



Welcome to the January edition of the DB Quantitative Strategy Team's monthly newsletter, **Quantum**. The aim of Quantum is to make it easier for you to keep track of all the research we publish, and to serve as a forum to highlight the latest news and thinking in the quant investing world. If you only read one email from us every month, make it Quantum!

We're delighted to kick off 2013 with a bumper crop of new research ideas. In the U.S. we continue to focus on what we think are the two most important areas of innovation for quants: new data sets and new modeling techniques. In our new paper **Quant 3.0** we tackle the former by exploring a unique database of structured web data. On the other side of the coin, in **The Rise of the Machines II**, we use old factors but new modeling techniques, specifically an advanced machine learning algorithm called AdaBoost.

In Europe, we continue to work on building more macro-aware quant models. Our paper **Hedging Inflation Risks** looks at ways to hedge inflation risk out of portfolios, something that is going to be increasingly important in 2013. We also completed a comprehensive review of all our European quant models, by highlighting their out-of-sample performance since publication date.

On the other side of the world, in Asia, we dig deeper into one of the most fundamental investment concepts of all: valuation. In **Value Focused, Value Driven** we decompose the valuation ratio for individual stocks, and show how to build investment strategies around the components. To download this paper, or any of the other papers mentioned, you can use the links in the section below.

Finally, a quick reminder that the **2012 DB Quant Yearbook** is now available. The yearbook is a compilation of all the research (excluding regular model updates) that we published last year, and is available in a two volume PDF set for easy reading on tablets. If you'd like to download it, please click [here](#) and fill in the requested details.

We're looking forward to sharing even more interesting ideas with you in 2013. Thanks for your ongoing support.

Regards,

The Deutsche Bank Quantitative Strategy Team

North America: +1 212 250 8983

Europe: +44 20 754 71684

Asia: +852 2203 6990

DBEQS.Global@db.com | <https://eqindex.db.com/gqs/>

Recent Research

North America

- **Signal Processing: The rise of the machines II (January 23rd, 2013):** We are introducing our second generation N-LASR (Non-Linear Adaptive Style Rotation) global stock selection model. This N-LASR2 model uses the same machine learning algorithm we used before, but utilizes a new neutralization technique and accounts for different market conditions. To read the whole report, click [here](#).
- **Signal Processing: Quant 3.0 (December 17th, 2012):** This is our third report in a series of papers studying the use of unstructured data in stock selection. In this paper we propose three ways to enhance traditional quant signals by overlaying information from unstructured web and news data. To read the whole report, click [here](#).
- **QCD Model: January update (January 8th, 2013):** In our regular monthly update of our flagship alpha model, we recommended allocating more weight to growth and quality factors, and less weight to value and revision factors. To read the whole report, click [here](#).

Europe

- **Quantitative Musing: Quant models performance review (January 16th, 2013):** Since our first report in January 2010, we have published a number of top-down/asset allocation and stock selection models. We take the opportunity at the start of a new year to highlight the out-of-sample performance of these models. To read the whole report, click [here](#).
- **Quantitative Musing: Hedging inflation risks (December 20th, 2012):** In this report, we investigate how investors can hedge inflation risk out of their portfolios. In particular, we study USA, Eurozone, and UK inflation proxies. First, we construct a tracking portfolio using a mix of cash and equity sector/country ETFs or future contracts. Second, we investigate if single stocks can be used to compute an equity-only version of the inflation tracking portfolios. To read the whole report, click [here](#).
- **Top-Down Monthly Update: MCRM update (January 3rd, 2013):** Since we launched the MCRM model portfolio in August 2010. The model has delivered out-of-sample positive returns for 18 out of the last 29 months, a monthly hit ratio of 62%. The

monthly average spread between the long and short portfolios has been approximately 0.6% per month, or 6.7% per annum. To read the whole report, click [here](#).

Asia

- **Quantiles: Value focused, value driven** (January 23rd, 2013): We decompose the price-to-book ratio of stocks in Asia and in Japan to highlight the information priced in by investors over time, and suggest different stock selection strategies. To read the whole report, click [here](#).

Global

- **Academic Insights: Harnessing the best ideas from academia** (January 2nd, 2013): Every month we scan the latest academic research for innovative but practical quant investment ideas. This month we highlight interesting papers on factor timing and the role that ETFs play in driving asset correlations. To read the whole report, click [here](#).

Note: to access these links you need a login to the DB Quant website; if you don't have a login, or have forgotten your password, please click [here](#) and fill out the requested details.

Quant in the News

Interesting news articles related to quant investing:

- **Are Quant Funds Back to Stay?** ([finance.yahoo.com](#), January 14th, 2013): Over the past year we've highlighted a number of articles suggesting sentiment towards quant strategies is thawing. Perhaps 2013 will be the Year of the Quant? To read the whole article, click [here](#).
- **DCM Capital Starts Trading Venue Mining Twitter Sentiment** ([bloomberg.com](#), January 11th, 2013): Coinciding with the launch of our own *Quant 3.0* paper (see above), this article highlights one way that social media data can be incorporated into investment strategies. To read the whole article, click [here](#).
- **The Hedge Fund Hunger Games** ([businessweek.com](#), December 20th, 2012): Quants spend a lot of time worrying about survivorship bias. This entertaining article gives a whole new meaning to the phrase! To read the whole article, click [here](#).

Quantomatic: Latest trends in quant technology

Each month we use this section to focus on the technological side of quant investing. Our view is that better technology can be a source of alpha in its own right - either via new, cutting-edge data sources or through more data intensive modeling techniques.

One of the problems with building models to predict returns is the large influence that outliers have on the estimation of any model. Regardless of what history one is using, there are always a few extreme returns that have a big bearing on the model parameters. A common way around this problem is to work in rank space instead of raw return space; for example, the rank information coefficient (IC) is a simple performance metric that assesses the efficacy of a factor by looking at how well the *rank* of today's factor scores predict the *rank* of the period-ahead returns. With this in mind, we were interested to come across a new R package in the latest [R Journal](#), that offers a suite of functions for estimating more sophisticated rank-based models. The package is called [Rfit](#), and will be of interest to anyone looking for tools that extend models like the simple least squares regression into rank space.

<https://ederivatives.db.com/static/disclaimer.html>