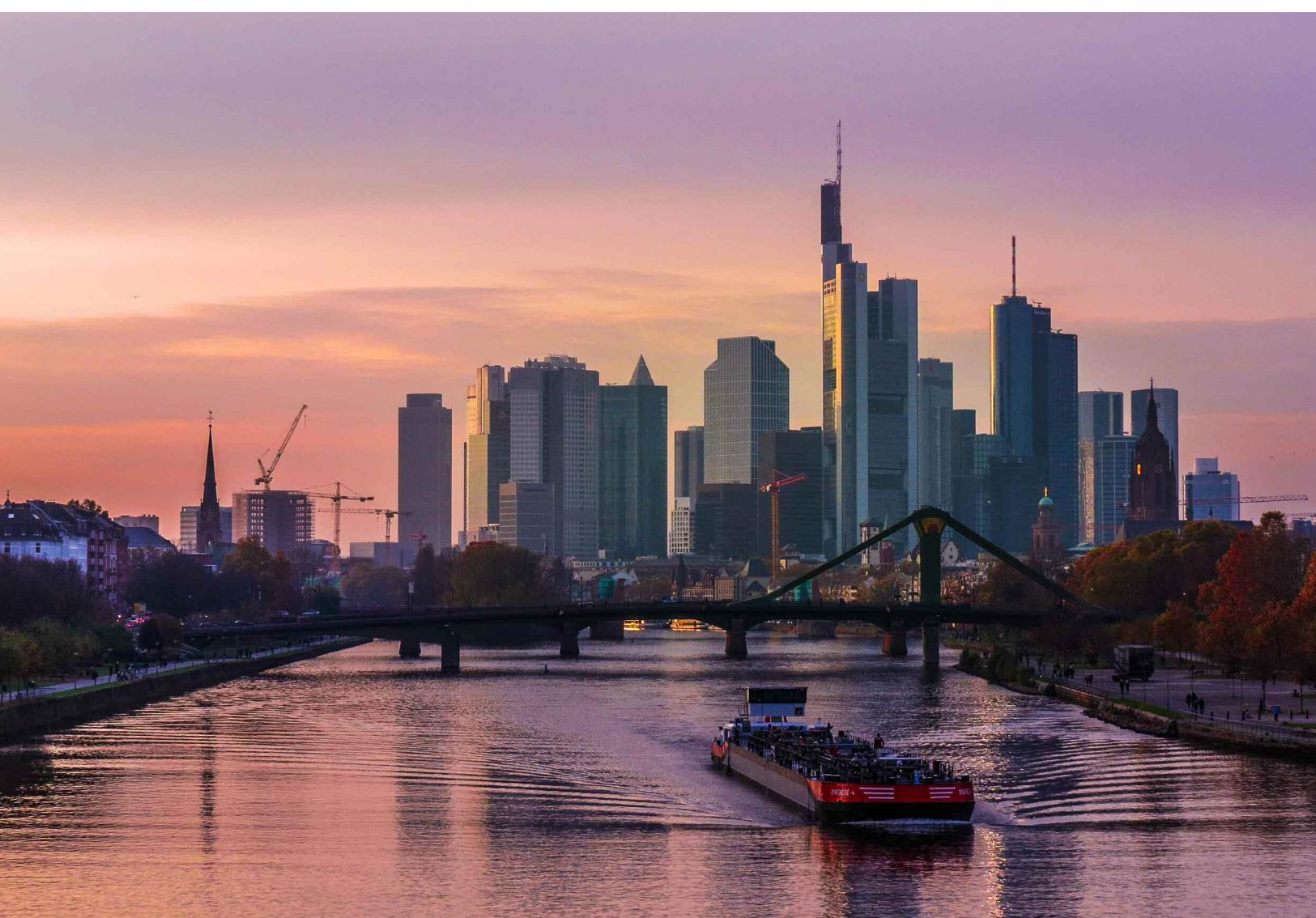


OPALESQUE



Opalesque Roundtable Series '16

GERMANY

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Editor's Note

Despite weak performance, investors pile into UCITS, but not without expectation mismatch

As everyone knows, liquid alternatives are suffering from a weak performance. The aggregate of all UCITS funds have made 1% a year since 2012. This could make you think that performance-wise that this would not be enough to attract investors, but fact is that German investors are still adding consistently to UCITS after having before focused on illiquid investments like real estate, PE or infrastructure.

Another positive development is that more-and-more American managers are launching their successful strategies in UCITS wrapper structures, broadening the UCITS universe. While this is good news in general, many investments are unfortunately done with a certain mismatch of expectations. Investors really need to be very clear and aware what types of characteristics they are really looking for when they look at substituting government bonds, because it seems some are asking the impossible, demanding that their new investment should be liquid and also capable of acting like a fat tail hedge where you win every time there is stress in the market, while during all other times it's paying you out a premium.

So what's Alpha, really? Why Germany's largest hedge fund investor isn't searching for it

Alpha is not a return source per se, it's something which is just not explained so far by simple models. In Feri's view, "*We should always try to persuade investors to seek hedge funds that offer them certain types of exposure to market inefficiencies, trading techniques and alternative betas rather than this elusive alpha. Most of the times when people talk about alpha, it's actually more or less a statistical artifact from doing an often too simple linear regression.*" Alpha will not get bigger and it will not be easier to find, just because more and more investors are looking for it. So investors felt trapped by zero rates, and they jump into the next trap.

The historical alpha is never a signal for future alpha. When Feri analyzes hedge fund strategies, "*we actually look for funds with low historical alpha, because a high alpha means we cannot explain their return source. We look for funds maximizing risk-adjusted returns and correlation measures in the future, not in the past. Of course, this concept is sometimes hard to explain because many investors don't understand why we are not interested in what others believe to be the holy grail of investing – alpha, but from our perspective, we want to know what the fund does, and this means knowing where the risks and the returns come from.*"

Why monthly return numbers are useless for a proper fund analysis

In the current environment, the hedge fund space is more relevant for investors than ever before, but you need tools which are better than the tools you had in the past. The hedge fund space has a very serious problem related to the fact that a lot of the screening for managers and a lot of the "research" (i.e., understanding what managers do) is based on a single number that the managers report once a month: the return. And it's **virtually impossible, to find anything meaningful using this approach**, says Prof. Luis Seco from Sigma Analysis. While the monthly return information is of course important, it's a massive compression exercise from where it is hard to extract a meaning. Investors are getting just a summary of thousands of activity points cumulating to one number.

Hedge fund portfolios would be too complicated to understand from a data series of one number per month. *Rather, "you have to go to the transactional data. We have been doing this for ten years now, on a lot of funds. When you look at every transaction that hedge fund is doing, you can develop analytical tools to understand where they make money and where they lose money, and why. I come from a world where we run all our clients' money on a managed-account platform, so we have access to virtually all relevant information. Imagine you get to see everything the hedge fund does, what decisions were right, what decisions were wrong through the right analytical toolbox, you get access to what people call alpha, except it is not alpha anymore, because alpha and beta are statistical numbers, but there are no statistics involved here – they are direct analytics. Following this approach, suddenly you have a tremendous tool to do manager selection and portfolio construction."*

Germany to simplify its investment tax law

Germany right now is a very difficult market for certain funds, especially tax law wise. However, there is an initiative in the German Parliament right now, which is expected to pass parliament in July 2016, with the effect that from the 1st of January 2018 onwards, many of those difficulties and restrictions impeding the decisions of your fund investors right now will disappear or at least become much easier.

From the 1st of January 2018, especially many tax law restrictions to the selection of funds will not exist any longer.

Right now, it is for example difficult for many investors to invest into highly leveraged funds. In the future, we won't have this problem any longer as there will be an attractive investor taxation system with just a few tax reporting obligations and much less cost than at present, **for almost all German investor types and for almost all funds that exist globally**.

The Opalesque 2016 Germany Roundtable, sponsored by Eurex and WTS, took place in June in Frankfurt with:

1. Prof. Dr. Luis Seco, **President & CEO Sigma Analysis and Management, Director Mathematical Finance Program TU München, Professor of Mathematics, University of Toronto**
2. Dr. Thomas Maier, **CFA, Senior Investment Manager, FERI Trust**
3. Frank Umlauf, **Co-Founder, Tajdo**
4. Lutz Klaus, **CIO, Tungsten Capital Management**
5. Holger Knauer, **Managing Director, Catana**
6. Markus-Alexander Flesch, **Head of Equity and Index Derivatives Sales, Eurex**
7. Steffen Grutzmannl, **Partner, WTS**

The group also discussed:

- Why manager selection is the main risk when investing in alternatives. Do UCITS funds of funds add value?
- What does it mean for investors that hedge funds or liquid alternatives strategies have on aggregate a short volatility profile?
- Why consultants prefer to talk about adding a second level of asymmetric strategies in the strategic asset allocation rather than "hedge funds or absolute return"
- Is it true that the average hedge fund provides negative alpha?
- What's behind the ongoing concentration process where large managers are attracting more and more assets?
- Are younger and smaller managers providing better risk-adjusted returns "by more or less any measure"?
- How can a "black box" fund gain the trust of investors?
- Which "Big Data" Alternative Investment Fund (AIF) has a better live trading record (13.5% in six month) than its already outstanding backtest? What's "Big Data", anyway?
- What is Lutz Klaus' rational way of investing in the irrational zero interest world? How to build the right base portfolio
- What are "fashion premia", and what are better options?
- Has investing today been degraded to "trading emotions"? Will fundamental investing have its day again?
- What's more important than transparency for an investor?
- Why especially smaller and mid size players benefit from the "Futurization" of the markets as pioneered by Eurex.

Enjoy!

Matthias Knab
Knab@Opalesque.com

Participant Profiles



(LEFT TO RIGHT)

Prof. Dr. Luis Seco, Dr. Thomas Maier, Markus-Alexander Flesch, Frank Umlauf, Matthias Knab, Lutz Klaus, Holger Knauer, Steffen Gnutzmann

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Introduction

Markus-Alexander Flesch

Eurex

My name is Markus Flesch and I'm heading globally the Eurex Equity and Index Derivatives Sales division. From my perspective these particular Roundtables are very helpful- and insightful because it gives a market infrastructure provider like us the great opportunity to interact with our indirect clients, be it traditional asset managers, hedge funds or CTAs. They help us get insights into the state, needs and moreover –trends- of this side of the industry.

Frank Umlauf

Tajdo Consulting

I am one of the Partners and Founders of Tajdo Consulting. We are an investment consultant for German institutional clients. One focus we have is liquid alternatives, and for German investors that means predominantly single absolute return strategies in the UCITS format. We are covering this space since 2006 as well as fund of funds in the offshore market, but after the last crisis, offshore funds have become a minor part for German institutions.

Lutz Klaus

Tungsten Investment Funds

My name is Lutz Klaus. I am a Managing Partner and CIO of Tungsten Investment Funds. Tungsten is an investment boutique which has been around for 10 years now. We are a liquid alternative asset manager. We focus on UCITS funds and offer different strategies like multi-asset; equity long/short, and volatility.

We also offer some family office services and manage a total of around EUR1.5bn here out of Frankfurt.

Steffen Gnutzmann

WTS

My name is Steffen Gnutzmann. I work with the professional advisory company of WTS Tax Legal Consulting in Germany, where I am a partner. WTS currently has approximately 550 employees in Germany and is running an international network, the "WTS Alliance" with offices for example in New York, Boston, London, Dublin, Luxembourg, Zurich, Hong Kong and Shanghai.

Our team here in Frankfurt specializes on servicing the asset management industry, which we have now been doing for some 15 years, with compliance needs, investor tax reporting and specific insurance or regulatory reporting, also servicing directly the investors if they have issues with regard to their fund investments. We advise all types of funds, from UCITS to AIFs and hedge funds and also private equity funds and German HNWI and institutional investors investing globally. Our team has a very diversified client base.

Prof. Dr. Luis Seco

University of Toronto

My name is Luis Seco, I am a Professor at the University of Toronto and the Director of the Mathematical Finance Program at the University. I am also the Director of the RiskLab, which is a research laboratory in risk management.

In addition, I am the President & Chief Executive Officer of Sigma Analysis & Management, a Canadian company that has been working with institutional investors in the alternative investment space since 1999. During the past 17 years we have been addressing the various aspects of hedge fund investing.

Most currently we created customized investment programs in the hedge funds space through managed accounts to provide liquidity, transparency, and affordability to the investing institution. I am also an instructor at the Technical University of Munich where I have taught a course on hedge funds every year since 2007, perhaps one of the few university courses on hedge funds in Germany.

Holger Knauer

Catana Capital

My name is Holger Knauer, I am the CEO of Catana Capital. Catana Capital is a newly founded asset management company based in Frankfurt. Our unique approach is combining Big Data analysis with artificial intelligence. We are launching a fund end of June, a registered, public AIF fund that will be powered by independent trading signals based on in the internet published information.

Dr. Thomas Maier

FERI Trust

My name is Thomas Maier. I am a portfolio manager at FERI Trust, responsible for several institutional hedge fund allocations and the development of equity related risk premia strategies. I am also lecturing a course on Alternative Investments at the Frankfurt School of Finance.

FERI is the leading asset manager for family assets and institutional investors in German-speaking Europe. Based on its own independent research, FERI develops comprehensive innovative and individually-tailored investment concepts for its clients. FERI manages EUR 29bn, including around EUR 3bn of alternative investments.



percent of the world's surface is covered by water.



Eurex Exchange turns figures into opportunities. About 70 percent of all listed and centrally cleared euro interest rate derivatives are traded on Eurex Exchange, making us the home to the euro yield curve.

We help investors get more from the market and maximize capital and cost efficiencies. www.eurexchange.com/rates

Eurex Exchange – the home to the euro yield curve.



Matthias Knab

Recently I have seen a lot of negative articles about liquid alternatives, like they wouldn't work, performance is lagging, and they are suffering redemptions. What's your experience and your view on liquid alternatives at the moment?

Frank Umlauf: Yes, they are suffering from a weak performance. If you look at the aggregate of all UCITS funds, they have made 1% a year since 2012. So yes, you'd think that performance-wise that this would not be enough to attract investors, but I'll come back to that.

Now, there is always a certain dispersion in fund returns, and investors might think, "OK, let's do with UCITS what we are doing with private equity as well where we aim to just invest with first quartile funds. So let's use fund of funds because they are specialized in fund research." But if you look at their performance numbers, these are 0% or negative, so no value added.

But, as a matter of fact, **we still see inflows into UCITS**, so looking at the German market there are no outflows. What we are seeing is that the number of funds stays at the same level in our database at about 1000 strategies. That number has been stable for the last two years, with probably a 10% turnover within that universe, so funds closing and new funds coming in.

But the overall asset size is still increasing. In fact even, with the rather low return figures, interest from German investors has increased materially over the last 15 months. They are still looking for a substitute of government bonds, and what they first have done is investing in illiquid alternatives. So they added to their real estate allocation, they went into infrastructure, at least they say they want to, but investing in that sector is not so easy. We can't really say how much real money has been flowing into infrastructure, but the effort is still there.

So on the one side investors went illiquid, and with bond rates coming down even more or going negative, what's left then? Well, with bonds close to zero, then perhaps even 1% in liquid alternatives is attractive, also because it is actually liquid. We are talking here about daily or weekly liquidity.

But what we still see is a certain **mismatch of expectations**. People really need to be very clear and aware what types of characteristics they are really looking for when they talk about substituting government bonds, because it seems some are asking the impossible, demanding that their new investment should be liquid and also capable of acting like a fat tail hedge where you win every time there is stress in the market, while during all other times it's paying you out a premium. I mean, if somebody has something like this, they will probably keep it for themselves and get very rich themselves...

So in my experience some investors are confusing what absolute return / liquid alternatives and hedge funds can deliver with the type of behavior of government bonds were offering in the past. These type of mismatches then always lead to some form of disappointment as people expect that if everything else goes down, absolute return must perform, and if this is not happening, they are not satisfied.



Matthias Knab

So what educational message that you are trying to bring across to those investors?

Frank Umlauf: Investors must be clear that **on aggregate, hedge funds or liquid alternatives strategies have a short volatility profile.** I mean, you could replicate them pretty well with equity market beta and volatility risk premium. These two things explain 80% or more of the return of hedge funds in aggregate. But this also means that ex-ante it is clear that when there is stress in the market, you will make a loss.

Therefore the real question is if there are certain strategies available that have a different profile. If you look across the strategies, what leads to this short volatility profile are often strategies which have “arbitrage” in their name, or certain long biased equity strategies as well. And then strategies like market-neutral equities are pretty uncorrelated over time, or you have CTAs that have a certain convexity. These are two strategies that will add some value in the overall portfolio.

So to minimize this expectation gap, we try not to put a bucket in the asset allocation that's labeled hedge funds or absolute return or anything like that, because when you do this, investors will then start comparing these strategies and their behavior with the other assets they have, which in the end will widen this expectation gap. We think it's better to introduce what we call a second level of **asymmetric strategies** in the strategic asset allocation. This means we try to find something that has a different profile to the managers the investors will already have in his portfolio, which will mostly be long-only equity, long-only credit or bonds. Along with this second level we also introduce a medium term allocation decision.



So if equities are pretty expensive, as they are for example in the US market, you can take out money there, and while in the old days you would then have been out of the market, now you could take the money and put it into long/short managers for US equities or market-neutral managers. If now you are wrong with this kind of decision, the opportunity cost is lower, because you are still invested, but you just switched market risk against manager-specific risk. And your expectation is linked now only to equities. If then, for example, the equity market and the traditional long-only managers are losing 20% and your long/short managers are losing only 5%, most investors would then be pretty happy with that outcome. If the absolute return block would be losing 5% and equities losing 10%, then the case would be weaker, of course.

Still, this type of allocation will give investors more flexibility, and we think that's how the industry is moving forward.

Dr. Thomas Maier: I agree with Frank, there are certain misconceptions which are creating challenges. It's generally still the case that investors expect hedge funds to deliver alpha without any dependence on any markets.

So the question is actually what alpha is. People tend to think that alpha is real propensity or characteristic, so something per se, but we have to make clear that alpha is in fact something which is not yet explained.

Alpha is not a return source per se, it's something which is just not explained so far by simple models.

In our view, we should always try to **persuade investors to seek hedge funds that offer them certain types of exposure to market inefficiencies, trading techniques and alternative betas rather than this elusive alpha.** Most of the times when people talk about alpha, it's actually more or less a statistical artifact from doing an often too simple linear regression. The model they are using is nothing more than a one or two-factor model of traditional asset classes. So this is a major misconception and problem for most investors to identify the real return sources of hedge fund strategies.



Dr. Thomas Maier: By definition, alpha is more or less just the final result of a regression based on historical return data. If we can completely explain the returns, there is no alpha left. And vice versa: A high alpha does not tell us necessarily that any skill, knowledge or strategy was involved in creating the return stream. A high alpha means that a large part of the returns is not explainable by the used factors and the model. Therefore **the historical alpha is never a signal for future alpha.** It's just statistical artifact and if you use the proper and right model, you can explain every return source either by the market inefficiencies or the alternative betas, i.e. the actual return sources.

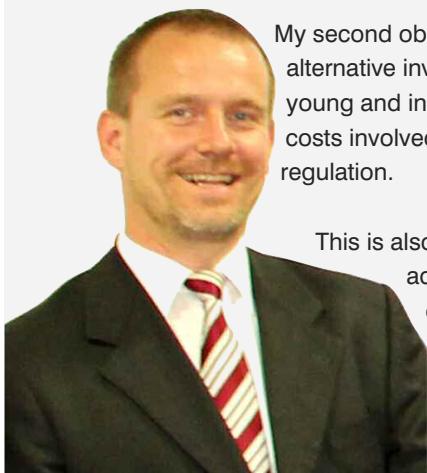
When we analyze hedge fund strategies, we actually look for funds with low historical alpha, because a high alpha means we cannot explain their return source. We look for funds maximizing risk-adjusted returns und correlation measures in the future, not in the past. Of course, this concept is sometimes hard to explain because many investors don't understand why we are not interested in what others believe to be the holy grail of investing – alpha, but from our perspective, we want to know what the fund does, and this means knowing where the risks and the returns come from. So we want our model, if possible a non-linear model, to be built on those factors explaining the performance stream as accurate as possible.

And, as Frank already said, it's actually true that most of the aggregate hedge fund performance is really explainable by traditional market factors and by being short volatility.

Actually, the latest research report published by Credit Suisse on the hedge fund universe analyzed the average market exposure of hedge funds through traditional asset classes, in particular world equities, and it has been shown that nowadays hedge fund typically participate more-and-more when the market is down and they participate less on the upside of the market than before.

If you think about it, this actually means that on aggregate, **the average hedge fund provided negative alpha** over this period. Obviously in such studies you always also have to deal with issues like selection bias, backfill bias and some other statistical problems here, but nonetheless this also supports our view and efforts that clients probably need to think differently about alpha and beta and help then realize that alpha is no longer the target, the target should be real return sources instead. Thus manager selection and strategy selection has become ever more important.

Apart from this fundamental and secular observation, I would like to share two current trends in the hedge fund universe which might be interesting for you and our discussion here as well. The first one is that we see **more-and-more American managers launching their successful strategies in UCITS wrapper structures.** We believe it is helpful for investors when the universe of investable hedge fund strategies becomes larger.



My second observation relates to the ongoing concentration process which is still going on in the alternative investment industry. Large managers are attracting more and more assets, whereas the young and innovative managers are almost no longer able to attract any new assets mainly due to the costs involved when setting up their whole business, creating their fund structure and fulfilling all the regulation.

This is also something investors should be aware of, because there is a lot of statistical evidence and academic research pointing out that larger managers typically tend to be closer to the end of their lifecycle and often no longer provide real additional return value-add. I will avoid naming any firm here, but we find that the **younger and smaller managers are providing better risk-adjusted returns by more or less any measure.**

Frank Umlauf: If you really do not understand the value and return drivers, of course the only thing you can do is to minimize your headline risk by investing in the big funds. So from that perspective this concentration process you mentioned is nothing other than another indication that a lot of investors are not able to understand what's happening.

What needs to be clear is that hedge funds or liquid alternatives are not an asset class. They are a pool of different strategies with so many different value drivers, to fully understand this universe is way too complicated even for the average institutional investor. So what happens is that even when some of these investors work with consultants or advisors, quite a few will just invest into the same known names, because in the end this is where their peers have invested and it minimizes their headline risk. However, this is not the ideal way to invest.



Markus-Alexander Flesch: Thomas, regarding your earlier comments about the deficits of the larger managers, I think some of that is explainable because they face a natural capacity issue in the market. The larger they are, the less they are probably able to explore all their different ideas. Smaller hedge funds can operate in small niches or different strategies where naturally they will not necessarily face such capacity issues. So just from that side, the smaller managers have more return potential than the bigger ones.



Prof. Dr. Luis Seco: This is a very interesting discussion and much to my liking. I am a mathematician by training, so I have spent a lot of my time analyzing statistical return data.

The hedge fund space has a very serious problem related to the fact that a lot of the screening for managers and a lot of the “research” (i.e., understanding what managers do) is based on a single number that the managers report once a month: the return. And it's virtually impossible, to find anything meaningful using this approach.

Take the concept of beta, for example. When you just get a monthly return number, you look at their series of monthly returns and then you perform some logical mathematical calculations to get an idea what the market exposure of that manager is. This is what beta is, it is your best guess at what the market exposure is of that manager.



Dr. Thomas Maier

In practice, the concept of beta is often misused and misunderstood. Instead of using a best-efforts-estimate of the expected beta, e.g. by looking at long-term correlations and implied volatility, in practice beta is calculated as a backward-looking number on the recent few months. Forward looking beta to whatever index or asset class, however, is a much more useful tool to determine market dependency of an asset or a strategy.

Prof. Dr. Luis Seco: No, I disagree on that one. I think mathematics has no chance here, whether it's past or future, that beta is just impossible to understand, if the only numbers that you are given are monthly return numbers.

One thing that I explain to all my students is the concept of return is a mathematical construct, it doesn't exist in reality. It's something mathematicians recreate to be able to understand something.

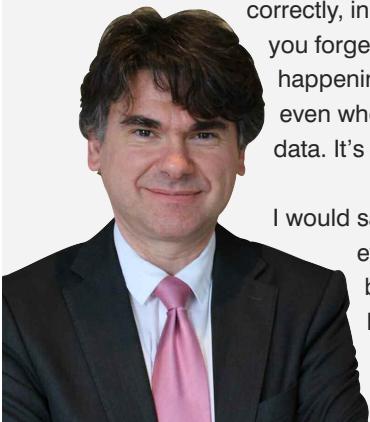
Interest rate is another one. Interest rates don't exist, what exists is the price of the bonds, but if you want to understand the price of the bond, that's relative to other bonds, and their interest is what tells you that.

Hedge fund portfolios are too complicated to understand from a data series of one number per month. You have to go to the transactional data. We have been doing this for ten years now, on a lot of funds. When you look at every transaction that hedge fund is doing, you can develop analytical tools to understand where they make money and where they lose money, and why. I come from a world where we run all our clients' money on a managed-account platform, so we have access to virtually all relevant information.

Their **return information is of course important, but it's a massive compression exercise from where it is hard to extract a meaning**. You are getting just a summary of thousands of activity points cumulating to one number. It's impossible to revert that.

By contrast, imagine you get to see everything the hedge fund does, what decisions were right, what decisions were wrong through the right analytical toolbox, you get access to what people call alpha, except it is not alpha anymore, because alpha and beta are statistical numbers, but there are no statistics involved here – they are direct analytics. Following this approach, suddenly you have a tremendous tool to do manager selection and portfolio construction.

The numbers Frank mentioned when he talked about the returns of liquid alternatives and UCITS were, as he pointed out correctly, in aggregate. So I agree with Frank, in aggregate things are actually not that interesting, but if you forget the aggregate and instead are able to go into the singularities, there are fantastic things happening there. There are fantastic hedge funds doing fantastic things, but the return numbers alone, even when they are good, won't tell you that necessarily. Rather, you have to go into the transactional data. It's a different analysis, but at the end of the day you have a very potent way of investing.



I would say that in the current environment, the hedge fund space is more relevant for investors than ever before, but you need tools which are better than the tools you had ever before. Generally, I believe we are in an environment where traditional passive investing in asset classes or silos like bonds, stocks, real assets, infrastructure etc. is going to be challenged by markets that lack direction.

Frank Umlauf: I agree that in theory, this is a good approach. However, in practice, there is probably no way to get all this transactional data from the complete universe of hedge funds in order to make your manager selection. That's one thing.

But then the real challenge is when you are starting to research those funds that there is a much higher dispersion between the managers. This in fact makes it much more challenging or even dangerous in a way to select managers in this space, at least it will be much more difficult than selecting traditional equity market managers. Those managers will have 95% beta, so if they get their 5% alpha wrong, the effect will be negligible, because you still have the beta. However, if hedge funds get their trades wrong, this will be the opposite way and you as an investor can get really hurt.



This is why in **alternatives manager selection is the main risk**, and something people hugely underestimate if they go out and say, "Okay, I will select one or two managers." Your probability that you will end up successfully with such a portfolio is much lower than in your traditional space, and this is something all investors need to be aware and have to deal with.

Of course there is always somebody who is making some outlier return, but the probability that you will find them at the right time is very lower than in the traditional world.

Lutz Klaus: Luis, my favourite professor said once, "If you don't know where you are heading to, you shouldn't be puzzled when you end up somewhere else." So I like your idea of going into the transactional data, but I also wonder, what do you want to detect? What are you looking for if you see the transactional data?

For example, one of our multi-asset funds, the Tungsten TRYCON Fund, has absolutely zero correlation to anything. It's in 40 different markets, equities, bonds, FX and volatility. It is based on artificial intelligence, is fully systematic, globally diversified and it rebuilds its positions each day. It's not a high frequency fund, but can change direction each day. It's totally non-correlated to any primary market. No factors to equities, hedge funds, bonds, and that is reasoned by its strategy.

But for any investor, it will always be a black box, it's artificial intelligence. Even we don't know why it sometimes changes its positions, although we know each transaction. You will never find it out, hopefully. So could we give you the transactional data? Yes, but you wouldn't see anything. The only thing that you would see is that is uncorrelated to any asset class. It could be long today and tomorrow it's short, and it doesn't have to do anything with the direction of the markets.

So will transactional information help you? I don't think so. In TRYCON's case, the traditional fund analysis would be much more helpful for investors.

Mathias Knab Can you tell us more about that fund?

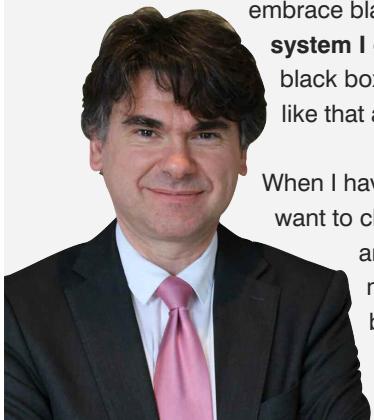
Lutz Klaus: Sure, the revised system of the Tungsten TRYCON Fund is now nearly three years old. We have done now more than 15,000 trades, so more than 15,000 bets, with a hit ratio above 52%. That might not sound much, but please you allow me to add the following comparison. The bank on a roulette table, which has two zeros, would have the same hit ratio. That's a lot. Who doesn't want to be the bank in a casino? As Investor in the TRYCON fund, your chances are the same. And since the system is self learning, the hit ratio gets better and better.

Here is my take: If you analyze this fund, you will find it has a 6% p.a. return, with a volatility below 6 – so a Sharpe Ratio above 1, which you like. Next you start analyzing the returns – daily, weekly, monthly, and you will see zero correlation. Next, you talk to the manager. He explains you the basics of the system, as far as he can go into it, and then it's up to you as an investor to decide whether you trust this guy and his system, which decisions you cannot understand. Will Tungsten TRYCON be able to deliver the same for the next three years will be your question. Analyzing the transactional data will only prove you once more it's non-correlation, but it will unfortunately not answer your question. Actually, bad for us, since we have to find other ways to earn your trust.

Prof. Dr. Luis Seco: I need to explain this, because maybe you misunderstood what I meant. You said that if you give me the transactional data, I would see nothing. Maybe you have never worked with a platform like ours, so please allow me to fill in what we will see based on the transactional data.

I will of course see and also verify your hit ratio of 52%. That's extremely valuable and it's a very good parameter. I will see the zero correlation to the market. I will also see if your returns are coming because of the smart decision you made six months ago or because you make smart decisions everyday. All of that comes when you have transactional data, so you can't say that it will tell you nothing; it will tell you a lot of things.

Let me also explain that we are fine with black boxes. We have many of them and invest in managers with black boxes. So we embrace black boxes, they are not a problem or challenge for us. And **also from a black box trading system I get the information that I want, just like from any other manager**. Specifically, how does the black box behave in certain market conditions, what are the risk drivers, if any, what is the hit rate, things like that are very valuable and extremely important, and you can't get it from monthly returns.



When I have the transactional data, I can get all of that. You tell me your hit ratio is 52%, but guess what, I want to check, and then I see that you are right, it's 52%. You tell me it has been improving over time, and I can see that as well. So now, when you say it's a challenge for an investor to find trust in a manager like you, I can tell you from the investor side that trust becomes a lot easier when it's being independently verified. You see what I mean? So, from my perspective as an investor, the transactional data and their analysis are indeed very valuable.

Dr. Thomas Maier

Lutz, I want to offer a bet to you. You give me the transactional data, the daily data, and I will show you a certain positive average delta to many risk-premium inducing asset classes you have invested in, unless your track record is negative so far.

Lutz Klaus

I take the bet.

Holger Knauer: We had a lot of discussion about data, and as you can imagine, this topic that is extremely interesting for us as a Big Data fund, of course we think there is a lot of value in data.

I was recently at a conference in New York, and for example, there was an American hedge fund manager who was asked what he would like to have the most or what is he searching the most? And he was saying data from Europe and from Asia. As we know, in the US there are a lot of companies focused on collecting data and selling it to hedge fund managers. You can in fact get the impression that the whole sky of the US is full with drones, flying and counting all over the place, whether it's parking lots of Walmart, whether it's truck traffic or oil tanks, checking even how full they are in order to be ahead of the curve before the crude oil inventories get published, and so on. Of course, this is a little different in Europe, where for example we also have other regulations for data storage and also data security.

But there is also a lot of data which comes out from the Internet, which is so far hardly used by the fund industry. One theory from Citibank was that asset managers in general still believe in the traditional ways and have problems in going towards new industries and new approaches.

Citibank has a smaller subsidiary, which is not that well known. When Citi recently wanted to hire IT people, they first were searching for the Citi Corporation, and unfortunately they found out that nobody wanted to go and work for Citi. They then put out the same job profile under the smaller company, and suddenly they got a lot of interest in the subsidiary.



That means attracting new talent has become very difficult for the big banks and for the larger, older and known asset management companies, because what they provide to those talents doesn't seem to be attractive anymore.

And from my personal perspective, these people that have developed the approach of working with large data mostly don't have a traditional background. They come straight from university, having studied IT, and may start with doing something quite interesting like looking at social media and trying to guess the next Academy Award winners, and they got it quite right with nine hits out of ten.

Most people have a certain misconception what Big Data really means. People just think it about a huge, massive amount of data, but that is actually only partly true. Big Data is predominantly about unstructured data. If you have data in a table, in a structured manner, it doesn't really matter how large the amount is.

The interesting thing is that unstructured data is now available everywhere. Over 80% of the data we use is unstructured, so we need to filter it out and in a way assess it. We have to try to understand if there is a meaning behind the data and if you are trading stocks, whether it has something to do with a certain company or not. For example, a new product of Siemens is going to have an influence on the stock price, while a piece of news that they are just moving their offices in Munich would be noise, it's not interesting at all. But if you have the right data and do the right analysis, I think this is one of those niches where you really can find interesting opportunities to create performance, whether you call it alpha or something else is a secondary discussion for us.

Prof. Dr. Luis Seco

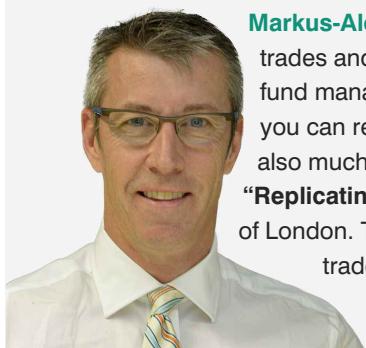
There is an interesting fund, based in Asia, that specializes in "front running" the trades of housewives. These housewives are very educated and manage the household money, so they are the ones who do the trading, but they are not investment professionals.

This hedge fund finds out the sentiment amongst the housewives of the country and then trades before the housewives. It's not about investing in good firms or bad firms, even if they invest in bad companies, they make money by anticipating the housewives trades. This is the small data version what Holger talking about, isn't it?

As you can imagine, this fund has very limited capacity, but these things do exist. Again, it goes back to the data analysis process that I mentioned earlier, once you know why these trades happen, why these returns occur, then you have a better sense about the longevity of that profitability.

Holger Knauer

Let me add that capacity-wise we are not that restricted, because we only trade the DAX index and DAX futures. But I can imagine to do this also in small caps when you have the proper resources.



Markus-Alexander Flesch: Luis, coming back to transactional data, if you ex post analyze the different trades and the performance of the asset managers, I wonder where is now really the value of a hedge fund manager if at the end of the day you find out the combination of factors and strategies through which you can replicate that hedge fund return? And not only that, by using derivatives you can probably do it also much cheaper and much more efficient. Back in 2006 Eurex proved this by issuing a study called "**Replicating Hedge Fund Returns Using Futures**" jointly with the Cass Business School, City University of London. This is already a great piece of research and I can assure that 10 years later the environment to trade these strategies improved significantly.

Prof. Dr. Luis Seco

Yes, Markus, you are absolutely right: if a hedge fund can be replicated like that, you don't want to invest in it. Investing is a difficult task. The investors need to use the very best tools available to them.

Matthias Knab

Investing is easy; timing is the difficult part.

Prof. Dr. Luis Seco: You are right, so this timing decision is a key component of the investing process. I can see this looking at the hedge funds that stand out, they actually do very interesting things, things that cannot be replicated by just throwing together a salad of indices.

Under these circumstances, hot-button issues like fees become less relevant because now you are buying something very precious, even after fees. You also know that these good performing funds do not exist in big numbers, so maybe you can justify that it's worth a little bit more.



Lutz Klaus: That's right. I love the statement.

I want to come back to what's going on right now in the investment industry. Many Investors are trying to get rid of their government bonds, for what reason ever. It might have something to do with the zero or negative interest rates. Then they looked for a replacement of the bonds. Infrastructure and real estate were the first shots. Those are very long term Investments, so you will need some time to evaluate how much the return at the end really was and whether it was worth the replacement. Way to often these decisions do not end up well.

Now, they are onto their next step. They continue to reduce government bonds in the portfolio, and replace it with risky assets, Emerging Markets, Equities and so on. Additional, they are looking for Alpha. But Alpha does not change its ugly face in these times. It still is a zero-sum game between investors. There's no economic value in it per se, it's just a zero-sum game. *And Alpha will not get bigger and it will not be easier to find, just because more and more investors are looking for it.* So investors felt trapped by zero rates, but they jump into the next trap, at least 50% of them.

In my view, many Investors are acting very dangerous right now. They are looking for equities, for more risk in the portfolio. And they are looking for alpha which only exists for 50% of the investors, at best.

This behavior is not rational, according to investment theory. The efficient frontier has come down and moved to the left, which means, taking the same risk as before, you might end up with less return. The risk free rate has come down as well, in Europe its even negative. The result of this change is – from theory – that your capital market line touches the efficient frontier

much more to the left side. *Your efficient tangential portfolio, the portfolio anyone should be looking for, because it has the highest return for a given risk, has moved towards the front end of the curve.* It is a low risk portfolio. A portfolio that most probably contains more bonds and less equities.

If you want to earn more, you have to buy more of this portfolio. And if you have return targets above 3%, then you have to invest it with leverage. That would be rational and is nothing bad. But investors do not like leverage. They prefer to invest in a less efficient portfolio with more risky assets. Unfortunately the difference between the returns of the levered optimal portfolio and the higher risk portfolio – we call it the **beta efficiency profit** - is much bigger now in this zero rate environment.

Furthermore, the optimal beta portfolio is a much better base for any kind of additional alpha investments if you are looking for alpha.



I understand investors selling their two year Bunds. In my opinion there is no risk premium inside, so it won't belong into a beta portfolio. But to replace it with equities and to accept the much higher risk is not smart here, because you are at the mercy of equity markets. Equities can easily fall 50% or more over your investment horizon.

So, first of all, **before you do any alternative investing, build a base portfolio that's working, that doesn't surprise you on the downside**. Then you are setup for more risk. Next lever it up, to the risk you want to take. And the last step is to find some alpha or alternative beta or just your favorite asset class and replace pro rata parts of your base portfolio. But way too often we see this last step first.

Especially now, in the zero rate environment, its time to rethink your whole portfolio. It is just theory, but it's good Nobel prize winning groundwork, so do not condemn it too early. Practitioners should not rely too much on their alpha ability. As Frank said, if you get Euribor plus 100, that might be ok to accept.

Dr. Thomas Maier: I agree from a theoretical point of view, that's actually true, especially what you said about the capital market line and the **Sharpe Ratio**. **Nonetheless, Sharpe Ratio should never ever be the target variable for new fund additions**. When investors want to diversify and want to add a further investment, one should look at correlations and expected returns. Sharpe Ratio can be the target variable on the total portfolio level, but is never to be maximized on a single investment level.

But I would add that there is still something going on in the market which can eventually lead to even more disastrous results, and this is the allocation to what we call **fashion premia**.

For example, nowadays people try to data mine more or less every factor and every market and come up with some premia which, in some cases, does not even rely on any risk.

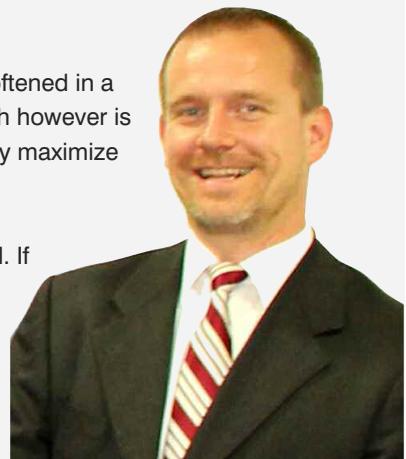
In order to create a viable and stable premium and therefore a positive expected return, one has to make sure that there is a **real non-diversifiable risk** behind it. Otherwise the underlying factor might have produced positive returns in the past, but will probably not do so in the future.

Quite a few factors are now coming up called low beta, sometimes disguised as low volatility factors. Meanwhile, there is a lot of academic research out there that says this low-beta anomaly is only relevant for the last 10 years from an expected returns points of view, but not if you go back longer in time, so it's actually just the data mining that leads you to think that low volatility or even low beta will provide you better returns.

For low vol, it's a little bit more complicated because high volatility stocks also typically exhibit lottery preferences and therefore induce lower expected returns. In practice, however, a high market risk must lead to a higher expected return in the long run, therefore in expected value. As expected volatility increases in expected beta and vice versa, the low vol anomaly is almost the same as the low beta anomaly.

As the expected return argument does not really work, the low beta anomaly is nowadays softened in a way that the current claim is that low beta or low vol stocks maximize the Sharpe Ratio, which however is an almost obvious tautology: As low beta and low vol stocks tend to have lower volatility, they maximize the risk adjusted returns if you take volatility as a risk measure.

However, if the goal is to maximize the Sharpe Ratio, one should not invest into equities at all. If one really wants to have exposure to single investments maximizing the Sharpe Ratio, invest in bonds, invest into rates, invest into something which is safe, but do not invest in equities at all.



It is highly likely that low beta factors and many other fashion factors, in particular those relating to certain quality criteria, will disappoint many investors from a return perspective. The fact that many products relying on these factors nowadays increase in AuM makes this problem even worse. At the end, it is risk, not the avoidance of risk, which is paid for in the long run. The art is to allocate into really independent risk sources.

Frank Umlauf: I would say since 2000, or since the end of the 1990s, we are living in a world where fundamental investing has just been fading away over time. That's a function of central banks' actions which also contribute to the rise of passive products and ETFs.

And this unfortunately also to some extend contributes to the lower returns and decreasing alpha on the side of hedge funds, because in general hedge funds are pretty much fundamental investment strategies. What's happening since a couple of years has put investing onto a path where it's no more about finding something that is undervalued and attractive, a lot of the investing that's done today is some form of momentum investing, or because some algorithm has put on a position. There are investors in the equity market that when they step back and rethink their position, as Lutz was suggesting they do, they don't really want to be in the equity market looking for a bond proxy.

Also Holger mentioned it just now, people out there are doing algo trading, but they don't have a clue about what kind of value is attached to their investments, or at least they don't care about it, it's not part of their process.

And this leads us to the assumption that **after the next big fire we may have a totally different world**. The next fire could greatly diminish ETFs and other passive ways to invest, and we may end up in an environment not unlike the one we had before I came into this industry. Back then, as my first boss told me, they didn't even had any benchmarks, and research reports were not labeled with buy, hold, sell. They had to come up with their own view and decision about their investments.



When will this happen? I don't know. Some people say when the return on investment is crossing the cost of capital, then there will be a moment where all this misallocation of capital will become visible, but I am pretty sure that after this we will have a totally different investment world.

We have seen this once in the run-up of the tech bubble with all the value guys getting decimated and viewed as dinosaurs, and afterwards we had one of the best periods for value investing. And this will happen again.

Markus-Alexander Flesch: I just want to warn people who still may assume that government bonds represent safe haven, as the risk-return profile is somewhat distorted and the return is not paying for the excessive risk taken.

Secondly, from my observation "Alpha" expressed in terms of excess return is a very marketing-driven concept used by the hedge fund side to try to differentiate themselves from the crowd, particularly when it comes to the money rising process.



Lutz Klaus

I disagree. What I was trying to say is, first of all, you are building your portfolio that has the highest Sharpe.

I also disagree with Thomas, because as an investor, I am obliged to look for the portfolio with the highest Sharpe, because I have to act economically. Like any other business, I try to maximize my output, divided by the input. Anything else is waste and you could be replaced.

Dr. Thomas Maier

Maybe you misunderstood me – you have to look at the portfolio Sharpe, but not at the Sharpe of the marginal investment.

Lutz Klaus: Okay, agreed on that.

The investor is obliged to maximize output through input. Your input is not the size of the money, but it is your risk, so return to risk is the ratio one has to maximize.

With this in mind, imagine the optimal portfolio had a volatility of 2,5% but you can bear 5% risk – which means 15% draw down (three standard deviations) when get really really bad – what should one do? You could afford a leverage of 2. Is that dangerous? No. It would be more dangerous to buy 30% equities and hold 70% cash. Is leverage for all investors suitable? Yes, but some might need external fund managers for that. It's our business to service clients need by the way.

You don't get broke by a wrong bet, you get broke by the wrong stake in it. Leveraging a portfolio with 2.5% volatility to 5% is pretty much ok with a 5% risk limit. An equity ratio of 30% might be too much. And remember that most companies levered themselves. The Golden rule of balance sheet is having 50% credit. You don't like leverage? Then you should not like equities. And what is with your home? You bought it with cash or financed? That's leverage. And it's ok, because a home is good investment. And the highest Sharpe Ratio portfolio is a good investment as well. Fancy style alpha on equities maybe not.



The most attractive alternative investment is to build a perfect Beta portfolio and find some real uncorrelated alpha ideas in addition. If you would construct it equal risk, so that each risk factor, including alpha, attribute the same risk to the portfolio – that would be perfect, because you have the most robust diversification you can build. An equal risk portfolio is a suitable solution for nearly every investor, who has limited risk budgets.

Therefore, it is urgent time for investors to rethink their base portfolio. If your base is working, than you can afford finding alpha in addition.

Holger Knauer: I would like to come back to Frank's comment on ETFs and passive investing, and I fully agree after the next big bang this is going to change that industry dramatically.

However, what I really cannot imagine that it's going to be back to the '60s because our world has changed so dramatically within that period.

In that period, you could, like André Kostolany recommended back then, buy some equities and some sleeping pills, and sleep for 10-20 years. Now-a-days, it's not even the companies' annual report that counts, but the quarterly, monthly results, or the daily collected numbers that drones are telling us. So, in order to get back to the value-centric way of investing like we had in the '60s and '70s, we would also have to get rid from our current way of accounting and controlling, not only in finance and asset management, not only in investing, but in many other parts of our society. But, at the moment I really see that the change is actually taking an extremely different direction.

At the moment, **we are living in another massive IT revolution, but I don't have the feeling that a lot people are really aware of it.** Big data is of course part of that revolution, and more and more people have heard of it. 90% of the data that is stored at the moment was created in the last two years. I am talking with many wealthy individual investors, and most of them tell me, "Of course Big Data; yes, we are dealing with that too."



But it's not only in finance, you have it in the real estate business, in the medical business, of course cars and so on, there are so many places where developments and major paradigm shifts are going on that are fascinating.

I also want to go even further what those developments will mean for society. Yesterday in Switzerland there was the votes on the basic income. Last year in Nevada, Daimler-Benz presented the self-driving truck. Did you know that in 28 states of the United States, the highest proportion in the labor force are truckers – a profession that in 5 to 10 years you might need anymore, at least not in those numbers.

Think of the call centers in Mumbai with things like Siri becoming better and better, even understanding slang, you don't need them anymore, where shall these people live?

Matthias Knab

In Switzerland...

[laughter]

But jokes apart, I think you are right in that society will have to address and solve a lot of questions how to live together in the future and how to maintain ethical standards and values like the French "Liberté, égalité, fraternité" which date back to the French revolution in 1790.

The Swiss vote was rejected by 77% (and accepted by 23%). In my view, the Swiss were very early, too early actually, to put this question out to the population at this stage. But for sure, this question will come back and the question of income and equality needs to be solved at some point, not only in Switzerland or country by country, maybe even through a new global social treaty...



Holger Knauer: These are just some of the mega trends and challenges that are going on in the moment. I am always wondering why there is no discussion in society about the things that were going on. If you look at the political shifts that are happening right now in the US and in Europe, mostly to the right, maybe those are reverberations of the beginning of larger societal changes.

The developments I've mentioned will not only hit lower qualified jobs but it's also increasingly high qualified jobs. For example, why should you have a surgery with a doctor where you don't know if he has really good hands if you could also do it with a computer that can be enormously precise?

Frank Umlauf: I am a big fan of technology, but my question here is if Big Data and such techniques can be applied to the financial industry just as any other industry? I am actually not so sure about that, because I do think that to some extent the financial industry is a special industry, maybe the only one that can deliver 95% of products which at one point go broke. As we can see, despite such a track record, this industry still exists, so it must be something special.

So what is going on here? If you think about it, we, or any investor, are buying people, their expertise, and we are buying hope that these people will invest and come up with a better product or solution for us. This is what keeps going on and keeps this industry alive.



The other think I want to point out is that if you're active in the current market, this mysterious "market", on a daily basis or with a short-term time horizon is really just **trading emotions**. And therefore I have my doubts if strategies that act on a shorter term time horizon or that are not really linked into some fundamentals will be successful over the longer term time horizon. But, again, it comes down to the environment we have to act in at the moment, with all the Central Bank misallocations and the consequences they create. So, in the short run some of the shorter term strategies work well, because these kind of systems, in my point of view, can much better filter all this noise, and it's pretty noisy right now. But in the environment I described going forward, your time horizon will become longer again. Investors will also not care about benchmarks anymore, because they will just make some absolute returns and profits. There will be no talk about tracking here anymore.

Right now, some investors cannot even cope with a tracking error of 3%. I think a lot of the ways the industry is functioning right now suits to a certain extent the current environment and Big Data fits into this environment, but it's not fundamentally sound. To me, in a way it feels like 2000-something...

Prof. Dr. Luis Seco: Regarding that high percentage of failing products in the financial industry, you mentioned 95%. I agree that it's high. But we are also already now seeing a fall-out from that in the sense that the financial industry is changing now more than ever before, and a lot of that is driven by the regulators. The Volcker Rule has forced certain banks, with American exposure, to dissolve their proprietary trading desks. While these prop desks were the most profitable part of the banks, they were rather very conflicted.

Regardless, the impact is clear. About USD\$4 trillion worth of prop-desk activity is leaving the banks. Guess where that profitable activity is going to go? That's part of the 5% of the products that work. It's just that they were not given to the investors, they were kept by the banks as an internal profit center. \$4 trillion is approximately the GDP of Japan, and the banks can no longer do it because the U.S. regulators do not allow them to do it. That's where, in my opinion, the hedge funds will come into play. Some hedge fund or another will get active in what before was a pure prop desk activity, and some are already doing it.



Frank also said that going forward benchmarks and their role will change as well. I agree, in my view the benchmark of the future will be cash. Interestingly, a cash benchmark is also what the prop-desks had as a benchmark, which is LIBOR +4%. That's the new benchmark and a select group of hedge funds – the 20% -- is delivering that.

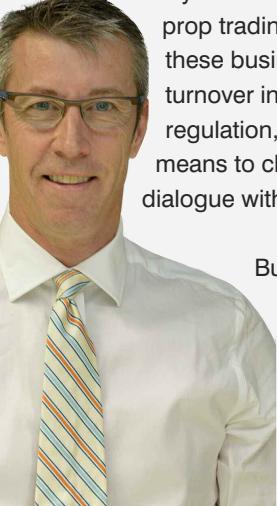
Frank Umlauf: At the end we have always a very small bucket of successful asset managers doing long-only, hedge funds, or wherever. So there is only a small pool of talent, but the problem is that there is no stability in that pool. Winners and losers change all the time. But right, this small pool of talent is indeed delivering this extraordinary returns, this elusive alpha, for a certain period of time, but figuring out who is on the winning side and building a stable portfolio with those managers, that in my view is a big art.



Lutz Klaus

You see, that was the point I was trying to make earlier. Here we are again with all these scientists, artists, alpha seekers, who are out there trying to build this exceptional portfolio that should deliver you cash plus anything. But beta still delivers. Risk premiums still exist, for every investor. Alpha does only exist for every second, at best.

Markus-Alexander Flesch: I agree with Luis that a lot of former prop-desk traders leave the banks because of regulations.

They are now moving on and start doing their own business which could be a hedge fund, CTA, algo or prop trading company. But then, the high costs of running such businesses will affect the longevity of these businesses. Frank had mentioned the issue about the survivor-biases when he said there is a 10% turnover in his hedge fund database. Even from our perspective as an exchange, we also struggle with regulation, since we need to adopt rules and regulation and some of the new regulation, and this often means to change the already existing and well working ecosystem. However, we are still in a constructive dialogue with the local regulator and the college to strike a good balance between all different interests.

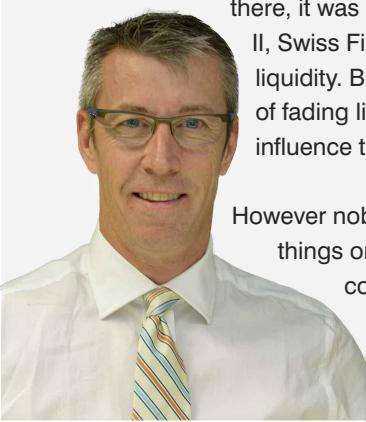
But there is of course no way to circumvent the regulation, we all have to deal with it, and in the end regulation and transparency is good for the market. Even if there is another crash coming, the market will reinvent itself and find a new equilibrium, just as it happened post 2008. New styles and new investors will come to the market, and there will be an ongoing basis for future investments. So, from our perspective, regulation is absolutely necessary in order have and deliver transparency.

Frank Umlauf: That's a good point on transparency, but from my perspective, **the most important thing is actually liquidity**. Something can be transparent, it can look good on paper and you could think everything is fine, but look at these kinds of markets – now even in equities, liquidity is going down. Liquidity is the most critical factor, and any deterioration will hit a lot of strategies.

Investors who are carefully observing the markets are aware of the liquidity issue, and they will then concentrate on other strategies that are perceived as liquid. But then, with that kind of concentration these strategies will also get problems to deliver the same returns as in the past.



Markus-Alexander Flesch: I agree that liquidity is a main concern. When you look at the 2008 crisis and what brought us there, it was maybe under-regulation that brought us there and now it seems that over-regulation, like MiFID II, Swiss FinFraG or Dodd-Frank will be followed by negative consequences resulting in the reduction of liquidity. But this is only one part of the equation, since central bank policy will have another strong impact of fading liquidity and in consequence to higher market volatility. So there are different factors that influence the markets.

However nobody of us is going to change the regulation. The regulator has the power, he imposes certain things on us, and we need to deal with it, as simple as this. And while there will be some negative consequences, I am a strong believer that the industry is very innovative and will address them, therefore liquidity can come back in any other form that maybe you and me don't know at this point of time.

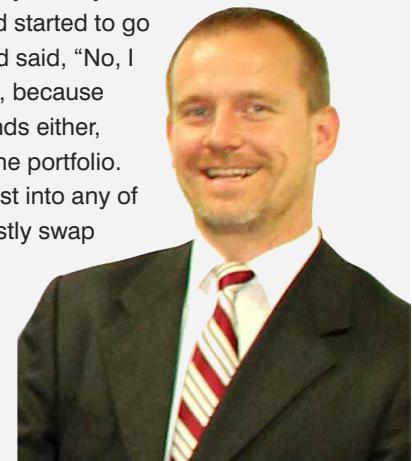
Dr. Thomas Maier: You mentioned the under-regulation before 2008 and the over-regulation we're having now. **Even if markets appear to be over-regulated now, that does not mean they have become safer**. I actually think that the chance of an even harsher crisis than 2008 has increased. Frank has already discussed some of the reasons for that, and I think the risk is acerbated by the everyday decisions of investment professionals of all kinds, for example in the fund selection space or in the equity space, and maybe particularly by people working in banks analyzing credit provisions and credit offering statements for clients.

I think that today, many investment professionals in smaller investment plans or pension funds are no longer really able to focus on the heart of job, ironically because regulation has interfered so much. They have been more or less degraded to just box checkers and they no longer cope with the real economic dimension of their decisions.

To give you one real life example, we had once a client seeking advice in the alternative investment and in particular in the hedge fund space, and you could say he was a very complicated client just as a consequence of being subject to so many different regulations. So he had to comply with the insurance law, the investment law, and some other self-imposed restrictions. In addition tax considerations came into play.

The client wanted us to deliver a defined return and risk profile, we were able to deliver exactly that by investing into a portfolio of alternative investment managers. The client got really excited and started to go through our proposed portfolio, and he went through the first five funds and turned to us and said, "No, I cannot, because of the investment law." He looked at the next three, and said, "No, I cannot, because they are non-compliant with the insurance law," and he couldn't invest into the next three funds either, because those managers could invest into some assets which he is not allowed to have in the portfolio. Despite the fact that we had a great solution for him, at the very end he was hardly able to invest into any of those funds in their purest form. Finally, he still got exposure to these strategies but via a costly swap construction.

It's the devastating reality about regulation that it's really hindering optimal economic decisions: the current over-regulation does not reduce overall risks but imposes a huge bulk of explicit and implicit costs on investors detracting from society welfare.



Steffen Gnutzmann: The news from the German regulatory and tax law compliance front is that, yes, Germany right now is a very difficult market for certain funds, especially tax law wise. However, there is an initiative in the German Parliament right now, which - as we believe - will pass parliament in July of this year, with the effect that from the 1st of January 2018 onwards, many of those difficulties and restrictions impeding the decisions of your fund investors right now will disappear or at least become much easier. From the 1st of January 2018, especially **many tax law restrictions to the selection of funds will not exist any longer.**



Right now, it is for example difficult for many investors to invest into highly leveraged funds. In the future, we won't have this problem any longer as there will be an attractive investor taxation system with just a few tax reporting obligations and much less cost than at present, for almost all German investor types and for almost all funds that exist globally. So, the good news is that - probably from 2018 onwards - tax law will not hinder your investment decisions in the future.

Prof. Dr. Luis Seco: Thomas had given the example of that client who would not invest in a fund because maybe they were investing into assets that were against the investor's policy, this is actually happening worldwide, and we are going to see an increase of that.

So when I said before that transaction level data helps to make smart decisions, this is another application where transparency is going to be critical. I think we are moving towards a situation where information has to be made available so that investors can manage risk in real time.

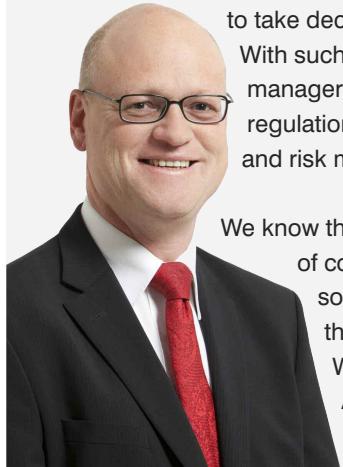
I think we are moving towards a world where information is going to be readily available and investors will have to be equipped to know what their assets are doing and be able to do risk management in real time. And this is not just market risk management, it is counterparty risk management, it is liquidity risk management, or legal and compliance risk management.



I have to admit that I am personally fascinated by this, because it can be done; it's just a change of scenery, so to speak, which is by the way how prop desks used to work.

Holger Knauer: What I find striking is that regulation became much stricter and more demanding at a time when all the financial institutions themselves started to have more risk management, more reporting, more controlling.

It seems like the regulator is starting with speed controls at a time when we have already traffic jams. What's the situation of a regulated investor like an insurance company, as in Thomas' example? There may be three people who are able to take decisions but on their back are 10 or 12 controllers that want reporting and want to have information. With such a setup, those few responsible decision makers really don't have that much time to look at new managers and new strategies, because they are busy making sure what they do comply with all regulations, and then they are also responsible to fulfill the reporting requirements that all the controllers and risk managers in the back end have.



We know that regulations cannot foresee any future catastrophe. Yes, we had the big mess of 2008, and then of course politicians and regulators needed to show that they are active, that they have done something, because the voters, the ordinary people were aware of the problems and suffered from them. I also remember politicians saying they want to have less system relevant banks, for example. What I see in the daily business is that some big banks have become even more system relevant. At least in that respect I see that the aims of regulation were not fulfilled at all.

Dr. Thomas Maier: This concentration is visible all over the financial industry, not only in banks. By the way, in Germany 8 or 9 of the 10 largest banks nowadays are at least partly owned by the governmental authorities. So just looking at the banking sector, we already are a socialistic country.

There is also a lot of concentration going on in the insurance sector, there are takeovers and a lot more focus on the big players. Also within pension funds, family offices and other kind of institutional investors you see a concentration process going on.

And most probably – despite the high level of regulation – given the low interest rates, it's nowadays even more probable that the taxpayer has to pay for some of those liabilities that either insurance companies or pension funds have on their books. It will not really be a surprise for either of us to say that those investors, if they have an internal rate of return of 3% or 4%, which is still true for many pension funds, will not achieve that rate if they have mainly government bonds in their portfolio. So this is the fact, everybody agrees on it, over and over again, but still, nothing happens. It has already been like this for the past two years and it will maybe go on another two, four or five more years, but there is a big bang awaiting us, unfortunately there is no other way out.



Matthias Knab

Despite that rather bleak long term outlook what type of investment opportunities do you see in the current environment? Where or how should people invest?



Dr. Thomas Maier: In this context let me come back briefly about Steffen's comment about the upcoming changes in tax law which will hopefully end the punitive taxation of the so called non-white funds. We are taking this as a starting point to promote one of our longstanding hedge fund strategy portfolios. In this product several equity long-short strategies of niche managers are included. Investors can get exposure to this strategy and can do this by just investing into the fund without having the need to invest into a certificate around it or into a soft structure. The upcoming changes in the law will facilitate to get exposure to pure hedge fund strategies from a tax perspective.

Frank Umlauf

But then this new fund will still be classified as a hedge fund, no? Because this is the second big issue; it's not only about taxes...

Dr. Thomas Maier: Yes, from a regulatory point of view, there are different layers, you are absolutely right. But at least from a tax perspective, the law changes Steffen referred to will help a lot.

When it comes to single hedge fund strategies that we find interesting, we typically take the approach that we try to find let's call it underlying market opportunities, say the alternative beta, or the market inefficiency, and see whether it's currently attractive in terms of its historical average.

From that perspective, at the moment we still like merger arbitrage, although everybody knows that there are some recent volatile periods behind us, but merger spreads are currently providing an attractive risk return ratio, and therefore the merger arbitrage strategy could be something of interest.

Secondly, from a fundamental perspective, and taking a kind of contrarian point of view, we think that some of the classical, fundamentally acting distressed managers might be interesting to invest, especially when there is a focus on commodity-related credit.

We also consider launching a risk premia strategy which does not include all those fashion factors, because as I already explained, there are so many risk premia products out there building on those factors like momentum, quality, or low-volatility, so we want to differentiate ourselves to build a strategy based on factors which are based on non-diversifiable risk which work in future, not only in the recent past.



Frank Umlauf: For institutional investors the UCITS framework is still the way to go, because they feel comfortable, the security of the four-eye principle of custodian and administrator, so this is something they are used to.



But of course, this will also limit or exclude certain strategies like distressed, etc.,

Investors also have to ask what underlyings in the UCITS framework really have a natural liquidity?

You have to know that, because with some daily or weekly liquid funds you may otherwise run into trouble. Therefore we don't think that things that are based on a credit strategy are suitable for UCITS. Also, most of these funds are having a long credit beta bias, so at the end you are not really getting a lot of diversification.

Therefore, when it comes to the credit space within UCITS, I think it is pretty hard to find any offsetting or differently working strategy. You also very much stay on the same volatility level, so you get the biggest effect on your portfolio on the equity side.

Still, we are able to construct portfolios with long-short, market neutral and other strategies in the equity space that more than double the Sharpe Ratio of an equity investment, and lower the typical volatility of an equity investment by 60%.

Our claim is that an investor can't stay in an equity investment if they have to take a drawdown of more than 10% and it's impossible to do this by working around the beta; you will always stay at levels of 0.35-0.4 Sharpe Ratio with traditional equities.

So the only way is to **exchange equity market risk against manager specific risk, staying in the same underlying**, and this will have the biggest efficiency effect in your overall portfolio.

Which strategies are suitable or what have a positive effect? We think market neutral is attractive, it's pretty uncorrelated, and the good old CTAs, because they can add convexity to your portfolio. If you combine these two, it could be an interesting portfolio.

Lutz Klaus: You are absolutely right about market neutral, but in my view market *neutral has to come with a business case*. Alpha is not a business case per se. It has to positive. You need a positive expected value. Again: It's a casino – and you want to be the bank in it, not the gambler.

We have talked about liquidity, and yes, this is one of the most important aspects that asset managers and investors have to consider. Look at this run into high yield and emerging market bonds. What happens if all those guys run for the exits? We will have a big bottleneck problem probably showing up very soon.

High yield bonds might be an interesting asset class, but you want to be liquid into it. Thanks to electronic trading platforms, it is quite easy to replicate high-yield bond portfolios or credit portfolios just with derivatives – Eurex tradable derivatives, to be precise. It will be important one time. At that time you don't want to be in swaps, owning bank risk – we saw that 2008. You want liquid exchange traded options and futures instead and use these instruments to replicate the returns of credit and high-yield markets. We have a very interesting solution for that at Tungsten with a competitive but young 12 months track record. The replication of the benchmarks works pretty well and we recommend investors diversifying their funds into this solution, before they face the next liquidity crunch.



Matthias Knab What would be the capacity of that strategy?

Lutz Klaus: We could easily handle a few billions in such a strategy and be much more liquid than the high yield manager with the same size.

Coming back to market neutral, our TRYCON Fund is totally market neutral to all markets. And the so important base portfolio, which we believe every investor should have in his portfolio – the perfect diversified long beta equal risk program – we call it Tungsten PARITON, is the perfect antagonist to market neutral alpha.

Both in combination produce Sharpe Ratios between one and two, consistently over nearly three years now. That's a base investment.

Frank mentioned CTAs and convexity. *When we talk about asymmetric return profiles, I always wonder which asymmetry you really want.* Many Investors want to have the right skewed one, so limited loss, but unlimited profits. But everything which is right skewed has a median below the average, that's a problem in a low yield environment. If your average expected return is somewhere around 0 now, minus cost, and right skewed, you will face problem with your clients.

The left skewed asymmetry is pretty unpopular at first sight but very attractive here. Your median is above average. High yield bonds for example are on vogue because of that. You get a nice high single digit carry. From time to time you suffer huge draw drowns, but it's a worth risk to take.

Coming to the point: **Looking for a certain asymmetry might lead you to the wrong direction.** From my view it is more important to think in terms of gamma risk, as you know it from option analysis. Being short gamma, e.g. selling a put option, earns a nice carry, but will hurt you very much in troubled markets. Corporate bonds, high yields and as we said most hedge funds have this short gamma profile, and they are skewed to the left. If you want to hedge these risks in your portfolio, something right skewed will not necessarily help you. Instead you want to be long gamma. That's your antagonist. A long gamma profile.



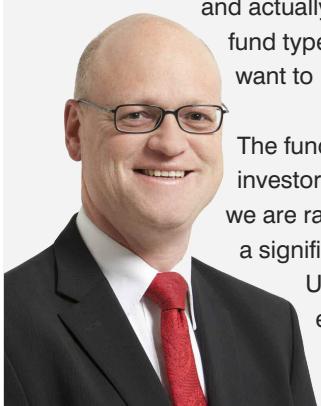
Therefore, I believe, it is very valuable to provide **solutions which are long gamma and do not cost too much carry.** And you get that in volatility arbitrage solutions. You can earn some volatility premium, but you are hedged and long volatility – long gamma - at the time you need it. Volatility as an asset class is going forward in this zero rate environment one of the most important solutions for institutional investors.

But don't get tricked. Most of these volatility strategies tend to be short gamma. We have been one of those managers before. But we changed our view onto it and rebuilt our Tungsten Vegamind fund towards a long gamma profile to better suit investors needs here.

Steffen Gnutzmann: From our perspective, we expect opportunities from the major 2018 changes in tax law which I mentioned. They will relieve the fund industry and investors from a compliance cost and also make it much easier for investors to choose from the whole range of global funds, whether a Cayman hedge fund or a Peruvian long-only fund to a Luxembourg UCITS fund. The tax law restrictions for investors to choose from the global range of funds that are available will be much easier in the future. This is good news and **an opportunity for many fund promoters outside of Germany.**



Holger Knauer: We'll launch our new fund at the end of June called CATANA BIG DATA. It will be a daily tradable public AIF, and actually we don't label it as a hedge fund or absolute return fund. Even though there are elements of those fund types to it, for example we're a long/short fund, it's not really the essence of our fund and so we don't want to be put in those boxes.



The fund also won't be a UCITS, but as mentioned, a registered public AIF which can be distributed to retail investors as well. Basically, our investment strategy is not based what you see looking at the rearview mirror, we are rather looking in front. When we get a strong signal in the form of a high probability trade, we will have a significant allocation into that trade, maybe 10% in one single stock, which could be higher than the UCITS diversification rules allow. As public AIF we have the same tax transparency, we have the four eye principle with custodian and a German KVG, and the fund is going to be daily liquid, because we are only going to invest in DAX stocks and DAX single stock futures and DAX index futures.

Why are we just looking on the DAX? We find that we have great signals in DAX single stocks and on the indices, but also, for example, the future is tradable from 8am to 10pm. That means we have the full Wall Street session covered as well.

We trade that strategy now with own money since November 2015, and interestingly the **strategy performs better now with live trades than the backtesting** we have done. Typically it is the other way round, but in our case, the backtesting was good and real life is even better. We think that many quant managers have problems with the current market situation, but we actually quite like it.

As it trades, your system is getting better and improving itself. That is part of the Artificial Intelligence that is in the system. This has been noticeable since we're live. In six months of live trading the strategy is up 13.5% and the beta versus the DAX, as we only invest in DAX, has been constant at -0.08 over the full period. As a result we delivered a Sharpe Ratio that exceeds 2. We are getting a lot of interest from investors who tell us they haven't seen a strategy like this before.

Matthias Knab

Markus, final word, what's going on at Eurex?

Markus-Alexander Flesch: I want to come back briefly to the topic of "regulations", as being a huge challenge, but as well an opportunity. MiFID II will become effective in 2018, if no further extension will push the deadline much beyond, which I doubt.

One of our major endeavors or projects is the so-called "**Futurization**" of the markets, so the design of former OTC products to their listed equivalent traded through a central counterparty. That means bringing OTC products in a transparent environment and trade it on-exchange, like for example with our 10year swap future or our Variance future on the equity side.

Well, the clearing obligation represents for mid-sized or smaller banks and some end clients an operational and financial burden, beside the documentation that is required. This obligation will and has already changed the world and it will shape the industry. The market still struggles to digest these changes. Therefore, at least from our perspective, the rationale is to come up with or invent new instruments representing the same or at least a very similar risk profile clients have seen and traded in the OTC markets. This creation is called the process of "Futurization" and Eurex is very active to design these solutions to facilitating the whole reporting transparency. I'm convinced that this investment will add value most probably not for the biggest clients, but for other client groups shying away from new additional documentation, new different operational and functional operation efforts. This effectively will be not a new, but a more emphasized business model for Eurex and therefore this regulation at least will add to some extent at least some further innovative power to the market.

Another development which I just feel to be quite relevant for our market is to come up with new breed customized indexes, because we were talking about benchmarking all across the industry, and therefore the index business is something we will jointly foster with our group company STOXX. In a coherent approach we will come up with custom-made index solutions and derivatives thereof to accommodate to the new need of our end clients. New index concepts with almost zero tracking error to the benchmark, but "hedgeable" with standard listed Equity Index Derivatives and a deep liquidity pool seems to be the future.





Markus-Alexander Flesch: Well, from our perspective, back in 2008 the credit derivatives have been very relevant, but they are less relevant for the current trading, due to compression and in consequence of the enforced regulation since. From the exchange perspective this field of derivatives is – although existing -- operationally not that easy, since the interesting part is not the Itraxx Index part, but more the single name CDS market. Clients want to hedge here their single name exposure and require physical delivery, but the universe and the settlement process including the recovery auction is not easy to cope with.

On the other side, FX is of strategic relevance for Deutsche Boerse, though Eurex has already a good solution in terms of listed FX Derivatives, Futures and Options. But now after our acquisition of 360T as a leading market player in the FX OTC market, Deutsche Boerse will become even stronger by combining both worlds – sell side, buyside and corporates, which is an USP since none of our competitors is able to deliver such a liquidity pool aggregating client interests.

So after the full integration of 360T Deutsche Boerse is going to have a very comprehensive FX solution that encompasses the full array of different OTC, as well as listed products. So, as stated, FX is and remains one of our major business pillars and will be expanded in the future.

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