

# A Note From Your Advisors

The logo for Baird, consisting of the word "BAIRD" in white, uppercase, sans-serif font, set against a blue parallelogram background.

---

THE MAIN, GOWIN, FISCHER, RICE GROUP

---

December 20, 2022

Happy holidays from all of us at Baird!! We hope you enjoy a peaceful and meaningful holiday season with the ones you love.

The year-end is often cause for reflection, and this year has in many ways been a very difficult one. As we have meetings and conversations with clients to review the year, we find ourselves describing a list of things about which we've had to worry: inflation, rising interest rates, a slowing economy, the war in Ukraine, and political division/uncertainty. Recently a client asked us, *"How do you even sleep at night thinking about all this?!"*

After a moment's thought, I realized the answer: I sleep at night, despite this worry list, because there is also a long list of wonderful developments about which to be hopeful and joyful. Some of them are related to our clients' portfolios, some are not. But on a human level, I really believe that it helps to balance our focus and remember that lots of good things are happening out there! Former President Bill Clinton once said, "There is nothing wrong with America that cannot be cured by what is right with America." I believe this. And I believe it extends to the rest of the world, and down to our communities and families.

In that spirit, here are just a few things that caught my attention recently. Disclaimer: I am NOT an expert in any of the scientific or other subjects described and am just doing my best to recount what others understand better. I've provided links for those who want to dig deeper and learn more.

**Vaccines:** Let's start with COVID vaccines. Do you realize that researchers began working on a polio vaccine in the 1930s, but an effective one (Jonas Salk and team) didn't come around until 1953? And then it was another two years (April 12, 1955) before trials were complete and it went into widespread use. In 2020 we went from pandemic onset in winter/spring, to shots going into arms in less than one year. Think about that! These vaccines are certainly not perfect, but scientists estimate that at least 20 million lives have been saved by COVID-19 vaccines to date. But wait, there's more! Derek Thompson of The Atlantic writes that "Decades from now, historians may regard the 2020s as a golden age of vaccine breakthroughs. The mRNA vaccines that blunted the mortality of COVID were just the start." Researchers at Oxford University announced in September a new malaria vaccine has been found in trials to be extremely effective (malaria kills 400,000 people each year, most of them children). In November researchers announced an experimental flu vaccine was "found to induce a protective immune response against all known types of flu in animals." While not a cure, it is thought this vaccine could tremendously reduce the amount of serious illness and death from influenza (flu is estimated to kill 290,000-650,000 people each year). The list goes on and on.

**Energy:**  $E=MC^2$ ! On Tuesday Dec 13th researchers and the US Department of Energy announced a major scientific breakthrough in the field of nuclear fusion. For the first time, physicists at Lawrence Livermore National Laboratory in California have produced a nuclear fusion reaction resulting in a net energy gain. In other words, there was more energy output produced than the energy it took (with lasers) to create it. We are still

years away from this being done on a scale to power an electricity grid. But it offers the possibility of cheap renewable energy without the nuclear waste created by current nuclear fission reactors. This fusion project involves using deuterium and tritium, both of which are isotopes of hydrogen. The deuterium from a glass of water, with tritium added, could theoretically power a house for a year.

**Cancer Treatment and Testing:** Everyone has been impacted by cancer. Everyone. So it catches my attention when we get potential breakthroughs in that field. And they are happening at an increasing pace. In July, researchers at Memorial Sloan Kettering Cancer Center announced that all 18 patients in a trial of an immunotherapy saw their rectal cancer was 100% gone. Small study, but... not reduced, GONE. Dr. Luis Diaz from MSKCC said, "I believe this is the first time this has happened in the history of cancer." (Colorectal cancer is the third most common cancer diagnosis in the US). In 2022 we've seen similar promising test results regarding a monoclonal antibody treatment for metastatic breast cancer. The treatment targets HER2 mutant proteins, which are thought to be responsible for about 20% of breast cancers. Additionally, scientists at the National Institute of Health (including my amazing niece, Erin!) are reaching toward a variety of disease-treatment breakthroughs using CRISPR gene therapy technology. Finally, multiple companies are working on blood tests to screen for dozens of types of cancer in a single test. As we all know, early detection is often the key to treating and surviving cancer; so these tests are really important developments! Again, lots of work and years to go, so keep donating to cancer research! But I am convinced that many of our best and brightest scientists are going to find new ways to diagnose, treat and cure cancers in coming months and years!!

All this good news has made this post longer than I usually like. But as you can imagine, it's only a small sample of the really fascinating stuff that WILL CHANGE LIVES FOR THE BETTER. Let's keep focused appropriately on the challenges before us. But let's also remember that the future is also brighter in many ways.

# Happy Holidays!

- The Main, Gowin, Fischer, Rice Group

RB2022-1220

