Q3 2022 OUTLOOK: AN INVESTOR'S GUIDE TO MAKING BAD DECISIONS

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Information used to be scarce. Before the internet, data moved slowly and expensively. And worse, after printing, binding, and shipping, it was out of date by the time it was received. Back then, investment research meant a trip to the periodicals desk at the local library to pull down musty binders of *Value Line* and *Standard and Poor's*.

Those days are gone. Investors have gone from a trickle in the Sahara to being dropped in the ocean. They now have access to more data than any investors in human history.

Remarkably, this information abundance has not improved investment results. Equity investors still struggle to outperform index funds. They are subject to the same bubbles, crashes, and the madness of crowds that a 1630s tulip bulb trader would recognize. We're only human after all.

The lack of improved acumen is inherent in how we process information. Our minds are Stone Age while our data is Space Age. Access to large amounts of data consistently brings out certain all-too-human mental traps. Awareness of those traps is a key step to becoming a better investor.

After a review of Q2 market activity, we discuss how the never-ending accumulation of information leads to overconfidence and bad decisions, and what investors can do about it.

2022 Q2 Economic Summary and Market Performance

In a word: Ouch! Market headwinds crushed returns. The S&P 500 dipped into bear market territory, high inflation brought rising interest rates, and now the U.S. is on the cusp of recession. Unemployment numbers continue to be a bright spot. However, the biggest mystery is: *Where are all the workers?*

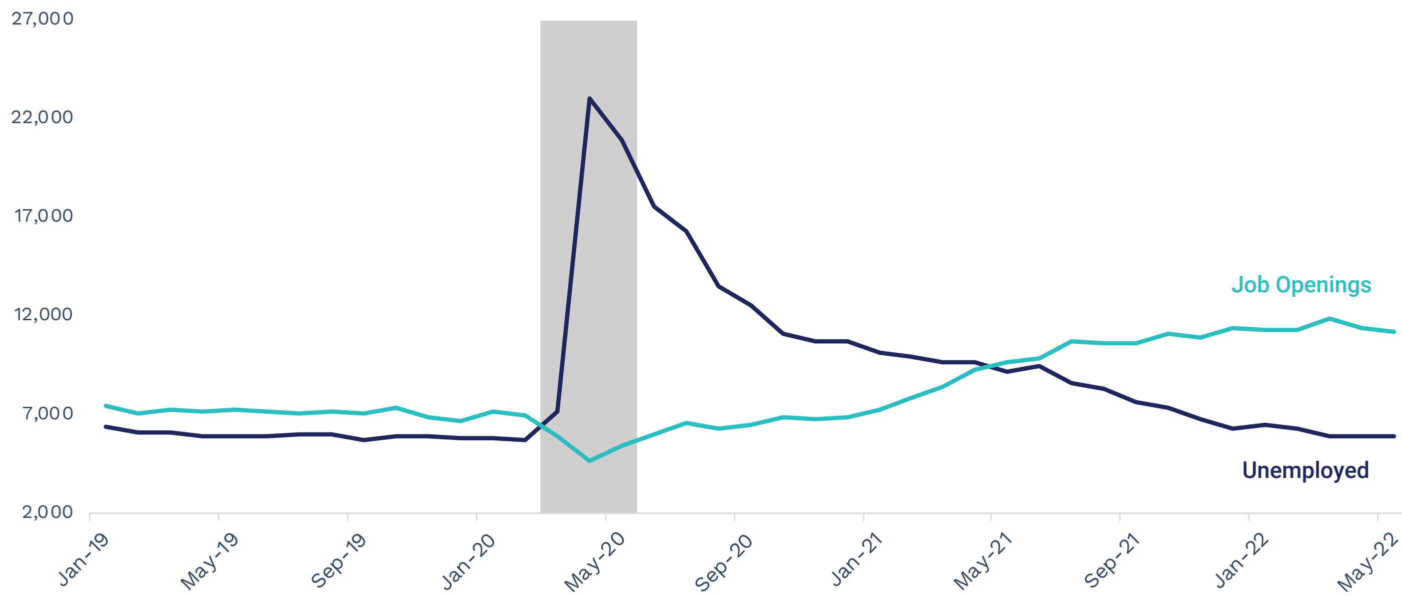
Economic Performance

- Inflation ⬆ | GDP Growth[1] ⬇ | Consumer Sentiment ☹
- The unemployment rate remained steady, at 3.6% in June, just above pre-pandemic levels (3.5% back in February 2020). Key data through the end of May (most recent available):

Inflation Rate	GDP (Annualized)	Consumer Sentiment
8.6%	**1.9%**	**50**
vs. 4.7% in 2021 1.2% in 2020	vs. -1.5% Q1 2022 5.7% FY 2021	The lowest on record dating back to 1952.

- Have you noticed that customer service is bad everywhere? Hiring remains a challenge as the gap between unemployment and job openings continues to widen.[2]
- The U.S. is in the unprecedented position of being on the brink of recession even as unemployment remains near record lows.

Unemployment vs. Job Openings



Source: U.S. Bureau of Labor Statistics

Monetary Policy Overview

- The Fed raised rates again and signaled that more rate increases are coming.
- Both equity and debt investors are watching the Fed closely. Some speculate that, contrary to its recent statements, the Fed will bow to pressure and use its balance sheet again to support the financial markets.

Fed Raised	Current Fed Funds Rate	Estimated Year-End Rate
+75 bps	**1.5% - 1.75%**	**3.25% - 3.5%**
The largest increase in 28 years, with more raises to come.	Still far under the current inflation rate.	Enough to tame inflation, tip us into recession, or both?

Credit Markets

- Higher interest rates globally; Investment Grade and High Yield Bonds have double-digit YTD declines; Leveraged Loans dipped.
- Higher rates benefit lenders and investors but could strain borrowers.
- Defaults remain low. As of May, leverage loan default rates were 0.5%. Fitch Ratings estimates this rate will climb to 1.5% at YE.

Q2 Returns[3]

Investment Grade	High Yield	Leveraged Loans
-7.3%	-9.8%	-4.5%

U.S. and Global Equity Market Summary

- 2021's gains mostly reversed; Equities down globally; The Energy sector is the only bright spot, up big YTD
- The U.S. Dollar hits 20-year highs and the Euro and Yen are near 20-year lows.

	As of 6/30/2022	Q2 Return	YTD Return
S&P 500	3,785.38 pts	-16.4%	-20.6%
NASDAQ	11,028.74 pts	-22.4%	-29.5%
The Dow	30,775.43 pts	-11.3%	-15.3%
Global Equities		-15.8%	-17.9%
Emerging Markets		-11.2%	-17.9%
Energy		-6.4%	+28.8%
Gas	$5.36/gal	+13.8%	+48.5%
VIX	28.71 pts	+39.6%	+66.7%
10-Yr Treasury	3.013%	+67.2 bps	+150.1 bps

See endnotes.

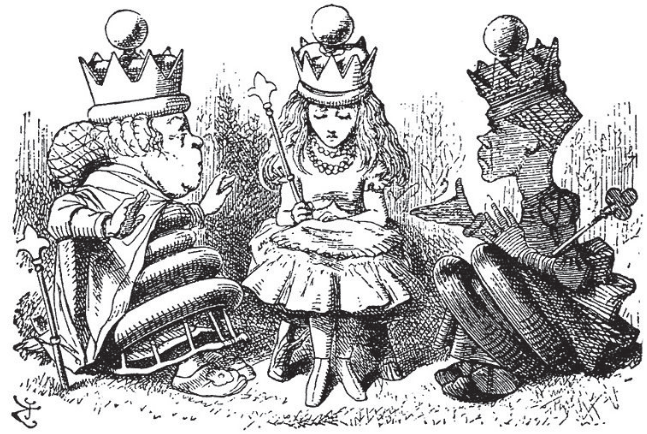
Alts, Odds and Ends

- Private Equity funds saw slowing deal volume through Q2. Geopolitical uncertainty, rising rates and inflation were all factors in the decline.
- Direct Lending continues to expand globally, with the European loan sector gaining trading volume and assets.
- Declines hit crypto HODLers. The overall crypto market cap fell below $1 trillion from a peak of $3 trillion; the Terra stablecoin collapsed; Bitcoin dipped below $18k.

	As of 6/30/2022	Q2 Return	YTD Return
Direct Lending			1.76%
CLOs		-5.4%	-5.8%
Private Equity		-23.8%	-36.5%
Hedge Funds		-3.7%	-5.0%
Equity REITs		-15.4%	-20.9%
Residential REITs		-16.4%	-21.7%
Industrial REITs		-23.5%	-28.9%
Wine		+1.4%	+4.2%
Rolex Watches	$14,715	-$1,401	+$1,201
Bitcoin	$18,731.30	-59.1%	-59.6%

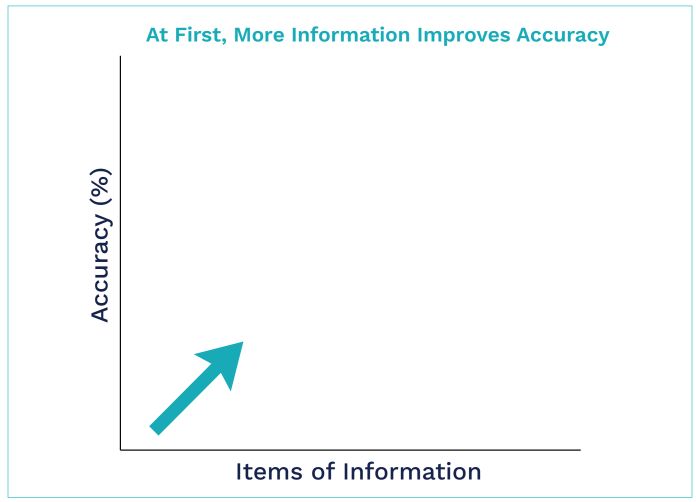
See endnotes.

There is no natural endpoint to research. More information always exists. Like Lewis Carrol's Red Queen notes: "It takes all the running you can do, to keep in the same place." Investors sympathize. Fortunately, it might not be necessary to review every piece of data. Research suggests that trying to consume as much information as possible before a decision is reasonable, common, and *totally incorrect*.



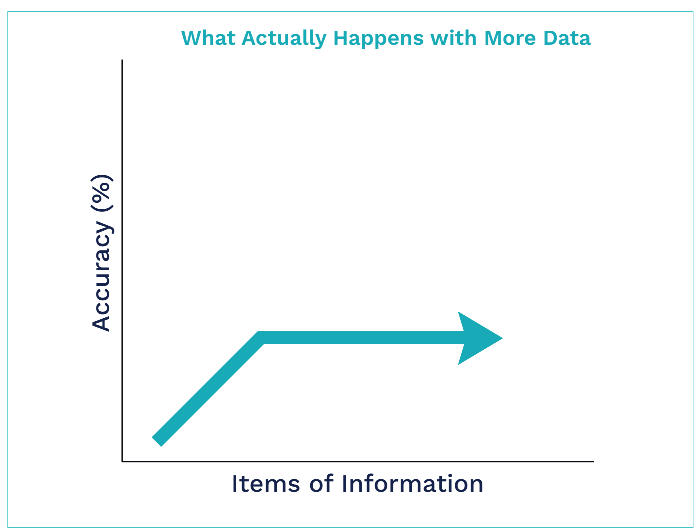
Wikimedia Commons, Sir John Tenniel

With access to an unlimited amount of data, much of it contradictory or ambiguous, how can experts make good decisions? Nearly 50 years ago, researchers studied that question using expert horserace handicappers.



Like investors, handicappers have voluminous sources of discretely identifiable data. Both groups make predictions that are comparable against a future outcome. In this, accuracy can be determined. Further, self-assessments of confidence can be tabulated and then compared to actual accuracy, an important factor for researchers figuring out how much information experts need.

Here is how the testing worked. First, the handicappers ranked the importance of 88 items of information used to predict the outcome of a horse race, e.g., the jockey's record, the weight carried, etc. Next, they were given information in rank order in increments of 5 items of information at a time. After each round of 5 items, the handicappers made a prediction about the race. Finally, the predictions — recorded at 5 items, 10 items, 20 items, etc. — were compared with actual results.



Initially, as expected, more data was correlated with better accuracy.

Conclusion: With zero information, a prediction is meaningless; however, with only a few pieces of data, prediction accuracy rapidly improved. So far, so obvious.

Quickly, however, the relationship between more data and higher accuracy broke down. In fact, after the first few items of information, accuracy flatlined and it did not improve further no matter how many more items of information were added.

Conclusion: After a few key items of information, accuracy tops out.

At this point an investor might ask: *So what if more information doesn't improve accuracy? It doesn't *hurt* accuracy either.*

Avoiding information overload improves decision making. Although accuracy is not impacted by more information, confidence is. And when self-perceived confidence is measured, the downside of excess information becomes apparent.

During the experiment, handicappers also recorded the confidence level of their predictions. At first, the handicapper's subjective confidence equaled their objective accuracy, e.g., if they were 20% sure of picking a winner, the results showed they were accurate about 20% of the time.

With more information, however, confidence began to outpace accuracy. In fact, the handicapper's confidence kept rising (as accuracy remained flat) with each additional round of data until confidence was nearly double the level of objective accuracy.

Excess information had transformed justified confidence into stubborn delusion. Moreover, the handicappers themselves — and all were experts — didn't realize that more information didn't improve their accuracy.

The researchers concluded that experts use much less information than they think and that only a minimum level of information is necessary to make an informed judgment. Further, they noted that too much information leads to overconfidence, i.e., an overestimation of accuracy. The gap between accuracy and confidence is the Zone of Delusion and is where experts make their worst judgments.

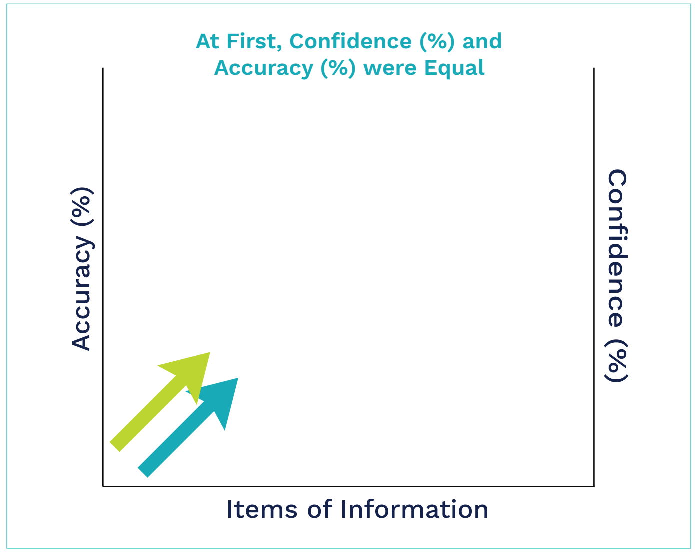
And not only for handicappers.

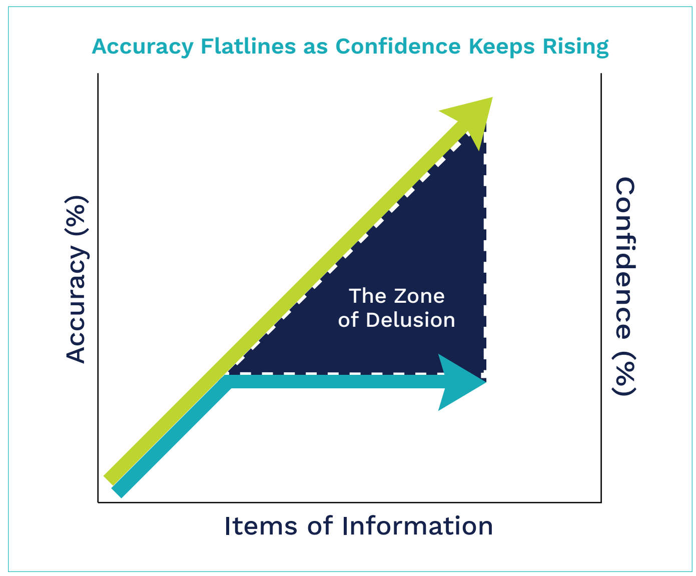
The same pattern of overconfidence has been seen in intelligence analysts at the CIA[4], and, of course, investors. Overconfidence comes with overreach and an inability to course correct when contradictory data appears.

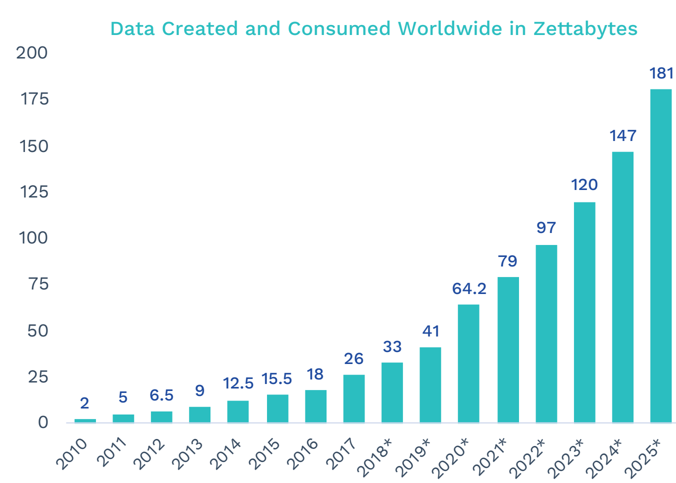
What actions can investors take to avoid excess information and overconfidence in today's unprecedented financial market?

The Problem of Too Much Data Will Only Get Worse, So Consider Hiring a Professional

Data is increasing exponentially so the amount of information investors won't see is getting rapidly larger.[5]

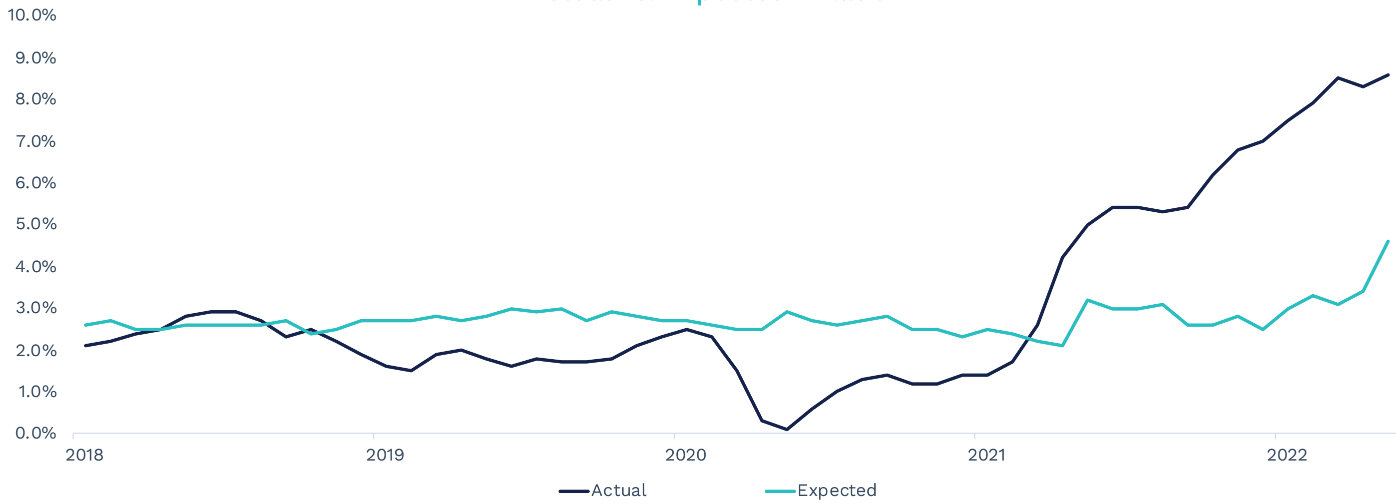






Source: Statista, shown in zettabytes of data created and consumed. Years 2018-2025 forecasted based on past and projected growth rates in data consumed.

Actual vs. Expected Inflation



Source: Actual inflation represented by the year-over-year change in the Consumer Price Index. Expected inflation represented by the next-12-months expected change in the Consumer Price Index. Actual and expected inflation gathered by FRED & The University of Michigan, respectively.

Retail investors are realizing that a steady hand is required for a turbulent market, especially without the bumpers of a loose monetary policy as protection. Trying to eke out a few extra basis points of return isn't worth the time and stress for many retail investors.

For this reason, active management strategies have seen a resurgence. The higher fees of active management seem worth it to investors who would prefer to have an actual human (or team of them) at the wheel.

For investors who expect more volatility, active management may make it easier ride out turbulent market conditions.

Consider a Different Strategy Instead of More Information about the Current One

We all know inflation is high. But not even the experts were able to predict its course.[6] The Federal Reserve, with the resources of a 20,000 person staff, was slow to recognize that inflation was not going to be transitory. Given interminable supply chain issues, persistent global conflict, and doubling of the U.S. money supply since 2020, inflation seems unlikely to return to its former lows anytime soon.

Even with recent rate increases, yield in public markets is still far below inflation. Government bonds don't offer sufficient yield, and neither do corporate bonds. Expect bond prices to drop more, as rates are going up globally. When interest rates in sovereign debt and investment grade fixed income are as low as they are currently, no amount of research will mitigate the expected principal decline from higher rates.

Investors have options to mitigate inflation and central bank's reaction to it.

The U.S. Government offers a free lunch, albeit a small one. Series I Bonds are a low-risk savings product with inflation protection and currently yield 9.62%. They are popular, with 40x more of them sold year-to-date than in all of 2020; too bad purchases are capped at $10,000 annually.

Institutional investors are shifting to floating rate instruments such as loans and private credit transactions for additional rising rate mitigation. Automatic risk mitigation from rising rates will likely provide better protection than even well-researched low-rate investments.

Consider Other Advantages That Aren't Informational

Investors intuitively understand that riskier investments potentially come with more return. Since 2008, as yields declined and remained low, investors have allocated more to riskier investments to maintain their desired return. Low rates and excess liquidity pushed yields down globally. In 2021, even so-called High Yield bonds yielded less than inflation, and over $18 trillion of sovereign debt was pushed into negative yielding territory.

But taking on more risk isn't the only way to get higher yield. Rather than maximizing Sharpe ratios through research, other factors can be traded for yield. Institutions with longer investment horizons are trading off liquidity to get higher returns. Locking up capital for longer periods of time allows investors to ride out short-term turbulence for potentially enhanced returns.

Relationship businesses are also somewhat immune to pure cost concerns. People still want to deal with other people they trust. Lending, for example, is a relationship business. Companies choose lenders they have a personal relationship with 4x times more frequently, and the lenders give them lower spreads, and let them borrow larger amounts. Institutions without short term liquidity constraints have allocated more to private debt and PE to capitalize on the relationships of larger asset managers, sometimes even co-investing alongside them.

Other investments are too exotic for some investors. Less competition means that inefficiencies — and potentially higher returns — are more likely to exist. Alternative assets, like art, watches, and wines have attracted interest from investors who can hold them for either the financial returns or for the fun of ownership, depending on where the market goes.

Navigating the Turbulence Ahead

Investors must constantly determine if they have enough information to make an informed decision. During unprecedented times – and 2022 is surely without a historical template – investors see through a glass darkly. In the past, a 60/40 portfolio would have tempered market decline and inflation, but institutional investors aren't getting the yield and inflation mitigation they need in traditional stock and bonds. With fewer informational advantages, investors are more likely to look to professional management, alternative investments, and liquidity tradeoffs to find potentially enhanced returns than are available in traditional asset classes and strategies.

Footnotes

1. The Conference Board Economic Forecast for the U.S. Economy, June 21, 2022, forecast of US Real GDP growth quarter-over-quarter, annualized rate.

2. All data from the U.S. Bureau of Labor Statistics.

3. Investment Grade represented by the Bloomberg US Corporate Bond Index (LUACTRUU). High yield represented by the Bloomberg Barclays US Corporate High Yield Index (LF98TRUU). Leveraged Loans represented by the S&P/LSTA Leveraged Loan Index (SPBDAL).

4. Psychology of Intelligence Analysis, Richards J. Heuer, Jr. 1999. A highly recommend and timeless summary of research in cognitive psychology and how incomplete and ambiguous information can be best used.

5. Data from Statista, shown in zettabytes of data created and consumed. Years 2018-2025 forecasted based on past and projected growth rates in data consumed.

6. Actual inflation represented by the year-over-year change in the Consumer Price Index. Expected inflation represented by the next-12-months expected change in the Consumer Price Index. Actual and expected inflation gathered by FRED & The University of Michigan, respectively.

Endnotes

U.S. and Global Equity Market Summary:

"Global Equities" represented by the iShares Global 100 ETF. "Emerging Markets" represented by the iShares MSCI Emerging Markets ETF. "Energy" represented by the Energy Select Sector SPDR Fund. "Gas" represented by the Bloomberg estimated U.S. average gasoline price per gallon. "VIX" represented by the Chicago Board Options Exchange Volatility Index.

Alts, Odds and Ends:

"Direct Lending" represented by the Cliffwater Direct Lending Index. "CLOs" represented by the Palmer Square CLO Debt Index. "Private Equity" represented by the Invesco Global Listed Private Equity ETF. "Hedge Funds" represented by the HFRXGL Global Hedge Fund Index. "Equity REITs" represented by the MSCI World Equity REIT Index. "Residential REITs" represented by the MSCI U.S. Residential REIT Index. "Industrial REITs" represented by the MSCI U.S. Industrial REIT Index. "Wine" represented by the LIVX100 Index, tracking 100 of the most sought-after, frequently traded wines. Latest LIVX100 data as of 5.31.2022. "Rolex Watches" represented by the WatchCharts.com Rolex Market Index.

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