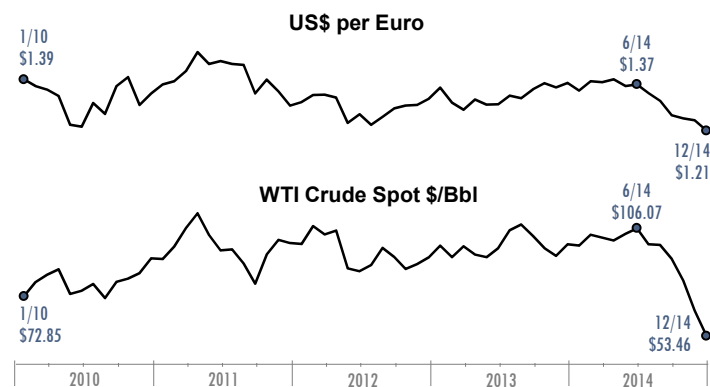
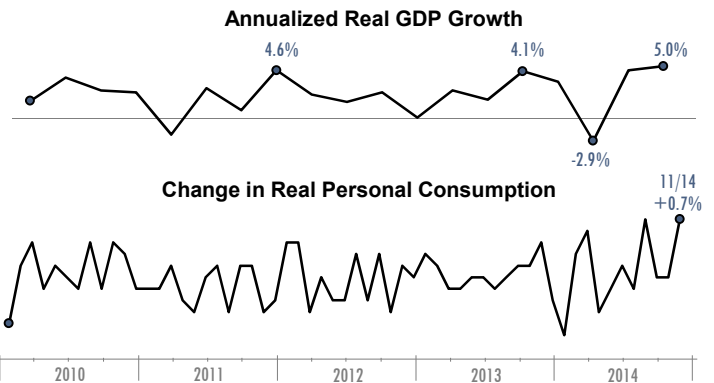


# MARKET Recap

## The US Economy: “Cheap Oil and Euros”

Economic growth continued in the US through the third quarter, achieving a 5% annualized rate for the first time since 2003. Personal consumption expenditures led the way, increasing 0.7% in August. November’s PCE change was similarly robust; other indicators for Q4 were mostly positive although at a decelerating pace, suggesting that the economic expansion is likely to persist.

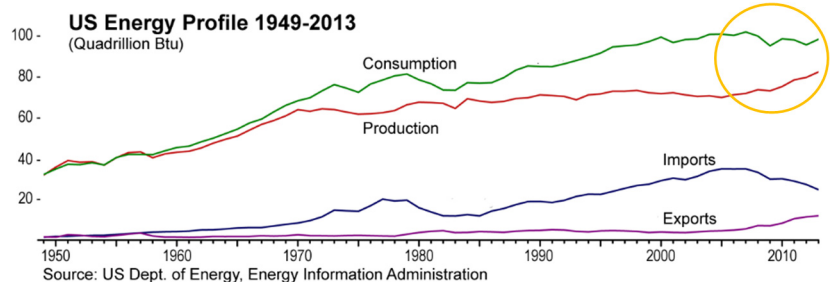
Interestingly, both imports and exports decelerated in the third quarter. Imports of goods and services decreased 0.9% in the third quarter compared to an 11.3% increase in Q2, while exports increased 4.5% in Q3 compared to 11.1% in Q2. Since exports drive up GDP and imports drive it down, the faster deceleration of imports added 0.78% to GDP growth for Q3. With the US dollar continuing to strengthen against the Euro and other currencies, one would expect this trend to reverse with net imports becoming a headwind once global sourcing and pricing have had adequate time to adjust. A flood of capital continued to pour into US markets, particularly into long Treasuries, as investors fled low and falling rates abroad.



West Texas Intermediate Crude declined 41% for the quarter, and 50% since June 30. Although this is not the first time oil prices have been this volatile, the underlying causes of the decline are unusually complex. Much has been made of the change in supply dynamics for oil, with worldwide production increasing due in part to North American oil shale. Supply diversity helps break the monopolistic power of the OPEC cartel leading to lower prices. However, US energy demand has also been decreasing since 2007. In part this has been a function of a slow economic recovery, but a portion of the decline is likely fundamental.

When businesses are forced to re-tool following an economic decline, they naturally seek to obtain efficiencies and then maintain those efficiencies through the following expansion. We’ve discussed that effect applied to the labor markets as a source of increased structural and frictional unemployment, but the same holds for other factors like raw materials. There is also pressure to substitute cheaper and/or cleaner sources of power. US consumption of petroleum and coal have decreased 12.9% and 20.7% since their peak in 2005; in contrast, consumption of natural gas and renewable-source energy have increased by 18.7% and 49.0%.

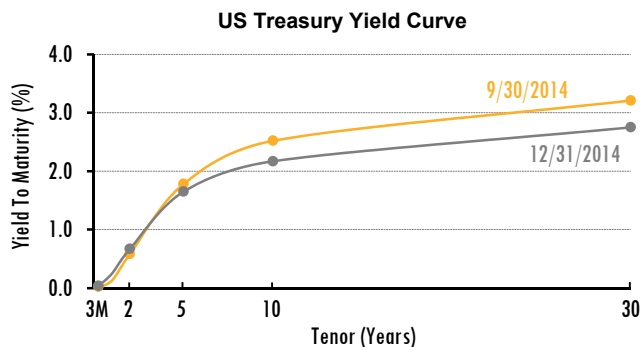
It is the speed, not the direction, of oil prices that has caught world markets by surprise. There is certainly a cyclical nature to the price collapse, with expectations of economic weakness in Europe and China being priced into the commodity. However, we believe some component of the pricing change is durable, absent a major geopolitical event. On the one hand, cheap oil may serve as a substitute source of economic stimulus for the US economy, driving growth as short-term interest rates increase. On the other hand, levered players in the oil industry may not be able to sustain a protracted price slump. That includes some US companies, along with weakly-financed sovereigns like Russia and several Latin American countries. The resulting uncertainty has proven difficult for global equity markets to digest.



## The US Bond Market

During Q4, the yield curve continued to flatten even more dramatically than it had in Q3. The 30-year rate closed out 2014 at 2.75%, having ended at 3.97% the year prior. All rates rose from the 3-month through the 3-year tenors, as a hike in the Fed Funds rate crept closer. At a time when sentiment has grown to view equities as overvalued, assets have sought out safe havens and minimal real yields. US Treasuries have continued to gain as seemingly the "only game in town" for the risk-averse.

The Federal Open Market Committee announced the conclusion of their asset purchase program at the October meeting, and noted that lower energy prices should moderate inflation in the near-term. At December's meeting they hinted at raised inflation expectations as labor markets further improve and lower energy price effects dissipate; however, with energy prices yet to rebound, the long-term impact on inflation remains unclear. The Fed's policy of reinvesting principal payments from holdings of agency debt and MBS and rolling over maturing Treasury securities at auction is being continued as a means of maintaining accommodative financial conditions.



Bond Indices - Total Returns		
	4Q14	2014
BarCap Aggregate	1.79%	5.97%
BarCap Inter. Gov't	0.95%	2.52%
BarCap Long Gov't	8.38%	24.66%
BarCap Inter. Credit	0.80%	4.16%
BarCap Long Credit	4.06%	16.39%
BarCap High Yield	-1.00%	2.45%

The yield curve has flattened to such an extent from the 2-year to the 30-year that, at 209 bps, the spread has reached a 6 year low. However, this is still steep by historic standards. From 1977 to 2002 when the Treasury ceased issuing 30-year bonds, the average monthly term spread was 75 basis points. Meanwhile volatility in the Treasury bond market has nearly reached the quiet lows seen during 2006, as measured by the Merrill Lynch MOVE Index. What does this imply for bond investors? The curve has stubbornly refused to conform to what many assumed would be universally higher rates, rewarding those who maintained relatively high duration. Those who anticipated a reversion to historical levels in the shape of the yield curve have fared considerably better this year. The increased volatility that will likely accompany normalization of the US Treasury bond market may work to the advantage or disadvantage of duration speculators. However, diversification within the fixed income class may provide a more reliable benefit. Active fixed income fund managers who regularly rebalance with the ability to tactically shift between sectors as volatility and interest rates normalize may then find themselves coming out ahead of undiversified or passively managed funds.

Spreads widened rather modestly over the quarter for most sectors, while high yield spreads were more volatile, with the spread on the BarCap High Yield Index ending 59 basis points higher. The widening was driven primarily by levered players in the energy sector, which is the largest component of the high yield market. Despite low rates, the consensus forecast among the major banks is for high yield issuance to contract moderately in 2015. This forecast stems primarily from the extended period for which rates have been low, expected FOMC rate hikes beginning in 2015, and lower oil prices negatively affecting credit ratings in the energy sector. Energy companies contribute roughly 15% of high yield issuance.

Spreads widened rather modestly over the quarter for most sectors, while high yield spreads were more volatile, with the spread on the BarCap High Yield Index ending 59 basis points higher. The widening was driven primarily by levered players in the energy sector, which is the largest component of the high yield market. Despite low rates, the consensus forecast among the major banks is for high yield issuance to contract moderately in 2015. This forecast stems primarily from the extended period for which rates have been low, expected FOMC rate hikes beginning in 2015, and lower oil prices negatively affecting credit ratings in the energy sector. Energy companies contribute roughly 15% of high yield issuance.

## The US Stock Market

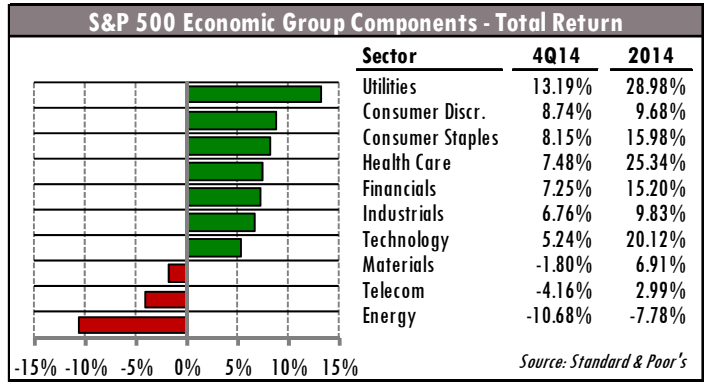
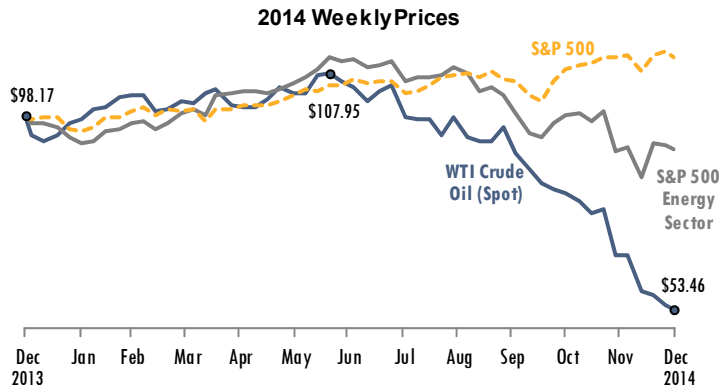
Despite a volatile three months, US equities posted healthy gains. Macroeconomic data was supportive, particularly around GDP growth, unemployment, and wage increases. 74% of the S&P 500 constituents beat analyst earnings estimates, above both the long-term average of 63% and an average of 67% over the prior four quarters. At the end of October, the Fed ended quantitative easing, but remained committed to a low interest rate environment.

Large cap stocks underperformed their mid and small cap peers. Small caps had a particularly strong quarter, rebounding from a sell-off in the third quarter. The outperformance is likely the result of a number of factors including excessive selling pressure leading up to Q4 and in the first half of October, greater exposure to the US economy than their larger-cap peers, and a smaller exposure to the poorly performing energy sector. As of year-end, energy exposure in the S&P 500 was 8.4%, while exposure in the S&P 600 was only 3.5%. On a style basis, growth and value stocks performed largely in line with each other. Dividend stocks, as represented by the S&P 500 Dividend Aristocrats Index, were also notable outperformers this quarter, returning 8.68% on strong performance from the utilities and consumer staples sectors.

Stock Indices - Total Returns					
	4Q14	2014		4Q14	2014
<b>Largecap Stocks</b>			<b>Midcap Stocks</b>		
S&P 500	4.93%	13.69%	S&P Midcap 400	6.35%	9.77%
Russell 1000	4.88%	13.24%	Russell Midcap	5.94%	13.22%
Growth	4.78%	13.05%	Growth	5.84%	11.90%
Value	4.98%	13.45%	Value	6.05%	14.75%
<b>Broad Markets</b>			<b>Smallcap Stocks</b>		
Russell 3000	5.24%	12.56%	S&P Smallcap 600	9.85%	5.76%
Growth	5.17%	12.44%	Russell 2000	9.73%	4.89%
Value	5.31%	12.70%	Growth	10.06%	5.60%
			Value	9.40%	4.22%

The utilities sector benefitted from strong performance among electric companies. Electricity prices remain at near-record levels driving top-line growth. High dividends offered by utilities stocks also continue to attract yield-starved investors which offer premiums over many bonds. Additionally, increases in equity market volatility over the three months likely drove greater investor demand for the historically less volatile sector. Strong performance among consumer discretionary stocks was attributable to the home improvement retail and movies & entertainment industries. Retailers such as Lowe's and Home Depot gained on strength in real estate where sentiment for homebuilders is high, as well as continued employment growth in the US. Movie & entertainment companies benefitted from potential merger activity in the media industry and alleviated concerns in late December over threats on US movie theaters made by the Sony hackers.

Energy was the worst-performing component of the stock market during Q4. Falling crude prices, most notably during December, drove losses across the majority of the sector's underlying industries. Historically, OPEC nations have cut production levels to avoid such price declines, however success with fracking and horizontal drilling in the US has created competition.



In a likely effort to hurt the US shale gas boom, OPEC will maintain current levels of production for the near future. Energy experts have estimated that protracted prices below \$60/barrel will lead to significant scaling back of shale drilling in the US.

Telecom and materials companies also stumbled in the fourth quarter. Pressure on profits from new customer discounts and higher-than-expected "churn" (internet and cell-phone subscribers switching providers) weighed on Verizon and AT&T. In the materials sector, industrial metals and silver sold off significantly on a confluence of reports of slowing demand, particularly from China.

## Overseas Markets

Overseas markets also experienced a significant uptick in volatility during the last quarter of the year. Continued signs of a global economic slowdown with on-going sluggishness in Europe, China and the emerging markets combined with geopolitical unrest and the collapse of the oil market took their toll. Once again, markets experienced currency flight as skittish investors the world-over sought the perceived relative safety of the US dollar.

Near the end of the quarter, a weak demand outlook led to a significant fall in the price of oil. Slower growth expectations combined with a stronger dollar have had a number of consequences, not all good. None were more significant than the impact on Russia. With its economy tied to the price of oil, the steep fall in oil prices put extreme downward pressure on the ruble. This, in turn, led to an outflow of money from Russia. In one day in December the ruble dropped 11% versus the dollar. Going into Christmas week, Russia began taking a number of extraordinary steps in an attempt to stabilize the ruble. To start, the Bank of Russia raised its key interest (overnight!) to 17%, an increase of 6.5%. In addition, Russia sold \$500 million in foreign currency holdings to support the ruble. The sale was the latest in a sell-off of more than \$10 billion since November. The ruble recovered a modest 5% as a result, but remained down around 35% from the beginning of the year.

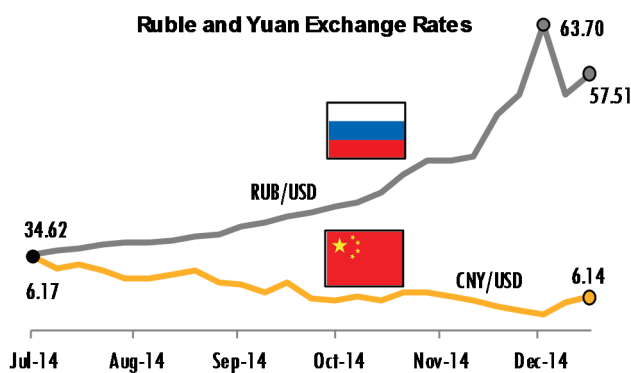
Russia remains under economic pressure from a number of sources. Expectations are that the country will fall into recession in 2015 due to a combination of falling oil prices and economic sanctions from the US and Europe. The ruble has been extremely volatile which has led to foreign and Russian investors taking money out of the market. Former Russian finance minister Aleksei Kudrin put the blame on the government for not acting quickly enough to address the falling ruble and capital flight. He projected a number of ill tidings for 2015: a recession, inflation running from 12-15%, a decline

MSCI Broad Indices	4Q14	2014	Barcap Global Indices*	4Q14	2014
World Index	1.01%	4.94%	Global Aggregate	-1.04%	0.59%
EAFE (Developed)	-3.57%	-4.90%	Pan-Euro	-1.65%	-1.26%
Emerging Markets	-4.50%	-2.19%	Asian-Pacific	-5.76%	-6.83%
			Eurodollar	0.65%	4.11%
			Euro-Yen	-7.67%	-9.67%
			Other Currencies	-1.66%	-0.54%
<b>MSCI Regions</b>	<b>4Q14</b>	<b>2014</b>	<i>*Unhedged</i>		
Europe	-4.35%	-6.18%			
Japan	-2.42%	-4.02%			
Pacific ex-Japan	-1.52%	-0.47%			
Latin America	-13.44%	-12.30%			

of 40% in imports as the falling ruble inflates the price of foreign goods, and the possibility of Russia's credit rating falling to junk status. The central bank also needed to step in with \$2.5 billion to save Trust Bank, the first major lender to fail as a result of the falling ruble. The Bank of Russia will also provide a 6-year loan of around \$550 million to an "investor bank" that will take control of Trust Bank. Analysts are predicting more bailouts in the near future. As of December 26th, data from the central bank showed that foreign currency reserves had fallen by nearly \$16 billion to around \$399 billion. The government has approved 1 trillion rubles (around \$20 billion) to rescue the banking system. Another concern with the falling ruble and economic instability is the possibility of a default. Mr. Kudrin's statement indicated that a default was unlikely, implying that consumers would feel substantial pain, but that the government would be able to withstand the downturn.

China continues to experience a decrease in foreign reserves, with a fall to \$3.89 trillion at the end of October from \$3.99 trillion at mid-year. The end of the Federal Reserve's QE policy was cited as the main contributor to the decline by China's State Administration of Foreign Exchanges. The administration did not perceive any risks or problems related to the decrease, but some analysts disagree as declining reserves and a concurrent slowing economy may foreshadow bad economic news as Chinese competitiveness as a result of its strong foreign exchange rate deteriorates and the outflows hamper the ability of the central bank to expand its balance sheet.

There were also a number of negative signs pointing to deflation and a credit crunch. Inflation shows signs of slowing, down to 1.6% in September from its previous 2.0% reading. The property sector also appears to be slowing with its first year-over-year home price decrease in a number of years according to China's National Bureau of Statistics. A central bank might respond with additional stimulus based on some of these indicators, but China is in a difficult spot with its

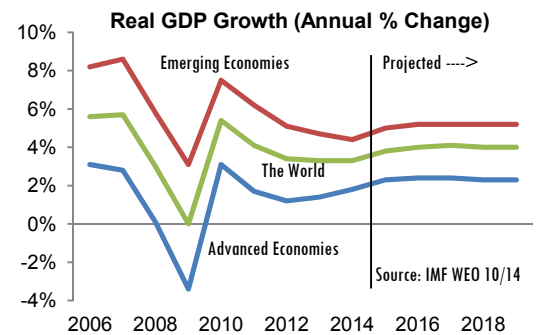


currency loosely pegged to the US dollar and the Federal Reserve ending QE. In August the PBOC discreetly initiated its own QE with a new 1 trillion yuan (\$163 billion) pledged lending facility. China all but admitted its growth problem in late November when it announced a surprise interest rate cut in an attempt to lift the sluggish housing market and support spending of large state-owned companies. In the first rate cut since mid-2012, the PBOC cut its benchmark 1-year deposit rate by 25 basis points to 2.75% and lowered the 1-year lending rate by 40 basis points to 5.60%. Given the negative signs one might have expected the yuan to weaken. However, the yuan strengthened modestly over the quarter, rising with the US dollar due to its "peg" to the currency.

The equity IPO market in China has been frothy in 2014. At quarter-end, short-term borrowing costs saw a significant jump as demand for cash increased due to a number of new stock offerings. The search for capital has intensified due to a recent ban on the use of lower-grade corporate bonds as collateral for loans, formerly a source of funding for institutional investors. Demand for capital is putting additional strain on China's financial system with smaller banks most exposed to higher borrowing costs since they tend to rely more heavily on the interbank market for cash. The weighted average of seven-day repurchase agreements, a benchmark for short-term funding costs in China's money market, rose to 5.27% from 3.89% at year-end. However, the level remains well below the 12% peak reached at the height of the significant cash crunch that China suffered in the summer of 2013.

Europe's economy continued to stagnate. Inflation remained dangerously low as the ECB considered stimulative measures. ECB President Mario Draghi again indicated that the bank would "do what we must" to drive up inflation and inflation expectations as expediently as possible. The bank continues to come under pressure to take more aggressive steps to stimulate growth with Eurozone consumer prices rising just 0.4% in October, well below the central bank's target of "close to but less than 2%." The ECB has pledged to inject up to €1 trillion to reverse the decline in inflation.

In late October, the ECB announced it had started buying covered bonds as part of a stimulus program to boost the eurozone's economy. The bank started buying short-dated covered bonds from a number of different countries, in sizes up to €25 million (\$31.9 million). Covered bonds are backed by a pool of loans, such as residential mortgages, and are widely considered to be the safest type of debt that banks sell. The covered-bond program is part of a package of stimulus measures announced in September that included cuts in interest rates to record lows and planned purchases of asset-backed securities. In December, Europe's central bank also initiated a second round of cheap loans to get commercial banks to lend. However, this second round of loans received a tepid response as banks only took €130 billion (\$161 bil-



Source: IMF WEO 10/14



lion) in loans offered at a fixed interest rate of 0.15% for four years. In November, the European Union said it now expects GDP in the 18-country eurozone to grow 0.8% this year, down from 1.2% growth it forecast earlier in 2014. Expectations are that in 2015 the eurozone economy will grow about 1.1%, also less than the 1.7% growth seen last spring. The forecasts for the eurozone were dragged down by lower-than-expected growth in big countries, including Germany, France and Italy, the latter of which expected to fall back into recession this year. The picture looks only mildly better for the broader EU. The 28 EU countries are now expected to grow on average 1.3% this year, down from 1.6% growth seen earlier in the year. Next year, EU GDP is expected to rise 1.5%, also below the 2.0% previously forecast.

The euro was not immune to the currency "contagion" sweeping the globe. The shared currency continued to weaken versus the US dollar during the quarter, falling near levels not seen since 2010. Draghi continues to press for a weaker euro as a means of stimulating growth in the eurozone and many analysts believe that the best policy tool in his toolbox is to talk the euro sharply downward, which would bolster exports, increase the price of imports and, hopefully, stimulate an increase in inflation. Recent data from the IMF showed that in the third quarter of 2014, global central banks were big euro sellers and dollar buyers. As a result, the proportion of global reserves held in dollars moved to 62% from 60%, and the euro's share fell to 22% from 24%.

Currency	Per US \$ 12/31 FX Rate	% Δ From Q3
Euro	0.83	4.77%
Yen	119.78	9.20%
Ruble	56.45	42.63%
Yuan	6.14	0.03%
Pound	0.64	3.81%
Real	2.68	9.31%

The Bank of Japan shocked global financial markets in October by expanding its massive stimulus spending, recognizing that economic growth and inflation have not picked up as much as expected after April's sales tax hike. BOJ Governor Haruhiko Kuroda characterized the tightly-split decision to buy more assets as a preemptive strike to keep policy on track, rather than an admission that his plan to reflate the economy had derailed. The move left some economists wondering if adding more money into the financial system would be effective as long as consumer confidence continues to worsen and demand remains weak. The new policy equates to about \$60 billion of quantitative easing per month. The jolt from the BOJ, which had been expected to maintain its level of asset purchases, came as the government signaled its readiness to ramp up spending to boost the economy and as the government pension

fund, the world's largest, was set to increase purchases of domestic and foreign stocks. In a rare split decision, the BOJ's board voted 5-4 to accelerate purchases of Japanese government bonds so that its holdings increase at an annual pace of ¥80 trillion (\$723.4 billion), up by ¥30 trillion. The central bank also said it would triple its purchases of exchange-traded funds and real-estate investment trusts and buy longer-dated debt. The bank's previous effort to defeat deflation via quantitative easing from 2001-2006 failed.

Emerging markets were significantly impacted by falling oil and commodity prices as well as a rising dollar. EM bonds were particularly hard hit as investors became skittish with falling local currencies and a lack of confidence that companies (and governments) would be able to make good on their debts, sparking sell-offs in Mexico and Brazil. In addition to Russia, many Latin American economic fortunes have been tied to oil and other natural resources, relying on cheap money to bankroll energy investments and fund growth. There are also concerns of broader economic ripples if large, state-run companies end up being cut off from the global bond markets. Bonds and currencies in non-oil producing countries such as Turkey, India and South Africa have also been negatively impacted, evidence that investors have broader concerns over the emerging markets. Further complicating the situation is the end of QE in the US. With the announcement that US rates will be rising at some point given sustained US growth, the dollar is likely to continue to appreciate at the expense of currencies such as the Brazilian real, Russian ruble and Mexican peso – driving down the incentive of investors to invest in these and other emergent countries.

## Focus On: *Stable Value*

The stable value investment space has evolved considerably since we last addressed the subject in a focus piece written shortly after the financial crisis in 2008. Following the crisis, the industry saw fewer, more-expensive and stricter wrap contracts which led to a decrease in product offerings for new investments. Wrap capacity has been rebounding since 2008, but investment guidelines remain tight. Fees have settled higher at around 20-25 basis points from about 7-9 bps prior to the crisis. Additionally, restrictions on transfers between stable value and competing funds (such as money market funds) have increased. While these new standards have been difficult for many players in the stable value industry, they have only made stable value products more attractive to both plan sponsors and participants. We continue to believe that stable value is an important investment option for many DC plan participants, albeit one that requires significant due diligence, assessment and monitoring by prudent fiduciaries.

## Stable Value in a Nutshell

Stable value funds have existed since the inception of US defined contribution plans in the 1970s. Despite their long history, these investments are still not well understood by the average plan participant or, in many cases, plan sponsors. Stable value experienced relatively little attention prior to 2008 despite assets in excess of \$500 billion at that time, according to the Stable Value Investment Association (SVIA).

These funds are uniquely available within tax-qualified plans (i.e., 401(k) and other DC plans or tuition assistance (529) plans). Portfolios are typically comprised of government, corporate, mortgage-backed and asset-backed securities with an average rating of AA and an average duration between 2 and 3 years. These credit and term risks provide a

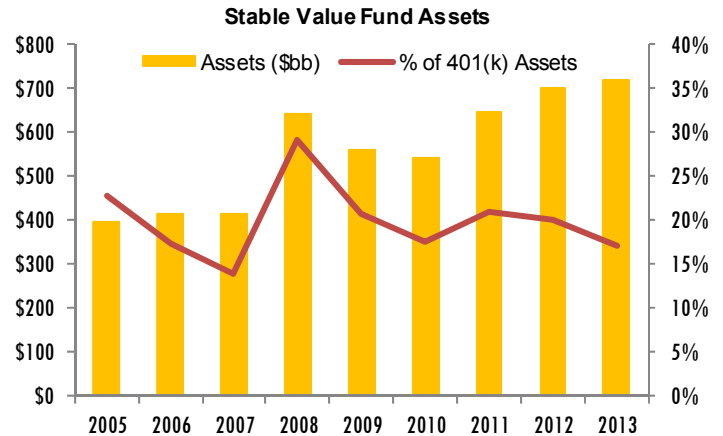
yield spread over money market securities, but they also subject the fund to greater volatility as interest rates and spreads change. To mitigate these risks and decrease volatility, an insurance company or bank provides a book value guarantee, or “wrap,” on the assets. Subject to the terms of the contract, this guarantee allows participants to withdraw funds at book value (the value of an investment plus earned interest minus withdrawals) regardless of the market value of the portfolio. If the market value is lower than the book value, the insurer makes up the difference. Over a complete business cycle the insurer expects the wrap fee to compensate them for any withdrawal risk assumed. While these contracts do not insure against fund losses, they do, over time, amortize the gains and losses of a stable value fund’s underlying fixed income portfolio through the product’s crediting rate, enabling a stable value fund to meet its capital preservation objective. While extraordinary circumstances resulting in mass withdrawals at book value when the market value of the portfolio is relatively depressed could result in irrecoverable losses to the fund, clauses in the wrap contract seek to protect the wrap provider and the fund from such an occurrence.

## Risks Associated with Stable Value

Participants often assume that investing in stable value is free of any risk. In reality, there are several aspects of the asset class that warrant careful consideration. An obvious concern should be default risk. A guarantee is only as good as the entity providing it. Although defaults have been very rare in stable value products, they are not unheard of. In the early 1990s, defaults by Executive Life and Mutual Benefit Life would have resulted in participant losses had other insurance companies not stepped in to assume their liabilities. More recently, AIG’s instability in the throes of the credit crisis had many industry experts concerned that the insurance giant would be forced to default on its stable value guarantee obligations just as the underlying bond portfolios were experiencing unprecedented losses, primarily from mortgage-backed holdings. As a major wrap provider at that time, the impact of an AIG default would have been felt by countless participants across the US. Diversification, both in guarantee structure and guarantee provider, has long been the most common step taken to mitigate default risk. But while such a step may reduce the overall impact of a default event, increasing the number of guarantors also increases the likelihood that a default could be experienced.

A frequently-overlooked risk of investing in stable value is “run risk,” or the risk that a significant amount of assets suddenly flows out of a stable value product. A run can be caused by a plan sponsor action (e.g., from a sizeable employee layoff) or by participant withdrawals (e.g., as a result of a bull run in equity markets or a fear-driven run in a credit crisis). The short-term impact of a run is obvious: if market value is below book value, the insurer must step in to meet the withdrawals (subject to contract provisions). However, participants are impacted as well through the long-term effect the event has on the crediting rate. The farther the market-to-book value ratio falls, the longer it will take to amortize the deficit into the product’s book value, which in turn suppresses the crediting rate. Since transfers to competing funds are restricted, unless a participant wants to invest in a “riskier” asset, they can be trapped in a low-yielding stable value fund.

Finally, there is an element of market risk in stable value arrangements. As with any other fixed income asset, the market value of stable value investments declines when interest rates rise. However, with stable value, any loss (or gain for that matter) is passed through the crediting rate over the duration of the fund, typically offsetting the market value loss by the rise in yields. This results in crediting rates that lag real yields as interest rates rise or fall. And while this allows for smoother returns for stable value investors, a problem may arise if interest rates increase significantly above the stable value fund’s crediting rate. If external rates rise steeply, the crediting rate on stable value will quickly look uncompetitive against money market or other short-term fixed income asset classes, potentially causing a run in participant withdrawals.



To assess the potential impact of an interest rate spike, we can look to the formulas that determine the crediting rates on stable value contracts. While there can be minor variations, essentially they are each a function of the annualized yield to maturity of the underlying assets, their average weighted duration, book to market value, and the contract fee as an annualized rate. In the current low rate environment, as cash flows into a stable value fund or securities are rolled, the yield in the formula will fall and the market-to-book will approach 1, likely from a value greater than 1. If rates subsequently begin to rise significantly, the market-to-book will fall. Together these factors seem to indicate diminished crediting rates for plan participants regardless of whether interest rates remain low or normalize.

A simulated rise in rates comparable to what occurred from 1986–1989, performed by Vanguard in a 2012 study, resulted in the crediting rate for stable value funds fluctuating within a range of roughly 40 bps – dipping as rates rise and then recovering. However, under a highly inflationary environment such as the 1970s to early 1980s, crediting rates would likely fall to 0% due to outflows at MV/BV ratios well below those resulting from a gradual ~200 bps rise in rates.

While the current low rate environment heightens this risk, there are mitigating factors. The Fed generally adjusts the target federal funds rate (used to control short term interest rates) in 25 bp increments immediately following regularly scheduled FOMC meetings. The current fed funds rate is set to a target range of 0 to 25 bps, meaning that it would likely take over ten increases of 25 bps each just to bring money market fund yields up to current stable value portfolio crediting rates. It is worth noting that since the inception of stable value there have been six full interest rate cycles that have been defined by restrictive monetary policy, increasing inflationary pressures, and a rise in interest rates (as stated by SVIA) and stable value investments have been able to weather each of these periods.

### Current Trends

As previously mentioned, the stable value landscape changed significantly following the 2008 financial crisis. Trends that took root in the early days of the crisis have now become market standards.

**Higher Wrap Fees:** Many banks and insurance companies providing wraps prior to the crisis curtailed their activity or left the industry entirely following 2008. This consolidation of the industry reduced competition, resulting in higher fees. Today wrap issuance continues to rebound, and wrap fees have stabilized. The higher fee levels have attracted new entrants, creating wrap capacity and a stronger, more competitive industry.

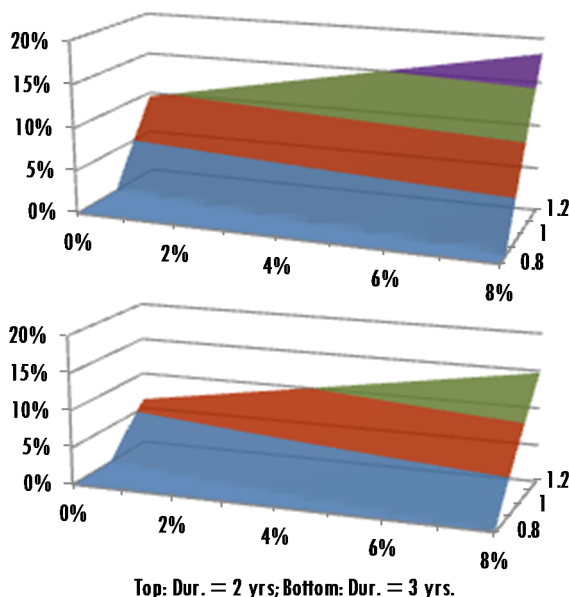
**Tighter Investment Guidelines:** Following the crisis, wrap issuers altered investment guidelines to minimize credit and duration risk in the portfolios they guaranteed. Today, guidelines typically include explicit duration definitions, quality and issuer parameters for each bond type, sector allocation limits, limitations on synthetic holdings and derivatives, and limitations on securitized assets as well as specific counterparty requirements. Additionally, new restrictions on transfers to competing funds have been established to protect long-term investors. Target-date funds and self-directed brokerage windows are now considered “competing funds” that can’t accept direct transfers from stable value funds. This minimizes opportunities for arbitrage between those options and stable value, especially helpful in a rising rate environment.

**Longer Puts:** When small plans invest in stable value funds they typically do so through pooled or commingled products. Commingled funds stipulate that if participant withdrawals from a stable value fund are due to employer-initiated events such as mass layoffs, bankruptcy or early retirement programs, then participants will be guaranteed access to their money at book value over a period of time rather than immediately. (However, participants may still receive distributions at market value immediately upon demand.) This process helps minimize the impact of massive withdrawals on the remaining investors. In the past, the payout period, called a “put,” had been 12 months. However, many wrap providers have extended this put to 18 months or longer in order to enhance the protections for the fund’s long-term investors.

**Commingled Constraints:** Prior to 2008, insurers put pressure on plan sponsors to use commingled funds, regardless of plan size. Theoretically, everyone benefited from the economies of scale. But during the credit crisis, commingled pools were hard-hit as large plans pulled out in favor of single-plan products. Today wrap providers protect themselves against this run risk by requiring funds maintain higher levels of unwrapped cash in money markets or other similar products. While in the past insurers required 2%-3% of assets be in cash, today many insurers require 10%-15%, which challenges

$$\text{Crediting Rate} = (1 + YTM) \left( \frac{MV}{BV} \right)^{\frac{1}{Dur}} - 1$$

Crediting Rate vs. YTM, MV/BV

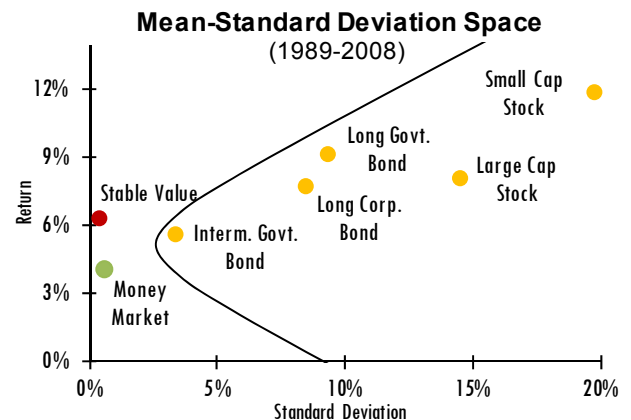


stable value performance over the longer term. In addition, insurers have become more selective than ever in the parameters set for plans allowed into commingled pools. They often require companies be vetted prior to accepting assets to ensure that no employer-initiated events are imminent.

### Should stable value be included in your defined contribution plan?

Stable value has been around since the inception of defined contribution plans and has delivered consistent and conservative positive returns through various market conditions, notably above those offered by other investments with similar risk levels. While money market funds are typically considered the closest alternative to stable value funds, there is no real substitute for the asset class. Like stable value funds, money market funds allow investors to redeem at NAV (usually \$1/share) at any time, in any amount and for any reason. However, their returns have consistently lagged stable value returns. As of 9/30/14, the Hueler Stable Value Index had a median 1-year return of 1.72% versus the 0.01% median 1-year return of the Morningstar Taxable Money Market Universe. Furthermore, money market funds do not offer any principal or yield guarantees. Another potential alternative to stable value are intermediate-term bond funds. While historically these funds have achieved long-term returns similar to those from stable value, their returns have been much more volatile. Also, like money market funds, intermediate-term bonds offer no protection of principal or accrued interest.

The unique characteristics of stable value are best demonstrated in the context of portfolio construction and risk/return metrics. Including a stable value fund often leads to a reduction in the number of funds needed to create a mean-variance efficient portfolio. Historically, stable value funds have exhibited lower volatility than even money market funds while offering returns above those of intermediate-term government bonds. Examining risk/return measures offers a compelling argument for the inclusion of stable value as an asset class as well. In their 2009 study, Babbel and Herce provide an estimated Sharpe ratio from 1973 to 2008 of 1.47 for stable value versus under 0.15 for stocks and bonds. Stable value funds appear even more attractive on the basis of Sortino and Treynor ratios.



### Conclusion

While no investment is risk-free, stable value is one of the lowest-volatility choices available in the DC plan environment. Notably, it was one of the few asset classes that did not experience negative returns during the financial crisis, averaging 4.17% in 2008 as stated by SVIA. According to Barclays, in that same time period money market funds earned 2.05% and the Barclays US 1-5 Year Credit Index lost 1.13%. However, the average market value of funds in the Hueler Stable Value Index dropped below 90% of book value during the crisis in 2008. While in most cases investors were still able to withdraw their funds at the full book value, it took years for some funds to amortize their way back to a healthy market-to-book value ratio. Had the financial system further deteriorated, bankruptcies among wrap providers could have rendered the insurance contracts protecting book values null and void, exposing participant investments to the significantly reduced market values. So while the most recent financial crisis provided evidence of the ability of stable value to withstand market forces and maintain a low correlation to other asset classes, it also highlighted some of the inherent and often overlooked risks in the asset class.

In the end, stable value funds offer predictable returns, principal protection and a high probability of achieving returns that keep pace with inflation. In today's unpredictable market, investor demand for principal protection and low-volatility returns is greater than ever. Stable value is a way to safeguard capital without settling for negligible yield. For participants nearing retirement who have little time to recover from significant losses, stable value is a particularly important investment option to consider.

