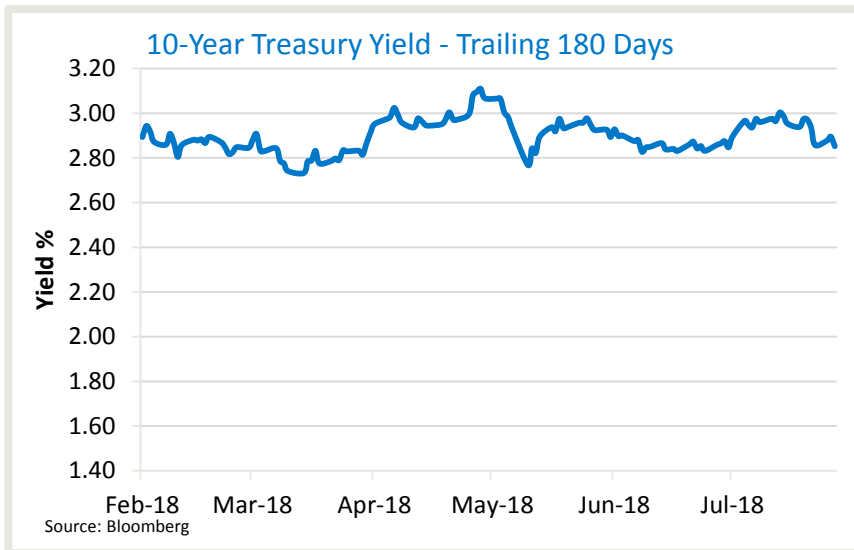


Weekly Market Review

August 17, 2018

Chart of the Week



Weekly Highlights

- Turkey remained in the headlines, as investors continue to worry the situation could begin to affect additional countries and cause contagion.** Emerging markets were affected, experiencing broad declines throughout the week. Adding fuel to the fire is the diplomatic dispute between the US and Turkey. Last week, the US doubled tariffs on metal imports from Turkey, and this week, President Trump has threatened additional sanctions over the detainment of an American Evangelical pastor on terrorism charges.
- The Philadelphia Fed Index dropped to 11.9 in August, a decrease of 13.9 points from July's reading.** This was the lowest reading for the Index in 21 months. Most components fell for the month, with the New Orders Index experiencing the largest decline. However, there was an uptick in future expectations, as more than half of the firms expect increased activity over the next six months.
- Trade tensions between the US and China eased somewhat this week, as officials from both countries announced they would hold lower-level talks later this month regarding the trade dispute.** In recent weeks, the US has imposed tariffs on billions of dollars of Chinese goods, prompting retaliatory tariffs from Beijing. Although the announced talks fall short of any resolution, there is hope they can help avoid a further decline in US-China relations.

Talking Points

- Global equity markets** have been mixed this week. US markets are mostly flat, but value stocks have managed small gains; international stocks are down, and emerging markets continue to experience significant declines.
- Treasury yields** have remained flat this week, with the yield on the key 10-Year US Treasury Note trading near 2.85%.
- Commodity prices** were mixed for the week. Crude oil prices finished the week lower, and grain prices were higher for the week.
- Among economic data** released this week, housing data was mixed, with the NAHB Housing Market Index coming in above forecasts, and both housing starts and building permits increased from prior readings but fell short of expectations. Consumer Sentiment softened, with the Michigan Sentiment Index for August declining to 95.3, its lowest level in nearly a year. However, Leading Economic Indicators ticked up to .6% versus expectations of 0.5%.

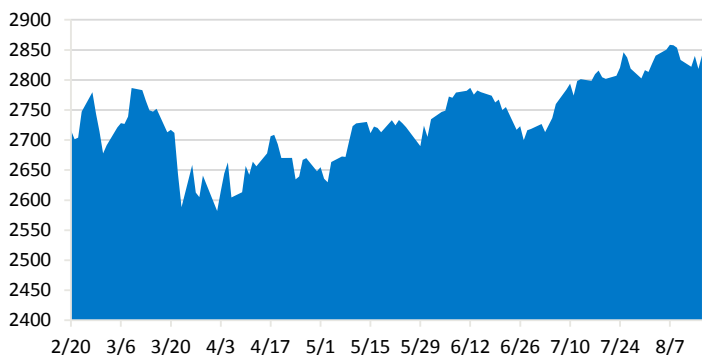
Market Dashboard

	Last Price	Change	% Chg.	YTD %
S&P 500	2,850.13	16.85	0.59%	6.6%
Dow Industrials	25,669.32	356.18	1.41%	3.8%
Nasdaq	7,816.33	-22.78	-0.29%	13.2%
Russell 2000	1,692.95	6.14	0.36%	10.3%
Euro Stoxx Index	381.06	-4.80	-1.24%	-2.1%
Shanghai Composite	2,668.97	-126.34	-4.52%	-19.3%
Russell Global	2,139.08	-17.85	-0.83%	-0.2%

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

	Last Price	Change	% Chg.	YTD %
Russell Global EM	3,217.30	-122.06	-3.66%	-11.7%
10-Year US Treas.	2.87	2 bps	NM	NM
Bloomberg Cmdts. Idx.	83.35	-0.88	-1.05%	-5.5%
Gold	\$1,184.25	-\$26.13	-2.16%	-9.1%
Crude Oil	\$65.89	-\$1.73	-2.56%	11.6%
Dollar Index	96.12	-0.25	-0.26%	4.3%
VIX Index	12.64	-0.52	-3.95%	14.5%

S&P 500 Index: Trailing 180 Days



Source: Bloomberg

	One Week			YTD		
	Value	Growth		Value	Growth	
L	0.78%	0.46%	0.19%	1.06%	7.27%	12.76%
	1.00%	0.75%	0.38%	1.87%	5.13%	9.31%
S	0.66%	0.36%	0.08%	7.23%	10.25%	13.09%

Source: Bloomberg

Sector Performance:

S&P/Global Industry Classification Sectors (GICS)

	% Wgt in S&P 500	Week % Chg.	YTD % Chg.
Consumer Discretionary	12.7	0.22%	13.9%
Consumer Staples	7.0	3.23%	-4.0%
Energy	5.8	3.59%	0.2%
Financials	14.0	0.61%	0.6%
Health Care	14.6	1.60%	10.1%
Industrials	9.7	1.42%	0.3%
Information Technology	26.0	0.17%	15.6%
Materials	2.5	0.50%	-3.4%
Real Estate	2.8	2.90%	2.5%
Telecom Services	2.0	3.65%	-5.0%
Utilities	2.9	2.54%	2.9%

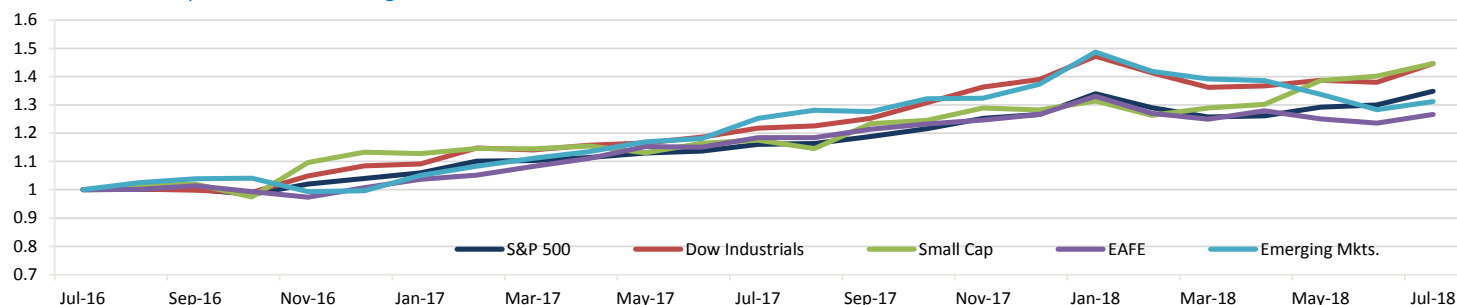
Source: Bloomberg

VIX Index: Trailing 180 Days



Source: Bloomberg

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



Source: Bloomberg

The Economy and Markets

A Macro View – Are Emerging Markets Signaling Contagion?

Emerging markets stocks have declined significantly thus far in 2018, after a solid rally last year that led to the asset class's best return since 2009. After reaching highs in late January, the space has slumped nearly 20%, stoking fears of further downside and potential contagion. The sharp pullback has caused many investors to question their commitment to emerging markets. Should they be worried, or is this pullback to be expected, given the historical volatility of the asset class?

First, it's important to understand the causes of the current decline. A strengthening dollar, tightening US central bank policy, and increased geopolitical tensions and trade rhetoric are contributing to the current weakness. Last year, emerging markets were buoyed by a weak dollar, but this year's reversal has had the opposite effect. As the US has gradually tightened monetary policy, several currencies, including the Turkish lira, Indian rupee, Argentine peso, and South African rand, have steeply declined against the dollar. Years of cheap borrowing costs have led to significantly higher costs for countries dependent on external financing, along with increased energy costs, as oil is denominated in dollars. A more volatile geopolitical environment hasn't helped: Global tensions and increased trade rhetoric have contributed to uncertainty, as China and the US risk an escalating trade war, and President Trump and Turkey's Erdogan continue to engage in a war of words.

When emerging markets decline, the risk of contagion escalates. One of the most notable examples of this is the 1997 Asian financial crisis, which began with a currency crisis in Thailand that quickly spread throughout Asia, and then to Russia and Brazil. The speed with which this crisis spread to other countries led to a proliferation of research on the linkages between economies and the risk of financial contagion. One such study, *Financial Crises and Contagion in Emerging Market Countries*,¹ presents a framework we can use to evaluate the current environment. The authors presented three reasons why crisis may occur in countries simultaneously: coincidence; a common shock to economies across countries; and a financial crisis that causes a contagious loss of confidence in local financial markets. Examples of common shocks include the Gulf War, the Tiananmen Square protests, and the September 11 terrorist attack. Examples of financial crises resulting in contagion include the US stock market crash in 1987, the Mexican peso crisis in 1994, and the Asian financial crisis in 1997.

The authors cite four models to explain the causes of contagion: economic linkages, poor economic fundamentals, lack of liquidity, and herd behavior. The first model, economic linkages, examines the trade and investment links between the country experiencing crisis and its trade competitors. Based on current information, this model doesn't predict a high probability of contagion now, but a potential crisis likely would start with Turkey. If this occurred, linkages between Turkey and other vulnerable countries probably would be limited. Although Turkey has significant trade partnerships with China, Russia, and India, they represent only a small portion of these countries' overall trade. Additionally, Turkey only accounts for less than 1% of the world economy, and global exposure to Turkish banks is limited. Spanish banks are the most exposed, yet still comprise only a small portion of total assets.

The second model theorizes that investors will ignore poor economic fundamentals in some countries until a crisis occurs. However, once they become aware of the crisis, investors will project the problems of the country in crisis onto other countries facing similar issues. Again, this seems to be a weak argument for the current situation evolving into contagion. The issues facing Turkey appear to be country specific. Turkey has been a huge borrower in recent years, with more than half of its borrowing being denominated in foreign currencies; however, private companies have accumulated much of this debt. Other countries, such as South Africa and Argentina, carry large current account deficits but have less domestic debt, whereas Eastern European countries have strong external balances, low inflation, and strong banking systems.

The third theory is that liquidity-constrained portfolio managers will sell other countries' debt to meet an expected increase in redemptions. After 18 weeks of consecutive inflows earlier in the year, emerging markets have reversed course and have had months of outflows, indicating that liquidity could become an issue. However, the magnitude of flows to date has been contained, relative to the overall market.

The final model for emerging markets contagion is herd behavior. This widely accepted theory states that investors will abandon markets based on what they think other investors are doing, and in the current environment, could be the most likely cause of potential contagion. To date, the broad-based sell-off seems to be based more on investors' fear that other countries in a poor financial position will follow in Turkey's footsteps. Based on fundamentals, these fears may be unfounded, as Turkey's problems appear unique to Turkey, and the overall financial position in emerging markets countries is much stronger than in past crises. Unfortunately, contagion based on herd behavior can be difficult to predict, and comes with limited prevention options.

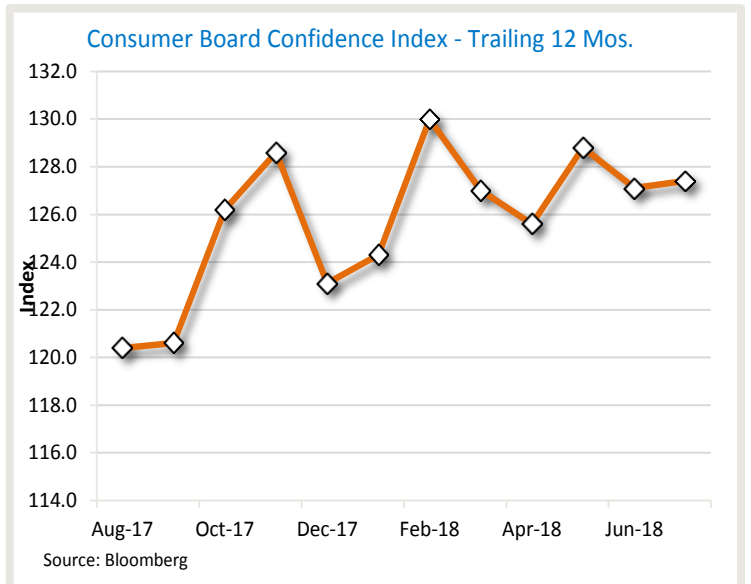
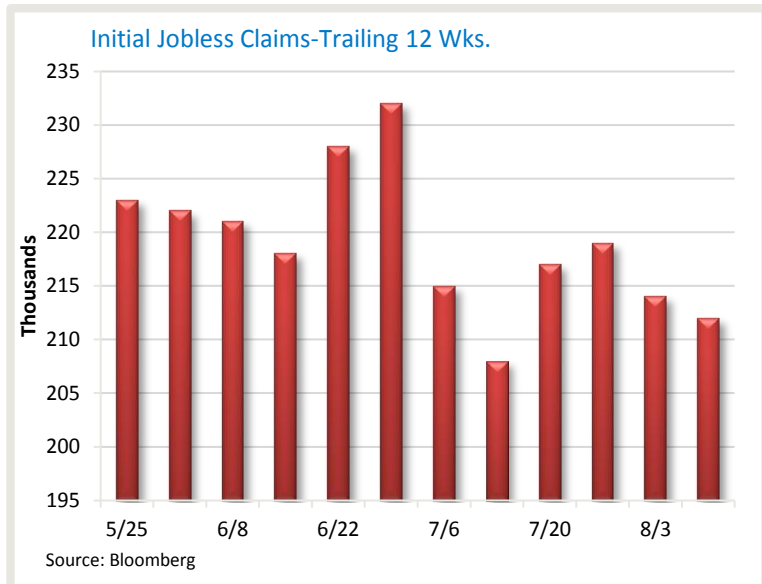
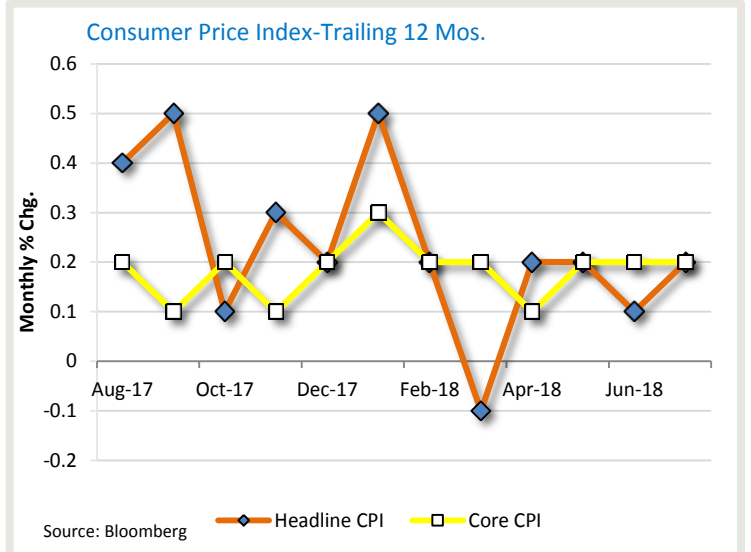
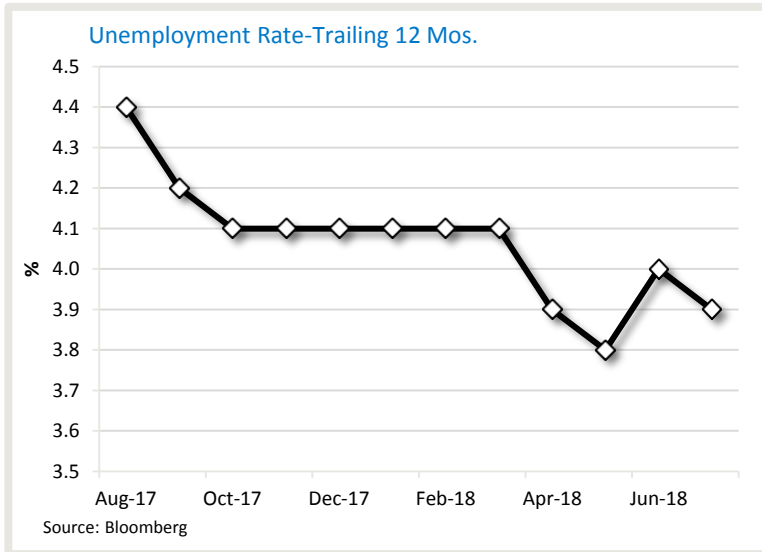
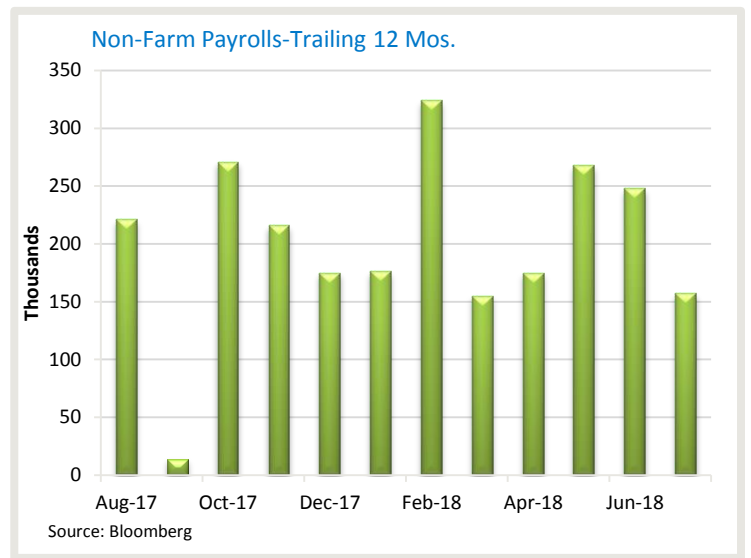
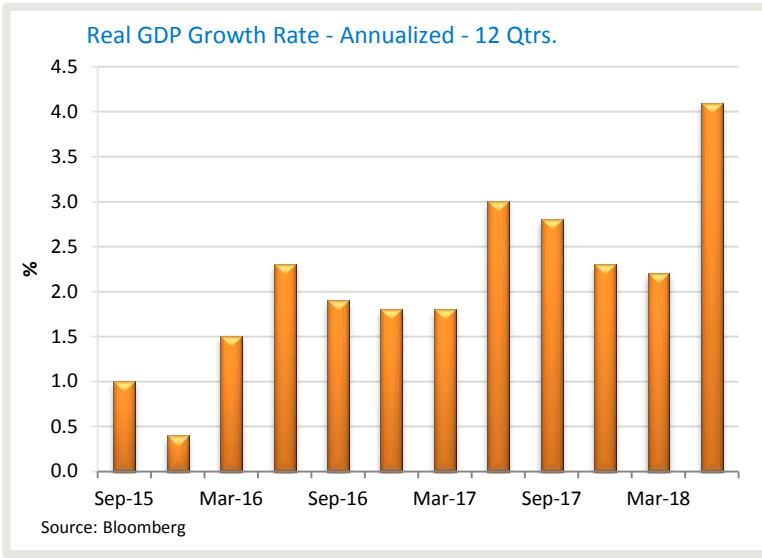
Overall, some risk exists that the current problems in emerging markets, and in Turkey specifically, could deteriorate into contagion, with herd behavior being the most likely cause. However, this is both difficult to predict and far from certain. Historically, large declines have been followed by large gains in the asset class, making it potentially attractive. Given this uncertainty, investors should carefully evaluate their exposure to emerging markets. Rather than avoiding the asset class, investors should consider emerging markets exposure in a total portfolio context, focusing on how it relates to their goals, risk tolerance, and time horizon.

Greg Richards, CFA, CFP
Senior Investment Analyst

Sources:

¹ https://www.rand.org/pubs/monograph_reports/MR962.html

Economic Data



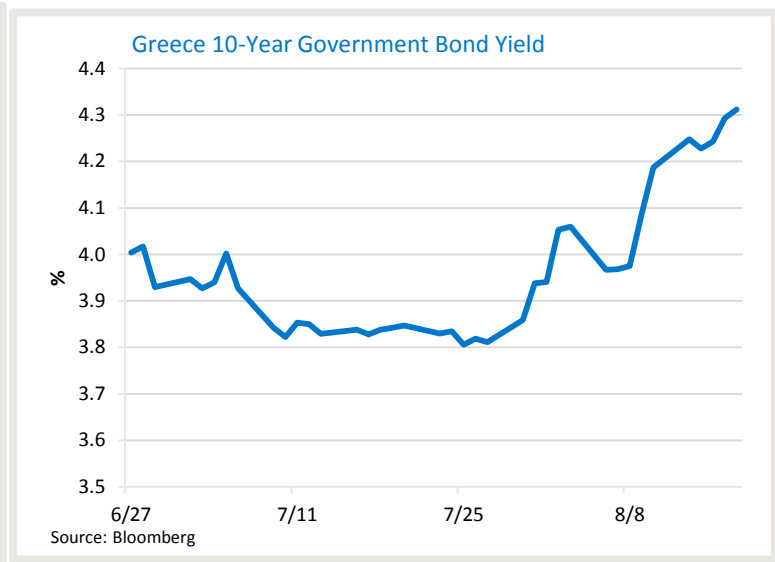
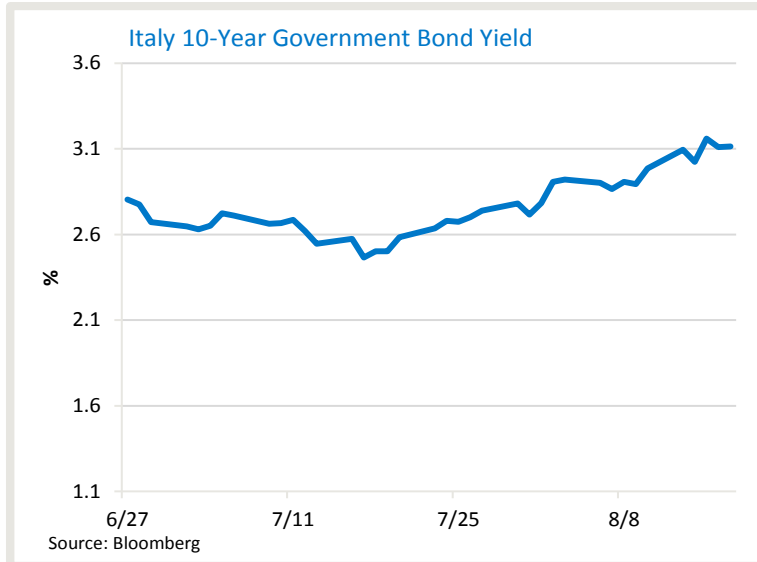
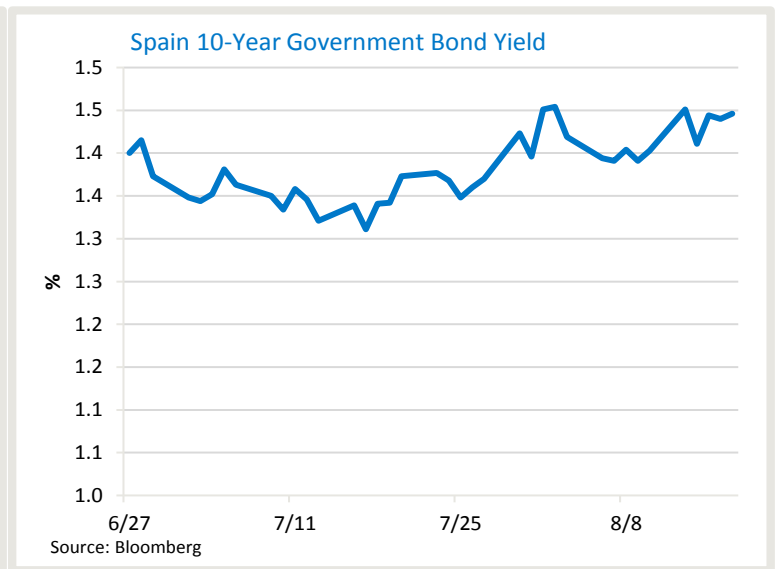
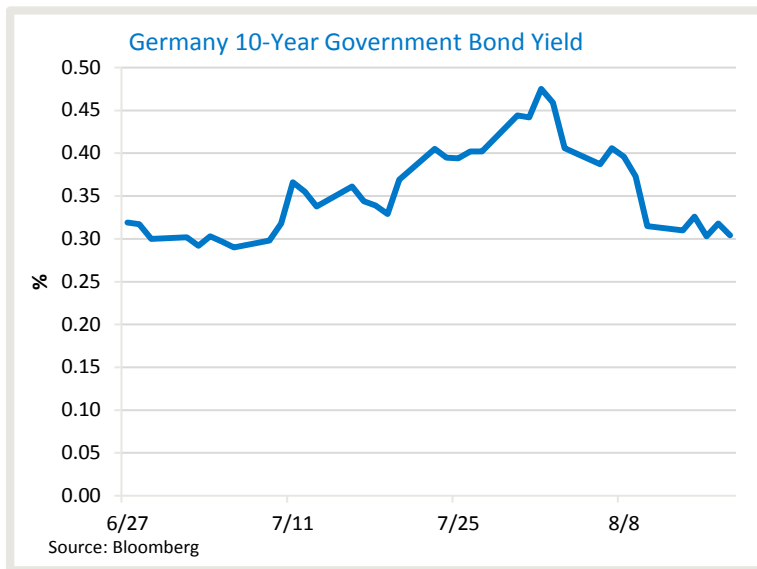
Eurozone

SELECTED EUROPEAN SOVEREIGN YIELD PERFORMANCE

	Last	Change	% Chg.	YTD %
Germany 10-Yr. Govt.	0.30	1 bps	NM	NM
Greece 10-Yr. Govt.	4.31	-9 bps	NM	NM
Italy 10-Yr. Govt.	3.11	-10 bps	NM	NM
Spain 10-Yr. Govt.	1.45	-4 bps	NM	NM
Belgium 10-Yr. Govt.	0.69	0 bps	NM	NM

	Last	Change	% Chg.	YTD %
France 10-Yr. Govt.	0.66	0 bps	NM	NM
Ireland 10-Yr. Govt.	0.83	-1 bps	NM	NM
Portugal 10-Yr. Govt.	1.84	-7 bps	NM	NM
Netherlands 10-Yr. Govt.	0.42	1 bps	NM	NM
U.K. 10-Yr. Govt.	1.23	0 bps	NM	NM

Source: Bloomberg
Basis points (bps)



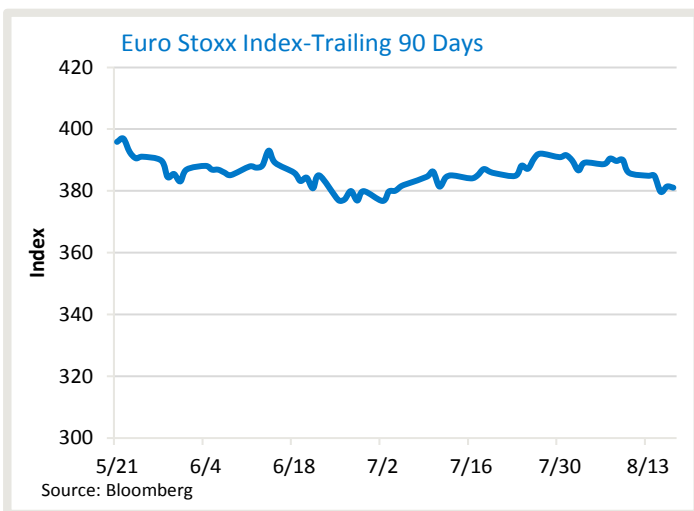
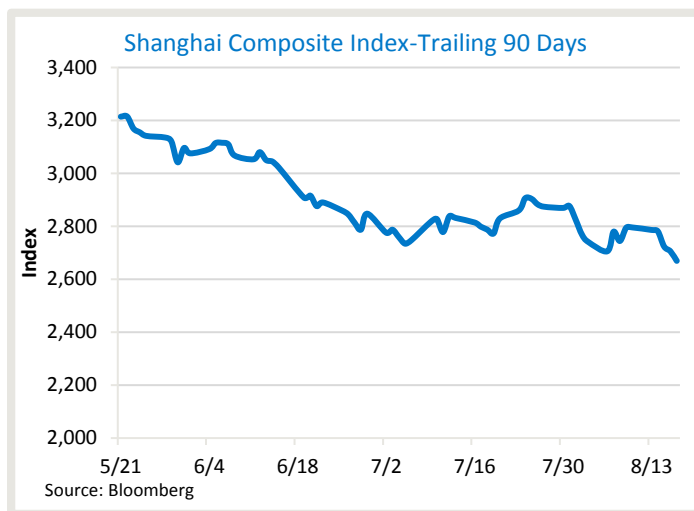
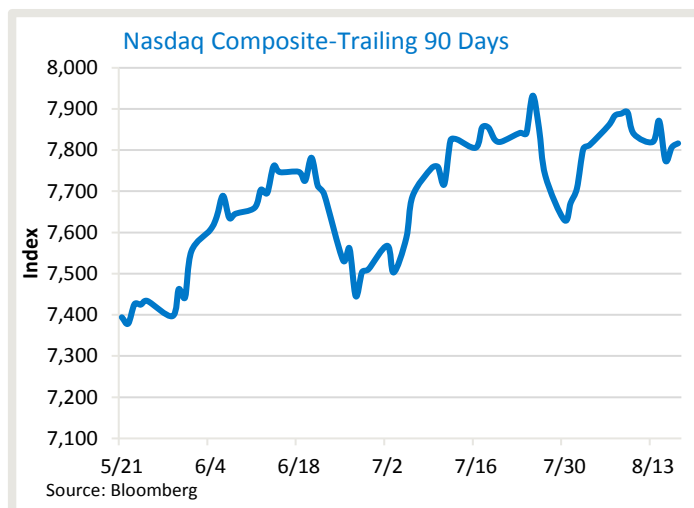
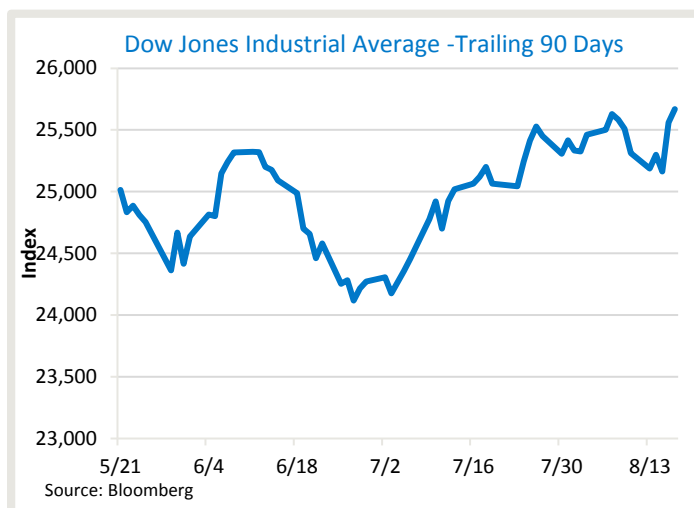
Equities

WORLD MARKET PERFORMANCE

	Last	Change	% Chg.	YTD %
S&P 500	2,850.13	16.85	0.59%	6.60%
Dow Industrials	25,669.32	356.18	1.41%	3.84%
Nasdaq Composite	7,816.33	-22.78	-0.29%	13.22%
Russell Global	2,139.08	-17.85	-0.83%	-0.2%
Russell Global EM	3,217.30	-122.06	-3.66%	-11.7%
S&P/TSX (Canada)	16,323.71	-2.80	-0.02%	0.71%
Mexico IPC	48,264.63	-126.43	-0.26%	-2.22%
Brazil Bovespa	76,028.50	-485.85	-0.63%	-0.49%
Euro Stoxx 600	381.06	-4.80	-1.24%	-2.09%
FTSE 100	7,558.59	-108.42	-1.41%	-1.68%
IBEX 35 (Spain)	9,417.30	-184.80	-1.92%	-6.24%

	Last	Change	% Chg.	YTD %
Swiss Market Index	9,003.91	-27.42	-0.30%	-4.03%
CAC 40 Index (France)	5,344.93	-69.75	-1.29%	0.61%
DAX Index (Germany)	12,210.55	-213.80	-1.72%	-5.47%
Irish Overall Index	6,698.59	16.62	0.25%	-4.83%
Nikkei 225	22,270.38	-27.70	-0.12%	-2.17%
Hang Seng Index	27,213.41	-1153.21	-4.07%	-9.04%
Shanghai Composite	2,668.97	-126.34	-4.52%	-19.30%
Kospi Index (S. Korea)	2,247.05	-56.66	-2.46%	-8.93%
Taiwan Taiex Index	10,690.96	-292.72	-2.67%	0.45%
Tel Aviv 25 Index	1,582.79	-7.05	-0.44%	4.84%
MOEX Index (Russia)	2,255.12	-19.93	-0.88%	6.89%

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



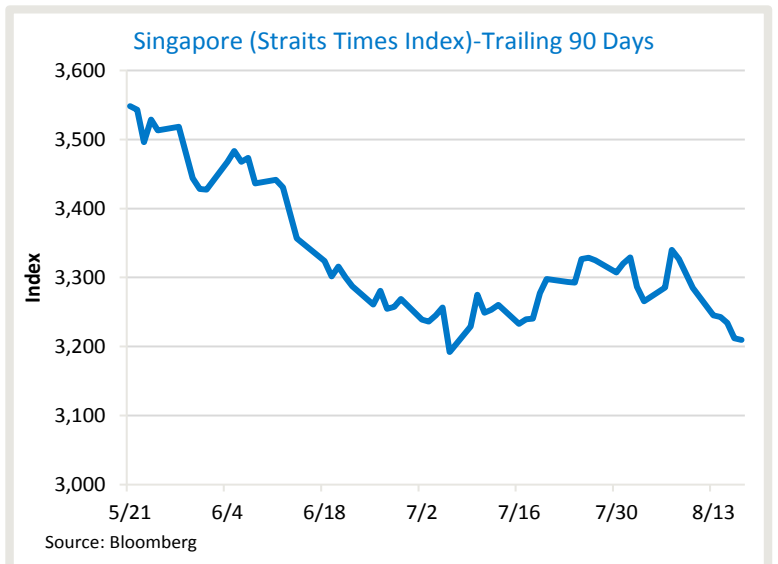
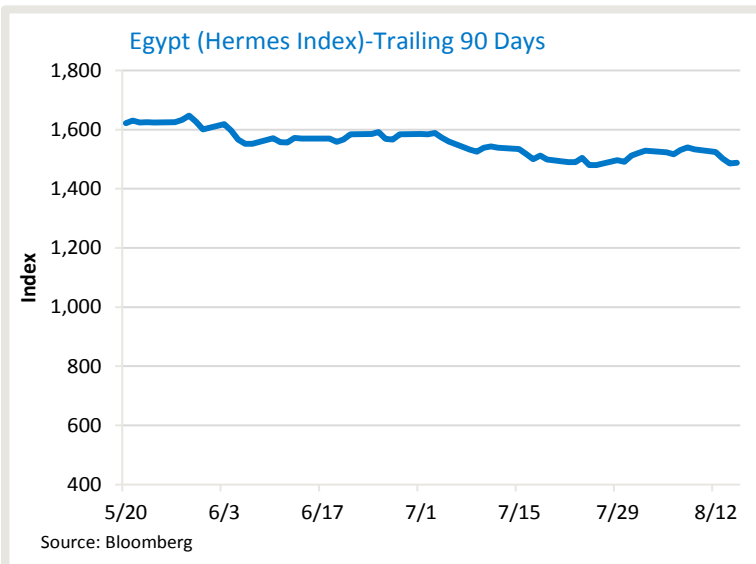
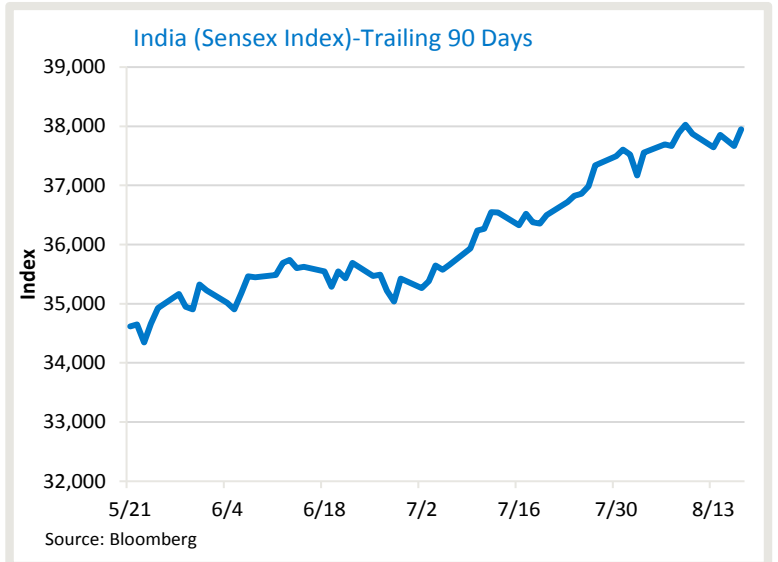
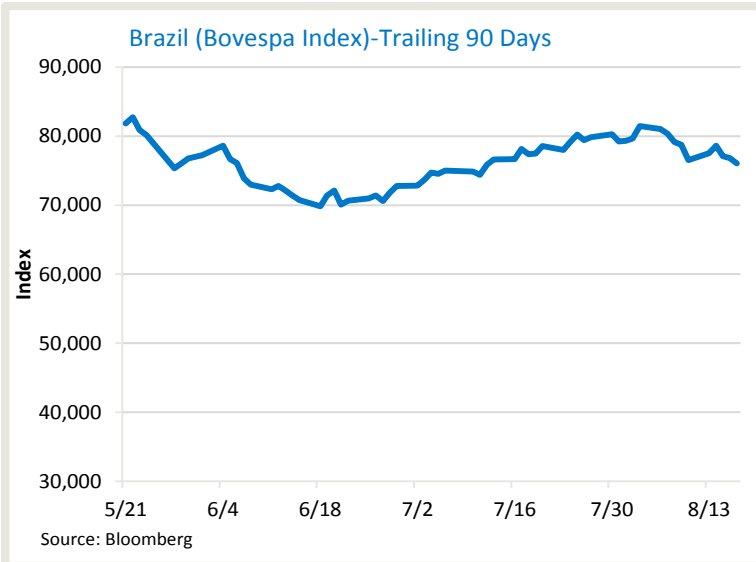
Equities – Emerging and Frontier Markets

EMERGING AND FRONTIER MARKET PERFORMANCE

	Last	Change	% Chg.	YTD %
Mexico IPC	48,264.63	-126.43	-0.3%	-2.2%
Brazil (Bovespa Index)	76,028.50	-485.85	-0.6%	-0.5%
MOEX Index (Russia)	2,255.12	-19.93	-0.9%	6.9%
Czech Republic (Prague)	1,058.05	-15.35	-1.4%	-1.9%
Turkey (Istanbul)	88,734.75	-6204.88	-6.5%	-23.1%
Egypt (Hermes Index)	1,482.15	-51.23	-3.3%	3.1%
Kenya (Nairobi 20 Index)	3,336.06	21.14	0.6%	-10.1%
Saudi Arabia (TASI Index)	7,867.16	-309.02	-3.8%	8.9%
Lebanon (Beirut BLOM Index)	1,012.37	-10.64	-1.0%	-11.9%
Palestine	541.56	-2.39	-0.4%	-5.7%

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

	Last	Change	% Chg.	YTD %
Hang Seng Index	27,213.41	-1153.21	-4.1%	-9.0%
India (Sensex 30)	37,947.88	78.65	0.2%	11.4%
Malaysia (KLCI Index)	1,783.47	-22.28	-1.2%	-0.7%
Singapore (Straits Times Index)	3,209.44	-75.34	-2.3%	-5.7%
Thailand (SET Index)	1,690.04	-32.44	-1.9%	-3.6%
Indonesia (Jakarta)	5,783.80	-281.46	-4.6%	-9.0%
Pakistan (Karachi KSE 100)	42,446.62	-395.56	-0.9%	4.9%
Vietnam (Ho Chi Minh)	968.88	0.41	0.0%	-1.6%
Sri Lanka (Colombo)	6,051.10	-90.45	-1.5%	-5.0%
Cambodia (Laos)	871.43	-1.79	-0.2%	-12.7%

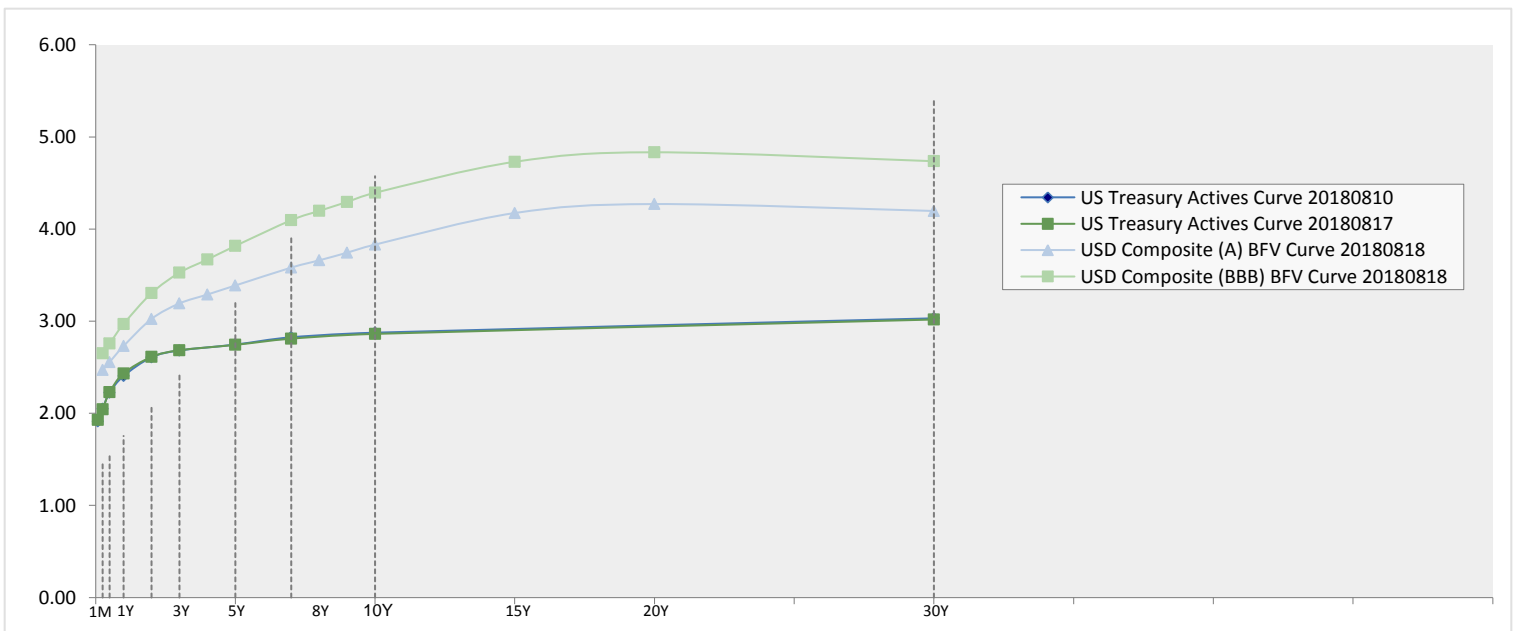


Interest Rates

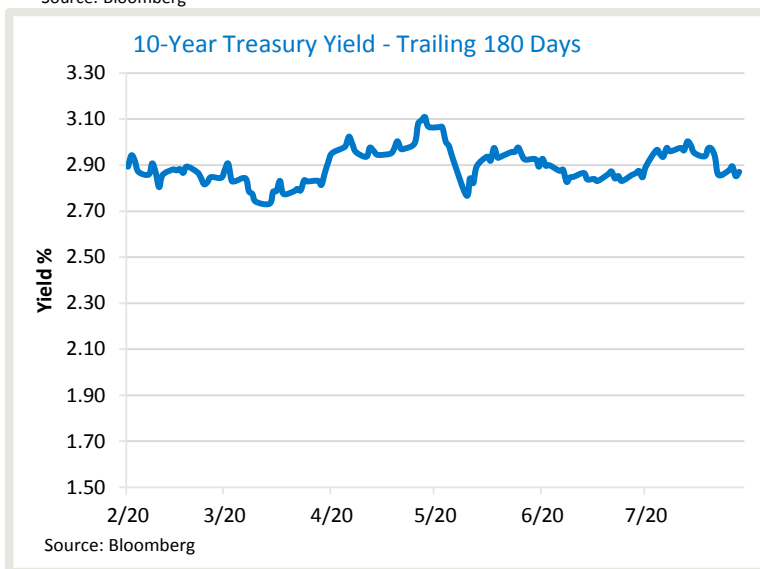
SELECTED INTEREST RATES

	Last	Change	% Chg.	YTD %		Last	Change	% Chg.	YTD %
2-Yr. U.S. Treasury	2.61%	0 bps	NM	NM	Prime Rate	5.00%	0.00	NM	NM
5-Yr. U.S. Treasury	2.75%	2 bps	NM	NM	Fed Funds Rate	2.00%	0.00	NM	NM
10-Yr. U.S. Treasury	2.87%	2 bps	NM	NM	Discount Rate	2.50%	0.00	NM	NM
30-Yr. U.S. Treasury	3.03%	1 bps	NM	NM	LIBOR (3 Mo.)	2.32%	0 bps	NM	NM
German 10-Yr. Govt.	0.30%	1 bps	NM	NM	Bond Buyer 40 Muni	3.84%	-3 bps	NM	NM
France 10-Yr.	0.66%	0 bps	NM	NM	Bond Buyer 40 G.O.	3.95%	NA	NM	NM
Italy 10-Yr.	3.11%	-10 bps	NM	NM	Bond Buyer 40 Rev.	4.45%	NA	NM	NM
Fed 5-Yr Fwd BE Inf.	2.13%	-1 bps	NM	NM					

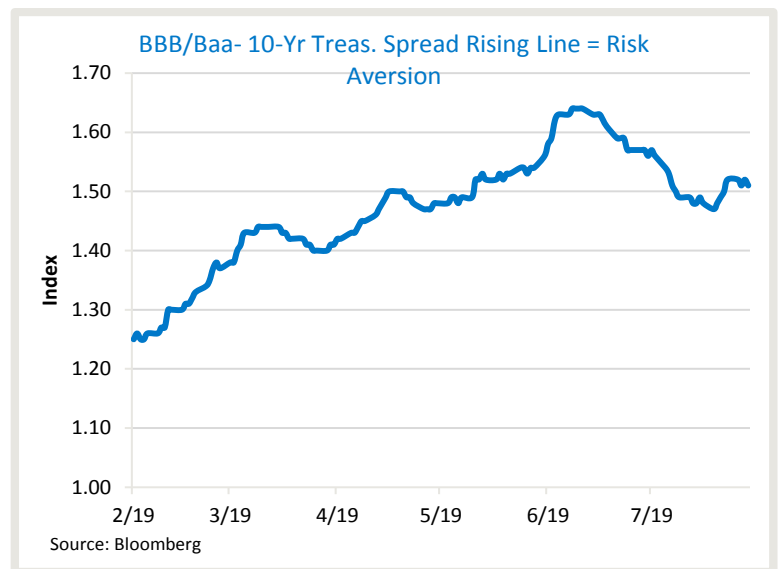
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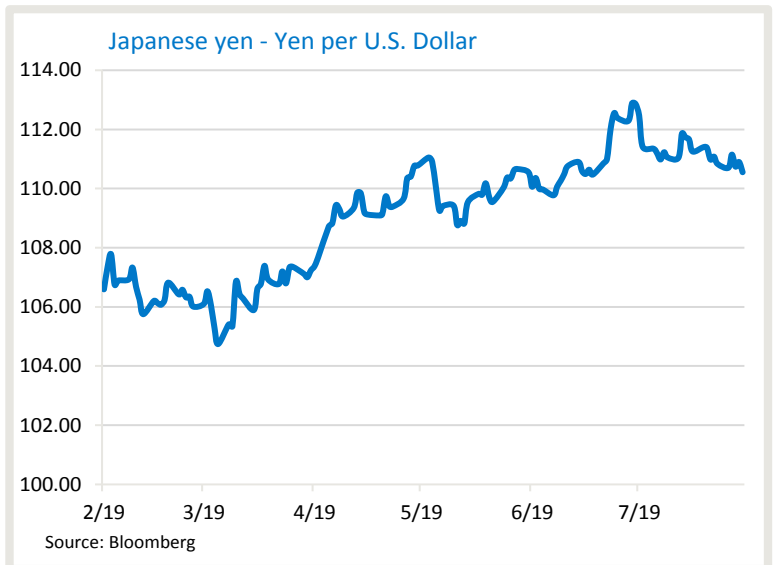
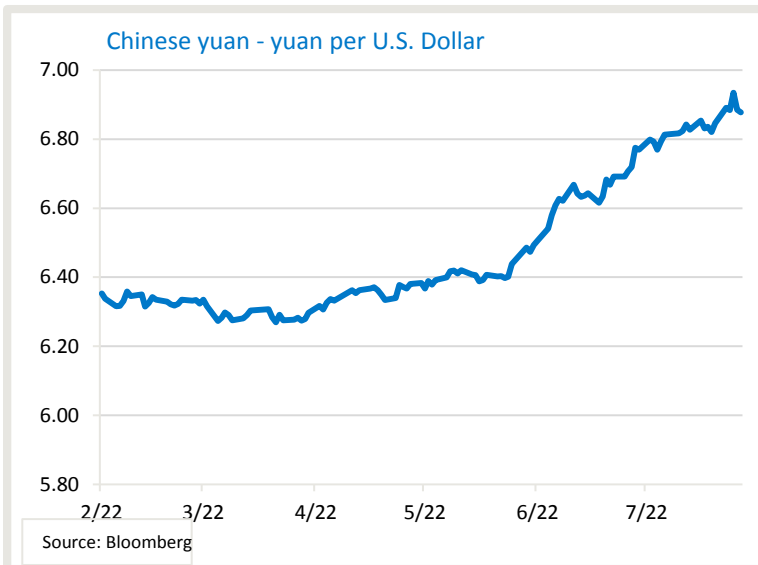
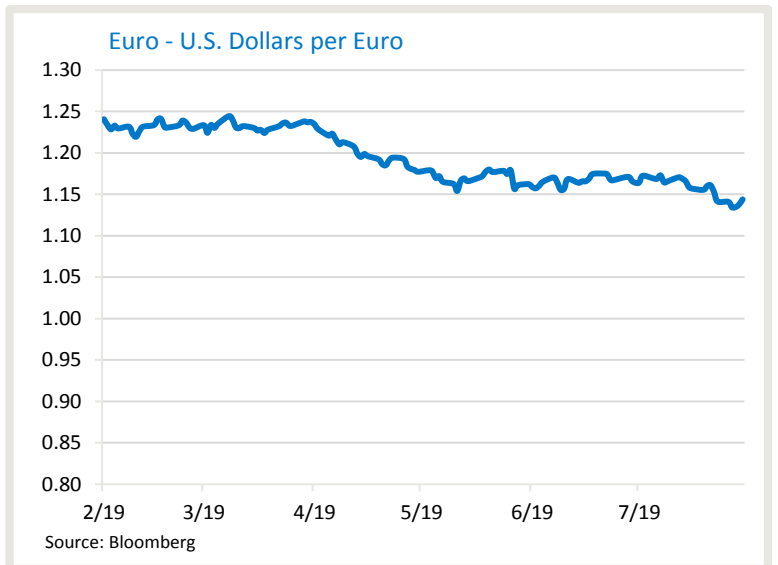
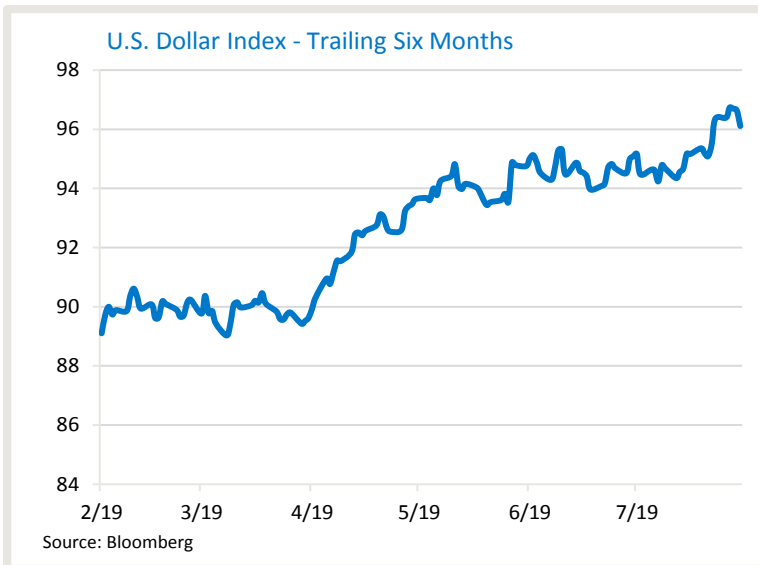
Currencies

SELECTED CURRENCY PERFORMANCE

	Last	Change	% Chg.	YTD %
Dollar Index	96.12	-0.248	-0.26%	4.33%
Euro	1.14	0.003	0.23%	-4.71%
Japanese Yen	110.53	-0.280	0.25%	1.94%
British Pound	1.28	-0.001	-0.07%	-5.65%
Canadian Dollar	1.31	-0.008	0.60%	-3.75%

	Last	Change	% Chg.	YTD %
Chinese Yuan	6.88	0.031	-0.45%	-5.39%
Swiss Franc	1.00	0.000	-0.02%	-2.12%
New Zealand Dollar	0.66	0.004	0.62%	-6.58%
Brazilian Real	3.91	0.052	-1.33%	-15.47%
Mexican Peso	18.89	-0.031	0.17%	4.13%

Source: Bloomberg



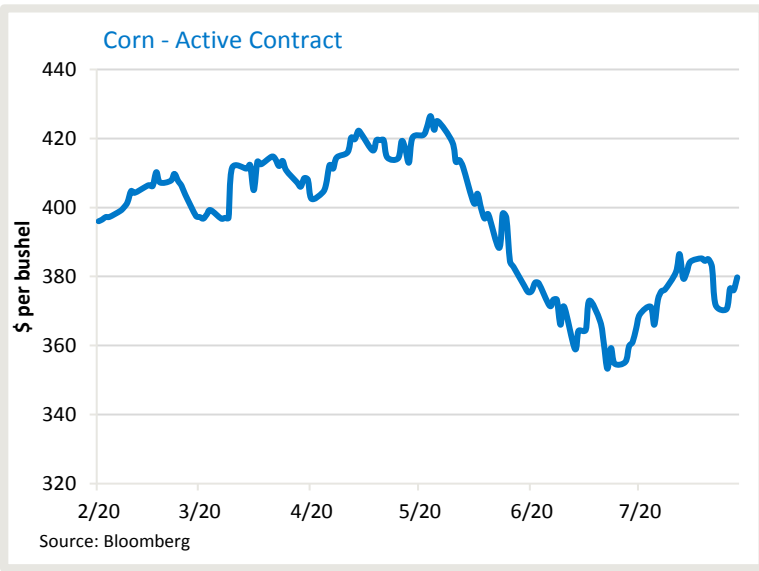
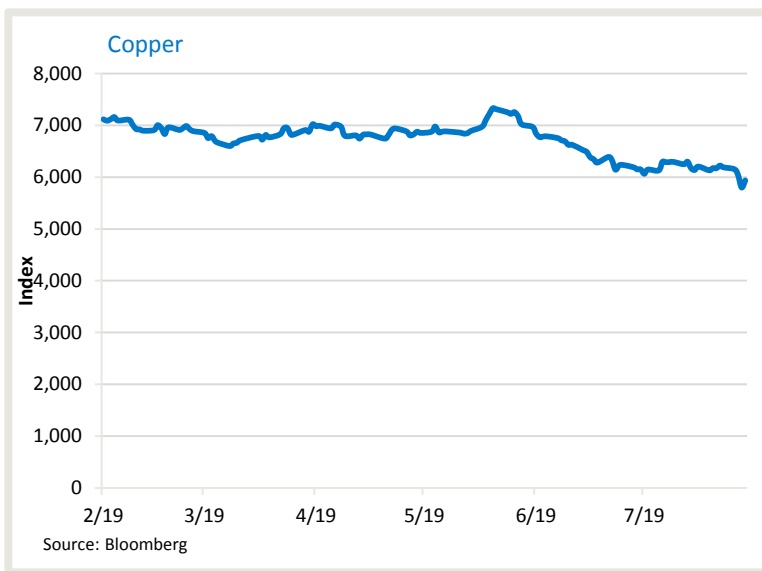
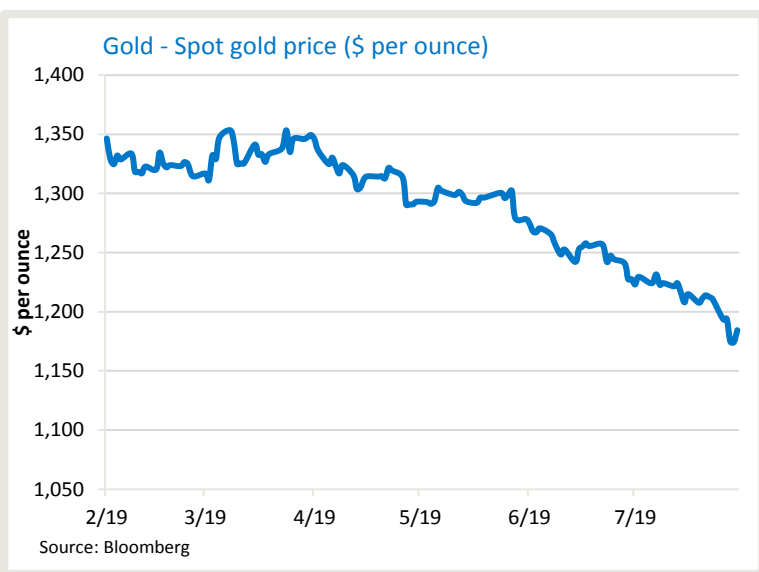
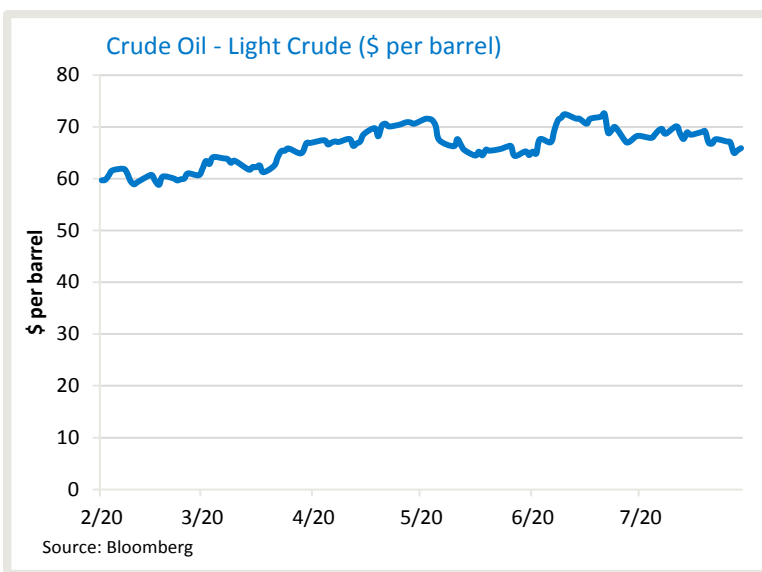
Commodities

SELECTED COMMODITY MARKET PERFORMANCE

	Last	Change	% Chg.	YTD %
Bloomberg Comm. Idx.	83.35	-0.88	-1.05%	-5.47%
Crude Oil	\$65.90	-\$1.73	-2.56%	11.56%
Natural Gas	\$2.95	\$0.00	0.10%	5.67%
Gasoline (\$/Gal.)	\$2.85	-\$0.01	-0.45%	14.60%
Heating Oil	209.88	-3.99	-1.86%	7.13%
Gold Spot	\$1,184.23	-\$26.13	-2.16%	-9.09%
Silver Spot	\$14.79	-\$0.51	-3.36%	-12.62%

Source: Bloomberg; % change is based on price.

	Last	Change	% Chg.	YTD %
Platinum Spot	\$788.87	-\$38.33	-4.63%	-14.97%
Corn	378.75	7.00	1.88%	-1.37%
Wheat	579.75	10.25	1.80%	20.28%
Soybeans	892.75	31.00	3.60%	-8.51%
Sugar	10.18	-0.36	-3.42%	-33.07%
Orange Juice	157.35	-6.00	-3.67%	10.81%
Aluminum	2,048.00	-57.00	-2.71%	-9.70%
Copper	5,938.00	-252.00	-4.07%	-18.06%

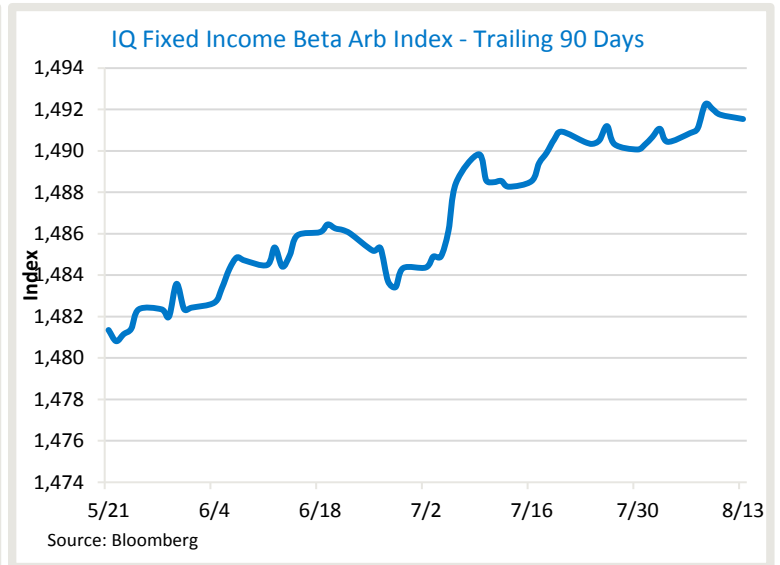
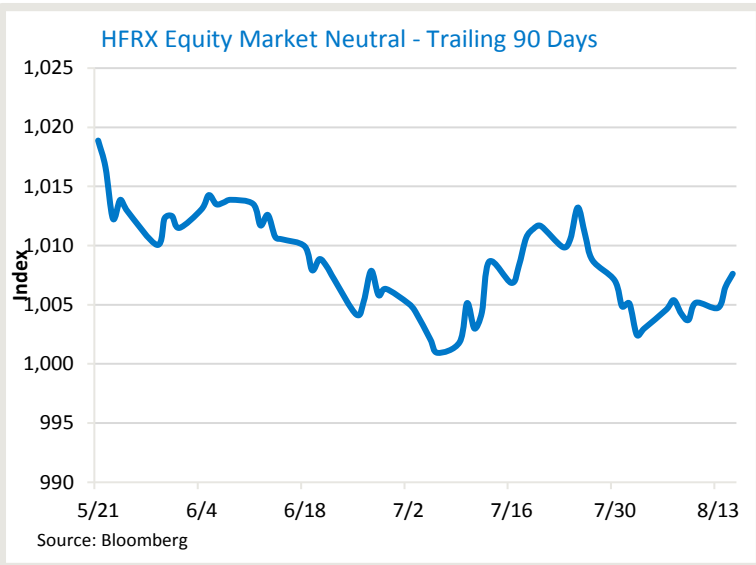
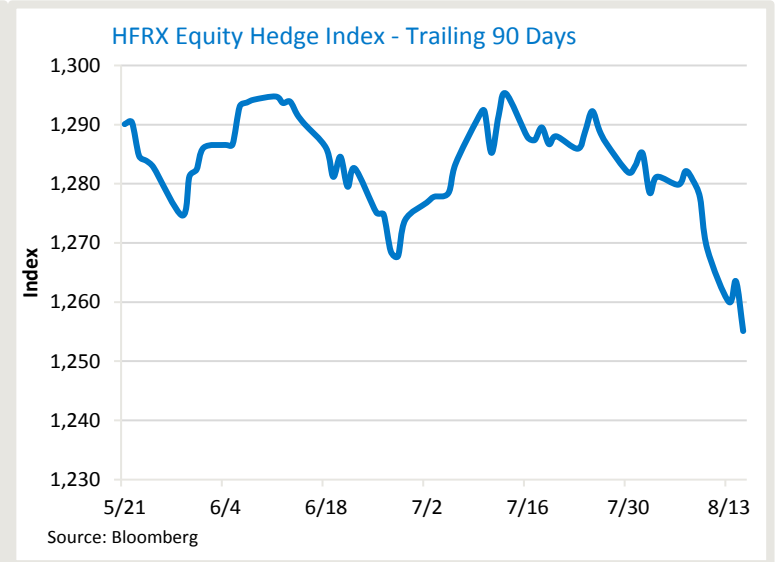
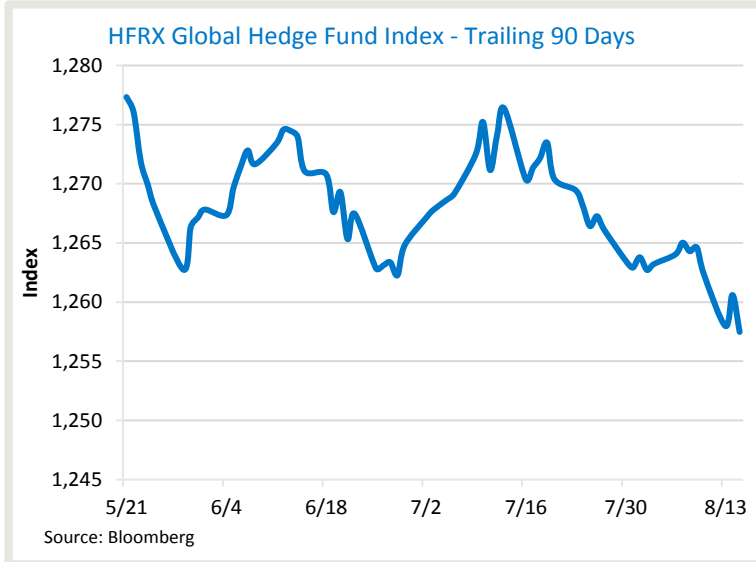


Alternative Investments

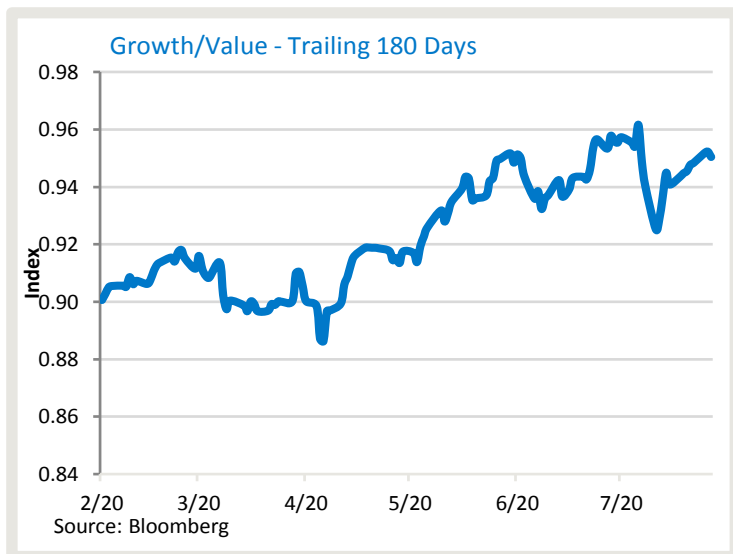
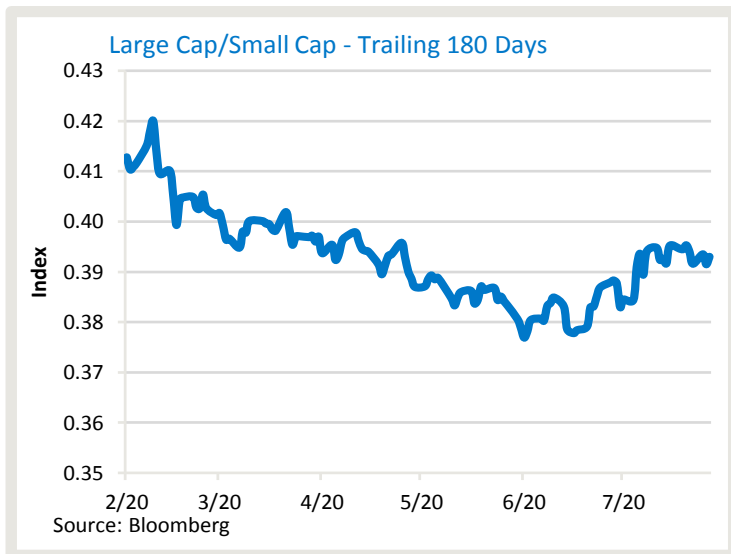
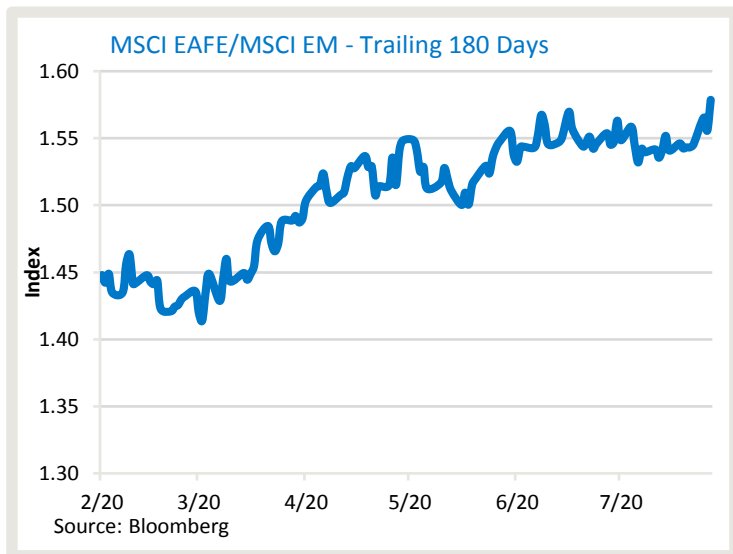
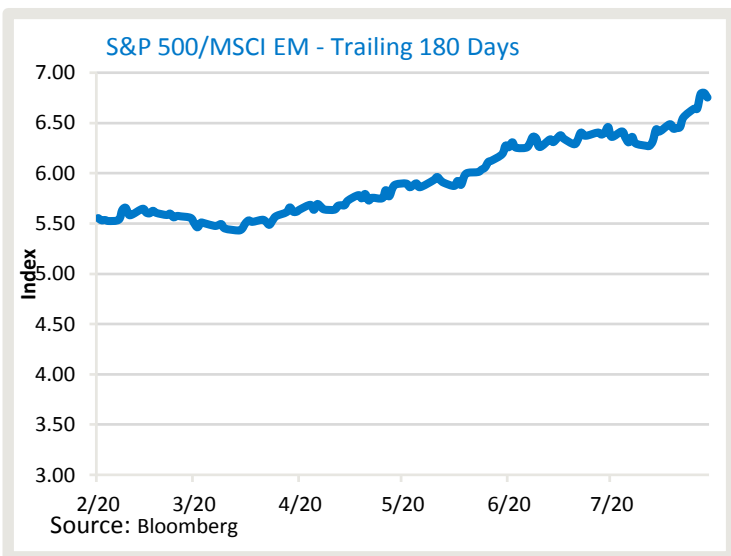
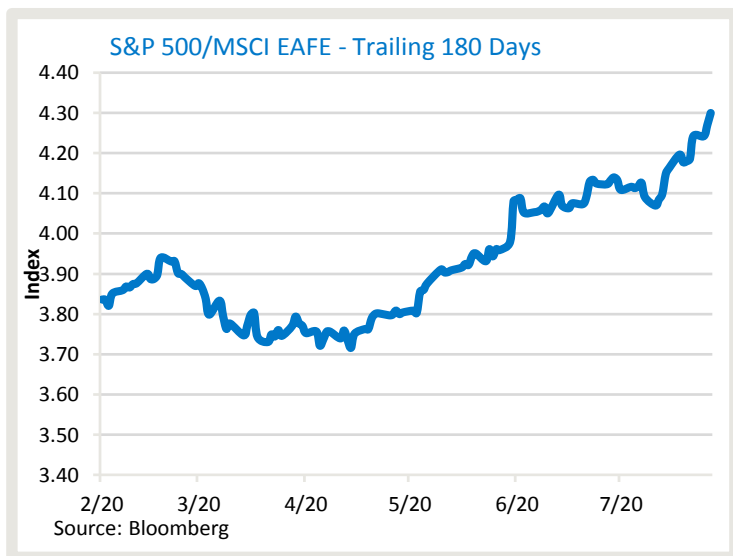
SELECTED ALTERNATIVE INVESTMENT INDEX PERFORMANCE

	Last	Change	% Chg.	YTD %		Last	Change	% Chg.	YTD %
HFRX Global Hedge Fund Index	1257.47	-4.85	-0.38%	-1.42%	HFRX Distressed Index	1039.22	-1.31	-0.13%	-6.09%
HFRX Equity Market Neutral	1007.62	2.45	0.24%	0.32%	HFRX Merger Arbitrage Index	1842.79	0.38	0.02%	-0.55%
HFRX Equity Hedge Index	1255.09	-13.92	-1.10%	-1.23%	HFRX Convertible Arbitrage Index	801.61	0.08	0.01%	0.68%
HFRX Event-Driven Index	1566.53	-10.15	-0.64%	-5.96%	HFRX Macro CTA Index	1159.75	9.66	0.84%	-0.35%
HFRX Absolute Return Index	1077.08	0.86	0.08%	1.30%	IQ Fixed Income Beta Arb Index	1493.66	1.91	0.13%	1.58%

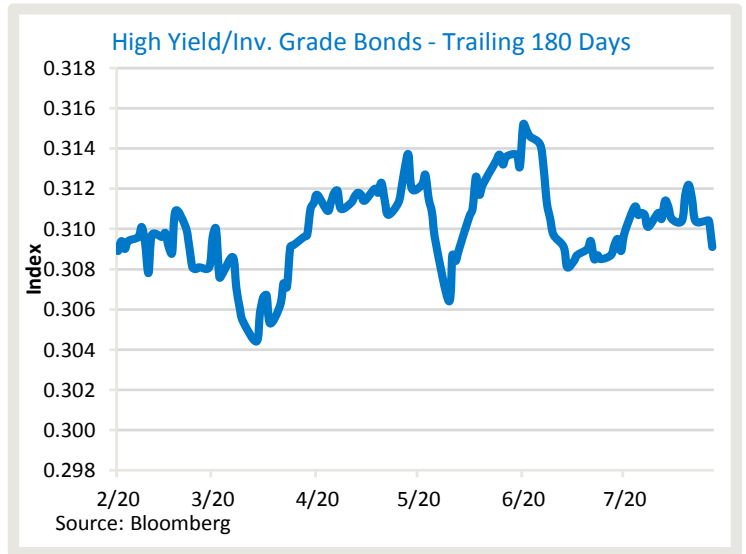
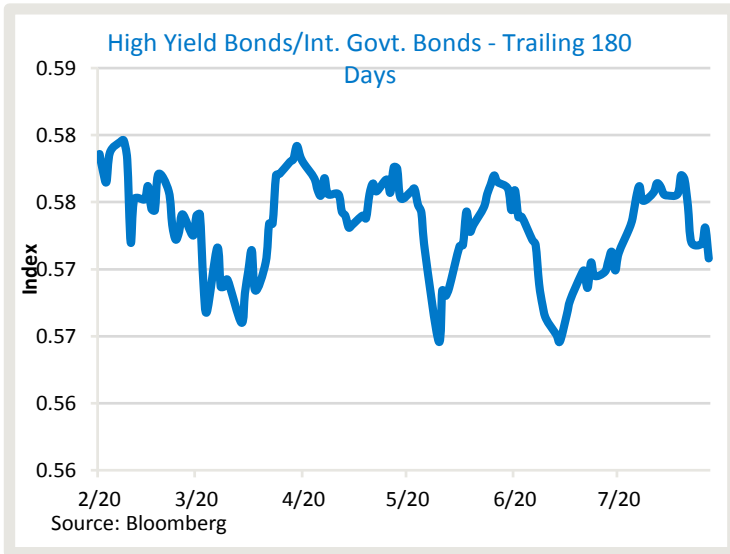
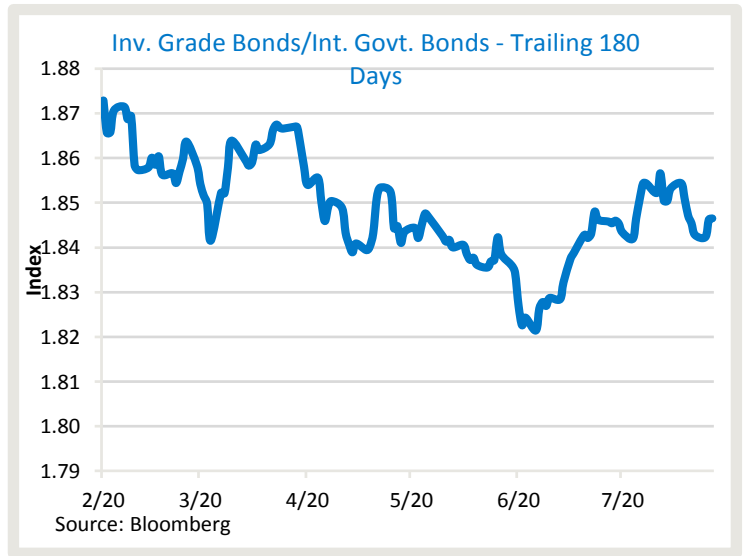
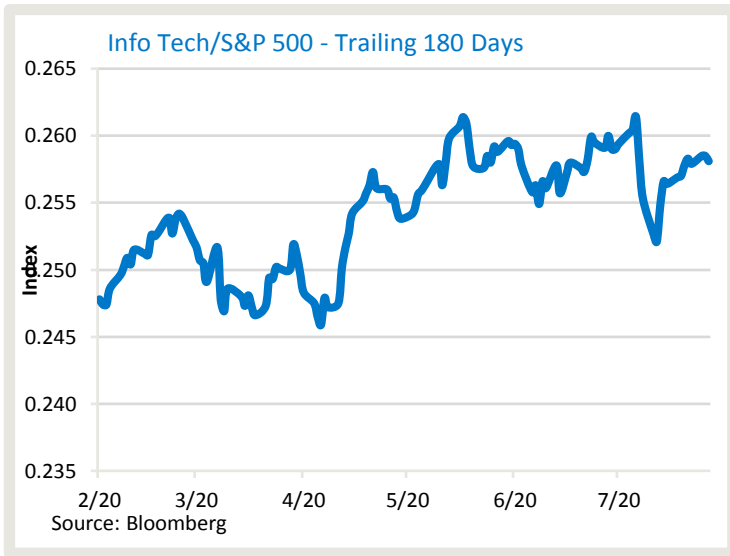
Source: Bloomberg; Index % change is based on price.



Portfolio Construction



Portfolio Construction (continued)



WEEKLY ASSET CLASS PERFORMANCE (Prior 12 weeks ending Thursday)

			5/31	6/7	6/14	6/21	6/28	7/5	7/12	7/19	7/26	8/2	8/9	8/16
Equity	Domestic Equity	Large Cap (R200)	-0.72%	2.53%	0.35%	-1.24%	-1.14%	0.68%	2.47%	0.15%	1.22%	-0.21%	1.01%	-0.49%
		Small Cap (R2000)	0.33%	2.09%	1.02%	0.25%	-2.60%	2.10%	0.64%	0.65%	0.35%	-0.78%	0.52%	-0.30%
	Int'l. Equity	MSCI EAFE	-1.82%	1.76%	-0.29%	-2.54%	-1.27%	0.80%	0.60%	0.25%	1.59%	-1.28%	0.54%	-3.26%
		MSCI Em. Mkts.	-1.26%	2.58%	-2.09%	-4.04%	-3.10%	0.73%	1.51%	-0.90%	2.69%	-2.00%	1.05%	-5.29%
Fixed Income	BarCap Agg. (AGG)	0.54%	-0.53%	-0.06%	0.00%	0.37%	0.08%	0.09%	0.07%	0.45%	-0.25%	0.25%	0.38%	
	High Yield (JNK)	-0.36%	0.36%	0.59%	-0.31%	-0.81%	-0.25%	0.62%	0.03%	0.45%	-0.11%	0.14%	-0.11%	
Commodities	Bloomberg Commodity Index	-0.87%	-0.74%	-0.92%	-3.13%	0.43%	-1.45%	-1.78%	-1.12%	2.27%	-0.52%	0.45%	-2.21%	
Alternatives	Hedge Funds (HFRX Global)	-0.22%	0.45%	0.09%	-0.68%	-0.24%	0.51%	0.44%	-0.06%	0.49%	-0.36%	0.15%	-0.56%	
Asset Allocation	60/40*	-0.35%	1.20%	0.07%	-0.95%	-0.86%	0.58%	1.03%	0.13%	0.57%	-0.52%	0.58%	-0.80%	
	48/32/20 (w/Alts.)**	-0.32%	1.05%	0.07%	-0.89%	-0.74%	0.57%	0.91%	0.09%	0.36%	-0.49%	0.50%	-0.76%	

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	1.01	1.02	1.06	1.06	1.06	1.07	1.08	1.06	1.43	1.66	0.95	1.41	1.07	1.12
Large Cap Growth	0.99	1.00	1.01	1.05	1.05	1.05	1.06	1.07	1.06	1.42	1.65	0.94	1.41	1.07	1.11
Large Cap Value	0.98	0.99	1.00	1.04	1.04	1.04	1.05	1.06	1.04	1.40	1.63	0.93	1.39	1.05	1.10
Mid Cap Core	0.95	0.95	0.96	1.00	1.00	1.00	1.01	1.02	1.00	1.35	1.57	0.89	1.34	1.01	1.06
Mid Cap Growth	0.94	0.95	0.96	1.00	1.00	1.00	1.01	1.02	1.00	1.35	1.56	0.89	1.33	1.01	1.05
Mid Cap Value	0.94	0.95	0.96	1.00	1.00	1.00	1.01	1.02	1.00	1.35	1.56	0.89	1.34	1.01	1.05
Small Cap Core	0.93	0.94	0.95	0.99	0.99	0.99	1.00	1.01	0.99	1.33	1.55	0.88	1.32	1.00	1.04
Small Cap Growth	0.93	0.93	0.94	0.98	0.98	0.98	0.99	1.00	0.98	1.32	1.54	0.88	1.31	0.99	1.04
Small Cap Value	0.94	0.95	0.96	1.00	1.00	1.00	1.01	1.02	1.00	1.35	1.56	0.89	1.33	1.01	1.05
Int'l. Developed	0.70	0.70	0.71	0.74	0.74	0.74	0.75	0.76	0.74	1.00	1.16	0.66	0.99	0.75	0.78
Emerging Markets	0.60	0.61	0.62	0.64	0.64	0.64	0.65	0.65	0.64	0.86	1.00	0.57	0.85	0.65	0.67
REITs	1.06	1.06	1.08	1.12	1.12	1.12	1.13	1.14	1.12	1.51	1.75	1.00	1.50	1.13	1.18
Commodities	0.71	0.71	0.72	0.75	0.75	0.75	0.76	0.76	0.75	1.01	1.17	0.67	1.00	0.76	0.79
Int. Bond	0.93	0.94	0.95	0.99	0.99	0.99	1.00	1.01	0.99	1.33	1.55	0.88	1.32	1.00	1.04
High Yield	0.90	0.90	0.91	0.95	0.95	0.95	0.96	0.97	0.95	1.28	1.48	0.85	1.27	0.96	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 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 **HFRI 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 HFRI Methodology (UCITS compliant), a proprietary and highly quantitative process by which hedge funds are selected as constituents for the HFRI 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 **JP Morgan EMBI Global Index** tracks total returns for US dollar-denominated debt instruments issued by emerging market sovereign and quasi-sovereign entities. The S&P Technology Select Sector Index includes companies from the following industries: computers & peripherals; software; diversified telecommunication services; communications equipment; semiconductor & semiconductor equipment; internet software & services; IT services; wireless telecommunication services; electronic equipment & instruments; and office electronics.

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