

# US Leveraged Finance Outlook

**Riz Hussain**

High Yield & Leveraged Loans Credit  
Strategy

+ 1 212 412 7997

[riz.hussain@barclays.com](mailto:riz.hussain@barclays.com)

BCI, US

**Scott Schachter**

+ 1 212 526 9716

[scott.schachter@barclays.com](mailto:scott.schachter@barclays.com)

BCI, US

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PLEASE SEE ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES STARTING AFTER PAGE 31

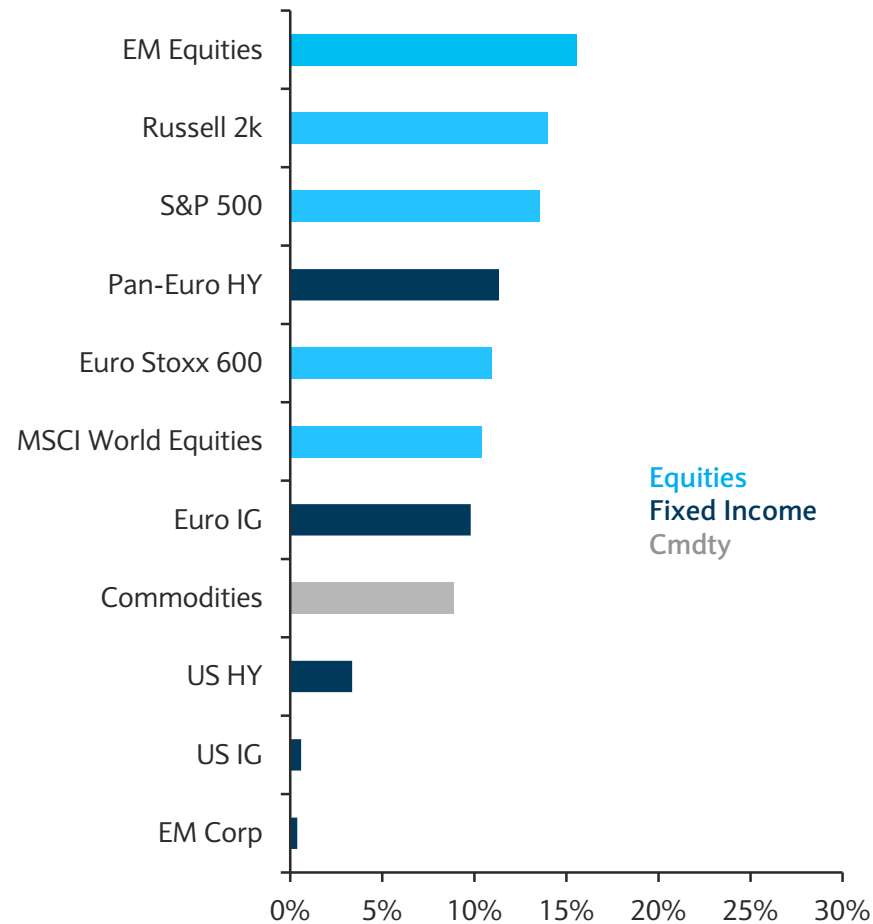
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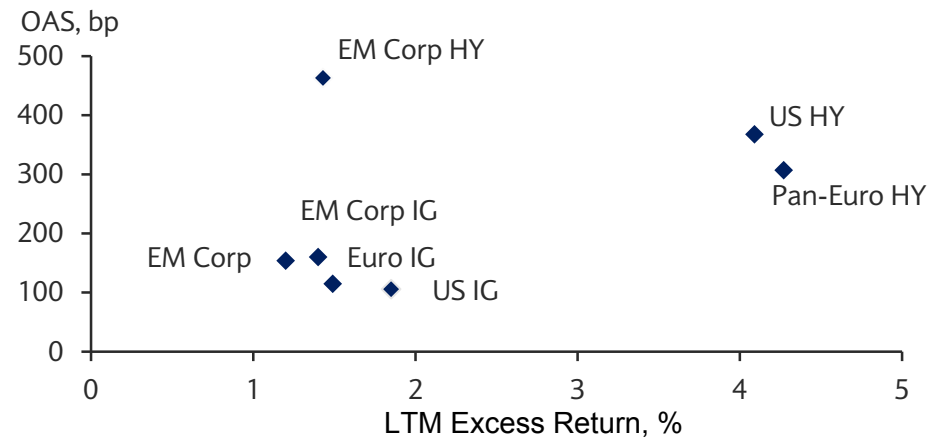
# Relative Value Across Asset Classes

# Higher beta has generally outperformed over the past 12 months, despite the mixed tone recently

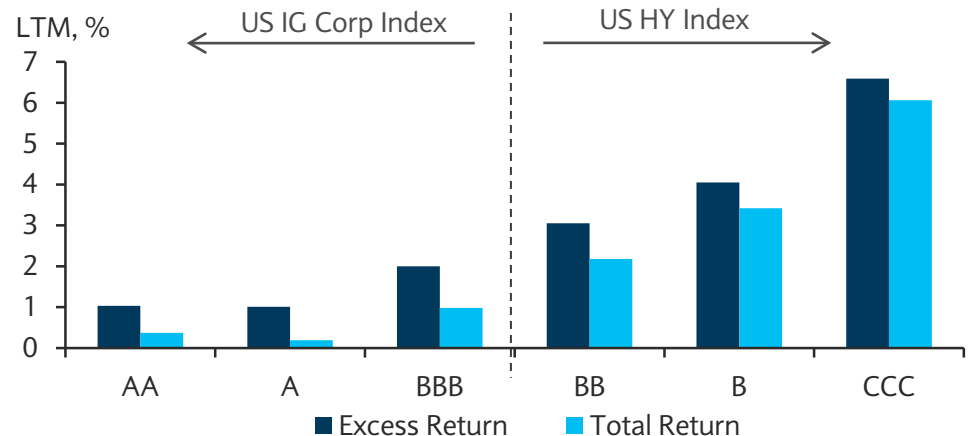
## LTM Returns for Different Asset Classes



## High Beta Outperformed in Credit



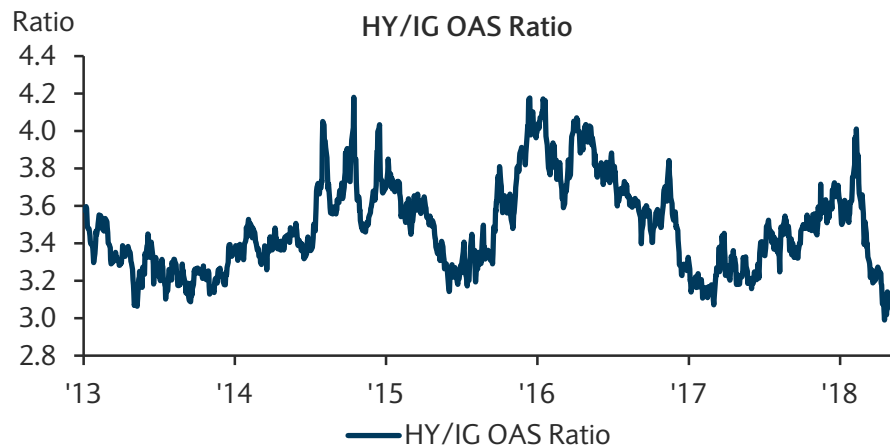
## US Credit Returns by Rating



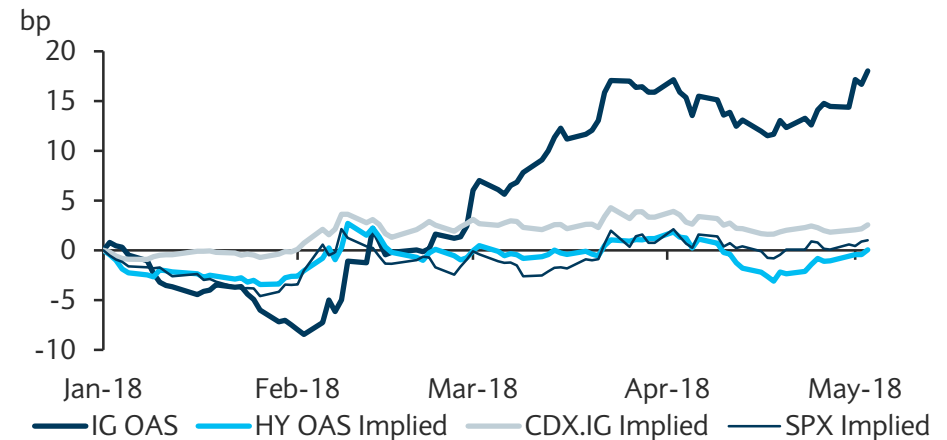
Note: Fixed income returns in left chart are total returns. \* Starting Date is May 31, 2016. Source: Barclays Research

# High yield looks rich relative to IG, mostly stemming from IG's cash underperformance due to poor technicals

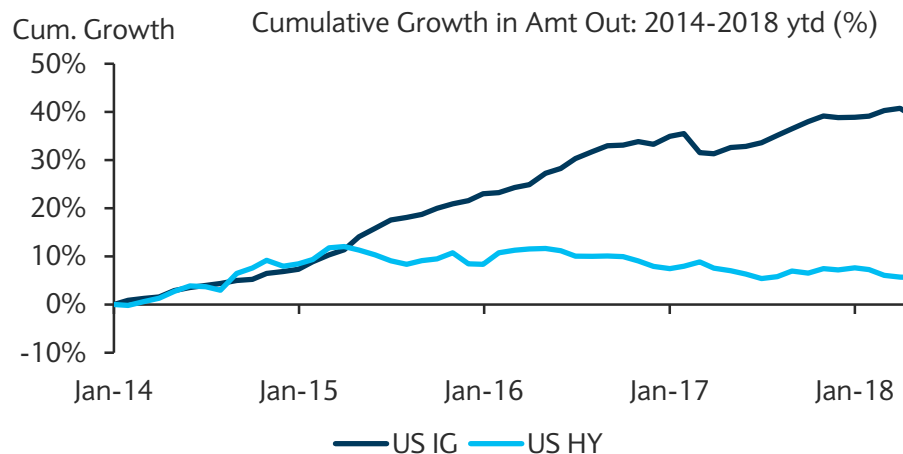
## HY Has Outperformed IG in 2018



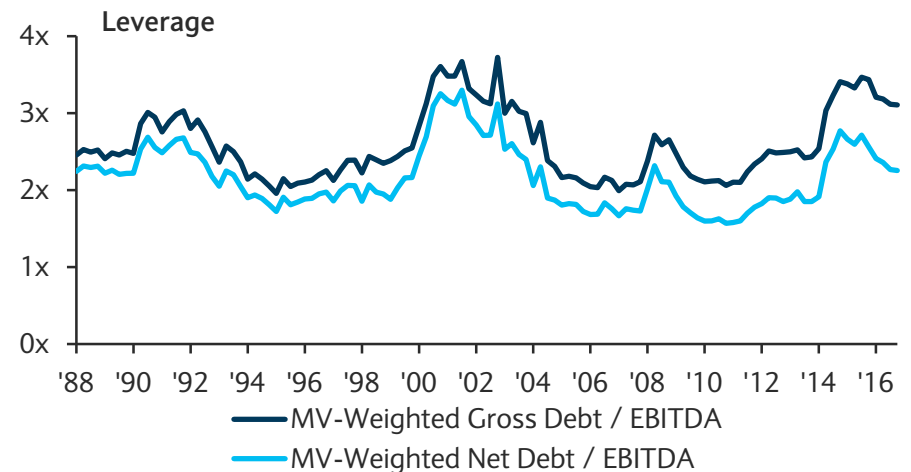
## IG OAS and Beta-Implied Changes



## Corporate Bond Market 2014-18



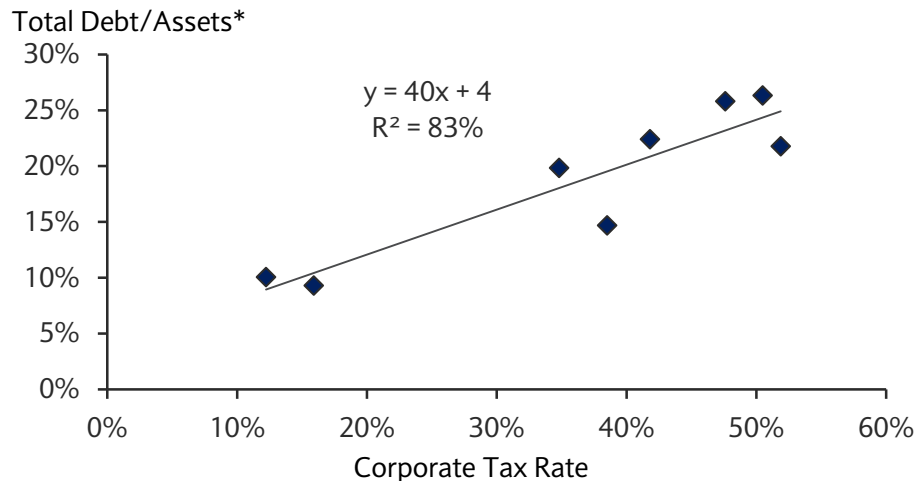
## IG Leverage



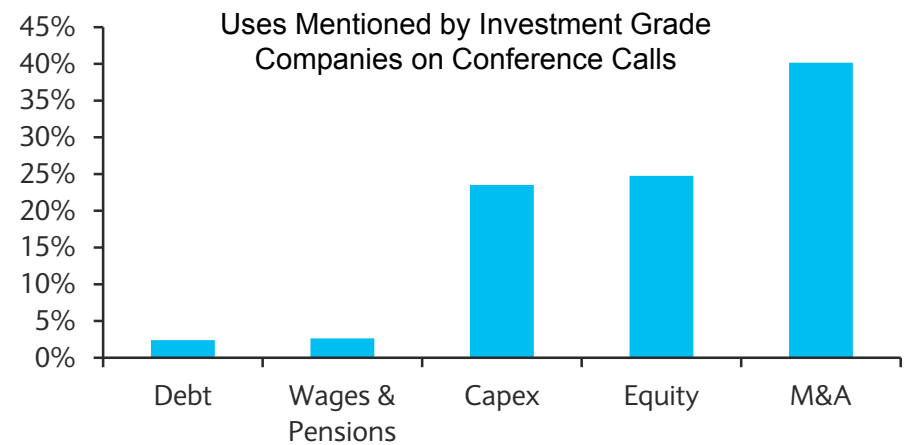
Note: IG leverage excludes financials. Sources: Bloomberg, Compustat, Bloomberg Barclays Indices, Barclays Research

# Tax reform is likely to lead to lower leverage for IG corporates, but the results for HY will likely be more varied

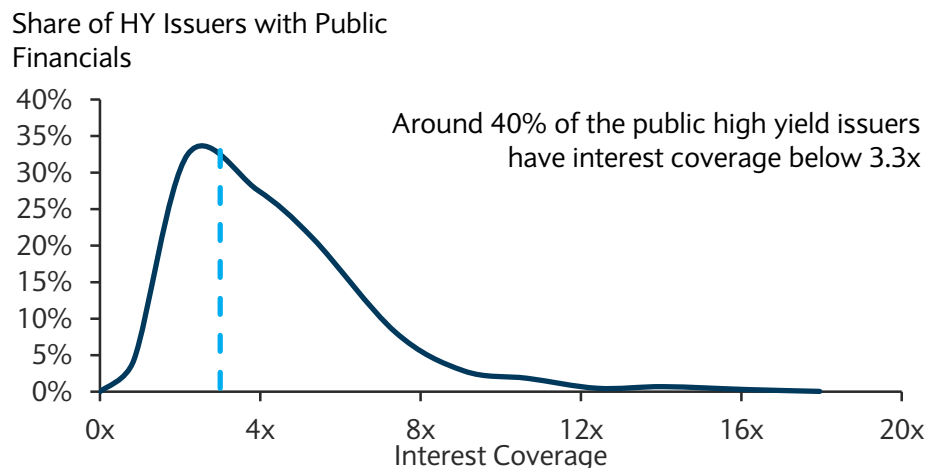
## Lagged US Tax Rates vs. Leverage



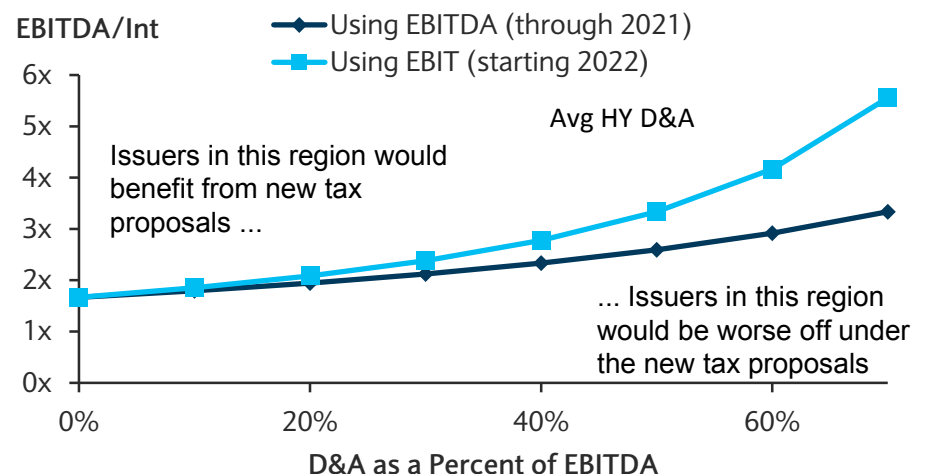
## Most Mentioned Uses of Tax Savings



## HY Interest Coverage Distribution



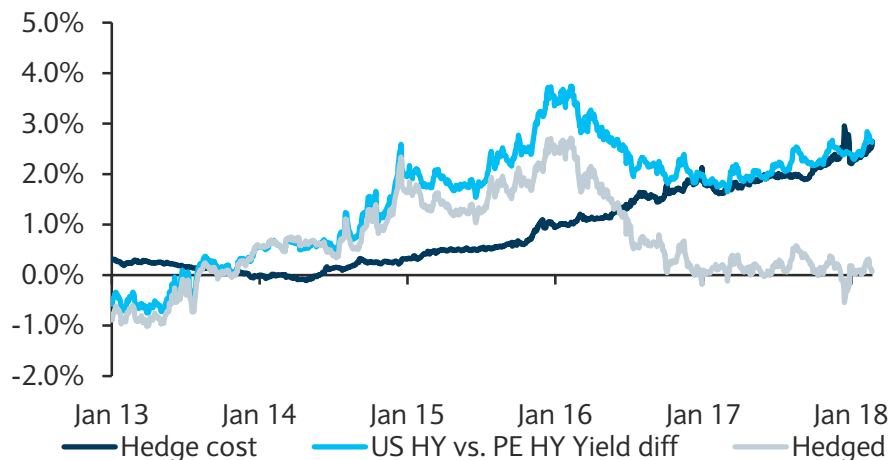
## Breakeven Coverage Ratios



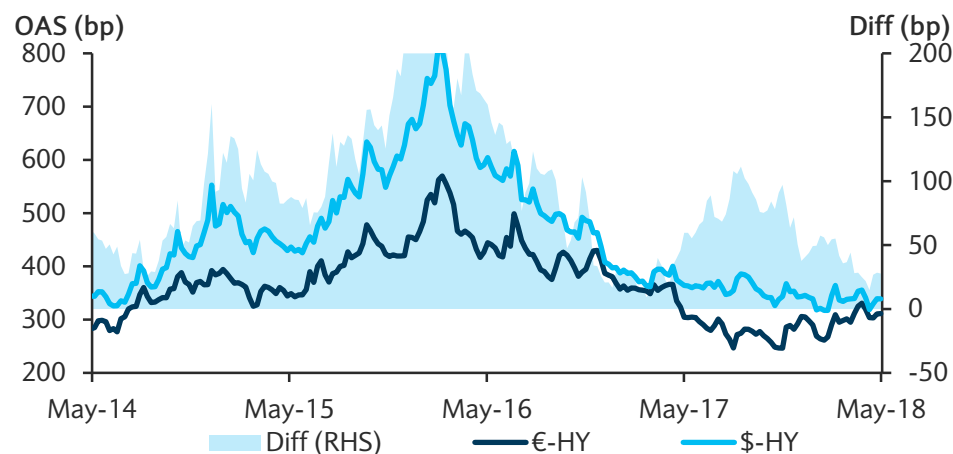
Note: \* Lagged by a decade Source: Kinor, Barclays Research. US Credit Strategy [A Tax on Leverage](#), 13 January 2017.

# For European investors US HY is less attractive due to higher hedge costs and outperformance of US spreads

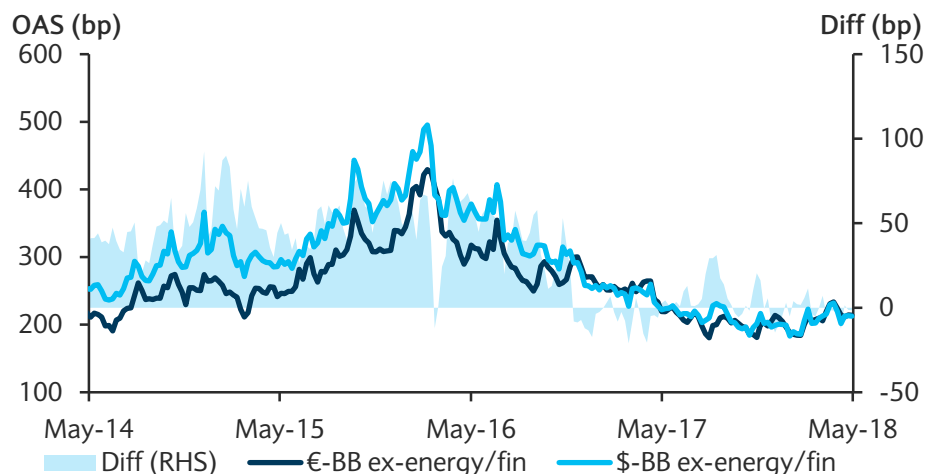
## US vs. Euro HY Hedged Yield Difference



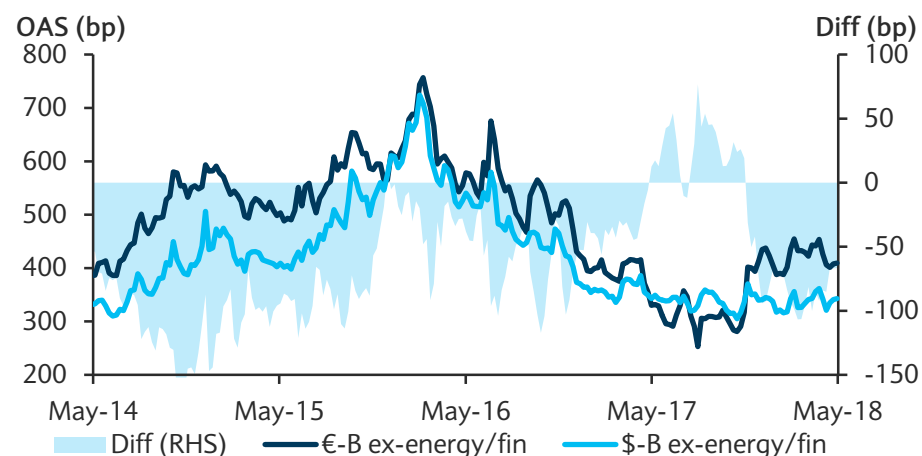
## US vs. Euro HY OAS



## US vs. Euro HY BB OAS



## US vs. Euro HY B OAS



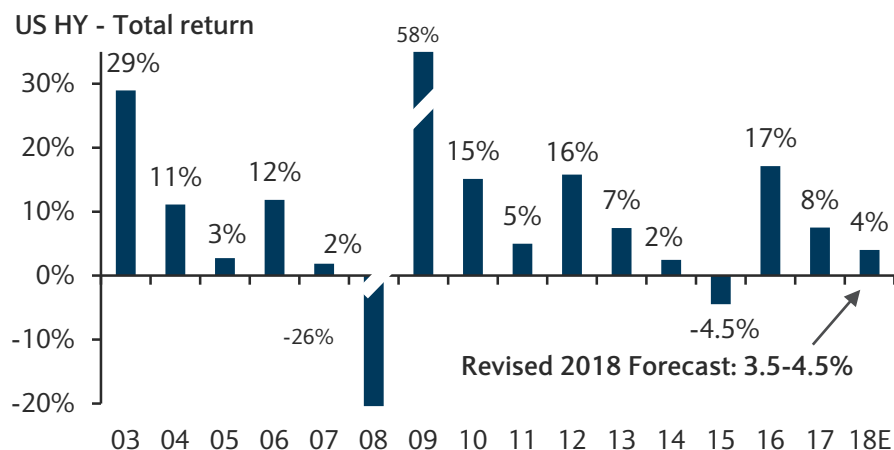
Source: Bloomberg Barclays Indices, Bloomberg, Barclays Research

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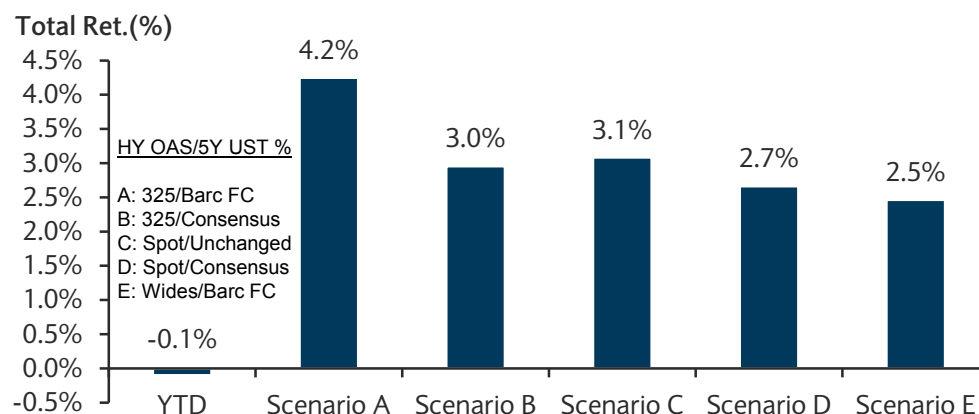
## High Yield Views

# Overview: Still forecasting modest spread tightening and a positive sub-coupon return, but rates have been the story this year

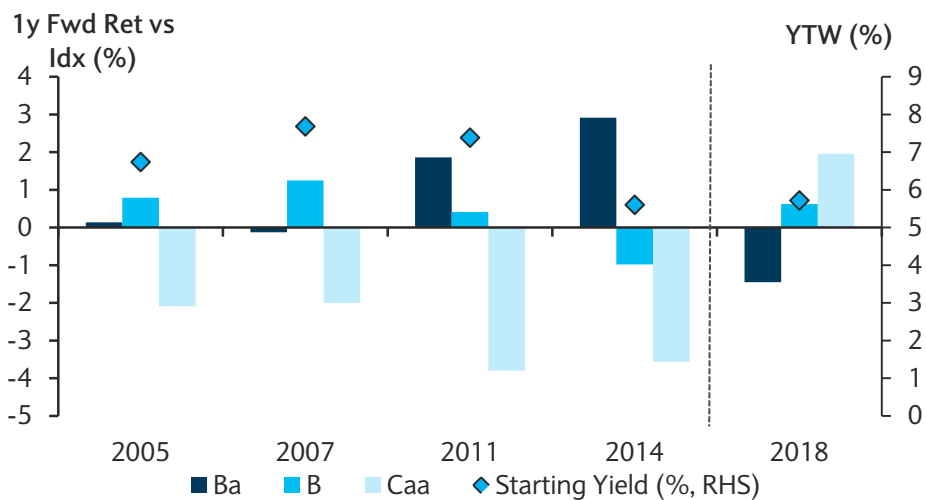
## '18 Return Forecast Lowered by 1% on Rate Move



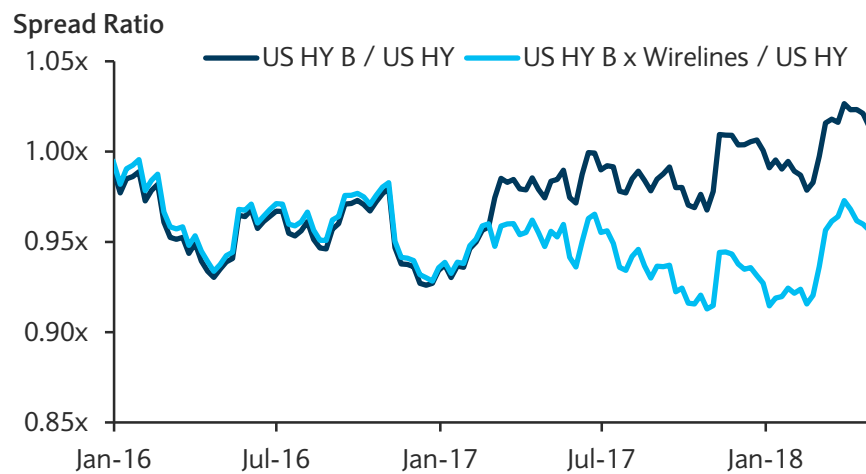
## Return Scenarios: Base Case Revised to 3.5–4.5%



## Comparing Years of Positive, Sub-Coupon Returns



## Can Single-Bs Lead? Largely Depends on Wirelines

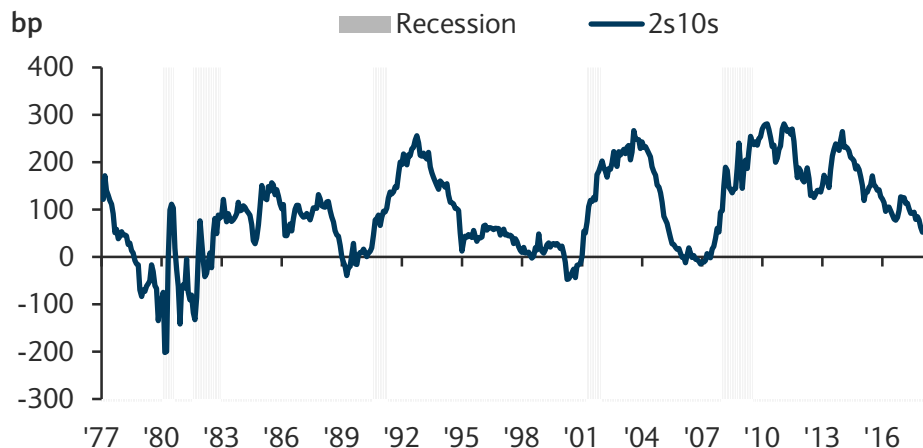


Source: Bloomberg Barclays Indices, Barclays Research

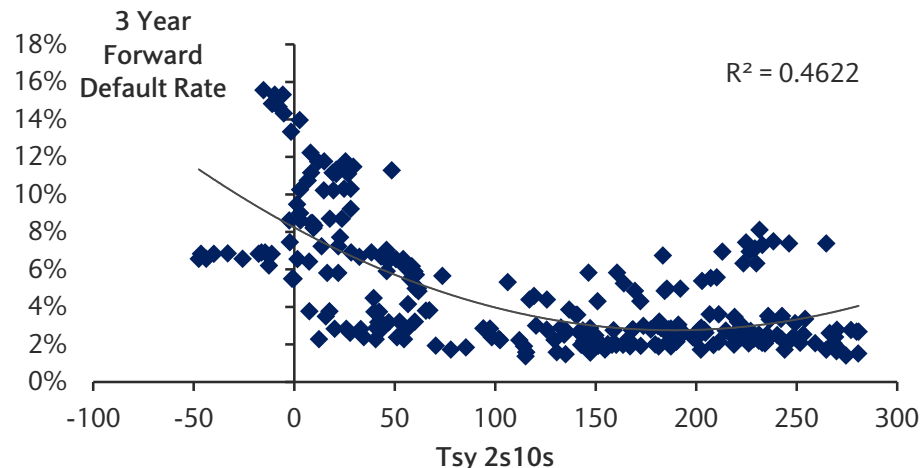


# The rates effect: Defaults lag curve flattening, but spreads will likely not fully offset rate moves

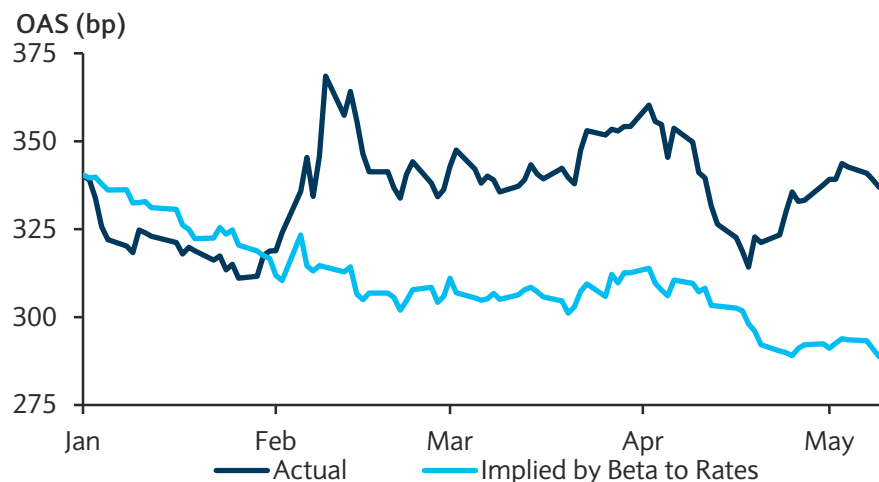
## Curve Flattens Leading Up to Recession



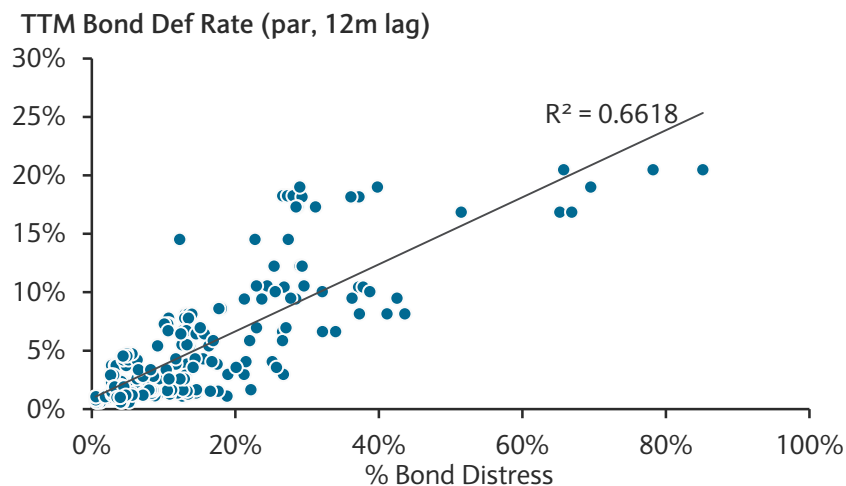
## But Defaults Pick Up 3 Years Later



## HY OAS Underperforming Its Historical Spread Beta



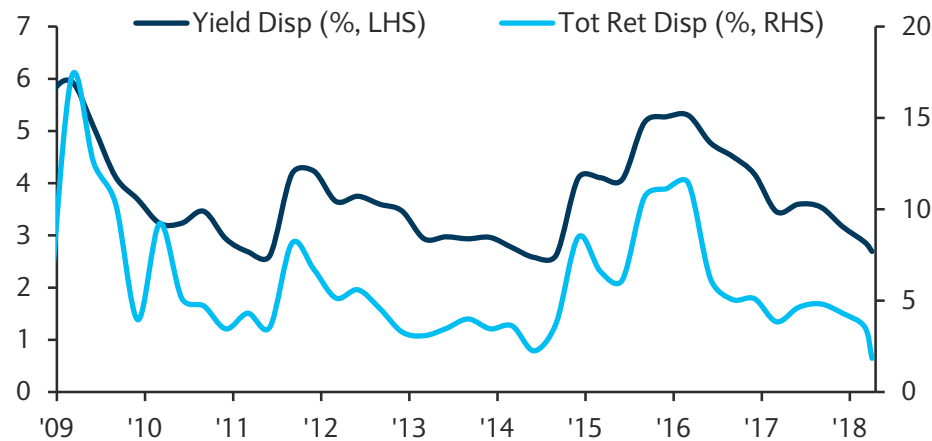
## Lagged Relationship Between Breadth of Bond Distress and Default Rate (Par-Weighted)



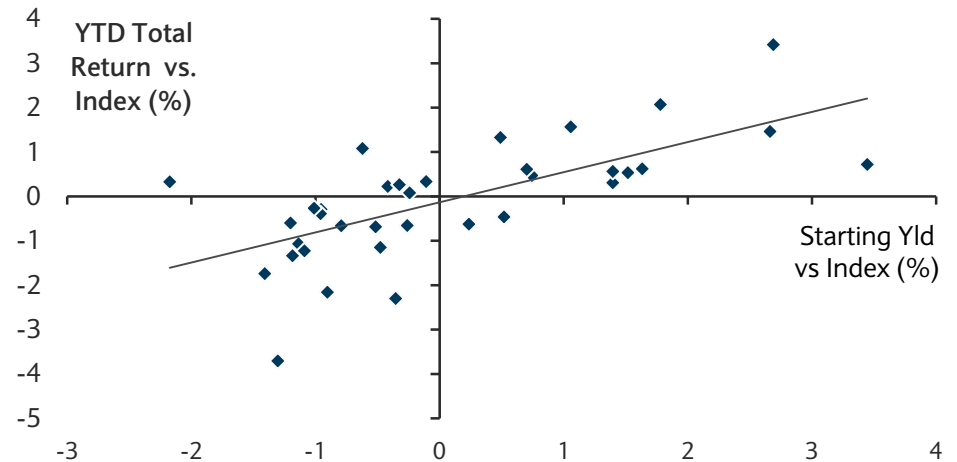
Source: Bloomberg, Bloomberg Barclays Indices, EPFR, Moody's, Barclays Research

# The opportunity set, positioning and performance: Collapsing dispersion and a tight distribution of returns: “late” cycle?

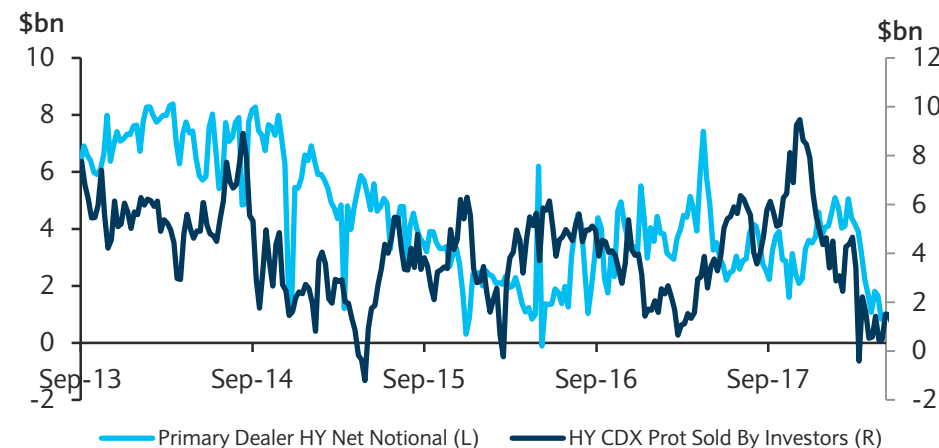
## Dispersion Hitting New Lows...



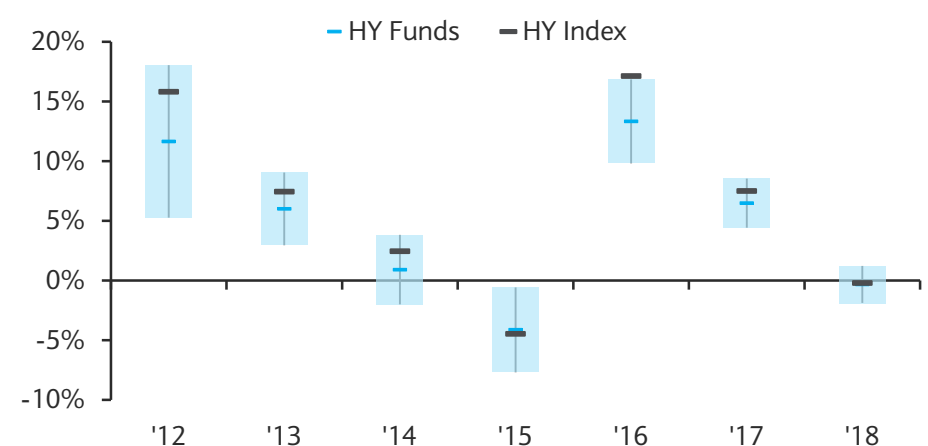
## ...And Simply Owning “Yieldy” Sectors Has Worked



## Positioning Suggests Caution...



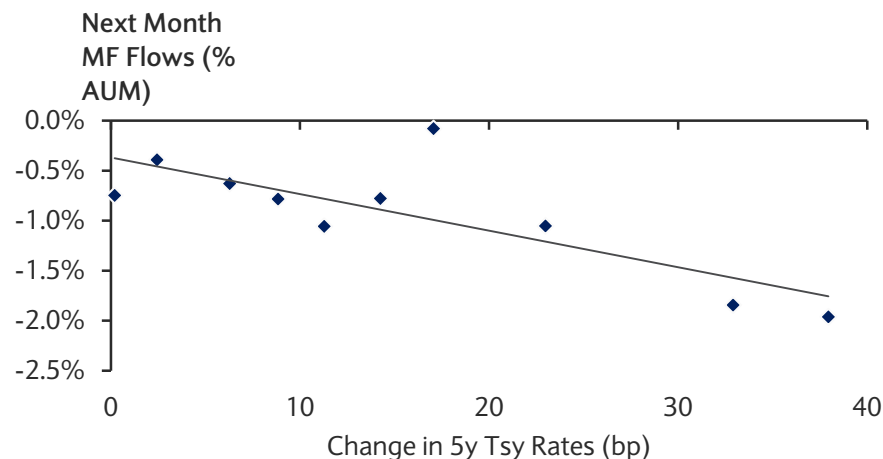
## ...Leaving HY Mutual Fund YTD Returns Clustered



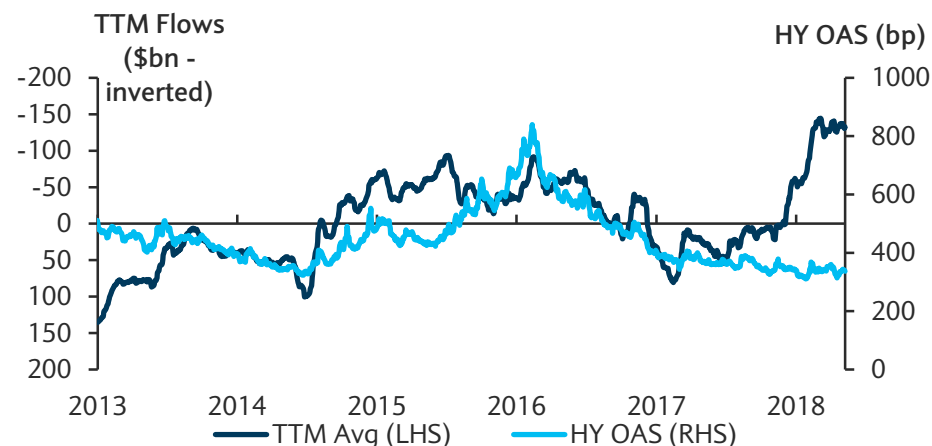
Note: \* Shaded blue area reflects the +/- one standard deviation band. We considered the average returns for a fund universe of 618 high yield funds.  
Source: Lipper, Bloomberg Barclays Indices, Federal Reserve Bank of New York, DTCC, Barclays Research. [US High Yield: Tying Technicals Together](#) 06 April 2018

# Complex relationship between rates, flows and spreads, but issuance lagging has helped

## In Tight Spread Markets, Higher Rates → Outflows



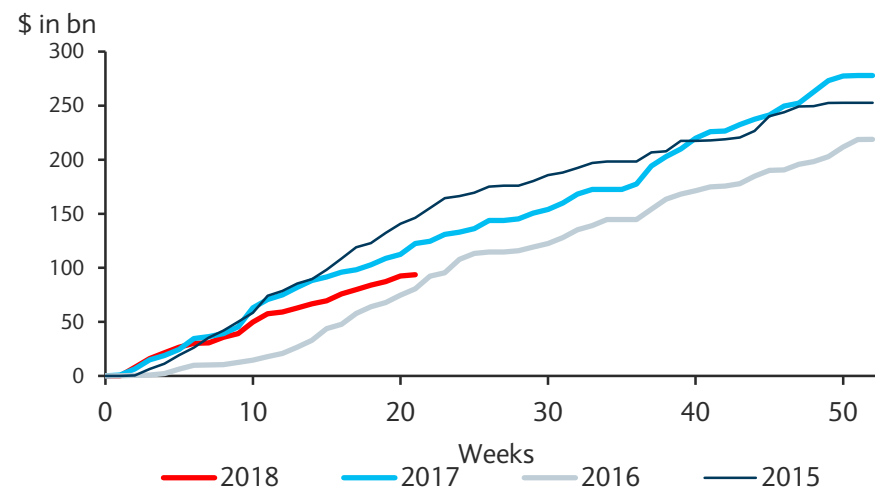
## But Outflows Do Not Always Drive Spreads Wider



## Who Else Owns the HY Market Other than Retail?

Category	2017	2016	y/y change
HY Mutual Funds and ETFs	19-22%	19-22%	0.0%
IG / Income Funds	13-16%	12-15%	1.0%
Offshore US HY Funds	2-5%	2-5%	0.0%
Global HY Funds	2-6%	2-5%	0.5%
Pension Funds / Sep Accts	20-24%	19-23%	1.0%
Insurance Portfolios	11-15%	11-15%	0.0%
Hedge Funds	11-17%	10-16%	1.0%
Other	6-11%	10-14%	-3.5%

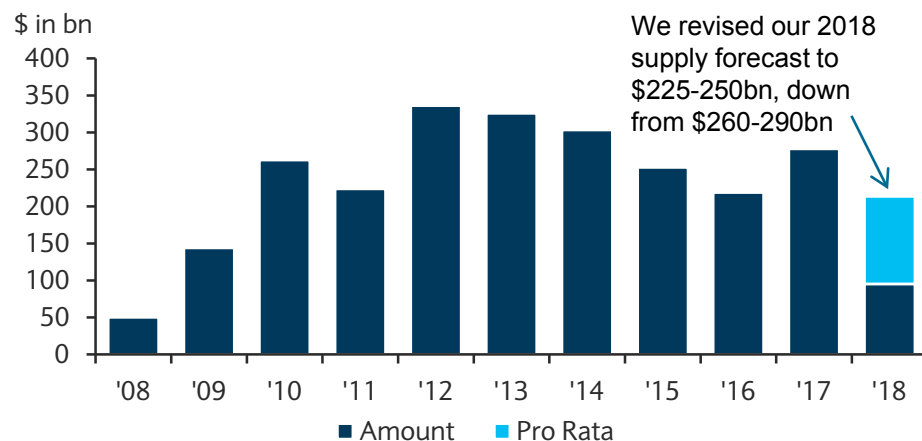
## Shrinking Supply Has Helped Offset Outflows



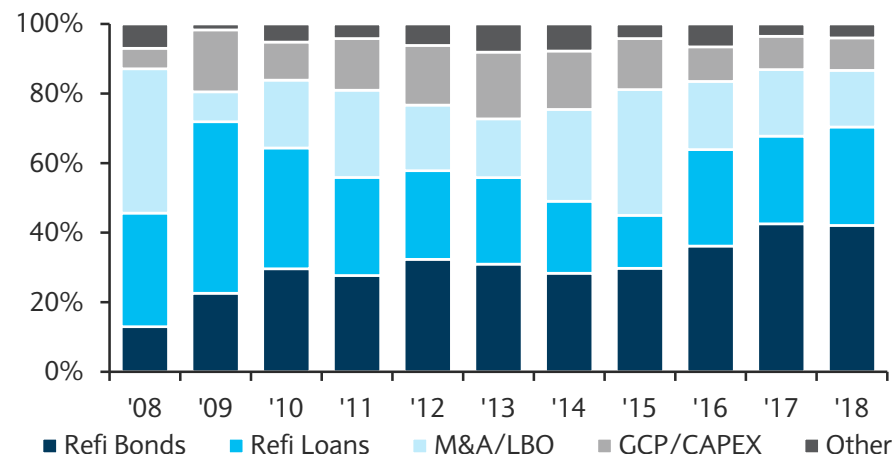
Source: Lipper, Bloomberg, EPFR, HFR, CEF, Credit Flux, Federal Reserve, Bloomberg Barclays Indices, Barclays Research. US Credit Strategy [US High Yield: Who Owns the High Yield Market Now?](#) 20 October 2017

# High yield new issue supply constrained and refinancing is dominating activity with few worries on near-term maturities

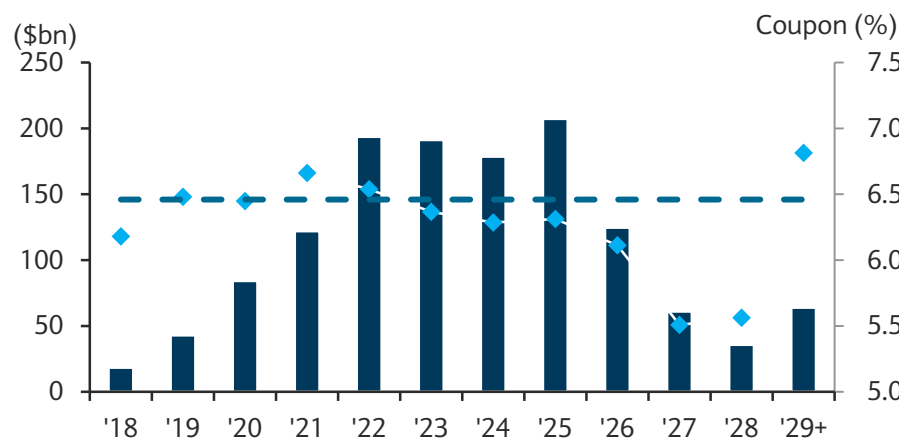
## 2018 New Issue Supply Running Below 2017; Annualizing Gets Close to Lowest Since 2009



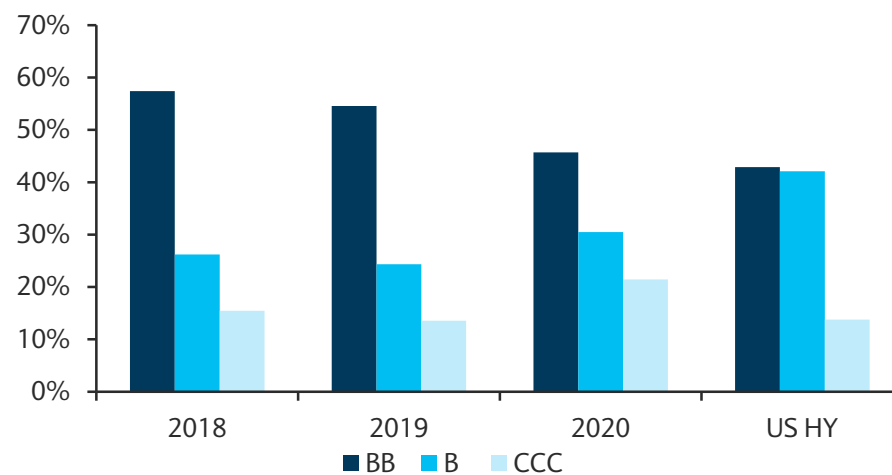
## Refinancing Now the Largest Proportion of Use of Proceeds Since 2009



## Refinancing Yields Not Particularly Expensive Yet; Very Little Comes Due Through 2020



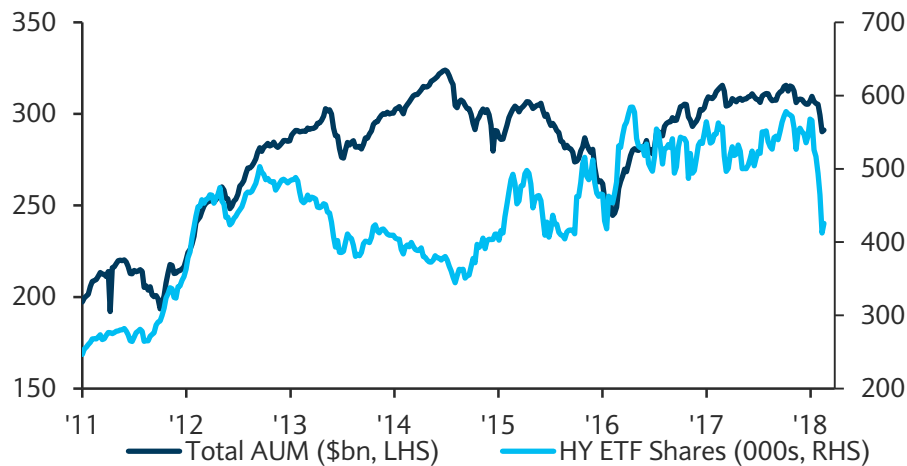
## What is Due is Higher Quality Than the Overall Market – Unlikely to Bolster Supply in '18



Note: Dashed line represents current US HY YTW. Blue data points represent current weighted average coupon. Source: Bloomberg Barclays Indices, Barclays Research

# Capturing the role of portfolio products in the early '18 risk-off episode – be careful not to 'double-count'

## Large Drop in Shares Outstanding

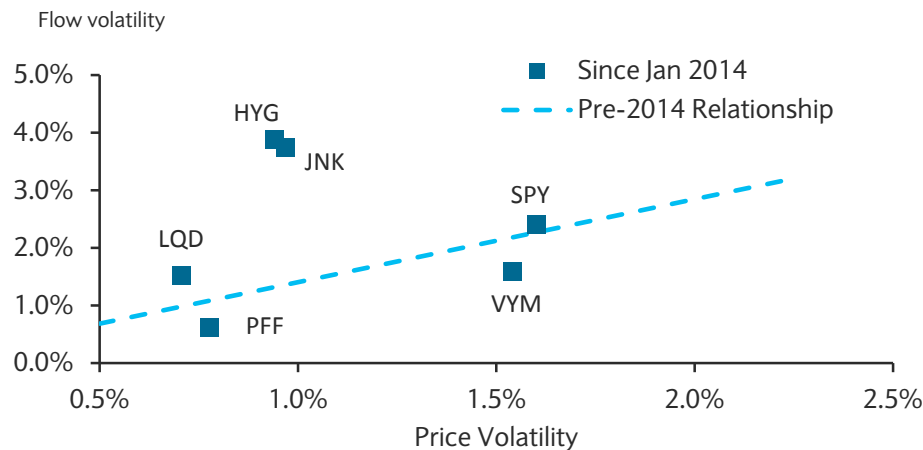


## Investors Very Rarely Flat Risk Through HY CDX

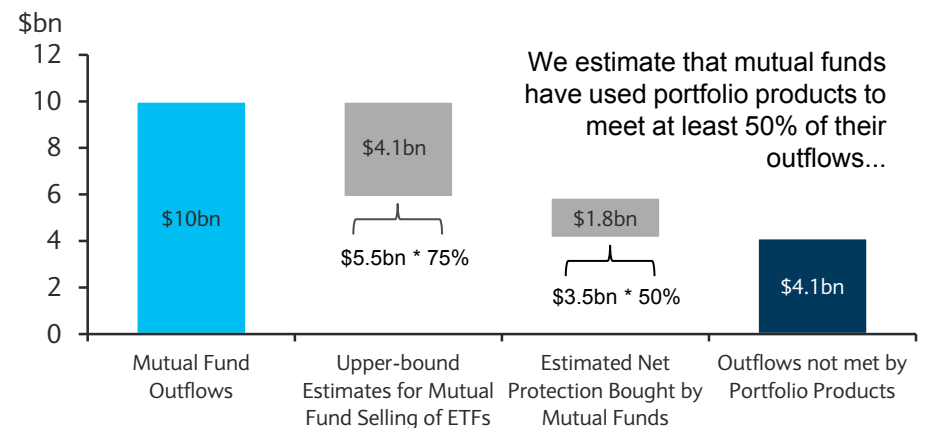
\$bn prot bought by investors



## HY ETFs' Outsized Flow Volatility Suggest Use as a Liquidity Tool Post 2014



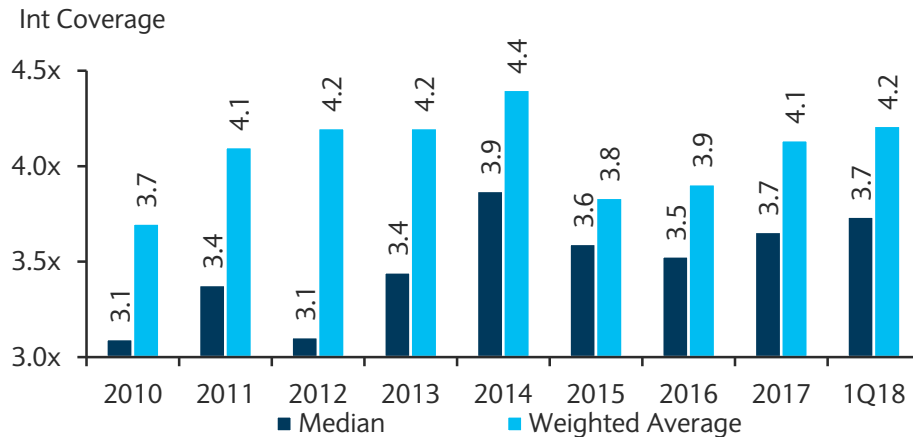
## Portfolio Products Played a Sizeable Role in Funding Outflows



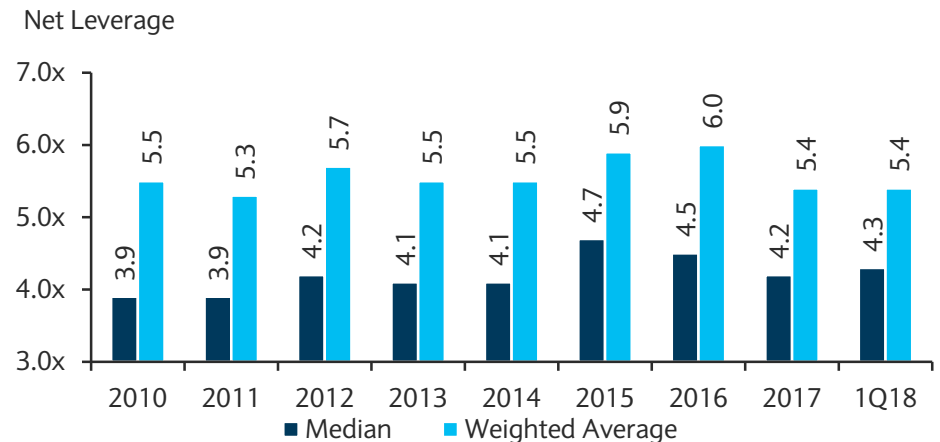
Source: Barclays Research, Bloomberg, Lipper, DTCC

# The fundamental setup: Solid starting point with little incremental floating rate exposure; equities still favor deleveraging stories

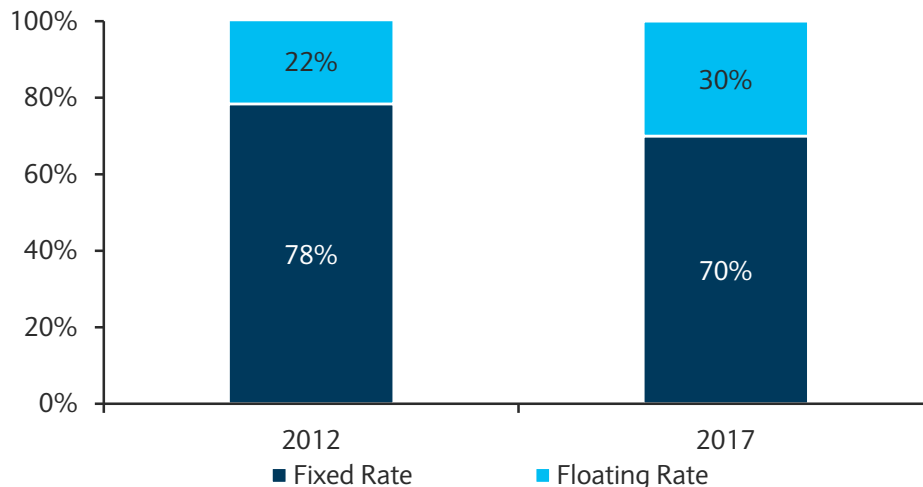
## HY Interest Coverage Well Positioned...



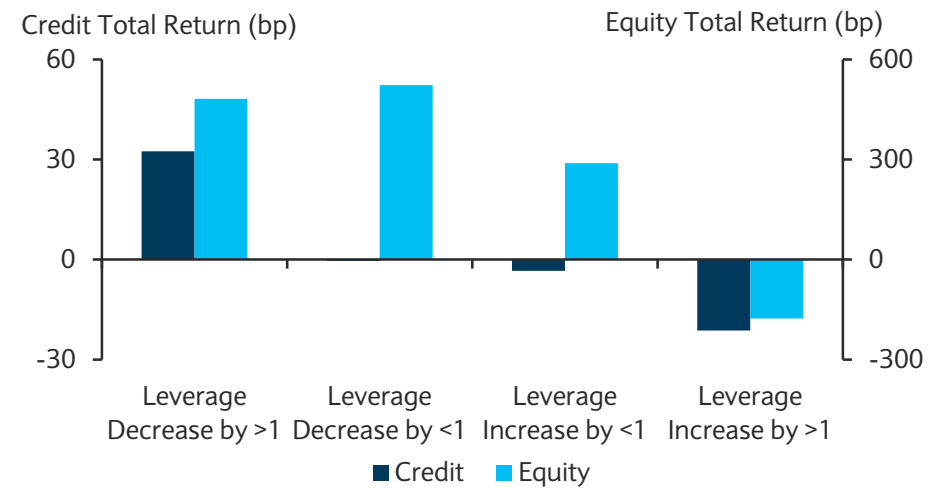
## ...Leverage Balanced as Well, Recovering from the Energy-Sourced Climb in '15/'16



## Crossover HY Cap Structures Not Particularly Heavy on Floating Rate Debt



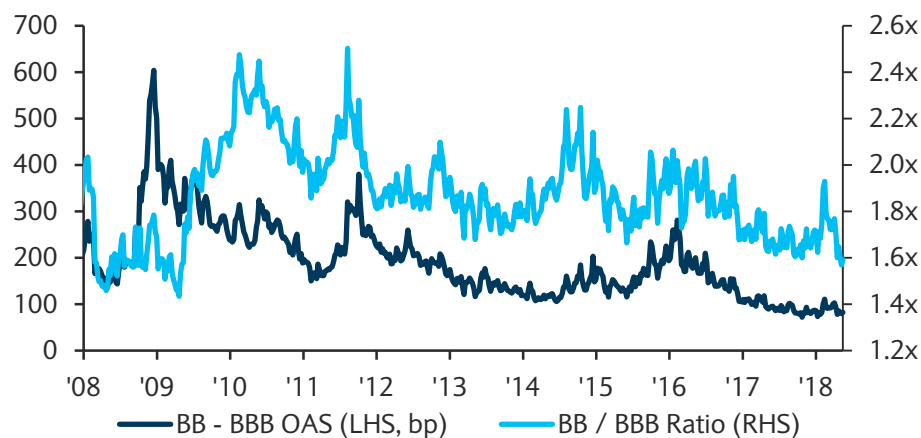
## Equity Returns Tied to Balance Sheet Improvement



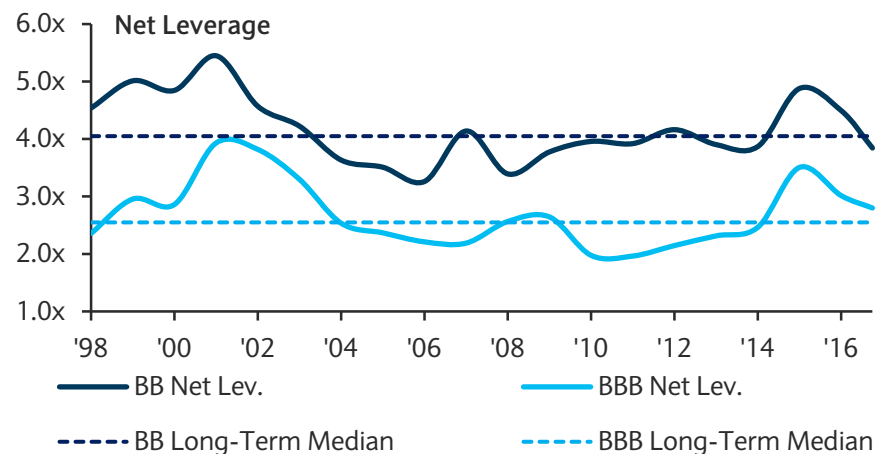
Note: Universe of issuers for leverage and coverage charts consists of ex-fin public entities with available financials.

# BB focus: Look to add to BBs on rate backups, given favorable leverage, duration and better downgrade loss-adjusted spreads

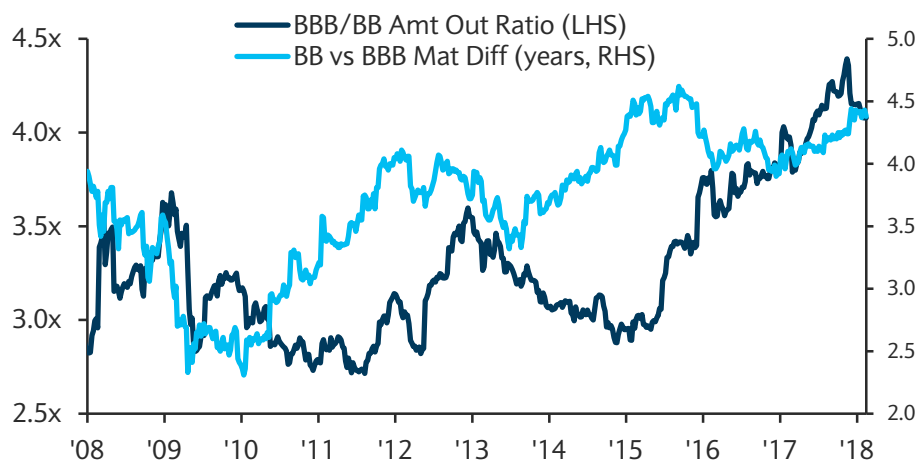
## BBs Might Not Tighten Much More to BBBs, but the Basis Can Persist for a While



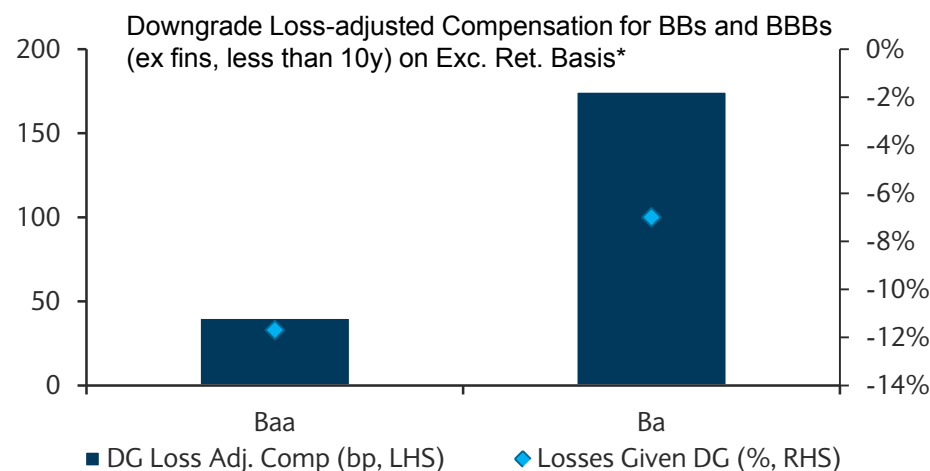
## BB Leverage Below Average; Not So in BBBs



## BBBs: More of Them and Increasing Maturity Difference



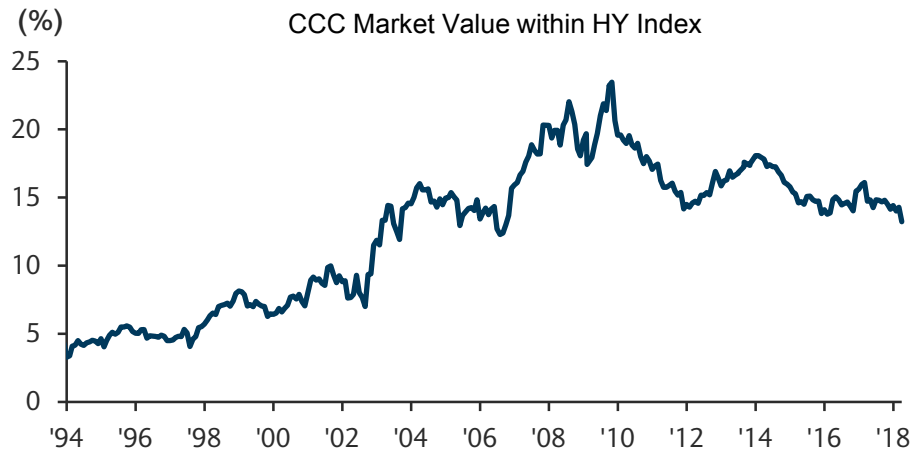
## Better Downgrade Compensation in BBs



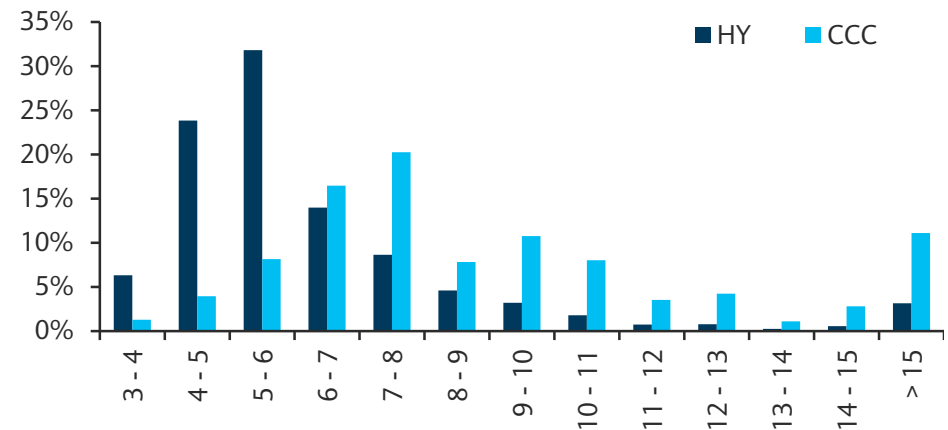
Note: \* Losses given downgrade is measured as the annualized excess returns during the month of downgrade. We use Moody's historical ratings transitions as a proxy for the probability of a downgrade of at least a full rating category. Source: Barclays Research. US Credit Strategy [US Credit Focus: BB Mine for Valentine's Day](#) 16 February 2018.

# CCC focus: Short in supply, short in duration, and incremental yield have been supportive

## Yes, the CCC Market Is Shrinking, Limiting Distressed Opportunity



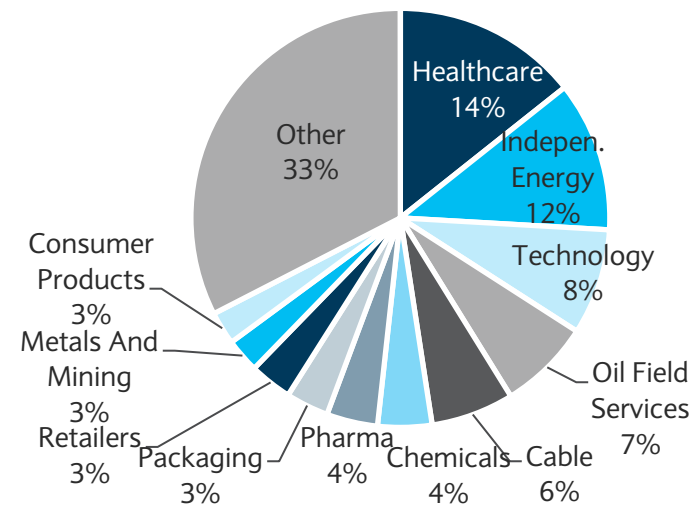
## Double-Digit Yields Limited, Even in CCCs



## CCC/BB YTW Ratio Close to the Lows but Has Been Lower



## The CCC Opportunity Set Is Led by Energy, Healthcare and Tech



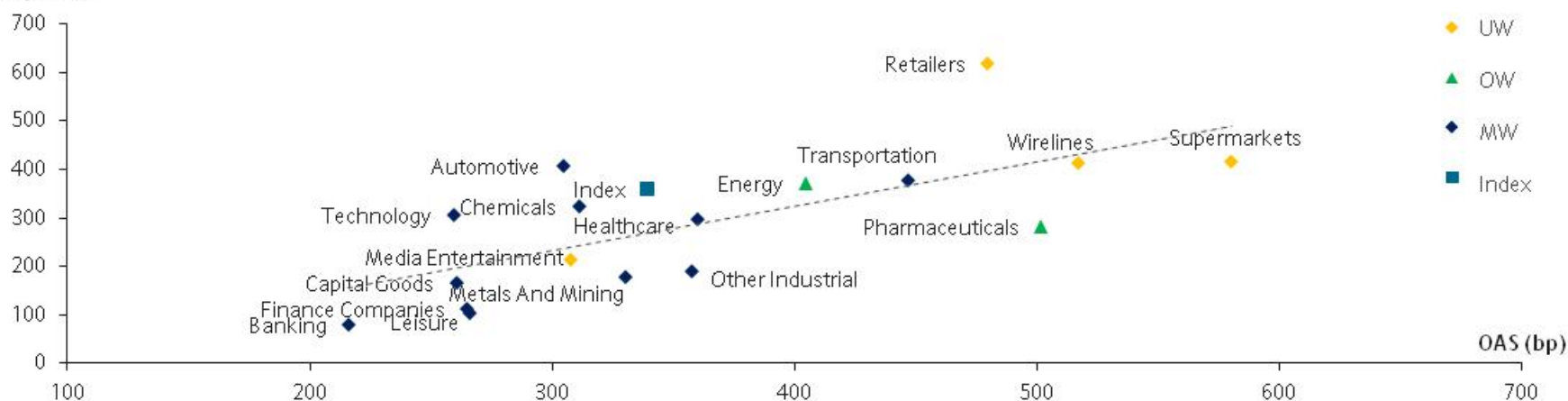
Source: Bloomberg Barclays Indices, Barclays Research



# Sector scorecard: Sector dispersion looking more “normal” now with a compression market thus far

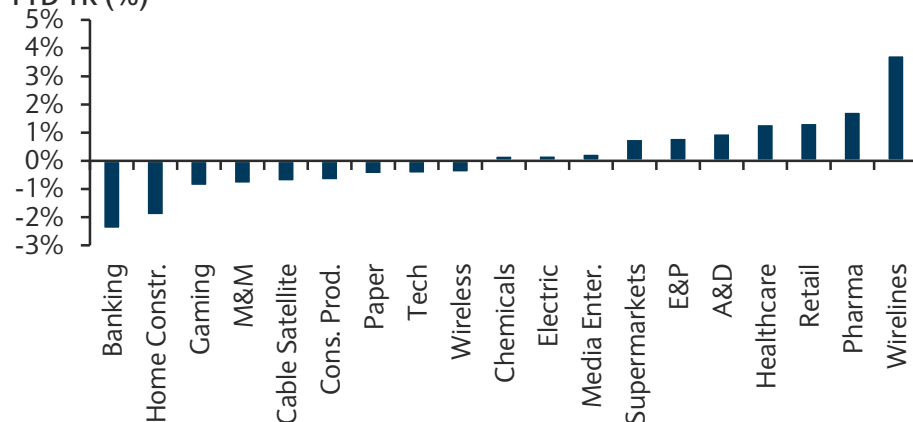
## Dispersion Has Fallen Across HY, with YTD Outperformers Still Relatively Disperse

Sector Dispersion

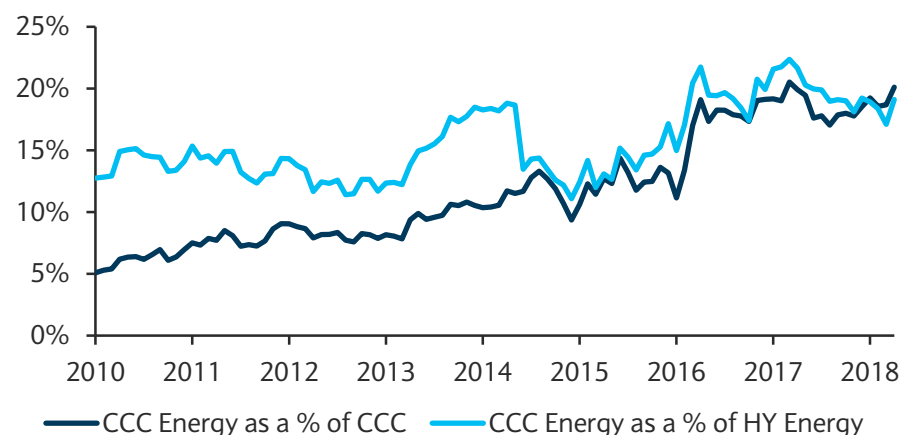


## 2017's Wide, Disperse Sectors Outperforming YTD

YTD TR (%)



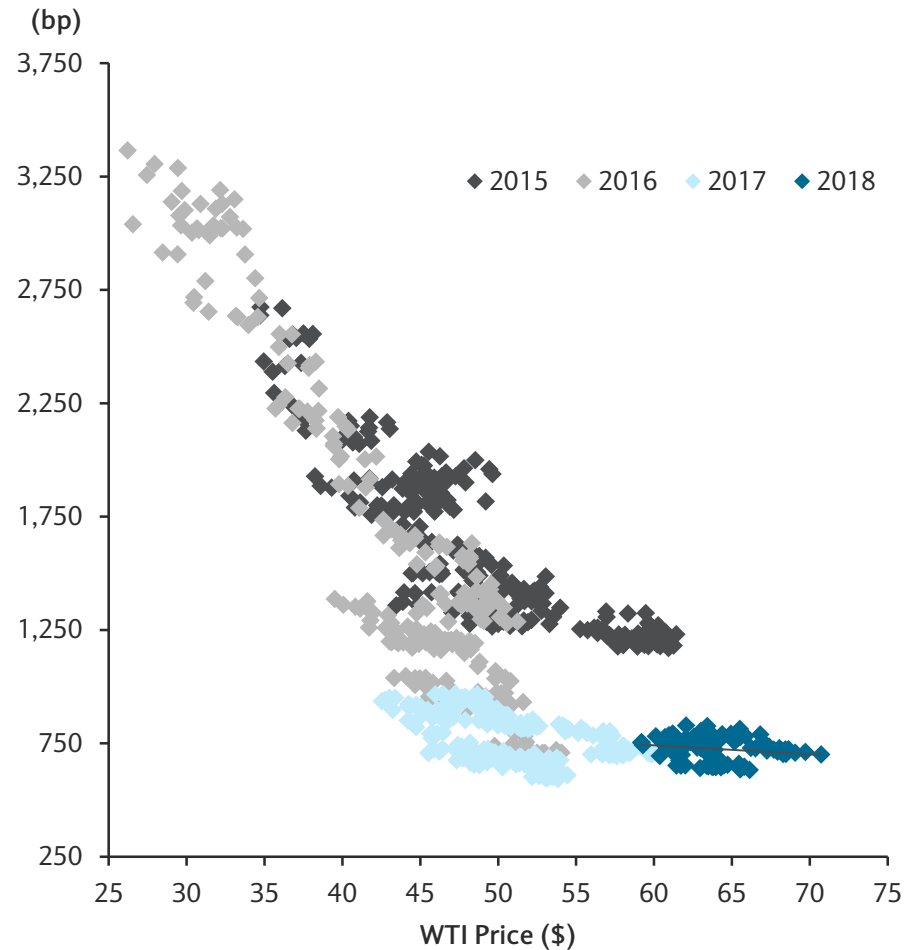
## CCC Energy: Growing Portion of CCCs and Energy



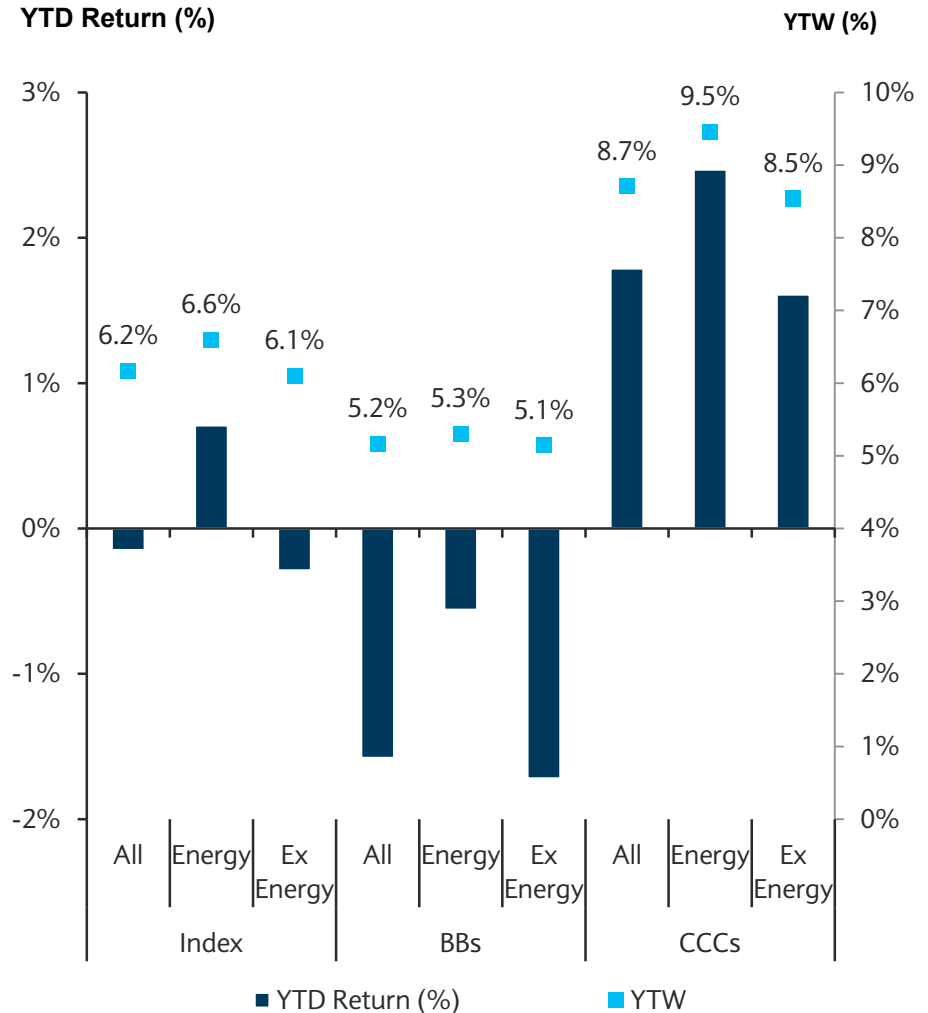
Note: Dispersion measured as standard deviation of sectors' constituent spreads. Source: Bloomberg Barclays Indices, Barclays Research

# CCC Energy focus: Among leaders YTD, as strong oil prices help; we still favor E&P and Oil Field Services

## Better Balance Sheets and Cost Structure Insulate Against Downside in Oil Prices



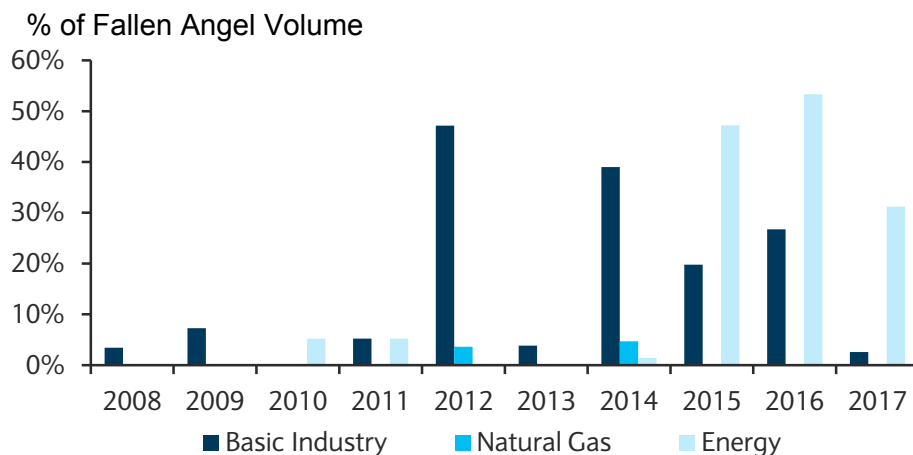
## Energy Outperforming YTD, but Still Has Some Incremental Yield



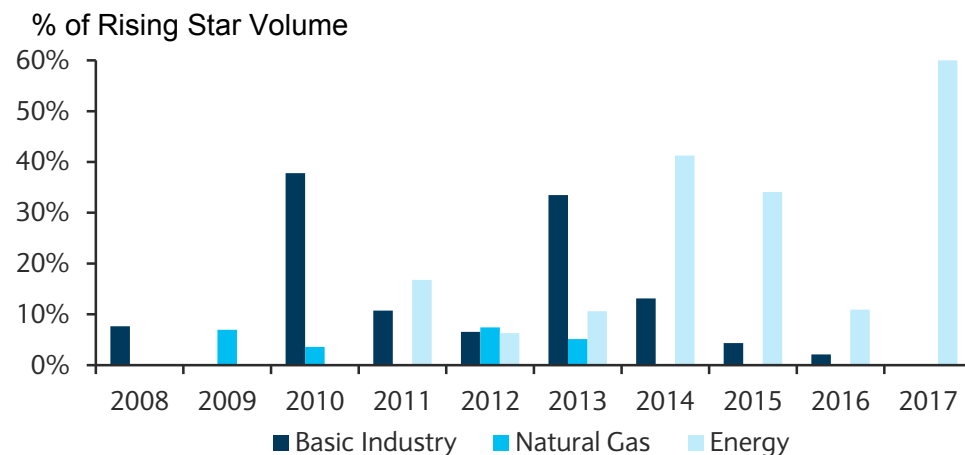
Source: Bloomberg Barclays Indices, Barclays Research

# We see potential for the commodity credit sectors to be a significant source of rising stars in the next two years

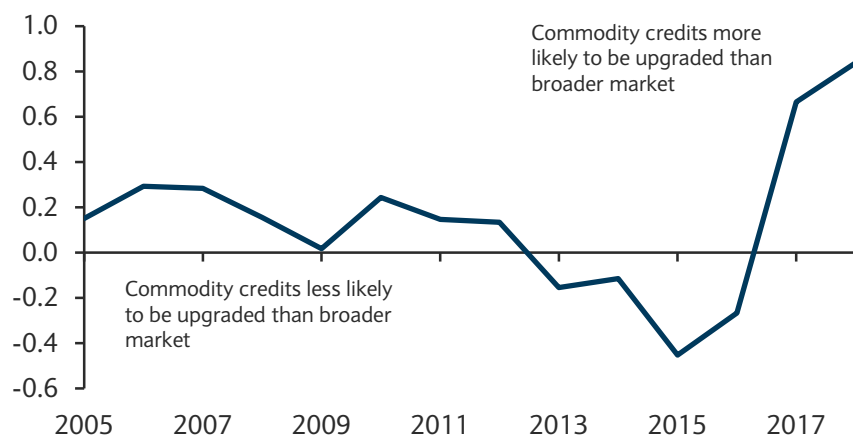
## Basic Industry Sectors Have Led Energy for Fallen Angels...



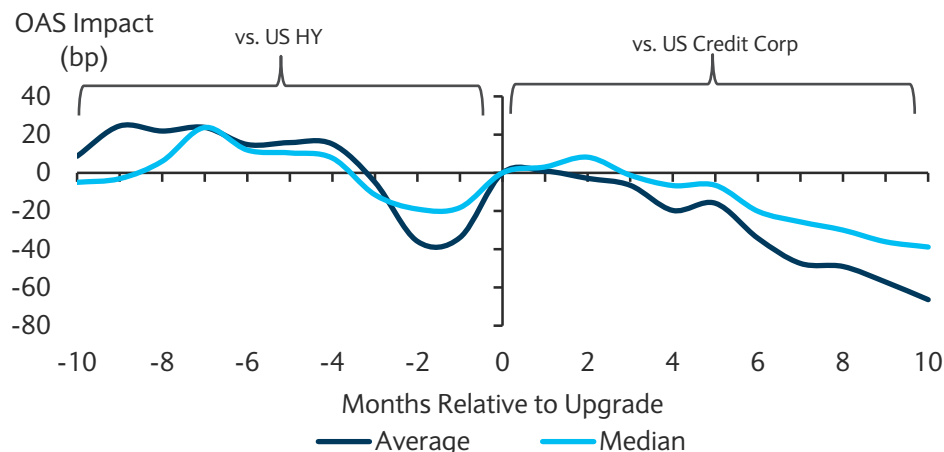
## ...With Energy Rising Star Volume Particularly Strong Now



## Upgrade-Downgrade Ratio Currently More Constructive for Commodity Credits Than the Broader Market



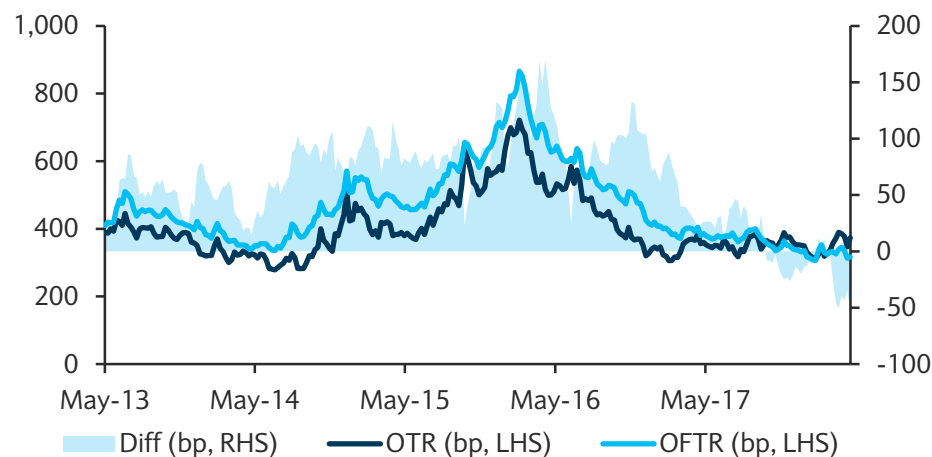
## Rising Stars Continue to Outperform Post-Upgrade



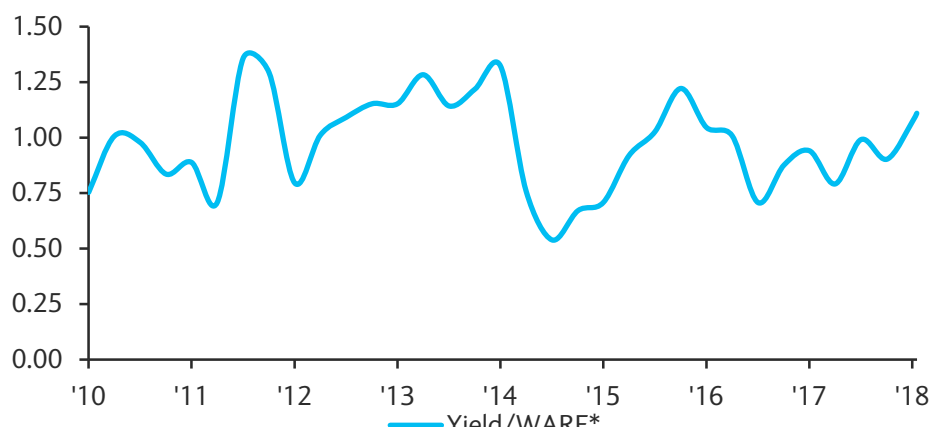
Note: Basic industry consists of metals & mining, chemicals, and paper. Rating agency upgrade/downgrade ratio for commodity credits minus ratio for industrials ex-commodity credits, by year.  
Source: Moody's, Bloomberg Barclays Indices, Barclays Research

# Other pockets of value: Liquid new issues, unsecureds vs. secureds, Bs in the belly, BBs at the front end

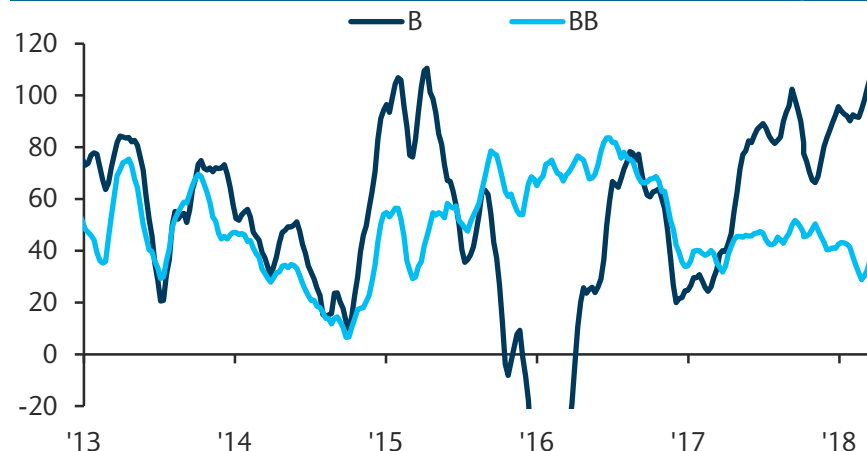
## Liquid New Issues Have Underperformed



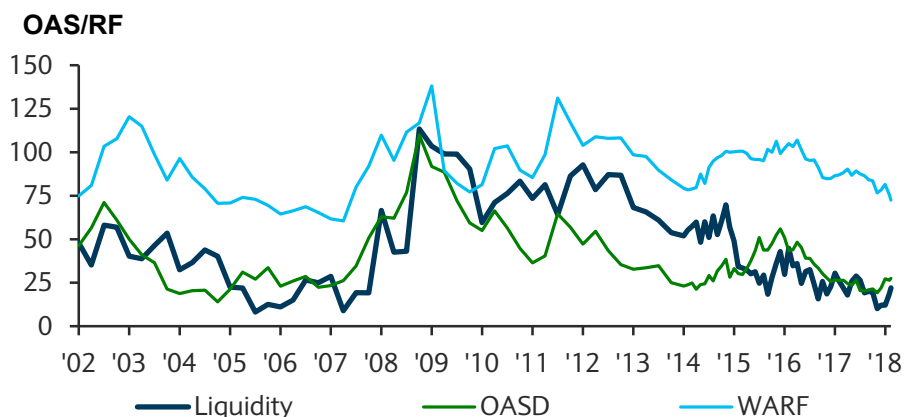
## Unsecureds Still Attractive vs. Secureds in Matched Pairs When Quality Adjusted



## Bs: Spread Curve Too Steep; BBs Curve a Bit Flatter than Average



## Quality Still Explains Valuations; Duration and Liquidity Less So



Note: \*Yield/WARF calculated as yield differential between matched pairs, scaled by WARF differential/1000. Curve steepness measured as difference between 3-5y and 1-3 index spreads. See "Deconstructing Spreads", 4 August 2017 for more details on our spread model; WARF scaled by 1000

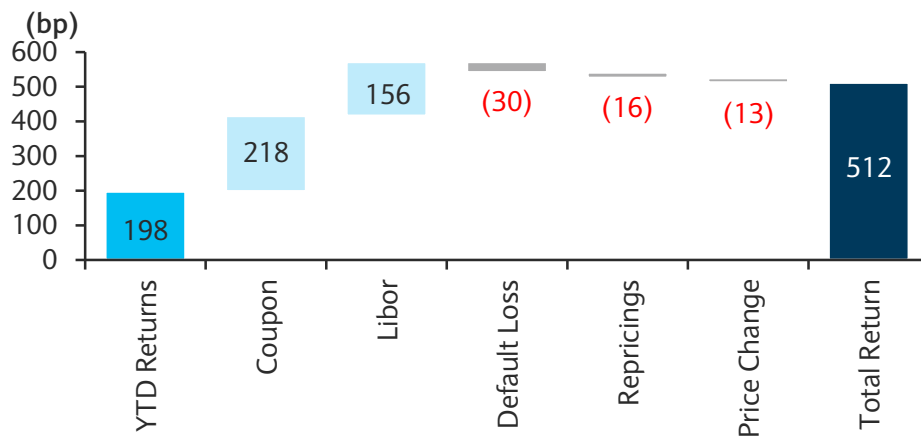
Source: Bloomberg Barclays Indices, Barclays Research

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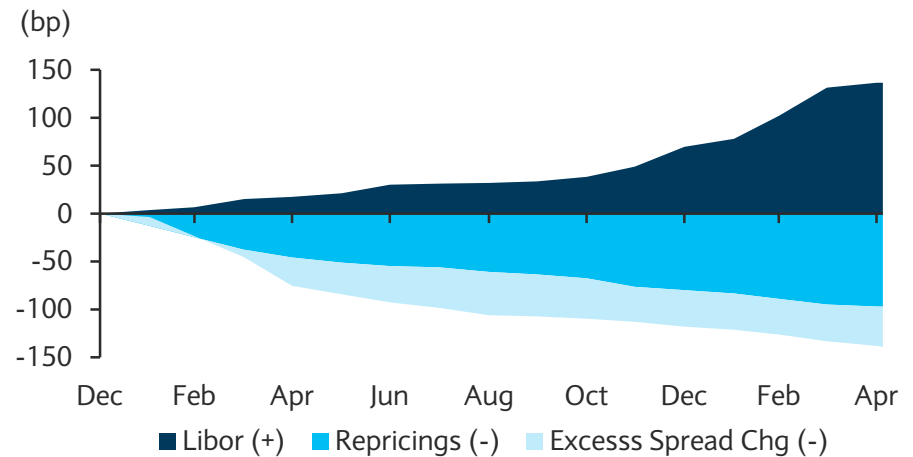
# Leveraged Loans and CLO Views

# With limited potential for price appreciation and continued repricing activity, we expect 4.5-5.5% total returns

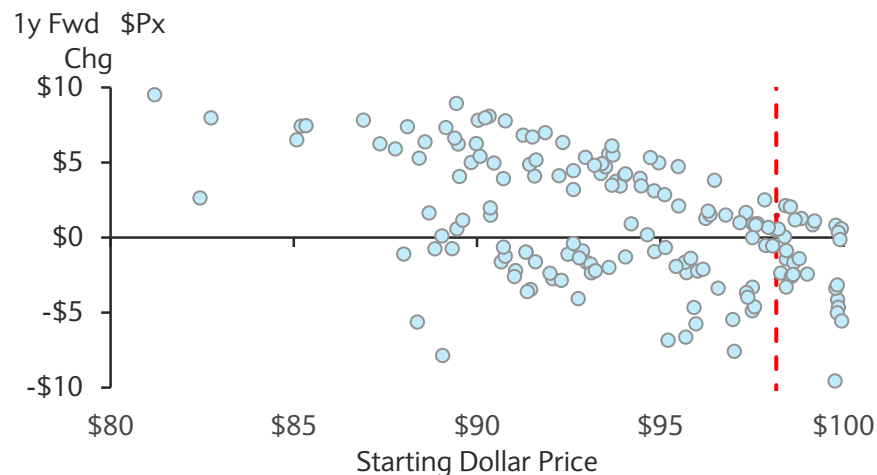
## 2018 Returns Forecast Components



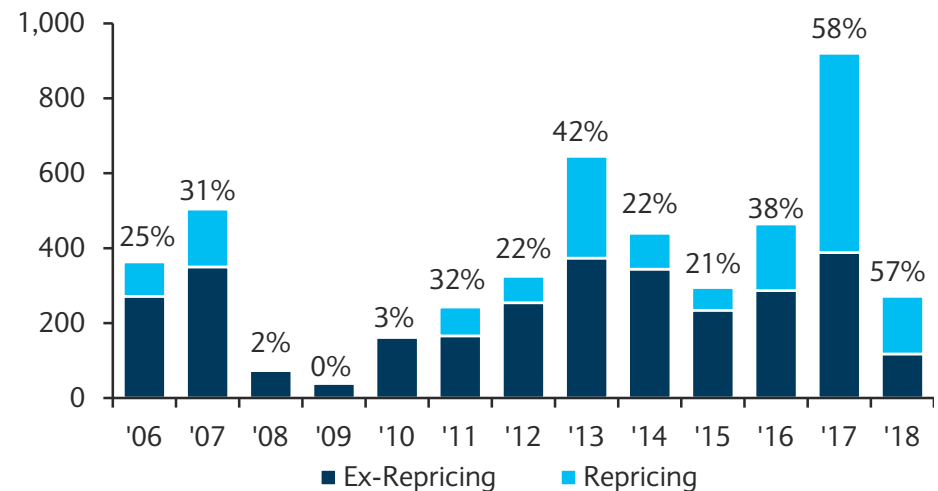
## Libor and Repricing Effect on Carry



## Starting Price vs 1y Fwd Price Change



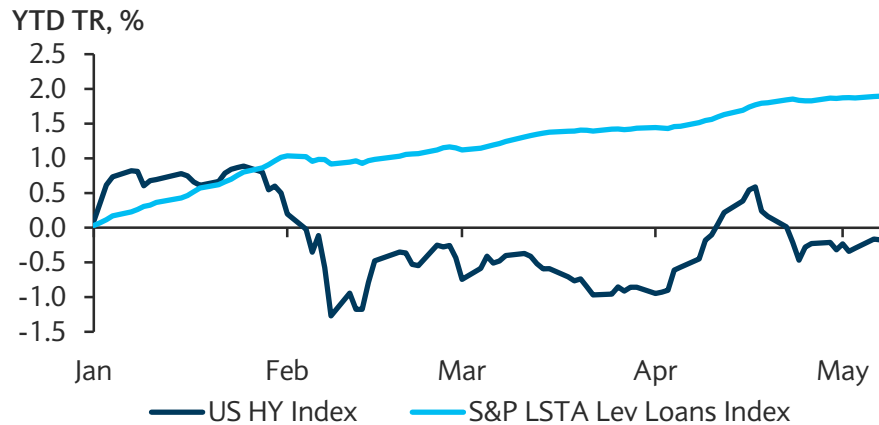
## Annual Repricing Activity



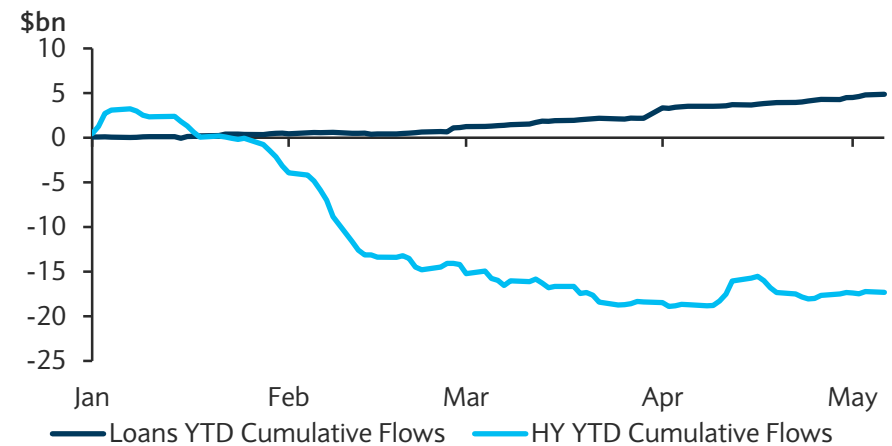
Source: S&P LCD, Bloomberg Barclays Indices, Barclays Research

# The loan market has outperformed high yield so far this year in flows and returns, thanks to rising rates

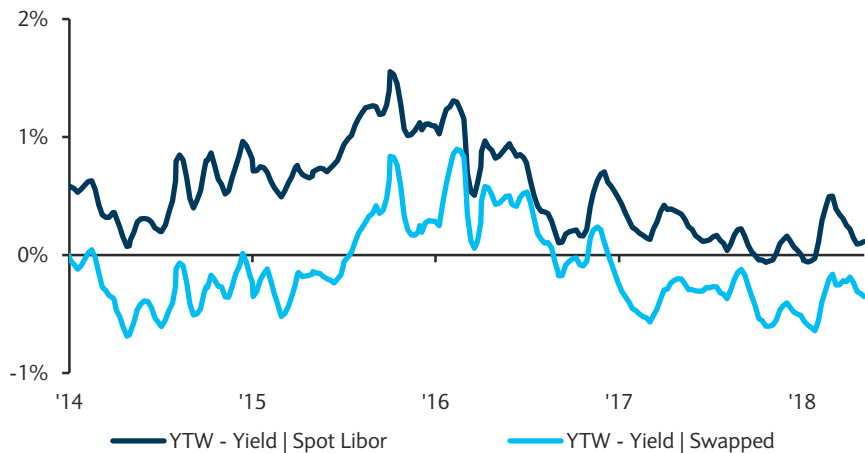
## HY vs. Loans YTD Cumulative Returns



## HY vs. Loans YTD Cumulative Flows



## HY – Loan Yield Differential



## Current Environment Compares with 2005

Year	Total Returns (%)				Change in Rates (bp)		
	Start HY OAS (bp)	High Yield	Lev Loans	S&P 500	3M Libor	2y Tsy	10y Tsy
2005	288	2.7	5.1	4.9	197	134	17
2007	275	1.9	2.0	5.5	-66	-176	-68
2011	325	5.0	1.5	2.1	28	-36	-142
2014	386	2.5	1.6	13.7	1	28	-86
2018E	343	3.5-4.5	4.5-5.5	--	94	89	77

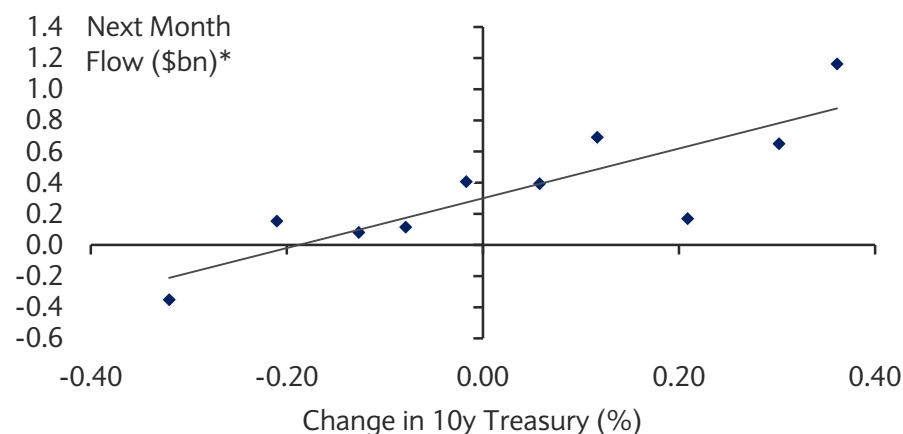
Note: Rate forecast reflects average consensus forecast through Q4 18. Source: S&P LCD, Bloomberg, Bloomberg Barclays Indices, Barclays Research

# Retail demand is positive, but CLOs will likely remain the driving force; we expect 2018 loan supply to be similar to 2017

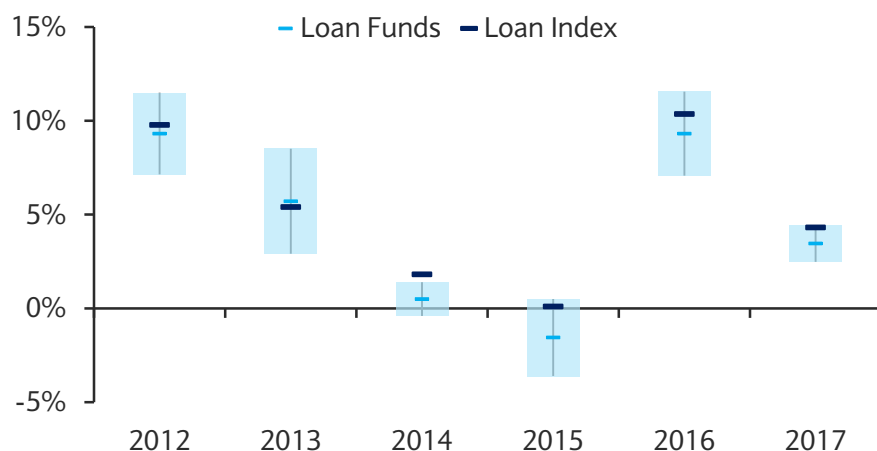
## Breakdown of Loan Buyer Base

Category	2017	2016
CLOs	57-60%	56-59%
Loan Mutual Funds (Open, Closed, ETFs)	16-18%	13-15%
Hedge Funds / Separate Accounts	14-18%	14-18%
Insurance (P&C & Life)	2-4%	2-4%
Non-Loan Mutual Funds / BDCs	1-3%	2-4%
Other	1-6%	4-9%

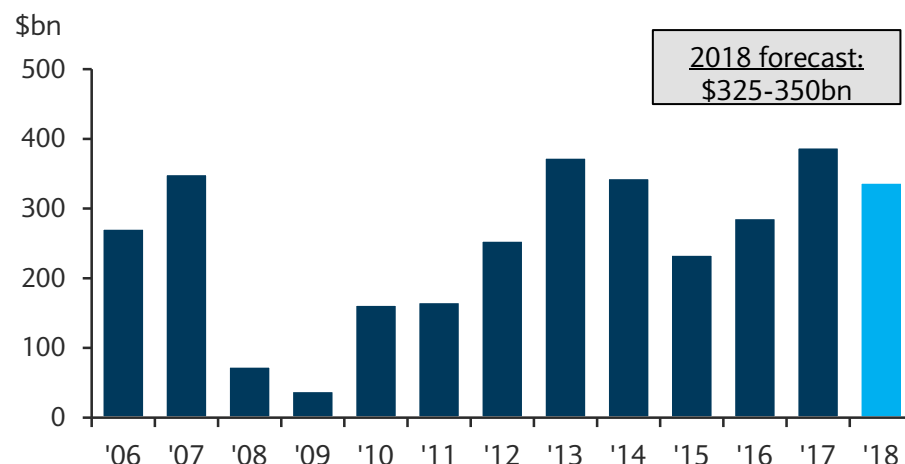
## Next Month Flow vs. Chg in 10y Tsy



## Dispersion of Net Fund Performance



## Annual Issuance and Forecast (\$bn)

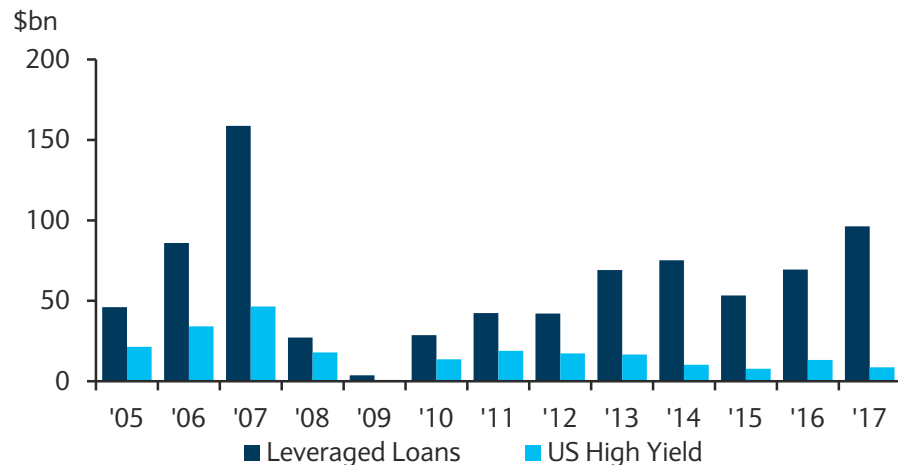


Note: \*Average flow is for deciles ranked by the monthly changes in 10y rates. Source: Lipper, EPFR, CEF Connect, Credit Flux, HFR, Federal Reserve, S&P LCD, Bloomberg, Barclays Research

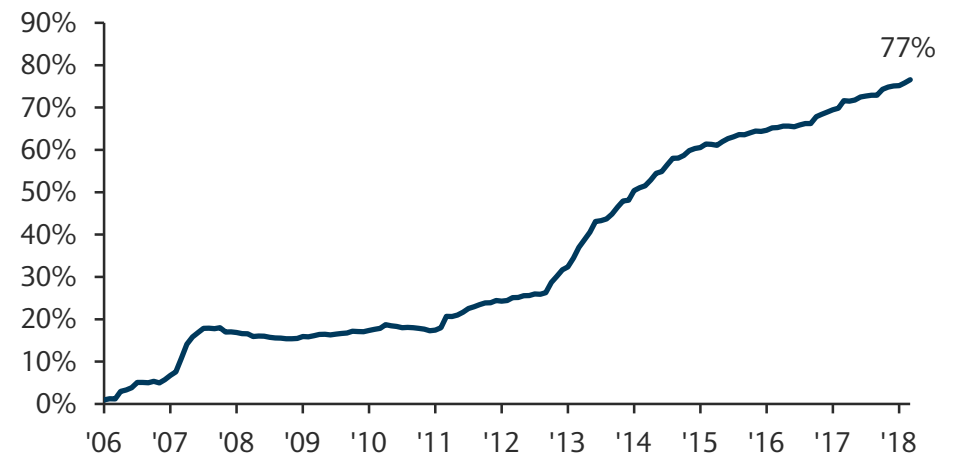


# The GAO's decision that the Leveraged Lending Guidance is a "rule" should cause the trend of higher new issue leverage to continue

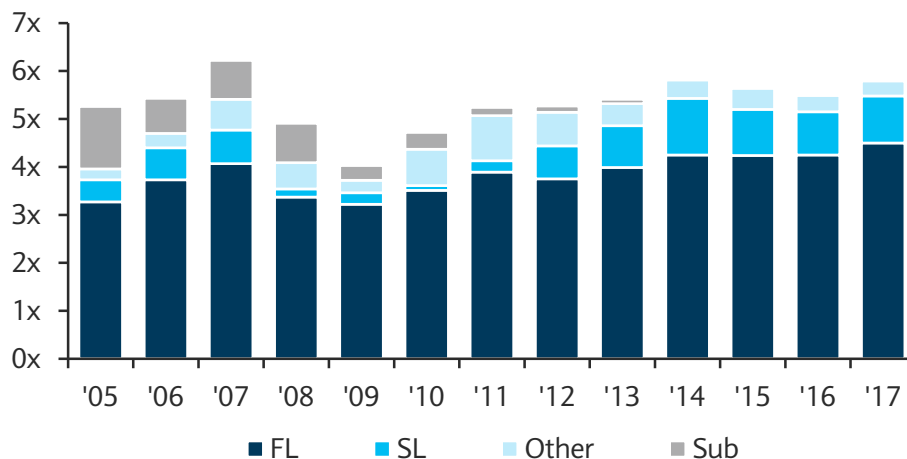
## LBO Issuance for Loans and High Yield



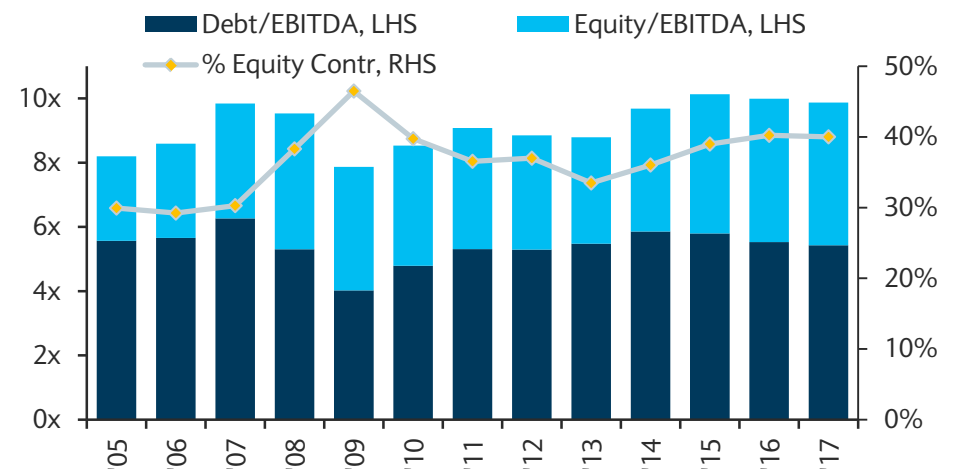
## Covenant-Lite % of Loan Market



## Large Corp Loan New Issue Leverage



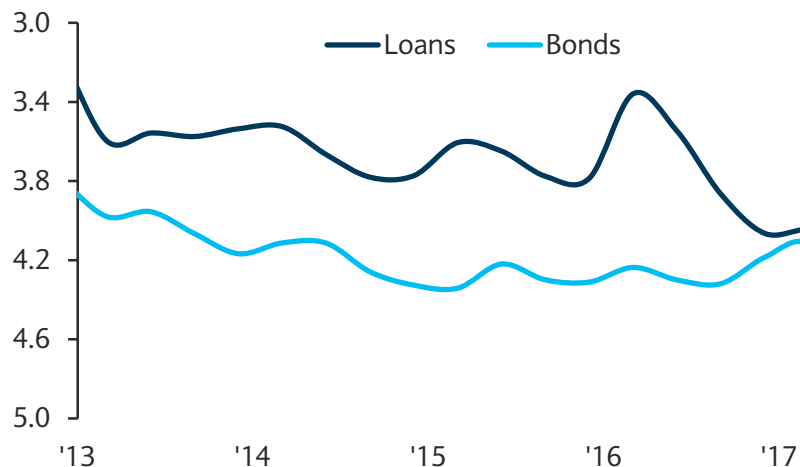
## Purchase Price Mult. and Equity Checks



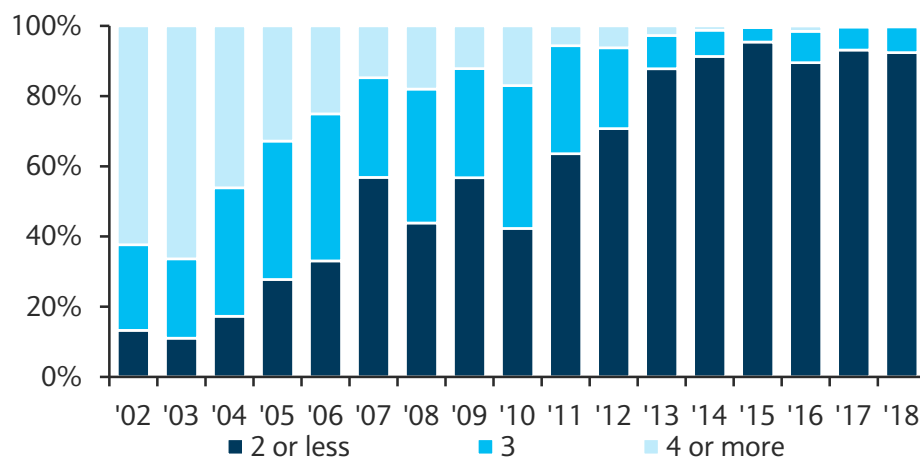
Source: S&P LCD, Barclays Research

# Demand outpacing supply has meant that covenant quality declined and there was not a penalty for issuing covenant-lite

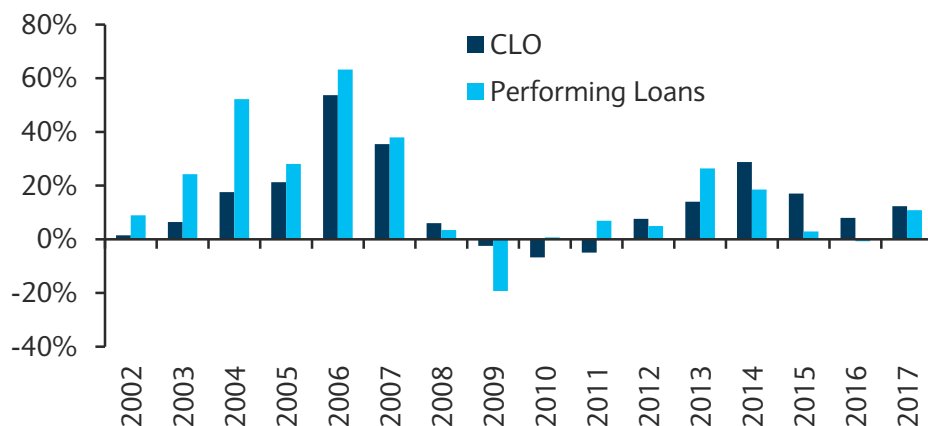
## Moody's Covenant Quality Index\*



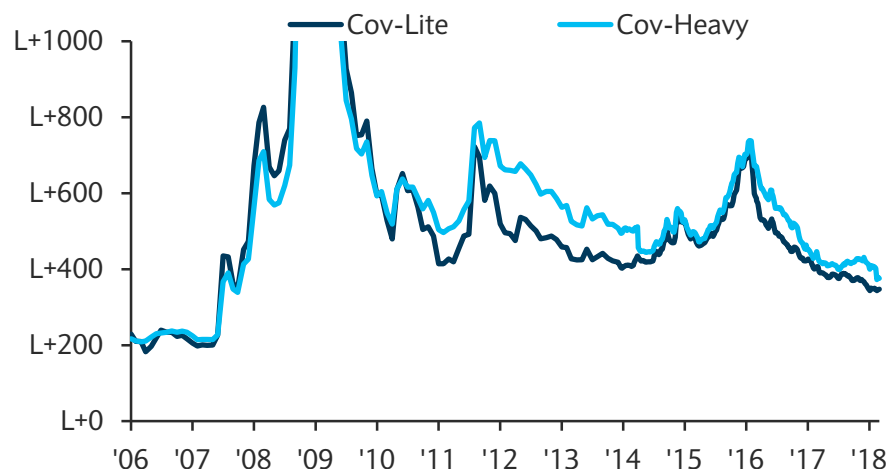
## 1st Lien Loans by Number of Covenants



## Y/y Growth in CLOs v. Performing Loans



## Cov-Lite vs. Cov-Heavy 3y Spreads



Note: \* Covenant scores are based on a five point scale rating from 1 (most protective covenant packages) to 5 (weakest covenant packages). Source: S&P LCD, SIFMA, Barclays Research

# Rising rates could have a meaningful effect on the interest burdens for loan issuers, particularly loan-only cap structures

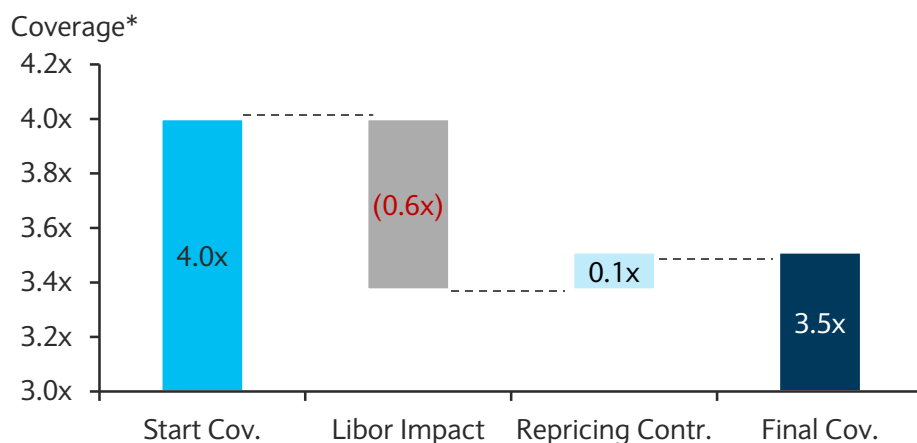
## US 3m Libor



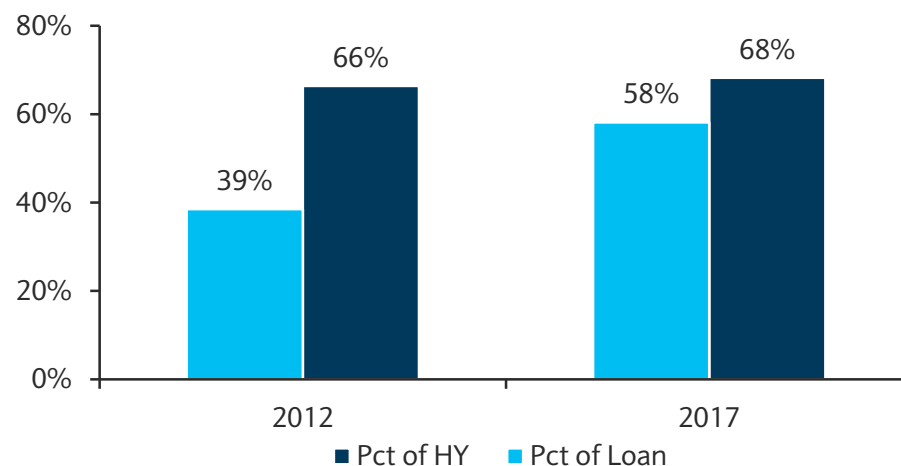
## New Issue Interest Coverage



## Estimated Coverage Decline (Stylized)



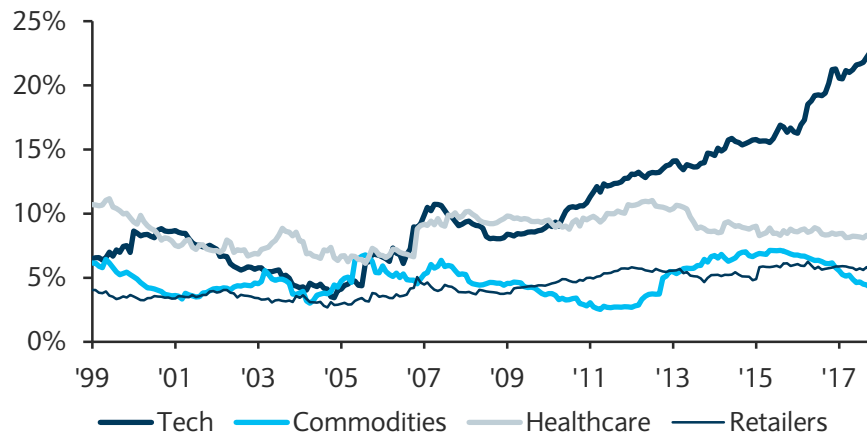
## Loan and HY Only Issuers as a % of Each Market



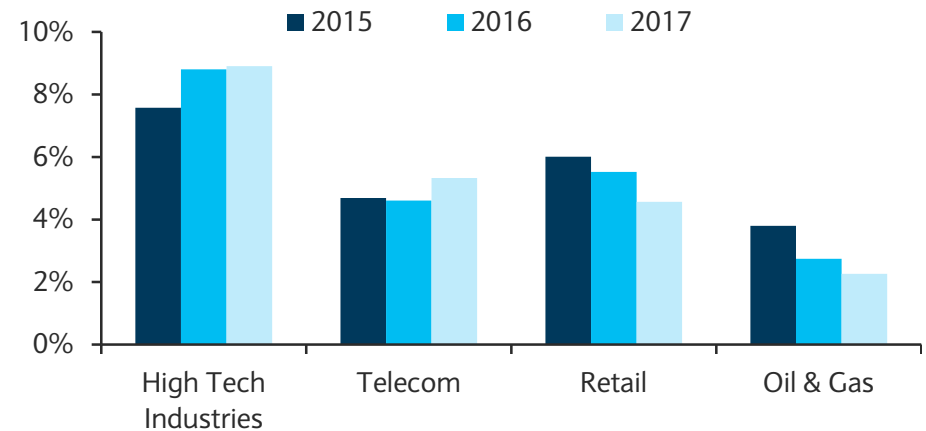
Note: \*We model interest coverage for a stylized \$100mn EBITDA company with 4.0x starting coverage. We assume a 100bp increase in 3m Libor and a 25bp repricing cut. Source: Bloomberg, Bloomberg Barclays Indices, Barclays Research

# Technology is the biggest sector, but the loan market also has outsized exposure to retail compared with high yield

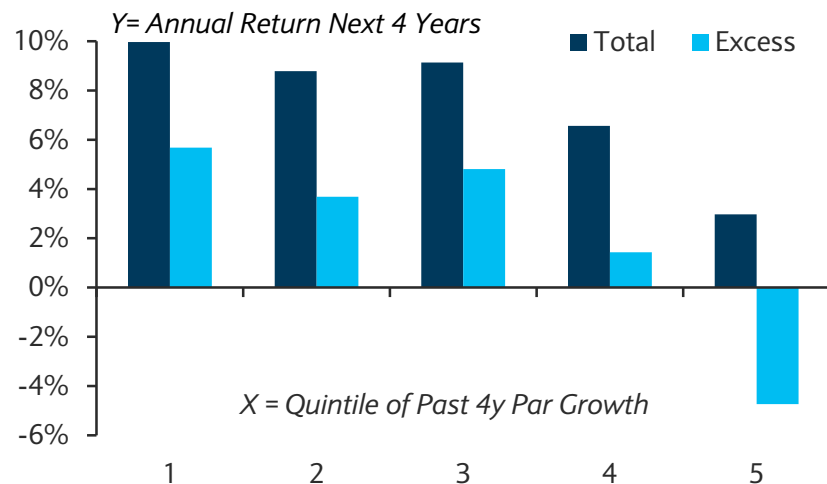
## Sector Weights in the S&P/LSTA Index



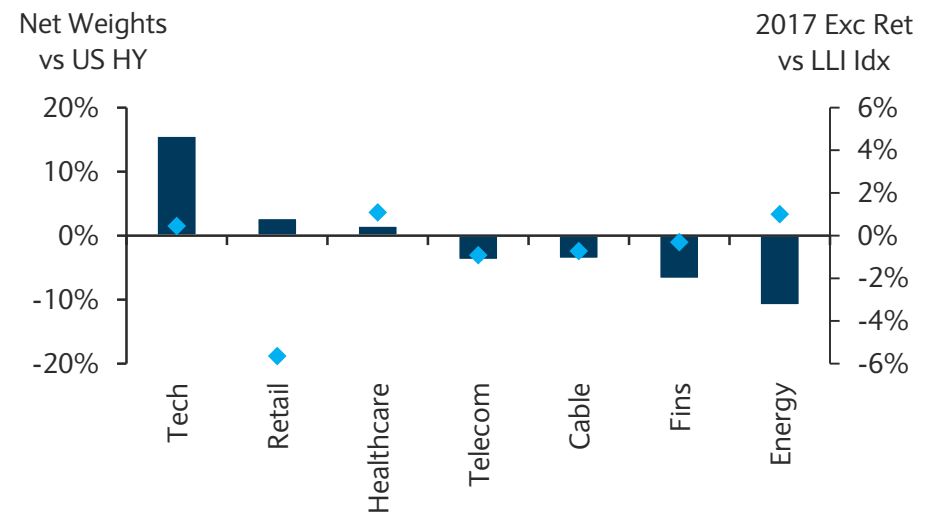
## CLO Sector Weights



## HY Returns Based on Sector Growth



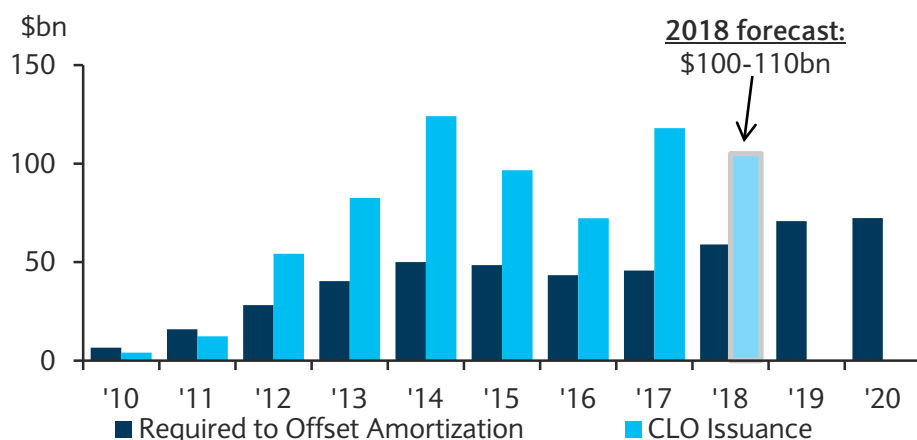
## Relative Weights and Returns by Sectors



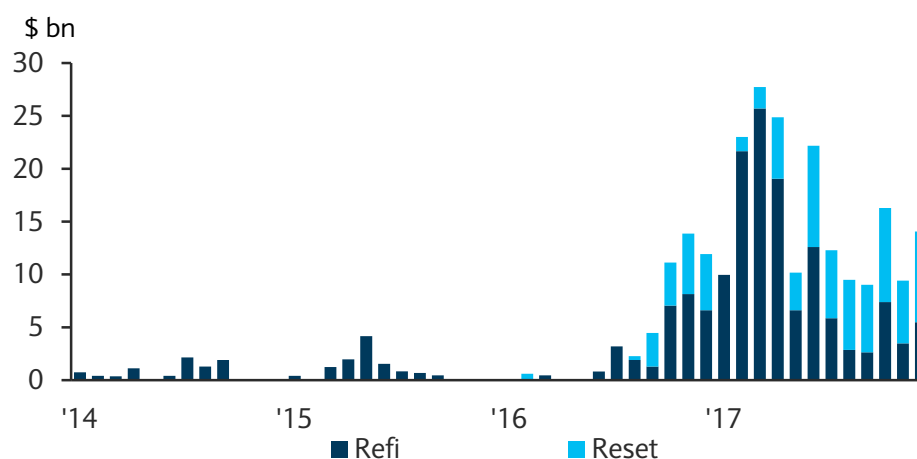
Source: S&P LCD, Barclays Research

# CLO formation has been robust, with new issuance significantly outpacing amortizations

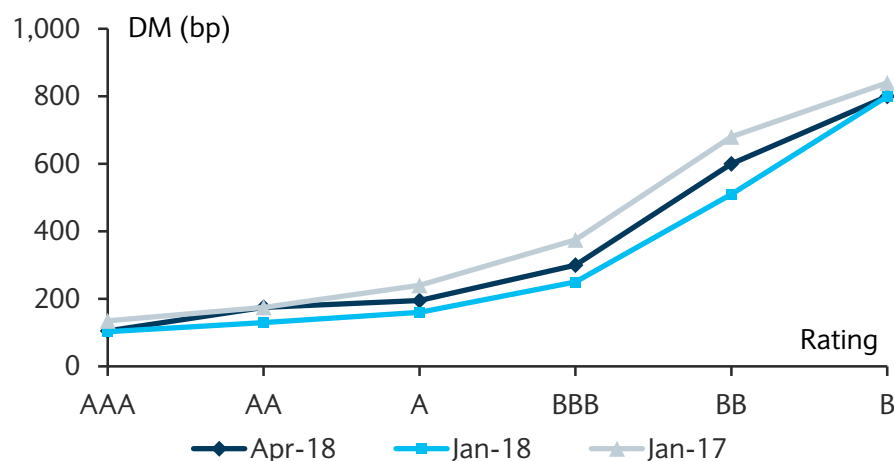
## Annual CLO Issuance and Amortization



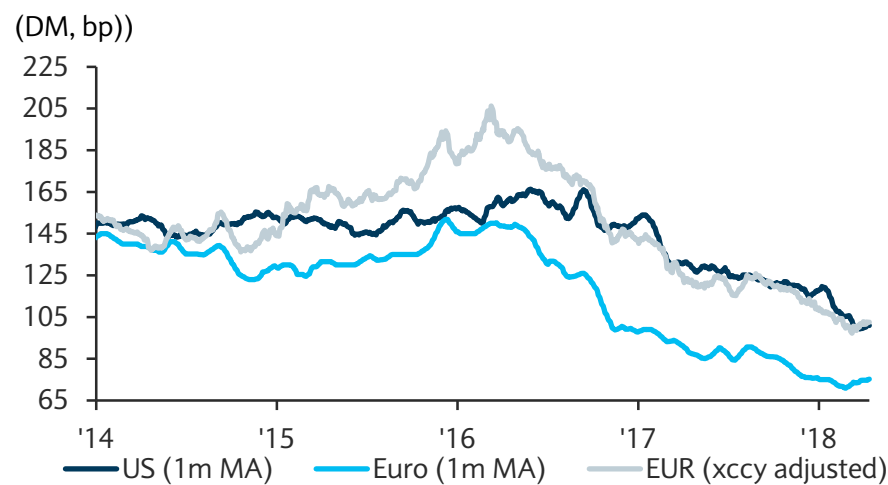
## Monthly CLO Refis and Resets



## US CLO Spreads



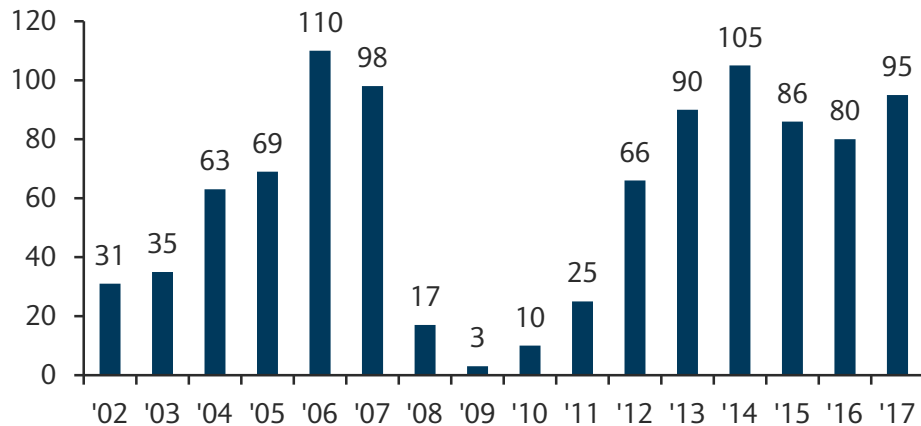
## Euro vs. US AAA CLO Spreads



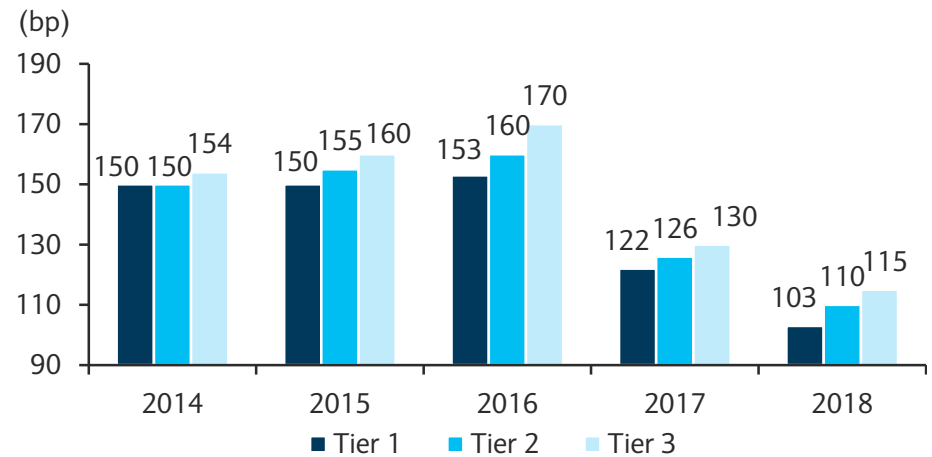
Source: Intex, S&P LCD, Bloomberg, Barclays Research

# A rollback in risk retention requirements is unlikely to lead to a substantial pickup in issuance for existing or new managers

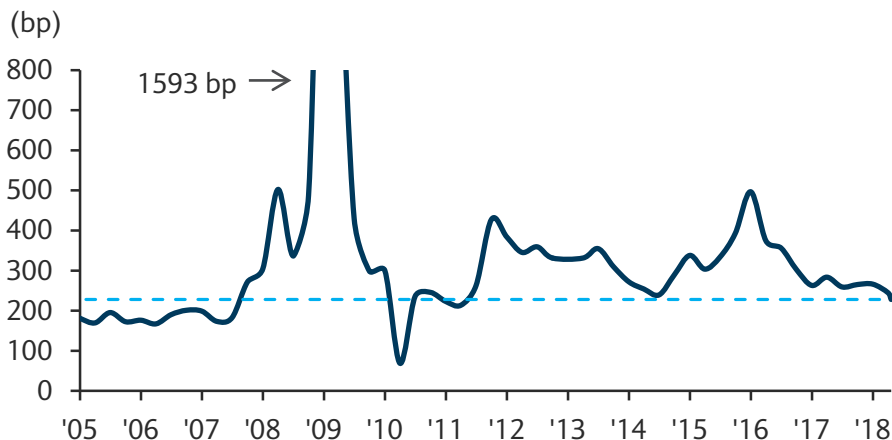
## Manager Count Over Time



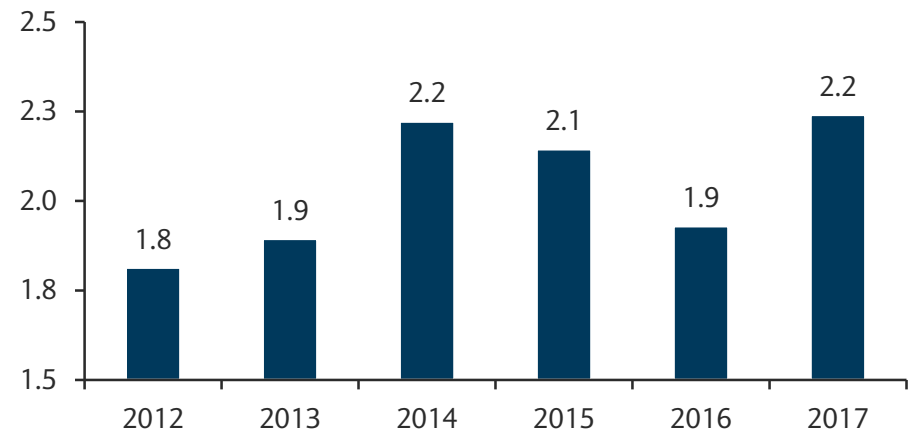
## Median AAA Spreads by Tier (bp)



## Estimated Asset-Liability Spread Diff



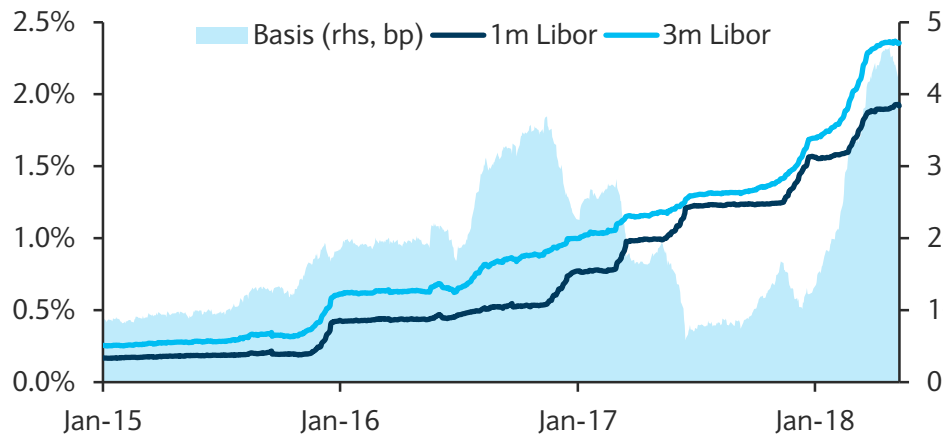
## Average Deal Count by Manager



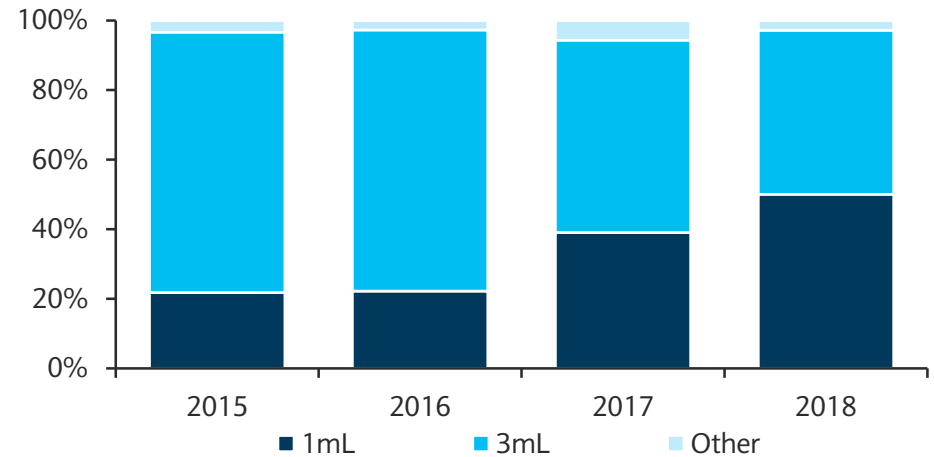
Source: S&P LCD, FINRA, Barclays Research

# As the basis between 1m and 3m Libor has increased, more loans are pegged to 1m Libor, which hurts CLO equity

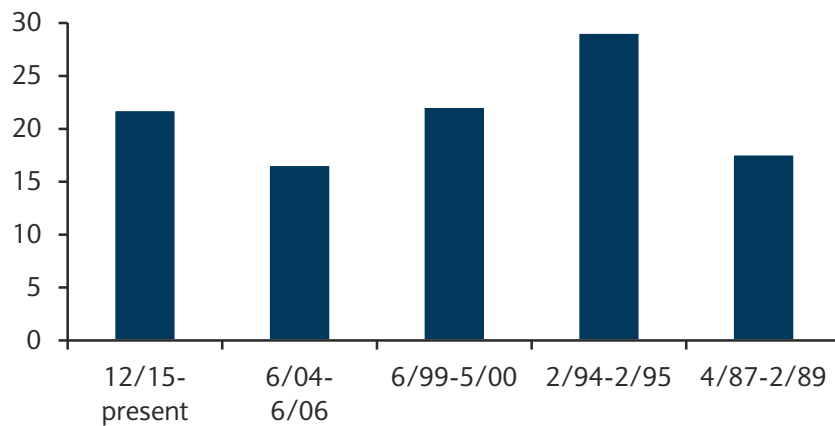
## Libor Yield and Basis



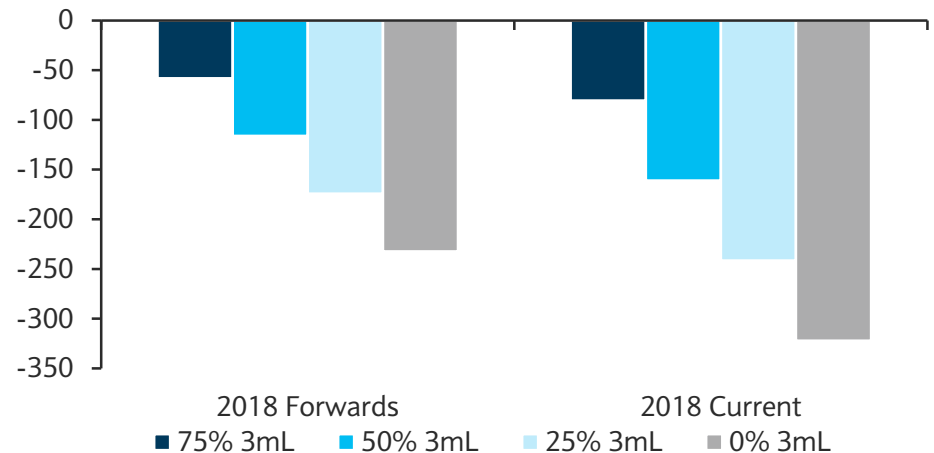
## Distribution of CLO Loan Collateral



## Avg Hiking Cycle 1m/3m Libor Basis (bp)



## Equity Returns Relative to 100% 3mL



Source: Intex, Bloomberg, Barclays Research

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