ROBECO

Super Quant Internship

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Robeco | Matthias Hanauer

ROBECO
The Investment Engineers

Introducing Robeco & Quantitative Strategies Team

Robeco

- Rotterdam-based asset management company
- Slogan: “the investment engineers”
- First CEO: “**every investment strategy should be research driven**”
- AuM: EUR 238 billion (September 2014)

Quantitative Strategies - A leading applied quant investment research team

- Long-time experience: team founded in the early nineties
- Critical mass: >20 dedicated quantitative researchers
- High level: able to attract top talent (50% Ph.D.’s)
- **Applied research**: extensive use of models in practice
- Pioneer with quant emerging markets & factor investing
- Dozens of peer-reviewed journal publications
- Proven track-record: excellent performance of quant products
- Visit http://www.robeco.com/quant

The Volatility Effect

Lower risk without lower return.

David C. Blitz and Pim van Vliet

Efficient markets theory has been challenged by the finding that relatively simple investment strategies are found to generate statistically significantly higher returns than the market portfolio. Well-known examples are value, size, and momentum strategies, whose return premiums have been documented in U.S. and international stock markets. Market efficiency is also challenged if some simple investment strategy generates a return similar to that of the market, but at a systematically lower level of risk.

An interesting study in this regard is an empirical analysis of the characteristics of minimum-variance portfolios by Clarke, de Silva, and Thorley [2006] (CST). These authors find that minimum-variance portfolios, based on the 1,000 largest U.S. stocks over the 1968–2005 period, achieve a volatility reduction of about 25%, while delivering comparable or even higher average returns than the market portfolio.

We present a simple alternative approach to constructing portfolios with similar risk and return characteristics. Specifically, we create decile portfolios that are based on a straightforward ranking of stocks on their historical return volatility. Unlike CST, we effectively use only the diagonal of the historical covariance matrix with this approach. We find that portfolios of stocks with the lowest historical volatility are associated with Sharpe ratio improvements that are even greater than those documented in CST, and statistically significant positive alpha.

Ang et al, [2006] report that U.S. stocks with high volatility earn abnormally low returns over the 1963–2000 period. They focus on a very short-term (one-month) volatility measure, while we concentrate on long-term (over three years) volatility, which implies much lower

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Fall 2007

The Journal of Portfolio Management 1

Global Presence: 13 countries, 85 years of heritage

● = Investment management, Business Development & Client Servicing
● = Business Development & Client Servicing

ROBECO

Super Quant Internship

What do we offer?

- Write your **master thesis** with Robeco
- **Experienced supervision** (PhD, CFA); full-time research project
- **Challenging research topics** for master students in finance
  (potential topics: www.robeco.com/en/careers/super-quant/projects/index.jsp)
- **Direct relevance** for the investment process
- **Bonus** up to € 2500

Who are we looking for?

- High ambition & outstanding grades
- Creative as well as analytical

Are you interested?

Write us an e-mail to **sq@robeco.nl**

1. Cover letter (indicate preference for a research subject)
2. Short resume
3. Grade list

Most students start in Feb/April ’15, but any time is possible

Internship period is 5 or 6 months (fulltime or close to fulltime)

For more information, visit **http://www.robeco.com/en/careers/super-quant/index.jsp**

or contact Matthias Hanauer (former research assistant @TUM):

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