

Opalesque Roundtable Series '17

FRANCE

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Editor's Note

Why everyone now talks about AI and Machine Learning but very few actually do it

The reason why people are so interested in Machine Learning and why people talk about it but very few actually do it is because it's a **paradigm shift to how things have been done before**.

Machine Learning needs to be put at the centre of the system, says Guillaume Vidal, Co-Founder of Walnut Algorithms:

"You shouldn't start by looking at 'What do I have and how can I improve it with machine learning?', but rather look at how Machine Learning works and what systems you should use so that Machine Learning is working at its best, which is supervised classification, to put it short."
(page 9)

This Roundtable also discusses the regulator's view (here: France's AMF) on Artificial Intelligence and Machine Learning as innovations within asset management and finance (page 10-11).

The Opalesque 2017 France Roundtable, sponsored by Eurex, took place in Paris with:

1. Matthieu Lucchesi, [Head, Asset Management Regulation Division, Autorité des marchés financiers \(AMF\)](#)
2. Philippe Paquet, [Managing Partner, NewAlpha Asset Management](#)
3. Bernard Delattre, [President, Altimeo Asset Management](#)
4. Philippe Malaise, [Chairman, Koris International](#)
5. Guillaume Vidal, [Co-Founder, Walnut Algorithms](#)
6. Carl Dunning-Gribble, [Senior Partner, Syquant Capital](#)
7. Nicolas Kageneck, [Senior Vice President, Eurex](#)

The group also discussed:

- How to launch an AI / Machine Learning based asset manager (page 5, 8-9, 14-15)
- Why Machine Learning is a paradigm shift. Why start ups can better harness AI than legacy quant managers (page 8-9)
- Model stability or model decay: Why most of the systematic firms and quant strategies have been decaying. Is Machine Learning the superior way? (page 12, 14)
- Do you know or don't know what's going on in an AI driven system? (page 9, 14-15)
- How asset managers can use Big Data (page 10, 15). The difference between Big Data and AI (page 15)
- Can quant strategies be used by Merger Arbitrage and Event Driven funds? (page 9, 11-12)
- Why establishing a fund just on one strategy, no matter how attractive it appears, can result in great disappointment to any investor (page 11)
- How to identify and deal with "fashionable" signals (page 12). The role of market stress indicators (page 13)
- The state of high frequency trading in Europe (page 12-13)
- Which are the most successful newly listed derivatives products replacing purely OTC traded swap instruments? (page 17-18).
Options on ETFs: Eurex celebrates sevenfold volume increase (page 24-25)
- France's hidden strengths in AI and Machine Learning (page 21-22). Brexit: Look who's moving from London to Paris (page 20-21)
- Performance review and outlook for merger arb funds (page 22-23)

Enjoy!

Matthias Knab
Knab@Opalesque.com

Participant Profiles



(LEFT TO RIGHT):

Matthias Knab, Philippe Paquet, Nicolas von Kage neck, Bernard Delattre, Philippe Malaise, Matthieu Lucchesi
Carl Dunning-Gribble, Guillaume Vidal

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Introduction

Carl Dunning-Gribble
Syquant Capital

My name is Carl Dunning-Gribble at Syquant Capital. We are an independent asset manager based in Paris and managing Event Driven funds. The company was founded in 2005 by former Crédit Agricole Cheuvreux executives. As colleagues we have worked together for over 15 years before spinning out to found Syquant Capital. Actually, the initial founding partners are Olivier Leymarie and Henri Jeantet, and progressively other ex members of the team at Cheuvreux from Crédit Agricole joined Syquant Capital.

We started off with EUR 20 million as initial AUM, EUR 10 million came from Exane. Exane is a shareholder in the business and holds 8% of our capital; the other 92% are held by the various senior partners.

Currently Syquant Capital manages EUR 3 billion across a range of funds which are called Helium. The funds have different risk budgets and tolerance to leverage, 15% of our AUM comes from French clients and the remaining 85% from mainly European clients, but also some Asian clients, for example from Japan or Korea.

We employ 20 people, 11 in the investment team, 6 people on the operational side, and two people or three people on the investor relations including myself.

Matthieu Lucchesi
Autorité des marchés financiers
(AMF)

I am Matthieu Lucchesi. I am the head of the asset management regulation division of the Regulation Policy and International Affair department of the the Autorité des marchés financiers (AMF). I joined the AMF in 2012, with a focus on asset management. My team's expertise covers a vast array a regulation (AIFMD, directive UCITS, EUVECA/EUSEF, ELTIF) to encompass the requirements applicable to funds, their activities and their management, but also their distribution and their marketing. We are involved in major reforms for the asset management sector at European but also at International levels, including for example initiatives led by the Financial Stability Board (FSB) or the International Organization of Securities Commissions (IOSCO).

Bernard Delattre
Altimeo Asset Management

I am Bernard Delattre. I manage with two partners Altimeo Asset Management, which provides like Syquant a merger arbitrage and a special situation fund, but also a new fund of European covered equities. We are also conducting a project about deep learning techniques applied to the financial world.

Nicolas von Kageneck
Deutsche Börse Group

My name is Nicolas von Kageneck. I have the dual French-German nationality and have been working for Deutsche Börse Group for almost 15 years. I started my career in Frankfurt and moved later to the representative office of Deutsche Börse in Paris. We have an office there since 1999 where a team of presently seven employees takes care of the French clients, namely the big Tier 1 banks, but also second tier banks as well as execution brokers and prop shops that are members of our Exchange.

We also have built a strong relationship with the French buy-side community as natural users of Eurex's products and services. Furthermore, I am responsible for the Equity & Equity Index derivatives trading & clearing sales activities at our representative office. We have recently developed a couple of interesting new products in the last months, which I will talk about later on.

Philippe Malaise
Koris International

My name is Philippe Malaise, I am the Chairman of Koris International, an advisory firm registered by the CNCIF, La Chambre Nationale des Conseillers en Investissements Financiers, a professional association approved by the French regulator AMF.

The DNA of our company is based on *extreme risk management*. We believe that defining, assessing, and controlling extreme risk constitutes the building blocks of investments.

Our philosophy is that only economically and empirically motivated investment processes can lead to expected results, especially with alternative investment vehicles.

We are therefore focused on the construction and development of quantitative models, dynamic asset allocation. We exclusively work with institutional investors, such as insurance companies, asset managers, private banks, pension funds, as well as large family offices in Europe. 90% of our business is international, especially Switzerland, Italy, Germany, and UK.

Philippe Paquet
NewAlpha Asset Management

I am Philippe Paquet. I am a Managing Partner of NewAlpha Asset Management. NewAlpha is an investment management company and subsidiary of La Française Group. Other shareholders include MACIF, a mutual insurance group and the company's team.

We are specialized in allocating capital to innovative entrepreneurs in the financial services industry. We initially started in 2004 with the selection and investment and then support of emerging managers. Working with emerging hedge fund managers has actually been our longest business line. We have allocated more than 1.5 billion US Dollars to about 50 mainly international hedge fund managers.

In 2011 we started to diversify the business by allocating capital to alpha-generating long-only equity managers. Under this business line, we are very well-known in France through the brand name of our umbrella fund, Emergence, and its existing sub-funds. We are right now in a marketing campaign to raise a third fund.

We started another diversification in late 2015 after having received approval from our regulator AMF to start a new business line as a venture capital investor in the FinTech space. We launched a truly venture capital fund in late 2015 and will probably at the end of May announce the final closing with EUR 60 million. That fund has already invested in five startup companies and we are going to announce a few more investments for this year.

To summarize, NewAlpha is specialized in providing institutional investors, insurance companies and pension funds, an unique access to the most promising and most innovative entrepreneurs of the financial industry, whether they are startups or portfolio managers. Our positioning illustrates perfectly the convergence at play between the traditional asset management and the FinTech space.

My personal responsibilities at NewAlpha is to cover business development, marketing and communications, and increasingly the support of our partnering asset managers and FinTech startups.

Guillaume Vidal
Walnut Algorithms

I am Guillaume Vidal, Co-Founder of Walnut Algorithms, a French technology startup. We are now 15 scientists, combining skills in quantitative finance, machine learning research, mathematics and computer science. We focus on doing research in automating investment making decisions with artificial intelligence.

We use the latest developments in AI, including deep learning or reinforcement learning techniques to automate in a sense the work of an investment manager and trader. The way we do this is by giving the machine enough information to trade, to learn from its trades, to improve as it trades and by accessing and processing more information than a typical quantitative, systematic, basically rule-based approach would have.

We have been doing that for the past two-and-a-half years. We are backed by VC funds, as well as business angels in the areas of AI research, such as AI Google Brain scientists, or from BNP Paribas, and also financial industry veterans.

We are in a pre-launch phase but will soon start proposing our services. Until now, we have been doing research and building an entire infrastructure to allow the automation of investment management and fund processes.

Our infrastructure is proprietary, coded in Python by our team, and includes all modules necessary in the automation of quantitative investments: data gathering, data cleaning, feature engineering, entry points in the market, exit policies, allocation, market impact, and also all the support modules such as reporting, monitoring, cloud computing, risk management, crash recovery, and so on.

All of these features and functions have been coded by our team of engineers. This required different skills that we brought together and the right culture to brainstorm and get the best ideas to win.

80

percent of all Beatles songs are about love.



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Matthias Knab

Guillaume, you and your team are basically building a new investment manager from scratch, and your trading will be based on artificial intelligence and machine learning. Have you done already some paper trading or real trading?

Guillaume Vidal

We have not been trading real capital. So far we have tested our systems with a walk forward analysis and backtests over ten years on European and US equity index futures, and we have also been paper trading using Interactive Brokers on specific strategies since September.

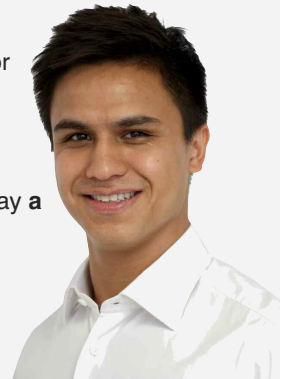
Matthias Knab

What markets and instruments besides US equities and futures do you trade?

Guillaume Vidal: We trade European and US equity index futures. We chose these for two reasons. One is the liquidity and cost of trading; the other one is expertise. We have three ex-BNP Paribas quants in our firm and they used to be trading either equity indices or foreign exchange.

For example, we reproduce a momentum and mean reversion type of quantitative strategies, but with the embedding of machine learning, which results in a better understanding of signals and better reproduction of let's call it the human kind of vision that is looking at data at multi-timeframes. We look at different level of timeframes such as the seconds, minutes, five minutes, the hour, the day, the year, enabling us to extract features not only on what's happening in the market at time t , but also looking at the macro picture and how it behaved in the past. We do this cross-market – we call it the cross-section – and the algos keep in memory their previous decisions allowing for constant refining.

Memory is relevant here as machine learning is able to classify new entry points, giving signals in the market with a memory of previous trades, and it can continuously improve doing that, which is I would say a **paradigm shift compared to standard systematic strategies that are mainly hard coded rule-based** where you say, for example, if these two moving average cross, then I buy or I sell.



Matthias Knab

You just started to explain how the artificial intelligence and machine learning approach is different from the traditional systematic, rule-based investing. Can you elaborate a bit more your strategy and maybe also how you're different from other firms in this space?

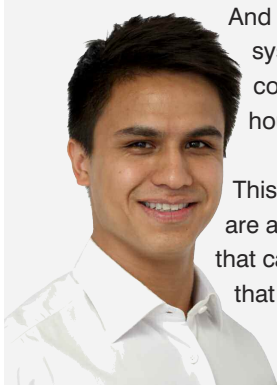
Guillaume Vidal: Well, of course we often get the question what do you do differently from other quant funds, however in general quant funds don't know what the other guys do because of the proprietary nature of their systems. *And even within a fund, a lot of quants don't know what their neighbour is doing*, because often the PMs are siloed and have their own P&L based on their own quantitative strategies. Often the quant trader will want to keep his IP proprietary so that when he or she goes to another employer, they can continue working on those strategies and generate a track record out of that.

I think this was so far a good evolution and a good idea. Quants within funds are competing to get the best P&L, and the firm creates a sort of an internal marketplace where their quants can compete.

However, the problem with that structure is that it hinders collaboration and so you can't actually achieve what we are working on, which involves the highest degree of collaboration amongst all the different teams in order to achieve automation and advanced AI-powered strategies. Of course, the quants won't try to replace themselves in that sense. So when we talk to the quants within those firms, they tell us, "I don't know what the other guy is doing, I don't know if we are doing machine learning at any level of the firm." I think the reason why people are so interested in machine learning and why people talk about it but nobody actually does it is because it's a paradigm shift to how things have been done before.

I have been talking to multibillion dollar funds that tell me, "Well, we haven't been doing that because if we applied machine learning within our systems it would be for a specific improvement within our processes, so it would be to try to optimize the capital allocation or to optimize some of our signals," but that doesn't really work, because compared to normal statistical methods, you are not going to find a big improvement if you are just using it for certain peripheral tasks.

Rather, **machine learning needs to be put at the centre of the system**, and you shouldn't start by looking at "What do I have and how can I improve it with machine learning?". You should look at how machine learning works and what systems you should use so that machine learning is working at its best, which is supervised classification, to put it short.



And so many of the players say, "Well, if I start this kind of technology, I would have to shut down my old system and start a new system and switching all those billions and those strategies from A to B is way too costly. So I would rather wait and see what happens and maybe hire a few guys to do some research in-house..."

This is what we see in general, and that's why we think there is **an opportunity for startups**, for people who are able to start from scratch, who have no preconception and no sort of legacy software that's in place and that can't be reduced too much, and this is why we think players like us have a role to play in terms of pushing that technology forward.

Bernard Delattre: On our side, we just launched a research program on that topic. Beside AI and machine learning, people also talk about Big Data where patterns are extracted from huge amount of various data types.

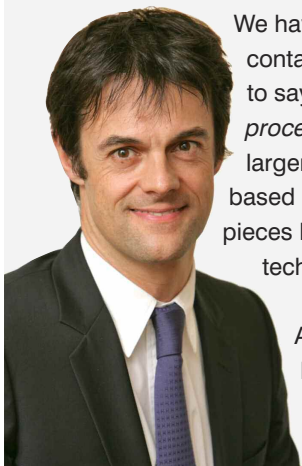
Correct me if I'm wrong, but the challenge we see with trading systems based on AI or machine learning is that the results, as good as they could be, cannot be "explained", making it thus hard to test for robustness. However, there are ways to monitor the stability of such systems and not only detect when they begin to not work as good as they used to be, but also detect if they begin to work well again. It's harder to do than with a classic "explicit" rule-based system though, but we are convinced that there's value in that approach.

This expertise can be delivered to hedge funds and non-regulated entities that don't have the



in-house expertise, but who are interested by that approach to trading. We have actually seen a strong interest for that by some institutional investors.

Philippe Paquet: We at NewAlpha are open to investment managers coming to us with so called AI, machine learning, or deep learning based strategies, but I would also like to add that at the moment this is not very common. I agree with Guillaume that there are a significant number of firms who incorporate a bit of these AI processes in their research process or the decision-making process. On the other side, we also see through our FinTech observation point many startup companies which provide investment managers with various processes like analysis of social media and social network traffic to generate investment signals from this huge amount of data.



We have seen one particular manager who is using big data to analyse traffic patterns, what is going on with containers, and so on, and from there to get signals on certain commodities. But at the moment I would like to say that there are *very few structured investment managers based entirely on AI or deep learning process*, but of course I have to add that managers who approach us are typically smaller firms. Therefore, larger hedge fund firms that do not seek external capital or support may have built their internal systems, based on AI. But I doubt there are very numerous. It's like a puzzle of say 1000 pieces: there are a lot of pieces but they are not yet built or joined together. That's the situation at the moment, but obviously this technology will come, this is for sure.

And, of course, when we talk about AI, we also have to look outside of investment management because these new technologies will affect many other spaces and parts of the economy.

Matthieu Lucchesi: I want to add to this discussion that the AMF as the financial regulator supports innovation, may it be through the use of new technologies by authorised actors to be more performant, to be more efficient, to the benefit of the markets and of the investors.

And at the same time, we want to make sure that any new players who develop regulated activities comply with the same rules as they apply to traditional players. We are more than happy to help any newcomer or startup to understand what is applicable and how regulations have to be applied. At the AMF we have even started a dedicated team working on FinTech services developed by both start ups and incumbent players to really help innovators to better understand what are the rules and how do they apply to their activities.

For example, we want asset managers to still manage and control their risks. It's not because someone is using new technologies that you should not comply with the requirements applicable in that area. And if you market products and vehicles to investors, whether they are institutional investors or retail investors, we want to make sure that those investors invest in an informed manner and knowing the kind of risks to which they are exposed.



Matthias Knab

This is an interesting point. Bernard pointed to the fact that the investment manager using artificial intelligence may not always be able to deconstruct and explain the details of an AI based investment strategy, and it seems the AMF will be fine with this limitation as long as the client is informed about it as well and as long as the other regulatory requirements like leverage, position concentration and risk management are being fulfilled.

Matthieu Lucchesi

The investors must be aware of the characteristics of the product in which they invest and the risks to which they are exposed. In addition, the management company must manage its vehicle in compliance with all the applicable requirements, including the risks management obligations. With this regard, shouldn't a management company be able to explain how the investment strategy is implemented (even if it relies on AI) to manage its risks properly?

Carl Dunning-Gribble: Our name "Syquant" actually stands for systematic and quantitative. While probably 90% of our total AUM are in fact managed on a discretionary basis ("bottom-up" deal by deal analysis)

Despite a very "discretionary" approach to the Merger Arbitrage and Event Driven "Hard" catalyst strategies, none the less most of our investment professionals have a "quant" background within our investment team. So we also run some very small strategies which are quantitatively driven – one senior investment professional is fully dedicated to those quant models.

We had an interesting experience with our quant strategies in 2008. At that time, we "took out" all risk from our discretionary strategies by going into cash, but we were still able to produce a 5% positive return that year because of one of our quantitative strategies. 85% of the positive returns in our fund in 2008 was brought in by a quant strategy, and being up 5% was of course fairly rare that year for an equity related fund. But we also know that this particular strategy can only work in very "stressed" and "dislocated" markets. In other words, we found that **we could exploit with quant strategies certain extreme or tail risks**, which are not necessarily exploitable in normal markets.

We are obviously very happy to have those models, but we wouldn't be able to rely on those "anti-cyclical" quant strategies on a permanent basis... for one the signals wouldn't be "strong" (or numerous) enough to fully allocate to that strategy. This particular strategy is a dispersion strategy and it worked wonders in 2008 with a 85% contribution of the positive return. *So to establish a fund based only on that one strategy would have been a great disappointment to any investor.* The great performance of 2008 could be a lure for any investor but probably followed by a great disappointment as this strategy (like many other quant strategies) are "situation specific". Theoretically, someone could have subscribed to that fund in 2009 and 2010, but since then, this investor would have been extremely disappointed.

The other aspect I had mentioned is **capacity**. At that time, we had EUR 20 million in assets. If we were to run that strategy today, even in markets like 2008, we are not sure whether our fund would not have a market impact and it is probable that the positive attribution (as we had in 2008, simply because the capital we deploy today is just too big for this specific model / strategy).

So again, size is definitely a point and everyone needs to understand to what extent these strategies may or may not be scalable? When you run them on a paper trade, you obviously will not have a market impact. If you start running them with small capital, you are likely not going to have a market impact either. But as soon as you start running them with a large capital – just imagine players such as the Wintons or the Caxtons etc. start deploying investment capital – then you will have an impact.



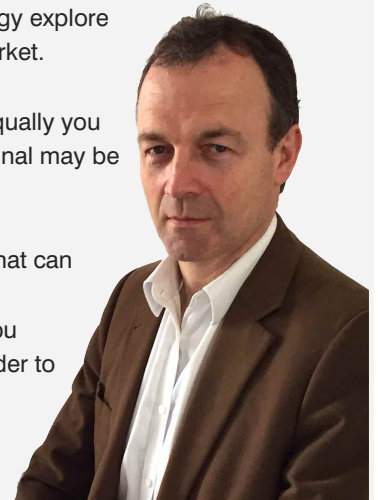
Matthias Knab

It's interesting how you and your team combine the discretionary approach with such research into quant strategies to diversify and to be able to benefit from different market environments. Can you share with us more details how you diversify and develop strategies that you could run in parallel?

Carl Dunning-Gribble: Yes, Syquant runs several quant strategies but all on a relatively small scale as compared to the “discretionary” merger arbitrage and Event Driven strategy. Every quant strategy explore specific themes and explore opportunities in different situations or different “pockets” of the market.

Another relevant aspect is that you need not to source a reliable “buy” and “sell” signals, but equally you need to monitor the “strength” of those signals. For example, there are times when a certain signal may be come let's call it “fashionable”, for whatever reason.

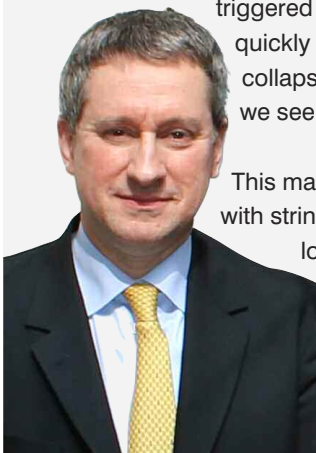
As Bernard mentioned before, you can't always explain where the performance comes from. What can happen is that a very “fashionable”, very strong and meaningful signal suddenly becomes less meaningful. You don't know why, it's part of the behavioral aspects of the markets. Therefore, you need to make sure that you continuously test how “fashionable” the signal is and remains in order to get some sort of color as to whether that signal is in fact still pertinent or not to the strategy.



Philippe Malaise: The fact that **high-frequency trading** has become so predominant to date, especially in Europe with over 80% of the market, not to say more, it has become a real challenge for traditional asset managers, especially when it comes to risk management.

Why? Let's remember the Yuan devaluation three times in a row in August 2015 or the Brexit vote in June 2016 which triggered significant volatility spikes. If you look at volatility clustering, volatility reverted to its mean very quickly after these events by contrast with the trend that had prevailed in September 2008 in the wake of the collapse of Lehman Brothers. At that time, it took a number of months to mean revert, if you remember. Now we see the same effect in just a couple of days or even hours with the Trump election.

This makes it very difficult to control extreme risk in such conditions. When, for example, you must comply with stringent constraints in terms of max drawdowns, so let's say you can't breach a certain threshold of loss, then you must reduce exposure. But just before the market rebound, this could be the end of your strategy simply because you had to respect the risk budget initially set! This is a major challenge for a number of asset managers.



Philippe Malaise: You can forecast volatility using, for instance, a GARCH Model. But as you know, the GARCH Model is based solely on asset prices; and new information can also be revealed through trading volumes, even before being revealed in asset prices. So it would be interesting to combine this kind of volume-based information with the flows coming from high frequency players.

To simplify matters, the question is what is the impact of high frequency players on volatility spikes? If it's 80% or 90%, you should consider this data very carefully before adjusting or readjusting the equity beta of your portfolio. Before the Brexit, the majority of HF players were long most of the time with huge risk exposure, no? Then on Friday, the day after the Brexit vote, they were massively short, and on Monday they were long again on average. So in three days they went long, short, and long again – this can drive you crazy even though you need to control the risk of your equity portfolio.

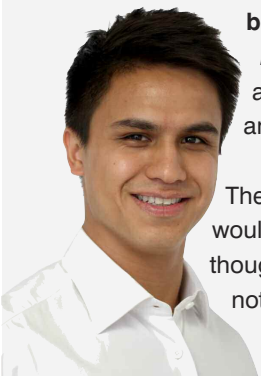
We have to remember that the cumulative loss at that time was around 8% or 9% intraday. That's a lot compared to the conditional value at risk over a two-day time horizon even with a high confidence level.

Logically, if you must comply with a max drawdown constraint and you have not yet hedged your portfolio, you will have to cut your exposure. Okay, but in that case will you cut all or part of your position? Be careful with “saloon doors” in oscillating markets. Use **market stress indicators** to try to anticipate market turnarounds. Keep in mind that a winning bet may quickly turn into a losing bet. Remember the guys who went short just before the Brexit. Initially they were right and they told us on Friday, “I am the winner, I am up 500 or 600bps” but they kept their position too long, unfortunately for them...

Few days later it was a disaster since their gain turned into a loss as the markets reversed and bounced back. This is why I am saying risk management is a huge challenge for a number of traditional asset managers and hedge fund managers too. It's all the more difficult as their investment horizon is not one hour, one day or even one week, for sure.



Guillaume Vidal: We are talking about a lot of different things here and possibly we are mixing a lot of topics. Philippe has been talking about high frequency trading, but let me point out here that there is a big and important **difference between high frequency trading and systematic funds**. *These days, high frequency firms are market makers and they are actually having a lot of trouble*, their profits have shrunk big time. A majority of them are now actually defunct. I have friends in HFT that are leaving the field because the profits are not there anymore.



The second thing I'd like to mention is that these are definitely not the guys going long or short 100%. I would say that the guys going long or short 100% on some news events are discretionary players. So my thought here is that we shouldn't blame the HFT guys too much. I am not defending HFT by the way, we are not an HFT.

My third comment relates to Carl's remarks about the stability of models. When we are looking at the systematic guys, most of them are systematic trend followers. These are the typical CTAs working on moving averages, they are trying to catch trends, and even the more sophisticated players, such as Winton in the UK, do that. I would say that *CTAs now in the US are almost a commodity*. They charge 1% management fee and 0% profit share, simply because they have a very standard replicable strategy.

As I had mentioned it before, this is one of the problems of rule-based models – we talked about the **decay of models**, and this is exactly what happens when you have a rule-based model. If, for example, you take a Bollinger Band, some moving averages, RSI – strength of buying power – et cetera, and then backtest it over the last five years. You overfit the model on this and then let it run. Maybe it will run for six months, and then it decays.

This is why most of the systematic firms and quant strategies have been decaying. They are all doing more or less the same thing, and there are only a few of those systematic models that can actually work across cycles. And what we try to argue is that machine learning is actually capable of coming out of this paradigm by learning through examples, and continuously improving as it trades – the same way a very smart trader could understand why a specific trade didn't work and adapt its trading style as the markets evolve.

As an example, We had one model that was following some form of trend, an intraday momentum, and arriving in 2011, the model actually stopped trading because the market was not appropriate. While the underlying rule-based systematic strategy was decaying, our machine learning system that before had learned how to trade that strategy as well then suddenly stopped and basically went flat. This is an example of what we are trying to achieve with machine learning.

Carl's comments about scalability are fair, intraday does have capacity constraints. But this can be solved through diversification over multiple instruments and markets. We see firms like Crabel Capital who run a 2 billion intraday fund – so it's definitely feasible.

I also wanted to make a point regarding Bernard's comment about not really knowing what's going on within a machine learning system. This is not really the case as you definitely know what's going. Machine learning is not some monster where you feed in data and it magically spits something out. People in such firms work on this everyday, nonstop, and they know exactly what's going on in their neural network or in their machine learning model.

Philippe Paquet had mentioned how firms use big data. When it comes to big data, it's a fact that if you put too much data into the model and you wait for it to find profitable investment points, interesting nodes in the market, the optimisation or the grid search is way too large. Even if you have quantum computers, if you put in a million data points and you tell it to try to find an optimal solution, you won't get it.

This is why we work with financial traders and quants who look at the market and who know which data points are important and what is not important; the machine cannot determine that by itself, or has a very hard time doing so if you don't take it by the hand, guide it somehow.

Therefore, machine learning is just a tool like others. There are tools like, Philippe Malaise mentioned GARCH, you can mention Markovitz, these are tools that everyone can talk about now, and these are concepts people understand.

But when you say AI, people all of a sudden seem to think it is not statistics. It is, it is just new models and in probably five, ten years from now everyone will talk about AI as a very transparent box, because it's just a better way of solving some statistical problems.

Through history, humans have always tried to use tools such as calculators, computers, now there is a new tool, machine learning, and these tools can allow us to have better signals in the market, work with more data, and get results faster.

And just to conclude, I want to make a **very important distinction between big data and AI**. So whenever we talk AI, everyone talks big data, but the two are very different.

AI is a way to harness big data, but when you look at what Google did with DeepMind, with video game, or with AlphaGo, which is the Go algorithm that beat one of the best human Go player, that was not big data, the data set is just the game and its rules. What Google managed to do, they didn't do it via big data, but rather using a combination of advanced algorithms.

Philippe Paquet mentioned satellite images, so let's look at what can you do with satellite images. You can use deep learning networks to actually classify what is an empty parking lot and what is a full parking lot, what is a dry field of crops and what is a healthy-looking field of crops, but then it's humans with discretionary decisions that actually will buy or sell that particular crop, because we don't have enough data to actually create a systematic strategy out of that. Or would you say, "Okay, if the crop is dry, then you go short; if the crop is healthy, you go long?" Systematically, you don't have enough data points, historically and in frequency, to have a statistically robust strategy around that.

Bernard Delattre: I tend to differ a little bit from what you are saying, Guillaume. The guy that we are working with has a PhD and he has been working on AI for many years, especially on facial recognition for medical applications.

I don't say that's every time the case, but his warning to us was that sometimes, especially in deep learning, you cannot know where the results are coming from. As I mentioned, this could be a problem when selling the fund to outside investors. However, if it gives good results and we cannot sell the fund to investors, we will use the system for us on our own proprietary funds.



Guillaume Vidal: Bernard, I think it's important to pinpoint or define exactly what we are talking about. You mentioned image recognition, which is an application where AI or machine learning has been used for a long time.

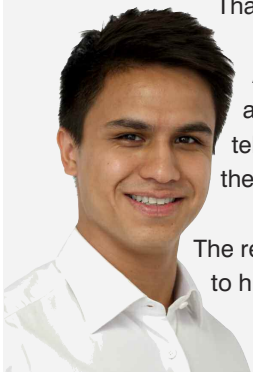
For example, to describe a cat, a normal way to do it in order to comprehend it is to say, well, if it has two eyes, if it has fur, that is white or brown or whatever, if it has a certain size and body shape, then it's a cat, and you can understand why and how a rule-based system sees a cat.

In machine learning, you only give examples of cat images, it learns by example. You train it using a million cat images and the pre-trained neural network will tell you if it's a cat or not when you give it a new example. So it learns by example, not by rules.

That's the big difference between rule-based and machine learning.

And indeed, when you give it the new image of cat, you don't exactly know how the neural network actually decided, what it is using, how it saw the correlations between the different pixels of the images to tell you it is indeed a cat, whereas in the old way of doing it, you would actually know because you coded the rules to identify a cat.

The result though is that with this new technology a computer has less error in classifying images as compared to humans, so it's extremely powerful.





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- Karim Ghandour, Founder, Legacy Line Family Office, UAE
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- Jason Cavanagh, CEO, Saint Leonard Family Office, Monaco
- Gordon "Grant" Curtis, CIO, CI Investments, Switzerland
- Elliott Donnelley, Founder, 5th Generation SFO, White Sand Investor Group, USA
- Dr. John Alexander, Jr., CIO, Clemson University Foundation, USA
- Candice Beaumont, CIO, L Investments Family Office, USA

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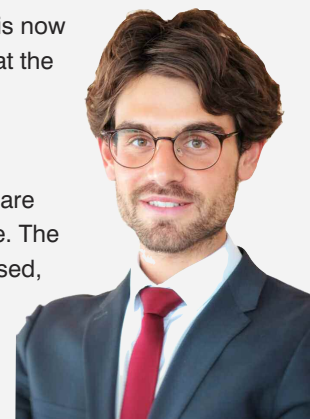
Registration is free for single family offices. Limited delegates (investor delegate ratio of 2:1) get a 15% discount quoting Opalesque (Opalesque founder Matthias Knab will be a co-chairman of the conference). For more information and registration, please email: info@MonacoFamilyOfficeSummit.com.

Matthieu Lucchesi: I just wanted to get back to the question of the risk management in relation to the use of new technologies.

The topic of risks and risks management is a question that we discuss a lot within the international institutions right now with a focus on the potential risks that the asset management industry could generate for the financial markets. It has been discussed by the Financial Stability Board that issued recommendations in January identifying several vulnerabilities for the asset management industry.

The key risks that have been identified were the **liquidity risk and the use of leverage**. The IOSCO is now working to implement those recommendations. These topics might also be discussed in the future at the European level, through the review of the AIFM Directive that will probably take place in the next months/year.

It's really important for you to have these topics in mind and to really engage with the regulators. We are contributing to this work on the international level, so please do not hesitate to share your experience. The knowledge like yours is probably very useful to better understand what are the tools that are being used, how do they work and how do they help or accelerate, accentuate, for example, the risks that are generated.

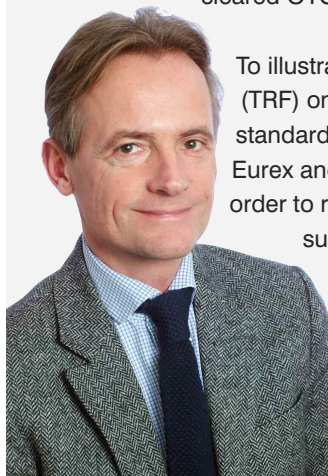


Matthias Knab

We discussed a lot about new technologies, innovation, new products. Is there anything you want to add when it comes to new product innovation?

Nicolas von Kageneck: As we all know, most of the market players and banks in particular were affected by numerous restrictive regulations since the financial crisis, increasing their capital and liquidity requirements instituted by the Basel Committee. These constraints led to broad balance sheet deleveraging, and a reduction in risk appetite specially between the years 2013 to 2015.

Eurex, as a listed derivatives exchange, has always sought to accompany its clients through these massive industry changes by creating and offering **new listed derivatives products**, replacing purely OTC traded swap instruments. These products typically constitute a listed solution to mitigate the concerns surrounding the introduction of the bilateral margining for non-cleared OTC Swaps.



To illustrate my remarks, I would like to mention the launch in December 2016 of a **Total Return Future (TRF)** on the EURO STOXX 50 index, aiming to provide a cost efficient access to the pay-out profile of a standard equity index total return swap (TRS). This product is the result of a perfect cooperation between Eurex and the dealers, active in this market, having been subject of intensive consultations before launch in order to receive the approval from the market players. Since launch, the product has shown an indisputable success with more than 100,000 traded contracts year to date, representing EUR 3.4 billion notional. It has also demonstrated the capability of Eurex to design innovative products in close collaboration with our customers.

I would also like to briefly comment on the Quanto Futures listed at Eurex, which represent the exact copy of the highly liquid EURO STOXX 50® index futures, with the exception that it

trades in USD. One year after the launch of the USD-denominated Quanto Futures on the Euro Stoxx 50 index, the open interest has already reached USD 1 billion notional.

What other existing products are concerned, I would like to mention the very positive development of our MSCI derivatives segment, which recorded a post-roll high in open interest of more than 1 million contracts in March. This is an excellent growth story given the high competitive environment with other derivatives exchanges such as ICE International or SGX Singapore. Eurex has succeeded to achieve a significant market share in this product segment. As you know, the MSCI indexes represent an important benchmark for the asset management industry across the continents.

Philippe Paquet: I would like to mention a new product we rolled out at the end of 2016, which is very illustrative of the way we are actually building and heading our business. I know that **funds of funds** are not very popular anymore, but it's my personal belief that it will come back, like many things in our industry. So the product I am talking about is a fund of funds that is allocating to independent managers using quantitative and qualitative selection factors. So we would analyse a sample of about 1,000 European with a risk factor approach and group them into clusters of managers that actually behave more or less in the same way. You may end up with 20 or 25 different clusters.

Next, we select the managers we believe are the best and then we optimise portfolio construction out of this for a liquid product.

As you know, one conviction in this industry is that we think smaller and younger investment manager generally outperform more established firms, because the portfolio managers are more motivated and as their portfolios are smaller, they are more flexible – you know the pitch.

NewAlpha has been focusing on this segment for a long time, but so far we only had products which were open to long-term, institutional investors and with some sort of lockup, but with this new product, we will offer a liquid AIF with no lockup. We are excited about this product so that more investors can access the smaller and emerging manager space in an intelligent or innovative way, which is a combination of discretionary approach and some quantitative optimisation. As I mentioned, this product fits very well with where we are heading.



Philippe Malaise: You mentioned the come-back of funds of funds, and in that respect we have also recently worked on a strategy that applies the **core-satellite techniques to alternative investments**. The core portfolio is a fund of UCITS funds or managed accounts that aims at generating smooth returns with low volatility and low equity beta, while the satellite portfolio acts as a return enhancer, going long or short the S&P500 index using futures. Those are not costly and very easy to trade.



The goal of this new product is to generate asymmetric returns and exhibit an attractive risk-adjusted performance clearly higher than that of the long/short equity fund indices.

In the core portfolio, we have a main allocation to long/short equity variable bias and market neutral funds, plus some risk arbitrage funds. All the underlying assets are liquid as we want to be able to rebalance the portfolio as often as necessary. When combined with traditional asset classes such as fixed income, for instance, this strategy can diversify the overall portfolio with limited risk, and as you know, all the investors are risk averse, even in relatively calm markets.

Matthieu Lucchesi: I think that France is known for the diversity of asset management company profiles and the different kinds of business that have been launched on its territory. The AMF supports that. I am convinced that the diversity of strategies implemented by asset managers allows investors to have access to a wide range of products and contributes to the good functioning of the markets. So we make sure that our framework allows you to be competitive and innovative.

For example, the AMF was the first authority in Europe to implement the ELTIF Regulation governing **European Long-Term Investment Funds**. It is a success. We have nearly 10 funds that have been authorised in France for that.

We also recently **allowed funds to originate loans** in addition to investing in other kinds of assets. This is now permitted in addition to the already existing possibility for funds to invest in existing loans. Regarding loan issuing funds, we made sure that certain constraints addressing the risks that are generally associated with the activity of granting loans would apply.

I am thinking here about the use of leverage, liquidity transformation and maturity transformation. French Law also provides restrictions in terms of nature of funds that can develop this activity, the kind of investors towards which they can be marketed, and the kind of firms towards which loans can be granted. Our goal here was to find the balance between giving the industry the framework needed to develop an innovative activity and providing enough safeguards for the sake of investors' protection and financial stability.

More generally, on the topic of innovation and creativity by asset managers, let me recall you that we launched the FROG Initiative [French Routes & Opportunities Garden] in February 2016, focusing on the French framework and its attractiveness. The objective was to foster the capacity of asset managers and funds located in France to develop their activities in and out of France.

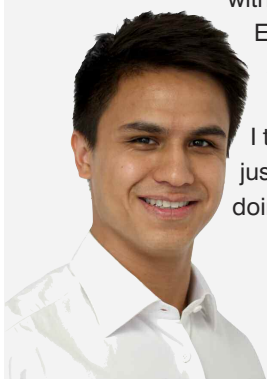
There were seven outcomes, taking the form of immediate quick wins, in the FROG Report. As an example, the FROG report recalls that SICAV may be launched in France, with a proper governance framework that really meets the expectations of international investors. It also suggests broadening the possibility to delegate management activities by asset managers and clarifying the conditions under which the latter could conduct premarketing activities.

I am glad to say that all FROG recommendations are now passed into the law and effective. A "FROG Record", scheduled by the end of this year, will be the opportunity to highlight concrete examples of how this FROG initiative has helped French players to be more competitive in an international environment.



Guillaume Vidal: Thank you very much for this, Matthieu. We appreciate and support these initiatives, and are open to work with the AMF and ESMA, for which we participated to a panel debate. We think it's very important for the European regulators to take such initiatives, especially the French regulators given that Brexit is happening and people are looking at other financial centers, passporting issues, et cetera.

I think it's very important not to think as all systematic firms or quants as risky black box trading – you can just open the box and you see that they are just like any other industry, with smart people working hard and doing things in appropriate ways.



Philippe Paquet: Now that the UK government has triggered Article 50 and Brexit is happening, players particularly in the alternative investment industry in London are now not only contemplating how to adapt to Brexit, but actually taking decisions. *UK investment managers which are founded or run by French professionals are approaching us to combine actually a move back to Paris with a potential allocation from Emergence*, the French incubation fund that NewAlpha is running. So at our end, we can basically see where the wind is going.

When you look at London-based alternative investment managers, for now we haven't seen many managers with say Romanian or Italian nationalities contemplating to come to Paris, but French ones, yes. We are actually talking to four such companies at the moment, so we are at an interesting point.

What's being discussed is either a complete reallocation from London to Paris, and the driver is not solely Brexit but also for cultural reasons: The balance of their client bases between Anglo-Saxon world and continental European clients is obviously very much in favour of continental Europe. We have met some firms whose revenues come 100% from France, Switzerland and Luxembourg, so for them there is no real point not to move back to continental Europe.

The other model we are seeing is sort of a hybrid business model where they keep their marketing – which is often run by an English or a British national – in London, and moving the front office for the manager, so the research people and analysts to Paris, and thus opening a subsidiary in Paris. We also hear about firms moving out of London into Luxembourg.

Mathieu, you may know that the FROG initiative you have mentioned is very well discussed in these London circles, so this is very positive for the French asset management industry.



Philippe Malaise: I think we have an incredible growth potential in France, but my fear is that in spite of the AMF support and the FROG initiative, France won't be able to attract London-based businesses on a bigger scale without reforming its tax and welfare systems.

This is undoubtedly the main concern for British managers or even French managers located abroad. I am afraid that the HSBC announcement to transfer about 1,000 jobs from London to Paris is the exception as opposed to the rule if we don't react quickly. Keep in mind that we are competing with Luxembourg, Dublin, Frankfurt that offer a lot of benefits to expat candidates.

Philippe Paquet: Well, I believe the current political uncertainties in France prevent particularly the larger firms from doing such type of announcements, but probably in the second half or toward the end of this year, it will be more obvious.

With L'Agence de Development de France / Paris Region we also have a sort of **one-stop shop on relocation questions** where interested parties can gather a lot of information about personal life, such as school registration, personal tax and the new fiscal status of 'impatrié' that is extremely favourable. So this exists partially, and I don't think that in any country you have a comparable one-stop shop where you can actually manage your professional and personal matters in the same way.



Matthieu Lucchesi

Please let me emphasize here again the numerous advantages that France and the French framework have to offer. Unfortunately, these advantages remain too unknown. French market players have a key role to play to ensure that France's strengths are better understood by foreign actors and investors.

Carl Dunning-Gribble: I can only echo what has been said. *Syquant has decided to stay in Paris at a time when many people from Paris were "seeking a new home" - mainly moving to London.* Throughout those years we have also always felt that the AMF was extremely supportive and that if managers were moving away from Paris it was for different reasons than "regulatory" reasons. Syquant Capital remained in Paris since its launch in 2005 !

As in many other developed countries as well, there have been issues around social cost or the perception of the instability on tax like Bernard has mentioned, but I would like to add one more point: the ancillary service providers to the financial industry probably need to be a lot more international and multilingual.



This is where we felt that Luxembourg actually had a tremendous edge on many other financial centers because they are so much focused on exporting their product or services and hence they are set up very differently with for example Italian people looking after Italian products or German people looking after the German products.

For example, when we work with an administrator in Luxembourg and we have a topic on tax transparency for Germany, this is a standard question for them and they will just put the solution in place. When we talked to our French administrator about German tax transparency for one of our French domiciled funds, it turned out to be a big question and they knew less about it than we did, and we knew very little about it at that time.

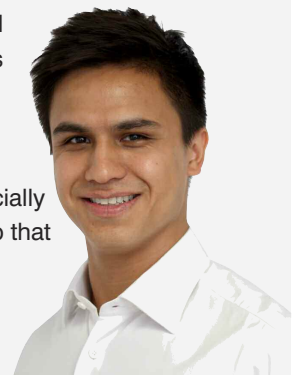
This is why I believe that the ancillary services also need to "step up", otherwise people will be disenchanted quite quickly.

Guillaume Vidal: Like in anything there are strengths and weaknesses, but one thing that is undisputed is the **quality of the French scientists**. Our team is mainly French – we have one Moroccan and one American but we are mainly France-trained scientists – and they are praised around the world.

When you look at the best hedge funds, they are all abroad in the US or the UK, but they are all using French quants, and when you look at AI, it's actually similar.

One of our research advisors and business angel, Pierre Sermanet, is a three times ImageNet Competition winner and a Google Brain scientist. Yann LeCun, the Director of Facebook AI Research, is French. And recently, Nicolas Le Roux, who was one of the leading researchers at Criteo, was dragged to Google as well. I believe we should strive to keep some of our talented scientists, especially after training them so well.

People understand France is an incredible destination. A lot of capital is now flowing into France, especially in deep tech. I believe the market expects the right candidate to win in the next presidential elections so that France can move forward supported by favourable policy-making. Hopefully, France will keep its brains because in investment management but also the AI world, and in technology, we don't have a global champion, right?



When you look at the big French companies, it's EADS, Alstom or Areva, old French industrial companies, but, although we have great scientists we don't have a world leading technology company competing with Facebook, Google or Amazon, we are definitely dwarves. On the hedge fund side it's the same story, CFM for example, is a dwarf compared to the likes of Rentec and Two Sigma.

Matthias Knab

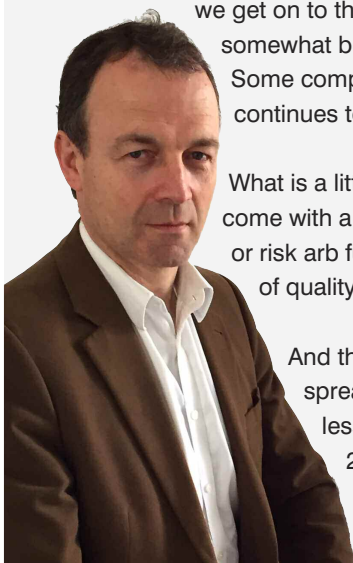
Merger arb funds are receiving a lot of interest given the global M&A activities. I thought to ask the two managers here to share your outlook on the strategy?

Carl Dunning-Gribble: Looking back for a moment, *2016 was a very good year for Syquant Capital:* having achieved our best ever alpha generation and equally the highest Sharpe Ratio across our different Helium Funds.

2017 looks probably a little more tricky despite a very strong deal flow, particularly out of the US. The number of deals which we get on to the screen is really very good, and this includes Canada and Europe, although Europe is lagging somewhat because of the political uncertainties in France and Germany with the elections looming in 2017. Some companies are probably waiting before they will actually make a move, and that explains why Europe continues to lag.

What is a little more complex is that a lot of deals which come out are not necessarily very safe deals and come with a *high degree of uncertainty*. Also, it's been a tough year for a couple of large US merger arbitrage or risk arb funds and as a consequence there is a lot more volatility on deal "spreads", or for the same kind of quality deals you have a high volatility on the spread.

And that's probably because as soon as some sort of uncertainty on the deal appears and/or the spread starts widening out, some very large US funds will withdraw capital quite quickly, which was less the case before. Hence volatility on to the spreads tends to increase. Therefore we think that 2017 probably will not quite be as a friendly environment overall as we had in 2016.



Bernard Delattre: For us it's a little bit the opposite. 2016 was absolutely horrible, because a large part of the merger arbitrage portfolio was on Chinese ADR. They are listed in the US and the deals took months and months and sometimes years to go through, but in the meantime the mark-to-market was absolutely destructive for our portfolio.

But in 2017 – and this is the paradox – we are in a very good situation where these deals are coming to an end, and I think we will recover a very large part of our 20% loss from last year because the spreads are just tightening on these deals, and we have some very good reasons and information on these situations.



But I agree with Carl that the environment in 2017 is a little bit different from 2016. The political environment around mega deals has changed, because the CFIUS for example, which is the regulator that accepts the overseas deals in the US, has become aggressive or challenging regarding certain mergers, especially when China is getting involved.

We have this situation with Zodiac, for example, which was absolutely astonishing. The deal was supposed to be pretty sure and it's now in the process of being reviewed because apparently Zodiac has hidden some crucial information to Safran when the due diligence was going on, it's absolutely incredible.

I actually believe the AMF should do something here because Zodiac has been misleading investors, and also arbitrage investors by apparently hiding some crucial information, but that's another story. So while the environment has become a bit more complicated, we also see some very good opportunities with certain merger arbitrage situations. In some situations there are fights for the control of some deals that could be very good for investors like us. We have several deals where we are in this situation, and so generally we think that merger arbitrage has a good return potential for investors.

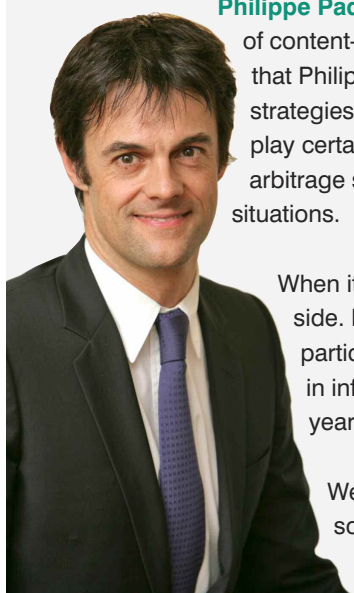
Philippe Malaise

In addition to merger arb opportunities, I also believe that political ruptures, fiscal push and greater dispersion between sectors and assets will favor long-short equity variable bias funds this year versus long bias funds.

I think there are still some alpha generators in this segment even if it's quite difficult to find them. Last but not least, don't forget that superior performance is never constant over time.

Matthias Knab

Philippe, on your side at NewAlpha you also see a lot of different strategies and developments. what are you seeing at the moment?



Philippe Paquet: In terms of new strategies there are obviously certain waves. We had this quantitative wave of content-driven managers over the past two to three years. What we are seeing now is something I believe that Philippe Malaise will like, I am referring here to the fact that more managers implement complex strategies using ETFs. Sometimes they can be considered as funds of funds, because they use ETFs. They play certain dislocations between ETFs, cross-border ETFs, or relative value strategies or a new set of arbitrage strategies on ETFs in addition to other specialised strategies like merger arb and special situations.

When it comes to managers or strategies that we like, we are looking for discretionary managers on our side. Investors have been telling us now for some years that they need good **global macro managers**, particularly those who are thematic managers. We currently work with a few managers with expertise in inflation and inflation derivatives so they can pick up on the perception of inflation in the next few years.

We also are looking at distressed and activist managers. By nature also those are very discretionary, so there is no AI inside to it, but this is what we like.

Philippe Malaise: I do agree with Philippe.

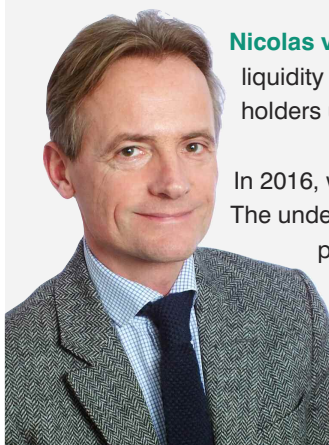
We can indeed use passive investment vehicles such as ETFs to generate alpha through tactical asset allocation bets. We also see the **emergence of what we call smart beta funds** that replicate the performance of factor-based indices. Some multi-factor funds rely on a passive combination of robust factors backed by decades of academic research such as low vol, value, momentum, size, and so on, while others implement a dynamic combination of those factors depending on market conditions. This approach makes sense as these factors that beat the market-cap weighted index in the long run perform differently from year to year through economic regimes.

The emergence of these types of investment vehicles is due to the fact I mentioned before: the percentage of active managers generating positive alpha is relatively low, whatever the asset class, sector, or investment category, whatever the analysis period. This is why larger institutional investors tend to invest more and more in ETFs and smart beta funds.



Nicolas von Kageneck: ETFs are indeed an interesting asset. Since 2015, Eurex has cooperated with both liquidity providers and ETF issuers to facilitate trading and hedging activities for, among others, ETF asset holders using **options on ETFs**. Liquidity has attracted further institutional interest.

In 2016, with nearly 300,000 traded contracts, Eurex recorded a sevenfold increase in ETF options volume. The underlying ETF market continues to demonstrate robust growth, driven by strong institutional participation. Global ETF assets have reached USD 3.5 trillion in 2016, and are expected to exceed USD 6 trillion by 2020. Europe is the #2 region in terms of AUM with USD 565bn; a 16% market share.



Matthieu Lucchesi

In the context of this discussion, you will then be probably interested in the study recently published by the AMF on the ETF market in France focusing on the recent rapid growth of this sector and its consequences on market liquidity and stability.

Matthias Knab

Nicolas, can you tell us more about the options on ETFs?

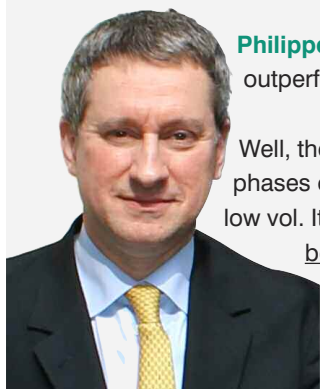
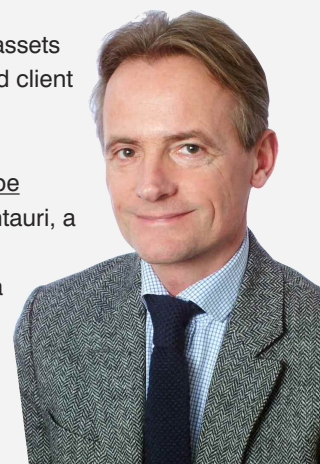
Nicolas von Kageneck: Yes, ETF options offer an accurate way in implementing option strategies like covered call writing, protective put or straddles/strangles with low execution risk. The key difference between ETF options and index options is the physical delivery of the underlying in case of exercise or assignment. Therefore, investors gain exposure not only to the performance of the underlying index, i.e. the EURO STOXX 50® or DAX®, but specifically to the underlying ETF itself. This allows investors to implement option strategies on existing ETF positions by referencing their exact underlying without the execution and basis risk associated with utilizing index options as an alternative.

ETF options listed at Eurex add derivative tools for the end user portfolio. They attract increasing institutional, as well as, private investors and contribute to the development of a healthy ETF ecosystem in Europe.

To meet the increasing investor demand, Eurex introduces seven new underlying ETF options. The offering expands to European underlying indexes with ETFs on STOXX® Europe 600, MSCI Europe as well as to the iShares S&P500 and the iShares FTSE 100. This allows investors to trade options on their U.S. and U.K. ETF exposures on a regulated European derivatives market, with UCITS compliant instruments. All this, during European trading hours with the transparency and benefit of centrally cleared on-exchange listed products.

Our relaunched ETF option segment will subsequently cover underlyings with a combined 90bn in assets (over 15% of the European AUM). We have a good balance between market making, proprietary and client flow with an agency account market share of roughly 38%.

When thinking about smart beta products, Eurex has recently launched six futures on iSTOXX Europe Factor Indexes. The underlying products were developed by STOXX in collaboration with Alpha Centauri, a Hamburg based investment boutique specialized in liquid alternative risk premia and equity factor strategies. These products represent a unique and very innovative way to target and capture premia of six well-documented sources of systematic risk: Momentum, Quality, Size, Value, Carry and Low risk.



Philippe Malaise: I think it's really interesting because we know that the most robust equity factors outperform the market cap-weighted indices in the long run, as explained before.

Well, the problem is that such factors may also underperform the market cap-weighted indices during some phases of the cycle, with significant relative drawdown, for example, more than 1,500bps for momentum or low vol. It's huge. So it makes sense to combine these factors or, if you are able to, make an arbitrage between these factors using replication tools such as ETFs. So this goes along the lines what Philippe Paquet mentioned before about managers playing certain dislocations between ETFs.



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What happened in Week 3?

Hedge fund manager A has produced a custom video with Opalesque.TV and it has been online for a few weeks. As with manager A, we sometimes notice that the weekly views of a video can jump several hundred percent from one week to the other.

Weekly video views	Week 1	Week 2	Week 3
of Manager A:	110	101	376



There are a range of different reasons for such a sudden jump in views, for example manager A could have:

- won a prestigious award or was nominated to it
- been included in some industry ranking
- been written up in the press / hedge fund media
- just launched a new fund that gained a lot of attention
- posted a (very) good month or year
- etc.

It is safe to assume that on any given day, someone or many will google any hedge fund manager's name, fund name, or company name. Good for those who have a custom made, targeted video online that investors can access any time, and at their time.



Unexpected long-term effect

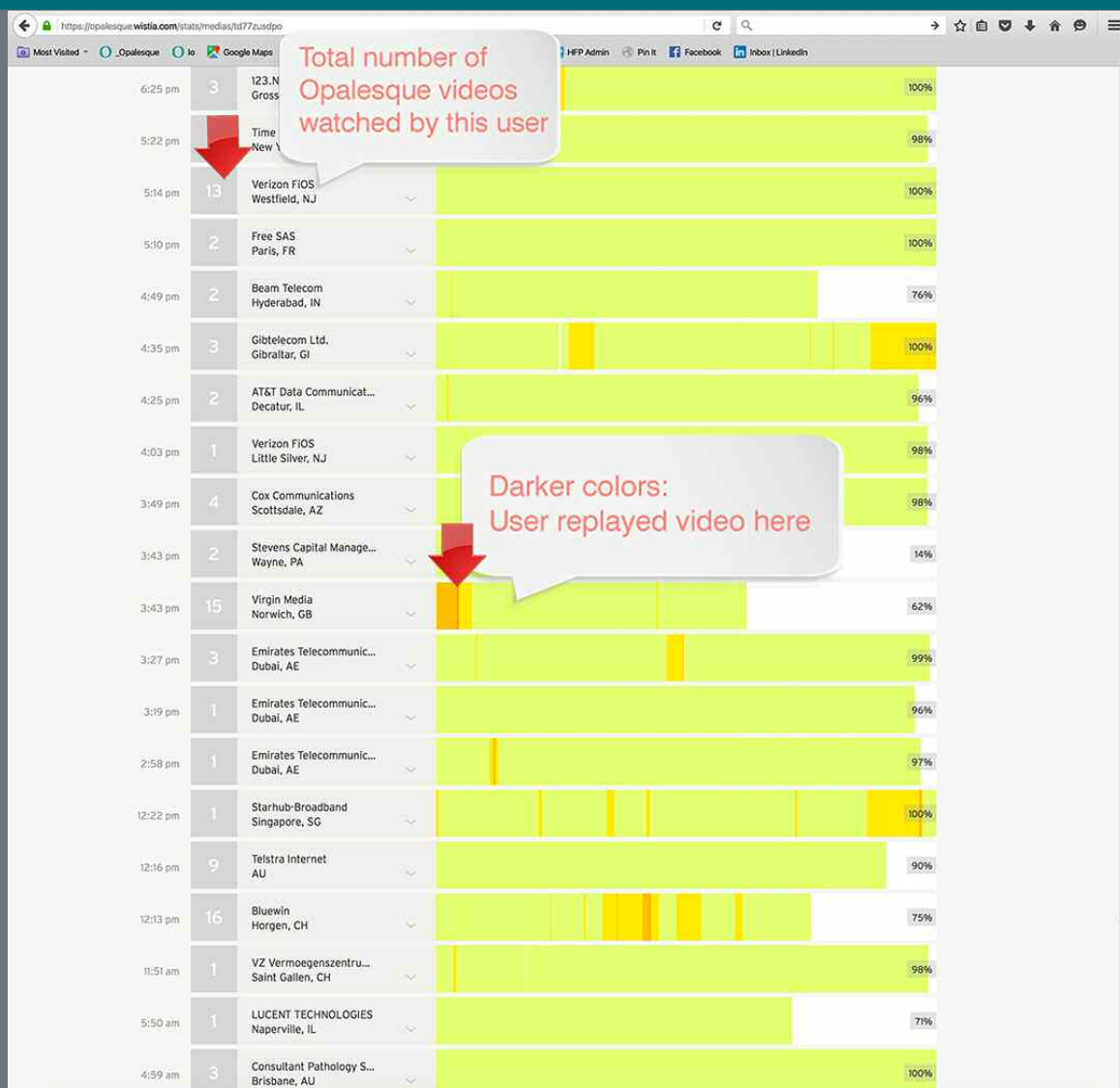
Opalesque has detailed viewer stats on 280+ videos since 2009. What's most interesting is that **video views do not drop significantly over time**, no matter how long the video has been online.

Taking Meetings over Christmas and while you're sleeping

Opalesque.TV videos are designed to simulate a first time meeting with a prospective investor. Many of these allocators will watch a video when they see that there's one available on the manager they are researching (like the viewers of manager A). All 280+ managers who have produced a custom Opalesque.TV video can therefore actually make business (or "have a meeting") while sleeping. Or when it's Christmas.

This video was watched 104 times over the 2016 Christmas holidays:
<http://www.opalesque.tv/hedge-fund-videos/patrick-stutz/1>

Take a look at the next graphic, especially at the hours (which are Central European), the locations, and the completion (how many viewers watched the video until the end):



We therefore believe there are real **opportunity costs** for managers who do not use videos to explain what they do.

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 1.2 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 1.2 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\$4000 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 \$5000, so \$1000 will be billed for each additional 5 minute segment 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/>

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