ALPHA CENTAURI
Riskpremia – Made in Germany

Is Size still a valid factor?...

… is a question, which pops up from time to time and in most cases – as with other factors – after a phase of sometime painful underperformance. And it is true, that size – alongside value – exhibited a difficult time between 2017 and 2020. Both have been **hit by a "double whammy" of a decelerating business- and earnings cycle** from late 2017 and- as the outlook started to brighten at the beginning of 2020- **by the COVID 19 crisis**. This in turn benefited large cap/growth stocks and led to a massive concentration in a small number of companies in all major indices and regions. Moreover, due to the massive underperformance of value and size, even many multifactor strategies have been hit hard.

Since Banz (1981) discovered the Size factor and Fama/French (1992) incorporated Size into their three-factor model, numerous papers have been released. Van Dijk compiled an overview over the literature until 2011 in *Is Size Dead? A Review of the Size Effect in Equity Returns (2011)*. Researchers who found excess returns, provided several explanations:

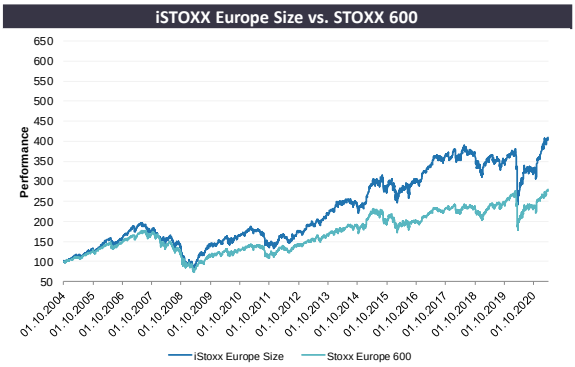
Risk-based	higher dependency on business and earnings cycle; higher leverage; higher level of volatility and/or beta; higher default risk
Behavioural	incomplete information or slower information diffusion due to lower analyst coverage, underreaction to company news
Institutional	lower free-float and institutional ownership; lower (trading) liquidity; seasonality

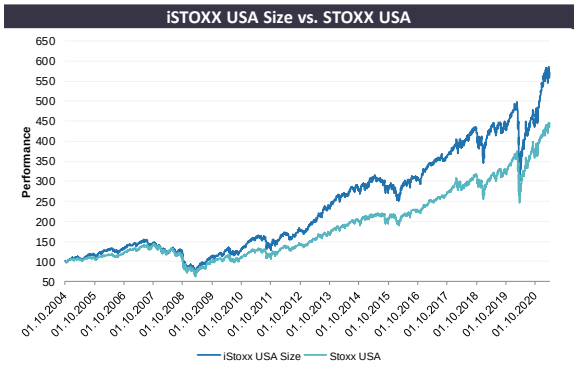
… to name few. Since then, it seems to be the case, that the **Size effect has been called into question with every new drawdown and every new publication**. But looking at the methodologies, how these studies are conducted and how many factor programs are (still) designed, we believe there are a lot of shortcomings which distort the factors and thus the results, like:

- concentration on a single metric to calibrate a factor,
- beta and the other well-known Fama/French/Carhardt-factors as control variables,
- focus on normal distribution and linear relationships where returns are economically plausible option-like, thus asymmetric and non-linear.

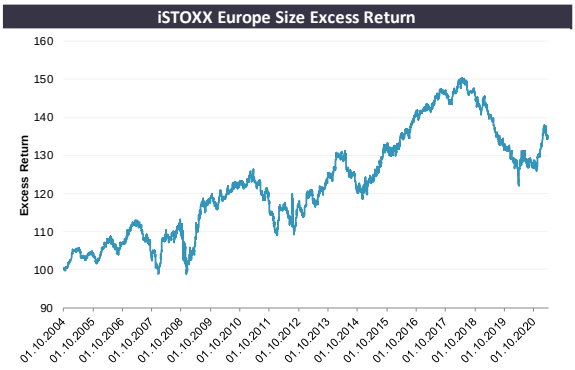
Size is no exception.

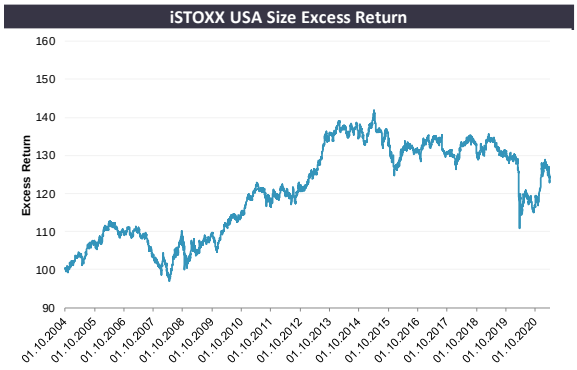
When we started the 2nd stage of our research- and development process of new factor- and risk premia strategies in 2012/2013, **we addressed many of these issues and decided to aim for "purified factors". Purification made more sense to us – from an economical, theoretical, and later – from an empirical point of view.** The results look promising so far, despite recent underperformance, which can be explained economically. The following charts show iSTOXX Europe Size vs. STOXX 600 Europe on the left and iSTOXX USA vs. STOXX USA on the right since 2004.





Looking at realized results of iSTOXX Size factors, **excess returns compared to STOXX 600 Europe (left) and STOXX USA (right) have been positive and survived transaction costs.** So, we can´t confirm the results of many research papers, that the Size premium, if purified by unintended risk, disappeared over time.





	iSTOXX Europe Size	iSTOXX USA Size
Excess Return p.a.	+2,5%	+1,64%
Volatility Ratio	0,92	0,98
Correlation	0,94	0,96
Beta	0,86	0,94
Tracking Error	6,47%	5,82%

Looking at the volatility ratio (Size vs. market), volatility of purified exposures to size have been slightly less volatile than the overall market, especially in Europe, which lead to betas below 1. Finally – and that is what might come as a surprize to many investors – the **realized tracking error came in two times larger than the ex-ante target tracking error of 3%.** With this result, one can either call the quality of the risk model in question – we don´t, as we work with FIS Risk Manager (formerly APT), which has been awarded several times over the last couple of years because of its quality – **or see these results as a confirmation of our view, that normal distributed behaviour and linear relationships shouldn´t be expected in equity factors** – or liquid alternative risk premia in general.

Putting our approach in perspective, some of our findings and conclusions from 2012/2013 can be found in several publications released over the last few years:

Asness et all in *Size Matters, If You Control Your Junk* (2015) found, that a Size premium is observable, if controlled for quality or junk.

We found a notable difference between simple "market cap" and "enterprise value" and explained this difference by the fact, that "enterprise value" controls simple "market cap" for leverage – or balance sheet quality.

Golz et all in *Size Factor in Multifactor Portfolios: Does the Size Factor Still Have Its Place in Multifactor Portfolios* (2019) found a diversification benefit in Multifactor portfolios even in the absence of a large premium on its own.

We found that different metrics within an economic factor group display different results and risks and if used in combination can improve economic fit, performance, and risk characteristics of a factor like size, quality and all others. Some metrics are major drivers of returns while others drive risk.

Blitz et all in *Settling the Size Matter* (2020) report similar findings as Asness and Goltz with respect to junk/quality adjustments as their results show, that most of the return of long/short size portfolios is driven by the short leg, which is unavailable for most investors.

We can confirm their findings from our own research over the last couple of years but controlling via enterprise value does a reasonable job for long only investors as well.

Bellone et all in *Equity Factor Investing: Historical Perspective of Recent Performance* (2021) couldn´t find a premium in the long term and concluded, that the increased concentration in well-known benchmarks is the main reason. As a way to improve performance and risk in multifactor portfolios, they recommend neutralization of sectors and beta as well as tracking error control.

We found that even neutralization of sectors and beta might not be enough to purify factor exposures, so **we decided to use PCA-based risk models to minimize all systematic risks (sectors, credit, rates, countries, currencies, beta etc.) to a low level.** There are two reasons for our decision to use statistical risk models: The first is a **"chicken and egg – problem" in fundamental factor models** as they need factors ex ante to work. So, it is basically not possible to build purified factors with a fundamental factor model as this will directly lead to the **second reason, which is called "factor alignment problems"**. They arise, when a risk model uses different metrics for a risk factor than a portfolio – for example, a risk model might use price/book for value, while an investor uses P/E or P/Sales in an investment- or factor design process.

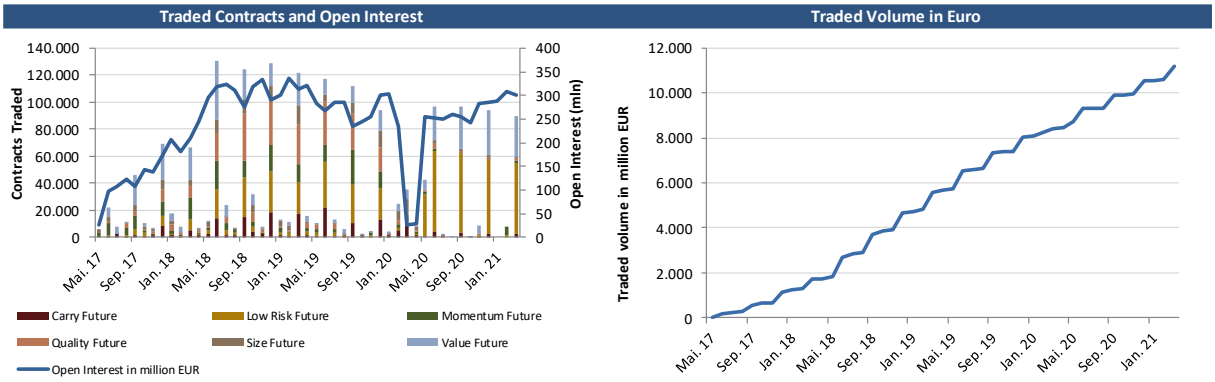
Summary:
Controlling for unintended risk exposures in equity factors and other risk premia helps to harvest factor premia "as pure as possible". Recent underperformance in factors like Size and Value shouldn´t lead investors to conclude, that the risk premia won´t be available any more. **If the underlying risks of systematic risk factors are still there, there will be a premium available in the long run**.

Factor performance

Value (+2,30%) and Size (1,73%) outperformed during Q1/2021, in line with what should be expected during an economic recovery. Momentum (-1,50%) and Carry (-1,89%) underperformed.

EUREX Futures

The first quarter in 2021 had an average open interest of almost 300mln. The graphs show development in traded contracts, open interest, and overall traded volumes since introduction in May 2017. Traded volume exceeded 11 bln Euros.



Alpha Centauri Indexing - Data as of 31.03.2021

Description:

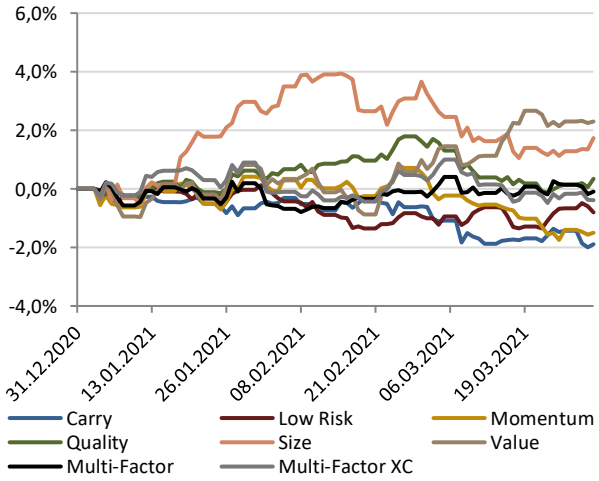
The iSTOXX Europe Single Factor index family developed by STOXX in collaboration with Alpha Centauri offers investors a unique and very innovative way to target and capture premia.
It consists of six single factors that aim to capture well-known risk premia and one multi-factor that aims at simultaneously capturing premia from the aggregate of all single factors rather than from just one source of risk alone.
All indices are constructed to maximize the exposure to their particular factor and minimize unwanted risks. While constructing the final indices the FIS APT risk model is used to measure and restrict risk.

For more information go to **www.alpha-centauri.com** or **www.stoxx.com**

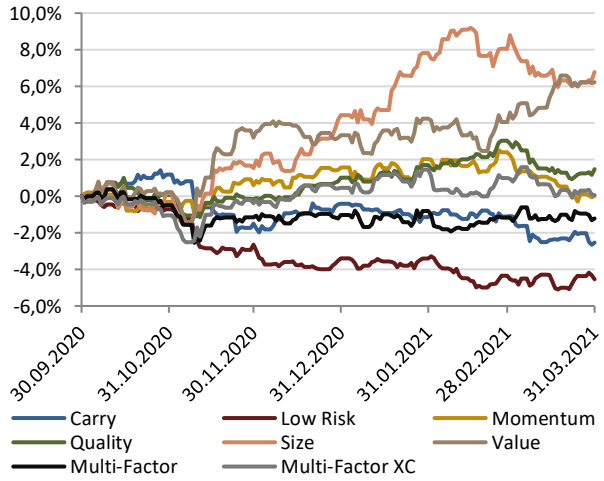
Performance and Volatility Breakdown

Name	Ticker	Return 3 Months	Return 6 Months	Return 12 Months	Return Live (1.4.)	Vola pa	Vola pa Live (1.4.)
Carry	ISECFER Index	6,3%	17,4%	39,9%	57,9%	14,4%	14,0%
Low Risk	ISERRER Index	7,4%	15,4%	33,8%	48,4%	13,6%	13,3%
Momentum	ISEMFER Index	6,7%	19,9%	40,7%	46,8%	14,2%	13,8%
Quality	ISEQFER Index	8,5%	21,4%	42,0%	45,2%	14,2%	13,8%
Size	ISEZFER Index	9,9%	26,7%	49,4%	48,0%	14,1%	13,7%
Value	ISEVFER Index	10,5%	26,1%	39,5%	18,0%	15,5%	15,1%
Multi-Factor	ISEXFER Index	8,1%	18,7%	38,8%	34,0%	13,6%	13,2%
Multi-Factor XC	ISEXFCR Index	7,8%	20,0%	41,5%	38,1%	13,9%	13,4%
Benchmark	SXXR Index	8,2%	19,9%	36,9%	47,3%	14,6%	14,1%

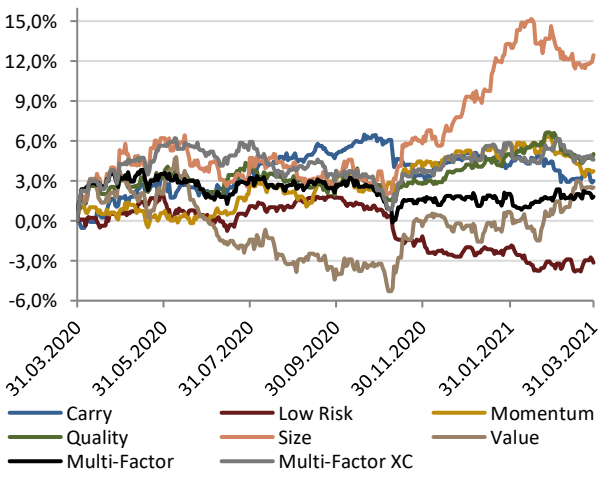
Excess Return 3 Months



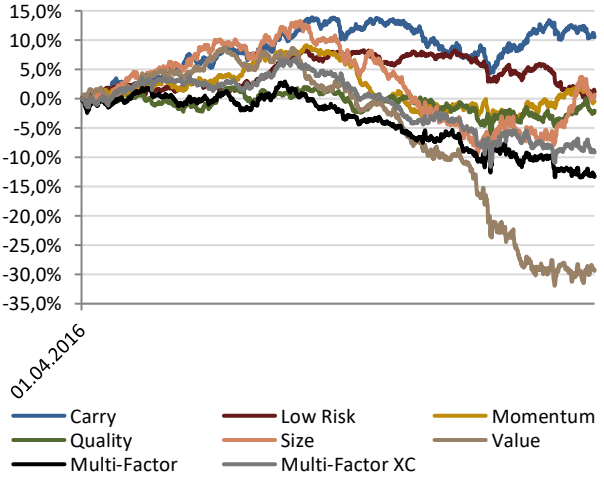
Excess Return 6 Months



Excess Return 12 Months



Excess Return since going Live (1.4.2016)



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