TRANSCRIPT

Beyond Disruption: Investing and Technology Converge

Featuring: ***Peter Zangari****, MSCI's Head of Research and Product Development*

Sebastien Lieblich*, Managing Director, MSCI Research*

Andy Sparks*, Managing Director, MSCI Research*

David Zhang*, Managing Director and Head of Securitized Products Research*

Brett Winton*, Head of Research at ARK Invest*

Adam Bass:

This is MSCI perspectives. Your source for weekly research insights as investors respond to the COVID-19 pandemic. I'm your host Adam Bass. And today is July 23rd, 2020. This week, the new reality of life and work in the time of COVID has highlighted our reliance on and the importance of technology. Like so much else about this crisis, the impact of technology has been magnified and accelerated. It's been especially true for investors and for financial services firms in general, where data and data systems play such a vital role. To explore this, we're doing something a little different on this episode of MSCI perspectives. Rather than one interview with one expert voice, we spoke with a number of people who are doing different types of research to get a 360 view and tell our story about the enormous amount of change we've seen.

Peter Zangari:

Nothing happens overnight, but you, but you kind of see how things are moving, going from sifting through stacks of paper to understand, where are my biggest risks? What's hurting my performance, meaning just give me the answer. Don't force me to go try and fight it. Don't give me all the ingredients of the cake. Give me the cake so I could spend my time eating it rather than reading through the directions.

Adam Bass:

That's Peter Zangari, MSCI's head of research. To be completely honest, Peter provided this mouthwatering metaphor during an interview we did with him before the crisis, but it's even more true today in terms of our ability to handle reams of data in a simple, accessible way.

Sebastien Lieblich:

I'm Sebastian Lieblich. I'm based in our Paris office. I'm globally heading up index solutions. And I'm the chairman of the MSCI equity index committee. I think what asset managers and investors in general are looking for are one stop shops. They don't want to have to juggle through different systems to get different pieces of information.

Adam Bass:

On top of his many other responsibilities, Sebastian has also started to focus on user experience. This has meant starting to think about questions like how easy, how intuitive is it for investors to get what they need from these one stop shops?

Sebastien Lieblich:

Before being involved in these types of discussions? I didn't realize that user experience is so important. That is going to be the cherry on the cake, a good user experience, but it's not only the cherry. The cherry will define the cake. If the cherry is not a good cherry, then no one will appreciate your cake.

Adam Bass:

There's that cake again.

Sebastien Lieblich:

That's why these platform are interesting, right? It gives you the flexibility. Someone that only wants to get the ready cake, just orders the cake and gets the cake. The one that is more sophisticated and knows how to bake the cake will just order the ingredients and then basically bake his cake.

Sebastien Lieblich:

And that's what these platforms are able to do. They cater for the entire spectrum of users from the very less sophisticated, just want to eat my cake to the one that even goes and defines the ingredients that the cake should include.

Adam Bass:

So let's move away from the cake now, as difficult as that may be, and look at where we've arrived at with COVID. Much of the financial services industry is working from home and we've leaned on technology to help us communicate and log onto our servers, but there's still the matter of all that data and managing it in an efficient way.

Peter Zangari:

I think there's a spectrum in terms of the ways that technology has helped clients and MSCI as well, become more efficient. And I say spectrum, because it could be as simple to begin with in terms of using technology that helps you limit the amount of spreadsheets that you have to manage. And we know that there's a high correlation between the number of spreadsheets that an organization uses and the number of people that are needed to create those spreadsheets and maintain those spreadsheets.

Peter Zangari:

This is one simple example. So to the extent that you can use technology, particularly in the areas or related to, what's now known as data science, it can provide a higher level of automation.

Andy Sparks:

Our compute power is dramatically cheaper than it once was.

Adam Bass:

Enter Andy sparks, head of MSCI portfolio management.

Andy Sparks:

There's much more available data, so it's easier to calibrate really complicated models. Investors that are consuming models from others, those investors now may have model validation groups and they may want to vet the model. So they may be using a model from a broker dealer. They may be using a model from an analytic provider, but they want more validation around the models. And the questions they're asking are, I'd say a lot more sophisticated than they would have been say 10 years ago.

Adam Bass:

And the models themselves are more sophisticated driven by advances specifically in artificial intelligence.

David Zhang:

In May 2017, we actually started exploring, apply AI to one of the harvester province in financial modeling, which is actually, it's a great products in general, but also like mortgage modeling specifically.

Adam Bass:

David Zhang heads the securitized products research group at MSCI, the research he does can be incredibly resource intensive and involve a lot of data and a huge amount of analysis. That's why a couple of years ago MSCI decided his area was a good one to help define the trend in big data and AI.

Sebastien Lieblich:

Yeah, food is advancing so fast, at a accelerating pace. When, the Google did a study, it was done by a specialist like people really expert in AI. But since then, we just whizzing less than a year, just a lot of advancement in both hardware and in software. So that, the advancement in hardware and software is that allow you to apply the techniques without being the expert, which I think in my view is really revolutionary. You know, analogy is a personal computer has been around for a long time. The takeoff really after the Mac allow you to do personal publishing. So that's, I feel not only for my project, but also surrounding industry. I notice this is one of the catalysts that allow AI to really improve a lot of financial modeling problems, why they set the MSCI in the industry and at other firms...

Adam Bass:

Helping these advances in machine learning move along is the fact that, as Andy Sparks put it, you have people coming out of school where they're very comfortable with programming languages, such as Python, but for those who may not be familiar, what is Python, Peter?

Peter Zangari:

So one answer is it's a snake that I know a little about. A second answer is it's a high level programming language, and when I say high level, meaning that it is something that does not require a sophisticated level of programming knowledge to learn, and then execute more lower level actions such as how one debugs a program, how one traps errors and so on is quote unquote taken care of so that the programmer can focus more on their specific mission. And it's something that quite frankly, people at MSCI on my team and client who I engage with have really been talking about how they have been using Python across their organization or organizations to help them do various types of work, research included.

Peter Zangari:

This open source code is very powerful. It's very economical. And it's the leading programming language that is taught at universities.

Adam Bass:

And back to Andy Sparks.

Andy Sparks:

Some of these individuals may be portfolio managers and they don't mind getting their hands dirty with code, in fact, more than you might think, like getting their hands dirty with code. They're getting exposed to these quantitative tools much more than a generation ago. I came to wall street 33 years ago, and the day I arrived, I was given a full time developer and by current standards, I think that would be a luxury at most institutions. What I speak about at times are generational changes. How current employees, future employees, what are they learning in school? What do they want to learn more when they join the workforce that can help them strengthen their career path? Today Python is right up there in terms of, I would say a core skill that many individuals in the finance industry view as something that can really help them further their career path.

Andy Sparks:

And that is the absolute key point. Once one understands and appreciates that then momentum builds within an organization to figure out ways in terms of how do we invest in training programs, for example, to ensure that our work force learns and adapts to these new skills.

Adam Bass:

This momentum Peter's talking about, it's happening everywhere, not just here at MSCI. It's happening in all areas of finance and in all sorts of ways.

Sebastien Lieblich:

We are now including AI techniques to build indexes, for example, thematic indexes, which use AI techniques and natural language processing techniques to define the companies that should be included in a thematic index, thematic being themes around smart cities, aging population, future mobility, et cetera.

Adam Bass:

One of those themes involves advances in the field of genomics, which we talked about last week with ARK Invest, director of research, Brett Winton, while we weren't able to include it in the final cut, Brett had added more color around the potential for radical changes in medical standards of care because of advances in technology.

Brett Winton:

The first disease that is clearly being addressed and going to be addressed by this, this cancer, which is at root a genetic disease. If you look at the cost decline in sequencing, one of the emerging technologies that we believe is going to commercialize is to be able to basically take a sample of patient's blood and extract from that sample of patients blood fragments of cancer DNA that have been kicked off by a tumor and thereby tell exactly what that cancer is and how to treat it.

Adam Bass:

But wait, it gets better.

Brett Winton:

Not only that, as you begin to do that testing, you're going to get a lot more data off of those patients who have early stage cancers that previously you had missed out on. And that data will be important because in computing the economics of this whole sequence, you have to account for the fact that detecting more early stage cancers isn't necessarily a great thing if you can't distinguish between those cancers that are dangerous and those that are not. And so the standard of care will likely become, you get detected with a cancer, and then you do a follow on genetic test to try to tell whether or not you need to act against it, or whether or not you need to continue to do that genetic test to see if the cancer mutates into an aggressive form. And so kind of the entire way in which we do cancer care will change on the basis of the data that we get off of these, we call them liquid biopsy, pan cancer detection tests.

Adam Bass:

For who may be thinking, okay, that's great. That's really interesting stuff, but weren't we talking about the role of technology? Here's where Brett brings it all together.

Brett Winton:

That data would be not useless, but it would be a real challenge to process it all, if you didn't have kind of the modern machine learning and AI software that's coming to market today. And so one of the interesting things that we see from a top down level looking at disruptive technologies is the way that the technologies are reinforcing each other and converging and creating new, catalyzing new opportunities that otherwise just couldn't be a common to the commercial marketplace. The combination of the massive data you're generating with sequencing, the artificial intelligence and machine learning products that are able to process that data and find patterns in that data that a human could not. And then the gene editing technology that can then allow you to actually act against your new insights is really likely to change the health space faster than any other space that we operate in.

Adam Bass:

Finding patterns human being can't and doing so quickly. That's really what we're talking about. The medic indexes, for example. It's not that it would have been impossible to create them before, it's just the amount of time and effort involved. Sebastian estimated that work savings to be...

Sebastien Lieblich:

Probably around 50 to 1. It's huge for this specific one, right? Imagine having to open 10,000 annual reports just to find the right words to be saying, okay, that's a company which is active in smart cities.

That's a company which is, which will be, that we can categorize on the theme of aging population. A computer does that just in a fraction of a period based on like AI and natural language processing.

David Zhang:

AI is really potentially revolutionary in terms of efficiency to improve your work. So I always imagined that, I've been doing this for 15 years, but if you just give me a daytime, start from scratch to the model, or take me for nine months, the machine actually fit a model in three hours. That's like 1000 times improvement in efficiency.

Adam Bass:

And not just faster, more accurate.

David Zhang:

The major reason is that in my, in SP modeling space you're dealing with hundreds of risk factors. So humans are not very good at thinking a hundred dimension, right? Like I have trouble just thinking like five dimension. And machine apparently does not have that sort of problem. So that's another kind of big finding. And I think the AI will be very suitable for the problems we're dealing with. And a lot of other problems we are going to deal with in the investment analysis work.

Adam Bass:

The COVID-19 pandemic has forced people around the world to quickly adapt to a new way of living, working, and even how we celebrate and mourn together. What we've heard today is how important technological advances are in helping us manage through all this, how we stay connected and even how we work toward a cure. If nothing else, COVID has shown us that embracing AI and machine learning is essential if we're going to solve the complex evolving problems we're presented with in all areas of life. That's all for this week. Our thanks to Peter, Andy, Sebastian, David, and Brett, and to all of you for joining us. Join us next week when we'll speak with Abishag Gupta about the rising importance of single factor portfolios. Subscribing to the podcast doesn't take long and while you're at it, why not leave a comment? What did you think of this week's format? Until next week, I'm your host Adam Bass, and this is MSCI perspectives. Stay safe everyone.

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