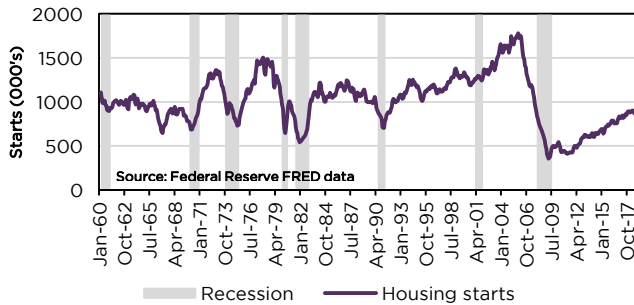


OCTOBER 2018

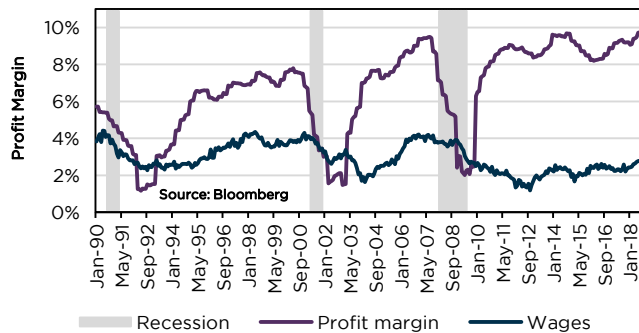
October provided precious few safe havens for investors. A fresh wave of uncertainty impacted virtually every asset class with across-the-board declines mimicking the sharp moves of February and March. This latest round of uncertainty was touched off by Federal Reserve Chairman Powell's hawkish comments, which sent 10-year Treasury yields briefly above 3.25%, the highest 10-year yields since mid-2011. The increase in yields triggered concerns of a near-term economic slowdown that could possibly end the decade-long economic expansion in the United States. Fears were stoked further by escalating global risks: proposed Italian deficit; stalled Brexit negotiations; trade conflicts with China; alleged hardware hacking by China; and conflicts with Saudi Arabia. Each of these risks presents a potential threat to healthy but slowing global growth, putting the pace of future earnings growth in question. Seemingly lost amidst these concerns was the strong earnings reports during the month. With 74% of S&P 500 firms having completed third-quarter earnings announcements, 78% had beaten earnings expectations compared to the five-year average of 71% with the average "beat" being 6.5% above estimates compared to the five-year average of 4.6%. Markets, however, were looking forward. Industrial bellwether, Caterpillar Inc., beat earnings estimates and painted a positive picture of global demand, but market reaction focused on comments regarding price pressures tied to trade disputes, sending the stock down -8%. While analysts estimate earnings growth to be close to 10% for 2019, the slowdown has investors skeptical. Current data continue to support expectations, but domestic and international undercurrents may prove challenging.

1. Single family housing starts



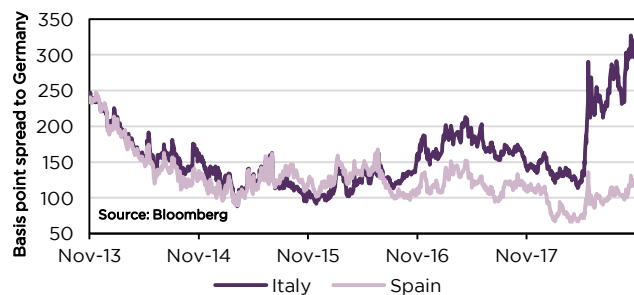
Home sweet home: U.S. single-family housing starts are an important long-leading economic indicator. A history of single-family housing starts is presented in Figure 1, where the grey bars indicate recessions. As can be seen, while not every downturn in housing starts results in recession, every recession is preceded by a downturn – usually a year or more in advance. Unfortunately, and for a number of reasons, housing starts have stalled recently. Firstly, mortgage rates have increased almost a full percentage point during the year, increasing the cost of homeownership. Secondly, recent changes in the Federal tax code restrict many tax incentives associated with owning a home, further increasing the cost of homeownership. And finally, supply-side factors such as increased input costs, a shortage of construction workers, and the relative scarcity of buildable lots are all factors crimping the pace of new construction. Against these negatives, there are positives. Surveys suggest confidence among homebuilders remains high. Total starts remain below the pre-crisis level while vacant housing units for sale remain at historically low levels, suggesting a need for continued growth of the housing stock. The question remains, however, as to whether the current stall is temporary or a sign of future weakness. Other long-leading indicators such as initial unemployment claims remain positive, arguing in favor of just a stall. The increased cost of home ownership cannot be overlooked. Housing data likely will take on an increased significance in the coming months as investors search for additional clues.

2. Profit margin squeeze?



On the margin, things seem ok: One factor contributing to strong earnings growth has been the continuing improvement in profit margins. Recent increases in wages and interest rates have created concern among investors that current margins cannot be sustained, threatening earnings growth. Fortunately, there are two sides to the profit margin story, revenue as well as costs. Over the last 30 years, in positive growth environments, companies have been successful passing along cost increases to consumers, preserving and oftentimes improving margins. Figure 2 highlights this relationship, reflecting the positive correlation between profit margins and wage growth. Note also that margins have tended to improve as the cycle extends, suggesting interest rate increases may be less damning than many believe. Recessions, understandably, have proven to be quite negative for margins, but recession risks for the coming year remain quite low. The entire story behind the determinants of profit margins is complex and beyond the scope of this brief comment; however, it should not be a foregone conclusion that increasing wages and interest rates by themselves spell doom for margins. The primary concern should be the strength of underlying growth, and for now, that appears to be "ok."

3. Italian debt getting more risky



Made in Italy: One significant threat to future growth is the possibility of an Italian debt crisis. While an actual default by Italy remains extremely unlikely, the increased probability of such an event, by itself, may tighten financial conditions and consequently hinder growth in Europe and elsewhere. The new government in Italy has proposed a program of fiscal stimulus that would put its budget in violation of the European stability pact. There is no specific enforcement mechanism for violators, but it may prevent the European Central Bank from purchasing Italian bonds. This has put significant selling pressure on Italian bonds, causing yields to rise. Figure 3 shows the sharp widening in Italian bond yields relative to German bunds, with no commensurate move in other fragile countries such as Spain. The sharp increase in yields has made matters worse, as it increases debt costs for the Italian government and impairs the capital positions of banks holding Italian debt – most notably Italian banks. The concern is that continued deterioration in Italian bonds will force Italian banks to recapitalize, threatening a run on the banks. While it is unlikely that European leaders will allow conditions to deteriorate to such a level, Italy remains a significant risk.

Market returns

	October	QTD	YTD
S&P 500	-6.8%	-6.8%	3.0%
Russell 1000 Value	-5.2%	-5.2%	-1.5%
Russell 1000 Growth	-8.9%	-8.9%	6.6%
Russell 2000	-10.9%	-10.9%	-0.6%
MSCI EAFE	-8.0%	-8.0%	-9.3%
MSCI Emerging Markets	-8.7%	-8.7%	-15.7%
Bloomberg Barclays Agg	-0.8%	-0.8%	-2.4%
3-Month T-Bills	0.2%	0.2%	1.5%

Source: Factset

Market Review

October 2018

Overview

Markets broadly declined in October, as mounting uncertainty drove a repricing of risk premia. Year-to-date themes of rising rates, trade tensions, and political risks remained at the core of the market's apparent indigestion. September's rate trends continued in October, as yields rose and the yield-curve steepened with the 10-year peaking above 3.25%. Escalating risks, however, caused the 10-year to reverse course and end the month at 3.15%. The about-face in yields helped soften the equity selloff that ensued. Underneath the headlines, fundamentals remain solid with S&P 500 earnings growing greater than +20%, close to first and second quarter's pace.¹ Growth is expected to slow, and the market is cautiously evaluating the transition to a lower gear. Although, equity and credit markets reflect varying degrees of concern. Similar to February's selloff, credit markets imply increased uncertainty but a smoother transition supported by fundamentals.

1.FactSet

Index Total Returns (%)

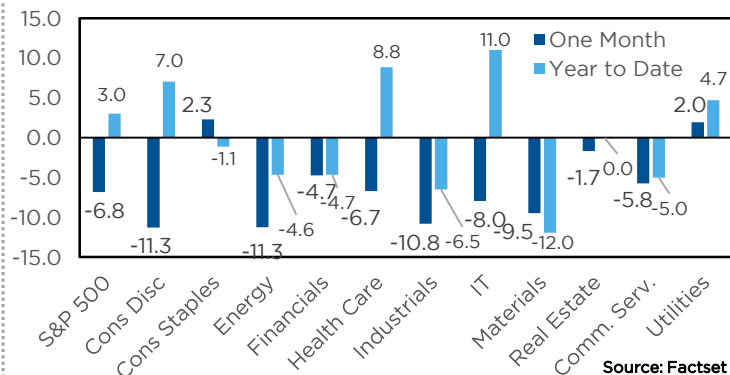
As of October 31, 2018

Domestic Equity Indices	Month	Quarter to Date	One Year
Dow Jones Wilshire 5000	-7.3	-7.3	6.7
S&P 500 Index	-6.8	-6.8	7.4
Russell 1000 Index	-7.1	-7.1	7.0
Russell 1000 Growth Index	-8.9	-8.9	10.7
Russell 1000 Value Index	-5.2	-5.2	3.0
Russell Midcap Index	-8.3	-8.3	2.8
Russell Midcap Growth Index	-9.9	-9.9	6.1
Russell Midcap Value Index	-7.2	-7.2	0.2
Russell 2000 Index	-10.9	-10.9	1.9
Russell 2000 Growth Index	-12.7	-12.7	4.1
Russell 2000 Value Index	-9.0	-9.0	-0.6
International Equity Indices			
MSCI EAFE Index	-8.0	-8.0	-6.9
MSCI EAFE Growth Index	-9.2	-9.2	-6.0
MSCI EAFE Value Index	-6.6	-6.6	-7.7
MSCI EAFE Small Cap Index	-9.6	-9.6	-7.8
MSCI AC World Index	-7.5	-7.5	-0.5
MSCI AC World Index ex U.S.	-8.1	-8.1	-8.2
MSCI Emerging Markets Index	-8.7	-8.7	-12.5
Fixed Income Indices			
Bloomberg Barclays Aggregate	-0.8	-0.8	-2.1
Bloomberg Barclays U.S. Int. Gov/Credit	-0.1	-0.1	-1.1
Bloomberg Barclays U.S. Long Gov/Credit	-3.4	-3.4	-6.4
Bloomberg Barclays U.S. Corp: High Yield	-1.6	-1.6	1.0
Bloomberg Barclays U.S. Treasury: U.S. TIPS	-1.4	-1.4	-1.2
Citigroup Non-U.S. World Government	-1.5	-1.5	-2.3
JPM EMBI Global Div (external currency)	-2.2	-2.2	-4.4
JPM GBI-EM Global Div (local currency)	-2.0	-2.0	-6.6
Real Asset Indices			
Bloomberg Commodity Index	-2.2	-2.2	-1.7
Dow Jones Wilshire REIT	-3.0	-3.0	1.8

- While no sector or style was immune to the market selloff, value outpaced growth globally. The relative strength of the U.S. once again drove domestic outperformance compared to international markets.
- Rising yields and widening spreads challenged fixed income markets, but volatility remained constrained relative to the equity market moves.

S&P 500 Sector Total Returns (%)

October 31, 2018



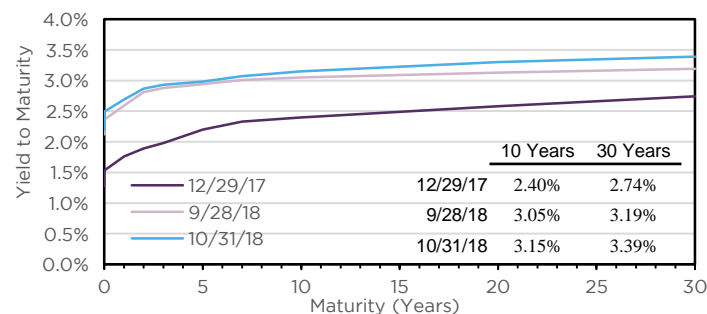
- The fourth quarter began with the S&P 500 falling -6.8% after third quarter's strong performance, but even after October's decline, U.S. markets remain in positive territory, unlike most international markets.
- Cyclical sectors were hit the hardest, as manufacturing related industries declined double digits.

Duration-Matched Excess Returns to Treasuries

	Month to Date (bps)	Year to Date (bps)
Barclays Aggregate	-35	-35
Agency	-48	-25
MBS	-37	-42
ABS	-6	22
CMBS	-44	24
Corporate	-82	-92
High Yield	-159	164
Emerging	-106	-164

- Growing uncertainty held back all credit sectors relative to similar duration Treasuries, but securitized sectors like MBS, CMBS and ABS weathered the storm better than their corporate brethren.
- Relative stability of emerging market currencies helped dampen the downdraft affecting credit sectors.

Treasury Rates



- The yield curve achieved year-to-date highs intra-month. Interest rate moves were stoked by neutral policy rate uncertainty suggested by policymaker comments.
- The interest rate path is expected to remain gradual with one more increase expected by year-end.