



Opalesque Roundtable Series '18

UK

Opalesque Roundtable Series Sponsor:



Editor's Note

The true active management industry, and part of that includes the hedge fund industry, is seen to be in rude health. Innovations abound as you have to keep improving in order to just stand still. The sector of the industry which has been radically changed, and in fact needed changing, was the "closet index" world. Why should anybody pay a premium price for a closet index fund? And so those buyers are now buying something that is outright passive. **Within asset management, the area with by far the biggest fee pressure last year was passive.**

At the moment, **UK investors across the board are coming back with a new interest for hedge funds and alternative investments**, because they feel that there is not just a combination of better pricing, but they are also starting to realize how the combined strategies are more effective to generate diversification within portfolios. Investors are looking for diversification again in a much more distinct manner than maybe a couple of years ago.

The Opalesque 2018 UK Roundtable, sponsored by Eurex and Société Générale, took place in London with:

1. Luke Ellis, **CEO, Man Group**
2. Andrew McCaffery, **Global Head of Client-Driven & Multi-Manager Solutions, Aberdeen Standard Investments**
3. Stephen Platts, **Founder and Chief Operating Officer, Melqart Asset Management**
4. Areski Iberrakene, **Chief Investment Officer, Arqaam Capital UK and the Arqaam Global Macro Fund**
5. Jon Hartropp, **Equity Finance and Delta One Sales, Société Générale**
6. Matthew Riley, **Regional Sales Manager, Eurex**
7. Duncan Crawford, **Global Head of Hedge Fund Sales, Société Générale Corporate & Investment Banking**

The group also discussed:

- **Adopt big data or get eaten alive** (page 7). Availability and quality of data create significant barriers to entry (page 13)
- Why the true active management and the hedge fund industry are in rude health. Turning alternative risk premia into UCITS (page 7-8)
- **Why are there so many risk premia programs out there?** Aren't they all pretty similar, because there are only certain risk premia out there which everyone is trying to harvest? How should you select risk premia products (page 8-10)
- **The "rise of the machines"** is supposed to create very efficient markets, but some active managers say it creates inconsistencies they can take advantage of (page 10)
- Machine Learning in trade execution, portfolio management, and alpha generation (trade ideas). **Man Group's experience with pure deep-learned strategies** (page 10-11). Why 47% of all Chief Investment Officers have an AI project going on. **Why AI in the biomedical field is ten years ahead of finance** (page 13, 14)
- Techniques for handling patchy data. **How asset managers can counter the attraction of 'big tech' in hiring top AI and data talent** (page 14). AI for asset allocation (page 15)
- **Why wouldn't Google come and start investing in the world of finance?** What are the Chinese tech giants doing in applying AI to finance? (page 16-17)
- Dramatic changes in financing and stock lending (page 12). Why funds now discuss cash deposits with prime brokers (page 21, 23)
- **More investors look at tail risk and optionality. Who wins with crash protection? The potential drawbacks of hedges. Forgotten opportunity costs of illiquidity** (page 17-22)
- How to structure crisis offsets. Using Eurex' factor-driven futures (Carry, Momentum, Quality, Low Risk, Size and Value) (page 18). Continued interest in non-correlated strategies (page 23)

- Bitcoin futures, Blockchain and Brexit. **How Blockchain could significantly reduce cost in the hedge fund business. Do you need a Brexit strategy?** Why other any European countries should think twice asking for the financial leverage that London has. Can UK managers rely on the already existing delegation to managers in places like New York or Singapore? (page 24-29)
- Diversity still a challenge in asset management. ESG is more than a policy today (page 20-13)

Enjoy!

Matthias Knab
Knab@Opalesque.com

Participant Profiles



(LEFT TO RIGHT):

Matthias Knab, Jon Hartropp, Luke Ellis, Areski Iberrakene
Andrew McCaffery, Stephen Platts, Matthew Riley, Duncan Crawford

Cover photo: London skyline, © Peter Coughlan under Creative Commons license

Introduction

Andrew McCaffery

Aberdeen Standard Investments

I am Andrew McCaffery, Global Head of Client-Driven & Multi-Manager Solutions at Aberdeen Standard Investments.

I have been involved in a variety of activities within the hedge fund industry and capital markets since the mid '80s. I am currently responsible for our strategic client partnerships, from an investment perspective, our multi-manager activity across liquid strategies, plus our cross public and private portfolio strategies, which includes much of our overall solutions approach and our alternative strategies.

Stephen Platts

Melqart Asset Management

My name is Steve Platts, a Founder and Chief Operating Officer of Melqart Asset Management, an Event Driven hedge fund manager established in 2015. I have been involved in the hedge fund industry for 15 years and have worked in financial services since 1990.

Matthew Riley

Eurex

Matthew Riley, currently working at Eurex. Before joining the exchange I was in derivatives sales at a variety of investment banks; Dresdner, Morgan Stanley, RBS, Jefferies, and now at Eurex I am working on the buy side engagement for Eurex where we focus on a dialogue with our end clients regarding the development and evolution of our products.

Duncan Crawford

Societe Generale

Duncan Crawford, I head hedge fund sales at SocGen. This encompasses Prime Brokerage Sales, Capital Introductions and Alternative Investment Consulting. Consulting is slightly different from what the industry understands as consulting where we produce market commentary on a variety of hedge fund strategies including various statistical reports and hedge fund indices.

The starting point of this is a proprietary database where we aim to include 100% of managers in the strategies that we cover. We then publish a wide range of strategy and industry benchmark indices like the SG CTA Index. And finally we also publish white papers on topical industry themes; the last published being on equity Hedge fund performance in 2017, and the current work in progress being on Risk Premia, which will be presented at our Flagship event in two weeks time.

Luke Ellis

Man Group

My name is Luke Ellis. I am the CEO of Man Group, the global active investment management firm. Through our five investment engines we manage over \$110bn of client capital in liquid and private markets.

Before joining Man Group in 2010, I held roles at Man GLG and Man FRM, prior to their acquisition by Man Group. I was previously Global Head of Equity Derivatives and Equity Proprietary Trading at JP Morgan.

Areski Iberrakene

Arqaam Capital UK

I am Areski Iberrakene, Chief Investment Officer of Arqaam Capital UK, and the Arqaam Global Macro Fund (or AGMF). We are a quantitative macro fund engaged in a combination of alternative risk premia, relative value, and tail risk investing strategies.

I started my career at SocGen over 25 years ago as a market maker of FX options. I was then at various other investment banks including Bankers Trust, Barclays, and Dresdner where I was engaged in pricing, structuring and studying the world of derivatives.

I have always been passionate about the inefficiencies in pricing in the derivatives space. Some ten years ago we launched systematic products aimed at arbitraging this mispricing, which was very successful. I've since devoted my time to offering these products to clients through hedge fund

vehicles. I began this initially under my own firm, before partnering with Arqaam Capital, a specialist investment banking group focused primarily on emerging and frontier markets.

Jon Hartropp
Societe Generale

I am Jon Hartropp from Societe Generale where I work in the Equity Finance and Delta One Sales Team. I started in the financial industry in 2001 with Goldman Sachs and subsequently also spent time at Nomura, all in the prime services, securities financing and sales teams.

This material reflects the analysis and opinions of the speakers as of 28, May 2018 and may differ from the opinions of Opalesque and/or the Roundtable sponsors. It is intended to be of general interest only and should not be construed as individual investment advice or a recommendation or solicitation to buy, sell or hold any security or to adopt any investment strategy. It does not constitute legal or tax advice.

The views expressed are those of the speakers and the comments, opinions and analyses are rendered as 28, May 2018 and may change without notice. The information provided in this material is not intended as a complete analysis of every material fact regarding any country, region, market, industry, security or strategy. Statements of fact are from sources considered reliable, but no representation or warranty is made as to their completeness or accuracy.

BROADEN YOUR HORIZONS WITH AN ALTERNATIVE SOLUTION



SOCIETE GENERALE PRIME SERVICES

PROVIDING CROSS ASSET SOLUTIONS IN EXECUTION, CLEARING AND FINANCING ACROSS EQUITIES, FIXED INCOME, FOREIGN EXCHANGE AND COMMODITIES VIA PHYSICAL OR SYNTHETIC INSTRUMENTS.

CIB.SOCIETEGENERALE.COM/PRIMESERVICES



SOCIETE GENERALE
Corporate & Investment Banking

**BUILDING TEAM SPIRIT
TOGETHER**

THIS COMMUNICATION IS FOR PROFESSIONAL CLIENTS ONLY AND IS NOT DIRECTED AT RETAIL CLIENTS.

Societe Generale is a French credit institution (bank) authorised and supervised by the European Central Bank (ECB) and the Autorité de Contrôle Prudentiel et de Résolution (ACPR) (the French Prudential Control and Resolution Authority) and regulated by the Autorité des marchés financiers (the French financial markets regulator) (AMF). Societe Generale, London Branch is authorised by the ECB, the ACPR and the Prudential Regulation Authority (PRA) and subject to limited regulation by the Financial Conduct Authority (FCA) and the PRA. Details about the extent of our authorisation, supervision and regulation by the above mentioned authorities are available from us on request. © Gettyimages - FF GROUP

Matthias Knab

When Duncan and I started to prepare this Roundtable, I read a quote from Luke which was, "Adopt big data or get eaten alive," and so we thought that is a very interesting angle to start this discussion today and analyze a bit deeper.

And then, this morning at Opalesque we received a release from a research group in the US that interviewed **180 institutional investors about their use of ETFs** and reported a continued explosive growth of ETFs. *Investors are now using ETFs for their core portfolios, for top-down strategies, to guard against volatility, execute tactical changes to portfolios, and 44% of the surveyed investors said they already use Smart Beta ETFs as well.*

So, let's look at this and potentially other major trends and how they affect active investment management?

Luke Ellis: I think there are a few subjects within that question. Let me start by saying that contrary to what one may read in newspapers generally, I think **the true active management industry, and part of that is obviously the hedge fund industry itself, is in rude health.**

The part of the industry which has been radically changed, and in fact needed changing, was the "closet index" world. Why should anybody have been asked to pay a premium price for a closet index fund? I have no answer for that. And so those buyers are now buying something that is outright passive.

Hedge fund assets have been at record highs for the last few years, setting new highs each year. The industry continues to grow through performance and flows, and so hedge funds are in rude health from that point of view. *Still, I think any true active manager has to find a way of adding value if he or she is going to charge clients fees. If you don't add value, you don't deserve a fee.*

Within asset management, the area with by far the biggest fee pressure last year was passive. The reality is that passive products with the same benchmark are, to a large extent, the same product, so there is very little or no differentiation or value add in that process.

You mentioned that from those surveyed investors 44% use Smart Beta ETFs, and this brings me to this weird development we have reached with ETFs and indices where there are in order of magnitude around 100 times more indices in the world today than there are securities. To me, that is a peculiar state of affairs.

Coming back to the idea that there is passive investing on one side, and active on the other, if you have 100 times as many indices as you have securities, you can't be purely passive. You have to pick one out of those multitudes of indices.

So, in general, I think the active investment management industry is in a good place, but, of course, like everywhere else in the world, **you have to keep improving in order to just stand still.** The amazing power of technology and data today means that if you stand still, you will get commoditized.

I think an important trait of the hedge fund industry is that it has always been an amazingly Darwinian industry. People have always fought to get better, and if you are not good enough, you go out of business really quite quickly.



Andrew McCaffery: Just thinking about what investors are doing and if there have been any particular changes within recent years. I think within the UK, for some time the question for several investors has been how to spend whatever fee budget they have as efficiently as possible, and so when we talk about the proliferation of ETFs and passive investing it's because for certain elements of asset allocation those are just being perceived as cheaper and easier to access for the required exposure.

Investors have also started to analyze in detail what they have been receiving from their external investment managers and are increasingly also looking if there are ways to change slightly the dynamics around that. Let me point here to the growth of alternative risk premia as a way to obtain diversification by tapping into different types of premia that are available in the marketplace, and which traditionally hedge funds have harvested over time, but which can now be generated at a different fee level. The goal is then trying to combine that with strategies where the investors see the real production of alpha in a purer form as something that is highly valuable.

So there is a bit of pendulum swing going on. We are all focusing on **turning alternative risk premia into UCITS** compliant profiles that then can be offered to investors in the UK and also in Europe. If you look to the pension fund universe, a lot of the flows and push to alternative risk premia are very much driven from investors at value for money considerations.

In the alternative risk premia market, there are a number of investment banks producing a wide range of products, and there are also a number of hedge fund managers that have entered that market and managed to create very effective strategies and taking in assets for that. Many managers are also blending these new alternative risk premia products with Alpha generating hedge fund strategies now, so the fee profiles are becoming more differentiated as well.

When it comes to fees, the hedge fund industry moved relatively slowly to embrace that they were not adjusting fees relative to the types of returns they were producing, and as importantly the risk they were taking, but I think that has evolved now.



At the moment we are seeing UK investors across the board coming back with a new interest, because they feel that there is not just a combination of better pricing, but they are also starting to see the way in which the combined strategies are more effective to generate diversification within portfolios. You could say that investors are looking for diversification again in a much more distinct manner than maybe a couple of years ago.

Potentially, the headwinds are actually now turning into tailwinds for the hedge fund industry, but the mix of strategy and allocations tend to be a bit different to what they have been five years ago and before.

Duncan Crawford: We also have observed the growth in risk premia strategies being offered by asset managers. The paper we are currently working on focuses on multi asset, multi risk premia strategies, and we identified at least 40 programs from asset managers in addition to those offered by banks. Their total AUM is approximately 50 billion dollars under management, approximately half being in managed accounts and the other half in funds.

We often hear questions such as, **“Why are there so many risk premia programs out there? Aren't they all pretty similar, because there are only certain risk premia out there which everyone is trying to harvest?”**

What we found however was that in these 40 programs, there were over 21 different risk premia being used with cross asset momentum, carry, value and some form of single stock equity factors being the most widely used factors. Perhaps surprisingly the pair-wise correlation between managers is only 0.23, so this is a pretty low correlation.

The average fee levels do vary, but seem to be aligned with **10 basis points of fees per 1% of risk**.



Paying on a percentage of risk basis makes great sense and although I agree that investors are becoming a lot more sophisticated, I have also heard about investors looking for a cheaper alternative beta products and paying 75 basis points for a 3.5 vol product which, frankly, is not particularly cheap – the median vol of the constituents of the SG CTA index, made up of 20 almost entire alpha managers is about 12. If you vol adjust this cheaper product to 12 that would take the 75 basis points up to 260 basis points.

Luke Ellis: Trying to judge correlations across different providers' implementation results in such a noisy environment is very difficult. On top of that, if you were to take ten providers' version of FX carry, you may get a low correlation between them, but that doesn't mean a combination of them would be better than any individual one. Because the Sharpe ratio is so low, you would have to wait a very long time to work out whether any combination is better.



One of things that concerns me is how some of the product providers seem to have been encouraging clients to look at risk premias as a menu. So investors may look at five providers' menus and they think, "Well, I am going to buy my rice from this shop and I am going to buy my chicken from this one and I am going to buy my vegetables from over here..."

However, the problem here, I believe, is that the ability to actually judge differences is so hard in these low Sharpe ratio strategies that people are almost certainly doing it based on historic returns, which as we all know is a bad way of judging between these things. At Man Group, we wouldn't pick out individual risk premia from our range of strategies for that reason.

Andrew McCaffery: I agree, and this is also a reason why at Aberdeen Standard Investments, we only offer multiple alternative risk premia as a diversified portfolio. Individual selection is potentially fraught with risk, and most investors don't have the ability to be able to understand and select individually, and then spend a great deal of resource and time in trying to time and choose environments to tactically shift exposures.

Also, we have observed that many of the **alternative risk premia Sharpe ratios** have been generally higher in more recent times than what one would expect over the medium term. I do fear that there may be a point where we are going to see, and potentially this may have already started, that these currently high Sharpe ratios come under pressure and head down towards their longer term mean. This may mean the excellent returns coming off slightly, but it is more likely that volatility rises and this leads to the deterioration in the very good risk adjusted returns we have been seeing.

That would challenge the real diversification profile we have seen for several individual strategies. Many alternative risk premia investors and product providers have benefited from a benign environment, so this is one of the things you should be thinking about: *Where is the current Sharpe ratio environment? Is it sustainable for the strategies I own, and how far looking forward can you rely on this.* Again, a diversified portfolio and a pragmatic, dynamic approach will likely prove more valuable.

This is again why you will see that hedge fund strategies, and hopefully the embedding of degrees of alpha production, will always be valuable. However, this could now begin to have a much greater focus, and you could see that differentiation coming through as well from the more skilled, capacity managed hedge fund managers. That is most probably one of the things we would be focusing on when we talk about looking out over the next two years rather than looking back at the last couple of years.





Areski Iberrakene: We are a smaller manager, still in the early stages of our development. Our aim is to offer investors something very niche, and so we focus on alternative risk premia (ARP), inclusive of volatility risk premia, alternative relative value, and tail risk premia. So we are active in the derivatives space, using futures and options, to extract carry or relative value spreads.

Reception thus far has been very positive, with investors showing strong interest in our offering, and in working with specialists across ARP like us, especially right now I think – and engaging our type of offering, as a component of their risk premia complex.

Stephen Platts: We are also a boutique manager, so let me add to that perspective.

One thing I see on a day-to-day basis has a lot to do with the rise of the machines in the markets. **Interestingly, this rise of the machines is supposed to create very efficient markets, but for us, it creates inconsistencies we can take advantage of.**

As to Matthias' initial question, is active management alive and kicking? I also think it absolutely is, and over the last few years I have sensed increased demand for boutique managers. It appears that there have been more successful hedge fund launches in the last few years in comparison to the five to seven years after 2007. And those boutique managers setting up have been raising money from investors who I think haven't necessarily fully invested their hedge fund allocation so far, but they are seeing the opportunity that active managers provide.



Matthias Knab

Do mean that hedge funds are winning investors who before didn't invest in them?

Stephen Platts: Well, not necessarily new investor types, just that the inflows stopped very quickly after 2008. Until recently, a lot of the flows into the hedge fund industry seemed to be directed to the larger, more established managers with a brand who would tailor a product to a certain vol target and what the investors wanted.



But I think now, some of those investors are looking for something a little bit more “niche”, to use Areski's term, and that there are managers out there such as Melqart who are proving that boutique managers can perform very well.

Now, do I think that event-driven is immune from the machines and some of the things we have talked about? Absolutely not, and I agree with Luke's point that we need to stay on our toes and one has to keep evolving. It's very much survival of the fittest, but I also believe that some form of inefficiencies will always be there, certainly within an Event Driven context.

Matthew Riley: I think it was Bill Gates who said something along the lines that if you take an inefficient process and you add automation, you increase the inefficiency. If you take an efficient process and you add automation, you increase the efficiency. Garbage in, garbage out.

When it comes to the use of artificial intelligence and machine learning as a successful, truly active management process – so you have machines both configuring and executing strategies such as a human trader would do – I think that is still somewhere in the future. I think now we still have mostly people telling a machine what to do and that machine is then executing the process more efficiently and faster than a human can do.

I think these two types of applications often get lumped together, but these are two quite different applications. Even in machine learning you define first the parameters of your desired outcome and in the same way what you want to avoid. The machine will then help you to work towards that outcome faster and quicker and but you often still need a lot of human input into design. An example I would propose is some of the multifactor funds where they will have several of these AIs, machine learning systems running, and the human intervention is to manage the risk capital allocation between strategies. At the moment most funds still rely on a human to do that.

It's almost like having for example a bond manager, but he doesn't have one long/short fund, but one long fund and one short fund, but he will dynamically put some more money in the long fund or the short fund. That's what I feel like some people are really doing with these machine learning approaches where they are the director at the top and instead of having a bank of traders they oversee a few machines, but there is still someone directing which strategy is dominant, the one they feel is relevant in this current macro environment for example.



Matthias Knab

Luke, do you agree with these statements, I think Man Group is very advanced in applying AI, so I wonder what you can share with us?

Luke Ellis: There are a lot of different things that come into play here, but let me begin with saying that you can use technology to improve almost any process. I agree you have to understand the process before you do it.

Let's look at the alpha generation piece. If you look at it as a management process, there are three basic steps. There is the gross alpha, where you have an idea that isn't currently reflected in the price. Then there is the process of trading into and out of that idea. And finally there's the process of building a portfolio of those ideas.

In futures and FX, we can debate whether humans still have an edge in coming up with alpha-generating ideas, but there are a lot of people who think they do. In individual stocks and in credit as well, it's very clear to me that there are humans who seem to have an edge, at least in one way or another, in generating potential alpha.



When it comes to trading in and out of positions, I would tell you that computers are infinitely better at it today than humans are in the futures, FX, and equities markets. Those markets now trade in micro size, and this is one reason why computers are just much better. **We use a significant amount of machine learning to do that execution.** When it comes to credit today, it's a telephone market, and so humans are very important to execution.

Now let's look at portfolio construction. **I believe most human portfolio managers – and I have worked with and interviewed thousands and thousands over the years, from different funds and firms – are pretty bad at portfolio construction, compared to machines, in my view.**

Yes, some may be good, but on average I have found that most people don't have their maximum position size in their best idea. They may also sell their winners too early most of the time, et cetera. Those are examples of such fundamental human behavioral traits or failings, and these biases are one of those things using computers can potentially help with.

The bit everybody focuses on is **can you use machine learning to generate the pure alpha piece?** And here too I can confirm that we can and we have done. We have been running pure deep-learned strategies, which do not include a human designing what it's supposed to do, for years with client capital.

Are they perfect? No. Is any human perfect? Of course not.

We also find them to be very transparent, and in some ways more so than a human is. I always hate the “black box” characterization, Whether it's a traditional algorithm, so a natural process where you know exactly what it's going to do next, whatever happens, or a machine-learned process where you have to build in a set diagnostics so that you know what it's going to do next, *the reality is that it will tell you exactly what it's going to do next if you tell it what the market is going to do next.*

To me, those are very transparent boxes compared to humans. I have a very close friend who I have known for 30 years and when I called him up on the way over here I really had no idea how my call would be received. Will he have time for me, or will he cut me short? That's how humans are, so in some ways humans can be more of a “black box” than technology.

Let me also say a word about high frequency trading. We don't do high frequency trading (HFT) ourselves, but *if you execute in equity markets or futures markets or FX, almost all the liquidity provided in those markets is provided by high frequency traders.* So if you don't understand what they are doing, you are going to be severely impacted.

There can be a tendency for people to think that, because they don't do HFT themselves, it's not something they have to worry about and they can rely on human trading alone. To me, that's a **fundamental mistake.**

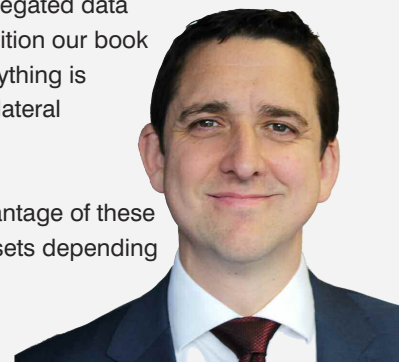
Jon Hartropp: Not only execution, but also financing, and in particular stock lending has changed quite dramatically in the last five to ten years.

Historically in securities lending, it wasn't easy to access comprehensive borrow color or obtain an efficient two way price, or an indication of volume traded in the stock loan market. Getting this type of information was a manual process and it was entirely driven by your market relationships. A relative lack of data meant inefficiencies.

More recently, over the last four or five years, there have been a number of entrants to the market that try to provide that color using participant data. The impact they have depends on various factors such as your market share and sophistication, but what they certainly do is provide more transparency.

From a financing perspective, we see there are a number of benefits, as we can access aggregated data from our counterparts and peers. This gives us more insight into trends and allows us to position our book appropriately during liquidity events. Looking from the lender's standpoint, increasingly everything is automated in terms of maximizing the return on the assets they lend and optimizing their collateral schedules.

From a client point of view, we see a lot more opportunities now than previously. Taking advantage of these data sets, clients are more willing to shop around and use different providers for different assets depending on who is axed on a name-by-name or market-by-market basis.



Matthias Knab

I want to come back into the discussion on the artificial intelligence. Yesterday I was at the conference of an alternative data provider, RavenPack, at the Banking Hall. The whole event was about artificial intelligence and alternative data. [In one of the presentations](#), Professor Mark Salmon from Cambridge University said that he thinks that in the biomedical field the applications of artificial intelligence would be around 10 years ahead to what's happening in finance.

So after his talk I had a conversation with him saying that in finance we are trying to catch up. At Opalesque we had covered some by Gartner Group that said 47% of all Chief Investment Officers have an AI project going on.

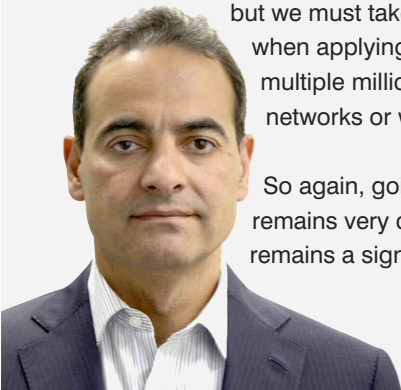
He said even at some of the large banks, such an AI project is often really just playing around to get to know the technology. He also gave me the name of a large global bank and said their "AI department" would be four people. He later said a lot will of course depend on the quality and experience of the people, but it seems his point was that compared to medicine we would be under-resourced.

Areski Iberrakene: I think it is important to highlight that even when we are referring to engaging artificial intelligence, it is still so much about data – both **availability of data, as well as quality of data**.

If I look at my investment banking career, it's only more recently – I would say the last 10 years, that we see data being gathered in a robust manner. Before we launched our fund, we certainly spent a great deal of time gathering data, and by data I don't just mean simple exchange traded futures, but also option volatility, OTC prices, etc. Though data may be available, either through exchanges or other avenues, (OTC data being a bit more complicated to collect), the complex of quality as well and cost, makes it I believe a **significant barrier to entry** for smaller managers.

So I see AI of course applied by large firms such as Man, and some of your competitors. The technology has also become more available, but all in all it is still extremely expensive. We have managed to implement it more economically, but we must take great care in being careful, and insightful, and corrective with this technology, especially when applying it cross-asset and in global markets. Should we not be, then it is something which can cost multiple millions of dollars a year – to have the proper datasets to begin with, the algos, and neural networks or whatever machine learning or supervised learning algorithm you want to do.

So again, going back to my initial point – availability and quality of data, along with the costs involved, remains very central to the discourse. We have managed to set this all up effectively, but I think it currently remains a significant hurdle for many.



Luke Ellis: The price of exchange-provided data has risen significantly.

Even in areas like index data, it's extraordinary how prices have been pushed up continuously.

At Man Group, we have been collecting our own tick data for a long time. We collect one to five billion ticks of data a day so that ideally we don't have to rely on somebody else's data to draw a chart and do as many things as we can with our own resources. In many ways, it takes a different mindset, focused on having a technology infrastructure, to do that. It can get complex, but what's obvious to me is that we have to embrace keeping up with technology.

Then secondly, for more than five years we have had more and more people doing machine learning. **We view machine learning and AI as tools and techniques which we now try to put in the hands of all of our quants.** You don't want everybody trying to use the same technique on the same problem, that would be pointless, but we have over 100 people who understand and use machine learning techniques in one form or another within the firm.

We also spoke about the role and significance of data, and one of the places where it gets really interesting is that in the field of data science we now have developed techniques for **handling patchy data**. This of course has a lot of complexity, but we think it is potentially interesting as a source of returns.

So when it comes to unstructured types of data, there are techniques that have been developed, which are able to handle data streams where sometimes you are getting daily data and sometimes you are getting monthly data, or sometimes there is a gap where you didn't get any for a while, and the challenge is how do you handle the gaps or is there a way to think about filling the data in, and so on.

There are some really interesting techniques that have been developed around sensors on water buoys which measure tides. The challenge with those buoys, whether they are in a river in Germany or in the Channel in the UK, is that the conditions mean they frequently break. So you have datasets, but they are riddled with gaps.

With the help of machine learning, scientists have developed some maths that is very interesting, and applying those ideas to finance is a fascinating intellectual problem.

Having seen the attraction of 'big tech', and what they seek to provide to potential employees compared to the finance sector, I think it is the quality of the intellectual problems you can offer that helps you get the best people to come and do this type of work.



Andrew McCaffery: Matthias, to your point about CIOs starting out with AI projects, I think a more fundamental issue for many asset management firms, that they are addressing ahead of AI projects, relates to the **data architecture**.

A good number of them have a lot of valuable data, it just has not been structured in a way, and organized and stored, so that the data can be utilized efficiently for the firm in order to generate a clear 'value-add'.

Therefore, I think there is enormous investment into that work across the board because, as we discussed, data is obviously a prerequisite for any differentiated machine learning project.

Also, at Aberdeen Standard Investments we have been using machine learning in a small, but developing, manner. We have a team that is also a multiple of that bank in question, more akin to a Man Group sized commitment, which has been specifically working on **asset allocation**. The team was set up just five years ago and actually now has a sleeve within one of our major strategies, as an explicit



machine learning strategy within a broader multi-strategy framework, and we are allowing it to run a defined allocation of capital.

When it comes to AI, it seems to me we are still in a quite early development phase. *When you look at how AI has evolved until now, I am not really sure a great deal is significantly beyond mining of statistics in ever greater, amplified form, but is it truly AI? Is it truly machine learning?*

However, what is a fact now is that across all of our activities, within the active discretionary as well as quantitative based strategies, we are all utilizing quantitative inputs in different ways. There's no one in any of our teams that hasn't significantly increased quantitative analysis and inputs to help with the decision making process compared to a few years ago.

Now, their final decision may still be a discretionary one, but it is based upon a greater understanding, better identifying of opportunities, and a constant search about new ways to access investment ideas via the quantitative input to their process. Also, these widespread techniques and approaches are being developed *more holistically*, and in a horizontal profile across investment activity rather than just within separated buckets of individual assets.

This leads to a shared knowledge starting to evolve that I think is very interesting, but it's also showing the rapid impact of understanding data and how you can utilize it, and the technology you need to build into the overall architecture of your investment platform.

When you look at the output or the value you'll get out of this additional input to help make better decisions, it is up to you whether you trust it as an explicit systematic output that you just implement or information that helps you to make your final, discretionary decision.

Matthias Knab

Yes, one of the buzz words that came up in our industry one or two years ago is "quantamental" as the marriage of fundamental and quantitative processes in investing.

Andrew McCaffery:

Well, it is to a degree. However, many managers of our active strategies would say that still key is the proprietary research with fundamental-based discretionary decisions, but it is the growing use below the surface where the amount of quantitative input has increased over time.

Matthew Riley:

I think you have probably more eloquently expressed what I find talking to a lot of our clients, even those whose principal business is high frequency trading: Today, you can run your firm with less analysts, there are fewer people doing more work because their work is enhanced through the data mining and the AI, these tools that they are now allowed to develop and use.

Areski Iberrakene: With respect to Luke's point about 'big tech' and their hiring power, one does need to ask themselves *why wouldn't Google come and start investing in the world of finance?*

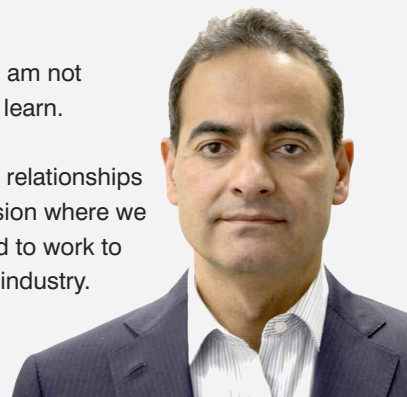
From my perspective as an asset manager, this very real possibility should serve as an important wake up call. Our industry needs to embrace technology as quickly as it can. If you look at the success of a purely systematic asset manager, or even a discretionary manager engaging technology more and more; data is one key ingredient, the second one is algos, and the third is of course talent with a deep understanding of capital markets and finance.

Google has the first two; they have the algos, and manage data better than anyone else. They may not have capital market professionals, but nothing prevents them from hiring them and undertaking such an initiative.

To go back to the quote of Professor Salmon regarding AI in the bio-medical field, I do believe overall that despite progress, we in our industry are latecomers to data acquisition and data normalization.

I am not overly worried about algos because they are starting to be freely available. In that, I am not talking about investment algorithms, but more those to data mine, machine learn, and deep learn.

Google actually offers amazing tools which allow you to structure your data and understand relationships between dataset and data series. So, we collect the data and the algos, but the third dimension where we can still differentiate ourselves is our talent of market professionals – and we constantly need to work to expand our capabilities with respect to the other two fronts, to remain at the forefront of this industry.



Luke Ellis: I hear your concerns, and in theory this is all good, but in practice one thing we all have to deal with every day is regulation. Of course, the big tech companies have a significant amount of potentially market-sensitive non-public information, but as we all know, it wouldn't be appropriate to trade on that information and that is something the regulators would be very focused on.

That doesn't mean that some spin-out or some variant of today's firms isn't going to in the future. I agree with Areski and have said it before, we all have to keep getting better at everything we do.

I am a great believer in humans' ability to do things that computers can't. But we all have to keep getting better at what we're doing, because otherwise someone will come along and disrupt us.



Andrew McCaffery: I would definitely affirm the role of regulation in impacting the thought process to date, but look at **what the Chinese are doing in this field**. They are definitely setting up entities that are starting to use AI in financial markets. They are starting to enter the financial domain through elements of Alibaba, Baidu, Tencent and other sort of alliances too. So the application of AI in finance is developing out there, and maybe this has also to do with the level of evolution of the industry relative to where we are in the West, and especially compared to the UK and the US.

At least for us here, regulation is the main factor. We can be reasonably confident that most of these firms would not want other forms of regulation being exercised on their existing businesses. So, this is actually the one saving grace we have at this stage, but it's not going to be without the tentacles



coming in. While the public may be all looking to the West Coast of the US, we actually could see the trend being set in the East...

Therefore, I believe we have to be very careful as to who is going to drive some of these things and how quickly they are evolving around the world. It's not just the names we know well in the Western world, it's going to be others, and we should especially be looking at China and Asia.

Matthias Knab

What other trends and developments do you see?

Andrew McCaffery: Let me come back to discuss **tail risk and optionality**, as this plays to another trend which is customization. Many investors try to identify where the sensitivities are in their portfolios and also around their liabilities, and therefore what type of scenarios they are most vulnerable to.

To date, we have seen far more focus on what could happen with a sustained uptick in inflation and how that could play out. What happens if inflationary pressure sets off a subsequent debt and default cycle, which no one is pricing in today? Or, what impact would the next recession have on portfolios?

By identifying the key sensitivities, investors want to understand where there are strong amplification risks within their portfolios, and then in a second step trying to think about ways in which they can have some forms of tail risk protection or true diversifiers.

These activities have really picked up in the last year to levels we hadn't seen for a long time, and this started even before we had the volatility events in early 2018. I think it's interesting to see that this sort of awareness is growing.



The other factor that drives this is that there has been an **embracing of more illiquidity** in investors' portfolios, both in terms of by choice – buying private capital, real assets and the like – but also in their own understanding that liquidity around certain public securities is not what it is in a benign environment. This prompts the thought of how should they think about the overall liquidity risks and then managing these. One consequence of this means having less of a product focus, but more customized ideas to address some of those direct sensitivities. In doing so, this essentially also includes the move of investors back to the hedge fund universe and the innovation around ideas in that sector.

Matthias Knab

Can you give us a bit more details or examples what you then do specifically around tail risk protection and diversification?

Andrew McCaffery: It is in the public domain that we manage money for some of the US based pension funds which includes aspects of what consultants have named '**crisis risk offset**'. Here we combine forms of systematic macro CTA strategies together with volatility strategies. This is about managing trend and gap risk in different forms linked to specific asset classes or broader market developments.

So rather than putting money into a generic product, this is more geared according to the types of exposures that the investors specifically want to protect against and which exposures they want within their portfolio. This means that investors are also moving away from the mindset, "We have a big core sovereign bond allocation that's going to offset some of our risk assets' movements," as they now believe such a strategy may not be as secure as it once was.



Matthias Knab

Andrew also brought up again the theme of innovation in our industry. Are there any other comments, what are you currently working at?

Matthew Riley: Following on from the discussion of systematic strategies, Eurex does have some hedge fund replication product expressed through the **factor-driven futures** which we launched in association with Alpha Centauri. These allow an investor to express an investment view based on six factors – Carry, Momentum, Quality, Low Risk, Size and Value.

These allow an investor to structure a long or long / short exposure to the various factors which was a request from clients who want to achieve a market neutral investment strategy. For more traditional investors or asset managers, whenever we discuss derivatives, particularly with UCITS funds or others who are restricted on what they can trade OTC, they are looking for protection in a down move. You can of course just buy EuroStoxx puts, but that comes at a price and then you have the problem of timing, and we have VSTOXX which gives a similar forward starting vol exposure to some other products and carries less drag.

Futurization of current OTC products can work as it has for our EuroStoxx 50 total return future, which has now traded over one million contracts, so we're always looking for ideas of a workable crash protection.



Duncan Crawford:

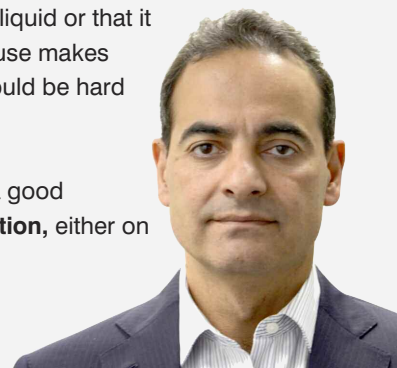
What about variance?

Matthew Riley:

We do have a listed variance products but this has not seen much support from some market participants, which is unfortunate as we have buy-side institutions who are keen and we have some of the high frequency market makers who have large options books who would love to get involved. We do have high hopes for the future given it does offer the kind of payoff over an event that they're looking for.

Areski Iberrakene: I believe CBOE also has a product on variance, but I don't think it's very liquid or that it has picked up yet. Your explanation of banks generally wanting to keep such products in-house makes sense. As you always need market makers for this product, given this conflict of interest it would be hard for the banks to fulfill this role.

Regarding the futurization of a crash product, I think it is a good idea – and would make for a good initiative. In my time at various investment banks we were very active in selling **crash protection**, either on indices like the S&P or other international indices, or even on portfolios of hedge funds.



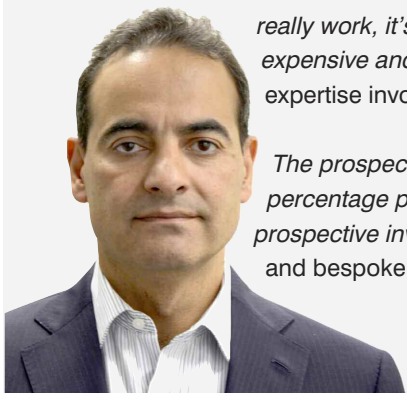
Luke Ellis: Did any of your clients make money out of any of them?

Areski Iberrakene: Well probably not as these products tend to be very expensive. You are selling a product which starts to pay off when there is a 10% gap from one day to the next. Looking at how those bank products are priced, there are certainly better ways to package options together and get crash protection. However, I think if such a product were to be listed, with more people looking at them you would have buyers and sellers, so price discovery would probably end up making such a product more attractive.

From our side, we do see a lot of interest in **tail risk protection**, and we have devoted much energy in the context of our research and development, to creating an effective and robust tail risk portfolio. The aim being to provide a similar level of protection to those offered by the more traditional strategies, while having an annual cost which is minimal.

We all know that simply buying an option on equity and rolling that monthly, or on a quarterly basis, doesn't really work, it's too expensive. That's why alternative risk premium is here, but optionality tends to be a bit expensive and therefore you need to combine and finance these tails. So, there is certainly a real expertise involved in being able to effectively structure and time this type of product.

The prospect of being able to have a portfolio inclusive of a tail profile, while not costing several percentage points of performance every year, is something we see considerable appetite for from prospective investors. We consequently have several discussions on going around managed accounts and bespoke mandates for specific tail products.



Luke Ellis: My experience is that most clients would consider buying something if it could offer them a tail protection without a premium, but that, by definition doesn't exist. One of the things we actually spend quite a lot of time discussing with clients is the **potential drawbacks of hedges**.

We know that over history, the seller of the protection has tended to be the one who does better out of that exercise. And the reality is that buying tail protection, unless you are doing it for regulatory reasons, requires amazing timing.

One of the worst trades I've seen in my career was buying investment banks' CDS in 2006. If you'd held it to the end of 2008, it could have been extremely profitable. But of course while initially the CDS looked like it wouldn't cost you very much as a carry, spreads then halved and there was a very large mark to market loss, which meant many investors didn't want to hold onto it.

Regarding Andrew's point about the belief that bonds are hedged to equities because they were in 2008, I agree this has become a large risk today. For 200 years, bonds and equities were positively correlated. Today, we actually spend a lot of time talking to clients about the potential drawbacks of these positions. So **what is the best hedge you can buy?** *Many of us who have been on a bank trading desk have learned that the answer, rather than trying to find some clever trade in order to hedge your other trade, is often just to sell the trade itself.* So, clients can reduce their exposure if they get uncomfortable, and sell out of positions and exposures.

They need to have a process and a way to do it, and I think it's in the end a much better service which can be given to clients – helping them to understand potential ways to mitigate certain risks that aren't the risk they want to take.

But again, I can tell you from experience that this can be a challenge because investors often tend to ask for things like, *"Give me a really clever complicated three-step hedge where there's something that doesn't carry too badly?"* Well, in the end such a thing is unlikely give the client what he wants or needs. In the perfect scenario, you think you have bought a hedge against say a drop of the equity market of 17%, and you think you are prepared and would get a pay out when that happens. But, as we have all seen, what happens then is a scenario that is marginally different from what you expected and hedged against, and then your experience can be the opposite.



Duncan Crawford: February 2018 is a very good month to look out for how all those tail protection products worked.



Perhaps not surprisingly a number of short vol ETFs and short vol managers blew out completely, however some performed surprisingly well. I can think of one that ended the month down less than 2%, having been up nearly 8% last year. And there were long vol managers who performed well in February. But to perform particularly well they had to lock-in to their gains halfway through the month.

Portfolio protection is certainly an issue that many investors are currently interested in. *Like Andrew we also see investors looking at combination of CTA, Systematic Macro and volatility managers. We see a role for short term CTAs in the mix and volatility managers trading more than just long vol.*

Andrew McCaffery: From Luke's and Duncan's points one other overriding comment would be that cash may not be 'trash' any more...

Understanding when you can be tactical or dynamic versus where your strategic asset allocation suggests, has always been a big challenge. A key aspect for investors is to fully understand their own philosophy, their own beliefs, and what the real constraints are that flow from these. When an investor has those points fully answered, this will then allow them to more efficiently manage difficult scenarios and across different environments, whilst not losing sight of the longer term objectives.



The reason I raise this is because it allows them to become more aligned to their key time horizon. Because, ultimately for many, it's multiple years in nature and to consider the degree to which, "Is this something suggesting we are moving into an environment where there's explicitly a significant drawdown risk that has other ramifications", which should prompt the discussion, of whether actions required to be employed within the overall framework for the portfolio risk and asset allocation management.

In reality, we spend a great deal of time thinking about how to manage short-term risk, and how to generate strategies that produce returns when thinking in a short timeframe. A big part of this is driven by reporting and review periods not linked to the real investment horizon. Whereas the reality for most investors is that they are longer term in nature with their liabilities and investment needs and actually that is the understanding which should be at the forefront of all participant's minds. I think a need to be honest about what are the true constraints, but also what it is that they are willing to live with to fulfil their strategic profile and core needs that is most important.

So, by definition, when running a form of tactical 'insurance' or explicit tail risk strategy within a broader, profile of managing your assets, it is important to understand the need of flexible thinking but also thinking within different time horizons, to link effectively how this should all fit together.

Stephen Platts: I agree with Andrew here, a lot of those problems are created or amplified by the more frequent reporting that we have now.



One doesn't start an investment management firm and focus on running it from just a month to month perspective. Rather, as founders we want to build a business for the long term and hopefully create a legacy to pass onto future generations.

Of course, we also realize that investors need to know our performance as we are judged against the market or versus our peers so the whole reporting monthly is a necessary evil to some extent.

Jon Hartropp: Andrew made an interesting point about cash. We actually spend a lot of time in prime brokerage now discussing **cash deposits** with funds which historically wasn't the case. It's been quite well-publicized in the last few years that many prime brokers generally have a decreased appetite for cash deposits.

Where hedge funds have high levels of unencumbered cash, they are typically not getting the same returns on them as 10-12 years ago. Many of our conversations are to propose different products to enhance cash yields. We use balance sheet efficient solutions and collateralize it in a way that suits a clients risk profile and gives them a return that may be preferable to a money market fund, a certificate of deposit or a traditional repo. Cash management conversations have therefore become a lot more relevant to Treasury and financing individuals at hedge funds.



Luke Ellis: On the other side of the spectrum we see that **investors are embracing private market assets at an extraordinary speed.**

Now, when you speak to the investors about their motives, one thing that also tends to come up is because there is no mark-to-market, and so it appears that there is no risk of a loss. But of course the fact you don't have mark-to-market doesn't mean that you don't have a risk of a loss.

Most importantly, if there was one thing that an investor should have learned from the 2008-2009 episode, it would be that **the value of cash at the bottom can be incredibly high.**

When you have a big sell-off, assets are cheap and what it would seemingly make sense to do is buy as much beta as you can – whether it's credit beta or equity beta.

My point here is that there is an opportunity cost of investing in, say, a 10-year private debt fund – you may earn some yield over the course of those 10 years, but there is also a significant opportunity cost because it's likely we will have one, maybe two, credit cycles during that time.



And so for people with long term capital, other than locking it up, the alternative could be to stay liquid, and then when there is a selloff, consider buying beta. When it's no longer cheap again, there's a possibility they could sell it and do it again.

I believe that today, that opportunity cost has become completely lost in all the talk about private debt that won't have this mark-to-market risk and so no apparent volatility – but there's a consequence to that.

Duncan Crawford:

But isn't the timing of that buy-sell, buy-sell a challenge or something that may intimidate investors?

Luke Ellis: I don't think it has to be. If you are investing for a pension fund for 30 years the answer is, at the moment they need 5% real returns, which you can hardly get with a portfolio of high yield credit today.

So, don't go into something that locks you up for 10 years because, at some point, that credit could in fact be yielding 14% again, and then the investor should consider buying that.

You see, high yield may go further up to a 20% yield, but then, those investors won't be disappointed because if they are getting 14%, they already are above their target return, and that is when they may wish to consider buying it. And then when the assets aren't yielding more than their target return, looking forward, they could think about getting rid of it and wait until they get another chance to buy it cheaply.

That to me is really the difference of long term capital compared to running a fund.

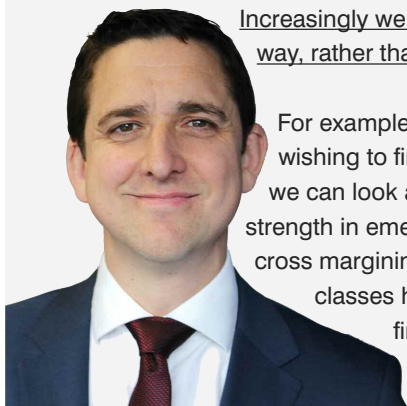


Duncan Crawford:

Makes sense and to be fair we are seeing investors looking to get more involved in optimizing the returns from their portfolios'. Jon perhaps you can elaborate a bit on what we are seeing?

Jon Hartropp: As the Prime Brokerage model becomes more commoditized, at Societe Generale we are focusing on how we can add value and differentiate our offering to clients.

For example in the event driven space, we have a team of market intelligence individuals who provide clients with color on corporate actions, such as tender offers and rights issues. We work closely with both lenders and borrowers to try to determine how holders are likely to elect on a given event. We also analyze how borrow availability and stock loan fee is likely to be impacted. This is critical for some who is putting on a position in one of these event names as they need to know the long term financing cost of the position, liabilities on their borrowed shares and any markets events such as index re-weightings that might impact their financing.



Increasingly we see that funds are looking for providers that can complement each strategy in a specific way, rather than a one size fits all solution.

For example, we are very active with clients trading Convertible Bond Arbitrage strategies and those wishing to finance more esoteric, less vanilla assets. Our derivatives heritage at Societe Generale means we can look at a range of structures and provide very competitive pricing and margining. Similarly, our strength in emerging market financing, sourcing and providing stable inventory in hard-to-borrows and cross margining between asset classes has been very significant in us winning market share and growing our prime services and financing business.

Matthias Knab

Duncan, from your perspective as head of cap intro at Soc Gen globally, what type of funds or strategies are investors interested in?

Duncan Crawford: Well, we already talked about tail protection and toppish markets, so perhaps not surprisingly the interest in the equity space had been more in market neutral strategies like event-driven and equity market neutral, against that thesis, we are in fact seeing a renewed interest in equity strategies in general.

There is **continued interest in non-correlated strategies**. Macro always seems to be of interest, and there is also continued interest in CTAs, despite their tough month in February after which potentially investors could have questioned why CTAs did not do well when equities were down. Investors do now understand that a long term trend-follower will lose money initially in their equity position when equities sell off after a bull trend, as by definition they will be long. Indeed we didn't see big outflows which you might have seen historically in March. On top of that, last year we saw some significant inflows into CTAs that were in some fairly big draw-downs, which I think is also an encouraging and healthy development.

From a geographical perspective, in the last year or so we've seen U.S. investors moving money into Europe, and a pick-up in interest in emerging market equities.



Andrew McCaffery:

Let me guess, it starts with a B...

[laughter]

Matthias Knab

Well, there are at least two or three B's to talk about, things like Brexit and Bitcoin...

Luke Ellis: We trade **Bitcoin futures** as we trade any other futures contract you can find around the world. We trade the future as a financial instrument – and, here, Bitcoin also helps us get more diversification, as it doesn't appear to trade in line with anything else.



We have looked hard at what it would mean to trade in “physical” cryptocurrencies, but this isn't really comparable to the way we currently trade financial instruments, and we would be taking on enormous amount of settlement risk doing business with these cryptocurrency exchanges, which aren't really exchanges in the way we know and need them.

We are not in the business of taking settlement risk and at the current stage, when we look at Bitcoin and the other cryptocurrencies, we see that as a real problem for institutional investors, whether via an asset manager or as an end client, to trade the coins themselves.

Stephen Platts: I have some comments, but not Bitcoin, but more on Blockchain.

I would say that the concept of Bitcoin as a virtual extension of the fiat currency isn't developed enough at this point for widespread adoption. It will develop in the future, and who knows which cryptocurrency is going to be the winner, but the underlying technology of **Blockchain**, which I don't profess to understand in any detail, is being mooted as something that can solve one of the problems that we deal with every day and that Luke just brought up as well – settlement risk.

Why in 2018 do we have a seemingly ubiquitous T+2 settlement cycle for the majority of products that we trade? It doesn't make any sense.

It's an anomaly and if something can come along and solve that problem, I think the whole back office piece in our industry will become way more efficient, and all those people who are doing reconciliations and other settlement related functions that don't add quite so much value can be redeployed.



Luke Ellis: The Blockchain technology appears to be ideally designed around something which is in the end a significant cost drag of the hedge fund business, namely the **three-way reconciliations** that we have between administrator, fund and prime broker.

This is nobody's fault - the way things are set up today requires the need to have that tri-party reconciliation.

In a Blockchain world, if it can be delivered on our instruments, you probably will need significantly fewer people focused on this, reducing costs in the hedge fund industry, which could lead to better returns for clients.



Stephen, you mentioned FX settles in two days. I was sitting next to someone recently who runs a digital money movement business, and he was able to move money from an account in the UK to an account in Italy. It was moved and reconciled and cleared in a matter of a few seconds. This type of technology could make all of our lives infinitely easier and remove other settlement risks.

By the way, if we get to that world, it's quite an interesting question what the business of credit cards will then look like? Right now, when you shop or get a coffee using your credit card, between you paying and the vendor getting the money is a whole lot of settlement risk, which is why credit cards sit in the middle and get paid 2% for that settlement risk. I think that's a good business, but what will happen if there is no settlement risk and all we have to do is wait an extra 10 seconds for our coffee?

Matthias Knab

So we covered two B's already – Bitcoin and Blockchain – which leaves the third one, which of course is Brexit. How are you dealing with Brexit? Do you have a “Brexit-Strategy”?

Areski Iberrakene: I don't have an answer to what's going to happen. I think it's still very difficult for anyone to say with certainty at this stage.

One thing we are looking at is the Sterling volatility against Dollars, or against Euro, and we find the price of protection rather cheap for less favorable outcomes. So, we buy downside optionality on Sterling and finance it against upside. This is a position which carries very well, and it's not going to have a tremendous cost if things go well – if the transition is smoother, or softer so to speak. It would have however a significant pay off, in the event of nastier outcomes.



Jon Hartropp: Working for a French bank, we have a natural hedge with operations here in London and then even bigger operations in Paris.

Clearly, the exact terms of Brexit are yet to be decided. However, if a fund is based in an EEA area, the likelihood is they need to also face a provider in EEA as well. As it stands, we have separate entities in both Paris and London which may become more meaningful in the next couple of years.

Matthew Riley:

Talking to a few clients who still trade OTC as well as listed, the biggest potential headache of those duplication of OTC ISDA documentation depending on what the requirements end up being for trade execution on behalf of an EEA fund – will the trading entity actually have to be an EEA entity in addition to the trade being registered against an EEA counterparty?

Andrew McCaffery: I suppose just going back quickly to preparation, as far as one can. Most of our funds are actually domiciled where the investors of those funds are.

So, we use Luxembourg or Dublin for European-based or non-UK investors, then the UK for predominantly UK-based investors. There are some exceptions to that, but I suppose the real challenge is on the question around the delegation of the asset management function and if parts of the asset or fund management teams may have to move to EU domiciles post Brexit.

I suppose this is a part that stands out and that has gradually picked up in terms of noise. *It's hard to see a rationale for that, given that there are already precedents in place for, take an example of Singapore, Hong Kong, around the management of UCITS funds and the regulatory equivalence. It is not clear to me why the UK would be different from that perspective given we have been within the EU framework. I expect this is one part that may still leave a residue of doubt, but I don't think people should feel pressed to necessarily prepare today, given these other precedents.*

Another perspective around Brexit would be to attempt evaluating from an economical and asset markets point of view – and that would be quite a different conversation about valuations, outlook and how the UK economy is performing – and what are the risks in the medium term based on this?

Re a specific market, we have seen the removal of a structural short positioning in Sterling over several months, so the currency is probably more balanced and can move either way as events evolve from here. Separately, on several of the calculations we have, it doesn't seem as if capital is flowing solidly into the UK, after the initial opportunity from Sterling's decline that prompted several investors to commit fresh capital post Brexit. From here, the interest rate movement, and whether expectations change based upon economic concern with inflation or signs of limited capital inflow leading to slowing economic momentum and fresh risks to the medium term growth prospects.

This is a simplistic description, but as the politics plays out, and the reality of whatever deal lies ahead becomes clearer, we could see a radical re-pricing of Sterling. A prolonged period of uncertainty and any fears of 'no deal' are likely to take their toll on Sterling again at some point in the interim.



Stephen Platts: From our perspective as a small, single product hedge fund manager that is hard-closed, we don't see Brexit as an issue. We have very few investors from what will be the EU, after the UK has left and I think all of the banks that we deal with currently are still going to want to deal with us in the future.

Just on a general point, it has been mooted a lot if there will or won't be a migration of the finance industry out of London. I have a different perspective on this as I just don't see at the end of the day that any European country is going to actually **want** the financial leverage that London has.

Why? It seems to me that European politicians have forgotten what the UK went through with RBS, being nationalized and a basket case for so many years.



There's a lot of chatter at the moment about businesses fleeing the UK, fleeing London and ending up in Paris or Frankfurt or wherever it maybe, but my view is when they finally realize what this would mean in terms of risk I think the political will in the end will limit this migration.

There's definitely an economy of scale of having people in the same place, but really, can you see the French government for example really wanting a financial industry, the size of London's, with the kind of the leverage that it brings and the potential outcomes in a disaster scenario? I don't think so, but that's just my view.

Duncan Crawford:

The other challenge is that infrastructure in Paris or Frankfurt or Dublin still needs to be built up to match the UK's financial industry.

Luke Ellis: One of the things which is a challenge in the whole exercise relates to certain misunderstandings about how our industry actually operates. It seems to me that some European capitals are focused on increasing local jobs and local taxes, but without fully understanding how our businesses actually work. There are still so many myths and misconceptions out there.

But equally what I am saying here also holds for the UK side. So much is done electronically today that the urge to have critical mass is just different from what it used to be. I agree that it used to be really important that you could go and see people, but the reality is that, probably in most industries, we just don't really have that many face-to-face meetings today.

Well, if you are a company CEO and you are doing an investor road show, then you want to meet people in person, so having access to a large number of asset managers all based in London is good, but this is quite a minor example. In general, I find it doesn't matter whether the insurer or the bank or the lawyers are here in person – instead we're typing up stuff on our computers.



Stephen Platts:

I think one consideration is where the balance sheets reside. This is also what people are concerned about.

Duncan Crawford:

Feel the same way as Stephen regarding a case like RBS and the European politicians' concern about the consequences of something like that happening on their turf.

Luke Ellis: I agree with you about the risk on the balance sheet. Allow me to come back to that.

First, you can still hear comments such as how many billions of pounds were spent on bailing out banks, when in fact, the UK taxpayers had a positive return in some of these cases, and so net we haven't spent anything.

But secondly, and more importantly, this was done because there was a risk that if the UK Government hadn't stepped in to save those banks, then the UK economy would have experienced a situation comparable to the 1930s. I have an aptitude for risk management and preparation, so when things looked



particularly difficult, I went out and bought 50 sheep for cash to go on my back field, and made sure the fences were intact!

To lose a banking system would be terrible – and so there are some highly geared risks in that industry – but can we be sure that is fully understood in the political system? I am not completely sure about that.

Matthias Knab

I think that at some point they realize this is not going to happen in a big way, and they are going to be doing deals.

Luke Ellis: Well, I think if, for example, our trading counterparty goes from one of the banks in London to the same bank in Paris, on paper you may not have to move people.

Once that happens however, you may end up having to move a certain number of people. Because once the capital goes somewhere, the government with the capital in that city has an enormous amount of power. But we still hope all will come up with a sensible outcome, but meanwhile prepare for the worst and

--



Duncan Crawford:

And buy sheep?

Luke Ellis:

Hopefully we don't have to this time, but I still think that option wasn't that far fetched just ten years back.

Duncan Crawford:

That sheep trade settled on trade day, didn't it?

[laughter]

Luke Ellis:

You are right, and it settled with physical delivery.

Andrew McCaffery: Luke, I think this episode exemplifies a really good point. I remember some of those I know who were closest to what was going on in the room when the discussions were taking place, went out and actually physically requested gold to be moved across to be accessible and were taking cash out of any cash machine they could.



In hindsight, I have to give a great deal of credit to Gordon Brown and Alistair Darling for actually realizing at the time that they had reached the point where if RBS had toppled over, the country breaks down, along with the political system, and so on. Doing the things that needed to be done was of course very hard, unless you are looking down the proverbial 'barrel'. *I would find it very hard to believe that every major city that is pushing for businesses and headcount now would be pushing equally hard*

in times of a potential crisis. I would agree that they tend to only see the benefits side of economic activity and the capital.

However, it also feels that a process has started and the pressure being felt will intensify from this point forward without true insight to progress on how the future looks. The challenge is how do the negotiations lay out key aspects, and do you plan for the uncertainty by activating any contingency plans you have as a company? The problem is that contingency plans are being activated more-and-more now! This is mainly driven by the fact we appear to have less-and-less certainty as to what really is going to be happening.

Luke Ellis: For traditional assets this is a much greater issue than for offshore hedge funds.

I agree that there is an open question around the details on what form of delegated authority is going to be allowed, where that line is drawn.

But let's be clear. Like many others, we run our UCITS funds out of Dublin or Luxembourg, but it is a delegated authority and so all of the execution and the decisions are in London. You cannot manage that fund if you are not allowed to do that, and so the regulators will have to clarify what the rule is here.



Duncan Crawford:

But as Andrew also pointed out before, we already have delegation to managers in places like New York or Singapore.

Luke Ellis:

Yes, I know. But from the stand point of a large firm such as ours, I also have to look at this question from a contingency perspective. There is nothing that says the regulatory system has to treat London and New York the same – it doesn't have to. So, *we have all got to make contingency plans; and probably for running UCITS, it would mean considering having more bodies on the continent somewhere.*



Stephen Platts: We talked about Brexit and the uncertainty associated with that. But even excluding Brexit, I think there is quite a lot of **uncertainty in the regulatory space**, and I also believe that the stability of the tax environment in the UK is rather shaky. I believe we need to be careful that the confluence of all these things happening together will not result in having a negative impact on the UK asset management industry as a whole. I think we want to avoid a scenario where people wanting to start new firms under those circumstances may think, "Oh, well, maybe I should take the offer from Paris or from Frankfurt. Those seem a much more stable environment where I can go and I can establish my operation."

And so, as someone who set up a business and working with my team out of London, I do have a certain concern regarding the uncertainty of what's coming down the pike from a regulatory and from a business perspective.

Luke Ellis: On a totally different topic, the London industry has tried very hard to **improve diversity**; it is going in the right direction but still has a lot of work to do. There are eight of us in the room talking about the hedge fund business in London, and I think that should include at least one woman, ideally as a hedge fund founder, and let's hope in a few years' time it will be three and then eventually four. Also, it's National Autism Day today, and this is a reminder that there are different sorts of diversity in society.

Over many years, the hedge fund industry here has been generous and supportive of a lot of causes, and has actually done a lot of philanthropic work, which it may not always get credit for. So, here is the good and the bad side if we look a bit deeper into our industry – we all have to do more on diversity and then also continue giving back to society.



Matthias Knab

You are certainly right about both those things, and let me address the diversity aspect. We did have our **first female only Roundtable actually on the Cayman Islands**, and we are trying hard to have a diversified panel each time. But have in mind that with the Roundtable PDF being published, our panel here becomes a public forum, and so some people decline our invitation because they are not seeking publicity, even when our Roundtable discussion is purely educational, such as ours today.

Interestingly, in 2017 the HFRX Women index, which measures female hedge fund managers' performance, has returned 11% while the broader HFRI Composite Index was up just 6%. **Female managers have been outperforming their male counterparts also over three, five and ten years** (by 20% over the last decade.) According to data from 2015 less than one in 20 hedge funds employed a female portfolio manager, and only one in ten UK asset managers was a woman.

Just last week I moderated our first **Cryptocurrency Roundtable in New York**, and that's an industry where the situation, at least for now, unfortunately appears the same with only 5% to 7% of all cryptocurrency being women, and making that industry a highly male-dominated one as well.



Andrew McCaffery: Luke mentioned the charitable side of hedge funds and giving back to society. This links with an observation on our side about the major growth in investors focus onto how they impact in society and their expectations of asset management, and therefore the hedge fund industry within this, to be stewards of capital and to produce a positive impact.

Whether it plays out through environmental and social governance issues or responsible investing, there are many different elements to this, but again, the growth we see is accelerating quite dramatically. There is a feedback loop into the hedge fund industry which as a consequence is also going to accelerate. More-and-more mandates that we see, and allocations that we make now, have some

attachment that is *not just having an ESG policy but a check on specific procedures and how different aspects of ESG are incorporated into the strategy effectively and consistently, providing different types of guidelines we get from investors to consider and then provide to managers.*

This in the end links back to the data element, which is where people usually start when managing those types of requests onto how you deploy your strategies. So again, from investors there are expectations for this to be not just a policy framework but a living commitment and we expect that a good deal more assets are going to be allocated with the view that specific guidelines are fully embedded and integrated into mandates.



DON'T MISS OUT

ACTION REQUIRED

Business decision makers LOVE online video because it gives them the most amount of information in the shortest amount of time.

– Bob Wies / President MV Digital

When done correctly, all you need is one video to build up highly targeted traffic for a really long time.

– Carey Lowe / Marketing Consultant

Video marketing is the most effective way for you to get someone's attention and engage them for a substantial period of time. Keeping someone engaged is the best and quickest way to gain their trust. Gaining trust is the only way to convert your audience into happy, long-term clients and customers.

– David Grimes / Marketing Manager

Video solidifies your online presence while building deep and meaningful relationships with your customers. It adds a personal touch to your brand while increasing your conversions! Videos are now an expected component of any website.

– Lilach Bullock / Marketing Consultant – Forbes top 20 women power influencers

It's more effective:

Video attracts two to three times as many monthly visitors, doubles their time spent on the site and has a 157% increase in organic traffic from search engines like Google.

– Marketing Sherpa

And more cost effective:

Video promotion is 600% more effective than print and direct mail combined.

– Diode Digital

One minute of video is worth 1.8 million words.

– *Forrester Research*

Video content can increase the chances of front page Google ranking by 53 times

– *Cisco*

And did you know that:

Online video is shared 1200% more times than links and text combined.

– *Simply Measured*

75% of executives watch videos while working.

– *Forbes*

"The Opalesque videos are a clever solution to the persistent problem of getting to know managers' style and philosophy within a dizzyingly large universe of possibilities and with increasingly limited time. More managers would be wise to step out of their 20th century shells to embrace the new economy of communication technology to find more efficient ways to convey their story and message to existing and prospective investors."

Adam Choppin, Manager Research & Investment Strategy of FIS Group

Opalesque videos are regularly featured among the best in any top 10 or top 20 hedge fund / investor video ranking, such as this one which lists 4 Opalesque videos out of a total recommended of 19 videos.

Opalesque started shooting manager videos in 2009 – you will probably know that **Julian Robertson, Izzy Englander, Jim Chanos, Jeffrey Ubben, Danny Yong, Elena Ambrosiadou**, and **many other hedge fund legends** have produced videos with Opalesque. We have also produced videos for some of the **biggest institutions** as well, such as **Morgan Stanley, State Street Global Advisors, M&G Investments.**

Save up to 50% in travel costs by making your first meeting the second one

Have you ever spent time and money to take a trip to present your fund, only to hear, *"Thank you for coming to our office, and please keep sending me your reports ..."*?

What if you had known before that the investor is looking for something else?

By sending their video to prospects **before the meeting**, the manager wins twice. Should the investor be looking for something else, the manager can focus his efforts on those investors who watched the video **and liked** what they saw.

In these cases, managers tell us that the first real meeting becomes more like a 2nd meeting (the 1st one being the video) as the groundwork has been laid and the meeting will be much more successful and achieve much more compared to a regular first meeting. By better **qualifying your leads**, you can basically halve your travel budget and raise more assets quicker.

Compliant

- Opalesque.TV videos are produced to comply with your regulatory requirements
- Allow for true reverse solicitation

You're in control

When you're doing a custom Opalesque.TV video, you have full control about any aspect of your message. This is not a given in any other regular media coverage.

A manager portrait on Opalesque.TV is generally designed to simulate a first time meeting with a prospective investor, meaning that questions like the following will be discussed:

- Please introduce yourself and your firm
- What is special about your strategy?
- How are you different from your competitors?
- What else is important regarding the asset class?
- Opportunities you focus on

Working with a trusted partner

Over 1.3 million people have watched one or more Opalesque.TV videos, which means that the people you may be targeting will already be familiar with Opalesque.TV videos.

Managers like **Julian Robertson, Izzy Englander, Jim Chanos, Jeffrey Ubben, Elena Ambrosiadou, Anthony Scaramucci**, and many others have done Opalesque videos, as well as institutions like **Morgan Stanley, State Street Global Advisors, M&G Investments**.

Broad distribution

You can either produce a private video with us, which will only be hosted on the non-public part of your website, or we can offer you the broadest possible multi-channel distribution on Opalesque.TV and our partners like Reuters and other leading platforms. Contact us to discuss your custom distribution package.

Managers have **quadrupled assets** thanks to our video (\$700m to \$2.4bn in 1 year) and also received a book contract or **invitation to speak at the World Economic Forum or at TED** through our video:

- View count: Over 1.3 million views (hundreds of thousands of people)
- Thousands of investors will view your presentations
- Longterm effect: Views do not drop significantly over time
- Without investing a single additional minute of your time – time required to record a video is approximately 90 minutes.

Costs

For a 10 minute video the all-inclusive package price is US\$10,000 which includes: travel (Europe and NY tristate), full production at your office, multiple edits (cuts), provision of the final video file, and a global, multi channel distribution package. A 15 minute video is \$15,000, so \$1,000 will be billed for each additional minute above 10 minutes. The client determines the final length of the video.

Links

Opalesque.TV video which got 104 views over 2016 Christmas:

<http://www.opalesque.tv/hedge-fund-videos/patrick-stutz/>

Opalesque.TV videos sorted by number of views:

<http://www.opalesque.tv/most-viewed-hedge-fund-videos/>

Opalesque.TV videos sorted by number of social media shares:

<http://www.opalesque.tv/most-shared-hedge-fund-videos/>

Contact

Matthias Knab
Founder
Opalesque Ltd.
www.opalesque.com
Email: knab@opalesque.com
Tel: +49-89-2351-3055
Mobile: +49-170-189-0077

