



November 13, 2022

CIO Strategy Bulletin

David Bailin

Chief Investment Officer
and Head of Citi Global
Wealth Investments

Steven Wieting

Chief Investment Strategist
and Chief Economist

Joe Fiorica

Head, Global Equity Strategy

Cecilia Chen

Global Equity Strategy

Malcolm Spittler

Senior US Economist

Too Soon to Pivot to Tech

SUMMARY

- While tech shares rallied sharply this past week, the sector won't be immune to economic weakness like it was in the COVID recession of 2020. The Fed will likely maintain higher rates until unemployment rises, further adding pressure to tech shares in the coming six months. This does nothing to dissuade us from a bullish view of key tech developments for the longer term.
- None of the 72 economists who participated in the Bloomberg consensus poll won the \$2 billion Powerball lottery this week and none had forecast headline inflation to be just 0.4% month over month. With bearish sentiment at highs, this better-than-expected news caused a highly correlated move higher for all risk assets.
- We acknowledge that valuations reflect new, higher capital costs and more conservative growth estimates, but immediate increases in profits and dividends are unlikely. After this 3Q reporting season, it is clear that tech won't be spared from this particular downturn.
- We now see tech valuations that are much closer to longer-run averages. While we expect interest rates to fall later in 2023, a challenging earnings backdrop is likely to initially offset some modest re-rating toward higher PE tech multiples in 2023.
- We continue to prefer quality names with less economic sensitivity, which in practice means a bias toward profitable tech over unprofitable moonshots.

A pause in valuations for the digital revolution

It has been a brutal year for tech investors, even after Thursday's 8% rally. The five largest US giants have lost over \$3 trillion in market cap since the start of the year. The S&P 100 IT sector has dropped 25% year-to-date, while the Nasdaq is down 28%.

A less aggressive Fed path will ultimately benefit technology shares. But the US central bank is far from making a true policy pivot, even though this week's CPI report suggested that inflation was abating in some sectors.

In the meantime, slowing economic growth is unlikely to spare these large platforms. Though fintech and e-commerce firms operate with a smaller physical footprint and less capital than banks and big-box retailers, they are likely to see slowing sales in the coming quarters as discretionary consumer spending fades. And for other tech segments, the likely deferment of capital expenditures by some firms will pressure bottom lines.

Technology shares benefited from the pandemic environment. With the cost of cash nearly "zero," the ability to "spend to grow revenues" and to take risk for big future payouts was enabled. Now the opposite is true. Risk appetite has faded, and the certainty of growing cash flows is valued. Remember that the Fed is not just raising rates – it's increasing the cost of capital by reducing the size of its balance sheet.

From a tactical viewpoint, we are hesitant to chase sharp moves higher in technology shares until the extent of impending economic weakness becomes clearer. We acknowledge that valuations reflect new, higher capital costs and more conservative growth estimates, but immediate increases in profits and dividends are unlikely. With the likelihood that the Fed will maintain higher rates until real unemployment occurs, tech shares will therefore remain under pressure.

As Goes Tech, Adjacent Businesses Follow

We see the emerging tech weakness as "typical" of a Fed-induced economic slowdown, not one brought on by an airborne respiratory virus (see figures 1-2). With real wages running in deeply negative territory, it is likely that discretionary spending – both online and in person – will weaken as job losses materialize in 2023 (see our October [Quadrant](#)).

While pandemic lockdowns led to a boom in demand for household electronics, the pull forward of that demand is starting to materialize in falling lead times for chipmakers and fewer orders for PCs and devices ahead of the holiday season. At the same time, the sharp drop in housing activity has been crushing for real estate fintechs, while the peaking in used car prices has pushed one online car retailer to the brink of bankruptcy.

Though tech spending boosts productivity in many industries, the underlying fundamentals of industries like retailing, advertising, and household electronics have not meaningfully changed. Meanwhile, digital advertising budgets face cuts as brands deal with their own pre-recessionary cash flow challenges. Bellwethers in social media and search have cited pullbacks among their largest advertisers, especially from customers in financial services and crypto.

The October CPI Provides a Ray of Hope

None of the 72 economists who participated in the Bloomberg consensus poll won the \$2 billion Powerball lottery this week and none had forecast headline inflation to be just 0.4% month over month. Only one economist had the actual print of 0.3% growth in core inflation estimated correctly.

After a string of higher-than-expected inflation prints that have justified more and more Fed tightening all year, the pendulum swung back this week. Headline inflation rose 0.4% in October (7.7% Y/Y) versus expectations for a 0.6% increase.

What is clear is that markets were not positioned for an "inflation miss" either. With bearish sentiment at highs, this better-than-expected news caused a highly correlated move higher for all risk assets. Equities ended the week 6% higher, with more rate-sensitive tech leading the way up 9%. The two-year and 10-year Treasuries dropped by 32 basis points and 34 basis points, respectively, and the Bloomberg US dollar index plummeted by 3.5%.

It is not wise to read too much into one inflation print, but this week's data means that the probability of deeply negative economic outcomes due to Fed policy faded a bit. Nonetheless, the Fed's large, fast rate hikes are

starting to affect the real economy. And after this 3Q reporting season, it is crystal clear that tech will not be spared from this particular downturn.

Cost Cuts Have Picked Up Steam Since 3Q Earnings

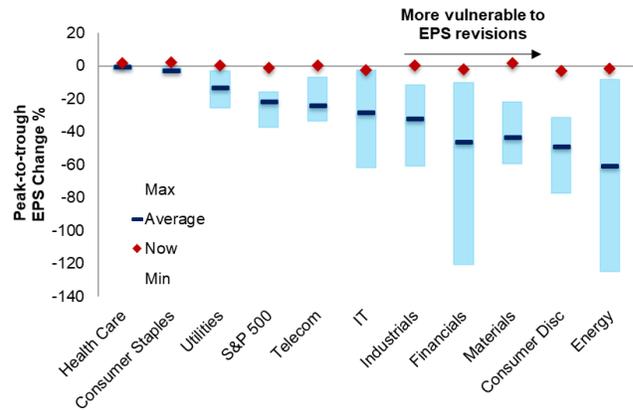
Tech employment and investment growth in 2021 reached its highest levels since the late 1990s (see figure 3). But since late October when most tech firms began to report 3Q profits, the sentiment across the tech landscape shifted toward “hunkering down.” Dozens of major firms have announced hiring freezes or outright layoffs in recent weeks in an effort to preserve free cash flow, maintain margins and appease investors amid an uncertain profits outlook (see figure 4).

Management teams also promised cuts to capital expenditures during earnings calls. Initial cost-cutting announcements have in some cases been cheered by markets, as a focus on slimming down operations is probably warranted after a binge in post-pandemic spending. If previous downturns are any guide, outright declines in technology employment and investment next year could materialize, which will have ripple effects on global tech supply chains.

Figure 1: US e-commerce sales



Figure 2: Range of EPS declines by sector during recessions since 1990



Source: Haver and Bloomberg as of Nov. 10, 2022. Grey lines note recessions. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. Past performance is no guarantee of future results. Real results may vary.

Figure 3: Technology employment and investment growth

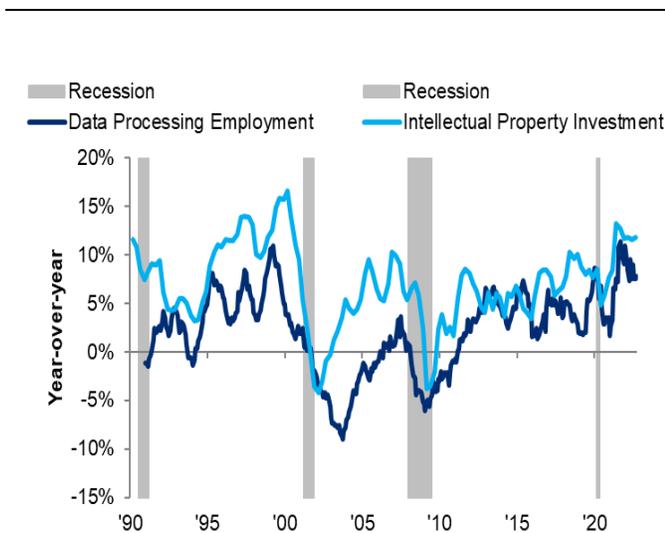


Figure 4: High-profile technology employment announcements*

Company	Hiring freeze
Amazon*	Pause incremental corporate hiring
Apple*	Hiring freeze across divisions
Microsoft*	New hires in 4Q should be minimal
Qualcomm*	Hiring freeze

Company	Layoffs
Lyft*	Cut 13%, or ~650 jobs
Stripe*	Cut 14%, or ~1100 jobs
Meta**	Cut 13%, or ~11000 jobs
Twitter***	Cut 50%, or ~3700 jobs
Intel*	Cut likely thousands
Seagate*	Cut 3000 jobs
Opendoor*	Cut 18%, or ~550 jobs
Upstart*	Cut 7%, or ~140 jobs
Chime*	Cut 12%, or ~160 jobs
Dapper Labs*	Cut 22%
Galaxy Digital*	Cut 15%-20%
Redfin****	Cut 13%, or ~860 jobs

Source: Bloomberg as of Nov. 8, 2022. *Bloomberg, Nov. 3, 2022, Bloomberg, Nov. 2, 2022; Bloomberg, Nov. 9, 2022; Bloomberg, Nov. 3, 2022. Note: All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. Past performance is no guarantee of future results. Real results may vary.

Send in the Cloud? Hardly.

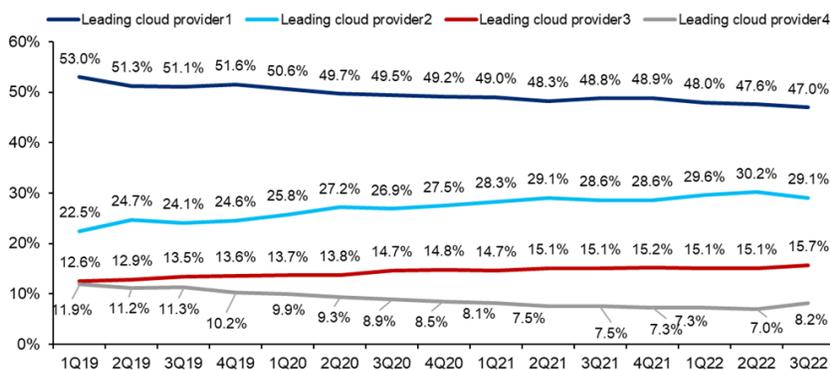
Cloud has been a growth engine for several US mega-caps over the past several years, though competition is heating up as new entrants see a large and growing market for computing power (see figure 5). It now appears that even a fast-growing segment like cloud is not immune to discretionary IT budget cuts. MarketWatch (10/29) noted that “Cloud-computing growth has finally reached a plateau, as companies around the world cut costs to address the slowing economy.” Forward-looking cloud bookings decelerated from 48% in 2Q to 38% in 3Q.

As the economy softens, cloud customers have become more price-sensitive than previously thought. They have focused on optimizing their cloud usage to reduce costs for the same jobs, while new commitments are being signed with shorter durations. And this is impacting the margins for cloud companies. With a deceleration in customer demand, it has been impossible for cloud providers to pass along their higher energy bills, resulting in lower cloud margins.

Tech Valuations Have Normalized, but Are Not Cheap

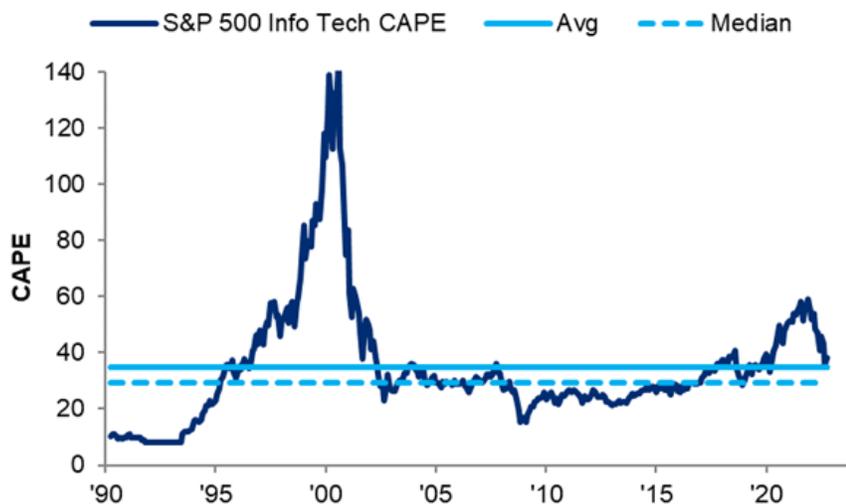
The carnage in the broad technology space this year reflects where we started 2022. Just a year ago, valuations for the US IT sector were trading at their most expensive levels since the dot-com bubble. Multiples that were acceptable when interest rates were low have had to re-adjust to a sharply rising cost of capital and a rapid shift in preference among investors for near-term cash flows. We now see tech valuations that are much closer to longer-run averages (see figure 6). While we expect interest rates to fall later in 2023, a challenging earnings backdrop is likely to initially offset some modest re-rating toward higher PE tech multiples in 2023.

Figure 5: Competition among cloud providers is heating up



Source: Haver and Bloomberg as of Nov. 10, 2022. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. Past performance is no guarantee of future results. Real results may vary.

Figure 6: S&P 500 Tech cyclically adjusted price-to-earnings ratio



Source: Bloomberg as of Nov. 10, 2022. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. Past performance is no guarantee of future results. Real results may vary.

Digitization Remains an Unstoppable Trend

The unstoppable trend of digitalization remains in full force. It was not an anomaly – such as COVID period strength – that has allowed tech spending to outgrow the broader economy over the last three decades. Long-term economic development favoring digitization has sent IT profits higher than other sectors, and shares to outperform the S&P 500 (see figure 7).

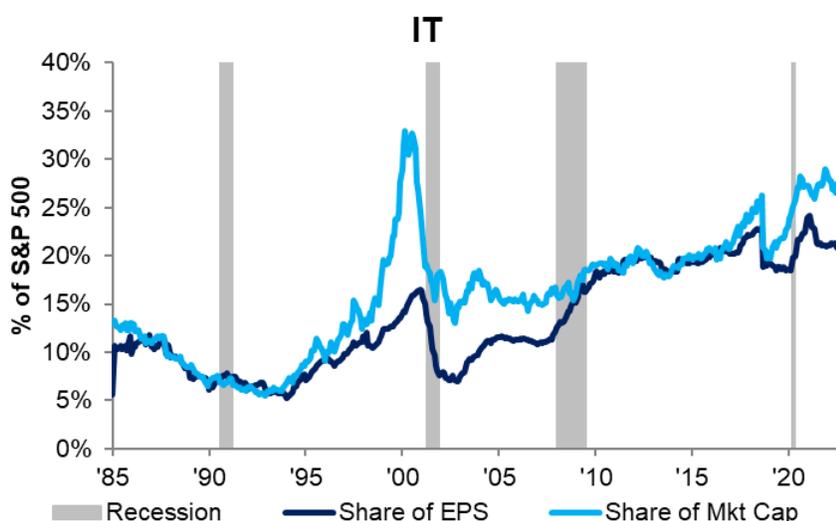
Despite a challenging year and an uncertain outlook into 2023, we still believe many technology firms will be leaders in the digital revolution of the next decade. Indeed, these technologies are becoming ever more deeply embedded in how we live and work. In the years ahead, we expect intensifying innovation driven by well-funded research and development. And we believe that businesses will either have to embrace new technologies and processes or face extinction. We therefore would view any further volatility in tech shares over the coming year as an opportunity to build positions for the long run.

Positioning in Tech: Own Quality Leaders and Avoid Economically Sensitive Shares

So how should growth-oriented investors position for the uncertain period just ahead? We continue to prefer a focus on quality names with less economic sensitivity. What this means in practice is a continued bias toward profitable tech over unprofitable moonshots (see figure 8). At the sector level, we see software – and especially cyber security – as likely more defensive once rates peak. This is because earnings are less levered to the business cycle than hardware and semiconductors (see figure 9).

Differentiation between leaders and laggards will become clearer over the next six months. Those companies able to maintain margins and achieve lofty growth goals will see shareholders rewarded. We also expect a re-rating of tech later in 2023 allowing for higher PE ratios when the end of the economic downturn is in sight.

Figure 7: S&P 500 information technology sector profits and market cap as % of S&P 500



Source: Bloomberg as of Nov. 10, 2022. Gray areas are recessions. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. Past performance is no guarantee of future results. Real results may vary.

Figure 8: Large cap vs unprofitable tech

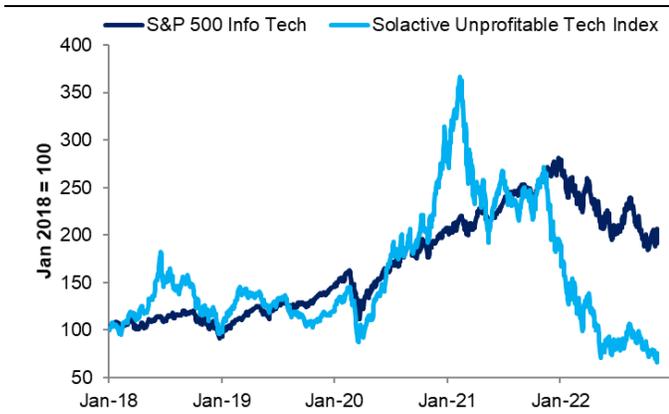
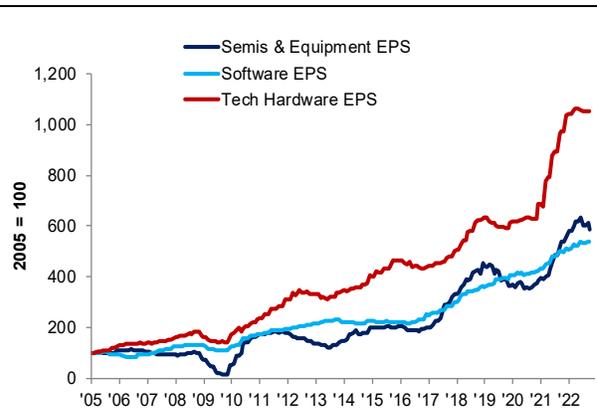


Figure 9: Tech EPS by industry group



Source: Haver and Bloomberg as of Nov. 10, 2022. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. Past performance is no guarantee of future results. Real results may vary.

CIO Strategy Webcast Series

Join us each week on
Thursday at 11:30am EST

LIVE Q&A TO FOLLOW

Join us each week on Thursday at 11:30am EST for a conversation with senior investment professionals and external thought leaders on timely market events and ask your most pressing questions.

[Register now](#)

DISCLOSURES

This email contains promotional materials. If you do not wish to receive any further promotional emails from Citi Global Wealth Investments, please email donotspam@citi.com with "UNSUBSCRIBE" in the subject line. Email is not a secure environment; therefore, do not use email to communicate any information that is confidential such as your account number or social security number.

This Communication is prepared by Citi Global Wealth Investments ("CGWI") which is comprised of the Investments and Capital Markets capabilities of Citi Private Bank, Citi Personal Wealth Management and International Personal Bank U.S.

Citi Private Bank and Citi Personal Wealth Management are businesses of Citigroup Inc. ("Citigroup"), which provides its clients access to a broad array of products and services available through bank and non-bank affiliates of Citigroup. Not all products and services are provided by all affiliates or are available at all locations. In the U.S., investment products and services are provided by Citigroup Global Markets Inc. ("CGMI"), member FINRA and SIPC, and Citi Private Advisory, LLC ("CPA"), member FINRA and SIPC and Citi Global Alternatives, LLC ("CGA"). CGMI accounts are carried by Pershing LLC, member FINRA, NYSE, SIPC. CPA acts as distributor of certain alternative investment products to clients of Citi Private Bank. Insurance is offered by Citi Personal Wealth Management through Citigroup Life Agency LLC ("CLA"). In California, CLA does business as Citigroup Life Insurance Agency, LLC (license number 0G56746). CGMI, CPA, CGA and Citibank, N.A. are affiliated companies under the common control of Citigroup. Outside the U.S., investment products and services are provided by other Citigroup affiliates. Investment Management services (including portfolio management) are available through CGMI, CGA, Citibank, N.A. and other affiliated advisory businesses. These Citigroup affiliates, including CGA, will be compensated for the respective investment management, advisory, administrative, distribution and placement services they may provide.

International Personal Bank U.S. ("IPB U.S."), is a business of Citigroup which provides its clients access to a broad array of products and services available through Citigroup, its bank and non-bank affiliates worldwide (collectively, "Citi"). Through IPB U.S. prospects and clients have access to the Citigold® Private Client International, Citigold® International, International Personal, Citi Global Executive Preferred, and Citi Global Executive Account Packages. Investment products and services are made available through either Citi Personal Investments International ("CPII"), a business of Citigroup which offers securities through CGMI, member FINRA and SIPC, an investment advisor and broker-dealer registered with the Securities and Exchange Commission; or Citi International Financial Services, LLC ("CIFS"), member FINRA and SIPC, and a broker-dealer registered with the Securities and Exchange Commission that offers investment products and services to non-U.S. citizens, residents, or non-U.S. entities. CGMI and CIFS investment accounts are carried by Pershing LLC, member FINRA, NYSE, and SIPC. Insurance is offered by CPII through CLA. In California, CLA does business as Citigroup Life Insurance Agency, LLC (license number 0G56746). Citibank N.A., CGMI, CIFS, and CLA are affiliated companies under common control of Citigroup Inc.

[Read additional Important Information](#)

Past performance is not indicative of future results. Real results may vary.

Citi and its employees are not in the business of providing, and do not provide, tax or legal advice to any taxpayer outside Citi. Any statement in this Communication regarding tax matters is not intended or written to be used, and cannot be used or relied upon, by any taxpayer for the purpose of avoiding tax penalties. Any such taxpayer should seek advice based on the taxpayer's particular circumstances from an independent tax advisor.

MBS are also sensitive to interest rate changes which can negatively impact the market value of the security. During times of heightened volatility, MBS can experience greater levels of illiquidity and larger price movements.

Important information, including information relating to risk considerations can be found in the link above.

Views, opinions and estimates expressed herein may differ from the opinions expressed by other Citi businesses or affiliates, and are not intended to be a forecast of future events, a guarantee of future results, or investment advice, and are subject to change without notice based on market and other conditions. Citi is under no duty to update this presentation and accepts no liability for any loss (whether direct, indirect or consequential) that may arise from any use of the information contained in or derived from this presentation.

© 2022 Citigroup Inc., All Rights Reserved. Citi, Citi and Arc Design and other marks used herein are service marks of Citigroup Inc. or its affiliates, used and registered throughout the world.

**INVESTMENT PRODUCTS: NOT FDIC INSURED • NOT CDIC INSURED •
NOT GOVERNMENT INSURED • NO BANK GUARANTEE • MAY LOSE VALUE**