

ClientFocus

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William Blair Biotech Equity Research Head Discusses Outlook for COVID-19 Vaccines

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2020: A Year We'll Never Forget

A year ago in my *Client Focus* letter to you I made the comment: “The year and decade ahead will undoubtedly mean change.”

Well, I was not expecting the amount of change we have lived through in 2020. It certainly has been one for the history books.

COVID-19 has shaken every facet of life as we've known it. Looking back over the year, it has been inspiring to see communities come together to serve each other. Nothing has brought home the impact of the crisis more than the growing number of families without enough food.

Since the onset of the crisis, William Blair has been working with community partners in Chicago and London, supporting their stepped-up programs to feed the hungry. In December, we expanded our support of food banks in each of the 16 communities around the world where William Blair offices are located. These efforts are featured in this issue of *Client Focus*.

William Blair has also come together to serve clients in today's expanded digital environment. While we miss meeting you face-to-face, we have

tapped the latest technology to stay connected with you and deliver our services around the globe.

Most recently, Investment Banking in October hosted 95 companies and nearly 1,000 investors for its annual Private Equity Conference. Traditionally held in Chicago at a downtown hotel, this event was pivoted to a virtual setting for the first time and drew participants from across North America, Europe, Australia, and Asia. Attendance was up over 40% compared to last year.

William Blair Investment Management and Private Wealth Management are expanding their reach through more online client events and communications. In June, Equity Research and Institutional Sales & Trading migrated their 40th Annual Growth Stock Conference to an online experience. The conference was a huge success, drawing our biggest crowd ever of 3,000 participants.

We look forward in 2021 to hosting more events and client meetings, whether digitally or in-person. Much will depend on COVID-19. But at year's end there was good news regarding COVID: vaccines. Their

development in record time has been an astonishing scientific achievement.

Tim Lugo, head of William Blair's equity research biotech team, provides an update in this edition of *Client Focus* on the latest developments from Pfizer, Moderna and the other vaccine candidates along with an approximate timeline for rollouts.

For a broader glimpse of key investment sectors to watch in 2021, Alaina Anderson of Investment Management and Equity Research analysts Nick Heymann, Ryan Daniels, and Bhavan Suri share their thoughts on renewables/climate issues, infrastructure, healthcare, and technology.

So as we wrap up 2020, I am genuinely looking forward to 2021—hoping for fewer surprises than we experienced in 2020.

Sincerely,

A handwritten signature in black ink, appearing to read 'John Ettelson'.

John Ettelson
President and CEO

Beyond 2020: Four Key Sectors to Watch in the Coming Year

After a year in which every corner of society and every market sector was shaken by the coronavirus pandemic, analysts and investors are looking beyond 2020.

For a glimpse of what's ahead on four key growth themes, Client Focus asked four lead William Blair analysts to discuss the biggest factors likely to drive their sectors in the coming year. In December interviews, Alaina Anderson reviewed renewable energy/climate, Nick Heymann infrastructure, Ryan Daniels healthcare, and Bhavan Suri technology. COVID-19 and the results of the November U.S. election remain key factors going forward. Here's what they said:



Alaina Anderson

Investment Management research analyst, portfolio manager Renewable Energy/Climate

Renewable Energy Surge Continues

The renewable energy industry has been booming over the last decade, not only as a source of energy, but also jobs. Wind and solar energy are the big drivers — the fastest-growing sources of electricity and in many cases the cheapest. That trend is set to accelerate in the next four years. The

Biden administration fully supports green energy as an overall economic engine while recommitting to cuts in CO2 emissions, marked by an immediate return to the 2015 Paris Climate Accord. The pace of this green push is what all the players in the renewable and fossil fuel energy sectors will be watching in 2021 and beyond.

During his presidential campaign, Biden detailed a “green plan” calling for \$2 trillion in spending over the next four years to boost energy efficiency of buildings, build green infrastructure and manufacturing, and boost development of renewable energy such as offshore wind and solar energy. We are looking at renewable energy—which accounts for 18% of [U.S. electricity generation](#), versus coal at 23%—to pass coal by 2025. Additionally, the [International Energy Agency](#) (IEA) is estimating wind and solar surpassing coal and

natural gas as sources of global energy by 2025. But that pace could quicken given the Biden plan that calls for U.S. renewables to overtake coal by early 2023.

The magnitude of a \$2 trillion spend on renewables would be immense. Ten years ago we talked about installed capacity in terms of megawatts. Four years ago we described it in terms of gigawatts (1,000 megawatts). Now we are talking about it in terms of terawatts (1,000 gigawatts).

Signs of the clean energy revolution already hit a milestone in the fall of 2020 when NextEra Energy, the largest U.S. renewable energy company, surpassed Exxon in market capitalization. Even though NextEra has since dropped back behind Exxon the move earlier this year was a clear indication of the extreme optimism on Wall Street around the clean energy sector.



Nick Heymann

Equity Research analyst, co-group head
Global Industrial Infrastructure

Green Renewable Energy Could Be Next Source of Long-Term Growth for Industrials

It is never easy to pass a major infrastructure program as witnessed by the Trump administration. But in 2021 all eyes will be focused on Biden's Build Back Better push touted during the campaign for major sustainable energy and climate change spending targeted to occur over the next four years.

His plan calls for improvements in transportation, roads, buildings, rail, and broadband, to cite a few of the initiatives. But much of the spending, a proposed \$2 trillion, will be tied to building a modern, sustainable renewable power infrastructure to accelerate the shift to a clean energy future. That includes retrofitting old buildings to be more energy efficient, ideally shifting from fossil to "green" hydrogen energy and modernizing the U.S. power grid to accommodate bi-directional energy transmission and distribution. Tax reform will be a big focus early in the new administration to help fund this multitrillion-dollar plan. Without a majority in both the Senate and House, however, the scope of legislative reform to fund green sustainable energy to combat climate change could be more modest.

Still, there is a growing belief that there needs to be a significant change in U.S. environmental, energy and climate legislation that encourages an accelerated pace to lowering carbon emissions. One big way to reach that goal is changing how we generate energy.

Already, wind and solar farms from the East Coast to Wyoming produce more renewable energy than can be used locally. But we lack the battery capacity to temporarily store the surge in ultra-low-cost, non-continuous power generation. There's just not enough lithium and cobalt available to meet the demand. New materials and technologies are pushing ahead to develop cost-effective alternatives.

Hydrogen—long a pipe dream for large-scale application—is emerging as a potentially viable alternative. One innovation to monitor is new lower-cost "electrolyzer" technology that produces hydrogen cleanly and cheaply from H₂O. It has caught the attention of many companies—Cummins, GE, Emerson Electric, Airbus SE, Kia, and the list goes on—with several big hydrogen initiatives underway.

We believe the vast majority of industrial companies that manufacture products using, regulating, generating, or distributing electricity as well as manufacturers of products that use fossil energy to operate will be affected by the conversion to the renewable energy and "green" hydrogen economy. By far, the biggest changes are seen coming in the utility and fossil powered transportation sectors as the prevalence of green renewable energy rises at an accelerating pace.



Ryan Daniels

Equity Research analyst, co-group head
Healthcare

Covid-19 to Remain a Key Focus of Healthcare Sector

In 2021, the healthcare sector will continue to be driven by a variety of factors surrounding COVID-19.

The main focus for investors early in the year likely will be policies, procedures, and funding mechanisms to continue combating the pandemic. These range from another stimulus package for states and healthcare providers, to how the government can assist in the manufacturing and rollout of COVID-19 testing capabilities and, eventually, vaccines. Healthcare providers should benefit as volumes return to more normalized levels, while payers could see an uptick in medical expenses as patients return for routine health needs and postponed care.

Moreover, the Supreme Court's review of the latest challenges to end the Affordable Care Act (ACA) has been a widely followed healthcare event. However, based on oral arguments heard on November 10 it appears the ACA will survive. A Supreme Court decision is expected by the summer of 2021. In 2019, 22 million people had health insurance through the act, according to the Congressional Budget Office.

As long as the ACA is upheld by the Supreme Court, we expect the Biden administration to build on the ACA to expand access to healthcare insurance coverage. Biden intends to offer Americans a “public option,” where they can choose to either maintain their private insurance or buy into the Medicare program. This will provide a new insurance option for individuals not eligible for Medicaid due to high income or residence in the dozen states that did not expand Medicaid in the initial ACA rollout in 2010. Biden also wants to boost subsidies for individuals buying coverage through ACA marketplaces so that no family will need to spend more than 8.5% of its earnings on healthcare coverage.

From an industry perspective, the current bellwethers are likely to maintain their competitive positions and growth outlook as any pending changes under the Biden administration should be modest—especially given a divided Congress that is unlikely to enact any major legislative changes that would affect the U.S. healthcare marketplace.

That said, we do see several healthcare subsectors as emerging areas of growth and investor focus. These include remote patient monitoring, telehealth, digital patient engagement solutions, home healthcare, advanced primary care models, and big data and analytics. All are expected to play a much more prominent role in the future of healthcare—with the potential to lower costs, improve care, and increase patient satisfaction. Many of these technologies were already experiencing accelerated adoption in recent years, but COVID-19 brought them into the mainstream of care. We believe the marketplace is unlikely to reverse these more consumer-centric, lower-cost advances going forward.



Bhavan Suri

Equity Research analyst, co-group head
Technology, Media, Communications

Coronavirus Pandemic Continues to Transform Tech Sector

Looking beyond 2020, the pandemic will continue to serve as a long-term tailwind for the software universe.

The pandemic has already altered the structure of work as we know it—more digital connections, more online services, more automation. But while COVID-19 has been a once-in-a-lifetime event for society, the challenges it has brought for corporations are not. The innovation challenge has just intensified.

The biggest hurdle for companies has been the massive shift to a mobile workforce. The reality is that many organizations even today do not have the software and cloud computing capabilities to handle a mostly mobile workforce. Though a shift to cloud computing and SaaS (software as a service) solutions has steadily increased over the past 5 to 10 years, the pandemic accelerated the timeline for companies that had not yet adopted these services. In today's distributed work environment, companies still using legacy systems are struggling to handle the mass migration to remote work. So cloud and SaaS providers will continue to see huge demand in 2021.

Moreover, the success (or not) of 2020's forced migration to remote work is now informing long-term budget and business strategy decisions in corporate boardrooms. The idea that we can be anywhere, anytime will be a huge driver of growth for software companies for a long, long time.

Innovation is erasing distance. Take DocuSign, whose e-signature technology allows you to sign legal documents digitally for mortgages, school enrollment, or construction contracts. Or Low-code/No-code and Appian, which design and develop software solutions so that individuals without IT experience can build their own workflows.

Another big area of innovation to watch in 2021 will be communications. Online technologies combining speaking, writing, audio-recording or videotaping will accelerate. We are going to be staying home more. But we're going to communicate, collaborate differently. Convergence will be important and driven by need. Just look at how the world—not just companies—embraced user-friendly systems like Zoom since the pandemic.

When the pandemic subsides, people will go back into the office—but maybe just two or three days a week. Lessons have been learned, costs measured, digital bridges built. Society's digital transformation will move forward and business will continue to invest in SaaS technology.

William Blair Biotech Equity Research Head Discusses Outlook for COVID-19 Vaccines

Tim Lugo, who leads William Blair's biotech equity research team, has been tracking the development of COVID-19 vaccines and shares his insights on the unprecedented efforts from a public health and investment perspective.

Q | In addition to the vaccines from Pfizer, Moderna, AstraZeneca are there other companies that are close to releasing a vaccine candidate?

Pfizer [PFE] was the first vaccine to receive U.S. emergency use authorization (EUA) by FDA on December 11 followed by Moderna's [MRNA] vaccine a week later. The AstraZeneca/University of Oxford vaccine has also recently announced data but the company still has some dosing work to complete in another trial and will lag Pfizer and Moderna.

The next two companies that appear most imminent in releasing a vaccine are Johnson & Johnson [JNJ] and Novavax [NVAX].

Novavax, which has partnered with the Gates Foundation, is running trials in the UK and South Africa. It is also going to start a U.S. study in a few weeks. But its current trials in the UK and South Africa will probably read out sometime early next year, as early as January. The Novavax trial in South Africa is particularly interesting since it will add to the diversity of patients exposed. It is also trying to enroll a number of patients

over the age of 65, hopefully providing good data in older adults. And that's obviously important because that group is seeing worse mortality.

The Johnson & Johnson trial should read out around the same time, early 2021. What's exciting about the J&J trial is it's a one-shot program—not two as with Pfizer and Moderna. The benefit is patients won't have to be tracked. Your pharmacy doesn't need to look up your records and figure out which vaccine you got before and then schedule you at the correct time for your second shot. You're one and done. J&J is a highly respected company, with a ton of manufacturing experience, having the heft to roll out distribution.

Additionally, there are some vaccines outside the U.S. in development—a Chinese vaccine, a Russian vaccine—but as far as what I track Novavax and Johnson & Johnson are the two important ones on the immediate horizon. And through 2021 we will also hear about vaccines from Merck [MRK] and Dynavax [DVAX].

Q | Can you share your thoughts on when vaccines will be available?

FDA's biologics evaluation and vaccines research advisory committee met in open session to discuss the emergency use authorization of Pfizer's vaccine on [December 10](#) and Moderna's on [December 17](#). It was a very open and transparent process—a whole day digging through the data



“This is the medical equivalent of the Manhattan Project of our time.”

—Tim Lugo, head of William Blair's biotech equity research group

with independent experts in the field. The committee approved EUA of the Pfizer and Moderna vaccines following the meetings and FDA authorized the vaccines for emergency use on December 11 and 18, respectively. Dosing began within days.

There could be millions of doses coming this month. Through 2021 we are talking about billions of doses.

CDC held an event on [December 1](#) to discuss the distribution of the vaccine. CDC has proposed the first wave of doses go to the most vulnerable: healthcare workers and nursing home residents. And I think that is going to happen this month.

For the general public, [health officials](#) currently tend to say the vaccine will be available by summer/Q3 of 2021. I am a little more optimistic, thinking April/May is reasonable. Yes, that's probably a little more optimistic than what you will hear in the broader commentary, but to me that broader commentary includes a public health push to either people who are hesitant about taking the vaccine or those who are not regularly seeing healthcare providers.

Personally, I'm not planning my spring vacation but I'm already planning my summer vacation.

Q | From your perspective, what are you evaluating regarding the safety of use? How safe will these vaccines be?

I cover biotech and am a strong believer in science and data. The vaccine data that has been presented to date looks incredibly safe and effective. And mostly it looks incredibly effective—94%-95% efficacy is incredible.

This is the medical equivalent of the Manhattan Project of our time. The fact that these vaccines were developed in under a year, with the first cases dosed in March and now here we are in December and going to be dosing patients. That's incredible. We have only known the sequence of the virus since January. While there are differences in the Pfizer and Moderna vaccines, they both use the same underlying technology—synthetic messenger RNA (mRNA). That innovation has been key to why they were able to be developed the fastest.

From a safety perspective, we will have data from 70,000 patients through the Phase III trials, out to two months. We won't have a year of safety data until a little under a year from now; that's just how the math works. However, a vast majority of adverse side effects for these types of vaccines occur within the first two months of dosing. That's why FDA used two months for the dividing line. But it is important to note that nothing that is biologically active will have zero side effects.

Q | What are the biggest challenges you see in getting the vaccines to the public?

There is no question the logistics of vaccinating 300 million people in the U.S., and in two doses at least initially, is a huge challenge. But more than that, I am concerned about effectively communicating the need for being vaccinated.

Despite the rising number of cases today and the largest mortality rate worldwide, there is still 40% vaccine hesitancy among Americans. I think the underlying science and data could ease most of those concerns. But again these are communications

issues. It will be a challenge in getting the vaccines to the public to stop the spread of COVID.

Q | As we head into 2021, what should long-term investors interested in the biotech space keep focused on?

COVID-19 has structurally changed how we view public health, how we view vaccines, how we view infectious diseases. Demand for COVID vaccines, technologies, antiviral technologies, testing is going to be significant and last for decades. A lot of COVID-19 vaccines will need to be administered yearly, at least initially although this is still an unknown. I don't believe this is just a 2020 phenomenon.

Q | Understanding this is a quickly evolving situation, any other comment you would like to make?

It's difficult to describe adequately how impressive the development of these vaccines has been to date. Development has been fast but it is important to note just how extremely effective they are. These vaccines have some of the highest efficacy rates of vaccines ever produced. What an incredible testament to our domestic biotech industry. It is a structural advantage for the U.S. to have such a robust, innovative industry in the states. There also has been a lot of scientific cooperation. The Pfizer vaccine originated in Germany while the Moderna vaccine is from the U.S. But both deployed very new biotech technologies, which have been incredible to watch over the last nine months. I am as surprised as anyone. The progress has surpassed everyone's expectations.

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William Blair Teams With Food Banks

While the COVID crisis impacted every household in the U.S., nothing has brought home the impact of the crisis more than the growing number of families who are now wondering where their next meal is coming from. They are turning to food banks for support.

Feeding America, the nation's largest network of food banks, estimates that 50 million Americans, including 17 million children, will struggle with hunger in 2020.

Since March, William Blair has been matching employee donations and contributing resources and volunteer time to local food banks in the U.S. and Europe. The largest funding has gone to the Greater Chicago Food Depository and City Harvest in London. But in December, [the firm expanded its support to food banks](#) in each of the 16 communities around the world where William Blair offices are located.

Kate Maehr, CEO of the Greater Chicago Food Depository, said the support from William Blair and other donors has

made it possible to provide not just nourishment but comfort to the many families served who have been hit hard by the pandemic.

"Never in our organization's 41-year history have we seen such an increase in the number of people who need food assistance," Maehr said.

Laura Coy, philanthropic strategist for William Blair, said the ability of the Food Depository and others to deal with the rising demand has been monumental.

"With each food bank we have been working with, I've been so impressed with how sophisticated they have become in managing their supply chain and raising donations to increase capacity," Coy said. "And also in the dignity I've seen with neighbors serving neighbors. The partnership and kindness are inspiring."

How Investors Win With 10 Key Strategies

Given the uncertainties created in 2020 by the coronavirus pandemic and political landscape, now is a good time to evaluate your tax and wealth-management plans.

To help, William Blair just released a year-end planning guide, *How Investors Win With 10 Key Planning Strategies*. It highlights 10 strategies that high-net-worth individuals,

families, philanthropists, and business owners can consider now or during 2021 to help meet their long-term financial and wealth-transfer goals.



PDF

How Investors Win With 10 Key Planning Strategies

To read more, view the online version of [Client Focus](#), williamblair.com/ClientFocus.aspx

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