



# Sanity Checking Momentum and Trend

Stockholm (HedgeNordic) - In February 2020 Finnish asset manager **Northern Star Partners** launched a new fund, [NS Quant](#), to capture positive and negative price trends early across several asset classes. The period since has been a somewhat challenging environment for many trend-followers. Judging from its 16.2 percent-gain gross of fees since its inception in February through the end of May, NS Quant is obviously doing something right - and different. "Classifying NS Quant as a trend-follower is hard and inaccurate because there is more to it," says Kenneth Barner-Rasmussen, who previously had worked at Man Group's discretionary investment engine Man GLG.

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According to Markku Malkamäki, the chief architect behind the strategy powering NS Quant, the origins of NS Quant go back a few decades to his PhD work and his time at Finnish asset manager Pohjola Asset Management. "Earlier versions of NS Quant are really used for a long time," Malkamäki tells HedgeNordic. Yet, the beginning of 2019 was one of the most fruitful periods, when Malkamäki and his older son, Markus, formalised and coded the existing systematic approach powering NS Quant. "After a couple of months, Kenneth joined us and contributed

significantly with position tracking and risk management.”

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Malkamäki describes NS Quant as “a systematic long/short strategy investing in liquid equity and commodity futures.” But the question of which strategy bucket NS Quant fits into is difficult to answer precisely, reckons Malkamäki. “NS Quant relies on a managed futures concept with a flavour of trend-following,” he explains. Perhaps the difficulty in locating the fund into a specific strategy bucket represents a competitive advantage and an explanation for the fund’s strong performance so far in 2020.

### **Three Interrelated Models**

The philosophy and objective of NS Quant, on the other hand, is much more straightforward. “The philosophy driving NS Quant is to exhibit limited drawdowns and limited volatility, and maximise our Sharpe ratio,” Barner-Rasmussen tells HedgeNordic. “Historically, the way positions are run in NS Quant has resulted in uncorrelated returns with the underlying markets we trade.” To achieve its objective, NS Quant relies on three interrelated models – momentum, trend, and trend- quality – that use day-to-day price data to trade major U.S. equity indices, as well as oil and gold futures.

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“These three models are independent of each other, but we designed them to interact,” explains Malkamäki, emphasising that this interaction “is really the core of the NS Quant strategy.” The first model, momentum, is the “quickest model and is pretty active,” according to Malkamäki. This model generates trading signals when there is a change in momentum. “But these signals occur all too often, and most of these signals are really false signals,” says Malkamäki. These signals, therefore, “need to be evaluated to identify if price changes are significant and exhibit some duration.” That is the role of the second model, the trend model.

The last model, dubbed quality, “is like a sanity check,” explains Malkamäki. “This model evaluates on a daily basis if the trend is on or not.” The quality model aims

to either confirm current signals or oppose false signals triggered by the momentum model. According to Malkamäki, “if the two slower models, trend and quality, are both in disagreement with the momentum, the signals provided by the momentum model will be overridden to minimise false signals.” This set-up aims to eliminate false signals, optimise performance and minimise trading activity. Any disagreements between the slower models, on the other hand, “can neutralise existing positions and give us new signals for new positions,” adds Barner-Rasmussen.

NS Quant relies on the three interrelated models to trade futures on the S&P 500, Nasdaq, gold and oil. “At any point in time, we maintain a portfolio with equal weightings between these four underlying instruments and conduct monthly rebalancing,” explains Barner-Rasmussen. “While we normally hold four positions, naturally, due to our risk management processes, we might hold fewer positions,” he adds. “If we stop loss some positions out, then we would hold three positions.” Malkamäki emphasises that “it is very rare that positions reach the stop loss,” for reasons related to the risk management design. “Usually a contradictory signal comes before that, and then we simply take the other side of the trade.”

## **Limited Drawdowns and Risk Management**

In the backtest, out-of-sample and live periods, NS Quant has exhibited limited drawdowns. Barner-Rasmussen finds two main explanations for this behaviour. First, “the portfolio is quite nicely diversified” and second, the existence of a robust risk management design. There are two aspects of the risk management design that has contributed to limited drawdowns. Because NS Quant receives strong and light signals, “we carefully analyse the light signals to make sure the signal is correct and we feel comfortable with it before going in.” That is the first aspect.

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The second aspect relates to the process of setting stop losses for each position. “Every single instrument we trade has its individually-set stop loss level,” explains Barner-Rasmussen. “We have conducted extensive research to look for the optimal stop loss for each underlying instrument without adding too much activity

in trading,” he adds. “The risk management design is a constantly-evolving research process,” according to Barner-Rasmussen, who was hired to rebuild the Alpha Capture platform at Man Group. “We are constantly trying to see with more data if we need to modify our risk limits and our positioning,” says Barner-Rasmussen. “It is an ongoing process.”

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The investment approach behind NS Quant is mostly systematic, but it does contain some discretionary components. “There are no discretionary elements on position-taking,” explains Barner-Rasmussen. “The risk management process, however, occasionally has some manual overrides,” he points out. “When you see moves in markets that we have seen this year, with the correlation between gold and equity going up, you need to make sure to sanity check the investment approach.” For that reason, the team at NS Quant “might interfere in terms of stop losses or overriding signals, but we never go against a signal.”

## **Performance ON in Risk-Off Environments**

NS Quant gained about 12 percent gross of fees in the risk-off environment during the first quarter of 2020. While satisfied with the performance, the team running the fund does not appear surprised by the outcome. After all, the backtest results show that NS Quant performed well in other risk-off environments such as the fourth quarter of 2018. “This set-up of three models usually captures early trends, and the model finds the turning points of the markets quite well,” explains Malkamäki.

Explaining the robust performance of NS Quant at the beginning of the year, Malkamäki says that “it is just market dynamics that created the performance, which has little to do with the models.” When markets go up, “the trends are choppier, and there are many drawdowns and many bull legs,” according to Malkamäki. “While the markets go up very slowly, they usually come down very quickly.”