Monthly

EM Equity Market Insight

December-2022

BANKINVEST Handler med omtanke

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
	Deep value	Blend of book and earning measures
Cap-Size	Size: Large Cap	Size: Large Cap
	Size: Mid Cap	Size: Mid Cap
Multi-factor	BIQ-QARP	A multi-factor model emphasizing quality, valuation and safety in earnings.
	BIQ-Score	A multi-factor model focusing on classic empirically validated factors
Cycle model	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
	Slowdown	Multi-factor, emphasis on factors that work in slowdown ie. high quality, growth, large cap
Sustainable Target	ESG	Highest ESG
	Low Carbon	Lowest Carbon
	SDG	Highest SDG

Performance

Investable portfolios

BANKINVEST Handler med omtanke

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

BANKINVEST

Definition of sustainability

Exclude controversial industries

Low carbon emissions

High ESG Rating

Impact Investing

Norm based screening

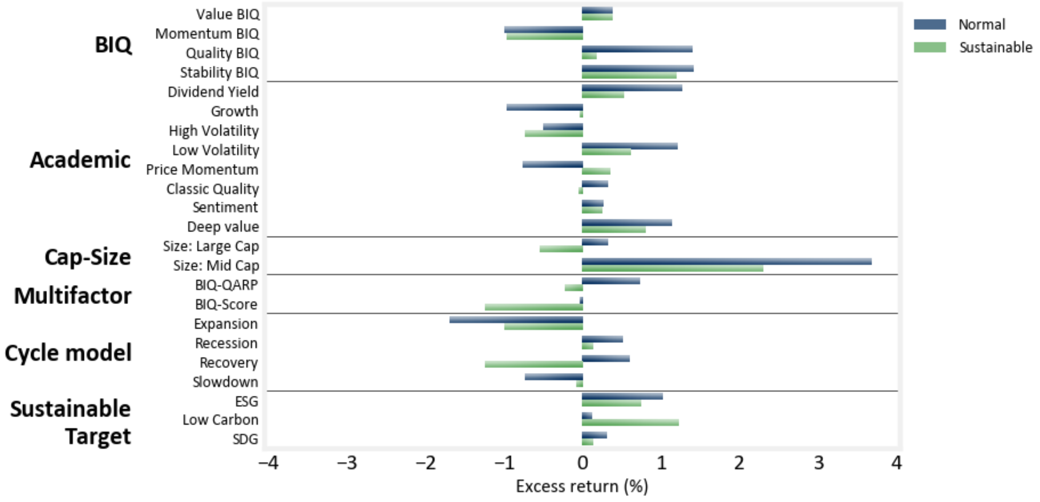
Sustainability

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:

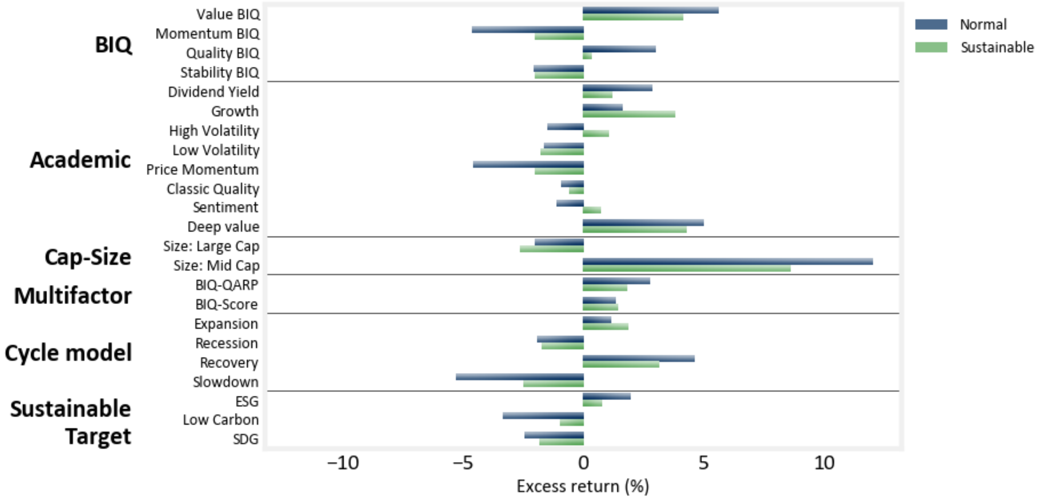
- Exclusion of: tobacco, fossil fuels, weapons and nuclear power
- A sustainable portfolio must not emit more than half as much CO2 as its benchmark
- The individual companies cannot have a CCC or B ESG rating (MSCI). The overall portfolio must have an AA rating except the EM portfolios that have an 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

EM style factors

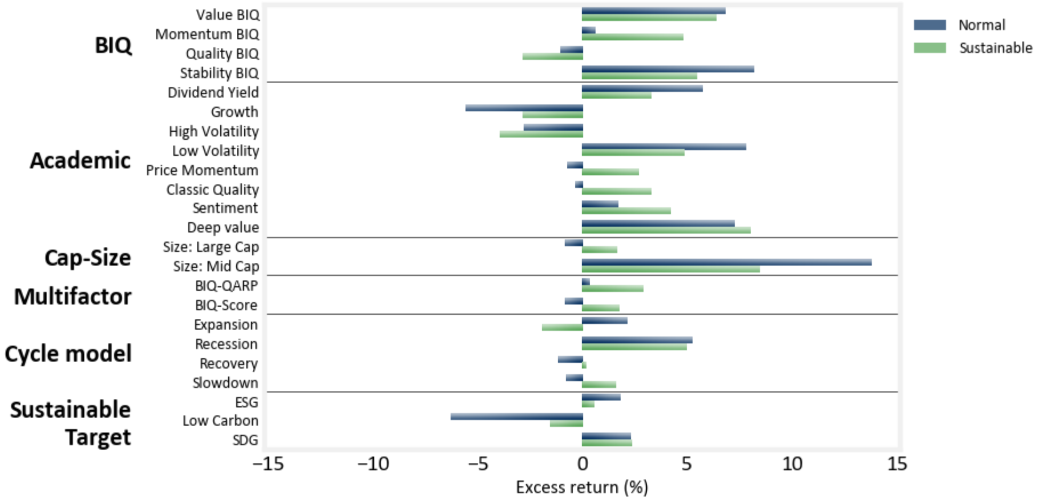
Month-to-date



Quarter-to-date



Year-to-date



BANKINVEST

EM: Portfolios

Benchmark: MSCI ND Emerging Markets

			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	-4.52 %	-4.90 %	38 bps	6.34 %	0.71 %	563 bps	-8.02 %	-14.87 %	685 bps
	Momentum BIQ	2022-12-30	-5.90 %	-4.90 %	-100 bps	-3.90 %	0.71 %	-462 bps	-14.23 %	-14.87 %	64 bps
	Quality BIQ	2022-12-30	-3.50 %	-4.90 %	140 bps	3.71 %	0.71 %	300 bps	-15.93 %	-14.87 %	-107 bps
	Stability BIQ	2022-12-30	-3.48 %	-4.90 %	142 bps	-1.35 %	0.71 %	-207 bps	-6.68 %	-14.87 %	819 bps
Academic	Dividend Yield	2022-12-30	-3.62 %	-4.90 %	127 bps	3.60 %	0.71 %	289 bps	-9.12 %	-14.87 %	575 bps
	Growth	2022-12-30	-5.86 %	-4.90 %	-96 bps	2.38 %	0.71 %	166 bps	-20.43 %	-14.87 %	-557 bps
	High Volatility	2022-12-30	-5.39 %	-4.90 %	-50 bps	-0.81 %	0.71 %	-152 bps	-17.65 %	-14.87 %	-278 bps
	Low Volatility	2022-12-30	-3.69 %	-4.90 %	121 bps	-0.92 %	0.71 %	-163 bps	-7.04 %	-14.87 %	782 bps
	Price Momentum	2022-12-30	-5.66 %	-4.90 %	-76 bps	-3.88 %	0.71 %	-459 bps	-15.60 %	-14.87 %	-73 bps
	Classic Quality	2022-12-30	-4.57 %	-4.90 %	33 bps	-0.23 %	0.71 %	-94 bps	-15.23 %	-14.87 %	-36 bps
	Sentiment	2022-12-30	-4.63 %	-4.90 %	27 bps	-0.39 %	0.71 %	-111 bps	-13.14 %	-14.87 %	173 bps
	Deep value	2022-12-30	-3.76 %	-4.90 %	114 bps	5.74 %	0.71 %	503 bps	-7.59 %	-14.87 %	728 bps
Cap-Size	Size: Large Cap	2022-12-30	-4.58 %	-4.90 %	32 bps	-1.33 %	0.71 %	-204 bps	-15.71 %	-14.87 %	-85 bps
	Size: Mid Cap	2022-12-30	-1.22 %	-4.90 %	368 bps	12.74 %	0.71 %	1203 bps	-1.07 %	-14.87 %	1379 bps
Multifactor	BIQ-QARP	2022-12-30	-4.16 %	-4.90 %	74 bps	3.50 %	0.71 %	278 bps	-14.48 %	-14.87 %	38 bps
	BIQ-Score	2022-12-30	-4.94 %	-4.90 %	-4 bps	2.06 %	0.71 %	135 bps	-15.69 %	-14.87 %	-82 bps
Cycle model	Expansion	2022-12-30	-6.59 %	-4.90 %	-169 bps	1.88 %	0.71 %	117 bps	-12.70 %	-14.87 %	217 bps
	Recession	2022-12-30	-4.39 %	-4.90 %	51 bps	-1.20 %	0.71 %	-192 bps	-9.61 %	-14.87 %	526 bps
	Recovery	2022-12-30	-4.30 %	-4.90 %	60 bps	5.36 %	0.71 %	465 bps	-16.02 %	-14.87 %	-116 bps
	Slowdown	2022-12-30	-5.63 %	-4.90 %	-73 bps	-4.61 %	0.71 %	-532 bps	-15.66 %	-14.87 %	-80 bps
Sustainable Target	ESG	2022-12-30	-3.88 %	-4.90 %	102 bps	2.69 %	0.71 %	197 bps	-13.06 %	-14.87 %	180 bps
	Low Carbon	2022-12-30	-4.78 %	-4.90 %	12 bps	-2.64 %	0.71 %	-335 bps	-21.18 %	-14.87 %	-631 bps
	SDG	2022-12-30	-4.59 %	-4.90 %	31 bps	-1.72 %	0.71 %	-243 bps	-12.53 %	-14.87 %	234 bps

EM: Sustainable portfolios

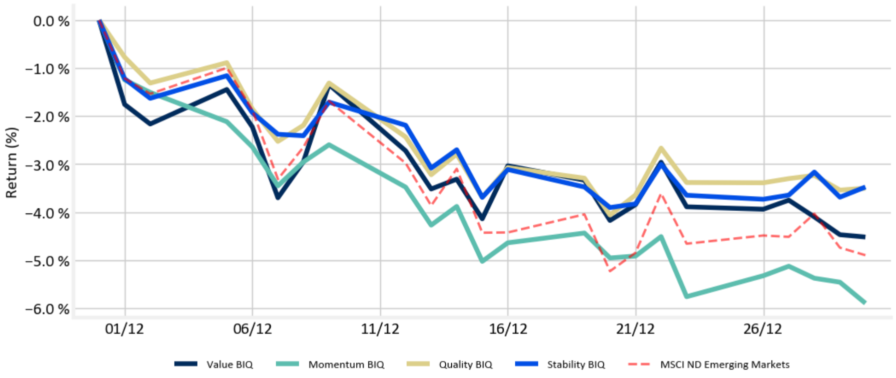
Benchmark: MSCI ND Emerging Markets

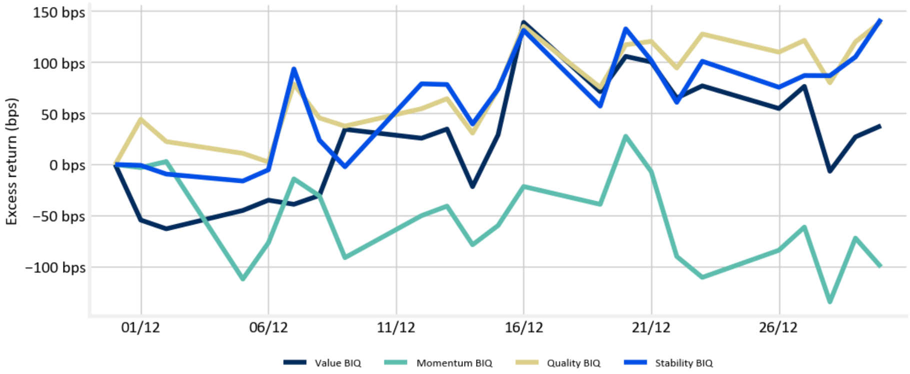
			Month-to-date			Quarter-to-date			Year-to-date		
Factor group	Factor name	Date	Factor	Bm	Excess	Factor	Bm	Excess	Factor	Bm	Excess
BIQ	Value BIQ	2022-12-30	-4.52 %	-4.90 %	38 bps	4.86 %	0.71 %	415 bps	-8.48 %	-14.87 %	638 bps
	Momentum BIQ	2022-12-30	-5.86 %	-4.90 %	-96 bps	-1.30 %	0.71 %	-201 bps	-10.03 %	-14.87 %	483 bps
	Quality BIQ	2022-12-30	-4.72 %	-4.90 %	18 bps	1.09 %	0.71 %	38 bps	-17.71 %	-14.87 %	-285 bps
	Stability BIQ	2022-12-30	-3.70 %	-4.90 %	120 bps	-1.32 %	0.71 %	-203 bps	-9.36 %	-14.87 %	550 bps
Academic	Dividend Yield	2022-12-30	-4.36 %	-4.90 %	53 bps	1.91 %	0.71 %	120 bps	-11.60 %	-14.87 %	327 bps
	Growth	2022-12-30	-4.94 %	-4.90 %	-4 bps	4.56 %	0.71 %	385 bps	-17.72 %	-14.87 %	-285 bps
	High Volatility	2022-12-30	-5.64 %	-4.90 %	-74 bps	1.77 %	0.71 %	106 bps	-18.84 %	-14.87 %	-397 bps
	Low Volatility	2022-12-30	-4.28 %	-4.90 %	62 bps	-1.07 %	0.71 %	-179 bps	-9.99 %	-14.87 %	487 bps
	Price Momentum	2022-12-30	-4.54 %	-4.90 %	36 bps	-1.31 %	0.71 %	-202 bps	-12.19 %	-14.87 %	268 bps
	Classic Quality	2022-12-30	-4.95 %	-4.90 %	-5 bps	0.13 %	0.71 %	-58 bps	-11.56 %	-14.87 %	331 bps
	Sentiment	2022-12-30	-4.64 %	-4.90 %	26 bps	1.45 %	0.71 %	74 bps	-10.64 %	-14.87 %	423 bps
	Deep value	2022-12-30	-4.10 %	-4.90 %	80 bps	5.03 %	0.71 %	432 bps	-6.84 %	-14.87 %	802 bps
Cap-Size	Size: Large Cap	2022-12-30	-5.44 %	-4.90 %	-55 bps	-1.93 %	0.71 %	-264 bps	-13.20 %	-14.87 %	167 bps
	Size: Mid Cap	2022-12-30	-2.60 %	-4.90 %	230 bps	9.33 %	0.71 %	862 bps	-6.40 %	-14.87 %	847 bps
Multifactor	BIQ-QARP	2022-12-30	-5.13 %	-4.90 %	-23 bps	2.52 %	0.71 %	181 bps	-11.95 %	-14.87 %	292 bps
	BIQ-Score	2022-12-30	-6.14 %	-4.90 %	-124 bps	2.15 %	0.71 %	144 bps	-13.10 %	-14.87 %	176 bps
Cycle model	Expansion	2022-12-30	-5.89 %	-4.90 %	-99 bps	2.60 %	0.71 %	188 bps	-16.81 %	-14.87 %	-195 bps
	Recession	2022-12-30	-4.76 %	-4.90 %	14 bps	-1.01 %	0.71 %	-172 bps	-9.90 %	-14.87 %	496 bps
	Recovery	2022-12-30	-6.13 %	-4.90 %	-124 bps	3.86 %	0.71 %	315 bps	-14.69 %	-14.87 %	18 bps
	Slowdown	2022-12-30	-4.98 %	-4.90 %	-8 bps	-1.78 %	0.71 %	-250 bps	-13.26 %	-14.87 %	161 bps
Sustainable Target	ESG	2022-12-30	-4.15 %	-4.90 %	75 bps	1.50 %	0.71 %	79 bps	-14.29 %	-14.87 %	58 bps
	Low Carbon	2022-12-30	-3.67 %	-4.90 %	123 bps	-0.27 %	0.71 %	-98 bps	-16.43 %	-14.87 %	-157 bps
	SDG	2022-12-30	-4.75 %	-4.90 %	14 bps	-1.11 %	0.71 %	-182 bps	-12.51 %	-14.87 %	235 bps

EM: BIQ (pure)

Benchmark: MSCI ND Emerging Markets

Month-to-date



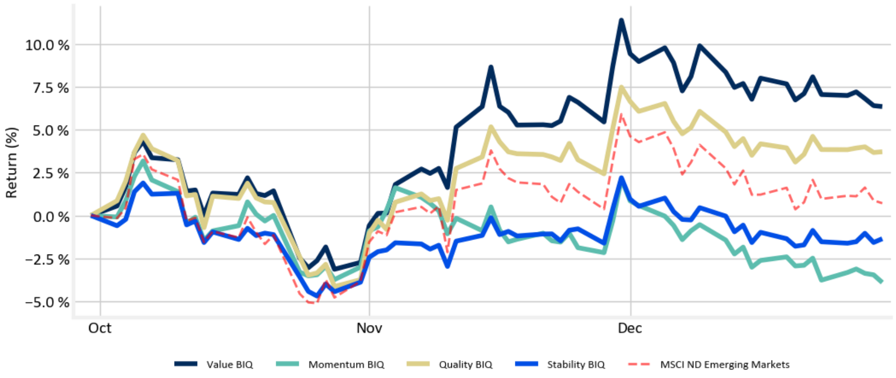


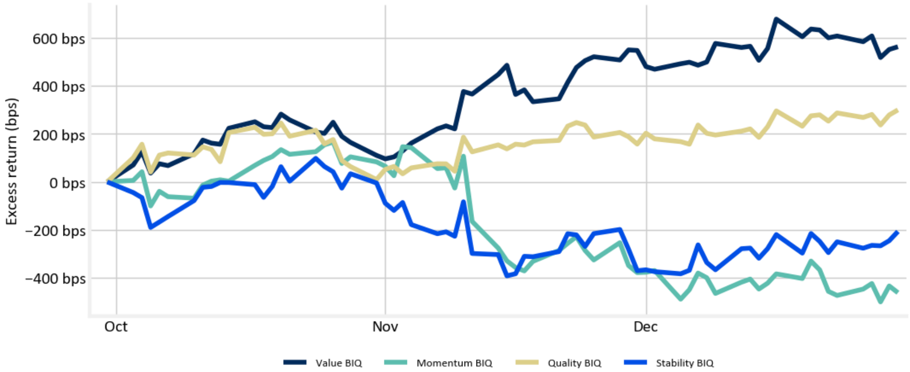
	Factor	Bm	Excess
Value BIQ	-4.52 %	-4.90 %	38 bps
Momentum BIQ	-5.90 %	-4.90 %	-100 bps
Quality BIQ	-3.50 %	-4.90 %	140 bps
Stability BIQ	-3.48 %	-4.90 %	142 bps

EM: BIQ (pure)

Benchmark: MSCI ND Emerging Markets

Quarter-to-date



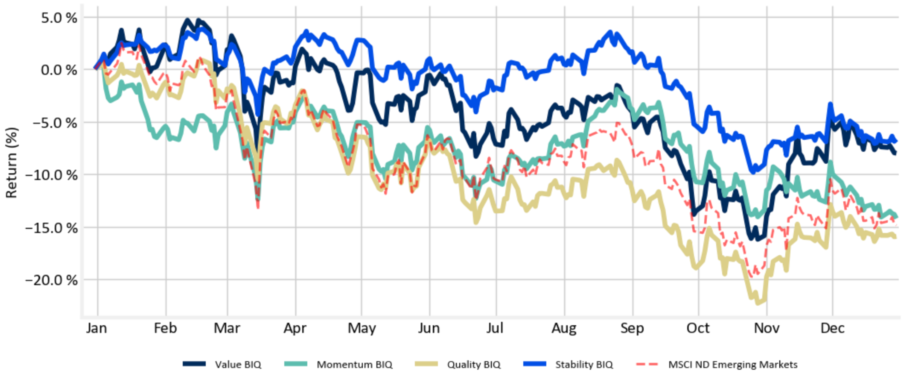


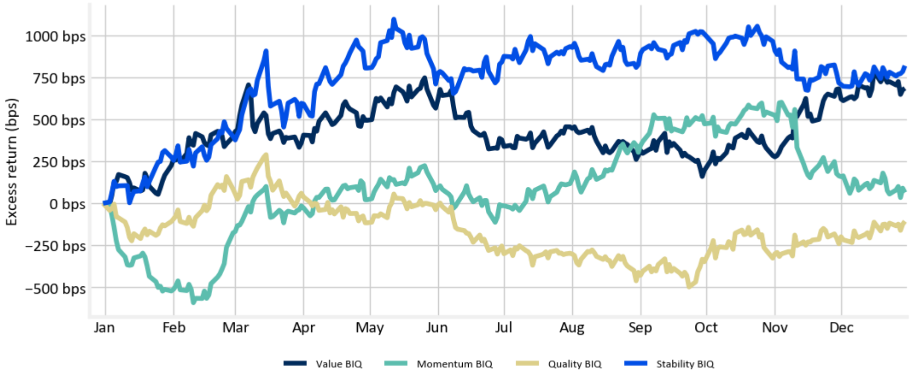
	Factor	Bm	Excess
Value BIQ	6.34 %	0.71 %	563 bps
Momentum BIQ	-3.90 %	0.71 %	-462 bps
Quality BIQ	3.71 %	0.71 %	300 bps
Stability BIQ	-1.35 %	0.71 %	-207 bps

EM: BIQ (pure)

Benchmark: MSCI ND Emerging Markets

Year-to-date





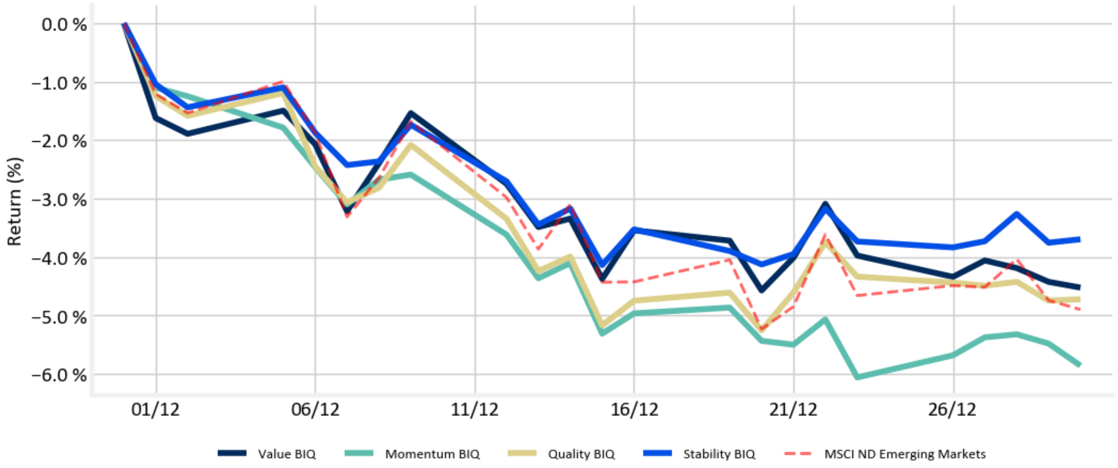
	Factor	Bm	Excess
Value BIQ	-8.02 %	-14.87 %	685 bps
Momentum BIQ	-14.23 %	-14.87 %	64 bps
Quality BIQ	-15.93 %	-14.87 %	-107 bps
Stability BIQ	-6.68 %	-14.87 %	819 bps

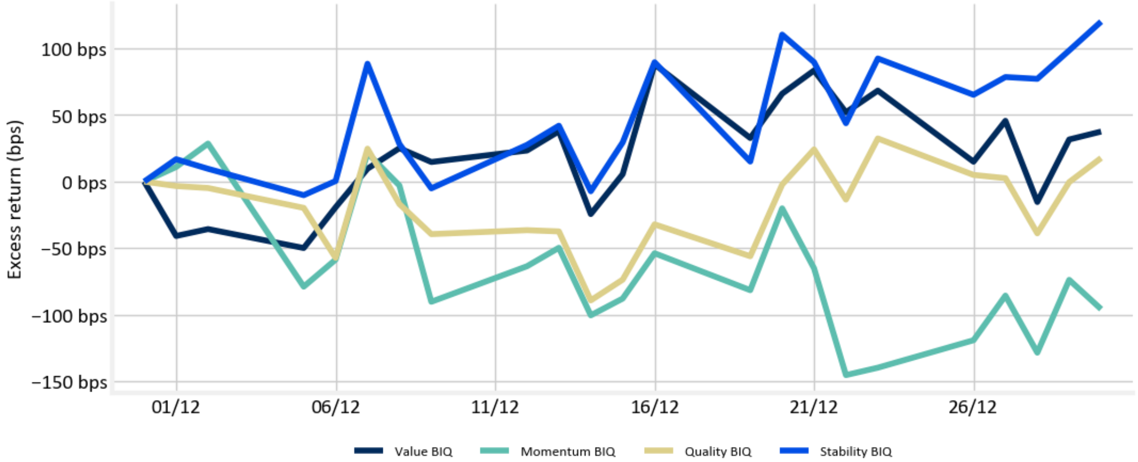
BANKINVEST

EM: BIQ (sustainable)

Benchmark: MSCI ND Emerging Markets

Month-to-date





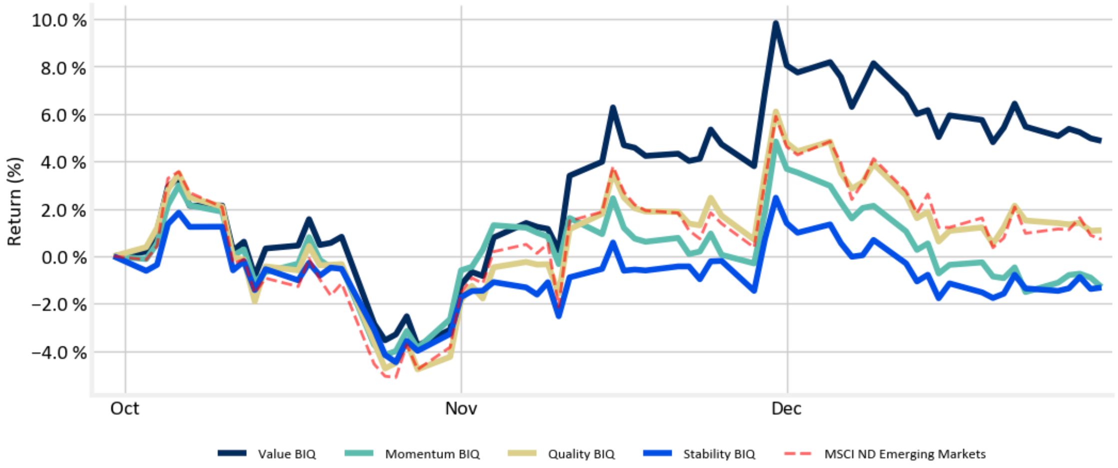
	Factor	Bm	Excess
Value BIQ	-4.52 %	-4.90 %	38 bps
Momentum BIQ	-5.86 %	-4.90 %	-96 bps
Quality BIQ	-4.72 %	-4.90 %	18 bps
Stability BIQ	-3.70 %	-4.90 %	120 bps

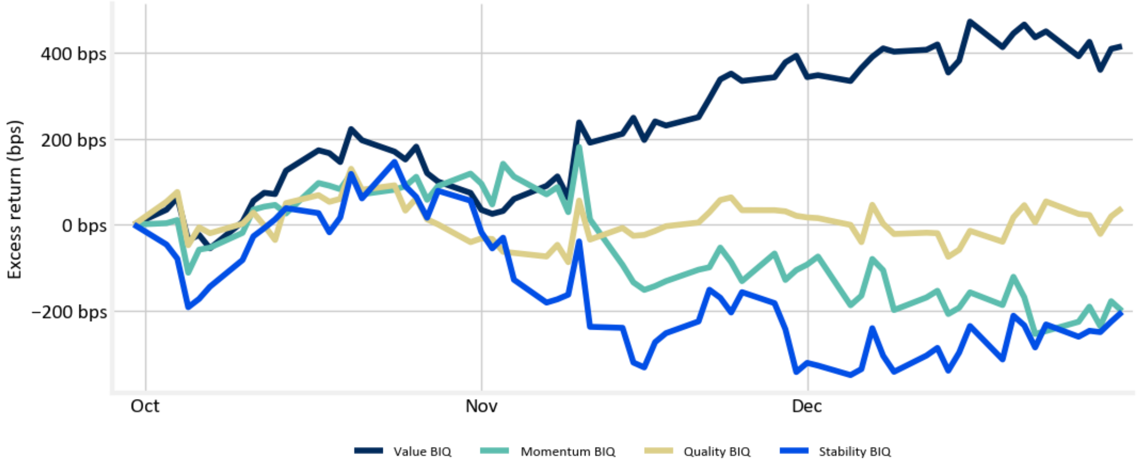
BANKINVEST

EM: BIQ (sustainable)

Benchmark: MSCI ND Emerging Markets

Quarter-to-date



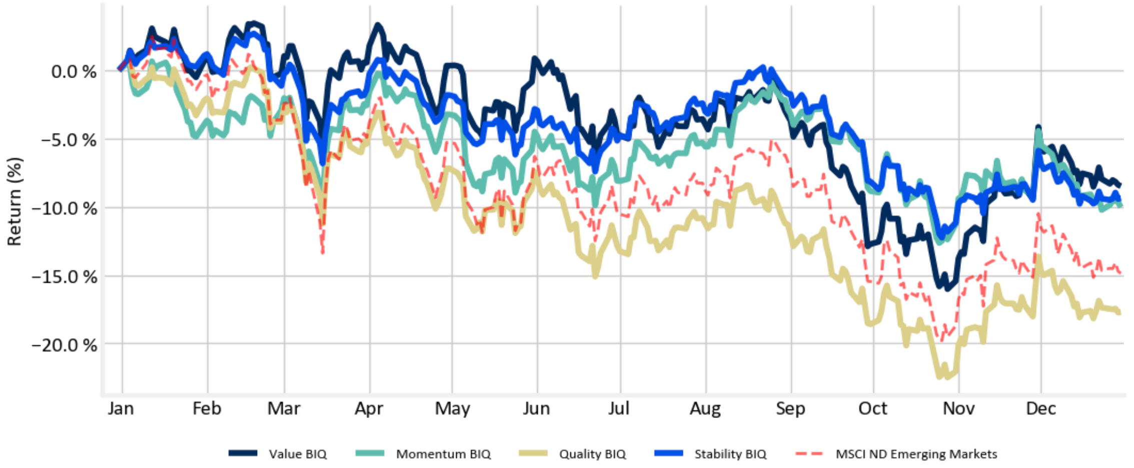


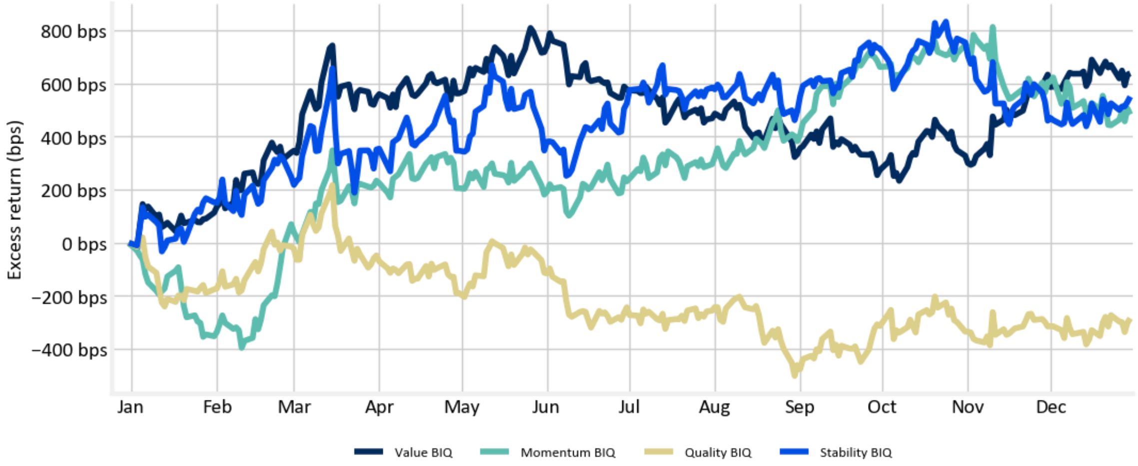
	Factor	Bm	Excess
Value BIQ	4.86 %	0.71 %	415 bps
Momentum BIQ	-1.30 %	0.71 %	-201 bps
Quality BIQ	1.09 %	0.71 %	38 bps
Stability BIQ	-1.32 %	0.71 %	-203 bps

EM: BIQ (sustainable)

Benchmark: MSCI ND Emerging Markets

Year-to-date





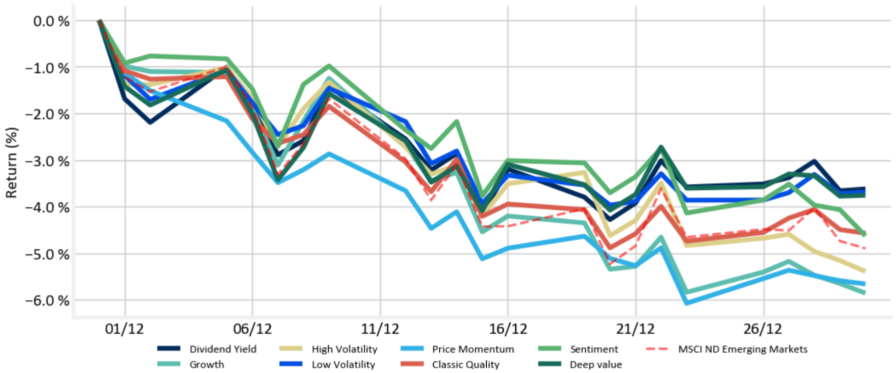
	Factor	Bm	Excess
Value BIQ	-8.48 %	-14.87 %	638 bps
Momentum BIQ	-10.03 %	-14.87 %	483 bps
Quality BIQ	-17.71 %	-14.87 %	-285 bps
Stability BIQ	-9.36 %	-14.87 %	550 bps

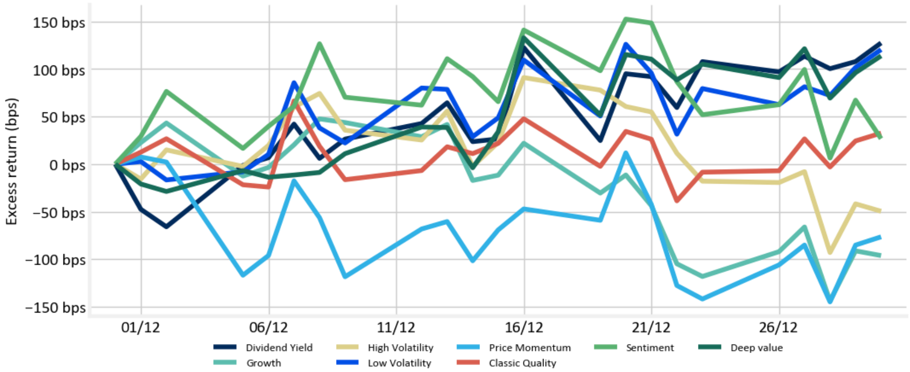
BANKINVEST

EM: Academic (pure)

Benchmark: MSCI ND Emerging Markets

Month-to-date



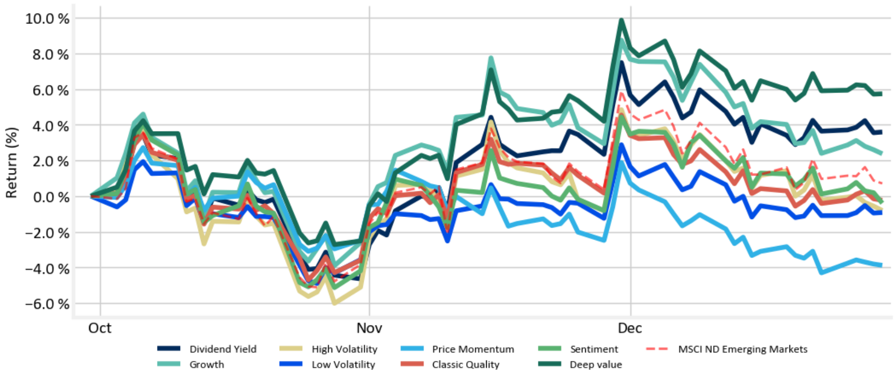


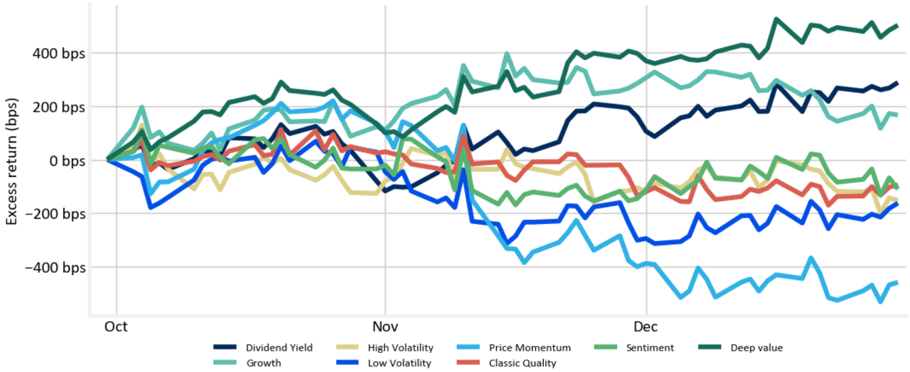
	Factor	Bm	Excess
Dividend Yield	-3.62 %	-4.90 %	127 bps
Growth	-5.86 %	-4.90 %	-96 bps
High Volatility	-5.39 %	-4.90 %	-50 bps
Low Volatility	-3.69 %	-4.90 %	121 bps
Price Momentum	-5.66 %	-4.90 %	-76 bps
Classic Quality	-4.57 %	-4.90 %	33 bps
Sentiment	-4.63 %	-4.90 %	27 bps
Deep value	-3.76 %	-4.90 %	114 bps

EM: Academic (pure)

Benchmark: MSCI ND Emerging Markets

Quarter-to-date



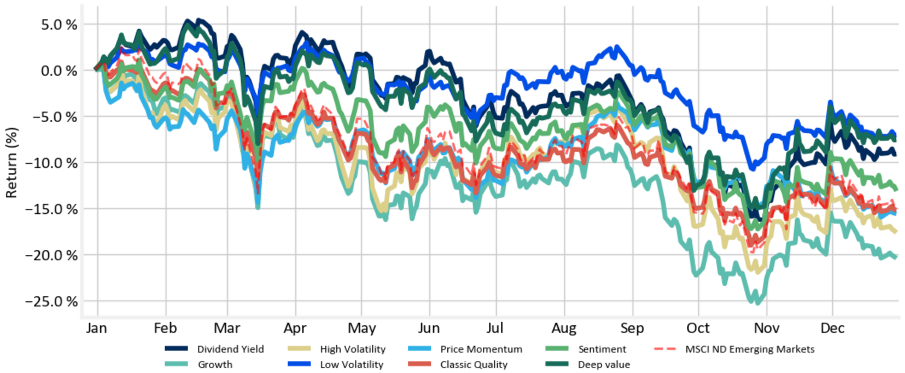


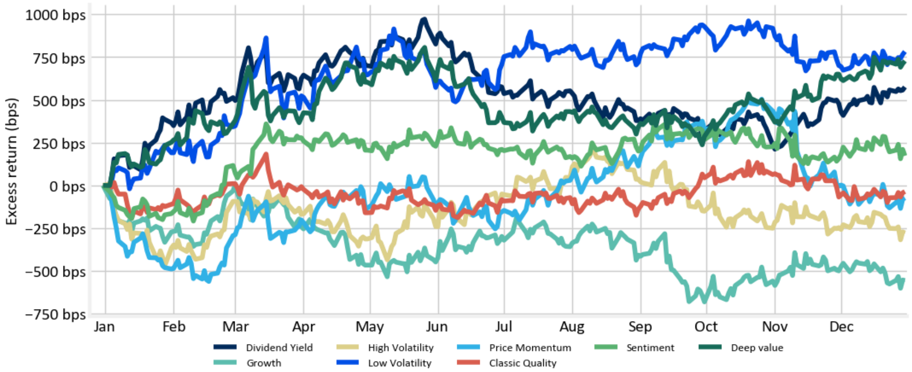
	Factor	Bm	Excess
Dividend Yield	3.60 %	0.71 %	289 bps
Growth	2.38 %	0.71 %	166 bps
High Volatility	-0.81 %	0.71 %	-152 bps
Low Volatility	-0.92 %	0.71 %	-163 bps
Price Momentum	-3.88 %	0.71 %	-459 bps
Classic Quality	-0.23 %	0.71 %	-94 bps
Sentiment	-0.39 %	0.71 %	-111 bps
Deep value	5.74 %	0.71 %	503 bps

EM: Academic (pure)

Benchmark: MSCI ND Emerging Markets

Year-to-date



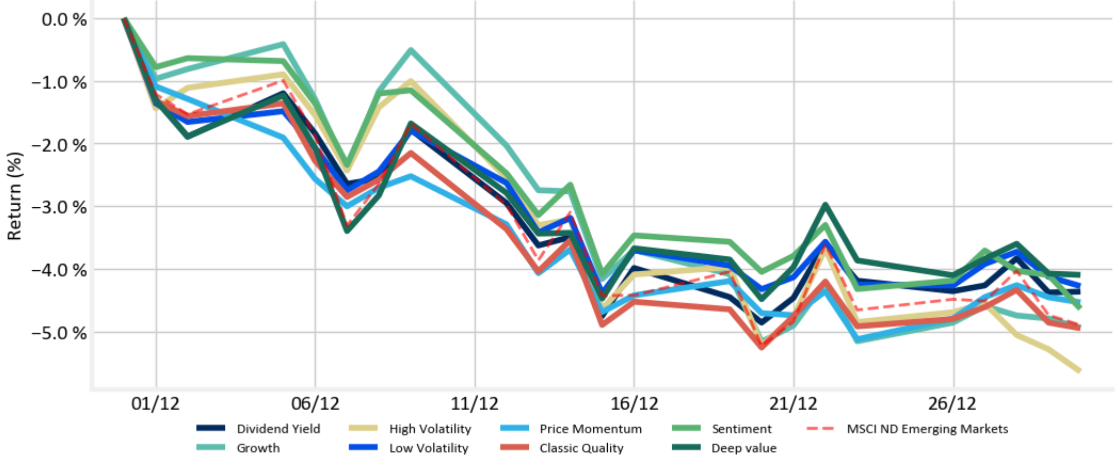


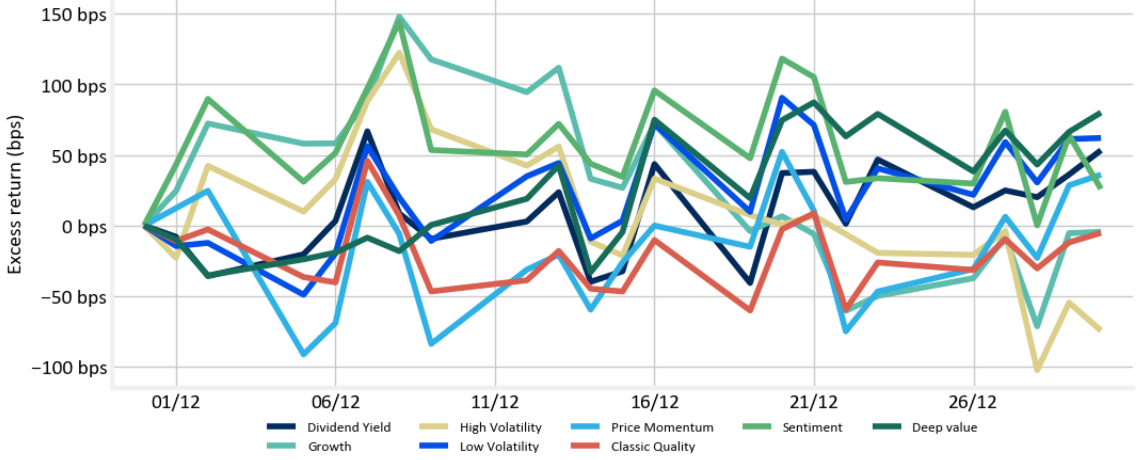
	Factor	Bm	Excess
Dividend Yield	-9.12 %	-14.87 %	575 bps
Growth	-20.43 %	-14.87 %	-557 bps
High Volatility	-17.65 %	-14.87 %	-278 bps
Low Volatility	-7.04 %	-14.87 %	782 bps
Price Momentum	-15.60 %	-14.87 %	-73 bps
Classic Quality	-15.23 %	-14.87 %	-36 bps
Sentiment	-13.14 %	-14.87 %	173 bps
Deep value	-7.59 %	-14.87 %	728 bps

EM: Academic (sustainable)

Benchmark: MSCI ND Emerging Markets

Month-to-date



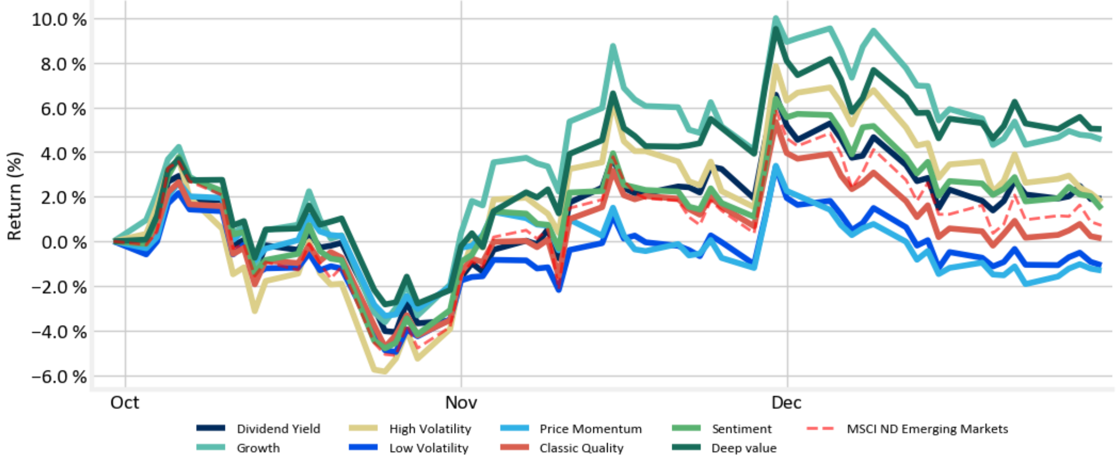


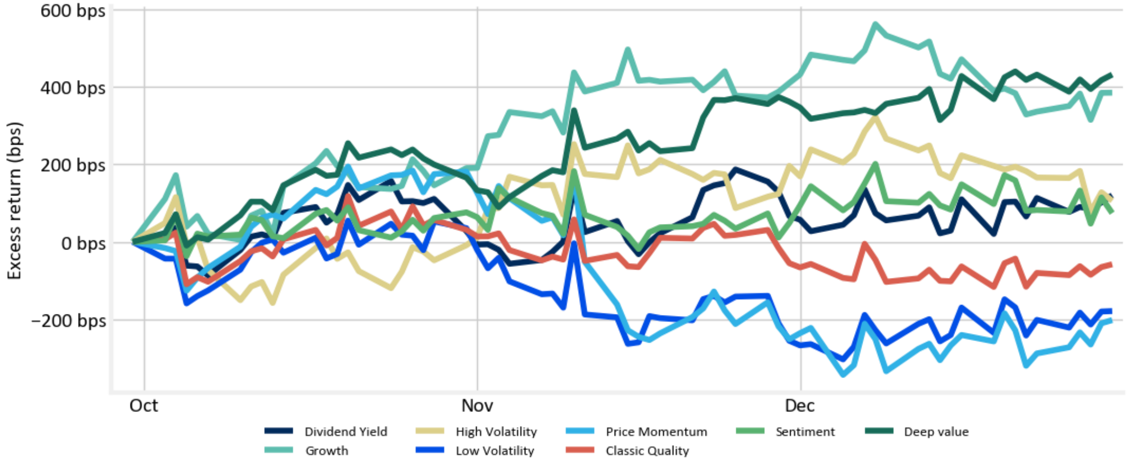
	Factor	Bm	Excess
Dividend Yield	-4.36 %	-4.90 %	53 bps
Growth	-4.94 %	-4.90 %	-4 bps
High Volatility	-5.64 %	-4.90 %	-74 bps
Low Volatility	-4.28 %	-4.90 %	62 bps
Price Momentum	-4.54 %	-4.90 %	36 bps
Classic Quality	-4.95 %	-4.90 %	-5 bps
Sentiment	-4.64 %	-4.90 %	26 bps
Deep value	-4.10 %	-4.90 %	80 bps

EM: Academic (sustainable)

Benchmark: MSCI ND Emerging Markets

Quarter-to-date



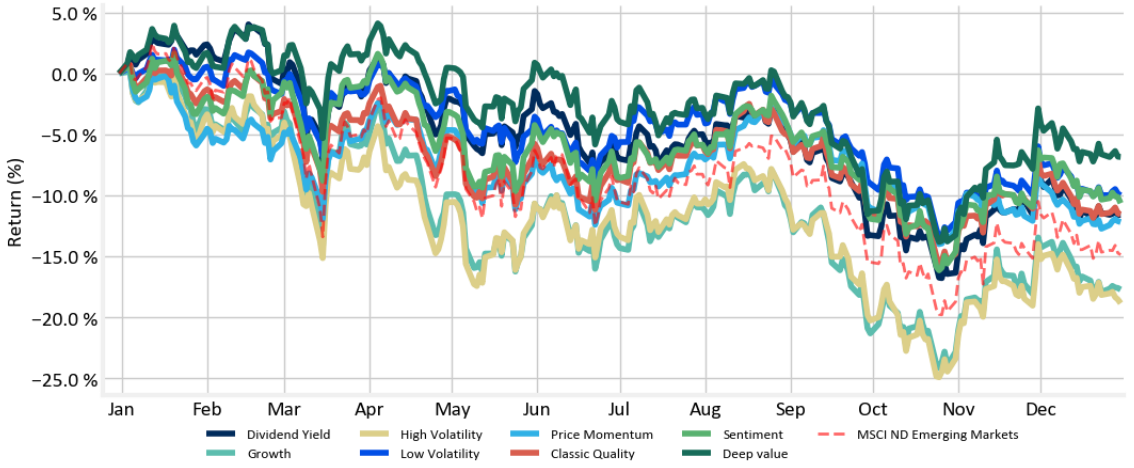


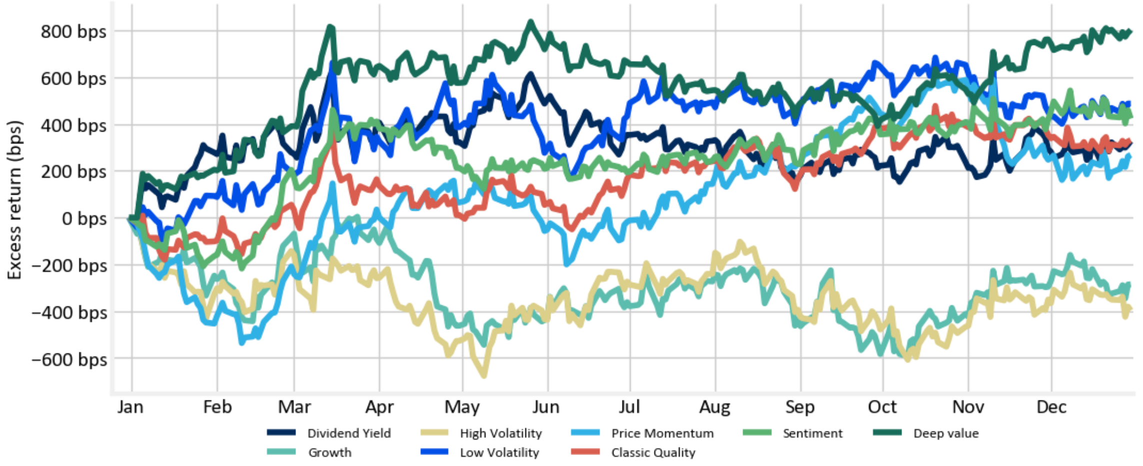
	Factor	Bm	Excess
Dividend Yield	1.91 %	0.71 %	120 bps
Growth	4.56 %	0.71 %	385 bps
High Volatility	1.77 %	0.71 %	106 bps
Low Volatility	-1.07 %	0.71 %	-179 bps
Price Momentum	-1.31 %	0.71 %	-202 bps
Classic Quality	0.13 %	0.71 %	-58 bps
Sentiment	1.45 %	0.71 %	74 bps
Deep value	5.03 %	0.71 %	432 bps

EM: Academic (sustainable)

Benchmark: MSCI ND Emerging Markets

Year-to-date



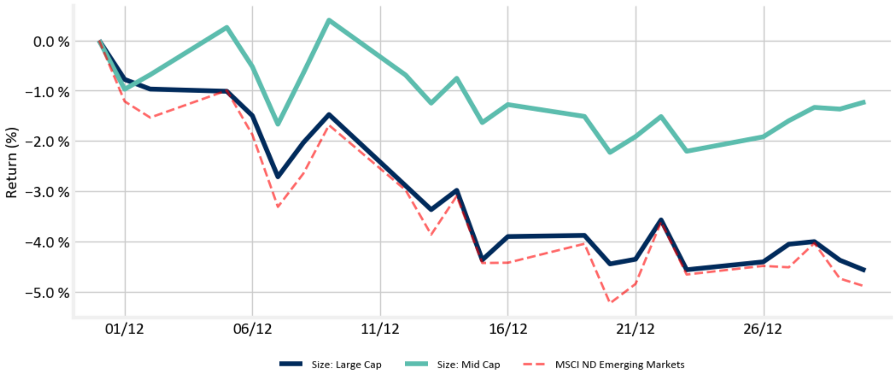


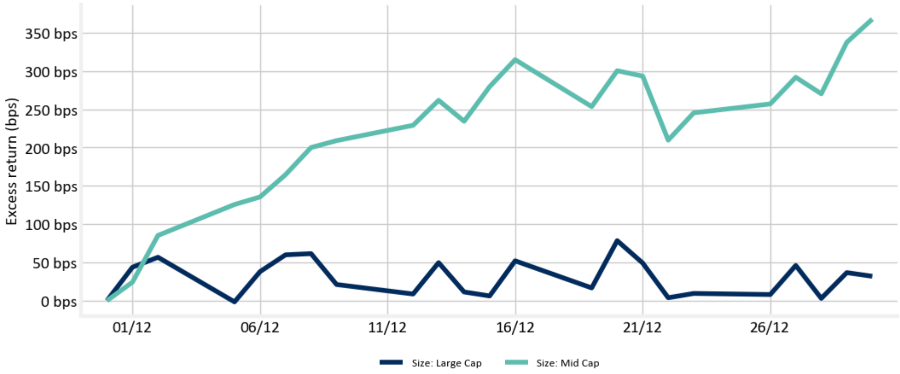
	Factor	Bm	Excess
Dividend Yield	-11.60 %	-14.87 %	327 bps
Growth	-17.72 %	-14.87 %	-285 bps
High Volatility	-18.84 %	-14.87 %	-397 bps
Low Volatility	-9.99 %	-14.87 %	487 bps
Price Momentum	-12.19 %	-14.87 %	268 bps
Classic Quality	-11.56 %	-14.87 %	331 bps
Sentiment	-10.64 %	-14.87 %	423 bps
Deep value	-6.84 %	-14.87 %	802 bps

EM: Cap-Size (pure)

Benchmark: MSCI ND Emerging Markets

Month-to-date





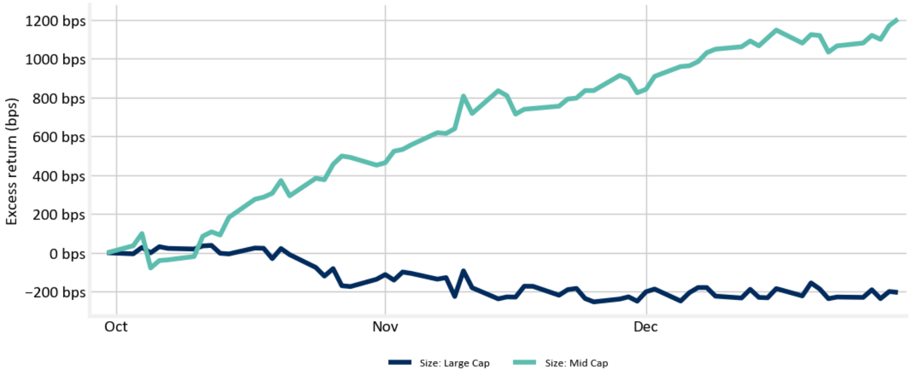
	Factor	Bm	Excess
Size: Large Cap	-4.58 %	-4.90 %	32 bps
Size: Mid Cap	-1.22 %	-4.90 %	368 bps

BANKINVEST

EM: Cap-Size (pure)

Benchmark: MSCI ND Emerging Markets

Quarter-to-date

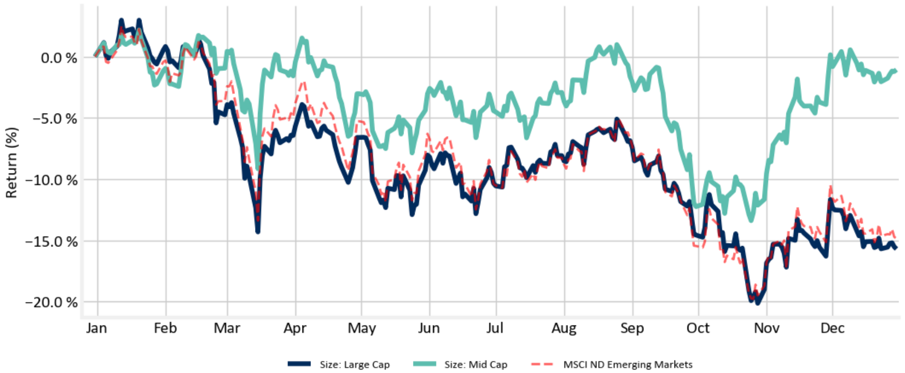


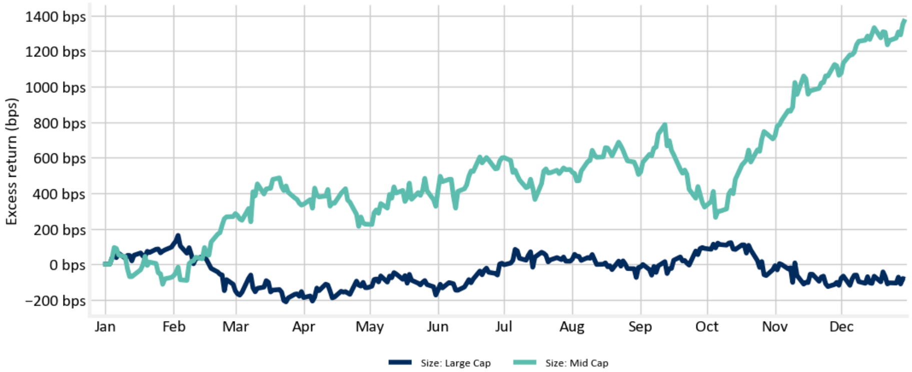
	Factor	Bm	Excess
Size: Large Cap	-1.33 %	0.71 %	-204 bps
Size: Mid Cap	12.74 %	0.71 %	1203 bps

EM: Cap-Size (pure)

Benchmark: MSCI ND Emerging Markets

Year-to-date





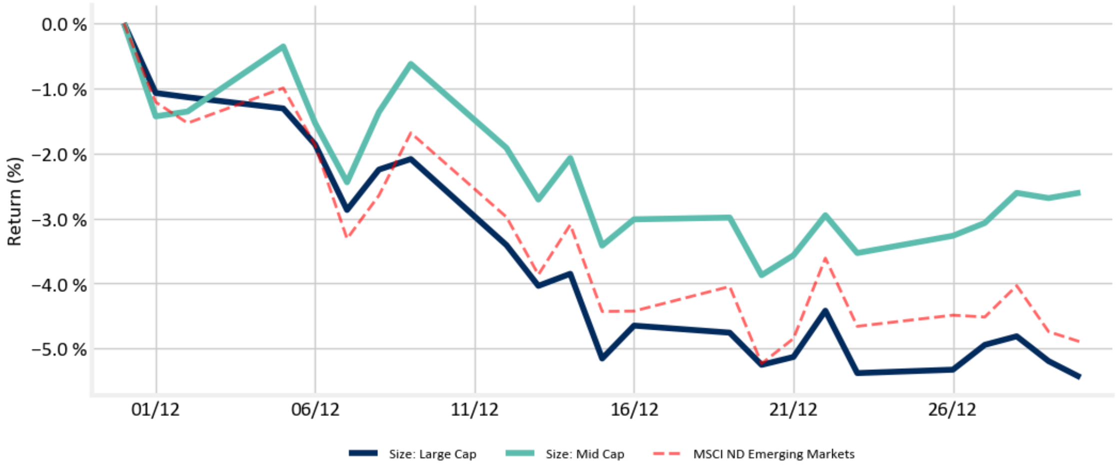
	Factor	Bm	Excess
Size: Large Cap	-15.71 %	-14.87 %	-85 bps
Size: Mid Cap	-1.07 %	-14.87 %	1379 bps

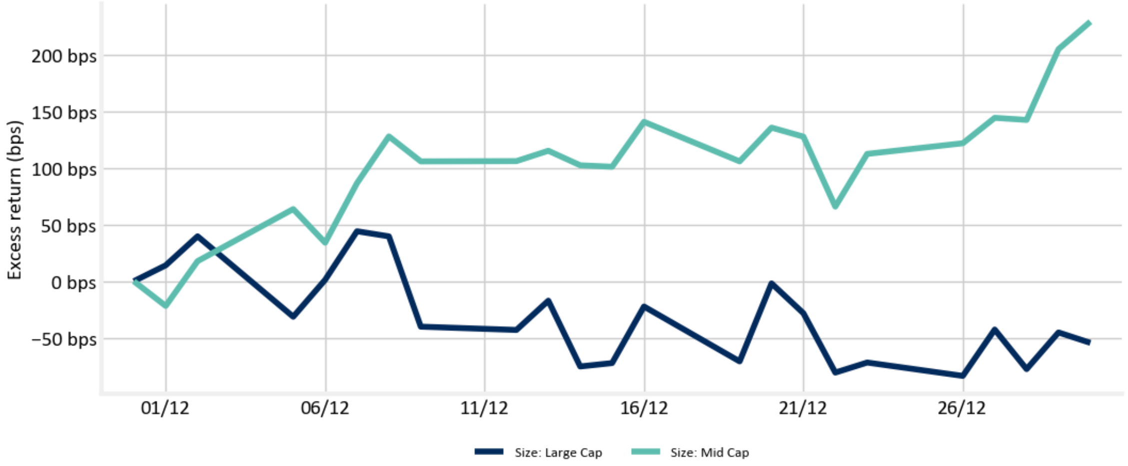
BANKINVEST

EM: Cap-Size (sustainable)

Benchmark: MSCI ND Emerging Markets

Month-to-date



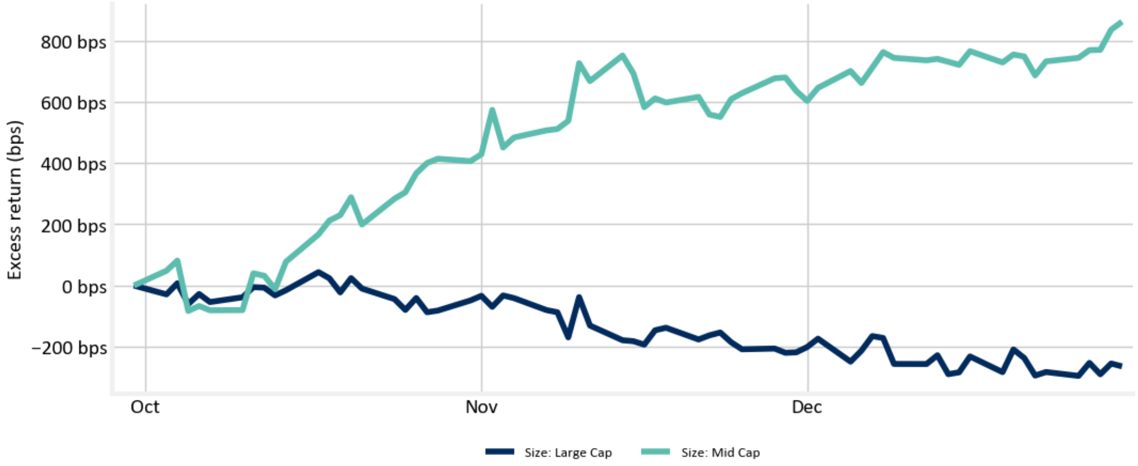


	Factor	Bm	Excess
Size: Large Cap	-5.44 %	-4.90 %	-55 bps
Size: Mid Cap	-2.60 %	-4.90 %	230 bps

EM: Cap-Size (sustainable)

Benchmark: MSCI ND Emerging Markets

Quarter-to-date

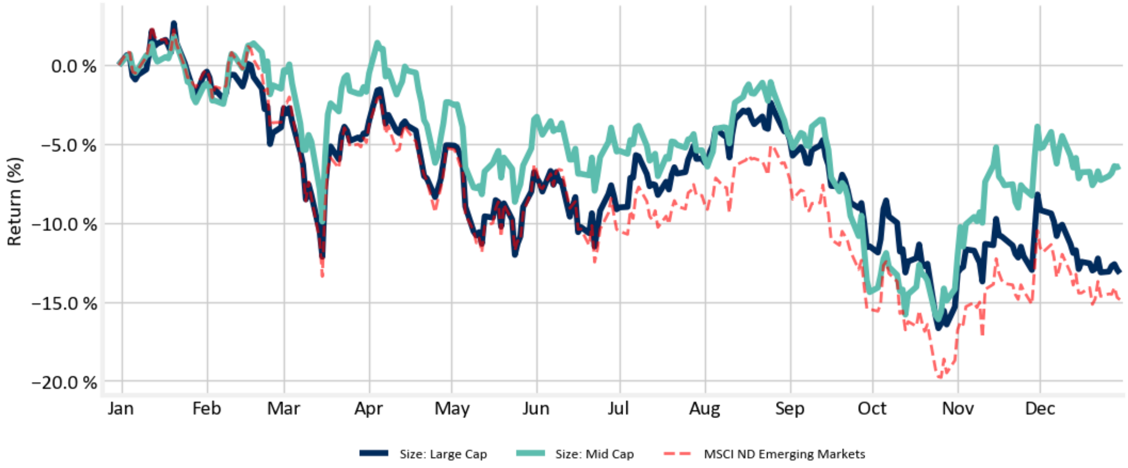


	Factor	Bm	Excess
Size: Large Cap	-1.93 %	0.71 %	-264 bps
Size: Mid Cap	9.33 %	0.71 %	862 bps

EM: Cap-Size (sustainable)

Benchmark: MSCI ND Emerging Markets

Year-to-date



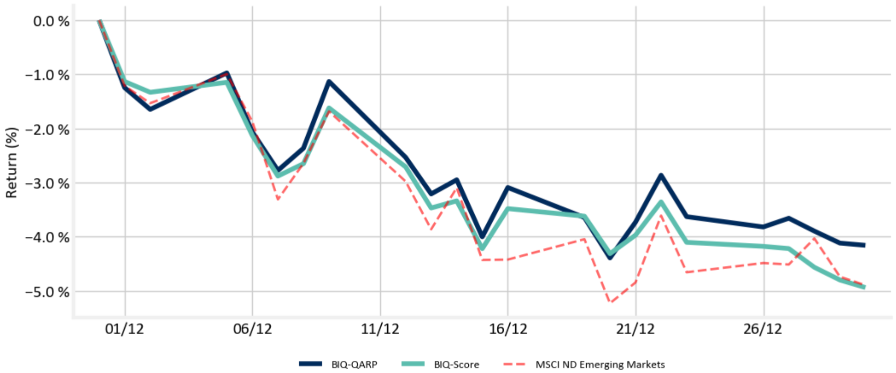
	Factor	Bm	Excess
Size: Large Cap	-13.20 %	-14.87 %	167 bps
Size: Mid Cap	-6.40 %	-14.87 %	847 bps

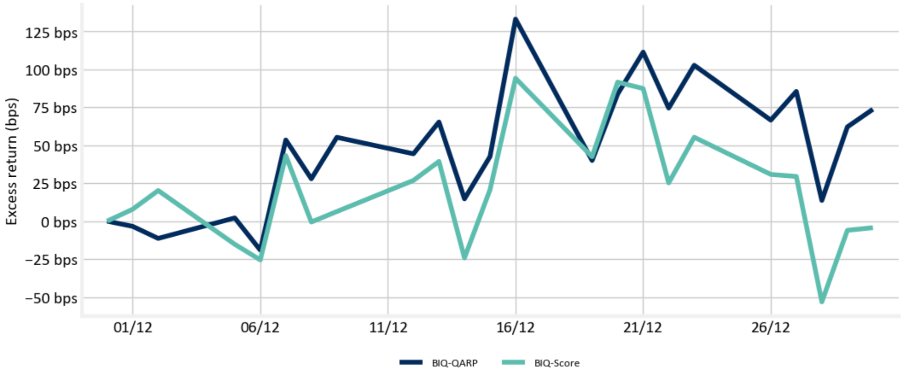
BANKINVEST

EM: Multifactor (pure)

Benchmark: MSCI ND Emerging Markets

Month-to-date





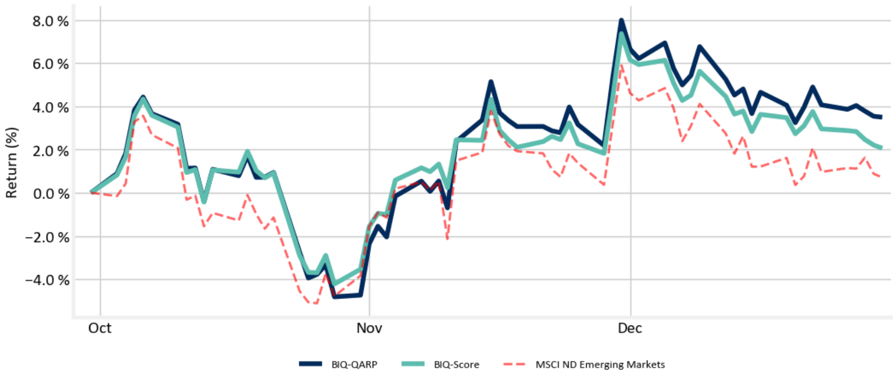
	Factor	Bm	Excess
BIQ-QARP	-4.16 %	-4.90 %	74 bps
BIQ-Score	-4.94 %	-4.90 %	-4 bps

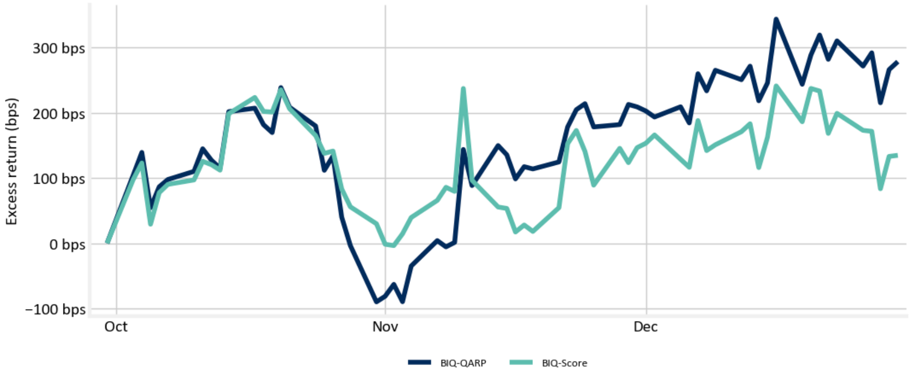
BANKINVEST

EM: Multifactor (pure)

Benchmark: MSCI ND Emerging Markets

Quarter-to-date



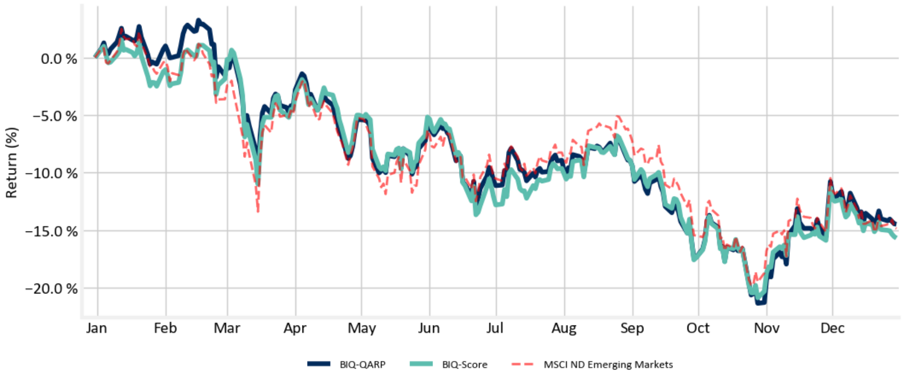


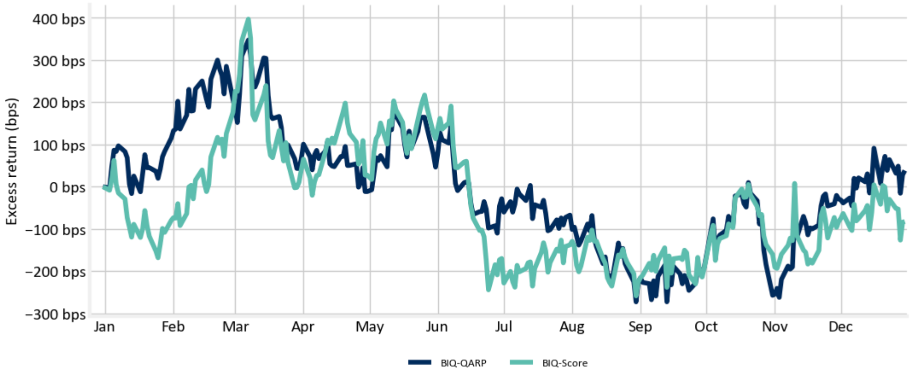
	Factor	Bm	Excess
BIQ-QARP	3.50 %	0.71 %	278 bps
BIQ-Score	2.06 %	0.71 %	135 bps

EM: Multifactor (pure)

Benchmark: MSCI ND Emerging Markets

Year-to-date





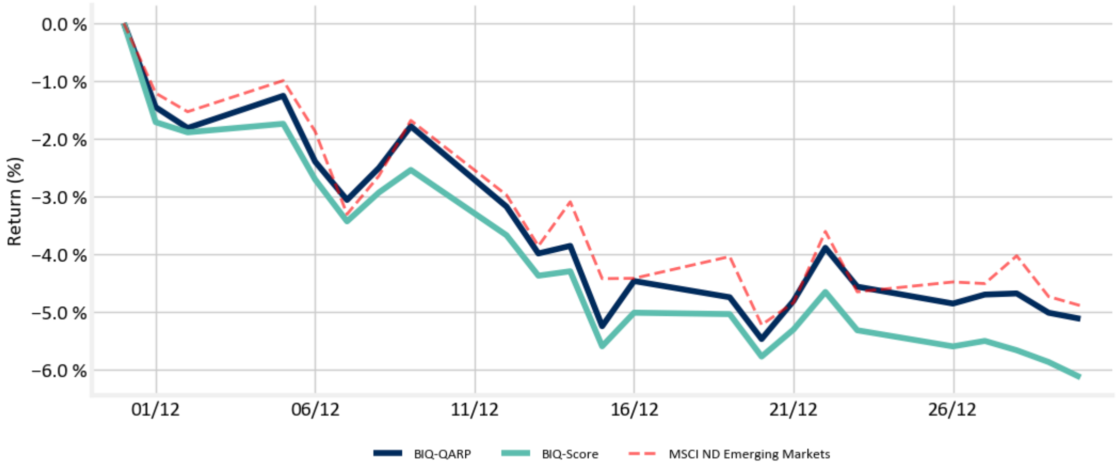
	Factor	Bm	Excess
BIQ-QARP	-14.48 %	-14.87 %	38 bps
BIQ-Score	-15.69 %	-14.87 %	-82 bps

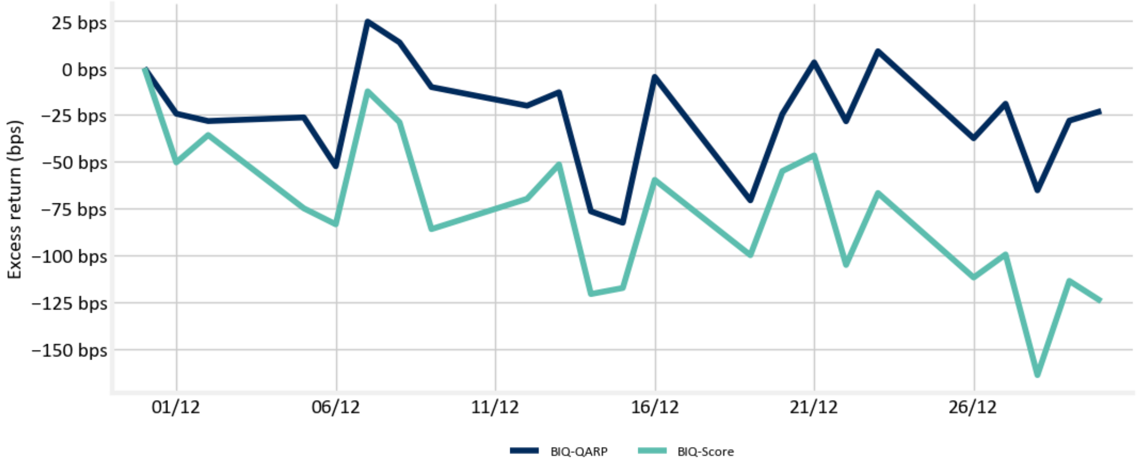
BANKINVEST

EM: Multifactor (sustainable)

Benchmark: MSCI ND Emerging Markets

Month-to-date



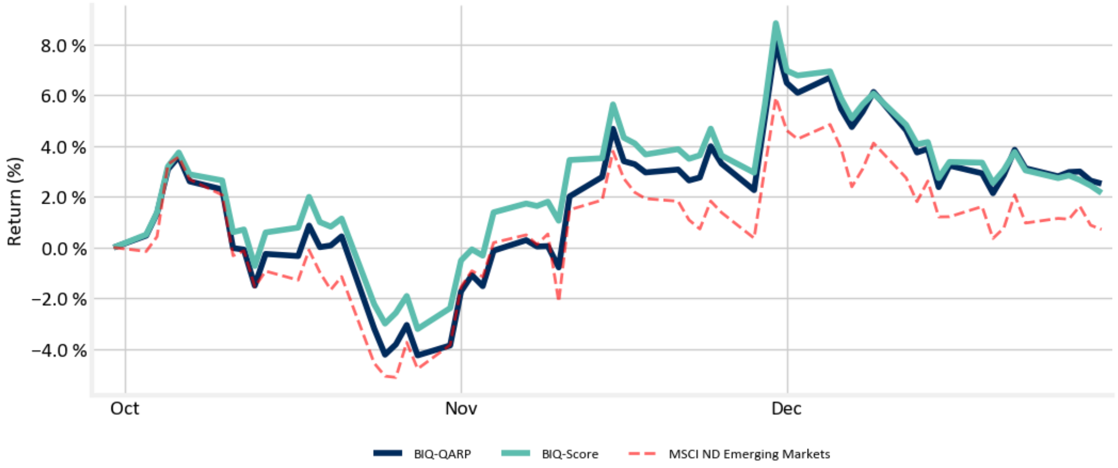


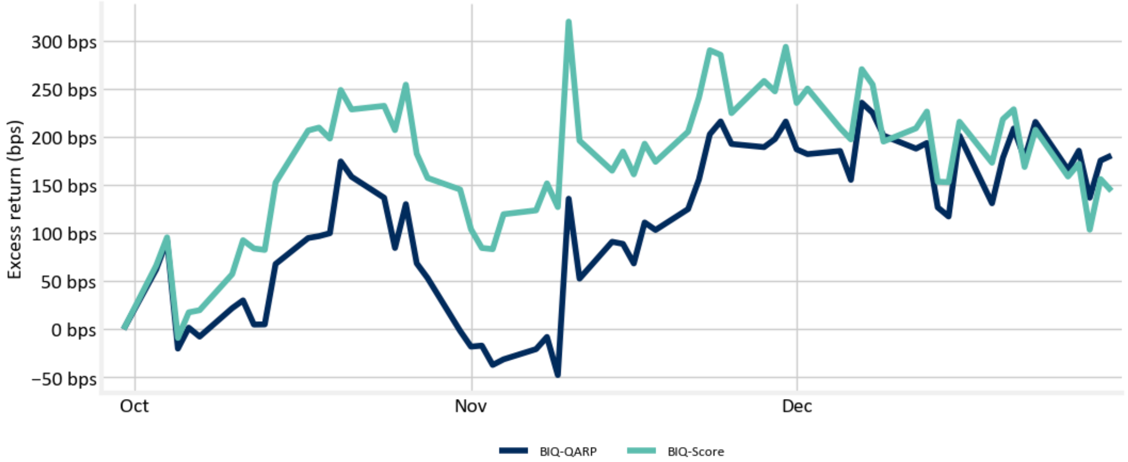
	Factor	Bm	Excess
BIQ-QARP	-5.13 %	-4.90 %	-23 bps
BIQ-Score	-6.14 %	-4.90 %	-124 bps

EM: Multifactor (sustainable)

Benchmark: MSCI ND Emerging Markets

Quarter-to-date





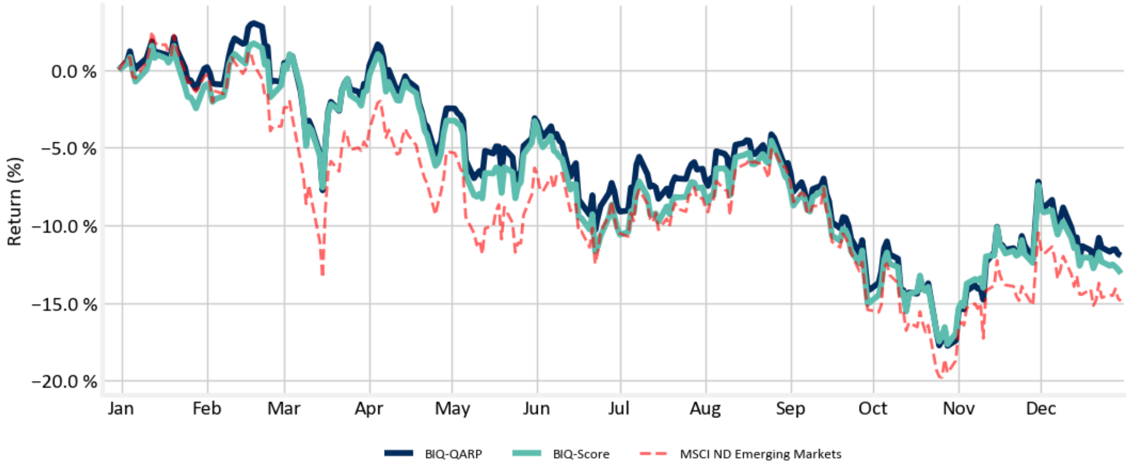
	Factor	Bm	Excess
BIQ-QARP	2.52 %	0.71 %	181 bps
BIQ-Score	2.15 %	0.71 %	144 bps

BANKINVEST

EM: Multifactor (sustainable)

Benchmark: MSCI ND Emerging Markets

Year-to-date

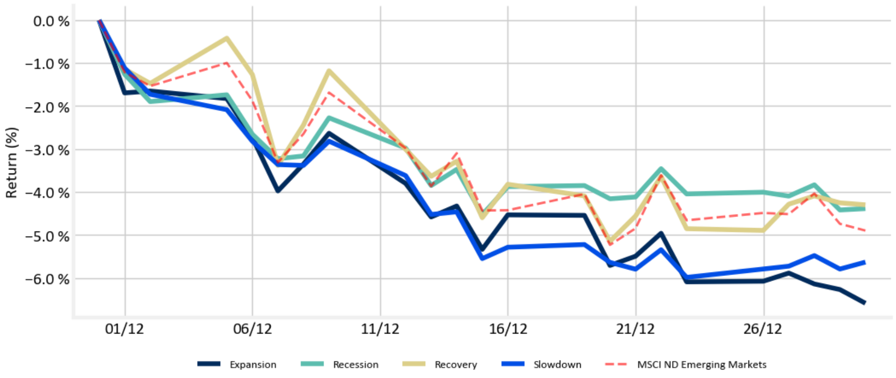


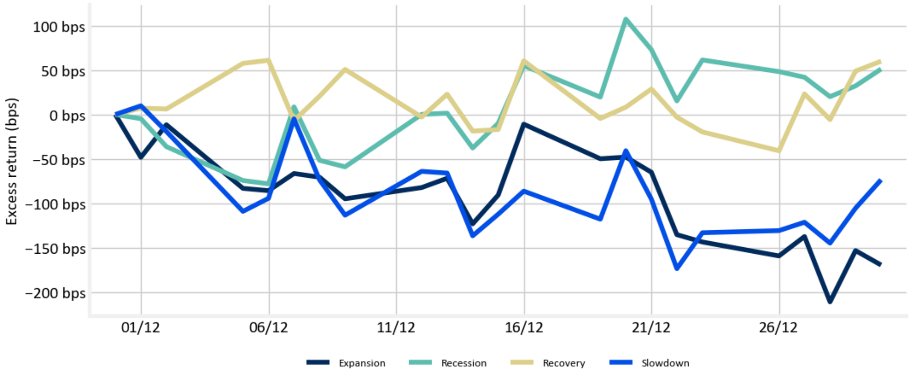
	Factor	Bm	Excess
BIQ-QARP	-11.95 %	-14.87 %	292 bps
BIQ-Score	-13.10 %	-14.87 %	176 bps

EM: Cycle model (pure)

Benchmark: MSCI ND Emerging Markets

Month-to-date





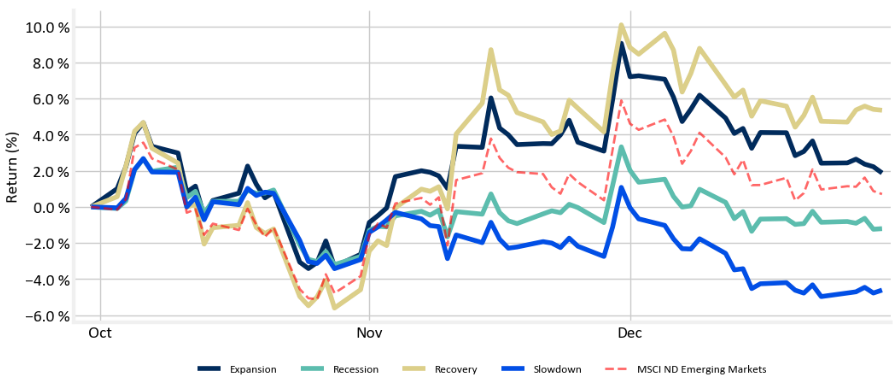
	Factor	Bm	Excess
Expansion	-6.59 %	-4.90 %	-169 bps
Recession	-4.39 %	-4.90 %	51 bps
Recovery	-4.30 %	-4.90 %	60 bps
Slowdown	-5.63 %	-4.90 %	-73 bps

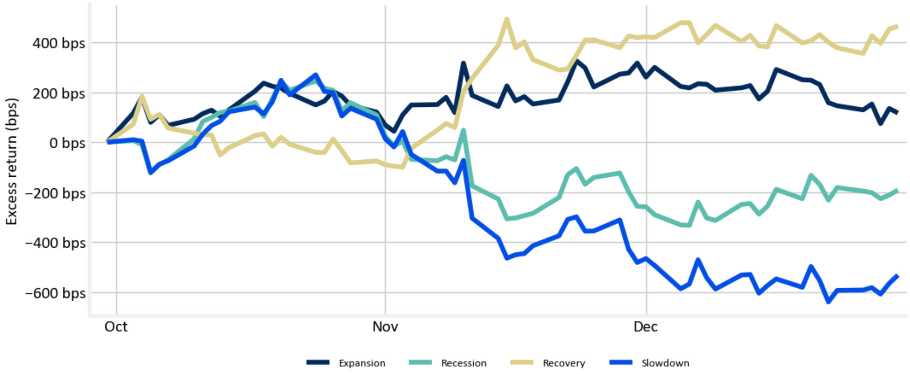
BANKINVEST

EM: Cycle model (pure)

Benchmark: MSCI ND Emerging Markets

Quarter-to-date





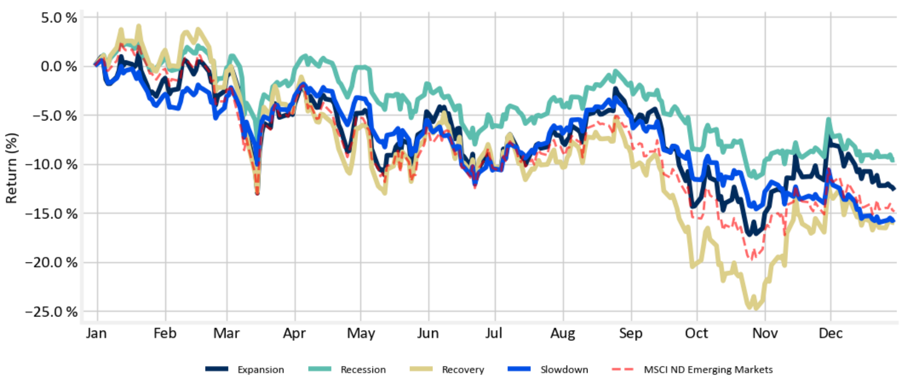
	Factor	Bm	Excess
Expansion	1.88 %	0.71 %	117 bps
Recession	-1.20 %	0.71 %	-192 bps
Recovery	5.36 %	0.71 %	465 bps
Slowdown	-4.61 %	0.71 %	-532 bps

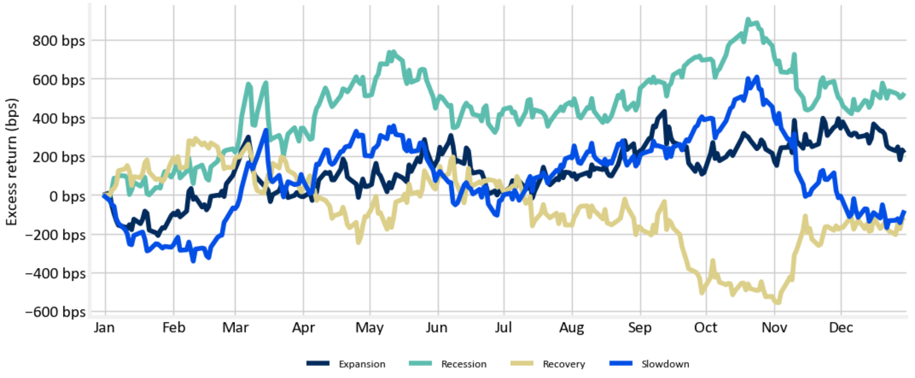
BANKINVEST

EM: Cycle model (pure)

Benchmark: MSCI ND Emerging Markets

Year-to-date





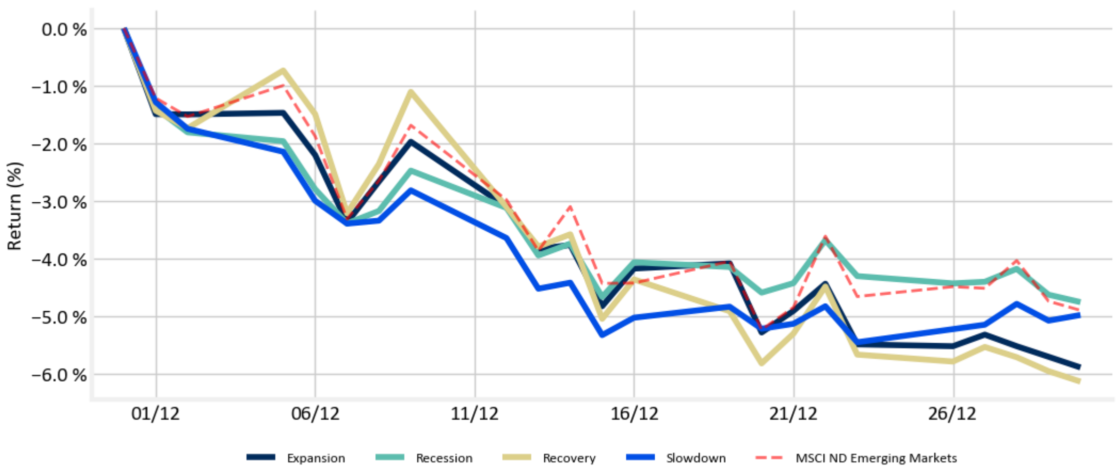
	Factor	Bm	Excess
Expansion	-12.70 %	-14.87 %	217 bps
Recession	-9.61 %	-14.87 %	526 bps
Recovery	-16.02 %	-14.87 %	-116 bps
Slowdown	-15.66 %	-14.87 %	-80 bps

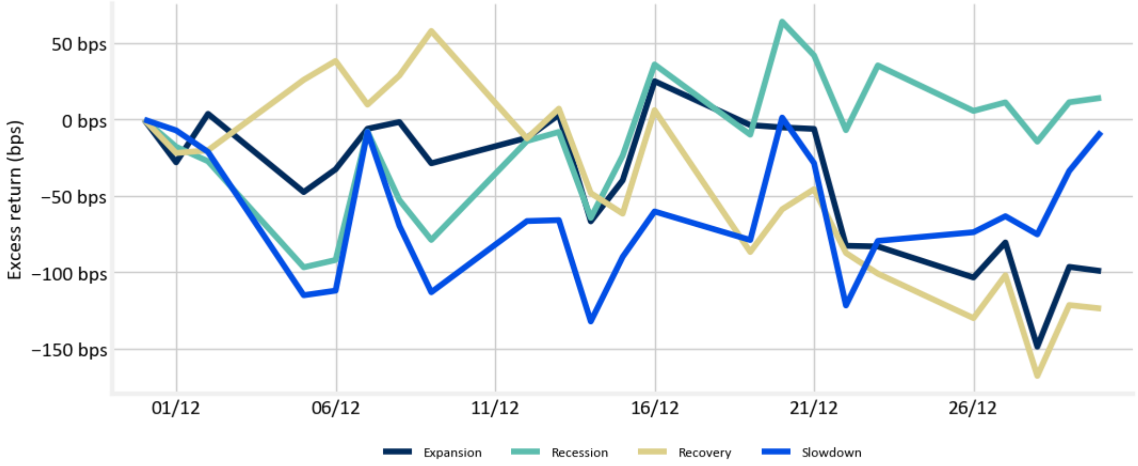
BANKINVEST

EM: Cycle model (sustainable)

Benchmark: MSCI ND Emerging Markets

Month-to-date





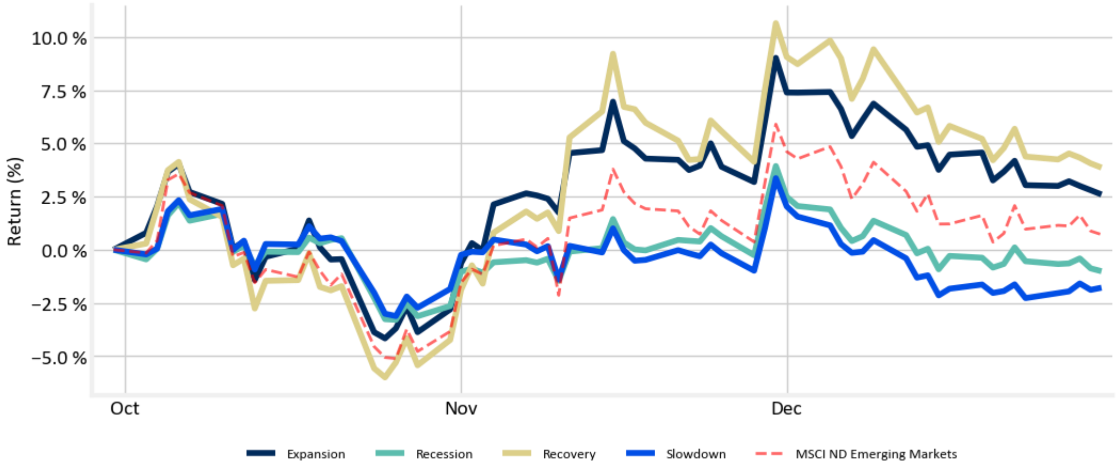
	Factor	Bm	Excess
Expansion	-5.89 %	-4.90 %	-99 bps
Recession	-4.76 %	-4.90 %	14 bps
Recovery	-6.13 %	-4.90 %	-124 bps
Slowdown	-4.98 %	-4.90 %	-8 bps

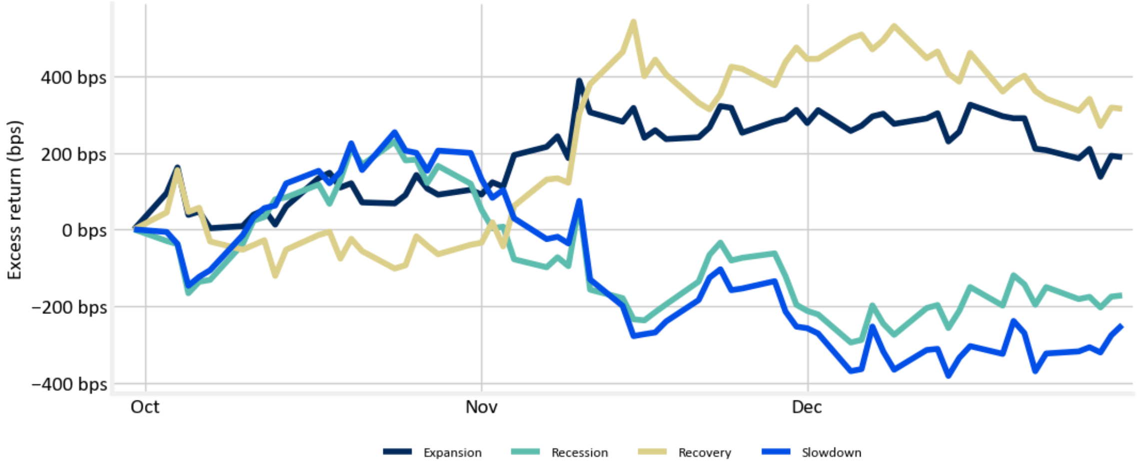
BANKINVEST

EM: Cycle model (sustainable)

Benchmark: MSCI ND Emerging Markets

Quarter-to-date



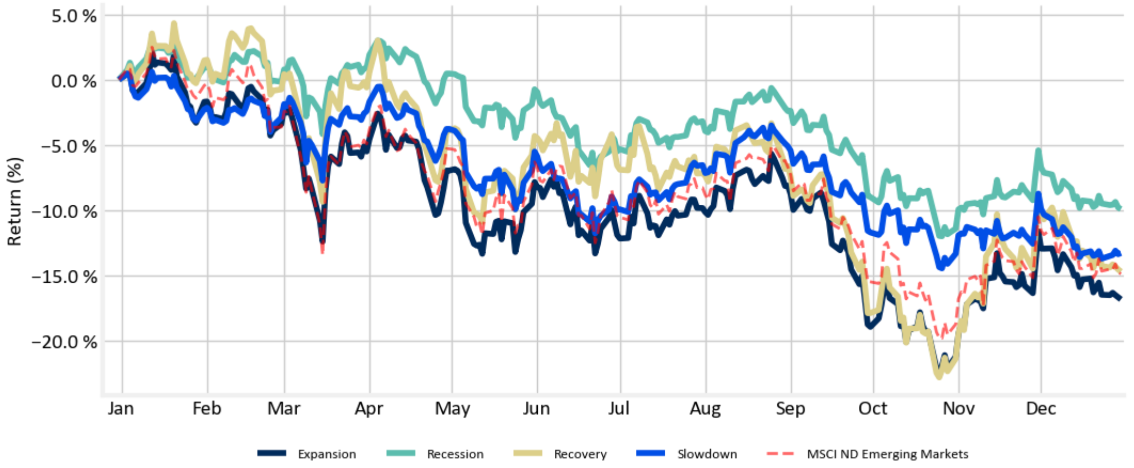


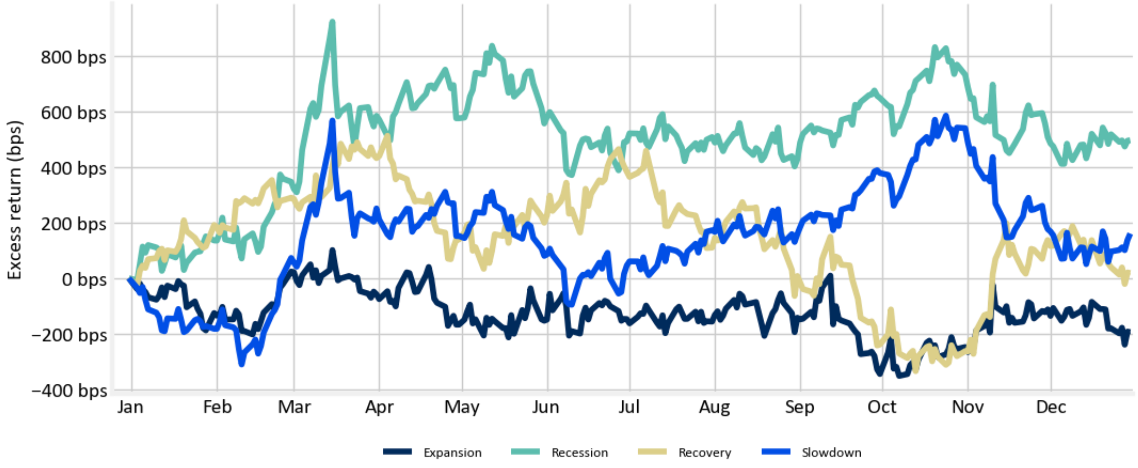
	Factor	Bm	Excess
Expansion	2.60 %	0.71 %	188 bps
Recession	-1.01 %	0.71 %	-172 bps
Recovery	3.86 %	0.71 %	315 bps
Slowdown	-1.78 %	0.71 %	-250 bps

EM: Cycle model (sustainable)

Benchmark: MSCI ND Emerging Markets

Year-to-date



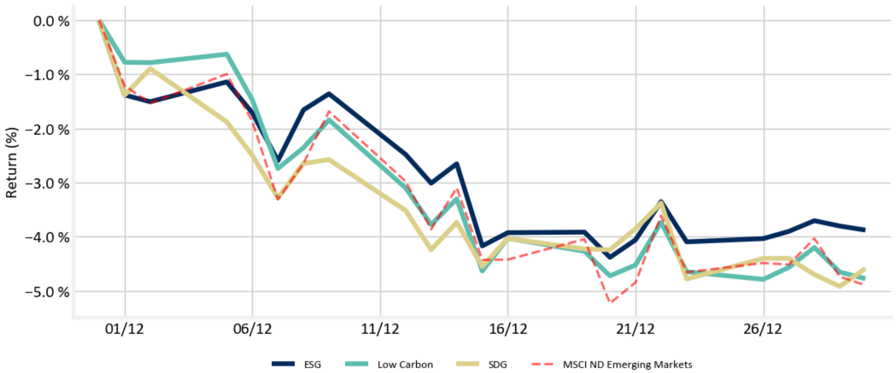


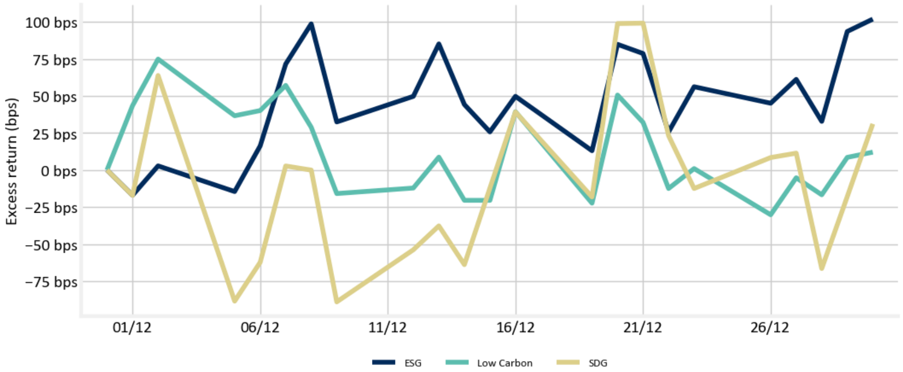
	Factor	Bm	Excess
Expansion	-16.81 %	-14.87 %	-195 bps
Recession	-9.90 %	-14.87 %	496 bps
Recovery	-14.69 %	-14.87 %	18 bps
Slowdown	-13.26 %	-14.87 %	161 bps

EM: Sustainable Target (pure)

Benchmark: MSCI ND Emerging Markets

Month-to-date





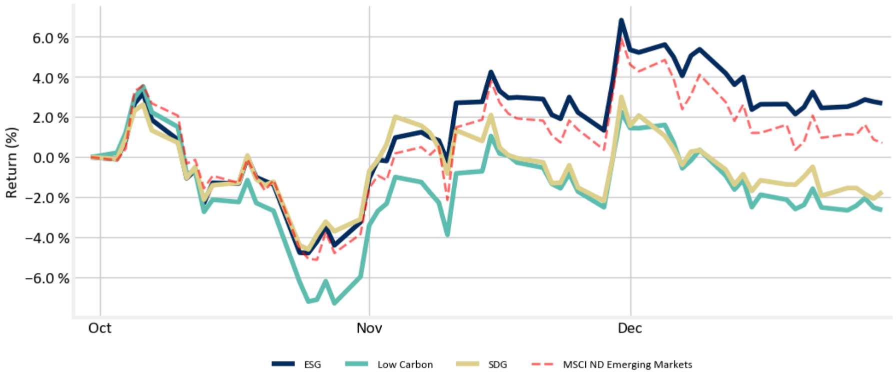
	Factor	Bm	Excess
ESG	-3.88 %	-4.90 %	102 bps
Low Carbon	-4.78 %	-4.90 %	12 bps
SDG	-4.59 %	-4.90 %	31 bps

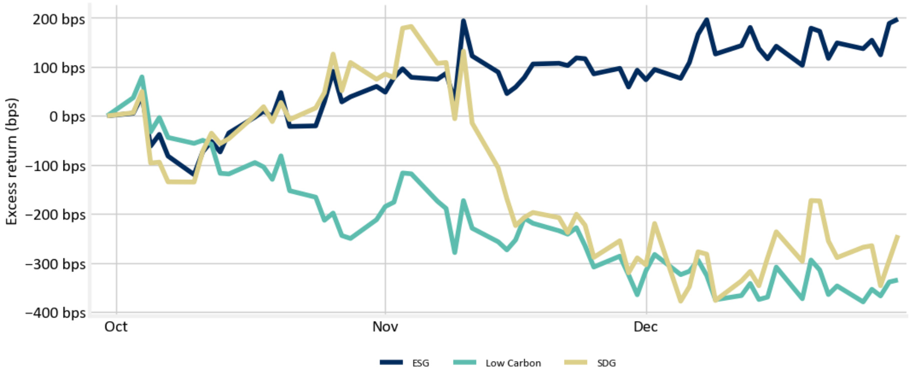
BANKINVEST

EM: Sustainable Target (pure)

Benchmark: MSCI ND Emerging Markets

Quarter-to-date



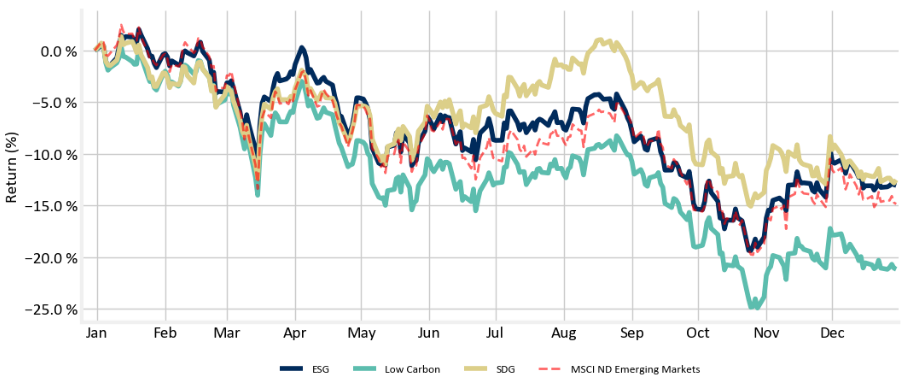


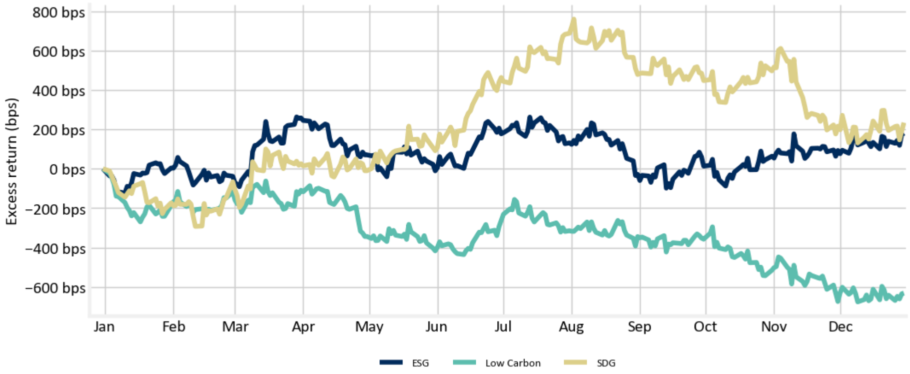
	Factor	Bm	Excess
ESG	2.69 %	0.71 %	197 bps
Low Carbon	-2.64 %	0.71 %	-335 bps
SDG	-1.72 %	0.71 %	-243 bps

EM: Sustainable Target (pure)

Benchmark: MSCI ND Emerging Markets

Year-to-date





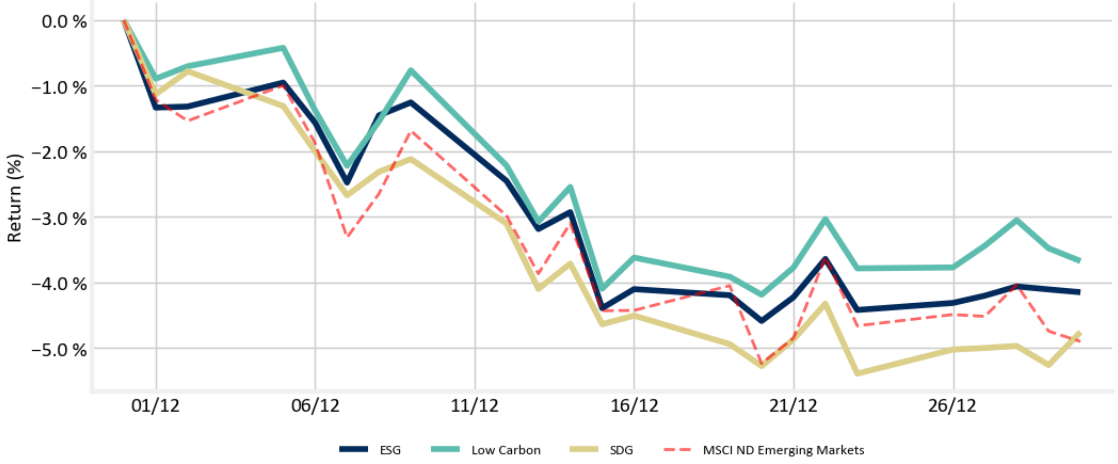
	Factor	Bm	Excess
ESG	-13.06 %	-14.87 %	180 bps
Low Carbon	-21.18 %	-14.87 %	-631 bps
SDG	-12.53 %	-14.87 %	234 bps

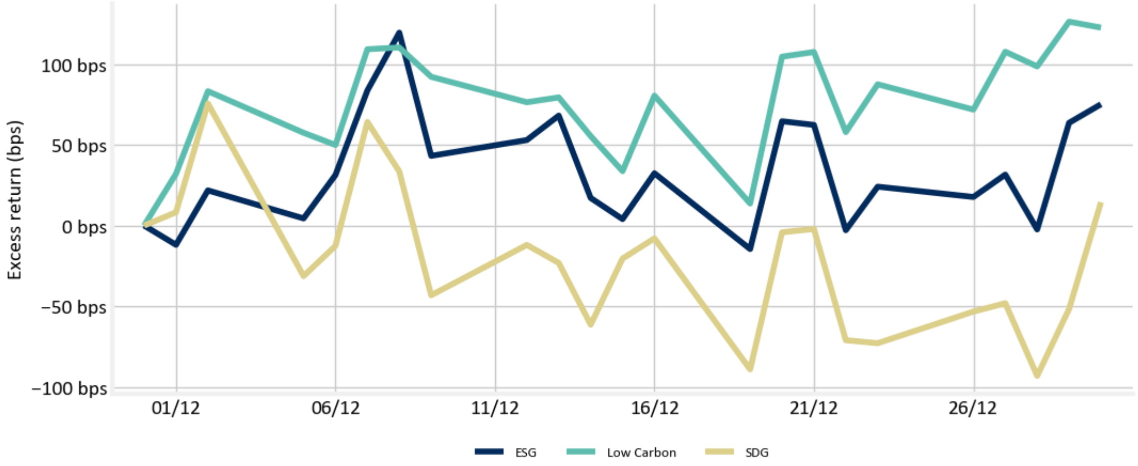
BANKINVEST

EM: Sustainable Target (sustainable)

Benchmark: MSCI ND Emerging Markets

Month-to-date



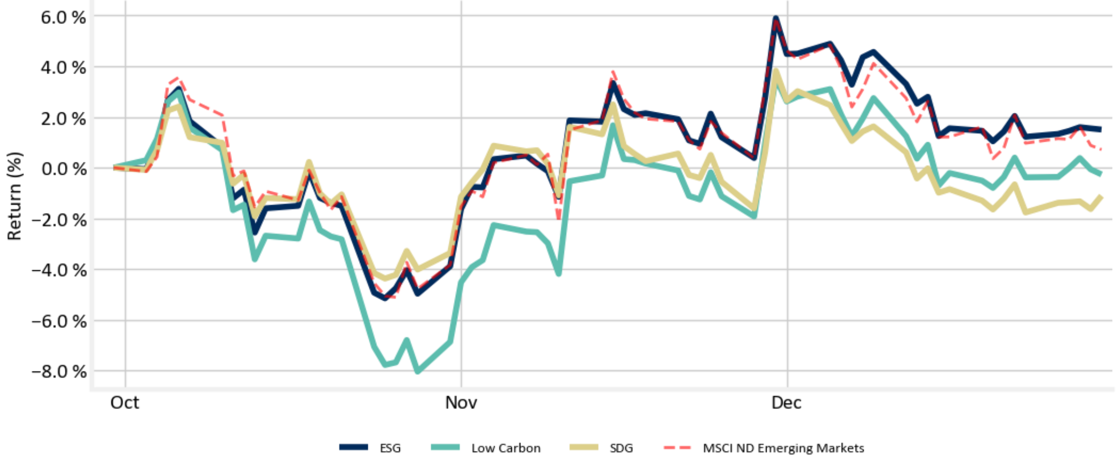


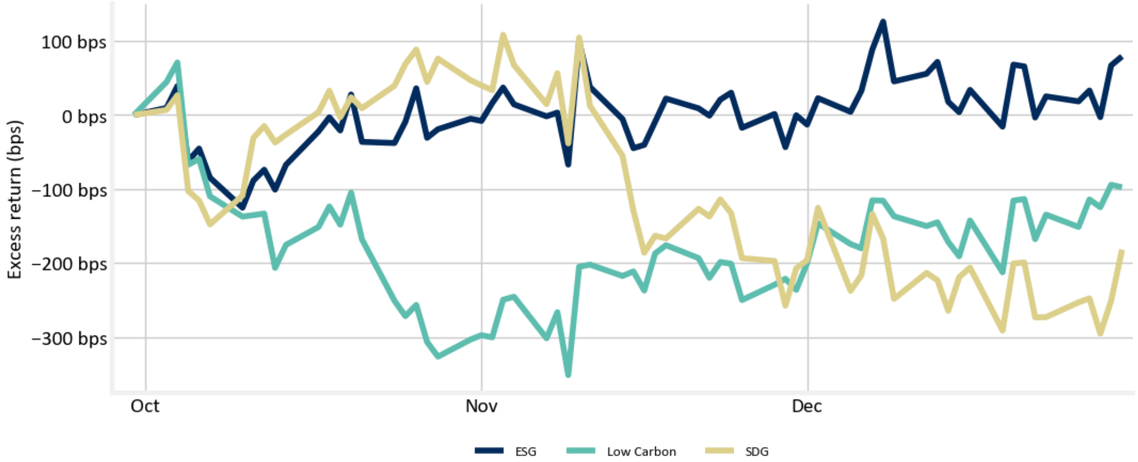
	Factor	Bm	Excess
ESG	-4.15 %	-4.90 %	75 bps
Low Carbon	-3.67 %	-4.90 %	123 bps
SDG	-4.75 %	-4.90 %	14 bps

EM: Sustainable Target (sustainable)

Benchmark: MSCI ND Emerging Markets

Quarter-to-date





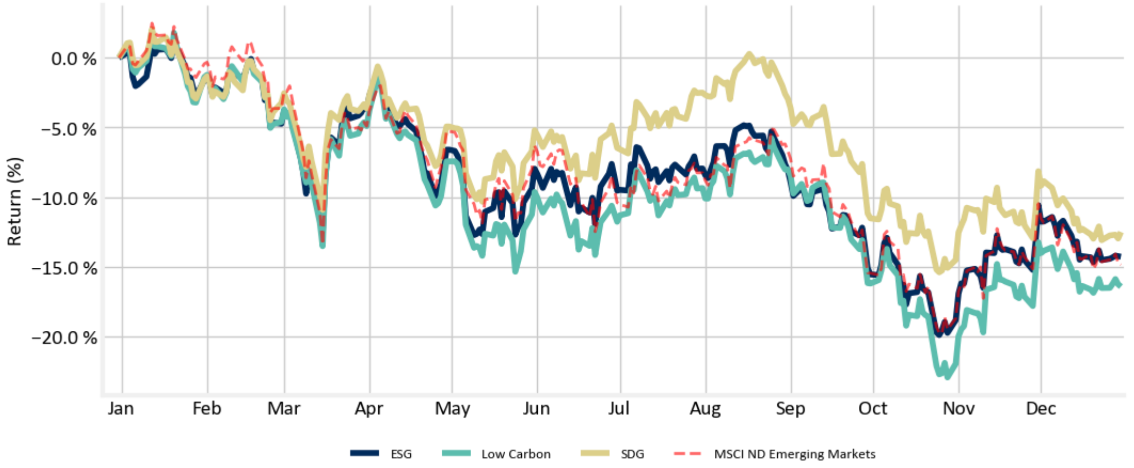
	Factor	Bm	Excess
ESG	1.50 %	0.71 %	79 bps
Low Carbon	-0.27 %	0.71 %	-98 bps
SDG	-1.11 %	0.71 %	-182 bps

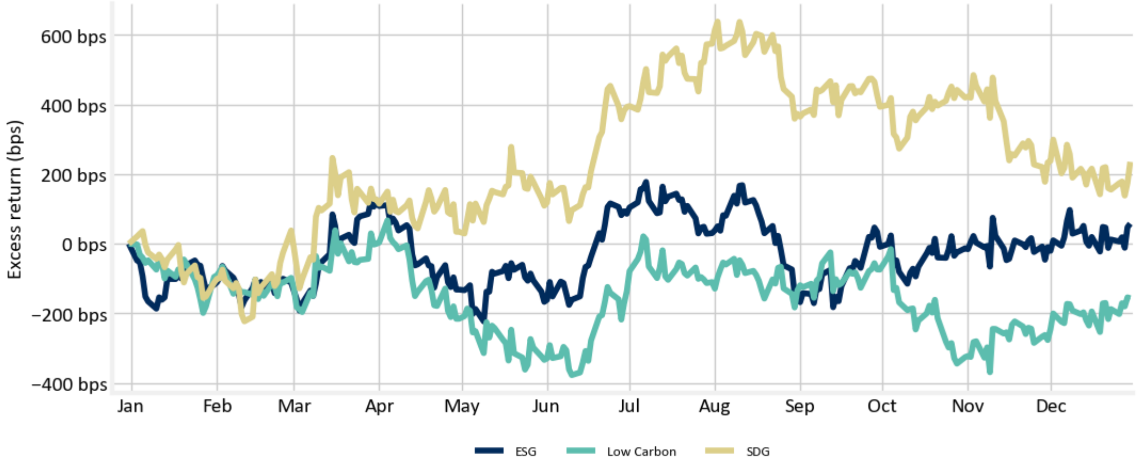
BANKINVEST

EM: Sustainable Target (sustainable)

Benchmark: MSCI ND Emerging Markets

Year-to-date





	Factor	Bm	Excess
ESG	-14.29 %	-14.87 %	58 bps
Low Carbon	-16.43 %	-14.87 %	-157 bps
SDG	-12.51 %	-14.87 %	235 bps

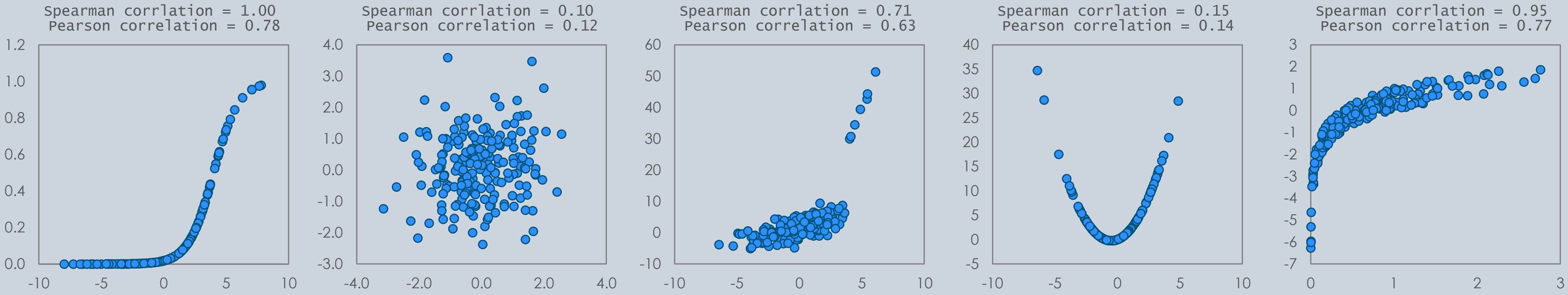
Rank Correlations

BANKINVEST

Handler
med omtanke

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 relationsship. 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.

BANKINVEST

Emerging Markets 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	-27	15	46	77	-5	17	-28	-17	8	1	-14	91	9	-22	29	72	68
Momentum BIQ	-27	100	1	4	-18	18	2	-12	87	-9	2	56	-26	-14	9	3	12	-21
Quality BIQ	15	1	100	22	36	39	55	-16	20	58	76	-23	10	77	-8	-4	54	70
Stability BIQ	46	4	22	100	68	-30	9	-82	18	30	-3	-15	47	32	-17	8	30	43
Dividend Yield	77	-18	36	68	100	-10	28	-46	-1	27	13	-23	80	32	-9	11	58	67
Growth	-5	18	39	-30	-10	100	36	38	22	4	40	7	-3	5	7	-4	36	7
Profitability Growth	17	2	55	9	28	36	100	-5	13	4	29	-10	25	20	11	-4	49	23
High Volatility	-28	-12	-16	-82	-46	38	-5	100	-13	-30	12	-4	-29	-28	21	-12	-17	-30
Price Momentum	-17	87	20	18	-1	22	13	-13	100	-5	19	10	-18	-4	14	-3	19	-6
Classic Quality	8	-9	58	30	27	4	4	-30	-5	100	45	-4	2	76	-50	6	21	57
Profitability	1	2	76	-3	13	40	29	12	19	45	100	-22	-7	51	0	1	50	59
Sentiment	-14	56	-23	-15	-23	7	-10	-4	10	-4	-22	100	-10	-19	-8	13	3	-24
Deep Value	91	-26	10	47	80	-3	25	-29	-18	2	-7	-10	100	4	-9	19	59	53
Safety	9	-14	77	32	32	5	20	-28	-4	76	51	-19	4	100	-23	-2	26	69
Leverage	-22	9	-8	-17	-9	7	11	21	14	-50	0	-8	-9	-23	100	-33	-17	-30
Size: Large Cap	29	3	-4	8	11	-4	-4	-12	-3	6	1	13	19	-2	-33	100	30	25
BIQ-Score	72	12	54	30	58	36	49	-17	19	21	50	3	59	26	-17	30	100	77
BIQ-QARP	68	-21	70	43	67	7	23	-30	-6	57	59	-24	53	69	-30	25	77	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 Emerging Markets factor correlations

1-month changes

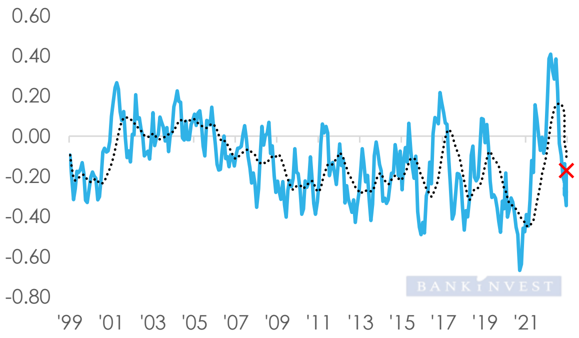
	Value BIQ	Momentum BIQ	Quality BIQ	Stability BIQ	Dividend Yield	Growth	Profitability Growth	High Volatility	Price Momentum	Classic Quality	Profitability	Sentiment	Deep Value	Safety	Leverage	Size: Large Cap	BIQ-Score	BIQ-QARP
Value BIQ		15	5	0	-1	3	7	0	14	2	6	17	-2	2	-2	8	11	5
Momentum BIQ	15		-4	10	13	0	-4	-12	-1	2	-8	-6	13	-1	-8	9	2	6
Quality BIQ	5	-4		5	2	0	2	-4	2	-3	3	-10	2	-1	-2	4	-1	0
Stability BIQ	0	10	5		2	4	5	0	7	1	5	12	-1	3	0	2	8	3
Dividend Yield	-1	13	2	2		1	4	0	12	1	3	14	-1	3	-2	6	6	1
Growth	3	0	0	4	1		-3	-4	8	-3	-4	-10	2	1	-3	-2	-4	0
Profitability Growth	7	-4	2	5	4	-3		-6	5	-1	-1	-11	5	2	-6	2	-2	3
High Volatility	0	-12	-4	0	0	-4	-6		-7	-2	-5	-12	2	-1	-1	-4	-7	-2
Price Momentum	14	-1	2	7	12	8	5	-7		4	1	-10	13	1	-6	7	8	9
Classic Quality	2	2	-3	1	1	-3	-1	-2	4		-1	7	0	0	-2	2	-1	-3
Profitability	6	-8	3	5	3	-4	-1	-5	1	-1		-12	3	2	-5	-2	-4	2
Sentiment	17	-6	-10	12	14	-10	-11	-12	-10	7	-12		14	1	-8	15	-1	7
Deep Value	-2	13	2	-1	-1	2	5	2	13	0	3	14		1	0	5	8	2
Safety	2	-1	-1	3	3	1	2	-1	1	0	2	1	1		-2	9	2	-2
Leverage	-2	-8	-2	0	-2	-3	-6	-1	-6	-2	-5	-8	0	-2		-9	-7	-3
Size: Large Cap	8	9	4	2	6	-2	2	-4	7	2	-2	15	5	9	-9		6	8
BIQ-Score	11	2	-1	8	6	-4	-2	-7	8	-1	-4	-1	8	2	-7	6	0	5
BIQ-QARP	5	6	0	3	1	0	3	-2	9	-3	2	7	2	-2	-3	8	5	0

3-month changes

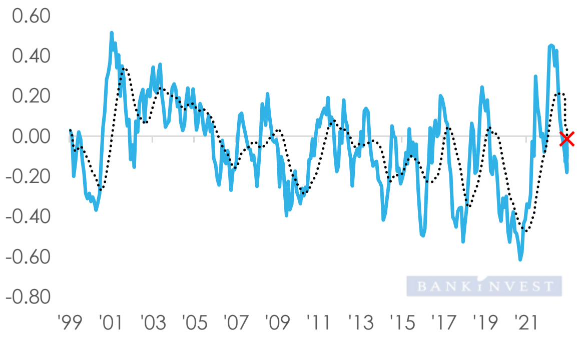
	Value BIQ	Momentum BIQ	Quality BIQ	Stability BIQ	Dividend Yield	Growth	Profitability Growth	High Volatility	Price Momentum	Classic Quality	Profitability	Sentiment	Deep Value	Safety	Leverage	Size: Large Cap	BIQ-Score	BIQ-QARP
Value BIQ		-1	-3	-4	4	-2	-11	0	-7	-4	-11	19	2	6	2	5	-2	0
Momentum BIQ	-1		6	20	3	10	11	-25	1	0	-1	-20	-1	-2	-1	2	11	4
Quality BIQ	-3	6		1	-3	7	-8	-8	13	-7	-5	-10	-4	4	2	2	-3	-4
Stability BIQ	-4	20	1		-6	2	-17	3	11	-9	-5	19	-4	3	6	-7	-2	-2
Dividend Yield	4	3	-3	-6		-1	-17	2	-2	-5	-9	13	1	5	4	4	0	0
Growth	-2	10	7	2	-1		7	-4	19	2	5	-12	-2	4	-1	7	5	2
Profitability Growth	-11	11	-8	-17	-17	7	0	2	14	-14	-19	4	-9	-7	3	7	-7	-21
High Volatility	0	-25	-8	3	2	-4	2		-12	9	2	-26	-1	2	-11	13	-6	-1
Price Momentum	-7	1	13	11	-2	19	14	-12		-3	10	-26	-7	-2	1	3	8	2
Classic Quality	-4	0	-7	-9	-5	2	-14	9	-3		-7	6	-5	0	-3	-1	-7	-5
Profitability	-11	-1	-5	-5	-9	5	-19	2	10	-7		-23	-12	4	1	4	-11	-7
Sentiment	19	-20	-10	19	13	-12	4	-26	-26	6	-23		18	0	-13	11	8	7
Deep Value	2	-1	-4	-4	1	-2	-9	-1	-7	-5	-12	18		4	3	7	0	-1
Safety	6	-2	4	3	5	4	-7	2	-2	0	4	0	4		-2	-5	4	7
Leverage	2	-1	2	6	4	-1	3	-11	1	-3	1	-13	3	-2		-2	3	0
Size: Large Cap	5	2	2	-7	4	7	7	13	3	-1	4	11	7	-5	-2		9	5
BIQ-Score	-2	11	-3	-2	0	5	-7	-6	8	-7	-11	8	0	4	3	9	0	-4
BIQ-QARP	0	4	-4	-2	0	2	-21	-1	2	-5	-7	7	-1	7	0	5	-4	0

Selected correlation charts in Emerging Markets

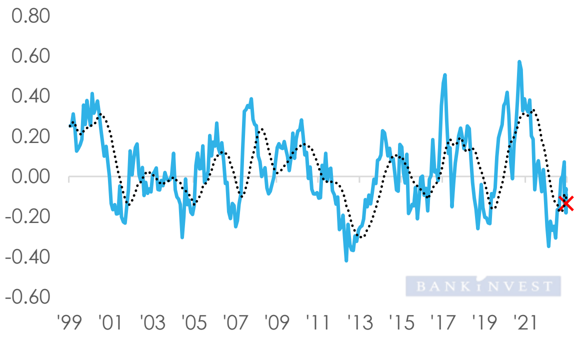
Price Momentum vs. Value BIQ
Rank Correlation in Emerging Markets



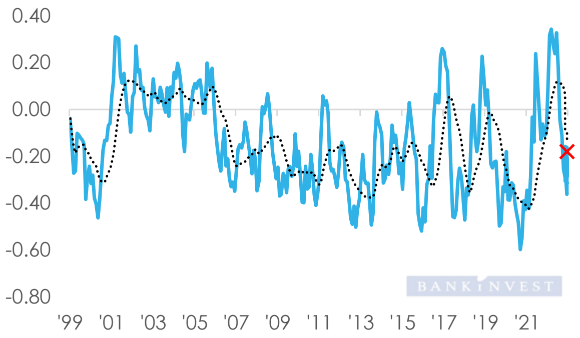
Price Momentum vs. Dividend Yield
Rank Correlation in Emerging Markets



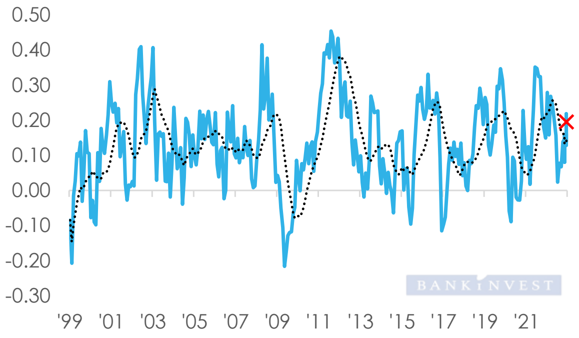
Price Momentum vs. High Volatility
Rank Correlation in Emerging Markets



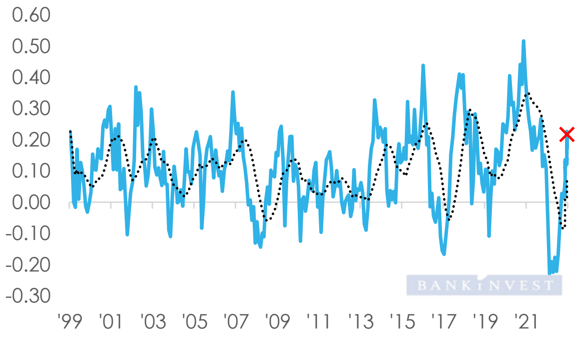
Price Momentum vs. Deep Value
Rank Correlation in Emerging Markets



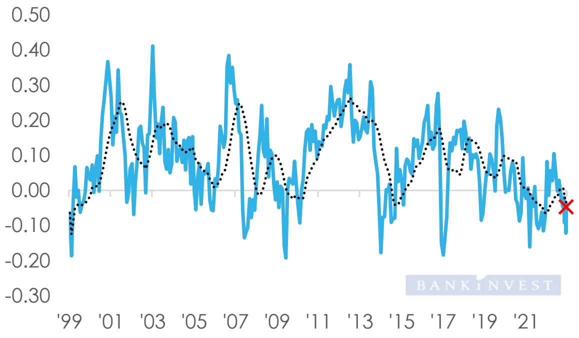
Price Momentum vs. Quality BIQ
Rank Correlation in Emerging Markets



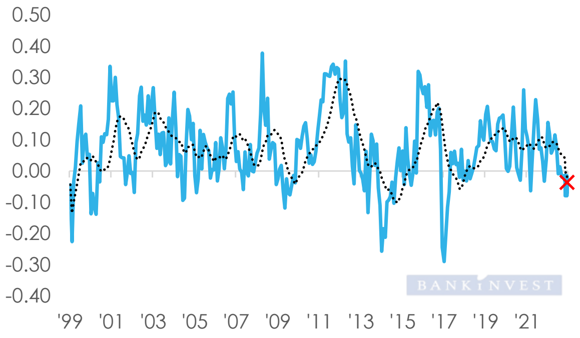
Price Momentum vs. Growth
Rank Correlation in Emerging Markets



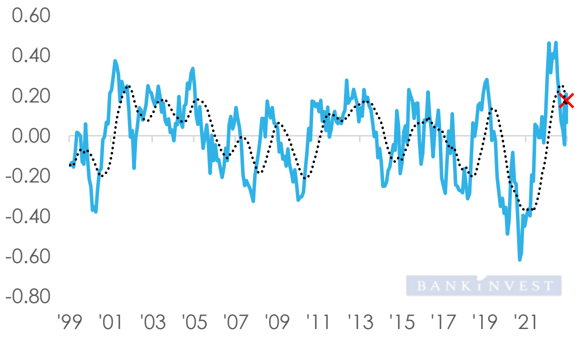
Price Momentum vs. Classic Quality
Rank Correlation in Emerging Markets



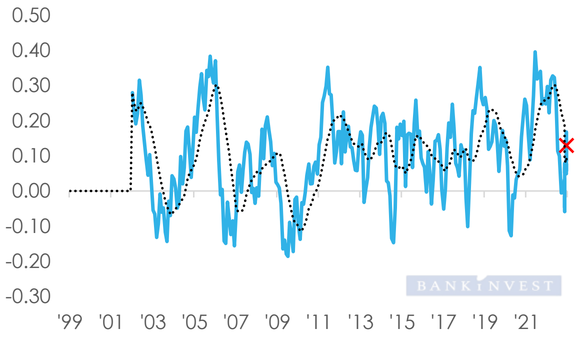
Price Momentum vs. Safety
Rank Correlation in Emerging Markets



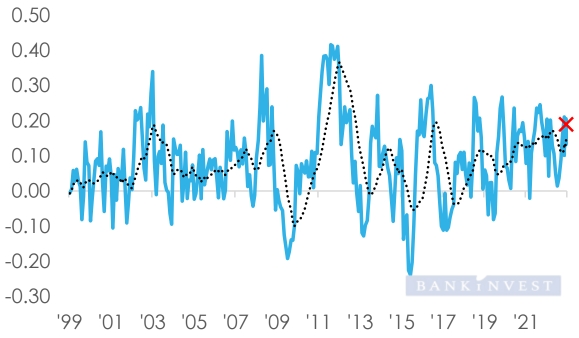
Price Momentum vs. Stability BIQ
Rank Correlation in Emerging Markets



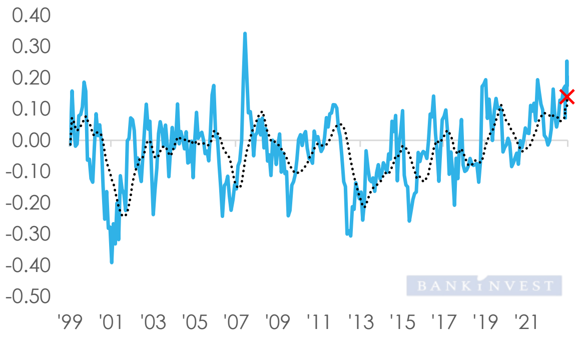
Price Momentum vs. Profitability Growth
Rank Correlation in Emerging Markets



Price Momentum vs. Profitability
Rank Correlation in Emerging Markets

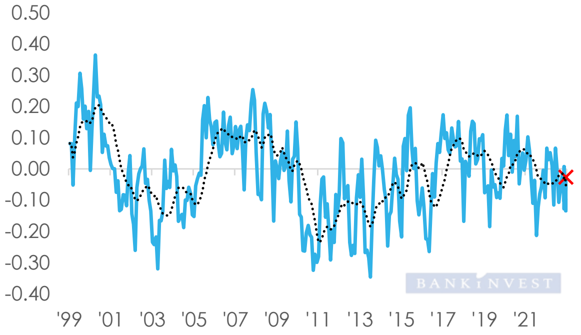


Price Momentum vs. Leverage
Rank Correlation in Emerging Markets

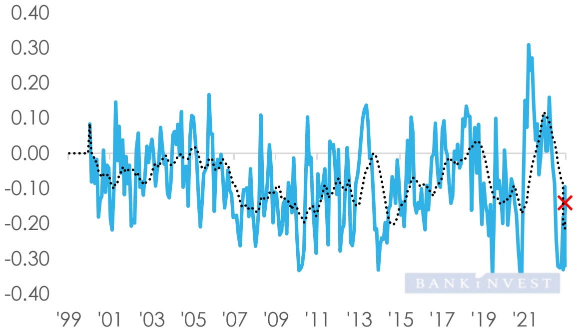


Selected correlation charts in Emerging Markets

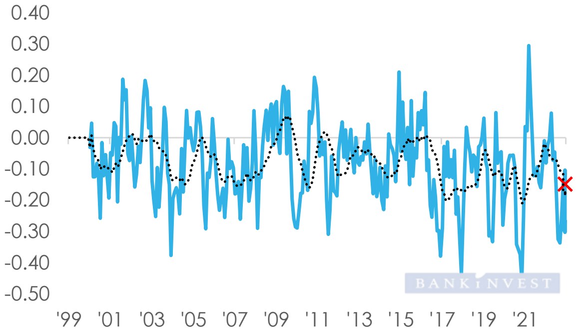
Price Momentum vs. Size: Large Cap
Rank Correlation in Emerging Markets



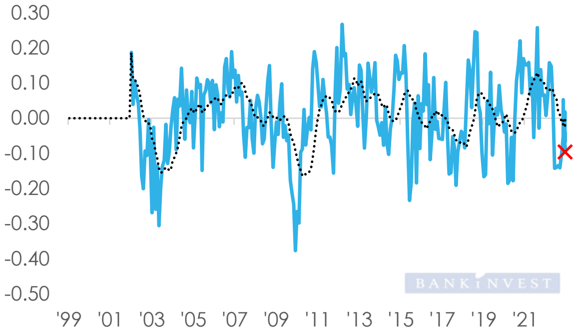
Sentiment vs. Value BIQ
Rank Correlation in Emerging Markets



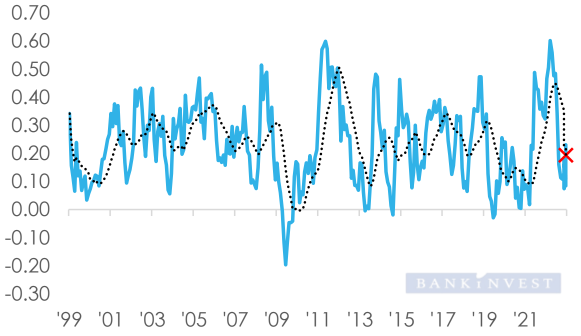
Sentiment vs. Stability BIQ
Rank Correlation in Emerging Markets



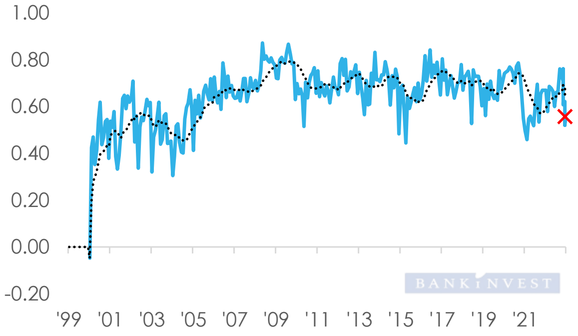
Sentiment vs. Profitability Growth
Rank Correlation in Emerging Markets



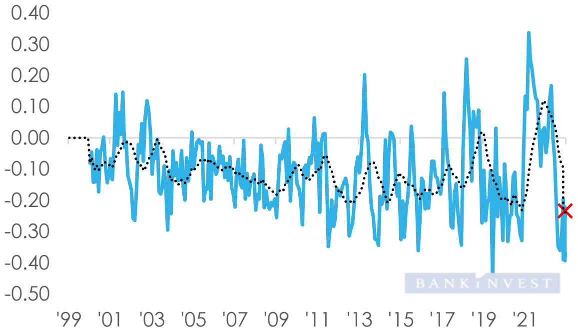
Price Momentum vs. BIQ-Score
Rank Correlation in Emerging Markets



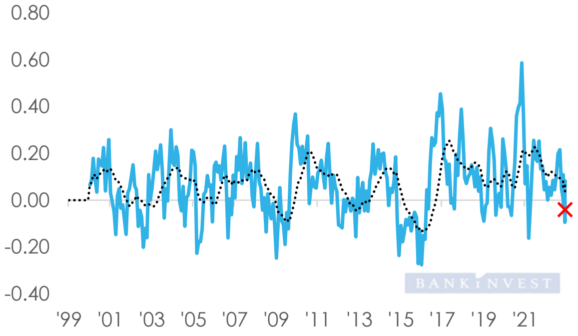
Sentiment vs. Momentum BIQ
Rank Correlation in Emerging Markets



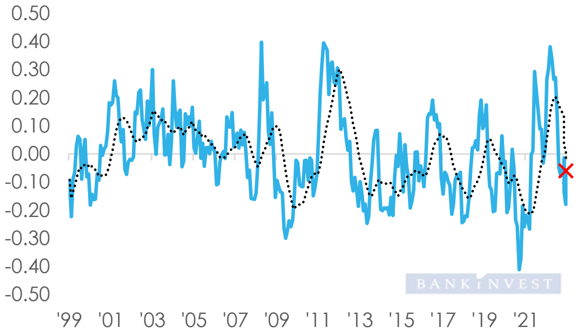
Sentiment vs. Dividend Yield
Rank Correlation in Emerging Markets



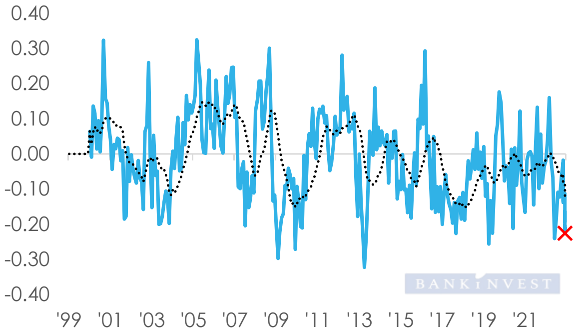
Sentiment vs. High Volatility
Rank Correlation in Emerging Markets



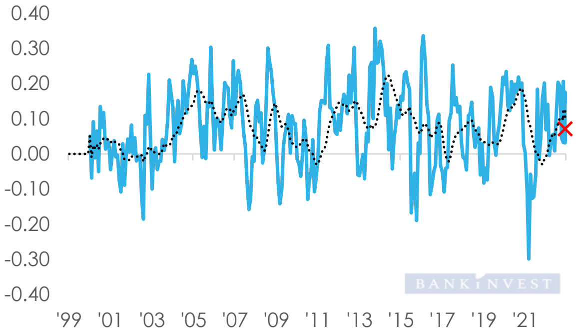
Price Momentum vs. BIQ-QARP
Rank Correlation in Emerging Markets



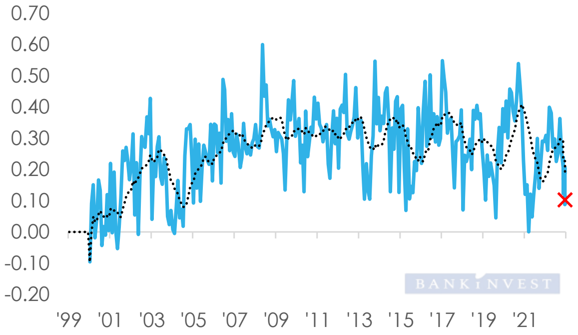
Sentiment vs. Quality BIQ
Rank Correlation in Emerging Markets



Sentiment vs. Growth
Rank Correlation in Emerging Markets

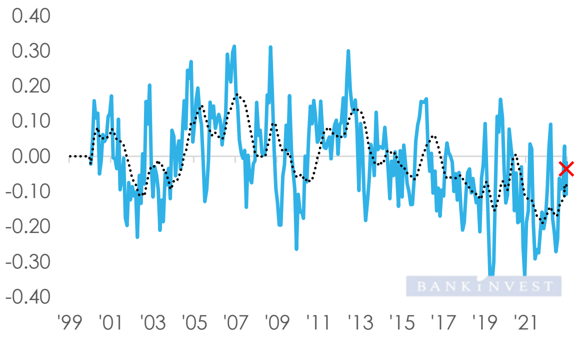


Sentiment vs. Price Momentum
Rank Correlation in Emerging Markets

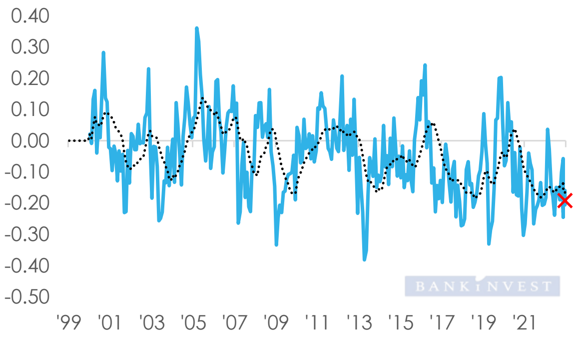


Selected correlation charts in Emerging Markets

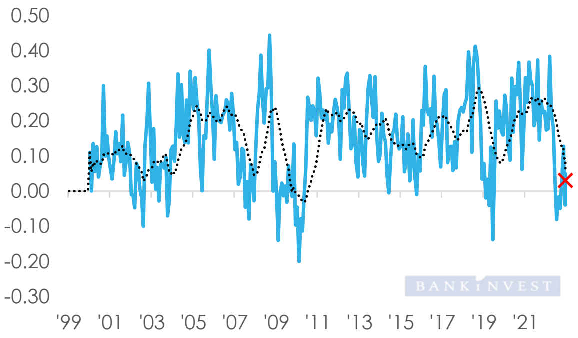
Sentiment vs. Classic Quality
Rank Correlation in Emerging Markets



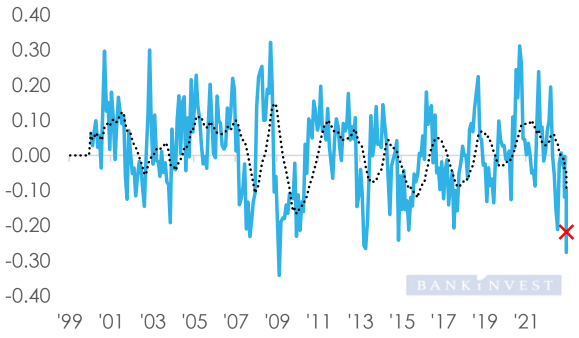
Sentiment vs. Safety
Rank Correlation in Emerging Markets



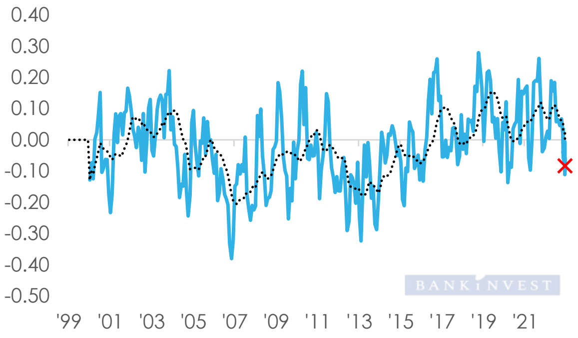
Sentiment vs. BIQ-Score
Rank Correlation in Emerging Markets



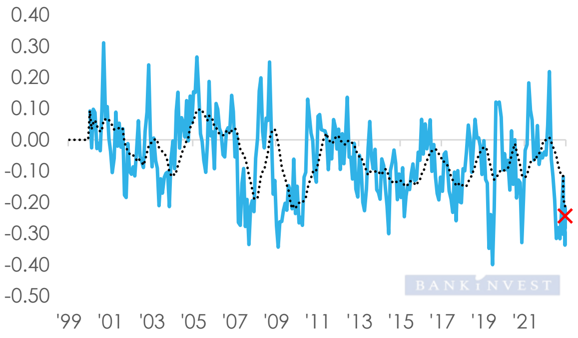
Sentiment vs. Profitability
Rank Correlation in Emerging Markets



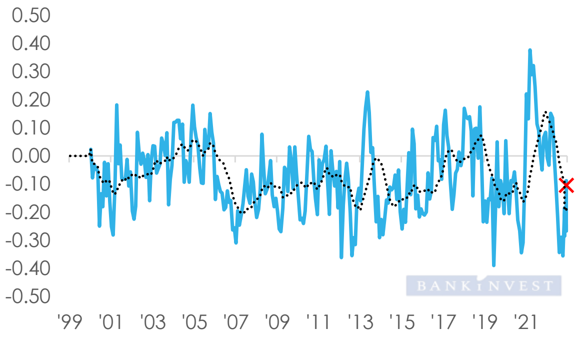
Sentiment vs. Leverage
Rank Correlation in Emerging Markets



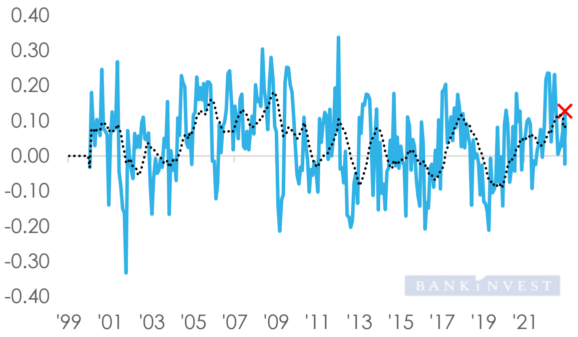
Sentiment vs. BIQ-QARP
Rank Correlation in Emerging Markets



Sentiment vs. Deep Value
Rank Correlation in Emerging Markets



Sentiment vs. Size: Large Cap
Rank Correlation in Emerging Markets



Valuation charts

BANKINVEST

Handler
med omtanke

Methodology

- To express the valuation level we use blended **12 month forward Price/Earnings** (FPE NTM).
- The aggreation method used is **weighted harmonic mean,** which is prefered 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

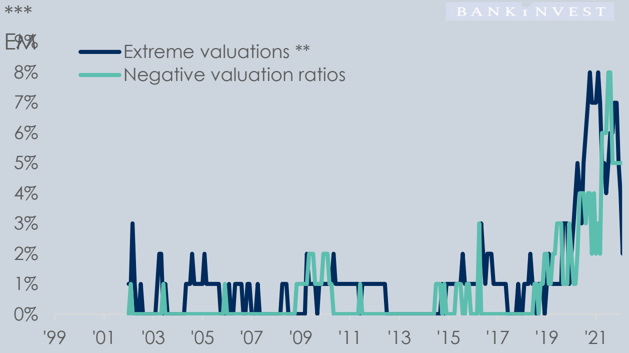
Broad Market - est P/E (NTM)
EM

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

Broad Market - Valuation Dispersion *
EM

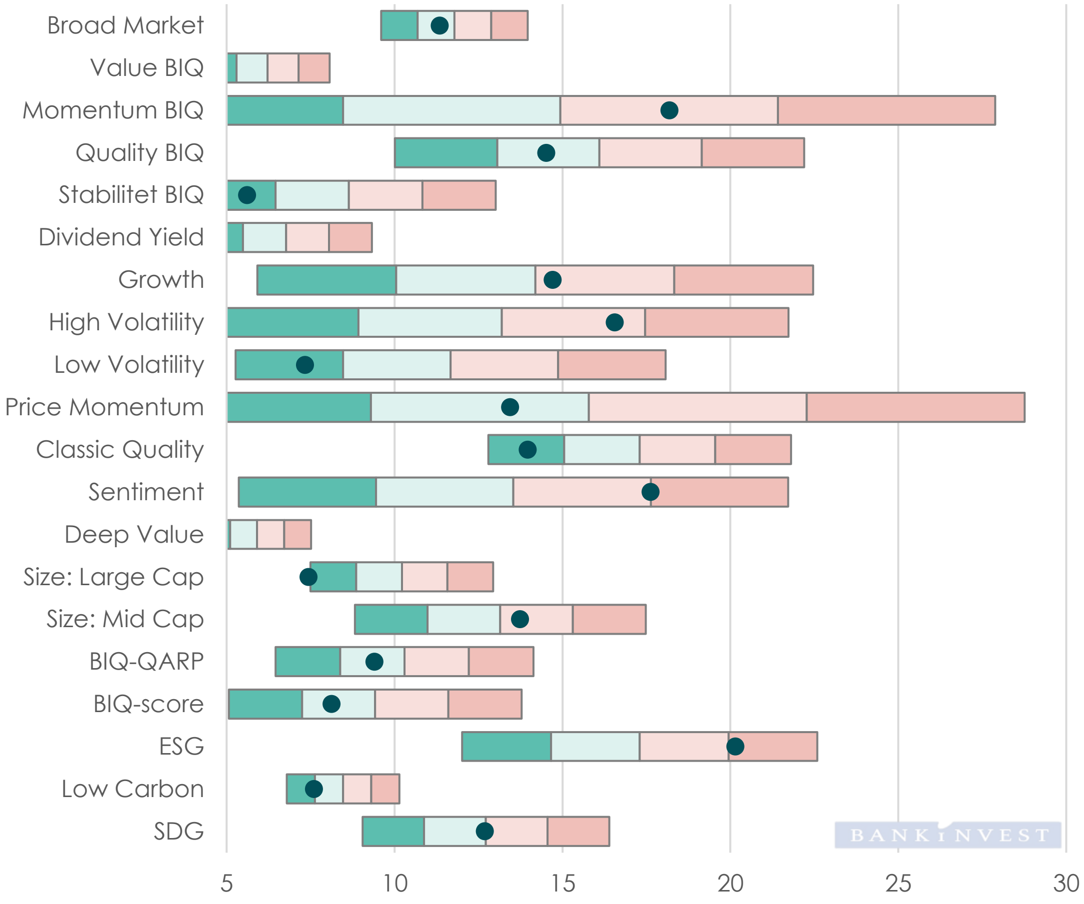
* Dispersion measures the mean absolute deviation from the median. In other word a measure of the difference between the most expensive and the least expensive stocks in the selected universe.

Broad Market - Extreme & negative P/E ratios
***
EM

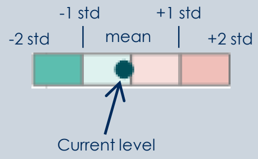


** An extreme valutation is defined as: estimate P/E (NTM) > 100.
*** In terms of number of stocks in the universe. 5% extreme valuations means that 5% of the stocks in the selected universe are above est P/E 100.

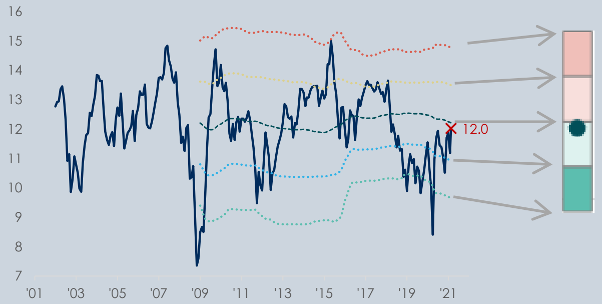
Factor valuation overview



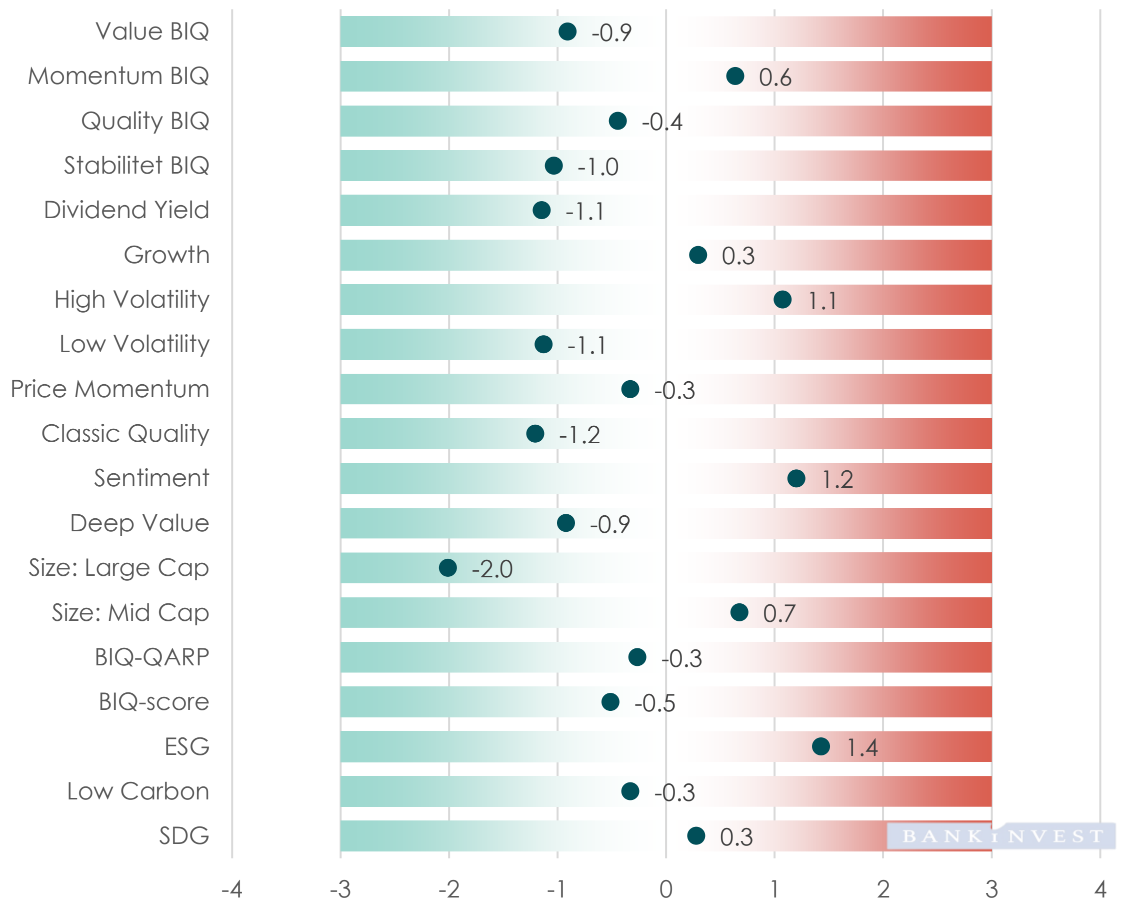
- Absolute valuation levels compared.
- The bar visualizes the given factor's historical confidence intervals, i.e., "valuation range":



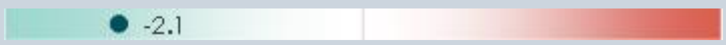
corresponding to the chart figures:



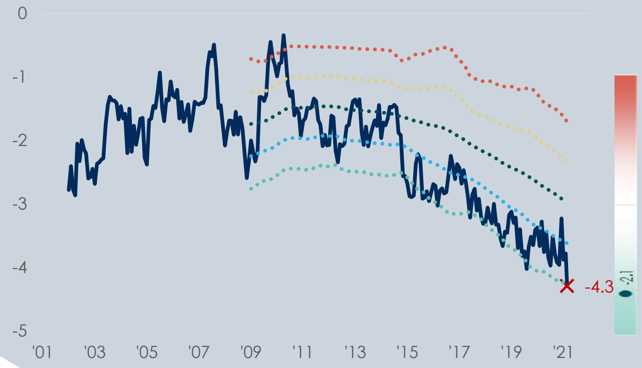
Factor relative valuation overview



- 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:



BANKINVEST

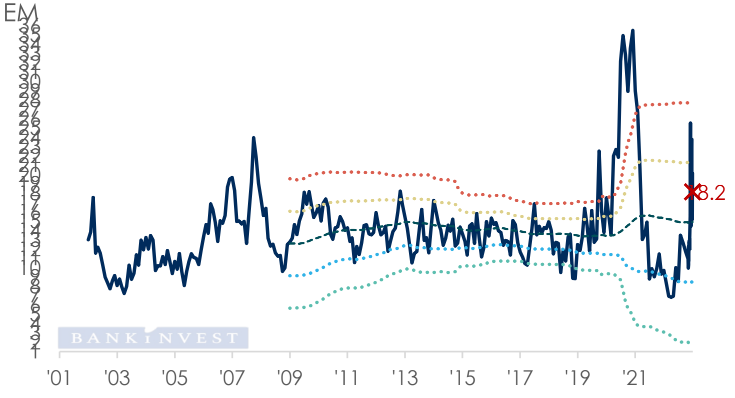
Factor valuation charts

Value BIQ

Value BIQ - est P/E (NTM)
EM

Momentum BIQ

Momentum BIQ - est P/E (NTM)
EM



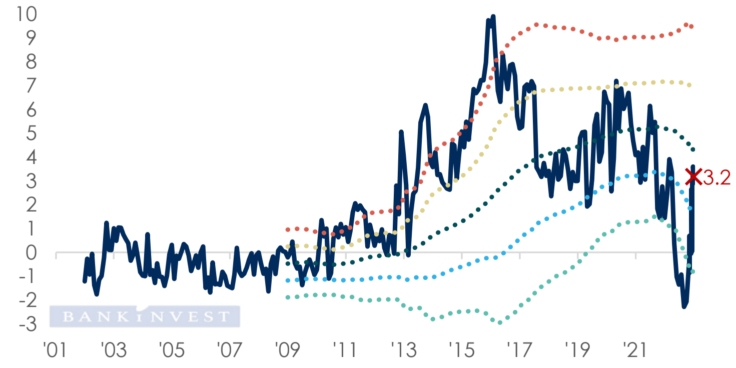
Quality BIQ

Quality BIQ - est P/E (NTM)
EM

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

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

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



BANKINVEST

Factor valuation charts

Stability BIQ

Stabilitet BIQ - est P/E (NTM)
EM

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

Dividend Yield

Dividend Yield - est P/E (NTM)
EM

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

Growth

Growth - est P/E (NTM)
EM

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

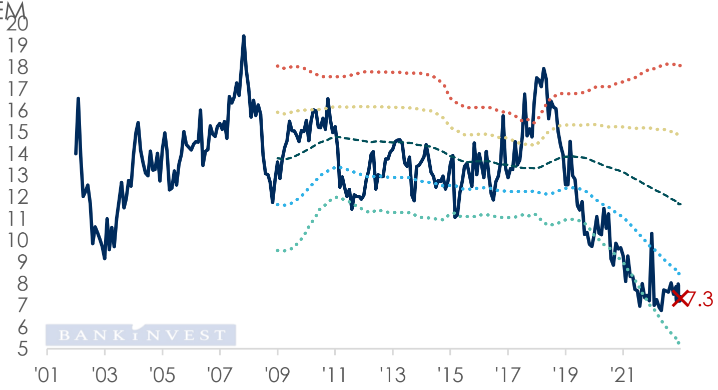
Factor valuation charts

High Volatility

High Volatility - est P/E (NTM)

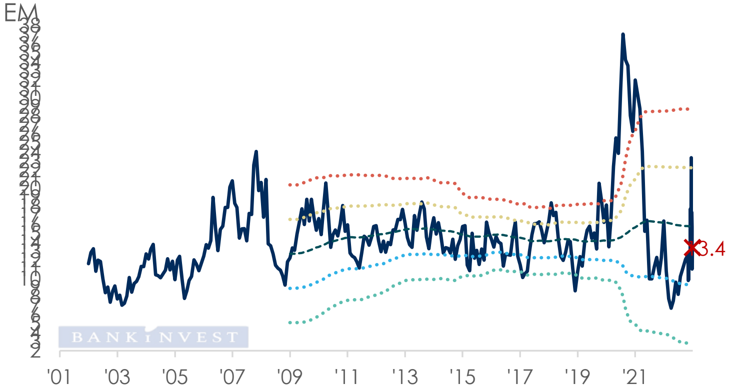
Low Volatility

Low Volatility - est P/E (NTM)

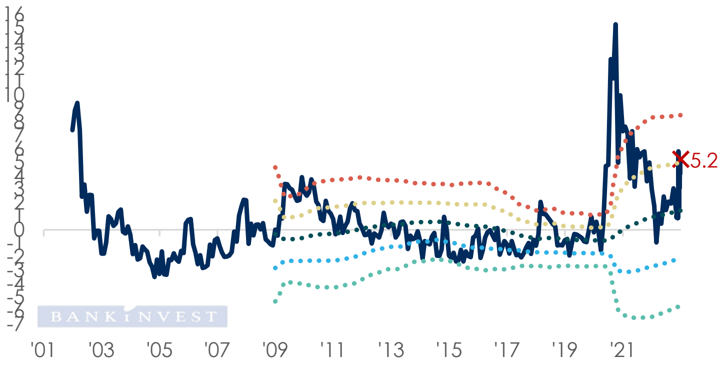


Price Momentum

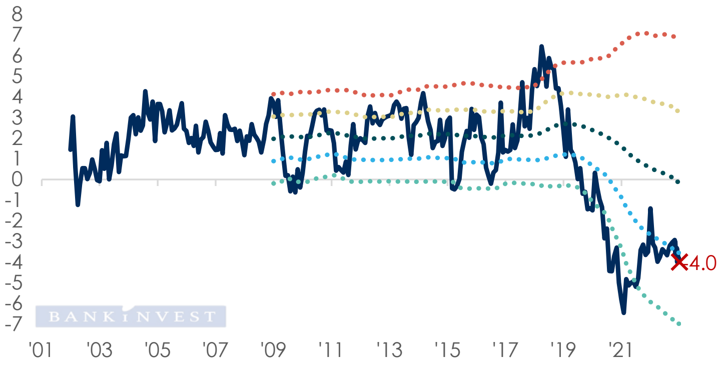
Price Momentum - est P/E (NTM)



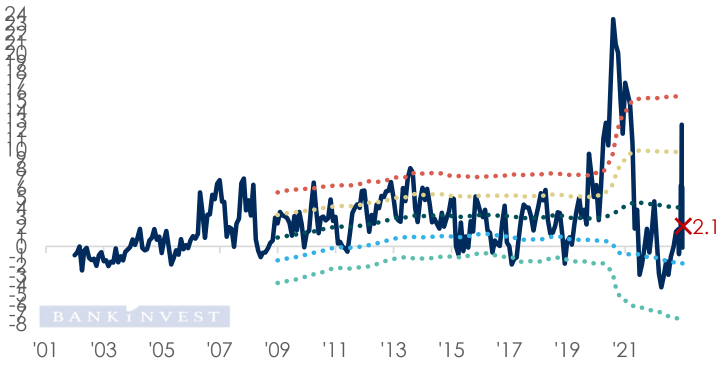
High Volatility(EM) vs. Broad Market(EM)
est P/E (NTM)



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



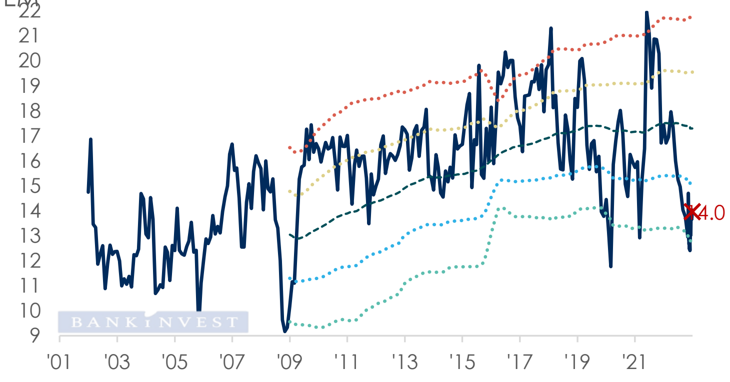
Price Momentum(EM) vs. Broad Market(EM)
est P/E (NTM)



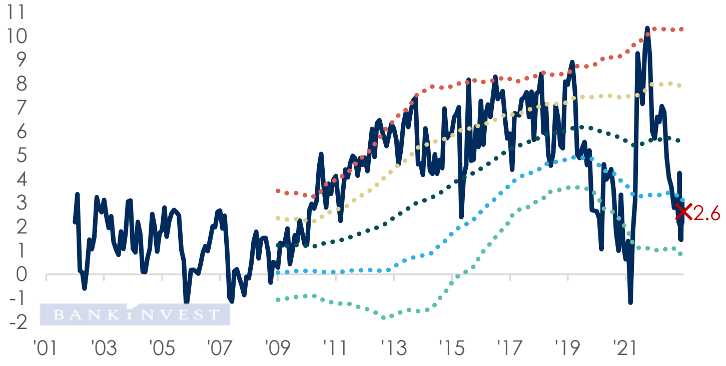
Factor valuation charts

Classic Quality

Classic Quality - est P/E (NTM)
EM



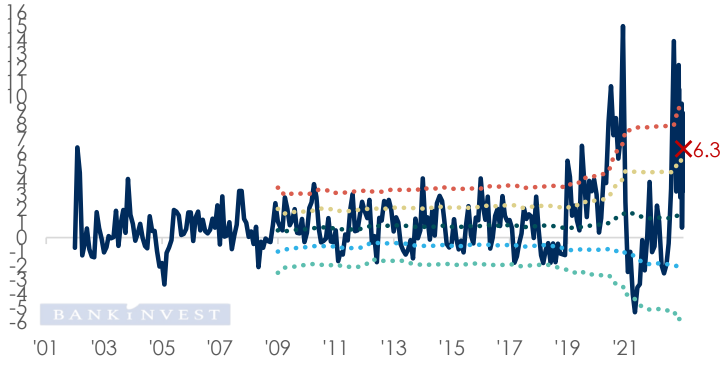
Classic Quality(EM) vs. Broad Market(EM)
est P/E (NTM)



Sentiment

Sentiment - est P/E (NTM)
EM

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



Deep Value

Deep Value - est P/E (NTM)
EM

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

Factor valuation charts

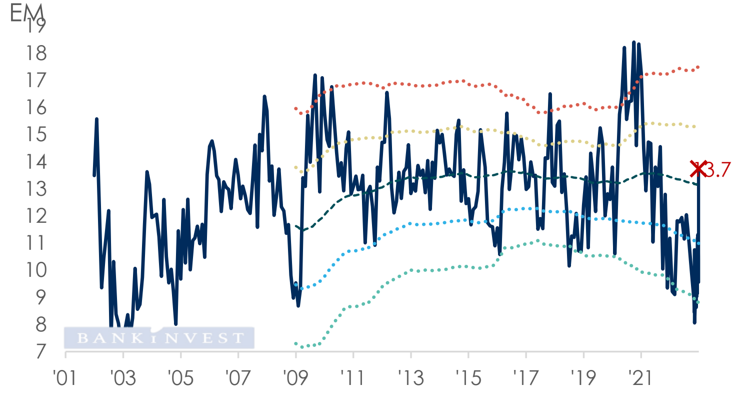
Large Cap

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

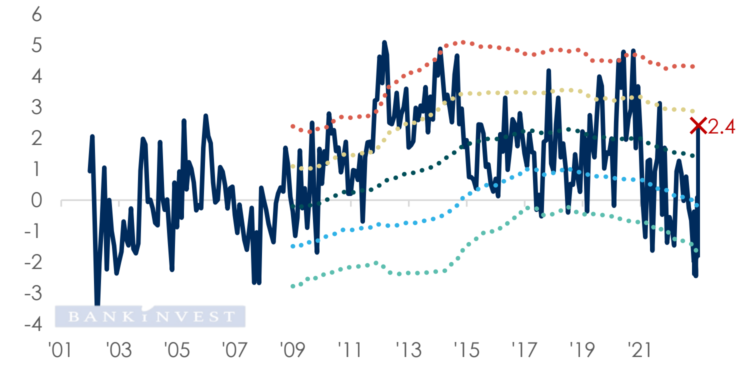
Size: Large Cap(EM) vs. Broad Market(EM)
est P/E (NTM)

Mid Cap

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



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



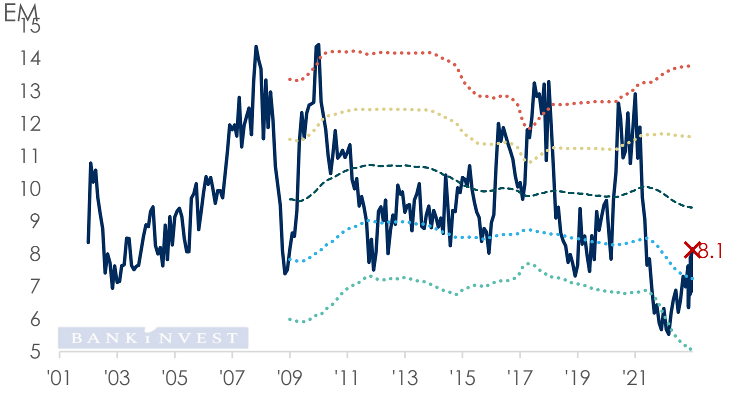
Factor valuation charts in Global

BIQ-QARP

BIQ-QARP - est P/E (NTM)
EM

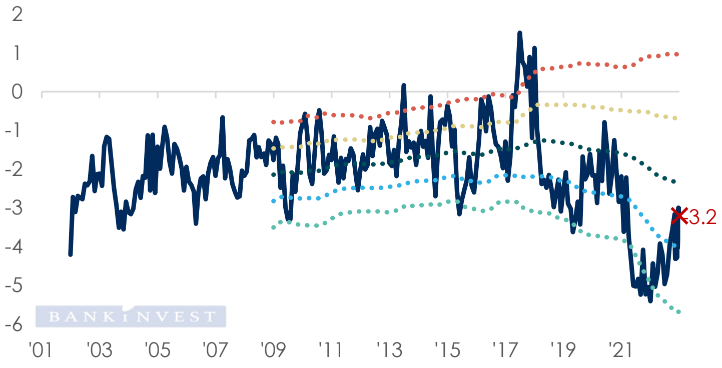
BIQ-score

BIQ-score - est P/E (NTM)
EM



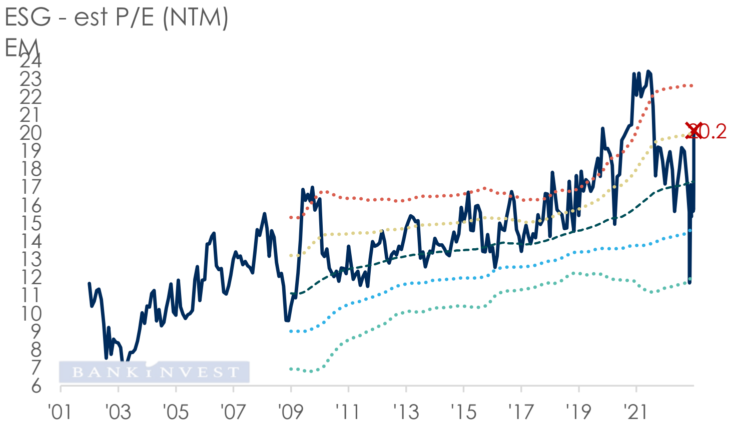
BIQ-QARP(EM) vs. Broad Market(EM)
est P/E (NTM)

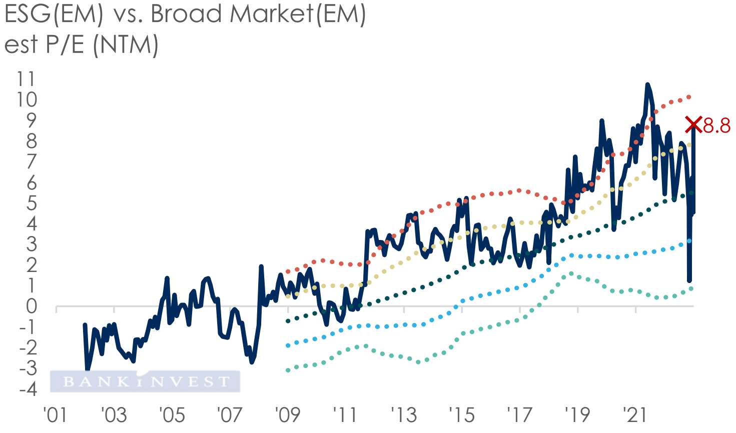
BIQ-score(EM) vs. Broad Market(EM)
est P/E (NTM)



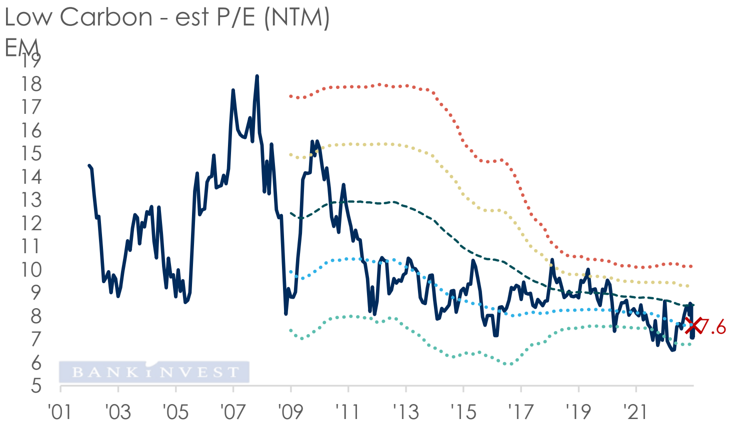
Factor valuation charts

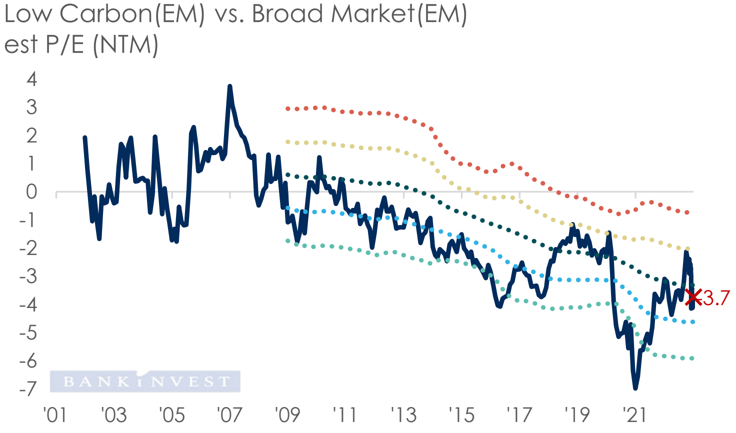
ESG



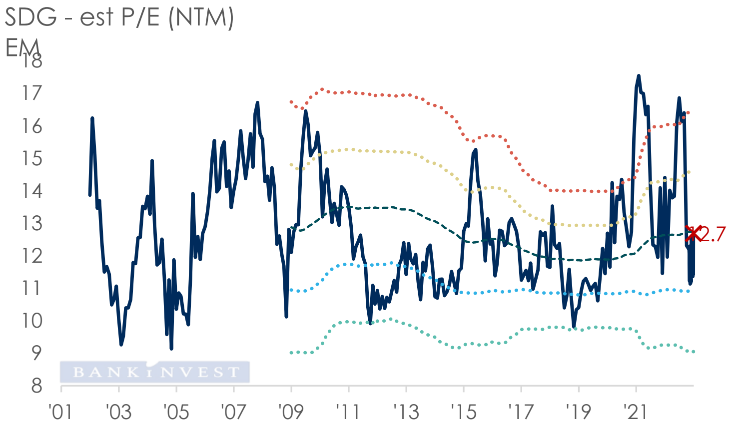


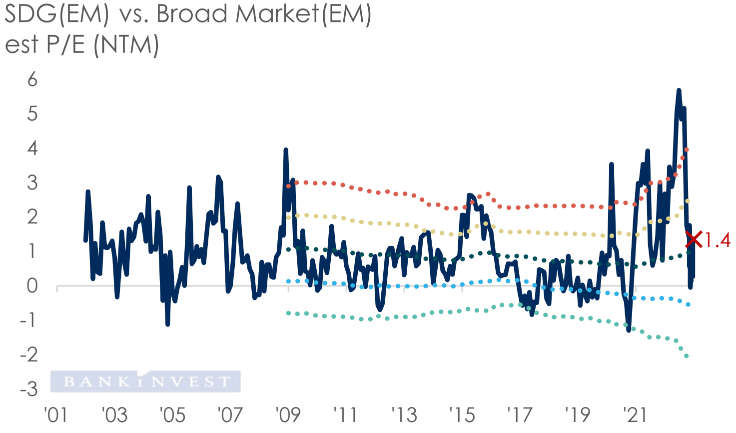
Low Carbon





SDG





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

Quant@bankinvest.dk

BANKINVEST Handler med omtanke

Disclaimer

This document is produced by the BankInvest Group (BankInvest) and should be regarded as general information only. No information in this document should be construed as an offer or recommendation to acquire, continue to hold or dispose of any investment or to engage in any other transaction, or to provide any investment advice or service. BankInvest assumes no responsibility for the completeness or accuracy of the disclosed information whether provided by BankInvest or obtained from public sources that BankInvest consider reliable.

Past performance is not a reliable indicator of future performance. An investment decision should be based on the information contained in the relevant prospectus, the Key Investor Information Document as well as the most recently published annual and semi-annual reports which are all available at www.bankinvest.dk.