

# iFlow

## MACRO MORNING BRIEFING

April 26, 2024

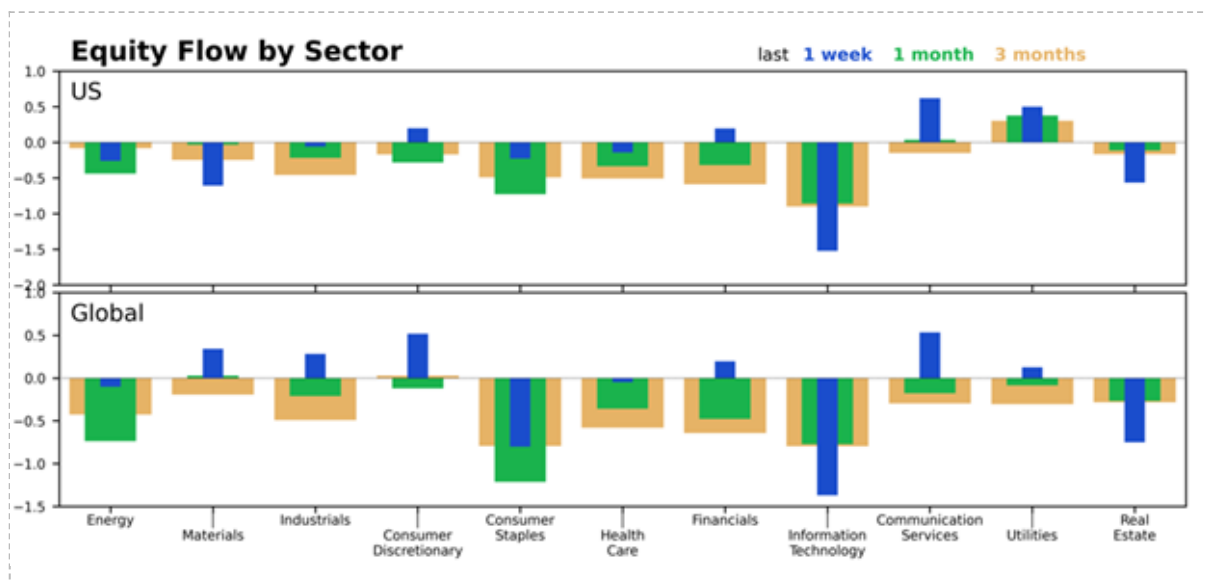
### Are Utilities The Hedge For IT And AI?

Micro earnings diving macroeconomics is like the tail wagging the dog. One equity sector that marries stocks to bonds is Utilities. The fixed cost of delivering energy has an element of bond-like cash flow and the sector has typically been favored when the business cycle shifts from late stage to recession and recovery.

Our iFlow data show that Utilities has been a standout favorite sector across the world – only recently joined by early-stage recovery sectors like Consumer Discretionary, Materials and Industrials. The US Utilities sector has been the only winner in our iFlow data over the week, month, and quarter (exhibit #1). Information Technology, by contrast, is the standout laggard with significant outflows globally.

As markets continue to digest the US Q1 GDP surprise and talk of stagflation but remain hopeful on productivity from AI and IT efficiencies, the link back to utilities demand may surprise, and render data on core inflation more difficult to understand.

**Exhibit #1: Utilities Have Been The Favorite In iFlow**



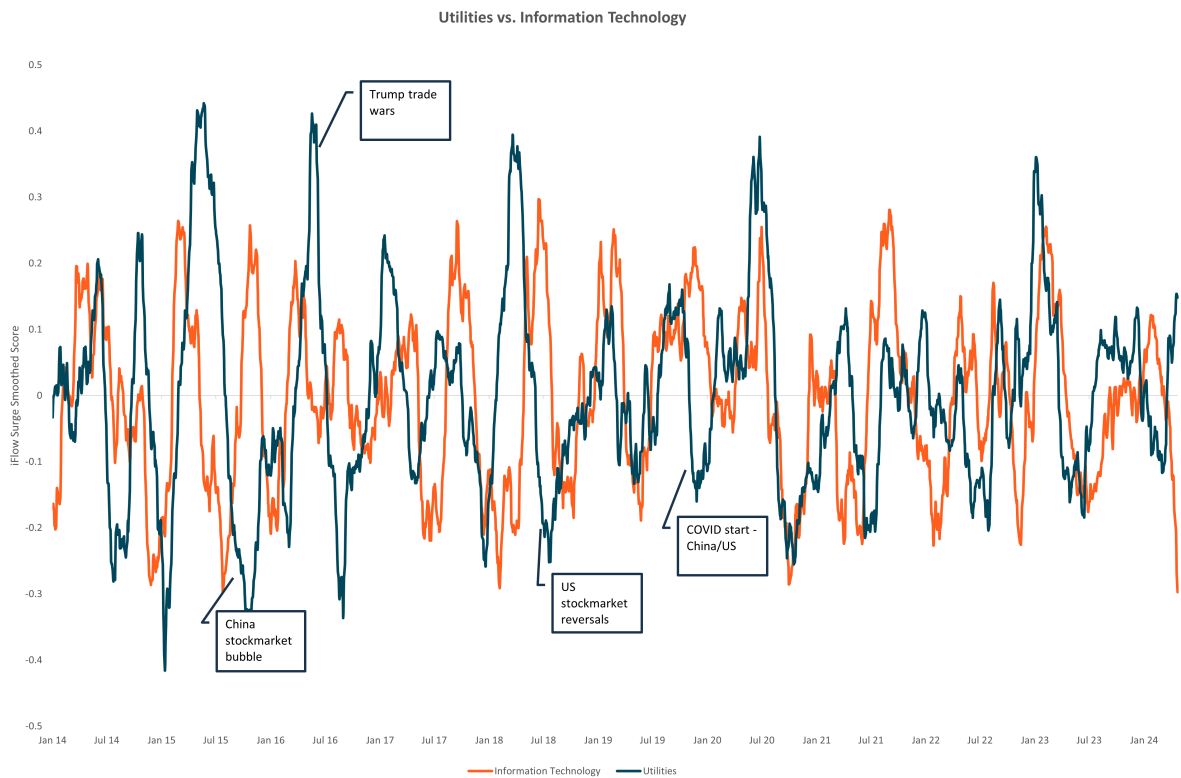
The search for a hedge to concentration risk in equities, i.e., focus on a handful of Tech companies, is dominating returns. This matters even more now with four of the seven 'Big Tech' companies having reported earnings, and as stocks in April have betrayed their seasonal bias to rally. The link of money flows to growth in earnings in equities has become more complicated this year. Many investors are looking afresh at sectors and the business cycle. Growth despite inflation is back in vogue. The driving force behind utilities growth has been a mix of crypto mining, streaming content, EV adoption and, more recently, the rise of AI. As [FactSet noted](#), electric utilities are the larger contributor to year-on-year growth in the broader Utilities sector, up 22.1%. Subtracting electric utilities, the sector's growth is just 0.3% y/y.

- The link of utilities to IT has been driven by growth in IT companies' data centers – now the nation's largest electricity users. The cost of energy and the push for more productivity via chips and AI are linked.
- The shift higher in expectations for data centers due to AI has implications for inflation expectations in the years ahead, suggesting productivity gains in labor may have limits in other areas like Energy and Materials.
- The role of the government in linking chips, data centers and the push for decarbonization through the CHIPS act is also important, as it makes the US more linked to the semiconductor cycle than the commodity cycle.

iFlow surge flows over the last ten years have shown more than five episodes in which the two sectors were out of synch – this break in correlation usually occurs around times of global uncertainty. The present situation is notable but not yet at extremes. The risk of markets continuing to rotate from Tech to other sectors seems high given other measures – like concentration or Factor Centrality. However, the economics of AI and IT seems linked to utility growth for the near future.

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## **Exhibit #2: Utilities And IT Dance, But Who Leads?**



Source: BNY Mellon iFlow

- The CHIPS and Science Act passed in 2022 set aside \$52.7 billion in funding for domestic chip manufacturing. New plants planned in Arizona, Ohio, Oregon, Idaho, Texas and New York would add another 2.1 gigawatts (Gwh) in demand. All the companies that support these plants are committed to renewables as their source – but when will be critical, with 2030 the common deadline. The link of Information Technology to Green efforts and to stress in utilities isn't just a US problem. Data centers providing cloud computing, streaming and AI appear set for continued expansion globally. According to McKinsey, the US accounts for 40% of the global data center market. By 2030, global data centers' power consumption is forecast to amount to 35 Gwh, a little more than double the 17 Gwh consumed in 2022.
- The US's 2,700 data centers consumed more than 4% of the country's total electricity in 2022, according to the International Energy Agency. Its projections show that by 2026, data centers will consume 6%. The largest data center in the world is in Northern Virginia – supported by one utility company, Dominion, which in 2021 forecast demand growth at 8% over the next decade. It now sees a twofold increase in ten years.
- The role of AI in increased power consumption stands out. A Dutch Study shows that the AI sector is seen consuming 85 to 134 terawatt hours by 2027 – usage equivalent to all of the Netherlands, or 0.5% of world use. Remember that 1 terawatt (Twh) is 1,000 gigawatts (Gwh). The IEA has another study that sees data centers using even more. The US agency says current data center

energy usage stands at around 460 terawatt hours in 2022 and could increase to between 620 and 1,050 Twh in 2026 — equivalent to the energy demands of Sweden and Germany, respectively. The rise of AI will also boost the outlook for global energy use and utility growth.

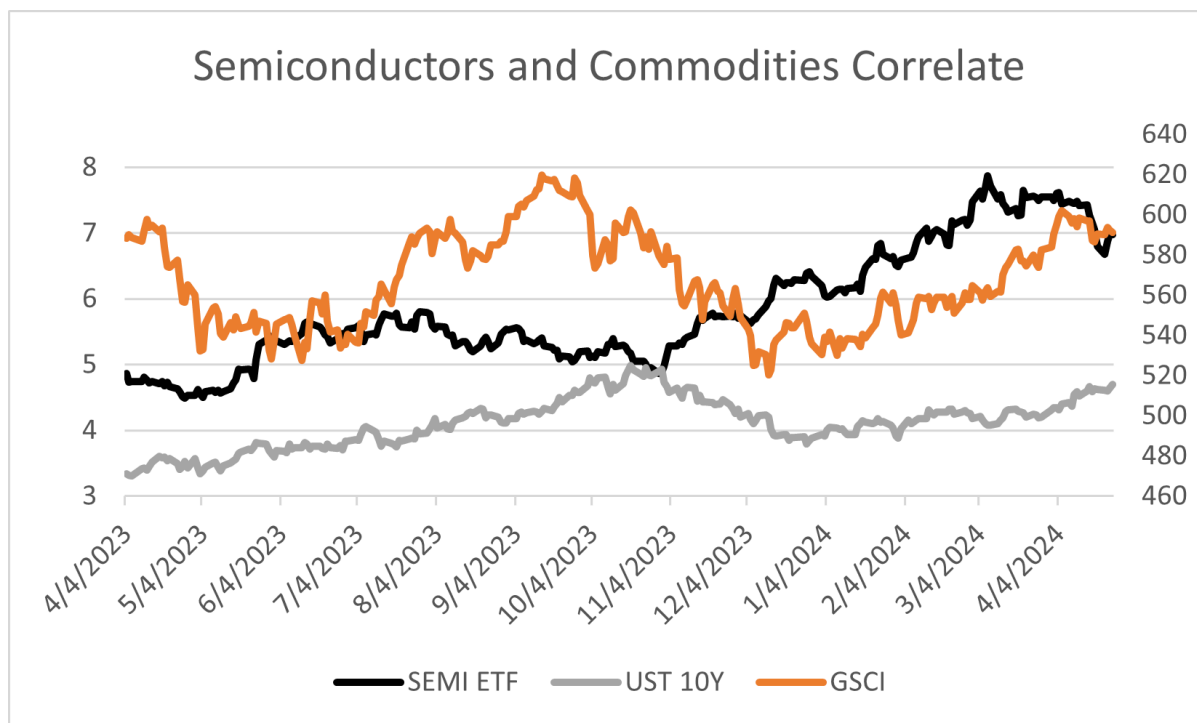
- Data centers have other drivers beyond AI, such as streaming content, EV cars/ autonomous driving, and crypto mining – all frequently linked to extreme energy use as well, and with their own growth dynamics. Right now, large IT companies account for most of the stress in the US electrical grid. But other sectors, like Communications, also matter. At the end of 2023, 6.92bn people had smartphones – those alone are forecast to account for 10% growth in data centers worldwide to 2030. The problem for investors starts in how intertwined all these drivers are in lifting utility company growth, not to mention the need to grow the infrastructure and energy supplies to meet the expected demand without squeezing prices beyond the reach of consumers.

When looking at the US electricity grid – the supply is 4.25mn gigawatt hours (Gwh), 60% derived from coal, natural gas or oil. As for the rest, 21.4% comes from renewables and 18.6% from nuclear. There are 3 key demand sectors: residential, using 1.51mn Gwh – 38.4% of the total – with heating and cooling the major uses; followed by commercial at 1.39 Gwh at 35.4%, with computers, refrigeration and cooling driving use; and then the industrial sector at 26% or 1.02mn Gwh, with machines and boilers dominating, while transportation was just 0.01mn Gwh or 0.2%.

The dynamism of US efforts to develop more chip factories, and to Green their energy use, links the US to the larger semiconductor cycle. In April 2022, McKinsey called it the decade of a trillion dollar industry driven by data storage, smartphones and automobiles. The rise of AI since then only adds to the arguments of secular growth in the industry. The implications for the commodity cycle dominated by energy are important – consider how energy costs will remain ever-present in the equation for economic modeling, as inflation anywhere limits growth everywhere.

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### **Exhibit #3: Will The Semiconductor & Commodity Cycles Merge?**



Source: Bloomberg, BNY Mellon

**Bottom Line:** Hedging equity concentration in a few IT names may be more complicated than adding Utilities risk. The correlation of the semiconductor industry to commodities has become more positive in the last year, in part because of the required new demand and infrastructure build needed. Markets will likely look through the connection of chip productivity to energy inflation quickly. There is a “Texas Hedge” in play for investors. Perhaps the larger hope for AI productivity lies in how fast it can deliver and across how many other sectors in the economy.

### Disclaimer & Disclosures

Please direct questions or comments to: [iFlow@BNYMellon.com](mailto:iFlow@BNYMellon.com)



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