

The Nasdaq-100® Index Meets The Inflation Boogeyman: What Happens Next?

Mark Marex, *Director, Nasdaq Index Research & Development*

The Nasdaq-100 Index has generated an exceptional record of absolute and relative performance over the past decade and a half. Broadly speaking, large-cap US equities have performed very well, with the S&P 500 Index producing total returns of 357% from year-end 2006 through year-end 2021. The Nasdaq-100 nearly tripled those gains, up 976% on a total return basis. Its concentration of high-growth, innovative large cap companies fueled this outperformance across an extended period of unusually low interest rates in the US. In addition, the Nasdaq-100's unique sector exposure allowed the index to avert deep fundamental damage during multiple economic and financial crises, including the Great Financial Crisis of 2008-9, the Oil Supply Glut of 2014-6, and of course, the arrival of Covid-19 in March 2020. With an overweight towards "new economy" sectors like Technology, Consumer Discretionary, and Healthcare, the Nasdaq-100 has felt rather immune to intense risk episodes disproportionately impacting Financials, Energy, and other "old economy" sectors vulnerable to macroeconomic shocks – such as a credit crisis, a deadly pandemic, or a major new geopolitical conflict disrupting global supply chains of raw commodities.

The first half of 2022 has proven to be one of the most challenging environments for investors to navigate in decades. Inflationary pressures arose in 2021 as the world gradually, then suddenly reopened following mass vaccination against Covid-19. Some of these pressures were thought to be transitory – understandably so, as different parts of the world, and different areas of the economy even within the US, reopened at different speeds. Supply-chain disruptions impaired the ability of global trade to deliver physical goods at pre-Covid rates. Not only that, but overall consumer demand was elevated by both fiscal stimulus in the US, and by widespread substitution of spending on (lockdown-restricted) services in favor of spending on goods. Just as certain segments of physical consumption saw supply chain pressures ease in early 2022, China's zero-Covid strategy led to renewed lockdowns of tens of millions of people, and Russia's invasion of Ukraine led to once-in-a-lifetime disruptions in the markets for physical commodities from oil and gas to metals, chemicals, and foods like wheat and cooking oils. As a result, inflationary pressures have only increased, forcing the Federal Reserve into an extremely hawkish position.

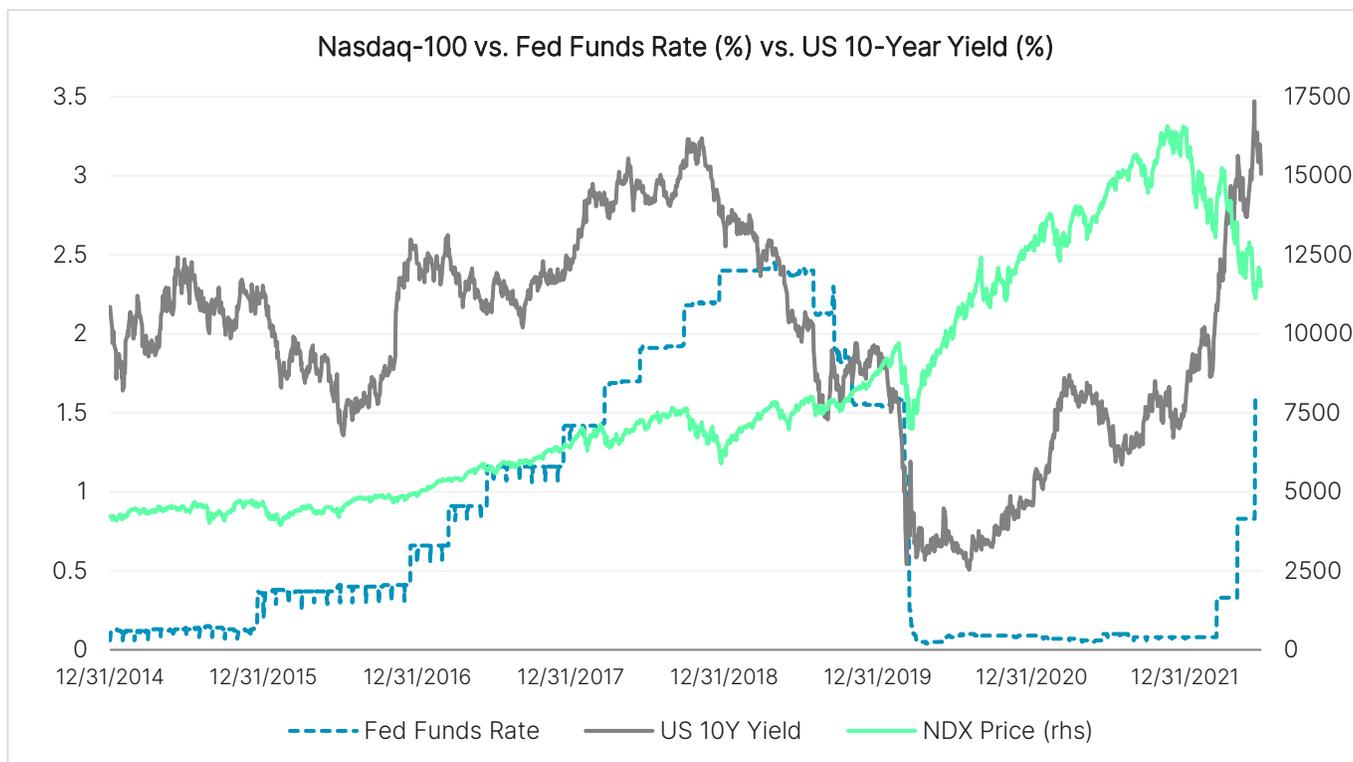
With three rate hikes already complete, the Fed is expected to continue hiking until inflation moderates closer to its preferred target of 2% annualized. China's reopening and a near-term conclusion to the Russian invasion could alleviate some of the pressure on the Fed, and perhaps put an end to rate hikes somewhere in the range of 3.0-3.5% on the Fed Funds rate. There is a chance the Fed can engineer a soft landing, with inflation and interest rates peaking before substantial economic damage is done. Yet there is also a chance that inflation remains stubbornly high, and the Fed raises rates farther and faster than anyone has seen since Volcker's chairmanship in the early 1980s. In that type of scenario, a broad-based recession would be likely.

The Nasdaq-100 has borne the brunt of this new era of macroeconomic uncertainty. Investors are primed to believe that high-growth sectors like Technology are especially vulnerable to higher inflation and interest rates, which is why the index began underperforming as soon as the Fed made clear it was going to start hiking at the end of 2021. The key questions for index investors now are thus: other than the impact of higher discount rates

on valuation models, how might the index respond to some combination of: 1) rising inflation vs. steadily higher-than-average inflation vs. moderating inflation; 2) rising rates vs. rates plateauing at a new “neutral” vs. renewed rate cutting; 3) a weakening but still expanding economy vs. a truly recessionary environment.

Putting Recent Performance into Context

With the index already down 29% YTD as of June 30, 2022, there are few reasons for investors to feel encouraged about performance. It has been the worst start to a year for the Nasdaq-100 in its history, and April 2022 was the worst single month of performance since 2008. Meanwhile, the S&P 500 has dropped 20% YTD, registering its worst first half since 1970. In a way, this is somewhat in-line with the equity market declines seen in the fourth quarter of 2018, when the Nasdaq-100 was down 23% at the nadir on December 24. That decline occurred at the tail end of a three-year-long Fed hiking cycle consisting of nine increments of 25 basis points each. The Fed would go on to pause in the range of 2.25-2.50%, and actually reverted to a gradual cycle of easing beginning in August 2019. The buying opportunity for investors was superb, under the assumption that the Fed would not induce an economic recession in an environment of subdued inflation and below-full employment. The difference today, however, is that full employment more or less exists; labor shortages persist in many parts of the economy; the price of labor has increased substantially; and inflation outside of wages is in danger of becoming entrenched. Thus the Fed is believed to be willing to increase rates beyond the upper bound seen in late 2018 and early 2019.



As of June 30, 2022

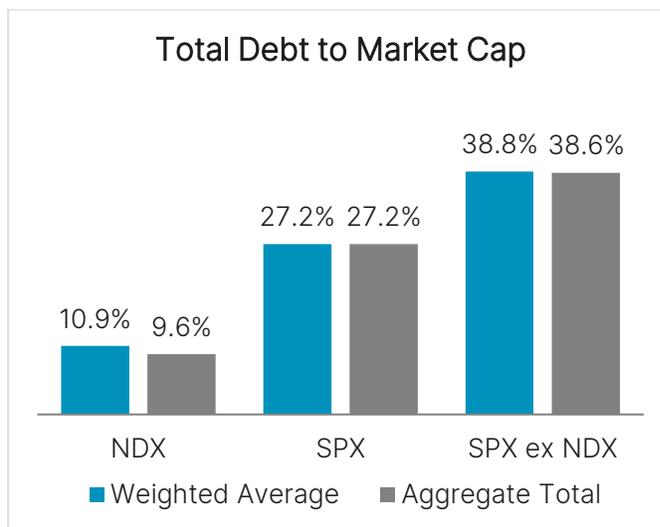
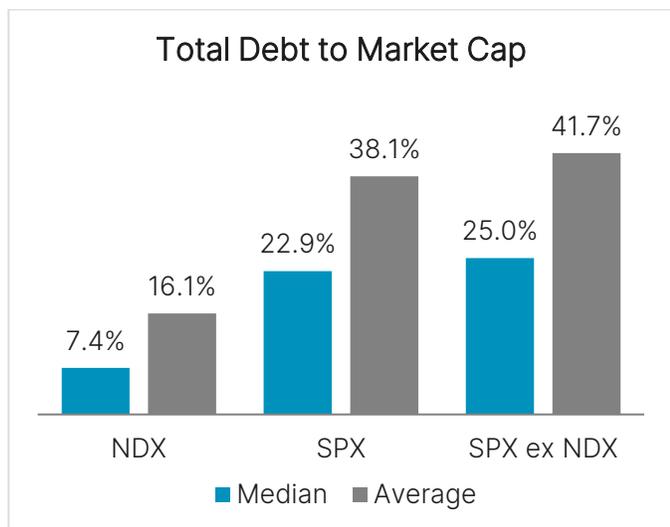
Given that the Fed Funds rate has already gone up by 150 bps YTD (as has the US 10-year Treasury yield), the impact on \$100 of earnings ten years into the future is a reduction in its present-day value by approximately 14%. As the market always does, though, its discounting mechanism is even further ahead of the curve, seemingly acknowledging that the Fed will have to hike more aggressively, by a total of around 300 bps. Given their latest preference for 50-75 basis point hikes, it will take two to three more Fed meetings to reach that goal. If inflation moderates by that time, it is well within the range of possibility that the economy will avoid recession, and the market will rebound as it did in early 2019. But if inflation stays well above 2%, the Fed may need to hike by

perhaps up to double or triple that amount – 450 to as much as 600 bps in total – which would reduce those future earnings in year ten by anywhere from 35% to 45%. For investors using traditional valuation methods, high-growth companies with most of their earnings well into the future face the biggest downward revisions in their estimated present values.

Structural Advantages of the Nasdaq-100 vis-à-vis Higher Interest Rates

With the prospect of higher interest rates for an extended period of time, investors should first and foremost seek to determine their equity portfolio’s sensitivity to an elevated cost of capital. Using a variety of metrics, the Nasdaq-100 appears minimally exposed to the risk of increased financing costs eating into its earnings, and thus depressing valuations further. This is largely a function of exceptionally strong, long-running fundamental trends that have built up the operating leverage, pricing power, and cash cushions of many of the index’s largest constituents. One of the clearest indications of above-average fundamental strength is a comparison of the indebtedness of Nasdaq-100 (NDX®) constituents to the broader US large cap equity space via the S&P 500 Index (SPX). For added emphasis, our analysis incorporates a view of the S&P 500 excluding any overlapping Nasdaq-100 constituents (i.e., SPX ex NDX), which recently numbered 77 companies.

The first series of charts measure the ratio of total debt (short-term plus long-term debt) to total market capitalization, using the latest available financial data as of May 19, 2022, and market caps as of April 29, 2022. Across each of the four variants of the ratio (Median / Average / Weighted Average / Aggregate Total), NDX appears significantly less indebted than SPX, and even moreso relative to SPX ex NDX. The ratio of the median NDX company (7.4%) was 68% lower than that of SPX (22.9%); the average of all NDX company ratios (16.1%) was 58% lower; the weighted average (10.9%) was 60% lower; and the aggregate total across all companies in the index (9.6%) was 65% lower.



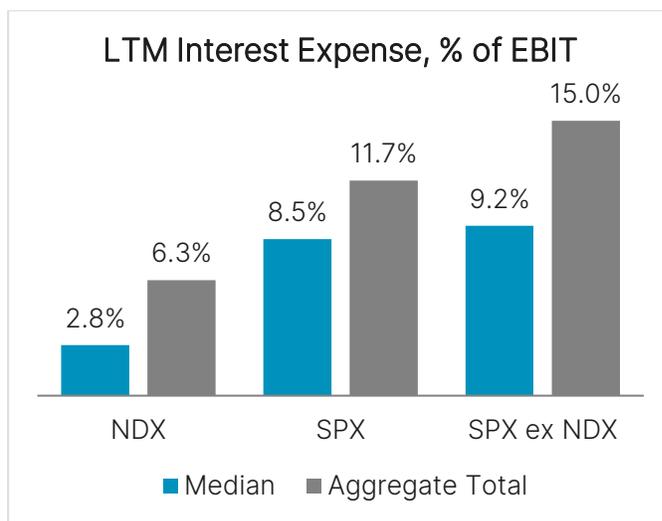
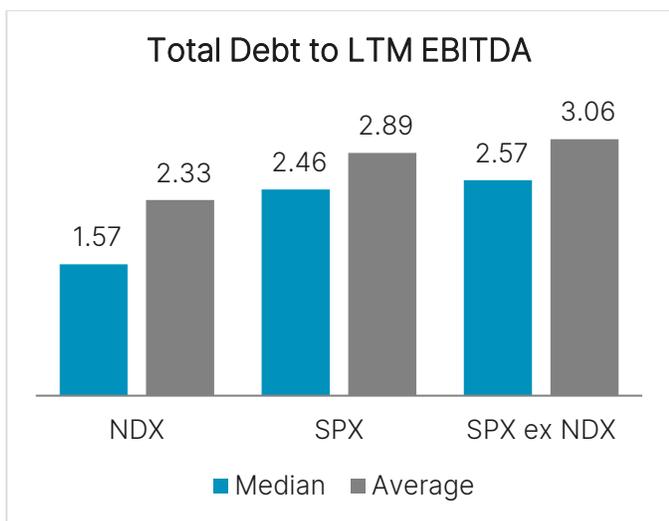
Financial data as of May 19, 2022. Market caps as of April 29, 2022.

While useful to get a sense of a company’s overall indebtedness, the debt-to-market-cap ratio does not quantify a company’s *capacity* to cover its obligations. The ratio of debt-to-EBITDA does, however. Using EBITDA as a proxy for cash flow, it indicates how much larger a company’s debt pile is in comparison with the amount of cash it generates to pay off that debt. Furthermore, the EBIT Interest Coverage ratio more narrowly measures a company’s ability to *service* its debt by comparing Earnings Before Interest and Taxes to Interest Expense.

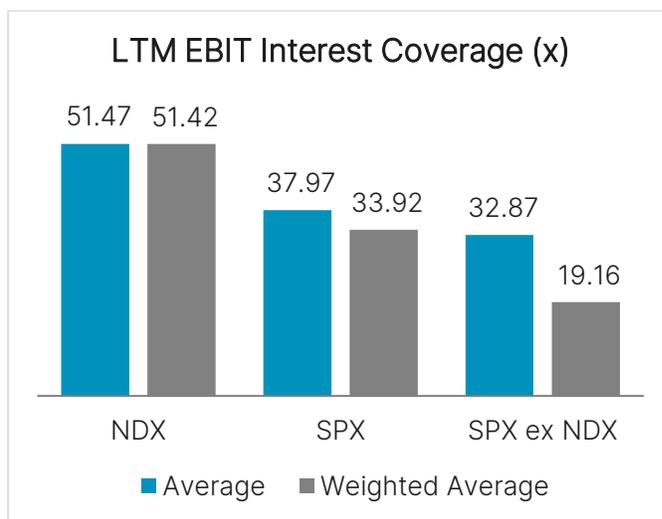
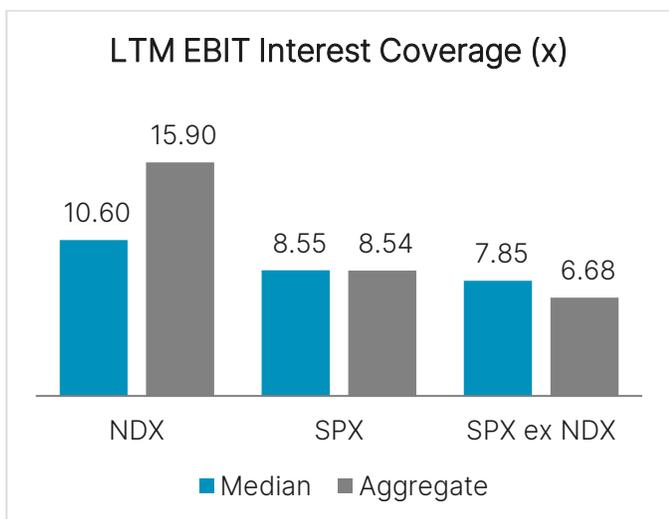
Using the most recent four quarters of financial data (i.e. “LTM”), the median NDX company had a debt-to-EBITDA ratio of 1.57, vs. 2.46 for the median SPX company – in other words, 36% lower. The average ratio for NDX was

19% lower, while the weighted average ratio was 25% lower (40% lower than SPX ex NDX). The aggregate total debt-to-EBITDA ratio for the index was 34% lower than SPX (63% lower than SPX ex NDX). Unlike with debt-to-market cap, this ratio strips out the impact of Financial sector companies, which do not report EBIT or EBITDA on their income statements, and tend to hold more debt on their balance sheets relative to non-Financials as a function of their unique business models. Regardless, the overall notion that the Nasdaq-100 is better-positioned than the S&P 500 to withstand a prolonged high interest rate environment remains justified.

In terms of interest coverage vs. EBIT, there are two ways of looking at the differential. One way is by flipping the ratio to calculate the percentage of EBIT that is consumed by interest expense. Here, it makes sense to look at only the Median and Aggregate ratios. Here too, it is obvious that the interest burden on NDX companies – in terms of the minimum payments needed to service their debts – is much lower than for the broader US large cap space. The median NDX company's ratio was 68% lower vs. SPX, and the aggregate total was 46% lower. The impact of Financials is excluded.



In terms of the traditional EBIT/Interest Coverage ratio, which calculates the number of times a company's EBIT can "cover" its periodic interest expense, the median NDX constituent scored 24% higher (better) vs. SPX; in aggregate, the index scored 86% higher. The average NDX company scored 36% higher, and 52% higher on a weighted average basis.

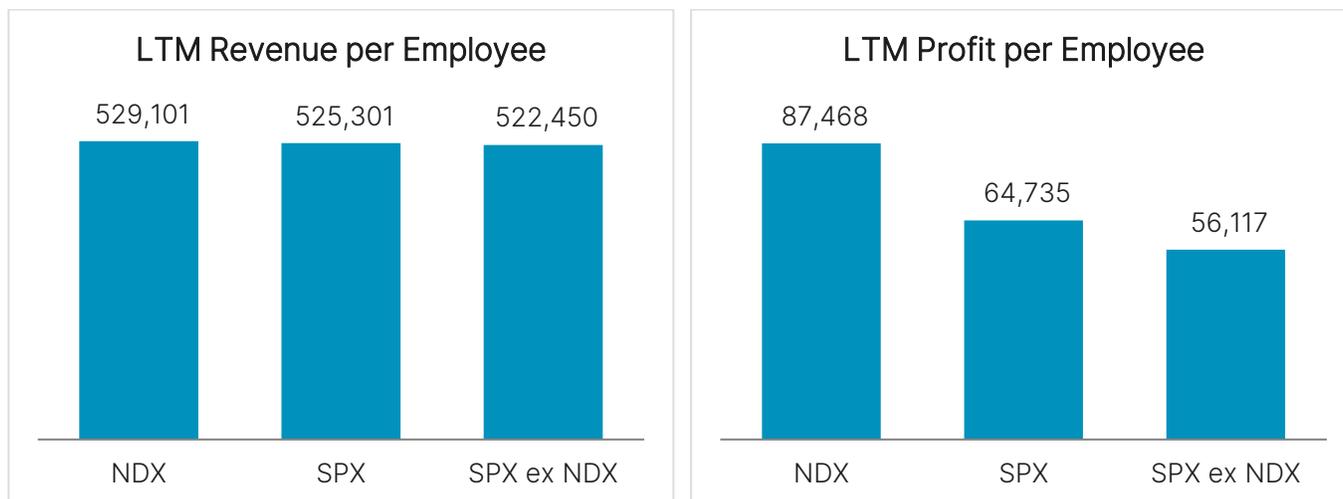


These substantial disparities reflect the fundamental strength of the Nasdaq-100's largest constituents and their outsized weightings in the index vs. the S&P 500. The seven largest names – Apple, Microsoft, Alphabet/Google, Amazon, Tesla, NVidia, and Meta Platforms/Facebook, accounting for 50% of the index weight in recent months – held \$440 billion in cash on their balance sheets as of the most recent quarterly reporting period. This exceeded the aggregate amount of debt for the group by approximately \$50 billion. Overall, they helped raise the total amount of cash held by NDX companies up to 59% of aggregate debt obligations. For the S&P 500, the equivalent cash-to-debt ratio was only 28%, while for SPX ex NDX, only 13% (excluding the impact of Financials).

Such immense cash cushions afford NDX's megacaps not only the ability to weather a period of higher interest rates, but also position them to take advantage of depressed valuations by either a) making strategic acquisitions at relatively sizable discounts to recent history, or b) repurchasing their own stock via buybacks – also at a relative discount. Both actions hold the potential to support their stock prices from extended downward pressure. If elevated interest rates were to persist for an unusually long time, many of the index's cash-rich companies would earn proportionately higher amounts of interest income from their cash balances; in the most recent quarter, for example, Google's (nonoperating) *interest income* totaled \$414 million vs. \$83 million of *interest expense*. Finally, as other more indebted large cap companies would stare down the need to refinance maturing bonds and loans at much more punitive rates, the largest Nasdaq-100 companies would have the option to retire much of their debt and keep their weighted average cost of capital well below market averages. In an economic environment of high interest rates, investors should balance the value-degrading impact of elevated discount rates with the value-preserving function of cash-rich balance sheets and leverage-light business models in the Nasdaq-100.

Structural Advantages of the Nasdaq-100 vis-à-vis Higher Inflation

Elevated inflation has historically wreaked havoc on equity market returns, especially when converting from nominal to real terms. The most prominently cited example today is the 1970s – an era of stagflation in the US that combined recurring recessions with high inflation. There are numerous differences between today's macroeconomic backdrop and back then: 1) the surge in the price of oil, due to the Arab embargo against the US, was more extreme than it is today – quadrupling virtually overnight and leading to widespread shortages; 2) the economy's energy intensity, and therefore sensitivity to price, was much higher; 3) wage inflation was much more entrenched due to higher rates of union membership (25% vs. today's 10%); 4) population growth was higher; 5) labor's share of GDP was higher, while labor productivity was lower; and 6) income distribution was much more equal, which meant a higher proportion of wage increases filtered back into overall demand growth.¹ Still, it behooves investors to consider the wage sensitivity of their equity portfolios.



¹ <https://media.bespokepremium.com/uploads/2022/03/032922-1970s.pdf>

As the charts above illustrate, Nasdaq-100 companies generate approximately the same amount of revenue per employee as the broader S&P 500. Yet the difference in profit per employee is dramatic: 35% higher than SPX, and 56% higher than SPX ex NDX. In other words, the average productivity of a Nasdaq-100 employee is considerably higher than for other large cap US companies. This strongly implies a lower sensitivity to wage inflation for NDX. If wages rise by 10% on average nationally, not only will the average non-Nasdaq-100 company lose a greater proportion of its profit per employee, but it will also most likely need to hire more employees (at a rising cost) to meet demand if the economy keeps expanding. If the pendulum swings in the other direction and the economy contracts, companies with more productive employees will be better positioned to adjust to decreased demand, meaning fewer costs in terms of layoffs, severances, and associated intangible losses.

Labor productivity is one important consideration in the overall inflationary environment. Another one is labor flexibility, namely with respect to geography. The Nasdaq-100 averages nearly double the allocation to Technology sector companies (57%) vs. the broader S&P 500 (28%), per ICB Industry (as of April 29, 2022). While difficult to quantify, Technology companies appear to be more flexible with the physical distribution of their employees.^{2,3} Among Nasdaq-100 constituents, Meta Platforms, Airbnb, Okta, and Atlassian have shifted to models that accommodate permanent work-from-home. Nasdaq-listed Coinbase, Lyft, and Dropbox have announced similar shifts, while other Technology companies such as Twitter, Square, Shopify, Spotify, and Slack have done the same.⁴ The intuition behind such moves is clear: with a high percentage of employees performing everyday tasks that require only a computer, internet, and phone service, Tech companies were seemingly made for this moment, and their employees disproportionately express a preference for remote work.⁵ More importantly, a substantial proportion of US remote workers have indicated a willingness to take a pay cut in exchange for ongoing remote work privileges, despite the finding that employees working from home tend to be more productive, on average, than those who commute into the office.⁶ In addition to embracing remote work for a substantial portion of their headcount, many other Tech companies have recently fanned out from the traditional hotbed of Silicon Valley to recruit knowledge workers across the US under a hybrid arrangement, opening up satellite offices in lower cost locations such as Austin, Phoenix, Nashville, and Miami. The upshot is a natural, moderating impact on upward wage inflation, with an increasing share of cheaper employees based outside of the headquarters. The impact also extends to real estate costs, through a net reduction in aggregate office space, and/or a reduced concentration in the most expensive office markets.

Outside of labor, the analysis gets murkier, as different companies have varying exposures to other costs of business such as raw input materials, fuel, power, and marketing/administrative costs. One counterbalancing variable that companies can leverage to outperform in an inflationary environment is their pricing power. As inflation eats away at purchasing power in the broader economy, consumers are forced to substitute cheaper versions of the goods and services that they may no longer be able to afford. Or, in some cases, they may do away with such expenditures entirely in order to be able to afford the bare necessities. Companies with substantial pricing power can raise prices and pass on their higher costs to customers, without creating demand destruction. It is instructive, therefore, to look at the overlap between the Nasdaq-100 and the Nasdaq US Price Setters Index (NQPRCE), which was designed to provide exposure to companies with high degrees of pricing power.

As of April 29, 2022, 29 companies in the Nasdaq-100 were also members of NQPRCE, representing 47% of the aggregate weight in NDX. The universe from which NQPRCE selected its 150 constituents – the Nasdaq US Large Mid Cap Benchmark Index – consisted of approximately 1,000 companies at the most recent annual

² <https://techhq.com/2020/11/tech-workers-universally-want-long-term-remote-working/>

³ <https://webexahead.webex.com/silicon-valley-rethinks-the-home-office/>

⁴ <https://www.flexjobs.com/blog/post/companies-switching-remote-work-long-term/>

⁵ <https://www.payscale.com/research-and-insights/remote-work/>

⁶ <https://www.businessnewsdaily.com/8156-future-of-remote-work.html>

reconstitution. All else equal, one would expect only around 15 of the 100 companies in NDX to qualify. Thus by constituent count, the index punches roughly twice above its weight; by index weighting, it is surely well in excess of that. Among the 11 factors used to determine NQPRCE's constituency, measures of earnings quality and margins feature prominently. Consistent with some of the prior analysis, the margin outperformance of NDX companies extends all the way to the top of the income statement: the median and average gross margins over the last 12 months were 54.5% and 51.5%, respectively, vs. 36.2% and 38.5% among SPX ex NDX companies (excluding Financials). Pricing power goes hand in hand with profitability, and suggests the Nasdaq-100 is better positioned than the broader US large cap equity market to pass on some portion of its higher costs to its customer base. It should also be able to absorb a portion of higher input costs given its fatter margins.

Nasdaq-100 Valuations: Reasonable on Multiple Levels

If Nasdaq-100 companies are relatively favorably positioned for the current macroeconomic environment, then why have they underperformed? Part of the explanation may have to do with investors' acquired biases around what works and what doesn't work – from an equity market perspective – during periods of elevated inflation. The vast majority of investors lack firsthand experience investing in the 1970s, however, and are thus reliant on limited historical data to inform their perspective. We have already discussed some of the key macroeconomic differences between now and the 1970s, but the market itself is also quite different, as is Technology as a sector. Only 16 companies in the Nasdaq-100 were in existence and trading publicly during the 1970s, representing 13% of the index weight (as of April 29, 2022). Moreover, Technology was largely comprised of Hardware and Equipment businesses, with multiyear-long product cycles and greater execution risk. Today's Tech companies are a healthier mix of Hardware, Software, and Internet businesses that are iterating new products much faster, and delivering product upgrades constantly.

For the Nasdaq-100, the split within Technology (ICB Industry) is roughly 50/50 between Software and Computer Services vs. Technology and Hardware Equipment (ICB Subsectors). Within Technology and Hardware Equipment, Apple alone represents 44% of the subsector's weight in NDX, and it has grown its Services (i.e., non-Hardware) revenues to more than 20% of the total in recent quarters. Within Software and Computer Services, Microsoft, Google, and Meta Platforms represent 73% of the subsector's weight; Services revenue is nearly 60% of Microsoft's total, and in excess of 90% for both Google and Meta Platforms. Outside of what's formally considered Technology, Amazon represents 34% of Consumer Discretionary's weight; Services is nearly 50% of Amazon's total – a far cry from the more typical Consumer Discretionary company (like a Retailer, or Travel and Leisure) that derives minimal revenue from contractual, subscription-based offerings such as Amazon Prime/AWS, or Microsoft 365/Xbox Live, Google Cloud/YouTube, Facebook Ads, Apple Music/Arcade/TV, etc.

Over the past decade-plus, Software and Internet companies have focused on creating high-margin products with substantial recurring revenue, making their business models less volatile than old-line Tech. Gavin Baker, one of the most successful Growth/Tech investors in the industry, recently summed up the fundamental strength of Internet/Advertising business models (like Google, Facebook, and to some extent Amazon as well):

For example, a lot of internet advertising businesses may be mismodeled. These are high ROIC companies, and they use auction mechanisms to price their ads. It happens in milliseconds every time you click on something, and the way their auctions work perfectly passes on price increases to the advertisers. So theoretically, inflation naturally flows through that auction. But most analysts are not taking inflation into account when they model these businesses.⁷

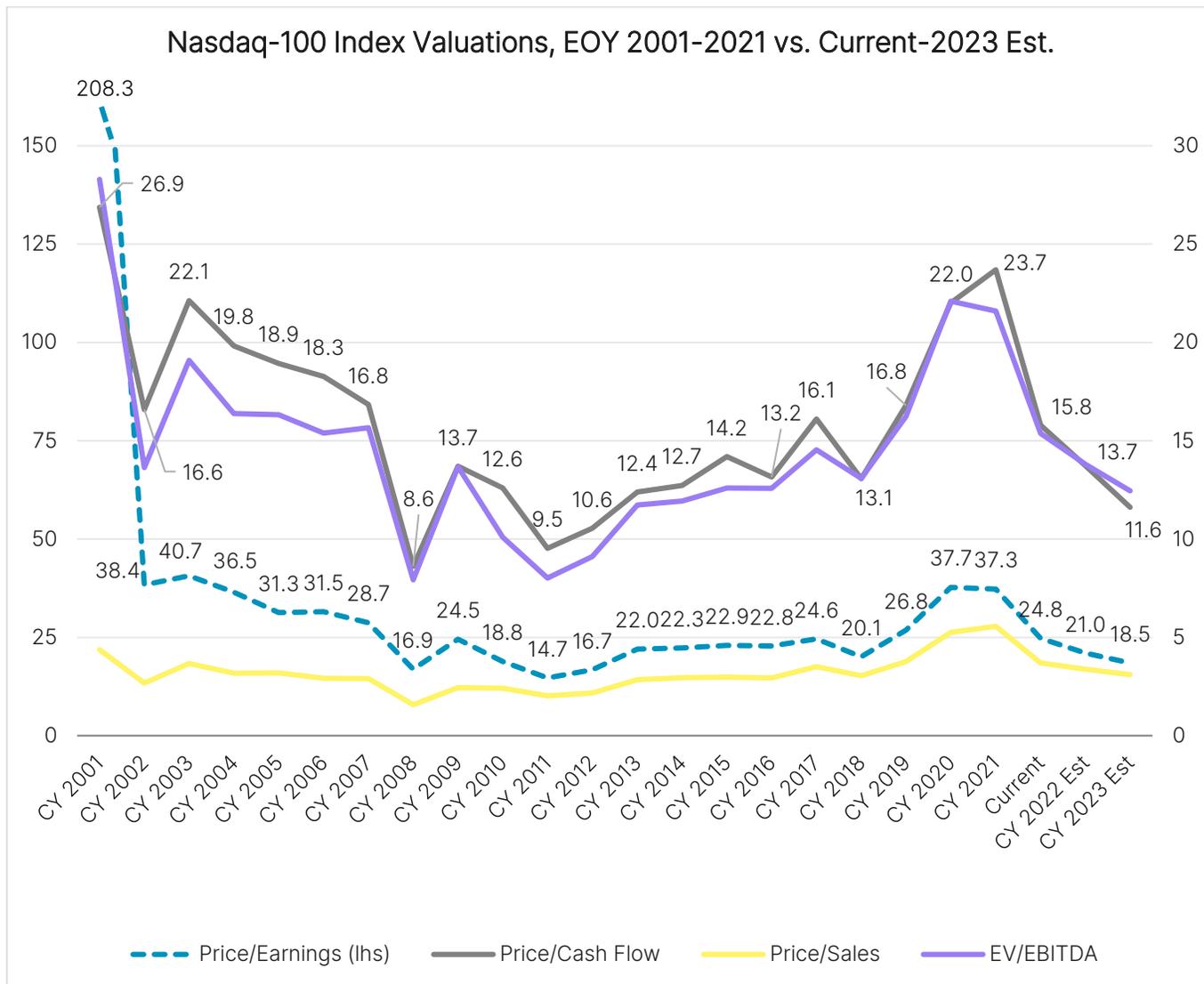
⁷ <https://themarket.ch/interview/there-is-no-playbook-ld.6422>

His optimism extends to much of the Software space:

I'm still bullish on software. Robert Smith, the CEO and founder of Vista Equity Partners, famously said that software contracts are better than first-lien debt: To pay its software contract, a company will miss the interest payment on their first lien. At first, I had some doubts, but COVID broadly proved that actually to be true. I was wrong and he was right. We know now that software companies have massive pricing power with a much higher conviction than we did before. Also, they are very high ROIC businesses, and their recurring revenue streams will help them in a slowing economy.

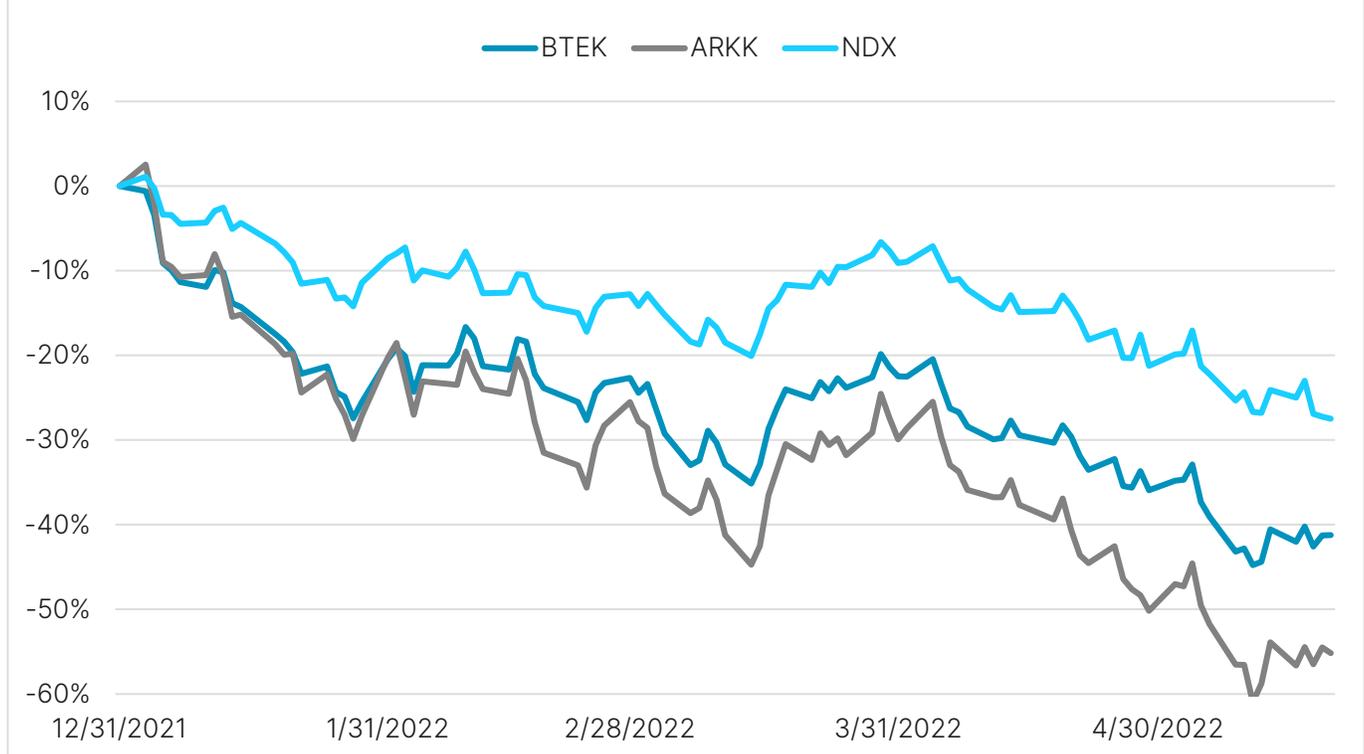
Going back to Hardware, Semiconductors have evolved from a highly cyclical industry tied to computers, to a new kind of commodity for the 21st century – a requirement for every device with an Internet connection, and almost every other type of electronic device on the planet. They represent 14% of the Nasdaq-100's weight, and have garnered perhaps the most headlines relating to the supply shortages stemming from Covid-19. Many semiconductor firms have gone “fables” in the past three decades, selling or spinning off their capex-intensive manufacturing properties and focusing solely on product design and software. For the few remaining large-scale manufacturers like Intel, their capacity to offset higher input costs with price increases is likely greater than for any other grouping of capex-intensive companies in today's modern, digitized economy.

The other major anchoring bias today's investors face with respect to high-growth Technology relates back to the Internet Bubble that collapsed in spectacular fashion at the beginning of the 21st century, and brought the Nasdaq-100's total peak-to-trough drawdown to over 80% from March 2000 to October 2002. Drawing parallels to the current drawdown ignores the extraordinary nature of the overvaluation of the index during that era, the vastly different fundamentals, and the fact that similar drawdowns have already occurred in parts of the market existing fully outside of the Nasdaq-100. As of May 20, 2022, the index's trailing Price/Earnings ratio was down to 24.8, in-line with its 10-year average of 24.4 (year-end 2011 through year-end 2021). It peaked in late 2020 at just under 40, nowhere near the observed level of 208.3 at year-end 2001. (This is using the earliest reliable historical data per Bloomberg, and reflects the index's valuation *after it had already declined by 66% from its peak in March 2000*. Prior to the decline, which coincided with an earnings collapse, most estimates place the index's P/E between 150-300 around the actual peak in prices.) On a forward-looking basis, the Nasdaq-100 is now being valued at under 20 times next year's earnings (i.e., full-year 2023). Revenues are still expected to grow by 9.4% on a per-share basis, generating earnings growth of 13.7% in 2023. This compares to compound annual growth rates of 10.1% for revenues and 10.9% for earnings over the past decade. Using almost any other valuation ratio – Price/Cash Flow, Price/Sales, EV/EBITDA – the index is trading very close to 10-year, and even 15-year, averages.



Investors can also very easily see the profound difference in today's Nasdaq-100 vs. 20 years ago by looking at relative performance against portfolios that track largely unprofitable segments of Technology (and related high-growth areas) that have thus far more closely followed the post-Internet Bubble path of returns. On a total return basis, NDX was down 27.2% YTD as of May 20 vs. a decline of 55.2% for the ARK Innovation ETF (ARKK); from its peak on February 12, 2021, ARKK was down 72.7% vs. 13.5% for the Nasdaq-100. Another actively managed product, the Blackrock Future Tech ETF (BTEK), was down over 50% from its peak in 2021, and 41.2% YTD. Per Bloomberg, ARKK's P/E ratio was not calculable because the portfolio's aggregate earnings are negative; of the 8 positions with positive earnings over the trailing 12 months, the average ratio was 71.1 (as of May 20). A similar result applied to BTEK, whose 45 holdings with some level of positive earnings produced an average trailing P/E ratio of 73.4; its aggregate portfolio P/E was also not calculable. Overall, only two of ARKK's 36 holdings overlapped with the Nasdaq-100 (Tesla and Zoom), representing 4% of NDX index weight. Nine positions representing about 6% of NDX index weight overlapped with BTEK's 92 holdings. In stark contrast, only four constituents of the Nasdaq-100 were unprofitable and produced uncalculable P/E ratios; 86 of its constituents, representing more than 80% of index weight, showed a P/E ratio of less than 40, based on full-year 2022 earnings. There is simply no basis for investors to compare present-day Nasdaq-100 valuations and fundamentals to 2000/2001, but other products do provide a closer approximation. ARKK and BTEK illustrate the degree of overvaluation that existed in other parts of the market leading up to the current broad-based correction, which likely put added pressure on NDX.

Nasdaq-100 YTD 2022 Performance vs. ARK Innovation ETF and Blackrock Future Tech ETF



As of May 20, 2022

| Product Ticker | # of Holdings | # P/E >0 | Average P/E | Portfolio P/E | YTD Return | Return Since 2/12/21 | # Overlap w/ NDX | % Overlap w/ NDX |
|----------------|---------------|----------|-------------|---------------|------------|----------------------|------------------|------------------|
| NDX | 100 | 96 | 33.3 | 24.8 | (27.2%) | (13.5%) | | |
| ARKK | 36 | 8 | 71.1 | N/A | (55.2%) | (72.7%) | 2 | 4.0% |
| BTEK | 92 | 45 | 73.4 | N/A | (41.2%) | (50.7%) | 9 | 6.4% |

Summary

It is understandable for investors to feel somewhat panicky in the context of a macroeconomic environment whose closest parallels existed 40 or more years ago. The weak start to the year for equities has extended into most parts of the fixed income market, with the first quarter of 2022 registering as one of the worst of all time for U.S. government bonds.⁸ The worst year on record for the Bloomberg US Aggregate Bond Index since its inception in 1976 was a loss of 2.9% in 1994; as of June 30, the index was already down 10.3% YTD. Positioning in equities has reached historically extreme levels of bearishness, and must be related on at least some level to the weakness across fixed income. Typically investors who target a 60/40 portfolio allocation would have rebalanced some of their fixed income gains into declining equities during a bear market, offsetting some of the selling pressure; this year the pain is being felt on both sides. Detailed analysis of cross-asset flows is beyond the scope of this publication, but the impact is likely material and has prevented a more meaningful bottoming process in equities from taking place thus far.

⁸ https://www.marketwatch.com/story/u-s-government-bonds-are-having-one-of-their-worst-quarters-since-the-u-s-civil-war-11648653175?mod=search_headline&mod=article_inline

The Nasdaq-100 has generated impressive outperformance against the broader US large cap equity market, as well as most segments of global equities, for a very long time. Its unique exposure – tilted to high-growth, innovative companies with above-average fundamental strength – has underpinned its outperformance, as well as its modest valuation premium vs. the broader market. After a painful correction in the first six months of 2022, the index is now trading well within its long-run historical valuation range. Several structural advantages position the index's constituents to endure a period of elevated inflation and/or historically high interest rates better than the S&P 500, and our analysis suggests the Nasdaq-100's YTD underperformance has been somewhat unjustified by the balance of fundamental factors.

The Nasdaq-100 of 2022 resembles neither its 1970s-era equivalent from a constituent perspective, nor its early-2000s equivalent from a size, volatility, or fundamental analysis perspective. Since our earliest reliable records dating back to 2003, NDX has grown its earnings at a compound annual growth rate of 21.0% vs. 10.1% for SPX; its revenues at 12.5% vs. 4.7%; and its dividends at 24.3% vs. 7.5%. As an index, it is more profitable per employee and more profitable per dollar of revenue, while being substantially less leveraged, than the S&P 500. The substantial pricing power and cash cushions of many of its largest constituents position the Nasdaq-100 for continued growth and outperformance even in an era of macroeconomic stress and uncertainty. Investors should consider these factors before jumping to premature conclusions about its vulnerability to the inflation boogeyman and the Fed's ongoing reaction function.

Sources: FactSet, Bloomberg, Nasdaq Global Indexes.

Disclaimer:

Nasdaq® is a registered trademark of Nasdaq, Inc. The information contained above is provided for informational and educational purposes only, and nothing contained herein should be construed as investment advice, either on behalf of a particular security or an overall investment strategy. Neither Nasdaq, Inc. nor any of its affiliates makes any recommendation to buy or sell any security or any representation about the financial condition of any company. Statements regarding Nasdaq-listed companies or Nasdaq proprietary indexes are not guarantees of future performance. Actual results may differ materially from those expressed or implied. Past performance is not indicative of future results. Investors should undertake their own due diligence and carefully evaluate companies before investing. **ADVICE FROM A SECURITIES PROFESSIONAL IS STRONGLY ADVISED.**

© 2022. Nasdaq, Inc. All Rights Reserved.