TRANSCRIPT

Antibiotic Resistance and What is ESG?

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Mike Disabato:

What's up everyone, and welcome to the weekly edition of ESG Now, where we cover how the environment, our society, and corporate governance effects and are affected by our economy.

I'm your host, Mike Disabato, and this week, we have two stories for you that I'm very excited about.

The first is a new hope in the fight against antibiotic resistance, and then we get to the big reveal and tell you what an ESG rating is actually for. Basically, I finally tell you what ESG investing is. Thanks as always for joining us, stay tuned.

Global emergencies tend to fast forward history. Decisions that people say are impossible to make happen in an instant, and societal structures you think are set at unbreakable laws, are revealed to be held together with nothing more than our collective imagination.

After the dust settles, what arises from these monumental shifts can be something like a good situation that we want to keep around for a long time. How can we keep it like this? A bad situation that we would like to disappear, as soon as possible, and there can be a change that happens that foreshadows a future, more cataclysmic event. We have to figure out how we avoid said bad situation.

One of those maybe problems in the future is lurking behind the collective exhaustion caused by COVID. It's the spread of super bugs that are resistant to antibiotics that could kill more than 10 million people a year by 2050, which is more than triple the number of people who died of COVID 19 in 2020, alone. This is all according to the Oral Health Organization.

To quickly define what antibiotic resistance is, is it occurs when bacteria change in response to the use of antibiotics. This can be due to a mutation, for example, that allows bacteria to pump antibiotics out of a cell, or all the bacteria that aren't resistant die off when you use antibiotic, and you leave the resistant bacteria around that are now able to spread unchecked. By competition, they grow, they become the dominant bug, and you're in trouble.

You may have heard murmurs of this looming threat before, but today, we want to discuss a possible change in how the market is looking at antibiotic resistance and how the market for vaccine development during the pandemic has created a new hope for the fight against super bugs.

Part of the research that we're going to cite in this episode, by the way, is from a portion of our ESG Trends for the Next Year, ESG Trends for 2022. I'm going to put a link to the Trends report in the podcast episode, which you should definitely read. It's a good one.

Anyway, to discuss this trend today, I called up my favorite epidemiologist and colleague, Julie Giguere-Morello.

I first asked her, what would happen if antibiotics were no longer effective, in case some people haven't been wanting to pay attention to another bigger sadder medical issue.

Julie:

When antibiotics become ineffective from a day-to-day perspective, we wouldn't be able to give our kids amoxicillin, right, a very basic general antibiotic if they have an ear infection. Taking it to a more extreme end, antibiotics are given to cancer patients, so without effective antibiotics, cancer patients then wouldn't be able to undergo chemotherapy, because it would be really just too dangerous to undergo chemotherapy.

Then there's other things like hip replacements, you're treated with antibiotics, so you wouldn't be able to undergo a basic hip replacement, perhaps as you age. There's just a whole swath of different areas where antibiotics are used, right. It's not just blood infections or sepsis. It's really along the whole spectrum of basic ear infections, to foot blisters that you might get when you're out playing tennis, or whatever it might be.

There's just an enormous range of antibiotics that are used in the medical setting.

Mike Disabato:

The prospect of life without antibiotics is a bleak one. One of the past, where a cut that gets infected could kill a healthy youngin in days.

When you hear that, you might be thinking, "Oh, my God. Oh, my God. I'm panicking here, Mike," but don't worry. There are regulations coming, or kind of coming, well, sort of coming.

Those that are around, the regulations that is, are actually mostly targeting the industry that use more antibiotics than any other, agriculture.

Julie:

Any type of global regulation, and it is very different on a country level, so there's a ton of variability, whether we're talking about emerging markets, we're talking about the APAC region, EMEA, the U. S., it's all very different on a country basis.

The regulations around the use of antibiotic have really, so far, to date, targeted the meat and agricultural companies. That's where, from our view, that's where most of the risk is coming from.

When you think about the livestock, and the meat industry, antibiotics are really used in the livestock industry, firstly, to maintain health, so disease prevention, but they're also used for growth promotion, so really just to meet the growing and global demand for meat that we're seeing nowadays.

On a global basis, when you think of the regulations that are in that are happening right now and that are also coming down the pipe, they're certainly becoming more and more stringent, especially in the EU, but they have targeted the inappropriate use of antibiotics in the food supply chain.

Mike Disabato:

Germany, for example, has some of the strictest regulations against the overuse of antibiotics, which includes restrictions on the use of certain antibiotics that are especially important for the treatment of human infectious diseases, and the more important one, is they collect data on how much antibiotics are being used, and how many antibiotic resistance-deaths there are in their country.

The U. S. is behind its EU peers in addressing antibiotic resistance, but it has released directives to help ensure antibiotics are only used to treat and prevent infections in animals. Though, unlike places like Germany, these directives are not enshrined in law, and there is a limited amount of data available to measure how prevalent antibiotic-resistance infections are in the U. S. That's a big problem.

In China and Brazil, some of the largest agricultural economies in the world, regulators were initially slow to curb the use of antibiotics in their systems, but have recently begun to act against the overuse of the critical medicines, giving many concerns, stakeholder's calls for hope.

There's also the vaccine development that has occurred during the pandemic, which has shown us that we can invent an innovative solution, given global collaboration and the right financial incentive.

Lost in much of the narrative around the pandemic is how extraordinary the development of the COVID vaccines have been. The last time we saw such a heroic vaccine development in the U. S., at least, was around 1955, when the polio vaccine was released to the world. There was just one vaccine available for use at that time, and on its release, church bells rang out across America.

Now, the lucky among us for COVID, actually have three or more vaccines to choose from. The reason the vaccine has been so successful is due, in part, to the development of the synthetic MRNA, the ingenious technology behind the Pfizer and Moderna vaccines.

MRNA, which stands for messenger ribonucleic acid, tells ourselves which proteins to make. It was developed, in part, at small private companies, which is where much of the early and possibly innovative antibiotic resistance work is happening, as well.

Julie:

If you broaden it out, actually, and just look at, not just antibiotics, but you do look at the antimicrobials in the global pipeline. There's a couple hundred of them. Most of those companies, about 75% are private sector companies, and most of these institutions actually have less than 50 employees.

We're not talking about the big, large, very resourceful companies that are actually taking on that risk and that are developing these really innovative solutions in the pipeline at the very, very early stages.

The picture does look a little bit different, once you get further along within the clinical stage pipeline, where there's still definitely a risk of these compounds failing, as you get closer along to the approval stage, but the really innovative groundwork is happening at the private companies.

Mike Disabato:

At the moment, there are 55 different antibiotics going through the trial stages. Of that, only 16 are novel compounds that can be used to prevent the spread of a super bug throughout a population.

That is twice as much as there was two years ago, which is hopeful, but the development of novel antibiotics is still only done in the relatively smaller parts of our pharmaceutical markets, those private companies.

In the 1980s, most pharmaceutical giants had teams focus on antibiotics, and now, it is mostly dominated by these smaller players, who would likely be acquired and courted for a partnership by the pharma giants if their drug development was successful.

Why in the world are the mass of pharmaceutical companies that pursue the development of a myriad of different medicines, why are they avoiding antibiotic developments? Well, like in the TV show, Succession, it's all about marketspeak.

Julie:

At the end of the day, it's a business case. Companies need to make business cases to pursue R&D in different areas, and there is not a very clear-cut business case within the larger public companies. It's just too high risk.

They're not as lucrative as other medicines on the market. They're also used for a really short period of time. Maybe you're on antibiotics for a couple days. The ability for companies to recoup their R&D costs is really low, because of that shorter duration of time.

Then, when you look at just the simple economics of it, the different prices of antibiotics versus other more long-term drugs, it's just not cost-competitive.

Mike Disabato:

Vaccines were actually similar to antibiotics, in this economic paradox. In fact, the vaccine market used to be this backwater, with generally unappealing investment returns, compared to more profitable drugs like cholesterol drugs, or blood pressure drugs. The vaccine market has found its footing, as the COVID pandemic continues to surge.

The hope is that, we do not have to see an antibiotic-resistance epidemic or pandemic to occur to have the same thing happen for antibiotic development, as has happened for vaccine development in the market.

Actually, some investors have seen this market failure and the warnings around antibiotic resistance as an opportunity to get involved in providing capital to either the development of these drugs, or to promote the more responsible use of antibiotics in our economies.

Julie:

From an investor standpoint, it is, at this point, from a very high-risk standpoint, it's mostly an investment for an impact PE firm, right, because these companies are not publicly traded.

That being said, once you get into the less early stage, so less of the venture capital stage, there are definitely opportunities for investors to become more involved. There's various different levers available, so engagement and stewardship within the food and agriculture industry.

You can, like we're talking about right now, invest in the solutions, new antibiotics, and vaccines that probably from a publicly traded equity standpoint, it wouldn't be quite in that early stage. It would be in the later stages, because that's where most of the publicly traded companies are operating at the moment.

Then, of course, there's policy advocacy, so if you are more of a high-risk impact investor, that's where there's an opportunity from an investment standpoint.

Mike Disabato:

Impact investing is where you are looking for a societal return that is as much, or even more, than a financial return, but this is where the destruction caused by COVID can have some beneficial aftereffect.

As our society breaks down from the spread of the virus, we can see what an unchecked, underfunded disease can do to a population. I know this isn't the first time that that has happened, but it seems to be the first time that it has happened in correspondence with an incredible vaccine invention.

For me, I think before COVID, I would hear warnings around diseases, as just that, possibilities that I would be impacted by a future event that may never come, but after seeing how a virus can spread through a population and affect everyone around us, it seems like it's possible that the market will begin to reverse the drought in antibiotic development that has plagued the industry over the last decade.

There's been a lot of talk this week in the market about what ESG, and an ESG rating actually is. Defining our industry hasn't been the top of my priority list on this podcast, because it seems a bit wonky and promotional, but I think it's time to give you a strong definition as to what ESG really is.

For one thing, it gives me a chance to talk to my uber intelligent colleague, Laura Nishikawa, and the second is, I get to showcase another one of our trends for 2022, that is aptly called Putting ESG Ratings in the Rightful Place.

There's actually this great interactive chart that goes along with the trend, the link to which I will also put up in the podcast description. Click on it, play around with it, have a good time.

I think I should also note that these very podcasts often use our ratings as a kind of initial launchpad, or as a foundational baseline measure from which we then pursue one of the various lenses that Laura is going to mention later on in this segment at a greater depth, which is to say, that our ESG ratings don't represent so much a conclusive ending, or summarization of how we research, but rather a starting point on which we build.

Okay, so I'm going to cut Laura in now, because she's going to say this better. Here she is, one of our global heads of ESG and climate research, telling me what an ESG rating actually is.

Laura Nishikawa:

I think there's a lot of confusion and lack of clarity in the market about what ESG means, and what an ESG rating is, and also, what different ESG ratings measure, because each ESG rating might be slightly different from the others.

ESG, itself, is a really broad umbrella. It includes a lot of different goals might be about changing the world. It might be about having a positive impact. It might be about avoiding negative impacts. It also might be about understanding emerging risks and opportunities from a financial perspective, right.

The MSCI ESG rating is intending to measure the resilience of companies over the long-run to ESG, environmental, social governance-related risks and opportunities, compared to their industry peers, full stop.

I think there's a lot of projection of what that rating means. Is it a measure of companies being good corporate citizens? Is it a credit rating? It's none of those things.

It's specifically a rating focusing on the material risks and opportunities that companies face and how those are managed, compared to other companies in the same industry.

Mike Disabato:

There's all these different metrics that are used in ESG that we talk about whenever we do this podcast and talk about the news, we're kind of highlighting one of those metrics.

Could you take me through some real-world definitions of those lenses, and relate them back to ESG ratings, and how they differ, and whatnot?

Laura Nishikawa:

Yeah, I mean, the ESG rating, itself, is focusing on a pretty narrow set of industry specific material, risks, and opportunities, but there's a much broader set of ESG data information that could be valuable to different stakeholders, different investors for different reasons.

For example, someone might want to put a gender lens on their investment. They might really want to care about investing in companies that are better, in terms of gender diversity, or how they treat women across the organization, for example, right.

There's definitely data that can support that. Someone else might really care about climate change or biodiversity, so you might want to say, "Across my entire portfolio, or across my investment opportunities, what companies are providing solutions to some of these environmental challenges, which ones are posing problems?" Those are all valid lenses that people can view.

The ESG rating, on the other hand, is really just focusing on which of those issues, which of those topics, pose material risks and opportunities to the company's bottom line, over the long-term horizon, which may not include everything that everyone cares about.

Mike Disabato:

That's it for the week. I want to thank Julia and Laura for talking to me about the news with an ESG twist, and I wanted to thank you so much for listening.

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Just to let you know, we are taking a break for the rest of the year. We are not going to be back until January 2022. I hope you have a great holiday, you stay safe, you spend some good time with your family, or just relax, in general, and I'll speak to you next year.

Speaker 4:

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