

Reflections

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Illumina has just reached its 10th anniversary in the Long Term Global Growth portfolio. The company has played a significant role in driving down the costs of gene sequencing. In 2002, it cost about \$100m to process the human genome. Today it can be done for less than \$600. Last year, 10 days after the first Covid-19 case, the virus was sequenced on an Illumina system and the code was shared with scientists around the world to develop a vaccine. Illumina has become key to helping scientists diagnose disease more quickly, enabling lifesaving solutions.

Like other companies in the portfolio, Illumina's journey has not been smooth. Its share price fell by more than a third on six occasions. One drop occurred in 2012 during Roche's attempted takeover. We opposed the bid. Despite the attractive offer, it did not reflect the immense potential for Illumina's technology to improve the lives of hundreds of millions of people. Safeguarding the company's independence was the correct action for a long-term investor and we now have the benefit of a long-standing relationship.

Mark Urquhart recently met with CEO Francis deSouza to discuss progress, and wrote the following:

Having met with deSouza last year to understand more about Illumina's slowing growth rate, today's picture is very different and much more positive. In many ways, this illustrates the dangers of putting too much emphasis on any spot numbers. I think we may be much closer to the tipping point for genomics than it would have been fair to expect before the pandemic.

The raw numbers are striking. The most recent top-line growth rate is 40 per cent and the company now expects growth of 36 per cent for 2021. That is double its expectation at the start of the year. Even allowing for some bounceback from low growth rates around the start of the pandemic, these numbers are striking and beg the question of whether we are transitioning to sustainably higher structural growth, which has been the alluring prospect at Illumina for many years.

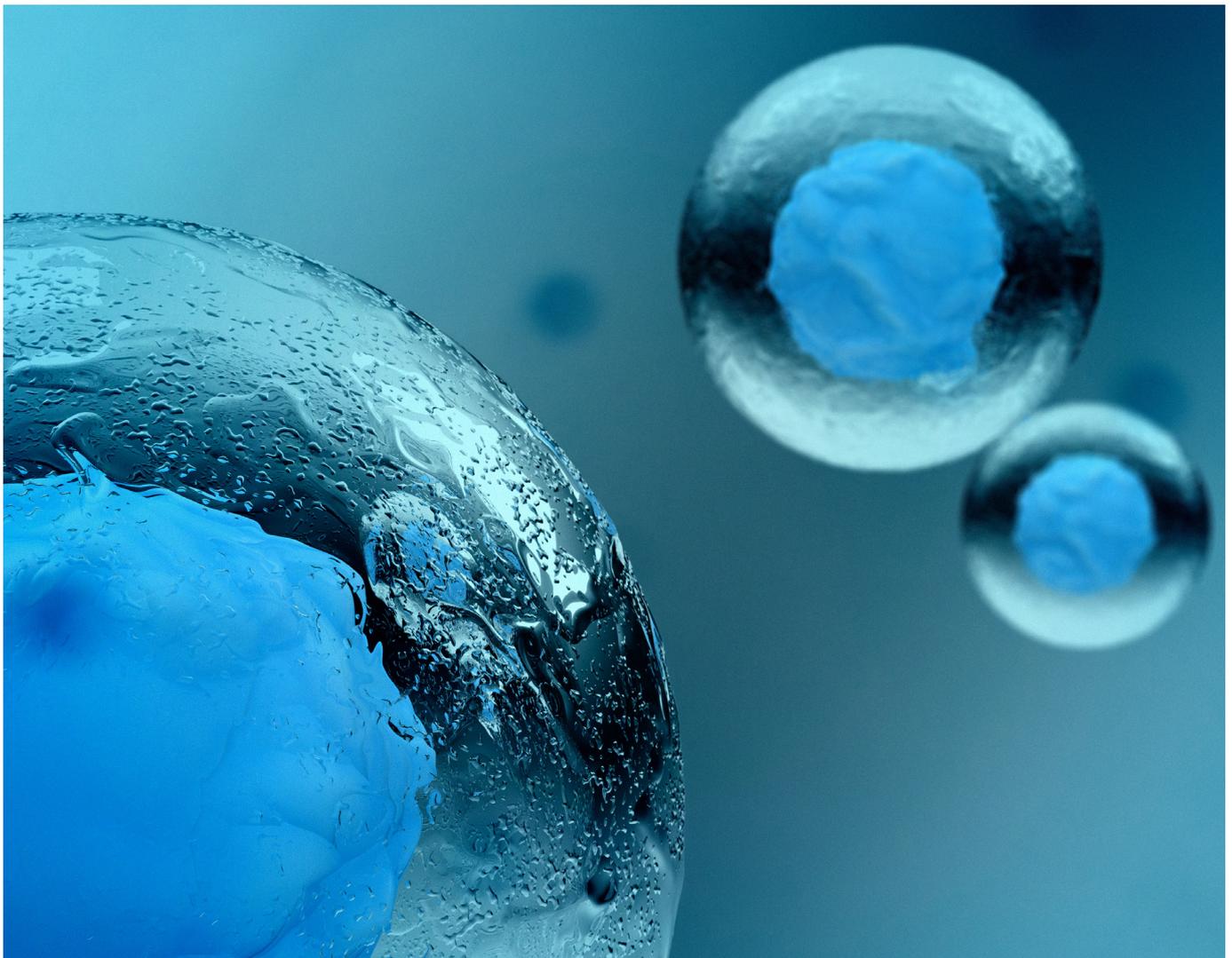
In this context, I thought deSouza's observations were noteworthy. His central message was that the pandemic had "accelerated the development of genomics by at least five years". The thought of having hundreds of millions of mRNA vaccines in people's arms was a pipedream two years ago. Now it is a reality, and in making this leap forward some of the biggest regulatory bars have been crossed, making future approvals meaningfully easier.

The bottom line is that sequencing is now central and has crossed its Rubicon in terms of adoption. He drew a stark contrast between how the Zika outbreak was dealt with and how Covid-19 and its variants are being tackled, describing the change as transformational. Zika used the old model, where after detection through unexpected death, scientists would fly in and set up sequencing machines to slowly piece together what had happened. Today sequencing is an embedded practice in Africa, South America and elsewhere, and every nation uses the process to determine its health and public policies. He also sees a common aim of making this the last pandemic.

There are two major consequences of this positive change. The first is that its customer numbers are rising rapidly. Illumina added 50 per cent more new customers in the first three quarters of this year compared to 2020 as a whole, as general awareness of genomics increased. In effect, the pandemic has decreased barriers to adoption, which should create lasting uplift in recurring revenues. The second consequence

of the greater ubiquity of sequencers is increased use across a spectrum of diseases. In deSouza's view, this is the second era for Illumina. The first was entering clinics in 2013. Today it's moving from primary oncology to embracing the top 10 big diseases, including cardiovascular and pulmonary ailments. In his words, "genomics is entering the mainstream much more broadly than before", and the use for drug discovery has moved from speciality biotech to big pharma.

I feel much more enthused about Illumina's long-term prospects than I did at the start of 2020, with the pandemic showing genomics is a powerful force for good. I liked the fact that deSouza was much more direct in his comments. He talked about Illumina transitioning into becoming a multi-omics company and the exciting opportunity Illumina had to recreate a Roche for the 21st century. With only 0.02 per cent of humans sequenced, little to no competition and strong public and private health tailwinds, Illumina is well-positioned to dominate this market. We're excited to support the company and be part of this journey. We remind ourselves that patience is key.



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