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Riskpremia – Made in Germany

iSTOXX Europe Factor Indices Quarterly – Confused by discussions between score-based and beta-based factor approaches ?...

…consider the best of both worlds and use the iSTOXX Europe factors in combination with EUREX futures. Separating the wheat from the chaff seems necessary after EHDEC´s critique of score-based factor analysis approaches of MSCI, Style Research, Bloomberg and S&P, outlined in two Scientific Beta publications (here) as well as in an October 2018 joint publication with IPE (here). Independent from the fact, that - at least from our point of view - the Rubicon has been crossed by criticizing the products of competitors directly, the researchers from Scientific Beta claim, that only beta- and regression-based approaches are well-suited to explain the factor exposure of portfolios, because they are in line with empirical finance and the CAPM, the natural origin of all "beta models".

But investors should always be reminded that the extensions of the CAPM and the emergence of the APT theory as well as factor premia are here today, because the **CAPM and Beta are unable to explain risk and return standalone outside the "scientific ivory tower"**. Two of the major problems of Beta – a function of volatility ratio and correlation of two variables:

- volatility is an elegant mathematical concept to describe "risk" but lacks economic reality, because returns of risky assets aren´t paid for bearing volatility but for bearing asymmetric tail risk; the business of bank and insurance since centuries
- correlation is a measure to describe a linear relationship between two variables; but as payoffs of risky assets are asymmetric, linear relationships shouldn´t be expected

But where is the beef? Both approaches have their merits and drawbacks. From our own experience it seems to make sense to get a view on a portfolios risk- and return drivers from different angles, dimensions and colours - like an architect´s plan or Rubik´s cube.

Score-based analytical approaches are similar to weights-based approaches, which are still the most utilized way to implement and communicate portfolio positioning in active investment management - across as well as within asset classes. Apart from the fact, that "overweight" and "underweight" only give a generalized idea about the direction, even a "neutral" position in weights, i.e. an 100% invested equity portfolio, can exhibit a Beta of 0,8 or 1,2. Scores and weights don´t tell anything about the influence of these positions on overall portfolio risk or tracking error per se.

Nevertheless, they can be a valuable tool for **investors, who follow a bottom-up based process** and primarily implement their exposures by selecting and trading single stocks as they offer a **higher level of detail and timeliness**.

The table shows a score-based analysis of a European equity portfolio relative to benchmark. Investors, who are interested in this type of **X-ray analytics**, are invited to give us a call or write us an email, as this in-depth analysis is part of **Alpha Centauri´s "Risk Solutions as a Service"** offering, **which helps to** make more well-informed investment decisions, improve diversification, maximize transfer-coefficients and finally **achieve a better performance**.

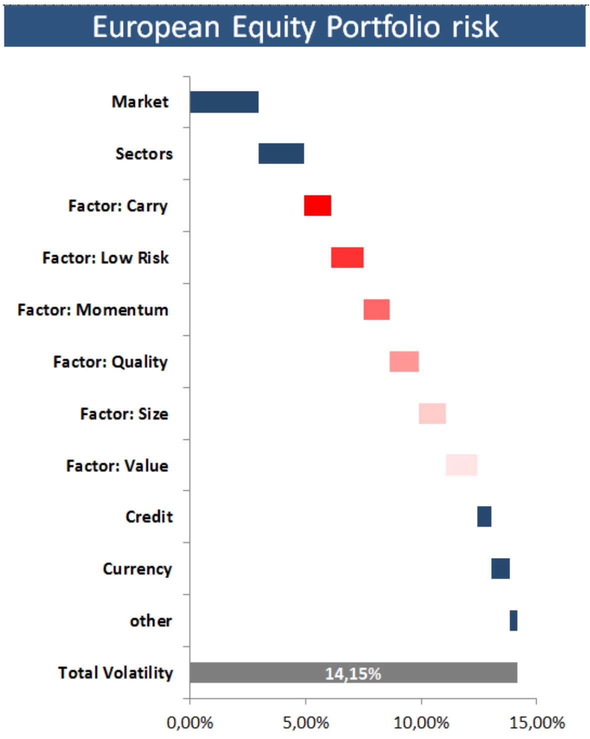
iSTOXX Europe – Faktorscores on sector- and portfolio levels

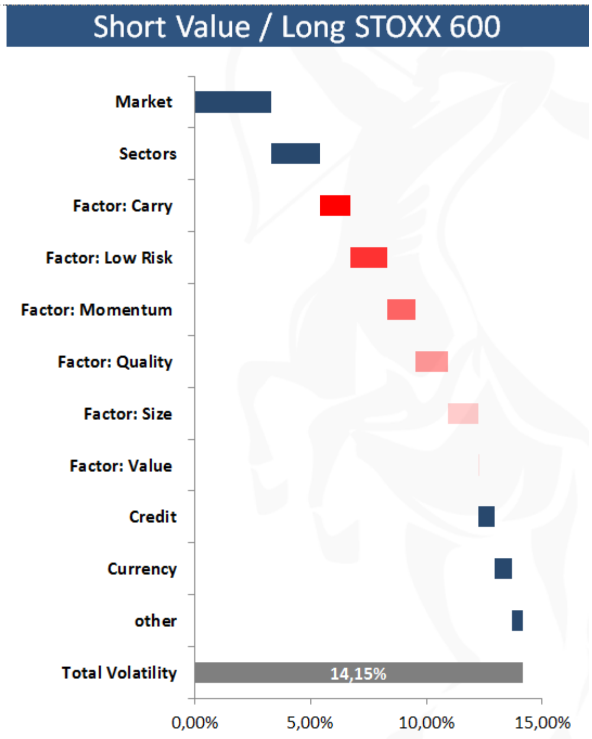
	Active Weight	Low Risk	Quality	Value	Momentum	Size	Carry	Low Carbon
Banks	3,54%	-0,01	0,02	0,04	0,05	-0,11	-0,07	-0,05
Insurance	-0,15%	-0,01	-0,02	0,01	0,02	-0,04	-0,01	-0,02
Financial Services	-1,74%	0,00	0,00	0,00	0,00	0,02	0,00	-0,01
Real Estate	-1,97%	0,00	0,00	0,00	-0,01	0,03	0,00	0,00
Industrial Goods & Services	-6,43%	0,00	0,00	0,02	-0,02	0,03	-0,03	0,00
Construction & Materials	-1,77%	0,01	0,01	0,01	0,00	0,01	0,01	0,00
Basic Resources	-1,36%	0,01	0,00	0,00	0,00	0,01	0,00	0,00
Chemicals	1,40%	0,02	0,03	0,00	0,00	-0,05	-0,01	0,00
Automobiles & Parts	-1,08%	0,01	-0,02	-0,01	0,00	0,00	-0,01	0,01
Oil & Gas	3,93%	0,06	-0,05	0,00	0,07	-0,08	-0,07	-0,05
Utilities	-2,53%	0,00	-0,01	-0,01	-0,01	0,01	0,01	0,01
Technology	-0,65%	0,04	0,02	-0,01	-0,01	-0,02	0,02	0,02
Telecommunications	1,58%	-0,01	0,01	0,01	-0,01	-0,04	0,00	-0,04
Media	-2,67%	-0,01	0,00	0,00	0,00	0,03	-0,01	0,00
Health Care	7,52%	0,13	0,12	0,12	0,03	-0,19	-0,09	-0,06
Travel & Leisure	-1,74%	-0,01	0,00	0,01	-0,01	0,02	0,00	-0,01
Retail	-2,98%	-0,01	0,01	0,00	-0,01	0,04	0,00	0,00
Personal & Household Goods	3,45%	0,06	0,04	-0,01	-0,04	-0,09	0,00	-0,01
Food & Beverage	3,24%	0,06	0,07	-0,05	0,00	-0,07	-0,01	0,03
Portfolio		0,35	0,25	0,14	0,05	-0,51	-0,25	-0,16

Beta-based analytical approaches have their merits because of the fact that they offer **information with respect to direction and dimension**. But as with all time series based approaches, they exhibit their own challenges. Changes in constituents and weights of the underlying securities lead to **weight- and risk drift in factor indices**, which can change the characteristic of a factor index temporarily, especially in cases, where rebalancing is conducted only in longer timeframes. As the payoff – profiles of all factor premia are asymmetric, thus "option-like", the result is similar to a delta-hedged option portfolios. Adjusting hedges in longer time-frames leads to continuously changing betas and unintended exposures. **Investors, who follow a top down approach,** where decisions are primarily based on asset allocation-, country-, sector- and factor decisions are more likely to use beta-based models. Especially this group should be aware of another problem called **"factor alignment problem"**, where i.e. a risk models underlying time series may use Price/Book as a value metric, while the investor uses P/E or Price/Cash Flow as a preferred metric. All points mentioned can lead to a **mismatch of positions.**

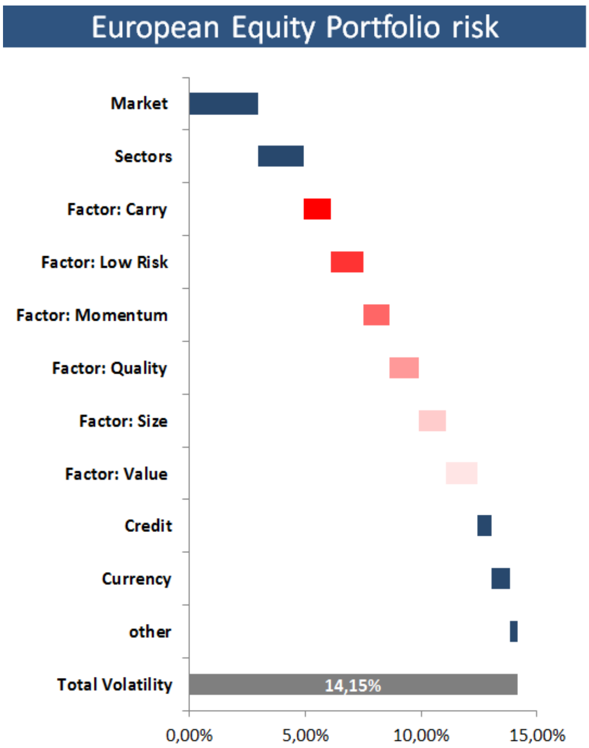
Investors of **both groups** should be interested in factor products that offer **high factor tilts in combination with limited and therefore low unintended systematic risks** (market, sector, country, currency etc.) beyond the target factor exposures. Moreover, they should be easy to implement as well as cost-efficient and liquid to trade. **The iSTOXX Europe factor indexes in combination with EUREX factor futures satify these requirements.**

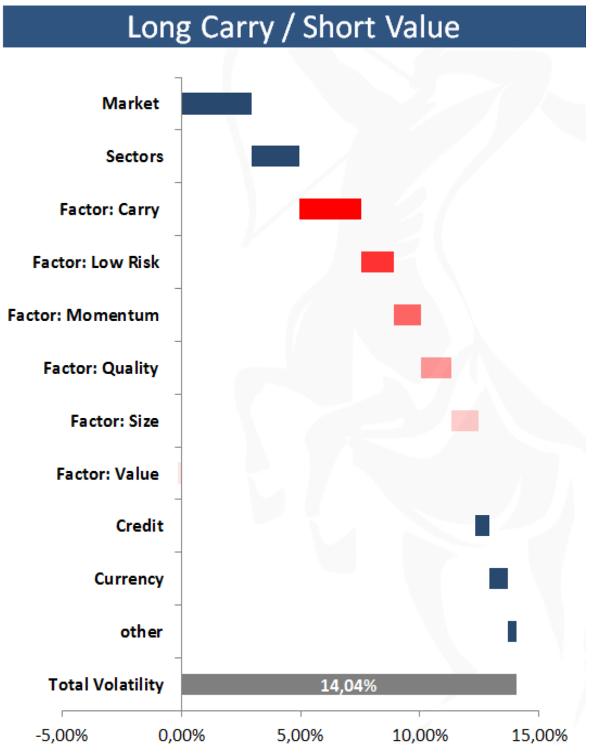
The table shows the impact of a hedge position in Value exposures of an European equity portfolio by going **Short 15% in iSTOXX Value futures while going Long 15% STOXX 600 futures**. The overall position is neutral with respect to overall portfolio risk ([this EUREX video explains more](#)**).** The numbers show, **what factor indices finally should deliver: a market neutral portable risk premia.**



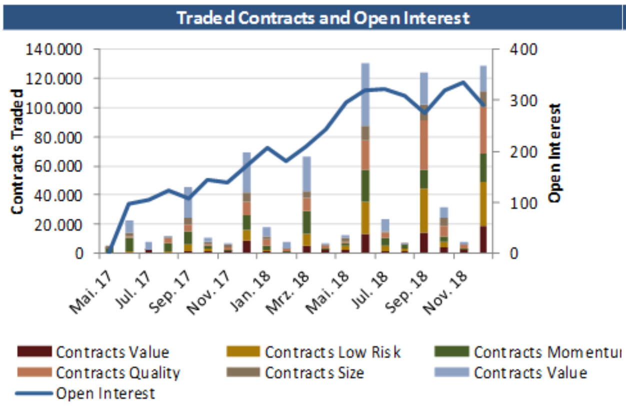


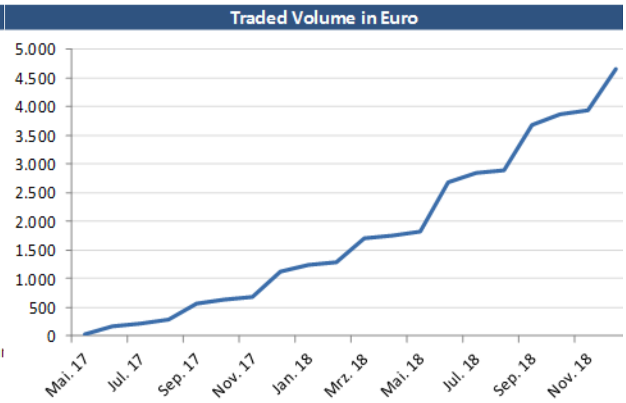
The same is true if spread trades are considered. The next table shows the European equity portfolio with a spread trade in iSTOXX EUREX futures of 15% Long Carry / Short Value put on top.





EUREX futures on iSTOXX Europe factor indices are continuously evolving in open interest and traded contracts. According to a market participant, "spreads headed only in one direction since the futures went live - down." The tables show developments in traded contracts, open interest and overall traded volumes since introduction in May 2017.





Factor performance in Q4/2018 showed continued **underperformance in Value (-3,03%)** due to an overall environment of declining equity markets, rising credit spreads and deteriorating fundamentals. **Value declined** for a third consecutive quarter in a row, losing more than 9% in relative terms since April 2018, which is 3 times tracking error and thus **similar to a 50% decline in overall equity markets**. Duration and dimension are comparable with the second half of 2007, when Value underperformed by ~ 8%. Momentum ranked second in negative relative terms (-3,01%) – a development, which should have been expected from cross sectional momentum in an overall environment of strong trends (upward or downward), where typically time-series momentum plays out its strength. **Defensive factors outperformed in Q4** - **Low Risk lead the table followed by Carry.**

The second half of 2018 totally reversed the overall performance rankings since introduction of the indices in April 2016. While Carry, Size and Momentum led the rankings after two years, only Carry has been able to defend its pole position since then. **Carry´s cumulative outperformance is still double digit at around 12% since going live**. **Size**, still at **~ 5,5% outperformance** since going live, had to give up performance as well as Momentum. **Low Risk** ranks second at the end of 2018 – **outperforming more than 8% since April 2016**.

Finally, investors shouldn´t be worried about the recent performance of value, size or momentum. The **behaviour of the factor indices** over the last two and a half years **is in line with what should be expected over time** and what we intended to provide. The **indices delivered on replicating the economic rationale** behind each of them and **as a group they outperformed** the broader European equity market in aggregate.

Alpha Centauri Indexing - Data as of 27.12.2018

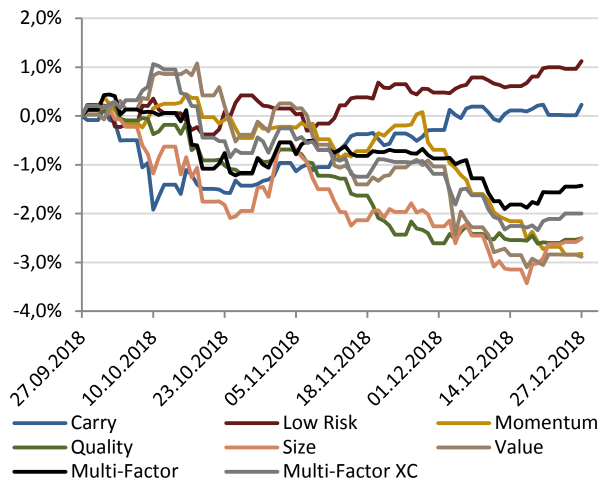
Description:

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**

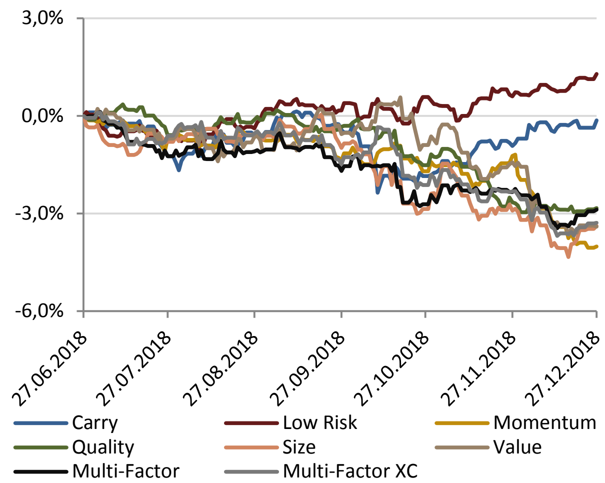
Performance and Volatility Breakdown

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	-14,2%	-12,7%	-9,9%	18,7%	14,6%	13,2%
Low Risk	ISERRER Index	-13,3%	-11,3%	-9,1%	15,0%	13,3%	12,1%
Momentum	ISEMFER Index	-17,2%	-16,6%	-16,3%	9,2%	14,2%	12,8%
Quality	ISEQFER Index	-16,9%	-15,4%	-15,6%	4,6%	14,4%	13,0%
Size	ISEZFER Index	-16,9%	-16,0%	-15,3%	11,7%	14,6%	13,4%
Value	ISEVFER Index	-17,3%	-16,0%	-19,3%	5,0%	15,1%	13,6%
Multi-Factor	ISEXFER Index	-15,8%	-15,5%	-16,2%	3,2%	13,9%	12,6%
Multi-Factor XC	ISEXFCR Index	-16,4%	-15,9%	-15,4%	7,0%	14,1%	12,6%
Benchmark	SXXR Index	-14,4%	-12,6%	-13,2%	6,9%	14,4%	13,0%

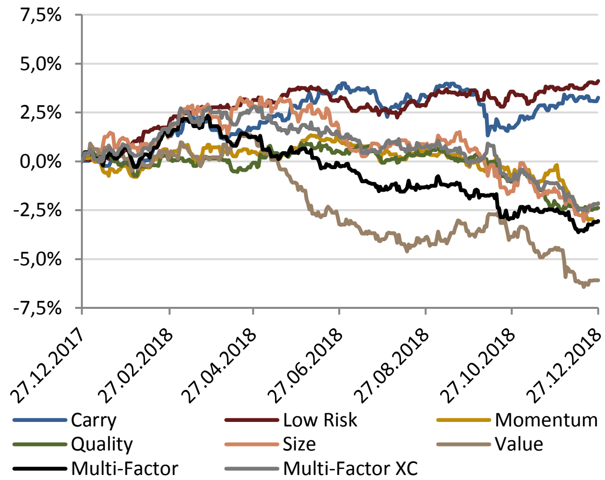
Excess Return 3 Months



Excess Return 6 Months



Excess Return 12 Months



Excess Return since going Live (1.4.2016)