



RAHEEL SIDDIQUI

Senior Research Analyst, Global Equity Research

Equity Market Outlook 1Q23

Economic and Market Review: Key Considerations for Equity Investors

Are we there yet?

After rising interest rates, persistent inflation and geopolitical turmoil pounded equity investors in 2022, we wish we could report that a rebound appears just around the bend. Alas, we believe macroeconomic indicators offer little to cheer about in the first quarter of 2023—and perhaps through the remainder of the year.

Despite Wall Street's rosier prognostications, we think that a challenging mix of alarming economic inequality, monetary policy headwinds and poor earnings quality will put increasing pressure on corporate profits and likely lead to even lower equity returns in the near term. We anticipate the bear market to continue in 2023 and believe the S&P 500 Index could trough around 3000. (For additional context, see our [3Q 2022](#) and [4Q 2022 Equity Outlook](#) reports.)

In this paper, we will discuss the U.S. economy's increasingly Dickensian divide; its implications for the Federal Reserve's ongoing war on inflation; and what current conditions could portend for equity portfolios over the next quarter and beyond.

NEUBERGER	BERMAN
-----------	--------

Investment Themes and Views¹

Based on their relative sensitivity to changes in inflation and financial conditions, and their historical beta to the stock market, we offer the following as our overweight and underweight views.

OVERWEIGHT VIEW ON:

Factors and Styles:

- Low beta
- High quality
- Large caps
- Momentum
- High earnings visibility
- U.S. stocks

Industry Groups:

- Household & Personal Products
- Telecom Services
- Food & Staples Retailing
- Health Care
- Utilities
- Food Beverage & Tobacco
- Equity Real Estate Investment Trusts (REITs)

UNDERWEIGHT VIEW ON:

Factors and Styles:

- High beta
- Low quality
- Small caps
- Low earnings visibility
- Speculative growth
- Ex-U.S. stocks

Industry Groups:

- Automobiles & Components
- Energy
- Banks
- Consumer Durables & Apparel
- Transportation
- Semiconductors & Semiconductor Equipment
- Technology Hardware & Equipment
- Capital Goods

NEUTRAL VIEW ON:

- Value
- Growth

¹ For illustrative and discussion purposes only. This material is general in nature and is not directed to any category of investors and should not be regarded as individualized, a recommendation, investment advice or a suggestion to engage in or refrain from any investment-related course of action. The firm and its portfolio managers may take positions contrary to any views and themes expressed.

TABLE OF CONTENTS

THE BEST OF TIMES, THE WORST OF TIMES	1
INFLATION AND SOCIOECONOMIC STABILITY	4
WHAT DOES VICTORY ON INFLATION LOOK LIKE?	6
THE LOOMING EARNINGS CRUNCH	7
WHAT IT ALL MEANS FOR EQUITY PORTFOLIOS	10

The Best of Times, the Worst of Times

We enter 2023 amidst a tale of two economies: As one side enjoys inordinate wealth, the other faces dwindling real incomes. While the economic realities of upper- and lower-tier consumers have always been very different, never has the polarization been this stark—and potentially problematic for the growth of a vibrant and resilient economy.

According to the Bureau of Labor Statistics, the wealthiest 20% of households—which can draw on savings to finance their lifestyles—account for 38% of all spending; the bottom half—with little wealth to lean on—mainly depend on modest incomes to support their spending. To put things in more tangible terms: For every \$1,000 in the checking accounts of the top 20%, the bottom 20% currently have just \$9; and for every \$10,000 of net worth in the top 20%, the bottom 20% have \$500, based on data from the Federal Reserve.

The table below offers a snapshot of how rapidly the gap between the two Americas has widened in just 10 quarters.

FINANCIAL HEALTH OF THE TOP AND BOTTOM QUINTILES OF U.S. HOUSEHOLDS BEFORE AND AFTER COVID

U.S. Households	Bottom 20% (26.2 million)		Top 20% (26.2 million)	
	4Q 2019	3Q 2022	4Q 2019	3Q 2022
Checking balance + currency	\$2,275	\$566	\$24,326	\$119,417
Cash and near cash deposits	\$19,604	\$23,299	\$266,093	\$396,755
Ratio: consumer Ccredit/(checking + currency)	5.1	17.7	1.9	0.4
Net worth (\$M)	\$0.13	\$0.18	\$3.00	\$3.60
Households using credit to meet spending needs (percent points) ¹	22.30%	29.30%	16.60%	20.60%
Increase in credit card delinquencies from post-COVID trough ²	0.33%		0.02%	

■ Worsening ■ Improving

Source: Neuberger Berman and New York Fed Consumer Credit Panel; Equifax; U.S. Federal Reserve; United States Census Bureau, Household Pulse Survey. Data as of December 20, 2022. For illustrative purposes only.

¹ Bottom Quartile vs. Top Quartile.

² Bottom Quartile vs. Top Quartile, Data as of November 30, 2022.

Dig deeper, though, and the divide becomes a canyon.

Poorer consumers' credit card and personal loan balances have reached record levels—the subprime category now makes up 20% of all card originations—and delinquencies on auto loans and small-business leases are gathering pace. Americans are once again tapping home equity lines of credit to pay down debt. And it isn't just the bottom 20% feeling the squeeze: The latest Household Pulse survey shows that 70% of U.S. households face difficulty paying expenses—not surprising given that, for more than half of U.S. workers, wages haven't kept up with inflation.

Meanwhile, in the same America, demand for expensive Champagne, Lamborghini roadsters, luxury fragrances, Birkin handbags and Swiss watches is white-hot. High-end art is being scooped up; Cartier is opening 10 more stores across the country; plastic surgeons are slammed with elective procedures; and U.S. corporate profits are at a record high.

Recent News Headlines That Appeared Between August and December of 2022

The **BEST** of Times

CARS

FLORIDA CAR DEALER SOLD TRIPLE THE NUMBER OF LAMBORGHINIS LAST YEAR as Luxury Vehicle Sales Soared Post-Pandemic

ROLLS-ROYCE SAYS IT ALREADY HAS HUNDREDS OF U.S. ORDERS for Its \$413,000 Spectre Electric Vehicle

BMW DECLARES THAT LUXURY EVS ARE WHITE HOT

AMERICANS DEMAND MORE LUXURY AND EXOTIC CARS in the Wake of the Pandemic

MERCEDES CAR SALES JUMP

Defying Growing Global Economic Gloom

GENERAL

DESPITE A GLOBAL ECONOMIC SLOWDOWN,
The Wealthy Are Still Spending on Over-the-Top Experiences

EBAY'S EFFORTS TO GROW ITS LUXURY BUSINESS ARE PAYING OFF

CORPORATE PROFITS HIT RECORD HIGH
in Third Quarter Amid 40-Year-High Inflation

LUXURY LIFESTYLE

FIRM BEHIND MOËT HAILS NEW "ROARING 20s"
as Wealthy Drain Stocks of Champagne

FERRAGAMO SALES BEAT FORECASTS
in H1 Despite Slowdown in China

EXPECTING HIGH LUXURY DEMAND,
Cartier to Open 10 New U.S. Stores

GLOBAL LUXURY SALES SET TO HIT RECORD
This Year, Study Says

THAT \$7,000 HERMES BIRKIN BAG IS HEADING TOWARD \$8,000 NEXT YEAR

SOME ULTRA-WEALTHY ARE BUYING HIGH-END ART FOR THEIR YACHTS as a Recession Hedge While Stocks, Real Estate and Crypto Tank on Global Uncertainty

REAL ESTATE

AMERICANS ARE BUYING UP PROPERTIES IN PARIS,
Causing Luxury Home Prices to Skyrocket

CONDOS IN MANHATTAN LUXURY BUILDING SELL FAST

WATCHES

HIGH-END WATCHES, CUSTOM SHIRTS IN HIGH DEMAND

SWISS WATCH EXPORTS AT NEAR-RECORD LEVELS

MILLENNIALS AND GEN Z ARE FUELING A BOOM
In The Second-Hand Watch Market

The **WORST** of Times

CARS

AUTO REPOSSESSIONS ARE ON THE RISE,
as People Walk Away From Car Loans

CREDIT CARD, ABS, HOME OWNERSHIP

YOUNGER AMERICANS STRUGGLE to Afford Dream of Home Ownership

CARDS ISSUED TO CUSTOMERS WITH CREDIT BLEMISHES
Are Surging

AMERICANS TURN TO HELOCS to Pay Down Pricier Forms of Debt

SUBPRIME CONSUMER ABS DELINQUENCIES TRENDING UP
as Inflation Bites

CREDIT CARD BALANCES JUMP 15%, Highest Annual Leap in Over 20 Years, as Americans Fall Deeper in Debt

RECORD 7% SURGE IN SMALL BUSINESS RENT DELINQUENCY
In October

LATE PAYMENTS RISE Among Low-Income Auto, Card Borrowers

CONSUMER HABITS CHANGE

THE MOOD HAS TURNED DARKER: Desperate to Outrun Inflation, People Are Changing Their Shopping Habits

LENDINGCLUB CEO SAYS PAYCHECK-TO-PAYCHECK LIVING IS "NEW CLIMATE CRISIS"

GEN ZERS ARE TAKING ON MORE DEBT,
Roommates, and Jobs as Their Economy Gets Worse and Worse

FOOD

HUNGER IN AMERICA: Inflation's Driving Up Need for Food Banks

"I FELT LIKE I FAILED": INFLATION PUTS HEALTHY FOOD OUT OF REACH for Millions of Americans

IS INFLATION TRANSFORMING DOLLAR STORE INTO BIGGER GROCERY DESTINATIONS

GENERAL

"PEOPLE GET DESPERATE": EXPERTS SAY
Increased Inflation Is Causing Crime to Climb

RETIREMENT DREAMS BECOME NIGHTMARES
for Many Older Americans as Inflation Soars

"LIFE IS GETTING MORE EXPENSIVE BY THE DAY."
Amid Inflation, 32% of Americans Are Struggling to Pay Their Bills

66% OF AMERICAN WORKERS ARE WORSE OFF FINANCIALLY
Than a Year Ago Due to Inflation, Report Finds

WALMART CEO: SOARING THEFT COULD LEAD TO HIGHER PRICES

LABOR MARKET

WORKERS ARE CHANGING JOBS AND GETTING RAISES, AND STILL STRUGGLING FINANCIALLY

71% OF WORKERS SAY THEIR PAY ISN'T KEEPING UP WITH INFLATION

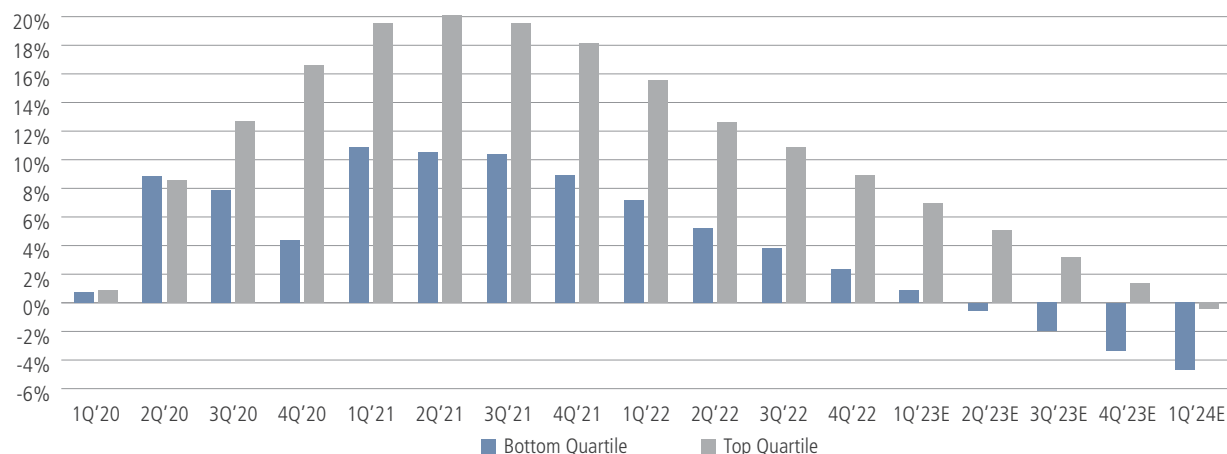
IN AN UNEQUAL ECONOMY, the Poor Face Inflation Now and Job Loss

We believe this exuberance stems in part from the extraordinary wealth effect created by overzealous monetary and fiscal policies in response to the COVID-19 crisis. Since the pandemic first struck, aggregate U.S. household net worth has increased by \$25 trillion—a whopping \$13 trillion above the long-term trend—including roughly \$1.4 trillion in spendable excess savings. Energized by the financial windfall, consumers have been gobbling an array of goods and services at elevated prices without feeling the need to cut back in other areas—all of which has triggered painful, broad-based inflation.

At this pace, the bottom 25% of U.S. households could be in danger of burning through their excess savings by the second quarter of 2023, while the top 25% appear able to keep gobbling until the first quarter of 2024 (see chart). **That could keep inflation high for another year or more** and further punish poorer consumers with diminishing ability to finance their spending.

POORER HOUSEHOLDS ABOUT TO RUN OUT OF EXCESS SAVINGS

U.S. Excess Savings as % of Spending

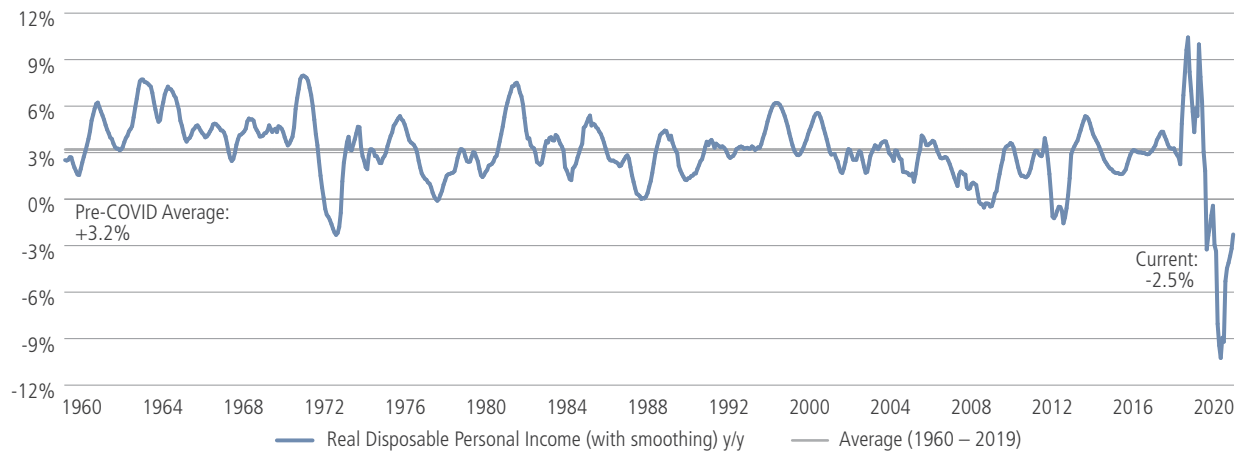


Source: Neuberger Berman, and Aladangady, Aditya, David Cho, Laura Feiveson, and Eugenio Pinto (2022). "Excess Savings during the COVID-19 Pandemic," FEDS Notes. Washington: Board of Governors of the Federal Reserve System, October 21, 2022. Neuberger Berman Estimates. Data as of December 20, 2022. For illustrative purposes only.

Inflation and Socioeconomic Stability

Persistent inflation is a truly insidious problem that, in our view, can have broad and harmful economic implications. When income growth trails inflation, the majority of Americans who depend on their after-tax personal income to maintain spending tend to steadily lose financial ground. Alarming, growth in real disposable personal income (RDPI) has fallen to *negative* 2.5%—the lowest level in the six decades before the COVID crisis and far from its historical average of *positive* 3.2% (see chart).

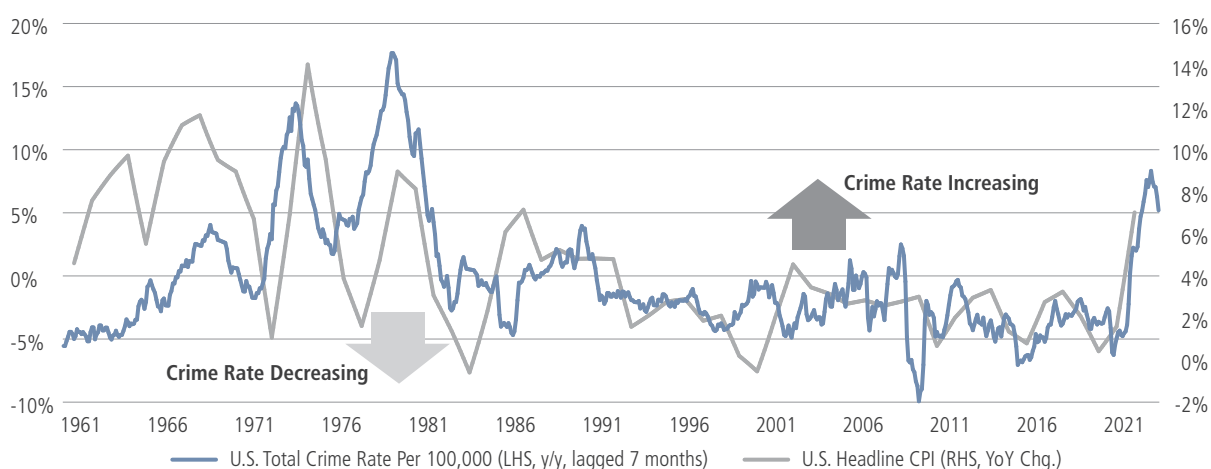
NEGATIVE REAL DISPOSABLE INCOME GROWTH THREATENS THE OVERALL ECONOMY



Source: Neuberger Berman and FactSet. Data as of December 20, 2022. For illustrative purposes only.

We believe an economy's ability to increase RDPI ultimately fosters social and political stability. For a start, falling real incomes threaten a crucial incentive to work. (After all, why would people put in the effort only to get effectively poorer month after month?) Negative RDPI growth also incentivizes illicit behavior: Inflation above 4% has been strongly correlated with rising crime rates over the past six decades (see chart).

INFLATION AND CRIME RATES GO HAND IN HAND



Source: U.S. Bureau of Labor Statistics; Disaster Center.

In short, high levels of inflation hurt everyone, and sustainable real incomes make the economy viable. Little surprise, perhaps, that RDPI growth has remained positive 95% of the time over the previous 60 years.

What Does Victory on Inflation Look Like?

Clearly, letting the excess savings drain out is not a defensible inflation-fighting strategy. That's why we believe the Fed must—and likely will—keep monetary reins tight, as suggested by its uniformly hawkish stance at the mid-December FOMC meeting: Of the 19 economists who weighed in, “no participants anticipated that it would be appropriate to begin reducing the federal funds rate target in 2023.” We believe sustaining higher rates should eventually put downward pressure on asset prices and dissuade the wealthy from continuing to spend at their current pace. (For a deeper discussion on the Fed's continued resolve to fight inflation, see our [4Q 2022 Equity Market Outlook](#).)

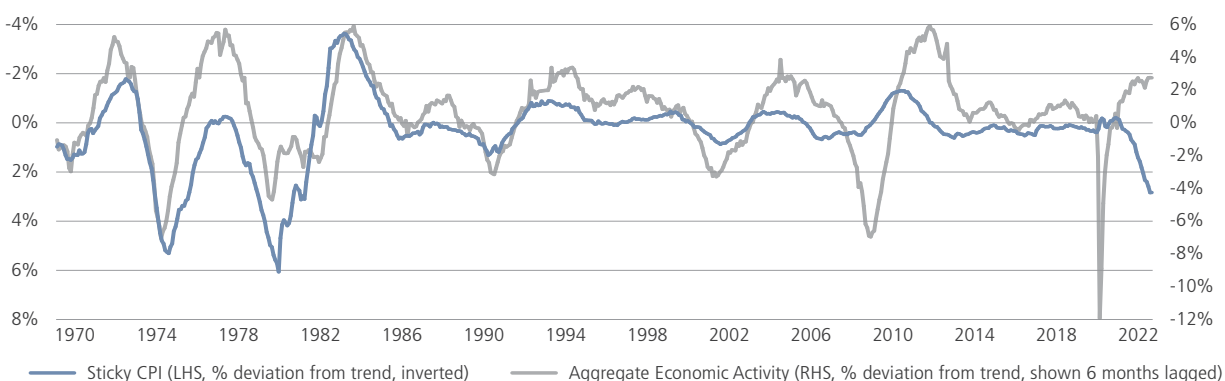
Winning the war on inflation, in our view, means achieving three objectives:

- Turning RDPI growth sustainably closer to its 3% historical average, which signifies a healthy economy
- Neutralizing the wealth effect, mainly by bringing down equity and home prices
- Restoring labor-market equilibrium by generating sufficient job losses to break the wage-price spiral that keeps inflation expectations aloft

Until these three objectives are convincingly met, we do not expect the Fed to loosen the reins. Given where inflation is now and appears to be headed, victory—in our view—likely also requires a moderate recession.

In the current environment, we believe the Atlanta Fed's Sticky-Price CPI offers the truest take on the impact of the Fed's monetary policy on inflation. (“Sticky” refers to prices for essential goods and services—from rent to healthcare—that don't change as quickly as prices for other items.) While sticky inflation is known to lag aggregate economic activity, inverting this metric can create an insightful leading indicator. As shown in the chart below, cycles in Sticky CPI inflation (inverted) lead cycles in economic activity by six months. The relationship is particularly strong when Sticky CPI inflation is above 3%, which is the case today.

STICKY INFLATION IS AN EXCELLENT LEADING INDICATOR



Note: Sticky inflation was above 3% from 1970 to 1996, and then briefly (six to 18 months) on three other occasions: 2001 – 02, 2006 – 07, and 2008
Source: Federal Reserve Bank of Atlanta; Neuberger Berman and FactSet. Data as of December 20, 2022. For illustrative purposes only. Nothing herein constitutes a prediction or projection of future events or future market behavior. Due to a variety of factors, actual events or market behavior may differ significantly from any views expressed or any historical results.

Many on Wall Street think headline inflation peaked in June 2022; meanwhile, in December, the Sticky CPI recently posted its highest year-over-year reading in 40 years and has deviated north of its historical trend by more than we've seen since the early 1980s. Sticky inflation also tends to lag employment trends, implying that Sticky CPI tends to peak only after the labor market has visibly weakened. We believe this environment—along with the Fed's continued commitment to tight monetary policy—bodes poorly for economic growth in the foreseeable future.

The Looming Earnings Crunch

If the first swipe of the bear claw slashed valuations, the next, we believe, could gut earnings. While many companies were able to pass along rising input prices and post record third-quarter profits in 2022, we expect a softening in corporate earnings to prolong the bear market until at least late 2023.

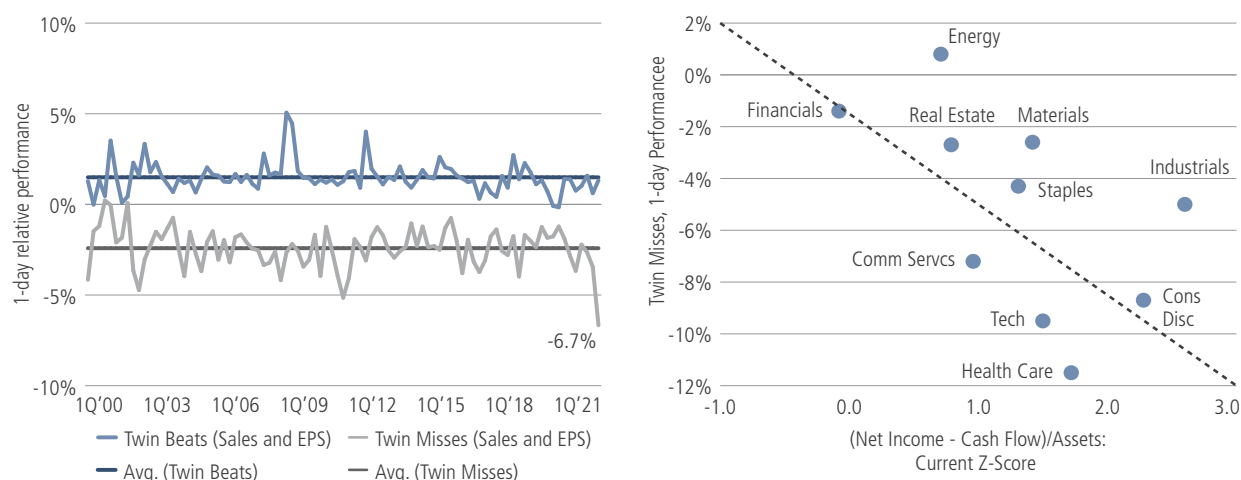
The reasoning is based upon our outlook and some of the key themes we envision emerging in 2023:

The recession will be more severe than expected. Many market watchers anticipate the gentlest recession in post-war America, with a peak-to-trough decline in real GDP of 0.2% and an increase in unemployment of 1.3%. We find this view unrealistic in light of the Fed's extraordinary tightening campaign and impending financial distress for 70% of Americans. Our historical analysis suggests that, in disinflationary recessions, GDP typically *contracts* by 3%, and the unemployment rate *rises* by 4%. We believe a deeper recession would deal a bigger blow to corporate earnings than Wall Street appears to expect.

Poor earnings quality will lead to larger write-offs. Aggressive accounting is back in fashion. The use of accounting accruals—which essentially represent best-case financial assumptions that may never come to pass and can lead to glaring disconnects between reported net income and actual cash flow—is the highest we've seen in three decades. In economic downturns, such poor earnings quality can quickly translate into write-offs and hammer equity returns. Last year we found accrual-heavy, relatively overvalued stocks declined three to four times more than the overall market. During this next earnings-driven phase of the bear market, we expect companies with the poorest earnings quality could suffer similar fates.

Consider the following two charts. Historically, the annual performance spread between stocks with aggressive and conservative accounting tends to be around 6%. We envision that gap widening—for both value and growth stocks—during the anticipated recession. Indeed, the cracks have already begun to show: As the chart on the left shows, during the 2022 third-quarter earnings season, companies that missed both revenue and earnings estimates immediately shed 6.7% in value—three times the average over the previous 20 years.

COMPANIES THAT USE AGGRESSIVE ACCOUNTING HAVE BEGUN TO ATTRACT INVESTOR SCORN

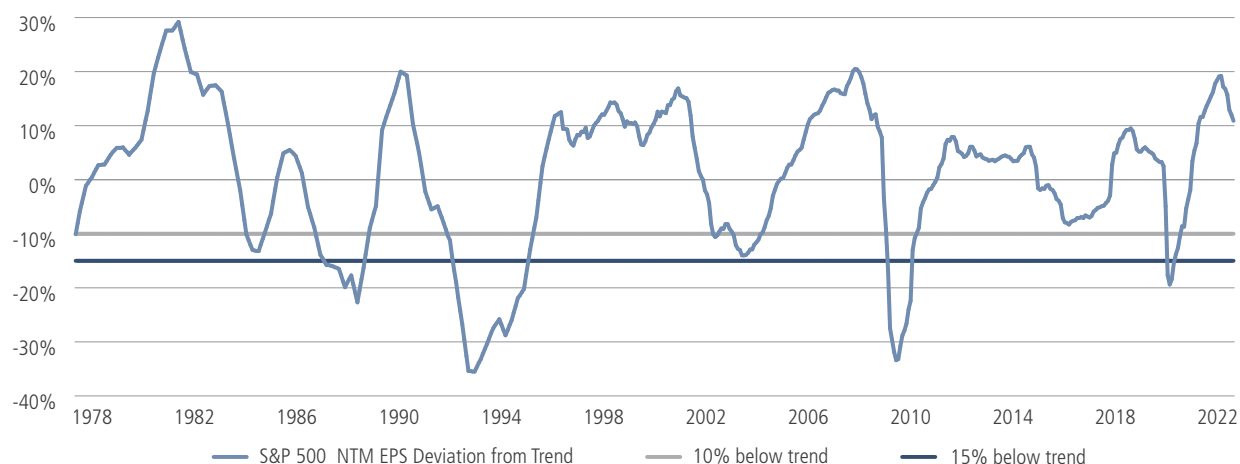


Source: Neuberger Berman, Bank of America and FactSet. Data as of December 20, 2022. For illustrative purposes only. Nothing herein constitutes a prediction or projection of future events or future market behavior. Due to a variety of factors, actual events or market behavior may differ significantly from any views expressed or any historical results. Indexes are unmanaged and are not available for direct investment. Investing entails risks, including possible loss of principal. **Past performance is no guarantee of future results.**

We believe the potential flight from poor earnings quality is already apparent at the sector level as well. As shown in the chart on the right, sectors with more aggressive accounting (measured by the number of standard deviations in the size of their accruals) have been hit the hardest, while those with relatively conservative accounting have suffered less. In our view, poor earnings quality has clearly begun to attract investor scorn.

Current earnings are above the long-term trend—but perhaps not for long. Since the 1930s, the collective earnings per share (EPS) for the S&P 500 has hugged a trend growth rate of 6.5%, which now implies a forward, 12-month EPS of \$207. Meanwhile, the current top-down consensus for trough EPS is \$208, and the bottom-up estimate is 11% higher, at \$230 (see chart). We believe both figures are too rosy given that consensus EPS tends to *fall 10% to 15% below trend* during recessions, implying a trough EPS of about \$176 to \$186. At a recent 3800, we believe the S&P 500 remains expensive—and thus maintain our trough estimate of sub-3000 (see Appendix for our market views, including our base case for a disinflationary recession).

S&P 500 BOTTOM-UP CONSENSUS EPS IS 11% ABOVE ESTIMATED LONG-TERM TREND



Source: Neuberger Berman and FactSet. Data as of December 31, 2022. For illustrative purposes only. Nothing herein constitutes a prediction or projection of future events or future market behavior. Due to a variety of factors, actual events or market behavior may differ significantly from any views expressed or any historical results. Indexes are unmanaged and are not available for direct investment. Investing entails risks, including possible loss of principal. **Past performance is no guarantee of future results.**

What It All Means for Equity Portfolios

Optimists crowed when the NASDAQ index jumped 7.4% on November 10. However, bear market rallies are often fleeting: Since 1971, the NASDAQ has staged daily gains of at least 5% on 49 other occasions—with 41 occurring in bear markets.

Gloom-piercing rallies aside, macro indicators offer plenty of doubt about the trajectory of the economy and, with it, our outlook for stocks:

- The U.S. Leading Economic Index is now down for nine consecutive months, and its global counterpart has been down nearly twice as long.
- The U.S. Current Activity Indicator, a broad gauge of ongoing U.S. economic activity, is deep in negative territory.
- Earnings downgrades have been outpacing upgrades, a historically bearish sign.
- Global monetary conditions do not appear to support risk-taking over the next 12 months. Specifically, the global money supply *in excess of what the economy can organically absorb* is flat—effectively robbing the market of the fuel it needs to spark the next bull run.

Though these observations are consistent with an economy locked in a downcycle and headed toward a recession, the stock market is barely pricing any economic pessimism, as estimated by our valuation-dispersion gauge, based on data back to 1926. This gauge aims to capture the level of economic stress by measuring the gap between the cheapest stocks versus the median performer; the wider the gap, in our view, the greater the potential for generating excess return from value-based stock selection. At present, our valuation gauge is squarely neutral, indicating little stress internalized by the market.

So what does all of this mean for equity portfolios?

- On the simmering question of growth versus value: Both styles currently have very similar betas and we envision them performing quite similarly during the course of the bear market. It is perhaps more illuminating to consider the beta of both growth and value portfolios: We believe a lower-beta value strategy is more likely to outperform both growth and value benchmarks; likewise, we think a lower-beta growth strategy is more likely to outperform both growth and value benchmarks. Across the board, in our view, lower beta likely wins.
- Overall, we see no reason to change the views we've offered since the beginning of 2022—that is, we favor **lowering portfolio betas across investment styles** (small caps, large caps, value, growth, domestic and international) and resist the urge to chase bear-market rallies.

De-risking served investors well in 2022. For example, the USMV—a diversified low-beta U.S. ETF—outperformed the S&P 500 by 868 bps, while its global counterpart, ACWV, topped the MSCI ACWI by 522 bps. If the Fed (as we expect) stays committed to vanquishing inflation—and ultimately shrinking the Dickensian divide—we believe equity investors should remain cautious in 2023.

While our outlook is somber, we wish to remind you that all economic downcycles and bear markets end. Indeed, our farthest-looking indicators have begun to hint that, sometime in late 2023, economic and monetary conditions could turn, which would present a more opportune time for investors to more aggressively add risk to their portfolios. Until then, we think patience is the better part of valor.

Appendix

DOWNTURN SCENARIOS: OUR BASE CASE IS A DISINFLATIONARY RECESSION

Peak-to-Trough Change Estimate	Mild Recession	Disinflationary Recession	Severe Recession
Real GDP	-1%	-3%	-4%
Nominal GDP y/y	-3%	-10%	-8%
CPI Inflation	-3%	-5%	-6%
WTI Oil	-32%	-69%	-69%
Unemployment Rate	1.9%	3.9%	5.4%
Duration (Months)	8	12	16
Peak S&P 500 NTM EPS (\$/share)	240	240	240
Est. EPS y/y	-15%	-25%	-35%
Est. NTM EPS at Trough	204	180	156
Peak NTM P/E	21.3	21.3	21.3
Est Change in NTM P/E Ratio	-20%	-25%	-35%
Est. S&P 500 NTM P/E Ratio at Trough	16.5	16.0	14.0
Est. S&P 500 at Trough	3350	2900	2200
Est. S&P 500 Peak-to-Trough Decline	-30%	-40%	-54%

Mild: 1960, 1969, 1980, 1990, 2000, Δ Agg. Economic Activity $>-4\%$, or Δ RGDP $>-2\%$

Disinflationary: 1948, 1953, 1957, 1981, 2008, 2020, NGDP $>6\%$

Severe: 1973, 2008, 2020, Δ Agg. Economic Activity $<-6.5\%$, or Δ RGDP $<-3\%$

*Analysis includes only the recessions starting in 1980 onwards.

Source: Neuberger Berman. IMPORTANT: Estimated returns or market levels are hypothetical estimates generated by Neuberger Berman based on various assumptions and inputs, including current market conditions, historical market conditions and subjective views and estimates. These hypothetical returns are for discussion purposes only and are not intended to represent, and should not be construed to represent, predictions of future rates of return. Actual returns may vary significantly. Estimated returns should not be used, or relied upon, to make investment decisions. Indexes are unmanaged and are not available for direct investment. Investing entails risks, including possible loss of principal.

This material is provided for informational purposes only and nothing herein constitutes investment, legal, accounting or tax advice. This material is general in nature and is not directed to any category of investors and should not be regarded as individualized, a recommendation, investment advice or a suggestion to engage in or refrain from any investment-related course of action. Investment decisions and the appropriateness of this material should be made based on an investor's individual objectives and circumstances and in consultation with his or her advisors. Information is obtained from sources deemed reliable, but there is no representation or warranty as to its accuracy, completeness or reliability. All information is current as of the date of this material and is subject to change without notice. Any views or opinions expressed may not reflect those of the firm as a whole. Neuberger Berman products and services may not be available in all jurisdictions or to all client types. Investing entails risks, including possible loss of principal. Indexes are unmanaged and are not available for direct investment. **Past performance is no guarantee of future results.**

The information in this material may contain projections, market outlooks or other forward-looking statements regarding future events, including economic, asset class and market outlooks or expectations, and is only current as of the date indicated. There is no assurance that such events, outlook and expectations will be achieved, and actual results may be significantly different than that shown here. The duration and characteristics of past market/ economic cycles and market behavior, including any bull/bear markets, is no indication of the duration and characteristics of any current or future market/ economic cycles or behavior. Information on historical observations about asset or sub-asset classes is not intended to represent or predict future events. Historical trends do not imply, forecast or guarantee future results. Information is based on current views and market conditions, which will fluctuate and may be superseded by subsequent market events or for other reasons.

The views expressed herein may include those of the Neuberger Berman Equity Research team. The views of the Equity Research team may not reflect the views of the firm as a whole, and Neuberger Berman advisers and portfolio managers may take contrary positions to the views of the Equity Research team. The Equity Research team's leading indicators and research models are based upon a variety of inputs, including markets surveys, market prices and government and economic data. The Equity Research team's views do not constitute a prediction or projection of future events or future market behavior. Discussions of any specific sectors and companies are for informational purposes only. This material is not intended as a formal research report and should not be relied upon as a basis for making an investment decision. The firm, its employees and advisory accounts may hold positions of any companies discussed. Specific securities identified and described do not represent all of the securities purchased, sold or recommended for advisory clients. It should not be assumed that any investments in securities, companies, sectors or markets identified and described were or will be profitable.

This material is being issued on a limited basis through various global subsidiaries and affiliates of Neuberger Berman Group LLC. Please visit www.nb.com/disclosure-global-communications for the specific entities and jurisdictional limitations and restrictions.

The "Neuberger Berman" name and logo are registered service marks of Neuberger Berman Group LLC.

©2023 Neuberger Berman Group LLC. All rights reserved

FIRM HEADQUARTERS

New York
800.223.6448

REGIONAL HEADQUARTERS

Hong Kong
+852 3664 8800

London
+44 20 3214 9000

Tokyo
+81 3 5218 1930

PORTFOLIO MANAGEMENT CENTERS

Atlanta	New York
Bermuda	Paris
Boston	Philadelphia
Buenos Aires	San Francisco
Chicago	Shanghai
Dallas	Singapore
Hong Kong	The Hague
London	Taipei
Los Angeles	Tokyo
Milan	Toronto

OFFICES

AMERICAS

Atlanta
Bermuda
Bogota
Boston
Buenos Aires
Chicago
Dallas
Los Angeles
Morristown
New York
Philadelphia
San Francisco
São Paulo
Tampa
Toronto
West Palm Beach
Wilmington

EUROPE, MIDDLE EAST & AFRICA

Dubai
Dublin
Frankfurt
London
Luxembourg
Madrid
Milan
Paris
Rome
Stockholm
Tel Aviv
The Hague
Zurich

ASIA PACIFIC

Hong Kong
Melbourne
Mumbai
Seoul
Shanghai
Singapore
Sydney
Taipei
Tokyo

NEUBERGER	BERMAN
-----------	--------

Neuberger Berman
1290 Avenue of the Americas
New York, NY 10104-0001

www.nb.com