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Excess Returns Mature Poorly

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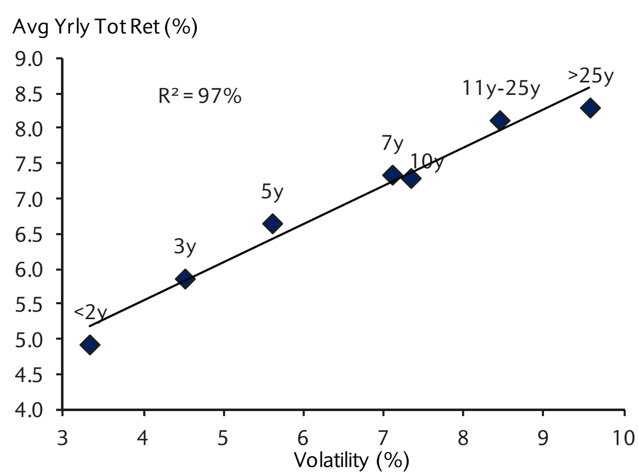
An analysis of returns by maturity bucket shows that while the total return of corporate bonds has historically had a positive linear relationship with maturity, excess returns have been substantially lower at the long end of the curve than the front (especially on a volatility-adjusted basis). Credit curve steepening explains some of the long-dated underperformance, but we believe downgrade losses are the primary driver: 11y+ securities suffer disproportionately large mark-to-market losses upon being downgraded to high yield. At current valuations, we recommend swapping out of 30y and into 20y bonds and extending from front-end securities (<5y) to 7y and 10y bonds.

The recent tightening of spreads in the US Corporate Index appears to have halted, at least in the near term, as spreads have widened 6bp so far this week. We continue to believe that spreads for non-financial debt – particularly short-duration high-quality paper – appear rich to fundamentals, although supportive technicals should limit widening in the near term. With strong foreign demand for USD debt and accommodative central bank policy abroad, we recommend remaining long the market but repositioning portfolios to limit downside by moving into bonds that should hold up well if market sentiment deteriorates (particularly if commodities accelerate downward or global economic data get worse).

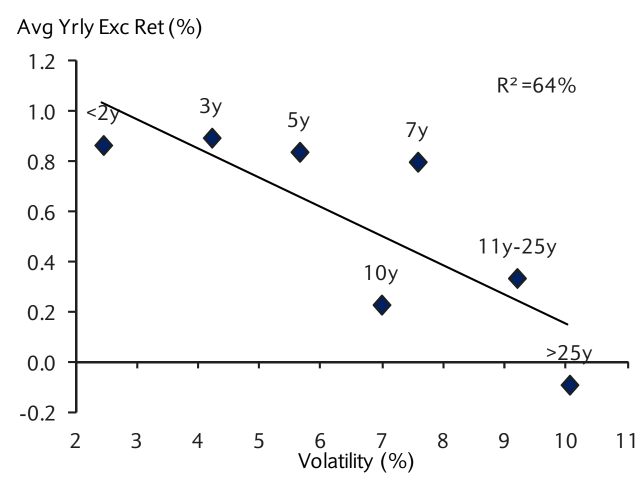
Investors could do so by increasing exposure to more liquid/on-the-run securities to take advantage of declining liquidity premia (*Quenching Thirst with Liquidity*, July 22, 2016), buying wide-trading but well-capitalized US banks (*What Matters Isn't How You Got Here, but What You Do Next*, June 24, 2016), or selling names that are trading well but could run into fundamental issues (*Weak to Weaker*, July 29, 2016). In our view, another potential source of relative value in this market could come from repositioning across the curve. Last week, we highlighted the attractiveness of 20y securities (*In the Long End, Meet in the Middle*, July 29, 2016), but we believe that a more holistic view of valuations across the entire curve (along with a broader historical analysis of returns for each maturity bucket under different market environments) should also be useful.

FIGURE 1
Average Annual Total Return versus Volatility by Maturity Bucket (since 1990)



Note: US Corporate Index, excluding subordinated debt. Average yearly return since 1990. Source: Barclays Research

FIGURE 2
Average Annual Excess Return versus Volatility by Maturity Bucket (since 1990)



Note: US Corporate Index, excluding subordinated debt. Average yearly return since 1990. Source: Barclays Research

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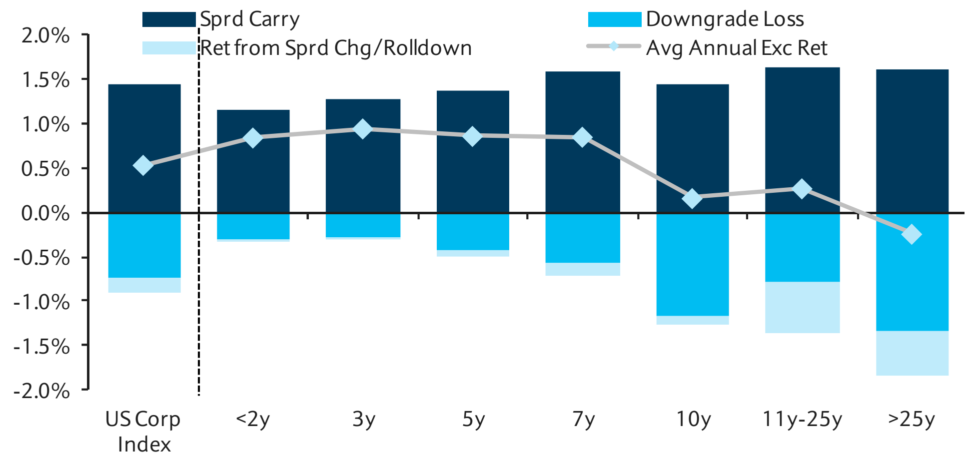
FIGURE 3

Excess Returns by Maturity, Broken Down by Return Contribution



Note: US Corporate Index, excluding subordinated debt. Average yearly return since 1994. Source: Barclays Research

Historical Returns by Maturity Bucket

Figures 1 and 2 show the average annual total and excess returns across different maturity buckets since 1990. The calculation is for a one-year holding period and assumes that bonds are sold when they fall out of the US Corporate Index. While the total return of corporate bonds has had a clear, positive linear relationship with maturity, excess returns have, on average, been substantially lower at the long end of the curve than the front. As Figure 2 shows, front-end bonds have earned an average return above duration-matched Treasuries of 80-90bp, compared with 23bp and -9bp, per year, for 10y and 30y securities (which we define as bonds with more than 25 years to maturity). To compound the problem, it appears that, on a mark-to-market basis, 30y securities are providing these lower returns (above duration-matched Treasuries) at substantially higher volatilities.

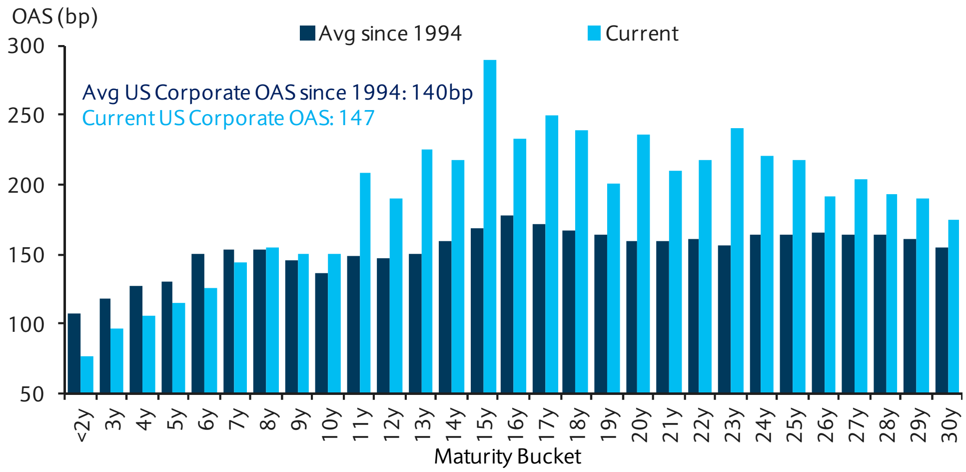
Ultimately, the expectation for credit investors is that because corporate bonds have significantly more credit risk than Treasuries (which are, in theory, risk free), they should earn higher returns and trade at higher yields. The fact that the very long end of the curve has actually earned negative excess returns, on average, over the past 20 years would appear to indicate that investors in the long end are actually better off owning a portfolio of duration-matched Treasuries.

While the analysis implies that investing in on-the-run 30y securities and holding for a year has generated negative excess returns, it is mainly relevant for mark-to-market investors and those with shorter investment horizons. In practice, a significant portion of the buyer base in the long end – specifically, insurance companies and pension funds – are buy-and-hold and less mark-to-market sensitive. The realized returns for such investors are likely to be better: for example, the losses in the 25y+ section of the curve would likely have been offset by gains once the bonds roll down to the 11y-25y bucket (Figure 2). A more in-depth analysis that tracks fixed cohorts of 30y bonds would be needed to compute the returns of 30y securities for buy-and-hold investors more accurately.

Understanding the principal factors underlying long-dated underperformance, however, should be critical for those price-sensitive investors with shorter time frames. In Figure 3, we break down excess returns for each maturity bucket into three components: spread carry, losses/gains from changes in spread, and downgrade loss (the leakage in returns that occurs when a name downgrades from investment grade and moves into the High Yield Index). Lower carry is not responsible for the lower excess returns, as long-dated bonds

FIGURE 4

Average Spread by Year to Maturity: Current versus Historical Average



Note: US Corporate Index, excluding subordinated debt. Average yearly return since 1994. Source: Barclays Research

have earned higher spread carry than the index since 1994; 30y securities have earned 161bp in spread carry annually, compared with 143bp for the index and 120-130bp for the front end.

Rather, large downgrade losses and steepening curves have driven most of the underperformance for securities with 10 years or more left to maturity:

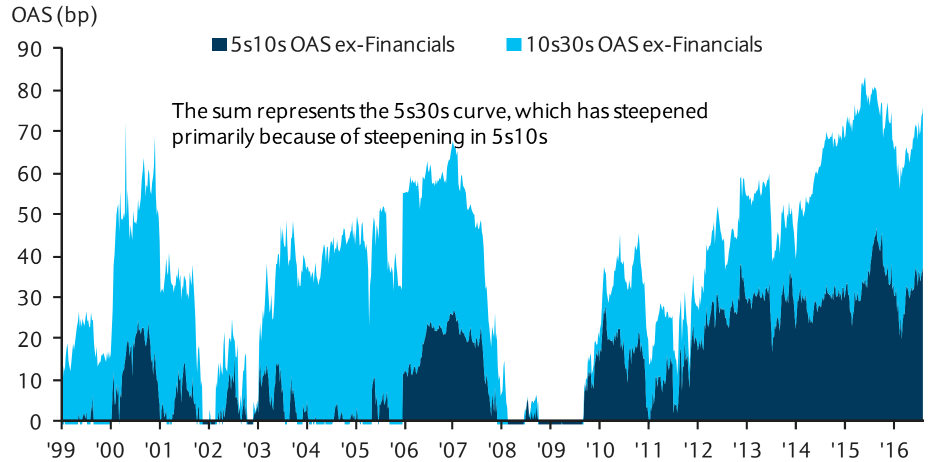
- The index leakage for 10y and 30y securities has been 1.25-1.50% annually, compared with less than 0.5% for the rest of the index (Figure 3). The higher spread duration of longer-dated bonds is behind much of the substantially larger downgrade losses, as widening spreads due to downgrades will obviously cause sharper losses in 30y bonds than 5y bonds. That said, these losses are exacerbated by the lack of a traditional investor base in high yield for 30y bonds, which creates a substantially more negative technical for long-end securities than front-end ones after a downgrade.
- Furthermore, curves have steepened over the past 20 years; as a result, mark-to-market losses from spread widening have disproportionately affected the long end of the curve. Figure 4 shows that spreads in the long end are well above historical averages, but are tight in the front end.

Together, these effects have more than offset the higher carry in the long end. While the sector composition of the long and front ends differs meaningfully – financials are roughly 40% of <5y paper but 15% of the 25y+ bucket – the underperformance of 10y and 30y occurs in both financials and industrials, and we do not believe this explains the disparity in returns.

Ultimately, then, it appears that spreads for 10y and 30y bonds have not fully accounted for these larger potential downgrade losses, so these portions of the market have underperformed on an excess returns basis over the past 20 years. That said, both 10y and 30y bonds are now trading wider relative to the market than they have in years past (Figure 5). This will likely improve the long-term relative excess return profile of the long end. At the same time, changes in NAIC weights could lead to higher life insurance demand for high yield paper (see *Proposed RBC Factors: Engendering a Shift to Lower Rated Bonds*, June 24, 2016), potentially limiting the negative technical for fallen angel long-bonds.

FIGURE 5

While 10s30s OAS Remains in Line with Long-Term Averages, 5s10s Curves Have Steepened Post-Crisis



Note: For the US Corporate Index, excluding financials. Source: Barclays Research

Currently, Valuations Favor the 7y-10y and 20y Buckets

We believe spreads look more attractive in the intermediate buckets (7y-10y) and 20y range than either the very long (25y+) or front end (5 years and in), given current valuations.

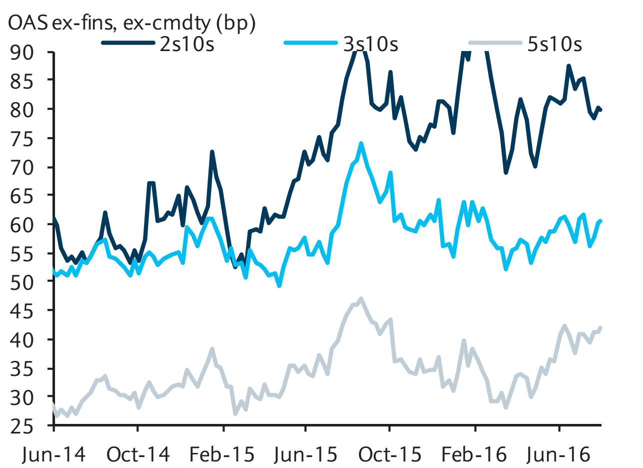
Extend to 7y and 10y Bonds in the Front End

Since the rally in investment grade corporate bonds, 10y bonds have widened 10-15bp to front-end securities (Figure 6). At 42bp, the 5s10s credit curve is now above the 40bp threshold, which we believe bodes well for the 10y bucket. The last time the 5s10s curve was over 40bp (in July 2015), 10y debt generated 90bp more in excess returns than 5y bonds over the subsequent three months.

Valuations look particularly tight in the very front end. Since summer 2014, 2y securities have tightened nearly 20bp relative to 10y bonds, particularly for higher-quality paper. For

FIGURE 6

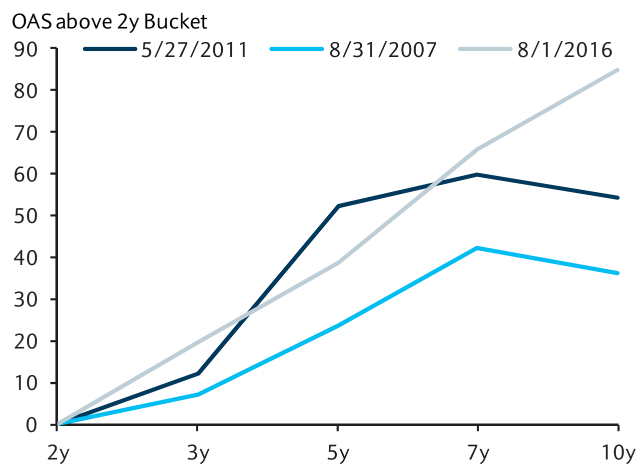
Curves in the Front End Have Steepened over the Past Two Years, Especially since mid-February



Note: US Corporate Index, excluding financials, energy, and metals.
Source: Barclays Research

FIGURE 7

7y/10y Spreads Are Historically Steep Relative to Previous Periods When Index Spreads Were 145-150bp



Note: US Corporate Index, excluding financials. Source: Barclays Research investors in short-dated paper, we believe FRNs offer a better alternative (*Implications of Rising Short-Term Fund Rates for Credit Markets*, July 14, 2016).

More generally, the 1-10y credit curves are too steep. Figure 7 shows what the curve looks like today, compared with instances in 2007 and 2011 when index-level spreads were 145-150bp (they are currently at 147bp). The pickup for 10y securities of 85bp and 65bp over 2y and 3y securities, respectively, compares with 54bp/42bp in 2011 and 36bp/29bp in 2007. We prefer 7y and 10y securities to anything with a maturity below five years, but for investors who wish to buy in the front end, we believe extending where possible makes sense: from 2y to 3y or 3y to 5y.

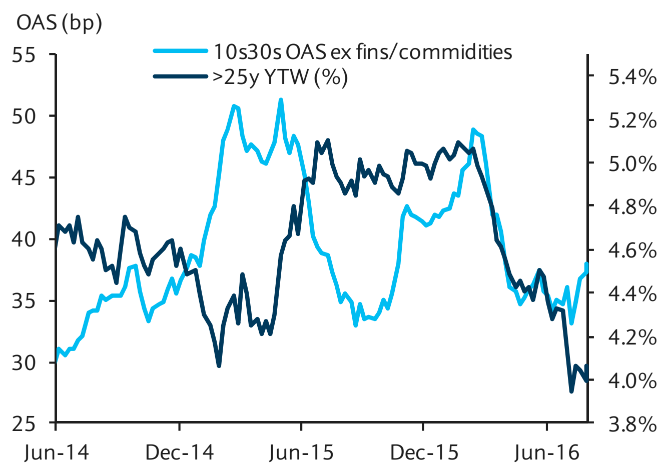
Move out of 30y Bonds and into 20y Bonds in the Long End

Given the low yield environment, we do not believe that 30y spreads are offering adequate compensation: at about 38bp, 10s30s OAS is only 3bp over the long-term average of 35bp, even though all-in corporate yields are at historical lows. While foreign insurance companies and pension funds are likely to continue to buy long-dated USD as they reach for yield, we believe the balance of risks at current levels is skewed to the downside, given that yields would likely need to rise above 5% in the long end before US insurance/pension funds feel comfortable adding risk.

Unlike 30y bonds, 20y securities are trading well wide, even after the most recent rally, and are now offering roughly 40bp of spread pickup on average. While 20y securities are generally less liquid than the rest of the index, since they consist primarily of off-the-run bonds, we have noted recently that liquidity in this maturity bucket has improved as 20y issuance has taken an increasingly large share of the primary market. Moreover, there are healthy pickups (relative to 30y bonds) even among the more liquid 20y securities, for both newly issued 20y securities and frequently traded legacy 30y bonds (*In the Long End, Meet in the Middle*, July 29, 2016). Finally, as we mentioned earlier, the wider spreads in this bucket do a better job of offsetting downgrade losses than 30y securities; the 11y-25y bucket has historically had substantially better excess returns than 30y securities, at lower volatilities (Figure 2).

FIGURE 8

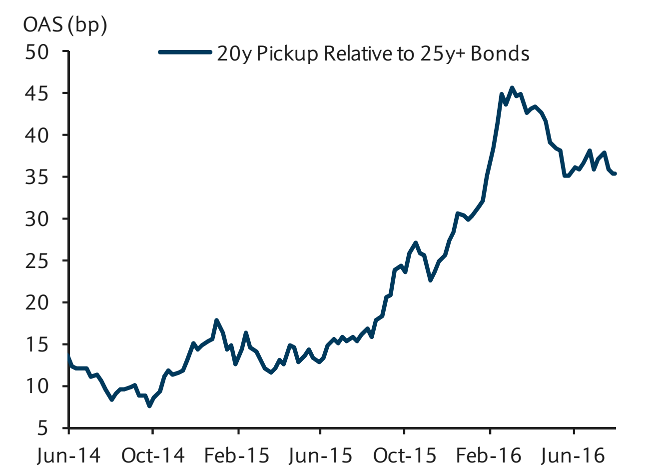
10s30s Curves Have Held Steady Despite a Sharp Decline in Long-End Corporate Yields



Note: US Corporate Index, excluding financials. Source: Barclays Research

FIGURE 9

20y Securities Continue to Offer a Healthy Pickup to 30y Bonds, Despite the Recent Rally



Note: US Corporate Index, excluding financials. 20y defined as 11y-25y bucket. Source: Barclays Research

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