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Newsletter

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Alternative Investment Partner Ltd. (AIP) is an alternative asset manager for investments in managed futures. AIP is the advisor to a number of funds and managed accounts. For the allocation of our clients assets we are selecting CTA (Commodity Trading Advisor) using conventional analysis and sophisticated quantitative methods.

It is our primary goal to find reliable managers with persistent high-quality risk-adjusted returns for our clients. But how can good CTA be found? Every CTA provides a disclaimer that states "past performance is not necessarily indicative of futures results". That begs the question: How do you know which managers will perform well in the future.

In this Newsletter we would like to start a discussion about CTA quality. What is a good CTA? How can a good CTA be found? There are many aspects to be reflected. And one Newsletter will not be enough to think about those questions. Therefore CTA Selection will be an ongoing issue for future AIP Newsletter. In this number we give a short introduction in the basic classification of CTA styles and in the selection process we are using. And last but not least we will talk about some aspects of the quantitative analysis we make for the portfolios we are managing and the CTAs we are working with.

Kind regards
Bernhard Steiner



Bernhard Steiner

CTA classification

by Simon Vuille and Corneliu Crisan *

Commodity trading advisors (CTAs) are professional money managers who invest their clients' funds using global futures and options markets as a medium. Often referred to as "managed futures", CTAs take part in all liquid futures markets, and as such, offer investors an efficient way of gaining exposure to markets otherwise not easily accessed.

CTAs can be classified along two dimensions: the markets they trade in, and the techniques on which their trading strategies rely.

With respect to the markets traded, CTAs are either fully diversified or focused on specific markets. Whereas diversified CTAs sometimes claim to trade as many as 300 different futures contracts, it is safe to assume that, given the liquidity constraints faced, positions are taken in only 50–100 contracts on a regular basis. Non-diversified CTAs specialize in a particular market, or a set of related markets. The following is a non-exhaustive list of markets for which specialized CTAs exist: currencies, agricultural commodities, precious metals, energy, stocks.

The trading approach for CTAs can be classified as systematic or discretionary, even though some CTAs base their actions on a mix of the two. Systematic approaches

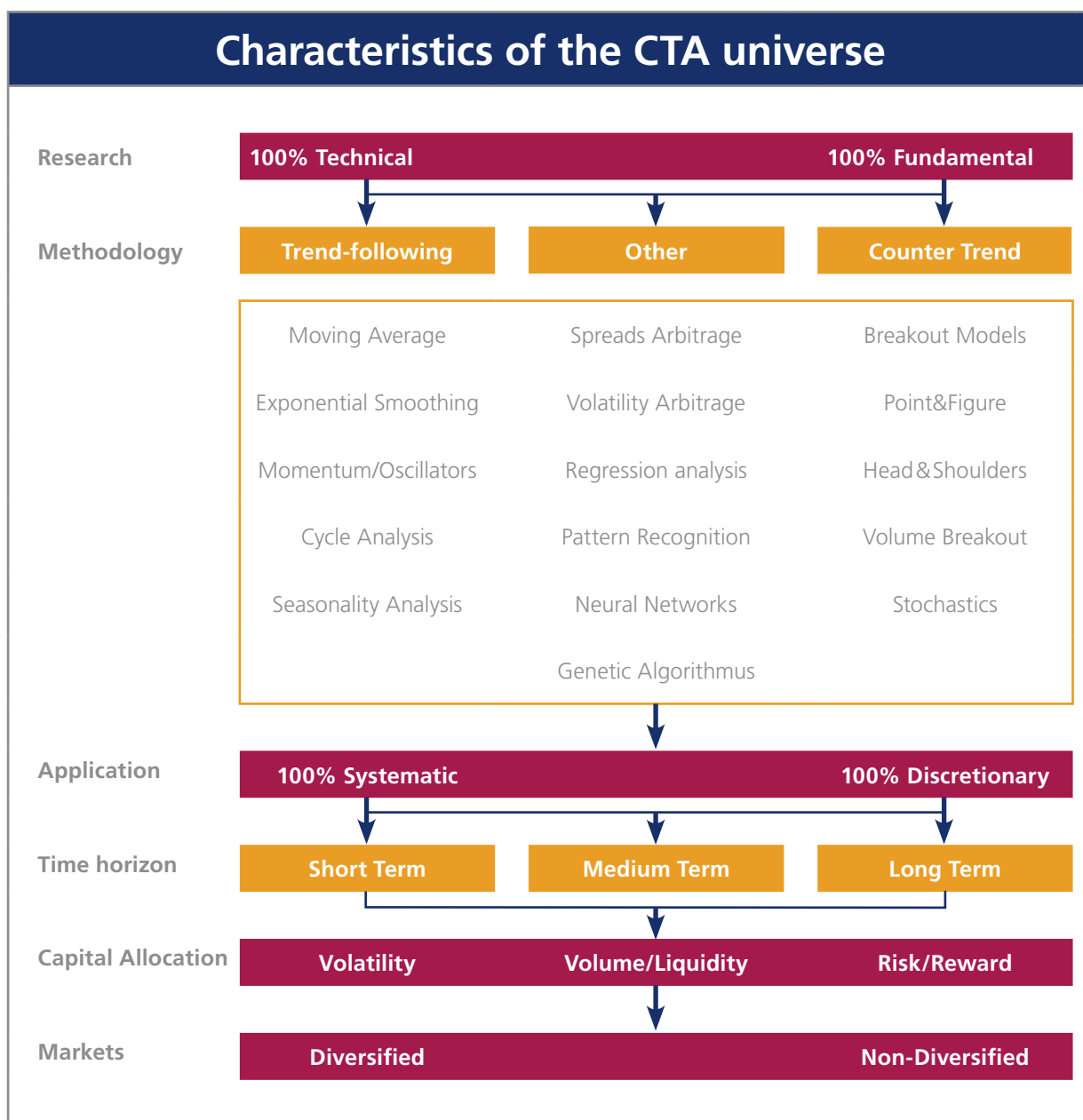
rely on quantitative models to perform technical or fundamental analysis, generating buy or sell signals. Purely systematic approaches are fully computerized. In such cases, the role of the CTA is to fine-tune the model, keep it up to date, or develop additional models in order to cope with the evolution of the financial markets. Non-systematic CTAs, also known as discretionary traders, base their strategies on fundamentals and underlying economic factors. Since experience is key for discretionary traders, they often specialize on a particular sector or market.

Most trading systems used by CTAs can be classified as either trend-following or counter trend-following. Trend-following is by far the most widespread strategy among CTAs. Often fully automated, such programmes tend to be diversified across a range of markets. Most trend-followers refrain from trying to predict trends, and rather take positions that will benefit if the current market trend persists. Trend-followers look at various indicators in order to eliminate market noise and find the current direction of a market. Widespread indicators include moving averages, exponential smoothing and momentum. Trend-followers differ from each other with respect to the time horizon they use to determine the existence of a trend. Funds focus on

* „Used by permission. „A quantitative analysis of CTA funds' returns“, by Simon Vuille and Corneliu Crisan, Master Thesis, University of Lausanne – School of Economics and Business Administration (HEC Lausanne), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=623261“

short, medium, or long-term trends, or a combination thereof. Counter-trend systems look for trend reversals using methods such as rate of change indicators (oscillators, momentum) or head and shoulders patterns. The use of trading systems relying on highly quantitative techniques, such as neural networks, genetic algorithms, or chaos theories has also generated much interest in the recent past.

Risk management is a key part of any trading strategy, and most systematic CTAs will typically cut losses as soon as they materialize, while they will try to let the profits run, often adding to winning trades. Additionally, various filters will be applied to the signals in order to determine capital allocation. Such filters include volatility, volume, as well as various forms of risk/reward ratios.



A Model of the different investment styles among CTAs, „A quantitative analysis of CTA funds’ returns“, by Simon Vuille and Corneliu Crisan, adapted from Habib, Rami, 2004, A look inside the black box, Working paper.

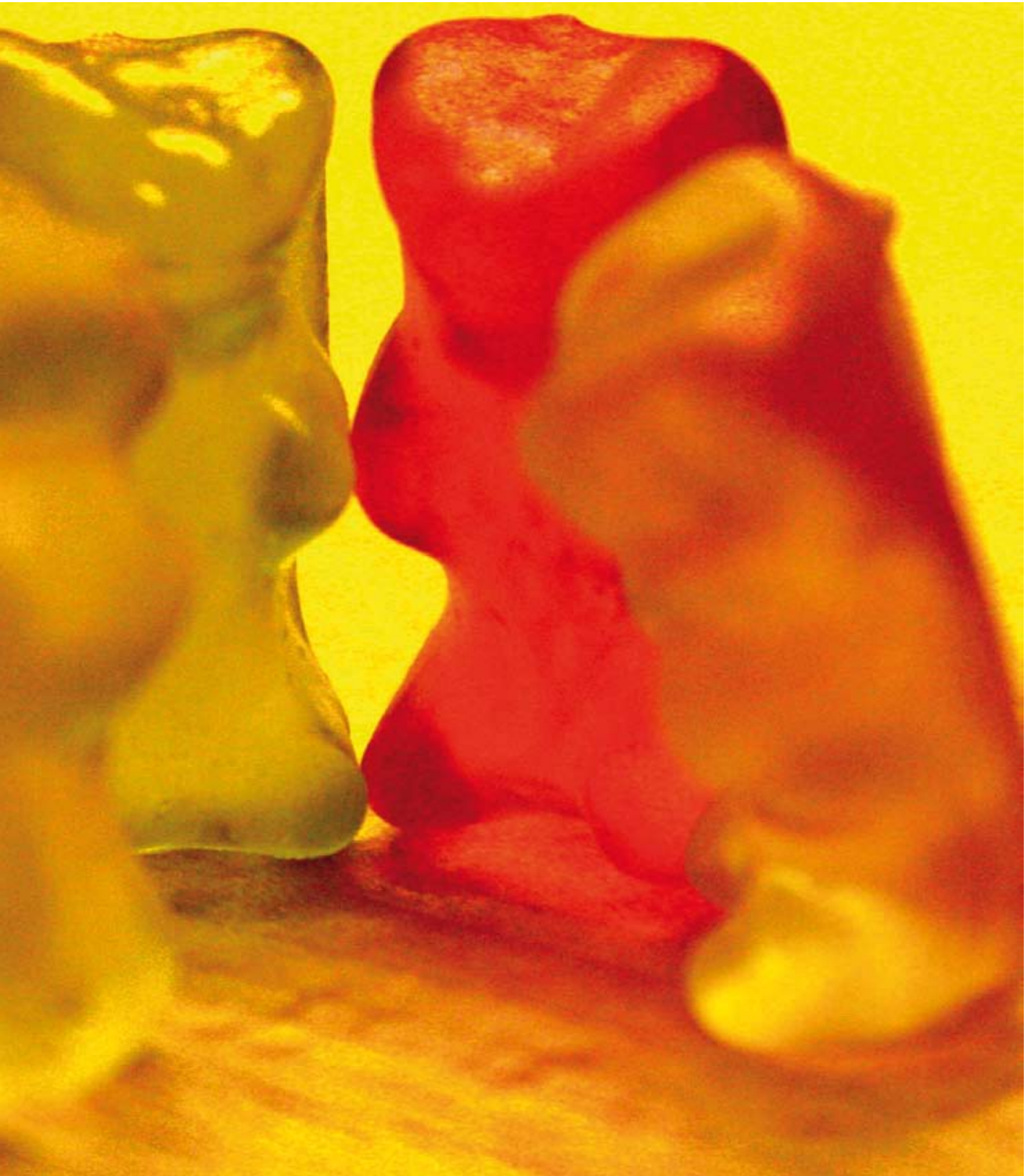


Predicting Manager Success

Despite disclaimers warning against it, past performance is exactly how most investors, whether institutional or individual, determine who to invest with. There are obviously other factors investors want to know, they check the business structures of a CTA. They perform due diligence to confirm that returns were not a fluke, the program is not overleveraged and that the CTA is doing what he is saying. Institutional allocators typically require several years of track record and at least USD 10 millions under management before an allocation can be done. But all those analysis are ways to qualify the past performance.

But with the benefit of hindsight, it is an easy task to create a CTA portfolio that performed well in the past. The real challenge is to create a CTA portfolio for tomorrow, when the market environment is unknown.

But how can this be done without reading tea leaves?





Bernhard Steiner
CTA Analyst, AIP

Interview

with Bernhard Steiner

How does AIP select its CTAs?

We are looking for CTAs with a consistent style and a return pattern which is coherent to this style. We need to find out how a CTA is trading. How does he earn money? What is his edge? And does the CTA really understand how he is making money. In order to find answers we make common due diligence and quantitative analysis. But even if our quantitative analysis is quite sophisticated it is most important for us that the CTA is a real professional, reliable and transparent person or organisation.

Hence your CTA selection is based on track records, too?

Yes, past returns are a basic input for our analysis, but we try to go a step further. CTAs use different inputs, methodologies, timeframes and market coverage. This implies that the trading programs of different CTAs will typically not perform in unison under most market conditions.

We are categorizing types of managers and types of market conditions. And we are looking at how a CTA handles different market situations. For the identification of this fingerprint for a CTA an in depth quantitative analyses of the track-records is an important issue.

What is the edge in your quantitative approach?

Our quantitative analysis is a very CTA specific analysis. We want to find out in what sort of market conditions a CTA is best suited.

In order to do that, we have defined a set of CTA Base Strategies (e.g. Trendfollowing, Short Option). For each of these strategies a mathematical formulation was derived so that we can calculate a set of artificial historical return time series. Based on these typical return patterns we can analyze the dominant CTA Base Strategy for each CTA.

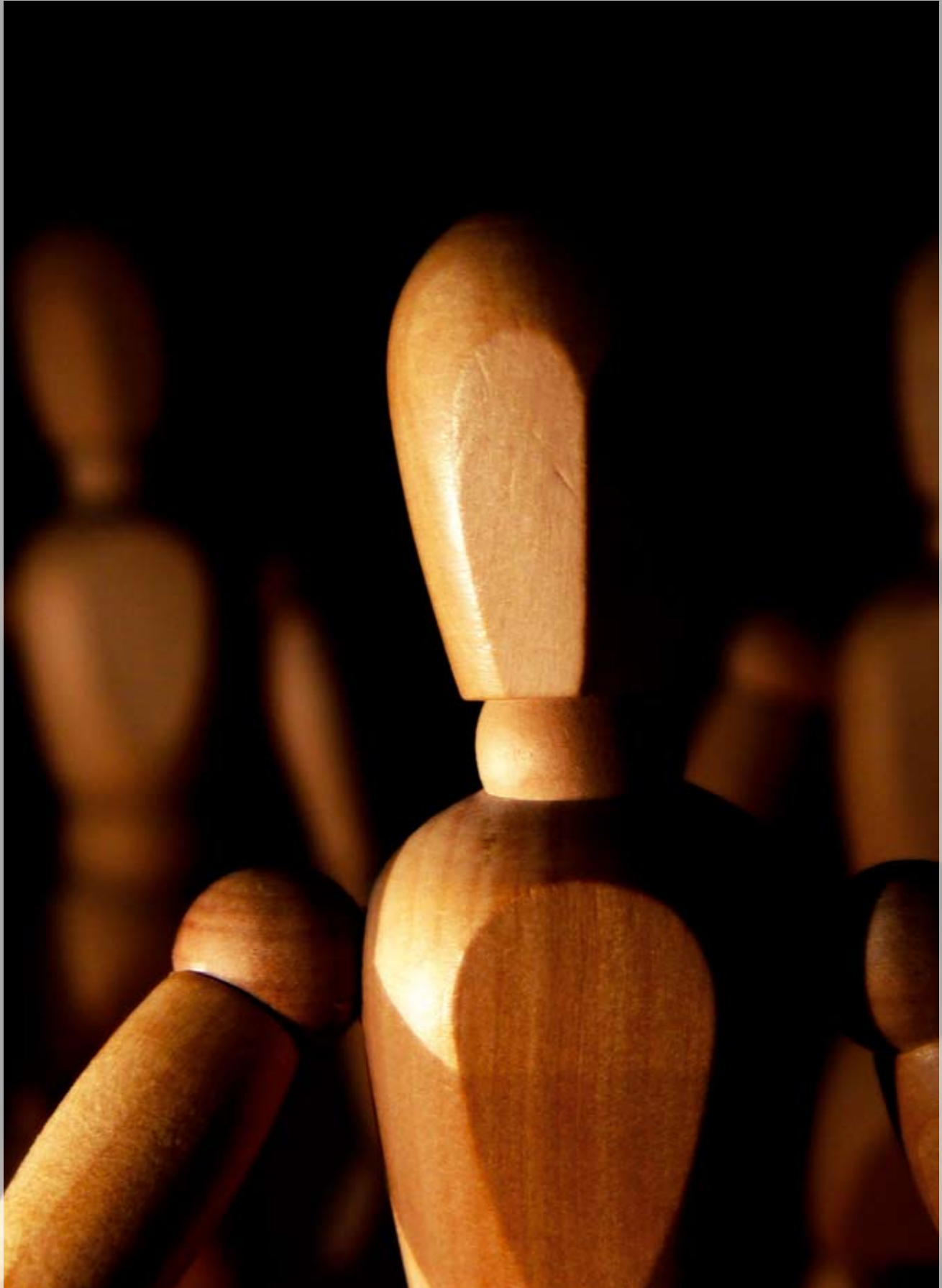
Furthermore we analyze how each CTA Base Strategy fits into certain market regimes. They are characterized by very fundamental assessments like e.g. bear or bull market, trendy or sideways movements in the different assets classes or the volatility and liquidity in the market.

The combination of common due diligence and the quantitative analysis enables us to find out with a certain level of reliability how a CTA will behave in different future market conditions.

And what is your customer's benefit of these CTA assessments?

We believe that it is great to find a CTA who did a good job in the past but will he be as good in future markets? What we do is turning this sort of a guessing game into a clearly structured logical procedure. We work with a traceable allocation process. Starting with a fundamental market outlook we can deduct the fine tuning of our CTA portfolios. With enough money you can run a large diversified CTA portfolio and you will have a good chance the one CTA in the portfolio will straighten out the losses of another. But that costs performance and can tend to be a zero sum game.

With our approach we can construct an optimal diversification for a certain market environment.



Your idea is that you can select the best CTAs for the market conditions you are expecting for the near future because you can analyse how a CTA can handle different conditions in his markets.

Yes that's our idea. We try to deconstruct the markets that we can apply sort of a bottom up approach in the composition of a CTA portfolio. But I think that this approach has another aspect which is at least as interesting. Our method of analyzing the CTAs obliges us to get a really fundamental understanding of the strategy the CTA is trading. At the point when we select a CTA we have identified his return drivers. Even if he could not explain his edge in the due diligence questionnaire we will find it out in our analysis. And if we can not we will leave the fingers from him.

What is a return driver for a CTA strategy?

The basic return drivers are the market conditions and the mood at the markets. The return driver for a CTA strategy is the ability of the CTA to recognize a certain market constellation that improves his chance to win. It's the question for the source of value. When you win a trade there is a loser somewhere. But at the beginning both the loser and the winner thought to have good reasons to win this trade. But there are elements that turn the deal to one side. The elements that are sort of catalysts for profit – for the winner side – are the drivers that generate the returns for a CTA.

For a CTA it is important that he can reproduce his winning method with consistency. If he can not and every trade has another return driver it must be supposed that he wins just by chance even if he does that over months or years.



But why do you care about that. Isn't it more important that the CTA makes good profits? You don't need to care about his methods.

Well every lucky streak will come to an end. But I don't know when. And I'm afraid that I will invest right at the moment when he starts losing. And when his ability to win was just the result of good luck it's hard for me to believe that he can handle losses and that he can come back to the winning side.

I think it is very important to have a good idea on how a CTA can make money. It is important that you know why a CTA can win his trades and another can not. Because if you do not know who the victim is its probably you. –

I believe that real successful CTA have sort of a skill to read the markets. They have a specific understanding

for the markets and the instruments they trade. They use some techniques or specific methods, sort of a procedure how they trade, but however, they have an edge. Even if they can not describe it sometimes they recognize certain market constellation when they make their trades. Somehow they identify the best circumstances to make their trades and somehow they generate their returns on the long run. And this specific method follows sort of pattern that can be recognized when you analyze the trading of the CTA in relation to his underlying markets.

If I can recognize that a CTA has an edge I know with certain reliability that his past results where not just good luck. And to know this could be quite helpful. No one likes to be fooled by randomness.





Interview

with **Dr. Lorenz M. Schumann**

Dr. Lorenz M. Schumann
Managing Director, Schumann Investment Management, Chairman and Partner, swissQuant Group AG

Mr. Schumann, you are employing new scientific tools for risk and performance reporting in the asset management market. What is the use of such reports?

The reports give an in depth analysis of quantitatively measurable risk and performance measures and style analysis of single funds, CTAs or managers as well as portfolios. They can be used for manager selection, continuous monitoring and comparison of funds, CTAs or managers.

How does your work differ from the analysis from bank analysts?

We work with purely quantitative analysis, however we acknowledge that quantitative and qualitative analysis and due diligence are complementary and for an educated decision need to be combined. Furthermore our work is based on the assumption that returns are not normally distributed and capital market phenomena are dynamic, that means they are time variant.

Is the modern financial market theory one of the basic principals in your approach?

We combine the best of financial mathematics, digital signal processing and dynamic system theory. Modern financial market theory has many critics and is therefore in a state of evolution.

Is modelling in financial engineering certain enough to run a portfolio?

When using quantitative models you need to be able to monitor the proper functioning of the models per se. We use, for example, a measure called "directional quality" to monitor prediction quality of prediction models. If the quality measures of our models fall

below specified limits, we question the functionality of the models and take predetermined measures. The occurrence of such procedures is quite rare.

With your quantitative due diligence of a CTA you can create a guideline for financial control of an investment. Do you get any information about the quality of a CTA out of that data?

Several analysis based on statistical evaluation of return time series give indications on the return process and return generation of an investment vehicle, such as a CTA. With regard to a quantitative due diligence, the return time series can be used to figure out, whether the manager follows the specifications (such as style and global positioning) made on his factsheet. Furthermore the analysis can give indications on investments into instruments with low liquidity, return smoothing, excess risk taking, to name a few. With the reports, the investor receives a guideline which questions to ask the CTA manager in order to gain confidence in the CTA.

Isn't it risky that you provide with your reports a certain feeling of security to investors? Are you not afraid that this could mislead him to risk more than he can afford?

No. With the risk reports we provide the investor with a consistent risk measurement framework. By emphasising the extreme risks (i.e., VaR95%, VaR99% and Tail Risk95%; Tail Risk99%) we explicitly show worse cases, than a conventional reporting that relies on normally distributed volatilities. Additionally, if there is extra risk involved, the investor should be able to estimate the additional returns received for taking the extra risk, as shown in the Tail Ratio in our reports.



Finally it is up to the investor to make efficient use of the increased transparency of risk.

You help to observe investment risks. But do you make risks lower when you observe them or does this give simply a good feeling to you that you've done your duties?

Simple risk reporting does have the disadvantage of being a backward-looking information source. However, certain analysis give early indications of potential future risks. An investment which is found to have autoregressive behaviour, meaning that a negative return is highly probably followed by another negative return, is to be avoided, thus reducing risks in the future. Furthermore, we could in the past warn investors that their investments which have only had positive returns in the last two years almost certainly will have a month with a loss. Two months after our warning, this particular investment had a loss just short of our expectations.

You try to find a robust non-normal return distribution for the CTAs trackrecord. Does that mean that you have some caveat against the common risk measure VAR?

If at all, our caveat concerns using normal distributions for returns, when they are not truly applicable. Fitting a non-normal distribution to the returns allows us to derive the risk measures that are expected to be closer to the observed data. We do use the VaR as a risk measure and we complement the VaR with the CVaR (Conditional VaR, also called Tail Risk or Expected Shortfall) which gives an indication of the expected risk beyond the VaR. Both measures quantify downside

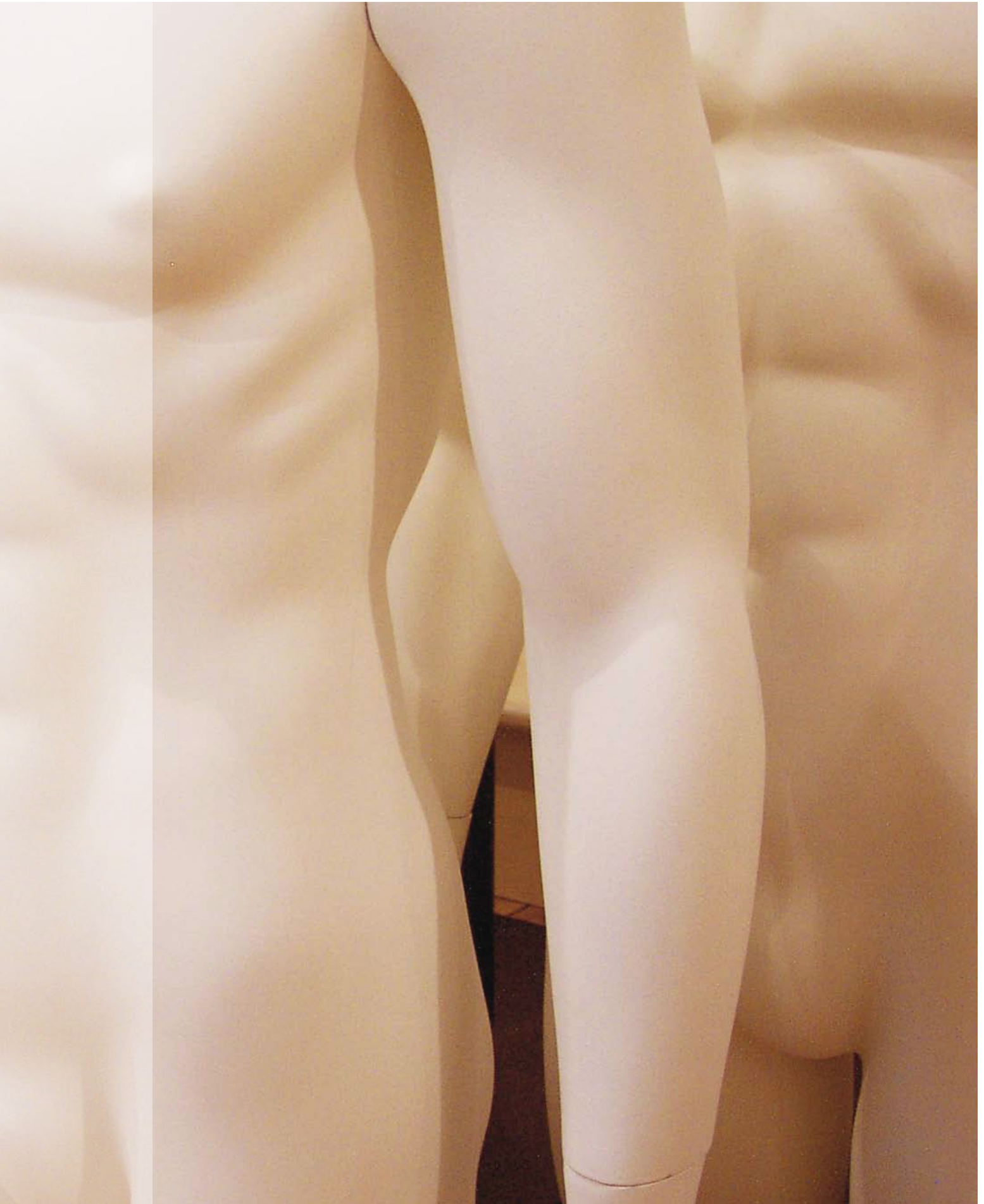
potential only, as opposed to volatility that also measures positive outliers of the returns. Furthermore, both measures can be used to measure extreme risks, which we consider as the most importantly anticipated and avoided.

When you say that CAPM is not the last conclusion of wisdom do you conclude then that financial markets are not efficient? If yes, what does that mean for stock markets?

In stock markets liquidity constraints, market signaling, economic and political shocks, sector rotations and index definitions are some of the well known sources of inefficiencies. How well they can be captured by systematic investment strategies is still focus of current research.

Is it possible to make certain prediction of future prices? Is possible then that past results have an indication on future results?

Our experience up to today is that it is, with restrictions, possible to estimate the direction of the markets. Practically, this means that when we make many predictions for a given time interval, that means we predict the movement of stock market in the next day, for every day over several years we have a few percent more correct predictions than wrong predictions. Nevertheless, probably it is too much a simplification to claim that past results do have an indication on future results. Furthermore, the art is then not to actually generate returns from the correct predictions but not losing money on the wrong predictions, giving an indication for the importance of sophisticated risk management.





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