

### ***Interview with a senior manager #5***

SPEAKER1 00:03 And. OK, so the recording started also, I should point out that I'm not looking for any sort of names of the investment firm that you work for or any sort of individuals or anything like that, just so it's all strictly anonymous. OK, great. So just to start off with, what is your investment firm sector or subsector?

SPEAKER2 00:32 And so, it will be derivatives, mainly contracts for difference.

SPEAKER1 00:42 OK, and those contracts for difference. What underlying do you typically sort of offer?

SPEAKER2 00:52 So, we offer equities, commodities, foreign exchange treasuries and indices.

SPEAKER1 01:03 So, would you offer, for example, so in the Treasuries, is that stuff like government bonds and things and stuff like that?

SPEAKER2 01:11 Yes, government bonds, the interest rate products.

SPEAKER1 01:17 OK, and what is your role in the investment firm?

SPEAKER2 01:23 So, I'll head up our surveillance team and we look at a lot of different things. So, I like to look at things from a principal perspective, which is looking at the company and things that we are doing specifically and also on a client perspective. So, looking at what our clients are doing and yeah, a lot of the client side has been past financial crimes, but still quite involved with that, it's just that and again, it won't be so relevant. But I also pick up a lot of day-to-day general compliance work, which kind of gets in the way of some of the violent stuff that I've had to shift a little bit of my surveillance stuff to the financial crime guys. But their side of things, which I think I've looked at before and I can talk about quite comfortably, is looking at clients that are yet doing things they shouldn't be doing, like insider trading rings to breach certain limits so we can check out the device types and that kind of thing to look at matches and then we have the principle side, which my team cover, and it looks at what our dealers and trading desk are doing in terms of any trades they're putting into the market and any kind of market manipulation or insider trading from that perspective. Although, you know, we might touch upon this a bit later, but with. A bit light on that at the minute and implementing a third-party system to assist with that and also with execution, so making sure that we're offering our clients the best possible result on their trades. And we do that kind of overall level and kind of sample-based testing as well. And we also touched upon looking at how trading and any changes that are being made that could affect how our algos work and looking at circuit breakers and that kind of thing. And then also look after kind of areas of compliance, which is kind of, yeah, hard for a little while. And I find it quite hard to shift that. But I don't know your that that's relevant. But compliance day with the ombudsman and financial

promotions falls under way just because of the guys that are reporting to me and also kind of routine monitoring plan as well. I take care of that. And there is quite a lot of crossovers between the routine monitoring and what we do in surveillance, just in terms of monitoring and that kind of thing, so it's fairly relevant.

SPEAKER1 04:28 And how would you describe your investment firm's goals?

SPEAKER2 04:33 Our goals?

SPEAKER1 04:35 Yeah.

SPEAKER2 04:36 And so, we have to with a company for 40 years now. And yeah, I kind of join the company if you need to start the client services desk and eventually move into compliance. And now it has set up the same. And the company has changed an awful lot in those 13 or 14 years, just in terms of how we kind of treat the clients differently, because I think previously that platform was pretty shoddy. And we have of a culture of the dealers just trying to make money. And it did kind of disadvantage the clients. It wasn't too much control or order in that area. And I think we've come a long way, partly because we've had the regulations and stuff, but also just because of some of the enhanced monitoring that we're doing and a far stronger compliance than we now have. That the desk. Well, hopefully we kind of get away with that kind of thing. But at the same time, if I'm being brutally honest, we still do see sometimes where you think our data is and trade is they still are kind of judged on what they're making on the desk. So naturally, there is still going to be some conflicts at times that I think we have quite good committees and the conversations that we can have to ensure that they have the right outcomes. OK, so we still very much interested in making money, but. Yeah, a customer certainly more at the forefront and we're looking at more that kind of longevity of clients, not so much the turnover. So, you know, we try and aim our products at the high value clients and a big focus on retention. And also, you know, in terms of our interest, I think, is much more focused on long term and trying to make money off that kind of commission and finance and other costs rather than client paying, because obviously we could not hedge any of our clients any money to the client's loss, we would make, which is an issue with our company. Yeah, we kind of hedge most of our flow. So that kind of conflict isn't so much less on the inside and, you know, the clients are ultimately going to lose money. So, let's just let the depositions run. Does that make sense?

SPEAKER1 07:40 Yeah. Yeah, it does. Does your firm deploy any algorithms on a proprietary basis? So, you mentioned hedging so it could be to hedge your own risk or that your client might use when trading with your firm. So maybe you give them a bit of an API or something and they put something on it, and they've

got some algos. What is being deployed? Because you mentioned that there were some being used earlier.

SPEAKER2 08:13 Yeah. So, a lot of our algos. So, a lot of our guys. So, we don't really trade. So, our trading is purely based on what I wouldn't call it. Trading on our trade is purely based on client flow. And when we have like hedge algos, so when we breach certain limits in certain positions and the hedging system kicks in and depending on how we want to place the trade into the market, we'll use an aggressive or passive orders. They say, well. And we use to some of the algos we fill, and certainly I know we use a couple from [REDACTED] as well. We kind of try to anyway, but we have a couple of our guys, those guys in terms of clients, clients can try to us via an API, but. We don't really offer them any guidance as such to try to do this, and they can we separated by empty for which is the kind of trading platform. And yeah, I think our clients can potentially use some hour goes by that we don't offer any such treatment.

SPEAKER1 09:37 When those figures that you mentioned that we you are using maybe to help with your hedging sort of strategies, is that across all that, is that deployed across all asset classes or only certain asset classes?

SPEAKER2 09:52 I am not 100 percent sure, but I think it is. It's generally on the equity side of things

SPEAKER1 10:00 like any used in not aware of any being used in this sort of foreign exchange or so guv's type stuff

SPEAKER2 10:10 on the other minute, I'm not sure, but I know we are doing some additional work at the minute and to improve some of ours. Of course, and some of the outside stuff, so it might be that if got an interest in states that with those oppressive classes in the future.

SPEAKER1 10:27 OK, and any of the algorithms that you use embedded any sort of artificial intelligence or machine learning type functionality?

SPEAKER2 10:37 I don't believe so.

SPEAKER1 10:39 That and for those algorithms that you do, you have described as being used. Are you familiar with the sort of design, deployment and recalibration process?

SPEAKER2 10:53 Fairly, yeah. So, we have a regular catch up. That because that's how it goes, you know, some of the terminology gets in there is quite technical, but obviously, you know, compliance needs to. Become an expert in that and says that you need to understand. So once a month, I have a catch up with the kind of pricing and we run through the main changes. Give us a chance as well to ask any kind of questions or any concerns that we might have got those out of a fairly basic understanding, but

SPEAKER1	11:40	does the phone have a sort of official signoff process when it might make some amendments to the algos? Or is it something which is very much controlled at desk level?
SPEAKER2	11:51	It is controlled at desk level and compliance are always informed as an FYI. And we actually have recently had an audit and kind of internal audit and has been done on algorithmic trading and , yeah , generally pretty happy with what we're doing , but I think it's probably quite clear from that that we need to kind of step up some of our monitoring from compliance and probably not be invoked so much after the fact and be so we can kind of sign off on things . But, yeah, in a minute, we're kind of noted as an effort by and often my discussions with the pricing guys are kind of taking place after the fact. But that's an area that we need to improve on and be more involved with this process. I think it's something that sometimes they want to make changes pretty quickly. So, it's not always easy to have those quick conversations, but ideally, that's the point that we want to get to.
SPEAKER1	13:07	And what is your or your firm's understanding of conduct risk? Because obviously the FCA, they haven't offered a sort of firm definition. They've sort of said to firms, look, you craft a definition which fits what your firm does in your sort of perception of what it means. So how would you describe that risk in the context of what your firm does?
SPEAKER2	13:32	So, would you say that is this a more general question or specific? Later on, outrated,
SPEAKER1	13:40	which is generally....?
SPEAKER2	13:44	Yes, I feel like that risk is this is almost like any bad behaviour that can put the firm or clients at risk. And yeah, so it's kind of more on a very much a cultural thing. And that's my view of it. Well, it's funny. Yeah. Behaviour that would be untoward, that the federal at risk
SPEAKER1	14:17	and does your firm have a defined conduct risk framework?
SPEAKER2	14:24	Yes, so we have a lot of it is we have a treating customer fairly and conduct committee that meets every month. I was actually the chair of that until recently, because, again, we have no debt all in that area, and yet it is recommended that it shouldn't be somebody in compliance that heads up that committee and it should be somebody on a kind of front side of things such as that. Head of customer management is our chair and TSF champion, although that's probably more for treating customers fairly standard things. But again, conduct issues will get right to that forum and we will go. And we had a group of attorneys that as well because, yeah, I was heavily involved with many complex issues, internal.
SPEAKER1	15:21	And what would you say? I mean, is there a perception? It is our perception of any what is the perception of conduct risk as it relates to the algorithmic

trading activities that you're engaged in, either in your firm specifically or in the wider market?

- SPEAKER2 15:45 I think a lot of it is. I would say that in terms of that area is anything that might disrupt the markets, I think, and what's the word I'm looking for is kind of people are doing it either knowingly or spiteful. But in terms of the stuff, it's where I think we could disrupt the market and come to the attention of the regulators or an exchange by yeah, if a poor practices or somebody genuinely trying to do something that's going to detriment the company or our clients.
- SPEAKER1 16:33 And you mentioned earlier that your clients are presumably driving most of your order activity and I mean, obviously, there's been some big things in news that GameStop , as an example with where you had like sit it out on the other side , reportedly , you know , offering payment for order flow in the US because it's not legal there in the same way as it is in the UK , effectively . What is your perception about the likely levels of self-calibration in the market in the future? Because at the moment it sounds like from what you've been saying, there's not too much it sounds like it's the human. They get their empty for platform. They decide the parameters of the order and they hit in their way. What do you say is your perception of maybe people downstream of the firm, your clients or maybe your indirect clients developing algorithmic functionality in the future, maybe to get a speed advantage? Or maybe it's an inside vantage. So, for example, it could be that there's Twitter news out there and they take that Twitter news in and maybe making some trade off that. Do you think that's doing that's a possibility in the sector that you're in or not really?
- SPEAKER2 18:04 Yeah, definitely. We've seen it. We've seen that. So, our prices are based off on the underlying prices. We receive a feed from a market data provider and then we kind of publish a price based on that. Obviously, the time it takes for that price to be processed by us, to be talking milliseconds, but know clients have in the past and still beaten us o that price. So effectively I have a quick a feed or they have a box the set closest to the exchange servers or something like that. And they're saying in these price moves before us, and I've got an automated system on that platform that allows them to trade with us. And then, yeah, they essentially beat the price so then they can get of us before our prices had a chance to update. So that's one example we have defended ourselves against this in a couple of ways. Firstly, we have improved the speed of our pricing and so we have a server that sits near the exchange to improve our price feed. We're also looking at other kind of products to get into it, and that's going to help when we do that, I also have if we suspect that clients could be partaking in this activity moves to have some pre trade authorization rules that we can set on specifically and second, it would need compliance approval as well. And once we put those in place, then we cross-check and it's much harder for firms to kind of beat

us there. So, we've got to be careful because if there is a kind of best execution, treating customers fairly angle to that, so we do have to be careful, and that's one example. Another thing that we say in the past are client's kind of manipulating the order book on the underlying market and taking advantage of that we've on it on our prices. So, they'll basically move the market. And effectively, sometimes the underlying spreads will be different to what we show in the platform, and that allows them to make money that way. Another thing that, and I've spoken to so many people about this and we haven't seen it recently. And yeah, I'll be interested to hear other people's business, but we've seen all this come for and again. This might sound pretty crazy to say this, but we've seen all this come through on certain FX pairs at illiquid times and they always seem to get with us before there's a kind of PIP move in the market, which seems crazy that you could think that somebody could move an FX market, but we have a few theories behind this kind of thing that clients might know somebody that's work in a big bank, and they know what a large order is going to go for, and we have. And then the thing is, when you say when they get into trying to get an edge and when the price is moving, it's impossible to think otherwise just because it's there in front of you. And you can see where their trades are going, and they've got a hundred percent success rate. It just doesn't make much sense. So, the explanation is, is that they're moving the market. So, a lot of these issues that we have had in the past, but when you do things like Gamestock and Twitter and social media, there's a lot of you. Yeah, it's difficult to call it market abuse, it's a bit of a tricky one. But there's all these other things that can be done that we haven't seen, but suddenly tons and build a massive position in. Stop and know we're performing an end of day, all of a sudden, the price that our clients have going at can be very different to what we get in at the end of the day. And if that makes sense and

SPEAKER1      22:47    it does I mean, given some of those things that you've outlined there and possibly ways in which the market may be evolving, how would you rate the knowledge levels sort of understanding of conduct risk? Because it might apply to relate to algorithmic activity specifically within your business, you know, from sort of senior management through to front office and then the support staff. Do you think it's something which is improving or is it is it something which is sort of quite static? I mean, you mentioned internal audit, doing audits on what you're some certain aspects of your conduct program and stuff. I mean, do you think they really, they understand what they're looking at? What do you think?

SPEAKER2      23:37    So, if I touch upon you point first, I mean, you would at least we've had some of our horrendous Otis's in the past where they really just don't understand the business and they can't find him to relevant or just for the sake of something. They told us that we had a really good background in

algorithmic trading is what's on the financial side of things. And yeah, he was a very good all the time and really understood the business and at the same time. Well, in his performance, you know, two weeks of. But there's only going to be so much information that is going to be able to get so well. Yeah, the finances have been pretty relevant. And generally, he was of the opinion that some of the things that are fixed on our kind of company, given the nature of our trading, so it's more kind of best efforts. You still couldn't conclusively say that he's covered everything, and yet there's only so much that can be done. So, in that respect, I thought his findings were reasonable. There is nothing that I would have expected to find, and they didn't find. But yeah, it's not to say that if it's been covered and then it's just....Yeah, but with so many different things that go on, I don't know whether. Some of the things that come out of the algo side, I don't tend to get involved in the risk management committee meeting and that sort of thing. So, it is a little bit difficult to say. But my general opinion would be that they probably are more concerned with things.... And actually, when we looked on the face of things, is one of our biggest risks because something could quite easily go wrong and all of a sudden there's been a failure or something's gone wrong with the algo where you are in a horrendous position that you really don't want to. To move the market in a certain way and suddenly you're in trouble with the regulators are an exchange. And yes, it's a big risk that probably doesn't get as much time as it should because not very much has happened with us. That's been negative. And we have had certain things. The exchanges I can think of from where the CME, where we had one of our clients' big orders, so they were on auto hedge. So, any child that this client placed, we were just automatically. And what happened was they had several stock losses in place. So, they had a stop loss. Excuse it. We then hit the market with that stop loss because we put out in the market dropped against the client. The next stop loss hit that we hit the market again. And there was a bit of a death spiral, and we pushed the market down and we got a letter from the same of sales being completely confidential. And yeah, we had to kind of explain how it happened, why it happened and what happened off the back of that. We had to change how that worked.

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| SPEAKER1 | 27:44 | And was what was the underlying. Was that it was on?  |
| SPEAKER2 | 27:49 | It was on an oil product. I think that was it was an oil product.   |
| SPEAKER1 | 27:55 | And have you had any incidents in the fixed income or foreign exchange side of things?  |
| SPEAKER2 | 28:05 | No, nothing on foreign exchange, nothing on fixed income. I don't know how relevant this is going to be for you, but we do often have conversations with some of our employees on some of our flow where, again, we have been not so relevant anymore. But we had some clients where they would trade equities and that I would make money and a lot of the time, mostly on the |

insider trading and news stories that are coming out. And so, there was a ring of these clients. And so, what we used to do because of the fact that we knew that that was going to make money, we would again put them to hedge. So basically, what we're doing is sending these trades to our papers that are clearly insider trades. And the papers are asking questions about where is this flow coming from? And we've obviously explained with purely just hedging the flow we get from our clients that this isn't serendipitous anymore because we now have a kind of an exit process where if we have X amount of suspicious trades over a certain amount of time, then we of all the clients, I think we have to find it extremely hard to prosecute in these kind of insider dealer cases and market misconduct. So, yeah, a few years back, they came out with a speech and really put the onus on firms to take steps to cut out this kind of behaviour and essentially do that is by closing different accounts. And yet again, they're going to have recognized some of the conversations we've had in the past.

SPEAKER1 30:07 Do you think there's a possibility that as the markets evolve, and possibly they become less human in certain respects, you know, they sort of also had other tools that might be deployed.... Do you think that creates more the possibility for more conduct risk or less.? Um. As you mentioned about the traders and staff and obviously traders are emotional beings right their acting on emotion, that there's greed involved, there's all that kind of stuff. And if you automate things, you know, all the dynamics are any different or is it the dynamics are different?

SPEAKER2 30:49 This is where, you know, comes at risk. We tend to think of it as individuals. And in this case, it would be, you know, individual trading in the market and doing something untoward or something they shouldn't be doing. Whereas, you know, the way things are going and what you say, there is going to be much more emphasis on the way that, you know, traders or whatever, you know, these algos. And yet there's still a conduct system. Yeah, a little bit different. And it's still going to need a lot of oversight. It's like you're losing kind of stuff that actually are in the trading. But you might say more staff from that perspective to monitor these guys and ensure that they're. Yeah. Set up correctly and they are performing as expected as well. So, it's kind of different kind of stress, I would say, in that respect.

SPEAKER1 31:51 And do you are you aware of any sort of plans to reduce overhead, even in your own firm or in your wider sectors or more generally maybe people you've been talking to as a result of a move towards more automation?

SPEAKER2 32:06 Or we kind of did do this probably three or four years back. And, yeah, we did kind of go more to.... But then I say that we actually we didn't our overhead shifted from dealers and pricing guys more manual things, and it shifted to quants. And this is in terms of our prices and our kind of charging in the underlying market. So was go to a model. So, I'd say the overhead in



terms of stuff, it's shifted from the more traditional traders and dealers to a more quant side of things. And actually, I think our overhead is far more than what it was before because we have far more quants than we did dealers. I don't know of any changes from our company or in the industry as a whole yet to have any kind of shifts going forwards. But yeah, from our point of view, we are constantly looking to improve our guys. What is being done on those?

SPEAKER1 33:22 So, you mean you bring in a lot of these quants stuff? I mean, how do you stay abreast of how the people in the business may be in different areas, including maybe the how do they stay abreast of developments in this space? What sort of methods? But you typically use some markets are more transparent and obvious. Right? I mean, you mentioned the CME. You know, you may find somebody in a listed derivatives market or a listed there's equities market. You could sort of see what's going on in this. But I suppose in markets like foreign exchange, possibly also some bond markets, which some of them say it's probably a bit harder to sort of they're a bit opaquer. So how do you sort of stay on top of what might be happening elsewhere?

SPEAKER2 34:09 And so, what you mean in terms of how we kind of change that kind of stuff to

SPEAKER1 34:17 try the staff maybe become aware of risk incidents? So, I mean, to give you an example, I think the British Bankers Association, they've got like an anonymous portal for people that are members of that association of firms that are members. And they do sort of like operational risk reporting events. So, if it's been, for example, some sort of strange price spike or there's been an outage or something like that or whatever it is, they will sort of operational risk report that to the to the central pool. So, it's all anonymous. And, you know, the other firms don't know who it is, you sort of reporting it, but they can then take that and say, OK, well, this is a risk event which we're seeing in our sector. And we can learn from that may be in our firm to try and stop that from being a sort of event which could cause contagion in the market or something. I mean, is there anything like that in your sector where there's a bit of information sharing and all that kind of stuff?

SPEAKER2 35:18 No, not particularly. But you certainly give me the thought that I mean, if it's something that's come out quite publicly, then we'll look at the issues and, yeah, ensure that all staff or relevant staff have been aware from that perspective. If anything happens internally, we do have an internal incident manager where our staff log incidents not anonymously, and we have a kind of operational risk framework around that. Let's be honest. There's no industry wide, yeah, share in that for us. And again, we do not so much because of the current situation, but we do kind of have regular meetings of our peers in the industry generally running for the main topics that are concern in our area. But our guys aren't really, and we can get it tough. I

mean, I would say we're competitors, so maybe it's not the kind of thing you would talk about. But yeah, again, it might go back to that point that this isn't really as much at the forefront as it should be. And yeah, we should probably be a little bit wary that technology doesn't go so far ahead of us that. Keep it out of it from a monitoring and oversight perspective

SPEAKER1 36:56 on that monitoring perspective, I mean, what type of detective surveillance tools are you currently using?

SPEAKER2 37:05 So, this is where we do have a gap that we've identified and we're currently talking to. We've been to some thought Evander's to help us with the detection of any kind of issues we try to notice that applies. So, you're talking to kind of Nasdaq and one market data, and we decided to use one market for this. And so, we're kind of in the. Yeah. Onboarding process of what our expectations are and trying to send them some data that they're able to work with our current.... Yeah, apart from that, the minute we have access to our intel system, which is like config manager, which allows us to view, whereas circuit breakers are set and that kind of thing, so we can perform some monitoring from that perspective. We also have weekly reports of what's been amended in any of our pricing systems that we that we can review. But yeah, in all honesty, it's an area that we do need to improve on. And yeah, I've been thinking about whether the right way to go about it as well with actually having an expert that sits on a desk, sits with the comments. And almost a decade and a half after those sorry folks, our resources focus on the area. But yeah, what we get pulled in all sorts of directions anyway, compliance in the department. So, we're already really, really stretched. Yes. Probably quite difficult to kind of justify that even. That's part of why we should be going.

SPEAKER1 39:05 When you look to sort of select that type of tool...Is that something which you maybe speak to your peers in the market and then sort of maybe take a reference from them or maybe those systems providers, they give you somebody as a reference? Is that kind of thing going on? Or is it is it very sort of no one really talks to each other about that kind of stuff in this sector?

SPEAKER2 39:33 And so, what we haven't had well, if we have ever been more alive, actually, we're part of a group at the barbecue club and there are several of our peers attend that and they'll be different topics. And it's the kind of, you know, Chatham House rules and the fun sometimes the more fun than others. And sometimes, you know, the topic might be at risk. But we've had a series of market abuse and we have discussed and yeah, the kind of providers that different people use. And, you know, that's the kind of open conversations about that. Also, when talking to these providers, you know, they've all talked in different kinds of companies, NASDAQ and dealt with two very similar companies to us. Again, being brutally honest, they were

kind of four or five times more expensive than the provider that we've gone with. So, you know, both. But again, the one market I'd say would have to go with I have every confidence that I wouldn't choose them. I don't think that we're going to be able to deliver what they say they're able to deliver. And they have a lot of big reputation and companies that use them, just not necessarily their industry. But from the conversations I was having with them regarding the products that we offer of what I'm looking for, to give me confidence that it understood the products and would be able to help us. And I think, yeah, we'll find out pretty quickly if they can't. And then we have to make a decision on.

SPEAKER1 41:22 Next question... is there a lot of reliance on the third-party vendor to sort of come up with the solution may be to identify some of the risks of manipulation and all the rest of it in your firms? Or is it very much a case of you're almost like a test case for them and they're asking you to almost write their alerts for them on these on these things?

SPEAKER2 41:50 We are the ones that are performing the risk assessment. So, we're the ones that I mean, they will help us along the journey. Yeah, well, and some of their may now think they can test the alerts. Yeah. That we have to perform the risk assessment. Ultimately, it's our responsibility. But there will be some handholding in that process where they can help and use their experience. I like to have to help with what levels to set up.

SPEAKER1 42:33 How would you rate the ability of humans to spot possible risk events and algorithmic activities, maybe with system, without the system, because you haven't had a system yet. By the sounds of it, this is sounds like a bit of a new venture. So how do you how do you rate the ability of the humans to sort of...algorithmic activity?

SPEAKER2 43:01 Like, I would write very low. I would think. I think you have to compare it to market manipulation and how many STORs, if they receive for inside data, which is very easy to detect compared to market manipulation. Such a revelation is such a collection is such a low percentage of the STORs I would say, but not tell me that it never happened. I just think, yeah, it's very, very difficult to detect anyway. And then, you know, when you have algo trading and something going on, I would say, yeah, very low.

SPEAKER1 43:53 And is the system that you're using... Is that just going to be primarily looking at sort of the classic market abuse type incidents? Or is it going to possibly look at broader conduct issues as well in the sense of things like execution, quality, pricing, possibly aggregation of orders, fair allocation, that kind of stuff?

SPEAKER2 44:23 So, for the first phase is going to be just market based. And looking at, you know, the example I gave regarding the CME, you know, that kind of thing, that wouldn't necessarily be as easy to spot as insider trading. We would

want to make sure that we would detect that kind of thing. And ideally, we would have seen that this was going on with kind of smaller orders before it happened, with an order so big that the same rights that we would like to think that we can have a system in place where we would detect that type of thing before they got to the larger scale. And we do have plans to use this provider. And again, their conversations and this is very much in the forefront of things like best execution and quality of execution. So, we have conversations with these guys have been related to that as well. And yeah, I noticed that kind of thing I don't think is as relevant for us. But certainly, the best execution will be to certainly provide a platform.

SPEAKER1 45:33 And how would you rate the ability of regulators to spot suspicious activity, I mean, obviously, they're taking in lots of stuff from transaction reports and things like that, do you think they were able to spot this or is it very much they're sort of relying on the firms to do the work for them?

SPEAKER2 45:58 Well, I think in the example I gave regarding insider trading, the emphasis is on the firms. So, yeah, obviously transaction going in their system, the whole point of transaction important is that they're able to detect this kind of thing. But, you know, trade level isn't necessarily going to give you all the all the details. So, and again, I don't think it is very easy to do. I mean, how many cases of market misconduct to prosecute or limit. And, yes, it certainly isn't proportionate to how much of it, I imagine, goes on and occurs. So, I would say I and regulators in general, not very good either.

SPEAKER1 46:54 Can you see any sort of instance where you might move to a situation of having more machine-to-machine regulation? Because presumably at the moment you'll use the tools that you're looking at are also a tape off one time delay in electronic stuff. Could you see any situations actually where people are taken out of the sort of alert review process and it's more sort of almost like idea combined with the concept of Star Wars type of thing? Somebody is trying to do something untoward and then the other system realizes that it's trying to do that and actually stops it even before. Yeah. No. Yeah, I can hear.

SPEAKER2 47:48 Sorry, I just missed the last 10 seconds of Alex.

SPEAKER1 47:53 Do you think there's a possibility of a sort of Star Wars like system almost where this sort of reliance on a T+1 leg and a human eye looking at something? And actually, there's a sort of approach taken to actually if this is going to be electronic messages which are driven by code, then we'll have a defensive mechanism which is able to counteract that real time and actually stop the abuse from occurring in the first place to say anything like that or.

SPEAKER2 48:28 Yes, potentially. I think if we've got to the stage where algos are performing the actual trading, then I guess it's not unreasonable to think they can get

access to a more automated monitor as an occurring. And you still going to have to adjust with the algorithm itself. We have constant need to develop and oversee the whole thing. So, you know, if you do have some kind of automated system, you're going to have to have some kind of human intervention, basically monitored, which is a bit odd. Know even in surveillance systems, you know, we companies try to sell us these wonderful, automated surveillance systems that detect speech recognition and connect it with orders and yeah, that that kind of thing. And, you know, I personally think we are quite way away from that. Yeah. I'm sure one day will happen.

SPEAKER1      49:38      And, you know, you mentioned that you tooled up and have loads of quants. I mean, if they develop some code to do you also had or something like that, is there any sort of thinking to say, OK, well, it may well be that, you know, normally when somebody creates code is created to address a specific goal. So, if you take the Google driverless car. Its goal is effectively going to be, as you know, get me from A to B and it might think, OK, how do I get from A to B in the quickest time possible, which does some calculations and then, you know, but then it equally. Would it be. You know, I'm reasonable in that circumstance for Google saying, OK, well, I might get to a be very quickly in my car, but that could be a mother and a child going across the road. And I'll just run him over to get to me to get to my destination as quick as possible, because that's what my master told me to do, is that in a sense that with maybe the quants and stuff that they are thinking, OK, similar to what Google is thinking is that, yeah, there is a goal, but there's a but there are ethical constraints on that goal. And are you seeing it or are you aware of any efforts by them to maybe do similar things to what Google and I have done , where they've tried to say, OK, well, I want you to try and hedge my risk the best way possible, but I want you to do it in the most ethical way possible , in a code sense, so that, you know, if it means that I'm going to front run somebody to hedge my risk. The code will realize that it's front running and will deliberately take maybe option B, which results in a hedge, but it may be a less perfect hedge or something like that. Are you aware of any moves like that? Again, quite farfetched.

SPEAKER2      51:37      Yeah, not particularly. I mean, yeah, obviously the code and the algorithms will work, so yeah, we're not. Well ideally that works. So, we're not leaving the market in certain ways. And yeah, ensuring that we're kind of getting out of a chase is all getting into trades as efficiently as possible because ultimately that's what they want to be doing to kind of achieve the best possible outcome for ourselves. But whether they're sophisticated to ensure that, yeah, they're not front running or that that until we get kind of third-party detection system, then.

SPEAKER1 52:32 I'm just interested to know why. I mean, has it ever crossed your mind to build your own surveillance system? I mean, just curious why you decided to sort of go outside and try and buy something in....

SPEAKER2 52:47 So, yet we talked about building our own style system and how terribly old our reporting for detecting client's suspicious activity is built in-house. And because clients and I would take...

SPEAKER1 53:09 You cut out there slightly.

SPEAKER2 53:15 So, yeah...

SPEAKER1 53:18 I can hear. I can hear you now. I can't. Can you hear me? Can you hear me?

SPEAKER2 53:31 I can I hear you? I'm sorry, I don't know how much you had that, but basically. Yeah, so all our client side trades is...Can you hear me now?

SPEAKER1 54:51 I can. Can you hear me?

SPEAKER2 54:52 Yes, sorry, I've just moved into another room now where I think the WIFI is much better.

SPEAKER1 54:59 I can hear you.

SPEAKER2 55:00 Sorry. I don't know if I had that.

SPEAKER1 55:03 So, I got to the point where you said that it was a resource thing to do it in-house or not.

SPEAKER2 55:11 Yeah. So basically, our main risk from a client perspective, because they're trading with us on a principal basis, and nothing's really hits in the underlying market. Our main risk from our client side is insider trading. So those reports with which we did failed internally, and we have been listening for some time and amended them as necessary with the hedge activity and the small kind of device. These added layers of complexity. And we did discuss building something internally and in a sense of isolation and just purely down to resources, a lot of other projects that are going on at the minute. And it's quite difficult for. Yeah, what we're looking for to take priority at the moment, unfortunately. And there are a lot of good providers out there who can, in our conversation with them, feel that they're going to meet our needs.

SPEAKER1 56:26 We're not far off there, and I promise we've got just a few questions left, so. This managing conduct risk in a traditional sense with human dealers, traders, brokers, FCA has made a big thing with SMCR, obviously about, for example, using remuneration to both incentivize but also deter. So, you know, if you do something stupid, then you might lose some of your bonus or if you do something positive, you might actually get a bit of an uplift or something. And then there's also things like punishment. So, you know, obviously this is different, that your certificate under some sale might get

taken away. If you if you don't, do you know you're trading properly if humans are taken out of the equation from the dealing side of things. Do you see any ways in which the machine or the or the types of algorithms that might be deployed could be incentivized or punished by the regulator because the whole system of regulation is built on human liability at the moment and human accountability. But there are some people in the for example, the European Union, they had a paper where they were considering recognizing. Certain forms of AI as being a sort of an agent, as having agency, almost like an animal has agency to a certain degree. Are you what are your thoughts on that? Or is that just a sort of philosophical pipe dream that just you are no real practical relevance to the world that you can, have it?

SPEAKER2 58:23 I mean, yes, it does sound far-fetched, but ultimately somebody's got to be responsible for that as well.

SPEAKER1 58:35 I mean, have you heard of something called the Dangerous Dogs Act? That was in the early 90s. It's quite interesting now. So, there was there the Conservative government in the early 90s and there was a big moral panic about dangerous dogs. So, people breeding dogs and then rearing them in such a way that they might be dangerous to kids in this kind of stuff. And there was a lot of debate and there was debate from people who were obviously pro animals and all that kind of stuff. And then there was people who, you know, want to protect the kids and everything. And the Dangerous Dogs Act was passed, which was quite a criticized piece of legislation. And this act did sort of confer a degree of agency on the dog as well as on the person, because even though the human being was deemed to be responsible for them and the act says yeah, you can get fined, you can go to prison, you know, this kind of stuff. Equally, the dog could get put down. So, the dog is effectively being punished as well, not just the owner. And I suppose, you know, can you be there a foreseeable situation where there is individual responsible for certifying the algo, but maybe that algo gets developed and does something which is not reasonably foreseeable to that person?

SPEAKER2 59:59 Yeah, I mean, it depends on the circumstances, I think. I mean. Oh, yeah. Ultimately, somebody has to go. Yeah, obviously, if it's in such a way that all of a sudden, it's got so much eye that you have a kind of its scenario where, you know, things happen that these guys want to wait for, I guess it just depends on the circumstance, really. Should whoever create or initiated, should they have reasonably been aware that, you know, what's happened, could have happened? I think it yeah, it really depends on the circumstances. But, yeah, I would like to have a person responsible rather than an algo, but maybe not forward thinking enough.

SPEAKER1 01:01:03 How would you rate the merits of legislative versus industry solutions in this sort of debate? I mean, what would you prefer to see...

SPEAKER2 01:01:22 I feel like maybe some kind of hybrid of the two, because I think the industry are going to have the knowledge and expertise of, yeah, well, most situations and little things that can happen. But if it was like, you know, some quite serious things could happen off the back of our trade. And so, it does feel like it's something that needs to kind of go into legislation. Obviously, you've got things like FX Global Code, which is, you know, yes, very much industry led like. This is different in that respect. So, in some ways, it is like, yes, it should be industry led by some of the implications and ramifications that could occur off the back of trade and things that things could get pretty horrendously wrong. I feel like it does need to be a legislative element as well.

SPEAKER1 01:02:30 And you mentioned earlier, so you know that your experience with ESMA and also things like RTS six and now we've got Brexit. So, you know, the UK is not in the tent of the EU anymore. How would you rate the UK's approach to these issues over, say, you know, the most obvious piercer like the EU and the US in particular?

SPEAKER2 01:02:58 So, yeah, for the US, again, we don't really have anything to those guys because we can't operate in the US. A of the standards are a bit harder and a bit more heavy, heavy hitter, if you will. And I think generally the FCA are pretty forward thinking with their legs compared to. So yeah, I wouldn't necessarily have the utmost confidence that they would implement. Yeah. But what we need at the same time and Brexit, most of our regs in my opinion are if it's a pretty, very high standard and also are often proportionate, I think some of the things like, for instance, reporting and, you know, we get captured with that and it just seems very, very burdensome. And, you know, I never really see any benefit, so anything really that kind of is relevant when it comes to reporting, and I just think sometimes they speak out with RTS 27 best execution reports and now all of a sudden, they decided not to use them and they're not relevant anymore. So, yeah, sometimes you get caught up of red tape and some of it's just not proportionate to

SPEAKER1 01:04:54 an ultimate question. Are there any lessons learned from instance elsewhere in the trading industry or possibly even from other highly regulated industries that could be aviation, health sector, military, something like that, which you think? A firm like yours could learn from in sort of managing the conduct risks associated with algorithms and automation and things like that.

SPEAKER2 01:05:38 After all, it's not something I've really thought about. Yeah, well, I'm not yeah, I'm struggling to think of an answer to this one Alex.



SPEAKER1 01:05:59 Well, I mean, look, there's been some eclectic ones, but it may not be an answer. I suppose, OK, we move on to the final one because it's getting late anyway, but what your principal concerns for the future. Final question...

SPEAKER2 01:06:18 Is this generally or specifically for algo?

SPEAKER1 01:06:24 Specific to algorithms and how the markets could evolve, you know, maybe your place and maybe your firm's place in it and stuff like that?

SPEAKER2 01:06:36 I mean, yeah. So, from a business perspective, you know, very forward thinking, we've got pretty good technology and, you know, our process is good. I mean, my concerns are and again, we've seen it. You know, to a lesser degree, but with a payoff, I have even more fat fingered things in the past, human error, but it can be very easy for some kind of our guy to basically bring down the market and cause some kind of catastrophe. I know we've seen instances here and there, but, yeah, it's probably in some ways quite amazing that nothing that major has happened today is in real, real catastrophic. So, yeah, I think the more. You use technology and you rely on technology. The more cash we've got to pay from that kind of monitoring and surveillance perspective, so that's probably my major concern.

SPEAKER1 01:07:58 OK, thanks very much for that. That concludes the interview. So, I'm going to press stop now on the recording.