COLONY
FAMILY OFFICES

Market Backdrop and Investment Outlook

September 2022

Market Backdrop
Global Market Summary

- Aggressive monetary and fiscal stimulus followed the COVID-19 economic shutdown/recession
  - Policy makers reacted on a greater scale and more rapidly than they did during the global financial crisis

- The economic rebound was stronger than anticipated—but growth has slowed as monetary policy has shifted to a headwind to combat sustained high inflation

- After pumping trillions of dollars of liquidity into financial markets the past two years, global central banks have pivoted toward monetary tightening
  - So far, 24 central banks have raised interest rates to combat inflation, and the European Central Bank is tapering its quantitative easing program while the US Fed started to reduce the size of its balance sheet in June

- Supply and demand imbalances related to the pandemic and economic reopening have continued to contribute to elevated levels of inflation
  - Russia's war with Ukraine is a "stagflationary" supply shock, propelling commodity prices even higher while negatively impacting growth

- After posting strong gains over the last couple of years, asset prices have stumbled thus far in 2022 as financial markets digest higher inflation, rising interest rates, and geopolitical uncertainty
  - Both stocks and bonds have experienced broad declines while asset categories that benefit from higher inflation, such as commodities, have generated gains

Note: Opinions above based on research as of August 2022. Please see our disclosures at the end of this document.

Market Backdrop
Broad Asset Category Performance

- High and rising inflation expectations, along with tighter financial conditions, proved challenging for almost all major asset categories thus far in 2022
  - The chart below illustrates broad asset category performance defined by market benchmarks

	Year-to-Date 2022	Full Year 2021
Global Stocks	-17.8%	18.5%
High Yield Corporate Bonds	-11.2%	5.3%
Investment Grade Municipal Bonds	-5.2%	0.5%
Investment Grade Taxable Bonds	-7.1%	-1.4%
Commodities	23.6%	27.1%

Note: Performance data as of August 31, 2022. Benchmark data obtained from Addepar. Past performance is not indicative of future results. Global stocks (MSCI All Country World Index), high yield corporate bonds (Barclays US Corporate High Yield Index), commodities (Bloomberg Commodity Index), investment grade municipal bonds (Barclays 1-10 Year Municipal Bond Index Index), and investment grade taxable bonds (Barclays Intermediate US Government/Credit Index).

Market Backdrop
Equity Market Intra-Year Declines

- Historically, so-called equity market "corrections" or declines of 5-10% or more have occurred frequently, even in years with positive equity returns
  - The chart below illustrates the S&P 500 annual price returns and intra-year price declines over time

Year	S&P 500 Annual Price Return	Maximum Intra-Year Decline
1982	15%	-17%
1983	17%	-7%
1984	1%	-13%
1985	26%	-8%
1986	15%	-9%
1987	2%	-34%
1988	12%	-8%
1989	27%	-8%
1990	-7%	-20%
1991	26%	-6%
1992	4%	-6%
1993	7%	-5%
1994	-2%	-9%
1995	34%	-3%
1996	20%	-8%
1997	31%	-11%
1998	27%	-19%
1999	20%	-12%
2000	-10%	-17%
2001	-13%	-30%
2002	-23%	-34%
2003	26%	-14%
2004	9%	-8%
2005	3%	-7%
2006	14%	-8%
2007	4%	-10%
2008	-38%	-49%
2009	23%	-28%
2010	13%	-16%
2011	0%	-19%
2012	13%	-10%
2013	30%	-6%
2014	11%	-8%
2015	-1%	-12%
2016	10%	-9%
2017	19%	-3%
2018	-6%	-20%
2019	29%	-7%
2020	16%	-34%
2021	27%	-5%
2022	-17%	-24%

Source: FactSet, Standard & Poor's, J.P. Morgan Asset Management as of August 31, 2022. Past performance is not indicative of future results. Returns are based on price index only and do not include dividends. Intra-year declines refers to the largest market declines from a peak to a trough during the year.

Market Backdrop
Periodic Table of Returns

- Most asset categories have experienced losses thus far in 2022, except for real assets, including commodities and energy-related investments, that benefit from higher inflation
  - The table below illustrates annual returns for various asset classes ranked in order of performance

2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Energy MLPs 13.9%	REITs 20.1%	US Large Cap 32.4%	REITs 27.2%	Private Equity 10.0%	Energy MLPs 18.3%	Emerging Markets Equity 37.3%	Private Equity 11.2%	US Large Cap 31.5%	Private Equity 32.9%	Energy MLPs 40.2%	Energy MLPs 28.7%
Private Equity 7.8%	Emerging Markets Equity 18.2%	Energy MLPs 27.6%	US Large Cap 13.7%	Municipal Bonds 2.5%	US Large Cap 12.0%	International Equity 25.0%	Cash 1.9%	REITs 28.1%	US Large Cap 18.4%	REITs 39.9%	Commodities 23.6%
Municipal Bonds 7.6%	International Equity 17.3%	International Equity 22.8%	Private Equity 12.6%	REITs 2.3%	Commodities 11.8%	US Large Cap 21.8%	Municipal Bonds 1.6%	International Equity 22.0%	Emerging Markets Equity 18.3%	Private Equity 37.9%	Cash 0.4%
REITs 7.3%	US Large Cap 16.0%	Private Equity 21.5%	Energy MLPs 4.8%	US Large Cap 1.4%	Emerging Markets Equity 11.2%	Private Equity 21.0%	Bank Loans 0.4%	Emerging Markets Equity 18.4%	International Equity 7.8%	US Large Cap 28.7%	Bank Loans -1.0%
US Large Cap 2.1%	Private Equity 13.2%	Hedge Funds 6.7%	Municipal Bonds 4.7%	Cash 0.1%	Bank Loans 10.2%	REITs 9.3%	US Large Cap -4.4%	Private Equity 17.7%	Hedge Funds 6.8%	Commodities 27.1%	Private Equity -1.4%
Bank Loans 1.5%	Bank Loans 9.7%	Bank Loans 5.3%	Bank Loans 1.6%	Bank Loans -0.7%	REITs 9.3%	Hedge Funds 6.0%	REITs -4.4%	Bank Loans 8.6%	Municipal Bonds 4.2%	International Equity 11.3%	Hedge Funds -3.6%
Cash 0.1%	Energy MLPs 4.8%	REITs 3.2%	Cash 0.0%	International Equity -0.8%	Private Equity 9.0%	Bank Loans 4.1%	Hedge Funds -6.7%	Hedge Funds 8.6%	Bank Loans 3.1%	Bank Loans 5.2%	Municipal Bonds -5.2%
Hedge Funds -8.9%	Municipal Bonds 3.6%	Cash 0.1%	Hedge Funds -0.6%	Hedge Funds -3.6%	Hedge Funds 2.5%	Municipal Bonds 3.5%	Commodities -11.3%	Commodities 7.7%	Cash 0.7%	Hedge Funds 3.7%	US Large Cap -16.1%
International Equity -12.1%	Hedge Funds 3.5%	Municipal Bonds -0.3%	Emerging Markets Equity -2.2%	Emerging Markets Equity -14.9%	International Equity 1.0%	Commodities 1.7%	Energy MLPs -12.4%	Energy MLPs 6.6%	Commodities -3.1%	Municipal Bonds 0.5%	REITs -17.5%
Commodities -13.3%	Cash 0.1%	Emerging Markets Equity -2.6%	International Equity -4.9%	Commodities -24.7%	Cash 0.3%	Cash 0.9%	International Equity -13.8%	Municipal Bonds 5.6%	REITs -5.9%	Cash 0.1%	Emerging Markets Equity -17.5%
Emerging Markets Equity -18.4%	Commodities -1.1%	Commodities -9.5%	Commodities -17.0%	Energy MLPs -32.6%	Municipal Bonds -0.1%	Energy MLPs -6.5%	Emerging Markets Equity -14.6%	Cash 2.3%	Energy MLPs -28.7%	Emerging Markets Equity -2.5%	International Equity -19.6%

**Private Equity data is final as of March 31, 2022.*

Note: Performance data as of August 31, 2022. Benchmark data obtained from Addepar. Past performance is not indicative of future results. US Large Cap (S&P 500 Index), International Equity (MSCI EAFE Index), Emerging Markets Equity (MSCI Emerging Markets Index), REITs (FTSE Nareit All REITs Index), Bank Loans (S&P/LSTA US Leveraged Loan Index), Municipal Bonds (Barclays 1-10 Year Municipal Bond Index, Energy MLPs (Alerian MLP Index), Commodities (Bloomberg Commodity Index), Hedge Funds (HFRX Global Index), Private Equity (Cambridge Private Equity Index) and Cash (BofA Merrill Lynch US 3-Month Treasury Bill).

Market Backdrop
Equity Market Volatility

- After a relatively calm 2021, higher volatility resurfaced across almost all asset markets thus far in 2022 as over 85% of days have seen the S&P 500 trade in at least a 1% daily range
  - The chart below plots the CBOE Volatility Index, a gauge of equity market uncertainty

90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022
CBOE Volatility Index (VIX) Average

Source: Federal Reserve Bank of St. Louis, Economic Research Division as of August 31, 2022. The CBOE Volatility Index (VIX) is a key measure of market expectations of near-term volatility conveyed by S&P 500 stock index option prices.

Market Backdrop
Interest Rate Environment

- After reaching all-time lows in 2020, treasury bond yields have increased with short-term rates rising sharply over the past several months alongside monetary policy tightening
  - The chart below plots both the 1-Year and 10-year US Treasury Yield

4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0

2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022

1-Year US Treasury Yield 10-Year US Treasury Yield

Source: Federal Reserve Bank of St. Louis, Economic Research Division as of August 31, 2022.

Market Backdrop
High Yield Credit Spreads

- Financial conditions have tightened in 2022 due to higher interest rates, a stronger US dollar, stock market declines, and widening credit spreads
  - The chart below plots the BofA US High Yield Index spread (relative to treasuries)

22.5
20.0
17.5
15.0
12.5
10.0
7.5
5.0
2.5
0.0

2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022

BofA High Yield Index Spread
Average

Source: Federal Reserve Bank of St. Louis, Economic Research Division as of August 31, 2022.

Market Backdrop
Monetary Policy

- Central banks pumped trillions of dollars of liquidity into financial markets during the past two years, but have pivoted toward tightening with the Fed starting to reduce the size of its balance sheet
  - The chart below illustrates the size of the Federal Reserve's balance sheet (measured in trillions)

$10.0
$9.0
$8.0
$7.0
$6.0
$5.0
$4.0
$3.0
$2.0
$1.0
$0.0

2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022

Federal Reserve Balance Sheet: Total Assets ($ Trillions)

Source: Federal Reserve Bank of St. Louis, Economic Research Division as of August 31, 2022.

Market Backdrop
US Labor Market

- After the steepest downturn for the US labor market since the Great Depression, it took just 29 months to fully recover all the jobs lost during the pandemic—but the recovery has been uneven
  - The chart below plots the total nonfarm payroll employment in the United States

160.0
155.0
150.0
145.0
140.0
135.0
130.0
125.0
120.0

2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022

February 2020
152.5 million jobs

April 2020
130.5 million jobs

August 2022
152.7 million jobs

Recession — All Employees, Nonfarm Payrolls (millions of persons)

Source: Federal Reserve Bank of St. Louis, Economic Research Division, U.S. Bureau of Labor Statistics as of August 31, 2022.

Market Backdrop
US Inflation

- The most extreme supply-related inflation pressures are easing, particularly for manufacturing, but some sectors where price changes tend to be more persistent—such as housing and food—remain elevated
  - The chart below plots the CPI and PCE Price Index (excluding food and energy) compared to the Fed's long-term inflation target of 2%

10.0
8.0
6.0
4.0
2.0
0.0
-2.0
-4.0

2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022

Consumer Price Index
Personal Consumption Expenditures Price Index (Ex Food and Energy)
Fed's Inflation Target

Source: Federal Reserve Bank of St. Louis, Economic Research Division, U.S. Bureau of Labor Statistics. Consumer Price Index (CPI) data as of July 31, 2022 and Personal Consumption Expenditures (PCE) Price Index data as of July 31, 2022.

Market Backdrop
US Inflation Expectations

- While US consumers' short-term inflation expectations have spiked, longer-term inflation expectations remain mostly "anchored" in a range consistent with the Fed's target
  - The chart below plots two measures of inflation expectations based on the University of Michigan's survey and the 10-Year Breakeven Rate

10.0
8.0
6.0
4.0
2.0
0.0
-2.0
-4.0

2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022

University of Michigan Inflation Expectations (Next 12 Months) — 10-Year Breakeven Inflation Rate — Fed's Inflation Target

Source: Federal Reserve Bank of St. Louis, Economic Research Division, U.S. Bureau of Labor Statistics. The University of Michigan Inflation Expectations survey of consumers presents the median expected price changes for the next 12 months, based on data as of July 31, 2022. The 10-Year Breakeven Rate measures the difference or gap between 10-Year Treasury Bond and Treasury Inflation Protected Securities (TIPS), based on data as of August 31, 2022. The 10-Year Breakeven Rate serves as an indication of the markets' inflation expectations over the 10-year horizon.

Market Outlook
Economic Scenarios

- The table below summarizes three scenarios designed to characterize a broad range of potential outcomes for the global macroeconomic backdrop and capital markets over the next few years
  - We refer to these scenarios as the base, bull, and bear cases

Scenario	Probability	Description
Base Case	55%	▪ Slowing, but positive corporate earnings growth and/or mild recession are followed by an economic and market rebound ▪ Inflation peaks in 2022 and begins falling in 2023 ▪ The Fed hikes rates less than anticipated resulting in a terminal Fed Funds rate of 3.5% to 4.0% and avoids a hard landing
Bull Case	20%	▪ No recession ▪ Inflation eases ahead of expectations as a result of non-monetary factors (e.g. supply chain normalization) allowing the Fed to limit rate increases ▪ The Fed halts its rate hikes immediately and the Fed Funds rate settles near a neutral level of about 2.0%
Bear Case	25%	▪ Persistently high inflation motivates the Fed to overtighten, leading to a sharp and potentially lengthy recession ▪ The Fed continues tightening aggressively, driving the Fed Funds rate to 5.0% ▪ Corporate earnings growth turns negative for the tactical horizon

Note: Based on research and opinion provided by Greycourt & Co. as of August 2022.

Market Outlook
Summary Macro Views

- It's been an unusual cycle—and a wide range of potential outcomes still exists
  - Multiple sources of uncertainty (inflation, monetary policy, and geopolitics) suggest market volatility may remain elevated
  - While risks have risen, starting point valuations have also improved
- The economic outlook has deteriorated as we assume a continued deceleration in US and global growth driven by tightening monetary policy in response to sustained high inflation
  - Near-term (next 12 months) recession risk continues to rise and represents a reasonable conservative scenario, but not a certainty
- Most relevant to investment strategy is assessing the potential severity of any economic downturn and its impact on corporate earnings and interest rates—and what is being discounted in asset prices
  - Given the strength in corporate and consumer balance sheets, we believe any potential recession is likely to be brief and shallow—perhaps a more "normal" type of cyclical recession rather than akin to the 2008-2009 financial crisis or the 2000-2002 dotcom bubble burst
  - The sharp fall in stock prices already experienced this year suggests markets have priced in some expectation of meaningful earnings decline
- Uncertainty about inflation and monetary policy remain key risks
  - Inflation rates should moderate over the next 12 months from multi-decade highs, but persistent pressures (like the cost of housing) are likely to keep inflation elevated for some time
  - Russia's war with Ukraine continues to put upward pressure on energy and agriculture prices while the potential exists for ongoing COVID-related supply chain disruptions
  - Global central banks have pivoted towards monetary tightening—of course, reduced accommodation can impact aggregate levels of demand but cannot directly influence matters of supply

Note: Opinions above based on research as of August 2022. Please see our disclosures at the end of this document.

Market Outlook
Capital Market Assumptions and Tactical Views

	10-Year	10-Year	3-Year	Current Tactical Views				
	Trailing Return	Strategic Return Assumption	Tactical Return Assumption	Strong Underweight	Underweight	Neutral	Overweight	Strong Overweight
Inflation	2.5%	2.2%						
Cash								
Cash	0.6%						■	
Fixed Income								
US Investment Grade Bonds	1.7%	3.1%			■			
Tax-Free Municipal Bonds	2.5%	2.4%			■			
High Yield Credit	4.1%	5.3%					■	
Equities (Public & Private)								
US Large Cap	13.8%	6.3%	3.8%		■			
US Small Cap	10.6%	7.6%	5.2%			■		
Non-US Developed Markets	6.3%	6.9%	4.3%			■		
Emerging Markets	3.2%	8.7%	5.6%			■		
Private Equity		10.0%						
Real Assets (Public & Private)								
Commodities	-1.0%	4.4%					■	
Public Real Estate (Core)	8.7%	6.2%		■				
Private Real Estate (Opportunistic)		8.3%						
Flexible/Alternative Strategies								
Diversifying Hedge	3.7%	5.0%					■	

Note: Based on research and opinion provided by Greycourt & Co. as of August 2022. Trailing returns shown as of July 31, 2022. Inflation based on the Consumer Price Index (CPI). Tactical views reflect a three-year investment horizon. Suggested asset class weights are influenced by Greycourt's detailed quarterly tactical analysis and are used as a starting point in assessing client portfolio weights against strategic targets which typically reflect a ten-year investing horizon. Past performance is no guarantee of future results. Please see the disclosure pages at the end of this presentation.

Market Outlook
Portfolio Positioning Themes

- Don't tilt too far away from an appropriate strategic asset mix
  - Proper portfolio diversification beyond traditional US stocks and bonds remains important as ever—aim to position for a range of outcomes
- Continue to target an underweight position to core/investment grade fixed income, but add to municipal bonds given recent weakness and more compelling yields
  - While rising interest rates still pose a risk to high quality bonds, tax-equivalent yields on municipal bonds are relatively attractive
  - High yield credit is also appealing given recent spread widening
- Maintain a slight underweight position in US large cap equities while emphasizing high quality stocks and more reasonably priced international and emerging markets
  - Remain fully invested in non-US stocks that stand to benefit from lower valuations, as a lot of bad news and negative sentiment is already priced into these markets
  - Recent weakness presents an attractive opportunity to add to emerging markets and global small cap stocks
- Target an overweight position to real assets given the risk of sustained higher inflation
  - Commodities and commodity-producer equities can help hedge against surprise increases in inflation while providing potential capital appreciation in a higher growth environment
- Maintain an overweight position to certain diversifying and credit-oriented alternative strategies
  - We believe the investment case remains compelling given macro uncertainty and still-elevated valuations across traditional investments

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Market Outlook
Non-US Equity Valuations

- The broad equity sell-off caused valuations for all categories of global stocks to decline while earnings growth continued to slow from the decade-high rates registered during the profit recovery in 2021
  - The price-to-earnings (P/E) ratios for both Europe and emerging markets stocks relative to the US are well below their long-term averages, indicating a steep discount in valuation and an attractive long-term backdrop for non-US stocks
  - The chart below plots the price-to-earnings ratios for Europe and emerging markets relative to the US

Valuation Discount: Europe and Emerging Markets versus US Stocks (Forward P/E Ratio)

Europe Valuation Discount to US
Emerging Market (EM) Valuation Discount to US
Average Europe Discount
Average EM Discount

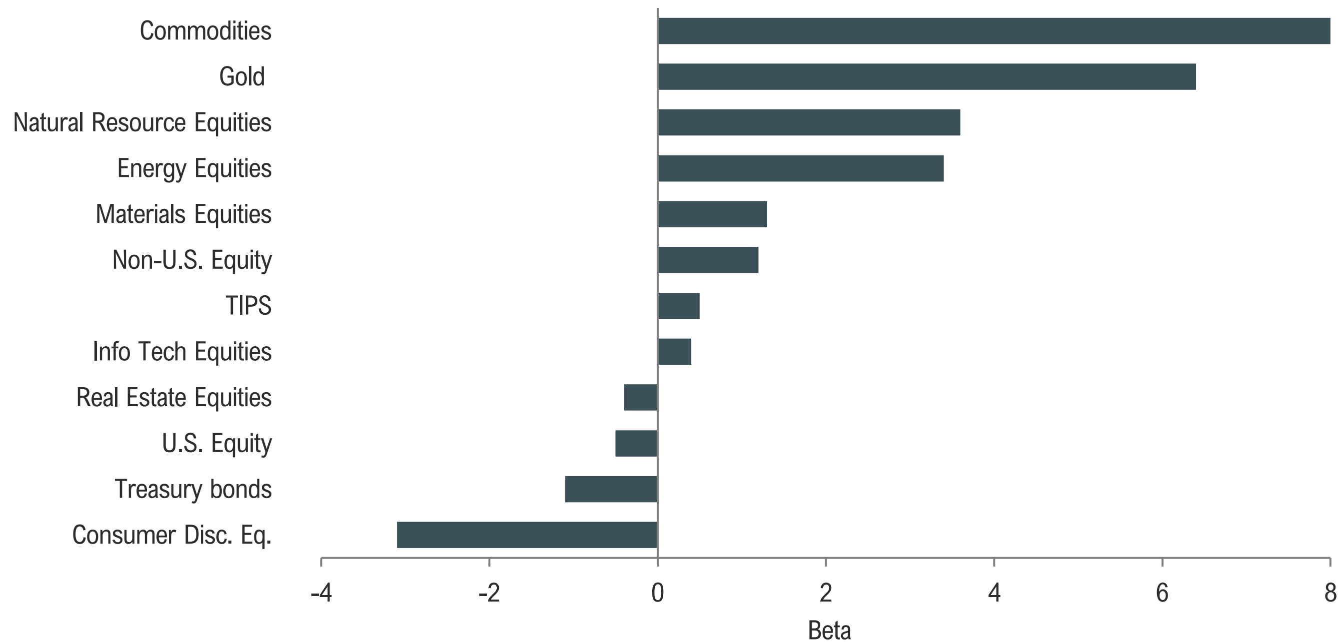
10%
5%
0%
-5%
-10%
-15%
-20%
-25%
-30%
-35%
-40%
-45%

2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022

Source: Litman Gregory AdvisorIntelligence and Bloomberg as of June 30, 2022. Price-to-earnings ratio (P/E) is the stock price divided by earnings per share.

Market Outlook
Inflation-Sensitive Assets

- The potential for a period of sustained higher inflation represents a risk factor for a diversified portfolio
  - Inflation-resistant assets, including commodities and commodity-producer equities, can help hedge against surprise increases in inflation while providing potential for capital appreciation in a higher nominal-growth environment
  - In fixed income, inflation-hedging assets such as TIPS have provided better diversification than Treasury bonds
  - The chart below illustrates the historical return sensitivity (or beta) of certain asset classes (based on index proxies) to inflation surprises



Source: Bureau of Labor Statistics, Fidelity Investments, data from January 1, 1972 through February 28, 2022. Past performance is no guarantee of future results. Inflation sensitivity measured relative to CPI, an index that tracks the percentage change in the price of a specified "basket" of consumer goods and services. Beta is a measure of a variable's sensitivity (response) relative to changes (volatility) in a reference (benchmark), which has a beta of 1.

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Appendix

Appendix
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