Opalesque Roundtable Series '18

FRANCE

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Editor's Note

(Big) data, AI to create next generation of systematic investment strategies, but human market 'interference' still a challenge

The Massachusetts Pension Retirement Investment Management (MassPRIM) has mandated Paris-based NewAlpha to identify newer managers and build a **global emerging hedge fund managers program.** Also apart from this mandate, NewAlpha sees a **growing demand for differentiated and creative investment managers**, more for quantitative strategies than for traditional, discretionary strategies. At the same time, **interest for risk premia strategies seems slowing down**, particularly from large European allocators like insurance companies for two distinct reasons (page 6).

This Roundtable also discusses the advances in artificial intelligence, machine learning and alternative data. Machine learning is presented as an exoskeleton that is very powerful to supplement people with some experience in the market in their decision making. The deeper challenge is however that markets are driven by people, and as they're driven by people, there are very few laws of nature. Prices in the market do not correspond to some sort of systematic measurement in physics but rather to the aggregate view of individuals.

In this context, information and data on their own may not be fully interesting, but how the information is absorbed and understood by market participants is what matters. The human brain of people shifting attention from one area to another creates additional complexity which interferes with prediction models. Still, some believe that (big) data combined with AI will lead us to the next generation of systematic investment strategies (page 11).

The Opalesque 2018 France Roundtable, sponsored by Eurex, took place in Paris with:

1. Vanessa Casano, Deputy Head Asset Management Regulation Division, Autorité des Marchés Financiers (AMF)
2. Arnaud de Servigny, Founding Partner, Bramham Gardens
3. Christophe Roehri, Deputy CEO, TOBAM
4. Nicolas Gaussel, Founding Partner & CEO, Metori Capital Management
5. Nicolas von Kageneck, Senior Vice President, Eurex/Deutsche Börse Group
6. Philippe Paquet, Managing Partner, NewAlpha Asset Management.
7. Thanh-Long Huynh, CEO, HTL Capital Management

The group also discussed:

- Can you design Alpha-creating strategies with machine learning? (page 8). The role of leverage for real creation (page 9). Is there risk of crowding in machine learning based strategies as both algos and data input are generally not that different? Why is simplification important for AI based trading systems? (page 10). **Examples of alpha decay in AI based strategies** (page 12). How to assess alternative data (page 12). Why have AI systems improved after researchers removed the need to learn from humans (page 14)

- **Strategy design and evaluation:** Why good performances on a 2-3 years dataset are close to meaningless from a statistical perspective (page 13)

- Under the premise of admitting our inability to forecast as a starting point, how can we still invest? (page 13)

- What could happen if you look at the price of assets as a piece of music? (page 14-15)

- **What concerns regulators about the increased proportion of passive asset management?** (page 16, 18). **How do regulators research and deal with closet trackers?** (page 17). **What is the French regulator AMF's approach to ICOs and cryptocurrencies?** (page 17-18)

- Green finance products: From label to reality (page 18, 19, 21)

- The diversity of the French investment management landscape. New pan-European Pension Product (PEPP) to offer opportunities for asset managers (page 20)

- How Eurex offers cost reductions in terms of collateral management through significant margin offsets between exchange traded derivatives. Eurex new total return future and EnLight (page 21)

- Why do many risk-premium products disappoint after launch? (page 22)

- A discussion of supervisory convergence within the EU (page 22-23)

Enjoy!

Matthias Knab
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Participant Profiles

(LEFT TO RIGHT):

Arnaud de Servigny, Thanh-Long Huynh, Nicolas Gaussel, Philippe Paquet, Christophe Roehri
Vanessa Casano, Nicolas von Kageneck, Matthias Knab

Introduction

Christophe Roehri
TOBAM

I'm the Deputy CEO of TOBAM. I have joined TOBAM close to ten years ago; I oversee from Paris our sales, marketing, RFP and client service teams based in Paris, Dublin, New York and Hong Kong.

With its Maximum Diversification® approach, TOBAM, which stands for "Think Out of the Box Asset Management, is one of the founder of what has been called later the Smart Beta movement. TOBAM offers long only equity, credit and multi asset strategies, and since this roundtable is about innovation, note that TOBAM also launched a separate activity on cryptocurrencies in 2017. TOBAM total AUM was over $10bn as of March 2018.

Thanh-Long Huynh
HTL Capital

I am Thanh-Long Huynh, the CEO of HTL Capital, an asset management company specialized in syste matic investment strategies. This month I am actually celebrating 20 years in quantitative investment strategies. I started out setting up quant investment strategies for Soc Gen in New York in 1998. Later from 2001 to 2006 I created and ran my first investment firm in Chicago before returning back to France with the aim of disrupting the asset management industry and creating the new generation of investment strategies based on AI and alternative data.

With AlphaNow Long Short Equity, HTL Capital has created an equity investment fund based on Artificial Intelligence. HTL Capital is also backed by the technology company QuantCube that is specialized in artificial intelligence for macroeconomics and financial predictions.

Arnaud de Servigny
Bramham Gardens

My name is Arnaud de Servigny. I am running a research lab called Bramham Gardens, which is a sub adviser to an asset manager called Boussard & Gavaudan.

At Bramham Gardens we are team of eleven. We started to work on this endeavor four years ago and the firm is now active since 2015. Our focus is on machine learning and behavioral finance. Combining these two things together, we are running several strategies, one is a long-short strategy related to the US, one related to Europe and a long-only strategy related to Europe and the US. Apart from that, since 2005 I have been an adjunct professor at Imperial College in London.

Nicolas von Kageneck
Deutsche Börse Group

My name is Nicolas von Kageneck and I work as a senior sales manager for equity & index derivatives for Eurex Exchanges which is part of Deutsche Börse Group, particularly known for its benchmark derivatives like Bund, Bobl, Schatz or the EURO STOXX50 index futures and options. I am based in Paris where Deutsche Börse runs a representative office since 1999, taking care together with my colleagues of our exchange members – the important French Tier 1 banks but also brokerage firms as well as proprietary trading boutiques. We also have developed a strong relationship to the French buy-side community as natural users of our products and services.

My focus for the time being is to actively promote and sell, our latest, innovative products and services to the French financial community. This includes for example our Total Return Futures (TRFs) on the EURO STOXX50 index or the introduction of a price discovery service, called Eurex EnLight, allowing banks and brokers to selectively contact Market Makers with requests for quotes in order to find a trading counterparty.

Philippe Paquet
NewAlpha Asset Management

My name is Philippe Paquet, I'm a Managing Partner at NewAlpha Asset Management. NewAlpha is an investment management company based in Paris and regulated by the French AMF. We specialize in identifying, analyzing, investing and supporting independent and entrepreneurial investment managers, whether they implement hedge fund style or long-only strategies.

Over the past 10 years we have deployed in excess of €1.7 billion with about 80 groups, either with seed money; acceleration capital or more traditional lock-up free allocations.

In late 2015 we diversified this business line of Emerging Managers with a second one we called Emerging Corporates which basically is a private equity / venture capital business. Within this new business of Emerging Corporates we launched the first VC fund in France specializing in FinTech.

Nicolas Gaussel
Metori Capital Management

My name is Nicolas Gaussel, I am the CEO and Cofounder of Metori Capital Management. Metori Capital was formed about one year ago by former Lyxor Asset Management managers.

We are ten people managing over USD 400 millions. We have taken over the management of a Managed Futures program called Epsilon. We manage this program on the Lyxor platform. Our investment style is medium to long term trend following. This means that we try to harvest the cross-asset trend following premium in a quantitative and systematic manner.

I have spent most of my career at Societe Generale in different roles, mostly in asset management either in Europe or in Asia, where I was based in Tokyo.

Vanessa Casano
Autorité des Marchés Financiers

My name is Vanessa Casano. I'm working for the Autorité des Marchés Financiers where I lead the asset management regulatory affairs' team within the international affair department. Previously I have been working with Lyxor Asset Management and BNP Paribas investment banking.

Matthias Knab Philippe, I am happy you could also join us this year to represent NewAlpha, because your firm has a great overview on the innovations, the new ideas and on asset managers setting up in France and emerging managers globally. Could you please share with us some of your observations?

Philippe Paquet: As a first remark, the number of new firms we come across is pretty unchanged over the past two years. However, let me clarify that there is a certain bias regarding our remarks because certainly we analyze approximately between 350 and 400 funds and managers per year, but those who are connecting with us are actually looking for seed capital or acceleration capital. There can be plenty of firms launching every year who do not seek any seed or external acceleration capital, therefore there is no reason that we cross our ways. Having said that, I would say that the number of new launches in terms of firms in France is actively steady.

Another observation regarding the strategies would be that the **proportion of quantitative strategies has been increasing** compared to more traditional, discretionary strategies.

There are some always some debate about the wording here, but quantitative doesn't necessarily mean systematic, but again my main point here is that quantitative is continuing to become more important and that we also see that the **demand from allocators** is meeting this offer.

If we go more granular now, over the last couple of years we have seen a lot of debates, launches and marketing of risk premia strategies. It seems that now the interest coming from allocators is slowing down a little. Particularly large allocators like insurance companies are facing **two issues with risk premia.**

The first one is that there is a lack of long-term track record which is an issue given that the markets over the past two, three years had been more or less the same in terms of direction and trading regime. Insurance companies tend to be cautious seeing that those market conditions we have had over the last couple of years are likely to change at some point in the near future, and so they tend to be a bit cautious regarding risk premia from an investment perspective.

The second point is that in terms of Solvency II ratios, risk premia strategies are extremely painful for the insurance companies. I spoke this morning with a very large allocator and he told me that *investing with a risk premia fund would actually be charged 92% in terms of Solvency II ratio compared to 49% for a private equity fund and 39% for a listed equity fund.* So, 92% is very high particularly if you also consider the expected return, which is not the double of a listed equity allocation over the long term. This is why risk premia aren't an attractive investment case for them at the moment.

Sure, the source of return is different from the traditional fixed income, credit, equity assets, but there is also some caution about that. In addition, the leverage is now seen as very, very high. Given the fact that rates tend to bottom out now, the allocators tend to be cautious.

Another major trend we have noted is the **emergence of several niche strategies and niche funds in credit** based on specific themes or specific expertise in the capital structure of the managers. We are seeing new funds and new firms particularly in the asset backed securities or proxies. There are numerous offers as many real assets can be collateralized, the default rate is very low over the long term, and because of that, the demand is also here.

And the last thing I would like to mention is the **development of the crypto space.** There's a lot of publicity and discussion and I'm very happy to have the French regulator here on this

Roundtable to discuss this sort of asset as well. We are seeing firms launching in this area, generally focusing on sub currencies, absolute return with more or less high frequency or type of strategies. But our feeling at NewAlpha is that it is very opportunistic, yes, there is a lot of debate and marketing about that but so far don't see any real inflows from institutional allocators.

Perhaps Christophe can say more about that later, but for the moment, the allocators are very cautious. I heard this as well from the insurance firm company I was talking to earlier who said that investing into a firm or fund which invests into cryptocurrencies would be too risky in terms of reputation and many other considerations. So, for the moment, they are looking at, but they do not invest.

Christophe Roehri: We've been looking at cryptocurrencies from a research standpoint for many years and the results of our research prompted us to launch a fund in 2017. We believe Bitcoin combines the potential to become a new standard on the one side, with incredibly high diversification benefits on the other side. Our fund is long-only on Bitcoin, and is not involved in ICO's. The goal of the fund is to allow an efficient and institutional way to get an exposure to the Bitcoin, now that volumes and liquidity are high enough to make it investable for some institutional investors.

Philippe, regarding your discussion with the insurance company this morning regarding risk: we recognize that the risk, the volatility of Bitcoin is very, very high. However, we also believe that the level of risk isn't a good proxy for a good or bad investments. We think the size of the investment is going to be a consequence of the risk. Risk is only relevant in the context of the size of an allocation. A $5 billion investment in an asset that displays 10% volatility is going to be more risky than a $50 million investment with 50% volatility. The question then is not "is Bitcoin too risky?". Instead, investors should be looking at how to size their allocations appropriately for the level of volatility

To use an image or a metaphor, cryptocurrencies are a bit like chlorine. Used massively it is deadly, however the addition of one drop of Chlorine ("water chlorination") is one of the process to render non-drinkable tap water into "germ-free" water.

We see marks of interest from many markets, notably the usual **"early adopters"** of innovation in Europe: the Nordics, the Netherlands, Switzerland and the UK. But the largest potential at this stage for us is the US and Canada, where we have advanced discussions with investors, some of which are already exposed to crypto assets, and who are especially interested to replace sub-optimal investment vehicles with more efficient ones.

Matthias Knab Can you give us examples or more details about the types of players that you see that are already invested in cryptocurrencies?

Christophe Roehri: At this stage, invested players are a combination of retail investors on the one side and sophisticated, less constrained institutional investors, like hedge funds or large endowments in the US, on the other side. We are focusing on the institutional players.

Our approach with our crypto offering is to be the first player to address the institutional market in an institutional way, with an institutional solution. We are meeting with investors who have built $50 or $100 million positions in crypto assets; so we are really talking about institutional size investments.

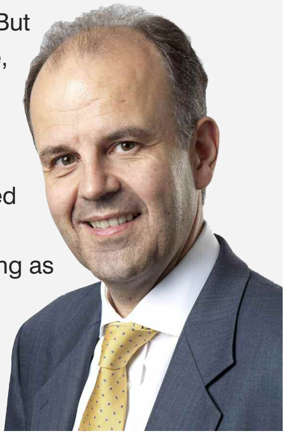
Matthias Knab Of course cryptocurrencies are one very, very hot theme and we can come back to it. Another main theme many people are interested in is artificial intelligence. And #1 number question I hear from investors is, "Do you think it's really working? Does it make money? Can you design Alpha-creating strategies with machine learning?"

Thanh-Long Huynh: To answer if the investment systems based on artificial intelligence can make money, the answer is yes.

We have launched the UCITS Fund called AlphaNow Long Short Equity, a long/short equity fund. And not only in 2017 the fund has delivered a positive performance, but especially this year 2018, which is up net 3.1% and with a very low volatility of 5.3% annualized. We have done that via managed accounts, in fact since August 2013, delivering a net Sharpe ratio of 1.8 until today.

There are different ways of using artificial intelligence for investment strategies, the one that we have used internally backed by the company called QuantCube which I have created too, works so far so good. I emphasize that the investment philosophy is very fundamental-based and AI is used only as a tool, to analyze data.

Arnaud de Servigny: The first thing that we need to bear in mind is that in finance, **markets are driven by people, and as they're driven by people, there are very few laws of nature.** This means that when you try to run money with fixed rules, sometimes it work, and after a while, it doesn't work anymore. And so, we believe the approach is to be more modest and admit that if we want to run money, it is very difficult to establish a set of rules that is static. But then on the other side, having some dynamic rules means in fact that either as an individual you change, or you make decisions and use a toolkit that enables you to change, or you try to have in the toolkit something that in itself adapts.



One of the most attractive set of features in artificial intelligence or in machine learning is actually directed at helping the system to adapt to changing environments. So that as soon as there is something that deviates or is no more representative of the overall condition in the market, then the approach is changing as a consequence. This is why having this more nimble, more adaptive approach is very important.

And let me also add that I believe that the truth in the pudding in a way, is related to the fact that you give **full transparency on leverage.**

Why is this important? Well, when I think of what I have lived with and observed into 2007 with the G7 global asset crisis was that during that period the power of the signals was decreasing. Therefore, the level of leverage in the strategies went up to the extent that when they were going to burst, the burst was really hard to bear. ***If you are honest about the real level of leverage that you have in a strategy, this then can very simply show whether you have some alpha creation or not.*** As long as we are able to deliver some strategies that run with low leverage, that means that there is a real understanding of the market that is worth working with.

What I would say in addition to this is the following. The reason why there are no laws of nature in the financial markets or because prices in the market do not correspond to some sort of systematic measurement in physics is because **prices rather correspond to the aggregate view of individuals.** Let me give you one example. Suppose that on a given occasion, a central bank is increasing the level of liquidity in the market. Is that something that it is a predictive factor of some value? Well, it depends, because on some occasions, market participants will consider that it is good news. On another occasion, they will consider it's bad news. So, what you can see is that the *information itself – and there is a lot of information available these days – may not be fully interesting, but how the information is absorbed and understood by market participants is what matters.*

And because the understanding of market participants over time tends to vary quite a lot, we therefore need to understand how people tend to behave and how their aversion to risk or indicators like that tends to evolve over time. So, once more, having a toolkit that is able to adapt, to capture, to grab some of the mindset of investors is something that is certainly more powerful than static rules. And it's also in a way less opaque than pure qualitative judgment.

When I was Global CIO Wealth Management and global head of Multi-Asset Group at DB with the direct responsibility for running EUR125bn AUM with 250 portfolio managers, I couldn't know exactly what a portfolio manager in front of his Bloomberg was thinking and what really was his decision making process? So, what you do as a manager of portfolio managers is to actually discuss with them their investment process. "Explain to me what you tend to do when markets are moving in this or that manner?"

What's interesting here is that **when you are running the investment process with an agile toolkit like machine learning, you are pushing the definition of the investment process to its maximum clarity.** Now we can say, for example, "Well, in fact, with the help and the support of the machine, here is the type of thing we are going to do and here are the types of rule we are going to follow."

We are therefore giving more transparency than any portfolio manager. However, because it's powerful, because it entails some complexity and because the machine can do several things at once, it's not that easy to replicate the whole process because there are a lot of operations taking place in one single period of time. But that being said, I would certainly say that **machine learning is an exoskeleton that is very powerful to supplement people with some experience in the market in their decision making.** In itself, machine learning is also something that, with proper risk mitigant incorporated into it, can help really capture some elements in the market quite quickly.

The last comment relates to the fact that when you are typically dealing with fundamental analysis, the market that you can cover well tends to be the market you are very or best familiar with. So, if you are in Europe, you'll be working with the European markets. If you are in the States, look at the US markets. When you are dealing with a toolkit that is quite powerful, you do not have the same limits. So, in my company we started building some strategies related to the US. We are not physically present in the US, but we have the ability to research US listed companies which is a quite large universe, and that would be impossible if we were working using the traditional fundamental methods.

Matthias Knab Data is obviously the key input into any quant, systematic and AI driven strategy. One concern that I sometimes hear is *"if all the AIs are mostly using the same data – the typical market or "alternative" data that's available – so given that there is a certain uniformity of input and that the basic machine learning algorithms do not differ that greatly, isn't there then a certain risk of crowding in the sense that they would all end up doing the same?"*

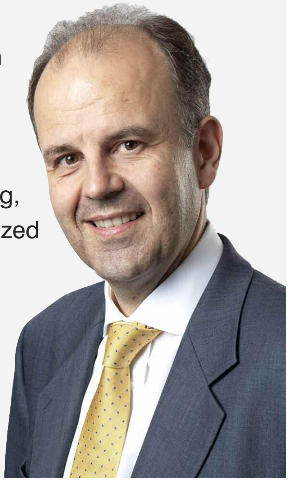
Arnaud de Servigny: Well, from my viewpoint, the first point to keep in mind is that machine learning is good dealing with simple problems. Machine learning worked well in chess. It is less easy with Go, and it's probably almost mission impossible when it's related to a problem with a wider level of complexity. This means that **masses of data are not in themselves the answer to everything,** in my view. Why? Because what matters in our industry, like in many others, is the signal-to-noise ratio.

So, the more data you add, you certainly add to the level of noise. Do you add to the quality of the signal? That's not a given. And what I would say to answer now directly your question, *the fact that what matters is not to take a bit of data, a set of data, dump it into a system and then see what it spits out. It's more about having some ideas, an understanding of the market which is differentiated.* And as a result of this, once you have this value added to simplify the problem you want to deal with, then in the next step, you can use the toolkit and the data. But if you don't go through the simplification phase, and you try to work on the raw problem, it is far too complex for the machine we have in the scientific community right now.

Matthias Knab So in other words you need to tell the machines exactly what they should be looking for?

Arnaud de Servigny: You need to have an angle that is a simplified angle and that represents another way to look at the market.

If you are directly trying to predict the prices you will meet the challenge that in fact asset prices are mediated by the human brain. And therefore, between the raw data and the strategy, there is the human brain.



In 2006-2007, I worked at Barclays setting up a very fancy Tactical Asset Allocation model. So I built a team with one guy coming from Intel, one guy coming from Microsoft, all specialized in machine learning, and we took whatever we could in terms of pieces of data available. And after a year-and-a-half, we realized that there were **very, very few pieces of data that had a resilient predictive power.**

But some of them had some predictive power, and the most resilient that we found to predict the direction of the S&P 500 was the number of cars sold in South Korea. Of course, this was a bit spurious. *The reality is that some of the factors have some predictive power during a certain period of* *time, then it drops. Why? Because in fact the human brain of people is shifting its attention from one area to another, and this is the complexity in the end that interferes with all these prediction models.*

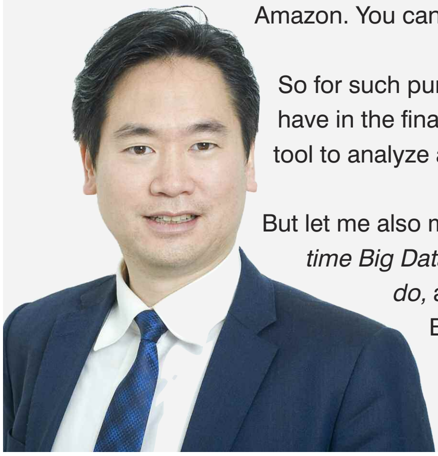
We believe that as a result, you need to really try and simplify what you are looking for and so that you manage the complexity. Because in fact, the complexity can be easily overwhelming.

Thanh-Long Huynh: Let me tell you why we strongly believe that artificial intelligence is going to deliver a strong performances over the next few years. And I do believe that data does play a role here. The more data we get, the more new territories are there to explore and more new investment opportunities.

For example, at the end of the '90s we got the data from electronic markets which has given birth to high frequency trading. Now we have all those data and big data you can use to extract value for different applications including the creation of investment strategies. We believe that this will lead to the **next generation of systematic investment strategies.**

Why? Because each data source can be potentially a new source of alpha. Of course, those new data sets are very different to each other. There is data from social media, which is very emotional, for short-term investment strategies. You have the blogs and other text formats, but blogs can be considered as a proxy of fundamentals in real time.

You have also satellite data you can use for long-term investments. Today, you can take picture and not only can you count the number of cars in the parking lot, but now with a new technology, you now can tell what kind of car is there and see if it's a Land Rover or a small car. This will allow us to tell the buying power of the parking lot, and we know that there is a high correlation between consumer expenses and the income of retailers such as Carrefour here in France or Amazon. You can now track their real time revenue.

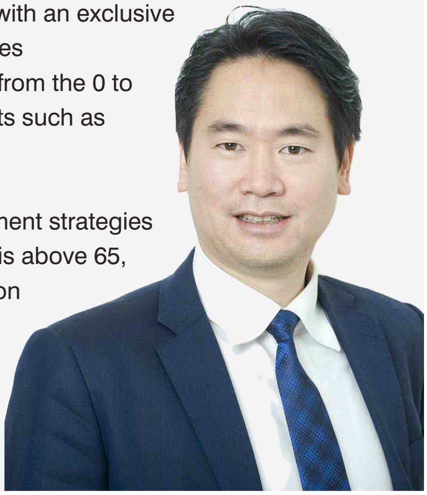


So for such purposes – analyzing text or picture or also relationships between board members that you have in the financial statement – you use artificial intelligence. Artificial intelligence on our side is only a tool to analyze all those data, either text, picture, or graph analysis.

But let me also make the important distinction that *we still make fundamental investments based on real-time Big Data or alternative data sources, we need to understand what we are looking for and want to do,* and then we acquire the datasets before analyzing it with artificial intelligence. It is not a Black Box, the philosophy of each investment strategy is very easy to understand.

Matthias Knab A description a participant at our recent Miami Roundtable said he is using AI as a recommendation engine", and not yet as an end-to-end process.

Thanh-Long Huynh: Well, the use of alternative data and AI already exists, and not only in the U.S. A few hedge funds currently use alternative data or IA for their investment proccess. On our side, we decided to tweak it in two ways. First, by getting access to Smart Data that are delivered by QuantCube Technology with an exclusive smart data provider contract to HTL Capital Management, this technology company acquires heterogeneous datasets to be analyzed with AI algorithms to create a Smart Data, varying from the 0 to 100. Advanced AI algorithms have been developed internally to analyze all kinds of datasets such as Natural Language Process, Machine Learning or Deep Learning.



Afterwards, the portfolio managers of HTL Capital Management will create Big Data investment strategies by generating buy and sell signals based on those Smart Data. Let's say if the Smart Data is above 65, then it is a buy signal, if it's below 35 then it is a sell signal. Following a portfolio construction process, those buy and sell orders are executed on the market in a systematic way. This is why I called it the next generation of systematic investment strategies based on Big Data Analytics. So, it already exists in the US market, and this technology will be applied on other major international markets by the end of 2018.

Arnaud de Servigny: Matthias, you see two of us here working with AI but with a different angle. So you can tell your investors they shouldn't be worried about the fact that everybody is going to do the same in artificial intelligence in the future.

Thanh-Long Huynh: For sure, we have different AI investment strategies. But allow me to also point out that **in the field of AI based strategies we expect some alpha decay happening already.** Let me give you one example of alpha decay.

Now every week there is a new start up coming up with some sentiment index, especially in the US. What is a sentiment index? You analyze the news and you say, "It's positive or negative." So, for sure, everybody is going to get the same information. Then you can get alpha decay as a consequence.

But let me also give you an example where we do not expect any alpha decay in the near term. For example, you have five times more information in Arabic than in English about crude oil. And finding some Arabic data scientists is very difficult. So for example, we do an Arabic sentiment index for oil and we do not expect alpha decay from that for some time.

Nicolas Gaussel: As a systematic manager, we put a lot or resources on data and their management. We look carefully at **alternative data** with always the same question in mind: which value can they bring that is not already priced in?

To answer this question, one needs to assess whether a specific market is far from a situation where participants are numerous and have easy access to information. In this case, price variations should be hard to predict and the added value from additional dataset limited.

This possibility should be considered as a real one when testing a new approach or a new dataset. This implies that the right methodology needs to be developed before starting running simulations. This might seem too cautious but one wants to be able to identify whether what will be obtained in sample can transform into a sustainable real-life trading strategy.

It is very easy indeed to find strategies which would have worked in the past, you can even find hundreds, even with no experience in the field. But gaining sufficient confidence to implement it is something different, especially when you manage others' money in a fiduciary framework.

Imagine you wish to organize a contest to find the best possible systematic strategy. You put a dataset on the internet and you publicize all this with a one million gain. What would be the right set of rules to organize an investment contest that will not eventually award a stupid strategy?

The problem you face is how to be sure that the strategy you select will really be a good one? That as soon as you implement it, it stops working or even deliver ugly results?

Take the Sharpe ratio estimator for instance. Its standard deviation is the inverse of the square root of the length during which you observed the strategy, in years. If you observe the strategy during one year, the uncertainty on the measured ratio is equal to 100%! If you observe it for 9 years, it is equal to 33% which is still very high!

This shows that **good performances on a 2-3 years dataset are close to meaningless from a statistical perspective.** Which confirms conventional wisdom of fund selectors who are aware of this, first hand.

So, you should tackle the alternative data / artificial intelligence matter with those considerations in the back of your mind.

Christophe Roehri: The three of you were just discussing how to forecast the future, or how to find new or better ways to forecast the future. Indeed, one option for asset managers is to design investment strategies based on an ability to determine what is cheap and might become expensive, based on a forecasting skill. At TOBAM, we believe there is also another option, which is essentially to **take the inability to forecast as a starting point.** Then the question becomes *"What should you do if you cannot forecast? What does make the more sense?"*

This is where diversification comes into play. **Diversification** is the most efficient answer to the absence of an easily accessible arbitrage opportunity. The goal is to use diversification to deliver the risk premium, i.e. to deliver the "real beta", rather than hunting for alpha. Results are very compelling, both in terms of returns and in terms of risk.

Coming back to the subject of AI, I would be interested in having a definition of machine learning and artificial intelligence and the difference between the two, and how you'd define these terms.

You mentioned the chess and Go game. In fact, I know Go game pretty well: I went to the world championship of Go when I was 16. There I had to play against what was back then the best computer in Go, and it was miserable, you would have almost laughed at the moves he was doing. Now of course we all know about the results of initiatives from AlphaGo and the likes.

What is interesting is that in the first version of AlphaGo, they included past data, i.e. past games of very strong human players. The second version of AlphaGo, which was much stronger than the first one, was on the contrary built without any past games data!

Matthias Knab The AlphaGo story is still unfolding.

Training artificial intelligence without datasets derived from human experts has significant implications for the development of AI with superhuman skills because expert data is "often expensive, unreliable or simply unavailable," according to DeepMind.

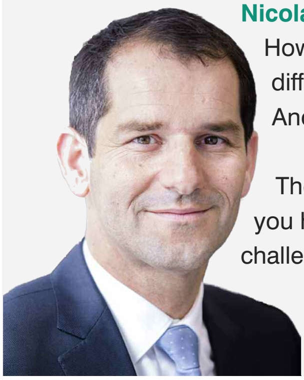
Demis Hassabis, the co-founder and CEO of DeepMind, said that AlphaGo Zero was so powerful because it was "no longer constrained by the limits of human knowledge". David Silver, one of the first authors of DeepMind's papers published in Nature on AlphaGo, said that **it is possible to have generalized AI algorithms by removing the need to learn from humans.**

In December 2017, a generalized version of AlphaGo Zero, named AlphaZero, beat the 3-day version of AlphaGo Zero by winning 60 games to 40, and with 8 hours of training it outperformed AlphaGo Lee on an Elo scale, as well as a top chess program (Stockfish) and a top Shōgi program (Elmo).

Arnaud de Servigny: I think, Christophe, what you said is very important in several ways. The first thing is that the way I understand it, I wouldn't say that it is right or wrong, is that, for me, artificial intelligence is an umbrella word to either talk about the big data element, or to talk the more mathematical machine learning aspect. And so, you can focus either on the angle which is having plenty of data to deal with or looking to deal with the data in an adaptive manner using a mathematical toolkit that is quite different from you.

I would like to take the opportunity to actually relay to the notion of efficiency. When I was doing my PhD, which was quite some time ago, the fashionable book at the time was the Copeland and Weston. The Copeland and Weston version 10 which I am teaching now at university still exists. The difficulty we are faced with is that finance 30 or 40 years ago was a new science, but now it is an old science, with everybody thinking the same way, and not many concepts are being developed. And I see that fundamentally, almost from an epistemological perspective, efficiency means that if you look at things the same way, in the end, there is nothing left to say anymore. Now let me have you think in a different manner.

If you look at the price of assets, let's consider that the price of asset is not dealt with the traditional approach and whatever it entails, but is actually considered as music, as a piece of music. And now let's build another science which is the science of music in markets. So here we define what a harmony means or disharmony means in prices and things like that. What I'm saying by that is that rather than think that there is one way to look at markets, and as a result of that, after a while, you don't have anything to say anymore, you can alternatively say, "Well, in fact, I'm choosing to look at the market completely differently and build a new science, a new understanding." It's not exactly about predicting. It is actually trying to uncover things and seeing things that people don't see because they don't spend attention on that the same way.



Nicolas Gaussel: Maybe I was not clear, my point is not to say that market are efficient, I don't know. However, when you test something, you should be prepared that maybe they are. Or, to express this in a different way, if I send you some data which are noise, you should be able to recognize if it is the case. And in this case, refrain from proposing any strategy.

The problem with a neural network, for instance, is that, once calibrated, it will always give a result but you have no clue if it is relevant or not. It is somehow the equivalent of human conviction when it is not challenged: it might well be true but it might also be just stupid.

Arnaud de Servigny: But, just taking a step back, the assumption we are typically making is that there is a data series and that we can understand it directly without knowing the grammar. If I gave you for instance, a recording of somebody talking Chinese, you may look at the statistics of what is coming through, and then conclude that this is white noise. But there is a grammar and some rules underneath, but you don't know them. So, you cannot escape from the idea that when you look at something, you have to have an idea or some set of rules that help you extract some value, and therefore this exercise is not just about pure statistics.

And when I took the example of saying that the price on asset is music, this is to say, in music you've got different rules that are not applicable in finance directly. As a result of that you may discover something new then in finance.

But why did I take the example of music in the first place? Because music also is a production of the mind of humans, as the price assets is also the production of the brain of humans. As a result of that, they are not directly based on a physical observation, and therefore, there may be some equivalences, you see? And when you are thinking of efficiency, statistic, we typically look at it from a statistical perspective and say, "Let's take the data, just the data and analyze it in a direct manner." But there may be more than that.

Matthias Knab I think this is a very interesting philosophical proposition within a very relevant discussion.

Thanh-Long Huynh: Allow me to get back to why I still strongly believe in why artificial intelligence will deliver positive performance. Let me bring up one of my experiences 20 years where I was the one who downloaded all the CD ROMs of tick-by-tick data at SocGen back to 1998 from the stock market. That type of data has then given birth to high frequency trading.

With every new technology or approach, the learning curve is extremely important. At first, we suffered significant losses on high frequency trading until it worked well. I think it's very similar for Big Data analytics, the learning curve is very important.

Our technology company "QuantCube" also organizes or participates in data science competition and is also a sponsor of

Data Science Games here in Paris, the largest data science competition at university level. Last January, there was a data science challenge organized by IARPA, a branch of the US National Intelligence, about the systematic classification of facility, building, and land use from satellite imagery: our data scientist team scored in the top 15 out of more than 800 teams. The teams in front of us were mainly from the defense industry, besides NVIDIA.

Apart from the learning curve, what I also learned to be important in order to deliver performance is that it is very relevant that you can get the information in front of everybody in a public manner. I really insist on that. For me, the strength of the big data is to get access to all of this public information in real time. So, the objective is to get and use this public information first, to analyze it as fast as possible using a graphic unit cards and things like that. This can give you then a competitive edge.

Let me give you a simple example of what and how we process such data. Usually if there is a job opening, this tends to be public information. We then aggregate some in real time and from there we will able to tell you which sector recruits the most or the least. With this process we are basically three to six months in advance compared to official numbers from the Bureau of Labor' Statistics. The investment strategy is very simple. We invest in the sector which recruits and we divest from a sector which does not recruit. It's a very fundamental bet, except that we have been able to analyze this information before you have official numbers.

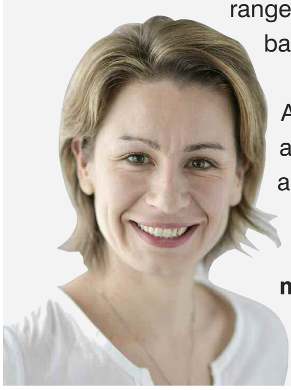
With AI and data science, there are many applications, including within the investment world. This is why we have separated the asset management company - HTL Capital - and the technology company - QuantCube -.

It's a coincidence that right now at 2pm a press release from BusinessWire announcing a Series A equity round of five million dollars within QuantCube by three large investors: Moody's Corp., the credit rating agency, and Five Capital - an investment fund sponsored by CDC International, the sovereign wealth fund of France, and Kingdom Holdings, the investment holding company of prince al Waleed. There are already 28 people in QuantCube, most of them are data scientists, with the objective to reach 45-50 within 12 months. The objective of HTL Capital is to take the lead in artificial intelligence within the asset management industry.

Matthias Knab Thanh-Long, congratulations on getting this investment and best wishes going forward!

Vanessa, I see you are enjoying our discussion, what do you like to share from your perspective?

Vanessa Casano: Absolutely! Let me go back to your first question on the ecosystem of the French asset management industry. On this topic, I share the views of other participants. We still have, in France, a diverse ecosystem embracing all ranges of asset management companies, from entrepreneurial boutique to large companies being held by a banking group.



At international and European level, there are currently various subjects of interests and analysis as well as policy initiatives. Let me focus on topics which may be of interest for the participants around the table and leave out of scope subjects such as PRIIPs.

The increased proportion of passive asset management out of the total asset under management raises more and more questions on its potential impact, notably with regards to its allegedly pro-cyclical nature or its potential effect on the price formation of the underlyers of the respective funds. There is currently no policy objective in that respect. The objective is rather analytical at this stage, aiming at getting a good understanding of the issues at stake, if any.

A particular focus applies to the **ETF ecosystem,** focus which can be explained by the exponential increase of their assets under management and also the evolution of that market. The Committee Five of IOSCO, dedicated to asset management, has launched in 2018 a study on ETF: its specific characteristics, its specific risks, if any, and whether the latter are well taken care of by current regulation.

There are questions, for example, relating to the good understanding by investors of the product they purchase and the specific nature of ETF. ETFs are wrapped as retail types of product. In Europe, they are mainly structured as UCITS investment vehicles, whereas in the United States they are being authorized as mutual fund under an exemption letter to the Investment Act of 1940. ETF shares are listed and their value may vary on the secondary market as any stock will. ETF shares may then be subscribed and redeemed at a price which might be disconnected from the net asset value of the ETF underlying basket, especially under stressed market conditions. Investors may – depending on market conditions and the applicable market rules on which the ETF shares are listed – get a return whose value depends on the mechanism of the supply and demand and not systematically on the value of the ETF underlying basket as a consequence. Disclosure requirements are being assessed against this background.

There are other topics of interests being discussed, such as the variety of investment strategies an ETF may implement, from very vanilla one – being passive and exposed on the equity asset class – to other asset classes, such as fixed income, with a growing proportion of lesser liquid asset. There are also new investment strategies which have been launched under the ETF structure, being more active types of investment strategies, such as smart beta. Investment strategies implemented by ETFs raise the question of their target market. Are all types of ETF adequate for all categories of investors?

This study is not yet directed to feed a policy work at this stage, but this might be a possibility.

At the EU level, there are on-going discussions on **closet trackers,** being those funds presenting themselves as active funds while implementing passive types of investment strategies. ESMA has come up in 2016 with an analysis based on a methodology mixing qualitative and quantitative criteria, such as a minimum level of investment management fee, a tracking error up to 4% or an active share lesser than 60%. This methodology aims at identifying potential suspects. However, tracking error and/or active share do not allow identifying closet trackers. There are multiple factors which may explain a given tracking error without implying a fund is a closet tracker. Such criteria in addition only apply to fund referencing a benchmark and not to the vast diversity of funds that do not.

Work on closet tracker is then still ongoing. A workshop should be organized by ESMA in the course of the year to enable authorities to exchange best supervisory practices and facilitate the identification of suspected funds, which is a very difficult task.

With regard to crypto assets, the AMF has indeed been very active and have so far been presented **over 50 ICOs projects.**

You may know that we have launched a consultation on a potential regulation in addition to a project named, "UNICORN", which stands for Universal Node to ICOs' Research and Network. UNICORN was an invitation launched to the market to share with the AMF ICOs' projects, enabling us to gain knowledge on that deep-set trend. Both the **UNICORN initiative** and the consultation were highly successful. The AMF has provided a report on the consultation. Most of the answers received favor an optional label/approval from the AMF. The Treasury is currently studying the potential way forwards based notably on AMF consultation and answers received. Its objective is to define a robust framework, both on the primary and secondary market.

Defining a transparent and secured primary market together with an efficiently organized secondary market is a pre-condition to any decision on whether the market of crypto-assets could be opened to funds. There are operational questions that would need to be solved as well, on the custody and safekeeping side in particular. There are questions on the valuation and the liquidity of those assets in addition.

Matthias Knab When earlier Philippe spoke about risk premia and demand going down a bit, I wondered what TOBAM's experience is in this sector?

Christophe Roehri: It's a matter of definition as usual. I think the risk premia products Philippe mentioned are certainly not to be understood as what we are doing at TOBAM. We are long only equity, long only fixed income, long only crypto. Typically, if I take a concrete example, TOBAM's equity strategies would be classified in equities in respect to Solvency II and much lower requirements than the 92% that your investor was referring to.

I think there are many interesting things in what we have just heard from Vanessa on the regulatory side. I agree that there are many questions to be answered or to be looked at around the ETFs.

I also agree that we start to hear concerns about the increasing share of passive management, even from passive managers. Some people say that it could be dangerous, that too much money is passively run, that you need active managers to arbitrage prices. When you think about it, passive investors put a lot of money in Google simply because the market cap of Google is very high. In turns, it means that they are more positive on Google than on other, smaller market cap stocks, otherwise why put some much money in Google? **At the end of the day, a passive portfolio implements a view. Are all passive investors aware of that?** Are passive investors actually favoring cyclicality? I think these are relevant questions.

Coming back to the launch of our cryptocurrency fund, we had a discussion with the AMF before we launched. I have to say that we also initiated conversations with other regulators in other countries and we were very pleased by the constructive view that the AMF has taken.

The approach of the regulator was not whether they should approve the project or not. It was constructive in the sense that the approach was more about what needed to be done in order for the regulator to be able to allow the project to move forward. Vanessa, you mentioned that there is a need for some type of unified answer within the European Union, so our observation is that we can have a constructive dialogue with the regulator in France.

Matthias Knab Any other comments about current trends and developments?

Philippe Paquet: One thing I want to make sure to mention is that we see good demand for **green finance products.** This is not only a pure marketing label in my opinion. Personally, I was very cautious over the past few years, but obviously now this field has gained real momentum.

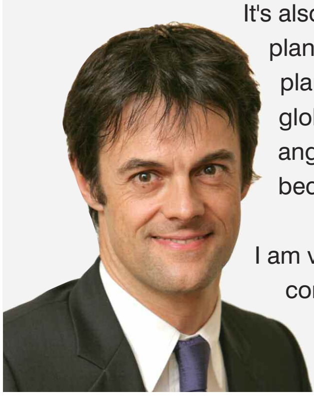
Another point which I think is very interesting regarding your Roundtable today, Matthias, is that the French industry, both asset management but also allocators, is not lagging but actually in a leading position in Europe and even in the world. So, also here in green finance we have seen initiatives from various sides, from institutional investors and it seems there is also demand coming from the retail side for such products, and even more and more hedge funds are now looking for having the green finance level in a way or another.

At the moment we have traditional equity and fixed income funds, and then besides those, some sort of green finance, SRI, ESG types of funds. In my opinion, in about five years time all these labels are going to unite in one single concept, that will be measured more obviously with metrics like risk measures.

Now, the other thing I like to mention is that on our side at NewAlpha we clearly see **increasing demand for differentiated investment managers.** It seems that after the past few years with this huge growth of ETF and passive management which also resulted in lower fees for investment managers, now allocators tend to give more value to differentiated and more creative investment managers.

That is a good development, also for us at NewAlpha because within this space the emerging managers label is really gaining momentum and recognition. This is happening globally, so not only here in France with our institutional incubator fund Emergence, but we have the same in Quebec and right now also starting in Japan where the local investment industry is considering to launch an emerging manager program to stimulate the investment management industry with startups.

It's easier to stimulate startups than to stimulate elephants, and maybe it could even be said that France perhaps is giving some sort of example to the rest of the world with NewAlpha doing just that for over ten years.



It's also in the public domain that since early March, NewAlpha has been working for a US public pension plan, MassPRIM, the **Massachusetts Pension Retirement Investment Management.** We advise the plan to identify newer managers and build an **emerging hedge fund managers program.** This is a global mandate. MassPRIM is not the only pension fund in North America to adopt this differentiated angle about external managers: recognizing that smaller and newer managers can deliver good returns because they are more flexible, more innovative and more motivated.

I am very pleased that also on this Roundtable today we have some emerging managers, so congratulations good luck to all of you going forward.

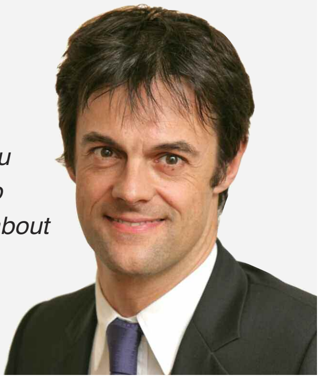
Christophe Roehri: It's interesting! TOBAM also entered into an emerging manager program, the one ran by CalPERS in the US, back in 2011.

I would agree with Philippe on several other points, notably the need to include the ESG dimension in the investment process, as well as the necessity to be innovative.

Philippe Paquet: We have about 650 investment managers regulated here in France. I don't know if you have an idea about of the number of independent investment managers in Japan that run hedge funds?

Matthias Knab I know the number from the Japan Roundtables I am producing in Tokyo, it's not more than 20 actually.

Philippe Paquet: Correct, the number of independent investment managers that run hedge funds in Japan is just about 20.

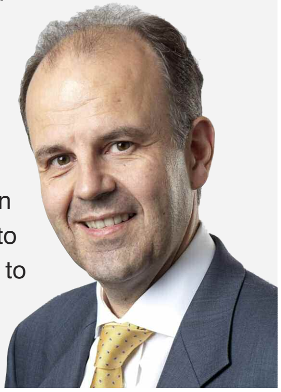


If you now look at the savings of Japan and then compare the number of independent managers, you only have around 20 in hedge funds and another maybe 20 doing long only investments. That is also why I believe we are rather privileged in France with more than 600 investment managers including about 400 independent which results in some true creativity and dynamism.

Vanessa Casano: Going back to sustainable finance and the trend Philippe observed, especially in France, it may be worth noting that the EU Commission has just published a very **strategic initiative on sustainable finance.** France is well positioned to contribute to this project, considering its advanced framework, based on a **"comply or explain"** approach, whereby asset managers shall detail under the fund's documentation the reasons for not integrating ESG criteria.

There are other very interesting on-going EU projects, in particular the proposed **pan-European Pension Product** or PEPP which is an opportunity for asset managers throughout Europe. This project is currently being discussed both in the Council and at the European Parliament. *We believe at the AMF, that asset managers and not only insurers should be able to propose PEPP, via tailored investment strategies aiming at providing capital protection, such as life cycle investment strategy.*

Arnaud de Servigny: This is very interesting, Vanessa. We are just about to advise a new fund that will be run by Boussard Gavaudan. It will be a long US equity SRI Fund. So we went through the analysis to understand what SRI meant. One of our partners is actually teaching the topic, the subject matter at HEC, so we are quite involved into this.



But frankly, if you want to have something that resonates with different European countries I would see this as a challenge, because there are no standards. One country prefers that type of approach and in another country another approach may be standard. I think a lot of good-will exists, but to translate this in something that is workable is not easy right now. And I think that people would welcome very much like to have some guidelines in what works and what doesn't work, things like that. That will help probably help to get these products develop quicker.

Matthias Knab Nicolas, what can you share with us from the exchange side?

Nicolas von Kageneck: Deutsche Börse Group and Eurex as the major derivatives exchange in Europe is closely following all the technological developments in the various fields of our financial industry. AI, blockchain technology and big data will change our services dramatically to an extent last seen in the nineties, when automated trading was introduced. And we are getting prepared for it.

The appearance of the cryptocurrency is a topic that we look at but we have not yet made any concrete decision to implement it within our product scope. When launching a future you definitively need as a prerequisite a liquid underlying market as well as support from major market players.

But most importantly, as we all know, since the crisis in 2007/ 2008, we have seen a whole series of restrictive regulations come into place, impacting the OTC markets in particular, representing not only a huge implementation effort for the banks to start with, but also an important cost factor for the entire financial community. I would give as an example the introduction of the so called bilateral margining charges for non-cleared OTC derivatives. In this context, it appears that the market infrastructure providers have positioned themselves as serious actors, proposing reliable solutions in the fields of trading and clearing. These solutions result for instance in **cost reductions in terms of collateral management** through significant margin offsets between exchange traded derivatives belonging to the same liquidation group.

Eurex has been working now for several years, in close cooperation with the major market players to transfer bilaterally traded, OTC equity & equity index vanilla swaps into listed futures contracts in what can be defined as **futurization process.** And we are successful in achieving that because there was a need.

Let me name here some solid examples. In 2008, we successfully launched an equity index dividend future based on the Euro STOXX 50 index followed by single stock dividend futures and equity index dividend options in 2010 as an alternative to the existing OTC equity dividend swaps. After a couple of months, we could observe a clear shift from the OTC space into our listed product. Not only the banks supported the migration process but also the buy-side community who saw in an exchange traded derivative the opportunity to trade dividends as a new asset class in a secured environment. Today, Eurex has further developed its dividend products offering, adding to the 15 existing equity index dividend futures also about 180 single stock dividend futures. Monthly volumes in the dividend segment often exceed the million contracts with open interest exceeding 5 million contracts.

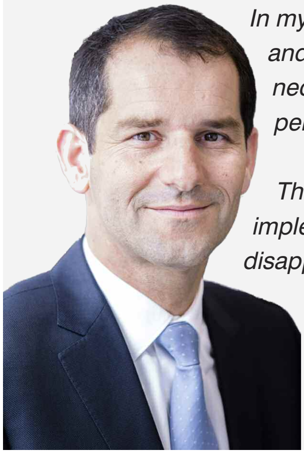
The second example of futurization I would like to mention is the launch in 2016 of a **total return future** (TRF) also on the Euro STOXX 50 index, aiming to replicate in a cost efficient way the pay-out profile of a standard equity index total return swap (TRS). This product is the result of a perfect cooperation between Eurex and the dealers active in this market, together with intensive consultations before launch in order to receive the approval from the market players. Beginning of May 2018, we reached an important milestone with one million traded contracts, which is equivalent of EUR 35 billion, a little more than one year after the launch. On this product, demand was high from the beginning and liquidity increased, partly due to the return of volatility.

In terms of new services, Eurex has launched a RFQ-platform to the attention of our exchange members, called **Eurex EnLight.** It is as a fully automated solution, replicating the core aspects of the voice and chat business. The new service intends to increase the electronification of the off-book business, complying with MiFIDII/MiFIR obligations, specifically around Best Execution.

Matthias Knab Any other comments regarding innovation or new products?

Nicolas Gaussel: I would like to come back to the discussion on risk premium. At the core of Metori strategy we seek to harvest both market diversification and trend persistence. To keep delivering this premium to investors, we are in the process of registering ourselves as a benchmark administrator to the AMF, leveraging on the newly enforced Benchmark regulation.

We see this is as another way to deliver performance to investors, even if this raises new challenges. Which ones?



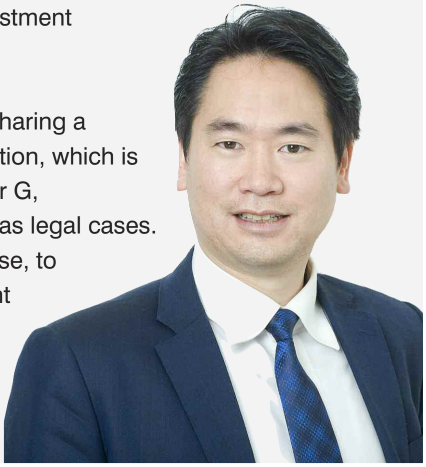
In my view, the difficulty is to reconcile a simple promise – the risk premium description must be simple – and an implementation which must cope with all real-life constraints.A confusion between marketing necessities and investment realities would lead to over-simplistic implementation and would hamper performances.

This is a frequent engineering conundrum: the principle of a steam machine is simple but its industrial implementation is not. This might be one of the reasons why many "risk-premium" products delivered disappointing performances after launch.

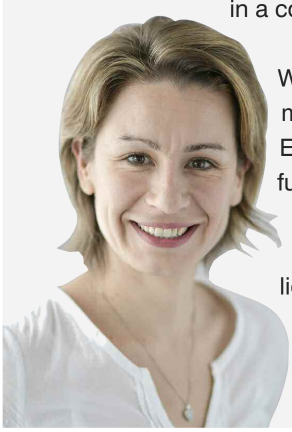
At Metori, we feel we have an edge in proposing strategies based on clear and understandable principles yet efficiently delivered.

Thanh-Long Huynh: To conclude on our side, we see a good range or a boulevard of investment opportunities basically using artificial intelligence.

Let me also add some comments on how will will approach ESG criteria with Big Data by sharing a simple example. For the first letter of ESG, letter E, we can use satellite data to detect pollution, which is straightforward. For letter S we can analyze social media, analytics and blogs. And for letter G, governance, you analyze the relationships in financial statements and other datasets such as legal cases. This is how you can analyze all this information using big data for ESG criteria, and of course, to make ESG investment strategies, so this is why I say we can see a boulevard of investment opportunities with many different applications.



Vanessa Casano: Regulatory wise, we are shifting model, moving from the single rule-book to **supervisory convergence.** The objective is that each competent authority across the EU shares the same interpretation of the EU laws and applies them in a consistent way.



We currently observe different applications of the EU rule-book, which creates regulatory arbitrage and may in turn impair investors' protection in an opened-market where cross-border distributions within the EU, through the passporting regime, prevents host competent authorities to ban the distribution of a fund domiciled in another jurisdiction. Such arbitrage could in addition hurt successful EU labels, such as the UCITS label, dedicated to retail investors, when certain jurisdictions tolerate UCITS funds to be exposed to underlyings which are non-eligible or entirely invested on assets whose valuation and liquidity may be questioned. *We believe further at the AMF that supervisory convergence is all the more key in the Brexit context. The EU should speak with one voice and avoid any race to the bottom.*

In that context, we believe at the AMF that alongside the key role played by national regulators, ESMA's role should be strengthened. It merely reflects the change of context since the main EU financial market will become a third country tomorrow. It also reflects that trying to foster supervisory convergence via more regulation has proved to be ineffective. This does not imply though that ESMA should replace national regulators. There is still no unified EU regime in terms of tax or "securities law" linked to the ownership of assets and bankruptcy law. Areas like retail financial services and investor protection are best dealt with at national level.

Nevertheless, we see merit in ESMA acting as a data hub center for various reasons: economy of scale in particular, for the benefits of regulators and market participants. Delegation is also a good example illustrating another strengthened role for ESMA. Delegation is part of EU regulation. It is key for market players and beneficial to investors and markets if used in a robust architecture. Objective is certainly not to restrict the use of delegation but to ensure that delegations articulate well with other issues at stake: level playing field, EU market integrity and investor protection.

One more and last update on the regulatory front: there is currently a project being run at IOSCO level on leverage, aiming in particular at operationalizing FSB recommendations, issued under the FSB Structural Vulnerabilities Report on Asset Management dated January 2, 2017. **Leverage and liquidity** were part of the structural vulnerabilities identified by the FSB. Work on liquidity has been completed at the beginning of 2018 by IOSCO. On leverage, work is ongoing. A consultation should be published at fall and IOSCO final report should follow in the first quarter of 2019. This work does not aim to reinvent the wheel and we do not anticipate at this stage impacts on the AIFM Directive.

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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/

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