

SEPTEMBER 2013

STRONG QUALITY FAMILY – A DIFFERENT INDEX SOLUTION

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STRONG QUALITY FAMILY – A DIFFERENT INDEX SOLUTION

Abstract

Recent academic research points toward the existence of a quality company risk premium. The STOXX Strong Quality Index family provides an indexing solution that aims to capture such a premium through a transparent, rules-based methodology. We offer a solution that brings together companies that have been historically profitable and which also enjoy strong working capital positions and lower (relative to the wider market) financial leverage levels. In addition, these companies meet strict minimum stock trading criteria. This means that only liquid stocks that exceed a well-defined trading threshold are considered for index inclusion. Such companies are valued against US AAA Corporate Bond Yields to establish relative investment attraction levels. STOXX offers investors not only a straightforward way to obtain exposure to a set of high-quality companies but does so only when valuations are compelling.

Introduction

Successful investing has always centred around companies that demonstrate superior profitability over time. Today's profitable companies have a tendency to continue being profitable tomorrow as well. According to Novy-Marx (2012) "... profitable companies are less prone to distress, have longer cash flow durations and have lower levels of operating leverage". It is no wonder then, why investors are constantly looking for such investment opportunities. There is a strong logic behind this. Companies with an established track record of earnings levels tend to point toward the existence of a capable management team that will - in turn - be likely to continue being successful in the future. Recent academic research seems to point toward the existence of a quality risk premium which has been harvested by successful investors in the past. In a recent thought-provoking paper, Asness et al. (2012) argue that Warren Buffet's success is linked to "... his preference for cheap, safe and high-quality stocks". While the definition of each of these important company traits may change a bit from investor to investor, there is no doubt that these principles have a very powerful appeal for the investing community. In this context, the question that we at STOXX have been asking ourselves is whether we could design an intuitive and straightforward framework that would capture the company quality premium in a purely mechanical way, over time. We have done precisely that and have now launched the following indices (all of which are part of the STOXX Strong Quality¹ Index Family):

- » STOXX Global Strong Quality 50 (selected from the underlying STOXX Global 1800 Index)
- » STOXX Europe Strong Quality 30 (selected from the underlying STOXX Europe 600 Index)
- » STOXX Asia/Pacific Strong Quality 30 (selected from the underlying STOXX Asia/Pacific 600 Index)
- » STOXX USA Strong Quality 50 (selected from the US portion of the underlying STOXX North America 600 Index)

As the above list demonstrates, STOXX has launched a global product, two regional products and a country product. We have decided to launch a US-centric product (as opposed to a North American regional product) because of the importance, vastness and the liquidity of the US market. Naturally, US companies are eligible for the STOXX Global Strong Quality 50 Index as well because of the participation of US companies in the wider STOXX Global 1800 Index. This paper is organized as follows: the next section discusses the data and the rationale behind the methodology that we employ for the purpose of index

¹ We have also launched the iSTOXX Turkey Strong Quality 20 Index which methodology is slightly different from the standard STOXX Strong Quality Index Family in order to accommodate the realities of the Turkish stock market. For more information, please check our website.

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calculations. That is followed by the results section where we discuss historical performance. Finally, concluding remarks bring the paper to an end.

Data and the methodology

Data choice is paramount for the purpose of calculating these indices. The data we employ needs to reflect the principles upon which Strong Quality is built on. This is a two-step process where the first one is to specify the exact attributes that we are looking for in a quality company. The second step is to quantitatively mirror such attributes and define the relevant data metrics that capture them. We are looking for companies that not only have an established track record of profitability but also have a strong balance sheet. In addition, such companies need to be attractively valued. Not only that, but they also need to offer a minimum level of trading liquidity (which, in turn, would offer easy access for investing purposes). We recognize that there is a wide choice of datatypes that investors can use to capture the above-described characteristics. As such, if investors were to have an inclusive approach - and use most of the competing data screening metrics - they would probably realize that the screening process would become too restrictive. The more screening data one uses, the more constrained the opportunity set. STOXX believes that the employment of a small number of key data screening metrics will help reflect the required quality features in a simple and straightforward way without compromising the rationale of the index offering. As mentioned above, selected stocks need to satisfy a strict investability criterion. We require the average traded volume of each stock, over the last three months, to exceed a pre-defined threshold. For the regional products, the threshold is 5 million euros. For the global and the USA product, the threshold is 10 million euros. Below, there is a detailed description of the screening data metrics that we employ for the purpose of stock selection.

1. Establishing a track record of profitability and accounting for financial leverage

Return on Capital (ROC). This is one of the key metrics that measures the ability of the management team to run an efficient and profitable business operation. As such, it can be considered a measure of corporate performance. Excellent management teams tend to achieve superior (relative to competition and the wider market) return on capital rates over time. Our definition of ROC is as follows:

$$ROC = \frac{\text{Trailing } ^1 \text{ 12m Net Income (Loss) + Minority Interest + Interest Expense } * [1 - \text{Effective Tax Rate} ^2]}{\text{Average Capital Employed} ^3} \times 100$$

¹ Trailing 12-month values use the latest four quarters

² ROC will not be calculated if the effective tax rate is negative

³ Average is the average of the beginning and ending balances

(1)

where,

$$\begin{aligned} \text{Capital employed} &= \text{Short- and long-term borrowing} \\ &+ \text{Preferred equity} \\ &+ \text{Minority interest} \\ &+ \text{Share and additional paid-in capital} \\ &+ \text{Retained earnings} \end{aligned} \quad (2)$$

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As formula 1 demonstrates, ROC aims to measure how profitable a particular business operation is considering the amount of capital committed. The numerator describes earnings before interest and taxes (EBIT), adjusted for the impact of taxes. The denominator describes the average capital employed in the business during the last twelve months. Effectively, ROC indicates how much return is generated by each dollar of capital employed in the business. Other things being equal, the higher the reading, the better it is as the company is making good use of its capital resources. As such, this metric can be considered as an excellent indicator of the strength of the company's (in the words of Warren Buffet ...) "economic moat". One of the key benefits of using ROC is that this measure of profitability is capital structure-neutral. In turn, that means that all sources of finance - the company is using - are taken into account. We believe that this is a very important point because - in addition to measuring profitability - we are also explicitly accounting for the leverage levels different companies are employing to operate their businesses. In contrast, another popular profitability metric - Return on Equity (ROE) - measures returns relative to equity finance only. The implication is that a highly leveraged company can still enjoy a high ROE reading because ROE does not take into account the company's debt levels. This is precisely the reason why we have avoided using ROE² but have opted for ROC instead. In doing so, we aim to achieve the following:

- » Measure the profitability of a company relative to all sources of capital provided; and
- » Compare companies with different capital structure profiles on a like-for-like basis.

ROC is a widely used metric - in the industry and academic literature - and is one of the key proxies³ for evaluating profitability levels. One of the more eloquent proponents of this metric is Joel Greenblatt⁴ who - among others - has made a strong case on the benefits of using this indicator. Naturally, no particular accounting metric is perfect (accounting practices themselves may be open to interpretation depending on the specifics of the underlying situation), and we fully recognize that.⁵ However, we believe that our definition of ROC strikes a good balance between the calculation⁶ of a company's profitability levels and the simplicity and clarity of the items entering such calculations. Further, as far as the selection process is concerned, we also aim to only select companies with consistently positive ROC readings over time. The rationale is that we want to remove companies with erratic earnings from being considered for further selection. For example, a particular company may appear great on the latest ROC measure. However, this particular ROC number is not deemed to be good enough (for the company to be a candidate for further selection) if the company has failed to generate a positive ROC consistently over the last three years. One would expect that a stable trend in ROC - over time - may point to a sustainable competitive business position. Effectively, what we are looking for is an established track record in terms of earnings power, considering the amount of capital the company is employing. In order for a particular company to be considered for selection, we explicitly require the following to be observed:

² While we use ROC for our STOXX Strong Quality indices, we use ROE for our iSTOXX Turkey Strong Quality 20 Index. The reason is that the Turkish equity market is relatively small and heavily dominated by the banking sector (which frequently uses ROE as a key measure of profitability).

³ While the exact definition of ROC may change slightly from one source to another (for example, Joel Greenblatt suggests his preferred definition of ROC), the fundamental principles which underpin its calculation are the same exact ones: earnings available to all company's stakeholders (i.e. to both equity and debt holders) are compared relative to all sources of capital the company is using.

⁴ Greenblatt, J. (2010), "The little book that still beats the market".

⁵ See Damodaran, A. (2007), "Return on capital, return on invested capital and return on equity: measurement and implications" for a more detailed discussion of the calculation mechanics behind different competing profitability metrics.

⁶ We source ROC data from a fundamental metrics database. As with any database, there will be instances where the data may be missing (reasons may range from mistakes related to data storing and cleansing to missing updates) for certain companies. Regardless, considering the prominence of companies which are the underlying constituents of the selection universe, the required fundamental data are available for the majority of the underlying companies in our universe.

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- » The latest 12-month trailing ROC reading is strictly positive; and
- » The ROC metric has been strictly positive for each single fiscal year during the period covering the last 36 months.

2. Strong working capital position as an indicator of near-term balance sheet strength

Current Ratio (CR). Current Ratio compares a company's latest trailing 12-month current assets (cash and marketable securities, receivables and inventory) to its current liabilities (short term debt payments, accounts payable and accrued liabilities and taxes).⁷ This metric is routinely used as a proxy for evaluating a company's liquidity position and its ability to meet near-term obligations to third parties. A healthy liquidity position – and subsequently, a source of balance sheet strength – means that a company has no problems to cover its current liabilities. Trading liquidity is a very important indicator because a company may go bust not necessarily because it is insolvent but because it may be illiquid and unable to meet its short-term obligation calls. We define this metric, as follows:

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}} \quad (3)$$

Other things being equal, when current assets cover current liabilities it is less likely that the company will find itself facing a liquidity crisis in the near future. Having said that, it is very difficult to prescribe a perfect quantitative range for the CR metric. Broadly speaking, a ratio greater than one means that the company should not normally have difficulties covering its immediate short-term obligations. However – as is frequently the case with accounting metrics – caution is warranted. There is no such thing as a one-size-fits-all-situations type of metric. By way of example (depending on the particular situation a particular company may be faced with), a high CR reading may also indicate that the company may not be using its current assets very efficiently. In addition, different industries may have different trading liquidity profiles.⁸ Further, for some industries – a relevant example is the banking sector – current ratios may not even be calculated due to specific industry reporting rules.⁹ For all the above shortcomings, the CR metric is very intuitive and straightforward. This is one of its key strengths. Its application covers a very large number of companies that make our selection universe. In addition, our Strong Quality screening process is not using this metric in isolation or in a vacuum. We are using this ratio in conjunction with other fundamental metrics before we make our final selection decision. While we recognize the above-described shortcomings of the CR metric, we firmly believe that the benefits of employing this metric across companies and across time outweigh any potential costs involved. As far as the screening process is concerned, a company will be considered for further selection only if the latest 12-month trailing CR reading is greater than one.

⁷ In accounting terminology, the difference between current assets and current liabilities is called working capital.

⁸ An example would be a company where the inventory book turns over much more rapidly than the accounts payable become due, which – in turn – has an impact on the current ratio being less than one.

⁹ Under IFRS (International Financial Reporting Standards) rules, banks (because of their different business model compared to the rest of the corporate sector) use a liquidity-based format (i.e. listing assets and liabilities in a decreasing order of liquidity) when presenting their balance sheets. Instead, non-bank companies use a current / non-current asset and liabilities format. See <http://www.iasplus.com/en/standards/ias/ias30> for a more detailed discussion on the topic.

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3. Relative valuations – establishing a margin of safety

Earnings before interest, tax, depreciation and amortization / current enterprise value (EBITDA/EV). This valuation metric is widely used in the industry as an indicator of a company's value. It is an alternative valuation metric to (the other popular) earnings to price (E/P) ratio. We have decided not to use the E/P metric because it gauges a company's value from an equity perspective only. We are aware that different companies may have very different financial leverage profiles, and, as such, we want to be able to compare different companies on a like-for-like basis and conduct value comparisons in a capital structure-neutral context. EBITDA/EV allows us to meaningfully compare yields across different companies, tax regimes, diverse capital structure profiles and subjective accounting judgments (related to different depreciation and amortization policies adopted). The numerator of this ratio is the latest trailing 12-month EBITDA value. EBITDA helps us analyze a company's operating profitability before non-operating (interest) expenses and non-cash charges (depreciation and amortization), whereas current enterprise value is defined as follows:

$$\begin{aligned} \text{Current enterprise value} = & \text{Equity market capitalization} & (4) \\ & + \text{Preferred equity} \\ & + \text{Minority interest} \\ & + \text{Total debt} \\ & - \text{Cash and cash equivalents} \\ & - \text{Nominal amount of debt included in price} \end{aligned}$$

As with any other accounting metric, EBITDA/EV's critics would point out that it also comes with certain shortcomings.¹⁰ Whilst caution is always warranted, we strongly believe that using this fundamental metric in conjunction with (as opposed to "in isolation from") ROC and CR metrics, tremendously complements the screening process and adds consistency on how we compare various companies with very different capital structure profiles. All things being equal, the higher the multiple, the more attractively the company is priced.

STOXX believes that bringing valuations into the picture is one of the key strengths of the Strong Quality product. Valuations help further differentiate our Strong Quality products from competitive offerings. Valuations are an extremely important point because one may come up with a list of companies which are both consistently profitable and enjoy strong balance sheet positions. However, the key question to ask - from an investment perspective - is: does it make any sense to invest in such companies now considering the price the market is currently valuing them at? In our view, the answer should be a strong yes only if valuations are compelling, otherwise the margin for error (i.e. if things go wrong in the future) may be considerably significant. As Benjamin Graham wisely put it decades ago: "... *price is what you pay and value is what you get*". In general, the lower the price that one pays for a quality company the greater the margin of safety and vice versa. This simple yet powerful principle is frequently used by successful investors. Warren Buffett best captures the essence of this price-value link when he says that "... *whether we're talking about socks or stocks, I like buying quality merchandise when it is marked down*".¹¹ The connection between price and value is fundamental to the STOXX Strong Quality offering. The decision of investing in a quality company is not any different than the decision of choosing not to pay the price of a Lamborghini for a regular family car. There is nothing wrong with the family car. It may be exactly what one needs but if it is priced like a Lamborghini, then the price is dead wrong. Simple. One would be interested in the family car only when it is priced like one. Effectively, when one is looking for a good family car he / she needs to work out the average price of similar cars that are available in the market first. Then, that average price could

¹⁰ For a more detailed discussion, see Fernandez, P. (2001), "Valuation using multiples. How do analysts reach their conclusions?", Working Paper, IESE Business School".

¹¹ Warren Buffett, Berkshire Hathaway Inc., Annual Report, 2008.

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be employed as a valuation benchmark which will help the buyer establish a price range within which it will be reasonable to purchase the car. Clearly, the purchase decision rests on the concept of relative valuations. The same exact principle is employed in the construction of Strong Quality indices. Whenever investors consider allocating money into riskier assets (such as equities and corporate bonds) they need to make relative value comparisons. What this means is that if one is considering investing in a company (as compared to government paper), valuation comparisons should be conducted between corporate credit and common shares. Both instruments give you access to a particular company, yet are different from one another. Broadly speaking, if an investor is offered the same exact yield from a high quality credit issue and a common share then, (other things being equal) the rational investment decision should be in favour of the credit instrument (due the priority of creditor's claims in the event of the company going bankrupt) rather than investing in company's shares.¹² In other words, rational investment decisions in common shares need to be benchmarked to an alternative form of investing in a company: corporate bonds. This is indeed the approach that we follow as far as valuing high quality companies is concerned. Our valuation benchmark is Moody's US AAA Corporate Bond Yield, which we use as a global proxy for high quality credit issues.¹³ This credit metric will represent our opportunity cost during the process of selecting attractively priced quality companies. What we are looking for are good, strong companies that are selling at a significantly higher yield than the prevailing AAA Corporate Bond Yield rate. We emphasise the word "significant" because we want to minimize any room for errors, which will inevitably happen from time to time and from company to company. On this point we are simply drawing on the timeless wisdom of Benjamin Graham through the establishment of a margin of safety during the company selection process. We do that by making sure that that the minimum yield that a particular company needs to sell at exceeds 150% of the latest AAA Corporate Bond Yield value, as follows:

$$\frac{EBITDA}{EV} > 1.5 \times \text{Moody's US AAA Corporate Bond Yield} \quad (5)$$

The 150% scaling factor is of course an arbitrary number. However, the decision to employ a scaling factor is not made at random. What we aim to accomplish is to provide a buffer between a particular company's yield and the AAA corporate bond yield benchmark. In other words, we want to provide some extra room for error in order to deal with individual selection mistakes, which will (inevitably) be made from time to time. As a result, we have decided to err on the side of caution and want to consider a company for further selection only when its yield is at least 50% higher than the latest prevailing AAA corporate yield benchmark.¹⁴ By way of example, at the end of August 2013, the US AAA Corp bond yield stood at 4.52%. That means that - on this date - the Strong Quality indices will only consider companies that have an EBITDA / EV yield that is greater than 6.78% (= 1.5 x 4.52%). Companies that offer a yield that is smaller than 6.78% are not considered to be attractively priced and will be dropped from the selection process.

¹² Graham, B. (1972 ed.), "The Intelligent Investor".

¹³ While the choice of US AAA Corporate Bond Yield is - naturally - simplistic and generic in nature, it is based on the fact that the US dollar is the world's reserve currency and overwhelmingly governs international trade. There is a multitude of non-US companies around the world that are able to freely borrow and choose to report in US Dollars (as opposed to reporting in domestic currency). Using US AAA Bond Yields as a global proxy for corporate paper takes place for the same reason that the US Government Bond Yields are widely used as a proxy for the global riskless rate.

¹⁴ Incidentally, this rationale is even stronger nowadays whereby central banks are intentionally pushing bond yields lower in an effort to kickstart economic growth and provide investors an incentive to jump into riskier assets.

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4. Other important considerations

As the previous section made clear, the establishment of a margin of safety resonates well with the principles of conservative investing. The introduction of the 50% (above the prevailing AAA Corporate Bond Yield rate) buffer rule means that for a company to qualify as a candidate for selection, the valuation bar has been raised further. However, jumping over the hurdle comes with a side effect: the higher the AAA credit yield levels, the lower the number of companies that qualify for index inclusion and vice-versa. Currently, US interest rates are at historically low levels and that means that the pool of companies available for selection is currently higher than it would have been otherwise (i.e. if prevailing interest rates were higher). This is a very important point because the size of the pool (which is composed of companies available for selection) dictates the choice of the number of constituents that enter our Strong Quality indices. The reason that we have decided to include a relatively small number of stocks in our Strong Quality indices is explained by our ignorance of the path that interest rates will follow in the next 5 or 25 or 50 years. We want to make sure that higher interest environments will not (unless extreme economic duress causes interest rates to shoot up way above historical records) constrain the ability of the Strong Quality framework to select the desired number of index constituents. To put things in a historical context, chart 1 indicates the evolution of AAA corporate bond yields during the last nine decades. The average level of interest rates - over the last nine decades - amounts to 5.85%. That would mean that - historically - the average valuation level that companies would have needed to exceed in order to qualify for Strong Quality index inclusion would be 8.78% (= 1.5 x 5.85%), only. However, the pool of companies available for selection would have undoubtedly shrunk during the seven-year period between October 1979 and January 1986. That is because interest rate levels then were well above 10% (with an average rate of 12.55% during that period.) An all-time high of 15.49% was reached in September 1981.

Chart 1. Moody's AAA Corporate Bond Index between January 1919 and August 2013 (monthly data)



If history is any guide, then it is reasonable to expect interest rates to keep fluctuating in the foreseeable future. What is certain is that future interest rate variations will undoubtedly have an impact on the number of companies that will be available for Strong Quality index selection. Higher interest rate levels shrink the pool of companies available for selection and vice versa. A quick sensitivity analysis will help make the point. On Aug. 29, 2013, the number of stocks that qualified for inclusion in the STOXX Europe Strong Quality 30 (at a time when the AAA average corporate yield benchmark stands at 4.52%) was 280. However, if the AAA corporate bond yield were at the 10% level, the number of available stocks would go down significantly and would amount to 64. Further, if the average interest rate of the October 1979 and January 1986 were to be reached again (i.e. 12.55%), only 42

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companies would meet all the criteria. Finally, if the extreme historical rate (15.49%) were to be observed again, then the number of index constituents would go down to 19 stocks only.

One can argue that a repeat of the October 1979 and January 1986 period is (in a historical context) a low probability event because that period accounts for only 6.7% of the time (i.e. it has occurred in 76 out of 1,136 months of AAA corporate bond yield history). History may or may not repeat itself. However, STOXX does not deal in probabilities. We take the view that we do not know what the future holds as far as interest rates are concerned, and, as such, we use the past nine decades of interest rate history as a guide to determine the number of stocks that make up the Strong Quality index. The above sensitivity analysis explains why we have decided¹⁵ to have 30 stocks in the STOXX Europe Strong Quality 30 Index.¹⁶

Another point worth emphasizing is that the Strong Quality framework compares companies across the entire market rather than across industries. What we are looking for is an index which is composed of the best available companies that offer the highest profitability levels (adjusted for the degree of leverage), enjoy the strongest operating liquidity positions and are also the most attractively priced across the entire market spectrum. As a result, this best-in-market approach makes redundant the concept of (an arbitrary and a pre-determined) sector representation level. Strong Quality diversification takes place at a company rather than industry level. We do not want to include companies (only for the sake of sector representation), which may score well relative to their industry group, but do not do qualify as top quality once compared to the rest of the market. Strong Quality aims to select the best of the best. Finally, once the Strong Quality company pool is defined, an average-of-ranks¹⁷ approach is followed with the view to decide on the identity of companies that will be included in the index. Strong Quality indices are reviewed annually.

¹⁵ Similar logic extends to other Strong Quality indices as well.

¹⁶ If AAA rates shoot up to very high levels it is possible that the number of stocks available for selection may be below 30. In that case, the index will contain less than 30 stocks.

¹⁷ Example, if company A ranks as 2nd best in terms of ROC; 6th best in terms of CR and 25th best in terms of EBITDA/ EV, then its average rank would amount to $11 (2+6+25)/3$. Companies with the best average rank levels will be included in the Strong Quality index.

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Results

This section introduces and comments on historical backtests of each Strong Quality index for the period covering Jan. 2, 2004 to Sep. 18, 2013. For lack of space, historical analysis is conducted at the gross return level (naturally, the underlying message is the same for price and net return versions) with Strong Quality indices weighted using the free-float market cap-weighted methodology.¹⁸ In addition, analysis has been conducted in US dollar terms with the exception of the STOXX Europe Strong Quality 30 Index where analysis has been carried out in euro terms.

Table 1. Analysis of historical performance between Jan. 2, 2004 to Sep. 18, 2013

	STOXX USA Strong Quality 50	STOXX North America 600	STOXX Global Strong Quality 50	STOXX Global 1800
Return (total)	179.90%	86.05%	170.68%	88.09%
Return (annual geometric)	11.16%	6.59%	10.78%	6.71%
Volatility (annualised)	21.73%	20.24%	20.72%	17.42%
Drawdown	-49.22%	-56.25%	-50.96%	-58.23%
Sharpe Ratio ¹⁹	0.39	0.19	0.37	0.20
Information Ratio	0.66	-	0.50	-
Turnover (annual average)	53%	-	66%	-

	STOXX Europe Strong Quality 30	STOXX Europe 600	STOXX Asia / Pacific Strong Quality 30	STOXX Asia / Pacific 600
Return (total)	148.25%	89.25%	131.15%	72.66%
Return (annual geometric)	9.80%	6.78%	8.99%	5.77%
Volatility (annualised)	19.40%	19.55%	22.01%	20.83%
Drawdown	-43.27%	-58.37%	-50.48%	-55.91%
Sharpe Ratio ²⁰	0.37	0.24	0.29	0.15
Information Ratio	0.19	-	0.38	-
Turnover (annual average)	58%	-	65%	-

¹⁸ Strong Quality indices are also available in an equally weighted format.

¹⁹ For USD calculations, the BBA LIBOR USD 12 month rate is used as a proxy for the riskless asset. For Euro calculations, we employ the 1 year EONIA Euro swap rate.

²⁰ For USD calculations, the BBA LIBOR USD 12 month rate is used as a proxy for the riskless asset. For Euro calculations, we employ the 1 year EONIA Euro swap rate.

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Chart 2. US performance from Jan. 2, 2004 to Sep. 18, 2013.

Indices rebased to 100



Chart 3. Global performance from Jan. 2, 2004 to Sep. 18, 2013.

Indices rebased to 100



Table 1 and Charts 2 through 5 illustrate the very strong performance of all Strong Quality indices during the last 10 years. Excess returns - relative to the underlying benchmark - range from 3% to 4.5% per year. This is very significant from an investing perspective. In line with findings in recent academic literature (cited throughout this paper), we also unearthed that investing in high quality stocks has historically paid off. In general, volatility levels are a bit higher compared to underlying benchmarks - with the notable exception of Europe - but this is hardly surprising considering the much smaller number of stocks contained in the Strong Quality indices. What is crucial here is evaluating relative performances from a risk-adjusted return perspective. Without exception, the Sharpe ratio of each Strong Quality index is distinctively superior to the underlying benchmark. In other words, Strong Quality indices have posted higher returns per unit of risk taken.

Furthermore, peak-to-trough losses have been - without exception - more pronounced for the underlying benchmarks. As demonstrated in Table 1, drawdown readings are smaller for each Strong Quality index when compared to the underlying stock universe. This highlights the fact that quality stocks have held up better (compared to underlying benchmarks) when markets plunged in 2008. This is remarkable considering the much smaller number of stocks contained in our quality indices.

Chart 4. European performance from Jan. 2, 2004 to Sep. 18, 2013.

Indices rebased to 100



Chart 5. Asia / Pacific performance from Jan. 2, 2004 to Sep. 18, 2013.

Indices rebased to 100



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In addition, turnover numbers range from 50%-65% per year.²¹ Considering the magnitude of excess return levels and the high stock liquidity thresholds (which ultimately means lower transaction costs), it is safe to conclude that turnover does not have an adverse impact on relative return (to underlying benchmark) performance. An example helps illustrate: suppose one has invested \$100 in the STOXX Global Strong Quality 50 index. As Table 1 indicates, its annual excess return amounts to \$4.07 (= 10.78% - 6.71%) whereas average annual turnover stands at 66%. This translates into \$66 (= \$100*66%). Assuming transaction costs of 5bps (considering the \$10 million stock trading liquidity threshold for the global product, 5bps may be a very conservative estimate), then annual transaction costs would amount to \$0.066 (= \$66*5bps*2).²² That means that the transaction-adjusted excess return for the Global Strong Quality index now equals \$4.004 (= \$4.07-\$0.066). The moral of the story is that the turnover incurred by these indices has not had an adverse effect on the performance of high quality stocks.

Conclusion

The STOXX Strong Quality Index family builds on very intuitive principles that have been employed by successful investors in the past. We propose a straightforward and mechanical framework that captures the essence of such principles. In so doing STOXX offers an index solution that selects profitable companies with strong balance sheets and which are attractively priced. Investors now have a Strong Quality index offering that has a very good historical track record.

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The views and opinions expressed in this paper are solely those of the author and not necessarily the view and opinion of STOXX Ltd

²¹ Index turnover is caused by a) stocks entering / exiting the index on annual review date; b) stock deletions / additions (due to corporate events and / or underlying benchmark membership) between subsequent review dates and c) quarterly weight capping (no individual stock can claim a weight greater than 10% on annual review and quarterly rebalancing dates).

²² Effectively, we are measuring round-trip transaction costs.

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Appendix A

Tables A1 to A4 provide the list of companies selected for inclusion in each Strong Quality index in the latest June 2013 annual review.

Table A1. STOXX USA Strong Quality 50

Company Name	Industry	Company Name (Cont.)	Industry (Cont.)
1. Joy Global Inc	Industrials	26. Seagate Technology Inc.	Technology
2. Linear Technology Corp.	Technology	27. Apple Inc	Technology
3. Lockheed Martin Corp.	Industrials	28. C.R. Bard Inc	Health Care
4. Lorillard Inc	Consumer Goods	29. Becton Dickinson & Co.	Health Care
5. Mattel Inc	Consumer Goods	30. Boeing Co	Industrials
6. Microsoft Corp	Technology	31. CF Industries Holdings Inc.	Basic Materials
7. National Oilwell Varco Inc	Oil & Gas	32. Chevron Corp	Oil & Gas
8. Northrop Grumman Corp	Industrials	33. Cisco Systems Inc	Industrials
9. PPG Industries Inc	Basic Materials	34. Cummins Inc	Oil & Gas
10. Petsmart	Consumer Services	35. Diamond Offshore Drilling Inc.	Consumer Services
11. Pfizer Inc	Health Care	36. Dollar Tree Inc	Basic Materials
12. priceline.com Inc	Consumer Services	37. E.I. DuPont de Nemours & Co.	Consumer Services
13. Qualcomm Inc	Technology	38. Family Dollar Stores Inc	Consumer Services
14. Ralph Lauren	Consumer Goods	39. Foot Locker	Consumer Goods
15. Raytheon Co	Industrials	40. Fossil Group	Basic Materials
16. Rockwell Automation Corp	Industrials	41. Freeport-McMoRan Copper & Gol	Consumer Services
17. Rockwell Collins Inc.	Industrials	42. Gap Inc	Industrials
18. Scripps Networks Interactive I	Consumer Services	43. W.W. Grainger Inc	Consumer Goods
19. Skyworks stln	Technology	44. Green Mnt. Cof. Roasters	Oil & Gas
20. Southern Copper Corp.	Basic Materials	45. Halliburton Co	Consumer Goods
21. TJX Cos	Consumer Services	46. Hasbro Inc	Oil & Gas
22. Tesoro	Oil & Gas	47. Helmerich & Payne Inc.	Oil & Gas
23. 3M Co	Industrials	48. Hollyfrontier	Health Care
24. Western Digital Corp	Technology	49. Humana Inc	Industrials
25. Zimmer Holdings Inc.	Health Care	50. Illinois Tool Works Inc	Industrials

STRONG QUALITY FAMILY – A DIFFERENT INDEX SOLUTION

Table A2. STOXX Global Strong Quality 50

Company Name		Industry	Company Name (Cont.)		Industry (Cont.)
1.	E.I. DuPont de Nemours & Co	Basic Materials	26.	K + S	Basic Materials
2.	Foot Locker	Consumer Services	27.	Michelin	Consumer Goods
3.	Fossil Group	Consumer Goods	28.	ITV	Consumer Services
4.	Freeport-McMoRan Copper & Gold	Basic Materials	29.	China Mobile Ltd	Telecommunications
5.	Gap Inc	Consumer Services	30.	Seagate Technology Inc	Technology
6.	Halliburton Co	Oil & Gas	31.	Otsuka Holdings	Health Care
7.	Hasbro Inc	Consumer Goods	32.	Inpex Corp	Oil & Gas
8.	Helmerich & Payne Inc	Oil & Gas	33.	Shimamura Co. Ltd	Consumer Services
9.	Hollyfrontier	Oil & Gas	34.	Daito Trust Construction Co. L	Industrials
10.	Humana Inc	Health Care	35.	Tsuruha Holdings	Consumer Services
11.	Illinois Tool Works Inc	Industrials	36.	DeNA Co. Ltd	Consumer Services
12.	Joy Global Inc	Industrials	37.	Toyo Suisan Kaisha Ltd.	Consumer Goods
13.	Lorillard Inc	Consumer Goods	38.	JGC Corp	Industrials
14.	Microsoft Corp	Technology	39.	Nippon Kayaku Co. Ltd	Basic Materials
15.	PPG Industries Inc	Basic Materials	40.	NEXON	Consumer Goods
16.	Petsmart	Consumer Services	41.	Rinnai Corp	Consumer Goods
17.	Pfizer Inc	Health Care	42.	SINO Biopharmaceuticals	Health Care
18.	Raytheon Co	Industrials	43.	Apple Inc	Technology
19.	Scripps Networks Interactive I	Consumer Services	44.	C.R. Bard Inc	Health Care
20.	Skyworks sltn	Technology	45.	Becton Dickinson & Co	Health Care
21.	Southern Copper Corp	Basic Materials	46.	CF Industries Holdings Inc	Basic Materials
22.	Tesoro	Oil & Gas	47.	Chevron Corp	Oil & Gas
23.	3M Co	Industrials	48.	Cisco Systems Inc	Technology
24.	Western Digital Corp	Technology	49.	Diamond Offshore Drilling Inc	Oil & Gas
25.	Zimmer Holdings Inc	Health Care	50.	Dollar Tree Inc	Consumer Services

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Table A3. STOXX Europe Strong Quality 30

	Company Name	Industry		Company Name (Cont.)	Industry (Cont.)
1.	Hennes & Mauritz B	Consumer Services	16.	Smith & Nephew	Health Care
2.	Smurfit Kappa	Industrials	17.	Tate & Lyle	Consumer Goods
3.	Ryanair	Consumer Services	18.	Croda International	Basic Materials
4.	Rolls Royce Holdings	Industrials	19.	British Sky Broadcasting	Consumer Services
5.	Inchcape	Consumer Services	20.	Michelin	Consumer Goods
6.	Smiths Group	Industrials	21.	Total	Oil & Gas
7.	Royal Dutch Shell A	Oil & Gas	22.	Teleperformance	Consumer Services
8.	Berkeley Group	Consumer Goods	23.	K + S	Basic Materials
9.	Rangold Resources	Basic Materials	24.	Hochtief	Industrials
10.	ITV	Consumer Services	25.	Lanxess	Basic Materials
11.	NEXT	Consumer Services	26.	Continental	Consumer Goods
12.	Burberry	Consumer Goods	27.	Roche Holding	Health Care
13.	GKN	Consumer Goods	28.	Georg Fischer	Industrials
14.	Astrazeneca	Health Care	29.	Sika	Industrials
15.	Weir Group	Industrials	30.	Solvay	Basic Materials

Table A4. STOXX Asia / Pacific Strong Quality 30

	Company Name	Industry		Company Name (Cont.)	Industry (Cont.)
1.	Soho China LTD	Financials	16.	Chiyoda Corp.	Industrials
2.	Sino Biopharmaceuticals	Health Care	17.	Daito Trust Construction Co. L	Industrials
3.	Agile Property Holdings LTD	Financials	18.	Secom Co. Ltd	Industrials
4.	Rinnai Corp.	Consumer Goods	19.	Stanley Electric Co. Ltd	Consumer Goods
5.	USS Co. LTD	Consumer Services	20.	Shimamura Co. Ltd	Consumer Services
6.	Brother Industries	Technology	21.	Sawai Pharmaceutical	Health Care
7.	Miraca Holdings LTD	Health Care	22.	Inpex Corp.	Oil & Gas
8.	NEXON	Consumer Goods	23.	Kurita Water Industries Ltd	Industrials
9.	Nippon Kayaku Co. LTD	Basic Materials	24.	Canon Inc.	Technology
10.	Nitto Denko Corp.	Basic Materials	25.	Otsuka Holdings	Health Care
11.	JGC Corp.	Industrials	26.	NTT DoCoMo Inc.	Telecommunications
12.	Toyo Suisan Kaisha LTD	Consumer Goods	27.	Itochu techno-solutions	Technology
13.	Denso Corp.	Consumer Goods	28.	China Mobile Ltd.	Telecommunications
14.	DeNA Co. LTD	Consumer Services	29.	Guangdong Investment Ltd	Utilities
15.	Tsuruha Holdings	Consumer Services	30.	ALS Limited	Consumer Goods

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Appendix B

Table B1. Evolution of accounting metric readings on June annual review dates.

	STOXX USA Strong Quality 50		
	ROC (%)	CR (x)	EBITDA / EV – 1.5*AAA (%)
June 2003	13.55	1.87	4.95
June 2004	16.04	1.42	5.12
June 2005	19.85	2.00	6.42
June 2006	21.43	1.62	5.74
June 2007	21.86	1.93	6.35
June 2008	22.79	1.93	6.62
June 2009	23.56	2.26	14.49
June 2010	24.36	2.13	8.15
June 2011	24.56	2.50	7.66
June 2012	25.87	2.23	11.06
June 2013	22.37	2.48	9.28

	S TOXX Global Strong Quality 50		
	ROC (%)	CR (x)	EBITDA / EV – 1.5*AAA (%)
June 2003	13.71	1.80	7.04
June 2004	17.18	1.55	6.91
June 2005	22.48	2.00	7.66
June 2006	24.48	1.62	7.98
June 2007	24.94	2.07	7.01
June 2008	23.96	1.99	9.28
June 2009	26.41	2.06	19.19
June 2010	22.67	2.03	11.08
June 2011	22.89	2.37	9.81
June 2012	21.05	2.35	13.42
June 2013	20.99	2.44	11.37

	STOXX Europe Strong Quality 30		
	ROC (%)	CR (x)	EBITDA / EV – 1.5*AAA (%)
June 2003	10.84	1.30	4.16
June 2004	18.45	1.32	4.93
June 2005	22.33	1.48	7.60
June 2006	24.59	1.63	5.99
June 2007	20.20	1.65	4.24
June 2008	24.49	1.63	8.09
June 2009	20.65	1.80	16.38
June 2010	17.36	1.69	8.32
June 2011	19.66	1.84	10.03
June 2012	22.79	1.77	12.55
June 2013	21.73	1.69	9.33

STRONG QUALITY FAMILY – A DIFFERENT INDEX SOLUTION

STOXX Asia / Pacific Strong Quality 30

	ROC (%)	CR (x)	EBITDA / EV – 1.5*AAA (%)
June 2003	7.26	1.99	4.96
June 2004	9.62	2.11	5.32
June 2005	11.75	1.63	6.12
June 2006	14.05	1.66	4.54
June 2007	16.31	2.31	4.85
June 2008	10.96	2.68	11.68
June 2009	16.17	2.03	15.71
June 2010	11.74	2.13	9.43
June 2011	13.17	2.35	14.04
June 2012	14.26	2.86	12.92
June 2013	11.10	2.36	14.06

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