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Opalesque Roundtable Series '16

NEW YORK

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Editor's Note

The evolution of the multi-manager hedge fund model & the hidden risks of quants

The criticism of hedge funds has been prevalent for the past few years, but 2016 has certainly been the "what gives" year. Many point to the level of dispersion in the market and then ask, "Isn't that great for stock pickers? Why aren't hedge funds picking up on this?" However, when you take a closer look you will find that while there is high dispersion, there is narrow breadth. We've all heard the acronym FANG – and there was a Friday in October 2015 where these four stocks single handedly added the equivalent of McDonald's market cap to the exchange. So, unless you have participated in a select handful of names, it's very difficult to keep up with the market.

Interest rates obviously are at lows while equity markets are at highs and continue to grind higher despite a number of global risks on the horizon. This produced an environment where hedge fund managers in general don't want to load up and take a lot of risk, and yet the market has continued to climb higher. To be fair, this isn't an environment where seasoned investors expect hedge funds to outperform. However, some hedge fund strategies were able to perform, and managers are trying out different ways to innovate.

Quantopian is a community of over 90,000 quants from 180 countries, who come to this online platform to research, simulate, and implement quantitative trading strategies. These quants have already produced hundreds of thousands of independent strategies on the platform. The firm, which recently got a capital allocation from Steve Cohen's Point72 of up to $250 million, views the hedge fund business and particularly the quantitative investment business as a production problem. *Inefficiencies come along and they live for a while, and then they die, and the problem with the traditional hedge fund business is that this timeframe has become very compressed. It has therefore become very difficult to operate in a traditional setting as an allocator, because the efficiencies that a single manager might be able to exploit could be gone in six months, in a year, or in two*. From this perspective, the limiting input to that production problem is research effort.

So far, the largest multi-manager hedge funds might have something on the order of 200 line items in the P&L, and this is how they achieve scale. Quantopian has been conceived as a tech startup and it could theoretically have thousands of line items in the fund and potentially achieving much larger scale and capacity than the largest traditional-multi managers.

Right now, quantitative strategies are still a small percentage of overall equity hedge fund AUM. But if we include things like alternative betas and risk premium strategies, one concern is that it may just take a tiny little wobble in momentum as a risk factor in the beginning of the year to torpedo a number of these quant models.

The hedge is down in Germany as market opens for fund promoters

Metaphorically, the hedge is coming down in Germany, because from 1 January 2018 any type of regulated fund, whether it's a Peruvian, Chinese or US fund, *whatever the strategy*, can be sold much easier to German investors. Germany's public pension system is not capital-funded but a rollover system, and approximately one-third of these overall payments are funded by the government. Many experts believe this system is not sustainable in the long term, so there is a pronounced need for good investments for (and new distribution options to) the 80 million Germans.

The Opalesque 2016 New York Roundtable, sponsored by SocGen Prime Broking and WTS Tax Legal Consulting, took place with the following experts:

1. Katherine Grant, Head of US Equity Research, LGT
2. Darren Wolf, Head of Hedge Funds, Americas, Aberdeen Asset Management
3. Jonathan Larkin, CIO, Quantopian
4. Thijs Hovers, Partner & fund manager, Lucerne Capital Management
5. Alain Courbebaisse, Head of Prime Clearing Services Americas, SocGen
6. Ted O'Connor, Director Prime Clearing Services, SocGen
7. Steffen Gnutzmann, Partner, WTS Tax Legal Consulting

The group also discussed:

- Which hedge fund strategies are attractive in the current environment?
- The identity crisis (and the role of innovation) of fundamental managers
- There will be consolidation: Hedge fund AUM levels seen somewhat consistent, but fewer players
- While in the US hedge funds collectively arbitrage away many opportunities, inefficiencies in Continental European mid-caps reward niche investors with a longer term outlook
- Why active investors need to get away from indices
- How to deal with crowdedness? Is there crowding in the quant space? How can crowding be measured? Is it always "bad"?
- Separately managed accounts: Investors' most valuable tool
- New insights on big data and "data cycles"
- Prime Broking booms at SocGen: A European Bank without any "pain" legacy or issues to fix continues to heavily invest in its cross assets platform.

Enjoy!

Matthias Knab
Knab@Opalesque.com

Participant Profiles

(LEFT TO RIGHT)

Thijs Hovers, Ted O'Connor, Steffen Gnutzmann, Katherine Grant, Jonathan Larkin, Alain Courbebaisse, Darren Wolf, Matthias Knab

Introduction

Katherine Grant
LGT Capital Partners

My name is Katherine Grant, and I work within the Hedge Fund Group at LGT Capital Partners. We are a global firm with headquarters in Pfaffikon, Switzerland. I work within the New York office overseeing US equity strategies. Our firm has a unique history relative to the industry as we initially started as a family office on behalf of the Royal Family of Liechtenstein. The history is worth emphasizing as the family's intention was to create a multi-generational investment vehicle with a focus on alternative investing. Such an objective has set the tone for how the firm has grown, developed and most importantly, how we invest.

With a long term trajectory and an early embrace of alternatives, LGT did a fantastic job attracting more institutionally inclined investors who understood the vision of the royal family. Hence, when you look at the firm today, LGT has developed into a $50 billion, standalone asset management firm.

While we believe in a long term mindset, we always look to proactively innovate to address short comings in the market and our industry. Our hedge fund program has embraced the importance of segregated managed accounts for over fifteen years, well before it became a conventional structure within the industry. The elevated transparency has made LGT an informed investor and a better partner to our clients and our underlying managers.

Steffen Gnutzmann
WTS

My name is Steffen Gnutzmann. I work with WTS Tax Legal Consulting in Frankfurt in Germany. I am a lawyer and partner at WTS. We are 650 specialized advisers serving mainly German corporate industry clients. Our WTS team advises many financial services institutions and funds in Germany, plus numerous non-German funds, their promoters and the related industry like fund administrators, in many different aspects: from issues like market entry and/or exit from Germany to the nitty-gritty details of German fund tax and regulatory law. We also work with German investors who invest in non-German funds.

Alain Courbebaisse
SocGen

My name is Alain Courbebaisse from SocGen where I run Prime Services in the Americas. Early in my career, I have been a developer for IBM in France for 10 years before joining the finance industry in 1999.

SocGen Prime is the result of the merger between Newedge and Societe Generale. Newedge has always been a leader in servicing managed futures, CTAs and global macro type of funds, and now with SocGen we strive to be one of the key players in global prime brokerage market, extending out to all kind of strategies. We continue to invest heavily into our platform to support this grown and out clients.

Jonathan Larkin
Quantopian

My name is Jonathan Larkin. I am the Chief Investment Officer at Quantopian. Quantopian is a community of over 90,000 quants globally who come to our free online platform to research, simulate, and implement quantitative trading strategies.

The quants on our platform have produced hundreds of thousands of independent strategies. Right now, we are in the process of launching our investment management business. The philosophy of that business is to take the best of the best strategies on the platform and invite the authors of those strategies into pay-for-performance license deals. We will implement the licensed strategies for the benefit of investors in a commingled absolute return vehicle.

I come from the multi-manager hedge fund business. I spent 10 years as an executive running multi-manager businesses within hedge funds, and the 10 years prior to that, I was on the sell side at J.P. Morgan. I joined Quantopian because I see Quantopian as the evolution of the multimanager hedge fund model.

As previously announced, we recently got a **capital allocation from Point72 of up to $250 million.** They will be our first institutional client, and this capital will soon allow us to make sizeable allocations to authors on our platform.

Ted O'Connor
Societe Generale

I am Ted O'Connor from the Prime Services Sales Team at Societe Generale. I joined the bank about a year and-a-half ago to work with Alain's team on the build out of the Prime Services. Historically I have focused on some of the larger equity funds, quant funds and multi-strategy funds in the United States. We see now a great opportunity to expand our footprint there, particularly as we see a rapidly changing environment in the prime brokerage industry, both from a regulatory perspective and from a competitive perspective. I've been in banking for 10 years and spent 15 years in asset management before that, including launching a startup hedge fund about 15 years ago.

Thijs Hovers
Lucerne Capital

Thijs Hovers, I am the co-portfolio manager and co-owner of Lucerne Capital. Pieter Taselaar and I manage a long biased European L/S strategy and have close to a 15-year track record investing in mid-sized European companies. Our investor base is predominantly family offices based in the US with a long term investment horizon looking to gain exposure to mispriced opportunities in developed Europe. We focus on investing in high quality growing businesses that are able to reinvest their cash flows with good returns in Europe.

Our investment team is all European and together we have 80 years analyzing European companies and we are proud of the network we have built with listed and non-listed corporations on the continent. We run a relatively concentrated portfolio and try to identify firms that are below the radar. We tend not to invest in the mega caps that are well covered, but focus our resources in 1 to 10 billion market cap range where persistent inefficiencies exist. Based on our research we expect that a select group of companies can make very high returns over longer periods of time.

As to my personal background, I was born and raised in The Netherlands and earned my BA and MA at the University of Amsterdam. As a kid I was always interested in investing. My father was the CEO of some listed companies and I was always intrigued to see how a company's actions ended up impacting the share price and I came to the conclusion that to see a positive stock price development over time, you need to run a good business in a very disciplined way. That then created my deeper interest for business and business management.

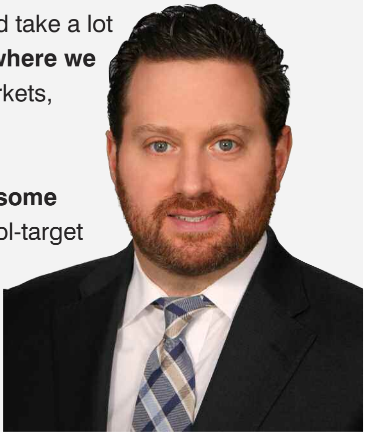
Darren Wolf
Aberdeen Asset Management

I am Darren Wolf, the head of hedge funds in the Americas at Aberdeen Asset Management. Aberdeen, with a network of 38 offices and investment centers in 25 countries, is a roughly $400 billion global asset management company. Our growing Alternatives Group has approximately $32 billion in assets under management, and includes private equity/secondary investing, real assets (infrastructure, real estate, energy, timber, agri-investing) and hedge funds.

The hedge fund piece, which is the group that I am a part of, oversees about $11 billion in assets. Our client base includes US and global institutions, with institutional investors representing the core of our hedge fund business and a primary focus. We help these investors structure and customize their specific hedge fund programs to meet their respective investment objectives. Aberdeen has a hedge fund desk in New York and in London supported by a staff of about 30 seasoned investment professionals.

Matthias Knab We just all saw the news about Perry Capital closing their fund, a hedge fund close to 30-year track record. I think many investors and others may be scratching their heads looking at this and other hedge fund closures, together with the recent muted returns, and asking, “what has happened to hedge funds?”

Darren Wolf: Unfortunately, what we are seeing is the continuation of a number of trends that have persisted for the past couple of years. Interest rates obviously are at lows. Equity markets are at highs and continue to grind higher, while at the same time we see a number of global risks on the horizon.



This produced an environment where hedge fund managers in general don’t want to load up and take a lot of risk, and yet the market has continued to climb higher. **To be fair, this isn’t an environment where we expect hedge funds to outperform.** Hedge funds will never keep up with persistently rising markets, especially if those markets seem disconnected from underlying economic fundamentals.

In this challenging environment, strategies that have done a bit better, and **where we have had some success, are the more actively traded, systematic strategies.** These strategies are typically vol-target and take the discretionary decision to lower risk out of the equation. This has helped in recent years, but there certainly is no guarantee that they will continue to work. Actually what concerns us a bit is the amount of money that has entered this space over the last five or six years.

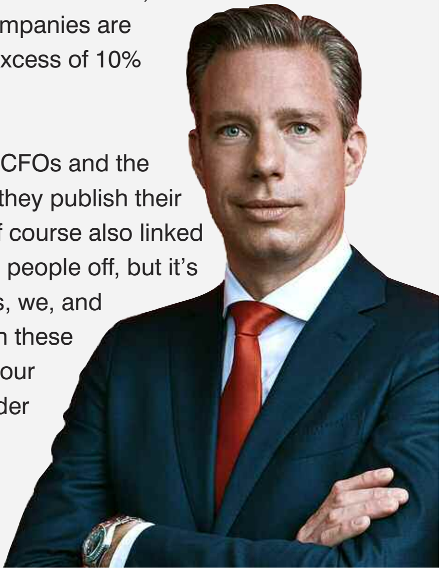
Katherine Grant: The criticism of hedge funds has been prevalent for the past few years, but 2016 has certainly been the “what gives” year. Many point to the level of dispersion in the market this year and then ask, “Isn’t that great for stock pickers? Why aren’t hedge funds picking up on this?” And this isn’t specific to just hedge funds, this is across all active management.

We have done analysis on this at LGT and what’s interesting is **while there is high dispersion, there is narrow breadth.** We’ve all heard the acronym FANG – and there was a Friday in October 2015 where these four stocks single handedly added the equivalent of McDonald’s market cap to the exchange. So, unless you have participated in a select handful of names, it’s very difficult to keep up with the market.

Now why is this? Why do we have low breadth? To Darren’s point, we’ve been in a low-growth environment for several years. When there is a lack of growth, there is a natural crowding into the few names that actually exhibit true, top line growth. It’s no coincidence that **crowding** has become the topic of 2016.

In the meantime, the hedge fund industry has gotten too crowded. Speaking specifically about equity long short, there are more players in a space where the barriers of entry are low and the incentives to start a fund are attractive. If I was going to make a prediction, I would say that **going forward the AUM levels will stay somewhat consistent, but there will be fewer players.** I think it’s healthy. And frankly, when you start reading articles about the “death of active management,” it’s most likely the worst possible time to be exiting these strategies.

Thijs Hovers: I see your point, even though we are focused on Continental Europe where the playing field is a little different. We don't have Google and all these names that are pushing up the stock market. But we also see that almost all the activity is in the large cap space. But if you go a little bit below that, let's say **below 10 billion, inefficiencies** have become more prevalent than I've seen in the last decade of investing. This is actually reflected in our max gross exposure where we are 140 long and around 50 short because we see so many great opportunities. We are relatively concentrated, so we don't want 100 names to fill the portfolio, but we do see these opportunities where our companies are growing their cash flows sustainably in the mid-teens, with high returns of capital and in excess of 10% free cash flow yields.



We often wonder looking at these impressive numbers, and when you ask the CEOs, the CFOs and the investor relations about what's going on and why is no one is picking up their stock after they publish their half-year results, the IRs says, "Well, you're the first to call." No one has interest. This is of course also linked to what's going on politically and on the macro level in Europe, which is definitely scaring people off, but it's also creating this situation where the good is being thrown out with the bad. Luckily for us, we, and our clients, are long term investors, so we can capture and will at some point capitalize on these inefficiencies. Our average investor tenure is approximately eight years. So we as well as our investors can have **patience.** A lot of other funds are forced to perform every month in order to keep their capital. So what are their options? They can either hug the index or hug the market, or they can try to beat it every month, and I believe both of those are a losing proposition.

Matthias Knab So also in your case, like many other hedge funds, you do all to good work and the right analysis, but you are often not getting rewarded with a performance increase, do you?

Thijs Hovers: This year has been a little weird, the first half was very different to the third quarter which has been really good for us. Also, over the last years, when Europe was flat, we have been doing very well.

But right, you always have a couple of months in a year when your strategies are out of favor. But this is nothing that really bothers me because we can also reposition a concentrated portfolio in such a way that you can certainly outperform.

For example, in September 2016 we are outperforming the European indices by 7-8% and not much has changed in our portfolio. You just see that there are some investors starting to wake up and say, "Oh, wow! Look at these great opportunities!" Take the cable operators in Europe, like Telenet which is trading at a 12%-13% free cash yields. Compare these valuations with Comcast or Charter in the US that are trading at twice the valuation with the same growth, drivers, and market dynamics.

So I think these inefficiencies will reverse at some point and if you have the patience, discipline, mental stability and the time horizon to sit that out, it will turn out to be a great opportunity. But it's not easy, that's definitely true.

Alain Courbebaisse: On the prime brokerage side, we see a bit of trend reversal in the sense that in 2016 there has been a **recovery in terms of hedge fund launches.** The trend continued for the first half of 2016 and slowed down since Brexit, like many other things that slowed down since the Brexit vote. There is no real volatility and no real trends in the market, so a lot of strategies are struggling.

But we have also seen that the overall hedge fund activity has been quite steady. Fixed income is bouncing back as a strategy versus long/short equity, and there is a **large interest for quant funds.** This has been the trend for the past 18 months.

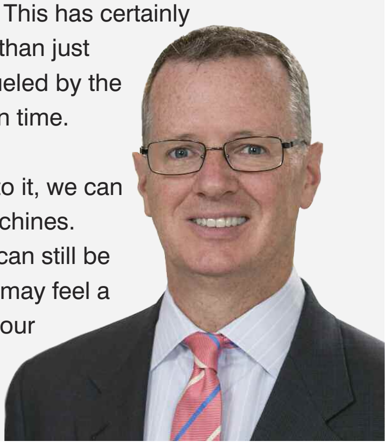
All the spectacular recent hedge fund launches,at least the ones we spoke to, are mostly focussed on the systematic strategy side. We see this as healthy as the industry is innovating, rejuvenating and growing, and with that our own commission income on the PB side is growing steadily. So which means that the opportunity for us is still going. We see globally good opportunities for us in the hedge fund market, especially in the US given that we are a European Bank without any "pain" legacy or issues to fix. SocGen here is really in an expansion mode, and investing into the PB platform is still very promising for us.

Jonathan Larkin: We are a purely quantitative, automated investment manager. Currently, we have capability to trade strategies in US equities. Our platform is venture-backed and has developed as a technology startup. We made the choice to focus on US equities given that is it a very large addressable market, but our plans are to methodically expand to other markets around the world.

What we observe with hedge fund performance is simply a classic result of the markets becoming more-and-more efficient and competitive over time: that's a function of the number of hedge funds out there who **collectively arbitrage away opportunities** and as more-and-more effort is thrown into researching those inefficiencies. Inefficiencies eventually go away and this fact underlies the foundational philosophy of our firm.

Ted O'Connor: One of the things we haven't talked about and probably isn't talked about enough in the industry is **liquidity of markets and the velocity of information.** I think this is also having a dramatic impact on the way hedge fund managers perform.

If you roll the clock back 10 years ago, hedge fund managers had some of the best information and the ability to transact on that information quickly in deep markets. Managers used to trade in blocks and be able to move in and out of asset classes on a regular basis. Since then, we have seen decimalization of markets, wider spreads, and those equity blocks are now traded over the course of the day in algos. There are less intra-day trading opportunities. Talk to managers in distressed debt and they're moving bonds three or four point increments where they historically traded in quarters. This has certainly reduced a lot of the opportunities, and at the same time we look at the phenomenon that Jonathan just talked about – the arbitraging out of opportunities and increased competition – which is also fueled by the dissemination of information and how it is digested very quickly by the machines at this point in time.



So while the hedge fund universe we all grew up in had a very heavy handed human element to it, we can now see that particularly for the shorter duration traders, it is really being taken over by the machines. Personally I think this fosters an environment where the longer duration and less liquid assets can still be managed by human hands, but the revolution you are seeing with the quants, while at times it may feel a little bit bubbly, that processing of information is certainly not going to slow down any time in your future.

Jonathan Larkin: As we speak, quantitative strategies are still a small percentage of overall equity hedge fund AUM. I do agree that there has been quite a bit of press around quantitative hedge fund launches and broader society embracing new technology outside of the hedge fund world as well. Maybe there has been extra press or interest around the quantitative hedge fund sector lately because it's viewed as kind of an extension of the technology industry in some way.

But one thing we can all agree on is that technology to date has been extraordinarily impactful in finance around the automation of trade execution. This is where so far the focus of investment banks and the revolution in technology-based finance has focused. There has been little innovation further out on the holding period horizon. I think that's really the next phase of growth and evolution for the business.

Matthias Knab So Jonathan, what do you see there? I would recon that with 90,000 people developing quantitative strategies, in a way you see the strategies that will be the funds of the future, no? What can you see?

Jonathan Larkin: Well, we do see a tremendous diversity of strategy production on our platform. There are many unique aspects of our business, and one of them is that we only see the exhaust data of the strategies, so to speak. The actual investment decision process, the code of the strategy, is the IP of the author. Like in the traditional multimanager philosophy, we believe this is a situation where we want to provide the best value proposition we can to get the best technical minds in the world producing strategies on our platform.

Therefore, one of the decisions we have made is to allow the authors of the licensed strategies to truly keep their IP. We see historical simulations of the strategies and the proposed trades coming out of the strategies. We also see how the portfolios evolve over time, but we have no access to the individual decision-making process.

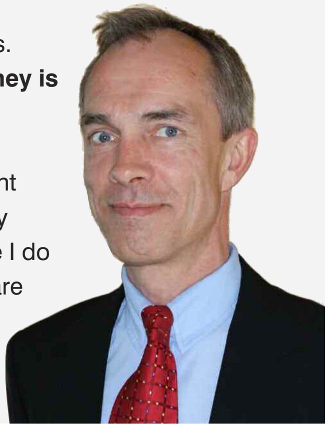
Thijs Hovers I wonder, how long the track records are of some of these successful strategies? Do you also see these opportunities or anomalies get quickly or in due course get arbitraged away, and then creating room for yet another strategy? I'm not an allocator, but I'd think that as an allocator you need to move from one to another.

Jonathan Larkin: Yes, absolutely. **We view the hedge fund business and particularly the quantitative investment business as a production problem.** Inefficiencies come along and they live for a while, and then they die, and the problem with the traditional hedge fund business is that this timeframe has become very compressed. It has therefore become very difficult to operate in a traditional setting as an allocator, because the efficiencies that a single manager might be able to exploit could be gone in six months, in a year, or in two. This does not leave a lot of time for the usual steps, like proper analysis, due diligence, and for your portfolio construction as an allocator.

Hence our perspective that alpha creation is a production problem and that the limiting input to that problem is research effort. This is really a foundational principle of our firm, which is to scale the research effort globally on our hosted, internet-based platform. We have users on our platform from 180 countries.

Regarding our allocation process, since all of the strategies live on our platform, we know precisely the time when a certain strategy went from in-sample performance to out-of-sample performances. What that means is that we know the point in time when the creator of the strategy could see all of the historical data versus the point in time where that strategy walks forward in time and sees data or sees a market environment that it could not have known. Our investment process blends the two, so we are able to simulate these hundreds of thousands of strategies concurrently on our platform, and we monitor the "out of sample" performance as an indicator of the true success of the strategy. We don't just look at the simulated performance.

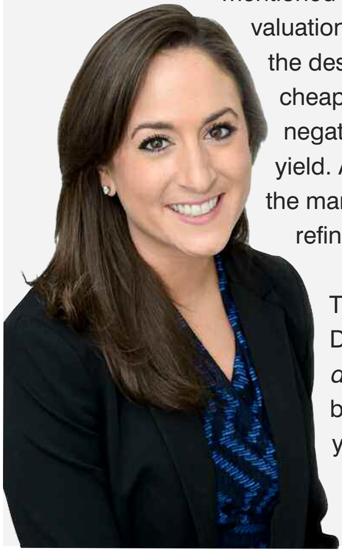
Steffen Gnutsmann: I think what we are discussing today, the low yield and low returns from many active managers, affects investors worldwide, also in my country. In Germany we have a public pension system which is not capital-funded but a rollover system, and approximately one-third of these overall payments are funded by the government. Many experts believe this system is not sustainable in the long term, so there is a pronounced need for good investments from the 80 million Germans.



The second thing I observe is that this huge need for a yield has driven many investors in debt funds. Banks are pulling out of the market, and just from observing what our clients are doing, **a lot of money is allocated to debt funds,** replacing banks in lending money.

I'd also like to make another comment regarding fund performance. We have probably a 150 different clients for whom we do German investor tax reporting for which we get from fund administrators very detailed reports, thousands of dividend streams, capital gains, etc., so we do get a good view. While I do understand that discipline and technology and all of that is important, but we also notice that there are managers who stick out by often making big gains, either because they are very lucky or they are very intelligent.

Katherine Grant: Well, that's the key to manager selection, **you need to make a distinction between skill and luck.** You mentioned the chase for yield, a good example here in the US is the consumer staples space. From a valuation perspective, consumer staples are optically expensive. But these names are working because of the desperate need for yield. Furthermore, with interest rates so low, these companies can refinance very cheaply. Take something like a Nestle which yields 3%. Then compare that to a Swiss bond with a negative yield. That absolute return is pretty attractive to investors that Steffen speaks of, that need that yield. Additionally, there is the 3G call option. 3G has acquired many consumer staple companies and the margin expansion story is very attractive. If any of these companies get acquired, continue refinancing at attractive rates and raise margins – no one is going to care about the valuation.



This is a very good example of how **the interest rate backdrop has skewed the market,** back to Darren's earlier point on the environment. But it's challenging. *Paying a higher valuation multiple doesn't necessarily change intrinsic value, but it lowers the investment's future returns.* Are you being compensated for the risk? On the other hand, you have to respect that the market is chasing yield.

Thijs Hovers I agree with you, compared to yields and everything you get on the market, 3% on Nestle is pretty spectacular, especially if you live in Switzerland.

Katherine Grant And you're investing in something that can hopefully grow, right?

Thijs Hovers: Correct, it should compound.

Coming back to the question why European mid-cap has become so inefficient, so just going one step lower in the market range, we have also seen that *some hedge funds grew their AUM to such an extent that it becomes impossible from a liquidity standpoint for them to invest in the mid cap space.* If you run $10 billion plus, it's very difficult to build a meaningful position in a $5 billion market cap company. So naturally **when hedge funds grow, they gravitate towards the large caps,** and as a result most of the money that went to these bigger funds automatically ended up in large caps. In the mid-cap space, contrary to large caps, where, to us valuations appear stretched, *you can find companies that have the same growth drivers and generate a 5% or 6% dividend and up to 12% free cash yields.* If we compare that to a Nestle, these companies grow twice as fast, and sustainably. Also, if they do an acquisition, it actually is meaningful, and they can finance very cheaply. Investing in these names over the next 2-3 years, will probably generate a higher return for investors than can be achieved in Nestle. So, Katherine, I agree on Nestle being attractive compared with other yield opportunities in Switzerland. However if interest rates would suddenly go up, and you input that in a weighted average cost of capital calculation, suddenly Nestle becomes very expensive

So don't get me wrong, I get it that if you need to put a lot of money to work and you're competing with negative yields on the bond markets, then Nestle is appealing. Also, even if interest rates go up and the bond markets goes to different levels, Nestle would still be a blue chip to own. But in that market, it still amazes me how crowded the large cap space is. Another example would be real estate in Germany. You should be happy if you find a real estate stock that pays you a 2% dividend on a 3% free cash yield.

Remember also that these are fixed assets, a housing block doesn't get bigger every year. It doesn't yield more every year. So that yield doesn't grow, you'll get a static 2% yield. While that's great compared to negative yields anywhere else, but compared to a mid-cap company that could grow their free cash flow by 10% a year and give you 5% yields, why not go there? But for some reason, that market is pretty empty. That's what surprises me.

Katherine Grant I have a question for Thijs. As an allocator, a few years back I was excited about the European opportunity set. While we saw the multiple expansion, we hadn't yet seen the earnings per share recovery. Normalization in EPS would make valuations in Europe very attractive. In the meantime, Europe has Mario Draghi committed with tools to weaken the currency. Fast forward to today, we haven't seen the recovery in EPS. What else has to happen to see this normalize? Do you have a view?

Thijs Hovers: That's a good question and in fact the most surprising thing. If you look at Europe top down, so taking say the STOXX 600 to STOXX 50, you don't see a phenomenon. But then, if you go again a little lower in the market range, for example, look at the MDAX in Germany or the Dutch mid-cap index, et cetera, there the earnings and free cash yields are actually growing at a quite high rate especially if you take the sectors out that are under pressure. I think that's a big problem for the European indices in general. A huge part of the indices are banks, and we all know what is happening to banks' net interest margins, profitability and earnings. Another heavily weighted sector within the indexes is integrated energy/oil services. Also there, we know that their earnings have collapsed. Then you have the utility companies that are under pressure

pressure from nuclear write down liabilities and legislative pressures from the governments that want more money from them. So you are left actually with sort of half of the index which is just not growing their earnings, and the other half is being basically deflated away by that.

Therefore, from a top down perspective looking at the indices, they should be flat, right? If one-half of stocks have earnings coming down and the other half goes up, basically it's a wash. This is why the aggregate doesn't really grow, and **this is why investors need to get away from indices** when they are trying to find out where the growth is in Europe. I think then you will conclude that Europe, after eight years of depression or recession, whatever you want to call it, has some very interesting pockets of growth. The housing market in core Europe, after having production levels at multi-decade lows, is suddenly bouncing from these low levels. Mortgage rates are very low, affordability is up, banks are able to provide mortgages at almost 100% loan to value, there's a structural shortage of homes, etc. You also see that car sales have been depressed for 10 years, and that there are a lot of end markets that simply mean revert from these very depressed levels.

Then, if you can again find companies with dominant market positions with embedded operating leverage, and if these markets do recover, you can actually benefit them from them quite well. For example, I'm looking at building materials companies that when the end markets index was at 100 in 2007 are now at 60, however these companies are still making 15% EBITDA margins and again very high free cash yields. If 60 goes to 70, you're still 30% below the peak, these companies probably lift their earnings by 50%, but those firms fall through the system if you're only looking at indices. So, Katherine, you are right that on an aggregate basis that index hasn't moved much, but in my opinion you have to look a little lower down the market cap range to find the exciting opportunities.

Alain Courbebaisse

I've got another question for you. How do you balance your strategy between what seems to be the old Europe, which is struggling a bit and the newer Europe which seems to be kind of booming right now, with some country like Poland and other Eastern European countries which are showing healthy growth?

Thijs Hovers: That's true. In certain parts of Europe, especially in Germany, certainly in the Stuttgart area, for example, where you have a concentration of some very good companies, the unemployment rate is almost negative. But also in the eastern part of the Netherlands or northern Italy you can have the same phenomenon where skills, labor and people who actually can work and fill the new plants or new R&D facilities are hard to find.

This is one reason why you see these companies are shifting towards the East, Poland, Czech Republic, etc, to set up facilities there where the minimum wage is around 70% below that of in Germany or Belgium, France, wherever. We don't invest directly in these countries as we feel corporate governance, equity culture, discipline and governance of how to basically launch information to the stock market equally so that you have a fair level playing field isn't really there yet. But there are a lot of companies in core Europe that have significant exposures there, so you can benefit indirectly.

It's almost the same for Spain, which has actually recovered quite nicely in the periphery, but Spain has a very small equity market. There are some food retailers, some banks, and then that's about it, but there are a lot of companies in France, Italy or even more up north that have 20%-30% of their end markets in the countries you mentioned, so you can benefit that way.

Alain Courbebaisse: Coming back briefly on the question about the impact of technology on hedge fund managers, I tend to agree with Thijs and to disagree with Ted.

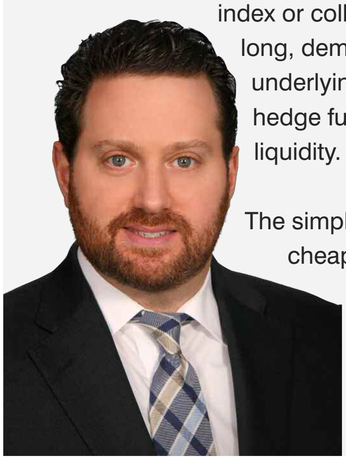
Over the last few years, whatever was making difference before – so speed, infrastructure and the capacity to store and process data – has become a commodity. I think we are now back to really the proper human IP or intelligence. Then you can decide whether or not to automate things, because possibly you find a way to be even more efficient with automation. Next is again human capacity to take advantage of this available infrastructure and develop strategies that will recognizes new patterns, analyzes, enrich and suggest and improve models based on all those concepts of the big data, AI and machine learning.

Katherine Grant: When you hear a manager say, "I'm a stock picker. I don't really care about anything else, I just pick ten really good stocks." That sounds great, but that model has been really challenged over the past few years. There are more systematic and passive participants in the market which has caused pretty violent rotations. I believe **fundamental asset managers have had a little bit of an identity crisis.** They want to maintain a long term trajectory, but they also try to address these violent rotations which often results in whipsawing or de-risking at the bottom.

To highlight long/short managers, I don't know if they're able to do both. A manager can't be all things to all people. Maybe going forward, long/short managers either have to embrace the long term; and with that have a different conversation with allocators on structuring their product, fees and provisions. With such a profile, I believe allocators need to be more tolerant of increased volatility in the return stream. Or, if not aiming for the long term, managers need to try to capture short term opportunities of alpha. Most of the time, it really comes down to risk management.

Overall though, the industry needs to adapt and innovate. It's a principal of LGT, and I think this industry needs to respect and address the non-active variables in this market. ETFs are 15-25% of the tape these days. **Perhaps systematic strategies aren't a massive component of aggregate AUM, but they can be two-thirds of the trading volume.** Managers need to be informed about these dynamics. It doesn't mean fundamental investing is dead. Perhaps though managers need to incorporate these findings into their process and risk management approach.

Darren Wolf: I think a key part of this discussion on innovation is actually defining what we mean by "alpha" for these fundamental strategies? We have been doing a lot in **risk premia and alternative beta strategies.** If you are going to buy a concentrated portfolio of stocks and actively manage them successfully, then it's certainly possible to add "alpha" above an index or collection of indices. And we do think that there are a number of high quality hedge funds that have long, demonstrated records of success doing so. But if instead we as investors can identify some sort of underlying alternative beta factor that can statistically do even a decent job explaining the returns of a hedge fund, you can extract those returns without paying hedge fund fees and without hedge fund liquidity.



The simplest example is a beta neutral long/short value factor. If you screen the S&P 500, and buy the cheapest decile of the S&P 500 and short the most expensive decile of the S&P 500, you may certainly sacrifice some of your stock picking alpha or edge, but you would be surprised at how much of a value manager's return can be explained by this simple factor. I'm not suggesting at all that alpha is dead, or impossible to engineer. On the contrary, **the gap between real alpha and alternative beta is widening.**

I agree with you, Katherine, there are managers out there that can still do it, and do it well. But maybe we have to redefine how we think about and define alpha. With the growth of these alternative beta strategies, *something that was "alpha" a decade ago may no longer be considered an alpha strategy.* The reason why that's relevant is that you shouldn't be paying 2% and 20% for something that can easily be replicated using a collection of indices.

Katherine Grant: Coming back to innovation, I mentioned this earlier, but LGT adopted and promoted SMAs early on. It's certainly become a more acceptable structure in the market, but our familiarity with SMAs makes us appreciate inputs beyond the stock selection.

When you have conversations with managers, it's relatively easy to be impressed by a stock idea. People in this business should be good about bottom up analysis. However, the key question is how are these names sized, how does that fit within general portfolio construction and how do you think about external factors in the market that can influence stock price?

What's so powerful about the SMA is that you get a solid understanding of how these PMs risk manage. I'm not calling up my managers each month to find out what made 25 bps. Instead, I have a real understanding of how the portfolio is constructed and how they will perform – especially during these factor rotations which happen at least once a year. It makes our conversations with managers more educated and we have a better understanding of each manager's vulnerabilities. In other words, who's going to get hit by a risk factor rotation and who isn't. We can use these insights to build a very informed hedge fund product.

Darren Wolf: I couldn't agree more. The silver lining of the current sentiment in the hedge fund market is that many more managers are amenable to unique or different structures, allowing for managed accounts, and potentially even allowing for some sort of fee negotiation. The asset raising environment has been tough, so if you are willing to commit capital through a managed account, more managers are willing to entertain it.

The benefits of the managed account are obviously well-documented. In addition to getting transparency and potential fee reduction, which are certainly major benefits, we have also been active in customizing investment strategies to try to ring fence exposure and almost force diversification. For example, if you have separately managed accounts with multiple structured credit managers, as we do, you can customize the investment management agreements to allow them to only trade different parts of the market or different regions. The fact is that no hedge fund manager outperforms across all investment strategies, and certain managers will always be better at some sectors, or regions, or sub-strategies than others. To be able to **isolate what a manager is particularly good at** allows us to more efficiently construct our portfolios.

Ted O'Connor I have a question for the table. We have talked about kind of managers getting large and having to go upstream, particularly in the equity markets, into more large cap.

So, how much larger can hedge funds get? We have seen $3 trillion, plus or minus, in hedge funds, assets has been stable now for the last two or three years. We have also seen quant funds trade more and use more leverage over the course of the last couple of years. With the current structure of the industry, have we extracted all that alpha, or can this industry continue to grow?

Thijs Hovers: Speaking for us, we are focused on European small mid-caps, so we are now running $600 million. At $750 million investing will become tougher, and getting close to $1bn we will hard close, because at this size you can't put meaningful short positions on, or a long when we find a great 2 billion market company that we think will double over five years. Also, you can't really go beyond a certain part of that market cap and still being able to move around.

For niche strategies like ours, the asset size you can run becomes limited. What we see happening with peers who do similar things is that when they grow bigger they launch long only funds or they launch SMAs. We are asset managers and certainly not asset gatherers.

I think we are really good in maintaining a very disciplined approach in analyzing companies and keeping that competition between say 50 names. Of those maybe 25 or 30 make the portfolio, and we keep the competition on which is the best company with the most upside going on the investor perspective. There is probably always some value to add via portfolio construction, et cetera. If you see more, you can probably still tweak the exposures.

But just looking at our own track record, we are close to 13% net annualized returns after fees. This also means that there is no fee pressure, because, as we discussed, there is a scarcity issue on returns and alpha, right? So we are having net inflows this year.

Coming back to this size discussion, the interesting thing is *when you look at any global ranking of funds between the 250 and 1 billion market range, we will probably be ranked somewhere in the 20s. However, if we would suddenly be ranked in the 1 billion plus range, we would be in the top 5,* because in that bracket annualized returns come down, whether it's that they become more risk averse, because their management fee is generating so much money that you are less incentivized to search for high returns, or it becomes again the situation that you are moving yourself into a more efficient part of the market; that could also be the case.

Our clients, the high net worth families that are with us for a long period of time, they would be concerned if we suddenly said, "Hey, that 750 million soft target, we'll move that to 2 billion!" They would be concerned, because they know it will impact their average compound annualized returns. This is certainly something to take into consideration.

Darren Wolf: Obviously we have observed the same thing. The idea of a **franchise risk** is real: as managers raise more assets, the value of the franchise increases and their risk tolerance or their willingness to take risk goes down.

But to your point about the size of the overall hedge fund industry, we don't really see hedge funds as being too different from any other business that goes through natural ebb and flow cycles. The hedge fund industry has grown, managers have had success, and new marginal hedge funds have entered the space attracted by hedge fund fees. Just like any other business cycle, we will inevitably have some sort of market event at some point and see a shakeout in the industry. But honestly, that's healthy for the industry. Spreads on relative value trading will normalize, the industry will experience strong relative performance, and the whole cycle will start again.

I agree with a point Katherine made earlier. In five years from now we might still see $3 trillion in hedge fund assets, but likely with fewer managers, the weaker hands washing out and the stronger players remaining.

Thijs Hovers: Just on size, when maybe five, six years ago the breakeven level for a small mid-cap equity hedge fund probably was like 150m or 200m; now it's probably 350m or 400m, and there are two reasons for that. One is compliance. You have to allocate way more capital to infrastructure, but also the sell side analyst community is dying. The quality of research that you can get from the brokers has dropped significantly.

At our firm we are insourcing a lot of research ourselves, so we are now thinking about building a bigger research team to digest it ourselves. You will have to do some decent work if you are interested in how a company may look like one, two or three years from now. If you want to know what happens this quarter, you can call an analyst, that's what they are focused on.

Therefore, managers need a certain AUM to be sustainable and that your investors are confident that you will be able to stay the course. Probably also some significant partner money needs to be invested so that you can weather some storms.

So while the minimum is now higher, we also need to remind ourselves that, at least in Europe, where Apple's and Google's market cap is bigger than the entire mid-cap index of Germany, France and the Netherlands combined, you don't need 10 billion to be successful there.

Jonathan Larkin: At Quantopian we have unique perspective on capacity. One way to achieve capacity is by having any one individual strategy have very large capacity, which is what the discussion is focused on thus far. But from our perspective, you also **achieve capacity by having many independent strategies combined.**

Our business is set up to achieve a level of strategy aggregation which hasn't been seen before in the industry. So far, the largest multi-manager hedge funds might have something on the order of 200 line items in the P&L, and this is how they achieve scale. In our model, because we don't have an employment relationship with our authors and there is no fixed cost to expand to another country or another region, we could potentially have thousands of line items in the fund. We believe that we can achieve high capacity through a large number of strategies.

Katherine Grant: It's one thing to understand hedge fund size as an absolute number. But it's also important to understand the pace of growth. No matter what the strategy, the IP is the human. When there is a huge inflow, it can influence human behavior. With growth might come additional hires, operational growing pains and all of a sudden, the role of the PM might change.

It doesn't matter how scalable the business or strategy is. There needs to be a responsible pace of growth. Unfortunately, you see the same story over and over again. When a hedge fund is growing, it's a very exciting time for the firm. Growth is often driven by good performance. Perhaps there is an analyst that really contributed to that performance. Maybe the PM gives that analyst more discretion. But then what happens when performance goes south? Who's responsible? The PM might not know what to do because he or she wasn't as involved.

So, from our perspective, the absolute dollar is certainly important but managers need to be responsible about their AUM growth. Once these managers become popular and performance is great, every investor wants it. It's just the way this industry works and managers need to be responsible.

The same discipline applies to multi-manager platforms as well. When these firms build out, they are bringing in new people to manage different portfolios and strategies. That's a new person the firm needs to trust and underwrite. The expansion of these firms needs to be moderate and incremental.

Matthias Knab Similar to what we have discussed here, I have also seen some articles and heard voices where people said that fundamental investing has to be complemented by big data, machine learning and these forms of innovation. Do you see this happening, or what other innovation do you see in hedge funds?

Jonathan Larkin: We believe that there will come a time as the data evolves, where the velocity of and volume of information are so high that it would be very, very difficult for a purely discretionary, traditional investment process to be able to perform.

I certainly see in the industry that discretionary funds that have some foresight are augmenting their process by ingesting new sorts of datasets as an input to their fundamental process. But this can only go so far as the limiting factor is human discretionary processing.

At Quantopian, we see data as absolutely critical. The first input to any quantitative strategy is of course the data, and one of the value propositions that we make to the authors on our platform is that we are the ones running around the world looking for new datasets for them. We have over 50 datasets available on the platform now that we have identified, that we have cleaned, symbol mapped and integrated, making it available for unstructured research or ready to be utilized in an investment strategy. The lifeblood of the firm is new data and authors who are putting that data to use.

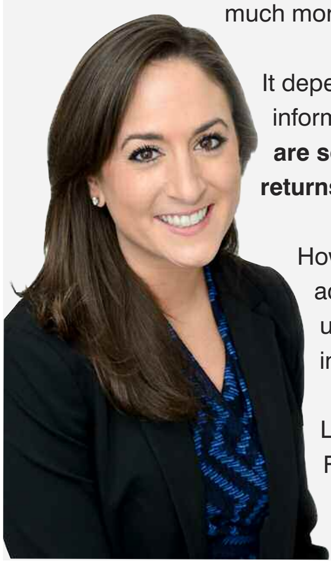
Alain Courbebaisse: From our perspective, we haven't yet really seen the fundamental managers taking advantage of these techniques, so I tend to disagree with what you said. First I think that the amount of the time and the speed of data for fundamentally focused research on a stock or on a sector is still very much manageable today.

When we talk about big data, we are not only referring to huge amounts of data but also to new techniques of data clustering where you also will have to model how much the new data will be relevant to you. You will shift your approach between "I have got the data or not", to "Is the data important to me or not", maybe with the help of a sort of data scoring engine that will help you to take that data into consideration.

We may actually end up managing the same amount of data today, but it will be highly relevant to a manager's model. And the set of data won't be static.

So this is probably part of the evolution going forward. I don't think such processes are already widespread among fundamental investors today, but I think it's in the process of going there.

Katherine Grant: I see big data almost like the SMA adoption. I don't believe big data exclusively informs security selection. However, it can be an edge and compliment to the fundamental analysis. Similarly, our industry doesn't see managed accounts as a requirement by any means. However, we believe at LGT that the structure is a value add and makes us that much more informed.

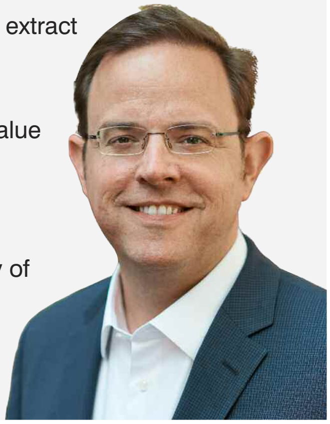


It depends on the strategy and investment universe, but big data can be a value add. It's elevated information but the data needs to be scraped and cleaned. You're seeing managers do just that. **There are several managers that have proactively invested in big data and you see the difference in the returns.**

However there is a training element that allocators need to focus on. It's one thing for a manager to actually afford the big data, then it needs to be cleaned and then analysts need to actually understand and capitalize on the information. Then the team needs to figure out how this information complements their strategy.

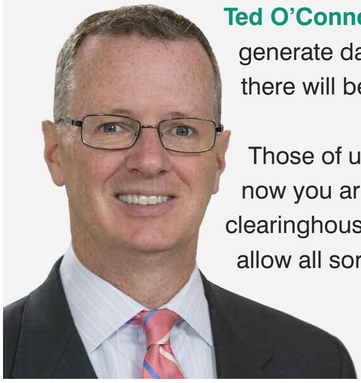
Longer term, and Jonathan I'd love your insights on this, there will likely be **regulatory implications.** For example, what's legal to obtain? And then once everyone has the data, what remains proprietary?

Jonathan Larkin: Today there are probably a handful of datasets where simply having that data is valuable in itself. But we have many datasets on our platform you would consider to be commoditized datasets. Those datasets have been inputs to quantitative strategies for many years, but even today, skilled researchers are able to extract value out of that data.



Data goes through a cycle. First it is exceptionally scarce and simply having access to that data is value enough. Next, when it becomes much less scarce, only highly skilled people can extract a valuable signal out of that data.

Lastly -- and this is where we are today with a lot of data – the data is so well picked that the efficacy of any one signal that you can extract from any single dataset is very small, the signal-to-noise ratio is very low. In this stage, only combining that signal with other signals can produce value.



Ted O'Connor: I think there is also the interesting phenomenon that regulation in a way contributes to generate data. As more markets move from bilateral markets to exchanged traded and clearable markets, there will be more data.

Those of us who grew up in the equity world always had data, because the exchanges provided that. But now you are seeing credit and rates and other products like repo products being pushed into central clearinghouses. That will allow for completely new and relevant data sets. The availability of this data will allow all sorts of traders and funds to go into new liquid instruments and asset classes globally.

Matthias Knab That's a good point, with more data clearly comes more opportunity. What other opportunities do you see in the market right now?

Steffen Gnutsmann: I'd like to point again to the opportunity that's opening up in Germany. As I said earlier, we do have a specific tradition in helping non-German funds to enter the German market, which is not so complicated. Over the years of working with international funds and German investors, we have seen that the latter certainly do not decide quickly and upon an impulse, but then this also means that German money will not leave a fund quickly.

If someone is interested in the German market, there will be a big change coming on the 1st of January 2018 which will remove a lot of the hurdles, especially tax law hurdles for German investors to go into non-German funds. A lot of such currently existing hurdles will be removed completely.

We phrased the term, "The hedge is down", because from 1 January 2018 ***any type of regulated fund, whether it's a Peruvian, Chinese or US fund, whatever the strategy, can be sold much easier to German investors.*** There will also be much less compliance cost, for most funds: almost no compliance cost. We believe this is good news for the global fund industry, but also for German investors. There will be a level playing field between German funds and the non-German funds.

Matthias Knab What I can add here is that German investors have been studying alternatives for years, educating their teams, and now what is happening is that they are actually pulling the trigger and invest in alternatives. This is of course driven by the interest rate environment, and more and more are taking alternative investments very seriously.

Alain Courbebaisse Just looking at what some of our clients do, there seems to be opportunities in specific countries where we see more funds becoming active, such as China, India, Spain, or peripheral Europe, including all the former Yugoslavia and Turkey.

We also see people using more products (derivatives, convertible bonds, options….) in more complex strategies. We see managers having a lot of success in using different instruments now, be it on the long or the short side.

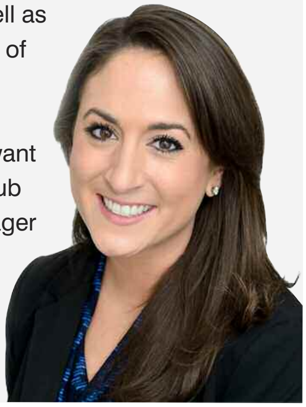
Darren Wolf: We are seeing opportunities in a couple of different areas, however, generally I would say this time is a bit different than prior periods, where the low hanging fruit was more obvious. Still, we actually see reasonably interesting opportunities on the **event-driven** side of things. It's a bit of a contrarian view, we know. There was quite a bit of capital flowing into event-driven over the last three or four years, but it left even quicker at the end of last year.

Historically, hedge fund investors have done a pretty poor job of timing hedge fund strategies. Therefore, we see the capital coming out of event-driven as a reasonable counter-indicator that opportunities in event-driven are starting to come back a little bit. Deal activity is still relatively healthy, and there are significantly fewer investors chasing those ideas compared to just one year or 18 months ago. So that's one area where we are seeing some interesting things to do.

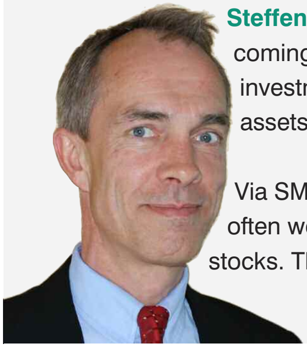
The other area I would call macro opportunities broadly and volatility strategies a bit more specifically. We see that space as pretty mispriced, and this includes not just equity market vol, but also finding interesting ways to express asymmetric long volatility trades. This can be in the form of macro trading strategies, or CTAs, or actual volatility arbitrage managers, although they are harder to find. Unfortunately, there aren't many managers out there that specialize in being long vol, and the best performers are hard to find.

But coming back to the managed account conversation earlier, it's an area where we are looking at potentially customizing strategies. For example, when you find a macro manager who does ten different things, and if one thing that he does particularly well is trade volatility, he might not want to do it as a standalone business. However, we would work with that manager to customize or **lift out** that piece and have them trade it in a dedicated format.

Katherine Grant: Similarly, we have been developing bespoke, custom made solutions for our clients supported by our long history in SMAs. As a result, we've been approached with longer duration mandates as well as more liquid products. The power of an SMA platform is that we as allocators can address many needs of our clients, especially given our elevated understanding of these managers.



But you also need to be careful – and this is another reason why the SMA is so important. You never want to push a manager to do something that is out of their core competence. Often times, focusing on a sub strategy of a manager might be optimal, but often times it's very difficult to execute. Perhaps the manager was able to execute on that sub strategy because it was part of a portfolio rather than a stand alone product. But again, having the SMA gives us a better understanding of a PM's capabilities and where they can do stand alone, bespoke products.



Steffen Gnutsmann: Katherine, it's good you're bringing up the SMAs again. The tax law reforms that are coming up in Germany can also have certain disadvantages for certain investors. But, if you can set up their investments via a specialized managed account so that in the end they would be treated as if they held the assets in the managed account directly, that could be very helpful and important.

Via SMAs, there will be big benefits especially for German corporations invested into equity strategies. We often we see many of our clients, these are DAX 30 clients, who allocate 20 or 50 million in say 20 different stocks. These clients could benefit from a future SMA solution, after 1 January 2018.

Jonathan Larkin: One thing we are working on for our commingled vehicle is setting up a **capital call structure,** which is rare in the hedge fund space but very common in the private equity space. As you would imagine, through our model we are discovering strategies on our platform at an unknown rate. We want to be aligned as best as possible on both sides of the capital/capacity seesaw. What I mean by that is we don't want to take in capital that we are unable to deploy. Therefore, a feature of our commingled vehicle will be that investors can make a commitment, but we will only call down that commitment and charge management fees when we have discovered capacity that we feel is appropriate to justify the call.

Matthias Knab Who else has something to say about new products and services?

Ted O'Connor: As Alain mentioned earlier, we are two years past the acquisition of Newedge into Societe Generale. The subsequent merger has afforded us an opportunity to take what was a world-class FCM, clearing over 12% of the world's derivatives on a daily basis, and expand our service now across asset classes.

We now have the ability to act as an equity prime broker, FX prime broker, as a fixed income prime broker, and we are doing OTC clearing as well. We like the fact that SocGen has a strong balance sheet to be able to grow this diverse offering. We have an institution that supports us and understands the significance of prime broking and clearing to the bank, and the value of our relationships, not only with CTA and hedge fund clients. A lot of our clients happen to be allocators. We are a very big player in the managed account space as well, almost half of our clientele are allocators who use managed accounts as a means to deploy capital for their allocations.

We are seeing a lot of innovation happening on our side. SocGen did the first non-deliverable forward (NDF) cleared transaction not too long ago. Although NDFs have not yet been mandated for centralized clearing, the adoption of uncleared margin rules for U.S. and Japanese Banks and pending commencement of same in Europe and the remainder of Asia has significantly increased the cost of intermediating these instruments. Soc Gen, in close coordination with CME and LCH, is at the forefront of crafting **alternative hybrid solutions across the cleared and uncleared space.** We think this will be a very significant part of the new world order as regulation has put punitive capital requirements in place for banks dealing with each other in the forex market. You are going to start to see cleared single names as well.

SocGen is in a position – given the 10+ years of history that Newedge brings to the table in all these cleared products – to continue to innovate, to continue to work with the exchanges and the clearinghouses to be able to provide solutions to all of the world's allocators, asset owners and managers.

We think there's a tremendous opportunity to be able to expand in an environment where you are seeing other people shrink for a lot of the right reasons. There are balance sheet hurdles or regulatory hurdles that impact different jurisdictions at other banks. SocGen is an institution that has spent a lot of time and effort over the course of the last five years setting ourselves up to be in a strong position, and we think it's a great time for us to be able to grow into the prime broking space.

Alain Courbebaisse: Our strategy is to continue to push on all asset classes. If Futures/Options/Cleared OTC (FCM) has always been a core strength, FX, FI, Equity PB are now totally integrated into the platform.

We are taking our time to roll out this global offering. We started in the US on the equity PB to provide customers our access to Europe.

As I mentioned, we continue to invest. We initially invested $180 million into the platform and into the integration. We continue to invest steadily on the platform, front and back end. One of our next deliveries is a fast execution platform on US equities.

Today, probably our main differentiator within the industry is really our ability to **cross margin** most of the products, if not all the products, across all over the world. This means that for any multi-asset strategy or financial institution we can be a one-stop shop for them, financing their margin and giving them a lot of optimization at this level. This is really where we want to be and we are taking our time in our global roll out, and clients are reacting very positive so far.

Thijs Hovers: There was one thing I wanted to add to our discussion on opportunities and where the industry is going. The US has become a market – and Katherine explained that very well – where a few names push the index up, and there is very little breadth in the market. Many investors also don't feel the necessity to invest in hedge funds, because the index or a couple of names gives you very good performance.

What we have noticed this and last year, and what has helped us get sticky, long term assets, is the fact that we are not so correlated. Last year we have seen a few high profile disappointments among very crowded hedge fund names, like the Valeants of this world. And we could see with investors that have been with us and others how surprised they were finding out how all these well-performing funds suddenly were all in the same names. Of course they all have positions in different funds, but the overlap was much higher than they had expected.

And suddenly when volatility kicks in, in areas that haven't been volatile – except when it's steady going up – you realize actually that this basket of funds was actually one of the same. That helped us a lot, because when those investors look in our portfolio, there were many companies they had not even heard of. And, of course, there are 5-10 billion market cap, yeah, but not many others owns them, right? Maybe a couple of funds in Europe and maybe one or two in New York or Connecticut that possibly also have this similar quality bias.

Even taking a closer look at European funds, sure there are a lot of funds, but if you look at London funds, they often traffic in the same names. I am exaggerating a little bit, but most funds there operate in the same few square miles, they talk to each other and tend to invest in the same companies.

And we touched on the US where the rising stars and the index have kept doing 30% per year, and everybody moved their way in there, and I think by having a very disciplined strategy and running a fairly uncorrelated portfolio, it does create at least a position for us to benefit from. Of course, also our fund could be down 10% in one year, but then there's a strong likelihood we'll be up 30% in the next year, and you can see that also just by looking at our compounded annual rate of return of 13%. The other thing is that should our fund drop in value, the likelihood that all your other funds will down in the same few months is rather limited, because we see that our portfolio has a different make up, as I have explained.

By the way, what we haven't talked about yet today is that the correlation between hedge funds has grown so much and the increased crowdedness in hedge funds.

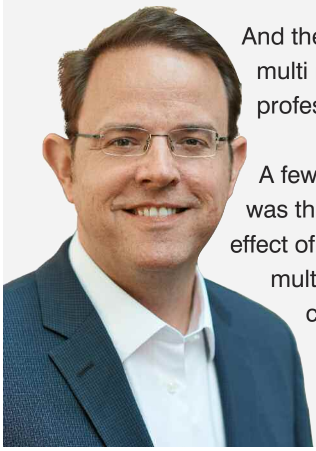
Ted O'Connor: Something we definitely have talked about is regulation and the structural changes in the industry. While the banks used to be warehouses of risk, they are less prone to do so now. Hedge funds have been taking on a lot of that risk. The banks used to produce research, they had access to certain information about markets and flows, they were also providers of new products and were trading a lot of them. Today, I think that a firm like Quantopian can trade with information that is a lot better than information the banks had.

Part of that new reality is caused by regulation, which in general allows for the hedge fund universe to continue to innovate. In fact it allows the banks to be partners in different ways to the industry than before when the banks used to be the sole stop for liquidity, research and access to company management, etc. Banks are now partnering in different ways with managers and allocators to help them think about challenges and issues that are changing almost every day. Most of our fund manager clients are small businesses. The majority of hedge fund clients we serve or have talked to are 20, 50 or 100 people. SocGen is a bank with 200,000 people with feet on the ground in over hundred countries. We aim to provide a lot of intelligence back to our clients. That forges the nature of relationships between hedge funds and banks today.

Jonathan Larkin: Going back to Thijs' point about crowding, I often see **crowding in the quantitative space** as well. Let me explain that.

One of the things that we observe as an organization is that basically all of the traditional quant hedge funds are **recruiting from the same schools.** They are all competing for the same 25 or 50 PhD candidates every year. Now, all of these people are trained in the same philosophy, and then they come into a shop and do a kind of apprenticeship for a senior portfolio manager who already taught a bunch of people similar strategies and techniques and a similar philosophy or approach to investment management and research. We actually have a term for this phenomena and we call it **"credentials bias".** As we see it, the traditional quantitative funds tend to be hiring new people only from the top 10 schools.

The way how we fight that bias is by going outside the normal channels to find researchers. Our platform is completely free and open; anyone with an email address can come and, with some Python programming, create a strategy and run a simulation. We don't have any screens on the way in for a particular professional or educational background. *When we end up licensing a strategy from an author, invariably we see that the author has significant professional technical experience, but what's important is that we don't screen for that on the way in.*



And then on Ted's comment about banks and regulation: my background has been within the traditional multi manager hedge fund space, and there we typically saw banks as a big breeding ground of professional investment talent. This was mostly on the quant side; not so much on the fundamental side.

A few years back the hedge fund industry cheered a bit because, due to new banking regulation, there was this one-time transfer of a large number of people out of banks into hedge funds. But by now, the effect of this regulation is that it has dried up the talent pipeline. It is much more difficult today for a traditional multi manager firm to find new trading teams and new ideas. It's clear that this, together with the credentials bias I already mentioned, has created a talent challenge in the industry. Our approach – where we survey the world outside of the well known silos – allows us to source differentiated and untapped talent.

Katherine Grant: I have a bit of a different stance on crowdedness. I explained the low breadth in the market causing crowdedness, but it's not always a bad thing. A lot of people in this industry feel an obligation to say, "Oh no, I don't do anything crowded." Sometimes, I feel like managers say it because that's what investors want to hear.

There are **numerous ways to measure crowdedness**, but we monitor the Goldman VIP list. Stocks on that list have actually outperformed over time. 2016 is the first year where it has massively underperformed – this is why crowdedness has become such an issue this year.

The conversation instead needs to be, if a manager is in something crowded, 1.) What's the information edge on this name and most importantly, 2.) How will this be sized and risk managed?

Liquidity of these names is another consideration. Perry Capital winding down will most likely not affect the prices of Google or Facebook. These are crowded names, but given Google's market cap, hedge fund deleveraging isn't going to be a meaningful influence. Compare and contrast that with a mid-cap name and it's a very different story. So **I don't necessarily see crowding as a bad thing.** Both managers and investors just need to stay informed.

I take a similar approach to **risk factors.** Momentum has always existed in the market, it's nothing new. It's a topical risk factor today because with no breadth and crowdedness, many hedge fund names have correlated to momentum. Perhaps a manager had four different names that were perceived to be negatively correlated to one another. However, then there's a breakdown in momentum, like what we saw in February, and those four names become one bet.

I'd rather have a manager say something like, "Listen, there is a growth or momentum effect in my portfolio, and I know that when there is rotation, my portfolio will be affected. But over time, it will likely be a tailwind to performance." Compare that with a manager that says, "I have no risk factors in my portfolio, or I'm going to factor neutral my portfolio or I'm going to avoid those rotations." *There are managers out there that don't have exposure to risk factors, but there are a group of managers that say that because they believe it's what investors want to hear. And that goes back to the whole identity crisis issue.* Bottom line, allocators and managers alike just need to be informed.

Thijs Hovers That's a good point, I fully get that. Crowdedness is not always a bad thing. The best shorts we had became in the end crowded shorts. But what I do feel in the mid cap space, let me explain that with a stock you may know called Altice. We have been invested in Altice, which is a cable company in Europe, since the IPO when no one knew it and no one wanted to own it. But at some point, some people picked it up and stock went and went and went --

Katherine Grant And everyone loves Patrick Drahi...

Thijs Hovers: Right, but for whatever the reason, I think the last incremental buyer didn't even look at the case. They jumped on it because it performed, because it had that momentum. But then what happens is that the characteristic of the stock changes. It becomes a very dangerous stock, because those are the guys that get out of it just as quickly when something happens like an analyst writing one headline like, "Oh, there's a miss" or that there would be some cracks to the story. Such a stock can then easily and quickly half, right?

So here is a reality about **a stock turning into a dangerous holding because it got crowded** and the people investing in it are not hindered by any knowledge. This is something we as managers pay attention to. When see something getting crowded and people you would not expect that they would have done the proper research turn up owning it too, then we know it may be a good time taking a step back. We would then run the valuation again and potentially reduce.

So in the case of Altice, we reduced and we got back in later, because we still like the story. But then you only buy it back when you don't want to, right? You feel like, "Oh my God, something must be so horribly wrong because it's going down, down, down now." No one owned it anymore or wanted to touch it with a six-foot pole. And then you just go do your work again, talk to management and to industry peers again and you may decide to get back in there. But the truth is that this volatility is risky, and what happens on a deeper level is that it also starts impacting your thinking.

Darren Wolf: I generally agree that crowdedness in isolation is not a bad thing, especially if you're going to own one single hedge fund then it may not matter that much if they are in crowded names or not crowded names. I also agree with the notion that you need to know what your informational edge is or why you're in a particular stock, and you shouldn't be in that name just because everybody else is in it.

All that said, we view one of the biggest aspects of our role in building diversified portfolios as finding managers that deliver some sort of unique return streams. If you are invested in a portfolio of hedge funds, and those hedge funds all own crowded stocks, your ability to build diversified ex-Ante portfolios is seriously compromised. It makes it that much more difficult to risk manage.

So that's something that we observed, but to Katherine's point, if someone is a true long-term buyer, if you're a long-term owner, it doesn't really matter if you are in a crowded name or not.

Also, aside for the diversification issue, one thing that scares us is that crowded stocks tend to do weird things over time, especially crowded shorts. The best example is what we consider the mother of all short squeezes, and that was Volkswagen in 2008. Without going into too much detail, it was a heavily shorted stock because it was part of a share class arbitrage trade. And some news came out that the free float was not as large as thought, and all the shorts looked to cover at the same time. That really, really hurt hedge fund managers that were short and put a bunch of them out of business, and for others setting back many and wiping out years of P&L.

Matthias Knab So how you deal with it with crowdedness?

Darren Wolf: Well, you deal with it by being a little bit more proactive than reactive. We spoke about separately managed accounts before, but with these structures at least now you have the ability to manage the exposure or at least monitor it so that you know when you're in something crowded.

What we probably wouldn't do is look to directly offset the exposure. For example, if we found everybody was in Amazon, we probably wouldn't short Amazon. But what we would do and what we try to do with the investment guidelines, is adapt the guidelines in some way that would preclude the managers from owning the same thing. With such restrictions in place, it's more of a portfolio construction exercise than anything else, where you now can be focused on diversification and correlations and not on where you have overlapping exposures.

Thijs Hovers What we do on our side is very simple. We are very transparent to our investors and just give them the top ten holdings when they want it, so that creates a lot of transparency. We have become more transparent over the last couple of years to keep investors informed and to allow for a more predictable return profile.

Katherine Grant: It's a good point, on a look through basis, we as allocators need to be informed about manager overlap. Not to be too repetitive about SMAs, but once again we're fully equipped to address any issues there. Our job is to identify good managers, but we also look at it from a portfolio point of view. In other words, I could come across a great manager, but it might not be a value add to LGT's current portfolio. It's part of our role.

There's always an element of luck, but LGT didn't have any exposure to Valeant or Sun Edison, or any of the disasters of the past few years. When we speak with our managers, we are partners and want the same outcome, but you also need to challenge them. Do you really have an edge on Valeant? Everyone loved Mike Pearson, the power of the platform and the stock admittedly did work incredibly, until it didn't.

Thijs Hovers Probably also here, some guys were thinking, at least initially, and the rest was following?

Katherine Grant Yes, I agree. It became a consensual stock that kept working. This is why we need to be on top of our portfolios and managers.

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