LYELL WEALTH MANAGEMENT

SEPTEMBER 16, 2022

2022 Snapshots

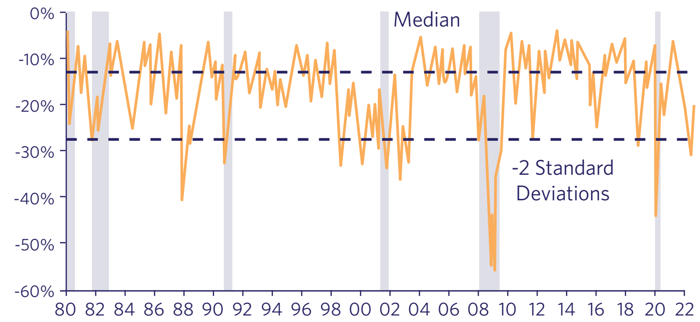
Lyell Wealth Management invests substantial resources in proprietary research in order to distinguish real economic and market data from the narratives pushed by the sensationalist financial media. We periodically publish a Snapshots issue that compiles charts and tables that we think are interesting and relevant. While there may not be a single unifying theme tying these charts together, the goal is to provide insight into the data that Lyell Wealth Management believes is currently relevant but perhaps not widely publicized.

The current economic cycle has no precedent. The combination of a global economic and societal shutdown (and subsequent recovery) coupled with massive monetary and fiscal stimulus (and withdrawal) has humbled both policy makers and market participants alike. Lyell Wealth Management currently has a skeptical view towards analyses regarding what "normally" happens in an economic cycle. This environment places a premium on access to current information and requires investors to avoid blindly assuming historical patterns will be repeated.

It has been an extremely difficult year for investors as the Federal Reserve and global central banks have aggressively tightened monetary policy and financial conditions. Two key U.S. stock market benchmark indices, the S&P 500 and NASDAQ, have declined (17.2%) and (25.9%) year-to-date. The average S&P 500 stock has declined (25%) from its 52-week high and remains near the -2 standard deviation level (Chart 1).

CHART 1

S&P 500 | Average Stock % Decline from 52 Week High

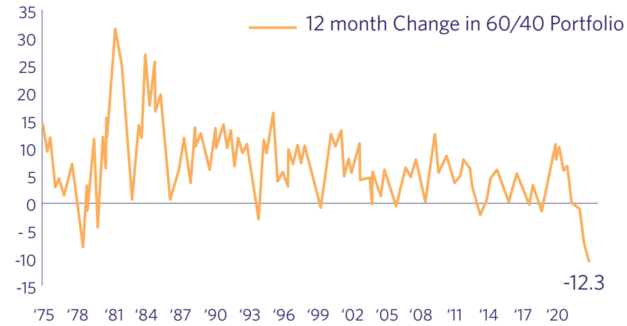


Source: Strategas Securities

Stock market losses have been compounded by weak fixed income markets, with bond prices dropping as yields have increased. The U.S. Barclays U.S. Bond index has declined (12.3%) year-to-date. 2022 is the worst year on record, to a significant degree, for the model 60% stock and 40% bond portfolio, which is a standard allocation for foundations, endowments, and many other investors (Chart 2).

CHART 2

Worst 12m Return on Record for 60/40



Source: Bespoke Investment Group

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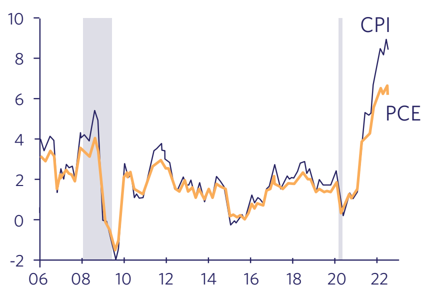
The central bank urgency is a result of forty-year highs in inflation. After more than a decade of trying to lift inflation up to 2%, the Federal Reserve is scrambling to contain year-over-year price increases of 6%-9% depending upon the measurement methodology (Chart 3).

CHART 3

CPI vs. PCE Deflator | Y/Y %



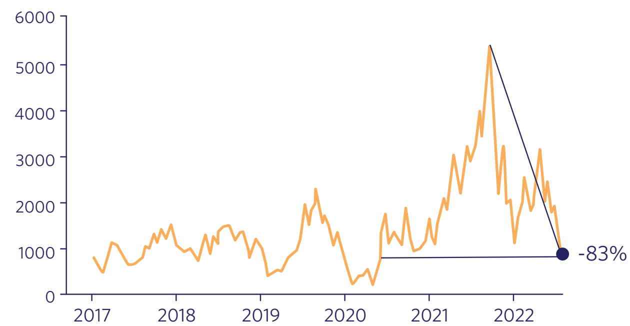
Source: Evercore ISI

The unacceptably high inflation is a result of pandemic-induced shortages, war-related disruptions, intra-state migration, fiscal actions, and monetary policy. The global economy is still dealing with pandemic issues, such as rolling "Zero Covid" China shutdowns, as well as product and labor shortages. Russia's invasion of Ukraine greatly exacerbated inflation in terms of energy and food prices, which also feed into prices for industrial and consumer products.

However, there are many examples of real-time data that indicate considerable progress towards price normalization due to tighter global financial conditions plus ongoing post-Covid recalibration. Some noteworthy examples in the transportation and logistics arena include: 1) the number of days for cargo delivered by ship to reach its destination port is back down to 69 days, which is not much slower than pre-pandemic 64 days in January 2020; 2) the Baltic Dry Index, which is the global benchmark for the price of transporting cargo over water, has dropped back to June 2020 levels; 3) the World Container Index, which reflects spot rates for eight major East-West routes, has dropped 48% from its peak level (Charts 4 and 5).

CHART 4

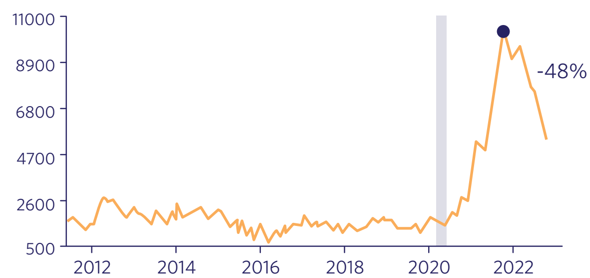
Baltic Dry Index: Last Five Years



Source: Bespoke Investment Group

CHART 5

WCI Composite Container Freight Rate
Sep 8: $5379

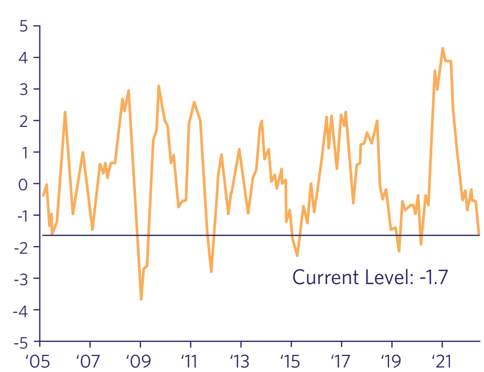


Source: Evercore ISI

The Federal Reserve's August manufacturing "prices paid" survey from its five regional banks registered declining prices in each region for back-to-back months for the first time since September 2008. The six-month average for these five surveys is currently in negative territory (Chart 6).

CHART 6

Number of Prices Paid Components Rising By Month: 2005-2022 Six Month Average

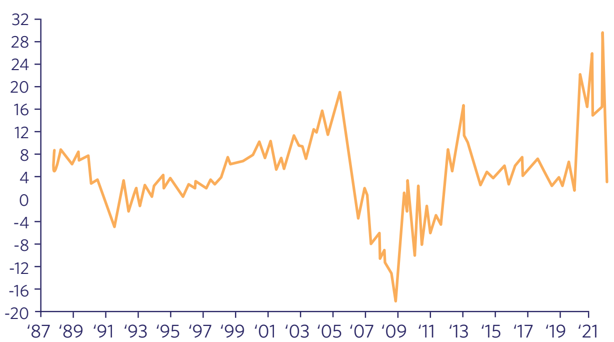


Source: Bespoke Investment Group

Housing prices have been increasing at an unsustainable rate since Work-From-Home policies allowed millions of Americans to move to the suburbs and/or to locations far from their offices. Very low mortgage interest rates enabled by the Fed's monetary policy fueled high real estate prices. In addition, the flow was generally from higher priced real estate markets in places like California and New York to lower cost markets such as Idaho and Arizona. For example, the average single-family home in Boise, Idaho sold for $368,000 in February 2020. By May 2022, the average price had increased by almost 60% to $583,000. However, the unwinding in these markets has begun. As of July 2022, the average Boise home sold for $523,450, and inventory is climbing. Higher mortgage rates, higher energy and food prices, and the reversal of the "work from anywhere" movement are impacting home values at a national level (Chart 7).

CHART 7

National Home Prices Slowed Dramatically in June (MoM Ann. %)



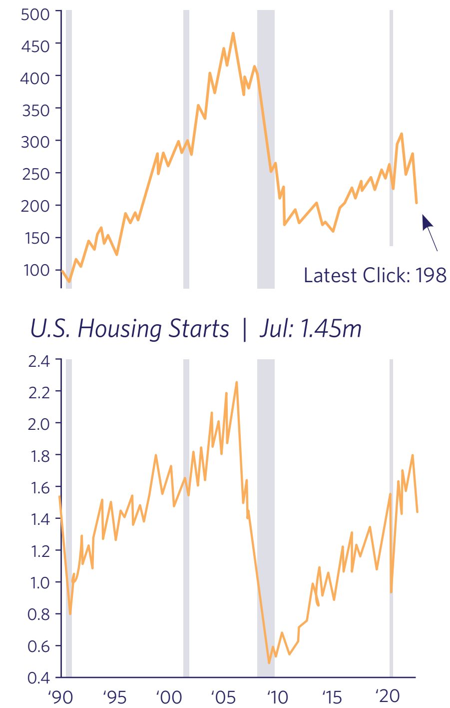
Source: Bespoke Investment Group

Housing weakness is confirmed by declining mortgage applications and housing starts (Chart 8). Lyell expects that home prices are dropping in most markets that experienced the kind of increases that Boise had over the past two-and-a-half years. Lost housing wealth, combined with declining investment portfolio values, is likely to hit confidence and in turn reduce economic growth and inflation.

"Housing", which includes both home prices and rents, is the largest CPI category by far with a 42% weight. Like home prices, apartment rents were increasing at an unacceptably high rate last year. A common tracking measure is "Effective Rent Growth", which suggests the rate of U.S. rents is still increasing around 10% per year after having peaked in March 2022 (Chart 9). However, the more timely "Asking Rents" measurement, which reflects what landlords are seeking from new tenants, suggests that rents may be much closer to

CHART 8

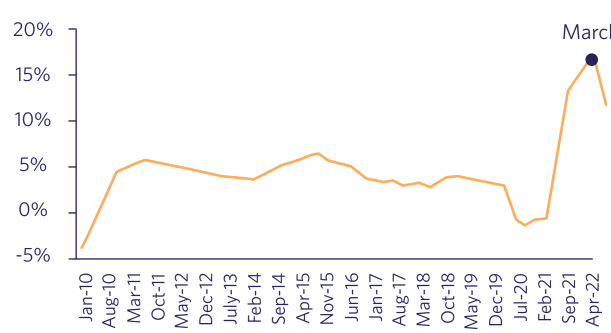
U.S. Mtg Apps for House Purchase Index 13 Wk. Avg. | Sep 2: 215



Source: Evercore ISI

CHART 9

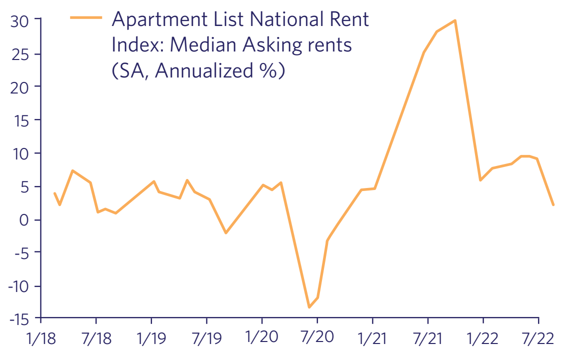
Effective Rent Growth (Apartments)



Source: Evercore ISI

CHART 10

Asking Rents Have Reversed in Dramatic Fashion



Source: Bespoke Investment Group

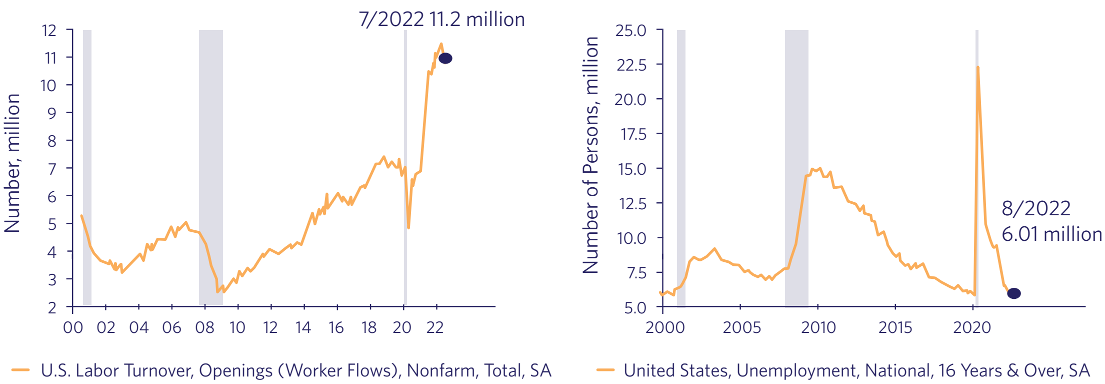
turning negative year-over-year (Chart 10). The discrepancy between the two data sets increases the risk of a Federal Reserve policy error as the "Effective Rent Growth" is the measurement captured in the Consumer Price Index.

The geographic distribution of inflation correlates with the pandemic-inspired migration of civilians around the U.S. When large numbers of people from the Northeast, for example, move to the Southeastern part the country, it puts significant strain on those local economies. Indeed, some of the highest inflation rates in August 2022 were in places like Atlanta (11.7%) and Miami (10.7%), while NY-NJ-PA (6.6%) and the San Francisco region (5.7%) are faring quite differently.

The most concerning aspect of the current environment for the Federal Reserve is the strong employment market, and the potential for higher compensation to translate into embedded inflation expectations. Labor shortages have been constant since Covid hit, although the industries impacted have shifted over time. Traditional employment metrics, such as new and existing unemployment claims as well as job openings, all suggest we are essentially at "full employment." However, slightly less than three million workers have left the workforce since the pandemic began, and no one knows how many of them will return. The Fed is likely anticipating that lower stock and home prices will motivate some people to return to the job market, which would reduce wage pressure and therefore help limit inflation (Chart 11).

CHART 11

U.S. Job Openings (JOLTS) *U.S. Unemployment*

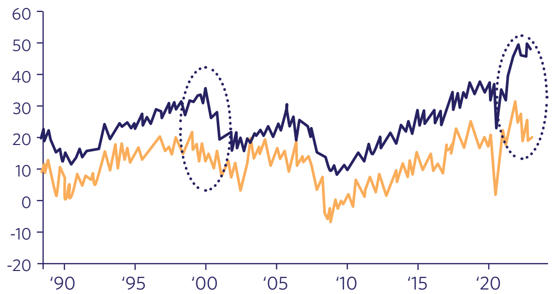


Source: Strategas Research Group

While the Job Openings ("JOLTS") data has consistently been very high since the pandemic began, there is now a curious divergence between small business job openings and hiring plans. Although small businesses appear to have a large number of positions that they are unable to fill, they are simultaneously reducing their hiring plans. This suggests the new job market may not be as hot as the oft-quoted JOLTS data suggests (Chart 12).

CHART 12

NFIB: Job Openings, Positions Not Able to Fill Right Now vs. Hiring Plans, Next Three Months, Net



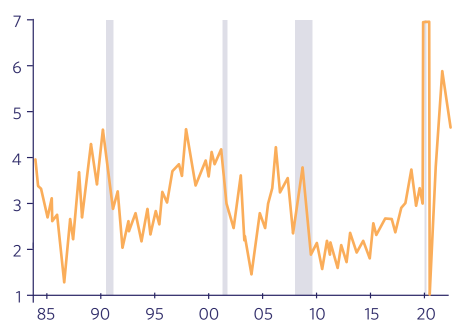
Job Openings, Positions Not Able to Fill Right Now
Hiring Plans, Next Three Months, Net

Source: Strategas Securities

Another data point suggesting that the employment market is softening is that average hourly earnings have begun to slow. The August data revealed that average earnings are now increasing at a 4.7% rate (Chart 13).

CHART 13

U.S. Average Hourly Earnings
6 Mo. Avg. | 3 Mo. Annualized % | Aug: 4.7%

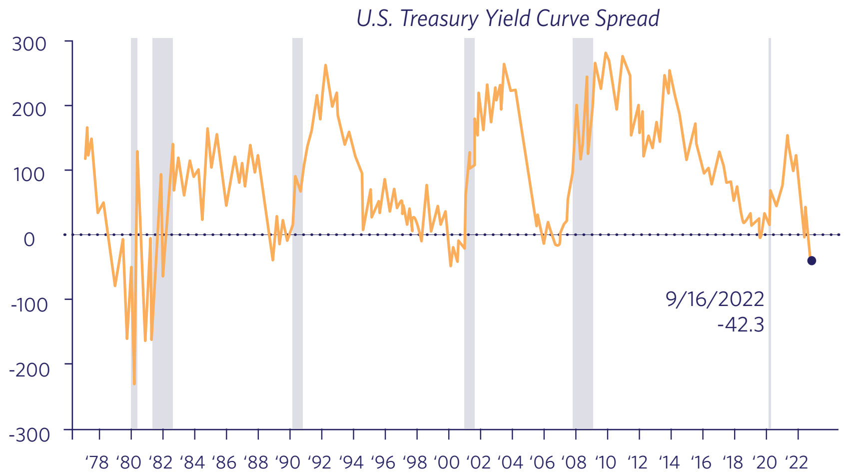


Source: Evercore ISI

Markets react instantaneously to signals and much of 2022's market turmoil has been in anticipation of Fed interest rate decisions long before they have been made. The Federal Reserve's disciplined emphasis on price stability (as defined by achieving its 2% inflation target) has resulted in an inverted yield curve, which occurs when the yield on a shorter maturity bond is higher than the yield on a longer maturity bond. There is some debate about which bond maturities are best to use, but conventionally it is the 2-year U.S. Treasury bond as compared to the 10 year bond. In each instance in recent history an inverted yield curve has preceded a near-term recession (Chart 14). Given the unique nature of our current situation, the inverted curve could also be forecasting that the Fed will need to ease policy in the future as inflation will not be a long-term problem.

CHART 14

U.S. 10 Year / 2 Year Yield Curve Moves Toward a Retest of 2022 Lows, Extreme Volatility On Long and Short End of Curve

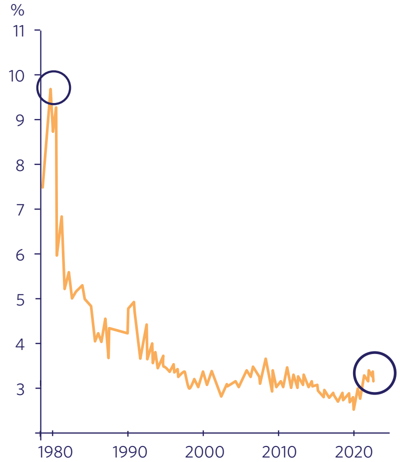


0 Market Matrix US Sell 2 Year & Buy 10 Year Bond Yield Spread

Source: Strategas Research Group

CHART 15

U.S.: Expected Change in Inflation Rate Over the Next 5-10 Years



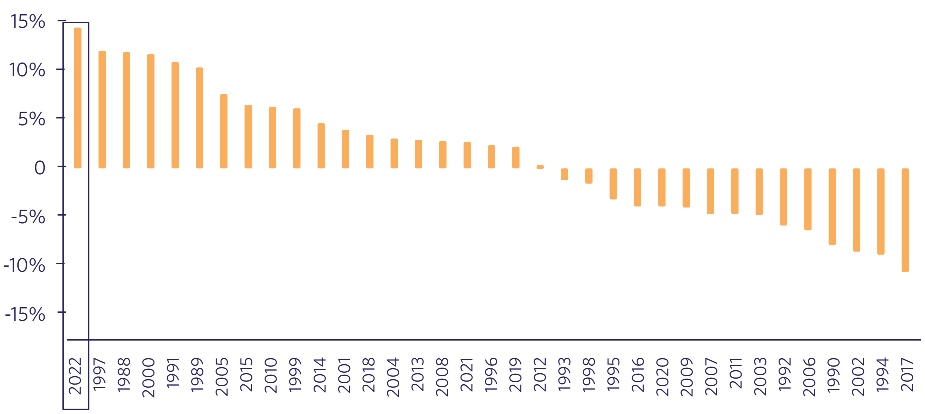
Source: Alpine Macro, University of Michigan

Academic research suggests that inflation expectations are a major driver of future realized inflation. It is therefore very good news that U.S. inflation expectations for five to ten years out remain within the range they have been in since the 1990s (Chart 15). There are market instruments available today that policy makers didn't have access to in the 1970s. There is no excuse for not using them.

The Fed's aggressive interest rate hikes coupled with the relative strength of the U.S. economy has caused capital to flow to the U.S. This has in turn led to an extremely strong U.S. dollar. It is easy for Americans to forget that we are still the "cleanest dirty shirt" in the world. 2022 has seen the strongest move for the dollar index since at least 1988, up over 14% (Chart 16). The Fed welcomes the strong dollar as it dampens import prices. The U.S. dollar is trading at the highest levels since the mid-1980s (Chart 17).

CHART 16

Strongest Year-To-Date Move for DXY Going Back to 1988

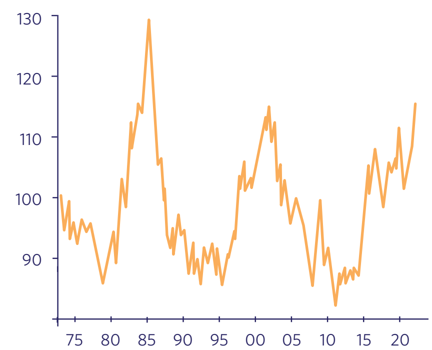


Source: Strategas Securities

Although U.S. energy prices have increased significantly in 2022, the impact on Europe is magnitudes greater (Chart 18). Europe's dependence on Russian natural gas and the difficulty with transporting gas globally has created a crisis. Goldman Sachs estimates that utility bills could account for up to 15% of European GDP with repercussions more painful than the 1970s oil crisis.

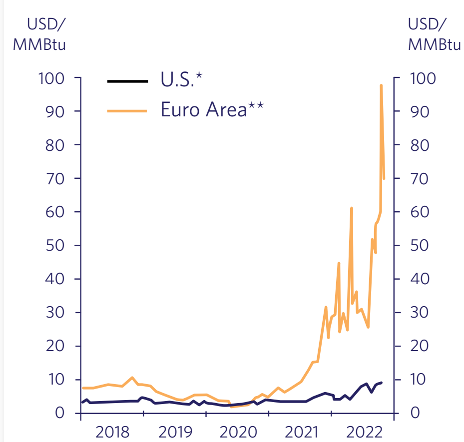
CHART 17

Real Broad U.S. Dollar Index



Source: Alpine Macro

CHART 18



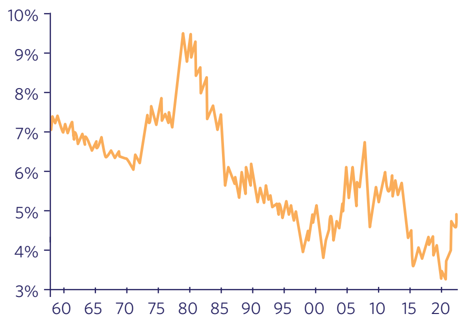
*Generic first Henry Hub natural gas futures contract

** Generic first Dutch TTF natural gas futures contract

Source: Alpine Macro

CHART 19

Personal Consumption: Energy Goods & Services As A Percent of Total Consumption



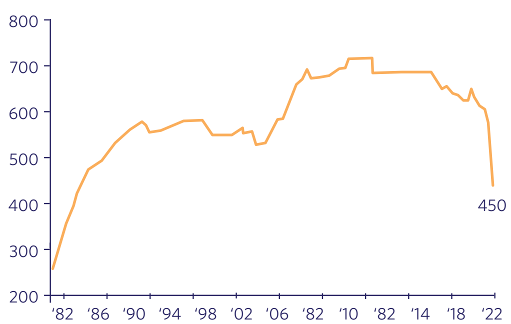
Source: Strategas Securities

Although U.S. energy prices are higher this year, energy currently represents a substantially lower percentage of American consumption than it did in the 1970s (Chart 19).

In recent months, the Biden Administration has released nearly 30% of the Strategic Petroleum Reserve ("SPR") to alleviate energy prices. The SPR is at multi-decade lows (Chart 20).

CHART 20

Weekly U.S. Ending Stocks of Crude Oil in SPR (Millions of Barrels)



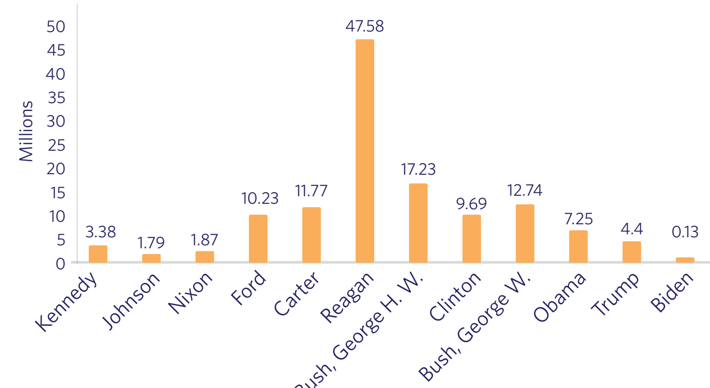
Source: Strategas Securities

During the first 19 months of the Biden Administration there have been only 130,000 acres of federal land leased for oil and gas production which is minuscule as compared to previous Presidential administrations (Chart 21).

Equity valuations are currently near the mid-point of their historic range excepting the 1970s and 1980s. The "P/E" for housing (median home price/median rent) is still historically high as is the "P/E" for bonds (100/10 year Treasury yield) (Chart 22).

CHART 21

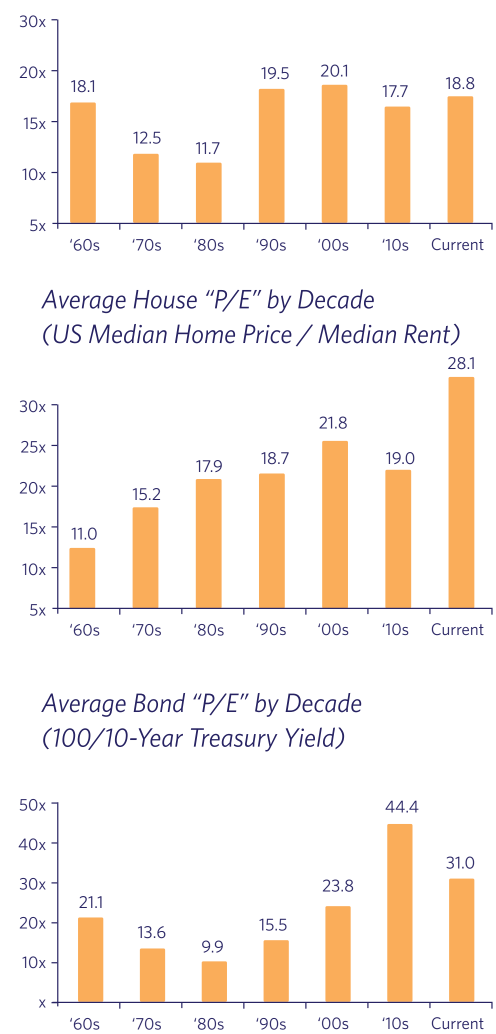
Federal Acres Leased for Oil-and Gas Production (First 19 Months of Administration)



Source: Strategas Securities

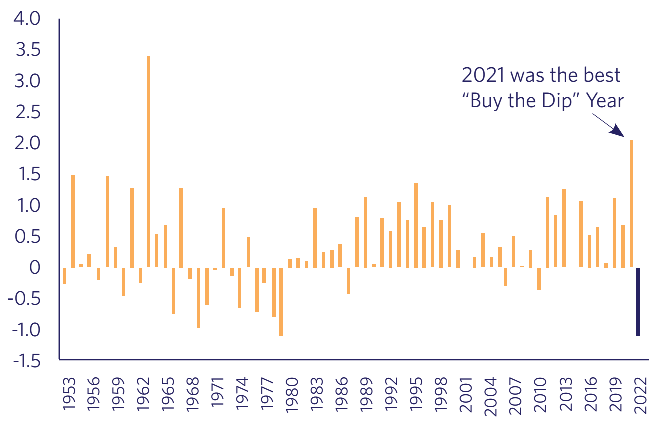
CHART 22

Average Equity P/E by Decade (S&P 500 TTM EPS)



Source: Strategas Securities

CHART 23
S&P 500 Avg. % Chg. Week After 1%+ Daily Drops by Year

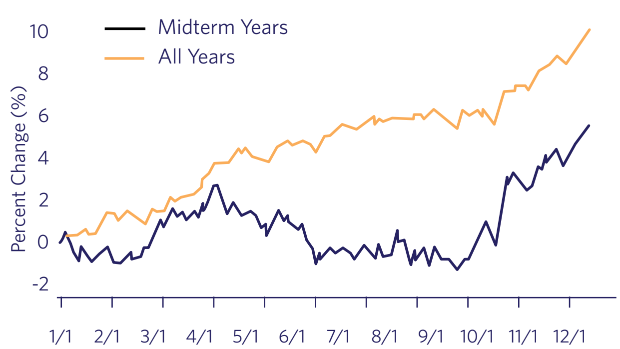


Source: Bespoke Investment Group

Another paradigm shift this year is that the "buy the dip" strategy hasn't worked. While 2021 was the best year since 1963 to buy stocks after they had a one-day decline of 1% or more, that strategy has lost money this year (Chart 23).

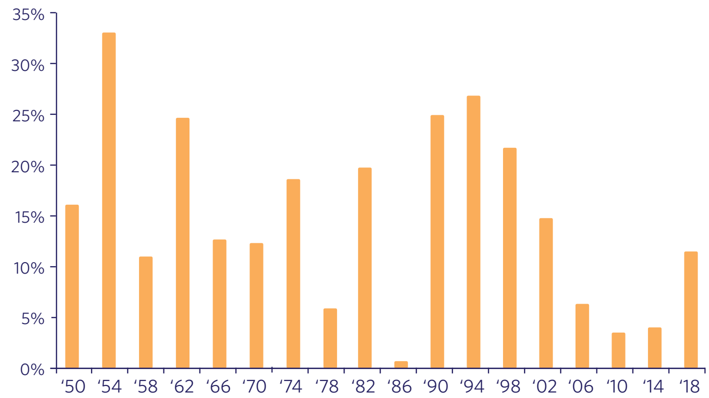
Mid-term election years are notoriously volatile for stock markets and statistically are the worst year for returns of the four-year U.S. election cycle. Markets typically see weakness until the later part of the year, after which they tend to take off. Since 1950, S&P 500 returns for the twelve months following midterm elections have averaged 15.1% (Charts 24 and 25).

CHART 24
S&P 500 Performance During Midterms Election Years: Since WWII



Source: Bespoke Investment Group

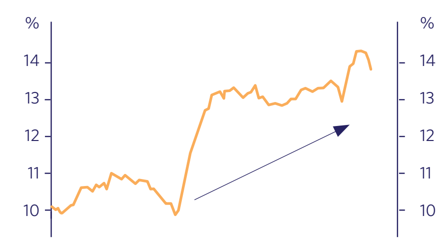
CHART 25
S&P 500 Price Return
12 Mo. Period Following Midterm Election
1950 - 2019 Avg = 15.1 Pct.



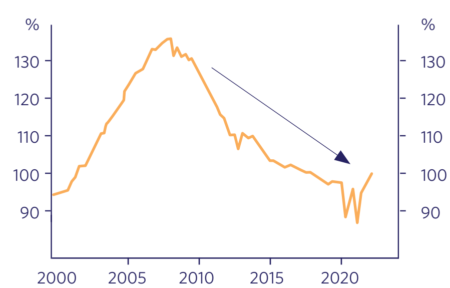
Source: Strategas Research Group

Although it appears that housing prices may fall considerably in certain markets, the U.S. consumer and commercial banks are in much stronger positions than they were prior to the Global Financial Crisis. Due to regulatory requirements banks now hold much more capital and consumers have much lower household debt to income ratios (Chart 26).

CHART 26
U.S.: Tier 1 Risk-Based Capital Ratio



Household Debt to Income Ratio



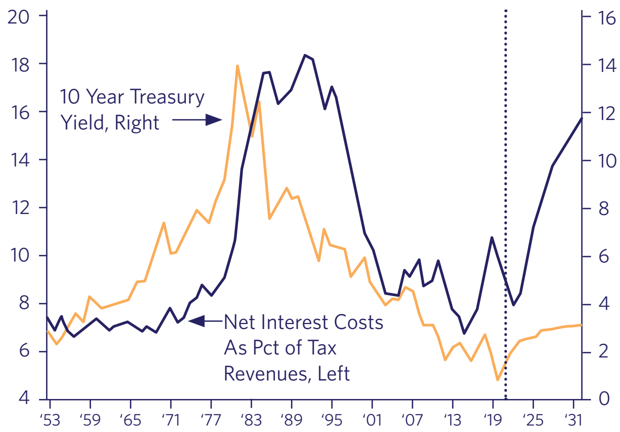
Source: Alpine Macro

One issue that undoubtedly weighs on the Federal Reserve is how interest rate increases will impact the U.S. budget. Due to the huge increase in U.S. government debt in recent years, each 1% increase in borrowing costs adds $250 billion to the annual deficit. Even modest rate increases will result in substantially higher claims on the budget in upcoming years (Chart 27).

The Ukraine invasion is likely a reality check to many governments that had neglected defense spending while relying on U.S. security guarantees. NATO countries are still mostly short of their decades-old promises to invest a minimum of 2% of GDP in defense (Chart 28). It seems that we are likely to see a material increase across Europe and Asia in defense expenditures in the upcoming decade.

CHART 27

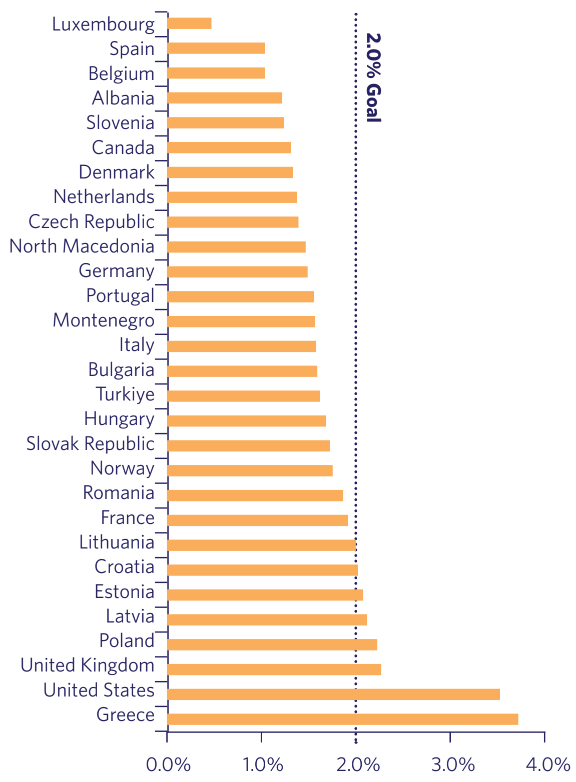
Net Interest Cost, Pct of Tax Revenues & Avg. Annual 10-Year Treasury Yields



Source: Strategas Research Group, Office of Management & Budget

CHART 28

Defense Expenditures as a Pct. of GDP (2022e, NATO)

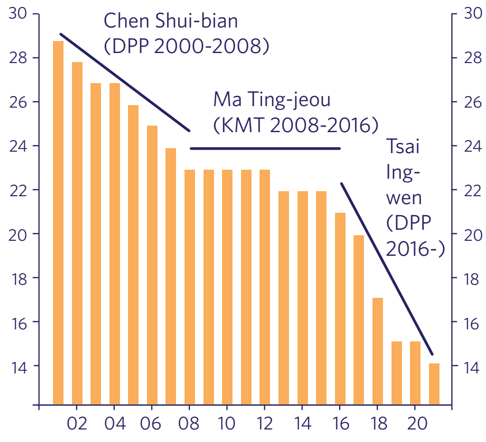


Source: Strategas Research Group

The Chinese Communist Party notoriously plays the long game and is patient in achieving its strategic outcomes. One example is their global campaign to isolate Taiwan whenever the Democratic Progressive Party ("DPP") is in power versus when the pro-China KMT holds the majority. Due to pressure from China, the number of countries maintaining diplomatic relations with Taiwan has been cut in half over the past twenty years (Chart 29).

CHART 29

Number of Countries Having Diplomatic Relations with Taiwan under DPP and KMT Presidencies



Source: Alpine Macro

As indicated throughout this Perspective, 2022 has been very challenging for investors and Lyell Wealth Management. A combination of factors, including unacceptably high inflation, tightening financial conditions and a European war, is resulting in elevated economic and market uncertainty. Real-time data now is indeed showing inflation rolling over, at least in the U.S. However, the Federal Reserve is committed to preserving the gains won thus far to reduce market froth, loosen the labor market, and lower housing prices. We already see many U.S. housing markets weakening rapidly and significant layoffs occurring, particularly in white collar jobs, as the lagged impact of recent interest hikes starts to bite.

The good news is that higher yields have made fixed income a more attractive asset class. Shorter maturity investment grade bonds can be acquired with yields higher than 4.00%. Stock valuations have compressed, and in many cases business fundamentals continue to be strong. Better clarity on the Fed's terminal Fed Funds target could set the stage for a nice stock rally near the mid-term elections. As always, Lyell Wealth Management prioritizes that our clients have adequate liquidity and diversification so that they can navigate punishing market environments such as this one.

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