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Opalesque Roundtable Series '15

SINGAPORE

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Editor's Note

A silent revolution in Asian private banking

Bryan Goh, the former Head of Alternative Investments of DBS Private Bank who in April 2015 joined private bank Bordier & Cie. as CIO, says he is "deploying capital almost like a hedge fund". With a deep personal background and expertise ranging from trading equities, managing equity and global balance funds before getting into fund of funds for a private bank and also for a family office, Bryan's aim is *"to bring more cutting-edge investment processes into a private bank where typically portfolios are created as a simple blend or balanced portfolio of equities, bonds, commodities, hedge funds."*

Many private banks just allocate capital on a long term fundamental basis, whereas Bordier's new approach is to allocate risk based on macro or systemic events at the top level and drill down to more specific catalysts. This has led the bank into more esoteric strategies, *"because the usual ones are not working that well any more or come with additional risk."* Bordier also allocates a substantial amount, anywhere from 25% to 30% of a portfolio, to hedge funds, which is more than the usual Asian private bank.

Bryan thinks that private wealth portfolios tend to be over-diversified. **"When the macro environment isn't so great, diversifying a lot means you actually end up picking up that not so great environment in your portfolio. What we find more effective is to diversify less, taking on idiosyncratic risk, and only deploying capital when there is a good reason to do so."**

One of the risks Bryan and other participants of this Roundtable refer to is the general lack of liquidity in Asia, which can be a challenge when your aim is to diversify over the full market cap range. This condition subsequently leads to substantial overlaps in portfolios where **everybody is owning the same large caps, the same big banks and large technology companies.** *This means that even though an investor may be looking at different funds, you could see the same portfolio underneath.* Now, maybe even more than ever, buyers need to look through in order to make intelligent choices.

Deutsche Boerse is China's partner of choice in first international exchange cooperation

Deutsche Boerse Group, which recently has been on a buying spree acquiring FX provider 360T, index provider STOXX, and fund admin Citco, has launched a joint venture in Frankfurt with its Chinese partners, Shanghai Stock Exchange and China Financial Futures Exchange. This is the first international exchange cooperation the Chinese have entered with the Shanghai Stock Exchange owning 40%, the China Financial Futures Exchange 20%, and Deutsche Boerse the remaining 40% of the new venture. This JV will be based in Frankfurt and develop cash and derivatives products denominated in Renminbi for broad distribution outside of China.

The truth about high frequency trading

Today, even the most sophisticated investors say they are feeling the impact of the high frequency traders and have to adapt. However, insiders also say that over the years, the names of those who are making the cut via some sort of high frequency trading also change. Looking at the overall volume contribution by so called high frequency traders, it has peaked probably two or three years ago and since then has been more or less stable. In fact, for many of those players it is more about latency than high frequency. Exchanges don't see too many new entrants entering this space, rather, a few ones will be dropping out over a certain period and those will then be replaced by new ones.

As we all know, there is no free lunch. While you could say that the high frequency or low latency traders are using somebody's limitation to make money, that lunch for high frequency firms comes at extremely high costs. Those firms need to cover enormous IT costs, and it's therefore quite a risky business. Still, other fund and asset managers have started to demand a **level playing field.** *"If the low latency guys get 40 or 50 different order types and are able to enter orders with four decimal points after the comma, I also want the same...".*

The Opalesque 2015 Singapore Roundtable was sponsored by Eurex and took place end of 2015 in the Deutsche Boerse office in Singapore with:

1. Bryan Goh, CIO, Bordier & Cie
2. Rajesh Sundaresan, CIO, Lighthouse Canton
3. Roshan Padamadan, Founder, Luminance Global
4. Steve Knabl, Managing Partner, Swiss Asia Financial Services
5. Peter Fricke, Head of Eurex Representative Office, Singapore
6. Roland Schwinn, CEO, Eurex Clearing Asia

The group also discussed:

- Update on new Asian fund launches
- Opportunities in relative value, market neutral arbitrage, asset backed securities, leveraged loans, CLOs, behavioral market neutral Asian quant, Alpha in India
- Which Asian strategies achieved 50% to 100% annualized over the past eight years?
- Can Chinese financial markets have a more serious compliance than the US?
- "You only had the optimists in China": Why the China bubble was destined to burst in 2015
- Why investors believe that "any good hedge fund manager" will most likely have quarterly liquidity, one year notice or one year hard lock
- How comes all of the larger international asset managers are now setting up shop in Asia?
- Are investors paying higher fees to long only managers than hedge funds?

Enjoy!

Matthias Knab
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Participant Profiles

(LEFT TO RIGHT)

Matthias Knab, Roland Schwinn, Peter Fricke, Steve Knabl, Rajesh Sundaresan, Roshan Padamadan, Bryan Goh.

Introduction

Bryan Goh
Bordier & Cie

I'm Bryan Goh, CIO of Bordier & Cie in Singapore. I started my career as an equity trader. I traded equities, managed equity funds and global balance funds before getting into fund of funds. I ran funds of funds for a private bank and also for a family office.

Now at Bordier, I run discretionary mandates for which I invest globally. At the moment, we are a little bit more invested in Asia than we usually are. I have to add that typically we don't have a bias to invest in Asia based on any strategic considerations, we rather consider the prospects and the potential of each individual investment. And **this actually has led us into more esoteric strategies, because the usual ones are not working that well any more or come with additional risk.**

In our mandates, **we actually allocate a substantial amount to hedge funds, so anywhere from 25% to 30%, which is more than the usual Asian private bank.** That allocation used to be very equity heavy or equity long/short heavy, but now it's becoming more balanced with event driven and credit strategies as well.

Apart from that hedge fund portion, the rest of the assets are run as cost effectively as we can. This means we invest directly in single name equities and bonds, and we also use mutual funds or ETFs. There may be opportunities where there is no ETF or no mutual fund, and then if we have resource constraints and we can't invest in individual securities, we would then create a managed account that is owned by us and appoint a sub advisor. Often we would find that a manager's fund has a too wide a remit, and we only want a subset of his strategies. So a managed account gives us that flexibility.

Rajesh Sundaresan
Lighthouse Canton

I'm the CIO of Lighthouse Canton. We got our license towards end of 2014, so we are a fairly young company. The company was set up by Shilpi Chowdhary and myself. Shilpi comes with a private banking background and he focuses on the multifamily office side of our business. I come with a background in research and asset management. I have spent over 20-odd years on investment research, managing money for a hedge fund and allocating capital to hedge fund strategies.

We have currently around $400 million of advisory and discretionary assets under management. In our fund management unit, we have two funds focused on India. They both have a similar underlying strategy on the long side but one fund is long only without any hedges and the other one is a fully hedged market neutral India fund.

We are also in the process of launching a **quant strategy** in the near future that would go long/short single stock positions in Asia-Pac whilst maintaining sector and country neutrality.

We also manage and advise on global portfolios for our clients on the family office side. We are not constrained in terms of asset class or strategy, we just try to identify sensible opportunities that we can exploit in a process-driven way. When I say process-driven, I don't mean to say that we are quantitative in decision making, but that even with a fundamental investment style we like to follow a clearly defined process for investing. It's important to understand the source of returns we are targeting and define upfront our strategy for generating those returns consistently across markets and market cycles.

Roshan Padamadan
Luminance Global Fund

My name is Roshan Padamadan. I'm the Founder and Fund Manager of the Luminance Global Fund. We invest in liquid assets - equities, bonds and related derivatives. We are looking for any kind of bargains we notice across the corporate structure in any of these liquid asset classes. For the most part, we are long/short equity and also look for arbitrage positions or special situations. This is our basic investment philosophy: Looking for value and for mispriced special situations.

My background has been in banking. I was in credit risk, then I worked both on the sell side and the buy side. I spent seven years with HSBC in India, the U.K. and then Singapore before I started my own fund. To keep the operational complexities limited, I just focus on the investment side and the rest is done on the Swiss Asia Financial Services' platform.

Steve Knabl
Swiss Asia Financial Services

My name is Steve Knabl, I am a managing partner of Swiss Asia Financial Services and Swiss Asia Holding. I am also a shareholder of the company. We operate two licensed entities, one in Singapore and one in Hong Kong.

We have been operating in Singapore since 2004 and in Hong Kong since 2010. We are basically a platform for wealth managers and fund managers just like Roshan here, who decided to join us and come in and operate his business from our platform. We provide the whole infrastructure, the framework, the corporate governance, the operations, the middle office, everything except for the investment knowhow, because that is what manager brings along with him. We have 70 employees in the company, $2.5 billion of assets on the management which are divided up by 34 funds and 17 wealth managers.

We can also help our platform managers distributing their funds. We have agreements with about 30 private banks on a B2B basis for the EAM or external asset manager desk, and we work with about 40-odd brokers, custodians, prime brokers and so on throughout Asia, Europe and the U.S.

As to my background, I'm Swiss and also Austrian. I studied in Switzerland and majored in Economics and Hospitality Management in Lausanne, but my first job was at a bank called Swissquote Bank where I became head of trading, treasury and FX for 10 years. And after that, I decided that I needed a change because the bank was actually a start up when I joined with about seven or eight people, and when I left we had 280 people. At that point is was a successful listed company. I then joined Swiss Asia Financial Services at the end of 2007, which at that time was also a seven-man team that we have built to nearly seventy today.

Matthias Knab

You had mentioned your business relations with private banks, but do you also actively help the managers on your platform to raise assets?

Steve Knabl
Swiss Asia Financial Services

We are in the process of setting up a cap intro service for the funds. Of course, the major challenge those younger firms have in terms of raising funds is track record. You need a good, i.e. long track record, and most of the funds on our platform today have less than three years track record. And with all investments, some of those that have three-year or two-year track records are not doing too well, so it's also difficult to raise money for them. But there are some funds that are joining us now that already have longer track records and raising money for them is slightly easier than it used to be. What certainly helps is that from our perspective we see now more interest coming into the hedge fund space.

Peter Fricke
Eurex

My name is Peter Fricke. I work for Eurex, the leading European Futures and Options Exchange. I head the Singapore branch office, which covers Southeast Asia including Australia. We target all kinds of different clients from proprietary trading companies, banks and brokers to market makers and hedge funds.

Prior to this role, I was also involved in some projects in Asia, for example, setting up the TAIFEX link with our partner, the Taiwan Futures Exchange and also managing the relationship with another partner, Korea Exchange. Prior to that, I covered various sales roles for the Middle East, Japan and also South Korea.

Roland Schwinn
Deutsche Boerse Group and Eurex

My name is Roland Schwinn. I am representing Deutsche Boerse Group and Eurex. I have been with the group now for 25 years, right from the beginning of electronic trading at Deutsche Terminboerse DTB when it started in 1990 as the predecessor of Eurex. In the early 2000s I also started to cover hedge funds and asset managers, and this is how I met Matthias 12 years ago. My personal background is in trading.

For the last eight years, I have been developing the business in Asia, setting up offices in Hong Kong, Singapore and Japan; hiring the people and also connecting new customers to our exchange. At the moment we have about 35 directly connected exchange participants across the Asian region, plus, of course, numerous end customers that are served via our direct participants and members in the region. We also set up cooperations with other exchanges in Asia, and Peter referred to some of those already.

About five years ago we implemented the Eurex/KRX Link where we give Eurex participants, after Korean trading hours, direct access to KOSPI 200 Options, which is one of the most heavily traded options contracts in the world. We send the positions back to Seoul after the end of our trading day. Then, we built the same structure with TAIFEX, the Taiwan Futures Exchange, in 2014, where we also trade after hours of TAIEX Futures and Options.

And now, just recently, we set up a joint venture with two Chinese exchanges about which I will talk more in details later at this Roundtable.

Matthias Knab Bryan mentioned that now he's doing more investments in Asia than typically. So let's take a look at the broader opportunities set for hedge funds and alternative investment globally and particularly in Asia. What has changed and what's your outlook?

Bryan Goh: I think I have a bit of a complex story to tell, so let me start with an anecdote. When we went around to a number of hedge funds based in Asia this year to start our usual due diligence and initial coverage, we actually found that there was substantial overlap between their strategies and ours, which made them redundant. We didn't always agree with them but we were trafficking in the same markets and strategies. Sometimes we had the opposite view.

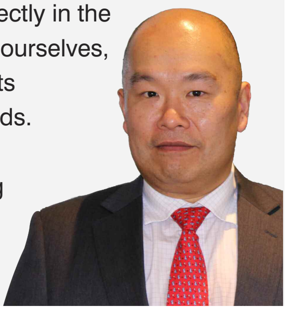
We found this strategic overlap beyond Asia, extending to Europe as well. I think there's less overlap in terms of hedge strategies is the U.S. The reason for these strong overlaps is simply because Bordier has very strong European research capabilities, and also we here in their Asian branch can draw on the work of our Geneva office for idiosyncratic stock ideas. We are also building analytical and trading capability in credit as well. This means that in essence, **we are deploying capital almost like a hedge fund, in Asia and Europe.**

And this was actually my intention when I joined Bordier, **bringing more cutting-edge investment processes into a private bank** where typically portfolios are created as a simple blend or balanced portfolio of equities, bonds, commodities, hedge funds. Many private banks just allocate capital on a long term fundamental basis. Our approach is to allocate risk based on macro or systemic events at the top level and drill down to more specific catalysts.

In my view, private wealth portfolios tend to be over-diversified. When the macro environment isn't so great, diversifying a lot means you actually end up picking up that not so great environment in your portfolio. What we find more effective is to diversify less, taking on idiosyncratic risk, and only deploying capital when there is a good reason to do so.

So coming back to your question, where we will allocate to hedge funds is more in event-driven credit strategies, activists, arbitrage, so generally a little bit away from equities towards credit.

A challenge that we see in Asia for hedge fund equity strategies is that stock borrow is becoming less liquid and less available. It's likely to be a temporary phenomenon but it will impact returns in the short term. We are investing directly in the markets and therefore have our ear to the ground and can pick up such dynamics. Also, to differentiate ourselves, we are also investing in asset backed securities, in leveraged loans, and we structure certain investments ourselves that have a slightly different duration in credit than available in benchmark ETFs or mutual funds.



Examples for those type of investments include some very good opportunities in the CLO market arising from "skin-in-the-game" rules which will squeeze CLO managers that tend to be thinly capitalized. We think there is value there that can be captured.

Steve Knabl One question, Bryan. What is the percentage of your discretionary mandates versus your advisory mandates here in Asia?

Bryan Goh: Let's say about a third of our asset base is discretionary and the rest of it is advisory. We do not take deposits, and we rarely deploy balance sheet. We are really asset managers. There is also alignment between the discretionary and the advisory portfolios because that helps us build scalability where the discretionary portfolio is the base for the advisory clients, rather than having two different processes.

Now, maybe for reasons of execution, the instruments that we suggest to the advisory class may be different because they may not be able to do complex derivates for example, which we can on the discretionary side.

Roshan Padamadan: I agree with Bryan's remark about some of the challenges in Asia. There's quite a lack of liquidity in general which can be a challenge when you want to diversify over the full market cap range. What you mostly see is that overlap Bryan described where everybody is owning the same large caps, the same big banks and large technology companies. **So even though you may be looking at different funds, you could see the same portfolio underneath.**

That also leads to **difficulties on the shorting side** as well, which Bryan also has correctly mentioned. You don't get enough borrow particularly on mid or small cap names. You do get the borrow when the stocks are held by large institutions because they usually have a lending mechanism in place. But if your stocks are widely disbursed, it's quite hard to collect the borrow, and of course in some markets shorting is not allowed at all.

That is the reality across many emerging Asian countries, including India, you cannot short, and that can limit your investment options quite dramatically. Just a couple of numbers to illustrate this point. India has over 6,000 stocks listed, and while there is a stock lending mechanism in place nobody uses it, borrowing is not taking place, and so it does not happen. You can short single stock futures however, but out of those 6000 stocks, single stock futures are only available on about 125 to 150 names, so it's only 2% or 2.5% of the Indian market which you can short. And not all of those will be liquid, so what you can actually short is a very small fraction of the whole country. That's the situation in India.

The other factor that restricts investing is that many firms still have a large share of family ownership and promoter ownerships so that the free, liquid float can actually be very small. These are some of the characteristics which are very evident in Asia that you don't find to this extent in the US and in Europe.

So how can you run money intelligently then in this part of the world? In my case, for example, I run global portfolios, however when I want to short, I find those short ideas more actionable in the Western or developed markets while it's harder to short the emerging markets. But this can also in effect lead to a certain skew where you are long both developed and emerging but the shorting is more on the developed markets. One might inadvertently be long Emerging Markets in the absence of shorts to balance that exposure.

Rajesh Sundaresan: Roshan's point about difficulties in shorting in emerging markets is very valid. What we do in our case, for example in India market neutral fund, is that we are only shorting the index futures that are highly liquid.

As a background, for our India funds we work with our sub advisory team based in India that has a highly successful track record in running money for six and a half years. They are focused on the mid cap space and the portfolio's average market cap is around $1.5 billion to $2 billion. We look at companies with high secular growth prospects and profitability and invest with a three to five-year view. We have a long only and a market neutral fund.

For the last six years, the alpha of this strategy has been very high, at **over 30% per annum**. And because the alpha is so high, we can afford to just short the index futures in order to take out the market risks. Since index futures are very liquid, we are not worried about liquidity on the short side. We hedge 100% of the portfolio which has the effect of bringing our correlation to broader market to zero.

Our quant strategy is predominantly active in the larger markets. For example, currently, two third of the exposures are in Japan. We invest only in the liquid MSCI Index component stocks from Japan, Australia, China, Hong Kong, Taiwan and Korea. Because it's a quant fund, it has about 250-300 names each on the long and short side. Since our short exposure is fairly well spread out we largely avoid typical challenges on the short side that managers running a concentrated fundamental book would face.

Bryan also made a good point about Bordier increasingly moving towards relative value and market neutral arbitrage kind of portfolios. This is something we are beginning to see more among our investors as well.

For the last five or six years, most of the private banks were selling leveraged debt products or were writing options to earn premium income in some form or the other. These were easy products to sell and it made sense when bond yields were falling and equity markets were going up. Investors in leverage bonds were picking up coupon and benefitting from appreciation in bond values. But I think increasingly, people are now realizing a couple of things. One is that with rates being where they are, i.e. at close to zero, there's not much juice left in bonds and the risks are disproportionately high.

Second, with the US equity markets having had a seven year bull-run, which is already one of the longest bull-runs by historic standards, people are beginning to worry about markets rolling over. The sharp moves in equity markets in August and September 2015 caused significant damage to many portfolios, including those of some large hedge funds, and that has also adversely affected investors' risk appetite. Many investors are realizing that they can't rely on leveraged bonds or keep writing option premiums to generate returns.

These are to me some of the reasons people are looking for more market neutral and more relative value type of strategies. It is a bit challenging to run these strategies in Asia and therefore I'm not surprised that private banks and other investors in general in Asia are implementing such strategies more in the US and other developed markets. Investors seeking exposure to Asia are often taking more concentrated bets and assuming specific risks, which is partly due to low liquidity of markets here and partly due to the type of investment opportunities available here.

We therefore find that the asset manager universe in Asia is divided into two camps. On one end we have boutique long-only fund managers with concentrated portfolios targeting absolute returns with large off-index bets; such managers have successfully raised billions of dollars in the recent years. On the other end, we have the classic Asian hedge fund managers who try to generate returns with low correlation to broader markets. The returns have not been bad for such managers, but in general they appear to have found it more difficult to raise money except for some successful spin-outs from large global firms that started with a large capital from day one.

Steve Knabl: I confirm what you are saying, it's difficult to raise money for hedge funds today in Asia specifically. It's very complicated. And I think what complicates the matter even more is that the long/short space or the multi-strategy space have not been performing up investors' expectations and underperforming the markets in general. Rajesh already referred to the multi-year bull run, so any manager coming out with a equity-type strategy hedge fund on this market will underperform. And if an active manager is underperforming the index, then many investors will say, "Why should I buy into hedge fund if I can just buy the ETF and I'm doing anyway better? And if there's a volatility event, some hedge funds have lost more money than the market. So why should I?" And it perfectly makes sense.

Now, if you move away from the equity-based strategies and look into the relative value, arbitrage, vol trading strategies or global macros, these people are making a lot of money. Some, also here in Asia where you even may have capacity issues in some of those strategies, these guys are making **between 50% to 100% annualized over the past eight years,** and they were going through volatility events in the middle of that as well. And when volatility events occur, they make even more money.

Now, these managers' AUM is growing pretty quickly but many of them are not marketing the strategies properly or efficiently. They don't have the structures or a sales process in place. There are people who do not like to talk to investors. Some of these managers come to us and say, "Guys, look, this is my track record. I have been doing this for years. I need help. I need help because I'm not structured properly. I need help because my back office isn't doing well. And I need help because I don't know how to talk to investors. Because when they ask me what do I do, of course, I'm not going to give them transparency on my algorithm…."

We are seeing a lot of these managers coming on that are very private-type funds with money from family, friends, and sometimes specific institutional investors that they know well. But, if you are looking at a typical equity type of approach with a standard low volatility strategy like equity long/short market neutral, yes some may be doing well and may yield a couple of percent at a very low volatility.

But at the end of the day, that's not what investors are really looking for, because they can do better by investing in the market with a long term perspective. Those people would argue, "Well, you know I am better off investing very long term with an index and just letting it be. And if it comes with a volatility of 20% a year, it doesn't matter." That is something that we are hearing from the investor base.

What this means is that **hedge funds today need to offer a serious edge.** They need to offer a real story and real performance that goes beyond what the market is doing and that is highly uncorrelated to the market. If you are too correlated to the market, you will find that there is much less interest. And rightly so, because the idea of a diversified portfolio is to decorrelate all asset classes in the portfolio, so hedge funds should contribute to that as well. That's the whole idea, and if you fulfill that criteria, this story must be core to your sales process as well as to why put a hedge fund in your portfolio.

From that side, I think Bryan is absolutely right. 20% to 30% of hedge funds in a portfolio are an absolute must, but the funds need to be well chosen. Right Bryan, or am I wrong?

Bryan Goh: Yes, absolutely.

Another phenomenon in the hedge fund industry I want to comment on is liquidity. I often found that if the hedge fund manager is any good, then he will most likely have quarterly liquidity, one year notice or one year hard lock. That's why when we structure our portfolios, one of the criteria that we look at is the lock up periods our clients can tolerate. And all our hedge funds go into that bucket with the lower liquidity, because for us, the UCITS or monthly liquidity type of funds are not working out, either because there is some adverse selection or the gestation for their arbitrage or event driven trades is just longer.

Roshan Padamadan: You are right, it is very important to align the investment horizon with the process. If your clients are on a weekly or daily liquidity, the portfolio manager will be forced to have very large cap liquid names or hold cash just to address that liquidity risk, it's impossible to manage otherwise. And if you're doing anything slightly complex like a spinoff, for example in the US, this takes two years to do. And if you take into account the initial filing, then it's a three-year process, because they usually have to wait two years to make sure it's tax-free when they do the last spin off. They usually spin off 10% to 20% on the first tranche, and then they wait two years to spin off the rest. To me, it is one single transaction because you can see through it from the beginning to the end. For example, there is a spin off that I'm looking at this month, it has been announced last year and I know it's been coming for a year, and it is getting priced next week.

There is no way the strategy can be done with one month liquidity or something shorter. But then you can also take a balanced approach in positioning. For example, in my fund, there's no hard lock, but it's kind of a moral lock. What I am offering to my investors is that I take my fees at the end of three years. So I tell them it's a three-year investment, but if they really have an emergency and they need money, they can take it out. But I didn't put in a hard lock as the underlying investments are liquid even though the strategy might take 3 years to deliver. Also, I was starting off as a small fund, and I didn't want to impose too many conditions because then the marketing hurdle becomes even higher. The lock up is a very important consideration that then also influences the stocks and strategies you can invest in, and there is really no decoupling or deviation from it.

Matthias Knab We spoke about the equity markets and the restrictions investors and managers face on the short side. This is also a segment where an exchange like Eurex can contribute and offer new solutions, right?

Roland Schwinn: When we look at the developments over the recent years it should be no surprise to everyone when I say that the traditional mix of asset classes traded on our exchange has changed from a 50-50 split between fixed income and equity to now around 25-75. As we all know, we currently are in a low interest rate and also a low volatility environment. Over the years, also our exchange has diversified, which for us means developing more markets and traded instruments, with the idea to provide more tools and instruments to the market to help you to achieve more diversification on your end as well.

Just recently Deutsche Boerse acquired 360T, one of the larger operators in the FX space. 360T is particularly strong in the corporate business and will be responsible for FX as an asset class within Deutsche Boerse Group. This will bring additional value to the entire offering, and we will try to synergize also with other elements of the value chain we offer as a group, like for example the CCP.

If you look at the entire offering for buy side clients of Deutsche Boerse Group, there is actually a lot more to come. So part of our mission is to make sure that all the right infrastructures and services are in place, enabling you to run and diversify your strategies.

Then, if you look at the entire value chain of the Deutsche Boerse Group, we offer a number of attractive services, allow me to mention just a few. One of the recent acquisitions for example was the leading fund administrator Citco in Cork, Ireland. Together with Clearstream, Citco can now expand the number of fund services to existing and new clients.

We also just recently completely acquired the index provider STOXX which is already very active on calculating index products for the buy side industry, not only for ETF issuers, but also customized index solutions.

Then on the trading and clearing side, we have developed special segregation models which are now also offered to buy side customers. Buy side customers can become so-called registered clients in a tri-party agreement with the clearing houses and their clearing member and their funds will physically be segregated in case of a clearing member default. This was a service we implemented after the Lehman case happened some years ago.

As an infrastructure provider in financial markets we already offer a broad and integrated array of products and services, and there is more to come.

From our perspective, being also based here in Asia, we have witnessed a strong move of larger international asset managers coming to the region. Why are they coming? Well, you just need to look at the fast growing markets in China in terms of insurance deposits and growing pension funds, or over to Japan where Abenomics led to a huge amount of excess in cash. And as you might all remember when, I think it was about a year ago, the government of Japan asked the government pension fund to increase foreign equity allocation from 12% to 25%. Being a fund having more than $1 trillion under management, this has impact of course.

This means that there is a lot of this excess cash to be allocated to large buy side firms, and of course, we also positioned ourselves as a group, not only to provide the respective services, but also to prepare the channels for those investment flows, which now will spill into not only other parts of Asia, but also into Europe.

Matthias Knab

Roland spoke about some of the major macro trends that are going on in Asia. Another recent one is the crackdown in China of fund managers and trading in general. Just yesterday or two days ago, we heard that authorities raided fund managers.

What's your view on those developments or any other major longer term trends you observe in Asia?

Roshan Padamadan: We don't trade in China at present, but we all know that there are still very specific sets of measures they are implementing. Clearly the market is still evolving there, and I think we can also say that there is a history of having a control kind of environment which they are trying to implement. My personal view is that it is obviously better to let the markets function the way they are working, I believe that ultimately leads to the best stability. But I think China has been grappling with multiple, larger issues in terms of excess liquidity which push the markets up very quickly and also accelerate and deepen any downward move equally fast. I think what China is experiencing now is a very specific set of circumstances. I don't see that being played out or repeated in other markets, some of the markets here even in Asia are fairly more mature in their structure and functioning.

The last time we had so much of restrictions was probably around the GFC when shorting around the world was getting controlled, but that again started off in the West, and then it went off to financial stocks and this part of the world as well.

Bryan Goh: I think the Chinese are very intelligent, but the regulators are probably inexperienced. So they have some good ideas, but they may be not very good at announcing and implementing those ideas. This is where they probably will have to learn. Also, just an observation, a command economy is very easy to control, but a market economy is not so easy to control. If you want to learn how to control a market economy; you need to learn from the Fed. They have been controlling market economy for a long time as opposed to having a free market.

So my take on China is that it is a very interesting and risky market at the moment, but it will evolve into an attractive and exploitable market. I'll give you an example of how we invest. We are just like any other asset manager: we have macro views and all that, but **so far this year, most of our risk and most of our profits have come from understanding the infrastructure of finance.** For example, understanding how Target 2 works in Europe, understanding how the U.S. Treasury funds itself, not the Fed, but how the Treasury funds government, and the interaction between Fed and Treasury.

There are trades that you can build around the infrastructure, the plumbing of the financial system, rather than taking a macro view. You can't do that in Asia because the plumbing mechanisms and the infrastructure are not transparent. They are not trying to hide anything, but they just didn't feel the need to let you know how everything works, how banks are related to payments and how they then are related to the shadow banking industry, for example. It's on a need to know basis, and they will feel that previously there has not been a need to know. And if you ask them, I'm sure they'll tell you. The PBOC has given a lot of information, but they have done this in fits and starts only when the market wanted this information, and there was no proactive policy of communication.

There's a lot mispricing in Asia, and once all the intricacies of the plumbing here become available, until we know how the infrastructure works, we don't actually know how to exploit these. So the future, maybe 2016, 2017, become very interesting as we learn more about how these systems work.

I'll give you another example. China has been operating in an LTRO program like the ECB's LTRO in a very large scale, which creates a lot of liquidity and subsequently pushes the prices of bonds. Look at the high-yield market. It has done a lot better than the equity market at a lot less volatility. Let's now look at the municipal bond market, where they are trying to refinance their local governments, and take good look at the holders. The holders are all banks, right?

If I have to retire a 7% yielding asset and replace it with a 3.5% yielding asset, the top line of those banks is going to suffer. Fortunately, the PBOC has made just this error, so they didn't get it right the first time. That is why there was a failed auction. They got it right second time when they went to the banks and said, *"Guys, you know what? Capital consumption is 20%, not 100%!"* The banks are now in a different position, and they are now saying, "Well, I can lever this up, it is profitable, and it consumes less capital!" And what you see? You see loans, loan growth in China.

Now, if you don't understand the workings of the plumbing, you will say, "This is a bad thing. Systemic risk has gone up." But no, this is an intentional policy by the PBOC to lower the cost of the local governments, to increase loans to SMEs and consumer loans, **and when you understand it, you can trade it.** This is where I'm getting at, and there will be more of these idiosyncratic event-driven trades that will become available.

Roshan Padamadan: When I set up my fund, I chose to give it a global mandate, because I always wanted to go where the opportunity is. I have direct access to more than 30 markets, and China of course is one of the biggest economies and therefore it is at the front and center in a lot of research efforts. But over the year of 2015 I have I come to the view that, at this point, China is kind of a cowboy market. Attracting a whole lot of new retail investors with margin financing is risky even in a sophisticated market. On another side, I welcome the recent investigations on insider trading. I believe the guilty should be taken to task and they should go the whole hog. **China may achieve more serious compliance than in the US.** By that I mean, there's less chance of getting away with it, perhaps with a smart lawyer finding a procedural loophole. China might be able to get the trials done quickly, and enforce market discipline.

There are two aspects. So if anybody is violating the law, they should be taken to task. But the same time, China has been implementing very dramatic measures like not allowing any shareholder of more than 5% to sell for six months. That is a capital control. It's not a FX capital control, it is a market restriction. In my view this would be rather typical in a frontier economy, and while China is not a frontier market, but seems to be regressing from being on the verge of going from emerging to developed with the Renminbi becoming more and more international, on the verge of becoming convertible in the next year. It's possible it might finally happen, but these market measures are very, very regressive. They may even have taken China back ten years.

Now, for any major bank or asset manager, when they talk about a China allocation, they will be much more cautious because you can go in, but you cannot come out. I can imagine they are actually all cutting their strategic choices and allocations in China. Of course, nobody will talk about it publicly, because China doesn't like anybody saying anything negative in public.

China is not allowing the regular price discovery. For example, at the peak of the Bull Run in the summer, there was hardly any shorting at all. There were weeks when nothing was being borrowed and nothing has been shorted. So if you're a foreign asset manager borrowing in China and shorting, though the mechanism was there, nobody was doing it because they knew they will be under special scrutiny, so why invite trouble? So if you don't like Chinese valuations, stay out of it.

This means that you only had the optimists in China. The retail investors were all fueled by shareholder money, actually by the shareholder money of the brokerages. All the brokerages have done several billion dollars of right issues in early 2015, and that's where the leverage came from. I mean, the money has to come from somewhere. People were being given three to five times leverage and many were first time investors who now with five times leverage would go out and buy the stock which has gone up the most over the last few months, and so on. The regulators failed in that instance by not curbing those developments directly. They could actually see very well what was is happening: people were opening multiple brokerage accounts. There was even a restriction on how many brokerage accounts one can open, but that restriction was relaxed. And the regulators knew that if this restriction was removed, then people will open multiple brokerage accounts, but those restrictions were actually in place for a particular reason.

In some sense, I don't know from whom that particular direction came from, maybe not the regulator, maybe more from the political heads: *somehow, they thought the market economy could make China rich very quickly*. But actually, that's not how the market economy works as maybe they are finding out now. Nobody gets richer if it's just the stock prices which go up, that's not real wealth when you then find out that nobody is on the other side of the trade when you want to sell it. That's when they realize that they can't really sell.

Let's look at Hong Kong which is at least a more mature market in terms of its long history, and the regulator also does a lot of things right.

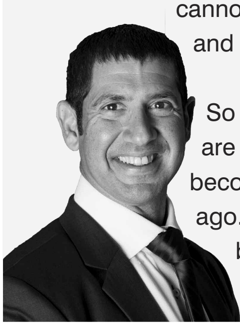
But even there, for example I have one complaint, which is also kind of a well-known among the investment community. The Hong Kong regulator is very happy to stop trading at the company's request. They are very company-friendly, so when you have instances of fraud or suspected fraud, a company can ask the stock to be suspended, and actually the stock can be suspended for years on end with no particular deadline. I think there should be a deadline for a response, for an audit or investigation, and the company should be forced to respond.

There are stocks on the Hong Kong stock exchange where allegations of fraud have not been refuted properly, and the stock have been suspended for one or two years, and so on. And this again is a risk for the short seller. So if you're right, but you still cannot square the trade, you have a risk.

I have one personal experience where I am right on the short; it was a fraud. The company went down 50%, but then trading was stopped. So I'm still waiting for the exchange to open to close my position. When I did my risk assessment of that trade, I took a very small position because I knew about the risk of possibly not being able to square the trade. But at the same time, the regulator has to fix this issue, because it's not something the exchange or the broker can help. It is therefore a risk the fund managers have to take into account.

Steve Knabl: There are actually different of ways to access Chinese markets, for example also via the derivatives market in Shanghai. One of our managers is trading futures on commodities. He is a relative value manager, he trades all different types of strategies on futures mostly. And an easy way is to do your China trading with CITIC structures, a total return swap, and then you get the return on the index they create.

Things are possible in China. You can do anything you want if you know how to do it. Structurally, it's just a question of having access, understanding, having the right brokers. Being worried of money not coming out of China is no longer the case. China cannot afford to retain money or to just all of a sudden close the floodgates and just say, "Oh well, what's in is in and what's out is out." They can't afford that, especially now with the internalization of the renminbi.



So from our perspective, we are seeing China open up step by step at all levels of the financial industry. Things are becoming easier to manage. Products that were not available before are becoming available today and it's becoming much easier to do business with the Chinese exchanges than it was two years ago or three years ago. Maybe Eurex can maybe enlighten us on how they're approaching the China aspect because that would be interesting for us to hear.

Roshan Padamadan: If I may just clarify, I was referring to the specific restriction in China that was put on shareholders who own more than 5% of a company. So if Fidelity has 5% of Tencent, they cannot sell, and if they use a derivative to reduce exposure, that might not be allowed.

The other thing was a threat of future restrictions. Currently there are no restrictions. Actions like these in a way showed what the regulator was capable of. These things in the end represent risk to the investor. But the shareholder restriction is a limited restriction, it was put into place in the summer for six months, so we'll see what happens when that ends.

Roland Schwinn: Thank you for the question, Steve. Before I come to that, I would like to also refer to Bryan who earlier spoke about the infrastructure of Asian markets in general. He is certainly right that things are not always in place right now. This is also a consequence of the fragmentation of markets and the fact that Asia has so many different currencies, different central banks and regulatory regimes.

This is of course a very different situation compared to Europe or the US, and also one of the reasons why Deutsche Boerse has set up already years back an Asian headquarter here in Singapore, because it also represents an opportunity to help building the infrastructure and create the links that are missing right now in many different places.

There are also certain differences to the other developed markets. For example, one thing that came to our attention just two years ago when we started building our Singaporean CCP is how securities are being used as collateral in Asia. It's quite interesting. Already in the 1990s, in Europe we received around 40% of margin deposits in securities, and that number has even increased over the years. If you look at Hong Kong and Singapore, that number is only at around 10%. If you look at developments coming from the regulatory side like Basel III, this needs to change in the future. Once the leverage ratio has kicked in completely, there will be a different need for cash compared to now. This is an example of the things we are also looking at when it comes to developing infrastructure and new services.

And now let me come back to China specifically. Over the years, we have worked out many different forms in terms of cooperating with other exchanges and infrastructure providers in Asia, and also in particular in China. Just recently, we were able to materialize one of those opportunities: Deutsche Boerse has launched a joint venture in Frankfurt with its Chinese partners, Shanghai Stock Exchange and China Financial Futures Exchange. **This is the first international exchange cooperation the Chinese have entered.** Basically we have a partnership where the Shanghai Stock Exchange owns 40% of the new venture, the China Financial Futures Exchange 20%, and Deutsche Boerse owns another 40% of the stake.

The idea is to develop cash and derivatives products for distribution outside of China, and what's unique here is that the denomination of products will be Renminbi. So this is another element in internationalizing the Renminbi and also building up additional RMB offshore hubs, with Frankfurt being one of them. The first products will be cash market products, in particular ETFs based on some Chinese stock indexes, depository receipts and then later on we will expand into the derivatives space.

We do see a very strong interest coming from larger Chinese FCMs in Hong Kong, and also Taiwanese and other Asian regional players. We are very excited about this new partnership and the new products and services that can now be offered.

The CSI 300 Futures is, of course, also part of our development strategy for the derivatives market. It's a very interesting story based on all these developments I described. But you also just mentioned earlier that fueled by the increased leverage and also the use by individuals rather than institutional investors, plus the sheer number of newly opened accounts, volumes in the CSI 300 grew tremendously over years, until it suddenly came to a different situation a few months ago. It's now only trading at a fraction of the original volumes. However, you have lots of trading firms now with free capacity. They are looking for opportunities, they need something to trade. Just think of all these traders which went from Taipei and other parts of the world to Shanghai to trade, particularly the CSI 300. As a consequence, we now see a growth in some equity products due to the fact that the CSI 300 future is not trading that much anymore. We also see volume increases in Taiwan, as well as in our products.

We have another product upcoming which might be of interest also for those strategies in which we have seen demands for some years already. We also launched a mini version of our DAX® flagship future, but only with one-fifth of the contract size. It is called Mini-DAX® and is already trading more than 13,000 contracts per day.

So when Deutsche Boerse develops markets like China and also other Asian countries, we do it in a partnership approach where we seek collaboration with local partner exchanges or international exchanges to build up markets in order to put things together and create synergies. For example, our cooperation with the Korea Exchange was an amazing success story as well. We are now trading around 110,000 contracts everyday, in the Korean after-hours only. And this is the number after Korea changed the multiplier of the contract by five. If you would use the old contract size, it would thus represent 550,000 contracts a day.

The reason why this cooperation has worked out so well is that, first of all, Korea was not very easy to access for trading firms. People had to deal with high cost, regulatory hurdles and special requirements in terms of physical presence. On the other hand there was a need also from Korean individuals in particular to trade their main derivatives product, the KOSPI 200, also after the exchange is closed. So we went into this partnership with the Korean Exchange, and after only ten months the product took off and started flying. That was also based on the fact that with this new link, more than 400 international exchange participants of Eurex had immediate access to Korea without setting up physical presence there.

Steve Knabl How do you actually manage any currency restrictions when people outside of Korea now trade on the Korean Stock Exchange? How do you deal with the aspect of currency?

Roland Schwinn We have a setup where you need a Korean broker and also a clearing member of Eurex Clearing, and those two will have account relationships with each other. We only transfer net positions at the end of the trading day. So once Korea closes, we open the market at Eurex with zero open interest. At the end of the trading day, all open positions will be settled into positions at KRX Clearing. So the settlement results in a physical option contract and we call those products daily expiring futures. Technically, what we trade are futures on specific options series of the KOSPI 200 with daily expiration.

Matthias Knab Who else is working on new funds, new products, or new services? Or Steve, are there any new exciting funds that came recently onto your platform?

Steve Knabl: Yes, every month we onboard an interesting fund, and actually do launch on average about one fund each month. The strategies will vary, from private equity, real estate fund in Japan buying hotels, which we launched in October, to social impact private equity fund investing in Myanmar, Cambodia, Pakistan, Laos. Also, various venture capital type of vehicles that are very niche and very interesting products. Some of those funds are actually not small but can be pretty medium sized for the region. Sometimes we also have sovereign wealth funds as cornerstone investors of those new funds.

A new fund we are launching is a shipping focused equity and fixed income fund, so very focused on the shipping niche. Another one is a relative value arbitrage fund trading futures on commodities. Its a $120 million market neutral fund which is transitioning to us. There is a lot of arbitrage between the US and Chinese commodity markets. It's very interesting and also technically a little bit more complex.

Another one we recently launched last month which is Korean volatility arbitrage fund, and that one is also doing very well. There also lot of CTAs and global macro strategies launching on our platforms as well, that is where some of the investor appetite seems to be today. My comments from what I said before is that these are the type of strategies that are really de-correlating portfolios today and where we see an appetite from investors today.

Matthias Knab Tell us more where are these traders are coming from? And where were they educated professionally?

Steve Knabl: It's fascinating, these new managers are literally coming from everywhere.

Some might be self-taught and have been trading personal accounts for a few years, and now they transform that into a fund. Some are ex prop traders, or others come from different private equity groups within banks. The CIO of the shipping fund is actually the owner of a shipping company. He had been running these investments as a private personal account for a few years and realized that he is doing well, so he spun it out from prop to being a fund. The Korean volatility fund is set up by brokers and prop desk traders who had traded that market before with their own algorithm, and they also decided to spin out and go for their own. So all of them come from a variety of backgrounds, and all are very interesting people and entrepreneurs who decided to take what they know to a new level and offer it to outside investors as well.

When you look at the geographies where they are coming from, there are few Europeans, some Malaysians and also Indonesians that were always working on prop desks initially and decided to take it and work under fund structure and market strategy after a year of having created a formal track record within the fund structure. But a lot of them already have audited track records within a prop setup.

But I also would like to stress one thing here, **a fund is very different from managing a personal account, and is very different from managing a prop account.** Managing a fund is a very different approach. So the risks that an investor will have look at include things like reporting transparency, limitations in terms of what you can actually do, commissions, infrastructures. Infrastructure is a major aspect, you need to be connected to different brokers; working with a prime broker is different to having an account with say Interactive Brokers. So now you need to have prime brokers, systems with multiple connectivity, reporting, and so on. You are moving from a retail type of approach to an institutional approach. Also, when coming from a prop desk within a bank where essentially you have access to infrastructure and things like flows, and all of a sudden you're sitting alone and obviously you don't have access to any of that noise or information anymore which was maybe helping you develop your strategy and perform. So a lot of things will change with a fund, and some managers can be successful and others not, only time will tell us.

Roshan Padamadan: Personally, I am looking at building out my track record before I think of new funds. But there are some things I had put in place from the very beginning. Within the portfolio, I have three different risk buckets which I track separately. They meant to be short term ideas, medium term ideas and long term ideas. Short term is up to two years, medium term is two to five years and long term is five years and over, which of course also depends on the confidence of the business model when I pick the stock. For example, Coca Cola is a model which will not change dramatically in the next five years, so it would potentially fall into the long term buckets. That stock, by the way, is also an example how to create differentiated exposures from a single idea thread. If we find a bargain in Coca Cola or in any of the 13 Coca Cola listings, you potentially have options in different exposures as you can buy Coca Cola in different countries.

Coming back to my risk buckets, when my first fund has an extended track record and if I see investors asking for a particular risk profile which is a subset, then that could be something I could spin out of those buckets, which will also limit additional work that will be required on the process side. The new fund would follow the same process and be based on the same structure and infrastructure, I may just be able to replicate a particular bucket for the new fund. That is how I plan to extend and diversify in the future.

Bryan Goh: We run a discretionary portfolio across usually three risk buckets. We don't offer or sell products per se. We do create new products, however they are only available to our discretionary clients. We are looking at a couple of interesting things, but as I said, we are not going to market them to non-Bordier clients. We think there is an opportunity in structured credit on the loan market where loans are trading at low 90s, amortizing at par, are experiencing low defaults, even if they are rising, and have decent recoveries. There are opportunities in non-market value structures which can be leveraged to good effect.

So that's one area we are interested in. We are also looking at long-only activist Japanese equity. There's a great push in corporate government, however here, we haven't yet found the right hedge fund for us. I mean, we do have the capacity to do single stocks but the opportunity cost in terms of diverting resources from looking at other investments is too high. We do have UCITS as well as offshore vehicles, so depending on the new strategy, we could package it in either form, but as I said, it is only for internal use for our active clients.

Rajesh Sundaresan: We are targeting managers that are generating genuine and substantial alpha. This is important, because when you look back around say ten years ago, a big portion of managers' returns were in a way beta driven. What has changed is that today, the sophisticated investors have realized that alpha is only a tiny portion of the overall returns that they are getting from the investment manager universe.

A lot of rule driven algorithms are available in the market as well, either as smart beta products or as replication products, and they aim and claim to replicate a significant portion of returns of many strategies at low costs. Statistical tools are being used to analyze managers' returns to identify sources of returns and replicate these at a low cost through systematic factor exposures and applying quantitative trading strategies that are typically followed by hedge funds.

This is why for every product we look at, we need to **assess if it has genuine alpha** in order to demand a hedge fund type fee structure. If not, investors are likely to invest in ETFs or smart beta products to get the exposure that they want.

We believe our India fund is a good example of true alpha. We have a track record of generating three times the index returns every year for the last six years with very little turn over, no leverage, and with only 60% of the downside risk of the market. To us, that is clearly pure alpha. Our five year investment horizon is clearly at the longer end of the investment spectrum which, as Buffett keeps pointing out, is becoming less crowded as more and more investors have moved towards shorter holding periods. So managers who are able to take a longer term view and who have investors to support that kind of a strategy and are willing to stay with them, can definitely offer value and good returns, particularly in markets like India.

India has 6,000 listed companies to put things in perspective, and of course not all of them are tradable, but even if you take a universe of let's say 500 stocks as being tradable based on market cap and liquidity, the top brokers typically cover hardly 100 to 150 names. This leaves a large universe of names uncovered for anyone who is willing to do the research, kick the tires and spent time on them can identify good investments. For instance, in the last six years, India has had one of the worst earnings growth phases. The corporate earnings growth was just 6% per annum, but the universe of stocks we focus on have generated earnings growth of over 30% p.a. So clearly there is scope for investors to identify such investments even in a weak macro environment, but this requires much more focus and efforts beyond looking at index names.

Bryan rightly identified structured credit as one of the attractive areas, and I also believe it has clearly a lot of potential because of market disruptions. In China there are lending curbs, but corporates do need money. That's a market where banks are just beginning to learn how to price interest rates freely. There is a lot of mispricing on the lending side, unmet demand, and there is potentially a market you can invest in profitability although risks are higher. So there are very specific niches that you need to identify and analyze.

The other fund that we are launching is a behavioral quant strategy that is also market neutral. The team running the strategy has a long history of generated uncorrelated returns with low volatility for close to eight years.

We find the strategy interesting because while most quant models look at typical fundamental or and momentum related factors, we have at the core a behavioral model that processes underlying factors in a non-linear way.

The term behavioral sounds a bit esoteric, but it's actually quite straightforward. For example, consider two companies who both beat their earnings estimates, the first one by 10% and the second by 20%. It doesn't mean that the second stock is going to achieve a stock move of 2X of the first stock. Rather, it will more likely follow a kind of an s-curve where there is a sharp impact for the initial earnings beat, and then it flattens or stabilizes out. The strategy invests in a disciplined way across markets with zero net exposure to any one sector or country. We are initially launching with our Asia-Pac model and intend to roll it out gradually to Europe and US as well.

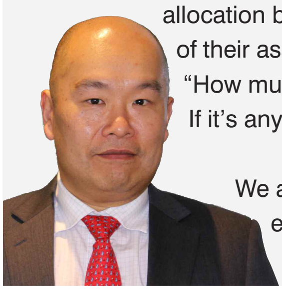
Summing up, I do believe that markets and investors are getting more sophisticated and it is important to demonstrate genuine alpha that cannot be replicated at a lower cost by anyone else. Given the stage of global markets, there is likely to be higher allocation to market neutral strategies from long biased funds.

I keep mentioning, not fully in jest, that **investors end up paying higher fees to long only managers than hedge funds.** For instance, consider a long only equities fund with a 3% tracking error and a 1% management fee. 97% of those assets could have been invested with an index fund at a fraction of that fees, and for the remaining 3% risk budget investors are paying most of the 1% fee i.e. a 33% fee on the risk taken. That's higher than what you're paying in a hedge fund! Investors are beginning to realize this and hence increasing the allocation of passive capital to ETFs.

This trend is becoming well established, but allocation to alternatives is still low for many institutional investors. In Asia there are not that many experienced investors like Bryan, who have the expertise and the confidence to say, "I'm going to allocate a significant portion to alternatives."

Matthias Knab That's actually an interesting point. Bryan, did you have to fight hard to implement this new policy, this new paradigm that you brought to Bordier?

Bryan Goh: Not really. Actually, what you referred to as hedge fund allocation is in our case not so much a hedge fund allocation but rather an illiquid sort of side pocket. When clients open an account with us, we can't just take 100% of their assets investing it in liquidity constrained strategies, that would be irresponsible. The question we ask is, "How much can we put in less liquid strategies?" Less liquid strategies for us means one month to one year lock. If it's anything longer than that, like private equity, then such an investment would have to be treated separately.



We are also active in private equity, real estate, or other high yielding investments on the private debt side, etc., but that is a separate discussion with our clients.

Roshan Padamadan I have a question about the whole issue about high frequency trading. How do you view those things like collocation of servers and giving some kind of a preferred data access? Do you think this discussion or this activity is just too much noise about nothing, or what is your view or experience? And is high frequency trading impacting anything that you are doing in Asia?

Matthias Knab To rephrase, do you as an investor or investment manager feel you are impacted by high frequency trading?

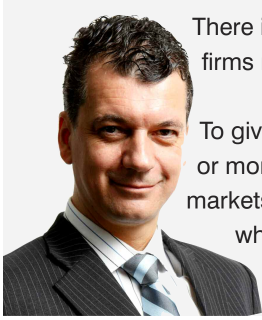
Rajesh Sundaresan: Last week I was speaking to one highly sophisticated investor in US, a real marquee investor with a potential Nobel laureate on their team. They have run high frequency strategies as part of very large funds and know that space very well. What they said is that for them, the US markets have become one of the most difficult market to trade, because of its fragmentation across multiple market places and the way the algorithms trade between these markets. By now you probably have about 50 different exchanges or trading venues with highly sophisticated competitors and it has become quite a challenge to trade. The team I spoke to are launching a new strategy, and interestingly less than 15% is being allocated to trading the markets in US while a significant majority is being allocated to emerging markets where inefficiencies are higher and number of exchanges and market places are limited.

What this suggests to me is that **even the most sophisticated investors can feel the impact of the high frequency traders and have to adapt.** The high frequency market in US appears to have consolidated and there are barriers to entry created by large institutions that have invested hundreds of millions of dollars in technology and infrastructure.

I am also curious to hear the perspective of representatives of the exchanges in this room. How do you look at high frequency trading?

Roland Schwinn: I think there are two parts of your question. One is the impact or the view on high frequency trading, are there any benefits or what are the pros and cons and side effects of it? The other aspect you mentioned relates to the fragmentation of markets like in the US with multiple venues trading the same securities. I think these are two separate aspects. Let me refer to the first one, high frequency trading.

Of course we have done a lot of research over the years and had lots of discussions also with all stakeholders and our customers. We have the view that high frequency trading helps to provide liquidity. However, when you refer to some guys making millions and millions, **what we have seen over the years is that the names of those who are making the cut via some sort of high frequency trading also change.** So you are not seeing the same people all the time, we have seen firms and teams come and go in that space over the years. Some of them run the race and keep the pole position for a number of years, and then suddenly they are gone, or they fall back significantly.



There is no free lunch, as we all know. The lunch for high frequency firms comes at extremely high costs. Those firms need to cover enormous IT costs, and it's therefore quite a risky business.

To give you an idea, connecting to one single exchange only can easily come up to USD 50,000 - USD 60,000 or more per year for the colocation services, market data and the data lines. And if you do that for three or four markets, you can imagine you have quite a high cost base already from the infrastructure site not to mention what you need to pay your traders or developers.

Steve Knabl: You are right, we have just done this and established a direct connection to the Korean exchange for one of our funds. So we leased lines to the Korean exchange with a collocation of servers on the exchange, and exactly what as you are saying, it costs about 60,000 US dollars to do that. So it is a recurring cost, and it's not cheap. Plus market data, just so you have an idea. And market data is not your hundred dollars that you may pay to a data provider like Bloomberg to get access to the Korean exchange, but it's thousands of dollars a month because you're getting all the data plus historical data. If you factor in everything, the aggregate cost of being connected directly to an exchange is easily about $100,000 a year.

Now, that expense has to make sense for a fund. It may make more sense for a large fund, but also then have in mind that for a large fund, everything in a way gets bigger and more expensive, also the teams. The guys who develop the algorithms are not cheap, and traders are not cheap.

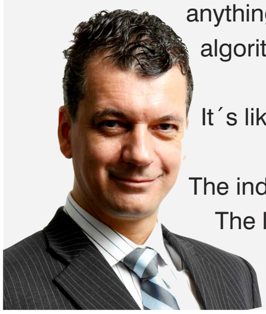
Systems now need to be duplicated, and latency becomes an issue. Actually, for many of those guys **it is more about latency than high frequency.** Basically, what they need is access the market at a single point in time.

As you know, the algorithms that are running are not running locally where the traders are, but they are running on the servers in the exchange, so when it triggers a trade, the trade is triggered right at the exchange.

From what we have seen, a high frequency trader can have a long or short lifespan in terms of their strategy. Possibly a certain strategy is in a way a niche strategy that could last a certain time, but generally at some point, all type of inconsistencies in the market can also get absorbed by the number of users coming in. So a firm might be able to have an edge for a couple of years, and then their advantage just disappears, and that's why we see them go and somebody else may come along doing something new or different.

We like to believe that markets are efficient. That is in a way what we all want to believe: markets are efficient and information is always there, that things are right. My way of expressing this is rather that over time, **markets *become* efficient**, they get more efficient. But in between, you can always find some inefficiencies.

Roland Schwinn: This is exactly also what our experience is. Most of the low latency trading firms, and I would also prefer that term, trade niche strategies. They are also highly vulnerable to any changes in the trading environment, and this can be anything, starting from change in market patterns as well as a modification of the exchange's matching algorithm.

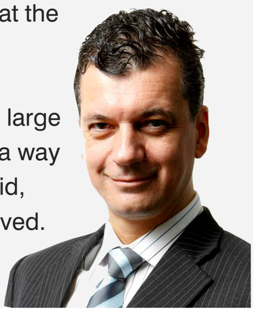


It´s like in Formula 1: very high speed but also high cost, and with high risks.

The industry has also engaged in discussions with regulators. Germany passed a high frequency law in 2013. The law requires a certain ratio between placed orders and executed orders for example, thus a certain order to trade ratio must now be maintained.

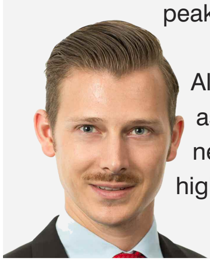
Steve Knabl Would you agree that most of these strategies are actually strategies are very niche and have a limited scalability? That is why we wouldn't expect it to impact too much the market in general, simply because of the low scalability of this type of strategies?

Roland Schwinn: Looking at the patterns and the kind of life cycles that we observe where firms could be at the forefront for a certain time and fall back, all of this indicates that we are mainly looking at niche strategies.



But again, the biggest contribution to the market is liquidity provision. Markets change all the time, a single large player entering a certain market can change it for maybe one or two years. So certain trading strategies in a way can have a certain influence on the markets, to general trading patterns and order book patterns. As we said, apart from running niche and thus sensitive strategies, the other main risk is clearly the very high cost involved.

Peter Fricke: When we look at the overall volume contribution by so called high frequency or low latency traders, it has peaked probably two or three years ago and since then has been more or less really stable.



Also when it comes to the number of players, we don't see too many new entrants entering this space. Rather, as we have described, a few ones will be dropping out over a certain period and those will then be replaced by new ones. So from both the number of players and their trading volumes we haven't seen an overall increase in high frequency trading over the last one or two years.

Matthias Knab But could this containment in a way also be a result of the German high frequency act, because that will apply also to Eurex and Eurex clients, no?

Roland Schwinn: Possibly, but there are also another dynamics at play.

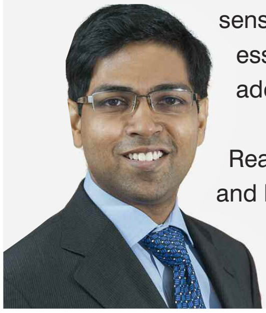
Some of the smaller high frequency shops that were set up were traders or small teams spinning out from banks and setting up their own firms. They may get some seed money or the typical friends and family money. So in this case, they may also have external investors, who at some point will pull the plug and demand their money back after three or four months, if the returns are not what they expected. Those are the type of rearrangements and reshufflings that you might see in this space, and it's at the end a limited number of players that are active here because of those risks and the relatively high hurdles.

Roshan Padamadan: I am a high latency trader in the sense that my quickest trade has been 30 minutes or something like that. I typically analyze and think for weeks and months before I put on a position.

What I want is essentially a level playing field. I'm happy to take on an ETF programmer or a high frequency program trading, I call them a low latency competitor.

The biggest difference I find is for example in the US where sometimes I can see orders going on the fourth decimal. I tell my broker, "Okay, my order is this. I want you to accept this order in four decimals." They said, "No, Roshan I can only give you two decimals." I then reply, "But I can see that it's happening, why can't I get it?" And he goes: "No, no, I can't give that to you, our systems don't support that."

So I want a level playing field. **This means if the low latency guys get 40 or 50 different order types, I also want the same.** I'm limited to four. I can only do a limit buy, limit sell, stop loss, market. And of course anybody who knows the US markets knows that this is a very loose market and you can get easily ripped of because of the 50 exchanges and the rule that you have to search for the best national bid-offer, giving the loophole for the low latency trader. When it comes to the low latency programs, their capacity is limited because they have no real view of where, say, General Electric is trading now. They are just sensing the market demand by pinging, and so forth. They are just provide a very limited liquidity and are essentially scalping, they are not providing any real liquidity, because canceled orders never provide any additional liquidity.



Real liquidity is when you are willing to take the other side. So if GE is falling 5% and you are able to buy and hold, that is liquidity. Otherwise, it's just sensing demand on both sides. So they sit on those 50 exchanges and are sensing demand, so they may see a seller over here, and then some limit buyer over there, so they just take it from this guy and give it to the other guy.

Those guys would have found themselves anyway in five seconds, but these guys are faster, and they are going in and take .001 cent on each site.

I understand that's a strategy, that's fine, but sometimes when I see my order not being filled by the fourth decimal point, I know that I have been scalped. But then I say, "Well, but it's okay, I don't have daily liquidity, so I will just go back the next day and try to buy it all then..."

So this is my remedy. I always do limit orders and stick to them. This is fine for me, because I can be a high latency investor, I do have a real and researched view on a stock. But if you have a large fund, let's say you are Fidelity and you want to sell a lot of things and they sense the order, you have nowhere to hide because maybe you're selling it because your portfolio manager has told you to sell. So that order will executed that day because Fidelity has daily liquidity. However, **the high frequency or low latency traders are using somebody's limitation to make money**. In the current market structure, this is a valid way to make money, but basically I just want the same order types. Normal brokers should have those order types for their clients as well.