Next Generation Trader: A Universe of Possibilities

Museum of Natural History
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MR. CHURCH: Good evening everybody and thank you for joining us this evening for a discussion on the future of trading. We have a distinguished panel who will be giving their views and thoughts on where trading has been, where it's going, and what the trader of the future will look like.

Let's begin the discussion with a look at algorithms and how they're evolving? It wasn't long ago that algorithmic trading was restricted to the domain of boutique hedge funds and proprietary trading desks. Now it seems like we're swiftly moving to an environment where everyone's going to be doing it in the future. How will the industry differentiate itself using algorithms?

MR. LEMAN: Well, I think it's going to end up being some level of analysis, either from afar or in conjunction with a customer to say, "Here's how," and I've been in a couple of algo conferences where larger brokerage firms are actually hiring people to analyze the customer activity and to try and coach the customers and, I even think, their internal people about how they use different algos for different purposes, because different ones will achieve different things in different markets.

And when to not use one as opposed to trying to use it to save labor but you're inevitably doing the best job you could.

So a lot of analysis that will lead to pre-trade analysis and improvement of algos is really the order of the day. So commodity can probably be true of the basic stuff, but to achieve penetration with customers you'll have to customize, or coach quite a bit.

MR. CHURCH: What does that mean to the day-to-day trader? you've got these algos running there's a tremendous amount of processing. What's the role of the trader? How is his role going to be different going forward--different set of skills, different role? Any comments?

MR. LEMAN: Well I think, at least my experience so far in observing this stuff quite a bit, is that traders will become more quantitatively tuned and oriented. They'll pay much more attention to the derivative market and what they believe is the fair pricing for a particular security and how a particular algo will need to change, or they'll have to intervene.

But, in some cases, intervention is frowned upon. If it's intentional and well-reasoned intervention, it probably pays. If an algo is used as a parking place for a trade until something else comes along, you could be making mistakes. But again, it's coaching and review of traders' habits, but more quantitative techniques, more reliance on tools.

MR. CHURCH: So the trader of the future is going to have more reliability on TCA and analytical tools, and himself will need to be more of a "quant guy" than perhaps in the past.

MR. LEMAN: I think he's going to have to have a healthy dose of those skills, yes.

MR. CHURCH: Andy, I see you nodding away there, any comments to that?

MR. ANDREW BRENNER: I think that generally I agree with Jim, but I think that the other side of it is there are quants that are working on these models consistently. And, you know, ten years ago we still had the first-generation VWOP orders. From there we've seen the next generation of semi-smart order flow--semi-smart algos.

We now are seeing incredibly smart algorithms that are being designed by incredibly brilliant people who are, you know, coming up with the decision making process. So we've kind of taken the trader away from it a little bit. I'm not quite as convinced that that trader has--he has to know what the products are, he or she, and how to sell them, but I'm not convinced that they have to do the development work themselves so to speak.

MR. CHURCH: Gentlemen?

MR. EDWARD BROWN: Well, I would say, voicing the minority opinion of coming from dealer space, algorithmic trading plays an integral part in the number of fully electronic trading platforms being run in a highly commoditized product. It's fair to say that virtually every new customer that we bring on board either has an algorithmic capability when they show up on the platform to begin trading or will have some kind of algorithmic capability in the next three to six months.

What's a bit different about our marketplace is that we don't provide that algorithm, so our clients use the algorithms to differentiate themselves against each other. And I would expect that to continue. It's all about having the edge and I don't see that changing in the near term or even in the medium or long term.

MR. CHURCH: With this growth in algorithmic trading, Andy Brown, do you see, a lot of people focusing on speed and is algorithmic trading all about speed? To the point, where's the speed thing going?

MR. ANDY BROWN: Yes, I think speed has become a price of entry for algorithmic trading, and actually speed over the white area for algorithms that are more sophisticated is something that I think we're going to see happen in a much wider scale than we've seen in the past.

Technology is even as wide an area. InfiniBand and things like that allow us to have access to global markets and much faster latency or much lower latency

numbers than we've seen in the past, which will open the door up actually for different strategies and different algorithms that are being created.

But the reality is that, you know, that the speed of light is the speed of light. There is only so far you can go in reducing network latency. And there's only so far for the processes to go on the end of the network pipe.

So processing the data for the differentiation, to me ultimately is all going to be about the sophistication and capability of the algorithms, whether they're written by the buy-side or by the sell-side and I anticipate that over the next five years, the infrastructure itself will be commoditized as we all kind of charge towards the same converged endpoint.

MR. CHURCH: Can the industry afford to put in place the sort of infrastructure that supports the need for speed?

MR. ANDY BROWN: Well, I think if you follow the kind of laws of convergence to their natural end, you end up with pieces of the algorithms running actually in the exchange as the mechanism to ultimately reduce latency to the point where you've got it minimized.

And so, the question then turns into a more complicated question about, "Can you manage distributed transaction management across multiple exchanges at the same time?" And potentially, even in different regions of the world at the same time.

So if you like, that's another level of sophistication on top of the algorithms of sophistication that you see today. But I view that as inevitable. I think it's going to happen and is happening, actually, too.

The question on cost I think is an interesting one because as I said before, I see that the only way that the arms race can be funded given the margin structure is going down as if the infrastructure itself gets commoditized, and so it was a service somehow to the participants and then it really does become a race between the sophistication and capability of the algorithm, rather than the underlying infrastructure.

MR. CHURCH: Thank you. Andrew?

MR. BRENNER: It's interesting. As an exchange you've sat down with all different types of brokerage firms and talked to them about algorithmic trading. And they certainly categorize certain strategies as commoditized. They said, you know, to us when we went in, "You want to do VWOP, that's fine. That's a commoditized product. You're not taking anything away from us. We can't really provide any added value to that."

As we've developed the concept behind the ISE Stock Exchange, one of the things that we're out there talking about is the fact that we are algorithmic friendly. What does that mean? That means that we are continuous--we have a continuous midpoint match product and it also means that we'll take any size order, because one of the problems out there in the crossing world is that some of those venues only accept large orders, some of those venues are not continuous. We've tried to be algo friendly with the idea of, as Andy said, working with the brokerage firms on this area.

MR. CHURCH: Thank you. Jim?

MR. LEMAN: I think one interesting thing we will see a parallel and may already be happening in certain large brokerage firms, with the New York Stock Exchange specialists having to move into a fast market environment, they have been forced to, essentially, abandon their human intervention with their clerks and with the marketplace and move toward an algorithmic-like solution, which kind of encloses their entire market-making concept, and then, overlying that with the exchange rules.

I would think that, that same manifestation is going to show itself upstairs, where block traders, rather than reacting on screens to trade, will have had to put into an algorithm into their methodology for trading which limits their reactions to the market for the securities they trade. And their willingness to accept customer business and stop stock and trade stock, not just to meet Reg NMS rules, but to be effective in the marketplace.

MR. CHURCH: So what's this going to look like on the trading floor? Firms are continuing to build large trading floors, for example in Stamford.

What's the dealer of the future going to look like? We're talking about machines, we're talking about the fact that need for speed is important --what will happen in large dealing rooms going forward? What will the activity be; convergent of asset classes, lots of black boxes, people responding and fine-tuning algorithms? What's the trading environment going to look like going forward?

MR. LEMAN: Well, I think the trading environment is going to look very much like what the intra-dealer environment looks like today, where we've taken a very highly commoditized product, recognized that it lends itself to electronic execution and so we've now successfully platformed.

That said, there's obviously a whole range of asset classes that are more esoteric and much more complex, that require the human element. And we handle that through traditional voice execution. I think you'll see a similar layout at the dealers in as much for the highly commoditized product, you will see electronic execution, whether it's a full algorithm or a complete model trading setup.

Whereas when you see the more complex product, you'll see much more of a human element and a manual element involved. That said, there will be pieces of the automated element that will lend itself to the traditional structure, such as straight through processing, where you'll be able to leverage some of the benefits of electronic trading, where some of the other benefits don't necessarily lend themselves to the traditional style of execution.

MR. CHURCH: Interesting. If we've talked about algorithmic trading, we've talked about the commoditization of it, but we still think algorithmic trading is going to be there.

If algorithmic trading, which started back in the eighties but really got very buzzy about five years ago, what is the next big mousetrap? If we were having this conversation in three to five years' time, instead of focusing on algorithmic trading, where would our focus be?

MR. BRENNER: I'd almost take a backward look. And that is, three to five years ago, where did we think things would be? And if you asked me that three to five years ago, I probably would have said, "More technology and fewer people." If you ask me today, "More technology and fewer people." I think the people are going to be very specialized, and I think the technology is moving along at a pace that I don't believe any of us have ever seen.

I'd be interested in the other folks here, but I think we've seen a greater growth in the technological side of things, in increase in speed, in the last six months to a year than we've seen maybe in the five years before that. It's been tremendous.

MR. CHURCH: Interesting point about technology change. So the rest of the panel, please comment on that. But also, what's going on out there in the marketplace.

Is it a combination of technology that's moving very fast? Is it the market structure that's moving very fast? Is it both? Are we in just a light-speed change in the industry? Comments, Andy?

MR. ANDY BROWN: I think if you look at what you do backwards, as Andrew suggested, I think what you'd see is that technology has actually acted as a commoditizer, first of all in the infrastructure and in the role of the trader, almost becoming an agent, an electronic agent for execution.

And what I see is that the role of technology as a commoditizer will increase, not only into the infrastructure, but potentially even much further up the stack. And what that will do itself is cause disruption in the ecosystem between the exchanges, the market data providers, the sell side and the buy side.

And I think if you think about the interfaces between all those entities now, there is disruption and decay actually happening at the edges there where, you know,

commoditization and de-margining are driving a completely different business model to the traditional one, but the traditional one is still surviving to a certain extent alongside it. And I think that's what will disappear for certain in the next five years.

Where the sophistication goes, I think really does depend on what technology is delivered, because technology is changing the roles of humans, and how they interact with both clients and the market, and I see that accelerating, actually, because of the things that have happened really in the last 12 months where things have gone really fast.

MR. EDWARD BROWN: I think for us, if we were to look at three to five years, probably the fastest growing trend and what we've seen more of is pure model trading in the intra-dealer space. We see some of it now, but I don't know that the level of sophistication is such that it's widely deployed. However, it's drawn newer and different participants into the market--non-traditional participants that have the ability to launch a pure model trading operation and I think that will continue.

MR. EDWARD BROWN: Model trading means absolutely zero human intervention - Turn the machine on and let it go.

MR. LEMAN: I've been to at least one shop that where when you ask what the model of the trading floor of the future might be; no noise, four or five guys sitting around, 110 million, 120 million shares trading, no pins dropping, it's model driven. It's again, algorithms or models where the guys have worked on stuff. It's a market making shop, a lot of retail flow.

And you see that and you say, "How can they do this with this few people but it's really because you've taken--it really worked on the model about how would you work on the market, you've got a lot of experience and it works? To answer--so I think that that's where it could go. It could be almost like a library.

In terms of what I think the future's going to hold, it would appear that with MiFID you're creating an environment in Europe where you can get more of a dealer market, more of an ECN liquidity-seeking environment and the brokerage community at least, will continue to pursue where better commissions and better margins lie.

So you're going to see a broadening of what the U.S. experience is, I think, rolling into Europe and into other markets. And you're going to see linked futures trades because there are already futures algos and algos that have futures and cash working in them at the same time.

And I also think some level in the business of entertaining retail activity--we're going to find these tools becoming more subtly embedded in the product offerings

that go out to the retail marketplace and not be kept in the domain of the institutional business.

So again, seeking liquidity is going to be an important thing, and I think a lot of people are saying proprietary trading. We'll continue to try and be opportunistic, either to provide liquidity or to make markets. So I think I see that coming in a larger sense.

MR. CHURCH: Seeking liquidity in a big buzzword, searching for these dark pools of liquidity and finding what it is going to become over the next year or two, one of the keys to success, navigating your way through those dark pools of liquidity?

MR. LEMAN: It's whose bets pay off, yes. 'Cause there's a lot of them out there and the question of how many of them do you need? And how much money do they make for what it costs to keep them going? How much flow do you need to make that machine operate that way? When you start looking at the breakdown of just NASDAQ, and who is trading how much in the volume breakdowns between the top 15 and the next 20 and the next 20? It's very stark.

MR. CHURCH: This discussion is about the arms race and who can afford it? Is it table stakes, Darwin theory, who's going to survive?

MR. ANDY BROWN: It's a given. If many people are investing in a very high-cost infrastructure to stay in the game, that at the point where the investment in the high-cost infrastructure is not backed up by revenue, those people will look for ways to reduce their costs without losing their edge.

When I look forward five years, I think the infrastructure will commoditize and what you're really asking is what would happen in a down cycle? And I think what would happen is you'd accelerate the adoption of an infrastructure that was commodity but still specialist enough to give you everything that you had internally.

So I think the price of entry is the latency that you have internally, the flexibility around hosting and the actual application and deployment that your algorithms run on. But if that price of poker can be met, then the argument for running your own infrastructure disappears if someone else can change the cost structure significantly enough to help you make profit in a down market.

MR. BRENNER: I think Andy's making a great point, which is, what this Street should do in a down market is continue to spend on technology. And, unfortunately, cut back on the human side of things. What the Street tends to do is what you suggested, is cut back on the technology budget and to keep the people as long as they can.

I think that the good news is speed is cheap. To add that technology is inexpensive. It's the development work that has to be done behind it, that's the expensive piece of it. And I think that there will still be that continuous tug that goes on on the Street as to whether it's a people or--a people spend or a technology spend.

But voice, is it still going to be out in 5 years? Technology is changing. Are we still going to be using phones?

MR. EDWARD BROWN: Again, certainly in the inter-dealer space, less liquid product it lends itself. In three to five years, I think that you will still see the telephone. You may see fewer telephones but they will still be there.

How do you see collaboration and the use of voice in the trading room? If voice is still going to be out there, are people going to be using more sophisticated tools to collaborate?

MR. EDWARD BROWN: Yes. I think they will. You know, the way we approach it is that we run, obviously, both a voice business and an electronic business and what we do with that is we give the client the opportunity to select which way they choose to actually execute. And there are individuals who prefer to have somebody on the other side of the telephone. I don't think that's going to change.

There will still be people like that over time. But again, when you're talking very highly commoditized markets, number one, it's very hard to compete when everybody else is electronic or has some algorithmic capability, so it's somewhat Darwinistic and it does force people out of the market that can't conform to the trend.

MR. ANDY BROWN: As you get more sophisticated and you're trying to discuss the sophisticated idea that you have with a client, it becomes a requirement to have a more sophisticated way of delivering that message, and whether it's actually looking at the same Excel spreadsheet together and actually seeing how the model works or whatever.

I think that some of the retail collaboration technology that's already available will make its way into the regular, kind of life between the trader--the sales trader and the client. So I think it's voice-plus because it's harder to describe and make the sale on a more sophisticated product.

MR. CHURCH: You know, we see in Europe the systematic internalizer emerging, a model that MiFID's calling out. We see brokers saying they're an exchange.

The people that used to own exchanges now are building their own exchanges, they're perhaps competing with traditional exchanges. What's going on with the exchange landscape? In three to five years time what's it all going to look like?

MR. BRENNER: In terms of three to five years, I have no idea. In terms of what I think is going to happen in the next six months to a year, we have Reg NMS coming into play here. Reg NMS basically levels the playing field.

All of a sudden, the tremendous advantages that the New York and the NASDAQ had, I don't want to say they disappear, but they're certainly more level. An order represented on ours or any other exchange, because of price protection, will be treated with the same respect and the same price protection as if it was on the New York, if it was on the NASDAQ or the like.

So I think that there's still a very important place for the exchanges. The other part of Reg NMS is I think it tried to dilute the value of ECN's because the ECN's really are no longer able to easily represent their bids and offers. So I think it becomes a little more complex.

And that being said, you know, we're seeing virtually every bulge bracket brokerage firm invest, not in one, but in two, three, and four different exchanges. They know that the world's changing. They're not sure.

In terms of that three to five year session, they're scratching their heads and they're saying, "Let me have a place card in multiple places, because something's changing." I think that flow's going to move away from these major marketplaces and move to the next grouping of exchanges and they want to be there and be able to have a say in what goes on in those exchanges.

MR. CHURCH: So the crystal ball's not so clear for the industry and they're backing many horses.

MR. BRENNER: Yes. That's what I'm seeing.

MR. ANDY BROWN: The smart money is on not placing your bets in one place and basically abstracting yourself from the decision as far as you can. So if you can treat all the exchanges and any pool of liquidity virtually, then you're in the best possible position in any electronic market I think.

And then you've got the kind of dichotomy or the problem to solve around, do you bring the liquidity to you or do you bring the algorithms to the liquidity, which I think will become a trickier problem as the liquidity pools are lowered? So I think if it's my budget I'm spending, I'm hedging, and I'm basically abstracting myself away from it but not cutting myself off from any of it either.

MR. LEMAN: I think that the challenge seems to be that you're going to have to have an exceptionally smart router. The people that are used to picking up the phone and calling the floor of the New York Stock Exchange to get a look, they will find there won't be a really good answer at the end of that phone after direct plus goes to the full volume that it's going to begin going to in October for the stocks.

And the real challenge there is, how do you collect historical information or how do you find patterns in the different ATS's that are out there because you have topical obligations if you're handling an order but there's going to be at least eight or nine or ten or twelve different ATS's that are sitting out there with different degrees of liquidity in different securities?

So whether it's by trial and error or by empirical evidence, you're going to have to decide which of them you want to hit with which security at what point, based on either your historical information or what's happened on the day. So perhaps it's a different dimension of algorithm that speed is very important, but then you have to figure, you know, how many can I go through before I'll miss the mark at the top of the book and I'll owe somebody a best execution a different way?

So it gets to be a very ticklish issue. It calls for more analytic tools than were there before because some people are just used to picking up the phone and there's a very human interaction. Now you're going to have to back away from it because it's so fast and have a model that you've essentially built. I think that the world that's going to come is--will have people but they'll be talking to their customers or to their colleagues about what to do, and then they'll set the strategy in motion.

And the strategies will run the markets. The human intervention will be in setting up the strategies, evaluating the results, counseling the customers on how to use them, but will be less and less in making the actual mechanics work, simply because the speed and the variety of liquidity points you can go to.

MR. CHURCH: Did you see for the vanilla stuff that something like EBay or a Google could become a global exchange just as they are an exchange with all the stuff that they deal with at the moment? Do you see it ever moving that way or is that just a fantasy forward notion?

MR. BRENNER: I think it’s a fantasy. I think--we have regulators sitting over all of this and I don't think, from a regulatory standpoint, something like that would happen.

MR. CHURCH: Jim?

MR. LEMAN: I don't even have to watch what they do.

MR. CHURCH: The question I'm going to pose to the panel, before we wrap up for the evening, is looking at that crystal ball, three to five years out from now, you're coming to work, you're doing your job. What's the single most significant difference between going to work today and what you'll be doing in three to five years' time?

MR. ANDY BROWN: Mobility in collaboration.

MR. CHURCH: Mobility in collaboration?

MR. ANDY BROWN: Yes. So I'll be able to do more on the run. I'll be able to do more when I'm abroad. And I think I'll have much richer connectivity into the people who work for me in different parts of the world.

MR. LEMAN: The opportunity and the demand of, shall we say, customization or personalization to meet customer demands will be the differentiating factor. And technology will be very important in being able to deliver that personalization cost effectively. But that's where the people component comes in, being able to listen to what people want to achieve and then translate that into action with a very flexible system.

So I think a lot of the time will be spent on talking to customers in different parts of the world or your colleagues in different parts of the world to deliver that customization to your customers.

MR. BRENNER: I think that as an exchange we're probably going to see the integration of multiple asset classes. I think that's definitely coming and will continue to grow.

MR. CHURCH: Tell us a little bit more about that, 'cause it was one of the questions we haven't touched on. We billed it…

MR. BRENNER: Well, you know, we'll take the simplest version which is, you know, the ISE has an options exchange and now has a stock exchange. And there's certainly hedging that goes on. There's trading, one asset against the other and I've got to believe that that will grow well beyond what we're doing here.

MR. CHURCH: Convergence of assets, interesting.

MR. EDWARD BROWN: I would agree with Andy and I'd take it one step further. That not only would it be a single, fully integrated multiple asset class, electronic trading platform, in our case it would also facilitate transactions by both the algorithmic trader and the manual trader, who will still exist for the foreseeable future.

I've picked up, and these are just the notes I've jotted down; algorithmic trading is here to stay, it's being commoditized, it's going to become sophisticated, more customized, but it's definitely part of the future. Speed is the differentiator. There is this natural tension between spend and technology and spend in people.

And at some point when, Darwin and survival of the fittest is going to kick out but right now, speed is a table stake if you want to be in the fast moving markets in the algorithmic trading business. The humans will not disappear, which is

good news, but there probably will be less of them. They are going to have a greater command of quantitative techniques and specialization and relationships.

The exchange is perhaps a level playing field, which is one of the things I wasn't anticipating coming out of it. I was thinking more of just a couple surviving, but a level playing field. The reality is that the exchange landscape is not too clear and the market is telling us that in the way that it's behaving in terms of placing its bets.

Smarter routing--there will be this constant tension between technology and spend and in this emerging trend, the technology is definitely a differentiator and those who don't invest in it do so at their own peril.

MR. CHURCH: Well gentlemen, that is about all we have time for this evening. I want to thank each of you for your frank insight and visions for the future of trading.

I would also like to thank our audience, and I hope everyone will join us downstairs for some drinks and nibbles and further discussions of these topics with our panelists.

Thank you and good night.