OPALESQUE

Opalesque Round Table Series '13

CHICAGO

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Editor's Note

Chicago: A culture and mindset different from anywhere else in the world

The city of Chicago is largely dominated by CTAs and proprietary trading firms. The proprietary trading firms have migrated off the trading floor and therefore have a very different mindset from most other market participants. **They don't have investors, so they are not worried about things like *"What is this idea going to do for the volatility of my strategy? If I change, am I violating the mandate of the fund? What will the pension board think about my style drift?"*** All they think about is: Am I going to make money?

When you free yourself from the external restraints and just say "all I care about is making money", then it fosters a very innovative and outside-the-box thought process. It has become the dominant culture in the city itself and bleeds over to the fund managers. Therefore, the culture and mindset is different from anywhere else in the world.

The Opalesque 2013 Chicago Roundtable was sponsored by FfastFill, Eurex and Taussig Capital and took place in October 10th with:

1. **Alex Brockmann, Portfolio Manager, TradeLink Capital**

2. **Chris Dopp, Senior Vice President, Eurex**

3. **Emil van Essen, CEO and CIO, Emil van Essen CTA**

4. **Paul MacGregor, Managing Director, Product Strategy (Europe), FFastFill**

5. **Scott Schweighauser, Partner, President, and Portfolio Manager, Aurora Investment Management**

6. **Sorina Zahan, PhD, Partner and CIO, Core Capital Management**

The group discussed fundamental trends and developments relevant for both investors and alternative investment managers:

- **The Field of Opportunities:** Credit, long/short stock-picking, volatility, event-driven, CTAs: best time to invest is when performance is "really bad"

- **Alternative 40 Act Funds**: explosive growth as retail investors start understanding strategy benefits

- **Commodities:** from passive long only commodities to active alpha – can term structure movements predict commodity prices?

- **Market Structure:** Clearing houses to provide capital efficiency through margin offsets, new gateways for SEFs (Swap Execution Facilities) make way for aggregation tools and include swap futures.

- **Risks:** When can 40 Act Funds blow off? Is it risky when pension and sovereign wealth funds start doing more trading on their own? Why is a rising volatility the unrecognized time bomb for most common risk models?

Enjoy!

Mark Melin
Melin@opalesque.com

Participant Profiles

(LEFT TO RIGHT)

Chris Dopp, Scott Schweighauser, Paul MacGregor, Alex Brockmann, Sorina Zahan, Mark Melin, Emil van Essen

Introduction

Emil van Essen
Emil van Essen, LLC CTA

My name is Emil van Essen. I am the CEO of the creatively named Emil van Essen, LLC CTA. Our flagship Spread Trading Program is a discretionary program that primarily trades commodity spreads and has a six year track record. We also recently launched a systematic long/short commodities strategy.

Sorina Zahan
Core Capital Management

Sorina Zahan, I am the CIO of Core Capital Management. We are an asset manager and financial research firm in Chicago. On the research side we do structural research, what I like to call financial de-engineering, and we look at things from portfolio construction to structural analysis of pension plans. My background is in Math and my PhD is in artificial intelligence, so I have a bias towards optimization and modeling.

We apply our research into our asset management side of the business, where we have managed for the past eight years specialty funds of hedge funds. These are mono-asset class, multi-strategy concentrated portfolios. The three asset classes that we cover are equity, credit, and volatility.

Scott Schweighauser
Aurora Investment Management

Hi, my name is Scott Schweighauser, and I am the president of, and a portfolio manager for, Aurora Investment Management. We are based here in Chicago, and are in our 26th year of allocating capital to hedge funds. Aurora is a hedge funds solutions provider, with three primary areas of business: we operate a number of private, commingled funds, both onshore and offshore. We also manage separate accounts of hedge funds for large institutional investors, and we just started a 40 Act mutual fund in March of this year—the Aurora Horizons Fund. Altogether we manage about $9.5bn.

I have been with the firm for 19 years. My partner Roxanne Martino started the Aurora Limited Partnership fund back in 1988 when we were part of Harris Associates. In 2003, we lifted out of Harris Associates and became Aurora Investment Management. We have a staff of 90 people here in Chicago, and we have investments with about 65 hedge fund managers all around the globe.

Chris Dopp
Eurex Exchange

My name is Chris Dopp and I am a Senior Vice President with the Buy-Side Business Development team at Eurex Exchange. Our team is responsible for all of the exchange's relationships with both traditional and alternative asset managers. Geographically, our team covers all of the Americas, including the U.S., Canada, Latin America and the offshore financial centers.

We view our participation in the Opalesque Roundtables as a unique and interesting opportunity. As an exchange operator, our goal is to provide the tools, products and services that the marketplace needs for generating returns and hedging risk exposures. In that capacity, we often sit in an independent and neutral position between fund managers and investors. The Opalesque Roundtables provide us with an additional view into what is going on with both market participants.

Additionally, we talk directly to nearly 100 different CTAs over the course of any given year and managed futures are an important piece of the fabric of Chicago's financial community. This helps us to understand who is doing what, which trends are forming and where the concerns lie. Hopefully, we can explore some of these topics today.

Paul MacGregor
FFastFill

My name is Paul MacGregor. I am the Managing Director of Product Strategy at FFastFill. FFastFill are a technology firm that provides services to around 60 exchange-traded venues globally. That includes connectivity services, trading, risk management, but also post-trade which has become increasingly important for us. Our post-trade matching, allocation, settlement and accounting tools are used by some of the biggest sell-side banks globally.

What's unique about FFastFill is that all of our products are delivered in the cloud. We don't physically deliver any hardware onto client sites or software onto client sites; everything is run out of our global network of co-located data centers.

Earlier on this year we were acquired by the ION Group. ION Is a market leader in principle fixed income trading tools at Banks, and has written gateways to allow customers access to a wide range of SEF (swap execution facility) venues. Also within the ION group are a number of trading, clearing, and settlement technology firms such as Patsystems, Mixit, Rolfe & Nolan and Wall Street Systems.

As the OTC world and the exchange-traded world are coming closer together, both by force of regulation and by the benefits of clearing, we believe we have tools that can help facilitate that process.

Alex Brockmann
TradeLink Capital

I am Alex Brockmann. I am a portfolio manager at TradeLink Capital. I am responsible for the TradeLink Integrated Program, which was formerly known as the DigiLog program, which was a medium term trend following program. Early this year, at the end of January, we made very significant changes to the program, significantly reducing its average holding periods. At one-and-a-half days on average, we have basically become a short-term momentum fund. That also means we are directional in nature, and trade basically all of the asset classes, through the most liquid contracts that we can find, also cash FX.

TradeLink is involved both in asset management and proprietary trading. The company employs about 150 people in both Chicago and London.

Mark Melin What do you see as the investment opportunities going forward, and how does that relate to how your fund or your investment strategy has operated in the past? Have you changed your approach to cope with the changing markets?

Alex Brockmann: As I had mentioned, we have recently focused on short-term holding periods. Based on the research we have been doing for the past couple of years we felt that our particular signal set in the short-term space was very reliable and had been holding up particularly well in these environments, as well as in the past.

The second aspect we focused quite a bit on was efficiency and trading costs. This is to a certain extent obvious when you are shrinking your holding periods and thus increase the number of trades.

Sorina Zahan: We look at three major asset classes; credit and everything that's related to credit, including credit derivatives and credit linked securities; equities and equity derivatives; and then volatility. Our volatility portfolio is biased long, we don't sell necessarily volatility. Our portfolios are fund of funds; we tend not to invest directly, although we manage portfolio overlays.

The credit space has been very interesting for the past one year-and-a-half with a good environment for short term or more trading oriented opportunities. For example, yield curve and rates trading can be very profitable if they are well-traded.

There are also long-term opportunities in credit, for example by providing liquidity through direct lending, especially in Europe in the middle market segment. This is really a three to five year opportunity, if you think about liquidity of the asset. However, in between short term and long term opportunities, i.e. in the medium holding time horizon, I think credit is expensive. It is very, very hard to make money there on an unlevered basis.

In equities we see a bit of the opposite going on. The recent disruptions that for example the recession in Europe has caused, are providing good opportunities for old style fundamental stock picking, both on the long and short side. The recession has created a scenario where you find winners and losers. High-cost producers are likely to lose market share, while strong companies are trying to expand in other markets. You can also find strong U.S. companies that can expand or buy in Europe.

For a number of years into the crisis and even afterwards it was quite a challenge to pick winners and losers, because everything was so correlated, everything tended to work well, which made it difficult for stock pickers to show real skill. We believe that now the environment has changed and stock picking is actually rewarding. We believe that withstanding some volatility and being willing to ride a good stock will pay off.

And lastly, in volatility trading, it has been very hard to make money being long, but the price level is so depressed that now you can use your balance sheet very efficiently. Per each dollar invested you get now a lot of upside, if you want, when the volatility picks up. So, in general, I think volatility is a space that is cheap, but I don't know how long it will take to actually be very profitable.

Emil van Essen: From an asset class standpoint, I am very much in favor of commodities, and we have been launching new products in that area. I think there has been an evolution over the last decade from a big rush into passive long-only commodities to active alpha generating strategies, and eventually to long/short. And I think everybody realizes the diversification benefits of commodities, but investors today decide at some point they also want some alpha to go along with all that non-correlated volatility. That is what we are trying to provide.

From a style standpoint, a trend that we believe is evolving now in the markets is a combination of discretionary and systematic. Possibly pure static systematic models have become a little bit problematic, because in today's information age things tend to evolve and change much faster, and alpha generating strategies tend to disseminate much quicker. Very quickly, everybody jumps on them, and then all of a sudden they don't work as well. Running models has become a moving target, and therefore managers need to have the discretion to adapt to changes very quickly. If you follow just the standard systematic approach, you will probably fail in a very short period of time.

It's very tricky. Of course, you need to have that number crunching ability and be able to back test and generate good strategies, but you also want to have the human element to make changes and to adapt to a changing environment. I believe having that capacity for fast discretionary changes will be very essential and continue to work in the future.

Paul MacGregor: Emil mentioned commodities, and also from our side we have seen a lot of demand for metals trading, in particular for base metals, where demand is pretty strong. But also in other commodities areas, people are looking for spread relationships between these contracts. At the same time, it's also getting more competitive now. You have the change in consumption patterns moving from North America and Europe to Asia, and you have some structural changes like the takeover by the Hong Kong Exchange or the LME, or with the launch of certain iron futures and swaps contracts in China. This is actually driving a lot of demand for our trading tools out in Asia, where some of the spread relationships have become pretty interesting.

But back to our more traditional marketplace in the interest rates space, one of the other big opportunities we see is in offering access to SEFs (Swap Execution Facilities). ION rolled out a wide range of SEF gateways to support the recent launch of SEFs, and that will eventually lead to creation of aggregation tools, that will allow people to direct their trade to where the biggest liquidity resides.

One of the next steps forward will be spreading those SEFs against swap futures, which are developing on a number of exchanges now. This will certainly happen in Europe as well over the next year as the clearing mandate comes into force.

We also see an investment opportunity in post-trade, where the OTC margin calculations are now beginning to be offset against the traditional margin calculations that you normally pay for exchange-traded products. As more OTC products move towards clearing, you want to look for greater offsets to reduce your overall net margin call.

Many CCPs are now starting to offer offsets between their OTC franchises and their exchange-traded franchises. This is becoming a very important value-add, because the whole idea of paying initial margin is quite new to many OTC players.

And from a technology standpoint that offers us an investment opportunity and tools we can offer back to the buy-side to make sure they are making the most efficient decisions.

Chris Dopp: As one of the world's largest clearing houses, providing capital efficiency through margin offsets and protection through client asset segregation have been the cornerstones of the development of Eurex Clearing's new innovations over the past few years.

Providing much-needed margin offsets has also dictated the direction that all clearing houses have taken. They must decide whether it is going to be their listed business that drives them into OTC clearing or whether it is OTC clearing that drives them into new listed products. For Eurex, our leading position in European fixed income futures made the clearing of OTC interest rate swaps a logical place to start from a strategic perspective.

To add to Emil's earlier comments, it is adaptability to changing markets and regulation that is the key differentiating factor between successful firms and less successful ones. Emil was referring to this challenge as something that the managed futures industry is currently facing. When I speak with some of the older long-term trend followers, they tell me that they have had the same model for 30 years. Being down for three straight years does not mean that they are going to change it, because back-testing over periods such as 10 years proves that it will be effective over the long-term.

The financial markets are constantly evolving and the speed at which that evolution is happening has increased exponentially in the information age. If it used to take 10 years for a market dynamic to change, then that time period decreased to five years and later down to one year. Now, you have to deal with fundamental changes on a month-to-month basis.

The Chicago office of Eurex Exchange is extremely involved with the high-frequency proprietary trading community and those firms are changing and adapting on a daily basis. If you are not able to at least adapt with the second wave, then you are going to be left behind. In short, using the same model for 30 years is a thing of the past.

Scott Schweighauser: At Aurora, we have a rather unique seat in examining the whole spectrum of hedge fund strategies when deciding how we want to allocate our capital. Our approach is both top-down and bottom-up, which means that we are looking for the intersection of market opportunity and manager opportunity, and doing it on a diversified basis. The macro environment is very important in determining which strategies we wish to emphasize and which ones we want to have more constrained exposure.

The watershed moment of recent memory, the financial crisis of 2008, caused a lot of investors to alter their behaviors--we've all been recalibrating our modus operandi given the shifts we've seen with market behavior, greater regulatory scrutiny, and clients' expectations.

In the aftermath of 2008, many hedge fund managers reacted very quickly to bad news by cutting risk exposures at the first sign of potential trouble. The so-called "risk-on, risk-off" environment was enormously vexing to absolute return-oriented managers, and endured until the very end of 2011. We have come out of the period in which investors are overly-fixated on risk management and into a phase in which hedge fund managers are more comfortable and in a position to return to the mode of generating great returns with controlled risk. I agree with Sorina's point about stock-picking working better now. People are taking a good look at fundamentals rather than being worried about the overhang of the macro factors and what those might do to their portfolios.

Just look at what happened recently. The "shut-down crisis" in Washington was met with a fairly muted market reaction, especially compared to what we saw just two years ago when we dealt with the same issue. That just confirms that we have

a more normal market paradigm, in which fundamentally-based managers can more easily extract idiosyncratic returns from their positions.

We are very bullish on stock selection strategies. Aurora has recently gone through our periodic portfolio recomposition that we call our Blank Sheet Review. In our multi-strategy diversified funds, we increased the allocation to long/short equities managers from 26% to 33%, which is a fairly big jump. We believe that the dispersion that we are going to see in stocks in 2014 will be fairly substantial, and that plays into the hands of people that have the flexibility to be both long and short.

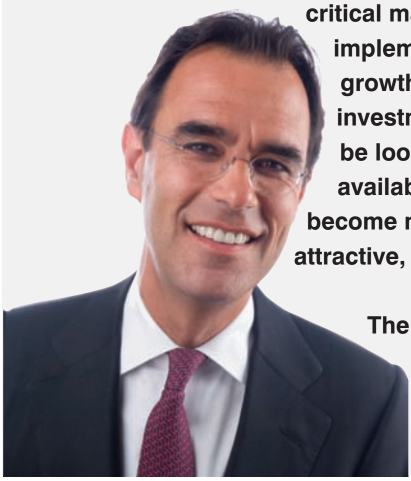
Why do we believe in such a strong dispersion? First, as I mentioned before, we are seeing the dissipation of the markets' post-traumatic stress disorder syndrome from 2008. We are also moving into an environment with expectations for higher interest rates, which is another good backdrop for equity dispersion. A higher threshold cost of capital for companies will create dispersion in their financial results and the competitive environment that they find themselves in.

Also, as investors' threshold cost of capital moves up, they are going to be more choosy in selecting which equities they want in their portfolios. With a zero cost of capital, some people may feel incentivized to take much larger risks because the opportunity cost is negligible. All this will be changing and contributing to the dispersion.

We also expect that event-driven managers will do well in this environment because so many companies have built up very strong balance sheets with lots of cash, which is a good harbinger for corporate activity. Look at what's happening at firms like Apple or Microsoft, in which activists are trying to unlock value by distinguishing between cash and the ongoing business value as components of the share price. This type of activity is healthy and should continue to drive the valuations of a great number of stocks and create greater realization opportunities for different companies.

Mark Melin These are great points, what else do you see changing in the future? What other opportunities will unfold?

Scott Schweighauser: Aside from the numerous investment opportunities, from a product delivery perspective, we believe that the 40 Act space is a huge opportunity. The world has changed a ton in recent years, and we now have a critical mass of hedge fund managers that meet our underwriting standards and are now implementing their trading strategies in a 40 Act structure. We anticipate huge, explosive growth in the area of alternative 40 Act funds. The need for absolute return-oriented investments in everyday investor portfolios is substantial. We believe that investors should be looking beyond long-only investing now that legitimate, high-quality choices are available to them in absolute return investing. In the future, as more and more people become more sophisticated about these investment strategies, they will find them increasingly attractive, because they provide terrific portfolio benefits.



The market potential for 40 Act funds is huge, as mutual fund capital dwarfs hedge fund capital by 10x right now. As more retail investors embrace a diversified, idiosyncratic, non-correlated approach to investing and asset allocation, the more it will help them to create lasting value in the long run.

Chris Dopp In your view, the inclusion of absolute return strategies in more standard portfolios will increase exponentially. Do you think the JOBS Act that provides hedge funds with more flexibility to market their products will accelerate that even more?

In other words, while the 40 Act fund structure will create the vehicle, the new marketing rules could help make those funds more mainstream.

Scott Schweighauser We think the JOBS Act will be helpful, but the devil is in the details. To the extent that more public investor outreach is effective in promoting greater education and understanding, then it'll be a very good thing.

Sorina Zahan: The 40 Act funds space is quite interesting, but I am, well, I wouldn't say skeptical, I am just curious how it will actually evolve. The way I see it, there are only few strategies like equity long/short or CTAs that are truly suitable for offering the sort of liquidity that is needed in a 40 Act fund. Given this limitation, it will be a challenge to launch products that are truly differentiated, and there may be a big impetus to launch funds where the liquidity will not be true liquidity. These funds will be offered with daily liquidity, but the underlying liquidity of the assets will not actually fully match that.

And at one point players will be pushed into taking on illiquidity in liquid format. We have seen this in past cycles and know how it ends up. I am sure there will be excellent funds in this format, but I am a little bit skeptical of the impact these other funds with riskier liquidity situations will have on the space.

We looked at the space and think that through structural analysis and financial de-engineering, as I like to say, a different breed of products can potentially be offered to a broader audience. Nevertheless, I believe that once the space becomes crowded and extremely competitive, there is a significant threat that some players will actually start blowing up for liquidity reasons.

Scott Schweighauser: We don't know how other alternative 40 Act funds will be allocating their capital--and what the resulting liquidity of those funds will be--but we do know that Aurora focuses intensely on ensuring that the Aurora Horizons fund and its underlying sub-advisers meet the 40 Act's stringent requirements, including those rules pertaining to liquidity.

Sorina Zahan Correct, and you need to make sure he is not lying to you.

Scott Schweighauser As investment manager for the Horizons' portfolio, Aurora monitors every position every day. There is just one account in which our sub-advisers trade, so there is no positioning that occurs without our scrutiny.

Sorina Zahan That is good; you absolutely need to know the liquidity. I am just afraid of the impact that those funds that will not respect this rule may have on the overall space.

Alex Brockmann We have looked at 40 Act funds, but as we believe our product will be a limited capacity product we didn't think this format was ideal for us.

One of our competitive advantages is the execution capability and infrastructure of our firm, and building on the very quick systems built for the prop side. From a strategy standpoint we are looking at reversion trades and we are studying spreads as well. These are aspects we may at some point incorporate into our strategy. We are basically trying to find niche areas and provide access to those opportunities for investors, and some of those may or may not suit a 40 Act fund.

Emil van Essen I agree that 40 Act funds will grow, and I believe they are good for investors as long as the products are offered by large, professional operations.

Emil van Essen: Mark had also asked about future investment strategies and opportunities, and one innovation we developed is a long/short commodities program that uses the term structure as the primary predictor of commodity price movements. Our research has led us to believe that term structure movement has strong predictive value for the outright commodity price.

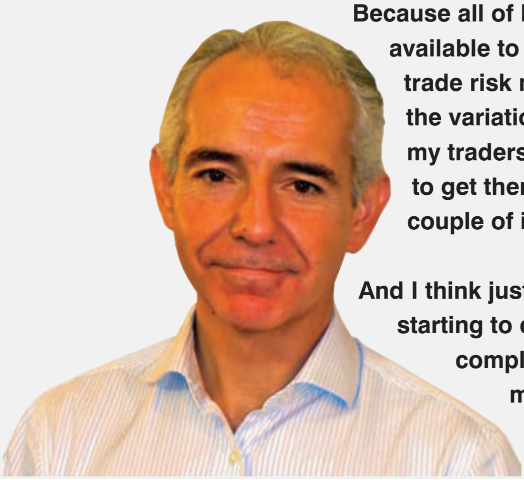
We also built in a model on the equity curve itself, something we think is somewhat unique. As commodities tend to be very spiky in their behavior, the model automatically de-leverages and re-leverages the entire portfolio based on profitability and momentum.

Paul MacGregor: FFastFill offers a nice spreading tool called Spread Intelligence. It was developed first by a proprietary spread trader. Unlike a lot of proprietary traders who sort of got pushed out of the market by algorithmic trading, he actually took his ideas and got them coded into software. It is now available as part of our toolset.

And within these tools you have the ability to set up complex spreads across multiple different commodities and wait for the right moment to algorithmically execute them.

So we are getting a lot of demand for that sort of tool, a lot more interest from the traders and end users.

The other area where there's a big focus we are seeing is in risk management tools. So certainly all our sell-side customers are looking to comply with CFTC 1.73, 1.74, and actually have auditable pre-trade and post-trade risk tools in place, and tools that they can then distribute to their clients, which is typically the end user as well.



Because all of FFastFill's tools are delivered in the cloud, clearing members can make available to a selection of their clients tools which enable clients run their own pre-trade risk management, which would look at things like what is going on in terms of the variation margin I might have to pay at any particular point during the day? Are my traders racking up too much of a big potential variation margin outlay? Do I need to get them to sort of shorten that position throughout the day? So there are a couple of investment areas for us.

And I think just generally cloud-based services, as a lot of our sell side customers are starting to cut back on heavy IT installations on-site, as the focus switches to complying with new regulation; running huge IT departments just doesn't really make a lot of sense.

Mark Melin Chris, what is happening at Eurex in respect to new products?

Chris Dopp: For Eurex Exchange, the newest innovations are the addition of new asset classes, such as volatility with the continued development of our VSTOXX® products for example.

As an aside, it is always interesting to hear everyone discuss the question of "What do you see changing in the future," but it is especially true right now in Chicago. I have had the privilege to participate at other Opalesque Roundtables and the answers are completely different than here in Chicago. I believe that the investment community and the trading community in Chicago are different than anywhere else. When you discuss a question like "What is the investment of the future," usually somebody says XYZ Telecom or the healthcare sector. There is more focus purely on the equity markets, while in Chicago the conversation tends to be more structural and more derivatives focused. Obviously, Chicago is the birthplace of futures.

If you would have asked that question two or three years ago in Chicago, people would have said "I have got to get faster. That is all I care about." The interesting thing is that given the way that technology and competition have developed, the cost to get to the minimal level of competitive latency has come down. Everyone is fast now.

Over the last 12 months or so, there has been a major shift away from allocating increasing capital to technology and toward expanding research. Instead of trying to get faster, firms are now focused on building better algorithms. Some have called it the Smart Trading Trend. We see this as a rather significant evolutionary change here in Chicago.

Sorina Zahan That sounds like human evolution, right?

Chris Dopp: It is human evolution, exactly right. It is about survival and innovation and it has been going on in Chicago for 30 years. 30 years ago on the trading floors, you would physically hand a person a piece of paper with an order for execution and that person would run it into the pit. Then, a system of hand signals was developed, because it was faster to flash the order than physically running. Later, direct headsets were introduced so that people could not see large orders being flashed into the pit.

As electronic markets were embraced, clicking a mouse became more efficient followed by automation and algorithms. The race to zero latency in the electronic world was not different than the previous developments on the trading floor. It was all about innovation and efficiency.

But now, we are talking to some clients about shaving 10 microseconds off of their latency times, and the incremental cost to do so is enormous and often not cost effective. That said, getting to 1-2 milliseconds is fairly easy and there is a level playing field in that space. So, the next phase of the evolution is to get smarter as opposed to faster.

Alex Brockmann: I completely agree. Our holding periods are hours, so we don't trade for seconds or anything like that. But no matter if you are a high frequency guy or a trend follower, if you go back in time, signals tended to be very simple and strategies were put together very simply. In a world where edges are shrinking, we find that you have to be quite a bit more thoughtful about many things. You need to think about how to put together a portfolio, you need to be mindful about where you have the edges, how those edges are evolving, and then allocating accordingly. I am not saying this is a super complicated process, it is actually relatively simple, but you have to go through that exercise and all those steps, whereas before edges were probably large enough so you didn't have to.

Chris Dopp Back then, if you weren't first but second, you were probably okay, because the edge was still big enough.

Alex Brockmann Exactly! And this has changed now.

Emil van Essen I am from Toronto – what I find about Chicago is that it's all about derivatives trading, it's sort of in the blood here, and with that you see grassroots evolution and development of trading ideas in Chicago. That is also very unique and I believe you don't really see this to the same extent in any other city around the world.

That means that also in say equities you probably wouldn't see the same sort of strategies that you might see in New York, Toronto or wherever. I personally find this energizing, I like the environment here and this is a strength that Chicago will carry forward into the future.

Sorina Zahan: I don't have the data, so I have to be a bit speculative here, but for me Chicago is a very dichotomic place. You have indeed futures and derivative lovers, like myself and like many others here, and on the other hand I have come across some of the most conservative investors you can find on the globe: extremely traditional and extremely hard to move from their beliefs.

I am not sure how these two worlds coexist, but in my experience they do, and that is how I perceive Chicago. Let me also add that I am not from Chicago. I am Romanian, so my understanding could be superficial.

Scott Schweighauser

I am an unabashed fan of Chicago -- Chicago is the home of financial innovation, whether you're talking about the futures exchanges, the fund-of-funds industry, or the University of Chicago, a place where the Nobel Prize for Economics seems to have taken up primary residence. Chicago is where innovation occurs. Our attitude is different -- we're the City of Big Shoulders. We work harder, we're risk-takers, we get up early in the morning to go out and do battle. That leads to great things.

Chris Dopp: I believe that there is a very good reason for that. If you think about the trading and investing community in Chicago, it is dominated by CTAs and proprietary trading firms. The proprietary trading firms have migrated off the trading floor and these firms have a very different mindset than most other market participants. They don't have investors, so they are not worried about things like *"What is this idea going to do for the volatility of my strategy? If I change, am I violating the mandate of the fund? What will the pension board think about my style drift?"* All they think about is: Am I going to make money?

When you free yourself from the external restraints and just say "all I care about is making money", then it fosters a very innovative and outside-the-box thought process. It has become the dominant culture in the city itself and bleeds over to the fund managers.

A lot of fund managers and CTAs in Chicago came from the same proprietary trading background. Therefore, the culture and mindset is different than anywhere else in the world.

Paul MacGregor: I would agree with a lot of Scott's comments that there is a lot of innovation going on in Chicago, but mainly in futures. London and New York have traditionally been very innovative in OTC, whereas in Chicago it's all about exchange-traded futures. Chicago is also the only town in the world I have ever found where you can walk into a large proprietary firm what you see is literally three guys; the trader, the technology guy, and the manager, and that's it. And then you look at the kind of volumes they are trading and you are just staggered. You don't see that literally anywhere else in the world.

Alex Brockmann: What I have noticed is that the profitability of the prop trading businesses has actually been declining since about 2009, and what you see as a consequence is that some proprietary trading firms are edging towards asset management as a way to earn something from the infrastructure and the intellectual capital they have developed. That seems a bit of a trend. If prop trading gets more profitable again, maybe it reverses, but for now we have certainly seen this trend.

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Mark Melin What are your observations regarding asset flows?

Emil van Essen: Well, for CTAs asset flows are disappointing. In aggregate, performance has been down over the last two to three years and there is always that temptation to look at past returns of other strategies or asset classes and exit what has not worked over the last 18 months and try to move into what has been working over that same period. These performance cycles have occurred many times in the past. CTAs will have a very positive run and investors will be back. In the past these upturn have been abrupt, so it has paid to buy CTA drawdowns or stay invested during drawdowns. I'd also say in the big picture maintaining CTA exposure in most portfolios makes a lot of sense over the long run.

It's all part of the cycle. I always say our job is to make money, to turn less money into more money, and if you do that the world will beat a path to your door, so don't worry about the rest of it.

Mark Melin What's also interesting is the fact that if trends reverse and CTAs make money again, if I am not mistaken, in such situations the moves are typically very abrupt and fast. That means you should be invested in CTAs before it turns - most investors will not be able to react fast enough in order to catch and ride that move, when the markets turn.

Scott Schweighauser: Asset flows are a function of people's expectations about the future, and, ex post, whether or not those expectations were met. We believe that we are in a very important inflection point in the markets right now. The financial crisis of 2008 catalyzed a recalibration of investors' expectations, especially as they relate to the magnitude of market dislocations, the evaporation of market liquidity, and the potential for exogenous actions and events to magnify both of those effects. Asset management firms—Aurora and others—are responding in meaningful ways that better fit products with expectations. Education and transparency are essential components of that process.

Sorina Zahan: I think assets should flow from asset classes or securities that are expensive into those that are cheap. The cheap ones will become expensive because of those flows and then experience outflows, so we should get this type of rational cyclicality. I am not sure though that in practice we observe this predictive power of asset flows. If you look historically, Emil is probably right. Sometimes flows go exactly into the expensive asset classes.

Notwithstanding this observation, I think credit is expensive, at least the US credit. Moreover, the more liquid it is, the more expensive it is. There have been some outflows from this asset class, and it will be interesting to see if this will continue. It's easy to say yes and expect to see a big correction there, but we also have to remember that players with very different risk appetite and very different return objectives are acting in this market. If the return objective is low enough, we might not see such pronounced outflows from the credit marketplaces. I was tempted to say that we will probably see outflows from credit and inflows into equities, but I don't think there's a guarantee for that. I do think that we will probably see more flows into equities, especially into developed markets equities.

Regarding Emil's comments about CTAs, I completely agree that CTAs are cyclical, and the best time to invest in them is when performance is really bad.

Paul MacGregor Sorina, we talked about assets flowing into the asset class that is cheaper from a relative perspective. Now, there may still be a lot of investors sitting on the sidelines saying that most equity markets have now recovered beyond pre-2008 levels in most sectors. Aren't they starting to look expensive now?

Sorina Zahan Well, you talk about the recovery of equities in the U.S. when you say that. Many European and certainly most emerging markets have not reached their pre-2008 levels.

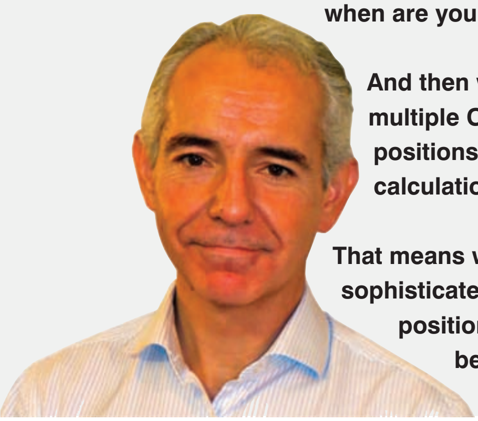
Paul MacGregor Some of the emerging markets are a bit bumpy still.

Mark Melin Let's look at risks and challenges you see in the market right now. Is there anything that worries you?

Alex Brockmann: Maybe the thing I worry most about is the low participation rate in markets. Many markets are characterized by a sort of thin class of participants that are actually driving most of the action. At times we do not see the broad follow-through in our strategies, and this applies both to trades that last two days or a couple of months.

Environments without broad participation from investors tend to be very tricky for us and other systematic traders. The challenge is compounded when there are many events that cause short-term movement without much follow-through. It is difficult navigating these periods well while also trying to participate strongly when momentum is prevalent in markets.

Paul MacGregor: I think one of the biggest challenges for us as a technology company is to get more sophisticated in risk management. I mentioned before how we are getting demand for better risk tools as more and more OTC markets are pushed into either lit venues, i.e. trading via a visible order book, or to be CCP cleared. I am sure Chris can talk about this quite a bit. The CCPs will have to become ever more sophisticated in the way they are pricing these products. They are also coming under ever increasing pressure from regulators saying "okay, you have done IRS, now when are you doing swaptions, when are you doing other sophisticated products?"



And then we need to keep up with all those calculations that are being offered across multiple CCPs and calculate those in real-time on the fly so that people can look at their positions and book values in real-time and actually pull those almost into a pre-trade calculation mode.

That means when you are executing on some of these new trading venues for these more sophisticated products, you can make a sensible decision like "okay, I have futures positions already on one particular CCP, I am now going to trade the IRS on that CCP, because I get the better offsets."

Paul MacGregor So one of the main challenges for us is to keep up with the ever increasing change that's going on in the CCPs as they become a pivot point of the markets of the future, because the regulators have said the CCPS is where the risk is going to lie now.

Chris Dopp: For an exchange and clearing house, the challenges are exactly as Paul has described. The new regulatory environment has created new demands and coping with these requirements is heightened by the dynamic nature of the regulation itself.

As an example, Eurex Clearing has developed an individual segregation model that provides the highest level of protection and safety for client assets. It is the level of protection that many market participants desire; however solving the regulation and bankruptcy codes of the U.S. and Europe to make it available is a challenging endeavor.

Paul talked earlier about how the new regulation has created a new universe of OTC derivative users who don't understand the concept of initial margin. Additionally, these firms will need to deal with the burden of initial margin levels that are higher than in the listed world. We have been working tirelessly to develop new clearing systems, new risk engines and new operations to assist in overcoming this burden.

Paul MacGregor ION Group are replicating that across most CCPs.

Chris Dopp That is correct. We are doing it in one way to comply with the proper regulation; another CCP is forced to do it another way; and the third one in yet another way. Every CCP is and will be different. That makes it very challenging, but also creates opportunities.

Sorina Zahan: I am not so much concerned about the regulation itself, but the cost of the regulation - the cost that's imposed on every single player down the chain. This cost will ultimately be borne by the investor and will erode returns. We already discussed how the returns are not easy to make and are not outsized anyway. I don't see a good solution to minimize those added regulatory costs. We try to minimize every cost, and I am still struggling with this.

A second challenge that I also see developing is related to volatility. Volatility has been going down across all asset classes. In equities, volatility has been going down for over three years now. I don't even want to talk about credit. It's ridiculous, credit probably has 30% of the volatility that it should have normally. You also see that phenomenon in FX and in rates for sure.

As I said, this trend has been going on for three years or more now. Now, a lot of risk models in this industry work with 100 day VaR or a few years, and many investors, both more sophisticated and less sophisticated, started allocating based on this completely under-appreciated risk. In our work we often see portfolios we believe are riskier than the true appetite of the holder.

Hopefully this will not happen, but I am afraid that we will get to a point where these holders can get very scared, because all of a sudden the risk is back to its normal values. As a consequence we might see irrational behavior, which actually is rational behavior, but based on the wrong cause. So that is something that worries me.

On the positive side, I am actually happy with the trends in our industry, the fund of funds industry, in my case. I think the most important trend is the search for alpha. This is really a good trend. It will make our industry much better. I don't think there should be room in this industry for index funds, i.e. for hedge funds or fund of funds that actually provide you the index. For that there is passive investment. You don't have to pay an active manager for that.

A second trend I consider positive is that we are seeing more emphasis on risk management in this industry. Scott has mentioned it; it is very necessary.

30 years ago we had good hedge funds that were very holistic - they knew very well the securities they owned, but they really had no idea how much systematic risk they had in their books. Now things are far from being perfect, but investors are more preoccupied by measuring more dimensions of risk, and they should do so. As long as they understand the limits of what they know, this is a very positive trend and can potentially counteract the second challenge, the one of taking under-appreciated risk.

Paul MacGregor Are there are any particular risk metrics your clients are asking for?

Sorina Zahan Well, our clients don't really ask for particular risk metrics, because we do provide them a large range of those metrics. I have a series of talks, which is called "Sophisticated Bad Habits in Portfolio Construction", in which I fight some of the habits I personally used to have for years. One example is looking at rolling beta.

Mark Melin That means your clients were sophisticated?

Sorina Zahan: We and they were sophisticated, but it was even worse. People would ask for rolling beta to understand systemic risk, but through rolling beta you really looked at the noise of the market.

I think what people want now is at least to understand the exposure of the portfolio. They also try to risk adjust performance as opposed to just look at performance in a vacuum.

There are people that understand that Sharpe Ratio should not be applied to many of the hedge fund strategies. Sharpe is OK for very liquid CTAs that tend to run normal distributions, but if you have a less liquid hedge fund, there is no way you can use Sharpe Ratio as a measure of your risk-adjusted returns.

There are people that have started understanding the limitations of VaR, and they are starting to understand that VaR is the minimum amount of loss as opposed to the maximum amount of loss. Some 10 years ago I met a lot of people who thought that VAR is the maximum amount of loss with 1% or 5% probability.

So these are more subtle changes, but I think a decade ago if I tried to speak to an investor about running risk budgets, and running simulations, forward looking simulations, I would get a completely blank stare. So it was a no go. I think now at least I can try. Moreover, and this is something of great interest to me, the hedge fund managers are starting to look at their portfolios in a more sophisticated way.

And what's very important is for them to understand the limitations of the tools they have, because I am very afraid of a dogmatic approach to risk management. I think that's worse than no risk management.

Emil van Essen: Even though overall volatility has declined over recent years, I believe the potential for massive market blowups has increased dramatically. The fact that overall volatility is low actually increases that potential.

There is another development that I think is very important. There is a trend where institutions with large pools of capital that used to outsource their investment professionals are not trading internally. It's important that the portfolio manager has decades of trading experience so that they have been through many market cycles and have a deep understanding of markets and that they have comprehensive risk management. I'm concerned that some of those large institutions don't have the thorough understanding of the tail risk that is required.

Things are not normally distributed when you get into these volatile market events. I will give you an example. Let's say someone is playing a roll down strategy on the VIX. You historically test it, it makes gobs of money, it appears to be a high probability trade.

Now, just wait until everybody starts doing the same strategy. Let's assume

some major event happens overnight when VIX futures are closed and everybody has got a stop at the same place. First thing in the morning liquidity goes to one-tenth of what it was the day before and 50 times as many people are trying to get out. These blowups will end in disasters.

Or think about long only funds crowding the crude oil futures market. Let's say something that will significantly impact oil supply and demand happens in the Middle East. Markets shoot up $20 per contract overnight, if trend followers are short and long only funds increase their holdings, the trend followers will be in difficult situation as it will be very difficult to cover their positions.

We have seen some of this activity in the spreads, where we have seen spread prices triple or quadruple the 20 year range highs in a very short time. This appears to be caused by some systematic structured products, who take massive positions that automatically try to exit trades at the worst possible time. The size of their positions and the timing of their exits creates a domino effect that creates these moves that dwarf the largest moves over the last 20 years. I believe we are going to see more of these moves in the coming years.

Paul MacGregor Where do you think these massive pools of money are coming from, and why are they not allocating through you?

Emil van Essen That's a good question and we are working on the second part of your question!

Emil van Essen: **You can see pension funds, sovereign wealth funds, and bank products hiring a suite of very smart analysts to create and test these products that work well with historical data. While the people may be very smart, if they don't have years of real world market experience there is danger in doing this. One of the big risks is that they take big large positions in markets that get very thin during major events and they can't get out of trades without massive losses and impact on the overall market.**

Another market force that a lot of people don't fully appreciate is the impact of long only commodity funds on commodity prices. They also create significant blowup risk in a commodity because the commodity price is at times driven more by investment demand as opposed to supply and demand dynamics in the commodity. When the traders and investors significantly outnumber the actual physical market participants of the commodity itself, that market can behave in unusual and unpredictable ways.

Paul MacGregor Maybe we should tell the regulators to focus a little bit more then on the non-sophisticated large players in the marketplace as opposed to sophisticated players and high frequency guys, which they love to spend a lot of time focusing on.

Paul MacGregor: **It's very interesting, the Metals Week event in London had quite a focus and presentations on changes on the supply side. The whole base metals industry is moving a bit towards a pronounced oversupply. The oil market is characterized by the fracking phenomenon that allows the U.S. to become almost oil self-sufficient. So, as a consequence of those fundamental changes in supply fundamentals and changes in demand, we may not see huge spikes in price in a lot of commodities that we have seen in the last few years.**

Alex Brockmann That is correct and actually something that you can see all the time when over a period of say two weeks a market trades limit up day after day. That is a great example of somebody or a number of people getting blown out.

Sorina Zahan But this should be good for mean reversion strategy.

Alex Brockmann That is right, but in some cases, for example if you trade momentum, you cannot even get in. That is because you see a price movement, but it's just limit after limit, so you cannot even get in and build meaningful positions.

Emil van Essen Unless your mean reversion is triggered before the blow-out...

Mark Melin Sorina had some comments before about the Chicago-based investor community. What other trends and developments do you see on the investor or particularly the end investor side?

Scott Schweighauser: Over time, the advancing level of sophistication on the part of institutional investors will inevitably lead them to different types of decision points. Instead of asking "what's the right mix of stocks and bonds?" they'll be seeking the most efficient ways to take on factor risks in their portfolios. They'll need to know what are the factors driving market returns in the myriad of asset classes, and how they'll want to take on those exposures in their portfolios. What is the exposure to the inflation factor? How is economic growth reflected in the portfolio?

We'll construct portfolios in very sophisticated ways that address those concerns—this is where we are headed in the long run. This approach covers our world, the alternative world, but it also and most certainly covers the long-only world as well. That means there will be an accelerating convergence between long only and absolute return investing.

We think we are 10 to 15 years away from an environment in which people will say, "Oh, remember when there was a dichotomy in the world--what's mainstream now was a small niche back then called 'alternatives.'" At some point, this will just become THE way to invest.

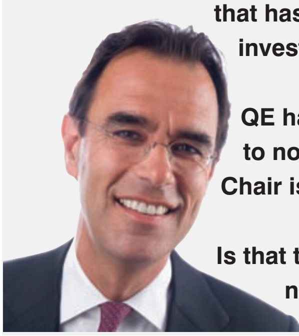
Sorina Zahan That is right, there is no alternative to alternative investing, in the end.

Scott Schweighauser Aurora and others are working to transform the conversation. In our separate account business, we are proposing different ways to examine how people should invest in their portfolios, and in very robust ways. CIOs of pension funds will say, "I want to take on these types of risk in my portfolio, and I am going to find an asset manager, a commodity, an asset class or even a trading strategy, that gives me exposure to that factor I want."

Alex Brockmann Or help them find a factor to deal with the QE factor...

Scott Schweighauser Yes, you are absolutely right!

Scott Schweighauser: The QE factor is a specific example of a non-economic, non-market-driven influence on markets that has very profound effects on those markets. Its effect has certainly been a huge challenge for investors; interest rates have been at zero for a long, long period of time.



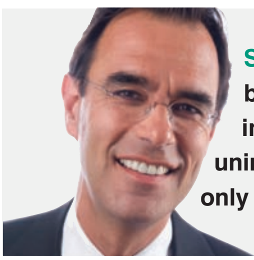
QE has distorted markets and disrupted the efficient allocation of capital in markets. Everybody has to now calibrate their expectations about what Fed Policy is going to be based on who the next Fed Chair is.

Is that the right way to do it? Is that an efficient way to think about allocating capital in portfolios? I am not sure it is, but certainly that's the reality that we are facing right now.

Scott Schweighauser I am worried about distortions creating bubbles. If you look at what created the financial crisis in 2008, it was a series of policies, both at the Federal Reserve level and mandated by Congress in terms of the housing stock, that resulted in this enormously distorted asymmetric outcome that ended up causing immense dislocations. All for reasons that didn't have to exist in the first place, if you think about it. So investors should certainly worry and factor in QE.

Paul MacGregor: It's a huge worry. The Fed just experimented a few weeks ago putting out a statement that they are thinking of maybe having some form of tapering at some point in the future, and look at the impact it created. It appeared it was it was pure experimentation on the Fed's part, but immediately they had to say, "well, we didn't mean it, we are not going to do it...."

Chris Dopp QE was an unprecedented market event. Until we actually test it, we can only hypothesize about what's going to happen when QE ends. I believe that the Fed needed to test the waters to see how the market would react.



Scott Schweighauser: I always think about regulation like squeezing a balloon. If you squeeze a balloon, the balloon's surface is going to herniate somewhere else. If you try to control an issue with inelegant regulation, in almost every case you will create unintended consequences. Those unintended consequences create the potential Black Swans, and the magnitude and duration of QE only magnify those risks.

Sorina Zahan It's very tricky. Sometimes also a White Swan can result from it; the balloon can also go in the other direction. And after that you may still get the Black Swan, and then it's going to be really bad...

Scott Schweighauser That's right. The financial-crisis-as-a-perfect-storm really started in 2007 when failed monetary policy created capital distortions. We had economic, fiscal, and tax policies which favored home ownership in very aggressive ways.

Chris Dopp And credit in general.

Scott Schweighauser Right, and credit in general.

Scott Schweighauser: A lot of oxygen was fed into the furnace that created these massive distortions, and it had a natural and inevitable end when it all came tumbling down very quickly. These are the types of events that are created by artificial influences in the markets, the artificial misallocation of capital.

One of the biggest misallocators of capital in the world today is China. They have a billion and a half people in a managed economy. Think about that. That's a hard thing to do. The USSR eventually failed because they tried to do just that. How will China continue to evolve, how will that work? That's just another huge risk to factor in.