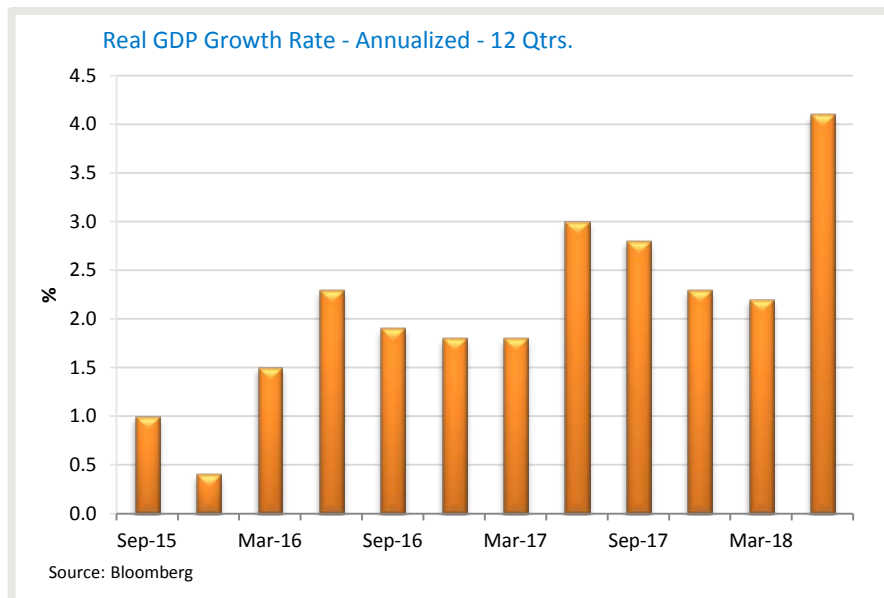


Weekly Market Review

August 24, 2018

Chart of the Week



Weekly Highlights

- **Fed Signals Rate Increase Next Month.** At their last meeting, Federal Reserve (the Fed) officials signaled they were likely to raise interest rates next month if the economy performs in line with current expectations. At the recent meeting, Fed officials discussed dropping language from their post-meeting statement that for years has described monetary policy as “accommodative,” as it “at some point fairly soon ... may no longer be appropriate,” the minutes said.
- **Home Sales Tumbled In July for the Longest Slump Since 2013.** The downward slide in sales of previously owned homes continued, as rising home prices and higher mortgage rates priced more potential buyers out of the market. Compared with a year earlier, sales in July were down 1.5%. Economists state many potential home buyers are staying put, often choosing to renovate rather than give up their historically low mortgage rates and pay the significantly higher prices for their next home.
- **The US-China Trade Battle Escalates.** The world’s two largest economies kicked off two days of talks in Washington. On Thursday, the US imposed tariffs on \$16 billion of Chinese goods on top of the \$34 billion in Chinese imports already targeted. By the end of September, the US could add levies on another \$200 billion—about half of all Chinese imports.

Talking Points

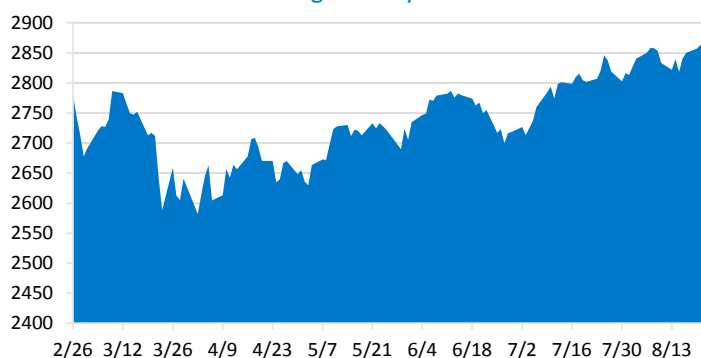
- **Global equity markets** were broadly up this week. US markets drifted slightly lower on Thursday, a day after the S&P 500’s bull run became the longest ever. International stocks were up modestly, and emerging markets reversed losses from last week, finishing largely in positive territory.
- **Treasury yields** have remained flat this week, with the yield on the key 10-Year US Treasury Note trading near 2.82.
- **Commodities remained relatively flat**, with the Bloomberg Commodity Index (the Index) finishing marginally higher after an up-and-down week. Within the Index, oil rose and headed for its first weekly gain in two months, as signs of tightened supply from the North Sea and Middle East surfaced.
- **The US dollar** ended the week lower against a basket of major trade partners’ currencies. The dollar fell 0.6% following a speech from Fed Chair Jerome Powell, in which he noted “further, gradual” rate hikes moving forward, given that the economy is “strong” and can handle tighter monetary policy.
- **In other economic news**, US jobless claims fell for a third consecutive week. Initial claims, a proxy for layoffs across the US, dropped to 210,000 in the week ended August 18, continuing to hover near historic lows. The unemployment rate fell to 3.9% in July, near its lowest level since April 2000, according to the Labor Department’s latest jobs report.

Market Dashboard

	Last Price	Change	% Chg.	YTD %
S&P 500	2,874.69	24.56	0.86%	7.5%
Dow Industrials	25,790.35	121.03	0.47%	4.3%
Nasdaq	7,945.98	129.65	1.66%	15.1%
Russell 2000	1,725.67	32.72	1.93%	12.4%
Euro Stoxx Index	383.56	2.50	0.66%	-1.4%
Shanghai Composite	2,729.43	60.46	2.27%	-17.5%
Russell Global	2,163.42	17.51	0.82%	0.9%

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

S&P 500 Index: Trailing 180 Days



Source: Bloomberg

	Last Price	Change	% Chg.	YTD %
Russell Global EM	3,295.94	73.88	2.29%	-9.5%
10-Year US Treas.	2.83	-5 bps	NM	NM
Bloomberg Cmdts. Idx.	83.69	0.34	0.41%	-5.1%
Gold	\$1,206.08	\$21.49	1.81%	-7.5%
Crude Oil	\$68.57	\$3.35	5.14%	16.8%
Dollar Index	95.16	-0.94	-0.98%	3.3%
VIX Index	11.99	-0.65	-5.14%	8.6%

One Week

YTD

	Value	Growth	Value	Growth
L	0.51%	0.87%	1.19%	1.58%
	0.48%	1.18%	2.24%	2.35%
S	1.30%	1.93%	2.56%	8.62%
				12.38%
				15.98%

Source: Bloomberg

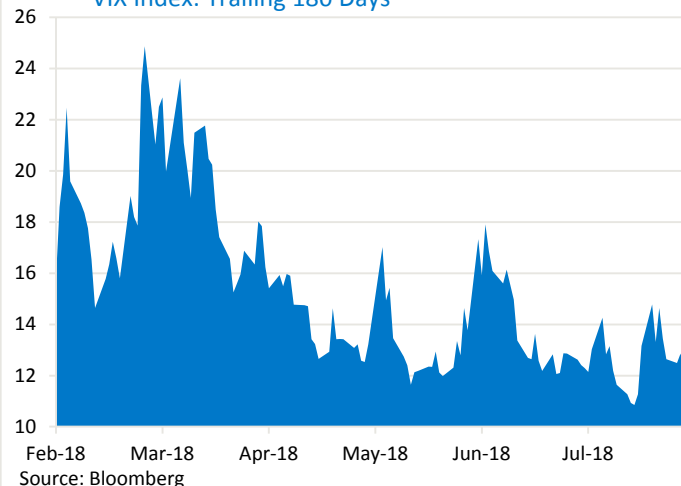
Sector Performance:

S&P/Global Industry Classification Sectors (GICS)

	% Wgt in S&P 500	Week % Chg.	YTD % Chg.
Consumer Discretionary	12.8	2.04%	16.3%
Consumer Staples	6.8	-1.79%	-5.7%
Energy	5.9	2.64%	2.8%
Financials	13.9	0.24%	0.8%
Health Care	14.6	0.76%	10.9%
Industrials	9.6	0.50%	0.8%
Information Technology	26.2	1.69%	17.6%
Materials	2.5	1.17%	-2.3%
Real Estate	2.8	-1.08%	1.4%
Telecom Services	2.0	-0.74%	-5.7%
Utilities	2.9	-1.41%	1.5%

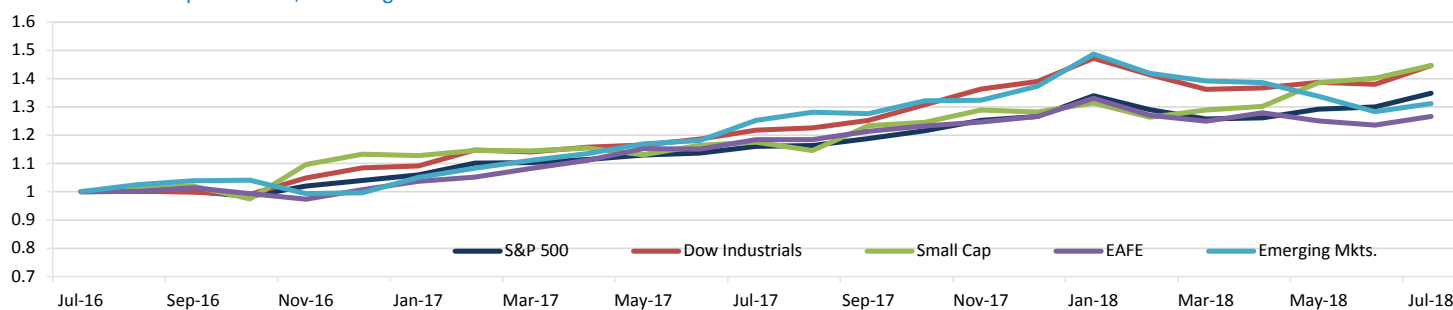
Source: Bloomberg

VIX Index: Trailing 180 Days



Source: Bloomberg

Wealth Index|Growth of \$1: Trailing 24 Months



Source: Bloomberg

The Economy and Markets

A Macro View – Digital Oil

Although the cryptocurrency market may not be snagging headlines to the degree it did in late 2017 and early 2018, Venezuela, formerly Latin America's richest country, has fallen into an economic downward spiral, and now is looking at the crypto market as a source of "de-risking" its economy. This is somewhat ironic, given that demand for cryptocurrencies can be viewed as a proxy for financial risk appetite. However, Venezuela's goal in adopting cryptocurrency is to help fight the hyperinflation that is devastating this resource-rich country. Enter the Venezuelan cryptocurrency, the "Petro." Though other countries, like Russia and the United Arab Emirates, have launched similar "crypto-projects," Venezuela's cryptocurrency is unique, in that it is the only one to be backed by an asset—the country's vast oil reserves. The currency was launched in February, but beginning August 20, 2018, Nicolas Maduro, Venezuela's president, announced the state-owned oil giant Petroleos de Venezuela (PDVSA) will begin using the digital token as a mandatory accounting unit.¹ At the same time, the country is rolling out a new currency pegged to the cryptocurrency: "sovereign" bolivars. This new banknote will shed five zeroes from the former bolivar (i.e., 250,000 converts to 25).¹

Let's take a step back and review basic hyperinflation. Simply put, hyperinflation is rapidly accelerating inflation, eroding the real value of a currency as the prices of goods increase. Hyperinflation is sometimes referred to as the "wheelbarrow problem," as consumers must bring such massive amounts of currency to afford even small items (like groceries) that they might as well use a wheelbarrow to transport the payment. This sometimes results in the population switching to more stable foreign currencies, like the US dollar, which causes additional issues for the country, as it can introduce asset/liability currency mismatches. Once a population puts enough of the alternate currency into circulation, or even adopts it as an official currency, the sovereign government loses its ability to print money and pay its bills, further exacerbating the problem. Economists cite a number of possible causes for hyperinflation: large deficits financed by printing money versus borrowing or raising taxes, a drastic decrease in export prices, or a sharp decrease in tax revenue. Venezuela suffers from all three of these, with rampant government spending, an inability to borrow due to sanctions, a crash in oil prices in 2014 that has never fully recovered, and a population exiting in droves.² This leaves the country with an inflation rate that topped 60,000% as of August 20, 2018 that is projected to exceed a mind-boggling 1,000,000% by the end of 2018, which would make it the worst hyperinflation crisis in modern history.³

So what does President Maduro hope to gain from this move, as the country precariously teeters on economic collapse? Perhaps most important is establishing a currency with a more stable value. The Petro will be backed by crude oil and will fluctuate based on oil prices, helping to set prices for goods. Second, this currency could be used to circumnavigate sanctions the US placed on the country last August, prohibiting US citizens and associated entities from negotiating new debt with Venezuela and PDVSA. This in effect closed the country's access to financial markets and crippled its ability to pay debt, on which the country is currently \$6 billion dollars in default.⁴ Finally, some see the Petro as an opportunity to attract new international investors, specifically crypto-enthusiasts, who may view it to be a compelling risk/reward. However, this all must be done under the pretense of the Venezuelan government prioritizing an ethical stance in carrying out this project, which in and of itself is a source of concern.

Needless to say, President Maduro's plan has been largely criticized by academics, the International Monetary Fund, and Venezuela's opposition leaders. As Venezuela's government has largely stopped reporting economic data, most critics remain skeptical about unchecked government spending using drying up revenues. They argue a simple "face lift" to the bolivar's redenomination does not really change what's underneath, but is simply an outward appearance.⁵

Drastic measures are clearly on the table for a country with extraordinary problems. Could the crypto market be a lever with which to take some risk off the table for a country in turmoil? Unfortunately, outsiders, and to a more concerning degree, Venezuelans living through this economic and humanitarian crisis, must wait and see, as the Petro is moved toward center stage, and banks across the country are closing to prepare the "sovereign" bolivar for action.

Ryan Knisely

Associate Investment Analyst

¹ Reuters, July 25, 2018

² United Nations estimates 2.3 million people have left the country since 2014 (The Wall Street Journal, August 20, 2018)

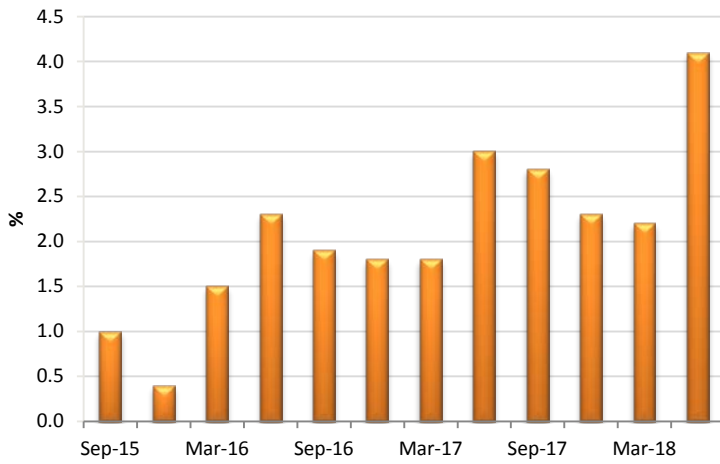
³ Reuters / NPR, August 23, 2018.

⁴ The Wall Street Journal, August 20, 2018.

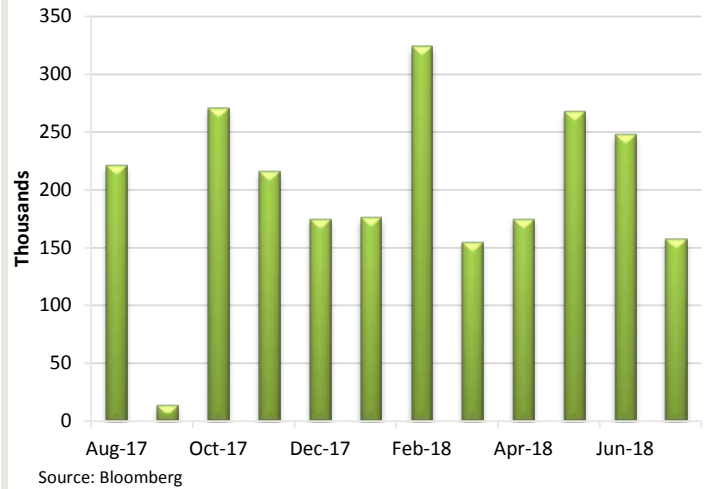
⁵ NPR, August 20, 2018.

Economic Data

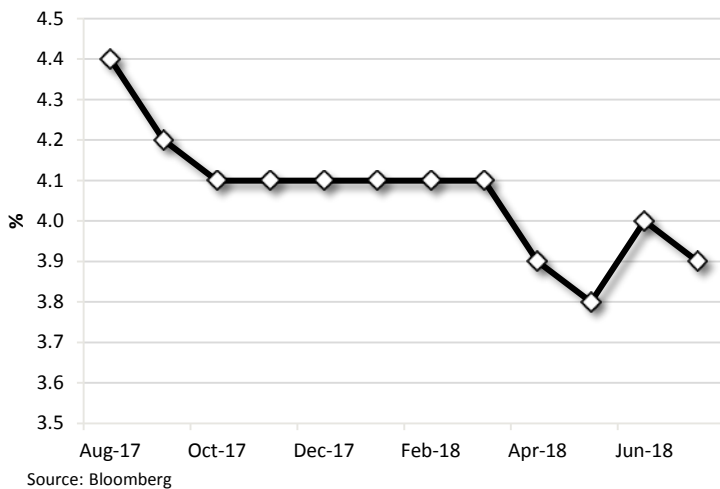
Real GDP Growth Rate - Annualized - 12 Qtrs.



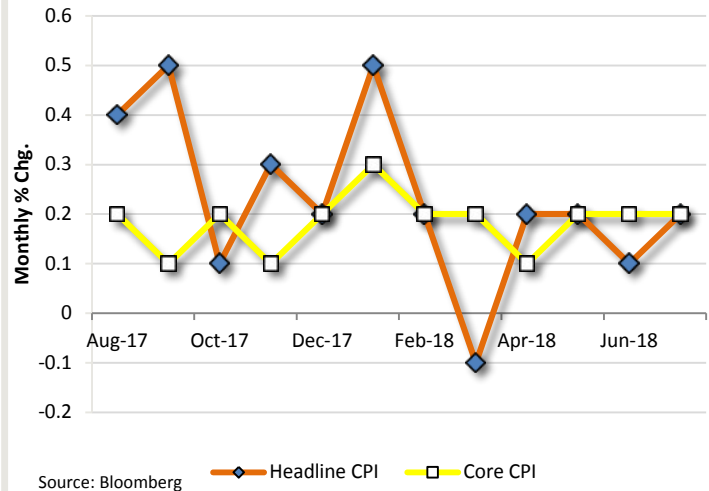
Non-Farm Payrolls-Trailing 12 Mos.



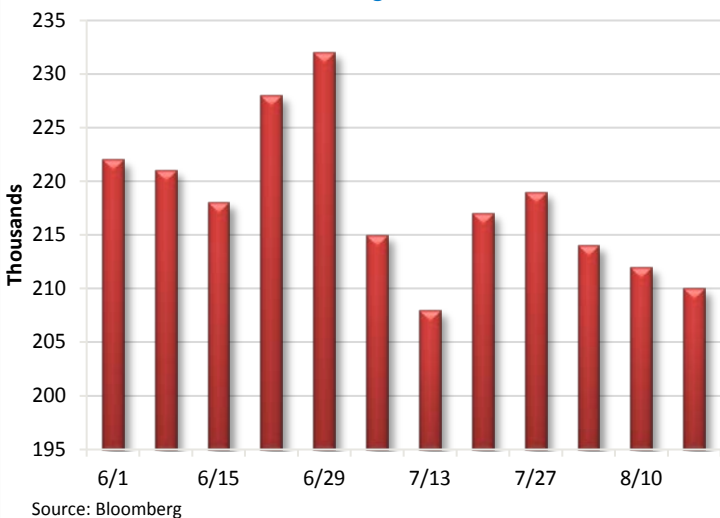
Unemployment Rate-Trailing 12 Mos.



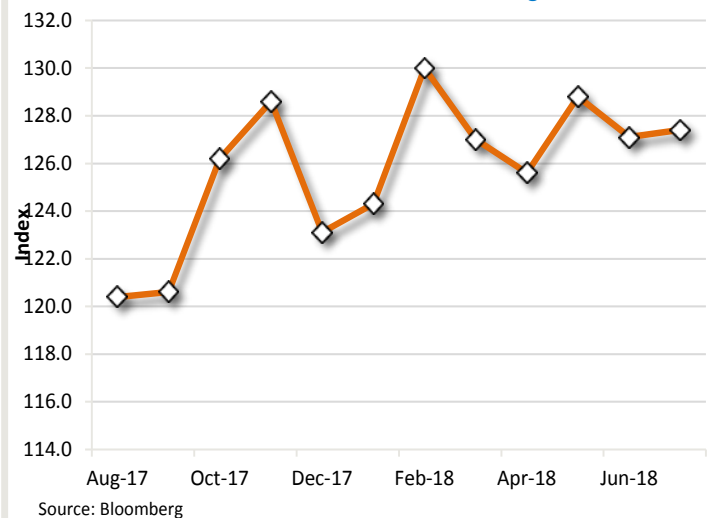
Consumer Price Index-Trailing 12 Mos.



Initial Jobless Claims-Trailing 12 Wks.



Consumer Board Confidence Index - Trailing 12 Mos.



Eurozone

SELECTED EUROPEAN SOVEREIGN YIELD PERFORMANCE

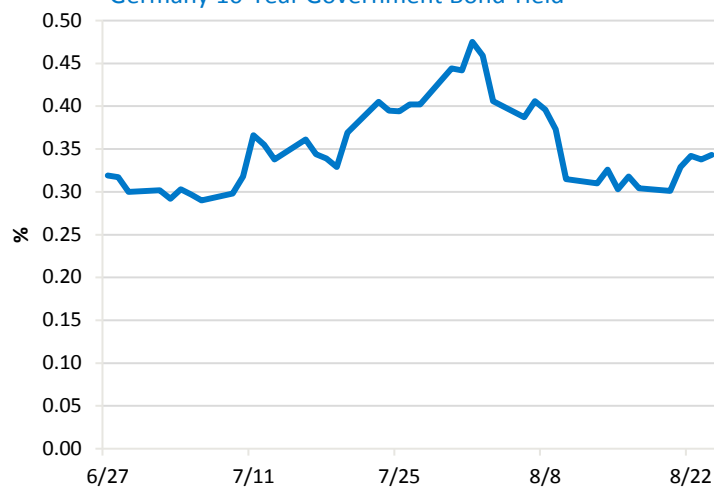
	Last	Change	% Chg.	YTD %
Germany 10-Yr. Govt.	0.34	-4 bps	NM	NM
Greece 10-Yr. Govt.	4.16	11 bps	NM	NM
Italy 10-Yr. Govt.	3.14	-2 bps	NM	NM
Spain 10-Yr. Govt.	1.39	5 bps	NM	NM
Belgium 10-Yr. Govt.	0.70	-1 bps	NM	NM

Source: Bloomberg

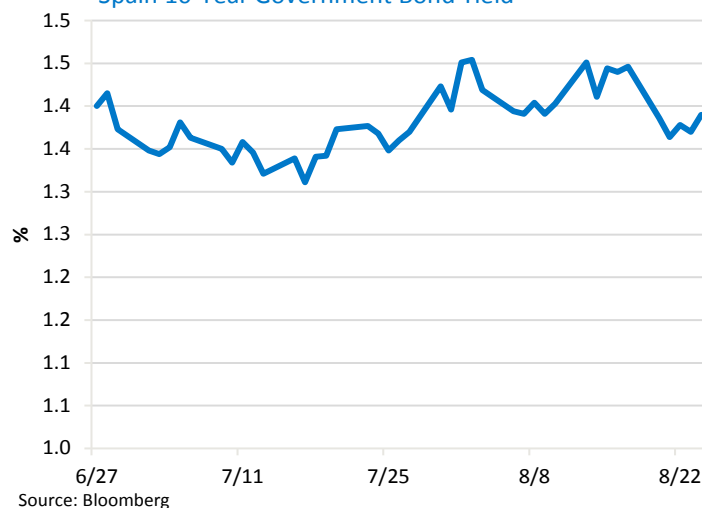
Basis points (bps)

	Last	Change	% Chg.	YTD %
France 10-Yr. Govt.	0.68	-2 bps	NM	NM
Ireland 10-Yr. Govt.	0.86	-2 bps	NM	NM
Portugal 10-Yr. Govt.	1.82	3 bps	NM	NM
Netherlands 10-Yr. Govt.	0.45	-4 bps	NM	NM
U.K. 10-Yr. Govt.	1.28	-5 bps	NM	NM

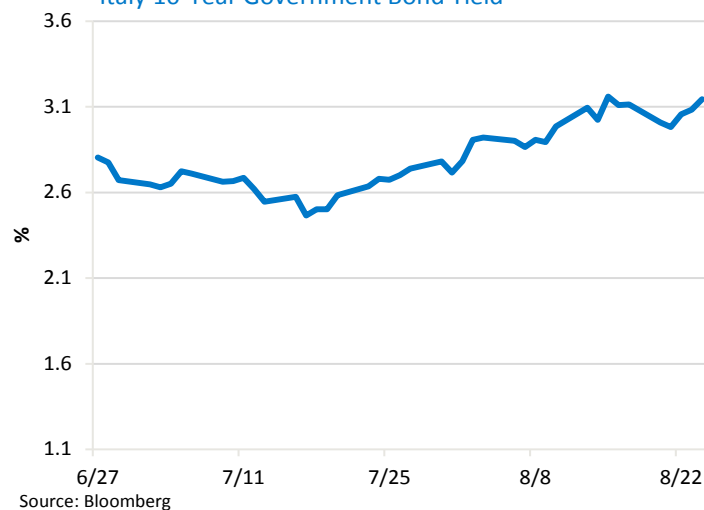
Germany 10-Year Government Bond Yield



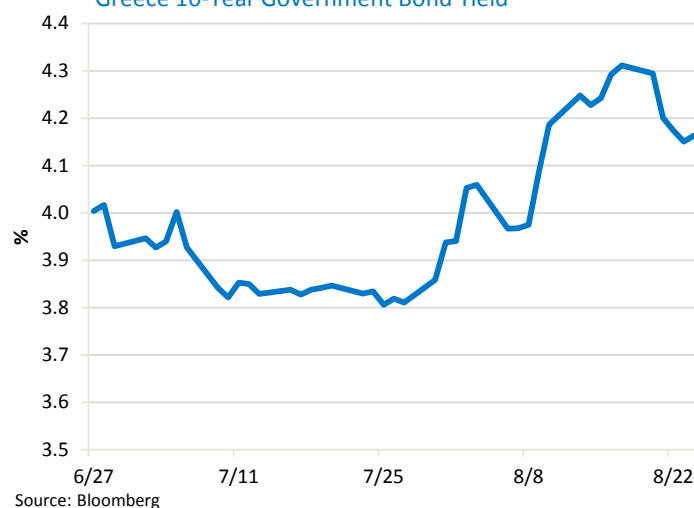
Spain 10-Year Government Bond Yield



Italy 10-Year Government Bond Yield



Greece 10-Year Government Bond Yield

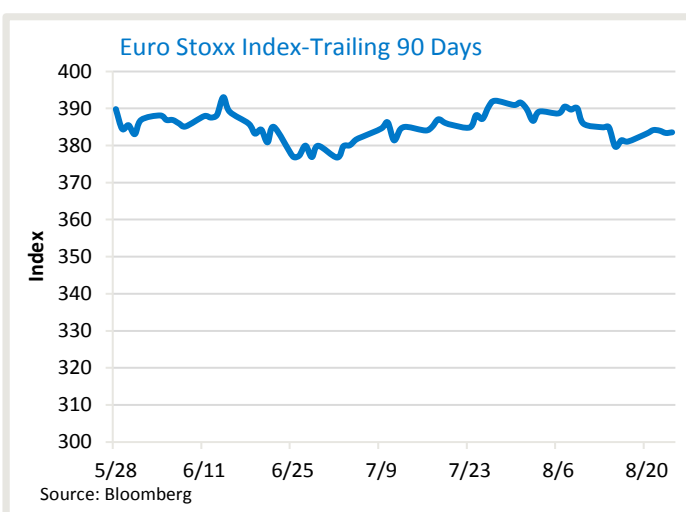
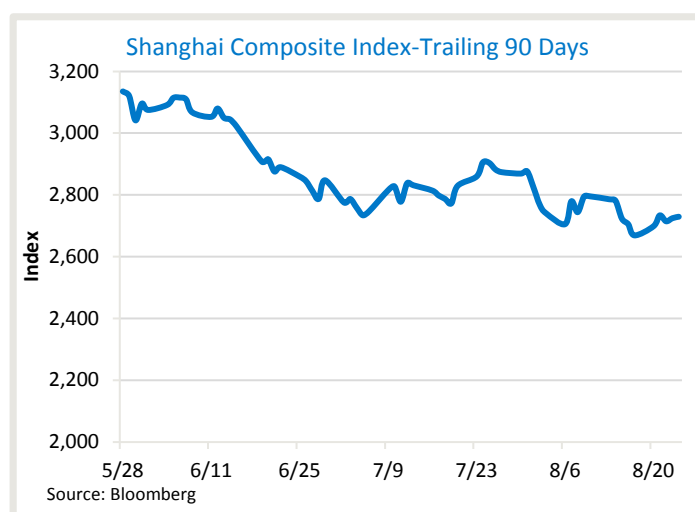
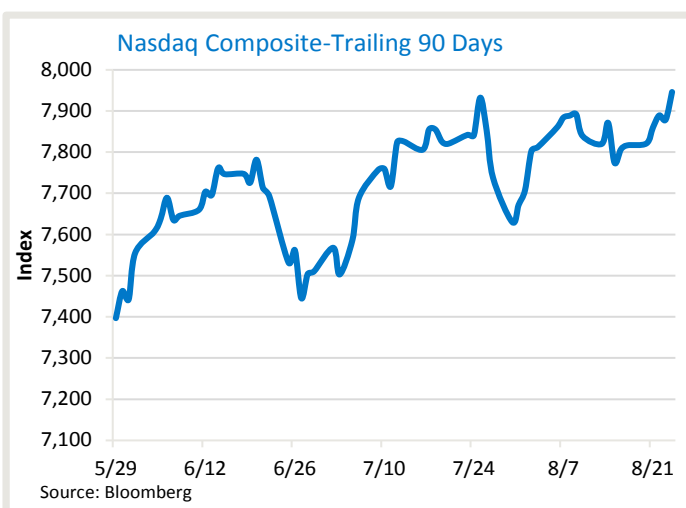
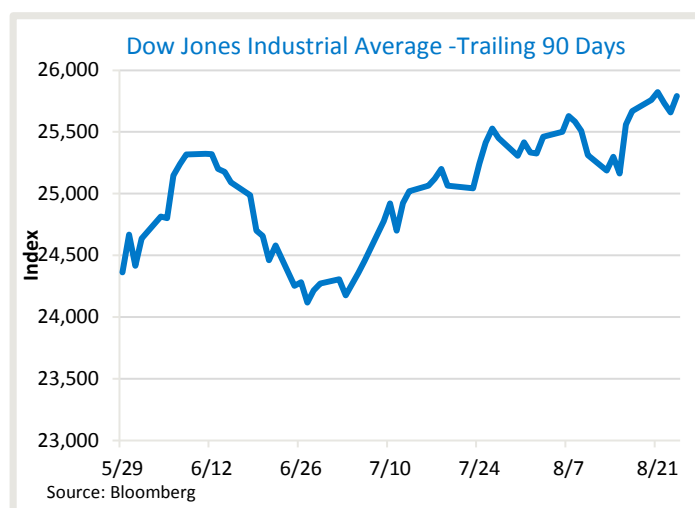


Equities

WORLD MARKET PERFORMANCE

	Last	Change	% Chg.	YTD %		Last	Change	% Chg.	YTD %
S&P 500	2,874.69	24.56	0.86%	7.52%	Swiss Market Index	9,052.90	48.99	0.54%	-3.51%
Dow Industrials	25,790.35	121.03	0.47%	4.33%	CAC 40 Index (France)	5,432.50	87.57	1.64%	2.26%
Nasdaq Composite	7,945.98	129.65	1.66%	15.10%	DAX Index (Germany)	12,394.52	183.97	1.51%	-4.05%
Russell Global	2,163.42	17.51	0.82%	0.9%	Irish Overall Index	6,794.21	95.62	1.43%	-3.47%
Russell Global EM	3,295.94	73.88	2.29%	-9.5%	Nikkei 225	22,601.77	331.39	1.49%	-0.72%
S&P/TSX (Canada)	16,356.05	32.34	0.20%	0.91%	Hang Seng Index	27,671.87	458.46	1.68%	-7.51%
Mexico IPC	49,633.77	1369.14	2.84%	0.57%	Shanghai Composite	2,729.43	60.46	2.27%	-17.47%
Brazil Bovespa	76,262.25	233.73	0.31%	-0.18%	Kospi Index (S. Korea)	2,293.21	46.16	2.05%	-7.06%
Euro Stoxx 600	383.56	2.50	0.66%	-1.44%	Taiwan Taiex Index	10,809.35	118.39	1.11%	1.56%
FTSE 100	7,577.49	18.90	0.25%	-1.43%	Tel Aviv 25 Index	1,634.02	51.23	3.24%	8.23%
IBEX 35 (Spain)	9,589.50	172.20	1.83%	-4.52%	MOEX Index (Russia)	2,279.76	24.64	1.09%	8.06%

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



Equities – Emerging and Frontier Markets

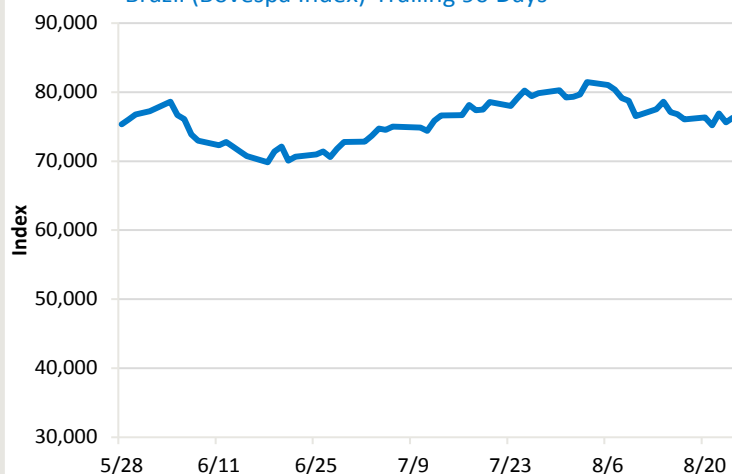
EMERGING AND FRONTIER MARKET PERFORMANCE

	Last	Change	% Chg.	YTD %
Mexico IPC	49,633.77	1369.14	2.8%	0.6%
Brazil (Bovespa Index)	76,262.25	233.73	0.3%	-0.2%
MOEX Index (Russia)	2,279.76	24.64	1.1%	8.1%
Czech Republic (Prague)	1,072.86	14.81	1.4%	-0.5%
Turkey (Istanbul)	90,185.99	1451.23	1.6%	-21.8%
Egypt (Hermes Index)	1,479.00	-3.15	-0.2%	2.9%
Kenya (Nairobi 20 Index)	3,296.26	-39.80	-1.2%	-11.2%
Saudi Arabia (TASI Index)	7,867.16	-309.02	-3.8%	8.9%
Lebanon (Beirut BLOM Index)	1,009.03	-3.34	-0.3%	-12.1%
Palestine	541.71	0.15	0.0%	-5.7%

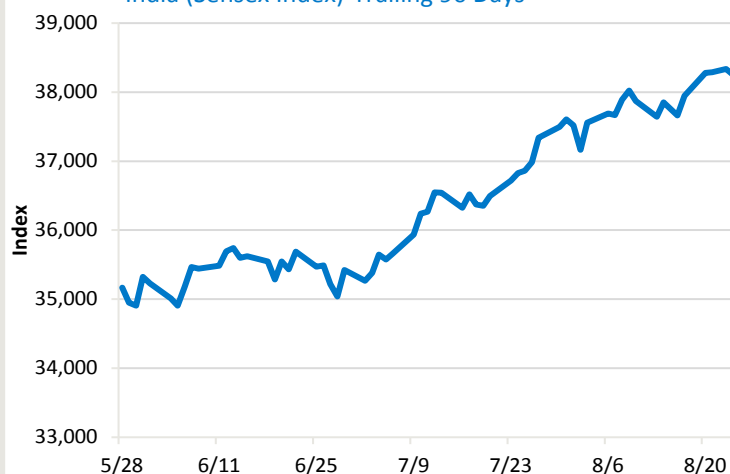
Source: Bloomberg; Index % change is based on price.

	Last	Change	% Chg.	YTD %
Hang Seng Index	27,671.87	458.46	1.7%	-7.5%
India (Sensex 30)	38,251.80	303.92	0.8%	12.3%
Malaysia (KLCI Index)	1,808.59	31.32	1.8%	0.7%
Singapore (Straits Times Index)	3,213.00	1.07	0.0%	-5.6%
Thailand (SET Index)	1,703.82	13.78	0.8%	-2.8%
Indonesia (Jakarta)	5,968.75	152.16	2.6%	-6.1%
Pakistan (Karachi KSE 100)	42,588.29	141.67	0.3%	5.2%
Vietnam (Ho Chi Minh)	987.05	18.17	1.9%	0.3%
Sri Lanka (Colombo)	6,052.69	-30.90	-0.5%	-5.0%
Cambodia (Laos)	877.86	6.43	0.7%	-12.1%

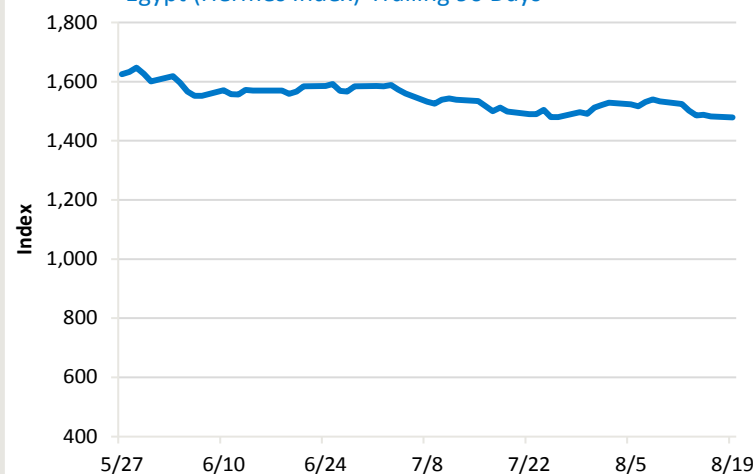
Brazil (Bovespa Index)-Trailing 90 Days



India (Sensex Index)-Trailing 90 Days



Egypt (Hermes Index)-Trailing 90 Days



Singapore (Straits Times Index)-Trailing 90 Days

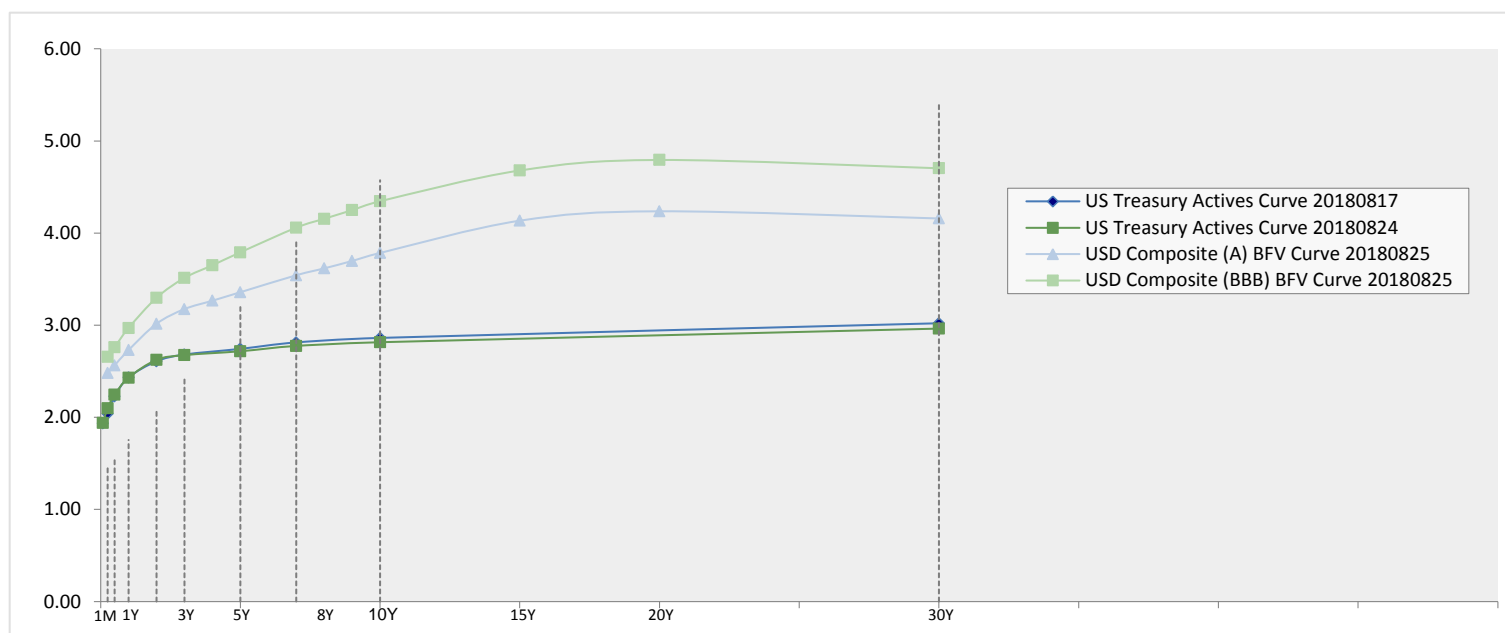


Interest Rates

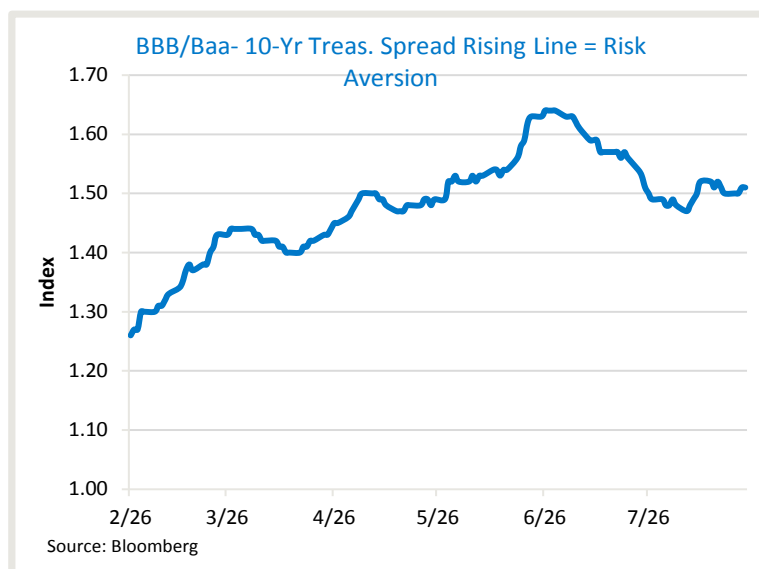
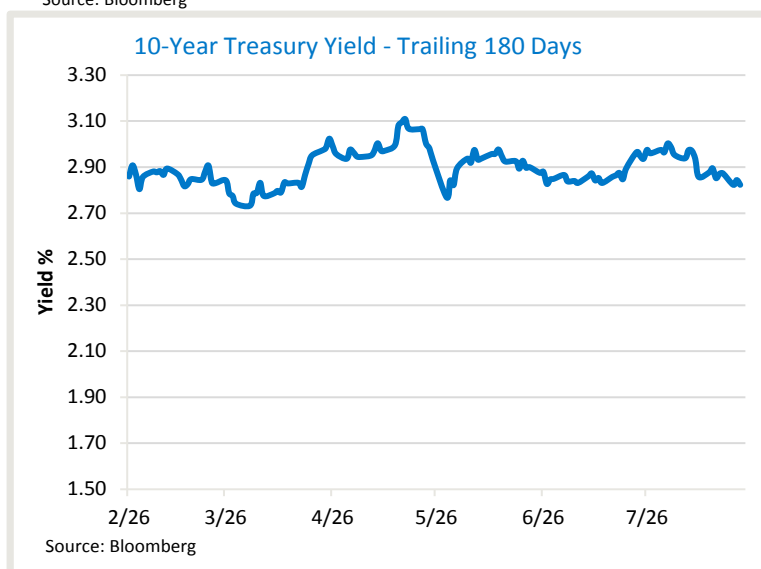
SELECTED INTEREST RATES

	Last	Change	% Chg.	YTD %		Last	Change	% Chg.	YTD %
2-Yr. U.S. Treasury	2.62%	0 bps	NM	NM	Prime Rate	5.00%	0.00	NM	NM
5-Yr. U.S. Treasury	2.72%	-3 bps	NM	NM	Fed Funds Rate	2.00%	0.00	NM	NM
10-Yr. U.S. Treasury	2.83%	-5 bps	NM	NM	Discount Rate	2.50%	0.00	NM	NM
30-Yr. U.S. Treasury	2.98%	-5 bps	NM	NM	LIBOR (3 Mo.)	2.31%	0 bps	NM	NM
German 10-Yr. Govt.	0.34%	-4 bps	NM	NM	Bond Buyer 40 Muni	3.83%	-1 bps	NM	NM
France 10-Yr.	0.68%	-2 bps	NM	NM	Bond Buyer 40 G.O.	3.94%	NA	NM	NM
Italy 10-Yr.	3.14%	-2 bps	NM	NM	Bond Buyer 40 Rev.	4.44%	NA	NM	NM
Fed 5-Yr Fwd BE Inf.	2.10%	-2 bps	NM	NM					

Source: Bloomberg



Source: Bloomberg



Currencies

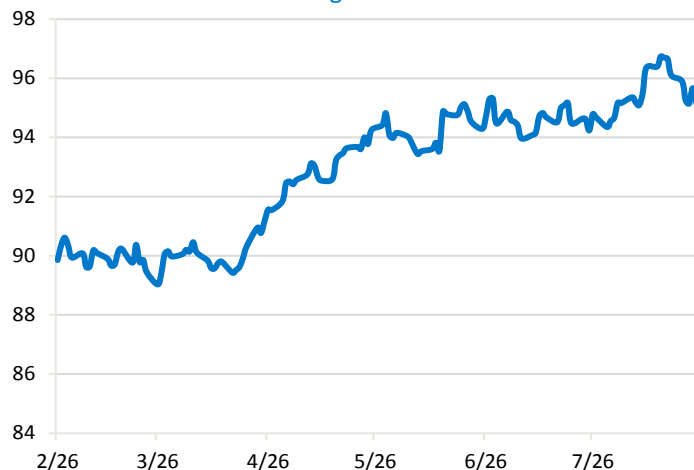
SELECTED CURRENCY PERFORMANCE

	Last	Change	% Chg.	YTD %
Dollar Index	95.16	-0.943	-0.98%	3.29%
Euro	1.16	0.018	1.61%	-3.19%
Japanese Yen	111.24	0.720	-0.65%	1.32%
British Pound	1.28	0.010	0.77%	-4.93%
Canadian Dollar	1.30	-0.003	0.21%	-3.54%

Source: Bloomberg

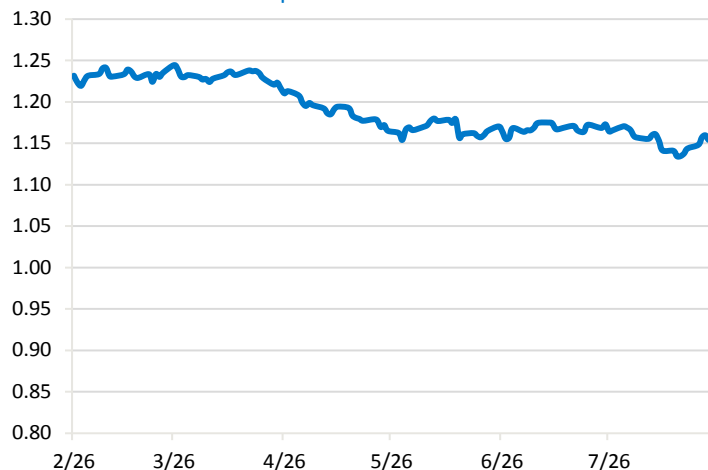
	Last	Change	% Chg.	YTD %
Chinese Yuan	6.81	-0.067	0.98%	-4.46%
Swiss Franc	0.98	-0.013	1.30%	-0.89%
New Zealand Dollar	0.67	0.006	0.83%	-5.72%
Brazilian Real	4.10	0.198	-4.81%	-19.46%
Mexican Peso	18.92	0.030	-0.16%	3.90%

U.S. Dollar Index - Trailing Six Months



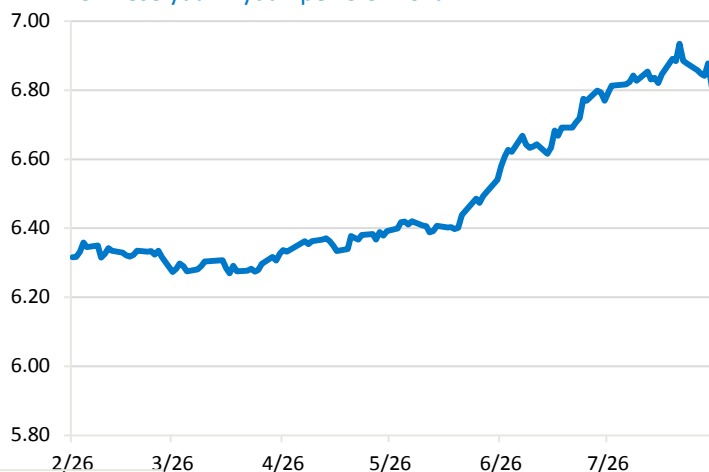
Source: Bloomberg

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

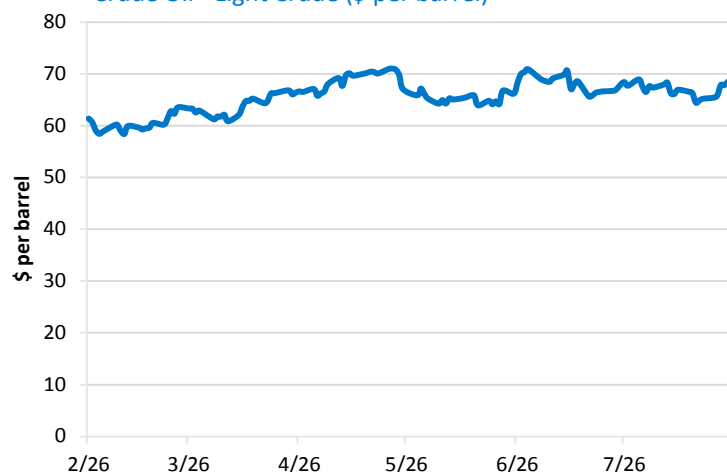
SELECTED COMMODITY MARKET PERFORMANCE

	Last	Change	% Chg.	YTD %
Bloomberg Comm. Idx.	83.69	0.34	0.41%	-5.08%
Crude Oil	\$68.56	\$3.35	5.14%	16.76%
Natural Gas	\$2.91	-\$0.03	-1.09%	4.48%
Gasoline (\$/Gal.)	\$2.84	-\$0.01	-0.21%	14.11%
Heating Oil	219.90	10.20	4.86%	12.26%
Gold Spot	\$1,206.03	\$21.49	1.81%	-7.45%
Silver Spot	\$14.81	\$0.01	0.07%	-12.54%

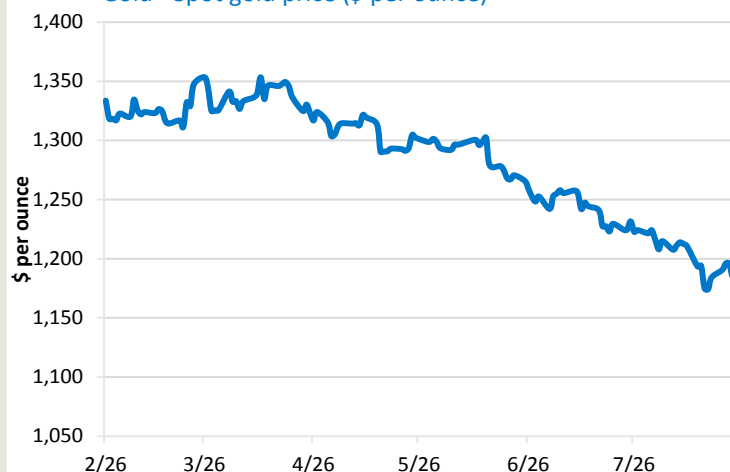
Source: Bloomberg; % change is based on price.

	Last	Change	% Chg.	YTD %
Platinum Spot	\$790.65	\$1.59	0.20%	-14.84%
Corn	362.75	-16.00	-4.22%	-5.53%
Wheat	536.50	-43.25	-7.46%	11.31%
Soybeans	855.25	-37.50	-4.20%	-12.35%
Sugar	10.23	0.05	0.49%	-32.74%
Orange Juice	156.45	-0.90	-0.57%	10.18%
Aluminum	2,075.00	45.00	2.22%	-8.51%
Copper	5,986.50	60.50	1.02%	-17.39%

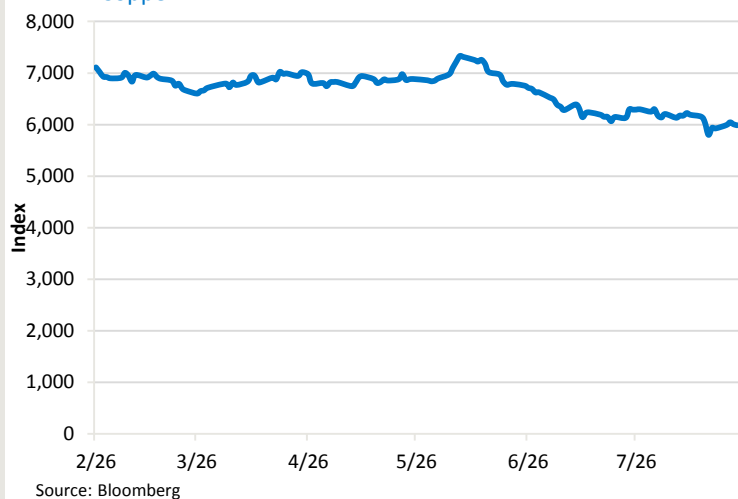
Crude Oil - Light Crude (\$ per barrel)



Gold - Spot gold price (\$ per ounce)



Copper



Corn - Active Contract



Alternative Investments

SELECTED ALTERNATIVE INVESTMENT INDEX PERFORMANCE

	Last	Change	% Chg.	YTD %
HFRX Global Hedge Fund Index	1262.99	2.16	0.17%	-0.99%
HFRX Equity Market Neutral	1003.67	-3.34	-0.33%	-0.07%
HFRX Equity Hedge Index	1268.69	9.27	0.74%	-0.16%
HFRX Event-Driven Index	1584.73	9.84	0.62%	-4.86%
HFRX Absolute Return Index	1076.21	-0.66	-0.06%	1.22%

	Last	Change	% Chg.	YTD %
HFRX Distressed Index	1042.04	1.07	0.10%	-5.84%
HFRX Merger Arbitrage Index	1842.52	-1.01	-0.05%	-0.57%
HFRX Convertible Arbitrage Index	801.39	0.53	0.07%	0.65%
HFRX Macro CTA Index	1145.28	-13.84	-1.19%	-1.60%
IQ Fixed Income Beta Arb Index	1496.93	3.26	0.22%	1.80%

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

HFRX Global Hedge Fund Index - Trailing 90 Days



HFRX Equity Hedge Index - Trailing 90 Days



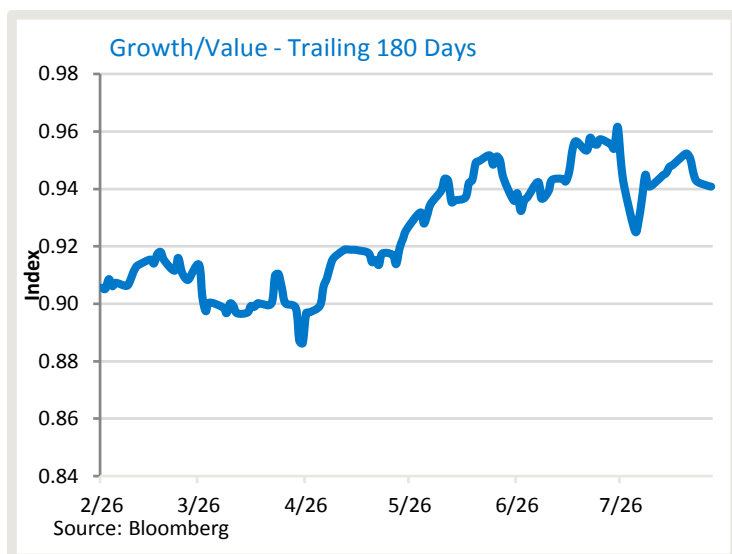
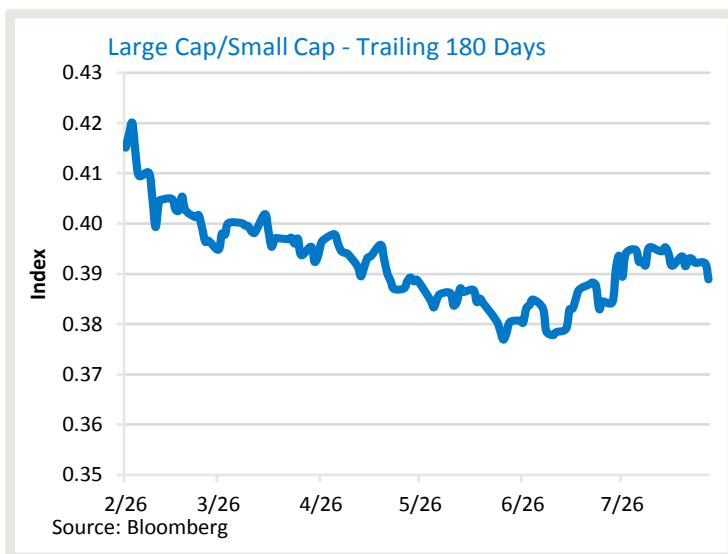
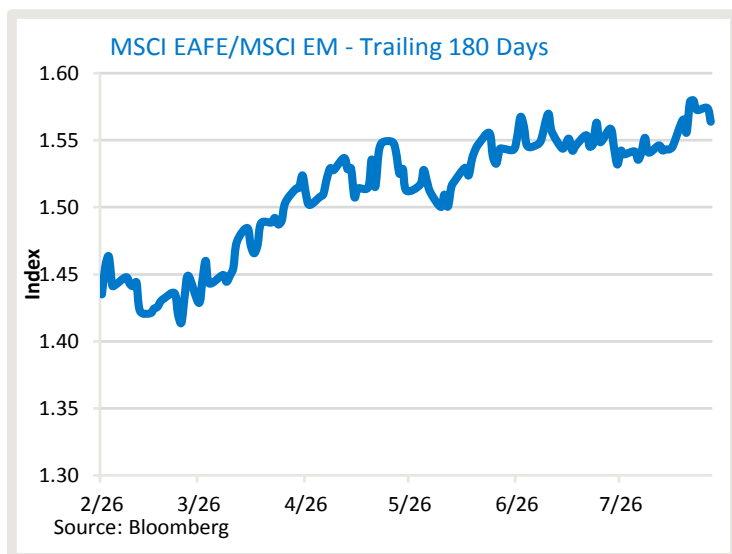
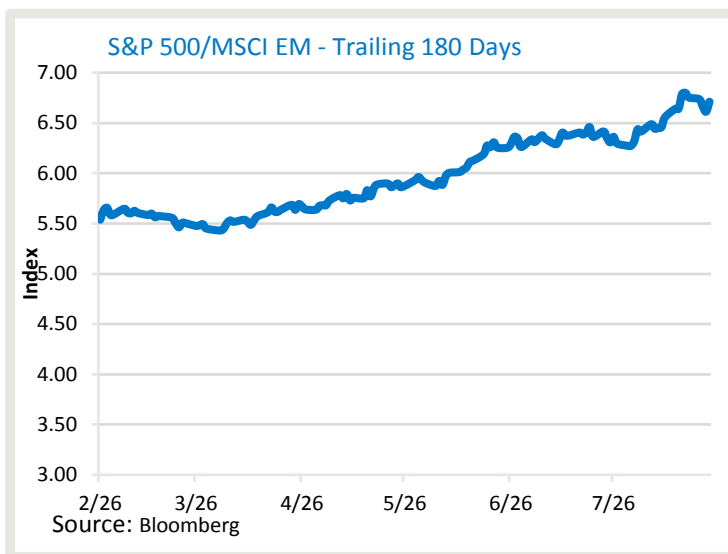
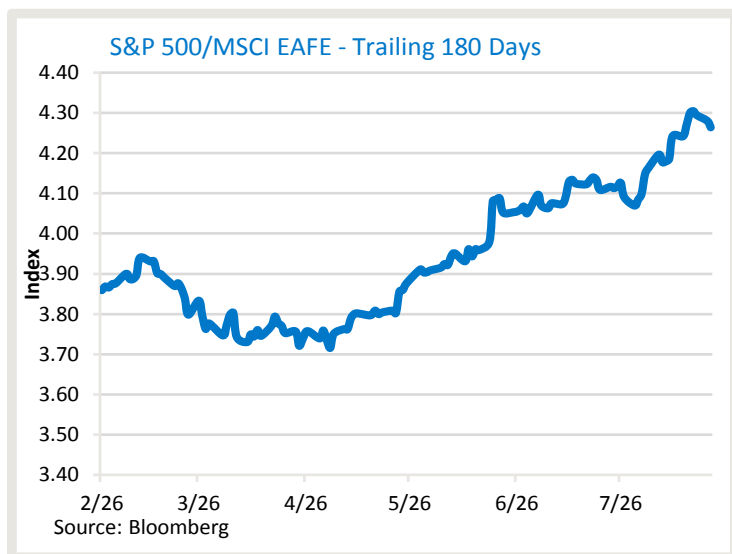
HFRX Equity Market Neutral - Trailing 90 Days



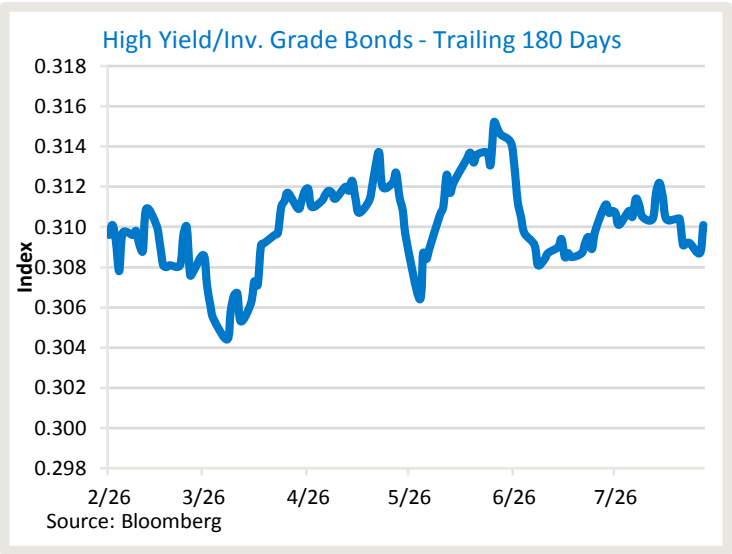
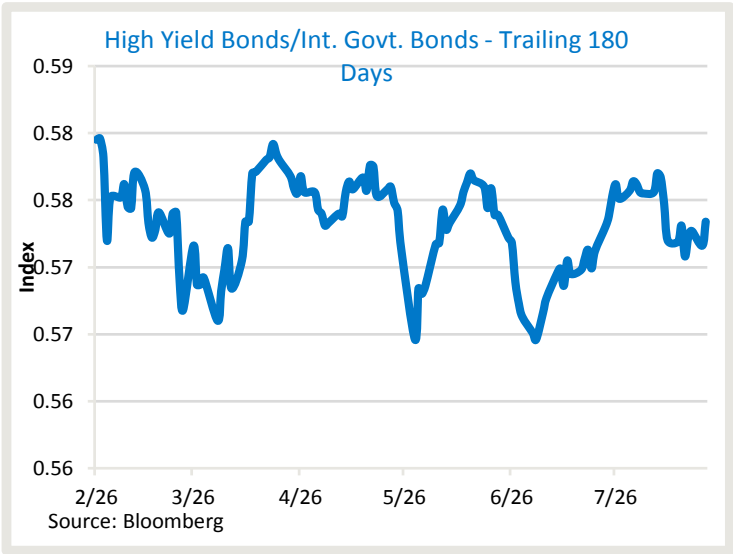
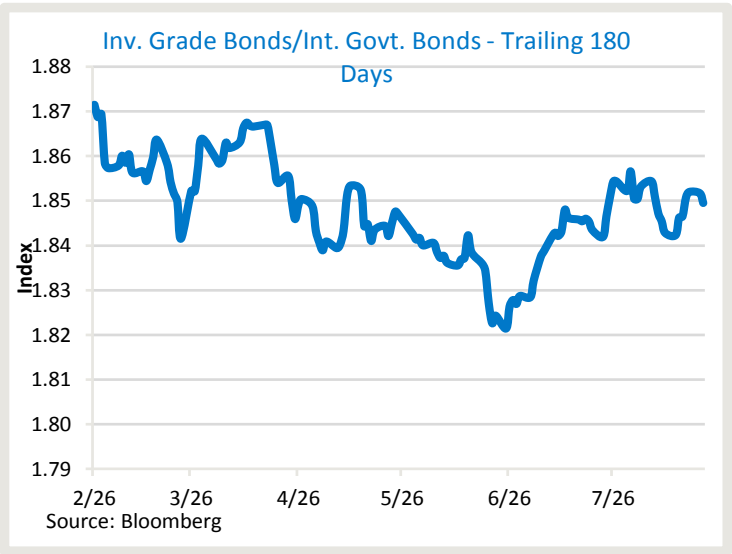
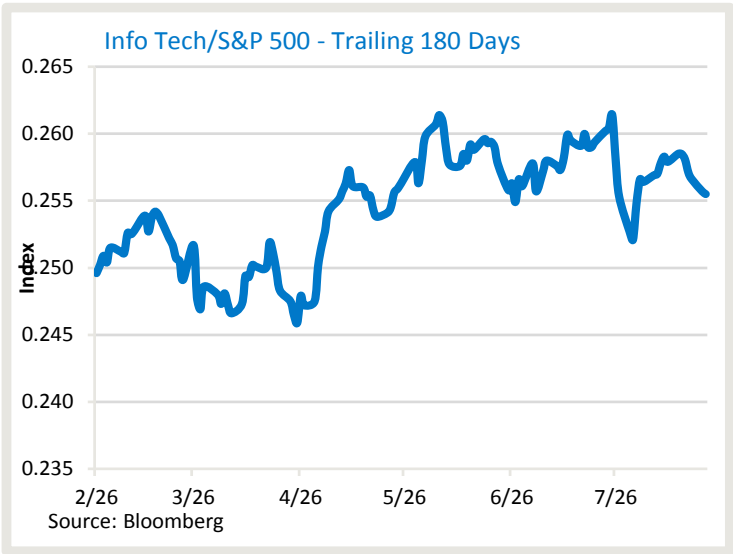
IQ Fixed Income Beta Arb Index - Trailing 90 Days



Portfolio Construction



Portfolio Construction (continued)



WEEKLY ASSET CLASS PERFORMANCE (Prior 12 weeks ending Thursday)

			6/7	6/14	6/21	6/28	7/5	7/12	7/19	7/26	8/2	8/9	8/16	8/23
Equity	Domestic Equity	Large Cap (R200)	2.53%	0.35%	-1.24%	-1.14%	0.68%	2.47%	0.15%	1.22%	-0.21%	1.01%	-0.49%	0.49%
		Small Cap (R2000)	2.09%	1.02%	0.25%	-2.60%	2.10%	0.64%	0.65%	-0.35%	-0.78%	0.52%	-0.30%	1.86%
	Int'l. Equity	MSCI EAFE	1.76%	-0.29%	-2.54%	-1.27%	0.80%	0.60%	0.25%	1.59%	-1.28%	0.54%	-3.26%	1.29%
		MSCI Em. Mkts.	2.58%	-2.09%	-4.04%	-3.10%	0.73%	1.51%	-0.90%	2.69%	-2.00%	1.05%	-5.29%	2.61%
Fixed Income		BarCap Agg. (AGG)	-0.53%	-0.06%	0.00%	0.37%	0.08%	0.09%	0.07%	-0.45%	-0.25%	0.25%	0.38%	0.20%
		High Yield (JNK)	0.36%	0.59%	-0.31%	-0.81%	-0.25%	0.62%	0.03%	0.45%	-0.11%	0.14%	-0.11%	0.33%
Commodities		Bloomberg Commodity Index	-0.74%	-0.92%	-3.13%	0.43%	-1.45%	-1.78%	-1.12%	2.27%	-0.52%	0.45%	-2.21%	0.12%
Alternatives		Hedge Funds (HFRX Global)	0.45%	0.09%	-0.68%	-0.24%	0.51%	0.44%	-0.06%	0.49%	-0.36%	0.15%	-0.40%	0.27%
Asset Allocation		60/40*	1.20%	0.07%	-0.95%	-0.86%	0.58%	1.03%	0.13%	0.57%	-0.52%	0.58%	-0.80%	0.74%
		48/32/20 (w/Alts.)**	1.05%	0.07%	-0.89%	-0.74%	0.57%	0.91%	0.09%	0.36%	-0.49%	0.50%	-0.72%	0.65%

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	1.00	1.03	1.03	1.01	1.05	1.01	1.01	1.02	1.30	1.38	1.02	1.41	1.06	1.07
Large Cap Growth	1.00	1.00	1.03	1.02	1.01	1.05	1.01	1.01	1.01	1.29	1.37	1.02	1.41	1.05	1.06
Large Cap Value	0.97	0.97	1.00	1.00	0.98	1.02	0.98	0.99	0.99	1.26	1.34	0.99	1.37	1.03	1.03
Mid Cap Core	0.97	0.98	1.00	1.00	0.98	1.02	0.99	0.99	0.99	1.26	1.34	0.99	1.38	1.03	1.04
Mid Cap Growth	0.99	0.99	1.02	1.02	1.00	1.04	1.00	1.01	1.01	1.29	1.36	1.01	1.40	1.05	1.06
Mid Cap Value	0.95	0.95	0.98	0.98	0.96	1.00	0.96	0.96	0.97	1.23	1.31	0.97	1.34	1.00	1.01
Small Cap Core	0.99	0.99	1.02	1.01	1.00	1.04	1.00	1.00	1.00	1.28	1.36	1.01	1.40	1.04	1.05
Small Cap Growth	0.99	0.99	1.01	1.01	0.99	1.04	1.00	1.00	1.00	1.28	1.36	1.00	1.39	1.04	1.05
Small Cap Value	0.98	0.99	1.01	1.01	0.99	1.04	1.00	1.00	1.00	1.28	1.36	1.00	1.39	1.04	1.05
Int'l. Developed	0.77	0.77	0.79	0.79	0.78	0.81	0.78	0.78	0.78	1.00	1.06	0.79	1.09	0.81	0.82
Emerging Markets	0.73	0.73	0.75	0.75	0.73	0.76	0.74	0.74	0.74	0.94	1.00	0.74	1.03	0.77	0.77
REITs	0.98	0.98	1.01	1.01	0.99	1.03	0.99	1.00	1.00	1.27	1.35	1.00	1.39	1.04	1.05
Commodities	0.71	0.71	0.73	0.73	0.71	0.74	0.72	0.72	0.72	0.92	0.97	0.72	1.00	0.75	0.75
Int. Bond	0.95	0.95	0.98	0.97	0.96	1.00	0.96	0.96	0.96	1.23	1.30	0.97	1.34	1.00	1.01
High Yield	0.94	0.94	0.97	0.96	0.95	0.99	0.95	0.95	0.95	1.22	1.29	0.96	1.33	0.99	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

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 Value 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 **Housing Market Index (HMI)** is based on a monthly survey of NAHB members designed to take the pulse of the single-family housing market. In May 2007, **Markit's U.S. PMI** research was extended out to cover producers of metal goods. In October 2009, Markit's U.S. Manufacturing PMI survey panel was extended further to cover all areas of U.S. manufacturing activity. 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 **JPMorgan Emerging Market Bond Index (EMBI)** are a set of three bond indices to track bonds in emerging markets operated by J P Morgan. The indices are the Emerging Markets Bond Index Plus, the Emerging Markets Bond Index Global and the Emerging Markets Bond Global Diversified Index. The **J.P. Morgan GBI** series covers a variety of asset classes ranging from flagship coverage of emerging markets to developed market bond indices.

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