

C&N VANTAGE POINT

QUARTERLY MARKET RECAP & OUTLOOK FOURTH QUARTER, 2018

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THIS QUARTER'S CONTENT

- Economic & Financial Indicators
- Quarterly Review
- Viewpoints
- C&N Portfolio Positioning
- Meet Our Experts

Key Interest Rates	2018				Key Equity Indexes - As of Quarter End	%YTD Return	NTM P/E*	P/B*	Dividend Yield*
	3/30/18	6/29/18	9/28/18	12/28/18					
2-yr Treasury Note	2.27	2.52	2.81	2.52	S&P 500	-4.39	14.29	2.90	2.09
10-yr Treasury Note	2.74	2.85	3.05	2.72	Russell 2000	-11.03	17.71	1.72	1.50
30-yr Treasury Note	3.06	2.98	3.19	3.04	Russell 1000 Growth	-1.52	17.47	6.14	1.32
30-yr Fixed Mortgage	4.69	4.84	4.97	4.84	Russell 1000 Value	-8.28	12.26	1.84	2.74
Corp. Bond Index	3.77	4.02	4.07	4.21	MSCI EAFE	-13.32	11.87	1.42	3.45
High-Yield Bond Index	6.5	6.66	6.48	7.73	MSCI EM	-14.49	10.59	1.46	2.86

Sources: JP Morgan Weekly Market Recap & Oppenheimer Markets Review At-a-Glance
Past performance does not guarantee future results, which may vary.

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Past performance does not guarantee future results, which may vary.
*Values as of 12/28/2018

2018 Performances

Equity Size	US Equity Style			Commodities	Fixed Income		
	Value	Core	Growth		Index		
Large	-8.24%	-4.77%	-1.51%	Gold	-2.13%	0.01%	Barclays Agg Bond
Medium	-12.25%	-9.03%	-4.73%	US Dollar	4.24%	-1.81%	Citi Non-USD WGBI
Small	-12.82%	-10.97%	-9.27%	Bloomberg Commodity Index	-11.20%	-2.07%	Barclays High Yield

Source: Goldman Sachs Asset Management Market Monitor & Oppenheimer Markets Review At-a-Glance
US Equity Style Returns - Russell Indices
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BAD FINANCIAL MARKETS?

Investors found themselves with a lump of coal as 2018 ended. Global equity markets fell 13% in the fourth quarter — 9% for the year — as the Fed continued its rate-hiking pace with four total rate hikes in 2018. Were financial markets really “bad” enough to justify this level of tightening? There are three major categories on the Fed’s checklist — none seem to qualify as “bad.”

2% inflation. U.S. core inflation topped out at the Fed’s 2.0% target and is now trending lower, currently sitting at 1.9%.

Full employment. U.S. unemployment rate is 3.7% — thought to be near the natural unemployment rate — but wage growth (3.1%) is below levels that have historically incited inflation.

Financial stability. Many are concerned about growing levels of system-wide debt, but financial institutions are well-capitalized and corporate interest coverage ratios are high.

Santa didn’t always give coal; originally those who were bad received onions. Coal became ingrained in the legend in the 19th and 20th centuries — alongside the chimney becoming Santa’s entrance of choice (at the time coal, not wood, was used in the fireplace, making it a convenient “gift” for Santa to give). Many commodities, beyond just onions and coal, would have made for cheap gifts this past holiday season. Commodity prices were down 11% in 2018, with oil prices down 25%. Driving prices lower was abundant supply but also some concern over global economic demand.

In fact, while the Fed is the biggest story in financial markets right now, concerns over global demand have also begun to take

hold. Namely, the synchronized global growth from 2017 turned into a global growth slowdown in 2018, with the notable exception of the tax-reform fueled U.S. economy. Political distractions likely played the biggest role as investors and consumers alike were forced to consider the implications of the following ongoing dramas:

U.S.-China trade tensions. Finding agreement on fair trade, market access and intellectual property rights.

Brexit breakdown. U.K. Prime Minister Theresa May’s challenge to secure European Union (EU) divorce terms.

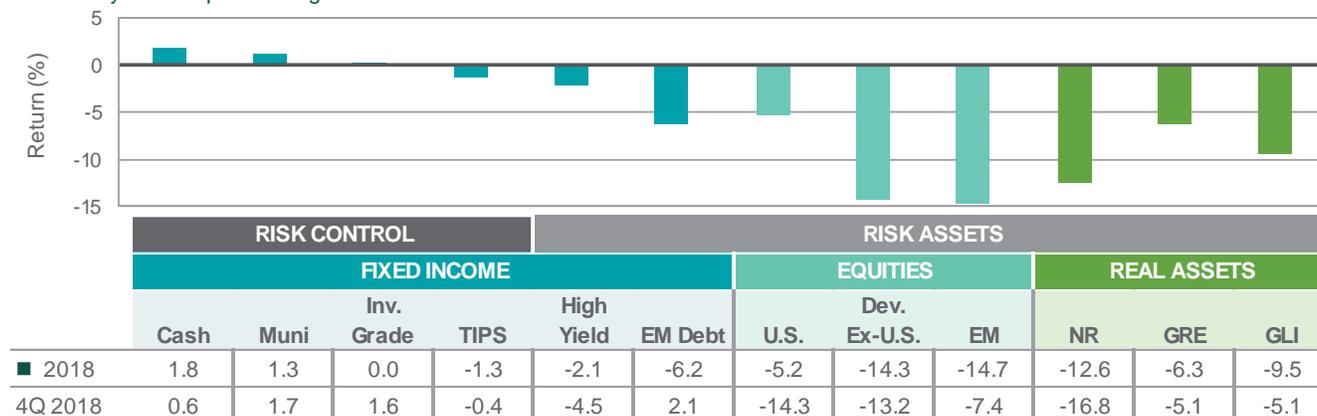
Italy-EU budget battle. Getting Italy to adhere to the EU’s Stability and Growth Pact regarding Italy’s debt and deficit.

Thankfully, by year’s end, the above issues were either largely put to rest (Italy-EU budget battle); on a slow mend (U.S.-China trade tensions); or deemed to be a minor headwind to the broader global economic outlook (Brexit breakdown). It is the Fed’s 2019 rate hike trajectory, and its impact on the global economy, that remains in focus as we head into 2019.

According to the well-known holiday song, Santa “knows if you’ve been bad or good.” That’s a level of clairvoyance that the Fed just doesn’t have regarding financial markets. This can lead to mistakes — in this case, being unnecessarily restrictive when markets have been “good.” However, should the Fed check its list a third time and give the gift of greater accommodation than implied by currently stated ambitions (two more rate hikes in 2019), investors may be celebrating a more joyous New Year.

2018 TOTAL RETURNS ACROSS MAJOR ASSET CLASSES

An end of year slump led to negative returns across most asset classes.



Source: Northern Trust Investment Strategy, Bloomberg. NR = Natural Resources; GRE = Global Real Estate; GLI = Global Listed Infrastructure. EM = Emerging Markets. Indexes are gross of fees and disclosed on last page. **Past performance is no guarantee of future results.**

KEY THEMES

Flattening Yield Curves

The specter of an inverted yield curve was an ongoing source of debate for financial markets in 2018. The historical observation that an inverted yield curve has preceded the past five recessions was cast against “this time is different” suppositions. The Fed appeared to be in the latter camp by raising rates four times in 2018, which reduced the spread between 2-year and 10-year U.S. Treasuries to as low as 0.1% (vs. 0.5% at year’s start). Investors did not care for what they viewed as a reckless approach, pushing equity prices lower as yield curve inversion neared. The temporary inversion of the “2-year to 5-year” part of the curve spooked investors further. While it may seem arbitrary, investors have taken notice (perhaps the Fed should too).

No More Rate Hikes in 2019?

During the fourth quarter of 2018, investors became increasingly convinced that the Fed was making a mistake, believing that a rate hike in December would mean less rate hikes in 2019. The accompanying chart shows how much tightening the markets believe the Fed will do in 2019. Near year end, this sat at 0.1%. Because the Fed generally moves in 0.25% increments, this effectively means the markets now believe that the probability of even one rate hike in 2019 is below 50%. Specifically, the markets are currently assigning a 77% chance that rates remain as is; an 11% chance that rates rise; and a 12% chance that rates fall. Market odds the Fed hikes the two times it predicts? Currently 1%.

Where’s the Inflationary Fire?

Markets are skeptical of the Fed’s rate hike ambitions because of the lack of inflationary pressures. Core inflation rose throughout the first part of 2018 but stalled out in the back half of the year. Heavily influenced by declining oil prices, inflation expectations have also fallen. For instance, investors now believe inflation will average 1.5% over the next five years, well below the Fed’s 2% inflation target. Earlier in the year, the Fed highlighted that its 2% target was “symmetric” — meaning, if inflation spends significant time below 2%, it should spend time above 2% as well. If the Fed truly believes this, it should take an easier policy stance. Per the chart, inflation has spent 95% of the past decade below 2% (on average, ~0.5% below). More recently, inflation is trending the wrong way.

Fed Actions Have Consequences

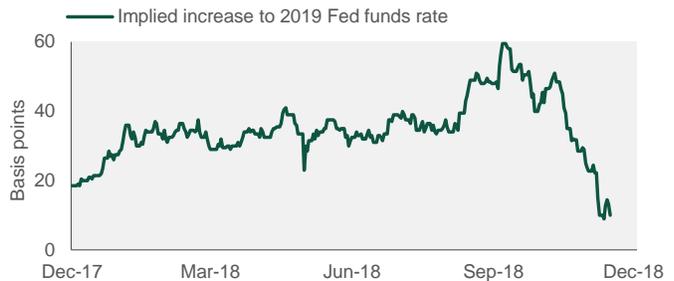
The Fed’s rate-hiking zeal has combined with ongoing U.S.-China trade tensions and other political distractions to slow global growth — notably Chinese growth. The Li Keqiang index¹ — measuring private indicators of Chinese growth — has shown notable weakness over the second half of this year. The index has not deteriorated as badly as it did during 2014-15, which culminated in the 10%-plus equity market drawdown that greeted investors in the first part of 2016. But investors fear a repeat if the Fed keeps pushing and the U.S. and China fail to resolve their differences in a timely manner, pushing global equity markets — dependent on a healthy China — lower.

¹Li Keqiang, now Chinese Premier, once remarked to a U.S. diplomat that the official Chinese economic data was “man made” and that he preferred tracking less alterable Chinese indicators of growth — including bank loans, electricity production and freight volume.

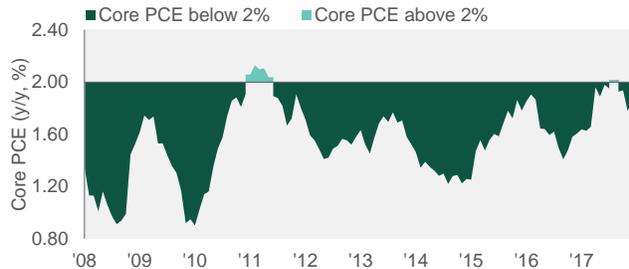
YEAR-END YIELD CURVE “SPREAD” AT SELECT INTERVALS



MARKET EXPECTATIONS FOR 2019 FED POLICY



U.S. CORE INFLATION VS. TARGET



CHINESE GROWTH – ESTIMATED BY PRIVATE MEASURES

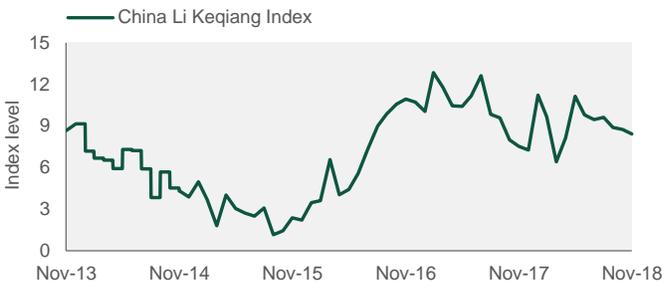


Chart Sources: Northern Trust Investment Strategy, Bloomberg. Indexes are gross of fees. Past returns are no guarantee of future results. Charts are as of December 31, 2018.

MARKET REVIEW

Interest Rates

The U.S. yield curve flattened for the fifth straight year, increasingly close to inversion territory and causing investor angst. Flattening the yield curve was the number of Fed rate hikes (four in 2018) against the backdrop of slowing global growth and lackluster inflationary pressures. Yield curves across many European countries have retained some steepness thanks to continued negative interest rate policy. But those yield curves have flattened as well, driven by a slow reduction in accommodation that is still too quick for investors. If nothing else, 2018 was a reminder that growth and inflation expectations — and the Fed's assessment of those factors — drive the yield curve, with other seemingly important factors mostly noise.

YIELD CURVE



Credit Markets

Credit spread widening occurred throughout most of 2018, but it intensified in the fourth quarter of the year with both investment grade and high yield credit spreads ending at levels last seen in 2016. Normally, the credit markets are considered the “canary in the coal mine,” alerting investors that stresses are building in the financial system ahead of other financial market metrics. This time around, however, it was reversed. Credit spreads took their cue from the broader deterioration in financial market sentiment despite solid fundamentals and adequate liquidity. Overall, both investment grade and high yield credit markets ended the year down slightly, a fairly constructive result given the poor equity market performance.

CREDIT SPREADS



Equities

Global equity markets handled moderating global growth and ongoing political distractions fairly well for most of the year, but they finally cracked as investors determined that Fed policy was too aggressive. Through September, global equity markets were up more than 4%, with U.S. equity markets up double-digits offsetting negative returns in emerging market equities. But the homestretch brought material equity market weakness. Even after the post-Christmas bounce, global markets fell by 13% in the fourth quarter. Developed markets drove the downturn (-13%) while emerging market equities held up better (-7%). All said, global equity markets fell by 9% in 2018 after being down as much as 13% at one point.

REGIONAL EQUITY INDICES



Real Assets

Global real estate and listed infrastructure underperformed the broader global equity markets for most of 2018 before showing their diversification properties during the year-end equity market slide. Rising interest rates into November represented a drag to these interest-rate sensitive asset classes. However, a strong fourth quarter (as interest rates fell) allowed both global real estate and listed infrastructure to perform in-line with, or even better than, global equities for the year. Meanwhile, the material fall in oil prices dragged down natural resource returns. The oil price fluctuations that drove the poor natural resource returns were noteworthy. Many investors saw \$75/barrel oil as just a stop along the road to \$100. Instead, increased OPEC supply and continued U.S. fracking supply drove oil down to \$45/barrel by year's end.

REAL ASSET INDICES

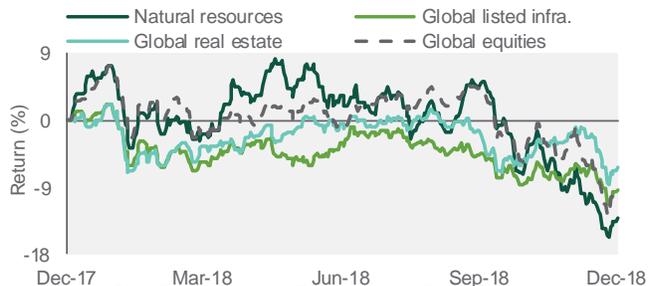
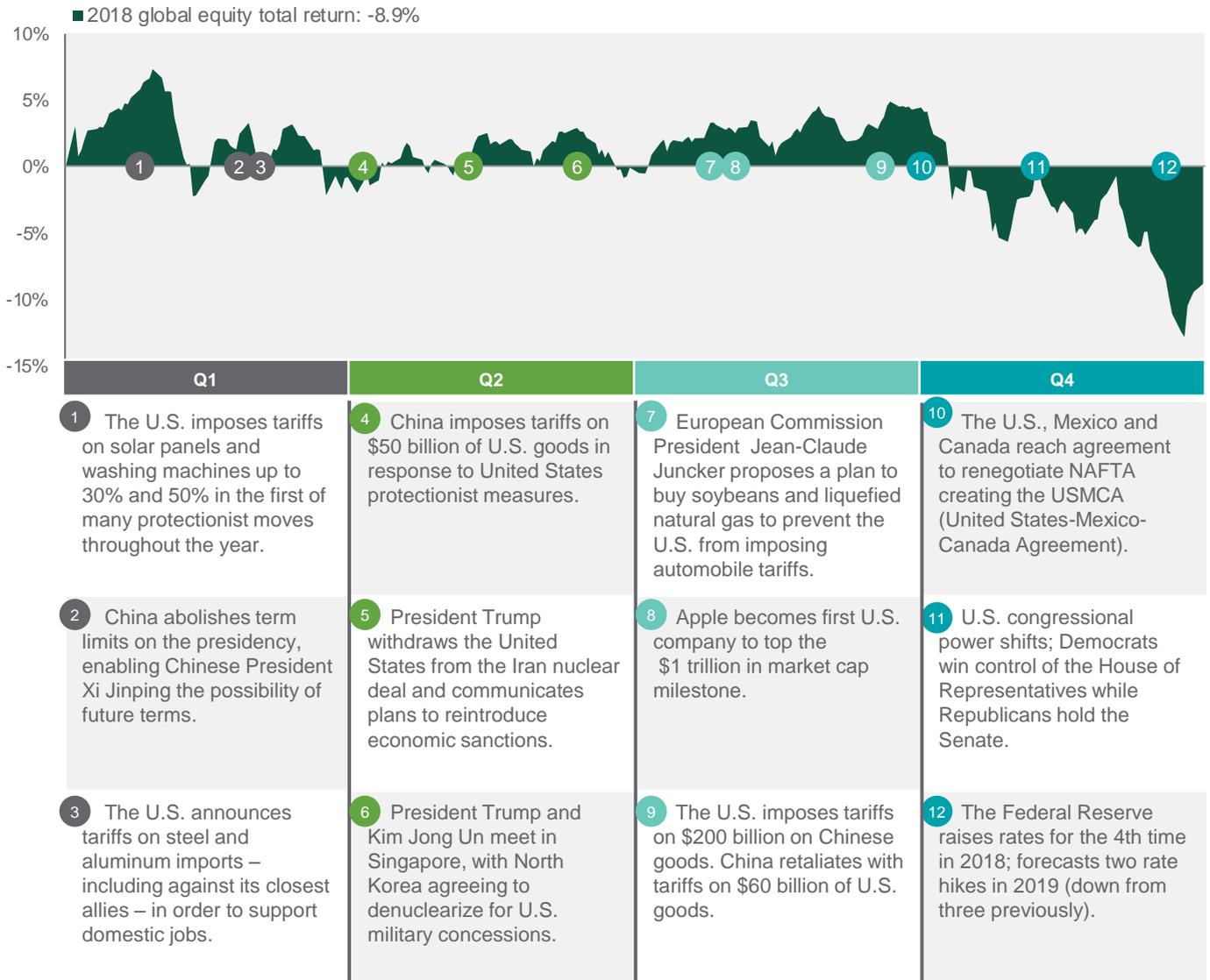


Chart Sources: Northern Trust Investment Strategy, Bloomberg.
 UST = U.S. Treasury. Indexes are gross of fees. **Past returns are no guarantee of future results.** Charts are as of December 31, 2018.

MARKET EVENTS



Indexes used: Bloomberg Barclays (BBC) 1-3 Month UST (Cash); BBC Municipal (Muni); BBC Aggregate (Inv. Grade); BBC TIPS (TIPS); BBC High Yield 2% Capped (High Yield); JP Morgan GBI-EM Global Diversified (Em. Markets Fixed Income); MSCI U.S. Equities IMI (U.S. Equities); MSCI World ex-U.S. IMI (Dev. ex-U.S. Equities); MSCI Emerging Market Equities (Em. Markets Equities); Morningstar Upstream Natural Resources (Natural Res.); FTSE EPRA/NAREIT Global (Global Real Estate); S&P Global Infrastructure (Global Listed Infra.)

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Equities

Equity markets remain largely tied to the Federal Reserve and the news flow on trade. While the Fed's job is not to make the equity markets happy, its December meeting will largely set the tone for 2019.

In 2019 we expect:

- Markets will remain focused on the Fed, U.S./China relations and Brexit, in that order.
- The Fed's messaging will be as important as whether it hikes rates.
- Until we get clarity on the Fed's plans, we are maintaining an overall neutral risk profile.

We are underweight emerging markets and neutral developed market equities

Fixed Income

Higher interest rates and wider credit spreads throughout 2018 led to flat or slightly negative returns. High yield has outperformed investment grade debt, which has cushioned against the higher rates.

Looking to 2019:

- High yield looks attractive compared to equities, especially on a risk-adjusted basis.
- Investment grade returns are catching up to high yield thanks to end-of-year falls in both interest rates and equity markets.

Investment-grade and high-yield fixed income are our only overweights.

Real Assets

Real assets underperformed the broader equity market in 2018, thanks to the effects of higher interest rates (real estate and infrastructure) and falling oil prices (natural resources).

In 2019 we expect:

- Global real estate and infrastructure will be attractive if the Fed pauses its rate hike campaign.
- A dovish Fed also would likely support dollar-based commodity prices, benefitting natural resources.

We are starting the year neutral across all real assets.

Interest Rates

The U.S. Treasury yield curve continued to flatten through 2018; a mere 0.1% separates the two- and 10-year yields and some parts have actually inverted.

In 2019 we believe:

- Other central banks will remain dovish, putting pressure on the Fed to do so as well.
- The financial markets are telling the Fed to pause its rate-hiking campaign. We expect the Fed will listen and only raise rates once more.
- Interest rates will remain near current levels.

We are looking for signs of a more dovish Federal Reserve in 2019.

* Source: Northern Trust. Bloomberg. Returns greater than one year are annualized. 2018 return data through 11/30/2018.

C&N PORTFOLIO POSITIONING: MODEST OVERWEIGHT TO RISK

C&N Vantage Points - January 2019



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Market Views:

Equities Becoming Attractive
Diversification Remains Paramount. Remaining Invested Is Important
Continued Market Declines Present Rebalancing Opportunities

Market Risks:

Rate Hikes Lead To An Inverted Yield Curve And Mild Recession
Trade War Risk Last Longer Than Expected
U.S. Political Dynamics. Brexit Negotiations

Risk Type	Asset Class	Sector Category	Under Weight	Neutral	Over Weight	Viewpoints
Risk Control	Cash/Cash Alternatives	Ultrashort Bonds			●	These sectors give us cash to be invested in risk assets in the event of further market corrections. With Fed rate hikes and trade war risks rising, we consider this a source of funds for further rebalancing.
	Alternatives (Fixed Based)	Absolute Return		●		With a sustained equity market correction upon us, we reduce our allocation and rebalance into equities. We believe equities present good value when looking out 2 or 3 years.
		Inflation-Linked Bonds		●		
Risk Assets	Fixed Income	US Investment Grade Bonds	●			We have a slight overweight to IG Corps and remain underweight to U.S. Govt bonds due to a tightening Fed. Overall, the category remains underweight.
		International Bonds	●			Foreign central banks continue to talk down their continuation of extraordinary policies which may leave this category stretched in its valuation.
		Emerging Markets Bonds			●	Spreads have widened, but fundamentals appear solid. Recent volatility and bond price declines have created opportunities. Risks appear country specific. The strong US Dollar headwind may be receding.
		High Yield Bonds		●		High-Yield's coupon remains attractive and tax reform will help companies, but spread tightening may hurt total return. Given the business cycle stage, we retain our neutral position favoring EM bonds.
		US Large Cap			●	Large Caps are becoming attractive on a price-to-earnings basis. We believe growth continues, albeit at a small pace, amidst a bumpy market. We look to add to these positions when rebalancing.
Equities		Developed Ex-US		●		Monetary policy transitioning has been slower than expected. Valuations are reasonable compared to the U.S. We continue to favor domestic equities but look to maintain our positions through rebalancing.
		US Mid & Small Cap			●	Like Large Caps, these categories are becoming attractive on a price-to-earnings basis. We maintain our risk assets through this category. We look to add to these positions when rebalancing.
		Emerging Markets		●		EM valuations becoming more attractive. Fundamentals have improved over the years but the recent dollar strength has been a headwind. We maintain our position through rebalancing.
		Real Estate		●		Fundamentals remain solid for the REIT category, but a tightening Fed and tight spreads gives us caution. The risk/reward scenario leads us to maintain our allocation.
Alternatives (Equity Based) & Real Assets		Commodities/Natural Resource		●		Given the demand/supply and political forces affecting oil, as well as potential Fed rate hikes, we maintain our neutral position.

Note: Views are subject to change based on market conditions and other factors. These views should not be construed as a recommendation for any specific security or sector. Client portfolios may or may not be at the recommended weightings above due to, but not limited to, distributions, tax management limitations, systematic purchases, etc. NOT FDIC INSURED / MAY LOSE VALUE / NO BANK GUARANTEE



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QUARTERLY MARKET RECAP & OUTLOOK

FOURTH QUARTER, 2018

MEET OUR EXPERTS



Nathan Gage, QKA, AIF®
Retirement Services Support Manager

Upon joining Citizens & Northern Bank in 2006, Nathan has been involved in all facets of administration and service for our clients' qualified retirement plans. Because his department handles everything in-house at C&N, his scope of expertise includes developing plan documents, record-keeping, investment selection and personalized retirement income planning for plan participants.

Nathan's previous experience with Seligman Data Corp as a Senior Business Analyst allowed him to develop knowledge in investment services. Prior to that position, he was a 401(k) plan administrator at Citistreet where he gained valuable expertise in retirement planning and administration. With his unique combination of skills and experience, Nathan provides unparalleled service

and expertise for his clients.

After receiving his BS in Secondary Education from the Pennsylvania State University, Nathan acquired his MBA from the University of Southern Maine. He's a member of the OSSEA Masonic Lodge and resides in Wellsboro, PA with his wife, Susan, and two children, Madeline and Olivia.