

# 3Q17 BHMS BOND COMMENTARY

*“Fed policy is based on a forecast, not on actual data.” – Robert Perli, Cornerstone Macro*

**3Q17 MARKET REVIEW:** Aside from a 10bp climb in the 2yr, U.S. Treasury (UST) yields were only modestly higher by the end of 3Q17. The flattening in the UST curve was offset by tighter credit spreads, which propelled the Bloomberg Barclays Aggregate Index to a 0.85% 3Q17 total return.

**THE ECONOMY, INTEREST RATES & THE FED:** The Federal Reserve (Fed) announced it will begin the drawdown of its \$4.5T balance sheet in October 2017, but also signaled a December rate hike is likely as well. The language in the Fed’s press release, strong data related to U.S. and global economic growth and the Trump administration tax proposals combined to lift UST yields in the final weeks of September.

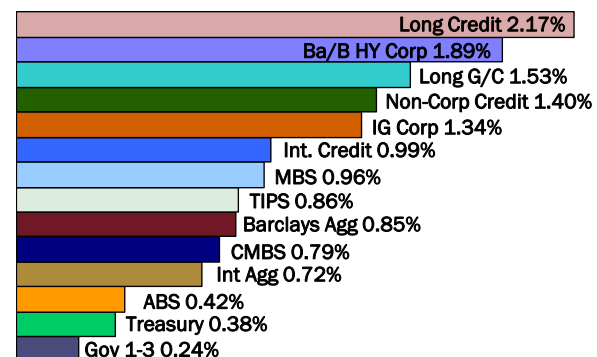
**INVESTMENT GRADE CREDIT:** Spread compression toward the post-crisis tights drove the Investment Grade Credit Index (IG) to a total return of 1.35%. Strong demand for IG Credit absorbed a deluge of new issue supply that has continued throughout 2017. BHMS maintains an overweight in IG Credit, but has de-risked the composition of this exposure. We remain vigilant in issuer selection as late-credit cycle deterioration in fundamentals and corporate management behavior continue.

**HIGH YIELD:** The average High Yield (HY) spread narrowed 22bps on the sustained investor appetite for higher yielding corporate securities. Tighter spreads lifted the Ba/B High Yield (HY) Index to a 1.89% total return in 3Q17. BHMS is wary of reaching for yield with credit spreads at such tight levels and prefers a more defensive bias via up-in-quality security selection.

**AGENCY MBS, ABS AND CMBS:** The MBS market continued to absorb the details behind the Fed’s balance sheet reduction plan, but posted positive 3Q17 excess returns. We are marginally underweight the sector, but believe supply pressures may cheapen MBS valuation versus IG credit. BHMS maintains an overweight in Asset Backed Securities (ABS) and an underweight in Commercial Mortgage Backed Securities (CMBS), and is defensively positioned in both sectors.

**LONG CREDIT:** Tighter credit spreads drove the Long Credit market toward positive total and excess returns in 3Q17. BHMS has de-risked the composition of its Long Credit portfolios, but continues to find opportunities in select credits. *See the page following the Long Credit market summary for further information on conditions and trends in U.S. pensions.*

## Bloomberg Barclays Index Returns 3Q 2017



Yields & Spreads	2017				
	12/31/16	6/30/17	9/30/17	YTD High	YTD Low
3 Mo. T-Bill	0.50%	1.01%	1.04%	1.17%	0.49%
2 Yr. Treasury	1.19%	1.38%	1.48%	1.48%	1.14%
10 Yr. Treasury	2.45%	2.30%	2.33%	2.63%	2.04%
30 Yr. Treasury	3.07%	2.84%	2.86%	3.21%	2.66%
Yield Curve 2-10 Yr.	126	92	85	128	77
Yield Curve 2-30 Yr.	188	145	138	190	132

Sep. 30, 2017	Total Returns		Excess Returns*	
	3-Months	YTD	3-Months	YTD
High Yield Ba/B	1.89%	6.52%	1.50%	4.80%
Utility	1.57%	5.60%	1.05%	2.09%
Non-Corp. Credit	1.40%	4.57%	0.98%	2.34%
IG Credit	1.35%	5.08%	0.89%	2.41%
Industrials	1.33%	5.35%	0.85%	2.40%
Financials	1.30%	4.79%	0.86%	2.53%
MBS	0.96%	2.32%	0.47%	0.27%
CMBS	0.79%	2.99%	0.34%	0.77%
ABS	0.42%	1.56%	0.14%	0.68%

\*Blmbg Barclays Indices calculates the excess return of various bond sectors by measuring the return above or below duration neutral Treasuries.

Source: Bloomberg Barclays

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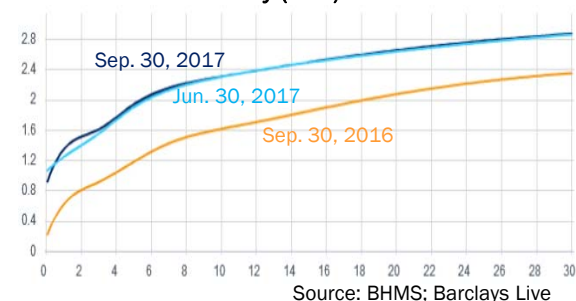
*“Temporary factors, by their nature, have little implication for the underlying trend in inflation.” – Fed Governor Lael Brainard*

**THE ECONOMY, INTEREST RATES & THE FED:** The Fed shook the UST market out of its risk-off mood, which had seen yields decline through most of 3Q17, largely on geopolitical tensions related to North Korea. As widely expected, the Fed announced it will begin to shrink its \$4.5T balance sheet in October 2017. The Fed will start reducing its holdings by \$10B each month (\$6B in UST and \$4B in MBS), and will gradually increase the liquidation to \$50B quarterly (\$30B UST and \$20B MBS) over time. At this pace, the balance sheet is not expected to drop below \$3T until 2020. Additionally, the market did not anticipate the hawkish language that accompanied the balance sheet announcement. The Fed expressed its intent to raise rates again in December 2017 and potentially three additional times in 2018. This surprise sparked a quick sell-off in the 10yr UST, which moved from its YTD low of 2.04% in early September to 2.33% by the end of 3Q. The 2yr-30yr UST yield spread narrowed another 8bps during 3Q17, and the curve is now flatter by 50bps YTD. While the brief yield rally lifted the 10yr only 3bps above the 2Q17 close, the 29bps rise over the final two weeks of 3Q reflected a significant change in market sentiment.

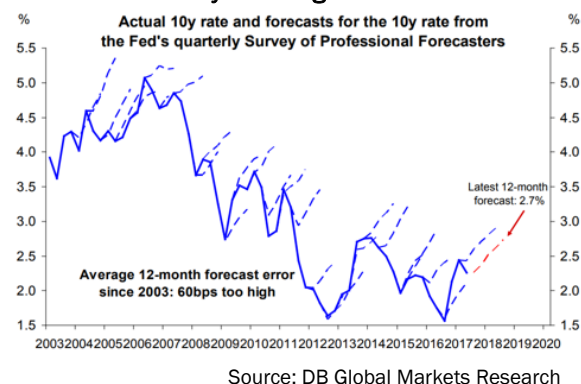
The late quarter rate rise was also impacted by stronger economic data. GDP grew 3.1% in 2Q17, while inflation rose 1.7%. The ISM manufacturing index spiked to the highest level in more than five years, even though the data was partially inflated by Hurricane Harvey-related delivery delays. Politics also played a role in lifting rates. The Trump administration’s proposed tax reforms raised concerns about expanding the federal budget deficit and stoking inflation, neither of which are welcomed by the bond market. In addition, global growth has accelerated as both the European and Japanese economies have shown improving data, while Chinese growth has remained stable. While the hawkish Fed meeting in September boosted to the USD (+1.9% from its recent YTD low), the currency has still declined 8.9% in 2017.

**BHMS OUTLOOK:** Global economic growth accelerated in 3Q17, providing a tailwind for asset markets in 2017, but the bond market is signaling uncertainty about the near-term future of stubbornly low yields. Entering 2017, conventional Wall Street wisdom assumed the rate rise and yield curve steepening witnessed in 4Q16 would continue as the Fed targeted further normalization policies and faster economic growth stoked higher inflation. Instead, the UST curve has flattened 50bps YTD as the bond market seems to favor a slowing in growth even as the Fed embarks on its untested “quantitative tightening” program. In addition, with four vacant or soon-to-be vacant FOMC board seats, along with a potential new Fed chair, a shift away from a post-crisis role of providing stability and stimulus may transform the Fed into an increasing source of uncertainty and volatility in the bond market.

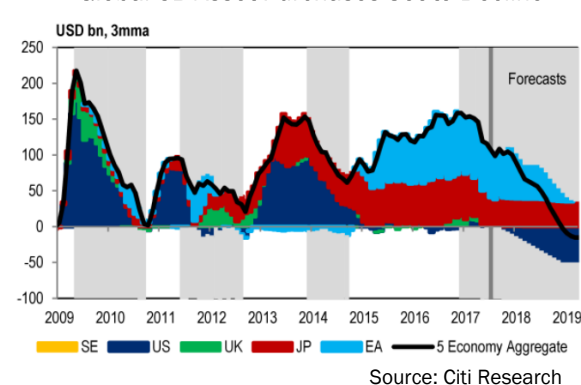
U.S. Treasury (UST) Yield Curve



Wall Street Always Too High on Rate Forecasts



Global CB Asset Purchases Set to Decline



# 3Q17 BHMS BOND COMMENTARY

*“Smooth seas do not make skillful sailors.” – Randall Forsyth, Barron’s*

**INVESTMENT GRADE CREDIT MARKET REVIEW:** A benign economic and earnings backdrop, along with continued strong investor demand for yield, led to tighter IG Credit spreads in 3Q17. This spread compression toward the post-crisis tights drove the IG Credit Index (“IG Index”) to a total return of 1.35% and an excess return of 0.89% in 3Q17. IG Index spreads tightened 8bps during 3Q17 and are now 22bps tighter YTD. Similar levels of spread tightening resulted in Industrials (+1.33%), Financials (+1.3%), and Utilities (+1.57%) performing roughly in-line. There was a similar lack of performance dispersion across virtually all corporate sub-sectors, as spreads tightened between 1bp (Communications) and 12bps (Basic Industry).

Non-Corporate Credit, led by Sovereigns, also performed in-line with Corporates and generated a 3Q17 total return of 1.40%. Continuing its 1H17 trend, BBB Credit outperformed other segments of the IG Index on both total and excess returns. The multi-quarter outperformance of BBB Credit led to the narrowing in spread versus A-rated credits to an average of 51bps, the smallest differential since October 2014, and 10bps below the post-crisis average.

New issue volume remained extremely robust throughout 3Q17, reaching a total of \$379.5B and nearly surpassing the record set in 3Q16. Total YTD new issuance rose to \$1.17T, and will likely surpass the 2016 record of \$1.44T. Total YTD17 IG Credit issuance will mark a sixth consecutive year of \$1T+ in gross new supply.

The willingness of the market to continue to absorb such massive new issue supply, even as credit spreads have reached post-crisis peak valuations, indicates unprecedented demand for IG Credit. Net inflows to IG Credit have topped \$20B per month and over \$100B YTD, and the asset class has not experienced a month of net outflows since January 2016. Foreign demand has remained particularly robust. Non-U.S. investors now hold 40% of the U.S. corporate bond market, following a 6% minimum annual increase since 1Q15.

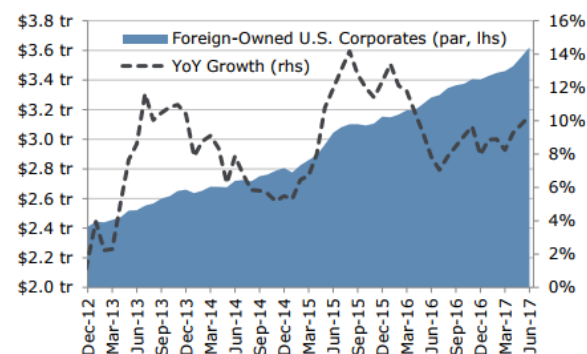
**BHMS IG OUTLOOK:** By the end of 3Q17, IG Credit spreads were hovering only 3bps above the post-crisis tight of 93bps set in June 2014, and well below the same period average of 140bps. Spreads have moved tighter because corporate earnings have accelerated at the fastest rate since 2011, while the reach for yield in an income-starved world continues. While the rate of deterioration in corporate credit fundamentals has slowed, especially in the Energy sector on an earnings recovery with commodity prices, leverage metrics across most sectors remain elevated. Even as the economic expansion continues, companies continue to accumulate debt at an even faster pace, and the Debt/EBITDA ratio in IG Credit now stands at 3.1x. Over 20% of outstanding IG debt has been issued by corporations with leverage ratios now standing at 4x or higher, while less than 10% of companies had similar leverage in 2011.

Spread Between A and BBB Near Cycle Tights



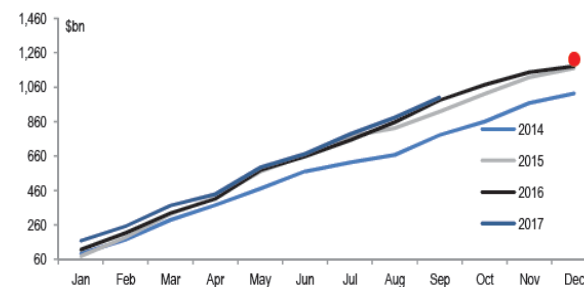
Source: Deutsche Bank

Foreign Demand for U.S. Corporates Still Strong



Source: Wells Fargo Securities

2017 YTD Issuance Still on Pace for Record



Source: J.P. Morgan

## 3Q17 BHMS BOND COMMENTARY

The use of debt proceeds to fund shareholder-friendly and M&A activity has modestly slowed, but remains at a level also typical of late cycle re-leveraging. Leverage generally peaks at much higher levels during a cycle-ending recession.

Though foreign demand for U.S. Credit is likely to remain strong for as long as the European Central Bank and Bank of Japan continue to suppress local yields through QE asset purchases, retail investors in the U.S. and globally are a less stable source of demand. Retail tends to chase performance when returns are stable and positive, even as fundamentals continue to deteriorate and valuations become extended. However, if higher rates or wider spreads generate negative total returns, the support could quickly evaporate, sparking a sizeable outflow from the asset class. For this reason, sustaining current valuations in credit may increasingly be dependent on both strong corporate cash flows and historically low volatility.

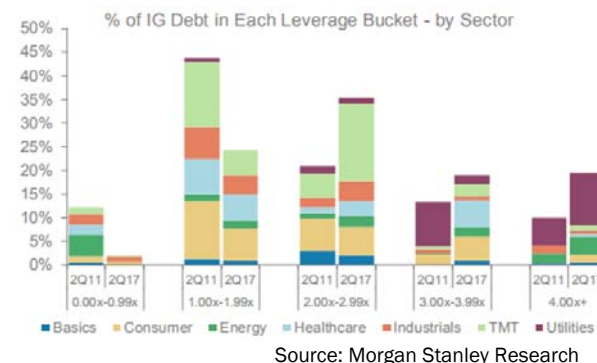
Exogenous risks are also a meaningful danger to the current credit cycle. The Fed's balance sheet expansion has been a critical catalyst in the demand for yield that remains in force. The great unknown is whether quantitative tightening will result in a steepening in the UST yield curve, widening in spreads, and consequent softening in demand for credit. Other factors like geopolitical risks and changes in U.S. tax and fiscal policies may also alter the landscape for IG Credit performance.

**BHMS STRATEGY:** *Maintain an overweight with a focus on security specific risk.* BHMS remains overweight IG Credit, but we have shifted the composition of holdings into credits we believe can weather potential late-cycle valuation pressures based on solid fundamentals, reliable cash flows, and carry advantage.

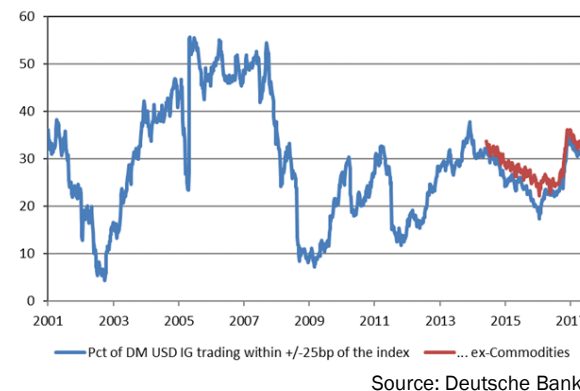
Our relative return model also reveals spreads have tightened enough versus historical averages that a reversion to the mean would erase the expected return advantage of most Corporate sub-sectors. As a result, our focus on security selection is paramount. Spread dispersion between individual credits has also widened significantly as idiosyncratic risks have become magnified. The time for riding beta-driven waves of spread tightening that drive all valuations higher is drawing to a close.

The current environment of low volatility and spread compression is very reminiscent of the mid-2000s "Goldilocks" period. Predicting how long this benign environment will continue is difficult. We know not only will it eventually end, but it may do so with painful volatility. Therefore, incremental excess returns must be pursued with caution.

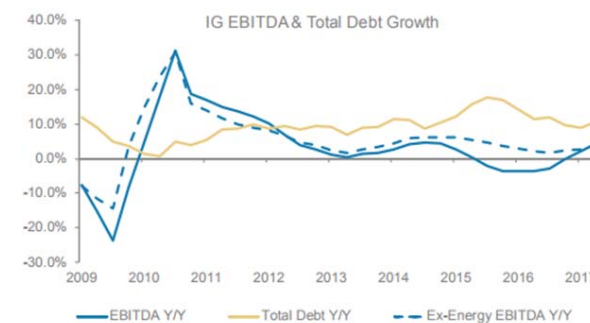
### % of IG 4x+ Levered Doubles from 2011



### Dispersion Between Credits Has Increased



### Strong Earnings Growth Outpaced by Debt Growth



## 3Q17 BHMS BOND COMMENTARY

*“Bull market tops are a process, not an event.” – Doug Ramsey, CIO The Leuthold Group*

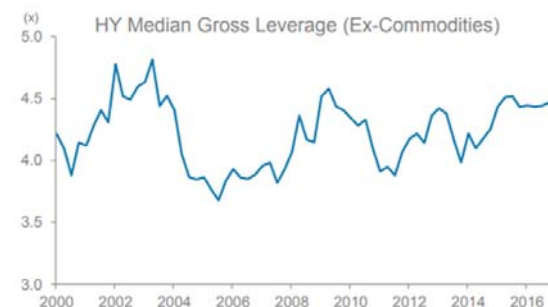
**HIGH YIELD MARKET REVIEW:** Continued tightening in credit spreads lifted the Ba/B High Yield (HY) Index to a 1.89% total return and 1.50% excess return in 3Q17. The average HY spread narrowed 22bps on the sustained investor appetite for higher yielding corporate securities. After trailing in 2Q17, HY bounced back to outperform IG Credit by 54bps in 3Q17, bringing the YTD total return to 6.52% and 144bps ahead of the mark set by IG. The Ba-rated segment of the Index outpaced its B-rated counterpart by 26 bps, and greater spread tightening in the former meant the spread advantage offered by the B-rated portion widened to 134bps. Energy and Transportation were the best performers, but all HY sub-sectors earned positive total and excess returns in 3Q17.

**BHMS OUTLOOK:** High yield bond prices continue to benefit from the “Trump Trade” optimism. The market has turned its attention to the GOP tax cut plan, it hopes will sustain the already extended economic cycle. Global macro stress has also largely receded, while the recovery in oil prices has stabilized energy bonds. Meanwhile, the number of defaults remains abnormally low. Only one company defaulted in September (Toys ‘R Us), the third consecutive month with only one or no defaults. This current period of default activity is the lightest since May 2011. According to JPMorgan, including distressed exchanges, the U.S. HY default rate now stands at 1.27%.

HY performance in 2017 has been highly bifurcated. Returns have generally not been beta-driven but instead dominated by both ends of the rating spectrum. The search for yield has encouraged many IG investors to reach into “safer” BB-rated bonds, which are +6.8% YTD. Simultaneously, helped by low volatility and minimal credit losses, CCCs have returned 9.8% YTD. The single-B segment has generated the weakest performance with a 6.4% return. We suspect the HY market has attracted too much “tourist money” from investors simply reaching for yield without a healthy appreciation for potential downside risks.

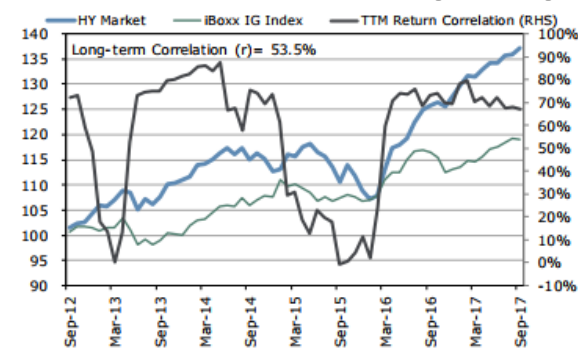
**BHMS STRATEGY: Maintain current risk profile.** BHMS believes the HY market is fairly valued. The new issue calendar has begun to heat up again, with issuers taking advantage of strong investor demand to obtain even more attractive pricing while weakening covenant protection. Consequently, we are wary of reaching for yield with credit spreads at such tight levels and prefer a more defensive bias via up-in-quality security selection. While we are not excited about current HY valuations, there are pockets of opportunity, particularly in Energy and Midstream. At this stage of the credit cycle, it is more important than ever for managers to scrutinize individual issuers for risks the market may be overlooking in its current euphoric state.

**Leverage Remains at Post-Crisis High**



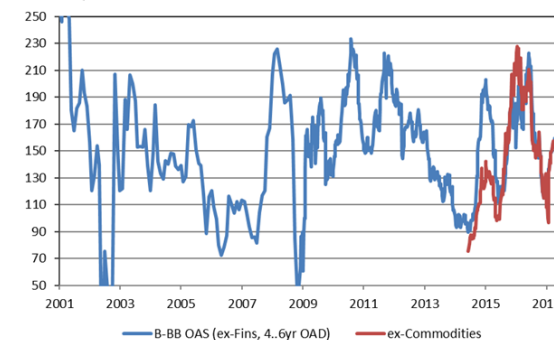
Source: Morgan Stanley Research

**HY-IG Credit Correlation Above Long Term Avg.**



Source: Wells Fargo Securities

**Spread diff. between Ba and B HY Widens**



Source: Deutsche Bank

## 3Q17 BHMS BOND COMMENTARY

*“Policy makers are damned if they maintain easy money, and damned if they don’t.” – Randall Forsyth, Barron’s*

**AGENCY MBS REVIEW:** The Fed’s balance sheet reduction plan announced in 3Q17 did not cause any upheaval in the MBS market. Of the Fed’s \$4.5T in assets, MBS securities comprise \$1.7T. Initially, MBS cash flows will run-off at a \$4B monthly pace, but the amount will increase each quarter until a \$20B cap is reached. This pace will see the Fed shed \$12B in MBS during 4Q17 and, based on current interest rates, an additional estimated \$168B in 2018 (Barclays).

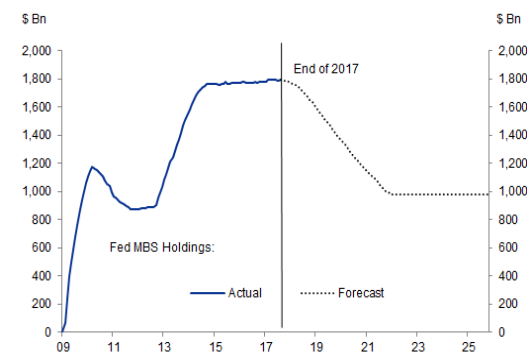
The critical issue for MBS investors is how the Fed’s plan will impact volatility and valuations. Though the plan was already widely anticipated but ill-defined, MBS spreads had moved wider before the announcement in the early part of 3Q17. Post-announcement, U.S. banks and mortgage REITs supported the sector with increased purchases. Mortgage REITs were particularly aggressive, raising cash at the fastest pace since 2013 to invest in agency MBS.

While spreads versus a USTs ended 3Q17 at a YTD narrow, MBS still offer value versus IG corporates, which have continued to grind tighter toward “Goldilocks” levels. In addition, Specified Pools rose in value during 3Q17 on better prepayment protection as UST yields declined to YTD lows in September. Despite some retracement of gains, the merits of these pools should remain in favor as the poor convexity of “worst to deliver” TBA collateral is most at risk from the Fed’s retreat from the sector. With the Fed’s current holdings totaling about 25% of the outstanding agency MBS market, the planned slowdown of buying support will have to be absorbed by other investors. In addition, normal organic supply of new MBS will need incremental buyers. Fortunately, the initial \$4B monthly taper and additional increases in 1Q18 happen to coincide with a typical seasonal decline in mortgage originations early in the year. Still, the market will likely be tested by an acceleration in seasonal supply that usually emerges during 2Q and 3Q.

**MBS OUTLOOK:** With mortgage rates now at 4%, most borrowers have moved out of the 40bp refinancing window. Consequently, MBS rates need to decline to 3.75% and maintain that level to spark a significant increase in refinance and prepayment activity. This rate move would equate to a 10yr UST yield of 1.80%-1.85%. Meanwhile, poor supply/demand technicals and accelerated prepayments in the VA program continue to weigh on GNMA performance. The sub-sector accounted for 48% of total net YTD issuance and is expected to remain elevated. Simultaneously, weak overseas buying, U.S. banks favoring Conventionals, and reduced Fed purchases have added to downward pressure on GNMA prices. The sector is now more reliant on money manager demand for the first time in years.

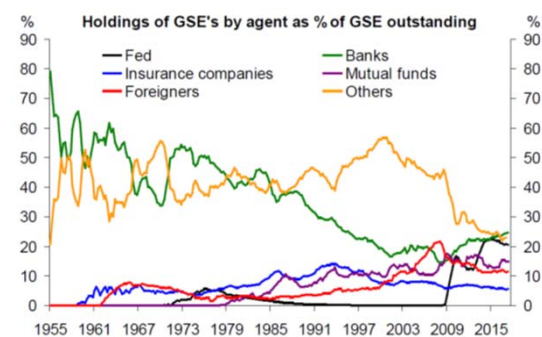
**BHMS MBS STRATEGY:** *Maintain an underweight exposure while taking advantage of carry and relative value trading opportunities.* We are marginally underweight the sector but believe MBS may offer value versus IG credit as supply pressures cheapen valuation. Supply/demand technicals should improve in 4Q17 with more favorable seasonal factors. We have a bias towards 30yr 3.5% and 4.0% coupons in the Conventional sector. We will also look to increase GNMA exposure on any correction in relative value versus MBS alternatives.

Fed’s Projected Long Term Holdings of \$1T MBS



Source: Goldman Sachs; Haver Analytics

Who Owns the Agency MBS Market?



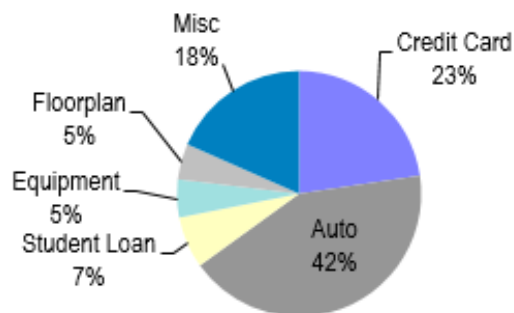
Source: FRB, Haver Analytics, DB Global Markets Research

## 3Q17 BHMS BOND COMMENTARY

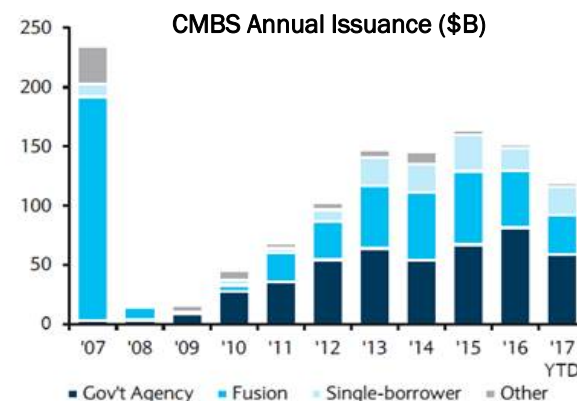
**ABS MARKET REVIEW:** Low rates, healthy investor demand, and stable-to-tighter spreads continued to benefit the ABS market during 3Q17. Secondary spreads have tightened across most of the ABS market since mid-2016, especially in securities lower in the capital structure, as investors continue to reach for yield in short duration assets. New issue supply and secondary trading volumes have also remained robust. New ABS issuance was \$45.6B in 3Q17, bringing the YTD total to \$164.3B, 9% ahead of the prior annual high set in post-crisis 2014. Although Auto issuance is 42% of new YTD ABS supply, it remains flat versus year ago levels. Credit Card issuance has increased 28% and now accounts for 23% of the total ABS market. The Miscellaneous sub-sector, which includes marketplace lending, whole business securitization and aircraft, is experiencing the most growth in issuance (+55%) in 2017. These issues are typically non-benchmark 144A securities. This exponential growth is part of the reason 49% of total ABS issuance is now in the 144A format.

**BHMS ABS STRATEGY:** *Maintain an overweight in shorter duration, high quality issues, but with a cautious view of late cycle concerns.* We remain overweight based on the incremental yield ABS offers versus short duration corporate alternatives. Strong technicals and stable fundamentals have supported exposure. However, late cycle concerns have emerged as tiering among sectors and issuers has compressed while lending standards have weakened, all when spreads have trended back toward the post-crisis tight. In addition, delinquencies and defaults in the Auto space are increasing, as lenders are seeking more business from lower quality borrowers. For this reason, security selection has become even more important. We favor the consumer issues which offer structural protections via credit enhancement that increase over time.

2017 New-Issue ABS Supply by Sector



Source: JP Morgan



Source: CMA, Barclays

**CMBS MARKET REVIEW:** Investors have absorbed a robust \$59.5B in YTD new private label CMBS supply, a 41% increase versus last year. This volume largely reflects the \$87B in 2007 vintage maturities facing refinancing in 2017, only \$16B of which remains before YE17. While traditional conduit issuance is up only 11%, Single Asset Single Borrower (which often includes “trophy” properties) issuance is up a whopping 116%. Despite the increased supply, spreads were largely unchanged to modestly tighter, depending on the tranche rating, and the credit curve was marginally flatter during 3Q17. One concerning trend is the sharp increase in new multifamily/apartment supply that further exacerbates the largest inventory on record, just as homeownership gains momentum at the expense of rental households.

**BHMS CMBS STRATEGY:** *Maintain current underweight and defensive exposure.* We prefer seasoned vintages with higher subordination levels, higher loan counts, and less exposure to full-term interest only loans. Spreads remain range-bound, and we would look to add on widening.

## 3Q17 BHMS BOND COMMENTARY

*“To the extent the normalization of the Fed’s balance sheet is gradual, well-communicated and driven by a friendly mix of growth and inflation, we expect the impact on corporate bond spreads will likely be manageable.” – Goldman Sachs Credit Research*

**LONG CREDIT MARKET REVIEW:** Long Credit posted positive total (+2.17%) and excess returns (+1.55%) in 3Q17. The 30yr UST yield modestly rose 2bps to 2.86%, while credit spreads were 8bps tighter. The Long Credit Index outperformed the Long Corporate Index due to the inclusion and outperformance of the Non-Corporate Credit sector.

Within Corporates, Financials earned the highest 3Q17 excess return, and over the last twelve months have outpaced the excess return of Industrials by 218bps. Despite a strong 3Q17 excess return, the trailing 12 month results of Non-Corporate Credit continue to lag the returns of Long Financials and Industrials, due to the large underperformance of Sovereigns in 4Q16.

Similar to IG Credit, the lower-rated segments of the Long Credit Index posted the strongest 3Q17 returns. Long BBB Credit outpaced the total return of Long A Credit by a margin of 51bps. Inflows into Long Credit also supported the continued spread tightening in 3Q17. The Long maturity segment of the credit market received \$12.6B in net inflows through the first nine months of 2017.

**BHMS OUTLOOK & STRATEGY:** *Cast a wary eye on issuer fundamentals, but take advantage of opportunities in favored credits.* The current credit market is mathematically riskier than at the same point in prior cycles. As is the case for the entire IG Credit market, the duration of the Long Credit Index has extended considerably during the current cycle. The effective duration of the Long Credit Index has now extended to 14.00 from 11.36 years ten years ago. This extension implies a 100bp widening in spreads or rise in yields would inflict a 264bp larger loss now than it would have in 2007. The magnitude of this additional risk means mistakes in today’s credit market are more costly than ever and lends credence to our focus on security selection. While this watchful eye over fundamentals has already generated benefits in specific instances, it will be during an eventual widespread sell-off in credit that the performance differential between poor credits and those exhibiting more solid fundamentals will greatly expand. In the meantime, we continue to de-risk the portfolio and seek excess return offered in issuer-specific spread narrowing opportunities.

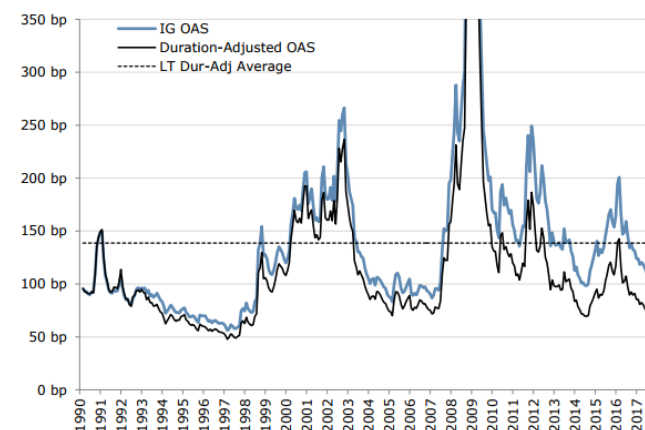
Bloomberg Barclays Indices: Total Returns (%)		
	3Q17	One-Year
Long U.S. Credit	2.17	8.75
Long U.S. Corporate	1.97	8.46
Long U.S. Gov’t/Credit	1.53	7.65
Long U.S. STRIPS 20+ Yr.	0.69	8.75
Long U.S. Government	0.59	6.06

Source: Bloomberg Barclays

Blmbg Barclays Sector Performance: Excess Returns (%)		
	3Q17	One-Year
Long Non-Corp. Credit	2.77	6.41
Long Financials	1.55	9.80
Long Utilities	1.46	6.37
Long Industrials	1.28	7.62

Source: Bloomberg Barclays

Duration Adjusted Spreads Tight vs. Long Term Avg.



Source: Wells Fargo Securities



## 3Q17 BHMS BOND COMMENTARY

**PENSION ASSETS:** Equity investments earned 4.9% during 3Q17, outpacing bonds as measured by the indices used by BHMS to estimate the average corporate pension asset allocation. Alternatives had the highest asset class returns: Private Equity returned 5.5% in 3Q17, while Core fixed income was the lowest at 0.8%.

**PENSION LIABILITIES:** Pension liabilities increased by 0.5% during 3Q17, driven by a 4bp decrease in corporate bond yields. Credit spreads drove that decrease, tightening by 7bps, while a 3bp rise in interest rates dampened some of the change.

**FUNDED STATUS:** Pension funded status improved during 3Q17 as assets grew faster than liabilities. Corporate pensions began the quarter at 83.3% funded and ended the period at 85.4%. Of note, some de-risking glidepath triggers may have been reached. Using the average plan as a barometer, funded status made good progress back towards the recent high of 87.8% achieved at YE13.

**CORPORATE PENSION TRENDS:** Just after 3Q17 ended, the IRS formalized their well-broadcast plans to update the required mortality tables for funding and PBGC insurance purposes. These updated tables were largely adopted in 2015 for pension accounting purposes.

This update means recognizing that people are living longer makes pensions more expensive. The impacts vary but range from low single to low double digits. This will have an influence on what plan sponsors do regarding de-risking: borrowing to fund becomes more attractive, while lump sum windows become less attractive.

Asset Allocations and 3Q17 Returns			
Asset Class	Index	Allocation	Q3 Return
Equities		43%	4.9%
	65% Russell 3000		4.6%
	35% MSCI EAFE		5.4%
Bonds		38%	1.4%
	75% Barclays Long Gov/Credit		1.5%
	25% Barclays Aggregate		0.8%
Real Estate	FTSE NAREIT Equity	2%	1.1%
Other (Alternatives)		14%	3.2%
	45% HFRI Fund Weighted Composite		1.7%
	35% S&P Listed Private Equity Index		5.5%
	20% Dow Jones UBS Commodity Index		2.5%
Cash		3%	0.0%
<b>Total</b>			<b>3.1%</b>

Source: BHMS; Bloomberg

BHMS Pension Funded Status Analysis	
Business Sector/Industry	September 30, 2017
<b>Overall</b>	<b>85.4%</b>
Financials	95.5%
Banks	103.8%
Industrials	84.5%
Airlines	69.0%
Materials	84.2%
Information Technology	83.8%
Consumer Discretionary	83.2%
Consumer Staples	82.9%
Health Care	82.9%
Utilities	82.7%
Telecommunications	82.3%
Energy	81.6%
Real Estate	81.5%

Source: BHMS; Bloomberg

		Discount Rate Change (% pts)								
		-2.00	-1.50	-1.00	-0.50	0.00	0.50	1.00	1.50	2.00
Equity Return	-20%	65%	67%	70%	72%	75%	79%	82%	87%	93%
	-15%	67%	70%	72%	75%	78%	81%	85%	90%	96%
	-10%	69%	72%	74%	77%	80%	84%	88%	94%	100%
	-5%	71%	74%	76%	79%	83%	87%	91%	97%	103%
	0%	73%	76%	79%	82%	85%	90%	94%	100%	107%
	5%	75%	78%	81%	84%	88%	92%	97%	103%	110%
	10%	77%	80%	83%	87%	91%	95%	100%	106%	114%
	15%	79%	82%	85%	89%	93%	98%	103%	110%	117%
	20%	81%	84%	88%	91%	96%	101%	106%	113%	121%

Source: BHMS; Bloomberg

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## DISCLOSURE

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