ARS INVESTMENT PARTNERS

THE OUTLOOK

July 25, 2023

IN THIS ISSUE...

Today's Turbulence Requires a Fresh Investment Approach

"The greatest danger in times of turbulence is not the turbulence — it is to act with yesterday's logic."
– Peter Drucker

These are turbulent times as evidenced by significant bank failures, an attempted coup in Russia, ongoing tensions over Taiwan and trade, and the debt ceiling debacle in Washington, DC. The combination of the COVID-19 pandemic, the war in Ukraine and the resulting geopolitical, social, and economic problems along with the challenges posed by climate change and the introduction of generative artificial intelligence (AI) has created one of the most interesting and complex investment landscapes we have witnessed.

These circumstances are disrupting global commerce, and the policy responses have led to distortions in economic activity. As we wrote in our January 12th Outlook, there are three major changes occurring simultaneously. These changes involve a meaningful increase in the cost of living, a realignment of the world order, and the reindustrialization of the global economy. These changes are defining the most critical investment opportunities for the next decade, creating additional revenues and profits for those who benefit.

China cannot be counted on to drive global growth as it had in the past.

The investment opportunities in the real economy, encompassing goods and services, rather than just the financial side of economic activity, are particularly noteworthy. It's crucial for investors to avoid assuming that this period resembles past ones, as our world has significantly changed in just a few years. Efforts focused on decarbonization, deglobalization, and remilitarization are shaping a new economic and geopolitical era with lasting implications. Therefore, careful consideration and adaptation to these emerging trends will be essential.

We believe that investors should focus on the strategically vital economic segments that governments are targeting for required spending.

The multi-decade neglect by governments in required areas of investment is being reversed by new and targeted fiscal policies. At the same time, we never had the degree of monetary resources in the system that we have today**.** One notable difference is that, unlike previous periods, this time the Chinese government cannot be counted on to drive global growth as it had in the past. We believe that investors should focus on the strategically vital economic segments that governments are targeting for required spending. The areas of investment opportunity encompass national security (military, food, energy, and cyber), the maintenance of technological and industrial leadership, the clean energy transition, and companies benefiting from technological advances in healthcare.

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The U.S. private sector has jumped on the opportunities with an estimated $470 billion of recently announced capital expenditure programs.

The U.S. has been, and remains, a magnet for attracting foreign capital. Although we have written about these shifts since November of 2020, they have become the reality as money from all levels of government enters the economy, and corporations react to new legislation. Following the government's lead, the private sector has jumped on the opportunities created by the Inflation Reduction Act (IRA) and the CHIPS and Science Act with an estimated $470 billion of recently announced capital expenditure programs as shown in Chart 1.

Chart 1. The Beneficiaries of Private Spending

New Private Sector Investments Focus Heavily on Semiconductors and Energy

Investment Type	Investment ($)	Share of Investment	Number of Projects
Semiconductors and Electronics	$213.5 billion	46%	41
EVs and Batteries	$139.5 billion	30%	101
Clean Energy	$82.0 billion	18%	65
Biomanufacturing	$19.5 billion	4%	48
Heavy Industry	$13.2 billion	3%	20

Note: This table excludes approximately $3.7 billion in private investments tracked by the White House that do not have a defined investment category.

Source: The White House.

Virtually every industry will be affected, and competitive advantages will accrue to those countries and companies offering leading-edge capabilities.

Virtually every industry will be affected, and competitive advantages will accrue to those countries and companies offering leading-edge capabilities. The recognition of this has pushed China and the U.S. to enact major fiscal stimulus initiatives to support the transition and their battle for technological supremacy. The CHIPS Act will revolutionize technology for devices and software applications as we continue to develop far greater efficiencies than have ever been created. As technology evolves, our existing devices will need to be upgraded as evidenced by the more than 250 million iPhones which are currently viewed to be obsolete. The greater sophistication of innovative technologies will accelerate the replacement cycles for many devices and their related software. Elsewhere, the implications for medical breakthroughs are clearly in evidence which should result in better productivity and living standards. The response from the pharmaceutical industry to develop vaccines for COVID-19 in a few short months was incredible, but we believe the medical advances coming will be equally amazing.

July 25, 2023

Today's uncertainty is creating some of the most exciting investment opportunities in the past 40 years.

Today's uncertainty is creating some of the most exciting investment opportunities in the past 40 years as the advent of generative AI, the reshoring of manufacturing to the U.S., and the introduction of trillions of dollars of fiscal stimulus are redirecting capital flows away from leading producers including China and Germany, while creating massive revenue opportunities for others.

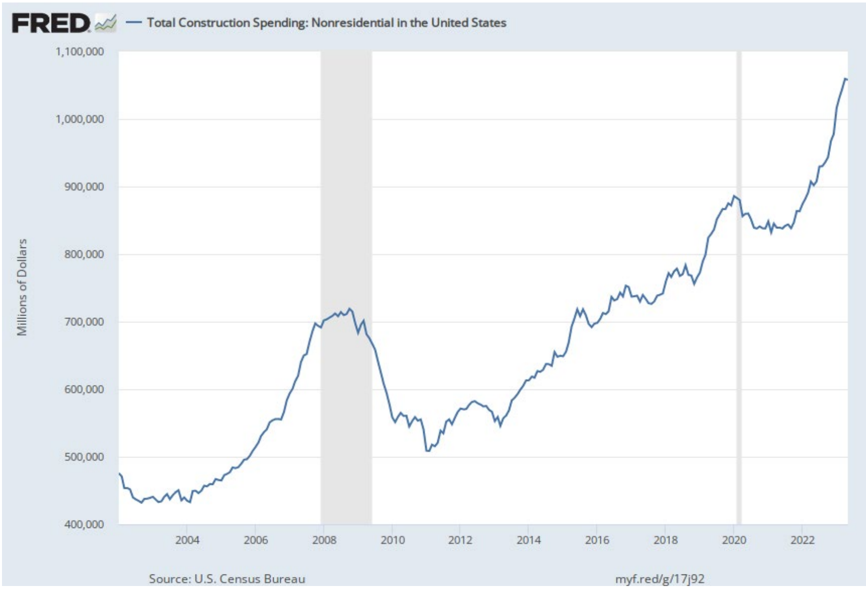
The Reindustrialization of the Global Economy

The secular decline in manufacturing in many economies is being reversed. U.S. manufacturing peaked in the 1950s at about 28% of the economy only to decline to about 10%. Manufacturing shifted to China and had a big influence on trade liberalization and resulted in globalization of supply chains to lower cost producers. For the past few decades, China and Germany have stood out as the world's premier manufacturers, and now both are facing difficult challenges with North America and a handful of nations in Asia and Latin America standing to benefit. The implication of this shift of production is a fundamental change to the economic outlook.

Demand for manufacturing construction will remain strong for many years to put in place the needed elements to rebuild, modernize, and expand the industrial base of the U.S.

Chart 2 illustrates just how powerful the U.S. government incentives have been as evidenced by the dramatic increase in total non-residential construction spending in the U.S. in the past two years with new announcements being made each month. Demand for manufacturing construction will remain strong for many years to put in place the needed elements to rebuild, modernize, and expand the industrial base of the U.S.

Chart 2. Construction Spending for U.S. Manufacturing Sector on the Rise



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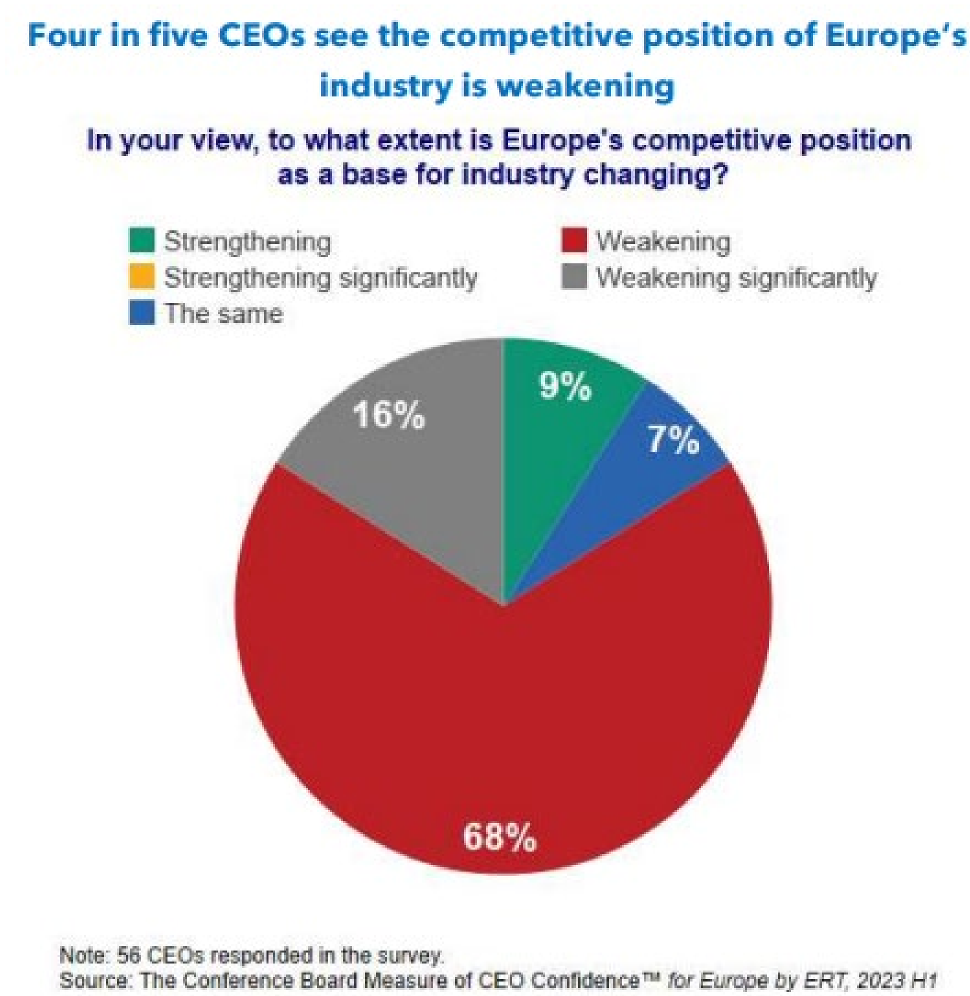
July 25, 2023

A recent European Business Roundtable survey of CEOs stated that 57% plan to shift investments or operations to North America over the next two years.

It is not just U.S. corporations that are responding as a recent European Business Roundtable survey of CEOs stated that 57% plan to shift investments or operations to North America over the next two years. As shown in Chart 3, 84% of CEOs responding stated that Europe's competitive position in industry is weakening or weakening significantly. The reasons for concern cited by CEOs include geopolitical tensions, deglobalization, still elevated inflation, potentially higher energy prices, and labor issues. The introduction of the IRA and CHIPS acts highlight the lack of comparable incentive programs for European nations. The free world has come to realize that autocratic regimes cannot be relied on to be dependable and secure trading partners.

Chart 3. The Weakening of Europe's Industrial Base



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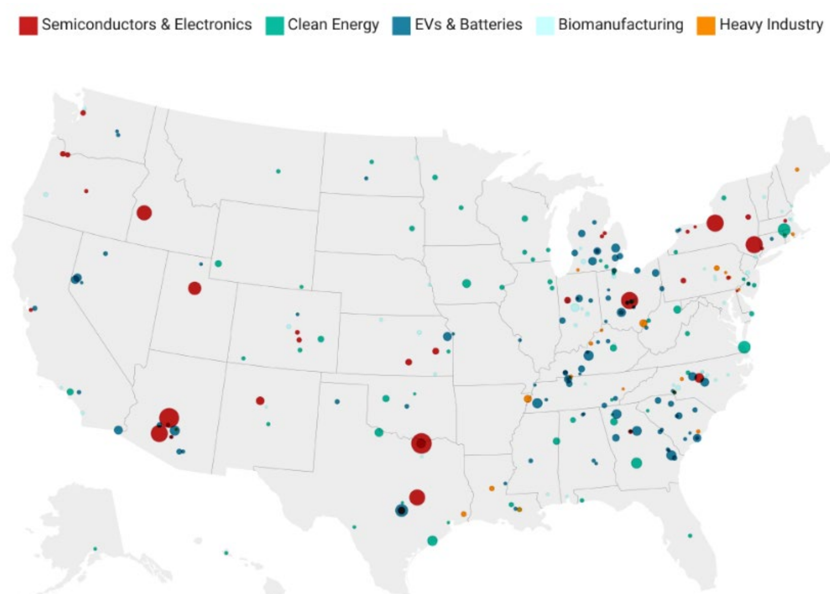
With the CHIPS & Science Act and the Inflation Reduction Act, there are now at least 35,000 projects underway in the United States. This has major implications for demand for critical inputs and skilled labor, while also requiring large investments in the nation's electrical grid, which is wholly inadequate, to support the energy transition and prevent massive damage from climate change. Not only is manufacturing making a comeback but so too is the nation's defense industry as the U.S. and Europeans' needed increases in defense spending are making themselves felt. In 2021, total global defense spending was $2.1 trillion. But after Russia invaded Ukraine, European defense outlays rose 14% to $480 billion versus global growth of 4%, according to the Stockholm International Peace Research Institute. After the annexation of Crimea, EU nations agreed to allocate a minimum 2% of their GDP on defense. However, they have only achieved half of that commitment and will need to increase their spending further to meet the goal. Bear in mind, the U.S. defense industry provides a significant portion of our allies' security needs, and filling these needs will result in growing backlogs, earnings, and cash flows for those companies benefiting.

There are now at least 35,000 projects underway in the United States. This has major implications for demand for critical inputs and skilled labor.

Capital is flowing to the United States in areas such as semiconductors and electronics, clean energy, electric vehicles and batteries, biomanufacturing, and heavy industry as shown in Chart 4. Regionally, the South has received 42% of new private investment dollars followed by the West at 25% and the Midwest at 19%.

Chart 4. Construction Spending for U.S. Manufacturing Sector on the Rise



Note: Circle size represents total dollars invested.
Source: The White House.

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What Are Leaders Saying About the Global Economy?

Below, we present some thoughts shared by political and corporate leaders on the state of the world, global trade, and how they are adjusting to the current situation. Countries, industries, and companies are being transformed and redefined, and the winners are proactively driving the changes and adapting, while the losers are not, due to a lack of vision or financial wherewithal to change. The comments reflect leaders' concerns about the political and economic fragmentation occurring in the world today. Their remarks also speak to the challenges of competing for business in China due to its nationalistic industrial policies, conflicts regarding the climate transition, labor costs/availability/skills against a slow growth, and highly indebted economy.

On the Remaking of the World Order

"On the current trajectory of relations, some military conflict is probable. But I also think the current trajectory of relations must be altered.... It's a unique situation in the sense that the biggest threat of each country is the other — that is, the biggest threat to China is America, in their perception, and the same is true here."

– Henry Kissinger, former Secretary of State and National Security Advisor, *Bloomberg,* June 15, 2023

"The United States must also respect China and not harm China's legitimate rights and interests. Neither party can shape the other according to its own wishes, let alone deprive the other of its legitimate right to development."

– President Xi Jinping, *Financial Times,* June 2023

The Reindustrialization of the Global Economy

Roland Busch, Chief Executive of Siemens, a German Industrial Conglomerate

On June 15th, Mr. Busch announced significant investments in China and Singapore as the company is doubling down on China due to its position as a driver of technological innovation, but also to hedge against overreliance on a country where U.S. restrictions are making it more difficult to operate.

"I avoid the word decoupling, because decoupling means deciding either/or and nobody wants to do that… the difference is diversification, which is looking at how you can serve more markets… which makes you at the same time more resilient."

Sanjay Mehrotra, President and CEO of Micron, a worldwide leader in innovative memory and storage solutions

Micron is making a $600-million investment in China and a $825-million investment in India following China's announcement that it had banned the company from key infrastructure projects noting national security concerns.

"This investment project underscores Micron's unwavering commitment to our China business and our China team members. The investment is in line with Micron's global packaging and testing concept and would give the company the flexibility to manufacture a wide portfolio of products in Xi'an."

James Litinsky, Chairman and CEO of MP Materials

Mr. Litinsky discussed MP's initiative to shift rare earth mining and refining from China to the U.S., crucial for an independent U.S. supply chain for the ongoing decarbonization initiative and a key partner of General Motors in electric vehicles.

"What's important about this supply chain is that if you can mine the material and refine it, but we're still sending it all to China to be made into magnets. So, the material gets mined-refined, but then 90%+ of the magnetics are made in China. We produce that content today and we send it to China, but we are in the process of moving downstream, what we call our Stage 3, where we're building a magnetics facility in Fort Worth, Texas. We have a foundational deal with General Motors, where we will take our mine-refined material from Mountain Pass, and we will send it to Fort Worth and make it into a magnet for the GM Ultium platform and then other industry use cases."

Commercial Metals Corporation, a leading U.S. steel producer

Commercial Metals Corporation described the key trends driving strong quarterly earnings.

"During Q3, North American segment volumes were supported by significant structural trends, including the re-shoring of manufacturing and logistical supply chains, and increasing investment to improve the condition and functionality of our nation's core infrastructure and energy markets. We expect increased activity in these rebar-intensive construction sectors will continue to drive demand in the quarters and years ahead."

Gridlock on the Electrical Grid

The rush to develop alternative energy sources and storage has laid bare the inadequacy of the planning process for the transition.

From wildfires in Canada, to water temperatures spiking 4 degrees in the waters around the UK, to the melting of the permafrost, the climate transition has been difficult, costly, and inflationary. In China, floods and extreme heat are putting pressure on food costs, exports, and imports. Rebuilding from climate damage will be costly as we've mentioned in the past with implications for insurance coverage and costs. The rush to develop alternative energy sources and storage (solar, wind, and battery) has laid bare the inadequacy of the planning process for the transition and the vulnerabilities of the U.S. power grid. The grid will require exceptionally large capital commitments over a longer period than anticipated, and projects are already facing delays of 5–15 years to connect to the grid. The Department of Energy has committed to spend $400 billion for alternative energy projects over the next two years as part of the Inflation Reduction Act.

The growth of electric vehicles (EVs) and alternative energy sources is outpacing both the capacity and upgrading of the electric grid. Importantly, this results in a mismatch between the ability to produce alternative energy and integrating it into the outdated grid. This fundamental imbalance will take considerable time and investment to bring into equilibrium resulting in increased demand and higher prices for companies focusing on strengthening and expanding the grid's capacity.

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According to the International Renewable Energy Agency (IRENA), meeting the target of limiting the planet's temperature increase to no more than 1.5 degrees Celsius will require more than tripling today's energy production of 3,000GW to more than 10,000GW by 2030. However, many companies may have to wait 5, 10, or even 15 years for a physical grid connection which varies by country whether the grid is government or privately run. This is one reason it is likely that fossil fuels will remain a necessary part of the energy solution for some time, and the transition will be significantly more expensive than originally planned.

Investment Implications

This Outlook's primary focus is on the reindustrialization process and issues involving global fragmentation, but that does not make the cost-of-living increases any less important. Inflation has become more imbedded into the world economy, and it is likely to settle above the 2% inflation target held by many central banks. Generally, headline inflation around the world is coming down as energy prices have declined sharply, goods inflation has come down rapidly, while core inflation is coming down gradually but nevertheless remains persistently higher than desired. That said, inflation trends may reverse for Europe as fears of more difficult weather in the second half of the year would push headline inflation back up. From an investment perspective, market participants need to balance the immediate geopolitical, climate, and economic risks against the opportunities coming from government policies targeting essential needs that can no longer be postponed. Market participants should closely follow the private sector spending in which CEOs are adjusting plans to take advantage of both government support and rapid advances in technology.

Market participants should closely follow the private sector spending in which CEOs are adjusting plans to take advantage of both government support and rapid advances in technology.

The ARS investment focus has always been on owning businesses and not trying to forecast the unpredictability of the stock market. Some of our favorite investments such as semiconductor chips and commodities (including copper, rare earths, steel, and energy) have experienced mixed results this year. This is indicative of the short-term focus of so many market participants, and not reflective of the opportunities for investors looking out over time with the philosophy that they are buying businesses and not trading the stock market. The supply and demand dynamics combined with the national security concerns make these areas clear opportunities to build capital and income to counter inflationary pressures and the higher cost of living. Many of our industrial investments are selling for quite attractive valuations (with many selling for single-digital multiples of earnings and cash flow) with the ability to raise prices as evidenced by Cleveland-Cliffs increasing prices on 7 occasions this year on some of its products. This pricing power is in stark contrast to what we are seeing from many companies that cannot maintain the price increases introduced during the pandemic.

Governments and corporations are focusing on well-defined segments of the economy and therefore defining the investment opportunity for investors.

As we wrote in our April Outlook, the United States is attracting capital in the form of foreign direct investments and reshoring. As capital flows into the U.S., jobs follow. Given that the U.S. unemployment rate is virtually at historically low levels, Congress needs to immediately address our immigration policy, as one of the next big competitions will be a battle for skilled and unskilled labor. Despite the tremendous advances occurring in technology, productivity has declined in recent years, and the hope is for generative AI to aid in reversing this poor productivity trend. We believe generative AI is a game-changer but will take time to see the productivity benefits become absorbed into the system.

In our January Outlook, we wrote that *"After a difficult year in the markets, it is easy to dismiss the public markets as an attractive area to find opportunities in 2023, and that would be a big mistake."* While there are always things to worry about for investors, we believed that the setup for 2023 was positive for equity investors as governments and corporations were focusing their spending on well-defined segments of the economy and therefore defining the investment opportunity for investors. That view has been proven correct by the returns in the U.S. stock market this year. What we did not appreciate was the reopening of China having a different focus than in the past which has weighed on some of our holdings in the first half but has set them up as even more attractive investments going forward. Our focus continues to be on the areas we have discussed in recent Outlooks, particularly those companies driving the clean energy transition, digitalization, and national security as well as those focused on improving healthcare costs and outcomes.

We believe that there will be significant differentiation between the winners and losers due to the forces described. Under these conditions, it would not be surprising to see further market volatility in the second half as the market adjusts to changes in interest rates, inflation rates, and corporate profits. Furthermore, we believe that investors should not be fixated on historical thinking to drive decisions in the coming period as the dynamics of a changing world requires a fresh and open-eyed approach.

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