# Equity Intelligence Report

September 2023

GAMMA INVESTMENT CONSULTING

## Gamma Global Equity Model Highlights

- **The S&P 500 and Nasdaq Models remained neutral (in cash) for September**. Stocks broke their five-month winning streak with the S&P 500 down -1.72% and the Nasdaq dipping -2.22%. The major indexes rallied from their mid-month lows on a weaker-than-expected employment report that investors hoped signaled at least a pause in the Fed's tightening cycle.

- **The Materials sector jumped to the top of the list this month as industrial materials prices showed signs of bottoming.** The Energy sector slipped to second despite the recent resurgence in crude oil prices. The Consumer Discretionary sector continued to languish at the bottom as weaker employment data and drop in savings suggest that the consumer spending binge may be running out of fuel.

- **The Gold Shares Model covered its long position and went neutral for September.** The jump in long-term interest increased the headwind that gold faces despite attractive valuation for both the metal and shares.

- **Pioneer Natural Resources (PXD), with an expected return of 1.31% for September and also a member of the second-ranked Energy sector, is being added to our list of recommended companies**. PG&E Corporation (PCG) was removed from the list due to a negative expected return forecast for September.

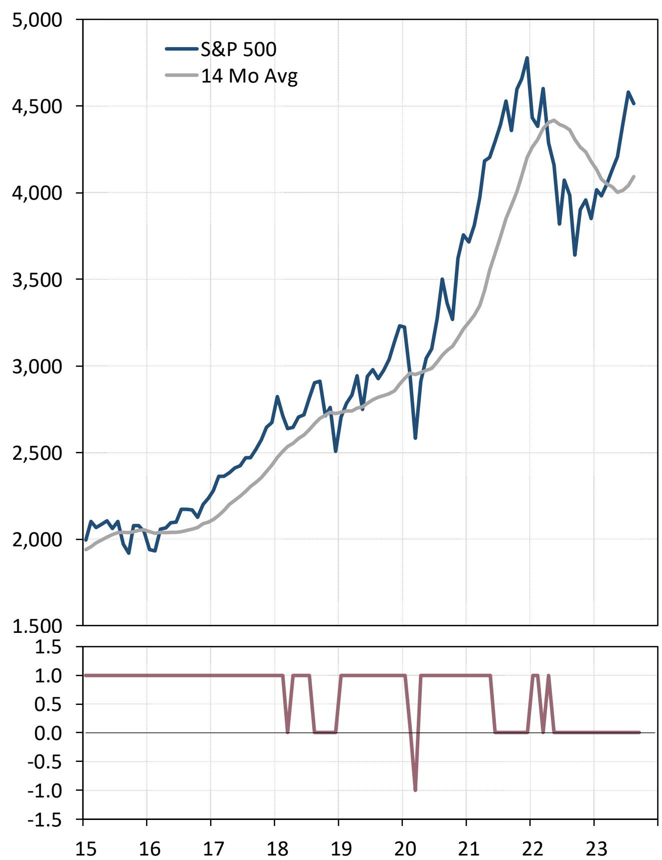
## I. Equity Index Outlook

U.S. equity indexes broke their five-month winning streak in August with the S&P 500 and Nasdaq falling -1.72% and -2.22% respectively. While most market analysts point to the selloff as a correction in a budding bull market, we're not so sure. The Gamma S&P 500 and Nasdaq models remained neutral (in cash) for September as our Model's most reliable long-term indicators still remain bearish on equities (Chart 1).

In our opinion, the August selloff is much more consistent with economic fundamentals than the five-month rally earlier this year. Even with the benefit of hindsight, we have trouble identifying the economic events that justified the March to July rally in the first place. Stock prices peaked in December 2021 when the Fed Funds rate was 0.25%, the 10-year T-Note yielded 1.51%, the yield curve was steeply positively sloped, real money growth was up 29% yr/yr, and earnings were growing at a 50% yr/yr rate. Now, the Fed Funds rate is 5.50%, the 10-year yield is 4.10%, the yield curve is strongly inverted, the money supply

CHART 1

**USA: S&P 500 Model Forecast**



is down -8% from a year ago, and earnings are down -4% over the same period. Despite this, the S&P 500 and Nasdaq are flirting with their previous highs.

The view that this is the beginning of a new bull market is simply not consistent with historical experience. We readily acknowledge that this time could be different. As long-term forecasters we are all too aware that the future doesn't always follow from the past no matter how historically reliable certain leading indicators have been. Our experience has also been that the claim that "this time is different" usually resonates most strongly just about the time the bottom falls out.

We are willing to concede, however, that the bizarre circumstances of the last several years are simply unprecedented in our 40+ years' experience. The U.S. economy has never experienced a combination of a complete economic shutdown followed by record expansion in money supply, near-zero interest rates, and a $10 trillion increase in the national debt followed by surging inflation, a near-record jump in interest rates, and the collapse in money growth to its lowest rate since the 1930's all packaged into a three-year period. For those reasons, if any time really is different, this could be it.

If we believe that this time IS different, we still want to know WHY it's different. And that's where things get dicey. The indicators that have the longest and most accurate track record of predicting the equity market simply do not indicate that we have put in a major bottom. So why are we flirting with the previous all-time highs? There are three plausible explanations:

1) **Extremely bearish investor sentiment.** Investor sentiment hit a record low of -1.9 standard deviations in September 2022 (Chart 2). The market at that point may have already discounted an "end of the world" scenario of higher interest rates leading to a severe recession. Instead, by early 2023 investors became convinced that the Fed was done tightening due to peaking inflation while at the same time the economy remained surprisingly robust. The combination of extremely bearish sentiment plus expectations of improved fundamentals may have triggered the relief rally of the last several months.

   If that's the case, however, investors have not only discounted an end to the Fed's tightening, but they have also priced in the prospect of much lower interest rates AND a strong recovery in

CHART 2

**Market Sentiment**

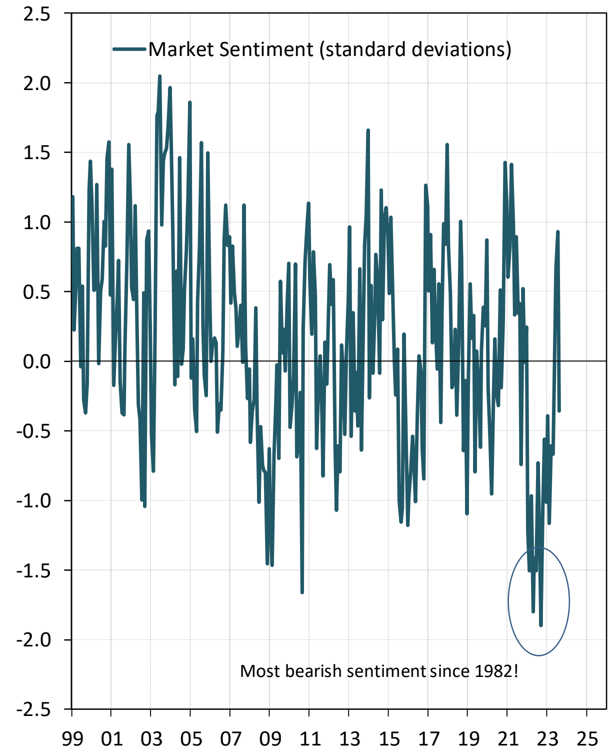
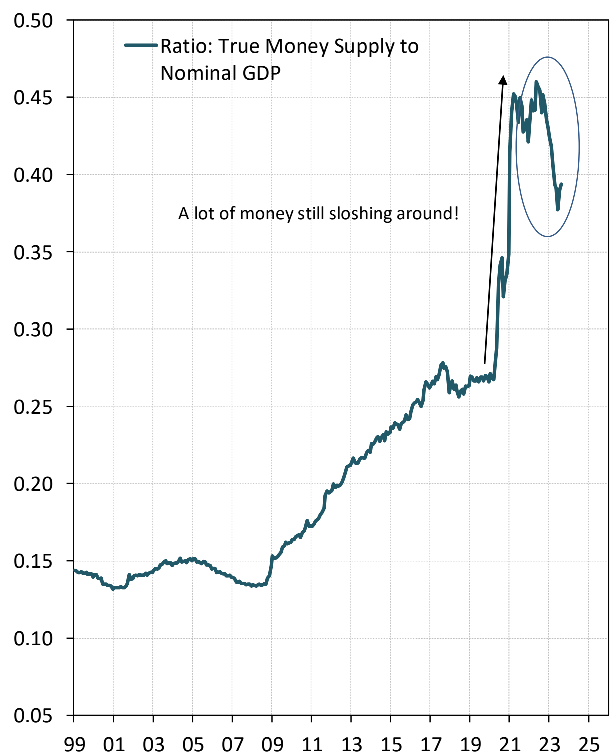



CHART 3

**Ratio: True Money Supply to GDP**



earnings. Investor sentiment, which had overestimated the chances of a collapse in 2022, has now driven valuation above its 2022 peak to levels not seen since before the dot com collapse in 2000-2002.

2) **The lingering effects of the Covid stimulus.** The second explanation is that the Fed's tightening since last year has not materially offset the effect of the massive fiscal and monetary stimulus of the 2020-2022 period. The ratio of money supply per unit of GDP exploded by 73% between the end of 2019 and mid-2022 (Chart 3). That ratio has since only retraced 25% of that 73% increase. In other words, almost 50% of the increase in liquidity (a whopping $5.6 trillion) is still sloshing around the economy bidding up prices, wages, and asset prices. And, while the Fed has raised interest rates 11 times since March 2022, the central bank's balance sheet (which more than doubled by $4.8 trillion) has only retraced $900 billion of that increase. The net effect is that inflation continues to run well above the Fed's 2% target rate while asset prices, especially equities (Chart 4) and real estate remain extremely overvalued (Chart 5).

CHART 4

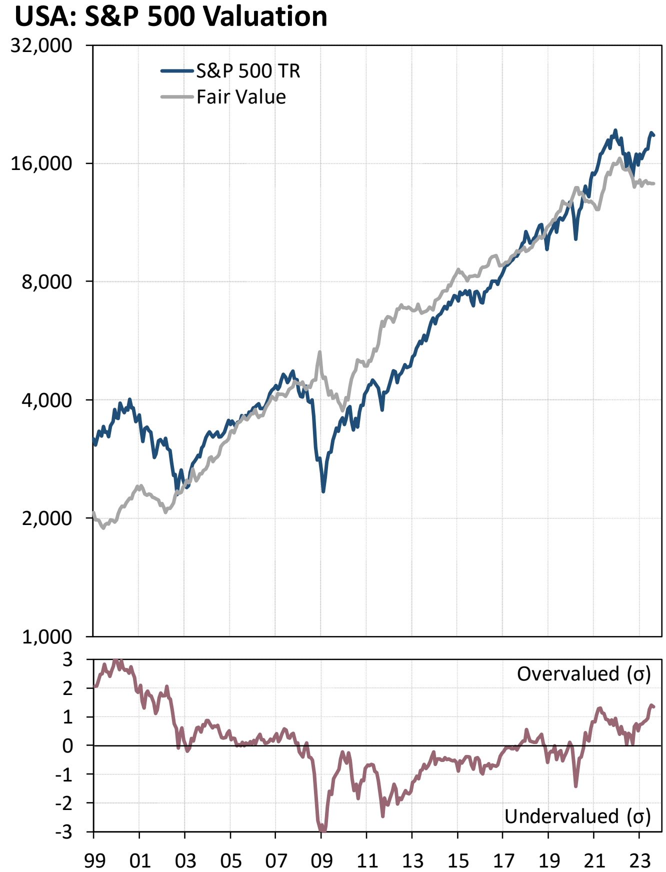
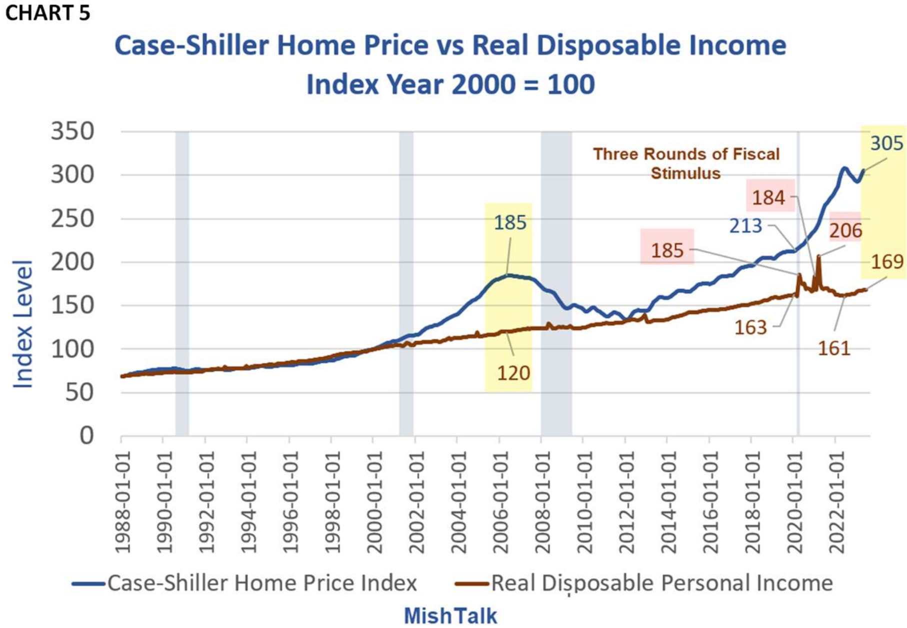



CHART 5




3) **Changing investor expectations.** Investor expectations about future changes in the economy and monetary policy are possibly being incorporated into market prices much faster than they were in the past. For example, the time between declines in real money growth, declines in leading economic indicators, rising interest rates, and yield curve inversions and the subsequent bottom in stock prices has historically averaged 14-15 months. The current cycle has seen the lag against all these indicators average only three months. It's possible that the market has become much more efficient (and correct) in discounting future influences on the market. Of these three

explanations, however, we find this one the least plausible. The reason is that the last two major "down" cycles – 2000-2002 and 2008-2009 – experienced the longest lead times of the post-WW II period. For example, the average lead time between these indicators turning bearish and the subsequent bottom in stocks was 25 months, almost a full year longer than average. A more likely explanation is that the lingering effects of the Covid stimulus are pushing the impact of the tighter monetary policy further into the future.



Regardless of which of these scenarios ends up being correct, the big question is this: is there a scenario in which core inflation declines to the Fed's 2% target rate while equity and real estate prices rise further from their already overvalued levels?

To play devil's advocate, such a scenario is certainly possible. The Fed could maintain interest rates at current levels until borrowing costs fully reflect the higher rates while continuing to drain liquidity at its current pace of $85 billion a month. Economic activity slows below its 2% trend growth allowing inflation to ease to the Fed's 2% target. Under this scenario, markets bid up asset prices by focusing on the long-term prospect of lower interest rates due to the lower inflation rate. Earnings growth remains positive but below trend due to slower economic growth but lower interest rates boost the present value of those earnings allowing higher stock prices.

While certainly possible, we do not believe that this scenario is realistic for several reasons.

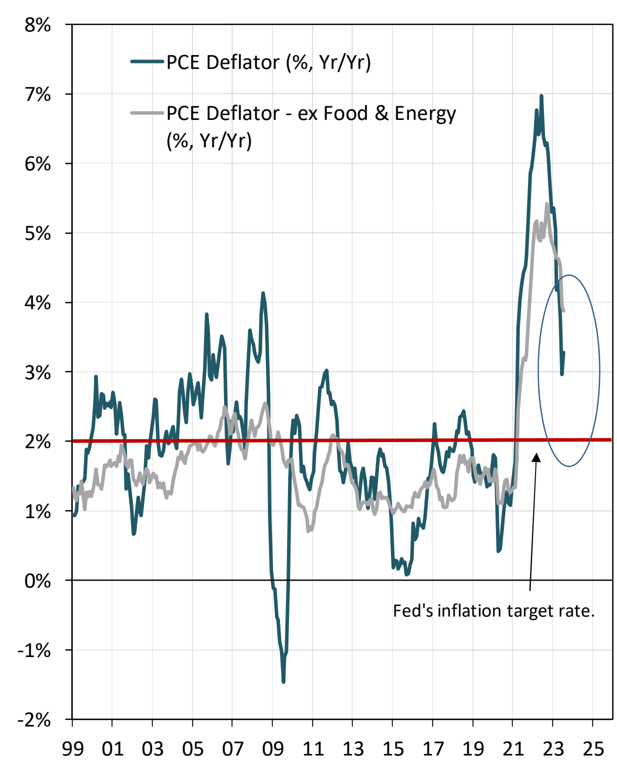
- **Equities are highly overvalued by historical standards**. Some analysts have argued that valuation has improved because the P/E ratio on the S&P 500 has fallen to 25 from its early 2021 peak of 33. The problem is that P/E alone doesn't take into account the effect of interest rates on the present value of those earnings. As we noted above, stocks have rallied back near their previous highs despite much higher interest rates and 10% lower corporate earnings. The Gamma Valuation Model indicates that the S&P 500 and Nasdaq remain 1.4 (28%) and 1.7 (46%) standard deviations above fair value – their highest levels since the collapse of the dot com bubble (Chart 4).

  **According to the Gamma Valuation Model, it would require either 1) a 25% drop in stock prices, 2) a 75% increase in corporate earnings, or 3) a drop in interest rates to 2% (or a combination of the above) to bring equity valuation back to neutral.** The problem is that sharply lower interest rates would likely require a recession which would cause earnings to contract. Conversely, if earnings growth continues to recover due to a strong economy, the Fed will likely have to raise interest rates further to keep inflation headed to its 2% target rate.

- **Short-term interest rates have not peaked**. The inflation rate using the Fed's preferred personal consumption expenditure (PCE) deflator measure fell to a 3.3% yr/yr rate last month from nearly a 7% rate in June 2022 (Chart 6). But the yr/yr rate worsened from a 3% rate the previous month. Moreover, virtually all of the improvement in the last year has been due to a drop in goods prices, especially food and energy. The PCE deflator excluding food and energy has

CHART 6

**Headline vs "Core" PCE Inflation**



fallen much more modestly from a 5.3% rate to 3.9%. Energy prices are down -15% from their year ago levels, while food prices are down -8%. These prices are threatening to add to inflation going forward. Energy prices have surged 22% since bottoming in May, and food prices have been largely unchanged since May after declining sharply from their mid-2022 peak (Chart 7). The much "stickier" PCE services inflation was 5.2% last month and has hardly budged from its 5.8% peak. **Our view is that the Federal Reserve will need to raise rates further or will need to keep interest rates at current levels for an extended period of time to slow the economy enough to reduce inflation to 2%. The prospect of "higher for longer" and the need for a possible recession precludes a "Goldilocks" scenario which doesn't end with another significant pullback in equity prices.**

CHART 8

**Interest Rates: United States**

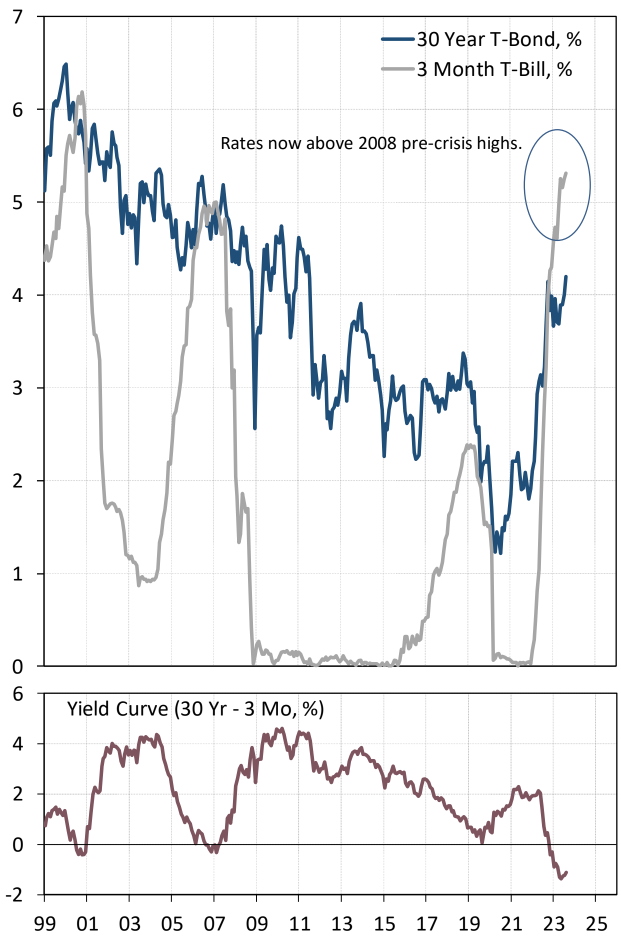
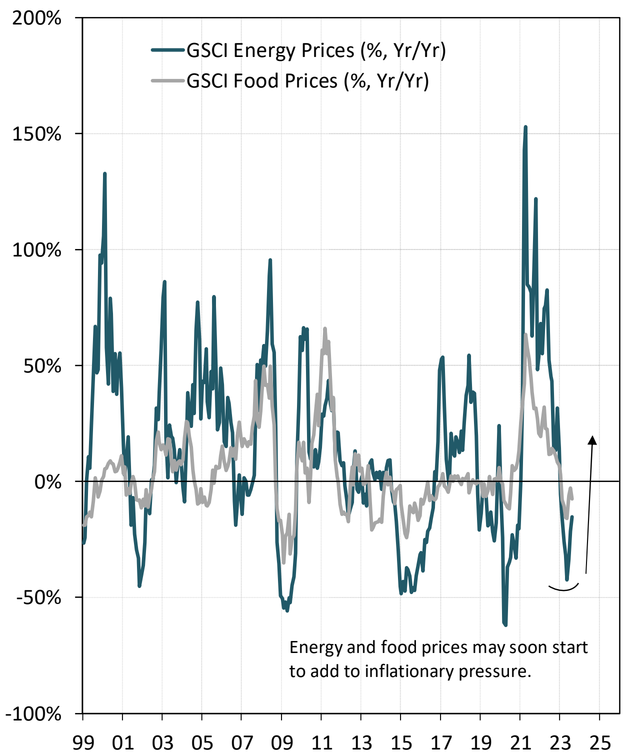



CHART 7

**Energy and Food Price Inflation**






• **<u>Lower rates don't automatically mean higher stock prices</u>**. Investors since February have signaled an "all clear" just because the Fed MAY be close to the end of its tightening cycle. History shows us, however, that far from signaling "all clear," this is where the real fireworks begin. **Stock prices have historically bottomed on average ten months after the Fed has stopped tightening**. There have only been two instances since WW II in which stock prices bottomed before the Fed ended its tightening. One of these cases was in 1980 when the Fed implemented its unusual and short-lived Credit Restraint Program which caused a collapse in bank lending that triggered the 1980 recession. Given that we expect at least one more Fed rate hike this year, that would imply that a bottom in equity prices isn't likely before the middle of 2024.

• **<u>The yield curve remains strongly inverted.</u>** Despite the recent sharp rise in bond yields as a result of the surge in U.S. Treasury borrowing, both the 2-10 and 3-30 yield curves remain extremely inverted (Chart 8). The inverted curves are contributing to a sharp slowdown in bank lending which will feed through to slower money growth. Growth in bank credit slumped to a 5% yr/yr rate last month - with virtually no growth since April - compared to a 12% rate just six months ago. Both yield curves have typically steepened to a normal shape due to falling short-term interest rates ahead of any sustained recovery in stock prices.

- **Liquidity remains abysmal**. **The Gamma Composite Liquidity Indicator (CLI) is showing signs of bottoming but remains just above an 80-year low dating back to the 1930's** (Chart 9). The CLI has historically turned negative an average of 22 months before stock prices bottom. Moreover, despite recent signs that the worst of the liquidity squeeze may be over, stock prices have generally not begun new bull markets until the CLI has turned positive which is still a long way off from its current level especially with weaker bank lending likely to weigh on money growth.

- **The Fed will continue to reduce its balance sheet.** The Federal Reserve will likely continue to reduce the size of its balance sheet regardless of its interest rate policy. The Fed's balance sheet ballooned by $4.8 trillion during the Covid pandemic. Since starting it tightening cycle last year, the Fed has targeted a monthly reduction in its balance sheet of $85 billion. The central bank has trimmed $900 billion of the $4.8 trillion added and is expected to continue the process causing a steady drain of liquidity from the banking system (Chart 10).

- **A weaker economy may still sink corporate earnings.** Corporate earnings have been on a massive roller coaster ride since the Covid pandemic. Earnings growth jumped to a record 68% yr/yr rate in mid-2022 following the massive fiscal and monetary stimulus. Earnings subsequently collapsed to a -9.2% rate this past June as the Fed moved into tightening mode. Earnings have since shown signs of recovering with 12-month trailing earnings having risen the past four month in a row including a surprisingly strong 1.8% gain last month. Sustained recoveries in earnings growth have historically begun 3-6

CHART 9

**Composite Liquidity Indicator**

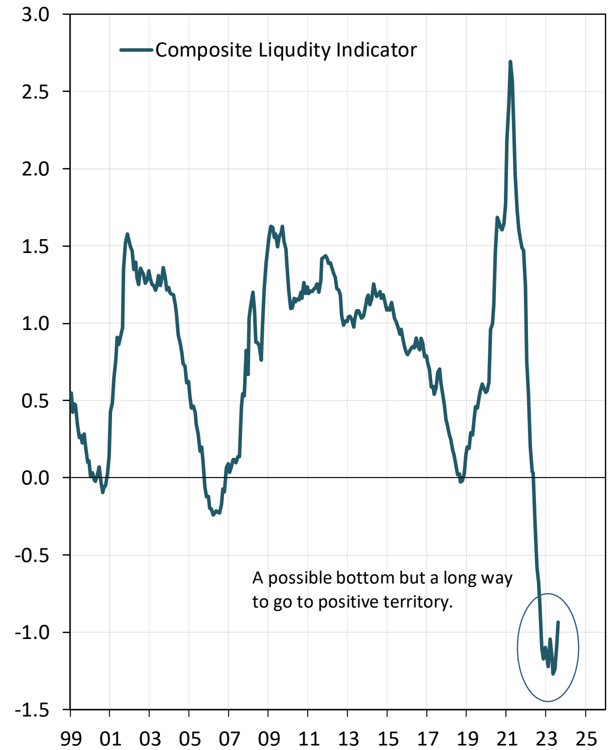
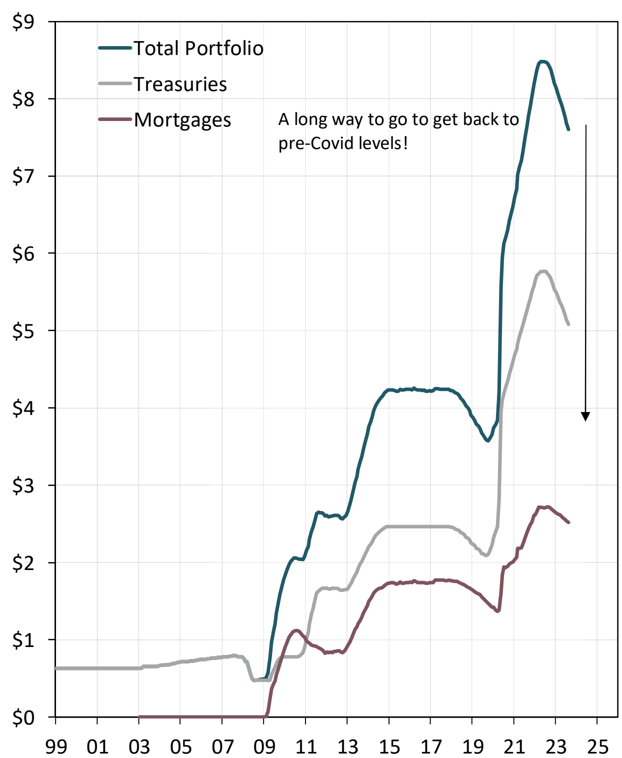



CHART 10

**Federal Reserve Balance Sheet (Trillion $)**



months after the 12-month change in the Conference Board's Index of Leading Indicators (LEI) turns positive (Chart 11). The LEI, however, is currently nowhere near turning positive. **The LEI has dropped 16 months in a row and was down -7.7% yr/yr at the end of August.** Despite this the economy has managed to avoid the most widely anticipated recession in decades. A strong labor market driving strong consumer spending has kept the economy afloat despite the second sharpest rise in interest rates in 60 years.

There are signs however, that the good times may be coming to an end. Second quarter GDP growth was revised down to 2.1% from a preliminary 2.4%. Even more interesting is the divergence between real GDP growth and growth in real domestic income (Chart 12). These two series are normally about 85% correlated with each other since growth in output is directly related to growth in income. Over the last three quarters, however, GDP has registered a surprising average annual growth of 2.2%. In contrast, real gross domestic income has declined at a -1.5% annual rate in the same period. Based on real income rather than real GDP, the economy actually entered a recession in the fourth quarter 2022. This discrepancy may help explain why the "most widely anticipated recession" hasn't occurred: it actually has based on income growth.

Economists have argued that the economy's surprising strength has been due to a robust labor market. A few cracks appeared in that argument last month. The Department of Labor reported that job openings last month cratered from 9.582 million to just 8.827 million, the first sub-9 million report since March 2021. The consensus forecast had called for 9.5 million job openings. In addition, every report for the past five months was revised downward including a whopping 417,000 downward revision to July's number. Adding to this was nonfarm payrolls which, while increasing by 187,000 jobs last month, saw growth drop well below the monthly average gain of 271,000 over the past 12 months. The unemployment rate edged up to 3.8% from 3.5%, though most of that increase was due to an unexpectedly large 736,000 increase in new people

**CHART 11**

**LEI vs Corporate Profits**

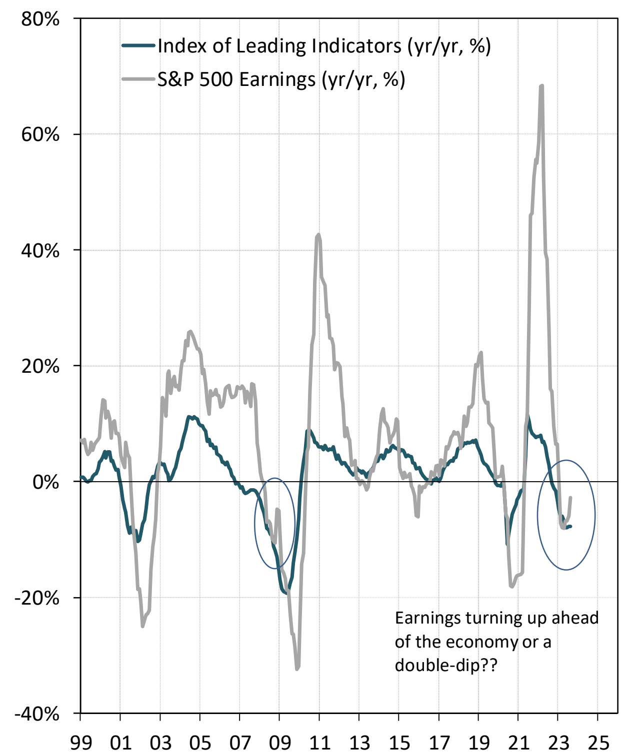
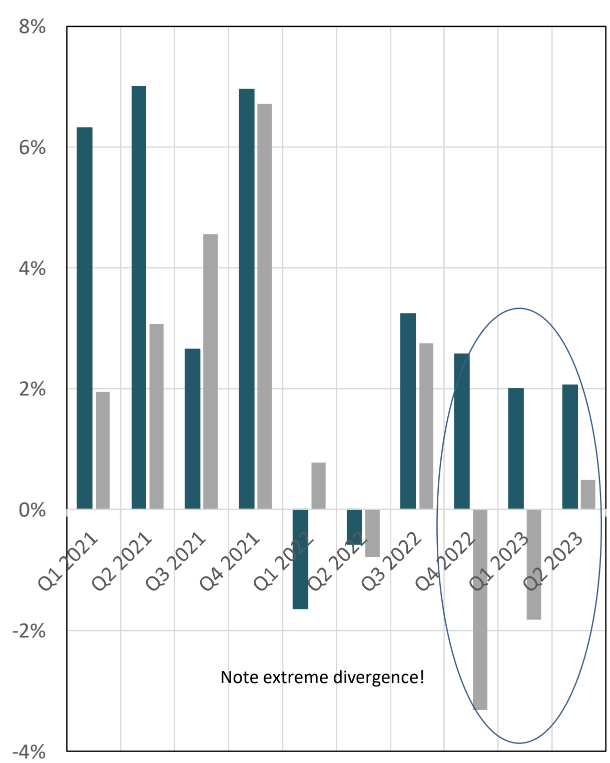



**CHART 12**

**Real GDP vs GDI (annualized, %)**



seeking jobs. These number bring the labor market largely back in line with its pre-Covid condition. The LEI suggests that further weakness in employment is likely to emerge putting downward pressure on the consumer sector that accounts for 68% of GDP. That would be expected to spill over to earnings growth.



## II. Equity Sector Outlook

Sector forecasts were largely unchanged with the exception of two sectors. Materials jumped to the top of the list with an expected return of 0.45%, while Gold Shares plummeted to the bottom of the list after turning moderately positive a month ago. Energy, which has generally held the first or second spot on for the past year, slipped to second with an expected return of 0.38%, down from 0.72% in August. Consumer discretionary continued to struggle with an expected return of -0.91% for September (Table 1).

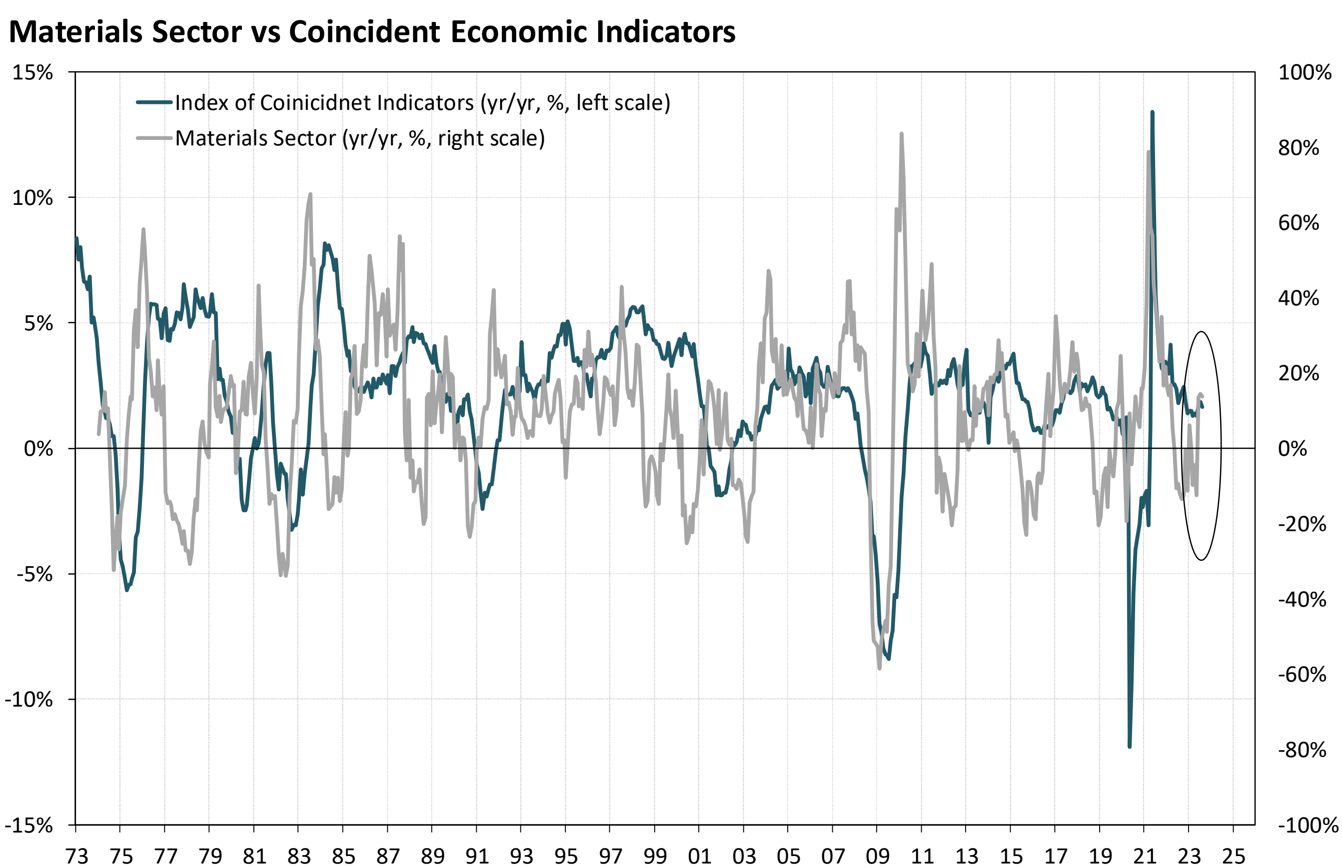
The jump of the Materials sector to the top spot was a bit of a surprise given the weakness in the Index of Leading Indicators (LEI). History shows, however, that the Materials sector has tended to rally even as the economy sinks into recession. Chart 13 shows the yr/yr change in the Index of Coincident Indicators (CEI) – a

**TABLE 1**

**1 MO STOCK SECTOR MODEL FORECASTS (%)**

| Sector | Ticker | 1 Mo Forecast |
|---|---|---|
| Materials | XLB | 0.45% |
| Energy | XLE | 0.38% |
| Health Care | XLV | 0.29% |
| Consumer Staples | XLP | 0.19% |
| Financials | XLF | 0.09% |
| Technology | XLK | 0.02% |
| Communications Services | XLC | -0.02% |
| Utilities | XLU | -0.24% |
| Industrials | XLI | -0.34% |
| Real Estate | XLRE | -0.50% |
| Consumer Discretionary | XLY | -0.91% |
| Gold Miners | | -0.95% |

**CHART 13**



monthly proxy for real GDP growth – and the change in the Materials sector index. The Materials Index is clearly turning up ahead of an upturn in economic growth, just as it has in previous cycles. What is puzzling about this cycle is that the Index is turning up while growth in the CEI is still positive. Virtually all previous upturns in the Index followed major selloffs when GDP was contracting. It will be interesting to see if the Materials Index is predicting a reacceleration in growth or, as we believe, that we are headed for a "double dip" with the economy slowing the balance of 2023 and especially into 2024.



Energy, on the other hand, is fully justified holding the second spot on the list. The sector is by far the cheapest with valuation -2.3 standard deviations below normal (-47%, Table 2). Crude oil prices have rallied over $20 from their mid-June lows and are poised to test $95/barrel (Chart 14). Saudi Arabia and Russia have both announced plans to continue to cut production by a combined 1.333 million barrels a day through at least the rest of the year. The U.S. government is also beginning to slowly refill the Strategic Petroleum Reserve (SPR). The SPR was drained almost 50% between June 2020 and July 2023 to keep downward pressure on oil prices following last year's jump to over $130/barrel. Just the lack of selling from the reserve will keep upward pressure on prices. The major uncertainty in this sector is Chinese demand which will be heavily influenced by the uncertain economic outlook for the country.

**TABLE 2**
**SECTOR VALUATION ANALYSIS**

| Sector | Valuation (σ) | Valuation (%) |
|---|---|---|
| Consumer Discretionary | +2.45 | +61% |
| Communication Services | +2.20 | +61% |
| Technology | +1.90 | +63% |
| Health Care | +1.50 | +34% |
| Utilities | +1.46 | +21% |
| Materials | +1.10 | +17% |
| Industrials | +0.76 | +16% |
| Consumer Staples | -0.01 | -0% |
| Real Estate | -0.30 | -9% |
| Financials | -0.79 | -19% |
| Gold Mining Shares | -1.04 | -31% |
| Energy | -2.30 | -47% |

At the other extreme is Consumer Discretionary. This sector has been at or near the bottom of the list for the last several months due to extreme overvaluation and expectations of a pullback in consumer spending. Our Gamma Valuation Mode l estimates that the Consumer Discretionary sector is a whopping 2.45 standard

**CHART 14**
**WTI Crude Oil Price**

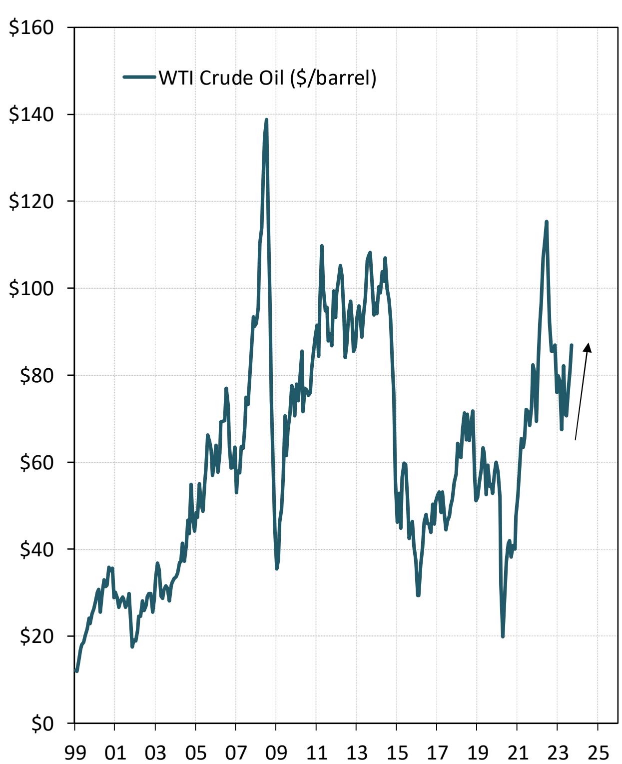
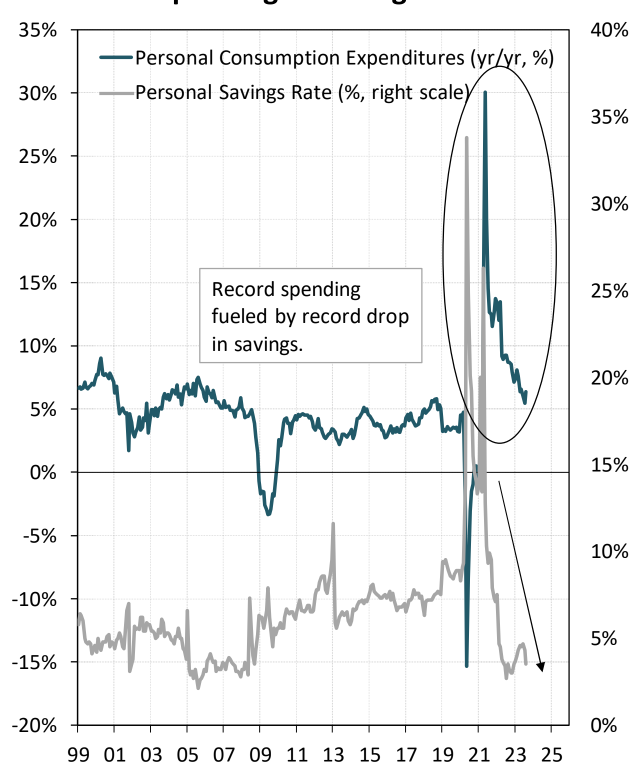



**CHART 15**
**Consumer Spending vs Savings**



deviations overvalued (61%, Table 2). U.S. consumers have been on a tear since the beginning of 2021 (Chart 15). Most of that spending has been fueled by the billions in unemployment benefits and fiscal and monetary stimulus that the federal government threw at the economy in response to the Covid shutdown. The personal savings rate has dropped to a near-record-low of 3.5%. **That raises the question of how consumers can maintain this pace with interest rates at 20-year highs, bank lending drying up, and money growth at its weakest since the 1930's**. Consumer spending historically has turned down about a year after the yr/yr change in the LEI turns negative. The LEI turned negative 11 months ago, so the consumer is right on schedule to start reigning in spending.

At the bottom of the list is, surprisingly, Gold Mining shares. The sector has the second most favorable valuation, -1 standard deviation below fair value. The sector's inability to make any sustained headway is due to the same factors weighing on gold. Even with last month's -1.4% dip, the price of gold is up a respectable 18.4% from its October 2022 low. Gold tested the $2,000 price level in May on the expectation that the Fed was through tightening. Instead, surprisingly strong growth and only slow inflation improvement has investors concerned that either rates will stay at current levels for an extended period or the Fed will be forced to raise rates again. Attractive valuation has allowed the metal and shares to gradually work their way higher, but the prospect of higher rates has capped any attempt to break out to new highs. Until the market becomes convinced that the Fed is through tightening, trading is likely to re-main choppy as attractive valuation is offset by the prospect of higher interest rates. **We continue to encourage long-term investors to take advantage of weakness in the sector to add to long positions in both metals and gold mining shares.**

## III. Stock Recommendations and Review

The Gamma Company Model starts September with 14 names on our "hold long" list of companies. PG&E Corporation (PCG) was removed from the list due to a negative expected return forecast for September. Pioneer Natural Resources (PXD) with an expected return of 1.31% and strong positive factor momentum was added to the list. No other companies were removed from last month's list as all the other names continue to have expected return forecasts well above the average for the S&P 500 stocks (Table 3).

The portfolio overall lagged the S&P 500 return by -3.4% at the end of August. As we noted last month, most of this underperformance continues to be due the lack of high-flying tech names on our list. Most of the return on the S&P 500 this year has been fueled by the so-called "Magnificent 7." The explosive growth of a handful

**TABLE 3**

**GAMMA COMPANY MODEL - Recommended List Performance** — As of: Aug 31, 2023

| Sector | Ticker | Entry Price | Closing Price 8.31.23 | % Change | Trade Date | S&P 500 % Change | Excess Return |
|---|---|---|---|---|---|---|---|
| Altria Group, Inc. | MO | $47.63 | $44.22 | -7.2% | 12.2.22 | 10.7% | -17.9% |
| Celanese Corp. | CE | $122.12 | $125.30 | -0.8% | 2.6.23 | 9.7% | -10.5% |
| Centene Corp. | CNC | $63.21 | $61.65 | -2.5% | 3.31.23 | 14.1% | -16.6% |
| DaVita Inc. | DVA | $90.36 | $102.42 | 13.4% | 4.28.23 | 8.1% | 5.2% |
| EQT | EQT | $41.13 | $43.22 | 5.1% | 6.30.23 | 1.7% | 3.4% |
| Henry Schein Inc. | HSIC | $78.31 | $76.54 | -2.3% | 3.1.23 | 14.1% | -16.3% |
| Kroger Co. | KR | $47.57 | $46.39 | -2.5% | 12.2.22 | 10.7% | -13.2% |
| McKesson Corp. | MCK | $313.34 | $412.32 | 31.6% | 6.10.22 | 15.6% | 16.0% |
| ONEOKE Inc. | OKE | $68.20 | $65.20 | -4.4% | 2.6.23 | 9.7% | -14.1% |
| Pioneer Natural Resources | PXD | $237.93 | $237.93 | 0.0% | 8.31.23 | 0.0% | 0.0% |
| Pulte Group | PHM | $57.48 | $82.06 | 42.8% | 2.6.23 | 9.7% | 33.1% |
| Sempra | SRE | $71.77 | $70.22 | -2.2% | 5.31.23 | 7.8% | -10.0% |
| Skywork Solutions Inc. | SWKS | $93.96 | $108.74 | 15.7% | 12.2.22 | 10.7% | 5.0% |
| WEC Energy | WEC | $87.35 | $84.12 | -3.7% | 5.31.23 | 7.8% | -11.5% |
| | | | | | | AVERAGE | -3.4% |

of tech giants has played a pivotal role in the market's gain this year.  Companies like Apple (AAPL), Microsoft (MSFT), Alphabet (GOOGL), Amazon (AMZN), Nvidia (NVDA), Tesla (TSLA) and Meta Platforms (META) have all seen impressive gains since the beginning of the year despite being in sectors that are about two standard deviations overvalued.

The new name being added, Pioneer Natural Resources (PXD, $237.93), has an expected return of 1.31% for September and is also a member of the second-ranked Energy sector.



- PXD operates as an independent oil & gas exploration and production company. The Company explores for, develops, and produces oil, natural gas liquids (NGLs) and gas in the Sprayberry/Wolfcamp fields of the Midland Basin in West Texas.
- The company is the 6th-rated stock for September based on our Gamma Company Model forecast for the S&P 500 stocks, with a forecasted one-month price gain of +1.31% and a previous month (August) forecast gain of +1.03%.  Energy is the second highest rated sector for September.
- Analyst coverage:  32 analysts cover PXD and the recommendations are 6 strong buys, 10 buys, 14 holds and 2 underperforms.  The price target ranges from $332.00 - $225.00.
- Trades at a Forward P/E (NTM) of 11.9 and pays a dividend with a 6.81% yield (includes variable dividend).
- On its Q2 2023 conference call, PXD's CEO Scott Sheffield correctly predicted "Saudia Arabia to extend their 1 million-barrel-a-day cut they initiated July 1 toward the end of '23."
- U.S. producers are managing growth by limiting drilling and the Strategic Petroleum Reserve (SPR) is at a 40-year low.  Oil demand remains resilient with China's economy being the wildcard.
- These factors are "supportive for oil pricing in the $80 to $100 range for the remainder of '23 and through '24 on," in Sheffield's view.
- PXD plans to return at least 75% of its free cash flow to investors each year through current dividend, share repurchases plus variable dividends.
- Its base dividend has grown for six straight years (14% in 2023).
- The company stock repurchase program is significant ($2.1 billion since initiating the program in January 2022). This represents a 4% reduction in total outstanding shares.  Pioneer recently authorized a new $4 billion program, equal to 7% of its outstanding shares, at its current market cap of $56 billion.
- Pioneer will pay an additional variable dividend each quarter to reach its 75% payout target. It paid an extra $0.59 per share in the third quarter, putting its total dividend payment at $1.84 per share (a 3.1% annualized yield).


-Karl Chalupa and N. Claude Colabella

Mr. Chalupa is the CIO and Co-Founder of Gamma Investment Consulting and Editor of the Gamma Intelligence Reports. He is also President of Gamma Capital LLC, a quantitative global macro investment firm. Mr. Chalupa developed the Gamma Investment Program used for previously trading the firm's $400 million global macro program. He was previously Director of Risk Management at Titan Advisors LLC, a $4.5 billion alternative investments firm. Mr. Chalupa was also Managing Director of the Currency and Alternative Investment Strategies Groups at State Street Global Advisors (SSGA) where he developed a $9 billion currency overlay program and launched SSGA's first hedge fund based on his Gamma Model. Mr. Chalupa spent 13 years at ABN Amro Bank where he traded interest rate and currency derivatives and was Manager of the Proprietary Trading and Economic Research Desk. He began his career as an economist for the Federal Reserve Bank of Chicago. Mr. Chalupa holds an MA in Economics from Brown University, graduated magna cum laude from Northern Illinois University with BAs in Economics and Political Science, and is Series 3 registered.

Mr. Colabella is the Chief Operating Officer, Co-Founder of Gamma Investment Consulting and Co-Editor of the Gamma Equity Intelligence Report. He was previously Director of Communications and Investor Relations at Titan Advisors, LLC, a $4.5 billion alternative assets solutions firm. Mr. Colabella has equity research experience with working at Petroleum Research Group, Inc. (Rye, NY), an independent energy equity research boutique and at John S. Herold, Inc., a leading petroleum research and consulting firm. He was a Managing Partner at Alpha Beta Alternative Investments, Inc., an alternative investment boutique that managed Alpha Beta Partners, LP, a multi-strategy "fund of funds". Mr. Colabella holds an MBA in Finance from Duke University, Fuqua School of Business. He graduated magna cum laude from Manhattan College, with a BS BA in Economics and is Series 7 and 63 registered.

# Gamma Equity Model Forecasts for September 2023

**TABLE 1**

**1 MONTH STOCK INDEX MODEL FORECASTS (%)**

| Country | Stock Index | Price | 1 Mo Forecast | Previous Forecast | Position | Trade | Updated |
|---|---|---|---|---|---|---|---|
| **USA** | **S&P 500** | 4,514.87 | 0.00% | 0.00% | Neutral | Hold | 8/31/23 |
| **USA** | **Nadaq** | 14,093.70 | 0.00% | 0.00% | Neutral | Hold | 8/31/23 |
| **Canada** | **S&P/TSX 60** | 1,221.82 | 0.00% | 0.00% | Neutral | Hold | 8/31/23 |
| **Mexico** | **IPC** | 54,223.96 | 0.67% | 0.72% | Long | Hold | 8/31/23 |

**TABLE 2**

**1 MONTH STOCK SECTOR MODEL FORECASTS (%)**

| Sector | Ticker | 1 Mo Forecast | Previous Forecast | Updated |
|---|---|---|---|---|
| **Materials** | **XLB** | 0.45% | -0.06% | 8/31/23 |
| **Energy** | **XLE** | 0.38% | 0.72% | 8/31/23 |
| **Health Care** | **XLV** | 0.29% | 0.13% | 8/31/23 |
| **Consumer Staples** | **XLP** | 0.19% | 0.31% | 8/31/23 |
| **Financials** | **XLF** | 0.09% | -0.24% | 8/31/23 |
| **Technology** | **XLK** | 0.02% | 0.11% | 8/31/23 |
| **Communications Services** | **XLC** | -0.02% | -0.13% | 8/31/23 |
| **Utilities** | **XLU** | -0.24% | -0.30% | 8/31/23 |
| **Industrials** | **XLI** | -0.34% | -0.53% | 8/31/23 |
| **Real Estate** | **XLRE** | -0.50% | -0.37% | 8/31/23 |
| **Consumer Discretionary** | **XLY** | -0.91% | -1.15% | 8/31/23 |
| **Gold Miners** | | -0.95% | 0.29% | 8/31/23 |

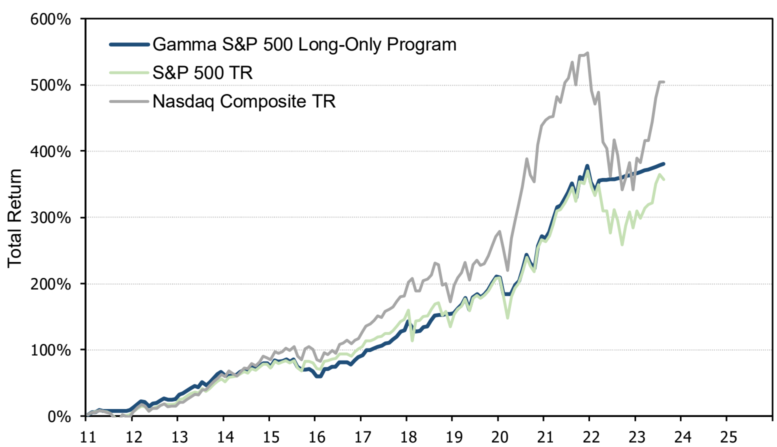
**TABLE 3**

**1 MONTH COMPANY STOCK PRICE FORECASTS (%)** **Updated: Aug 31, 2023**

| Company | Ticker | Closing Price | 1 Mo Forecast | Previous Forecast | Change | % Off 52 Wk High | Forward P/E | Dividend Yield | Factor Momentum |
|---|---|---|---|---|---|---|---|---|---|
| **INSULET** | **PODD** | **$191.71** | 1.74% | 0.73% | 1.00% | -39.9% | 93.16 | 0.00% | **Positive** |
| **HERSHEY** | **HSY** | **$214.86** | 1.51% | 1.19% | 0.32% | -21.3% | 21.60 | 2.22% | **Positive** |
| **RALPH LAUREN CL.A** | **RL** | **$116.63** | 1.43% | 0.96% | 0.47% | -11.2% | 11.73 | 2.57% | **Positive** |
| **WESTERN DIGITAL** | **WDC** | **$45.00** | 1.35% | 0.93% | 0.42% | 0.0% | NA | 0.00% | **Positive** |
| **TRIMBLE** | **TRMB** | **$54.79** | 1.34% | 1.25% | 0.09% | -13.4% | 18.24 | 0.00% | **Positive** |
| **PIONEER NTRL.RES.** | **PXD** | **$237.93** | 1.31% | 1.03% | 0.29% | -7.2% | 10.65 | 6.92% | **Positive** |
| **NEXTERA ENERGY** | **NEE** | **$66.80** | 1.19% | 0.44% | 0.75% | -21.5% | 20.24 | 2.80% | **Positive** |
| **EXPEDIA GROUP** | **EXPE** | **$108.39** | 1.14% | 1.13% | 0.02% | -11.5% | 9.94 | 0.00% | **Positive** |
| **DAVITA** | **DVA** | **$102.42** | 1.14% | 0.93% | 0.21% | 0.0% | 13.44 | 0.00% | **Positive** |
| **WEC ENERGY GROUP** | **WEC** | **$84.12** | 1.12% | 0.59% | 0.53% | -18.4% | 17.71 | 3.71% | **Positive** |
| **EVEREST GROUP** | **EG** | **$360.68** | 1.12% | 0.87% | 0.25% | -6.1% | 6.36 | 1.83% | **Positive** |
| **FIRSTENERGY** | **FE** | **$36.07** | 1.12% | 0.56% | 0.56% | -14.0% | 13.67 | 4.32% | **Positive** |
| **MONDELEZ INTERNATIONAL CL.A** | **MDLZ** | **$71.26** | 1.10% | 0.71% | 0.39% | -7.1% | 20.86 | 2.39% | **Positive** |
| **STEEL DYNAMICS** | **STLD** | **$106.59** | 1.10% | 1.10% | 0.00% | -15.5% | 9.37 | 1.59% | **Positive** |
| **CONSOLIDATED EDISON** | **ED** | **$88.96** | 1.08% | 0.67% | 0.42% | -9.7% | 17.54 | 3.64% | **Positive** |
| **L3HARRIS TECHNOLOGIES** | **LHX** | **$178.09** | 1.07% | 0.63% | 0.43% | -27.7% | 13.61 | 2.56% | **Positive** |
| **EDISON INTL.** | **EIX** | **$68.85** | 1.04% | 0.95% | 0.09% | -6.5% | 14.03 | 4.28% | **Positive** |
| **MCKESSON** | **MCK** | **$412.32** | 1.02% | 0.95% | 0.07% | -3.5% | 14.73 | 0.60% | **Positive** |
| **ALLIANT ENERGY (XSC)** | **LNT** | **$50.17** | 1.01% | 0.50% | 0.51% | -17.8% | 16.86 | 3.61% | **Positive** |
| **SEAGATE TECHNOLOGY HOLDINGS** | **STX** | **$70.79** | 0.94% | 0.57% | 0.37% | 0.0% | 48.79 | 3.96% | **Positive** |
| **DTE ENERGY** | **DTE** | **$103.38** | 0.92% | 0.38% | 0.54% | -20.7% | 16.02 | 3.69% | **Positive** |
| **BOOKING HOLDINGS** | **BKNG** | **$3,105.03** | 0.88% | 0.83% | 0.06% | 0.0% | 19.36 | 0.00% | **Positive** |
| **LAM RESEARCH** | **LRCX** | **$702.40** | 0.87% | 0.40% | 0.46% | -2.2% | 23.70 | 1.14% | **Positive** |
| **GENERAL MILLS** | **GIS** | **$67.66** | 0.86% | 0.58% | 0.28% | -23.7% | 14.97 | 3.49% | **Positive** |
| **INTERNATIONAL PAPER** | **IP** | **$34.92** | 0.86% | 0.83% | 0.03% | -16.5% | 15.57 | 5.30% | **Positive** |

# Gamma Model Performance Summary – August 2023

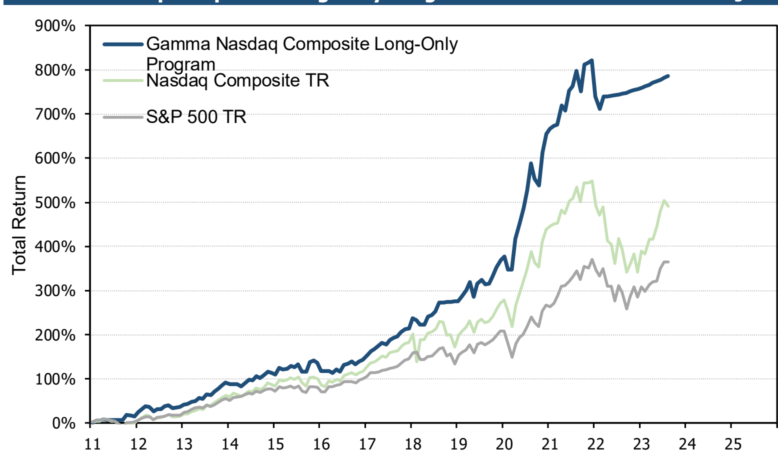
**Gamma S&P 500 Long-Only Program** Jan 2011 - Aug 2023




| Historical Performance | Program | BM1 | BM2 |
|---|---|---|---|
| Compound ROR | 13.2% | 12.8% | 15.3% |
| Cumulative Return | 481.1% | 357.4% | 504.3% |
| Cumulative VAMI | $4,811 | $4,574 | $6,043 |
| Best Month | 10.9% | 13.9% | 20.7% |
| Worst Month | -8.2% | -17.7% | -20.9% |
| % Positive Months | 78.9% | 70.4% | 66.4% |
| **Historical Risk** | **Program** | **BM1** | **BM2** |
| Standard Deviation | 9.8% | 15.7% | 18.7% |
| Sharpe Ratio (1.0% RFR) | 1.24 | 0.75 | 0.76 |
| Sortino Ratio (1.0% RFR) | 1.70 | 1.14 | 1.26 |
| Downside Deviation | 7.2% | 10.3% | 11.4% |
| Maximum Drawdown | -14.1% | -23.8% | -31.8% |
| Months In Maximum Drawdown | 18 | 20 | 20 |

BM1: S&P 500 Total return
BM2: Nasdaq Composite Total Return

**Gamma Nasdaq Composite Long-Only Program** Jan 2011 - Aug 2023




| Historical Performance | Program | BM1 | BM2 |
|---|---|---|---|
| Compound ROR | 18.8% | 15.1% | 12.9% |
| Cumulative Return | 885.7% | 491.3% | 364.8% |
| Cumulative VAMI | $8,857 | $5,913 | $4,648 |
| Best Month | 15.5% | 20.7% | 13.9% |
| Worst Month | -9.0% | -20.9% | -17.7% |
| % Positive Months | 77.6% | 65.8% | 71.1% |
| **Historical Risk** | **Program** | **BM1** | **BM2** |
| Standard Deviation | 12.8% | 18.7% | 15.6% |
| Sharpe Ratio (1.0% RFR) | 1.39 | 0.75 | 0.76 |
| Sortino Ratio (1.0% RFR) | 2.12 | 1.25 | 1.15 |
| Downside Deviation | 8.4% | 11.3% | 10.3% |
| Maximum Drawdown | -12.0% | -31.8% | -23.8% |
| Months In Maximum Drawdown | 20 | 20 | 20 |

BM1: Nasdaq Composite Total Return
BM2: S&P 500 Total Return

**Past performance is not indicative of future results**

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