GHP Investment Advisors, Inc.





Personal Wealth Management

GHP Global Markets

INVESTMENT INSIGHT



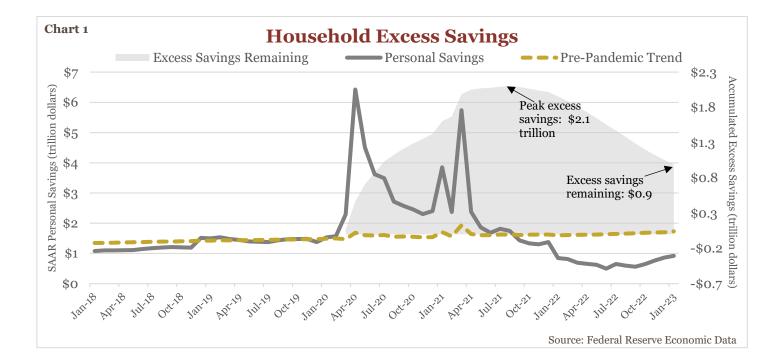
Inflation: Data Indicates We are Past the Peak



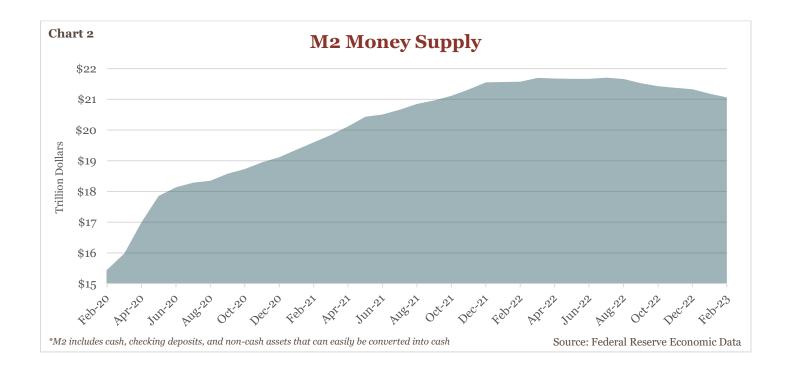
"Too much money chasing too few goods" is a good explanation for rising inflation. In the 1970s the rapidly growing money supply triggered a "wageprice spiral," exacerbated by the Arab oil embargo of 1973 and the Iranian Revolution in 1979. Wages rose by more than 5% annually throughout the 1970s, eventually peaking above 9% in 1981. In a wage-price spiral, consumers and businesses come to expect accelerating wage hikes. Thankfully today's inflation is not the wage induced inflationary spiral of the 1970s.

The current inflation story began three years ago, with the global pandemic and government shutdown mandates. To replace lost income and help the economy during this difficult time, the U.S. government provided cash payments to households, businesses, and state and local governments. While a certain amount of cash was necessary to avoid another Great Depression, the \$5 trillion provided proved excessive. Some of the government largesse resulted in record levels of personal savings for U.S. households. Nearly three years after the initial shutdowns, consumers still have about \$1 trillion in extra pandemic cash (see Chart 1).

Federal reserve policy turned off the monetary printing presses and by all measures inflation seems to have peaked, although the **Fed believes** further vigilance is warranted to guard against a false summit.



When pandemic related cash payments ended, excess savings started to gradually drain out of the economy. Federal Reserve policy turned off the monetary printing presses (see Chart 2 below) and by all measures inflation seems to have peaked, although the Fed believes further vigilance is warranted to guard against a false summit.



Economic Measurements – When to Ditch the Forest for the Trees

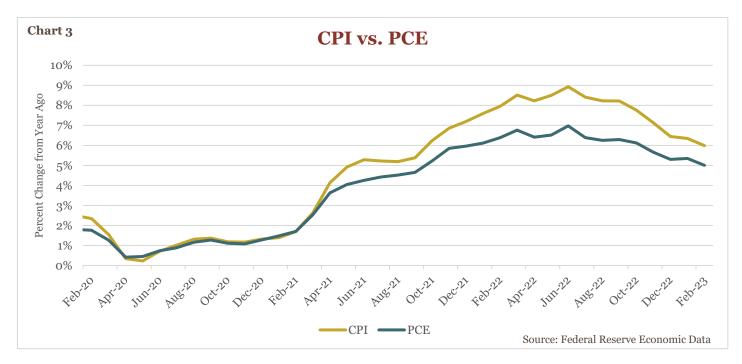
"Inflation is when you pay fifteen dollars for the ten-dollar haircut you used to get for five dollars when you had hair." – Sam Ewing

One day, perhaps, economists will report inflation statistics in concise catchy quotes or memes that sum up how we experience rising prices in our lives. In the meantime, the public relies on statistical indicators to serve the purpose. The two most commonly used are the Consumer Price Index (CPI) and Personal Consumption Expenditures Price Index (PCE). These numbers directly guide public policy such as, adjustments to income eligibility levels for government assistance, federal income tax brackets, federally mandated cost of living increases, and private sector wage increases.

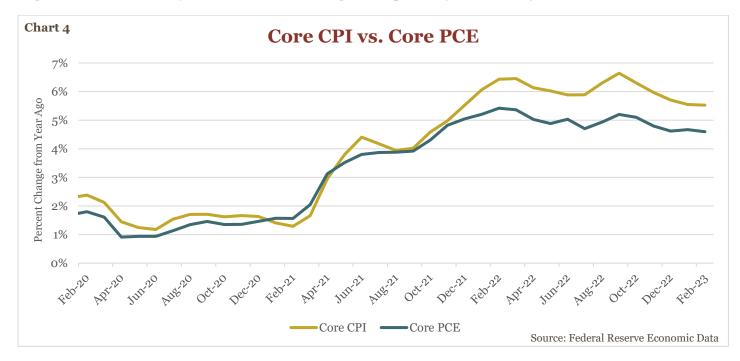
Investors, businesses, and consumers also use the CPI and PCE for planning. As we learned in the 1970's, expectations can, in-and-of-themselves, fuel accelerating inflation. While both measures descended from their peak last June, discrepancies between the CPI and PCE widened during the pandemic (see Chart 3) necessitating a more detailed look at the data to more accurately gauge expectations.

The CPI is a monthly report sourcing data from surveys collecting 94,000 prices. Roughly two-thirds of collection is done in-person at brick-and-mortar stores with the remaining collected by phone, online, or through other partners. The survey strictly includes final products and services purchased directly by consumers (i.e., not intermediate supplies along the production chain). As of 2023, weights attributed to each product and category are updated annually. A major critique of the CPI has been that its annual weighting adjustment does not capture the fluidity of actual shopping behaviors. For example, if the price of eggs goes up in a given week or month, people buy fewer eggs. Likewise, newly released products (think personal computers or machine learning software) are not included in values until the following year.

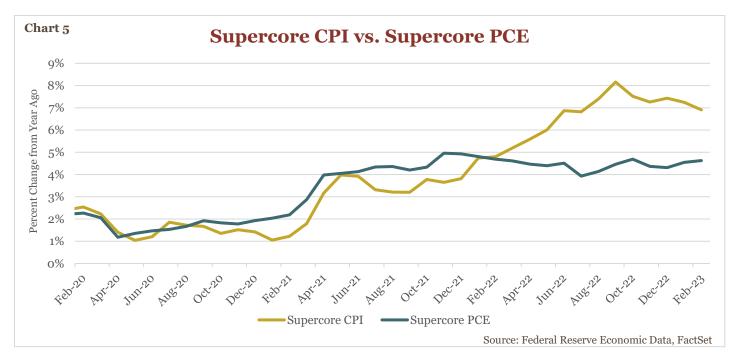
The PCE data on the other hand is collected directly from business information used to calculate Gross Domestic Product. Data reported represents goods and services sold each month, so weighting is inherently adjusted monthly. The PCE covers the entire U.S. population rather than a survey sample, with a broader array of products covered relative to the CPI. In other words, the PCE better represents how consumers change their buying patterns when relative prices change, resulting in smoother price changes and somewhat lower reported levels of inflation. Due to its more comprehensive basis it tends to be the preferred inflation indicator for Federal Reserve policymakers.



Both CPI and PCE also report what is known as "core" measures. Core measures strip out food and energy which have historically been the most volatile contributors to inflation. Ridding these entirely from the headline figures makes it easier to discern trends to the overall inflation rate and typically results in lower levels of inflation (see Chart 4 below). Core PCE is the foundational index on which the Fed bases its 2% target, but this inflation cycle has warranted even greater specificity and new key measures.



Unofficially branded, "Supercore" inflation (see Chart 5) essentially focuses on core services and removes the influence of house prices on inflation. It has been referred to by Federal Reserve Chairman Jerome Powell as the "most important category for understanding the future evolution of core inflation." The idea being, a downward trend in this measure would suggest that wage increases are not a concerning contributor to inflation.



Removing the cost of shelter and housing became necessary due to the recent housing boom and the awkward "Owner's Equivalent Rent" method by which home prices are included in inflation indexes. Both the CPI and PCE use a similar process to calculate the cost of owner-occupied housing which extrapolates from rent data. Not only is the method inexact, but it also results in a significant time lag when reflected in CPI or PCE data. Other real-time data such as the Zillow Rent Index and surveys of median home sale prices suggest that declining rents and cooling home prices may have not yet made their way into the inflation data.

For short-term traders or momentum investors whose measure of success is quick, outsized returns, the environment is more challenging than ever. Stock and bond markets reacting quickly to uncertain economic data will continue to be volatile. Higher costs put downward pressure on business earnings and rising interest rates increase the burden for indebted companies. The era of easy money is behind us, and good companies will gradually prove their value to investors.

The big winners during the easy money pandemic turned into losers as the Fed tightened its monetary grip. Long-term investors can press forward buying companies with real fundamental value. This value will be better revealed as supply bottlenecks ease, excess savings dwindle, and wage growth ebbs. So far, the CPI and PCE both indicate we are past the peak of this inflationary cycle. At GHPIA, we target investments that are neither amplified by easy money nor existentially threatened by inflation or recession. Although the path ahead is uncharted, we remain confident that discipline and patience will be rewarded in due time.

Market Summary

Asset Class	Price/ Earnings 2023:Q1	P/E Benchmark	Over / Under Valuation	Price/ Book Value 2023:Q1	P/BV Benchmark	Over / Under Valuation	Price/ Cash Flow 2023:Q1	P/CF Benchmark	Over / Under Valuation
Large-cap growth stocks	20.7	27.0	-23.4%	7.0	5.7	23.1%	16.5	17.5	-6.0%
Large-cap value stocks	17.0	20.2	-15.8%	2.7	2.5	9.9%	12.2	13.1	-6.8%
Mid-cap growth stocks	16.1	24.8	-35.1%	3.3	4.5	-25.9%	10.3	16.1	-36.3%
Mid-cap value stocks	13.2	19.1	-30.6%	1.7	2.2	-23.7%	10.2	12.4	-17.6%
Small-cap growth stocks	14.9	23.2	-35.8%	2.3	3.5	-33.4%	9.9	15.0	-33.7%
Small-cap value stocks	13.8	18.2	-24.0%	1.4	2.1	-33.8%	8.3	11.8	-30.0%

The GHPIA Equity Valuation Dashboard

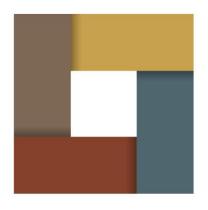
GHP Investment Advisors, Inc. Benchmarks are determined using any combination of valuation approaches deemed relevant by GHPIA, including Price to Earnings (P/E), Price to Cash Flow (P/CF), and Price to Book (P/B), and other relevant analyses. Consideration is given to such factors as historical and projected financial growth for the company, profit stability, leverage, the quality of earnings, valuations of comparable companies, the size and scope of the company's operations, the strengths and weaknesses of the company industry information and assumptions, general economic and market conditions, and other factors deemed relevant. While Benchmarks are based on valuations and assumptions that GHPIA believes are reasonable under the circumstances, actual realized returns on such investments may differ materially and do not take into account any fees or expenses that may be associated with investing in those assets. There is no assurance that the investment objectives and strategies described herein will be achieved or successful. P/E, P/BV, and P/CF data are provided by Bloomberg.

Returns by Index

Index	2023:Q1	YTD
DJIA Total Return*	0.93%	0.93%
S&P 500 Total Return*	7.50%	7.50%
S&P 500/Growth*	9.24%	9.24%
S&P 500/Value*	4.62%	4.62%
S&P Midcap 400/Growth	4.68%	4.68%
S&P Midcap 400/Value	1.99%	1.99%
S&P Smallcap 600/Growth	1.76%	1.76%
S&P Smallcap 600/Value	2.53%	2.53%
MSCI EAFE	7.65%	7.65%

Source: FactSet as of 03/31/2023. *Dividends reinvested.

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