

# Economic & Capital Markets Outlook

BNY MELLON INVESTMENT  
STRATEGY & SOLUTIONS GROUP

FIRST QUARTER 2015

PREPARED FOR INSTITUTIONAL INVESTORS,  
PROFESSIONAL CLIENTS, OR OTHER QUALIFIED,  
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BNY MELLON

# Executive Summary

## ISSG CMC SUMMARY ASSET ALLOCATION

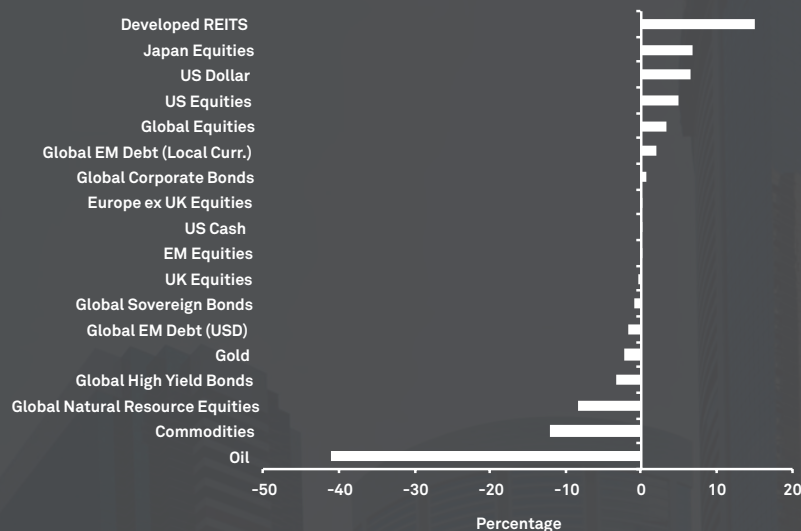
	Current	Benchmark
Global Equities	59.5%	50%
Global Bonds	40.5%	50%
Cash	0%	0%

- Continued diffusion of economic fundamentals drive policy dispersion.
- Maintain preference for US given accelerating economic momentum.

## FIVE THINGS TO WATCH IN Q1 2015

- 1) Economic activity in the Eurozone and the trajectory of “flation” in any form
- 2) US corporate profit expectations vs. slowing global backdrop
- 3) US curve flattening: tightening vs. lower inflation risk premium
- 4) Impact of low oil and strong dollar on developing economies
- 5) Impact of low oil prices on high yield and EM credit

**FIG. 1: GLOBAL ASSET PERFORMANCE**  
% change over 3 months to 31/12/14

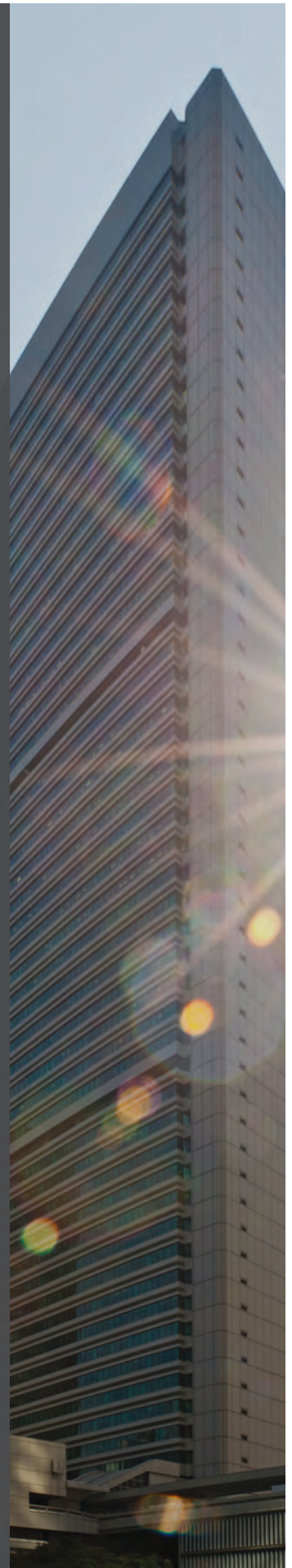


Source: Thomson Reuters Datastream & ISSG

## ABOUT THE INVESTMENT & STRATEGY SOLUTIONS GROUP

The BNY Mellon Investment Strategy and Solutions Group (ISSG) partners with clients to develop thoughtful and actionable solutions to broad investment policy issues. We engage in an ongoing dialogue with our institutional clients to achieve a deep understanding of their concerns and needs. Harnessing the full depth and breadth of our global network of specialized investment boutiques across all asset classes and return/risk objectives, we help craft comprehensive strategies relevant for our clients' specific investment objectives and policies.

The ISSG Capital Markets Committee (CMC) governs asset allocation policy and assesses the market outlook for the global multi-asset strategies and solutions managed by ISSG.

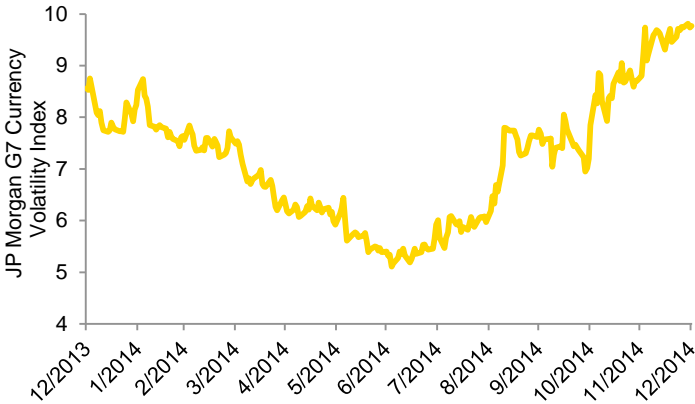


# What we are watching

Theme	ISSG View	Asset Class Impact	Risks to View	Recent Considerations for ISSG View
Global Growth	An open question remains about a secular decline in the long run rate of global growth in the face of continued divergence into 2015. Growing concern that Europe weighs on the US which has been a stalwart in 2014.	Valuations and expectations continue to run ahead of fundamentals making further gains increasingly difficult to capture, especially with already stretched profitability.	The effects of slowing Europe, as well as developing economies, weighs on the US in comparison to lofty valuations.	“Herd” risk around local policy responses is increasing volatility; The downward move in oil prices is a net positive for global growth.
Global Inflation	The downward move in oil prices has increased the threat of prolonged deflation in Europe; Downward move in long term inflation expectations more closely watched than short term expectations.	The benefit of low inflation, in the US, still outweighs perceived cost. Economic sensitivity to inflation will increase the dispersion in global growth rates amongst economies.	Prolonged pick up in disinflationary pressures in Europe and other areas of the global economy.	Inflation remains under control in the US while policy responses in Europe should prevent a pickup in disinflationary pressures.
Monetary Policy	While increasingly diverse, policy makers are responding accordingly to maintain, and even promote, sustainable global growth.	“Herding” behaviour around policy should not be ignored; The effects of policy on currency and the impact to asset returns is also something that needs closer consideration going forward.	The recent movement in oil has created a disturbance in the normal policy / inflation feedback loop that creates a bi-modal risk of deflation and inflation in response to increasing amount of stimulus.	The transparency of policy makers globally allows for removal of “worst case” scenarios in the distribution of possible outcomes.
Fiscal Policy	Incremental fiscal policy becoming limited in scope given rising debt/GDP levels ex-US while recent elections in the US make the fiscal landscape more opaque.	Japan continues to lead the charge on deployment of fiscal stimulus; Other regions continue to focus more on monetary policy responses.	Monetary policy limited in stimulative impact and limited scope for fiscal stimulus add to further compression of global growth.	China remains the exception on fiscal stimulus, as it remains to be seen whether policy makers revert to fixed capital formation to ease their growth transition.
Emerging Markets	Approaching US tightening cycle, strengthening dollar, and declining oil prices will create clear winners and losers in emerging markets.	Capital outflows from EM combined with currency depreciation will negatively impact current account deficit countries; Energy importers will benefit from lower oil.	The appearance of attractive valuation in certain regions and countries masks value traps caused by changing secular dynamics.	The need for regional, country, and even thematic approaches to investing in developing economies is critical for success.
“Tail Risk Monitor”	Military action by Russia out of economic desperation; Increasing socialist movement from deflationary Europe leads to “Grexit” as well as rising unrest in other Eurozone countries.	Traditional safe havens of bonds, the US, and the dollar may exacerbate already influential secular changes taking place.	Geopolitical tensions remain subdued as does military action; Communicated and coordinated policy moves ease Eurozone and developing economy pressure.	Refinancing of dollar based emerging market debt could become more difficult beyond just Russian debt, and could accelerate contagion.

# KEY CHARTS: ECONOMICS AND MARKETS

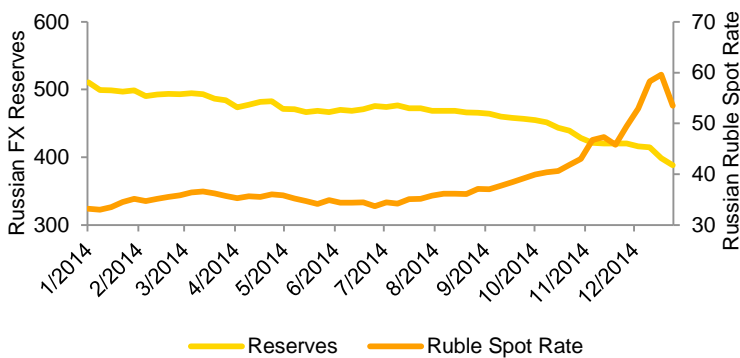
Fig. 2: The Return of Currency Volatility



We've shown the chart to the left recently but given its significant change we felt it was worth revisiting. Consistent with various events that have taken place in the 2H 2014, volatility has returned to currency markets, not to mention broader capital markets as well. We continue to believe that currency risk will be one of the key themes that investors need to monitor throughout the year. A strengthening dollar is something that markets have not seen in well over a decade (back when the Euro was in its infancy) and the effects of this are yet to be determined but it is likely that they will be significant.

Figure 2 Source: Bloomberg, JPM; Dec 2013 – Dec 2014

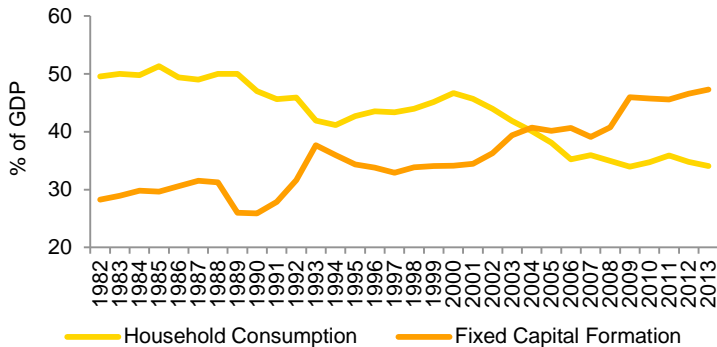
Fig. 3: Will 1998 troubles resurface in Russia?



A combination of falling commodity prices, in particular oil prices, and economic sanctions have put significant strain on the Russian economy that is manifesting itself in the depreciation of the Ruble. To support the currency and the economy, foreign exchange reserves are quickly being put to work. As debt service becomes a larger burden and bond redemptions occur, we are watching closely for the possibility of a Russian default and potential reverberations throughout the developing world; especially given how much debt has been issued by developing nations taking advantage of the global "thirst" for yield.

Figure 3 Source: Bloomberg; Jan 2014 – Dec 2014

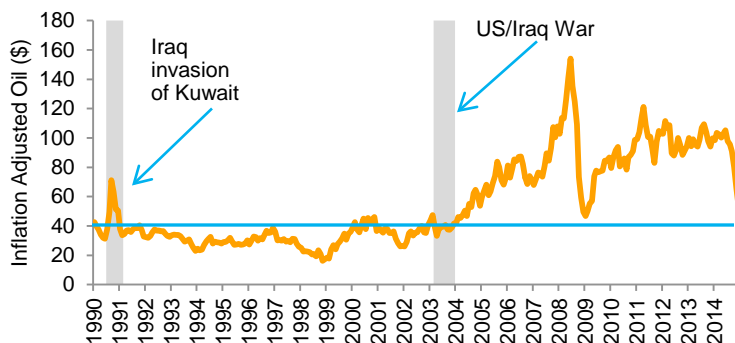
Fig. 4: China Attempting Difficult Transition



The reality that the rate of economic growth in China is slowing is a widely accepted truth in capital markets heading into 2015. The key issue is just how much growth will slow compared with expectations and stated government objectives. Below the surface of the slowdown is a lack of evidence to support the stated objective of a managed transition from an investment-led economy to one driven by domestic consumption. This transition will be a driving force for the foreseeable future in global markets.

Figure 4 Source: World Bank; Dec 1982 – Dec 2013

Fig. 5: Looking for a bottom: Inflation Adjusted Oil Prices

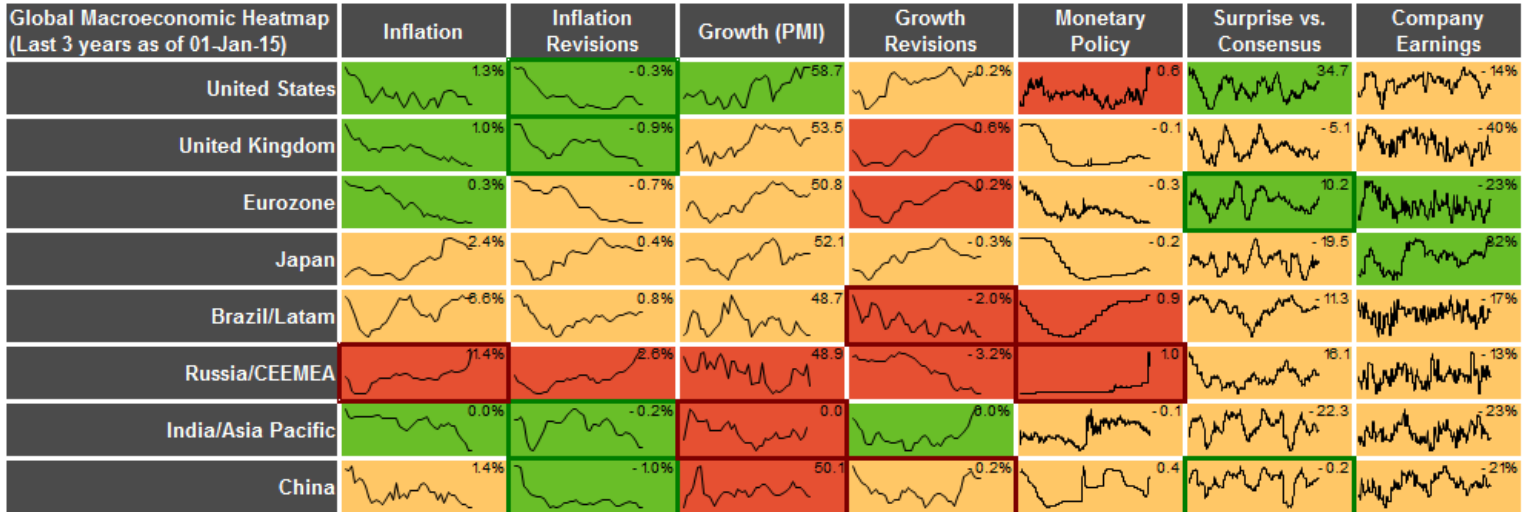


With so many comparisons of the current period in financial market history to that of 1994 to 2000 given the recent move in energy prices, it is interesting to note the inflation adjusted bottom in oil during that period (in today's dollars) is \$16.23. Yes, incremental demand from developing economies is present today; as is increased supply from the North American hydrocarbon boom. The impact oil prices play, for us, matters more to high yield, emerging market credit, and national current accounts, than the tug of war between net exporters and consumer spending.

Figure 5 Source: Bloomberg; Jan 1990 – Dec 2014

# ISSG GLOBAL HEATMAPS

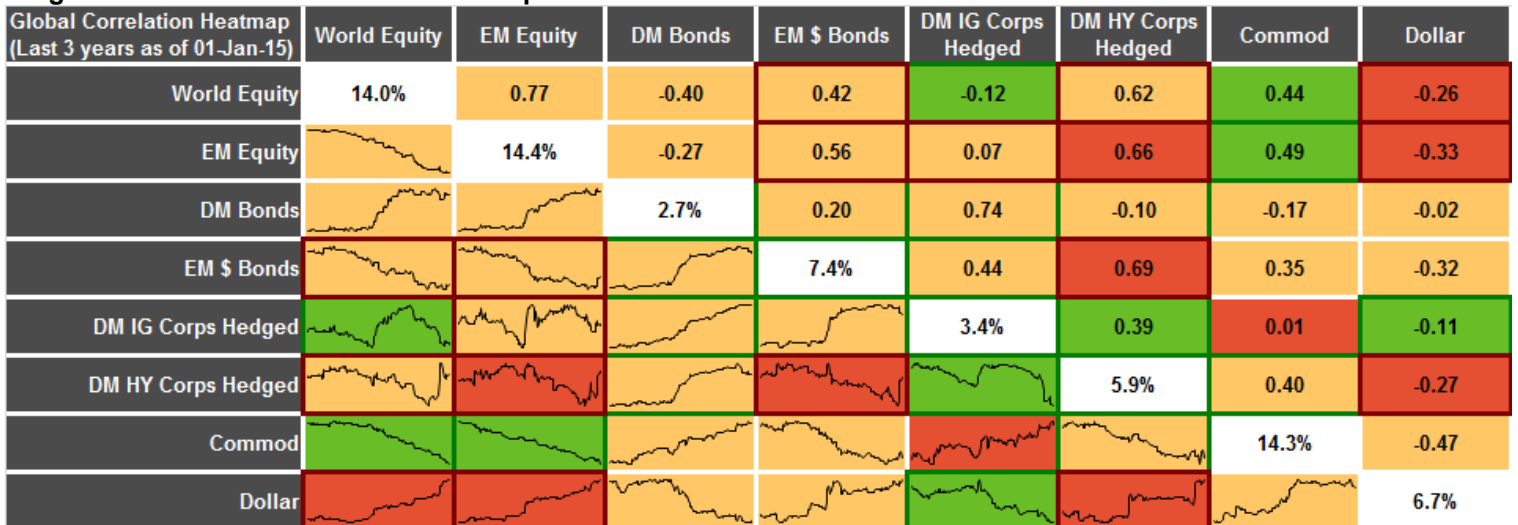
Fig. 6: ISSG Global Macroeconomic Heat Map



This heat map is designed to display a wide spectrum of macroeconomic trends across the major global regions over the past three years. Green and red shading indicate what we believe to be positive and negative levels, respectively, of the indicated variables; while green and red borders indicate positive and negative changes over the last quarter. Yellow shading indicates neutral readings. The time series lines are shown merely for ease of comparing trends, and are not meant to convey any particular values or levels. See appendix for series definitions and sources.

As we head into 2015, our Macroeconomic Heatmap (Fig. 6) confirms an investment landscape that dominated much of late 2014. Inflation, almost globally, continues to move lower as a result of both demand factors as well as lower oil prices. At the same time, engines of growth continue to sit idle with the US being one of the few remaining engines still running. Interestingly, expectations in Europe may be reaching some inflection points looking at both economic surprises and company earnings. ECB policy transmission and the economy's response remains a key item to watch in 2015 against a backdrop of depressed expectations. Russian indicators, almost across the board, are flashing signs of warning with inflation moving up rapidly while growth is moving lower. The outlook for the Russian economy may prove to be a critical component of the broader 2015 outlook should it have negative ripple effects in the global economy.

Fig. 7: ISSG Global Correlation Heat Map



The Global Correlation Heatmap is designed to convey levels and changes in correlation and volatility numbers across major asset classes. Numbers in the unshaded cells represent the current exponentially weighted volatility level, with green and red fonts representing low and high levels relative to a time-weighted 3 year mean. The lower left half of the Heatmap, displaying exponentially-weighted weekly correlation pair data for the last 3 years, is included to allow users to compare trends and is not meant to convey any particular values or levels. The upper right half of the Heatmap reflects the current observation for the same data series. Green and red shading indicate what we believe to be low and high levels, respectively, of the current observation relative to a time weighted 3 year mean, while green and red borders indicate a significant decrease or increase over the last quarter.

Our Global Correlation Heatmap (Fig 7) highlights several changes to relationships that should be watched heading into a new year. The end of the commodity "super-cycle" continues to be seen in the breakdown of correlations between both global and emerging market equity indices. Tangential to this correlation change, we are seeing positive movements in the relationship between EM dollar denominated debt and emerging market equity. Increases in this correlation, to us, indicate a focus on the part of investors on sovereign risk premiums present in both asset classes as opposed to an equity and fixed income relationship. Additionally, we believe the recent movements in high yield bonds and emerging market debt should be watched closely as possible indicators of rising contagion risk in 2015.

# Economic Outlook

The final few months of 2014 saw significant shifts – one somewhat expected, one widely unexpected – in two key economic variables. One of these shifts is a strengthening of the US dollar, a possibility that has been widely discussed since the federal reserve first discussed an end to quantitative easing in May 2013, if not before. The other is a dramatic fall in oil prices, which came in contravention to consensus forecasts for oil prices to remain stable into the next year. Although the shifts were different in their expectation on the part of investors, the two will both play significant roles in determining the investment landscape for 2015 and beyond.

Whilst expected global GDP growth remains somewhat steady (Fig. 8), the trend in revisions to expectations for global growth has turned negative during the course of 2014. Looking at the regional breakdown of revisions (Fig. 10), not surprisingly, negative revisions are being driven primarily by the Eurozone and the BRICs. The Eurozone continues to suffer from high youth unemployment that is leading to a structural lack of demand. A previously expensive Euro didn't help this situation but the recent decline in the Euro to the sub 1.20 EUR/USD level should begin to help Eurozone competitiveness. Within the BRICs, particularly Brazil and Russia, an end to the commodity boom of the past decade coupled with the recent fall in oil prices has put a damper on growth expectations as much of the economic growth in these two countries was a result of the surge in energy and commodities. Additionally, a stronger dollar relative to local currencies is causing a "crowding out" effect through increasingly expensive external sources of funds for investment. Finally, in China, consensus appears to have bought into a slowing level of GDP growth from above 10% annually several years ago to something potentially below 7% annually in 2015 as the property sector slows in that country and transition from infrastructure-led growth to consumer driven growth continues to take place.

Like growth, the trajectory for global inflation has also turned decisively lower (Fig. 9) with both expected *levels* of global inflation and *revisions* to expectations moving sharply lower. The fall in energy prices globally coupled with concerns over demand in Europe and some developing economies has lowered the inflation outlook as exhibited in the regional breakdown of inflation revisions (Fig. 10). Both the ECB and BOJ are attempting to generate inflation towards stated targets of 2% through policy stimulus, yet it appears that the drop in oil prices is serving to counteract any potential inflationary effects that policy might have on their respective economies. Even in the US, where growth continues to be positive as evidenced by continued improvement in labor conditions and other economic data, falling energy prices and tepid wage growth are serving to dampen inflation concerns in the near term and create uncertainty about the Fed's pace for policy tightening in 2015. Current expectations for the first increase in the Fed Funds rate appear to centered around the end of the second quarter of 2015.

Fig. 8: Expected Global Growth and Growth Revisions

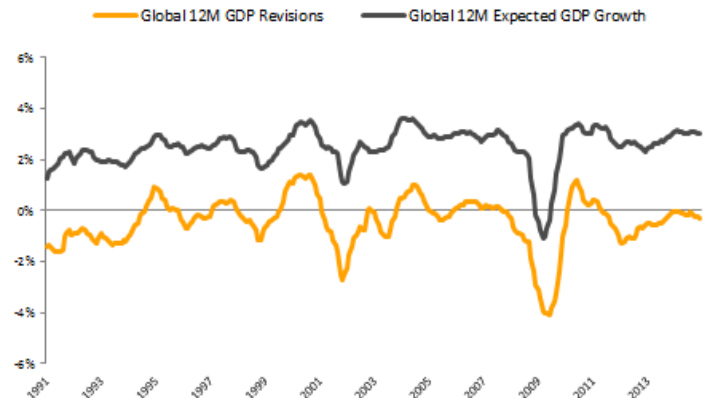


Fig. 9: Expected Global Inflation and Inflation Revisions

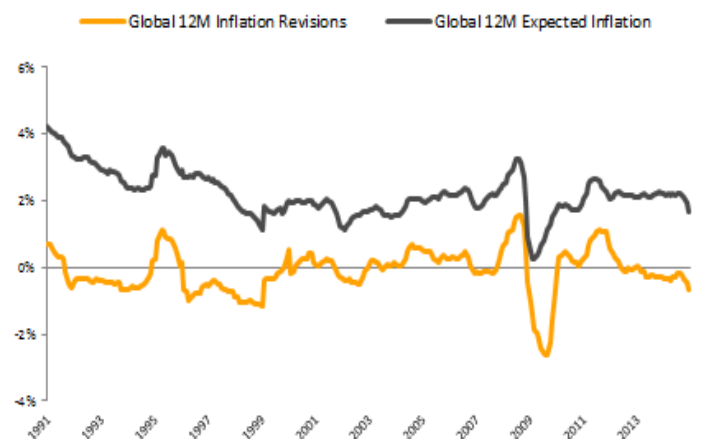
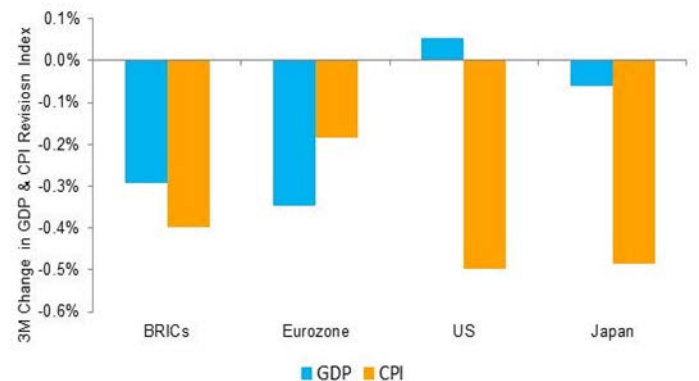
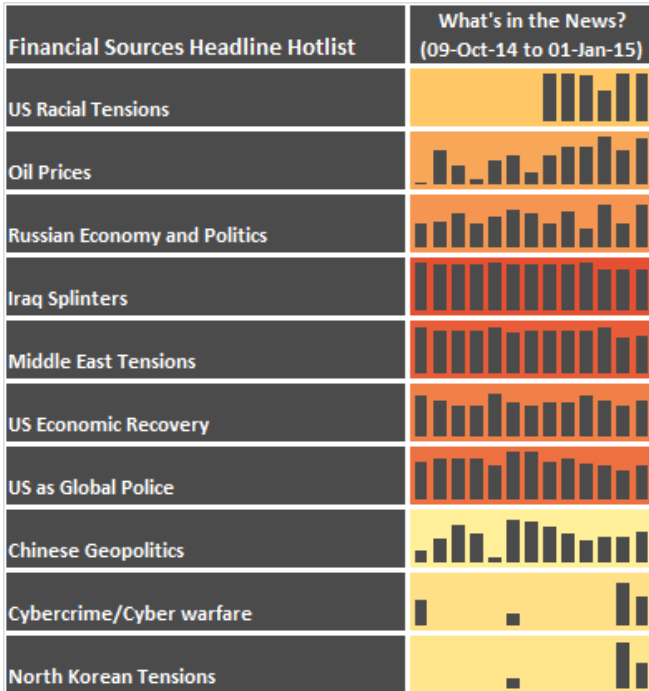


Fig. 10: Quarterly Regional Revisions For Growth and Inflation

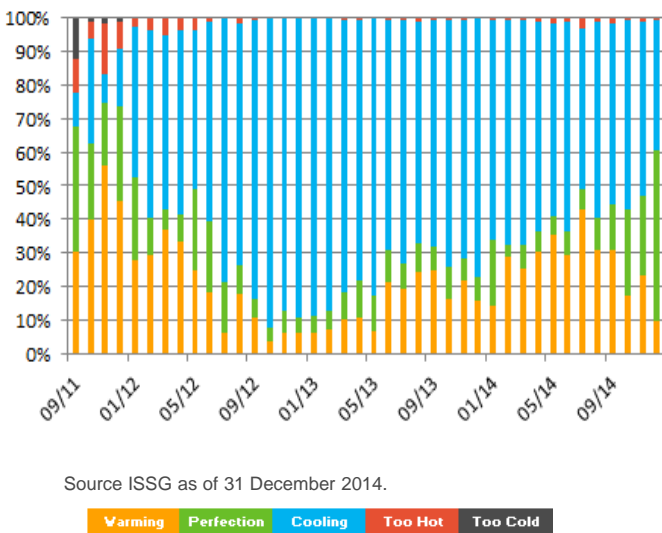


**Fig. 11: Global Headline Hotlist**



The above graphic shows the top ten most mentioned themes that are relevant to financial markets in order of their ranking on June 26<sup>th</sup>, 2014. The bar height shows the frequency of the coverage of each theme in the news for each of the last 13 weeks, with the furthest right bar representing the most recent ranking. The color of the background denotes the average intensity over the past quarter. Using financial media and influential blogs identified by multiple teams at BNY Mellon, those stories are used to highlight the hottest topics each week across over 3,000-6,000 news items. Story summaries are classified using a Bayesian classifier which is trained on stories from the last six months. Training stories are manually tagged and classified by a senior strategist.

**Fig. 12: RBAA\* Regime Probabilities**



Source ISSG as of 31 December 2014.

Warming Perfection Cooling Too Hot Too Cold

Observing the ISSG's Headline Hotlist (Fig. 11) reveals continued presence of global unrest with the top spot occupied by news headlines related to racial tensions and protests taking place throughout the American Midwest as well as other parts of the country. In addition to the protests in the US, there continues to be an undercurrent of social and political unrest in other parts of the global economy as indicated by headlines from Russia, the Middle East, and parts of Asia. The unrest "theme" we are seeing from news media headlines is consistent with an increased level of geopolitical unrest that was present throughout 2014 and we expect to persist into 2015, and potentially beyond, as the effects of economic diffusion and politics affect global economies and ultimately global portfolios.

As mentioned earlier, the price of oil was an unexpected theme that emerged in 2014 and has come to dominate both financial markets and financial media in recent months as indicated by oil's #2 spot on our Headline Hotlist. Oil continues to sit at the intersection of capital markets and geopolitics. With the sharp drop in oil (WTI) prices in 2014 (From \$98.42 on January 1<sup>st</sup> to \$53.27 on December 31<sup>st</sup> according to Bloomberg) many of the financial market "tectonic plates" have started to shift as previously held assumptions are now challenged.

In the middle of this "tectonic shift" are both the US and developing economies. With the increase in US oil production as a result of both shale oil and fracking technology the US has not only taken significant strides towards energy independence, but also disrupted previously held beliefs about global energy supply and demand. Not to mention the economic benefits that the US has come to realize from the energy "boom" in the form of increased productivity, capital expenditure, and even employment. In contrast, emerging market economies that have come to depend on their ability to export energy at high prices now find themselves searching for new external sources of funding for current account deficits that were once funded through oil revenues and strengthening currencies.

One of the key considerations that we believe bears watching in 2015 is the effect that oil's price decline could have on higher yielding credit around the world. The global search for yield has increased the availability of credit to many lower quality borrowers. In particular, within the energy sector of high yield bonds in the United States as well as emerging market debt; much of which has been issued from energy dependent countries like Brazil, Russia, and Venezuela. If defaults from energy dependent regions begin to accelerate as a result of low oil prices, we will monitor other credit sectors for any type of contagion reaction.

Lastly, a quick review of our regime probabilities (Fig. 12) reveals a dramatic increase in the probability of Perfection to 51%. While this is the first month that Perfection has occupied the top spot, it does bear watching in the near future as increased market volatility may provide attractive entry points for risk assets. The change in probability outlook is most likely being driven by the downward revisions to inflation expectations while growth revisions in the US have been positive.

\*Regime Based Asset Allocation (RBAA) is a proprietary asset allocation model created by the ISSG which considers asset returns in the context of regimes created by underlying changes in growth and inflation expectations. Contact the ISSG for detailed information on this research. Please see appendix for information regarding regime categories.

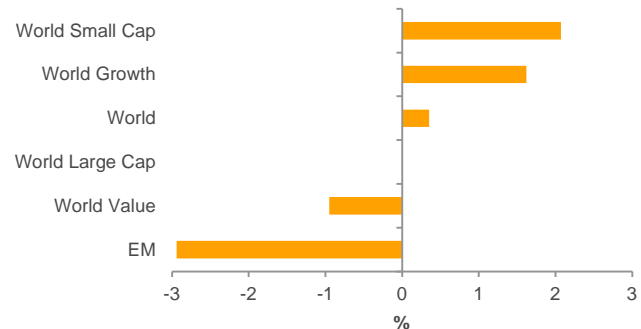
# Asset Class Outlook

Global Equity Markets:				
	ISSG CMC View	Valuation Model	Momentum Model	RBAA Model
US Equity	<b>Overweight</b>	<b>Favorable</b>	<b>Favorable</b>	<b>Favorable</b>
	Despite an approaching Fed tightening cycle and fair valuations, we remain overweight to the US given its current role of global growth "engine." Long awaited improvement in labor data is accelerating and the recent drop in oil prices will be a net benefit given the importance of consumer spending to the US economy despite any headwinds to the energy sector.			
Europe ex-UK Equity	<b>Neutral</b>	<b>Neutral</b>	<b>Favorable</b>	<b>Favorable</b>
	Mario Draghi and the ECB continue their fight against the threat of deflation. It remains unclear the ultimate impact that actions to date have had on the region as economic data remains volatile. Expectations are growing for sovereign QE. We remain neutral given rising expectations and uncertainty that remains in place. Our view on the Euro merits a hedged approach to the region.			
Pacific ex-Japan Equity	<b>Neutral</b>	<b>Favorable</b>	<b>Favorable</b>	<b>Favorable</b>
	Despite attractive valuations the region remains susceptible to commodity price moves as driven by incremental demand from a slowing China. In addition, the impact of changes in regional currency patterns arising from a weaker Yen remain unclear, particularly for other exporters in the region, such as South Korea.			
Japan Equity	<b>Overweight</b>	<b>Neutral</b>	<b>Unfavorable</b>	<b>Unfavorable</b>
	We have moved to an overweight in Japan as the BOJ continues to take the necessary steps to create both demand and inflation in the country. Recent actions of a delay in the second VAT implementation, pension allocation towards equities, and election results are further proof of policy maker's commitment to achieving stated goals. We have a neutral view on the Yen but currency impact should be considered.			
UK Equity	<b>Neutral</b>	<b>Favorable</b>	<b>Neutral</b>	<b>Favorable</b>
	While the UK economy, similar to the US, has been a bright spot for the global economy we remain cautious given its close relationship with the Eurozone where the impact is yet to be known. In addition, general elections in May will create additional uncertainty towards the end of Q1 2015.			
EM Equity	<b>Overweight</b>	<b>Favorable</b>	<b>Favorable</b>	<b>Favorable</b>
	Relative valuations keep us overweight to the asset class. We continue to maintain our stance that country, regional, and even thematic approaches to the asset class are paramount to success given continuously changing dynamics due to declining oil prices, stronger dollar, capital flows, geopolitics ... not to mention a slowing China. Currency risk will also be critical in 2015.			
REIT Equity	<b>Underweight</b>	<b>Neutral</b>	<b>Favorable</b>	<b>Favorable</b>
	Despite the continued performance of the asset class, we remain underweight as global search for yield continues to drive returns of this asset class in addition stretching valuations. Current spreads over Treasuries are well below historical levels. In addition, a manipulated US yield curve further masks excess valuation.			
Global Natural Resource Equity	<b>Neutral</b>	<b>Favorable</b>	<b>Neutral</b>	<b>Unfavorable</b>
	The commodities complex continues to come under increasing pressure from the threat of slowing global growth as well as a strengthening dollar. Excess supply and capacity are also adding to negative pressure. We remain neutral despite attractive valuations given the commodity backdrop in the near term.			

Fig. 13: ISSG CMC Global Asset Class Views

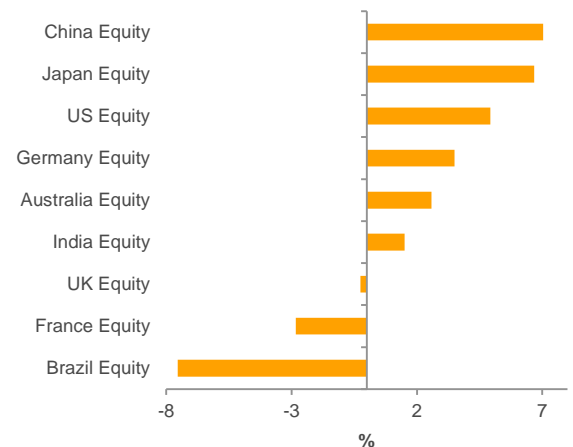
ASSET CLASS	ISSG VIEW
<b>Global Equities</b>	<b>+9.5%</b>
U.S.	O/W
Europe Ex U.K.	Neutral
Pacific Ex-Japan	Neutral
Japan	O/W
U.K.	Neutral
EM	O/W
REITS	U/W
Global Natural Res.	Neutral
<b>Global Bonds</b>	<b>-9.5%</b>
U.S. Sovereign Debt	U/W
U.K. Sovereign Debt	U/W
Japanese Sovereign Debt	U/W
German Sovereign Debt	U/W
High Yield	U/W
U.S. IG Corp. Bonds	U/W
EM Local Cur. Debt	Neutral
EM USD Sovereign Debt	Neutral
<b>Cash</b>	<b>+0.0%</b>

FIG. 14: GLOBAL EQUITY INDEX PERFORMANCE  
% change vs MSCI AC World Index over 3 months to 31 Dec 14



Source: Thomson Reuters Datastream & ISSG

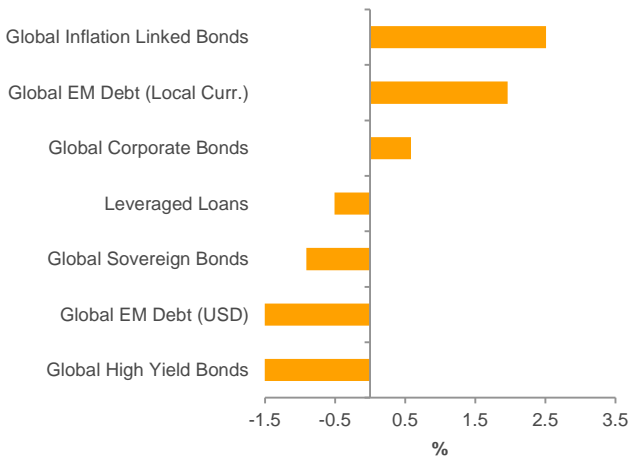
FIG. 15: COUNTRY INDEX PERFORMANCE  
% change over 3 month to 31 Dec 14



Source: Thomson Reuters Datastream & ISSG

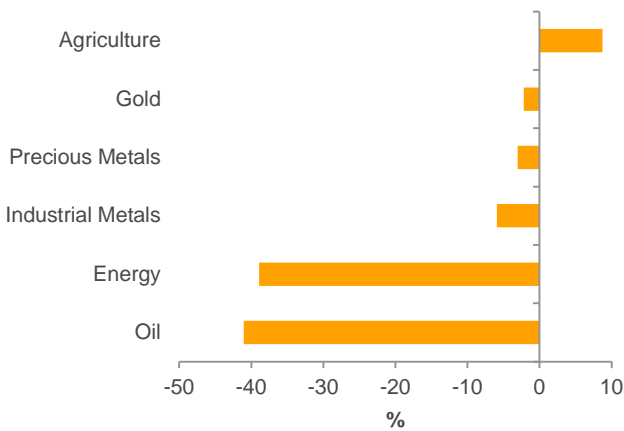


**FIG. 16: FIXED INCOME PERFORMANCE**  
% change over 3 months to 31 Dec 14



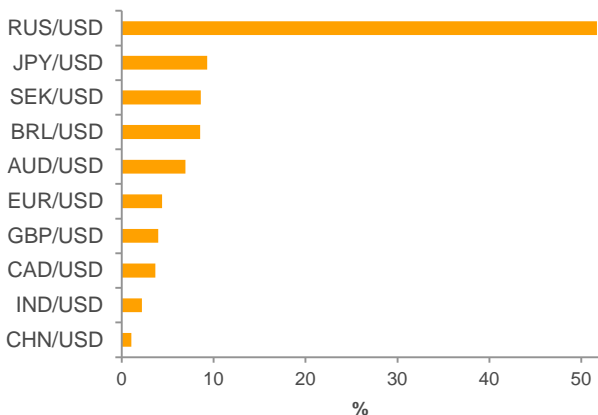
Source: Thomson Reuters Datastream & ISSG

**FIG.17: COMMODITIES PERFORMANCE**  
% change 3 month to 31 Dec 14



Source: Thomson Reuters Datastream & ISSG

**FIG. 18: FX CURRENCY PAIRS**  
% change 3 months to 31 Dec 14



Source: Thomson Reuters Datastream & ISSG

**Global Bond Markets:**

	ISSG CMC View	Valuation Model	Momentum Model	RBAA Model
<b>Developed Sovereign Bonds</b>	Underweight	Unfavorable	Unfavorable	Unfavorable
We remain underweight developed market sovereign bonds despite the downward movement in rates YTD. With the US and UK on the verge of increasing rates we maintain our underweight stance.				
<b>High Yield Bonds</b>	Underweight	Neutral	Neutral	Unfavorable
This remains one of the areas across capital markets that we are watching most closely given the decline in oil prices and an approaching tightening cycle from the Fed. With the decline in oil prices we are on the look out for increasing defaults from energy related issuers and the threat of contagion across the high yield complex.				
<b>Investment Grade Corporate Bonds</b>	Underweight	Unfavorable	Unfavorable	Unfavorable
While investment grade bonds lack the issuer exposure to declining oil prices that exists in high yield, we remain underweight as the asset class is still not compensating investors for duration risk given the compressed nature of spreads in this credit tranche.				
<b>Emerging Markets – Local Currency Bonds</b>	Neutral	Favorable	Neutral	Neutral
We see the dollar strengthening in the next 2 to 3 years and this will present an additional headwind to returns of the asset class. Additionally, we remain cautious on the exposure of issuers to declining oil prices.				
<b>Emerging Markets – USD Bonds</b>	Neutral	Unfavorable	Favorable	Neutral
While we have a neutral stance on both forms of EM debt, we prefer dollar based debt given the outlook for the dollar. Yet, credit spreads remain compressed and we feel do not compensate investors for the risk of declining oil prices as well as increased geopolitical and sovereign credit risks.				
<b>Cash</b>	Neutral	N/A	N/A	N/A
We remain neutral to cash which is a zero weight in our base portfolio given our favorable view of risk assets.				

**Commodities:**

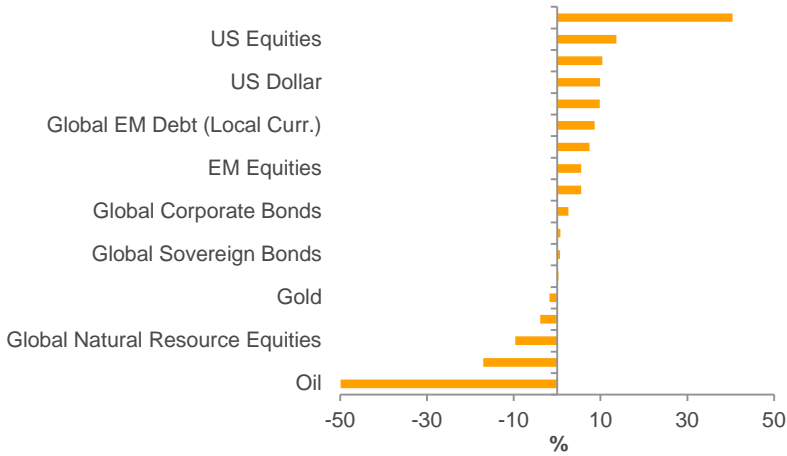
<b>Neutral</b>
The commodity complex across the board is under pressure from both a strengthening dollar and changing supply / demand dynamics. Despite the appearance of attractive entry points in commodities, we remain neutral given the risk of secular as opposed to cyclical changes in commodity fundamentals.

**Currency:**

<b>EUR/USD</b>	<b>Underweight</b>
The threat of deflation and additional policy stimulus from the European Central Bank continues to put downward pressure on the euro and we remain underweight as a result. There is also the threat of currency contagion from the Russian ruble given the impact of oil and sanctions.	
<b>JPY/USD</b>	<b>Neutral</b>
The yen has moved into valuation ranges that are in line with Bank of Japan (BOJ) stated targets. We continue to monitor the prospects of additional stimulus from the BOJ.	
<b>EM: Asia/USD</b>	<b>Neutral</b>
A weaker yen has changed some of the longer held currency relationships in the region between exporters and importers. The Chinese yuan continues its pattern of internationalization, a trend that should be closely followed.	
<b>EM: LATAM/USD</b>	<b>Neutral</b>
While we are neutral to the regional currencies, the decline in oil prices combined with rising inflation will weigh on the prospects for Brazilian real.	

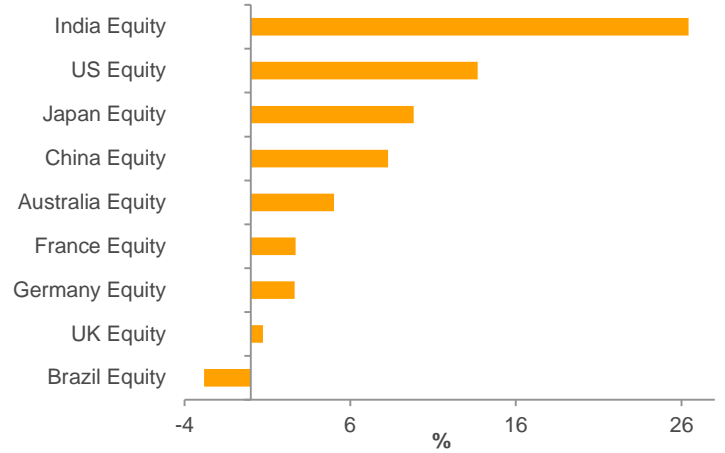
# Performance Monitor

**FIG. 19 : CAPITAL MARKETS**  
% change over 1 year to 31 Dec 14



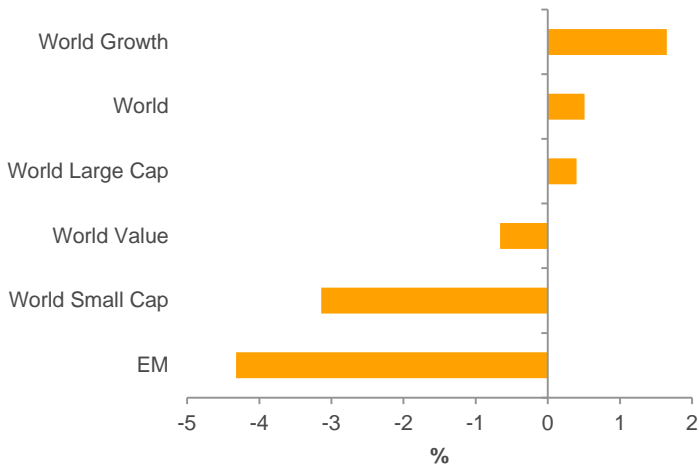
Source: Thomson Reuters Datastream & ISSG

**FIG. 20 : EQUITY COUNTRY INDEX PERFORMANCE**  
% change over 1 year to 31 Dec 14



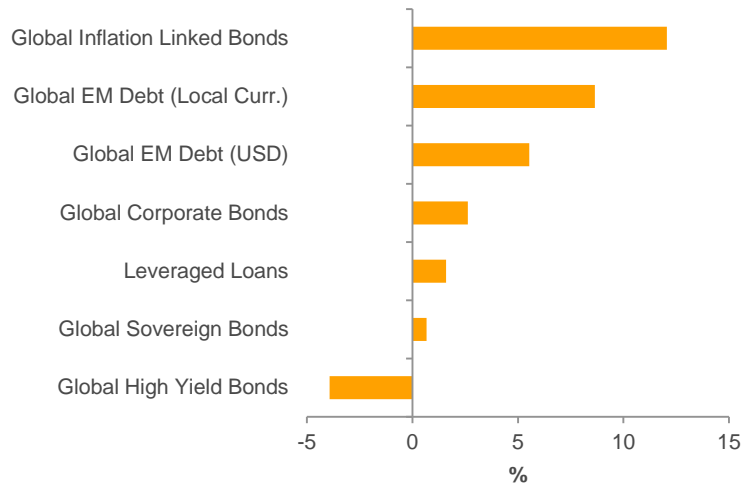
Source: Thomson Reuters Datastream & ISSG

**FIG. 21: GLOBAL EQUITY PERFORMANCE**  
% change vs MSCI World Index over 1 year to 31 Dec 2014



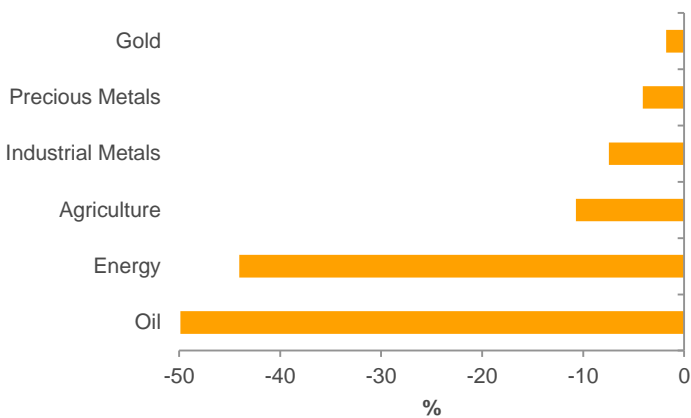
Source: Thomson Reuters Datastream & ISSG

**FIG. 22: FIXED INCOME PERFORMANCE**  
% change over 1 year 31 Dec 14



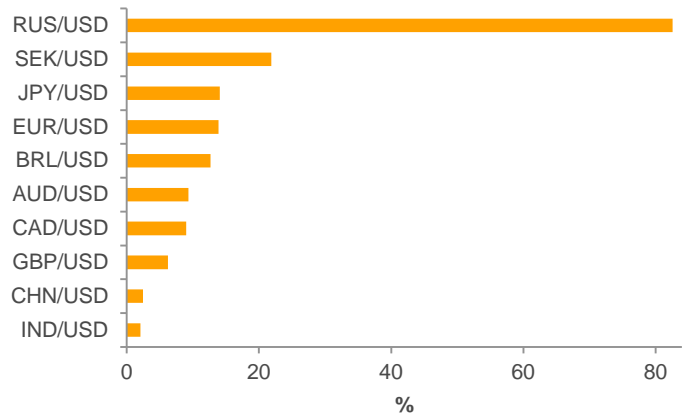
Source: Thomson Reuters Datastream & ISSG

**FIG. 23: COMMODITIES PERFORMANCE**  
% change 1 year to 31 Dec 14



Source: Thomson Reuters Datastream & ISSG

**FIG. 24: FX CURRENCY PAIRS**  
% change 1 year to 31 Dec 14



Source: Thomson Reuters Datastream & ISSG

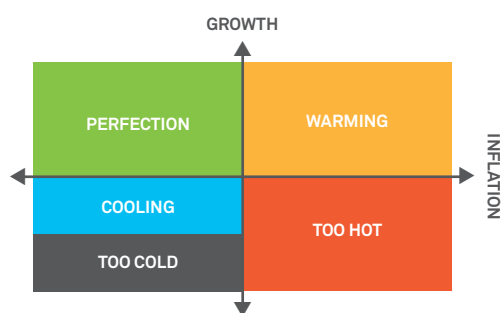
# Appendix & Disclosures

ASSET	INDEX	DEFINITION
Commodities	Bloomberg Commodities Index Total Return (USD Index)	The Bloomberg Commodities index is an index that tracks the performance of broad based commodities.
Gold	Gold Bullion LBM USD/ozt	Tracks the performance of gold bullion spot prices.
Oil	Brent Crude Month FOB USD/BBL	Tracks the performance of Brent Crude Oil spot prices.
Global Sovereign Bonds	JPM Global GBI (USD Index)	Tracks the performance of global sovereign bonds.
Developed Sovereigns		US, UK, Japan, and German Sovereign Debt securities
US Equity	S&P 500 (USD Index)	Tracks the performance of 500 of largest market capitalization equities in the United States.
US Cash	JPM US Cash Index (3M) (USD Index)	Tracks the performance of US 3 month treasury bills.
US Dollar	JPM USD Index Real Broad	Tracks the performance of the US Dollar against a basket of broad currencies.
Global Corporate Bonds	Barclays Global Agg Corp (USD Index)	Tracks the performance of aggregate corporate bonds.
Developed REITS	FTSE E/N Dev REITS (Local Currency)	Tracks the performance of global real estate investment trusts in developed markets.
Global Natural Resource Equities	S&P Gbl Nat Resource Equities (USD Index)	Tracks the performance of global equities linked to natural resources.
Global Investment Grade Bonds	Barclays Inv Grade Corporates (USD Index)	Tracks the performance of aggregate investment grade corporate bonds.
Global Inflation Linked Bonds	Barclays Global Agg Infl-Lkd (USD Index)	Tracks the performance of global inflation linked bonds.
Global High Yield Bonds	Barclays Global High Yield (USD Index)	Tracks the performance of global high yield bonds rates below investment grade.
Global Equities	MSCI World (LC Index)	Tracks the performance of developed market global equities.
MSCI AC World	MSCI AC World Index	Tracks the performance of developed market global equities
Global EM Debt (USD)	JPM EMBI Global Composite (USD Index)	Tracks the performance of dollar based emerging market sovereign bonds.
EM Equities	MSCI Emerging Markets (LC Index)	Tracks the performance of emerging market equities.
UK Equities	FTSE 100 (LC Index)	Tracks the performance of equities domiciled within the United Kingdom.
Europe Ex UK Equities	MSCI Europe ex UK (LC Index)	Tracks the performance of equities domiciled in Europe and not including the UK.
Japan Equity	MSCI Japan (LC Index)	Tracks the performance of equities domiciled in Japan.
Pacific Ex Japan Equity	MSCI Pacific ex Japan (LC Index)	Tracks the performance of equities domiciled in the Asia - Pacific region but not including Japan.
Germany Equity	DAX 30 (LC Index)	Tracks the performance of 30 of largest equity market capitalization companies in Germany.
Eurozone Equity	EuroStoxx 50 (LC Index)	Tracks the performance of 50 of largest equity market capitalizations in the Eurozone.
France Equity	CAC 40 (LC Index)	Tracks the performance of 40 of the largest equity market capitalizations of France.
Australia Equity	ASX All Ordinaries (LC Index)	Tracks the performance of the largest equity market capitalizations of Australia.
Brazil Equity	MSCI Brazil (LC Index)	Tracks the performance of the equities domiciled in Brazil.
India Equity	MSCI India (LC Index)	Tracks the performance of equities domiciled in India.
China Equity	MSCI China (LC Index)	Tracks the performance of equities domiciled in China.
World Growth	MSCI World Growth (LC Index)	Tracks the performance of growth oriented equities as defined by MSCI.
World Large Cap	MSCI World Large Cap (LC Index)	Tracks the performance of large equity market capitalization companies.
World Value	MSCI World Value (LC Index)	Tracks the performance of value oriented equities as defined by MSCI.
World Small Cap	MSCI World Small Cap (LC Index)	Tracks the performance of small equity market capitalization companies.
Leveraged Loans	S&P Leveraged Loan Index (USD Index)	Tracks the performance of leveraged loans.
Global EM Debt (Local Curr.)	JPM GBI Emerging Markets (LC Index)	Tracks the performance of local currency denominated emerging market bonds.
Agriculture	S&P GSCI Agriculture Total Return (USD Index)	Tracks the total return performance of agricultural commodity futures.
Precious Metals	S&P GSCI Precious Metals Total Retn	Tracks the total return performance of futures for precious metals related futures.
Industrial Metals	S&P GSCI Industrial Metals Total Retn (USD Index)	Tracks the total return performance of futures for industrial metals related commodities.
Energy	S&P GSCI Energy Total Return (USD Index)	Tracks the total return performance of futures for energy related commodities.
EUR/USD	EUR/USD	Tracks the performance of the Euro / US Dollar exchange rate.
RUS/USD	RUS/USD	Tracks the performance of the Russian Ruble / US Dollar exchange rate.
CHN/USD	CHN/USD	Tracks the performance of the Chinese Renminbi / US Dollar exchange rate.
SEK/USD	SEK/USD	Tracks the performance of the Swedish Krona / US Dollar exchange rate.
GBP/USD	GBP/USD	Tracks the performance of the British Pound / US Dollar exchange rate.
AUD/USD	AUD/USD	Tracks the performance of the Australian Dollar / US Dollar exchange rate.

ASSET	INDEX	DEFINITION
BRL/USD	BRL/USD	Tracks the performance of the Brazilian Real / US Dollar exchange rate.
CAD/USD	CAD/USD	Tracks the performance of the Canadian Dollar / US Dollar exchange rate.
IND/USD	IND/USD	Tracks the performance of the Indian Rupee / US Dollar exchange rate.
JPY/USD	JPY/USD	Tracks the performance of the Japanese Yen / US Dollar exchange rate.
EM LATAM/USD		Considers the aggregate performance direction of a basket of currencies from Latin America countries as defined in the JPM GBI Emerging Markets Index
EM Asia/USD		Considers the aggregate performance direction of a basket of currencies from Asian countries as defined in the JPM GBI Emerging Markets Index
EUR FX		Tracks the performance of the Euro / US Dollar exchange rate.
GBP FX		Tracks the performance of the British Pound / US Dollar exchange rate.
JPY FX		Tracks the performance of Japanese Yen / US Dollar exchange rate.
EM FX		Tracks the performance of a basket of Emerging Markets currencies versus the US Dollar.
US 10Y Yield		Tracks the performance of the yield on the 10 year US treasury note.
Inflation	Headline Consumer Price Index	Tracks the performance of inflation as reported by respective national economic statistics bureaus.
Growth (PMI)		Tracks the performance of purchasing managers indices in each country to proxy GDP growth.
Surprise vs. Consensus	Citigroup Economic Surprise Index	A measure of economic data reported versus expectations created by Citigroup.
Company Earnings		A proprietary diffusion index of positive and negative analyst earnings estimate revisions.
Monetary Policy		Derived from the futures curve for short term interest rates as indicative of central bank policy.
Inflation Revisions		A proprietary measure of cumulative economist revisions for future levels of inflation in a country.
Growth Revisions		A proprietary measure of cumulative economist revisions for future real economic growth in a country.
Currency Volatility	JP Morgan G7 Volatility Index	Tracks the volatility of G7 currencies and is calculated based on currency 3 month ATMFX vols, which are combined with a set of fixed weights to produce the daily result.
Russian FX Reserves	RUREFEG Index	Tracks the aggregate levels of both Russian gold and foreign exchange in dollars as reported by the central bank of Russia.
RUB/USD	Russian Ruble Spot Rate	Tracks the daily closing spot rate of the Russian Ruble against the US Dollar.
Household Consumption	Household final consumption expenditure	Tracks the aggregate final household consumption expenditure as a percentage of total gross domestic product on an annual basis for China.
Fixed Capital Formation	Gross Fixed Capital Formation	Tracks the aggregate amount of gross fixed capital investment as a percentage of total gross domestic product on an annual basis for China.
Inflation adjusted oil price		Tracks the performance of the generic front month WTI contract (CL1) from Bloomberg and adjusts for the effects of cumulative inflation by deflating the price using the US CPI.
Dollar (Figure 7)	Bloomberg US Dollar Index (DXY Index)	Tracks the performance of the US dollar against a basket of global currencies.
DM Bonds	JPMorgan GBI Global Unhedged LC	Tracks the performance of non-US developed market investment grade corporate bonds denominated in local currency.

These benchmarks are broad-based indices which are used for comparative purposes only and have been selected as they are well known and are easily recognizable by investors. Comparisons to benchmarks have limitations because benchmarks have volatility and other material characteristics that may differ from the portfolio. For example, investments made for the portfolio may differ significantly in terms of security holdings, industry weightings and asset allocation from those of the benchmark. Accordingly, investment results and volatility of the portfolio may differ from those of the benchmark. Also, the indices noted in this presentation are unmanaged, are not available for direct investment, and are not subject to management fees, transaction costs or other types of expenses that the portfolio may incur. In addition, the performance of the indices reflects reinvestment of dividends and, where applicable, capital gain distributions. Therefore, investors should carefully consider these limitations and differences when evaluating the comparative benchmark data performance. The foregoing index licensors are not affiliated with The Bank of New York Mellon Corporation, do not endorse, sponsor, sell or promote the investment strategies or products mentioned in this presentation and they make no representation regarding advisability of investing in the products and strategies described herein. Valuation Model – The ISSG Valuation Model considers relative valuations across the asset classes that we rank. We consider the current values placed on future cash flows of the securities against their historical longer-term trend levels. Momentum Model – The ISSG Momentum Model considers relative price momentum across the asset classes that we rank. Our research shows that this can be an indicator of continued appreciation potential in the future. RBAA Model – The ISSG Regime Based Asset Allocation Model defines five macroeconomic regimes based on the interaction of growth and inflation expectations. We believe changes to these expectations drive regime shifts and influence asset returns.

### BNY Mellon ISSG RBAA Regimes:



### CORRELATION HEAT MAP DEFINITIONS

ASSET CLASS	INDEX — please see above for definitions
World Equity	MSCI AC World (LC Index)
EM Equity	MSCI Emerging Markets (LC Index)
DM Bonds	JPMorgan GBI Global Unhedged
EM \$ Bonds	JPMorgan EMBI Global Composite (USD Index)
DM IG Corps Hedged	Barclays Global Aggregate Corp Index (USD Index)
DM HY Corps Hedged	Barclays Global High Yield (USD Index)
Commodities	Dow Jones – UBS Commodities Index Total Return (USD Index)
Dollar	US Dollar Index



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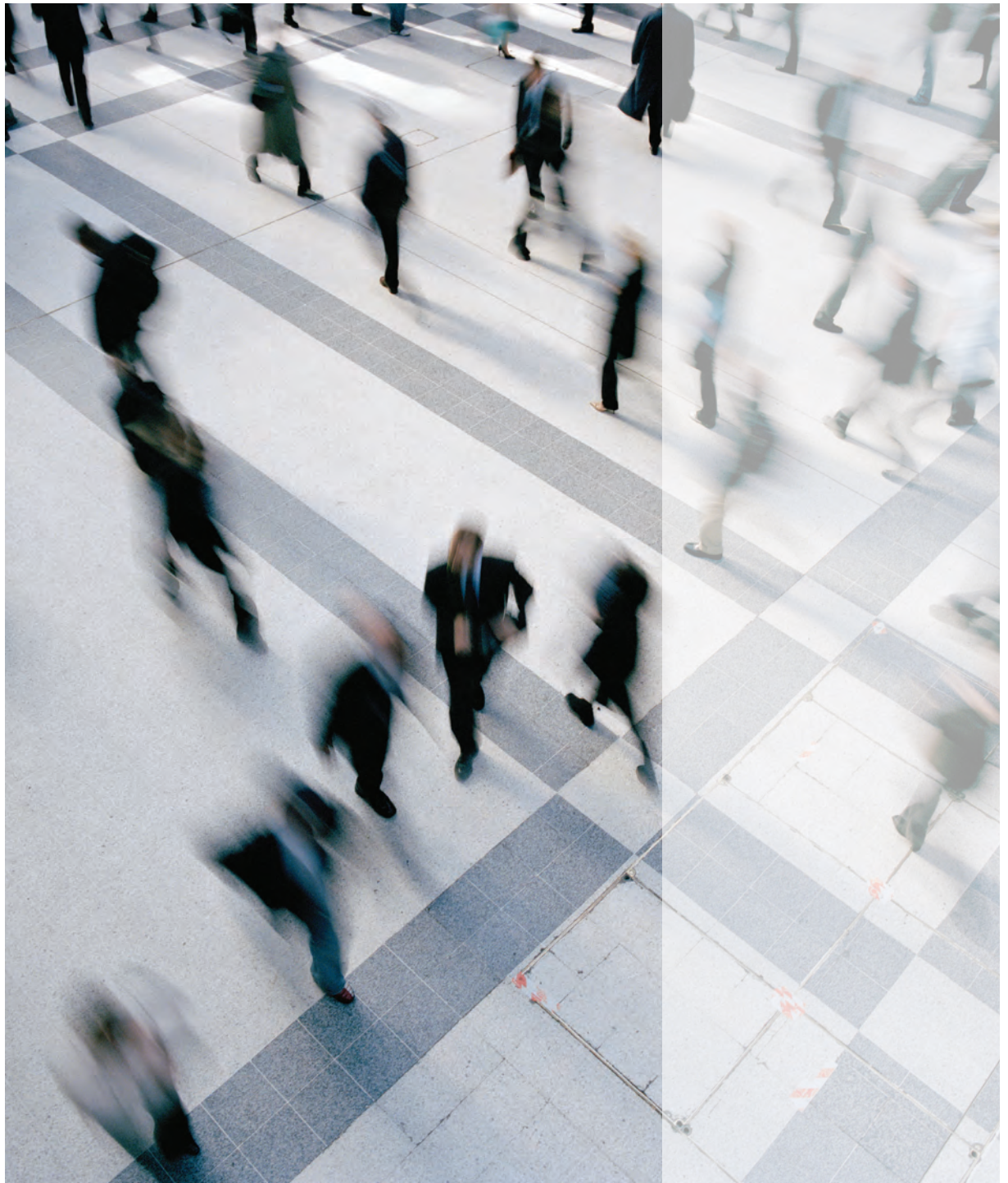
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