Macroeconomic Report

Fall 2024

Letter to the Shareholders

Welcome to the Bulldog Student Investment Fund's Semi-Annual Outlook Report for Fall 2024. Our team of economic analysts has gathered information from many reliable sources to bring you the current outlook on each of the sectors we are considering an investment in for this pitch cycle, as well as the macroeconomy as a whole in our home nation. In this report, we highlight the effect of several issues in each sector as well as the on-going trends present in them. Especially given the impacts of inflation and fluctuating interest rates, we believe thorough economic analysis should continue to be fundamental to portfolio decisions going forward. We hope that the information presented in this report will prove beneficial in the development of your investment strategies.

Sincerely,
Fletcher Kehm
VP of Investment Environment
October 23, 2024

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United States

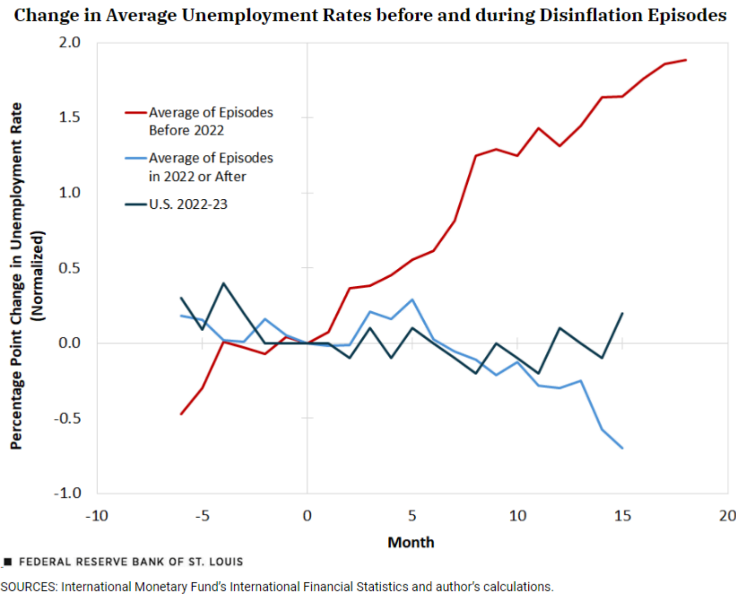
By Claire Ashley

In this section, we will examine how real GDP, slowing inflation, unemployment, and issues abroad affect the United States economy.

Real GDP is commonly used as an indication of economic growth. Deloitte predicts that real GDP will continue to rise as we enter the 4th quarter. Although we had a slower first half of the year, the second is expected to experience a 3% increase(Kalish, 2024). Overall a 2.7% for 2024 is expected, possibly caused by an increase in government spending, stimulation of customer spending, and a decrease in rates by the Federal Reserve 50 basis points so far. With a $1.4 billion increase in Real GDP from 2023 to 2024, we see that the U.S. continues to follow an upward economic trend. (BEA, 2024)

Inflation has been decreasing in recent years after its recent peak in 2022. Over the last few years, inflation has fallen roughly 0.7%. Although we are resting above the Federal Reserve's preferred inflation rate of 2%, we are predicted to meet their goal by the end of 2024.

Historically if inflation decreases, unemployment increases. Our most recent decrease in inflation has not produced the same effects as it has done in the past. Although unemployment has risen, it has not increased at the same rate as previously predicted.



Issues abroad affect our market outlook due to the interconnectedness of global trade. With wars in the Middle East and Israel, global transport of goods slowed due to taking alternative routes. Additionally, new tariffs imposed on Chinese imports may cause an increase in domestic prices. (Kalish, 2024) Due to China's cheaper pricing of goods and our dependence on their goods, finding other countries to import from may cause an increase in pricing(as seen below).

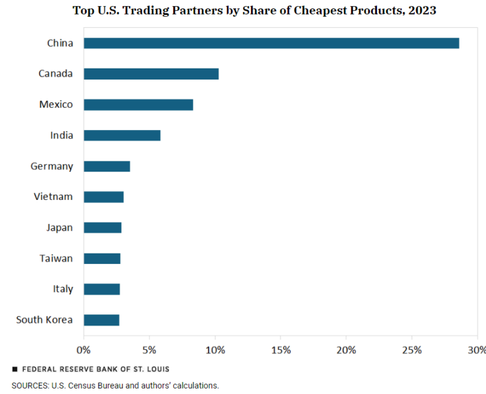
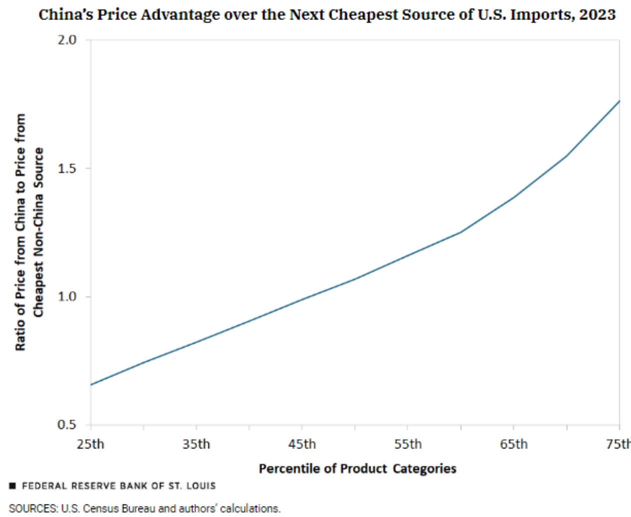


Figure 2 compares the price advantage of products sourced from China and other countries.



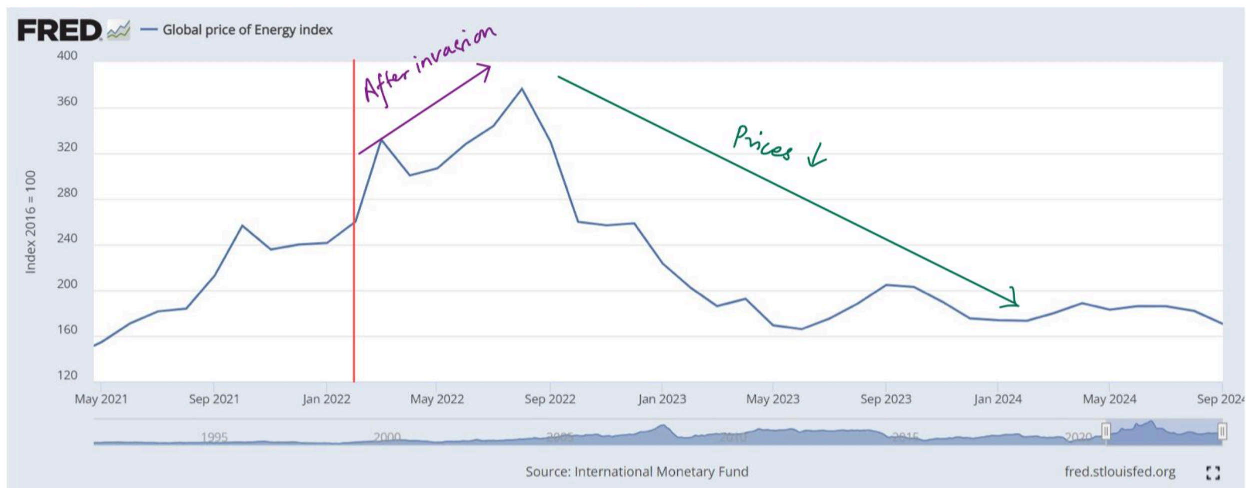
Overall the United States economy has seen an increase in real GDP, a decrease in inflation, and lower unemployment. Although we are set to have a strong end to 2024, increases in pricing may prohibit our economy from hitting our end-of-year projections.

Europe

By Pujan Gauli

Europe is a big continent to research, and I personally thought what would particularly be an interesting area to research about is the ongoing Russia-Ukraine war and its implications for global investment markets. This analysis will primarily focus on how the conflict affects the U.S. economy, with particular attention to two key sectors: energy and agricultural commodities.

The Russia-Ukraine war has led to significant increases in oil, gas and food prices since Russia's invasion of Ukraine in February, 2022. Energy prices are particularly sensitive to geopolitical tensions and economic instability, often resulting in high market volatility(Ruta, 2022). However, in recent months, oil prices have decreased after reaching record highs. The graph below, directly taken from St.Louis Fred database, indicates that energy prices have recently started to decline which can give some comfort to the global economy.



While higher energy prices can pose challenges for consumers and businesses—especially in an environment of rising inflation—there are opportunities for U.S.

investors, particularly in the renewable energy sector. The investment shift towards sustainable energy sources may provide a silver lining amidst the uncertainties.

Similarly, Ukraine and Russia are among the world's largest exporters of agricultural products, such as wheat and barley. The conflict has disrupted supply chains, leading to price hikes in agricultural commodities (Ruta, 2022). This situation can be beneficial for those investing in agricultural markets, as rising commodity prices may yield higher returns. Additionally, there are opportunities for investors interested in agricultural technology and companies focused on enhancing supply chain resilience.

While the rising prices of energy and agricultural commodities present potential benefits for investors, they also introduce economic uncertainty. Historically, during geopolitical crises, investors often "seek safe-haven assets like the U.S. Treasuries" (Forex GDP 2024). This trend both in treasury bonds and the domestic stock market can help buffer against losses in more volatile sectors while also potentially overvaluing the financial instruments in the domestic economy; I personally believe this should be well noted before making any judgments. Notably, several sources indicate that the U.S. is somewhat less affected by the economic consequences of the war compared to other regions ("Geopolitical Conflict and Its Impact on Global Markets | U.S. Bank" 2022). For instance, European economies, which heavily rely on Russian energy, face significant vulnerabilities. The loss of Russian oil and gas could lead to substantial economic contraction, with worst-case scenarios estimating a GDP loss of up to 3% annually (Morgan, n.d.).

In summary, while the broader European economy is grappling with challenges and inflationary pressures due to the war, U.S. investors may find relatively favorable conditions.

The potential impacts on multinational companies should not be overlooked, as they may experience similar external pressures like other European nations. The energy and agricultural commodities sectors are particularly relevant, as countries aim to reduce their reliance on Russian energy. Hence, sectors focused on renewable energy and energy efficiency may see increased investment, presenting further opportunities for U.S. investors and any other investors around the world.

Asia

By Quinn Long

In previous decades the Asian economy was little brother to North America, it was behind and didn't have nearly as many advanced sectors and technologies. Fast forward three decades and Asia is the most important economic region in the world and the fastest growing by far. But, although some economies are making great strides the overall Asian economy still revolves around one very important and the second largest economy in the world China.

According to Mckinsey researchers, Asia accounted for 57% of the global GDP growth between 2015 and 2021 making it the fastest growing region. However most of this growth is not through innovation or research and development of new products in the region, it relies on manufacturing and a hearty workforce. As of now Asian economies don't control their own destinies; they are the world's factory and the aging populations of sophisticated Asian countries like South Korea, Japan, and China is a major cause for worry. "In Advanced Asia and China, 34 percent and 30 percent of the respective populations will be elderly by 2050"(McKinsey), but there is a possible replacement in the much younger populations of Emerging Asian countries like Singapore, Indonesia, and India. Some Asian Nations such as South Korea are attempting to lessen immigration restrictions so that more working age people will enter their workforces. But, due to cultural divisions it is most likely that people will not move but rather have the work come to them. Resulting in corporations moving business to these areas.

Another challenge facing the Asian economy is climate change. "From 1991 to 2021, Asia accounted for a remarkable 97 percent of the global increase in CO_2

emissions”(McKinsey). As Asia’s manufacturing sector ramped up production, so did its carbon emissions. Asia is the largest producer of carbon emissions by far, but has a unique opportunity to gain from this as they also lead the world in the R&D of climate solutions. But for now, Asia relies on fossil fuels, “70 percent [of which] came from outside Asia”(McKinsey). Oil and natural gas are almost exclusively imported from other regions making Asia very reliant. The only fossil fuel that Asia is naturally rich in is coal.

Asia is the world’s largest energy consumer, and almost half of that consumption comes from industry.

Global total final energy consumption, 2021, million terajoules

By region

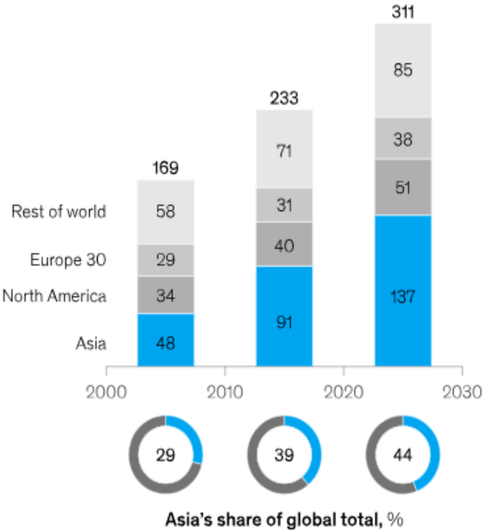
Note: Figures may not sum because of rounding.
Source: McKinsey Energy Insights; McKinsey Global Institute analysis

McKinsey & Company

Asia consumes the most energy in the world and as more Asian countries ramp up their growth they will only continue to produce more emissions, which is why this issue is so crucial to the stability of the Asian economy. The Indian economy alone,”is expected to grow at 6.8% this year,” and “ it is expected to overtake Germany and become the world’s third largest economy by 2030”(McKinsey).

Geopolitical factors also act in Asia but those are largely controlled by one nation, China. The US and other countries have used trade as a weapon against China levying tariffs, legislation, and litigation on what can be exported to and imported from China. For example, Chinese tech products need high end semiconductor devices from the US but the US has placed a

limit on what they can import leaving the Chinese manufacturers scrambling to find another source, greatly increasing the time it takes to produce devices, and thus shrinking companies profit margins. In contrast it seems that whatever the US has decided they no longer want to buy from China they can easily find elsewhere in other Asian countries like South Korea and India. The Chinese economy has been further destabilized by Xi Jinping's Covid measures. Under Xi's net zero policies the economy deflated which was somewhat expected, but when the economy was reopened it did not resurge as most thought it would. Since some countries have stopped using Chinese goods, Chinese companies are having a hard time offloading their excess product and often have been selling things at less than cost to get rid of them, leading to further deflation. This practice of overproduction is a principle of the Chinese Communist Party so it is unlikely that the Chinese companies will start making less goods to fit the lessened demand. Rather, Xi will have to continue to implement stimulus measures to keep the economy afloat until it eventually returns to its previous height.



Although Asia does have a few large challenges ahead of it there is a large margin for profit in the industrial sector all across the continent. With every problem listed there is a conventional solution that can better the overall Asian economy. But, the question is can Asian corporations implement those solutions. The Asian economy as a whole is going to continue to

boom no matter what happens but there is a huge margin for growth in developing Asian economies like India. Although China's economy is at a low point, Asia as whole is still a great place to invest.

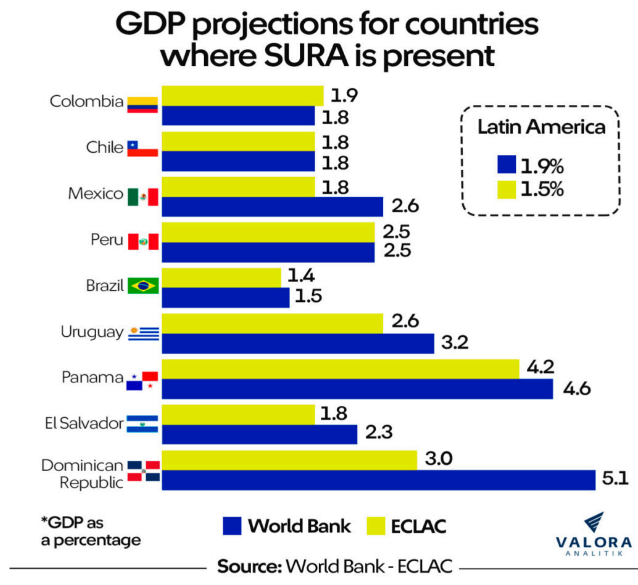
South America

By Bek Usmonov

The macroeconomic landscape of South America in 2024 is shaped by a combination of domestic and global challenges. The region is dealing with post-pandemic fiscal pressures, inflation, trade uncertainties, and a heavy dependence on commodity exports, particularly to China. These factors, compounded by global economic shifts like rising interest rates in the United States and China's economic slowdown, complicate efforts to foster sustainable growth. This report delves into the key macroeconomic trends, policies, and potential pathways for South America's economic recovery and stabilization.

Post-Pandemic Fiscal Adjustments

Following the COVID-19 pandemic, South American governments implemented large-scale fiscal measures to support their economies. These efforts, while necessary, led to significant increases in public debt. The fiscal deficit across the region rose from an average of 2.9% of GDP in 2019 to 6.3% in 2020. Although efforts to reduce these deficits have been made, they remain above pre-pandemic levels, with the regional deficit standing at 3.8% of GDP in 2023 (Deloitte Insights; ECLAC).



Fiscal consolidation efforts have been uneven. Countries like Chile and Brazil have made strides in reducing public spending and increasing tax revenues. However, slow economic growth and inflationary pressures have hampered these efforts. Inflation erodes consumer purchasing power and dampens tax revenues, making fiscal stability an ongoing challenge (Deloitte Insights).

Inflation and Monetary Policy

Inflation remains a pressing issue for many South American economies in 2024. While inflation had shown signs of easing in late 2023, it remains elevated, largely due to external factors like commodity price fluctuations and exchange rate volatility. Central banks across the region have had to adopt cautious monetary policies, balancing the need for inflation control with supporting growth. Interest rate cuts, which were implemented as inflation eased, have stalled due to renewed inflationary pressures in countries like Argentina and Brazil (Deloitte Insights).

Exchange rate volatility, influenced by global economic trends, has exacerbated inflation. The U.S. Federal Reserve's policies and the slowdown in China's growth have contributed to

currency depreciation in several South American countries. This depreciation raises import costs, which in turn fuels inflation, putting additional pressure on central banks to stabilize their economies (ECLAC).

Commodity Dependence and Trade Uncertainty

South American economies are heavily dependent on commodity exports, particularly to China. Countries like Brazil, Chile, and Argentina rely on the export of agricultural products, minerals, and oil to drive growth. However, China's projected slowdown—from 5% GDP growth in 2024 to 3.6% by 2027—poses a significant risk to these economies (Deloitte Insights). This deceleration in demand could lead to reduced export revenues, further straining fiscal balances and hampering overall economic stability (ECLAC).

Moreover, trade uncertainties and global shifts in geopolitical dynamics have made export-oriented economies more vulnerable. Tensions between the U.S. and China, as well as protectionist policies in other major economies, could further restrict access to key markets for South American exports. This uncertainty hampers long-term planning and investment in critical sectors like infrastructure and energy (ECLAC).

Structural Challenges and Opportunities for Growth

Aside from external shocks, South American countries face deep-rooted structural issues. Public pension systems are in need of urgent reform, with several countries facing unsustainable liabilities. High levels of public debt and persistent budget deficits limit governments' ability to invest in essential infrastructure and social services. These challenges necessitate difficult policy

choices, such as cutting public spending or raising taxes, both of which carry significant political and social risks (Deloitte Insights).

Despite these challenges, there are opportunities for growth and stabilization. The potential for U.S. interest rate cuts provides some hope, as lower rates could ease pressure on South American currencies, allowing for reduced local interest rates. This, in turn, could stimulate investment and foster economic recovery. Additionally, there is potential for economic diversification, with sectors like renewable energy, technology, and tourism offering avenues for sustainable growth (Deloitte Insights).

Conclusion

The macroeconomic outlook for South America in 2024 remains challenging but not without hope. The region must navigate a complex web of domestic issues and external pressures, including inflation, fiscal instability, and dependence on commodity exports. At the same time, there are opportunities for reform and growth, particularly in diversifying economies and improving fiscal governance. The path forward will require strategic policy choices, regional cooperation, and resilience in the face of global uncertainties.

Technology

By Bennett Ellsworth

Technological progress is a key factor for economic growth. (St.LoiusFed) The companies within the technology sector of the NYSE have been drivers of economic growth and innovation, while playing a pivotal role in shaping our markets. Throughout the past year, technology stocks have gotten significant attention from investors due to their rapid growth, high valuations, and impact on a variety of other industries. From artificial intelligence to e-commerce and semiconductor production, technology companies have consistently evolved, generating a new form of growth.

Large Cap Growth Technology Stocks. The Fab 5. Apple(24.96%), Alphabet(GOOGL– 19.83%), NVIDIA (168.8%), Meta (67.14%), Microsoft (12%). All large cap technology stocks that have had tremendous performance YTD, pushing the NASDAQ and S&P 500 to new all time highs. Also showing signs of market dominance, is the technology sector ETF $XLK. This consists of "Stocks primarily covering products developed by internet software and service companies, IT consulting services, semiconductor equipment, computers and peripherals are included in this Index. ($XLK)" $XLK has a YTD performance as gain of 22.00% (as of 10/15/24), falling short of the the full S&P 500 market ETF ($SPY) by a mere 0.67% YTD.

Artificial Intelligence (AI) refers to technology's capability to perform functions that typically require human intelligence. This includes tasks like understanding written language, analyzing datasets, and interaction between humans and machines. AI enables machines to "think" and "learn" in ways that make them more efficient and adaptable, improving everything from service chatbots (ChatGPT) to complex data-driven decision-making systems. AI can be a

tool used to create more effective and efficient business strategies, using a generative AI tool. (SAS) “Bloomberg Intelligence found that GenAI could become a $1.3 trillion market by 2032.(SAS)”

With technology weighted heaviest of the sectors at 32%, it overall tends to shift the market, even on a day to day basis. Semiconductors have played a large role in the advancement of AI, as they “enable global connectivity (BBC),” and are essential to their production. Of that 32%, companies that produced Semiconductors, weighted at 28.62%. Software - Infrastructure (26.13%), Semiconductor Equipment and Materials (2.33%), Electronics & Computer Distribution (0.17%). Semiconductor production and distribution have grown to be 57.25% of the technology sector (nearly 18% full market) as advances have been made in AI.

Growth in today's rapidly evolving world stems from a variety of factors, with one key driver being technological progress. Innovations like artificial intelligence have transformed industries, boosting efficiency and creating new opportunities for advancement. As technology continues to evolve, it will remain a crucial force behind economic growth, driving improvements in productivity, expanding markets, and reshaping the way businesses operate. Embracing this progress is essential for sustained development and future success in an increasingly digital world.

Materials

By Marcela Rodriguez

The material sector is highly demanded, as the processing of raw materials includes important industries such as mining, metal refining, chemical products, and forestry products. However, demand for materials is cyclical, this sector tends to be closely tied to the economic cycle, susceptible to the overall state of economic growth. Understanding the sector's current trends is crucial to making informed decisions when investing in materials industries.

In 2023, like the broader economy, the materials sector achieved positive but sluggish growth due to concerns about the risk of recession in 2024. The sector ended up with only a 5.0% growth compared to the 19.9% increase in returns of the S&P 500 (Fernandes). However, it is important to consider that the S&P's gains were led by the rise of artificial intelligence, standing out companies in the technology and communication services sectors.

Recently the economy has been experiencing rate-hike cycles that led materials' stocks to underperform as investors anticipate that higher inflation and borrowing costs will undercut business spending. As of mid-October 2024, the materials sector has had a 12.46% YTD return, 10 percentage points under the S&P 500's return ("Basic Materials Stock Performance"). The sector relies heavily on foreign demand, therefore, the U.S. dollar becoming stronger weakens materials sales abroad.

Despite poor performance in recent months, the sector promises to outperform the market soon. Since materials companies have a reliable cash flow, in case of a less severe recession, the sector's profitability might not be as dramatic as expected. Eventually, a new cycle of economic growth is likely to emerge, which could benefit materials stocks. Historically, the materials sector tends to perform strongly during the initial phases of economic growth, making it potentially well-suited for a future economic recovery (Fernandes).

The mining industry is one of the best industries for investment in 2024 because of the rising demand for minerals used in advanced technologies. Investing in copper producers is a great opportunity because of its promising supply-and-demand dynamics. Because copper is a key input in the development of electric vehicles (EVs), it's expected to experience strong demand growth in the coming years. Researchers anticipate that demand for the metal is on track to grow at an accelerated 2.6% annual clip through 2035 and they expect the global demand for copper to increase by around 70% by 2050 (BHP Group). On the other hand, Copper mines are aging, and the quality of the ore in key producing countries has been decreasing, challenging the

supply of copper worldwide. This expected shortage will trigger copper prices in the future, making it a very attractive product.

Companies in the mining industry lead the Best Materials Stocks lists. Freeport-McMoRan (FCX) is an attractive investment opportunity to cash in on the long-term growth in copper demand. As one of the world's largest copper suppliers, it has benefited from improved pricing and strong demand, especially in the U.S. FCX stock price has risen about 35% over the past year, and its sales are expected to rise to 5.6 million dollars by 2026 (DiLallo). The company is investing more than $1 billion in high-return leaching projects that could return the investment in the next three to five years and boost its overall production. Another recommendation would be Rio Tinto PLC (RIO), a global mining company with a 10.4% average annual return and a 6.4% dividend yield.

U.S. chemicals companies represent a promising opportunity, particularly within the commodity chemicals segment. American firms in the materials sector benefit from using natural gas in their manufacturing processes, having a cost advantage over European companies that rely on oil. With generally lower energy prices, U.S. companies can offer more competitive pricing, strengthening their market position and potentially increasing profitability. Some recent fund holdings among such "U.S. chemical producers are LyondellBasell Industries (LYB), Olin (OLN), and Cabot (CBT)" (Fernandes).

Investing in the material sector is a great way to diversify your portfolio. Still, one must consider price sensitivity to market changes. As the economy shifts towards growth, investing in the materials sector could result in significant rewards.

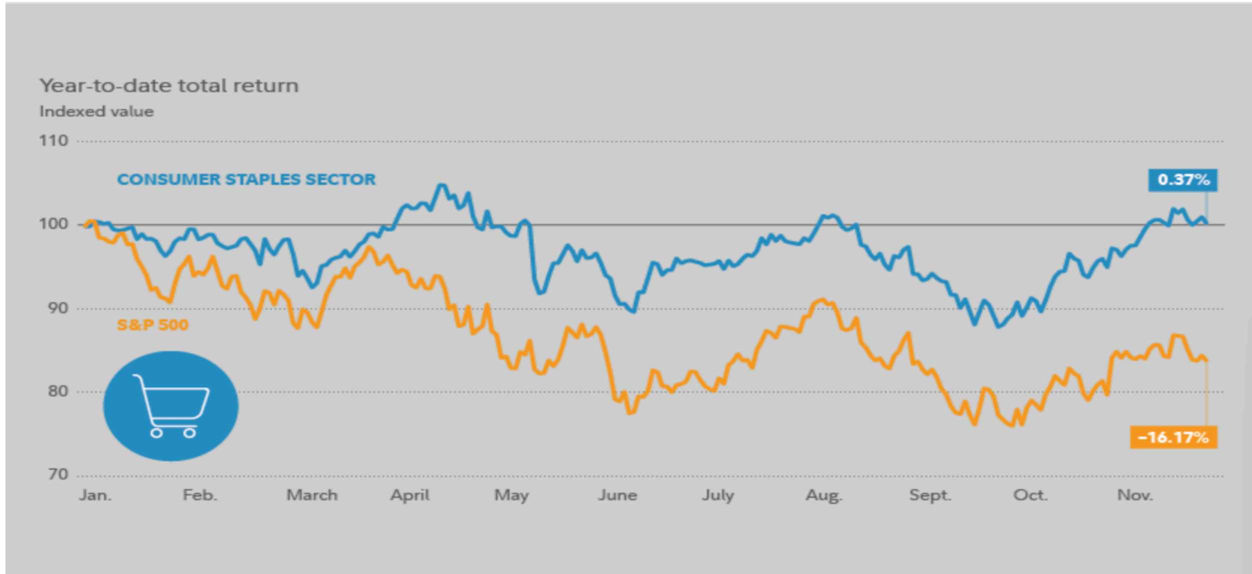
Consumer Defensive

By Deeptika Karki

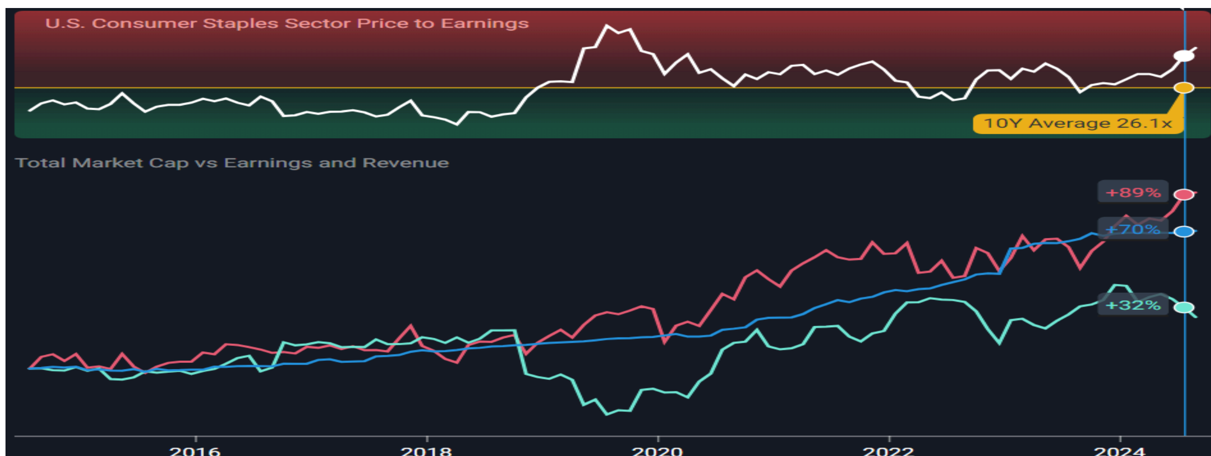
The Consumer Defensive Sector, also known as Consumer Staples, encompasses essential products used by the consumers. This sector includes items such as food and beverages, household goods, healthcare products, as well as tobacco and alcohol. These goods are considered non-cyclical, meaning they remain in demand year-round, regardless of economic conditions. As a result, consumer staples are generally unaffected by business cycles, with demand remaining relatively steady even if prices fluctuate.

Because demand for these products is largely unaffected by business cycles, consumer defensive stocks could be beneficial to investors looking for consistent growth, reliable dividends, and low volatility, even in challenging economic conditions.

Historically, the consumer staples sector has performed consistently well, especially in recessionary periods. During the COVID-19 pandemic in 2020, consumer staples saw significant demand as people stocked up on essentials. The sector's market cap rose while the broader market faced declines. The year-to-date return chart showed consumer staples up 0.37%, while the S&P 500 dropped -16.17%, reflecting its defensive role.Therefore, consumer staples stocks decline far less during bear markets than stocks in other sectors.



Additionally, rising geopolitical tensions and fears of recession in 2024 led to a sharp increase in the Consumer Staples sector's valuation, as shown by the chart, where market cap surged by 89% while earnings lagged slightly at 70%. Products like personal care, food, remained essential, making the sector a safe investment option.



From 2022 to 2024, the sector's P/E ratio surged to 33.1x, signaling that investors continued to value the sector for its stable dividends amidst rising inflation and interest rates. Despite cost pressures, companies passed price increases to consumers, maintaining profitability.

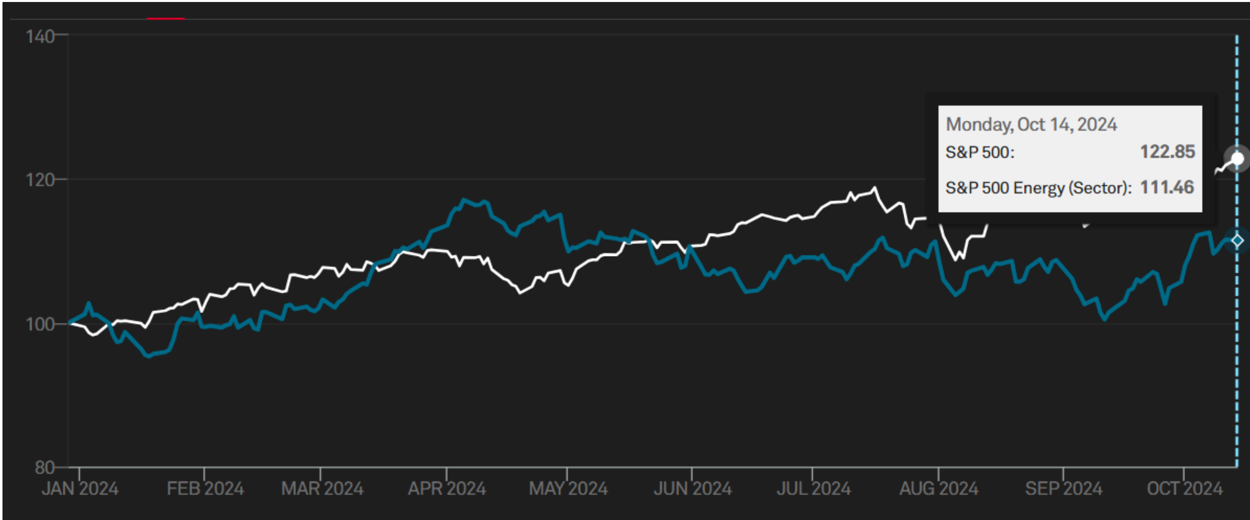
The combination of inelastic demand, the ability to pass on higher costs during inflation, and the sector's appeal during geopolitical instability have made it a go-to for conservative investors. While the Price-to-Earnings ratio indicates some overvaluation in the current market, the sector continues to offer stable returns and consistent dividends, making it a viable choice for those looking to hedge against market downturns.

Energy

By Raghu N. Shahi

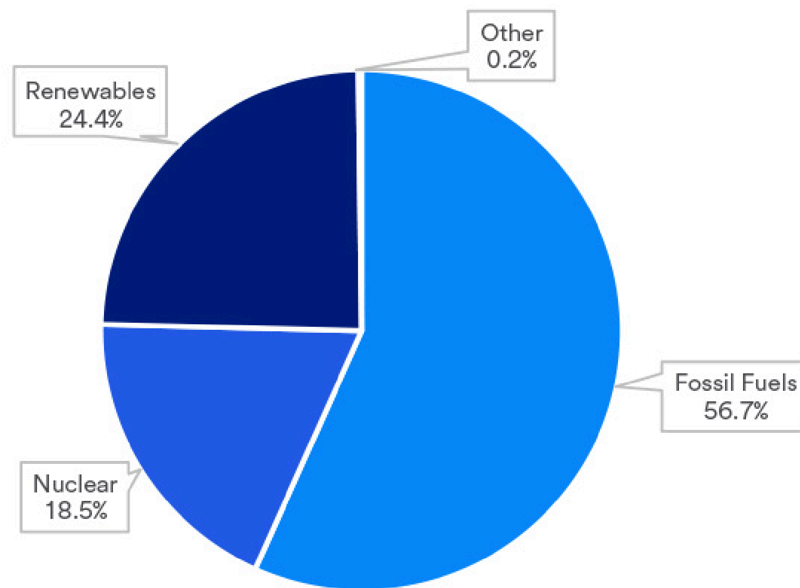
The United States stock market has been bullish year-to-date for 2024; The Energy Sector has also rebounded from the misgivings of a negative return in Q4 of 2023, to now a year-to-date return of 11.46% (as of 10/15) in comparison to the still greater overall market return of 22.61%

Year to date Comparison of the Energy sector and the Wider market

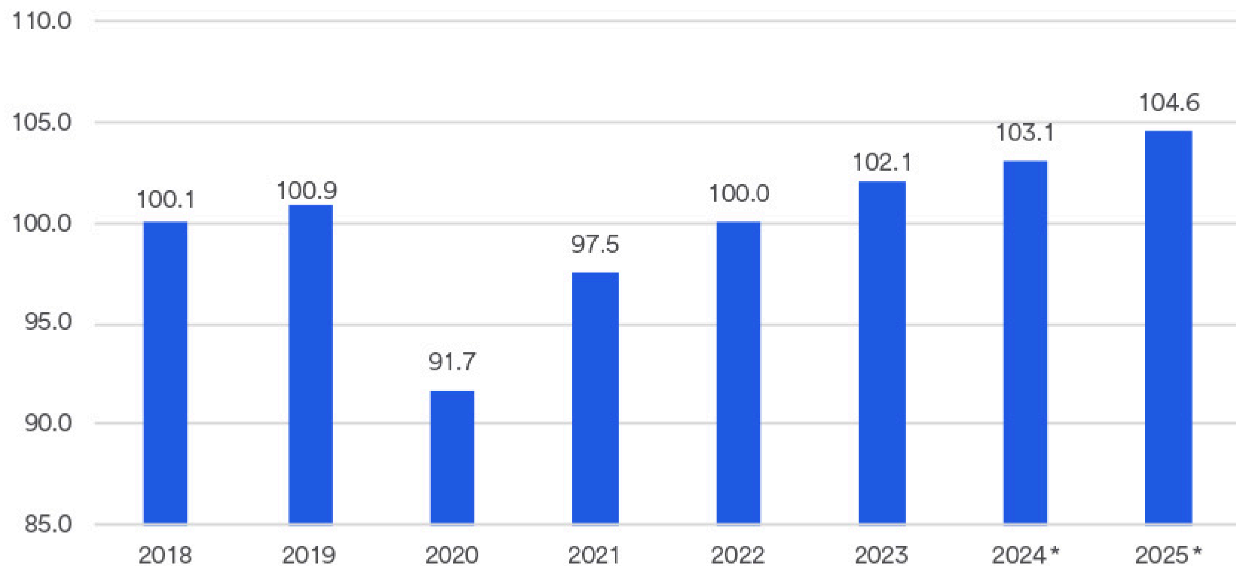


(Courtesy: S&P Global at https://www.spglobal.com/)

The sector has shown some stagnation in indexes such as the Global Oil Index with a Year to date return of 2.15%, However many of the bigger fossil fuel companies have performed much better for example Exxon Mobil (XON) having a YTD of 17.58%. Therefore there is still good reason to still consider the Fossil Fuel industry as a good investment opportunity (USBank), with fossil fuel still making for over 50% of all electricity generation in the United States.



(Courtesy: U.S. Energy Information Administration, “Electric Power Monthly,” Year-to-date generation as of June 2024.)



(Courtesy: U.S. Energy Information Administration, "Short Term Energy Outlook," Petroleum and Other Liquids Consumption, September 10, 2024. *Projected consumption.)

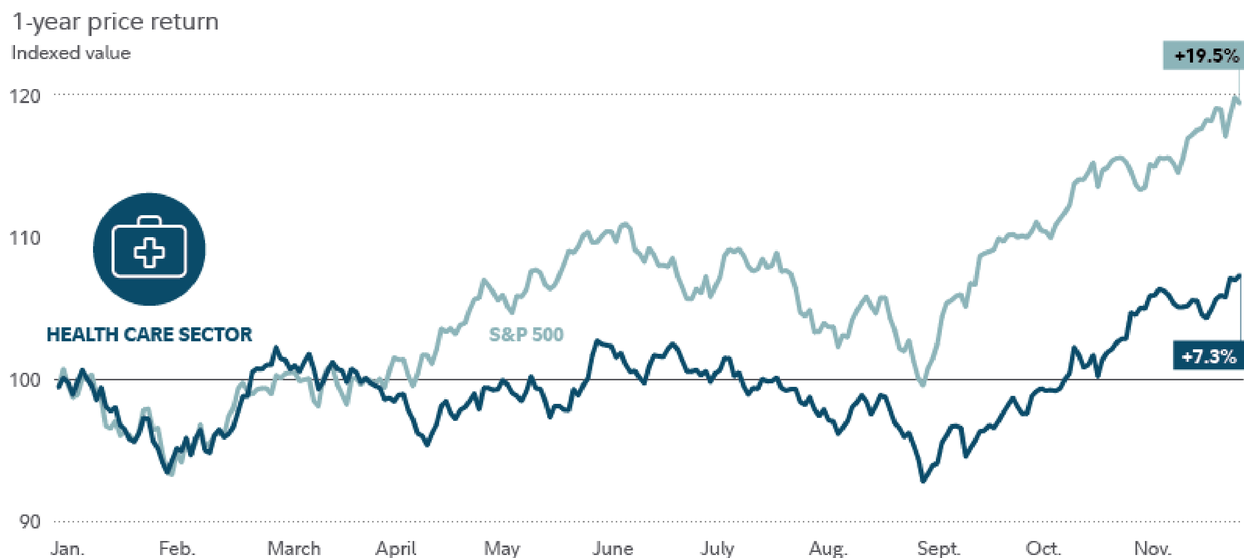
Outside of traditional energy companies there remains to be significant growth potential in the renewable energy sector with Solar Energy being the front runner with predictions to have increased by 75% in energy production by 2025 in comparison to 2023.(eia.gov).
Renewable energy provides us with an opportunity to invest longer term, with many government policies now centering towards going carbon neutral there is reasonable prospect of growth. BlackRock says "Over the next 30 years there will be a shift in global power generation from two-thirds fossil fuels to two-thirds renewables. This presents a $9 trillion climate infrastructure opportunity".

Conclusively I see room for immense growth in the energy sector (Renewables more so) but I recommend selective and investing in a well curated portfolio with considerations to the risks some of the sub-sectors pose mainly due to ongoing geopolitical situations.

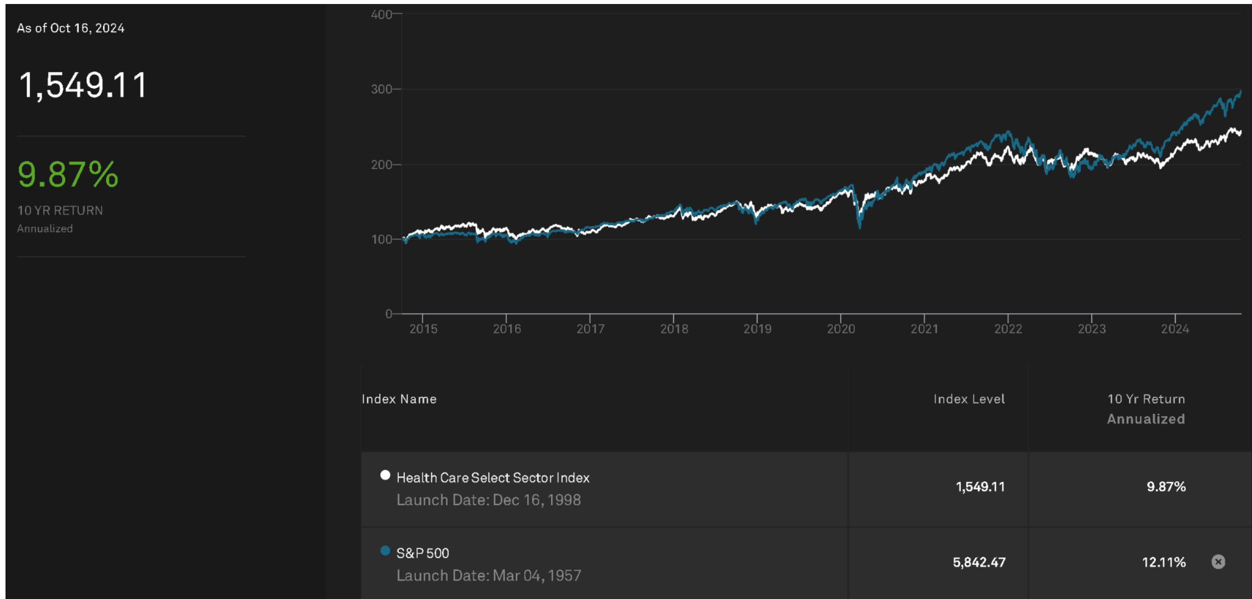
Healthcare

By Zun Koseki

During 2023-2024, the healthcare sector underperformed the S&P 500 Index. This reputation became a drawback over the past year, as investors favored mega-cap growth stocks—especially those of major tech companies viewed as potential beneficiaries of artificial intelligence—over defensive sectors. However, this does not imply that the healthcare sector isn't worth investing in. It is also a fact that the U.S. healthcare sector index has performed well over the past decade as the economy has grown. The healthcare sector has long been regarded as a defensive segment of the stock market. The demand for healthcare remains relatively steady even in uncertain times when economic downturns loom. This characteristic of the healthcare sector makes it rather attractive to investors looking for stability. The healthcare industry is undergoing significant transformations, driven by government expenditures, technological advancements, and shifting demographics, creating a compelling outlook for its future.



February 5, 2024. Source: S&P Dow Jones Indices, a division of S&P Global.

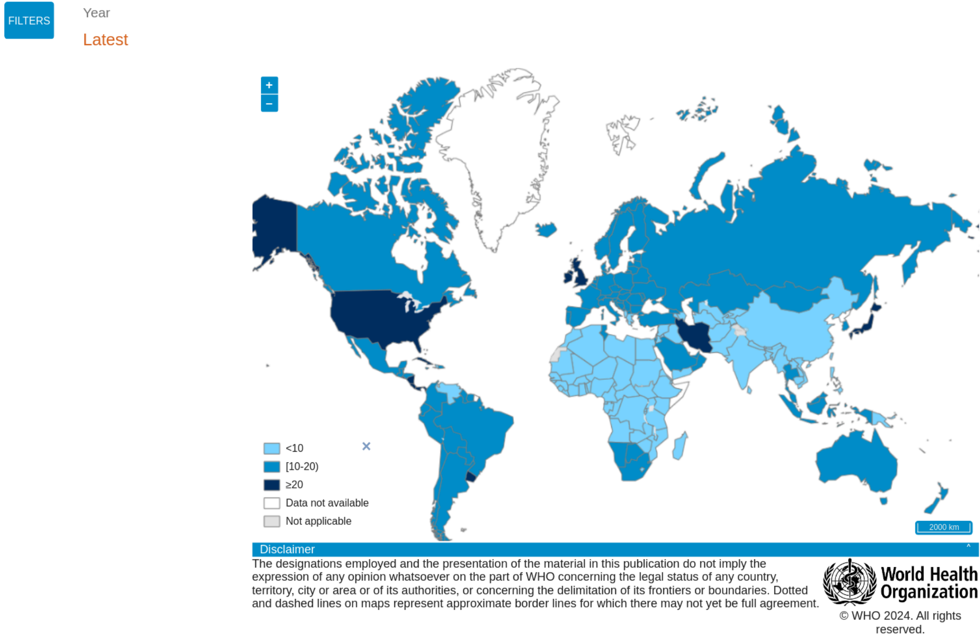


Index Name	Index Level	10 Yr Return Annualized
Health Care Select Sector Index Launch Date: Dec 16, 1998	1,549.11	9.87%
S&P 500 Launch Date: Mar 04, 1957	5,842.47	12.11%

(Courtesy: S&P Global at https://www.spglobal.com/)

One reason for the stability of the healthcare sector is its significant portion of government expenditure. In 2024, healthcare expenditures by governments are a substantial component of national budgets globally. The percentage of general government health expenditures exceeds 10 percent in the majority of countries and exceeds 20 percent in several prominent nations, including the United States, the United Kingdom, Japan, and Iran. This heavy government investment underscores healthcare's vital role in societies and creates a sustained foundation for healthcare businesses.

Domestic general government health expenditure (GGHE-D) as percentage of general government expenditure (GGE) (%)



(Courtesy: WHO at https://www.who.int/data/gho/data/themes/topics/health-financing)

The increase in global life expectancy is another factor driving the value of the healthcare sector. In 2024, the average life expectancy worldwide reached 73.2 years, a figure that continues to rise annually (United Nations, 2024). This trend indicates a growing need for healthcare services, particularly for managing age-related diseases and conditions. As the population ages, demand for pharmaceutical products, healthcare facilities, and medical devices is likely to increase, providing further stability and growth opportunities for the sector.

Performance in the healthcare sector varies significantly from stock to stock. Particularly following a year in 2023-2024, Excitement over weight-loss drugs became a major driver of healthcare stock performance. Producers of these drugs saw substantial gains, while some healthcare equipment makers, particularly those serving the diabetes market, faced losses due to concerns over the potential impact of weight-loss drugs on long-term demand for diabetes devices. Additionally, health care utilization increased as patients who had delayed treatments

during the pandemic returned to hospitals and clinics, benefiting healthcare facilities and medical-device manufacturers but weighing down managed-care insurers. Despite these dynamics, the healthcare sector as a whole fell out of favor with investors, who gravitated toward mega-cap growth stocks, especially in tech, rather than defensive sectors like healthcare. However, the sector could potentially benefit from the AI innovation trend, as technological advancements may significantly reduce the high R&D costs that burden healthcare companies. The awarding of the 2024 Nobel Prize in Chemistry highlights the profound impact of AI innovation in this field. The study on decoding and creating proteins has significant implications for drug development, offering hope for more effective treatments for a wide range of diseases (Ahlander et al, 2024). Innovations in the healthcare industry due to advances in AI technology illustrate the potential for healthcare companies to deliver new solutions to pressing health challenges, thereby enhancing their market value and appeal to investors.

The healthcare sector remains a fundamental component of the global economy, driven by essential public expenditure, demographic trends, and scientific innovation. While the sector's stock performance has experienced challenges due to fluctuating investor preferences, the long-term outlook is bright and stable. With aging populations, sustained government support, and ongoing advancements in biotechnology and artificial intelligence, the healthcare sector is well-positioned to deliver both societal value and financial returns. For investors seeking stability combined with growth opportunities, healthcare represents an enduring and promising investment avenue.

Communication

By Hinako Kaneda

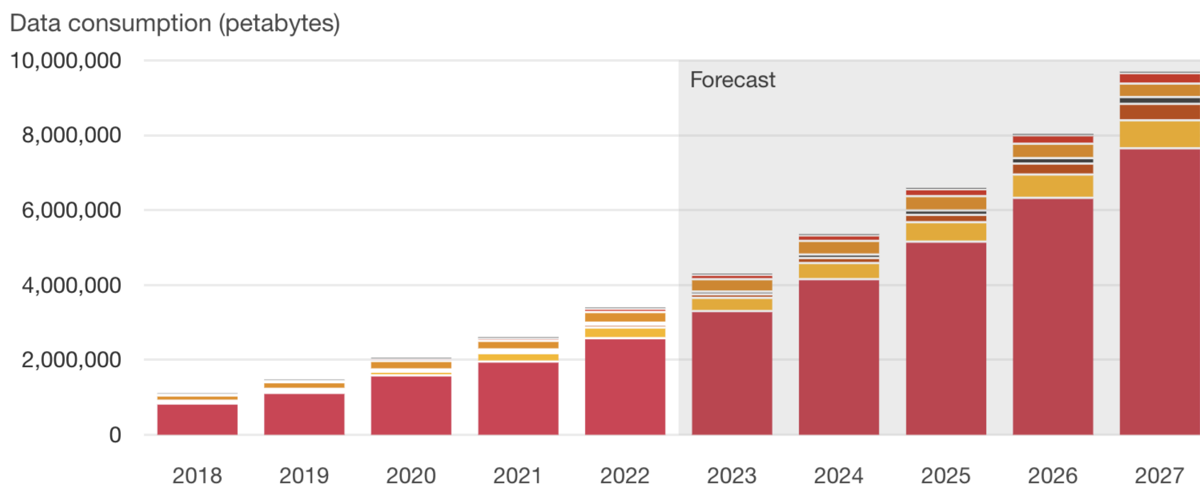
The communication sector has demonstrated significant economic relevance and resilience in 2023-2024, outpacing overall economic growth despite challenging macroeconomic conditions. This sector's performance and prospects are shaped by several key trends and factors.

The information and communication technology (ICT) sector grew by an average of 6.3% between 2013 and 2023, about three times faster than the total economy across OECD countries. In 2023, the sector maintained strong performance with an average growth rate of 7.6%, with some countries like the UK, Belgium, Germany, Austria, and the Netherlands achieving growth rates above 10% (OECD, 2024). Despite macroeconomic challenges in 2023 such as rising interest rates and increased competition, the U.S. telecommunications industry remained resilient. The sector developed innovative solutions like improved fiber technology, new 5G revenue streams, and investments in artificial intelligence to adapt to these challenges (Siegel et al., 2024).

Key Industries and Investment Opportunities

Broadband and Connectivity

The demand for connectivity continues to grow, driven by increasing digital engagement. Companies that can cost-effectively deliver high-quality, fast broadband service through fiber or 5G networks are well-positioned to benefit from this trend. Global data consumption over telecom networks is expected to nearly triple from 3.4 million petabytes in 2022 to 9.7 million petabytes in 2027 (PricewaterhouseCoopers, 2023).



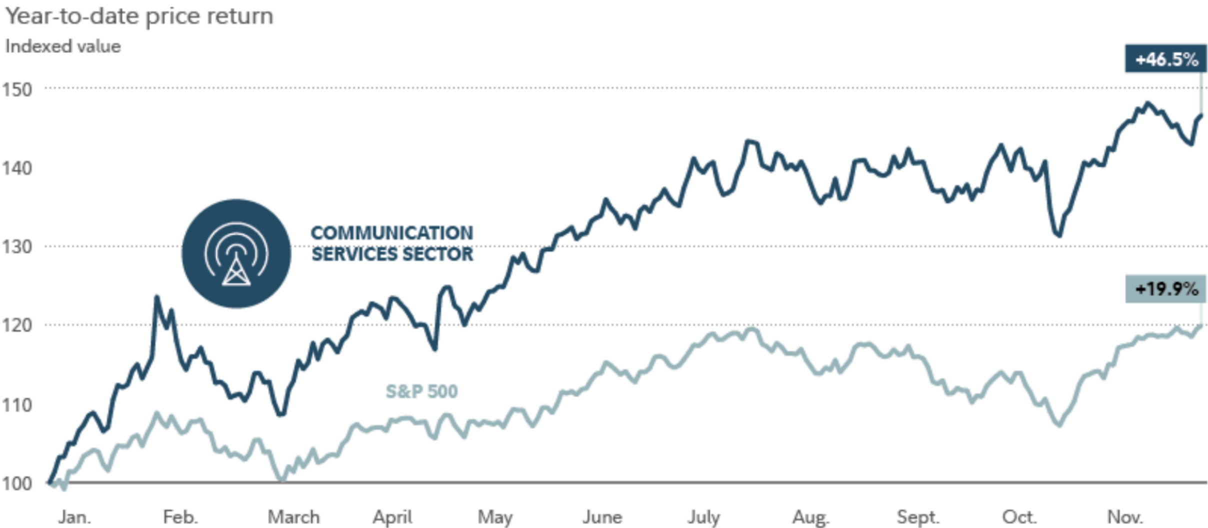
Artificial Intelligence

Generative AI has emerged as a significant investment opportunity within the sector. Investment in generative AI grew from $1.3 billion in 2022 to $17.8 billion in 2023 (OECD, 2024). Many communication services companies are at the forefront of AI development and implementation, which could drive future growth and efficiency.

Digital Advertising

In 2022, the communication services sector faced such poor performance that it was called the "tech wreck." This decline was due to a drop in digital advertising, rising costs, slowing earnings, and a shift in investor preferences. However, in 2023, the situation improved.

Digital advertising began to recover, companies reduced spending, earnings bottomed out and started to recover, and large-cap communication stocks regained popularity. This was partly due to the belief that the Federal Reserve's rate-hike cycle was nearing its end and partly because of growing investor interest in companies leading advances in generative AI. As of mid-December in 2023, the communication services sector was the second-best performer, just behind the technology sector (Drukker, 2023).



Past performance is no guarantee of future results. Communication services sector performance is represented by the S&P Communication Services Select Sector Index. Data as of December 8, 2023. Source: S&P Dow Jones Indices, a division of S&P Global.

Company and Industry Trends

Large tech companies in the communication services sector, such as Meta Platforms (Facebook) and Alphabet (Google), have shown strong performance in 2023. These companies have benefited from the rebound in digital advertising and enthusiasm around AI developments (Drukker, 2023).

Telecom companies are projected to invest heavily in infrastructure, with an estimated $342.1 billion to be invested in networks in 2027 alone (PricewaterhouseCoopers, 2023). This investment is driven by the ongoing transition to 5G and the emergence of newer technological standards.

Risks and Prospects

While the communication services sector has significant growth potential, there are also several risks to consider. First, increasing competition with cloud providers could put pressure on revenues and profits. Additionally, the sector faces ongoing regulatory challenges related to data privacy, content moderation, and market dominance. Furthermore, the need for continuous investment in network infrastructure and new technologies could strain financial resources. On top of that, rapid technological advancements could quickly render existing infrastructure and business models obsolete.

Despite these risks, the communication services providers appear well-positioned for continued growth (Arbanas et al., 2024). The sector's valuation remains attractive, and earnings estimates have been trending in a positive direction. The ongoing digital transformation across industries and the increasing importance of connectivity in daily life provide a solid foundation for long-term growth in this sector.

Federal Reserve

By Fletcher Kehm

The current position of the Federal Reserve is to try and limit inflation in an economy that has reached full employment. Over the summer, a poor jobs report caused an overall decline in the stock market, and the biggest factor to cause this lackluster jobs report was the high interest rates that the Federal Reserve imposed in order to try and curb inflation. Inflation that was mainly caused due to the covid pandemic and government lockdowns had led to higher inflation that the Federal Reserve was looking to get down to the target 2% inflation rate in a now post covid lockdown world. In response to the dangers of slowing job growth, the Federal Reserve took a more hands on approach to economic management and on September 18th, the federal reserve cut interest rates by 50 basis points (J.P. Morgan). JP Morgan experts expect interest rates to be cut by another 50 basis points during its next meeting in early November. This was the first interest cut in 4 years. Following these cuts, the economy and jobs market is doing better than expected. 254,000 jobs have been added in September and the unemployment rate has fallen from 4.3% to 4.1% (U.S. Department of Labor). Another cut to interest rates by 50 basis points was expected to occur before the end of the year however due to the state of the economy and the improved jobs report now some analysts believe that the Federal Reserve might slow down its pace and size of interest rate cuts. The US was previously thought to be on a "soft landing" trajectory, meaning that the inflation rate would drop to the targeted 2% and economic growth and employment would remain stable (Mao). Due to strong income growth, employment, and inflation it seems like this "soft landing" might not occur and the economy will continue to expand while inflation remains high. Some of the reasons that the inflation rate will remain high

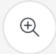
are the increase in prices, the growing money supply, and loose monetary policy from central banks. Because of this, the Federal Reserve will be closely monitoring the upcoming U.S. retail sales report. A stronger than expected retail sales report will indicate that the previously stated theory is correct and that inflation will continue to remain high as the economy expands.

The federal funds rate is the interest rate that banks charge each other in order to borrow money overnight. These rates are set by the Federal Open Market Committee, which is a 12 member-committee that is a part of the Federal Reserve. When the federal funds rate decreases, borrowing costs are lower, which can lead to increased spending by consumers and businesses. This can boost economic activity and employment. When the federal funds rate increases, the cost of credit increases, which can curb demand and reduce inflation.

FOMC federal funds rate forecasts

Median values, end-of-year

Meeting date	2024	2025	2026	2027	Longer run
Dec 2023	4.6	3.6	2.9	-	2.5
Mar 2024	4.6	3.9	3.1	-	2.6
Jun 2024	5.1	4.1	3.1	-	2.8
Sep 2024	4.4	3.4	2.9	2.9	2.9



Source: Federal Reserve Board, J.P. Morgan

The above table highlights the Federal Reserve's forecast when it comes to the federal funds rate. The current federal funds rate sits at round 4.83%. The table above shows that the long term goal of the Federal Reserve is to have the funds rate at around 2.9%, meaning that they are looking to lower borrowing costs in order to increase consumer spending and economic activity.

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