INVESTMENT STRATEGY COMMENTARY

2016 OUTLOOK: SEPARATING SIGNAL FROM NOISE

Engineers work to filter out noise when trying to accurately measure signals. We think investors will need to really focus on separating signal from noise in 2016 as evolving monetary policy meets uneven global growth, less liquid financial markets, and continued geopolitical concerns.

Asset class returns were disappointing in 2015 (see Exhibit 1), with U.S. dollar-oriented assets outperforming as global growth slowed. We entered 2015 with a moderate overweight to risk tactically, but reduced risk mid-year by cutting U.S. and emerging market equities, along with natural resources, in anticipation of further slowing of growth. After the market correction in August and September, we increased our recommended exposure to international developed market equities and U.S. high yield, as the correction improved valuations. Global growth has been disappointing all year, as the plunge in commodities has hurt investment while lower energy costs have benefitted growth little. Inflation remains dormant, and central banks are working to adjust their approach to account for the possibility of continued low prices. With the Federal Reserve and the Bank of England interested in raising rates while the European Central Bank and the Bank of Japan continue to ease, we expect continued divergence in central bank policy in 2016 and some follow-through impact on currencies. We enter 2016 with a tactical moderate overweight to risk, and we expect economic developments to be more of a driver of asset class returns than monetary policy.

December 16, 2015

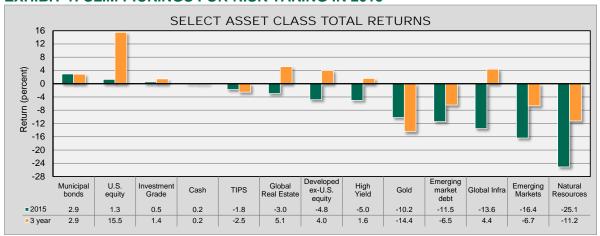
Northern Trust Asset Management http://www.northerntrust.com/ investmentstrategy

James D. McDonald Chief Investment Strategist jxm8@ntrs.com

Daniel J. Phillips, CFA Investment Strategist dp61@ntrs.com

Daniel B. Ballantine Investment Analyst dbb3@ntrs.com





Source: Northern Trust, Bloomberg. Year-to-date and trailing three-year annualized returns through 12/15/2015.

A long-term theme of ours has called for "Political Volatility yet Policy Stability." While discontent with income inequality and political discourse has raised the hopes of dissident parties, voters have displayed a preference for relative safety when entering the voting booth. The most consequential election of 2016 is likely in the United States, where the November presidential election may provide a chance to unify the executive and legislative branches. Geopolitical risks are likely to remain elevated in 2016, as plunging oil prices have raised fiscal uncertainties and Middle East unrest continues to fuel the European migrant problem. See Exhibit 2 for our current tactical views.



EXHIBIT 2: 2016 OUTLOOK BY ASSET CLASS

		Asset Class	TAA*	SAA*	Key Views
Risk-Control Assets Risk Assets		United States 10% Overweight	30	20	U.S. equities should maintain above-median valuations on steady economic growth and continued Fed engagement. The U.S. economy remains in a higher "growth channel" than its developed economy counterparts. This should support earnings and cause further dollar strength, reinforcing our preference for U.S. dollar-denominated asset classes.
	Equities	Developed ex-U.S. 2% Underweight	15	17	We see continued economic growth momentum relative to low expectations supporting developed ex-U.S. equities. Monetary policy is supportive of the P/E multiples in Europe and Japan. All said, we have decreased our underweight to the asset class over the past year but still remain slightly underweight given our preference for dollar-denominated assets.
		Emerging Markets 3% Underweight	3	6	We expect emerging market P/E multiples to remain depressed in 2016, as emerging market equities face multiple headwinds including the strengthening dollar and continued rebalancing pressures. We will likely need to see currency stability and improving emerging market economic growth before becoming more constructive.
	Real Assets	Global Real Estate/ Infrastructure Neutral	6	6	Real estate and listed infrastructure continue to offer relatively high income and are supported by their diversified risk exposures. Given their interest rate sensitivity, the asset class will benefit from a gradual path of monetary policy tightening. However, we remain equal-weight both as interest rate volatility may impact the risk/return trade-off.
	Real A	Natural Resources 4% Underweight	1	5	We expect to continue seeing stubbornly high inventory levels due to steady production (even in the face of price declines) and slowing global demand. OPEC's recent decision to continue pumping has led to another leg down in oil prices. These factors, in combination with a stronger dollar, will limit natural resource returns in 2016.
	Gold	Gold Neutral	0	0	We view gold as an alternative currency and prefer the U.S. dollar in 2016. While the upward trajectory of interest rates is expected to be shallow, inflation remains subdued, meaning real interest rates will be rising. However, gold may be more appealing vs. other developed market currencies as aggressive monetary policy accommodation continues.
	Φ	High Yield/ Emerging Market 11% Overweight	16	5	We remain constructive on high yield due to high demand for new issuances, healthy balance sheets and limited maturities in 2016. We believe spreads will tighten in 2016 and view the recent spread widening as an opportunity, with distressed situations localized in the energy/materials sectors as well as select retail companies.
	Fixed Income	Investment Grade 10% Underweight	25	35	We believe investment grade spreads will trade close to their current band due to continued reach for yield. With limited room for spread tightening and low starting point yields, total returns in investment grade fixed income will be muted. We prefer risk assets given our modestly constructive macro outlook.
	L	TIPS Neutral	4	4	Despite recent small increases in wage growth, we do not see a steady rise in inflation as a likely occurrence in 2016. However we are cognizant that headline inflation metrics could begin to improve assuming oil prices stabilize in 2016. We continue to advocate for shorter-duration TIPS to remove interest rate risk and focus on inflation sensitivity.
	Cash	Cash 2% Underweight	0	2	Even with the December rate hike, we continue to believe in a very gradual trajectory for the Fed lower than both current FOMC forecasts and market expectations. One additional rate hike in 2016 is a reasonable assumption to us. Much attention will be paid to the Fed's ability to maintain the lower bound through their reverse repurchase operations.

Tactical Risk Position: Moderate Overweight We continue to prefer U.S. dollar-related assets, with our current modest overweight to risk in the tactical portfolio concentrated in U.S. equities and U.S. high yield. Key risk case scenarios include a China hard landing, financial market dislocations from U.S. dollar strength, and consequences of flubbed Fed communications.



^{*}TAA = tactical asset allocation; SAA = strategic asset allocation. These recommendations, based on the Global Tactical Asset Allocation Model, do not include alternatives. We believe strategic holdings in both private equity and hedge funds can assist in increasing portfolio efficiency. However, we do not make tactical recommendations on these assets classes due to the nature of the investments.

MACRO THEME REVIEW

Part of our 2016 outlook is a review of how our long-term capital market assumption themes, as published each summer in our Five-Year Outlook paper, are developing. These themes drive the forward-looking portion of our "forward looking, but historically aware" approach to strategic asset allocation (a five-year time horizon). They also serve as a useful template for our tactical (one-year time horizon) outlook and asset allocation positioning. Exhibit 3 details our key themes from the 2015 edition and how those themes are progressing as we approach the New Year.

EXHIBIT 3: REVISITING OUR FIVE-YEAR MACRO THEMES

CMA Theme	What was said at the time	What the data show so far
The Slow Burn of Low Growth	Financial markets are at low risk of an inflation/central bank policy-induced end to the current expansion, but are exposed to the "slow burn" of falling demand momentum.	The global expansion continues at a slow pace – developed economies are stuck in narrow "channels" of growth while emerging economies are struggling with region-specific issues.
Productivity Paradox	We believe that productivity is being incorrectly measured; that low inflation/elevated profit margins will persist; and any pickup in demand can be sufficiently met with increased supply.	Inflation and inflation expectations have remained mostly contained (core inflation still below target in most major economies). Earnings are generally outpacing sales, leaving profit margins elevated.
Inequality Inaction	Despite dynamics that have promoted inequality (most recently technological advances), redistributionist remedies are not expected to bear fruit amid the headwinds of austerity and competition.	While political rhetoric around inequality may garner headlines and early votes, voters have tended to move toward the center in the final vote – which recently occurred in France.
Low and Slow Monetary Policy	Driven by slow growth and low inflation, monetary policy will remain accommodative; but subject to volatility as investors attempt to understand new policy tools and large balance sheets.	The Fed punted at their September meeting but finally raised rates in December. Volatility has been high as Fed officials have given differing opinions on the path of future policy.
Living in a Low- Yield World	After holding out hope for years, financial market participants are increasingly accepting the view that interest rates could remain low indefinitely – possibly causing some to take inappropriate risks.	Market consensus continues to come our way. We expected the Fed funds rate to be at 2% in mid-2020 (5 years out) when the markets expected 3%, they now expect ~2.5%.
Cyclical Meets Structural	The cyclical upswing in equity prices has support from continued accommodative monetary policy, and will only slowly meet the reality of the structural low-demand outlook.	The August market correction – recalibrating valuations to the low-growth environment – was the opposite of slow, but it did turn out to be fairly shallow vs. past experiences.

Source: Northern Trust Capital Market Assumptions. For full detail on themes, see Five-Year Outlook: 2015 Edition.

Our overarching theme of a slow-growth and low-inflation environment that allows for a continuation of accommodative monetary policy remains mostly intact. Shifts in the global economy have made it difficult for global demand to gain traction. These shifts have come in all forms. Some examples include: the ongoing demographic shift in developed economies (and some emerging ones); the shift in the United States from manufacturing to services; and the shift in emerging markets from investment to consumption. Global supply has been able to easily meet this lower demand bar. Inflation – aided by continued commodity weakness – has remained weak, allowing for global monetary policy to remain "low and slow" as we are expecting. This has further supported our expectation that markets succumb to the realization that we are "Living in a Low-Yield World." Our "Inequality Inaction" theme looks to be progressing as voters have been moving more to the center as election time approaches, a revival of our "Political Volatility yet Policy Stability" theme.



GROWTH & INFLATION

The post-financial crisis pattern of disappointing growth and inflation continued in 2015 across both developed and emerging economies. The hoped-for boost to growth from lower energy prices didn't help oil consumers equally in 2015, and commodity prices fell further as the year progressed. U.S. growth looks to finish the year at 2.5%, below the 3.0% original forecast, while Europe will beat its original growth expectation of 1.2%. The Eurozone is benefitting from stronger growth from former laggards like France, Spain and Italy, and is also profiting more than the U.S. from the fall in energy prices. Emerging markets may be set up for a small bounce in growth in 2016, primarily due to less drag from commodities exporters like Russia and Brazil. China's growth is being supported by easier monetary policy, and Asian emerging markets look set to lead emerging market growth overall. The global growth is forecast to accelerate in 2016, but the disappointing trends of the last seven years throws some caution toward this forecast.

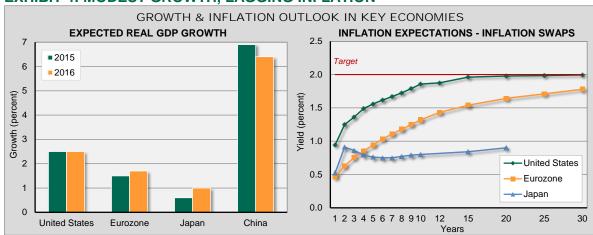


EXHIBIT 4: MODEST GROWTH, LAGGING INFLATION

Source: Northern Trust, Blue Chip Economic Indicators, Bloomberg 12/15/2015 swaps curves.

The continued drop in commodities this year furthers the disinflationary trends in place in many economies. In addition, fiscal austerity and deleveraging have contributed to deflationary trends but the austerity impact is starting to fade as government spending starts to increase. The U.S. and Eurozone look set to record consumer price increases this year of just 0.2% and 0.1% respectively, compared with original estimates of 1.4% and 0.7%. We will likely see a jump in headline consumer inflation in 2016 going forward one year such that year-over-year comparisons are against the current weak prices but markets are still sanguine about the longer-term outlook. As shown in Exhibit 4, the financial markets expect the U.S. to hit its inflation target in 15 *years-time* – and don't expect the Eurozone or Japan to hit theirs over the next *30 years*. What could prove this sanguine outlook incorrect? The most likely culprit is an eventual tightening of the labor markets resulting in higher wages, without an offsetting pickup in productivity. The minimum wage was set to rise in some 24 U.S. states in 2015, yet overall wage gains in the month of November were just 2.3%, compared with productivity just reported for the third quarter of 2.2%. This is the crucial dynamic we will need to see repeated if wage gains are benign to corporate profits and investor risk appetite.



MONETARY POLICY

Led by the Federal Reserve, major developed market central bankers have been following a similar script since the financial crisis. Seven years later, the Fed has started the normalization process with its rate hike on December 16, but we expect this to be a long process. The financial crisis created an atmosphere of cooperation amongst the central banks, while the normalization process will be an individual affair. Although different central banks have modestly different objectives, a desired level of inflation is a common thread. It is also true that while the banks may profess to have a domestic focus, they operate in a global economy and financial market. Therefore, the Fed's ability to raise rates to the level they think would be optimal is likely to be constrained by the currency strength caused by rising U.S. rates. We don't expect any backing off of the accommodation being provided by the ECB and BOJ, as their primary focus toward inflation is far from being met. As shown in Exhibit 5, the United States, Eurozone, Japan and China are all below their targeted inflation rates. In sum, we expect developed world central bank policy to remain very accommodative during 2016.

CENTRAL BANK INFLATION SCORECARD & BALANCE SHEET PROJECTIONS **CURRENT INFLATION VERSUS TARGET** CENTRAL BANK ASSETS-TO-GDP 3.5 ECB Fed +/- stated target 12 month price level growth (percent) 3.0 BOJ -PBOC ■ Inflation 2.5 2.0 1.5 1.0 1.5 0.5 0 0.0 China 2010 2012 United States Eurozone Japan 2008

EXHIBIT 5: INFLATION STILL WELL BELOW TARGET

Source: Northern Trust, Bloomberg, IMF World Economic Outlook GDP forecasts, Oct. 2015. Dashed lines indicate forecasts. People's Bank of China balance sheet decline results from a stable balance sheet projection and growing GDP.

Emerging market central banks have joined the accommodation party over the last year, as growth has become more challenging and inflation – their historical villain – has been slowing. The vast majority of emerging central banks have been cutting policy rates, with the notable exceptions of Brazil and South Africa where inflation has been more troublesome. One aspect that may be constraining the level of accommodation is the risk of currency depreciation on both inflation and debt service of foreign-currency denominated debt (a broad basket of emerging market currencies is down 15% year-to-date). Inflation in China is running below their policy target, as is also the case in Korea, India and Taiwan. The countries with continued inflation problems include Brazil, Russia and Turkey. Overall, we believe emerging market monetary policy is likely to remain accommodative in 2015, but the amount of leeway these central banks will have will be constrained by concerns over currency valuations and capital flows.



FIXED INCOME

Interest rates remained well anchored in 2015 as the Fed pushed out their "liftoff" date and the ECB promised continued accommodation. Rates on 10-year U.S. and German bonds rose by only around 0.10% over the full year, to 2.24% and 0.64%, respectively. U.S. short-term rates lingered around 0% before a false start in August and the real start in December (shepherding in the end of zero rate policy) pushed the 3-month T-bill to its current 0.25% rate. Coming into the year the Fed expected they would have their key policy rate at 1% by now, so "liftoff" was well-anticipated by the markets. What was less anticipated was the rise in credit spreads; high yield spreads rose by nearly 2% in 2015 while investment grade credit spreads rose by 0.25%. This rise in spreads caused prices to fall across many fixed income asset classes (with non-U.S. bonds also hurt by the rising dollar). U.S. investment grade bonds managed a positive total return for the year, with income more than offsetting negative price returns. However, falling prices were too much to overcome in non-U.S. investment grade and U.S. high yield fixed income.

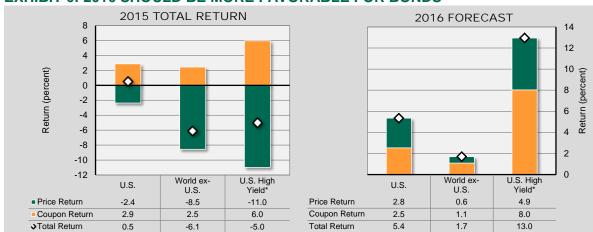


EXHIBIT 6: 2016 SHOULD BE MORE FAVORABLE FOR BONDS

Source: Northern Trust, Barclays. Year-to-date returns through 12/15/2015. *Barclays High Yield 2% Issuer Cap Index.

Looking ahead to 2016, the key question is whether the recent rise in credit spreads is a "macro" or "micro" issue. A macro issue – the proverbial "canary in the coal mine" portending further deterioration in financial conditions – would pressure all risk assets. However, we believe the current sell off is more of a micro issue – wherein credit concerns are mostly confined to the energy/materials sectors and don't represent a negative call on the overall economy. We believe that high yield issuers, in aggregate, are in relatively good financial shape with adequate cash and few maturities due in 2016. Further, we believe that a slow but positive growth environment, combined with accommodative central banks (certainly the ECB and Bank of Japan, but also the low-trajectory Fed), will support most high yield assets. These views culminate in our 13% expected return for the asset class (although a higher-quality high yield product may return closer to the 8% coupon). We believe investment grade fixed income will also post solid returns, but are currently underweight the asset class given better opportunities elsewhere. Returns outside the United States are lower, reflecting the lower yield starting point, and could be pressured by further dollar strength.



EQUITIES

Developed market equities worked hard to run in place in 2015 as negative earnings growth was offset by price-to-earnings valuation expansion, suggesting that investors are largely looking through the material negative impact to earnings from falling commodity prices. U.S. dollar strength once again played a role – with currency representing a greater than 8% drag on both developed ex-U.S. and emerging market equity performance. Our expectation coming into 2015 was that U.S. equities would outperform the rest of the world given superior U.S. growth fundamentals leading to further dollar appreciation. While we got this directional call right, we believed overall global equity returns would be higher. Instead of mid-single digit global equity returns, we saw modestly negative returns and continued material weakness out of emerging market equities. See the left panel of Exhibit 7 for 2015 total returns and contributions from earnings, valuations, dividends and currency.

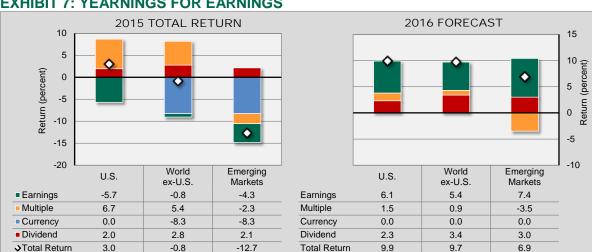


EXHIBIT 7: YEARNINGS FOR EARNINGS

Source: Northern Trust, MSCI, Bloomberg, Standard & Poor's. Year-to-date returns through 11/30/2015.

As we head into 2016, the question is: can corporations regain their organic level of earnings growth after enduring the considerable headwinds of lower energy prices and (for U.S. multi-nationals) dollar strength. In the United States, our analysis shows organic growth was 7% in 2015. We are calling for 2016 earnings growth to be mostly in-line with that at 6%, which assumes the commodity-sensitive sectors are no longer a material headwind to earnings (nor a tailwind). We expect slight valuation expansion in 2016 with central bank policy remaining accommodative. Expectations for developed markets outside the United States are similar while emerging market equities are expected to face continued negative sentiment, further valuation contraction and lower total returns. Geographically, we continue to favor U.S. equities over other developed markets given the superior "growth channel" of the U.S. economy and the expectation for further dollar strength (not explicitly built into the total return forecasts). That said, we have become more constructive on European equities given continued economic momentum and accommodative monetary policy; but we are mindful of European company exposure to emerging market economies. We remain underweight emerging market equities, the region where dollar strength poses the biggest hurdle.



REAL ASSETS

Beginning-of-the-year optimism that a supply response to lower commodity prices would tighten markets and ultimately push prices higher faded mid-year as supply continued to overwhelm demand. Despite falling rig counts and lowered capital expenditure plans, production continued as drillers focused on their most lucrative wells to maintain cash flows. The most recent blow to oil fundamentals was OPEC's decision to maintain production levels at its annual meeting, continuing the market share battle against non-OPEC producers. Meanwhile, markets have begun to price in Iran's imminent return to the global oil marketplace, which will add additional supply to an already-oversupplied market. Finally, the dollar's continued strength added to the headwinds.

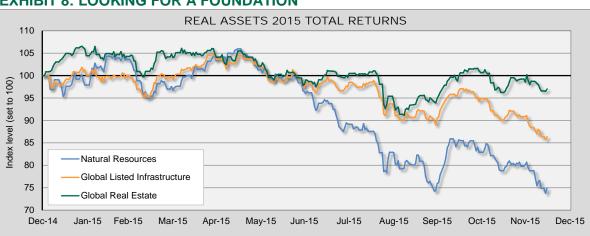


EXHIBIT 8: LOOKING FOR A FOUNDATION

Source: Northern Trust, Bloomberg. Index levels set to 100 at the start of 2015. Data through 12/15/2015.

When diving into the energy data, we find we are predominately dealing with a supply issue. The Energy Information Administration (EIA) anticipates global demand for oil increased by 1.8 million barrels/day in 2015 – a 1.9% increase. This compares to its beginning-of-year 2015 growth forecast of 0.9 million barrels/day (1.0% increase) and the 2014 demand growth of 0.8%. This slowly accelerating demand data was trumped by oil supply growth of 2.4% in 2015. Even as supply growth is expected to fade in 2016 (due to unconventional well depletion and reduced capital expenditures), high inventory levels mean oil markets will take time to return to equilibrium. Other sectors have faced similar headwinds in 2015 – with industrial metals down 30% and agricultural commodities down 15% (compared to the 40% decline in energy commodities). Overall, supply-demand imbalances in the energy and industrial metal sectors combined with expectations for continued dollar strength keep us underweight natural resources heading into 2016.

Global real estate and global listed infrastructure also faced headwinds in 2015 in the form of lower equity prices, volatile interest rates and widening credit spreads. Fundamentals look more supportive heading into 2016 – as modest global economic growth should provide steady cash flows. We continue to recommend strategic weightings in both asset classes, attracted to the superior dividend yield but cognizant of the continued interest rate volatility to which these asset classes are exposed.



CONCLUSION

We expect higher volatility into 2016 as evolving monetary policy faces an uneven global economy, less liquid financial markets and geopolitical concerns. Having said that, our theme of "separating signal from noise" is meant to indicate that we expect a lot more noise about prospects than actual fundamental changes in the economic or monetary policy outlook. A tactical tilt toward U.S. dollar assets and away from emerging markets and natural resources paid off in 2015, and we maintain that stance – with an appreciation that there are already a lot of investors positioned this way.

There are two key themes that are driving our tactical asset allocation views for 2016. First, we believe the major economies are in a "growth channel" – with a breakout to either the upside or downside unlikely. Upside growth is capped by debt and demographics while the downside risk appears manageable as there is little excess in the real economy. It is this excess that typically leads to inflation, tighter monetary policy, and an eventual recession. A second theme entering 2016 is our expectation of "lower and slower" monetary policy. Weak global trade and unsynchronized growth should keep monetary policy accommodative and interest rates structurally low. This should not prove disruptive to the financial markets and supports equity valuations.

Our risk cases have been fairly consistent over the last several months – concern about the prospects for Chinese growth along with fallout from U.S. dollar strength. The Federal Reserve provided some salve to our third risk case – that of a flubbed Fed liftoff – with the 0.25% rate hike on December 16 accompanied by an outlook that has been well received by the markets. There is still a long way to go on the path to interest rate normalization – for example, the Fed said they would keep their balance sheet at current levels of \$4.5 trillion well into the interest rate normalization process. Visibility toward the terminal level of U.S. interest rates could be an important catalyst to improve the outlook for those asset classes most harmed by dollar strength – including emerging markets and natural resources.

Special thanks to Tyler Bullen, Investment Analyst, for data research.

IMPORTANT INFORMATION: This material is for information purposes only. The views expressed are those of the author(s) as of the date noted and not necessarily of the Corporation and are subject to change based on market or other conditions without notice. The information should not be construed as investment advice or a recommendation to buy or sell any security or investment product. It does not take into account an investor's particular objectives, risk tolerance, tax status, investment horizon, or other potential limitations. All material has been obtained from sources believed to be reliable, but the accuracy cannot be guaranteed.

PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS. Periods greater than one year are annualized except where indicated. Returns of the indexes also do not typically reflect the deduction of investment management fees, trading costs or other expenses. It is not possible to invest directly in an index. Indexes are the property of their respective owners, all rights reserved.

No bank guarantee | May lose value | NOT FDIC INSURED

© Northern Trust 2015

