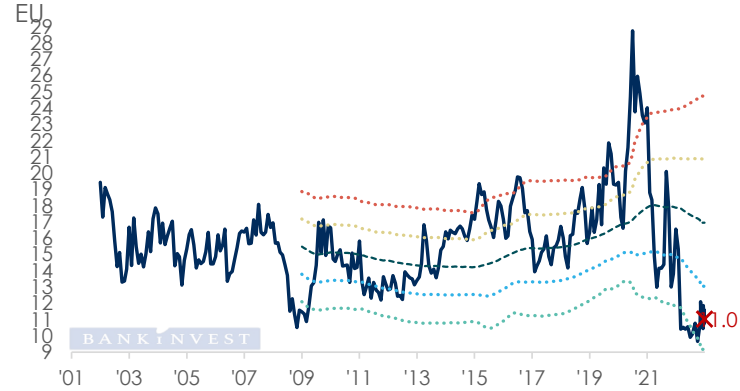
Value BIQ

Value BIQ - est P/E (NTM)



Momentum BIQ

Momentum BIQ - est P/E (NTM)



Quality BIQ

Quality BIQ - est P/E (NTM)



Value BIQ(EU) vs. Broad Market(EU)
est P/E (NTM)



Momentum BIQ(EU) vs. Broad Market(EU)
est P/E (NTM)



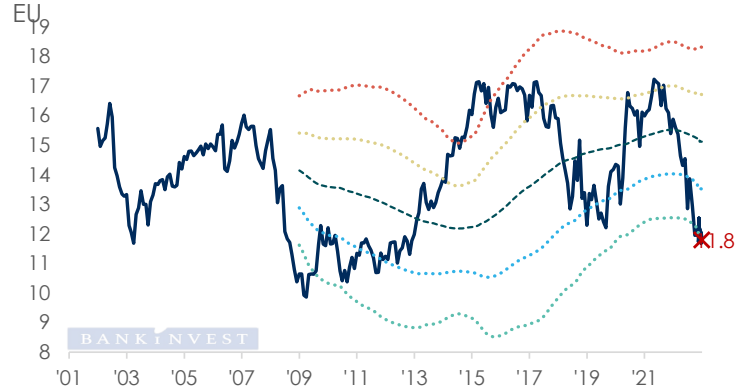
Quality BIQ(EU) vs. Broad Market(EU)
est P/E (NTM)



Factor valuation charts

Stability BIQ

Stabilitet BIQ - est P/E (NTM)



Dividend Yield

Dividend Yield - est P/E (NTM)



Growth

Growth - est P/E (NTM)



Stabilitet BIQ(EU) vs. Broad Market(EU)
est P/E (NTM)



Dividend Yield(EU) vs. Broad Market(EU)
est P/E (NTM)



Growth(EU) vs. Broad Market(EU)
est P/E (NTM)



Factor valuation charts

High Volatility

High Volatility - est P/E (NTM)



Low Volatility

Low Volatility - est P/E (NTM)

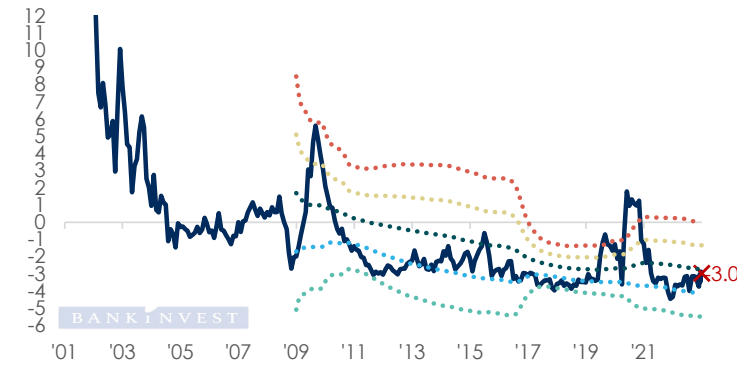


Price Momentum

Price Momentum - est P/E (NTM)



High Volatility(EU) vs. Broad Market(EU)
est P/E (NTM)



Low Volatility(EU) vs. Broad Market(EU)
est P/E (NTM)



Price Momentum(EU) vs. Broad Market(EU)
est P/E (NTM)



Factor valuation charts

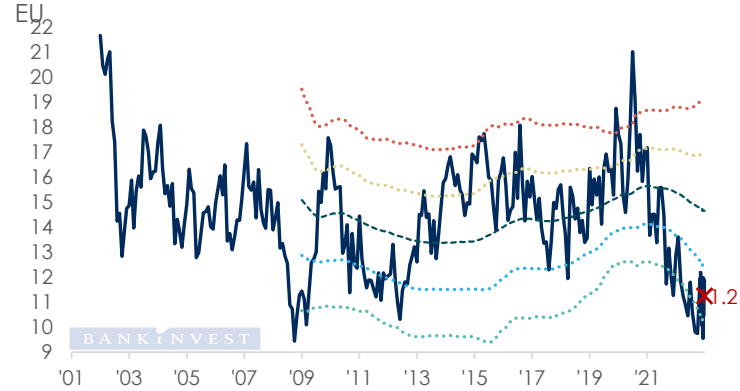
Classic Quality

Classic Quality - est P/E (NTM)



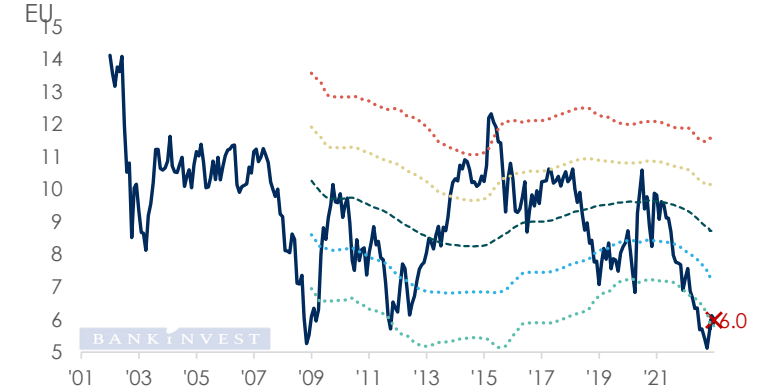
Sentiment

Sentiment - est P/E (NTM)



Deep Value

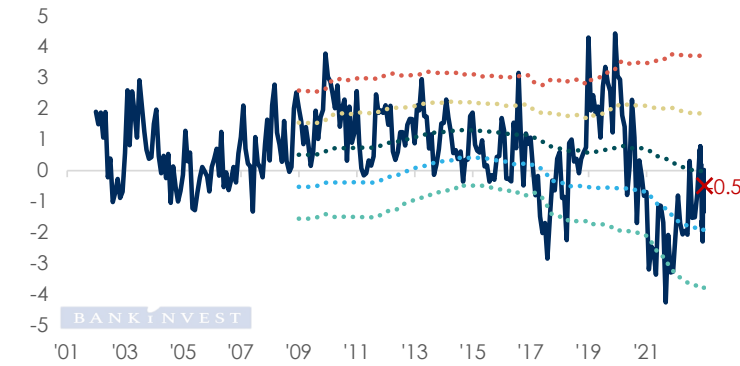
Deep Value - est P/E (NTM)



Classic Quality(EU) vs. Broad Market(EU)
est P/E (NTM)



Sentiment(EU) vs. Broad Market(EU)
est P/E (NTM)



Deep Value(EU) vs. Broad Market(EU)
est P/E (NTM)



Factor valuation charts

Large Cap

Size: Large Cap - est P/E (NTM)



Mid Cap

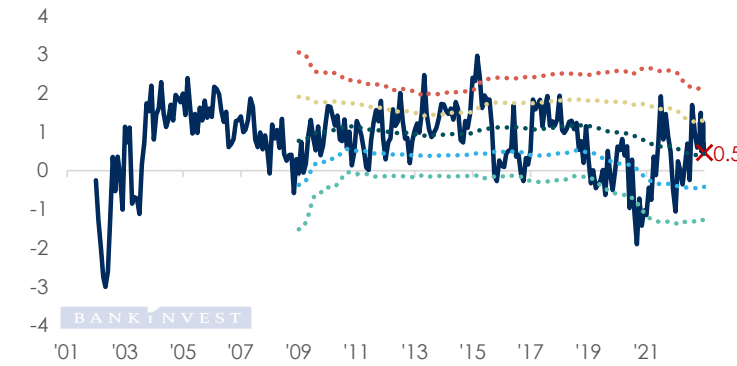
Size: Mid Cap - est P/E (NTM)



Size: Large Cap(EU) vs. Broad Market(EU)
est P/E (NTM)



Size: Mid Cap(EU) vs. Broad Market(EU)
est P/E (NTM)



Factor valuation charts in Global

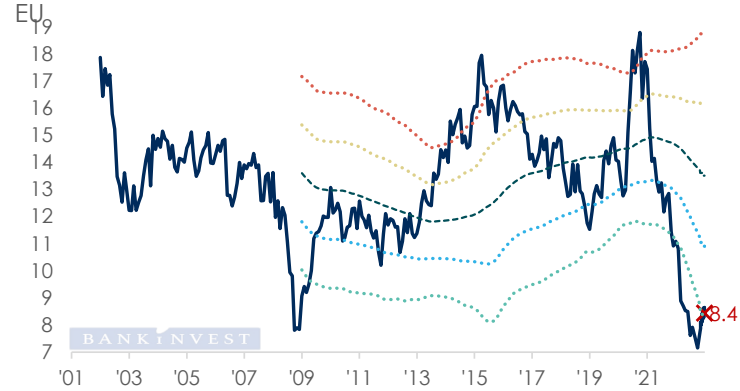
BIQ-QARP

BIQ-QARP - est P/E (NTM)



BIQ-score

BIQ-score - est P/E (NTM)



BIQ-QARP(EU) vs. Broad Market(EU)
est P/E (NTM)



BIQ-score(EU) vs. Broad Market(EU)
est P/E (NTM)



Factor valuation charts

ESG

ESG - est P/E (NTM)



Low Carbon

Low Carbon - est P/E (NTM)



SDG

SDG - est P/E (NTM)



ESG(EU) vs. Broad Market(EU)
est P/E (NTM)



Low Carbon(EU) vs. Broad Market(EU)
est P/E (NTM)



SDG(EU) vs. Broad Market(EU)
est P/E (NTM)



In case of questions, request for time-series or current holdings within a strategy your more than welcome to contact us.

Quant@bankinvest.dk

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