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Opalesque Roundtable Series '16

MONTREAL

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Editor's Note

A world-class city in the alternative investment space

Québec is the second-most populous province (8.3m) in Canada (after Ontario) and the only one to have a predominantly French-speaking population, with French as the sole provincial official language. With a territory nearly three times the size of France or Texas, most inhabitants live in urban areas near the Saint Lawrence River between Montréal and Québec City, the capital.

Montréal is definitely a world-class city in the alternative investment space, for a number of reasons. For one, you can find some excellent universities here: McGill University, Concordia, HEC Montréal, and Université de Montréal. Second: the Montréal Exchange has launched equity options in 1975, right after CBOE launched the first options in the US. Like in Chicago, this derivatives exchange created a lot of talent in terms of trading, operations, regulations, and market know-how. The third reason, and this is another very special feature of Montréal, is the quality of the institutional investing space. **Some of the finest pension funds that invest in alternatives are in Montréal** and have world-class respect; Caisse de depot, PSP, Bimcor, CN and Air Canada. There are also some very sophisticated family offices in Montréal.

Canadian banks have a strong presence in Montréal, along with some well established investment firms, and consulting firms. One can find some talented hedge fund managers, emerging managers, and private prop traders. All of this creates a very rich ecosystem for the finance community in Montréal. Besides, this city just short of 2m inhabitants offers one of the **highest densities of CFAs and Masters in Finance per capita in the world.** The resulting pool of knowledge and expertise that can be drawn upon by investment managers, be them traditional or alternative, is impressive and quite attractive.

Residents also praise the low cost of living compared to cities like Toronto and Vancouver. In addition, it is seen as very safe and lively multicultural city with a wide spectrum of cultural/sport events, and a wonderful "joie de vivre" -- very likely a legacy of the French influence that started in 1534 when Jacques Cartier planted a cross in the Gaspé Peninsula, claiming the land in the name of King Francis 1st (François au Grand Nez ("Francis of the Large Nose")). Québec has one of the world's largest reserves of fresh water, occupying 12% of its surface, representing 3% of the world's renewable fresh water. More than half a million lakes, including 30 with an area greater than 250 square kilometres (97 sq mi), and 4,500 rivers pour their torrents into the Atlantic Ocean.

Montréal's Emerging Managers' Board and the PGEQ (investors') win-win strategy

The Montréal based Emerging Managers' Board (EMB) is a non-profit organization whose mission is to promote and contribute to the growth of Canadian emerging managers. It strives to educate asset allocators and investors about the benefits of investing with local talent and encourages family offices and institutions to invest an additional 1.5bn$ with local emerging managers by 2016. The long term goals is to get the largest pension funds in Québec to i**nvest 1% of their AUM (so around C$3bn) with local emerging managers.**

On the investor side, institutions have joined forces in an initiative called PGEQ (Programme des Gestionnaires en Emergence du Québec). The PGEQ is a Fund of Fund of Québec emerging managers in long-only and alternative investments. The PGEQ is also **seeding emerging managers with up to C$50m.** Its investment committee is formed with financial community members such as consultants or people that sit on pension funds investment committees that volunteer for the organization.

To qualify for an investment, each manager goes through a **four step process.** A manager's strategy presentation and track record gets vetted by a panel comprised of pension plans, emerged money managers and consultants. First these people vet a short questionnaire discussing the firm and strategy in broad terms, then a long questionnaire, which is similar to a full due diligence questionnaire. Later there is an on-site vetting process, and finally you will be facing a selection committee. If a manager goes through the four stages, he will get seeded.

Both the EMB and PGEQ are unique and of course very complimentary organizations. The important factor here is that a number of pensions pool their money, so they are not exposed to a single manager but rather a pool of alpha or a pool of beta for the long only strategy. These initiatives are very interesting and positive in the sense that it encourages the local young asset managers in developing their strategies, their business, and it's also benefiting the community and society through the pensions and all the investors involved. It's a win-win-win strategy.

This Opalesque Roundtable took place May 2016 in Montréal with:

1. Thai An Le, CAIA, Senior Manager, Castle Hall Alternatives
2. Marc Amirault, CFA, Founder & CIO, Crystalline Management
3. Brian Gelfand, Chief Regulatory Officer, TMX | Montréal Exchange
4. Pierre-Philippe Ste-Marie, Founder & CEO, Razorbill Advisors
5. Ranjan Bhaduri, PhD CFA CAIA MBA, Chief Research Officer, Sigma Analysis & Management
6. Ben Djerroud, PhD, Sr. Director, Portfolio Analytics & Management, Sigma Analysis & Management

The group also discussed:

- Empirical evidence has shown that many smaller emerging managers outperform larger ones. However, investing in smaller managers can also carry bigger risks. *How does the PGEQ address the key challenge to provide the necessary credibility and the level comfort needed to convince (especially the smaller) allocators' investment committees to participate in this seeding/investment program?*
- Evolution: What is "Due Diligence 1.0 / 2.0 / 3.0"?
- How hedge funds have come to set the benchmark: Which types of practices that have become standard within the hedge fund industry are now being taken up by other type of asset managers (e.g. real estate, PE, VC fund managers)?
- Why more and more hedge fund service providers evolve to be true FinTech firms
- How new forms of benchmarking can mean trouble for a fund manager
- The value add of an investor-owned managed account platform solution. How managed accounts can help managers pass due diligence.
- How their managed account platform "solved" the financial crisis for Sigma Analysis
- Cyber security policies and changes in assets liquidity distribution
- Why Canada's regulatory environment is a forte for alternative investment managers
- Making money with arbitrage: Cristalline's annualizes 8.5% net since 1998 inception

Enjoy!
Matthias Knab
Knab@Opalesque.com

Participant Profiles

(LEFT TO RIGHT)

Matthias Knab, Ben Djerroud, Pierre-Philippe Ste-Marie, Ranjan Bhaduri, Thai An Le, Brian Gelfand, Marc Amirault.

Introduction

Ranjan Bhaduri
Sigma Analysis & Management

My name is Ranjan Bhaduri. I work as the Chief Research Officer at Sigma Analysis & Management. Sigma Analysis & Management provides customized managed accounts for large institutional investors, and is a Think Tank in Hedge Fund Research. Sigma offers structural alpha and helps design and implement innovative hedge fund fee methodologies.

My own experience has been in due diligence, portfolio construction, structuring, and research. I'm actually bilingual in having a lot of experience in both investment due diligence and operational due diligence.

Pierre-Philippe Ste-Marie
Razorbill Advisors

My name is Pierre-Philippe Ste-Marie. I am the Chief Executive Officer of Razorbill Advisors. We are a Montréal based emerging manager specialized in fixed income investing. Prior to Razorbill, I worked for National Bank of Canada, more recently as a Managing Director and built a team around me in the Treasury Department centered on quantitative credit modeling and investing. We left in 2013 to open Razorbill Advisors.

Ben Djerroud
Sigma Analysis & Management

My name is Ben Djerroud, a Senior Director of Portfolio Analytics and Management at Sigma Analysis & Management based in Toronto, Ontario. I joined Sigma shortly after its inception in 1999. My role at Sigma evolved with the firm's growth and centers generally around using quantitative analysis to enhance the investment decision: from providing analytic solutions for financial institutions through consulting, to offering portfolio construction, asset management and advisory services to family offices and institutional investors in the hedge fund space. The services evolved later to the Managed Account Platform (MAP) solutions that Sigma offers today.

In my role, on a daily basis, I oversee the risks that hedge funds managers take on behalf of institutional investors, assess the manager's performance relative to the risk, and relative to the investor expectations. In this role, with the transparency that the MAP offers, I get the privilege to be exposed to various hedge fund strategies, and to understand the thought process of the hedge managers, with whom we communicate regularly. I also get the privilege of communicating and working with sophisticated institutional investors who share with us their thoughts, ideas and expectations.

Brian Gelfand
Montréal Exchange

My name is Brian Gelfand. I am the Vice President and Chief Regulatory Officer at the Montréal Exchange which is the Canadian financial derivatives exchange. We list futures on interest rates and indices, and equity options on single stocks, ETFs, and indices.

I have been with the Exchange since 2001. I have been in charge of market regulation since the end of 2013. Prior to that I was in charge of all of our relationship management, client connectivity, market operations and market microstructure.

I joined the Exchange as the founding Director of the Derivatives Institute, which was the Exchange's training service. We built and delivered online and in class training on derivatives and risk management for both retail investors and market professionals. Before joining the Exchange I was the Special Advisor to the Secretary-General of IOSCO, where I worked on international regulatory policy.

Thai An Le
Castle Hall Alternatives

My name is Thai An Le, I am a Senior Manager at Castle Hall Alternatives. Castle Hall provides operational due diligence services to investors to help identify risk factors which elevate the risk of financial loss or business failure to material levels. A differentiating aspect of our firm is that we represent allocators only, and we don't build portfolios for clients or provide any advisory services to avoid potential conflicts of interests.

We are now in our 10th year of operation and have several thousand funds under coverage globally. Our clients are predominantly U.S. and Canadian pension funds, but we also maintain a diversified client base across family offices, foundations, endowments, and sovereign wealth funds across the world.

Castle Hall initially focused on hedge funds, but over time with the increase in scrutiny by both regulators and institutional investors, we have been conducting ODD across all types of third party asset managers, and now have an extensive portfolio of private equity, venture capital, real estate, and even long-only funds under coverage.

Marc Amirault
Crystalline Management

My name is Marc Amirault. I am the founder and CIO of Crystalline Management, one of a handful of alternative strategy managers based in Montréal, Canada, and … a relatively long standing one also! Crystalline was founded in 1998 when my partner Jean-Pierre Langevin and I launched our flagship product, the Amethyst Arbitrage Fund. Amethyst is the continuation of the arbitrage strategies I had the opportunity to implement and manage during the last four of my 13 years previously spent at the Caisse de Dépôt et Placement du Québec (CDPQ).

Started with a modest amount of capital in 1998, Amethyst has won several awards over time in recognition of the quality of its results. The Fund is also offered in a non-Canadian resident version to international clients.

The Company recently merged the operations of a local global-macro investment advisor and expanded the investment team with fixed income expertise. On February 1st of this year, we launched the Emerald Global-Macro Fund, a strategy focused on generating alpha through directional exposures on all major asset classes. Together with a handful of managed accounts, the global-macro strategy represents close to $40 million in assets.

With a highly skilled staff of 16 including 7 PMs, an enviable institutional client base both in Canada and internationally, an AUM of C$250 million as of May 2016, Crystalline is committed to increasing its presence on the alternative investment space with the development of rewarding and non-correlated investment strategies.

Matthias Knab Let's look at the role Montréal plays within the global alternative investment universe. Why should people look at Montréal and the province of Québec, why are they relevant?

Ranjan Bhaduri: I have had the privilege and pleasure of traveling all over the globe to meet with different institutional investors, hedge funds and to see different investments, and Montréal is definitely a world-class city in the alternative investment space. I believe there are three main reasons for that.

For one, you have some excellent universities here: McGill University, Concordia, HEC Montréal, and Université de Montréal. The second reason is that you have the Montréal Exchange. I had previously lived and worked in Chicago where I could see how the derivatives exchanges there created a lot of talent in terms of trading, operations, regulations, and understanding how the markets work, and this talent helps to foster more knowledgeable professionals. Here in Montréal, we have the same effect with regards to the Montréal Exchange. In some ways, it is a positive luxury for a city to host an Exchange, as there is a sizable positive impact, and second order benefits as well.

The third reason, and this is another very special feature of Montréal, is the quality of the institutional investing space. Some of the finest pension funds that invest in alternatives are in Montréal and have world-class respect; Caisse de depot, PSP, Bimcor, CN and Air Canada. There are also some very sophisticated family offices in Montréal. And for a city such as Montréal to have that many high quality institutional investors is a very special characteristic.

The Canadian banks have a strong presence in Montréal, along with some well established investment firms, and consulting firms. One can find some talented hedge fund managers, emerging managers, and private prop traders. All of this creates a very rich ecosystem for the finance community in Montréal.

Also from a personal level, Montréal has always been a near and dear city to myself. I went to grade seven here at Westmount High School when my father, who is a Professor of Physics at McMaster University, was on a sabbatical at McGill. I watched my first NHL game here at the Forum – the Chicago Blackhawks against the Montréal Canadiens. So I can add from personal experience that Montréal is just a tremendous city as well.

Pierre-Philippe Ste-Marie: Ranjan just gave an excellent overview, I would also add from personal experience that the ecosystem in Montréal is fantastic, and that this ecosystem means that we are able to attract highly qualified international talent.

The core of my team includes a PhD in Theoretical Physics from England and a PhD in Computer Science from France. Our team is multi disciplinary but we all share international profiles. We found that Montréal is welcoming, but also that the ecosystem supporting the managers and their families is quite exceptional.

Also, as Ranjan already mentioned when it comes to local talent, because you have so many good graduate schools and because science is quite important here, you can find great talent in science oriented disciplines. Given the nature of our company, it is very important for us to find good programmers, good modelers, people in engineering and physics. This intellectual power is not something that people may think of first when they hear of Montréal, but we do have very extensive networks of very specialized talent that lives here, because they like the city, because of everything that's around it, because of you can get the support I've mentioned when coming to live here.

Thai An Le: Ranjan and Pierre pretty much outlined all of the reasons why it's great to be here, but let me add that Montréal is a melting pot so there is great pool of bilingual or even trilingual candidates with very diverse backgrounds.

For Castle Hall, we chose Montréal for all of the reasons previously mentioned. It's also a better choice from a cost perspective as overhead is a lot less expensive, the work/life balance is great, and there is less poaching of talent as compared to New York or Toronto.

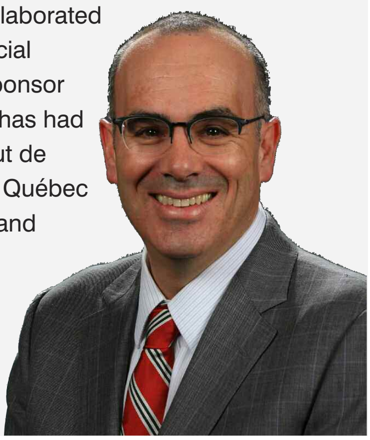
Marc Amirault: I agree with Thai An, the cost of living is very low in Montréal compared to cities like Toronto and Vancouver. But not only is Montréal a very safe and lively multicultural city with a wide spectrum of cultural/sport events, it also offers one of the **highest densities of CFAs and Masters in Finance per capita** in the world. The resulting pool of knowledge and expertise that can be drawn upon by investment managers, be them traditional or alternative, is impressive and quite attractive.

Brian Gelfand: It's a great city for combining the advantages of an urban environment and the availability of outdoor activities. There is a wonderful joie de vivre in Montréal, and world-class restaurants and festivals. I can cycle, sail, and hike without leaving the island of Montréal, and there are more lakes and mountains within an hour's drive of the city.

The Montréal Exchange has been central to the development of the financial sector in the city. MX was one of the first exchanges to launch exchange-traded derivatives. We launched equity options in 1975, right after CBOE launched the first options in the US, and we launched interest rate futures in 1988.

A lot of people got their start in the business on the floor of the Exchange, and there is still a community of former Montréal Exchange floor traders, market makers and brokers who form a strong foundation of the derivatives community in the city.

Since the floor closed, the Exchange has worked very hard to continue developing the derivatives sector in the city and to make Montréal a center for derivatives excellence. At the Exchange's Derivatives Institute we collaborated with the University of Québec at Montréal (UQAM) to set up a graduate diploma (DESS) in financial derivatives. We also sponsor a trading room at the same University. On the national scale we sponsor scholarships for graduate dissertations in finance and we run an options trading simulation that has had more than 3000 university students competing for prizes. In addition, Montréal boasts the Institut de Finance Mathématique de Montréal (IFM2),an institute for financial mathematics founded by the Québec government in 1998, and the University of Montréal's Institute for Structured Financial Products and Derivatives.



The Montréal derivatives and finance community has spent time and effort and money on sustaining the development of expertise and talent in the city.

Pierre-Philippe Ste-Marie

I am part of that crew. I started in 1997 as an upstairs market maker trading OBX, which are the equivalence of the Eurodollar futures options. I was trading OBX as a market maker, and then I moved into bond options, swaptions and later exotics. Without the Montréal Exchange I wouldn't have had a first chance in fixed income, which led to where I am now.

Matthias Knab So how has the asset management industry here developed?

Pierre-Philippe Ste-Marie: There are a few big flagship operations in Montréal in asset management, mostly in traditional asset management. There is Hexavest, which is headed by Vital Proulx. Then there is Addenda and Fiera Capital. We have, AlphaFixe and also Jarislowsky Fraser which is more on the wealth management side.

The most established firm in Montréal on the alternative investment side is Crystalline. Marc, I think your firm is really the reference in our province. Our firm is now three years old, so we are emerging. But there are others, Ipsol Capital and Landry Investments also have alternatives products.

Montréal has a unique initiative called the **Emerging Managers Board** (EMB). It is comprised of many of the alternative investment managers in Québec, Razorbill Advisors is part of that association. The Emerging Manager's board is a non-profit organization whose mission is to promote local emerging managers, local being Canadian. So far it has only deployed in Québec. It should launch in Ontario next year if all goes according to plans and expand to the rest of Canada over the next few years.

The EMB has more than 50 members so far in Québec. There are about 40 voting-members which are actual managers registered with the AMF. An emerging managers is defined as having less than 1B$ AUM. More than 50% of the managers have alternative products. The EMB has been founded to invest in the next generation of entrepreneurs in asset management, innovate and grow our financial sector.

The EMB's goal is to get the largest pension funds in Québec to invest 1% of their AUM with local emerging managers. From our computation that would be the equivalent of 3B$. Once that kind of money is invested towards emerging managers, we think we will find great momentum and be able to support our local talent to emerge. On the investor side we have an initiative called PGEQ (Programme des Gestionnaires en Emergence du Québec). **The PGEQ is a Fund of Fund of Québec emerging managers in long-only and alternative investments.** We do not think this initiative is common around the world. It created a momentum that is now enabling firms which otherwise may not necessarily have the size to be noticed by larger players. We are able to have our investments vetted by the PGEQ Investment committee. The PGEQ investment committee is formed with financial community members such as consultants or people that sit on pension funds investment committees that volunteer for the organization. It is a genuine example of the community coming together for the community. It is a great initiative.

Matthias Knab Tell me more about how this consortium works and interacts with the emerging manager community. Does PGEQ also provide seeding, for example? Please tell us the whole story, this is indeed very unique and highly interesting!

Pierre-Philippe Ste-Marie: Marc's firm has already been chosen for the alternative side, so he can add to what I am saying, and my firm is also going to apply. Razorbill Advisors won a mandate on the long-only side and we will apply on the alternative side in the next few months.

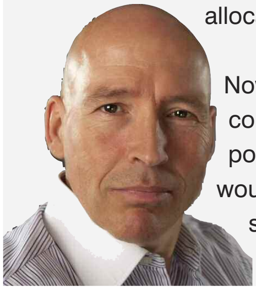
Each manager goes through a four step process. You submit your strategy presentation and track record, and this gets vetted by a panel comprised of pension plans, emerged money managers, like for example Hexavest and AlphaFixe, and consultants.

First these people vet a short questionnaire discussing the firm and strategy in broad terms, then a long questionnaire, which is similar to a full due diligence questionnaire. Later there is an on-site vetting process, and finally you will be facing a selection committee. If you go through the four stages, you get seeded.

Matthias Knab What size is a typical seed investment?

Pierre-Philippe Ste-Marie The size depend on the strategy and the demand for the strategy. The important factor here is that a number of pensions pool that money, so they are not exposed to a single manager but rather a pool of alpha or a pool of beta for the long only strategy.

Marc Amirault: Worth noting is a key preoccupation of PGEQ in allocating money to emerging managers: ensure that each manager is/will be in a sufficiently stable financial position to focus on the money management side of the business and have enough resources to meet all compliance issues relevant to their firm and their investment strategy. Thus, and given the fee structure, a much larger allocation was given to managers of long only strategies - around C$50 million, and an allocation varying between C$12 to 20 million for managers of alternatives strategies.



Now, in regard to the funding of the PGEQ program itself, my guess is that larger funds such as CDPQ would contribute somewhere between C$40 to 50 million to the Alternative pool (size approx. C$100 million) and possibly a similar amount in the long only pool targeted at C$200 million. Smaller institutional allocators would likely invest from C$10 to 25 million in one or both EM funds depending on their own asset allocation strategy.

Ranjan Bhaduri I serve on the AIMA Canada Managed Futures Committee as a Co-Chair. There are not many CTAs in Canada. If we apply the formal definition of a CTA, there are about a dozen in Canada. In Montréal I know of four emerging CTAs; two of them are at this table. So it is exciting to see that Montréal is developing more emerging CTA managers. Incidentally, globally, one of the trends that Sigma is observing is a renewed interest in the emerging manager space.

Ben Djerroud Actually it's a nice coincidence that we are talking about this initiative. I heard of it only yesterday while attending a seminar, here in Montréal, on recent regulatory developments for alternative investments. One of the attendees mentioned this initiative. I was pleasantly surprised, for me this is an additional indication that in Québec we are at the forefront of innovation. It's an initiative that I have not heard of in Ontario or elsewhere in Canada.

This person did mention that this idea was supposed to be national, but then it's only here in Montréal, Québec that it finally took off. I find this initiative very interesting and positive in the sense that it encourages the local young asset managers in developing their strategies, their business, and it's also benefiting the community and society through the pensions and all the investors involved. It's a win-win-win strategy.

Matthias Knab Do you have an idea why it didn't happen to be national?

Ben Djerroud It was a short conversation so I didn't get the chance to ask.

Marc Amirault: I think that such an initiative was bound to start somewhere in Canada and it just happen that Québec was readily prepared to embrace the opportunity. Most people will wait until it becomes clear that this new approach works and is widely accepted. In the case of the PGEQ initiative, while some of the ingredients for success were already in place, what was missing was a champion to execute and make it happen.

In some other jurisdictions, including certain US states, a somewhat similar program is already in place where institutional allocators are encouraged to allocate a certain percentage of their assets to emerging managers. What is more, empirical evidence has shown that many smaller emerging managers outperform larger ones. However, a key challenge, especially for smaller allocators was to provide the necessary credibility and the level comfort needed to convince the allocators' investment committees to participate.

These issues were addressed with the help of several parties adopting a collaborative approach:

1) Two heads of large money management firms accepted the task to lead the implementation.

2) Several well-known consultants/actuary firms based in Montréal believed in the merit of the project and decided to speak to some of their clients about the opportunity to allocate money.

3) Innocap, an investment platform owned jointly by BNC and BNP Paribas, accepted to manage the program on their platform – performing the due diligence, monitoring the activities of the individual managers and the overall performance and risk. Finance Montréal, a non-profit organization devoted to the economic development of Montréal also played a key role in creation of the project.

As a result two funds were created, one for alternative strategies and a second for long only strategies. In due course, the model will most likely be exported to other provinces or nationally.

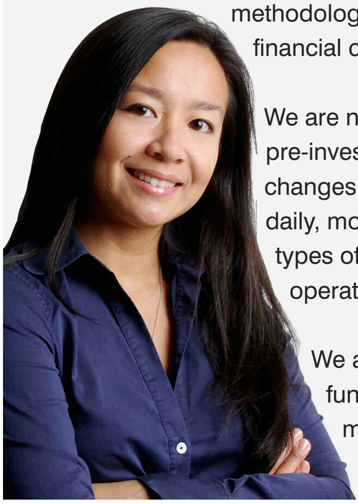
Pierre-Philippe Ste-Marie To this I would like to add that Finance Montréal is a catalyst for the PGEQ project. When the project was launched, it was done under their umbrella, they had a place for it, and that helped quite a bit, having an organization that was willing to sponsor it.

Matthias Knab I think this is really an excellent model that also I haven't heard anywhere else globally and I think this should be copied around the globe.

Thai An, Castle Hall does operational due diligence on hedge funds globally. What are some of the developments you have noted lately?

Thai An Le: We are seeing an incredible increase in demand for operational due diligence reviews - it's gaining so much traction everywhere in the world. Investors now consistently recognize that, when giving capital to an external manager, the process to identify and address operational risks is a key part of the overall investment process. **What has changed over the years is the approach to operational diligence.**

When we first started conducting these operational due diligence reviews, the industry operated under a different model. What we call **"Due Diligence 1.0"** was pre-Madoff: ODD on hedge funds was a luxury option, a nice to have, but the scope and methodology of the process would differ greatly across investors. **"Due Diligence 2.0"** was post-2008 when the ODD methodology became increasingly structured and somewhat standardized across investors. Since the financial crisis – and Madoff - most investors have introduced some kind of ODD on hedge funds.



We are now moving towards a **Due Diligence 3.0** model, where diligence is no longer simply about a pre-investment ODD report, updated with an annual onsite visit. It's a dynamic industry with material changes that need to be addressed right away, and we have realized the need to actively monitor funds daily, monthly and quarterly. And as I've previously introduced, we are now providing ODD reviews on all types of asset managers, and we are really seeing the increase in investor appetite for consistent operational risk information across all funds and account holdings.

We are also seeing a trend where best practices that were historically only petitioned in the hedge fund industry are being replicated onto the operational framework of other types of alternative asset managers.

Matthias Knab For example, which ones? Which types of practices that have become standard within the hedge fund industry are now being taken up by other asset managers?

Thai An Le: Let's take the private equity and venture capital spaces as examples. While it wasn't the case in the past, today 99% of hedge funds have a third-party administrator, otherwise it would be very difficult for them to raise capital. I would say that only about a third to a half of private equity funds have appointed an administrator. This is a standard that has been well established within the hedge fund industry, and over the next five years we would expect to see a majority of PE funds onboard a third-party administrator as well.

On its side, venture capital is at the bottom of the barrel, so to speak - there is much less regulatory oversight and funds often have a weak control environment. For example, we continue to see venture capital funds where one person can sign alone to move investors' cash from the fund, which is a pretty basic control deficiency. I think that's something that will move along the operational best practice curve as well over time.

Matthias Knab I really want to stay on that point again, because so often hedge funds get bashed and get the bad reputation, but now it seems like there's a good deal of best practices in hedge funds that other fund sectors are lagging on and slowly taking up. You mentioned third-party administrators and cash control, what else is the world taking over from the governance of hedge funds?

Thai An Le: That’s right, there are a few deal breakers when we review a fund, and most large hedge fund managers are already following best practice.

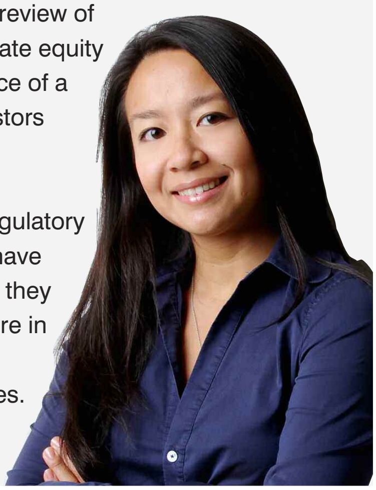
Let’s take segregation of duties as one example. Most large, established hedge funds have a clear delineation between front and back office roles. You can’t have a portfolio manager or a sales staff also be the compliance officer, or have investment staff, whose compensation is directly linked to the performance of the fund, also be responsible for valuation. Obviously, when you are launching a new hedge fund and you are a two-person shop, employees are bound to wear multiple hats at the beginning, but over time as AUM levels grow we would encourage managers to onboard a COO to take on back office functions.

Matthias Knab So those are the characteristics and procedures of hedge funds that are now being also demanded from other funds types, like real estate, private equity, etc. Is it fair to say that hedge funds have actually set the benchmark?

Thai An Le Yes, I would say so.

Ranjan Bhaduri Thai An, would you also add independent directors to that, because many private equity funds don’t have independent directors?

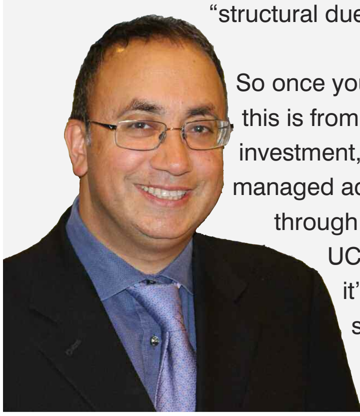
Thai An Le: I think that’s also a trend that’s coming on board. I would say that most private equity vehicles are limited partnerships and therefore are not subject to oversight from a board of directors – from a governance perspective, the limited partnership structure is far from ideal. Many funds do have a “limited partnership advisory committee”, or “LPAC”, but the role of the LPAC falls far short of the scope and obligations of a true board of directors. Most LPAC members are also investment professionals, despite the LPAC’s role being focused on legal and compliance matters such as review of potential conflicts of interest. Again, investors have historically not been as demanding with private equity funds as they have been with hedge funds. As they become increasingly aware of the importance of a sound operational framework across all asset managers, not just hedge funds, we will see investors engage much more actively with private equity firms to require a move towards best practices.



But to Matthias' point, in the hedge fund industry, following best practices isn’t only driven by regulatory requirements anymore. While clients each have their own points of sensitivities, they generally have the same deal breakers. Especially if you are looking to raise capital from institutional investors, they generally know what best practices are now and have a checklist of mandatory items they require in a hedge fund manager. Not only do managers have to comply with the regulatory environment, they have to satisfy investors’ demand for implementation of appropriate policies and procedures.

Ranjan Bhaduri: I know that the fees that some private equity funds charge have received some regulatory scrutiny. And obviously in the hedge fund industry, one of the trends that we are seeing relates to fee compression, but it has been a situation where in general hedge fund fees have been quite a lot less than private equity fees. Private equity fees can have hidden fees and less transparency, so one has to be careful. It is not enough for an investor to merely state that they have a long time horizon and therefore can make an illiquid investment; an investor wants to ensure that its portfolio is getting properly compensated for taking on this illiquidity. It is very easy to underestimate the value of liquidity.

But rewinding to some of what you were speaking about earlier on operational due diligence, we have seen similar trends. Just looking at the evolution of due diligence, 20 years ago it was investment due diligence, and then 15 years ago operational due diligence, and then post-Madoff I would add another dimension of due diligence that I have labeled as "structural due diligence."



So once you know that a certain investment will add value and you wanted to add it to your portfolio – and this is from the institutional investor's perspective – what's the best way structurally to access that investment, is it through the hedge fund manager's flagship fund structure, is it through a separate managed account, is it through an external managed account platform, is it through a fund of one, is it through some kind of a customized managed account solution or if the hedge fund manager has a UCITS or a '40 Act type of product, is it through that? There is no universal answer to that question, it's always going to be case by case depending on many different considerations, but that structural dimension is very, very important because there is a lot of alpha that can be extracted from that.

Pierre-Philippe Ste-Marie

Ranjan, with your global experience, are there certain characteristics in alternative investment firms you find here in Montréal that could be identified as differentiated compared to the rest of Canada? And then, any characteristics that separates Canadian alternative asset managers from their US counterparts?

Ranjan Bhaduri

In Canada, and very much including Montréal, the large pensions have really implemented a model of governance. Ontario Teachers' Pension Plan was the pioneer, but many of the pensions based in Montréal have embraced governance and created their own identity, meeting their specific needs. Montréal is world-class for institutional investors and ice hockey.

Matthias Knab

Thai An, you said the ODD has changed from pre-investment or yearly reviews to may be quarterly or even ongoing, so please tell use more about how you do this now? Do you actually do ongoing risk management monitoring, you have the systems in place to do that? I would say that this represents a fundamental change of your own business, procedures and resources, no?

Thai An Le: Absolutely – the legacy approach to diligence was based on "snapshots", where a diligence team interviewed a fund manager every 1, 2 or 3 years and produced a report that then went in the drawer until the next update. We think this process is now outdated. Nearly two years ago we launched OpsMonitor, which starts with daily media reviews and rolls through to monthly, quarterly and then annual reviews of any changes at both manager and fund levels.

Another trend in Montréal is the influence of high technological companies on the financial industry.

We've actually become a FinTech company ourselves, with 10 technologists on staff developing our online due diligence app. Investors no longer want to read a 50-page diligence report once a year: instead they much prefer to quickly identify relevant, material changes from quarter to quarter, to have a clear picture of the operational environment of a firm by easily seeing what has improved and what has worsened over the quarter. Our platform curates a large amount of data and flags issues and news immediately.

Our tech development has allowed us to create a **diligence dashboard** which provides qualitative and quantitative data to compare a fund's risks across time, and also compare data across all funds. If a client has 100 funds under coverage, they will be able to see quickly, for example, which of their 100 funds have an expense ratio exceeding 50 basis points over the last year. This really gives them a good sense of where their funds are and how they evolve over time, and it enables a discussion with the investment manager to ask why there is an expense ratio of 75 bps when all other funds are within a 25-35 bps range.

Matthias Knab This would put a guy into trouble if he has a higher expense ratio?

Thai An Le: Exactly! It's a way of identifying outliers and it provides leverage during a discussion with managers. It allows investors to, for example, request more color on something that is done differently than at other firms. In this example investors would request an explanation as to the type of expenses that are being charged back to the fund, and they would have a legitimate piece of evidence to raise their concern. Of course, we also have to adapt to the asset class - real estate, PE, and long/short equity funds will have different types of expenses, and this will also be captured through our platform. Other examples of data that can be compared across funds on our platform include the audit firms used across funds, systems in place, service providers, etc.

Pierre-Philippe Ste-Marie: Coming from a bank I was introduced to the world of OpsDD in a very different manner than many. I think few managers are used to continuous audit monitoring, while we are used to full transparency, used to have an external Investment Fund Manager (IFM) and used to be constantly audited by the bank internal audit. The bank was effectively the IFM for the funds that we managed for the treasury. So when Razorbill was launched, the idea was to ally ourselves with an external IFM. I never dreamt of having signatory power over an account of a client account, that's not what we do.

I realized starting my investment firm, that this was actually not the business model; there was not much of an ecosystem for firms wanting to use external IFM's, or run segregated accounts on external platforms. Hedge funds were used to be launched by portfolio managers doing their strategy, being the IFM and managing the whole ecosystem, for us it was not natural. It was a steep learning curve. I think players like me are more recent to the field of investing. After Dodd-Frank there are many treasury traders that were pushed out of Banks.

My team and I are all coming from the same proprietary department, we launched our firm with a new business model. The PGEQ gave us a nod because of our technical skills and our technological bend. In many respects we are a FinTech company, we are based on technology. Razorbill is first and foremost an operating system, front to back integrated operating system and that's the name of the software that we developed at National Bank and when we left, we named our company after it. But, again, this was not the standard in the industry. I don't think this is particular to Montréal or particular to Canada, I think it's also the same in the US and even perhaps in Europe, but it is a sign of time.

Ben Djerroud: Actually what Thai An described on the due diligence side is something we at Sigma have been involved with, and provided to the institutional investors on the operational and investment sides since 2006.

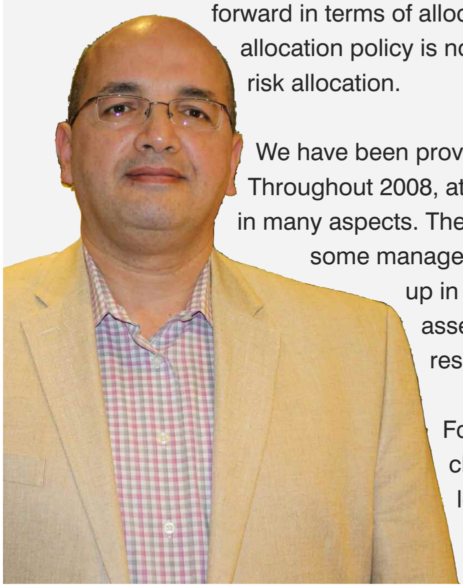
We have been working with institutional investors since 2000. From 2000 to 2005 we regularly reviewed their hedge funds books, using a thorough process that involved quantitative analysis. This analysis was a valuable tool for the investor in his/her/its decision making, but was not sufficient.

During that period, the investors were getting, at best, monthly return numbers from the hedge fund managers. The institutional investor with whom we were working needed to know more about the risk/exposures involved in their hedge funds' book, individually and, more importantly, on an aggregate basis, as well as on a more frequent manner. They also wanted to ensure that the managers were not taking undue risks inconsistent with the agreed-upon investment guidelines or simply engaging in unnecessary or impermissible trading activity. The investor also wanted to ensure that the managers were **providing an added value** relative to the passive exposure to the markets they invested, traded in. And when there is an added value, it was also necessary to ensure that the value justified the costs.

Together with the investors, we came up with an alternative way for investing in hedge funds that allowed us a transparent access to the hedge fund manager investments: the investor-owned managed account platform solution (MAP). On a daily basis, the MAP offers the capability to view all the trades, all the positions that the hedge fund managers invest in on behalf of the institutional investor. On a daily basis, all of the investment guidelines are reviewed, systematically, to ensure that the managers adhere to each item of the agreement. The push that we are seeing today towards increased checks and controls from a regulatory perspective is reminiscent of the demands of certain institutional investors a decade ago. Within the managed account universe, it is likely that the Madoff debacle would not have occurred.

The transparency provided by the managed account platform solution, beyond the checks and controls, also helps institutional investors to understand what it is happening in each of their individual and aggregate portfolios, in terms of factors or drivers of risk and returns, and why. On a daily basis, the investor can relate his/her portfolio performance to the various markets actions, to the impact of the geopolitical events, to the Central Banks decisions, or to the funds flows resulting from the action of large players in the equity, commodity and credit markets, etc.

This enables the investor to discern when his/her portfolio is driven by the fundamentals, which are derivatives of the hedge fund manager portfolio choices, or by the macro environment or risk on/risk off situations. Those observations over time enable the institutional investor to assess the fund manager skills as well as his/her abilities to navigate throughout the various market risks in order to provide the investor with attractive risk-adjusted returns, uncorrelated to the traditional markets. Last but not least, this mosaic of knowledge enables the institutional investor to enhance his/her decision making process going forward in terms of allocation. Over the last decade, it became clear to the institutional investors that the allocation policy is no longer a choice of asset classes, strategies or instruments, but is rather a policy of risk allocation.



We have been providing the managed account platform solution to institutional investors since 2006. Throughout 2008, at the height of the financial crisis, together with the investors, we witnessed the benefits in many aspects. The transparency allowed us to detect large deviations from the investment guidelines by some managers and allowed the investor to terminate them immediately as opposed to being locked up in a fund and deal with the gates, etc... The transparency also allowed us to accurately assess the market risk exposure and hedge it throughout that tumultuous period. It resulted in a superior risk-adjusted performance.

For an easy and immediate access to the information, the transparency flows to the client through a secure web portal dedicated to the institutional investor. There is no longer a need to wait for a delayed monthly report from the manager.

Thai An Le: An issue that ties into what we are doing within our platform as we are evolving into a FinTech company is the topic of cyber security that comes with having this kind of platform which stores all client and manager data. We have hired a dedicated cyber security resource who is developing and implementing a cyber security framework tailored to Castle Hall's needs and risk profile.

The first initiative was geared towards protecting client data and involved migrating our client platform to a Castle Hall managed environment. This allowed us to "bake in" cyber security as part of the design process and include cyber security controls at each layer, as well as set up processes and procedures that ensure our security posture is kept above the accepted risk level. Cyber security controls used for our platform include network segregation, firewalls, intrusion detection and prevention systems, security information and event management tools, configuration compliance checks, continuous logging and regular audits. Cyber security is certainly becoming a barrier to entry and is obviously a very important and current topic - have you've addressed cyber security issues internally and implemented policies?

Ranjan Bhaduri: That's actually an excellent question and one always has to be careful in answering it because you always want to be setting the bar higher, so I never view the answer as complete. Back in October 2011 at the 2nd Annual Hedge PRMIA/AIMA Fund Risk Management Event that took place in Montréal, I had listed cyber-security as one of the five most underestimated risks facing the hedge fund industry – back then, very few folks seem to think about it or mention it. It is good that cyber-security is getting some more attention in our industry.

The mathematical subject of cryptography is a key component – one of the backbones – of cyber-security. At Sigma the fact that our President and CEO and Co-Founder Luis Seco is a Professor of Mathematics and also the Director of the Masters in Mathematical Finance Program at University of Toronto, and that half of our firm has PhDs in Mathematics, Physics, or Computer Science, helps to give an advantage. We have relationships with some of the mathematicians that have been pioneers in cryptography and are keeping in touch with the mathematical developments. I am friends with the recently retired Professor of Mathematics Claude Levesque of Laval University, who has done a lot of work in number theory, some of which has direct applications to cryptography. In addition, one of the Professors (Alfred Menezes) at the Center for Applied Cryptographic Research (http://cacr.uwaterloo.ca/) had taught me a graduate course in cryptography when I did my Masters degree at the University of Waterloo. The amount of research and development in cryptography over the past few decades has been considerable. Having a better understanding of some of the math can help you in some of your policy making with regards to that.

The second part is obviously having the culture of compliance and the appropriate policies and so forth. So this is something that we are constantly working on – I think we have excellent cyber security policies, but can we get better? Yes. For groups that state "no", there is a danger of hubris. One always has to be trying to set the bar higher. Are we thinking about it? Yes. Are we looking at it? There are weekends where late at night where I will send an e-mail to some of my colleagues stating "take a look at this article" or "this is what I heard from one of my friends who is a computer engineer" with regards to certain types of cyber security; this then starts a dialog within the firm in terms of what we are currently doing and how we are trying to further improve. Last year we hired a General Counsel, Megan Vesely who came from New York and San Francisco, who has a lot of experience as a litigator and has SEC knowledge. She has reviewed the entire compliance and security procedures within Sigma Analysis, collaborating closely with our technology group. Having the legal & compliance dovetail with the mathematics helps Sigma to create a safe environment.

Some of cyber-security is common sense and the discipline with regards to be alert for suspicious emails. One cannot and should not be on "auto-pilot". Another part of cyber-security is the architecture that has been implemented. For instance, at Sigma, the external website is completely separate and ring-fenced from the secure client portal. The Sigma website is in no way connected to our secure client portal. The analogy that comes to mind is saying a picture of a kitchen on a billboard on the side of a highway does not mean that one can step into the kitchen and make a cake. There's absolutely no link.

Another advantage I think that Sigma has in terms of cyber-security is that we get to go see a lot of different hedge fund managers all over the world, and we are licensed to ask questions pertaining to this topic, how are they doing it and what they are doing? And so, while we keep things very, very confidential, if we come across a good idea that can be a catalyst for how we can also improve, then we may invoke that idea. So I think that there has to be that culture of constantly wanting to improve and adapt, but I think in general, this is something that the industry needs to be improving in.

Pierre-Philippe Ste-Marie: My end of year project at Carnegie Mellon was fast implementation of financial solution through web platform. So what I did basically is port everything I had built through Excel compatible DLL's into a C++ back end with an Apache server front end.

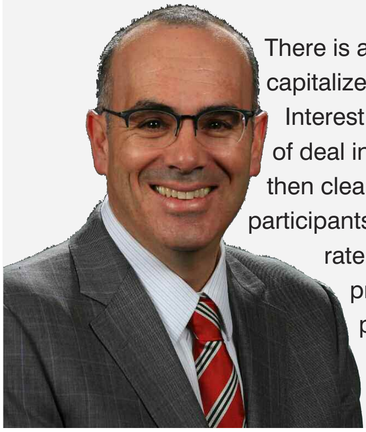
Razorbill is browser based, not web based. In terms of reporting it creates challenges. We work with our clients, custodians, prime brokers and administrators to find solutions. Our reporting is automated but it's still done through means that are relatively simple, simply because we want to make sure that the data, our trading data and the data of our clients is secured. It is certainly a challenge.

Matthias Knab In this context, I wonder if TMX also monitors the developments in the Blockchain?

Brian Gelfand Yes – in fact TMX has recently appointed a Chief Digital Officer, Anthony Di Iorio, who is a well-known pioneer in the field of blockchain. Mr. Di Iorio is focused on helping TMX build its digital strategy and the capabilities required to drive its success. While the strategy is still being developed, it will better position TMX to leverage emerging technological innovations to develop new client solutions and enhance our user experience.

Matthias Knab We have started to talk about the broad aspects of innovation in our industry. Do you want to share any observations, comments or questions regarding innovation in finance and asset management?

Brian Gelfand: One thing that is of course a subject of interest for me the whole subject of the re-regulation of OTC markets and the migration of bilateral transactions to exchange platforms and central clearing.



There is a lot of transformation occurring in that area and products are being developed to capture or capitalize on that activity. In September 2016 the Montréal Exchange will be launching Canadian Dollar Interest Rate Swap Futures based on the Eris Methodology. That's something that has received a great of deal interest in terms of taking bilateral swaps, standardizing them, trading them on an exchange and then clearing them at the Central Counterparty Clearing House. These Swap Futures will provide market participants with a transparent and cost-efficient benchmark product to complement the Canadian interest rate swap market, while also improving price discovery across the Canadian yield curve. Similar products are available in the US and Europe, and this will be an innovation on the Canadian product side.

Capital efficiency is clearly driving a great deal of change in our industry. Market participants want to execute investment or hedging strategies, and they are forced to reevaluate how they execute these strategies given new capital and regulatory requirements. Firms and exchanges are seeking to innovate in order to achieve their objectives in this new environment. And certain patterns are changing, for example we can see how participants who formerly were trading bilaterally are now using exchange traded products.

We have seen tremendous growth in the past year in our activity of exchange-traded products. We have 27% volume growth year over year, and while of course it's very difficult to identify or breakdown the components of what generates this growth, clearly, regulatory and the capital requirements are drivers of the growth in exchange-traded centrally cleared derivatives.

Pierre-Philippe Ste-Marie: Post-crisis I think we have seen somewhat of a trend in product destruction. For example, tranches used to be very commonly traded in North America and Europe, they have now almost disappeared.

Before the crisis you had a plethora of new products that were coming like EDS, FTD baskets and others, and that now is basically all gone. My personal feelings from a product development perspective is that the current environment is very hostile.

So what we are seeing now is that firms like ours are using old products in new ways, modeling more products that we didn't really need to look at because we had other products that were more interesting. So that's in a way also an innovation.

For example, the Canadian Preferred Shares Market is a market that has been in existence for a long time. It's a market that is not highly commoditized. You need to look at the perspectives of each preferred in order to figure out what it is.

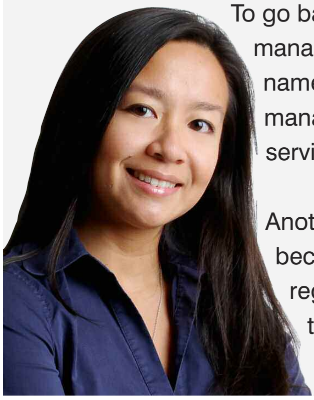
I have to admit that the preferred shares market also had been pretty sleepy for years and it has gone through a tremendous shock in the last few years. So this is an old product that all of a sudden brings innovation. Our team at National Bank of Canada was managing a portfolio of preferred shares, so it's a product we are familiar with, but it was just not the most exciting product out there.

And now things have changed, products have changed. 2016 has been interesting so far for the preferred market, and as we are involved in it. We are having a great time. But it is an example of where you have a refocus of resources into existing products, products that are more traditional but can also be seen under a different light.

Matthias Knab Thai An, what would be your recommendations for an investor who maybe for the first time is considering investing in hedge funds or other alternative investments?

Thai An Le: We have actually just launched **Due Diligence University**, which is a series of white papers and a collection of online tools to introduce operational due diligence to investors. We lay out the basics and show what type of things investors should look out for, and discuss hot topics and trends in the industry. We actually just issued our first white paper on cyber security.

While different companies in the due diligence space will conduct their own review slightly differently, the common themes are always the same and include, for example, existence of assets, valuation, and again, cash control and segregation of duties are very important.



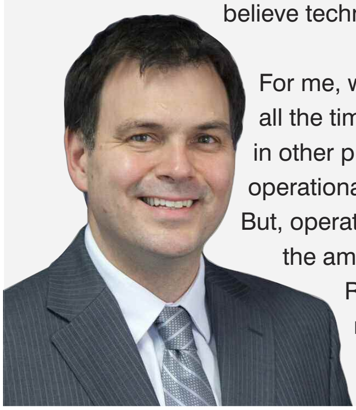
To go back to our earlier discussion on managed accounts, a lot of investors feel safer opening up a managed account rather than investing through a commingled fund because assets are actually in their name and they control all cash movements. On the other side, a lot of managers aren't open to such managed accounts because it creates a lot more work for them in managing relationships with multiple service providers.

Another thing I do want to point out is that in recent years, investing in hedge funds seems to have become mainstream and investors feel as though they have become a lot safer because of the regulatory scrutiny. But it's still a market that can have higher risk – both in investment and operational terms - and investors should be reminded of that.

Ranjan Bhaduri: I think that some managers don't want to give managed accounts, that's definitely true and their right, but the opportunity set for institutional investors is greater with regards to invoking managed accounts. The reason that I state that is that it really goes to the importance of operational infrastructure … there may be a manager where you like their investment strategy, and you have done your due diligence and you know that these are good people, good integrity, but they are not yet able to afford to use a top tier type of administrator or top tier accounting firm or may be even the prime broker. Certain prime brokers won't take their business because it's not quite big enough. So, such a hedge fund might not pass the operational due diligence for a sophisticated institutional investor. However, if the investor were to invoke a managed account type of solution, it might **pass the due diligence**, since so much of the operations would be done in-house. Managed accounts also lead to other kinds of structural possibilities with regards to innovative hedge fund fee methodologies and cash efficiency when you create a customized type of solution via managed accounts for an institutional investor.

There will always be some hedge funds that will say no to managed accounts, but through the trend of the '40 Act mutual funds in the US that have alternatives, because of the fact that there are a lot of more hedge funds in the US, more will now say yes to a managed account. There are credit funds that now come to me and say, "If you give x dollars, we will be able to grant a managed account." Five years ago this same hedge fund probably did not even know what a managed account was! I think that the lesson from the Madoff should never be forgotten. You have to trust but you have to verify, and that doesn't mean verify once a month or once a quarter or once a year.

Pierre-Philippe Ste-Marie: I completely agree with Ranjan, and again, I think am saying this because of my background, but I believe technology allows you to deal with a lot of the shortcomings that a managed account brings.

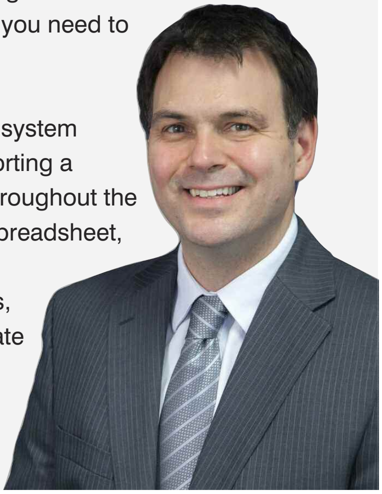


For me, what's most important is my reputation. I like having somebody that's looking over my shoulder all the time, making sure I don't have an operational problem. We have not seen this at National Bank, but in other prop desk at banks where the prop desk shuts down after a trade, because there was an operational problem. Market risk is one thing, if you lose because you took the wrong bet; that happens. But, operational risk is everything. If you lose because you hit $500 million when you meant to hit $5 million, the amount of losses can be staggering. Coming from this background, we have set up in place at Razorbill a system that allows us to interface readily on multiple funds, and that allows us for managed accounts. Technology can help to mitigate operational risk way more than market risk.

Now there are issues like fair allocation policy, there again technology can help. Finally, fees. Fees are a big issue, in terms of managed account, because everyone wants MFN (most favored nation clause). If you are running more than one fund I think you need standard fees. If you have those building blocks in place, then managed account is not anymore the huge problem that it can be.

Matthias Knab Pierre, can you give us more details how exactly your technology addresses the challenges that can come with managed accounts?

Pierre-Philippe Ste-Marie: Certainly. The beauty of running just one flagship fund is that you only have one account to manage, right? Your fair allocation policy is straightforward, your settlement operations are straightforward. If you have multiple managed accounts and you have a fixed income strategy, for example, then you need to allocate real-time allocation of transactions. How do you do that, how do you monitor this?



If you are still operating in Excel or using a third-party, it can be very difficult. We have built our system internally where we have real-time allocation. Then, of course, there is reporting. If you are reporting a managed account then you need to compute returns. We do instantaneous three-way recon throughout the day, and again, this is done through technology. If you don't have that, if you are using Excel spreadsheet, it's not going to work, you really cannot handle more than one account. So that's another challenge, and there are tons of them. Real-time risk measurement also: with multiple accounts, how do you handle this? Not all of your accounts will necessarily have exactly the same mandate or exactly the same investment policy. In our module we have browser-based real-time monitoring of investment policies, and if you don't have it, then it becomes problematic.

Thai An Le I see a lot of firms still using Excel. If you have many managed accounts, using Excel to track their performance, allocate trades, monitor tracking errors to understand why one may have a different performance, deal with the ramping-up phase of the portfolio - all these manual steps can cause errors due to the separately managed accounts structure.

Pierre-Philippe Ste-Marie: Correct, and if reporting is not done automatically, it can be very hard. We are able to do instantaneous three-way recon because we have an OCR (Optical Character Recognition) feature we have built internally that reads all the PDFs automatically we get from the administrator, the prime brokers, and reconcile those with our numbers. If you don't have that and you have somebody doing this for more than one account, it becomes hard.

Ben Djerroud I wanted to ask Marc, who is and has been an asset manager, here in Québec, for a long time: what is the landscape for the investors in the hedge funds space, here in Québec, beyond the institutional that are well known in Québec and nationally?

Marc Amirault: That's a good question; I would like to know where they all hide…! In our experience it is very difficult to raise assets for our type of investment strategy from individuals in Québec unless you have a direct relationship with them or if a specific retail broker who refers them to you.

It is worth noting that Crystalline was originally founded with the institutional market in mind. That is why I convinced the Caisse early on to be our first institutional client and partner at the equity level in the firm. This relationship lasted 5 years, removing the traditional business risk associated with new managers. This early arrangement provided us with enough market credibility to win several other institutional clients. The Caisse remains today one of our largest clients.

Our approach to the retail market has been largely a word of mouth story, taking the time to ensure that each potential client understands the product and its underlying performance and risk drivers. These are typically individuals we already know, or new clients that are referred to us by existing clients.

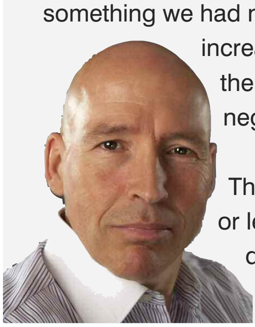
As retail investors are becoming interested in alternative strategies, advisors are increasingly looking for innovative ways to complement the long-only portfolios of their clients. In other jurisdictions the adoption of liquid alternative strategies has been a meaningful driver of growth, and a similar regulatory framework is currently being debated by Canadian regulators. If and when adopted, we expect investors and advisors to increasingly look to alternatives to both drive returns and mitigate risk. At the same time, a simplified process for buying and selling alternative funds will make it much easier for clients and advisors to add innovative strategies to their portfolios.

At Crystalline we have started to look more seriously at **retail distribution** for our recently launched Global Macro Fund and for our Topaze Multi-Strategy Fund. We are closely monitoring the development of the Canadian liquid alternatives framework and think that there is an opportunity for firms like Crystalline to offer innovative products to the retail market.

Matthias Knab Let's give the two managers here the opportunity to talk in greater detail about your programs, about your performance, about the opportunity sets that you see for your strategy, let's say, for the rest of the year.

Marc Amirault: Our flagship fund, Amethyst, is built around three arbitrage strategies with low covariance and is focused on the Canadian market: event driven arbitrage (mainly M&A), convertible securities arbitrage (primarily debt), and fixed income arbitrage playing a "cash plus" role. When combined, these three highly diversified sub-portfolios lower the overall fund **volatility to below 5%** in normal markets. Many of our institutional clients use Amethyst as a substitute or complement to part of their bond portfolios. While it remains an alternative product, its return structure is remarkably similar to that of a bond portfolio, albeit with less sensitivity to interest rate movements. With a **net annualized return of 8.5% since inception**, the Fund aims return 5% to 10% above the risk-free rate.

If you look at each of these three strategies, you'll see that M&A and convertible debt activity, at least in Canada, is generally more dependent upon the resource sectors where you also find a high degree of fragmentation. The 2012-2013 period was something we had not experienced previously, but we learned: The portfolio's resource exposure was lowered while we increased slightly our exposure to US M&As, where activity remained healthy. Despite unfavorable conditions, the Fund's total return for the period was far from catastrophic with just -2.5%. But still, one never gets used to negative returns!



The nice thing about arbitrage is that unless you are facing major structural change, arbitrage plays are more or less mean reverting. Because risk premia can't live long outside their long term range, pricing disequilibrium between related securities, which we love, simply can't remain for long periods.

As a result, this means that a period of sub-performance will probably be followed by a period of over-performance. With M&A activity in Canada on the rise, increasing attractiveness of convertible debt issuance with a possible interest rate hike, and an apparently rebounding resource sector, I think that the ingredients are in place for the fund to perform very well going forward. With year-to-date performance at +7.5% to the end of April, we seem to be on the right track…

As for the new Global-Macro Fund, we're actually pretty excited about it. It is a great opportunity for Crystalline to combine two proven investment approaches: On one hand, the original management team with a 10 year track-record which we acquired at the end of 2014, and on the other, the addition of fixed income expertise and generally, a more quantitative style. While the wider use of fixed income and commodities is expected to marginally improve on the +9% historical return on a typical 1.8 leverage account, we believe that the quantitative approach will allow us to deliver a slightly lower expected risk profile for the strategy, with a volatility closer to 10-12%.

We remain very cautious and as a result the core equity component is underweight given that we don't see many drivers of earnings growth. Indeed, equities remain attractive on a relative basis given the negative rate environment and super low bond yields, but that doesn't mean risks can be ignored. At this stage, we prefer erring on the side of caution, deploying more capital than usual tactically and taking advantage of local market dislocations within G20 markets.

Pierre-Philippe Ste-Marie: We are fixed income specialists with three sources of Alpha; quantitative credit modeling, fundamental credit modeling, and FX and rate modeling.

This Alpha is expressed in two main Alpha products; our Credit Alpha and our Global Macro. The Credit Alpha is comprised of three strategies: we have a capital structure strategy, credit curve strategy and a credit long/short. The Global Macro is a semi-systematic system that is focused on G7 currencies and rates.

We have three beta plus products that are an amalgamation of this Alpha. We have a preferred shares strategy, the Prefs+. We have a Bond+ strategy, this is the program that won the PGEQ mandate that is going to be launched this May, and we have an Income+ strategy that we have designed through our discussions with clients, which is basically like our Bond+ but with low and active duration management based on our Global Macro.

In terms of track record, this is one of the problems of our firm coming from a proprietary trading of a bank. Even though the funds management team members have well over ten years of experience and a track record, there is only one track record that we can show, and it's the Credit Alpha track record. This is a quant credit alpha, it was originally designed as capital-structure, correlation trading expressed through tranche trading and quant credit long/short and credit curve trading.

We have seeded the Global Macro with our own capital, and we've now have three months of track record. Also the Prefs+ is also seeded with our own capital and we have begun to accept outside capital.

We run the Credit Alpha as a ghost portfolio. It's a low turnover portfolio, so there is not a lot of slippage. We trade like if we were trading for real, we have access to all the markets from dealers.

That portfolio is up about 3.1-3.2% year-to-date and the first three months were positive. The program that's making the most money right now in our credit alpha is the capital structure strategy.

I have good expectations for long/short. For the May 2016, we have a decompression trade on high yield versus IG, we are short high yield, long crossover and long IG, and we think we have also good asset selection.

The capital structure is doing well partly because we model very carefully the relationship between equity and credit. In our monthly newsletter we publish indices in Canada and the US of the relative value of each segment, and so far this year we called it right, so it worked very well.

So that's it. We have three sources of alpha, five products, two of them are absolute returns and three of them are smart beta.

Matthias Knab Is there anyone with a question he or she would like to pose the panel?

Pierre-Philippe Ste-Marie: The roundtable could probably give some interesting insights regarding changes in assets liquidity distribution. Thai An discussed taking principles from hedge fund into private equity and venture capital. We at Razorbill Advisors have done a study on pension fund allocations and found a significant emergence of direct investment into private equity.

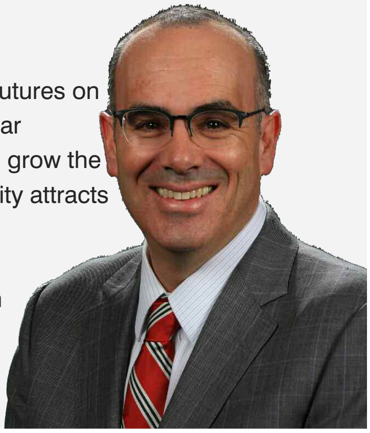
What I would like to know from people around the table is if you have noticed any impact on public markets liquidity and distribution? We have done a study in our markets which are credit derivatives and corporate bonds, this research is freely available on our website, and we have noticed that the ultra-liquid became even more liquid and the ultra-illiquid became somewhat more liquid, but the middle of the distribution, a lot in the crossover space, that **liquidity appeared to have dried out.**

What are your observations?

Brian Gelfand I spoke before about tremendous growth in volumes and open interests in Montréal Exchange listed derivatives, so I think that's clearly an area where we have seen an improvement in both of those areas, a significant growth.

Pierre-Philippe Ste-Marie When you look at distribution, isn't this just the ultra-liquid that's taking a greater part of that liquidity?

Brian Gelfand: Well, I think in our space what you have is, and this is typical of any derivatives' exchange, you have flagship products which are the most liquid and will benefit immediately from more interest in listed derivatives. In terms of futures contracts, these are the BAX, the CGB and the SXF. And then you have the newer, less-liquid products where the exchange has to invest in growing the available liquidity.



We are always studying what we can do to improve liquidity on the less liquid products. We list futures on the Two-Year Canada Government Bond, the Five year Canada Government Bond and the 30 Year Canada Government Bond. The Exchange invests in market making programs and incentives to grow the activity and open interest in these products. The goal is to achieve a virtuous circle, where liquidity attracts liquidity.

It's also clear that foreign interest in Canada has grown tremendously over the years. More than half all of approved participants - in effect the "members" of the Exchange – are based in the US and the UK. And their clients are located all over the world.

Matthias Knab Is there a continuous growth?

Brian Gelfand Yes, there has been continuous growth since the Exchange demutualized, focused exclusively on derivatives and migrated to an electronic trading platform in the early 2000s.

I would say that our efforts outside of Canada tend to be focused on drawing the attention of people who use derivatives to Canadian opportunities, and inside Canada there is not only an effort to focus on sophisticated users of derivatives, but also to educate the market as to why and how to use our products – in effect to grow the market in Canada.

So to summarize - yes, the liquid products are attracting more and more liquidity. And we work hard both in Canada and abroad to educate market participants as to the availability of Canadian financial derivatives, and the advantages of using them for investment and risk management.

Pierre-Philippe Ste-Marie Is there a correlation between the strength of the Loonie (CAD) and international interest?

Brian Gelfand That is a good question. I haven't looked at that particular relationship, but what I can say is despite the volatility of the US/Cad exchange rate we have seen continuous growth.

Pierre-Philippe Ste-Marie In the most liquid products?

Brian Gelfand Yes, in the most liquid products.

Pierre-Philippe Ste-Marie Is it open interest or is it speed of trading?

Brian Gelfand It's both.

Pierre-Philippe Ste-Marie What proportion?

Brian Gelfand Average daily volume, as I said, is up by more than 27%. The open interest numbers have grown -- again, in the most liquid products we have over the past few years' very significant growth in open interest. So it's not just the velocity of the trading, there is some of that as well, but it's also people putting on positions.

If I look at open interest from 2014 to 2016, we are looking at a growth in open interest, all products combined, from around 4.5 million contracts to just under 6 million contracts. And in terms of the average daily volume, we are looking at growth from around 260,000 contracts to just under 400,000 contracts.

Pierre-Philippe Ste-Marie: So Brian, would you be comfortable saying that in many products Canada can be considered now as a good alternative beta and a diversifier for international clients?

This is a relevant question. If you have a big sovereign fund, like ADIA, for example, they will look at rates across the planet, and part of the analysis they do is a liquidity analysis, making sure there is enough liquidity to support their volume.

What we've had been hearing for a while was that Canada was great diversifier in terms of rate policy and rate management, and people would really like to invest, but the open interest in any product and the liquidity was not sufficient for them to move the size they want.

Brian Gelfand Yes – our products offer a good alternative beta and a diversifier for international clients.

Pierre-Philippe Ste-Marie Can an investor move 500 million a day?

Brian Gelfand You can execute significant size on MX products. That size may not be available on the screen, but we offer institutional trade facilities – block trades and crosses - for transactions of significant size.

Pierre-Philippe Ste-Marie: We talked extensively about OpsDD and I wondered what your thoughts are with respect to where the Montréal community stands with respect to international standing, are we behind, are we ahead? If someone comes here will he find alternative investment managers that are competitive globally?

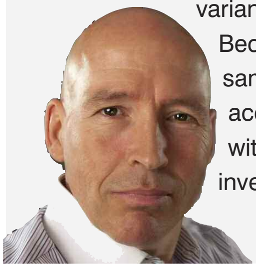
Also, we know that Canada is different from the US which has a central agency called the SEC, whereas in Canada we have the CSA, Canadian Securities Administrators where we are regulated by our own provincial administrators. In Québec it is the AMF.

I do think that there needs to be more advertisement as how our framework compares internationally, because it sure seems to us that there's a significant amount of money sitting in the US that feels they cannot easily invest with us Montréal managers.

Is there anything we could say to international investors from a regulatory standpoint to the effect of, look, we have our equivalences, please come and invest with us?

Thai An Le Many funds we visit are obviously in the U.S. and are registered with the SEC: many larger international managers may also have enough US investors to trigger an SEC registration. I haven't personally reviewed many Canadian funds, but the approach is a little more complicated here as each Canadian province has their own regulator, each with their own policies and regulatory subtleties.

Marc Amirault: The regulatory environment in Canada is actually a forte for our businesses. Yes, we do face some level of variance between provincial regulatory bodies, but the since 2012 the Canadian landscape is fairly harmonized. Because **regulators view alternative managers the same as traditional money managers**, they face the same set of operational constraints as any other money manager (proficiency, education, systems, accounting, insurance, minimum working capital, etc.). As a result, no one can manage money in Canada without being registered as such. Although the alternative products themselves are still limited to qualified investors, the managers are subject to full regulatory oversight and compliance.



Pierre-Philippe Ste-Marie Maybe just from a general policy standpoint, I wonder if we here in Québec should try to welcome people here to invest here, not just with Québec manager but in the Québec jurisdiction, would this help open up our market? I think it's a pertinent question and one that's not often asked, but I wanted to make sure to bring it up so that maybe more people begin to think about where we as a province and the whole country could be heading.

Ranjan Bhaduri: Due to the strong alternative investments community in Montréal, it is a very good place for educational and industry events. AIMA Canada, PRMIA, and CAIA are all active in the area with regards to educational events. Sigma Analysis has organized or helped to organize quite a few research and educational events in Montréal. The CFA Institute held its annual conference in Montréal in 2016, and AIMA Canada is planning to have Montréal host its second Annual Conference in October 2016. I also want to thank Matthias Knab for his excellent work with regards to the Opalesque Roundtable Series. Adding Montréal makes it an even better, global Series.