NOVEMBER 2017

A CREDIT PERSPECTIVE: HOW THE NEXT DOWNTURN WILL BE DIFFERENT

See slide 19 for important information regarding our certifications as well as other disclaimers.

Introduction to Janney Montgomery Scott LLC

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Janney Headquarters

Source: Janney ISG

Goals

- **November 1st PCBE Event Goals:**
  - To discuss the post-recession era of corporate bonds
  - To identify elements that complicate the story for bondholders
  - To address issues that may arise during the next downturn or change in credit cycle

Source: Janney ISG

"Can you increase its range?"

Source: Janney ISG, www.cartoonstock.com

A Quick Recap of Prior PCBE Presentation

- **"Exogenous Factors Shaking Outlooks for Firm Fundamentals"**
  - Presented in March 2015 to PCBE
- **Main point was non-Fed factors affecting corporates would be**
  - Energy/Commodities
  - Currencies

Snapshot from March 2015 Presentation to PCBE

…and Seen in Ratings Downgrades of Late

Company Name	Date	Agency	Curr Rtg	Prior Rtg
Peabody Energy	27-Feb	Moody's	B2	Ba3
Hercules Offshore	26-Feb	S&P	CCC+	B-
Comstock Resources	25-Feb	Moody's	B3	B2
Rex Energy	25-Feb	S&P	B-	B
DCP Midstream Ptnrs	23-Feb	S&P	BB	BBB-
Quicksilver Resources	19-Feb	S&P	D	CCC-
Samson Resources	17-Feb	S&P	CCC+	B- *-
Rex Energy	12-Feb	Moody's	B3	B2
Sabine Oil & Gas	12-Feb	Moody's	Caa2	Caa1
Cyprus Amax Minerals	11-Feb	S&P	BBB-	BBB
Freeport-McMoRan	11-Feb	S&P	BBB-	BBB
AM Castle	9-Feb	S&P	CCC+	B-
RAAM Global Energy	9-Feb	S&P	CCC-	CCC+
ArcelorMittal	3-Feb	S&P	BB	BB+
DCP Midstream	2-Feb	Fitch	BBB-	BBB
Arch Coal	2-Feb	Moody's	Caa1	B3
Niska Gas Storage	2-Feb	Moody's	Caa1	B3
Niska Gas Storage	2-Feb	S&P	B-	B+
Alpha Natural	30-Jan	Moody's	Caa1	B3
Cliffs Natural Resources	30-Jan	S&P	B	BB-
Energy XXI Gulf Coast	28-Jan	Moody's	Caa1	B2
EPL Oil & Gas	28-Jan	Moody's	Caa2	B3
Alliance Pipeline	27-Jan	Moody's	Baa2	Baa1 *-
Midstates Petroleum	26-Jan	Moody's	Caa1	B3

Company Name	Date	Agency	Curr Rtg	Prior Rtg
Halcon Resources	23-Jan	Moody's	Caa1	B3
DCP Midstream	23-Jan	Moody's	Baa3 *-	Baa2
American Eagle Energy	22-Jan	Moody's	Ca	Caa1
NGPL PipeCo	16-Jan	Moody's	Caa2	B3
Apache	16-Jan	S&P	A- *-	A-
Black Elk Energy	16-Jan	S&P	CCC-	CCC+
BreitBurn Energy Ptnrs	16-Jan	S&P	B+ *-	B+
Energy XXI	16-Jan	S&P	B	B+
EPL Oil & Gas	16-Jan	S&P	B	B+
Magnum Hunter	16-Jan	S&P	CCC+	B-
Midstates Petroleum	16-Jan	S&P	B-	B
Swift Energy	16-Jan	S&P	B-	B
Warren Resources	16-Jan	S&P	B-	B
WPX Energy	16-Jan	S&P	BB	BB+
CITGO Petroleum	15-Jan	Moody's	B3	B1
Paragon Offshore	14-Jan	Moody's	Ba3	Ba2
Patriot Coal	14-Jan	S&P	B-	B
Southwestern Energy	12-Jan	S&P	BBB-	BBB *-
CITGO Petroleum	9-Jan	Fitch	B	BB-
Wise Metals	8-Jan	Moody's	B3	B3 *+
Resolute Energy	8-Jan	Moody's	Caa2	Caa1
Halcon Resources	23-Jan	Moody's	Caa1	B3
DCP Midstream	23-Jan	Moody's	Baa3 *-	Baa2
American Eagle Energy	22-Jan	Moody's	Ca	Caa1

Source: Janney FISR; Moody's; S&P; Fitch; Bloomberg; only showing US companies that were downgraded since the start of 2015

Janney CAPITAL MARKETS

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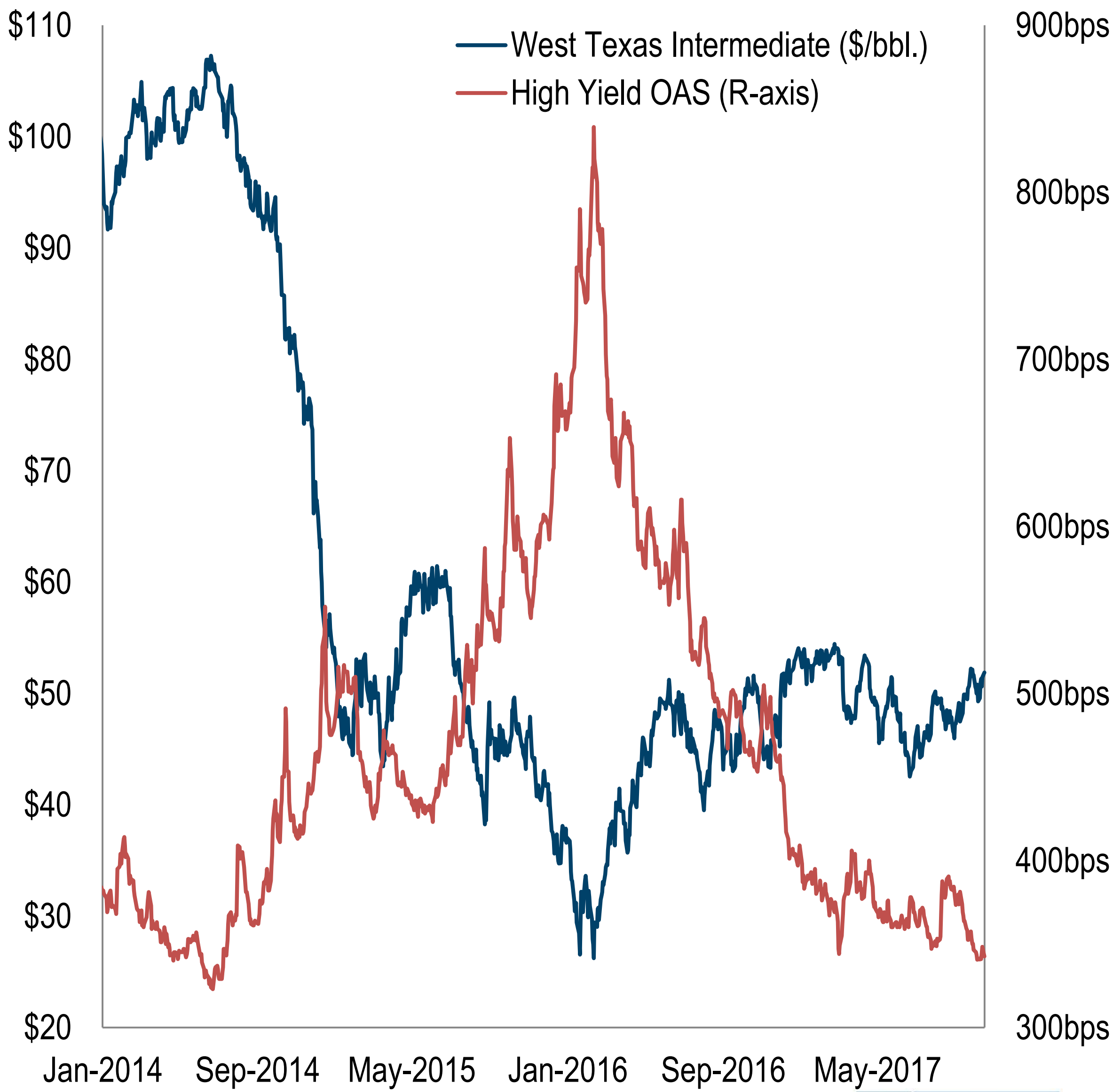
Source: Janney ISG

Lessons Learned from the Selloff in Energy

- **Selloff in energy can show how quickly the market can move either direction**
  - Energy prices not yet back to pre-selloff levels, but high yield credit spreads are
- **Individual and institutional investors had difficulty exiting positions**
- **Companies employed creative financing to extend liquidity situations**
- **Energy represented 16% of HY index in June 2014 and 14% today**

Credit Spreads Have Responded to Moves in Oil Prices in Recent Years

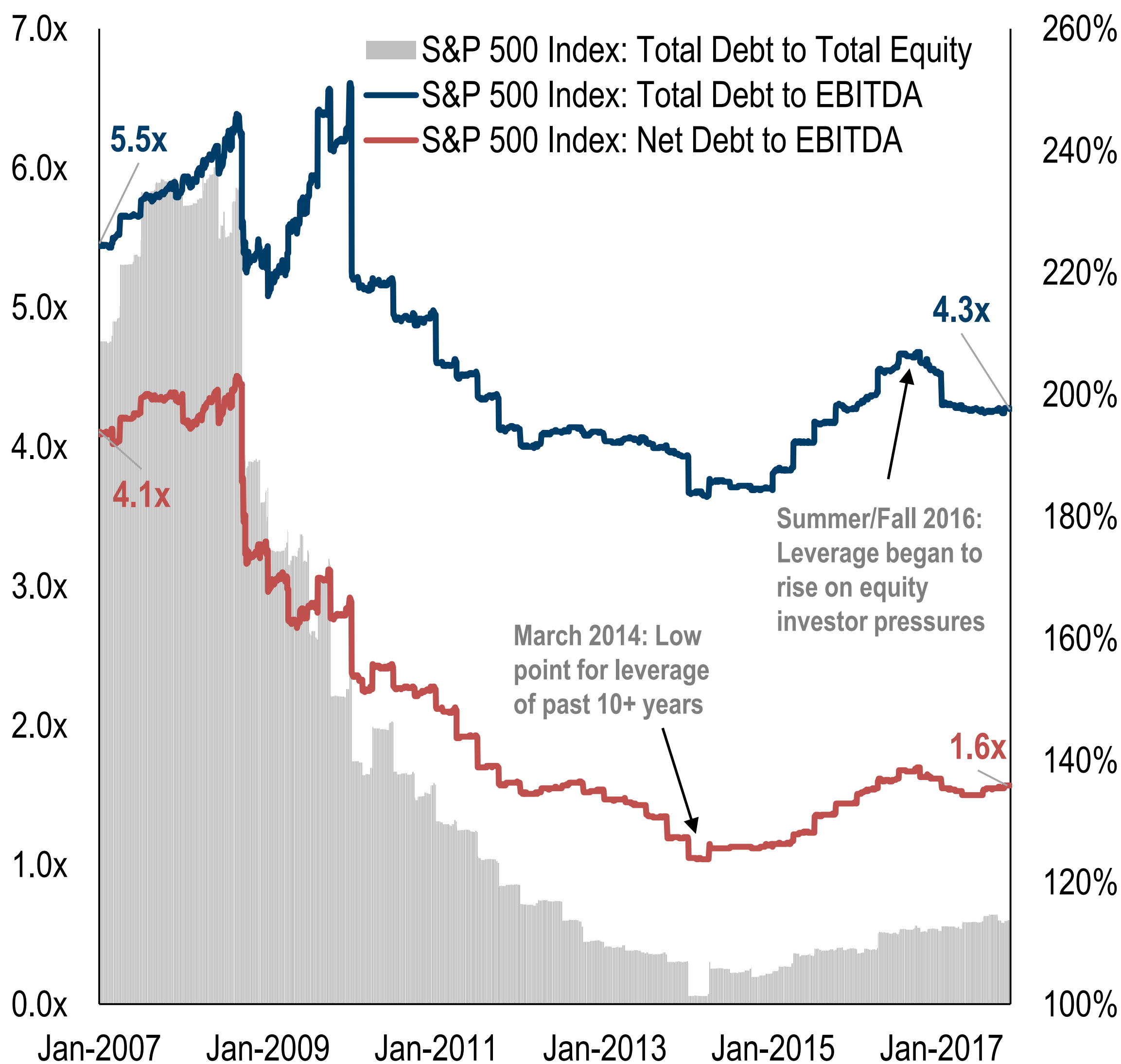


Source: Janney ISG, NYMEX, Bloomberg/Barclays

A Look Back At How We Got Here – The Post-Recession Era Story

- **Low rates getting lower meant:**
  - Low cost of debt capital
  - Potential for firms to
    - Refinance debt to push out maturities
    - Build up liquidity
    - Focus on balance sheet
- **Shareholders were patient in the few years post-recession**
  - Now activist investors are demanding returns via dividends, share buybacks, spin-offs, etc.
  - Capex still not to pre-recession levels
- **Side note: Remember the "maturity wall" of 2014?**

Leverage Has Risen from the 2014 Lows, But Not At Pre-Recession Highs

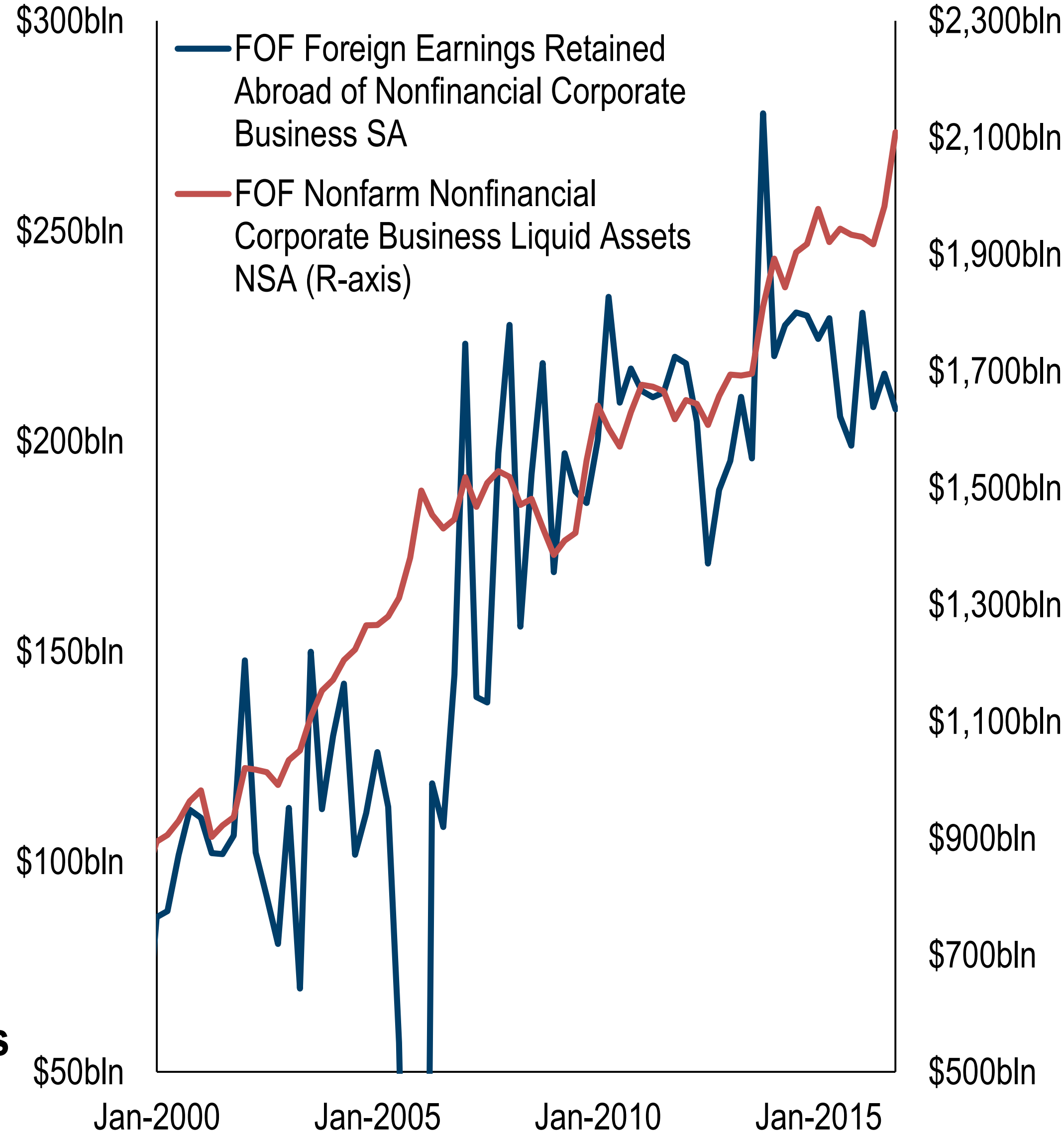


Source: Janney ISG, Bloomberg, S&P

The Post-Recession Era Story (cont.)

- **Cash balances at a peak, but earnings generated overseas (therefore cash held overseas) elevated vs pre-recession**
- **Fit with narrative of stronger companies → buy corporate bonds**
- **Concentration of cash among top issuers implies total does not tell whole story**
- **Companies' capex plans have not returned to pre-recession levels relative to cash on hand**
  - Speaks to lack of long-term growth plans
- **Optimism shifted positive post-election**
- **Tug-and-pull equity vs debt markets**

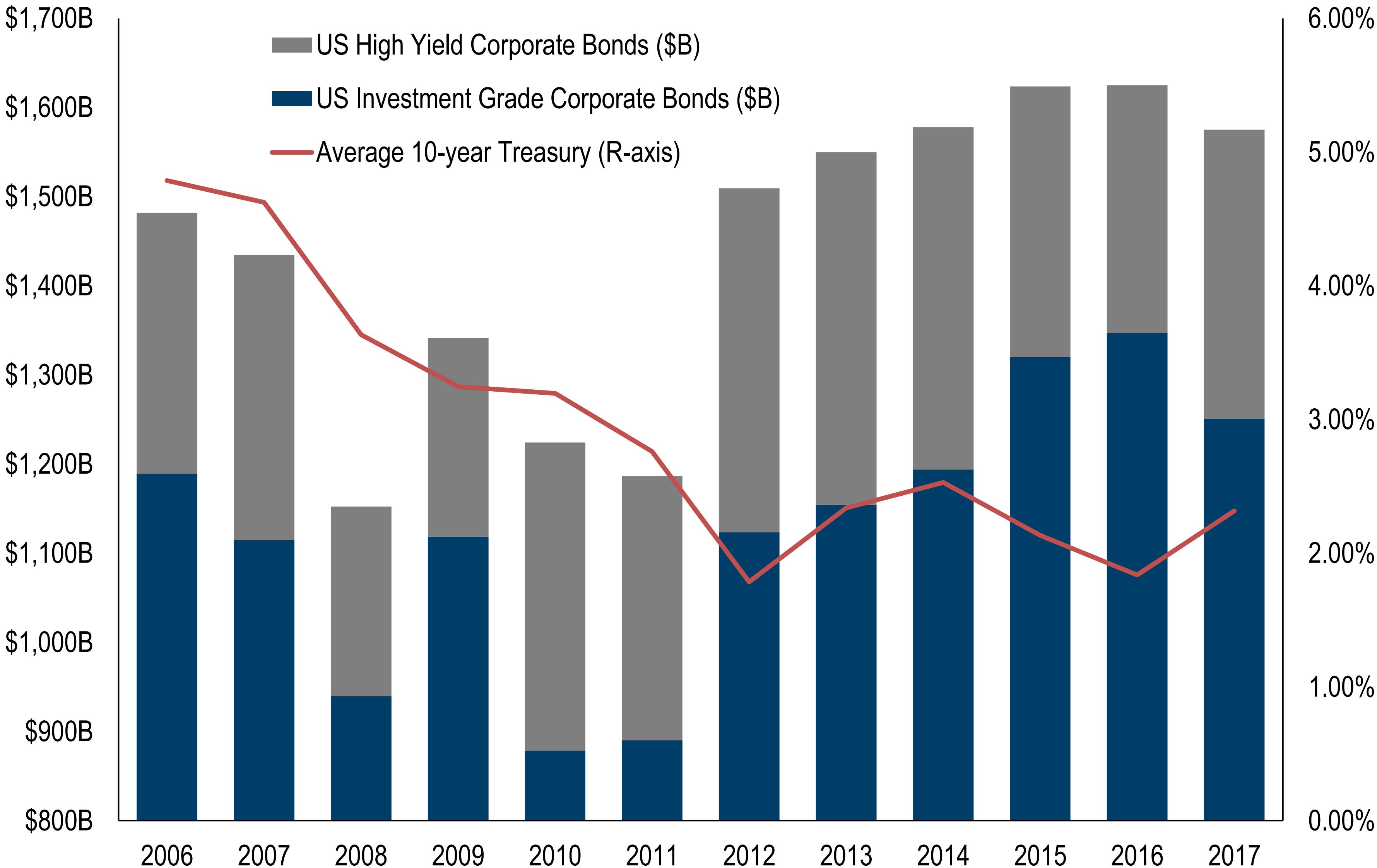
Earnings Retained Abroad Have Risen in Recent Years



Source: Janney ISG, Federal Reserve's Flow of Funds

The Present: Issuance Volume

US Corporate Issuance Has Been Robust in Years Post-Recession as Rates Remained Low



Source: Janney ISG, Bloomberg, Company Reports

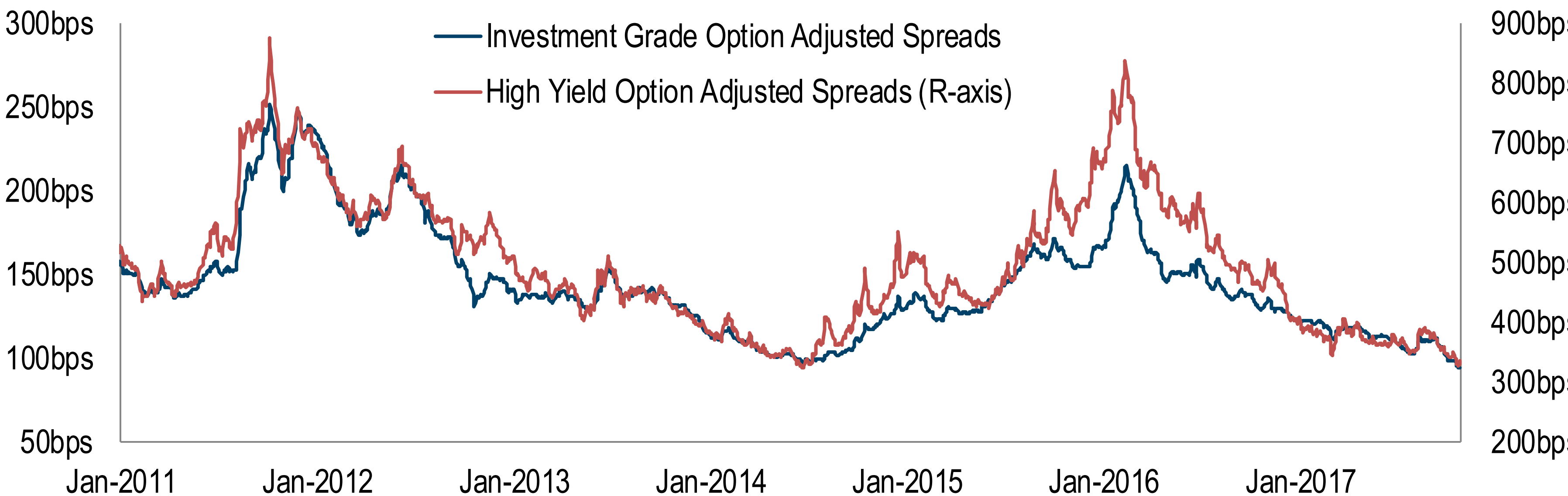
Investors Are Feeding Off Robust Returns

- **Returns in corporates vs other fixed income asset classes have perpetuated investors' interest**

- **Credit spreads are narrow and getting narrower**
  - IG at 10+ year tight
  - HY near June 2014 tights

Name	YTD Rtn	1Yr Rtn	3Yr Rtn	5Yr Rtn	7Yr Rtn
US Aggregate	2.91%	0.68%	6.74%	10.56%	22.37%
US Treasury	1.83%	(0.86%)	4.36%	6.42%	16.40%
US Agg Gov't-Related	3.64%	1.29%	6.37%	10.08%	20.50%
Municipal Bond	4.87%	2.29%	9.11%	15.89%	31.19%
US Corp Ivmt Grade	**5.27%**	**3.14%**	**11.26%**	**17.61%**	**37.82%**
US Corp High Yield	**7.40%**	**8.36%**	**17.71%**	**35.36%**	**62.17%**
US MBS	2.03%	0.33%	5.98%	10.17%	19.33%
Euro Aggregate	0.77%	(0.04%)	7.49%	22.00%	33.88%
Asian Pacific Agg	0.72%	0.16%	5.57%	14.70%	20.22%
Global Infl-Linked	4.39%	2.35%	2.07%	6.01%	21.42%

IG Credit Spreads Are at July 2007 Tights, but High Yield Still Slightly Wide of June 2014 Tights



Source: Janney ISG, Bloomberg/Barclays, a/o 10/27/2017

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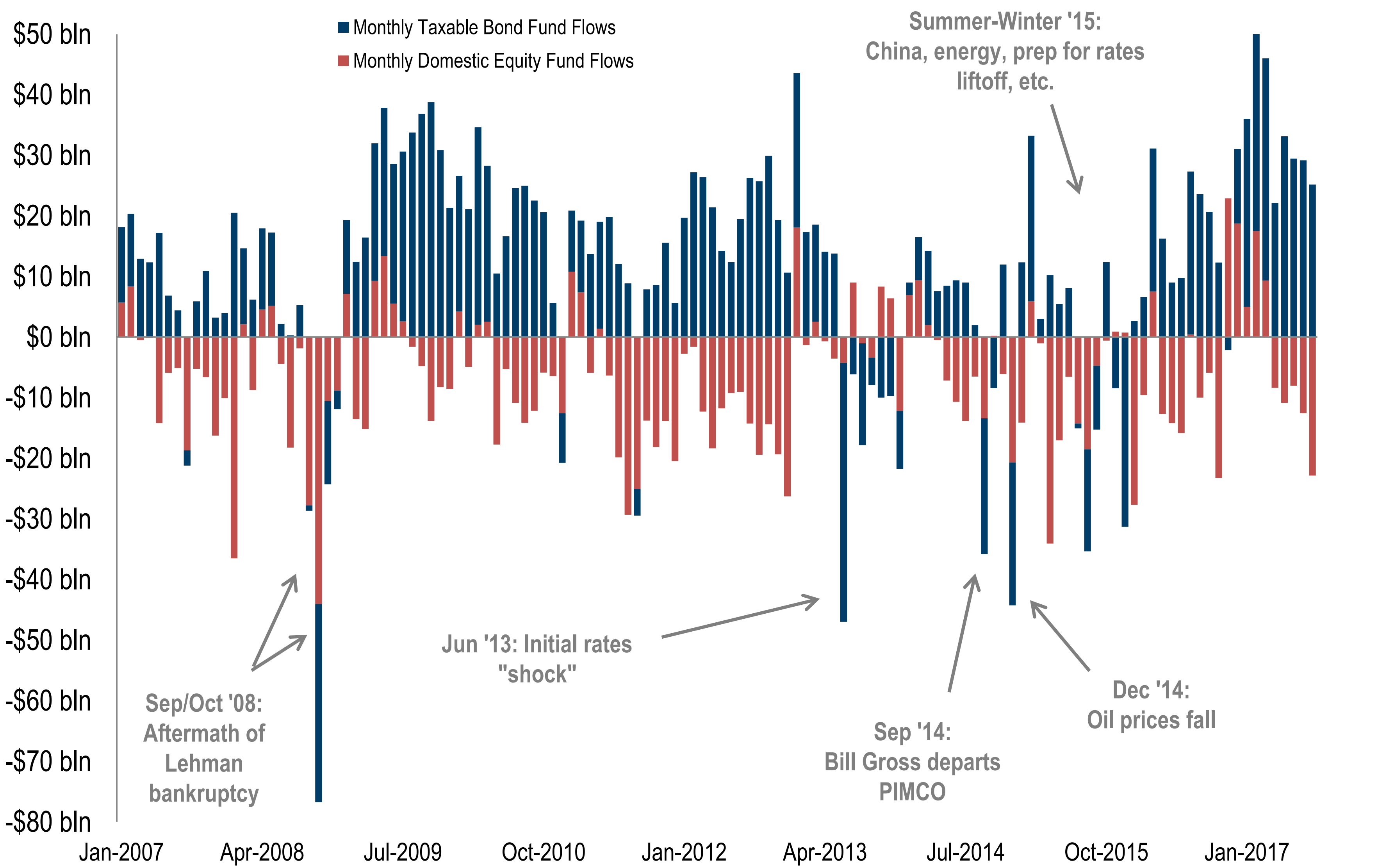
Flows Into Taxable Fixed Income Funds Largely Positive

Investors Continue to Buy Bonds

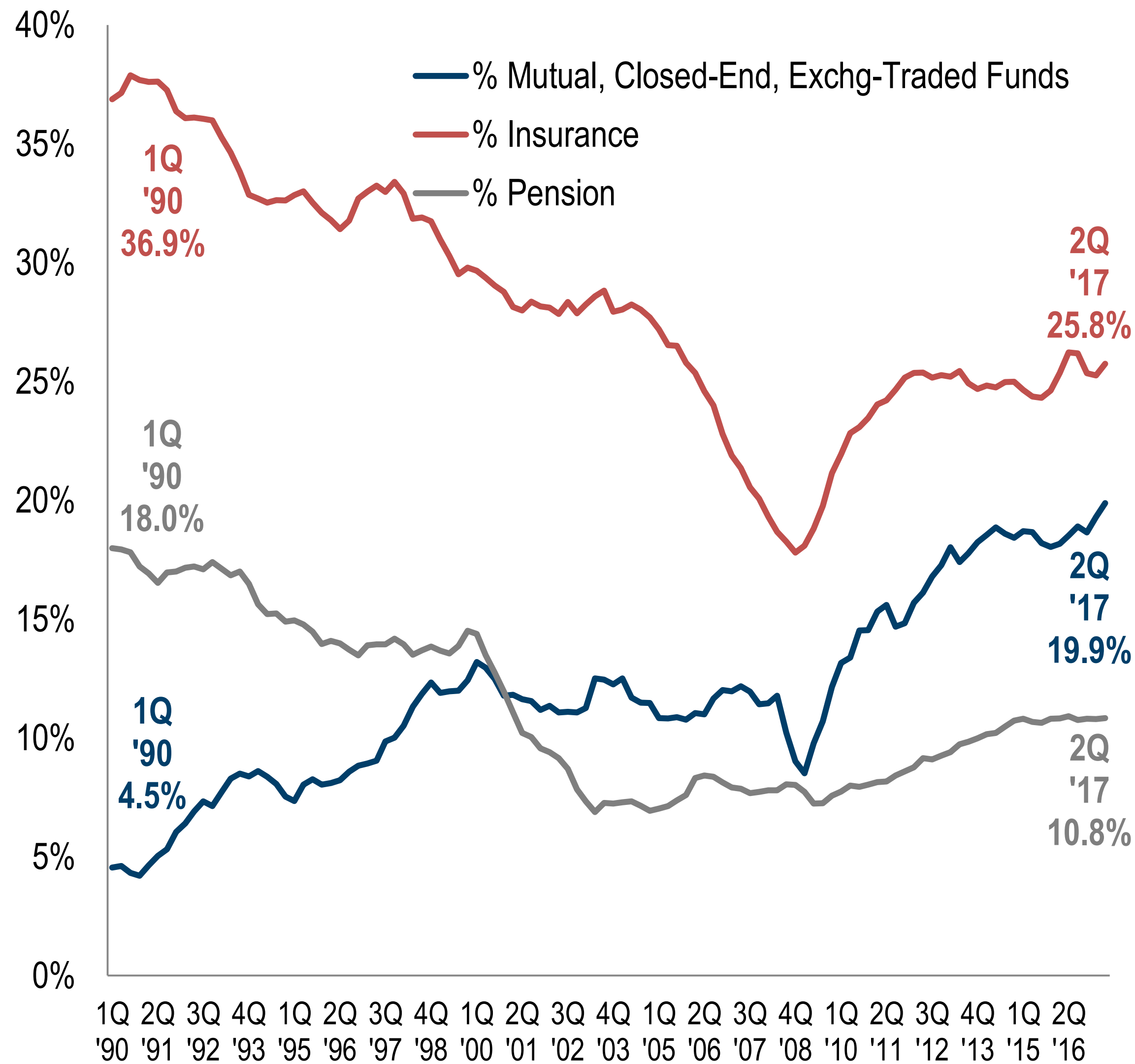


Source: Janney ISG, ICI, Bloomberg, FactSet

Fund Ownership of Corporate Bonds Reduces Market Depth

- **Fund representation of corporate and foreign bonds ticked up, particularly in the post-recession era**
- **Contrasts with insurance companies that have pared back their ownership post-recession and pensions that have moderated corporate positions since 2000**
- **Asset/liability mismatch during volatile market situations?**
- **December 2015: Third Ave Focused Credit Fund biggest mutual fund failure since recession**

Fund Ownership of Corporates Rose, While Insurance & Pensions Shrank

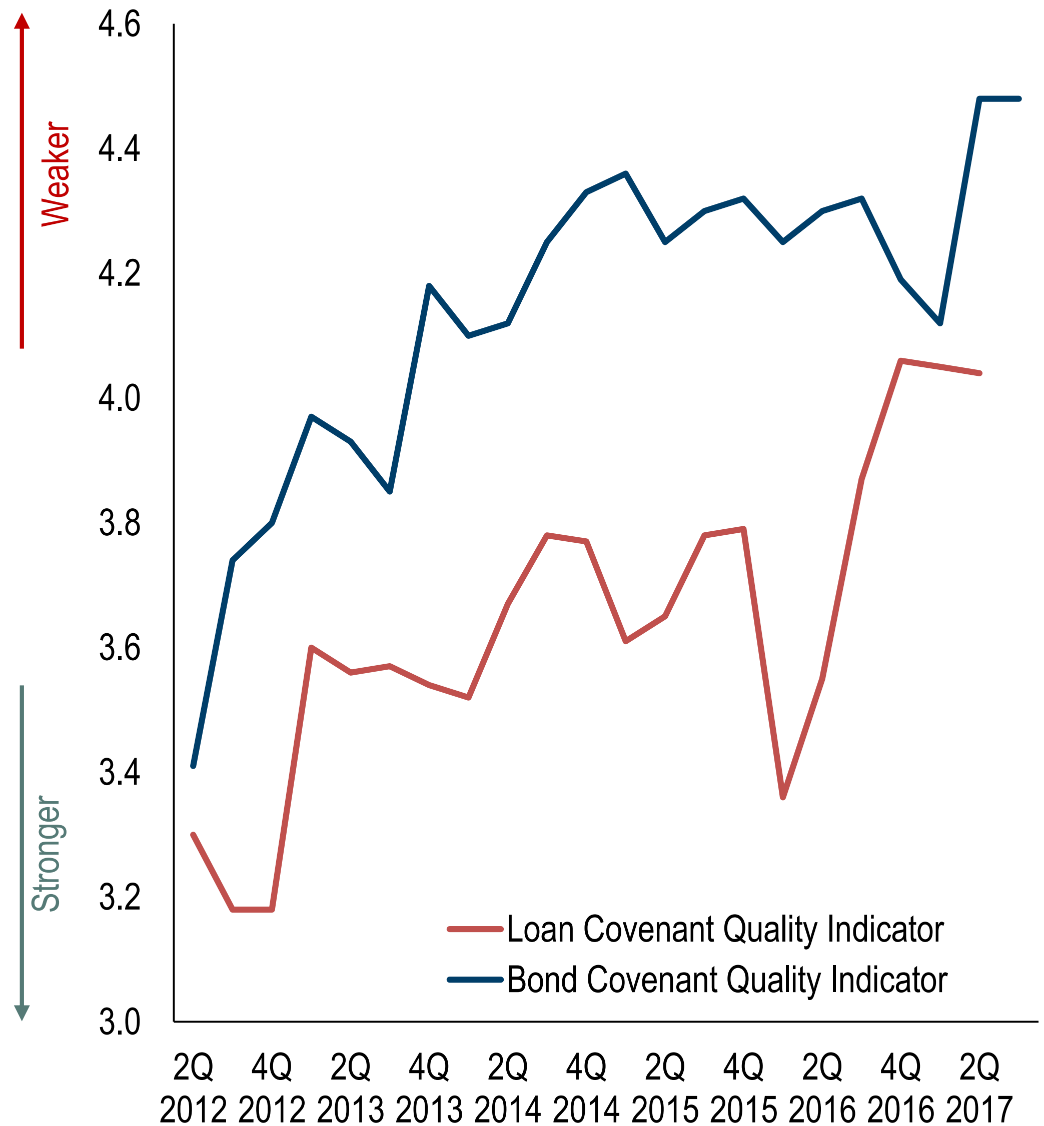


Source: Janney ISG, Bloomberg, Federal Reserve's Flow of Funds; shows percentage of corporate & foreign bond assets

Cov-lite, High Yield-lite, and Lack of Bondholder Protection

- **Moody's noted recently the expansion of cov-lite bonds**
  - Bond Covenant Quality Indicator "near record worst of Aug 2015"
  - Loan Covenant Quality Indicator worst 4Q 2016
- **Per S&P LCD, cov-lite as % of US leveraged loan market ticked up to 73% in Sep 2017 (record high) from 58% in Sep 2014**
  - Total loans outstanding of $947B
- **CLO market active with buy-side participating**

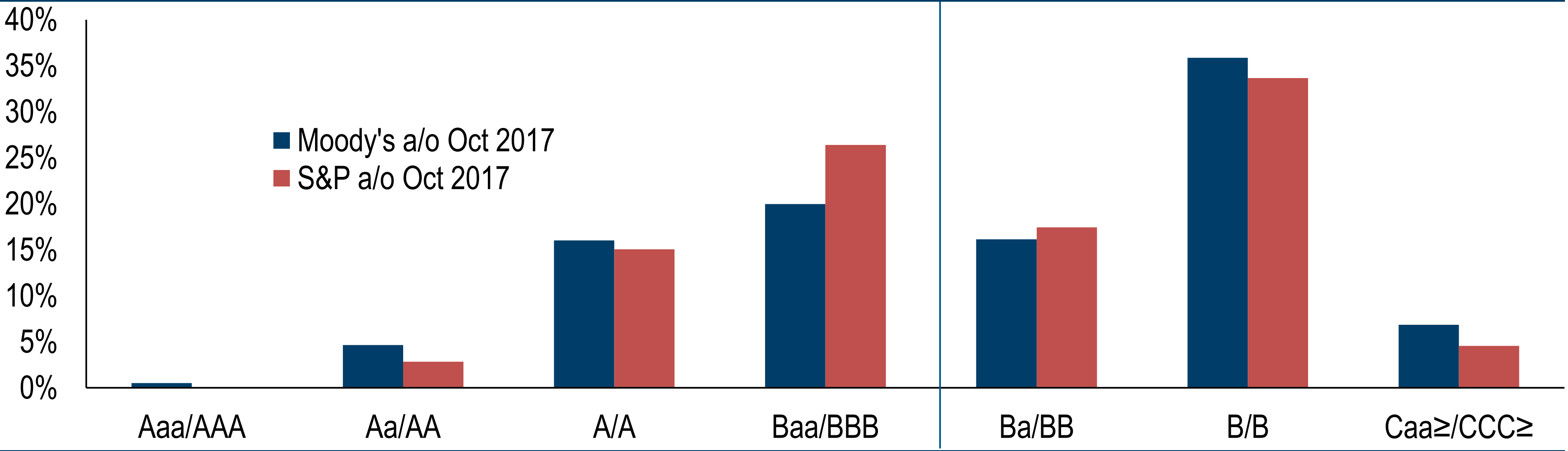
Moody's Bond and Loan Covenant Quality Indicators Peaked Recently



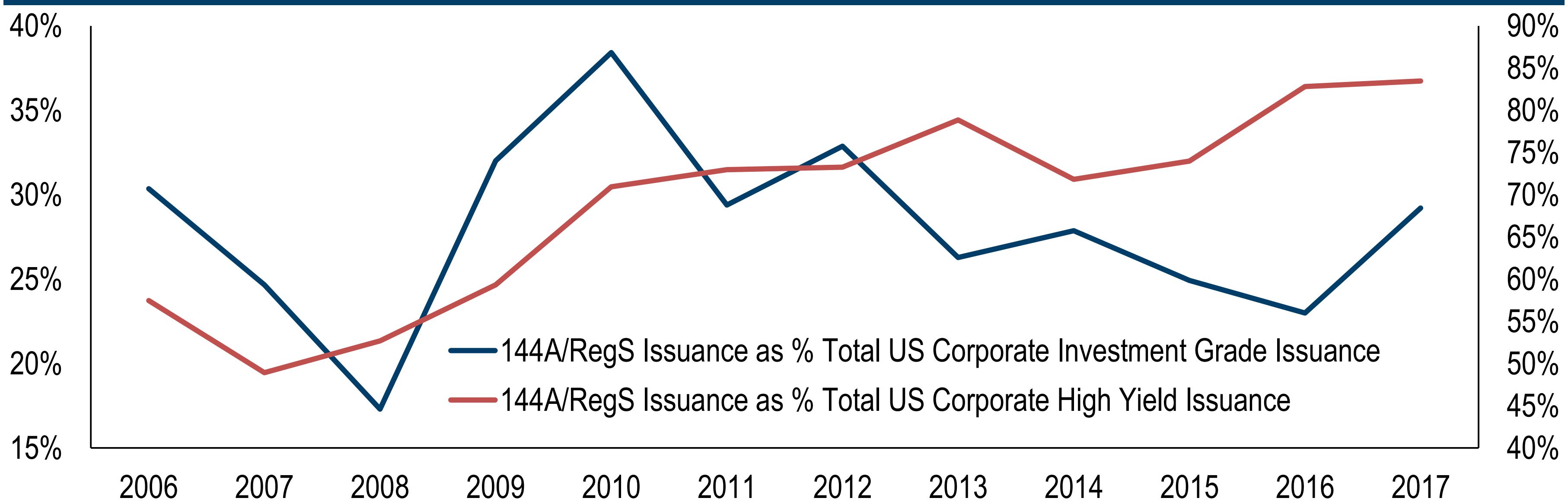
Source: Janney ISG, Bloomberg, Moody's, S&P; Moody's bond covenant quality indicator includes all high yield bonds and lowest ranking (auto-assigned to HY-lite) is 5

More High Yield Credits, More 144A Issuance

More Credits Are at the Lower End of the Ratings Spectrum



High Yield 144A Issuance Is on the Rise, Meaning Fewer Alternatives for Individuals



Source: Janney ISG, Moody's, S&P, Bloomberg, Company Reports; 2017 a/o 10/27/2017

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A Lack of Market Liquidity?

- **Regulatory changes affecting liquidity**
  - Smaller dealer inventories with size restrictions for some asset classes
  - Volcker Rule, Basel III, SLR

- **Larger buy-side, consolidation of sell-side participants**

- **Electronic trading platforms**

- **Hard to identify market liquidity other than by**
  - Ease and speed of transaction
  - Cost of transaction – bid-ask spread
  - Depth of market – dealer inventories, market turnover
  - Buoyancy – how quickly recover from bouts of volatility

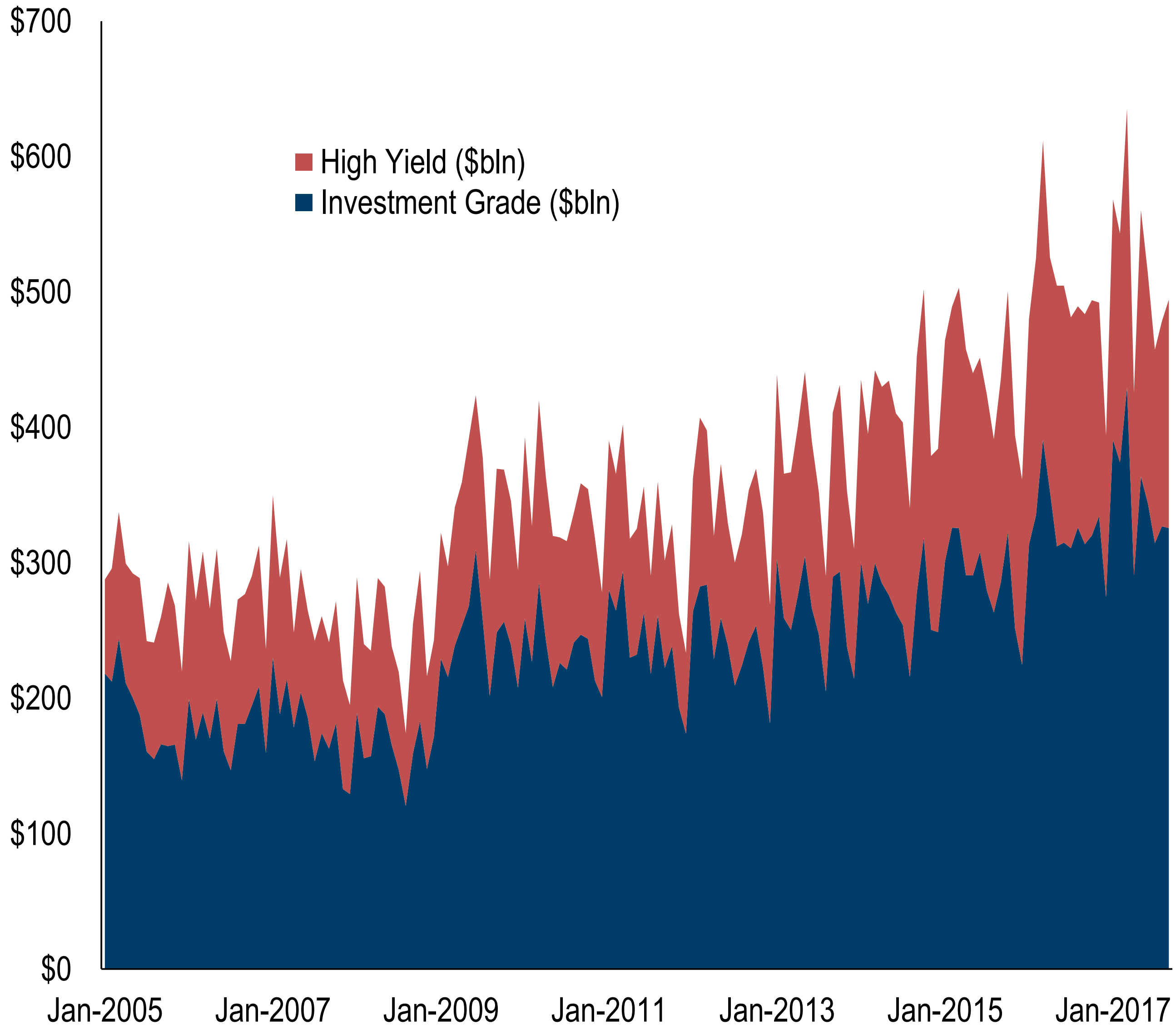
- **Examples of bouts of volatility:**
  - June/July 2013 “rate shock”
  - Fall 2014-Feb 2016 energy selloff

Source: Janney ISG, Federal Reserve, US Treasury, SIFMA, Brookings Institute

Trading Volumes Are Misleading

- **Both investment grade and high yield volumes have been elevated in past few years**
  - Speaks to actively traded market and coincides with busy primary market
  - Does not show full story – large block trades not fully represented
- **Bouts of volatility prove how sensitive market is – lack of depth**

TRACE Dollar Volumes Traded Have Ticked Up in Recent Years

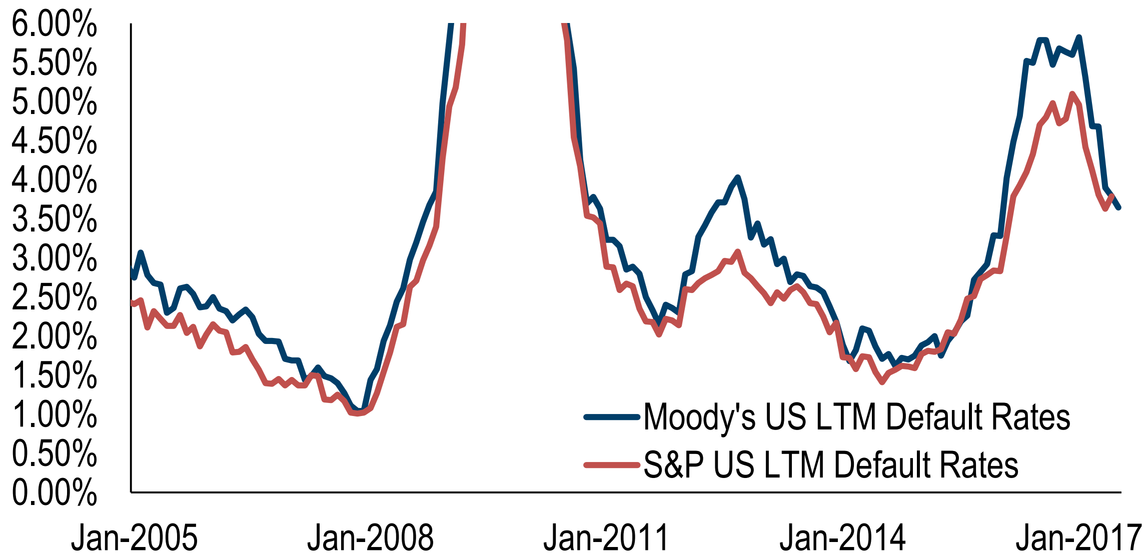


Source: Janney ISG, Federal Reserve, US Treasury, SIFMA

A “Fun” Comparison: Energy vs Retail

- Recent softening of the retail space is reminiscent of Fall 2014-Feb 2016 with energy
- Fewer corporate bonds in retail vs energy circa 2014
- Contagion effect coupled with headline risk
- Retail now cited by Moody’s and S&P as main risk of default rates increasing
- More meaningful if combined with challenges from autos (auto lending), student loans, and/or credit card loans, or if other sector (Telecom & Media?)

Default Rates Escalated with Selloff in Energy/Metals & Mining



Sector % of Bloomberg/Barclays US HY	As of 10/27/2017	As of 06/30/2014
Communications	20%	18%
Consumer, Non-cyclical	16%	15%
Consumer, Cyclical	15%	15%
Energy	14%	16%
Financial	10%	11%
Industrial	10%	11%
Basic Materials	7%	6%
Technology	6%	4%
Utilities	3%	3%
Diversified	0%	0%

Source: Janney ISG, Bloomberg/Barclays, Moody’s, S&P

Summary

- **The "buy everything corporates" narrative has run its course – data around credit quality has an upward bias**

- **The low-rate environment has supported more favorable conditions for companies over bondholders**

- **Factors that will make this next downturn different**
  - The expansion of cov-lite and reduced bondholder protection
  - A larger corporate bond market
  - More fund participation in corporates
  - Lack of market liquidity in volatile environments

Source: Janney ISG

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