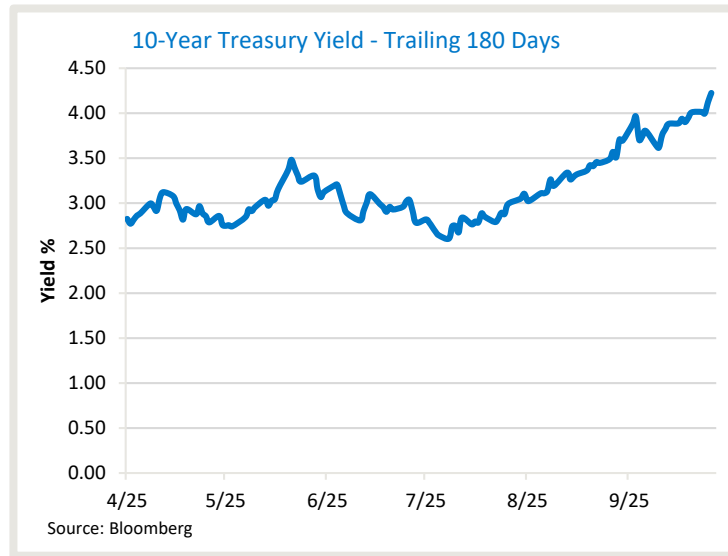


Weekly Market Brief

Chart of the Week



Economic Week Ahead

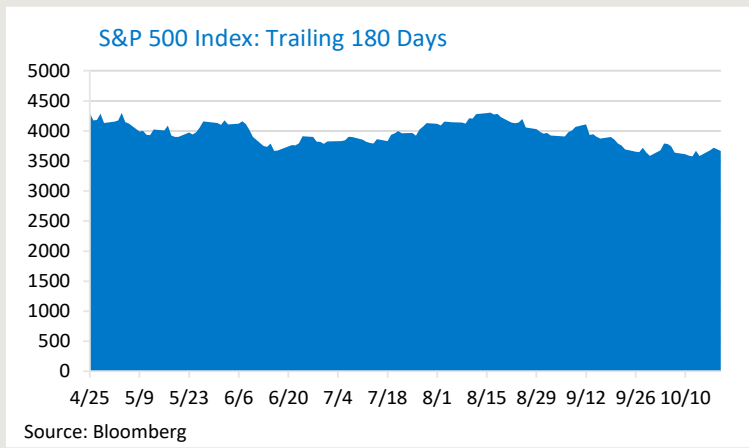
| | | | |
|-----|----|--------------|---|
| MON | 24 | October 2022 | <ul style="list-style-type: none"> Chi Fed Actv |
| TUE | 25 | October 2022 | <ul style="list-style-type: none"> Conf BD: October (est 107.0) House Prices Richmond Mfg |
| WED | 26 | October 2022 | <ul style="list-style-type: none"> New Homes: September (est 0.6) Mtg Apps Retail Inv |
| THU | 27 | October 2022 | <ul style="list-style-type: none"> Real GDP: 3Q (est 2.5%) Dur Goods: September (est 0.5%) Claims Pers Consum KC Fed Mfg |
| FRI | 28 | October 2022 | <ul style="list-style-type: none"> ECl: 3Q (est. 1.2%) Pers Income: September (est. 0.3%) U of Mich: October (est. 59.8) |

Market Dashboard

| | Last Price | Change | % Chg. | YTD % |
|---------------------------|------------|----------|--------|--------|
| S&P 500 | 3,752.75 | 169.68 | 4.74% | -21.3% |
| Dow Industrials | 31,082.56 | 1,447.73 | 4.89% | -14.5% |
| Nasdaq | 10,859.71 | 538.33 | 5.22% | -30.6% |
| Russell 2000 | 1,742.24 | 59.84 | 3.56% | -22.4% |
| Euro Stoxx Index | 396.29 | 4.98 | 1.27% | -18.8% |
| Shanghai Composite | 3,038.93 | -33.06 | -1.08% | -16.5% |
| MSCI ACWI | 563.06 | 10.98 | 1.99% | -25.4% |

Source: Bloomberg; Index % change is based on price.

| | Last Price | Change | % Chg. | YTD % |
|------------------------------|------------|---------|--------|--------|
| MSCI EM | 864.76 | 1.43 | 0.17% | -29.8% |
| 10-Year US Treas. | 4.21 | 20 bps | NM | NM |
| Bloomberg Cmdts. Idx. | 111.27 | -2.40 | -2.11% | 12.2% |
| Gold | \$1,657.05 | \$10.42 | 0.63% | -9.5% |
| Crude Oil | \$85.13 | \$0.45 | 0.53% | 21.9% |
| Dollar Index | 111.86 | -1.48 | -1.31% | 16.9% |
| VIX Index | 29.69 | -2.28 | -7.12% | 72.7% |



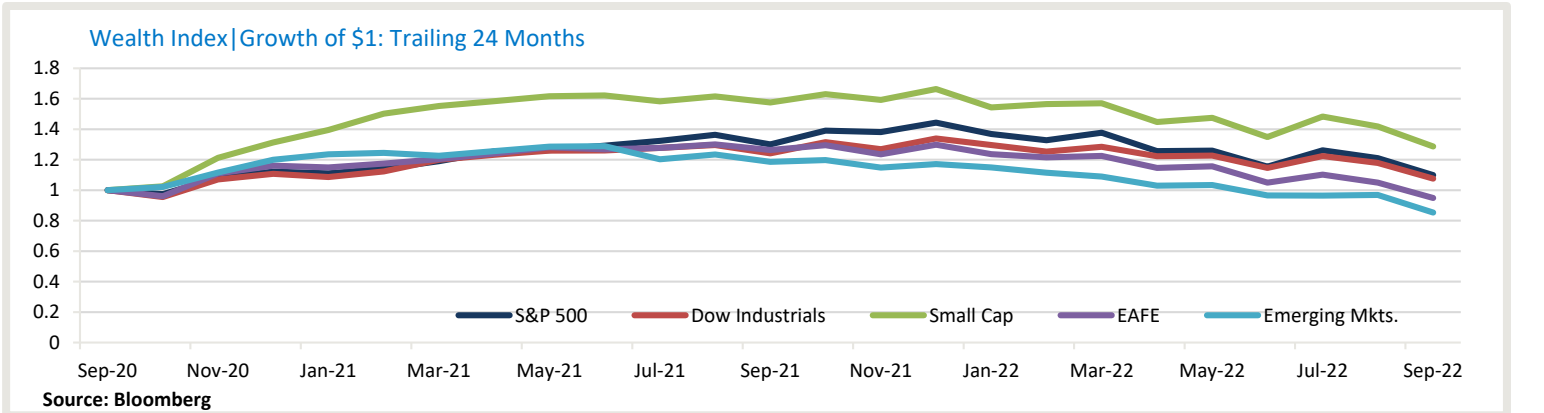
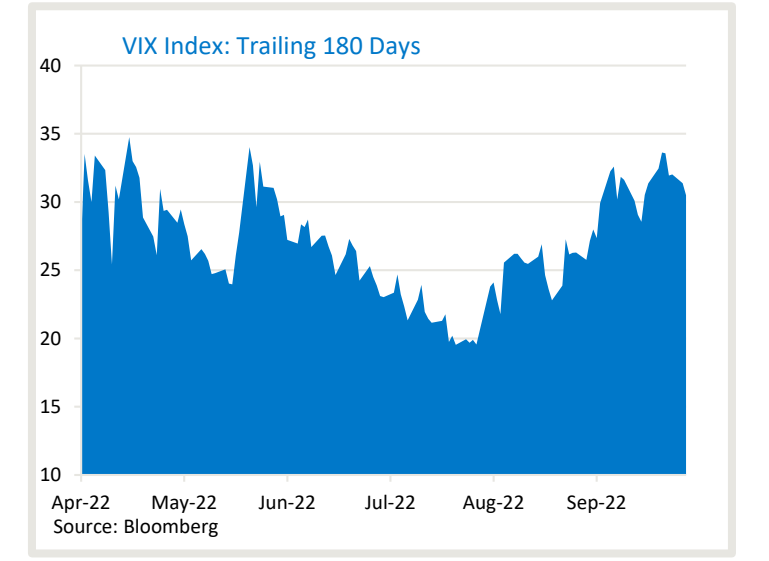
| | One Week | | | YTD | | |
|----------|----------|--------|-------|---------|---------|---------|
| | Value | Growth | | Value | Growth | |
| L | 4.24% | 5.04% | 5.70% | -12.69% | -21.94% | -28.35% |
| | 3.27% | 3.57% | 4.11% | -18.51% | -22.59% | -30.02% |
| S | 3.31% | 3.56% | 3.80% | -17.75% | -22.41% | -27.16% |

Source: Bloomberg

Sector Performance:
S&P/Global Industry Classification Sectors (GICS)

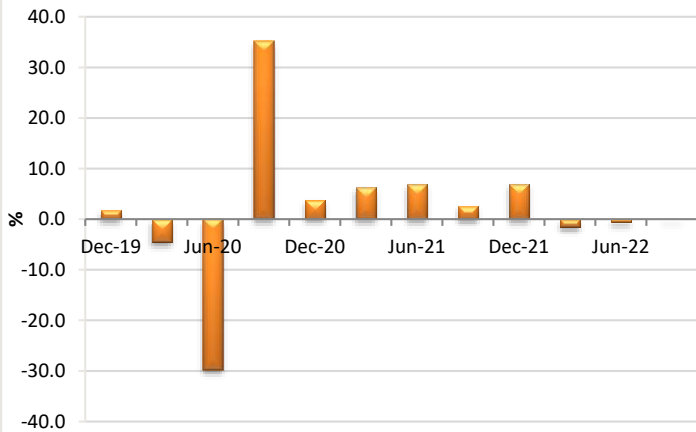
| | % Wgt in S&P 500 | Week % Chg. | YTD % Chg. |
|-------------------------------|------------------|-------------|------------|
| Consumer Discretionary | 11.2 | 5.64% | -30.2% |
| Consumer Staples | 6.8 | 2.16% | -10.7% |
| Energy | 5.4 | 8.08% | 57.9% |
| Financials | 11.1 | 3.93% | -17.7% |
| Health Care | 15.1 | 2.29% | -10.3% |
| Industrials | 8.0 | 4.65% | -16.2% |
| Information Technology | 26.4 | 6.49% | -28.7% |
| Materials | 2.6 | 6.15% | -20.1% |
| Real Estate | 2.6 | 2.79% | -33.1% |
| Communication Services | 8.1 | 5.03% | -36.6% |
| Utilities | 2.9 | 1.95% | -11.6% |

Source: Bloomberg



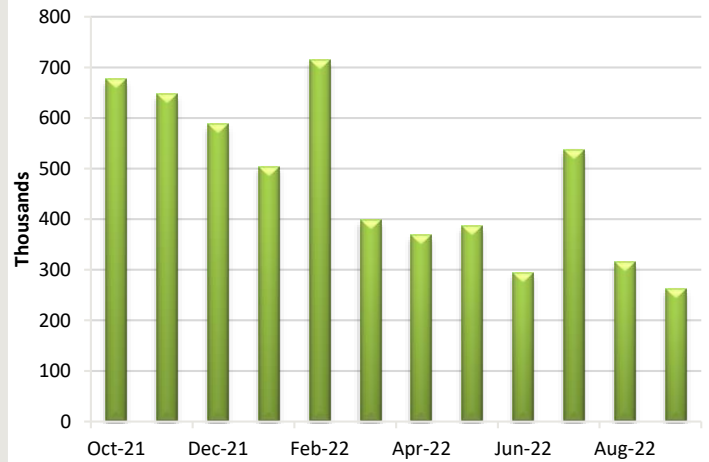
Economic Data

Real GDP Growth Rate - Annualized - 12 Qtrs.



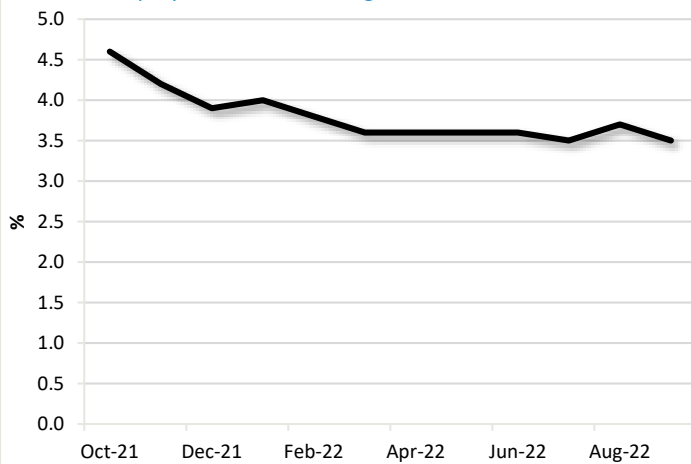
Source: Bloomberg

Non-Farm Payrolls-Trailing 12 Mos.



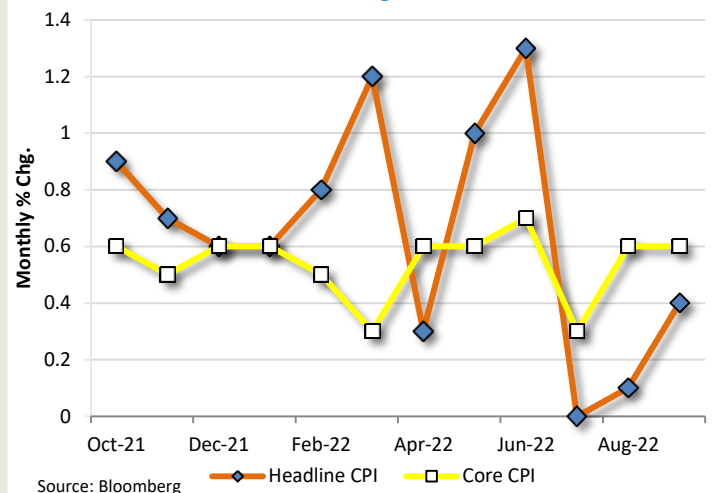
Source: Bloomberg

Unemployment Rate-Trailing 12 Mos.



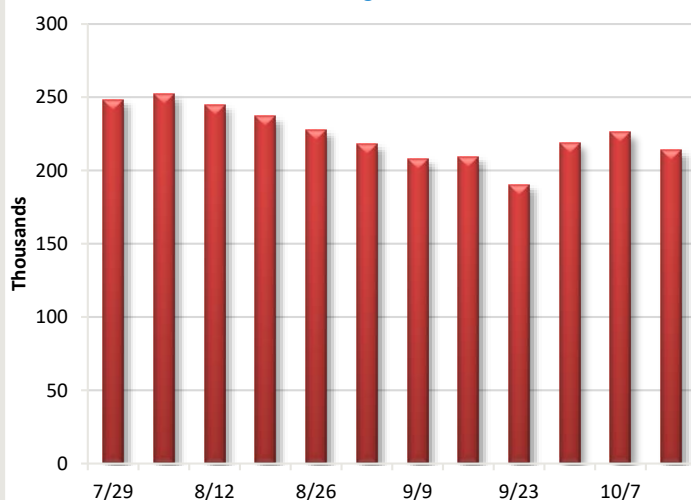
Source: Bloomberg

Consumer Price Index-Trailing 12 Mos.



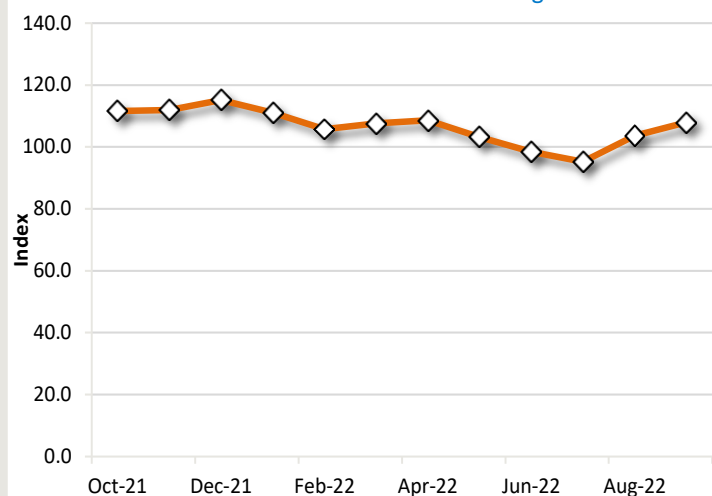
Source: Bloomberg

Initial Jobless Claims-Trailing 12 Wks.



Source: Bloomberg

Consumer Board Confidence Index - Trailing 12 Mos.



Source: Bloomberg

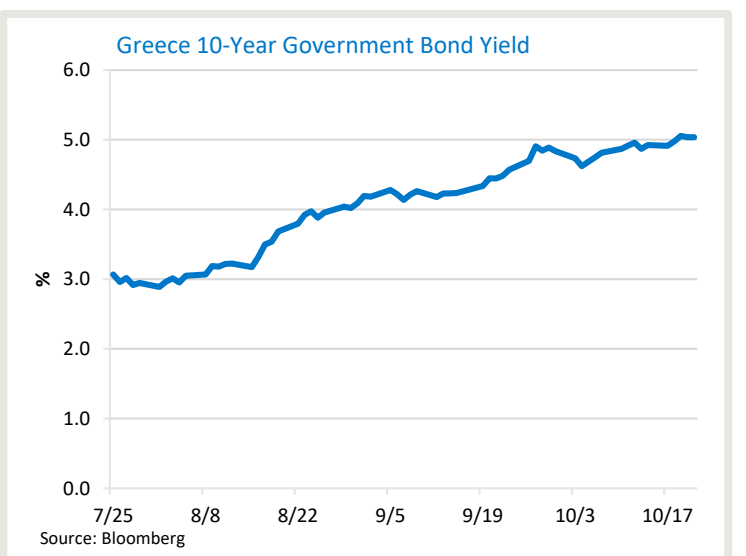
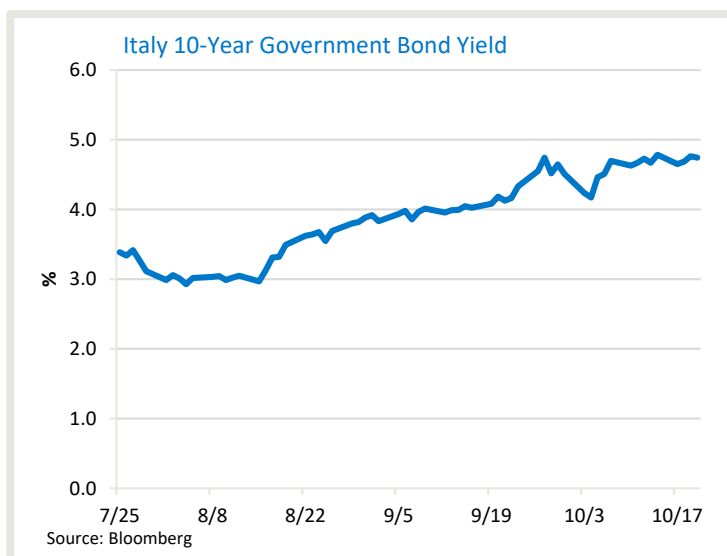
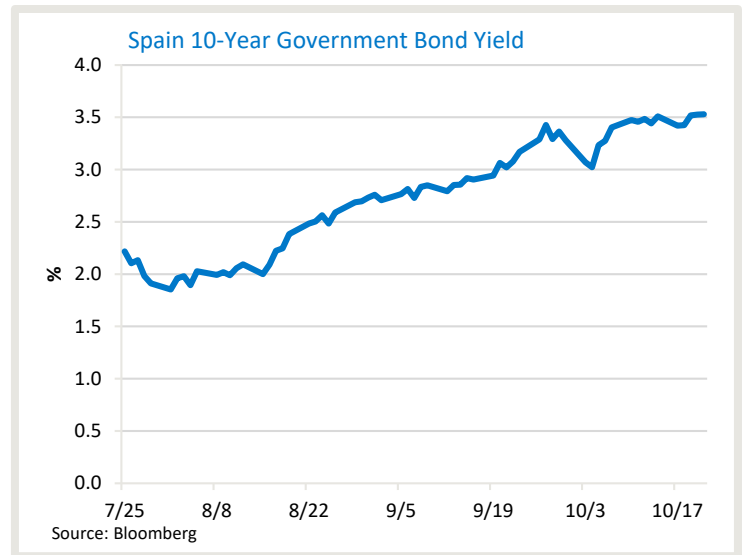
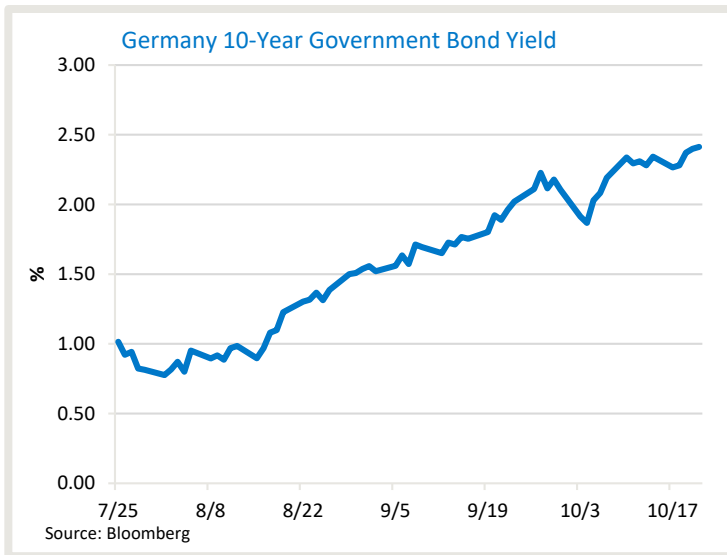
Eurozone

SELECTED EUROPEAN SOVEREIGN YIELD PERFORMANCE

| | Last | Change | % Chg. | YTD % |
|----------------------|------|--------|--------|-------|
| Germany 10-Yr. Govt. | 2.41 | -6 bps | NM | NM |
| Greece 10-Yr. Govt. | 5.04 | -7 bps | NM | NM |
| Italy 10-Yr. Govt. | 4.74 | 3 bps | NM | NM |
| Spain 10-Yr. Govt. | 3.53 | -1 bps | NM | NM |
| Belgium 10-Yr. Govt. | 3.03 | -1 bps | NM | NM |

Source: Bloomberg
Basis points (bps)

| | Last | Change | % Chg. | YTD % |
|--------------------------|------|--------|--------|-------|
| France 10-Yr. Govt. | 2.97 | -2 bps | NM | NM |
| Ireland 10-Yr. Govt. | 2.89 | 0 bps | NM | NM |
| Portugal 10-Yr. Govt. | 3.44 | -2 bps | NM | NM |
| Netherlands 10-Yr. Govt. | 2.71 | -3 bps | NM | NM |
| U.K. 10-Yr. Govt. | 4.05 | 22 bps | NM | NM |

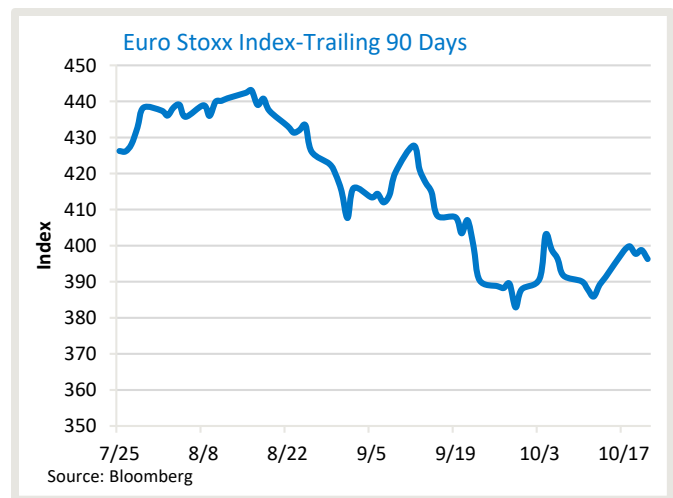
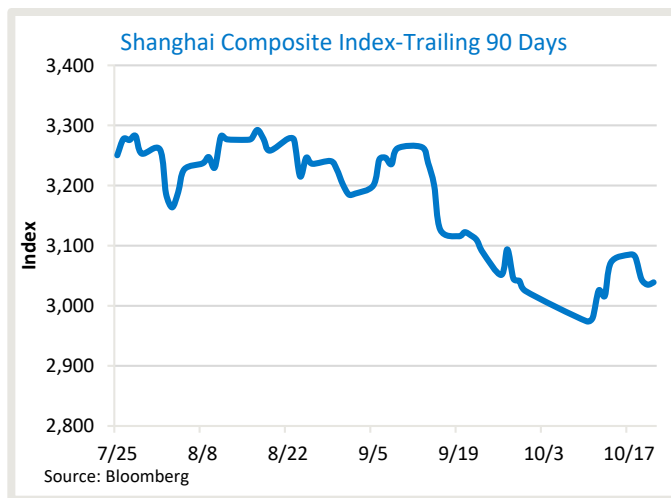
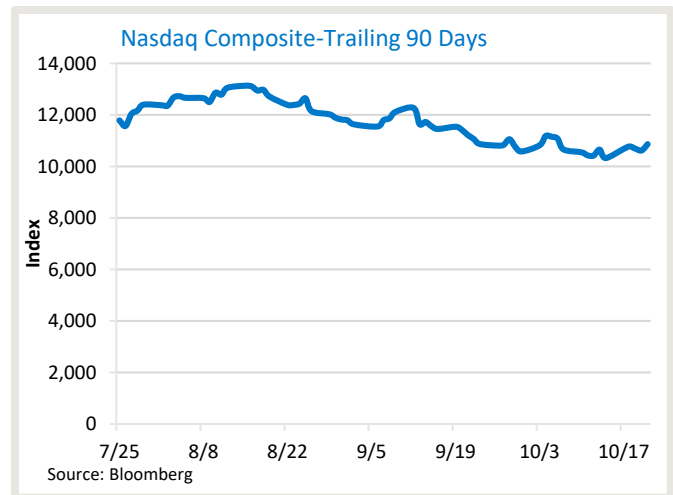
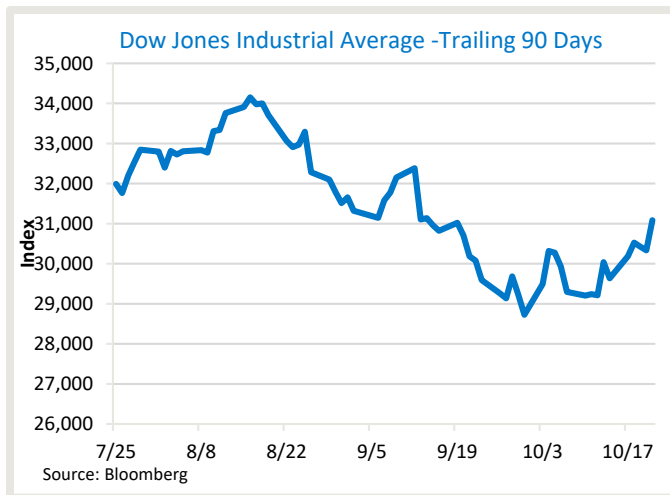


Equities

WORLD MARKET PERFORMANCE

| | Last | Change | % Chg. | YTD % | | Last | Change | % Chg. | YTD % |
|------------------|------------|---------|--------|---------|------------------------|-----------|---------|--------|---------|
| S&P 500 | 3,752.75 | 169.68 | 4.74% | -21.26% | Swiss Market Index | 10,418.60 | 89.26 | 0.86% | -19.08% |
| Dow Industrials | 31,082.56 | 1447.73 | 4.89% | -14.46% | CAC 40 Index (France) | 6,035.39 | 103.47 | 1.74% | -15.62% |
| Nasdaq Composite | 10,859.71 | 538.33 | 5.22% | -30.59% | DAX Index (Germany) | 12,730.90 | 293.09 | 2.36% | -19.86% |
| MSCI ACWI | 563.06 | 10.98 | 1.99% | -25.4% | Irish Overall Index | 6,626.73 | 67.40 | 1.03% | -21.53% |
| MSCI EM | 864.76 | 1.43 | 0.17% | -29.8% | Nikkei 225 | 26,890.58 | -200.18 | -0.74% | -6.60% |
| S&P/TSX (Canada) | 18,860.95 | 534.60 | 2.92% | -11.13% | Hang Seng Index | 16,211.12 | -376.57 | -2.27% | -30.71% |
| Mexico IPC | 47,120.08 | 1666.02 | 3.67% | -11.57% | Shanghai Composite | 3,038.93 | -33.06 | -1.08% | -16.51% |
| Brazil Bovespa | 119,928.79 | 7794.73 | 6.96% | 14.35% | Kospi Index (S. Korea) | 2,213.12 | 0.57 | 0.03% | -25.68% |
| Euro Stoxx 600 | 396.29 | 4.98 | 1.27% | -18.76% | Taiwan Taiex Index | 12,819.20 | -308.92 | -2.35% | -29.64% |
| FTSE 100 | 6,969.73 | 110.94 | 1.62% | -5.62% | Tel Aviv 25 Index | 1,887.95 | 25.26 | 1.36% | -4.56% |
| IBEX 35 (Spain) | 7,545.60 | 163.10 | 2.21% | -13.41% | MOEX Index (Russia) | 2,043.71 | 92.73 | 4.75% | -46.04% |

Source: Bloomberg; Index % change is based on price.



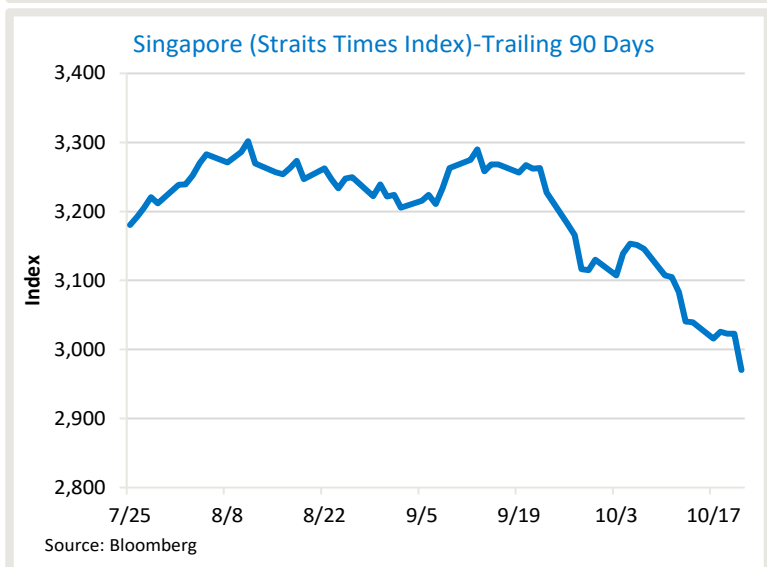
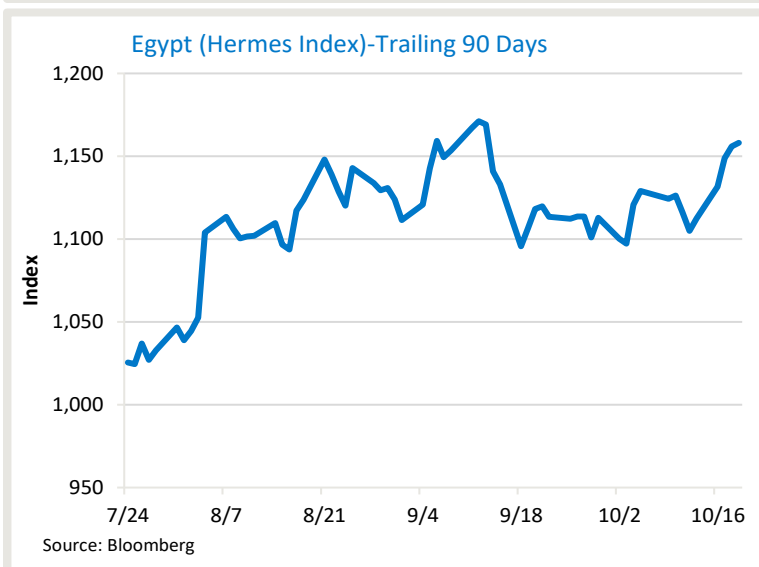
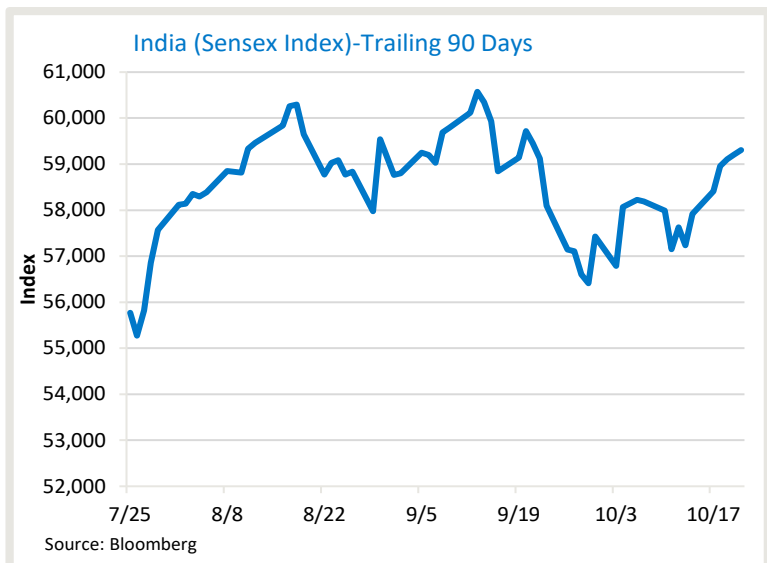
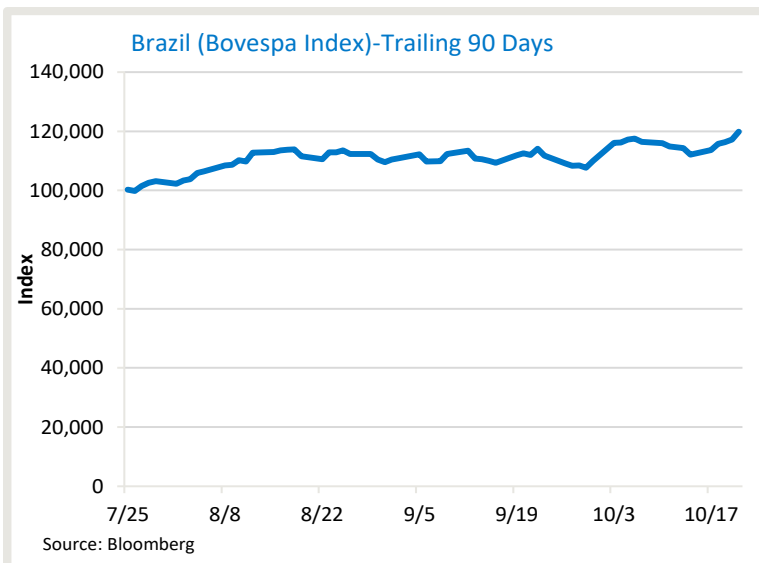
Equities – Emerging and Frontier Markets

EMERGING AND FRONTIER MARKET PERFORMANCE

| | Last | Change | % Chg. | YTD % |
|-----------------------------|------------|---------|--------|--------|
| Mexico IPC | 47,120.08 | 1666.02 | 3.7% | -11.6% |
| Brazil (Bovespa Index) | 119,928.79 | 7794.73 | 7.0% | 14.4% |
| MOEX Index (Russia) | 2,043.71 | 92.73 | 4.8% | -46.0% |
| Czech Republic (Prague) | 1,164.33 | 17.18 | 1.5% | -18.4% |
| Turkey (Istanbul) | 3,934.63 | 307.67 | 8.5% | 111.8% |
| Egypt (Hermes Index) | 1,167.89 | 55.55 | 5.0% | -8.8% |
| Kenya (Nairobi 20 Index) | 1,704.60 | 4.38 | 0.3% | -10.4% |
| Saudi Arabia (TASI Index) | 11,963.68 | 541.90 | 4.7% | 6.0% |
| Lebanon (Beirut BLOM Index) | 1,267.39 | -24.12 | -1.9% | 23.1% |
| Palestine | 624.53 | -0.41 | -0.1% | 2.6% |

Source: Bloomberg; Index % change is based on price.

| | Last | Change | % Chg. | YTD % |
|---------------------------------|-----------|---------|--------|--------|
| Hang Seng Index | 16,211.12 | -376.57 | -2.3% | -30.7% |
| India (Sensex 30) | 59,307.15 | 0.00 | 0.0% | 1.8% |
| Malaysia (KLCI Index) | 1,446.42 | 63.95 | 4.6% | -7.7% |
| Singapore (Straits Times Index) | 2,969.95 | -69.66 | -2.3% | -4.9% |
| Thailand (SET Index) | 1,591.32 | 30.54 | 2.0% | -4.0% |
| Indonesia (Jakarta) | 7,017.77 | 203.24 | 3.0% | 6.6% |
| Pakistan (Karachi KSE 100) | 42,213.48 | 58.17 | 0.1% | -5.3% |
| Vietnam (Ho Chi Minh) | 1,019.82 | -42.03 | -4.0% | -31.9% |
| Sri Lanka (Colombo) | 8,685.52 | -407.85 | -4.5% | -29.0% |
| Cambodia (Laos) | 857.66 | 45.93 | 5.7% | 43.5% |

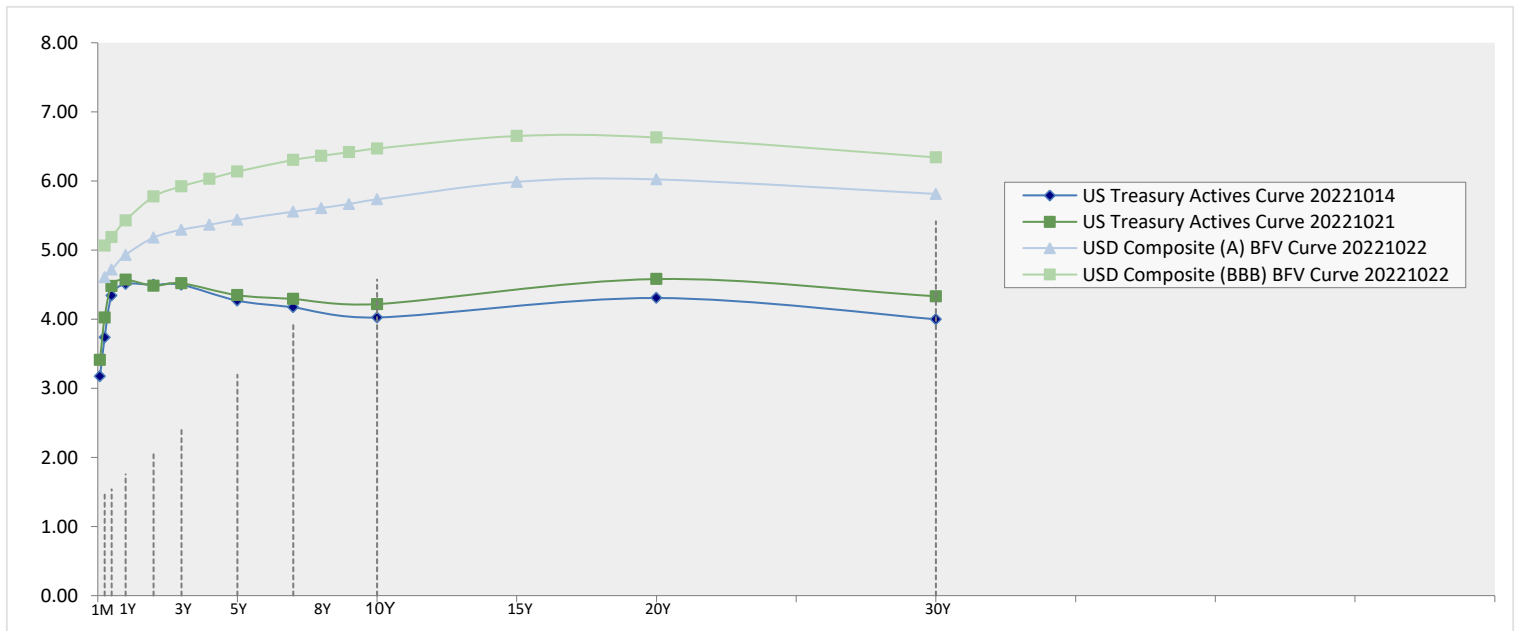


Interest Rates

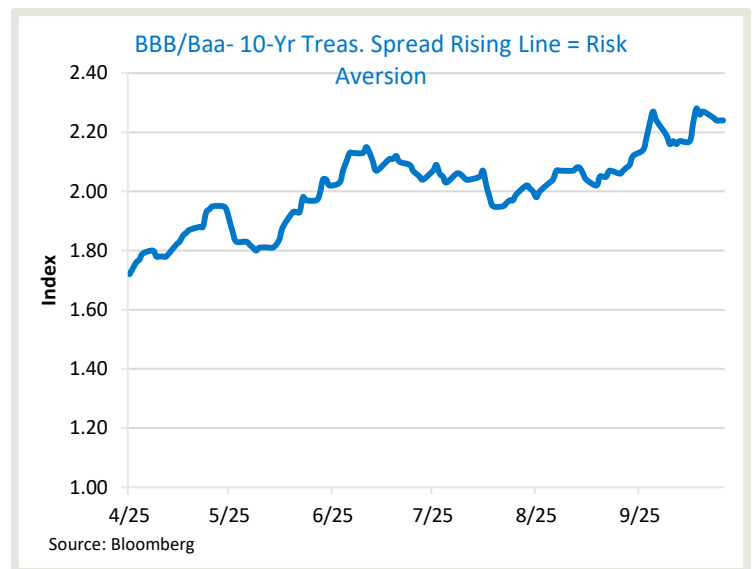
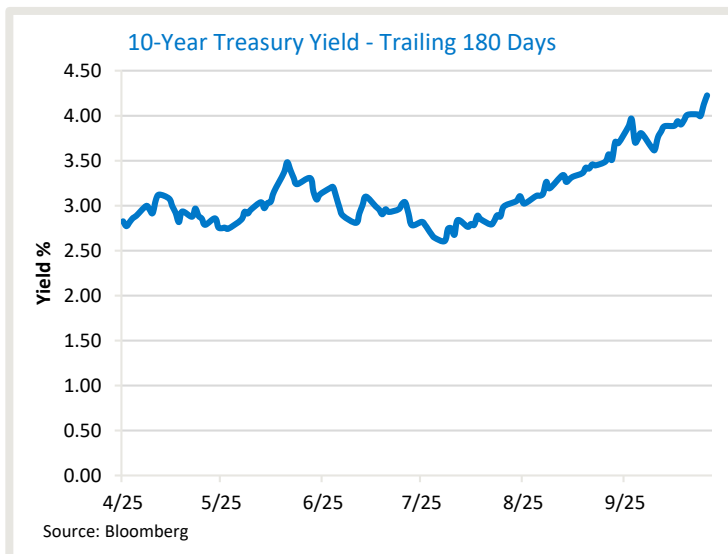
| | Last | Change | % Chg. | YTD % |
|----------------------|-------|--------|--------|-------|
| 2-Yr. U.S. Treasury | 4.48% | 0 bps | NM | NM |
| 5-Yr. U.S. Treasury | 4.35% | 9 bps | NM | NM |
| 10-Yr. U.S. Treasury | 4.21% | 20 bps | NM | NM |
| 30-Yr. U.S. Treasury | 4.31% | 33 bps | NM | NM |
| German 10-Yr. Govt. | 2.41% | -6 bps | NM | NM |
| France 10-Yr. | 2.97% | -2 bps | NM | NM |
| Italy 10-Yr. | 4.74% | 3 bps | NM | NM |
| Fed 5-Yr Fwd BE Inf. | 2.20% | 26 bps | NM | NM |

| | Last | Change | % Chg. | YTD % |
|--------------------|-------|--------|--------|-------|
| Prime Rate | 6.25% | 0.00 | NM | NM |
| Fed Funds Rate | 3.25% | 0.00 | NM | NM |
| Discount Rate | 3.25% | 0.00 | NM | NM |
| LIBOR (3 Mo.) | 4.32% | 13 bps | NM | NM |
| Bond Buyer 40 Muni | 7.63% | 34 bps | NM | NM |
| Bond Buyer 40 G.O. | 3.87% | NA | NM | NM |
| Bond Buyer 40 Rev. | 4.15% | NA | NM | NM |

Source: Bloomberg



Source: Bloomberg



Currencies

SELECTED CURRENCY PERFORMANCE

| | Last | Change | % Chg. | YTD % |
|------------------------|---------------|---------------|---------------|----------------|
| Dollar Index | 111.86 | -1.479 | -1.31% | 16.89% |
| Euro | 0.99 | 0.014 | 1.43% | -13.27% |
| Japanese Yen | 147.68 | -1.180 | 0.80% | -21.97% |
| British Pound | 1.13 | 0.014 | 1.22% | -16.44% |
| Canadian Dollar | 1.36 | -0.024 | 1.78% | -7.37% |

| | Last | Change | % Chg. | YTD % |
|---------------------------|--------------|---------------|---------------|----------------|
| Chinese Yuan | 7.23 | 0.038 | -0.53% | -12.09% |
| Swiss Franc | 1.00 | -0.008 | 0.78% | -8.49% |
| New Zealand Dollar | 0.58 | 0.020 | 3.58% | -15.60% |
| Brazilian Real | 5.16 | -0.161 | 3.11% | 7.95% |
| Mexican Peso | 19.92 | -0.156 | 0.78% | 3.03% |

Source: Bloomberg

U.S. Dollar Index - Trailing Six Months



Source: Bloomberg

Euro - U.S. Dollars per Euro



Source: Bloomberg

Chinese yuan - yuan per U.S. Dollar



Source: Bloomberg

Japanese yen - Yen per U.S. Dollar



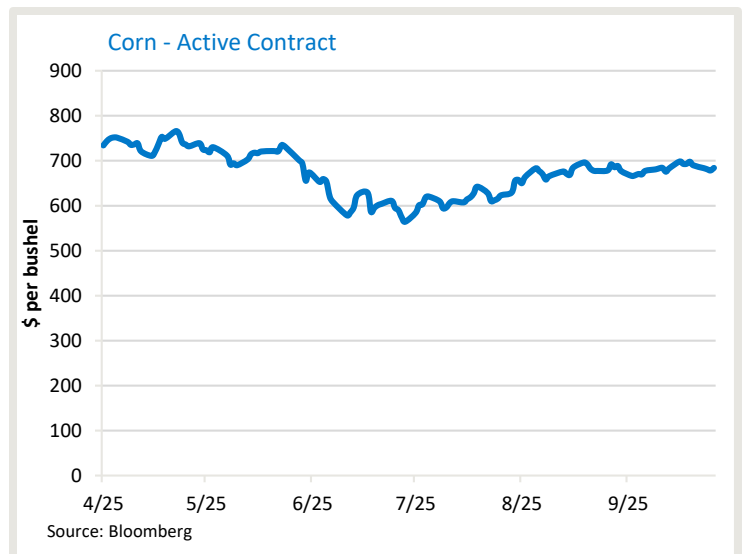
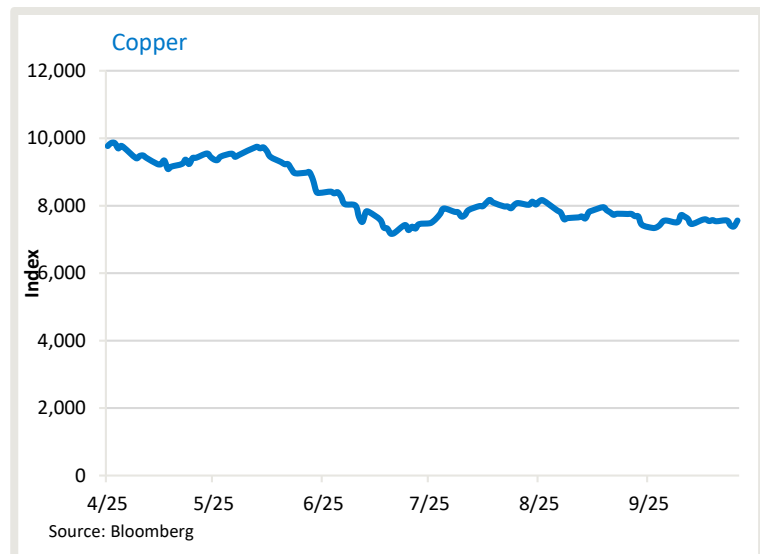
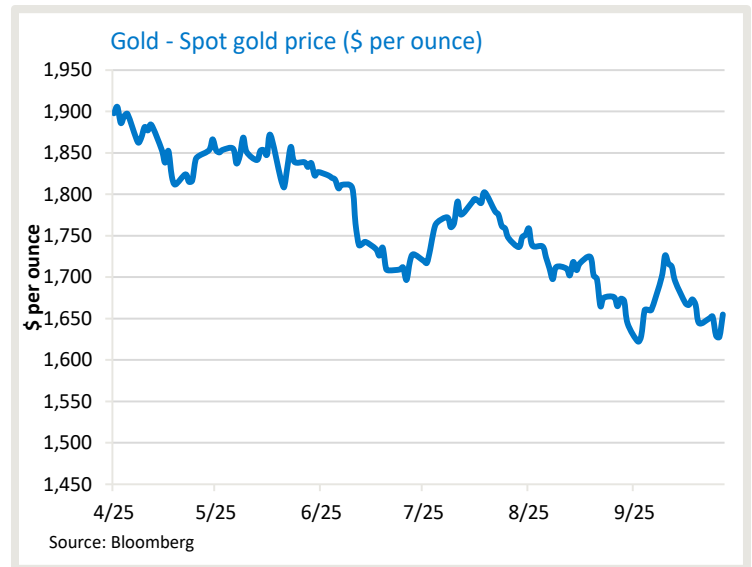
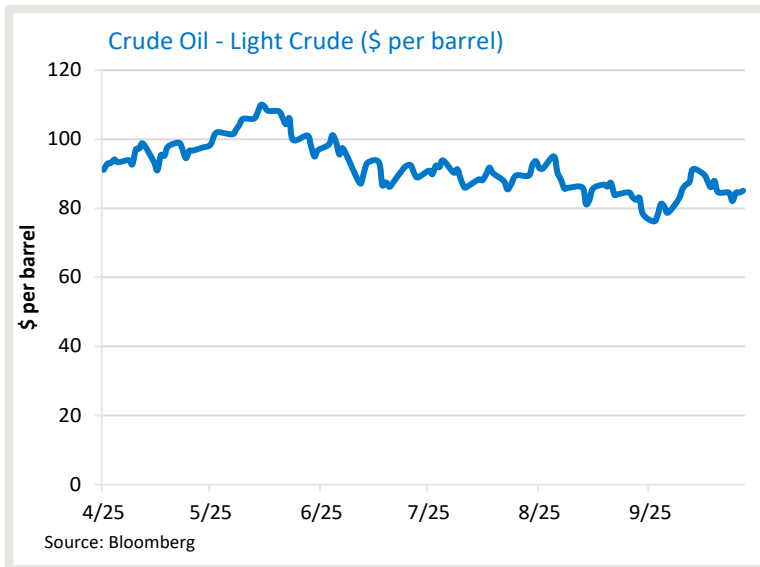
Source: Bloomberg

Commodities

SELECTED COMMODITY MARKET PERFORMANCE

| | Last | Change | % Chg. | YTD % | | Last | Change | % Chg. | YTD % |
|-----------------------------|------------|---------|---------|---------|----------------------|----------|---------|--------|---------|
| Bloomberg Comm. Idx. | 111.27 | -2.40 | -2.11% | 12.20% | Platinum Spot | \$934.59 | \$30.79 | 3.41% | -3.60% |
| Crude Oil | \$85.13 | \$0.45 | 0.53% | 21.87% | Corn | 683.50 | -6.25 | -0.91% | 25.18% |
| Natural Gas | \$5.01 | -\$1.44 | -22.30% | 32.44% | Wheat | 848.00 | -11.75 | -1.37% | 10.13% |
| Gasoline (\$/Gal.) | \$3.82 | -\$0.07 | -1.85% | 16.25% | Soybeans | 1,401.75 | 9.00 | 0.65% | 10.44% |
| Heating Oil | 382.45 | -14.50 | -3.64% | 70.99% | Sugar | 18.38 | -0.46 | -2.44% | -0.27% |
| Gold Spot | \$1,656.38 | \$10.42 | 0.63% | -9.53% | Orange Juice | 197.00 | 7.60 | 4.01% | 37.28% |
| Silver Spot | \$19.34 | \$1.03 | 5.61% | -17.19% | Aluminum | 2,209.50 | -96.50 | -4.18% | -21.30% |
| | | | | | Copper | 7,560.50 | 22.00 | 0.29% | -22.22% |

Source: Bloomberg; % change is based on price.

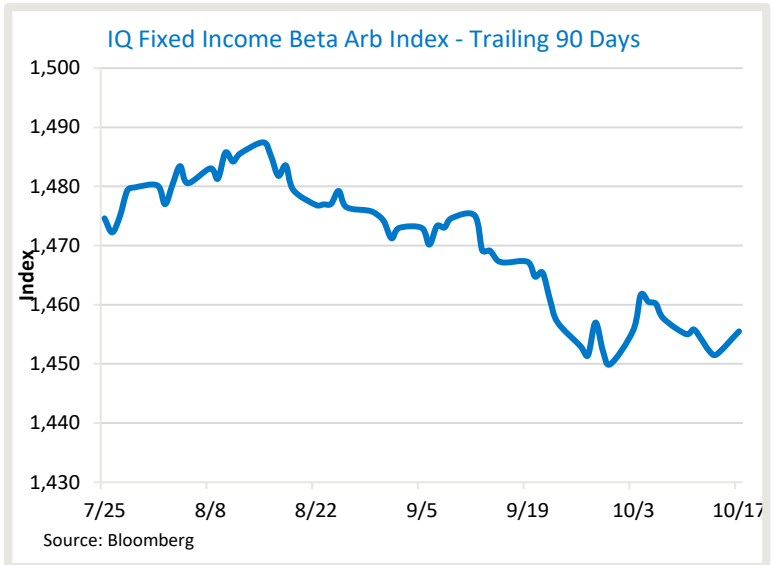
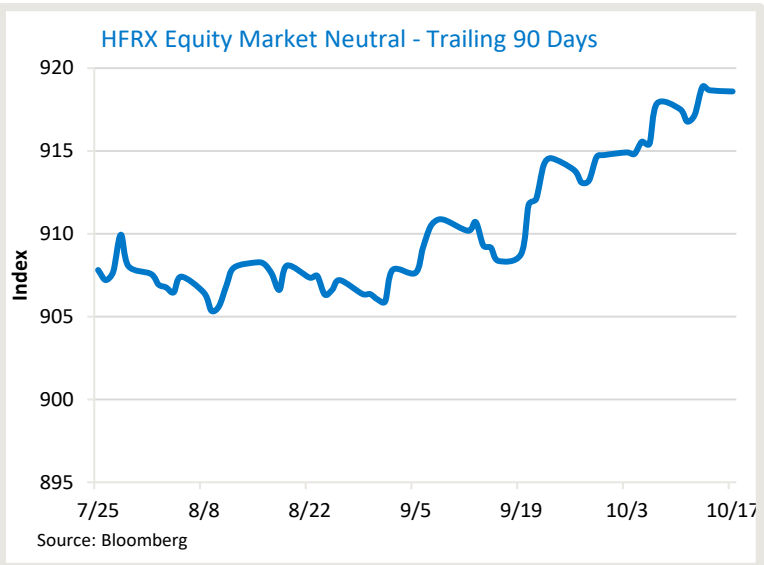
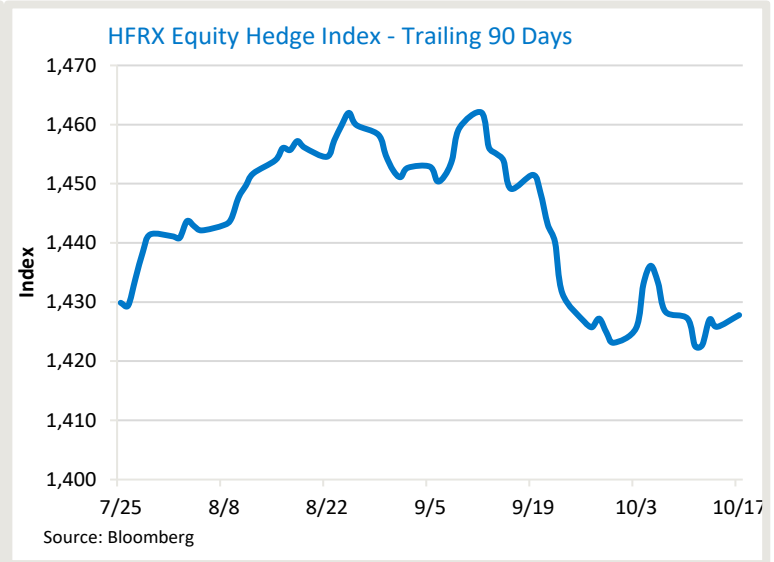
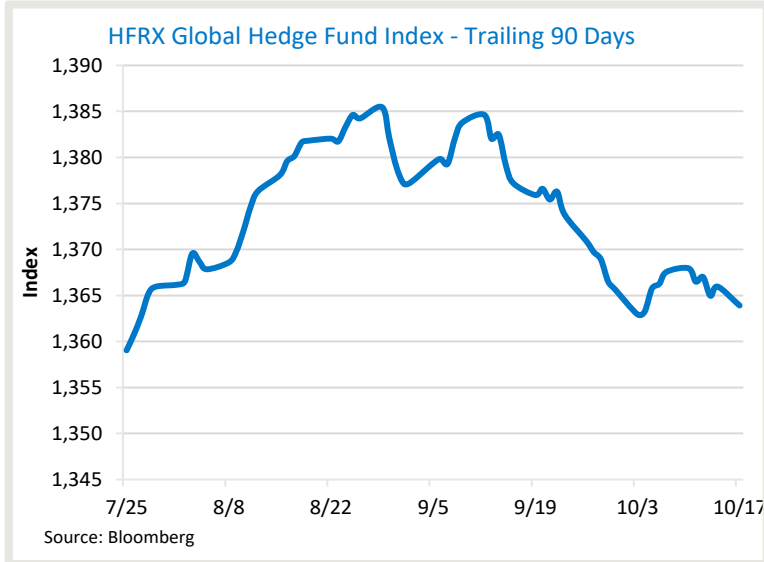


Alternative Investments

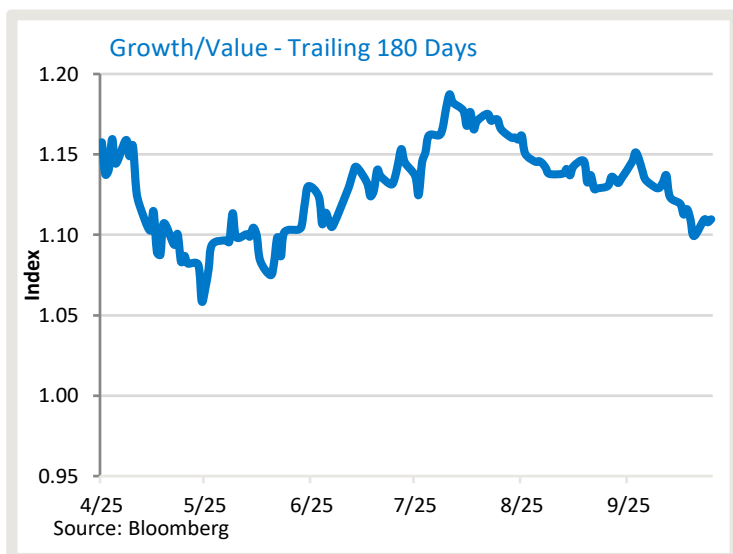
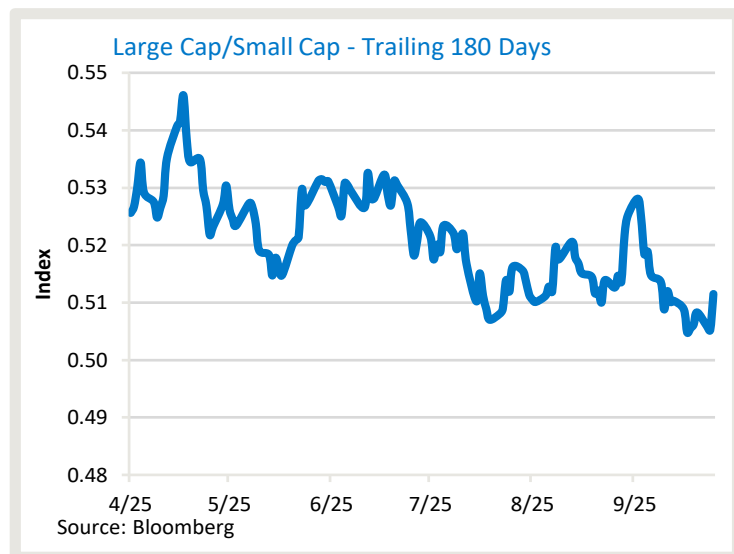
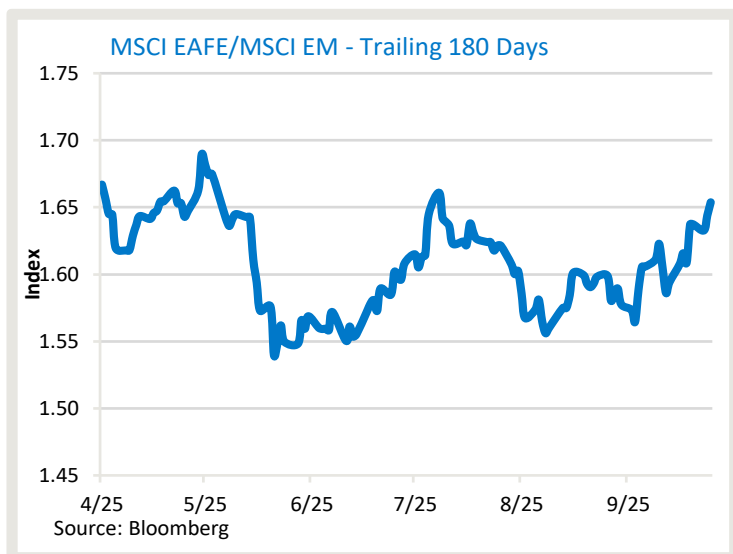
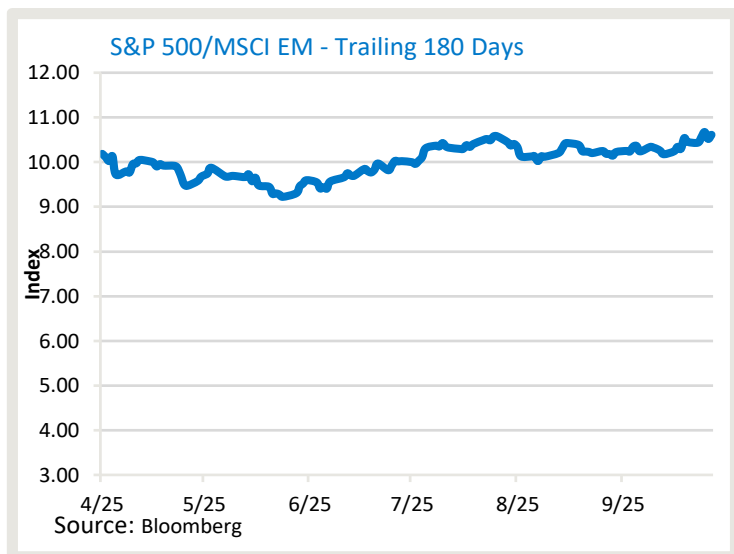
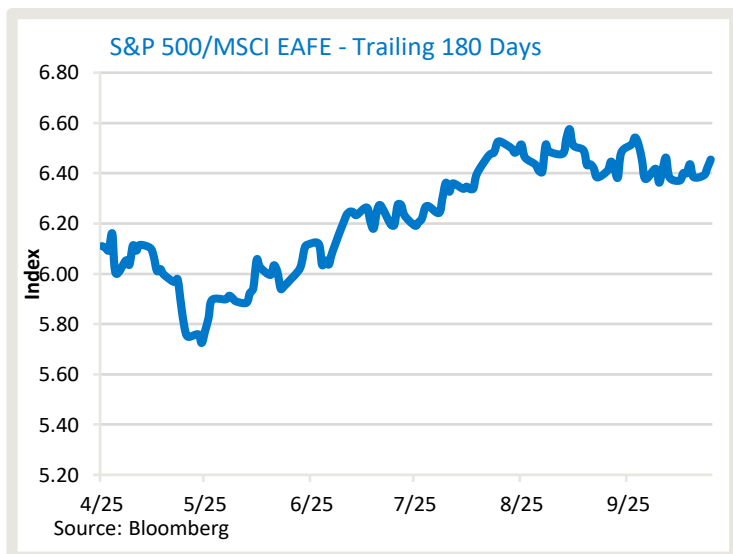
SELECTED ALTERNATIVE INVESTMENT INDEX PERFORMANCE

| | Last | Change | % Chg. | YTD % | | Last | Change | % Chg. | YTD % |
|------------------------------|---------|--------|--------|--------|----------------------------------|---------|--------|--------|---------|
| HFRX Global Hedge Fund Index | 1365.81 | -0.15 | -0.01% | -4.55% | HFRX Special Situation Index | 1342.91 | -8.11 | -0.60% | -6.45% |
| HFRX Equity Market Neutral | 919.01 | 0.35 | 0.04% | -0.75% | HFRX Merger Arbitrage Index | 1939.85 | 4.95 | 0.26% | -1.84% |
| HFRX Equity Hedge Index | 1431.96 | 6.16 | 0.43% | -4.21% | HFRX Convertible Arbitrage Index | 855.41 | 6.18 | 0.73% | -14.16% |
| HFRX Event-Driven Index | 1660.43 | -9.20 | -0.55% | -6.20% | HFRX Macro CTA Index | 1304.62 | -1.51 | -0.12% | 6.84% |
| HFRX Absolute Return Index | 1172.31 | -0.43 | -0.04% | 1.23% | IQ Fixed Income Beta Arb Index | 1453.67 | 2.10 | 0.14% | -4.60% |

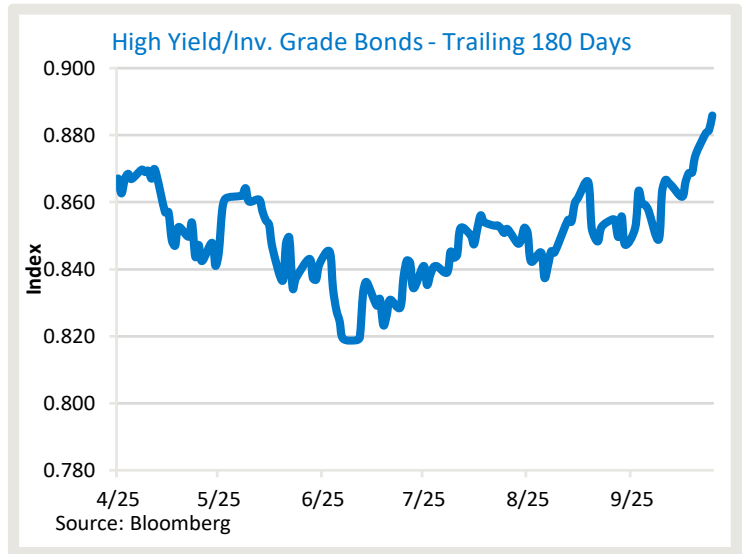
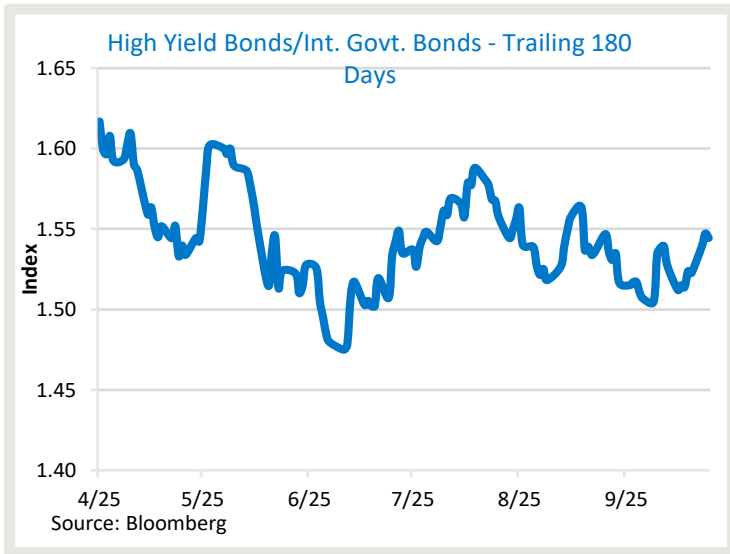
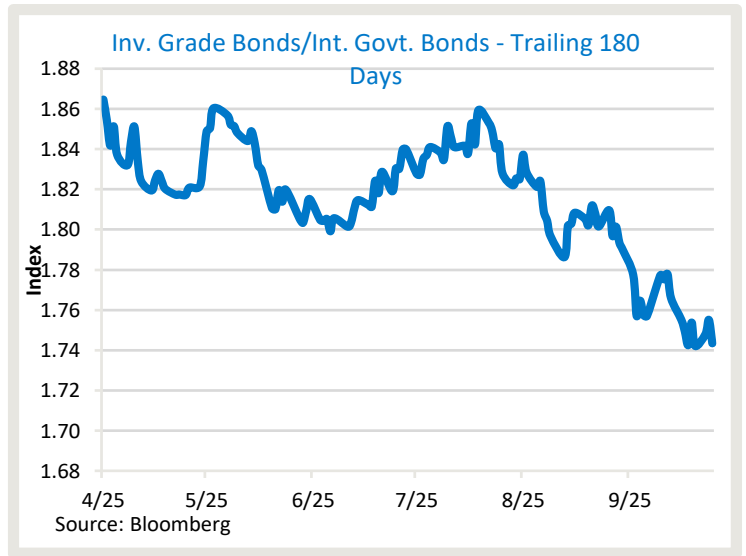
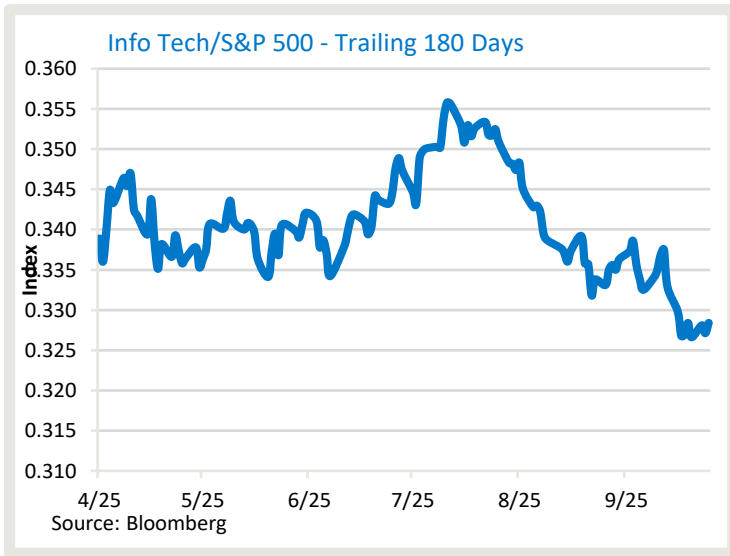
Source: Bloomberg; Index % change is based on price.



Portfolio Construction



Portfolio Construction (continued)



WEEKLY ASSET CLASS PERFORMANCE (Prior 12 weeks ending Thursday)

| | | | 8/4 | 8/11 | 8/18 | 8/25 | 9/1 | 9/8 | 9/15 | 9/22 | 9/29 | 10/6 | 10/13 | 10/20 |
|------------------|---------------------------|-------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Equity | Domestic Equity | Large Cap (R200) | 2.43% | 1.02% | 1.87% | -2.01% | -5.54% | 0.72% | -2.56% | -3.43% | -3.13% | 2.71% | -2.11% | 0.23% |
| | | Small Cap (R2000) | 1.78% | 3.61% | 1.29% | -1.80% | -7.22% | 1.32% | -1.17% | -5.64% | -2.75% | 4.63% | -1.38% | -1.39% |
| | Int'l. Equity | MSCI EAFE | 1.38% | 1.46% | -1.20% | -2.47% | -5.70% | 0.58% | 0.31% | -3.99% | -4.54% | 3.81% | -3.89% | 2.83% |
| | | MSCI Em. Mkts. | -0.30% | 1.98% | -0.46% | -0.61% | -2.72% | -1.94% | 0.14% | -3.75% | -5.35% | 4.27% | -6.15% | 1.20% |
| Fixed Income | BarCap Agg. (AGG) | -0.18% | -1.16% | 0.05% | -0.89% | -1.70% | -0.28% | -0.89% | -1.42% | -0.95% | -0.30% | -1.14% | -1.63% | |
| | High Yield (JNK) | 0.62% | -0.05% | -0.61% | -1.03% | -3.72% | 1.52% | -2.01% | -1.24% | -1.89% | 1.50% | -1.69% | 0.06% | |
| Commodities | Bloomberg Commodity Index | -1.86% | 4.74% | -1.75% | 2.20% | -3.77% | -2.75% | 1.36% | -1.48% | -2.97% | 3.69% | -0.62% | -3.92% | |
| Alternatives | Hedge Funds (HFRX Global) | 0.25% | 0.44% | 0.51% | 0.22% | -0.54% | 0.36% | -0.22% | -0.20% | -0.71% | -0.02% | -0.09% | 0.06% | |
| Asset Allocation | 60/40* | 1.07% | 0.57% | 0.47% | -1.55% | -4.15% | 0.32% | -1.24% | -2.94% | -2.59% | 2.03% | -2.15% | -0.15% | |
| | 48/32/20 (w/Alts.)** | 0.90% | 0.55% | 0.48% | -1.19% | -3.43% | 0.33% | -1.04% | -2.39% | -2.21% | 1.62% | -1.74% | -0.11% | |

Source: Bloomberg; *60/40 portfolio = 30% Large Cap/10% Small Cap/15% EAFE/5% Emerging Markets/35% BarCap Agg./5% High Yield.
 **48/32/20 portfolio = 24% Large Cap/8% Small Cap/12% EAFE/4% Emerging Markets/28% BarCap Agg./4% High Yield/20% HFRX Global Index.

RELATIVE STRENGTH MATRIX (BASED ON 30-DAY RSI)

| | Large Cap Core | Large Cap Growth | Large Cap Value | Mid Cap Core | Mid Cap Growth | Mid Cap Value | Small Cap Core | Small Cap Growth | Small Cap Value | Int'l. Developed | Emerging Markets | REITs | Comm. | Int. Bond | High Yield |
|------------------|----------------|------------------|-----------------|--------------|----------------|---------------|----------------|------------------|-----------------|------------------|------------------|-------|-------|-----------|------------|
| Large Cap Core | 1.00 | 1.02 | 0.97 | 1.01 | 1.00 | 1.02 | 0.98 | 0.97 | 0.98 | 1.04 | 1.23 | 1.16 | 1.05 | 1.43 | 1.05 |
| Large Cap Growth | 0.98 | 1.00 | 0.94 | 0.99 | 0.98 | 1.00 | 0.96 | 0.95 | 0.96 | 1.02 | 1.20 | 1.13 | 1.03 | 1.40 | 1.03 |
| Large Cap Value | 1.04 | 1.06 | 1.00 | 1.05 | 1.03 | 1.06 | 1.01 | 1.01 | 1.02 | 1.08 | 1.27 | 1.20 | 1.09 | 1.48 | 1.09 |
| Mid Cap Core | 0.99 | 1.01 | 0.95 | 1.00 | 0.98 | 1.01 | 0.97 | 0.96 | 0.97 | 1.03 | 1.21 | 1.14 | 1.04 | 1.41 | 1.04 |
| Mid Cap Growth | 1.00 | 1.02 | 0.97 | 1.02 | 1.00 | 1.02 | 0.98 | 0.98 | 0.98 | 1.05 | 1.23 | 1.16 | 1.05 | 1.43 | 1.05 |
| Mid Cap Value | 0.98 | 1.00 | 0.95 | 0.99 | 0.98 | 1.00 | 0.96 | 0.95 | 0.96 | 1.02 | 1.20 | 1.13 | 1.03 | 1.40 | 1.03 |
| Small Cap Core | 1.02 | 1.04 | 0.99 | 1.04 | 1.02 | 1.04 | 1.00 | 0.99 | 1.00 | 1.07 | 1.25 | 1.18 | 1.07 | 1.46 | 1.07 |
| Small Cap Growth | 1.03 | 1.05 | 0.99 | 1.04 | 1.03 | 1.05 | 1.01 | 1.00 | 1.01 | 1.07 | 1.26 | 1.19 | 1.08 | 1.47 | 1.08 |
| Small Cap Value | 1.02 | 1.04 | 0.98 | 1.03 | 1.02 | 1.04 | 1.00 | 0.99 | 1.00 | 1.06 | 1.25 | 1.18 | 1.07 | 1.45 | 1.07 |
| Int'l. Developed | 0.96 | 0.98 | 0.93 | 0.97 | 0.96 | 0.98 | 0.94 | 0.93 | 0.94 | 1.00 | 1.18 | 1.11 | 1.01 | 1.37 | 1.01 |
| Emerging Markets | 0.82 | 0.83 | 0.79 | 0.83 | 0.81 | 0.83 | 0.80 | 0.79 | 0.80 | 0.85 | 1.00 | 0.94 | 0.86 | 1.16 | 0.86 |
| REITs | 0.86 | 0.88 | 0.83 | 0.88 | 0.86 | 0.88 | 0.85 | 0.84 | 0.85 | 0.90 | 1.06 | 1.00 | 0.91 | 1.23 | 0.91 |
| Commodities | 0.95 | 0.97 | 0.92 | 0.97 | 0.95 | 0.97 | 0.93 | 0.93 | 0.94 | 0.99 | 1.17 | 1.10 | 1.00 | 1.36 | 1.00 |
| Int. Bond | 0.70 | 0.72 | 0.68 | 0.71 | 0.70 | 0.72 | 0.69 | 0.68 | 0.69 | 0.73 | 0.86 | 0.81 | 0.74 | 1.00 | 0.74 |
| High Yield | 0.95 | 0.97 | 0.92 | 0.96 | 0.95 | 0.97 | 0.93 | 0.92 | 0.93 | 0.99 | 1.17 | 1.10 | 1.00 | 1.36 | 1.00 |

Source: Bloomberg

The Relative Strength Matrix provides an indication of how the various asset classes have performed relative to one another over the past 30 days. A number greater than 1.0 indicates that the asset class in the far left column has outperformed the corresponding asset class in the top row over the past 30 days. A number below 1.0 means the asset class on the left has underperformed the asset class at the top. The green shading indicates outperformance, and the red shading indicates underperformance.

Index Overview & Key Definitions

Fed, The Fed or FED refers to the Federal Reserve System, the central bank of the United States. The **Federal Open Market Committee** (FOMC) is the monetary policymaking body of the Federal Reserve System. **Fed Funds Rate**, the interest rate at which a depository institution lends funds maintained at the Federal Reserve to another depository institution overnight. The **European Central Bank** (ECB) is the central bank for Europe's single currency, the euro. The ECB's main task is to maintain the euro's purchasing power and thus price stability in the euro area. The euro area comprises the 19 European Union countries that have introduced the euro since 1999. The **Gross Domestic Product** (GDP) rate is a measurement of the output of goods and services produced by labor and property located in the United States. **Basis Point(s)** is a unit that is equal to 1/100th of 1%, and is used to denote the change in a financial instrument. The basis point is commonly used for calculating changes in interest rates, equity indexes and the yield of a fixed-income security. A **separately managed account** (SMA) is an individual managed investment account offered typically by a brokerage firm through one of their brokers or financial consultants and managed by independent investment management firms (often called money managers for short) and have varying fee structures. The **Consumer Price Index** (CPI) measures the change in the cost of a fixed basket of products and services. The **Producer Price Index** (PPI) program measures the average change over time in the selling prices received by domestic producers for their output. The prices included in the PPI are from the first commercial transaction for many products and some services. **Core CPI** is an additional CPI Index, excludes energy and food item price changes, and measures the "core" or "underlying" rate of inflation. The PCE (Personal Consumption Expenditure) Index of Prices is a US-wide indicator of the average increase in prices for all domestic personal consumption. Using a variety of data including U.S. Consumer Price Index and Producer Price Index prices, it is derived from personal consumption expenditures; essentially a measure of goods and services targeted towards individuals and consumed by individuals. The **Purchasing Managers' Index** (PMI) is an indicator of the economic health of the manufacturing sector. The PMI is based on five major indicators: new orders, inventory levels, production, supplier deliveries and the employment environment. **Brexit** is a commonly used term for the United Kingdom's withdrawal from the European Union. The **Kansas City Fed Manufacturing Survey** monitors manufacturing plants selected according to geographic distribution, industry mix and size in the Tenth Federal Reserve District. **West Texas Intermediate** (WTI), also known as Texas light sweet, is a grade of crude oil used as a benchmark in oil pricing. **Risk Premium** is the return in excess of the risk-free rate of return an investment is expected to yield. **LIBOR or ICE LIBOR** (previously BBA LIBOR) is a benchmark rate, which some of the world's leading banks charge each other for short-term loans. It stands for Intercontinental Exchange London Interbank Offered Rate and serves as the first step to calculating interest rates on various loans throughout the world.

The **Dow Jones Industrial Average** (DOW or DJIA) is an unmanaged index of 30 common stocks comprised of 30 actively traded blue chip stocks, primarily industrials and assumes reinvestment of dividends. The **S&P 500 Index** is an unmanaged index comprised of 500 widely held securities considered to be representative of the stock market in general. The **S&P/Case-Shiller Home Price Indices** measure the residential housing market, tracking changes in the value of the residential real estate market in 20 metropolitan regions across the United States. The **Nasdaq Composite Index** is a stock market index of the common stocks and similar securities listed on the NASDAQ stock market. The **US Dollar Index** is a measure of the value of the United States dollar relative to a basket of foreign currencies. It is a weighted geometric mean of the dollar's value relative to other select currencies (Euro, Japanese yen, Pound sterling, Canadian dollar, Swedish krona (SEK) & Swiss franc). The **FTSE 100 Index** (FTSE 100) is a share index of the 100 companies listed on the London Stock Exchange (LSE) with the highest market capitalization. The **Bloomberg Commodity Index** (formerly the **Dow Jones-UBS Commodity Index**) tracks prices of futures contracts on physical commodities on the commodity markets and is designed to minimize concentration in any one commodity or sector (currently 22 commodity futures in seven sectors). The **Barclays Capital US Credit Index** is an unmanaged index considered representative of publicly issued, SEC-registered US corporate and specified foreign debentures and secured notes. The **Barclays Capital US Aggregate Bond Index** is a market capitalization-weighted index of investment-grade, fixed-rate debt issues, including government, corporate, asset-backed, and mortgage-backed securities, with maturities of at least one year. The **Barclays Capital US Corporate High Yield Index** covers the USD-denominated, non-investment grade, fixed-rate, taxable corporate bond market. Securities are classified as high-yield if the middle rating of Moody's, Fitch and S&P is Ba1/BB+/BB+ or below. The index may include emerging market debt. The **Barclays Capital Municipal Bond Index** is an unmanaged index comprised of investment-grade, fixed-rate municipal securities representative of the tax-exempt bond market in general. The **Barclays Capital US Treasury Total Return Index** is an unmanaged index of public obligations of the US Treasury with a remaining maturity of one year or more. The **Barclays Capital Global Aggregate ex-U.S. Index** is a market capitalization-weighted index, meaning the securities in the index are weighted according to the market size of each bond type. Most U.S. traded investment grade bonds are represented. Municipal bonds, and Treasury Inflation-Protected Securities are excluded, due to tax treatment issues. The index includes Treasury securities, Government agency bonds, Mortgage-backed bonds, Corporate bonds, and a small amount of foreign bonds traded in U.S. The **Barclays Capital U.S. 5-10 Year Corporate Bond Index** measures the investment return of U.S. dollar denominated, investment-grade, fixed rate, taxable securities issued by industrial, utility, and financial companies with maturities between 5 and 10 years. Treasury securities, mortgage-backed securities (MBS) foreign bonds, government agency bonds and corporate bonds are some of the categories included in the index. The **Barclays Capital U.S. Corporate High-Yield Index** is composed of fixed-rate, publicly issued, non-investment grade debt. The **Barclays Capital U.S. Corporate 5-10 Year Index** includes U.S. dollar-denominated, investment-grade, fixed-rate, taxable securities issued by industrial, utility, & financial companies, with maturities between 5 & 10 years. The **Russell 1000 Index** is a market capitalization-weighted benchmark index made up of the 1000 largest U.S. companies in the Russell 3000 Index. The **Russell 1000 Growth Index** is an unmanaged index considered representative of large-cap growth stocks. The **Russell 1000 Value Index** is an unmanaged index considered representative of large-cap value stocks. The **Russell 2000 Index** is an unmanaged index considered representative of small-cap stocks. The **Russell 2000 Growth Index** is an unmanaged index considered representative of small-cap growth stocks. The **Russell 2000 Growth Index** is an unmanaged index considered representative of small-cap value stocks. The **Russell 3000 Index** is an unmanaged index considered representative of the US stock market. The **Russell Midcap Index** is a subset of the Russell 1000 Index. It includes approximately 800 of the smallest securities based on a combination of their market cap and current index membership. The **Russell Midcap Growth Index** is an unmanaged index considered representative of mid-cap growth stocks. The **Russell Midcap Value Index** is an unmanaged index considered representative of mid-cap value stocks. The **HFRX Indices** are a series of benchmarks of hedge fund industry performance which are engineered to achieve representative performance of a larger universe of hedge fund strategies. Hedge Fund Research, Inc. employs the HFRX Methodology (UCITS compliant), a proprietary and highly quantitative process by which hedge funds are selected as constituents for the HFRX Indices. The **University of Michigan Consumer Sentiment Index** (MCSI) is a survey of consumer confidence conducted by the University of Michigan using telephone surveys to gather information on consumer expectations regarding the overall economy. The **CBOE Volatility Index** (VIX) is an up-to-the-minute market estimate of expected volatility that is calculated by using real-time S&P 500 Index option bid/ask quotes. The Index uses nearby and second nearby options with at least 8 days left to expiration and then weights them to yield a constant, 30-day measure of the expected volatility of the S&P 500 Index. The **MSCI EAFE Index** is designed to measure the equity market performance of developed markets outside of the U.S. & Canada. The **MSCI EAFE Growth Index** is an unmanaged index considered representative of growth stocks of Europe, Australasia and the Far East. The **MSCI EAFE Value Index** is an unmanaged index considered representative of value stocks of Europe, Australasia and the Far East. The **MSCI EM (Emerging Markets) Latin America Index** is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of emerging markets in Latin America. The **MSCI World ex-U.S. Index** captures large and mid-cap representation across 22 of 23 Developed Markets (DM) countries - excluding the US. With 1,002 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country. The **MSCI Japan Index** is designed to measure the performance of the large and mid-cap segments of the Japanese market. With 320 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in Japan. The **MSCI Emerging Markets Index** is a free float-adjusted market capitalization index that is designed to measure equity market performance in the global emerging markets. The **MSCI Europe Index** is an unmanaged index considered representative of stocks of developed European countries. The **MSCI Pacific Index** is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of the developed markets in the Pacific region. The **Barclays Intermediate US Government/Credit Bond Index** is a market capitalization-weighted index of investment-grade, fixed-rate debt issues, including Treasuries, government-related and U.S. corporate securities, with maturities of at least one year and less than 10 years. The **NY Empire State Manufacturing Index** is based on the monthly survey of manufacturers in New York State – known as the Empire State Manufacturing Survey – conducted by the Federal Reserve Bank of New York. The **S&P The Dow Jones Wilshire U.S. REIT Index** tracks the performance of publicly traded REITs and REIT-like securities and is designed to serve as a proxy for direct real estate investment, in part by excluding companies whose performance may be driven by factors other than the value of real estate. The **Russell Top 200 Index** measures the performance of the 200 largest companies in the Russell 1000 Index, with a weighted average market capitalization of \$186 billion. The **Barclays 1-3 Year US Treasury Bond Index** measures public US Treasury obligations with remaining maturities of one to three years. The **S&P LSTA Leveraged Loan Index** is an unmanaged capitalization-weighted syndicated loan index based upon market weightings, spreads and interest payments. It covers the US market back to 1997 and currently calculates on a daily basis. The **NFIB Small Business Optimism Index** is compiled from a survey that is conducted each month by the National Federation of Independent Business (NFIB) of its members.

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