2013 Default Outlook

Bradley Rogoff
+1 212 412 7921
bradley.rogoff@barclays.com

Mike Kessler
+1 212 412 3031
michael.kessler@barclays.com

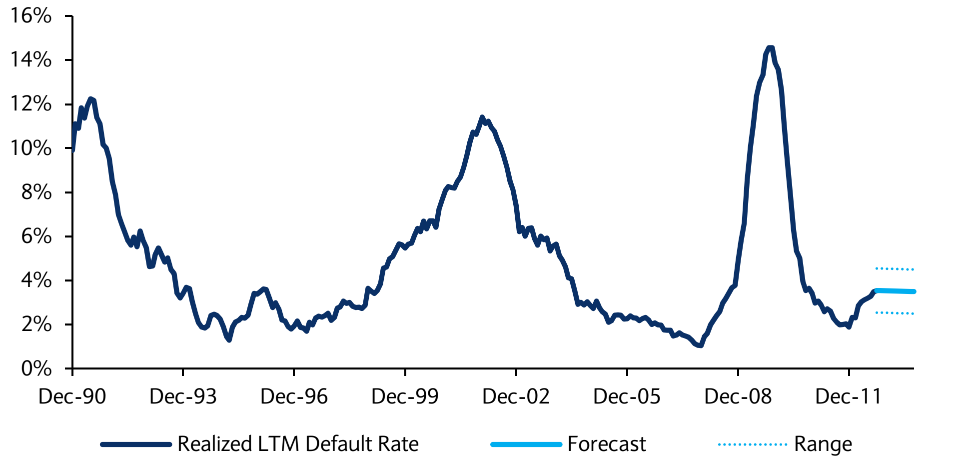
Eric Gross
+1 212 412 7997
eric.gross@barclays.com

The high yield default rate is likely to remain subdued in 2013, and we do not expect a material pickup until 2014, at the earliest. Combining the results from three different methods, we forecast a 2013 issuer-weighted default rate of 3.5%, essentially unchanged from the most recent Moody's reading. Our expectations for the par-weighted default rate are highly dependent on the future of TXU, the fourth-largest issuer in the U.S. High Yield Index, and range between 2.5% and 4.5%. We expect the default rate for loans to remain slightly lower than for bonds next year, but believe it has the potential to catch up in 2014 as overleveraged pre-crisis LBOs are forced to restructure.

The Anatomy of Default

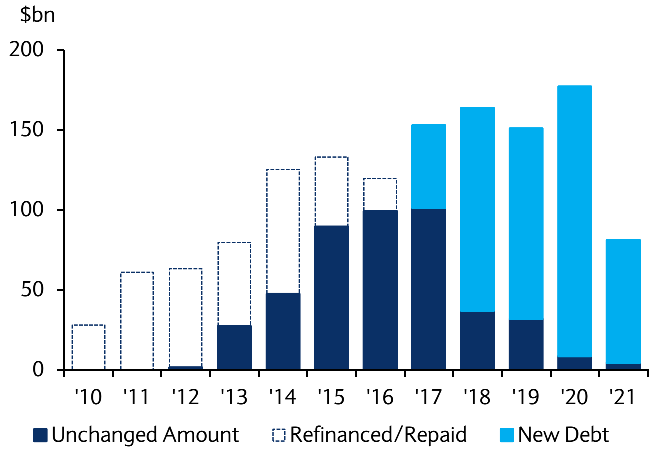
When considering default risk, high yield investors often begin by examining upcoming maturities. This approach is intuitive, as highly leveraged issuers are typically not in a position to pay down maturities with excess cash and must rely on primary markets' being open for refinancing. On this front, the current profile of high yield bond maturities appears encouraging, while the distribution of leveraged loan maturities strikes a more cautionary note. As Figure 2 shows, high yield bond maturities are now extremely well laddered, rising gradually from a mere $25bn next year to an average of $157bn per year from 2017 to 2020. In contrast, the loan maturity distribution continues to show a distinct bulge in 2014, with approximately $50bn in 2y-and-under maturities. Under normal circumstances, most of this balance would already have been refinanced or extended, but as most investors are aware, the remaining 2014 maturity wall is concentrated in a fairly small number of issuers (Figure 3). Several of these issuers are large, pre-crisis LBO credits with potentially problematic capital structures, including TXU, Cengage, and Clear Channel, among others. While the size of the 2014 wall now pales in comparison to its peak of $225bn at the end of 2009, it represents nearly 10% of outstanding loans and is, therefore, likely to be a factor in the default pattern that emerges over the next two years.

Figure 1: Realized and Forecast Issuer-Based Default Rate



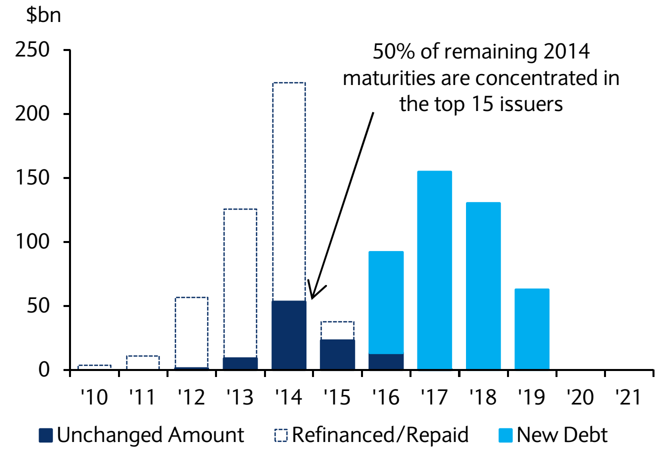
Source: Moody's, Barclays Research

Figure 2: High Yield Bond Maturities, Change since 2009



Source: Barclays Research

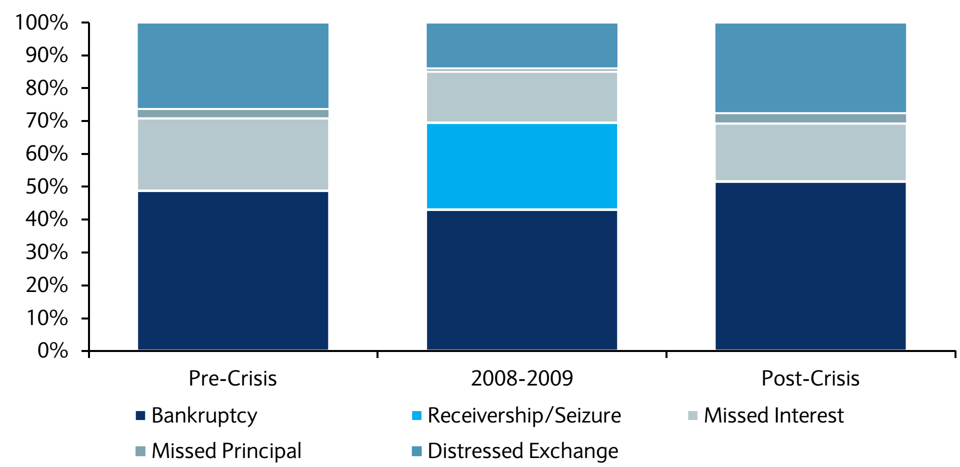
Figure 3: Leveraged Loan Maturities, Change since 2009



Source: S&P LCD, Barclays Research

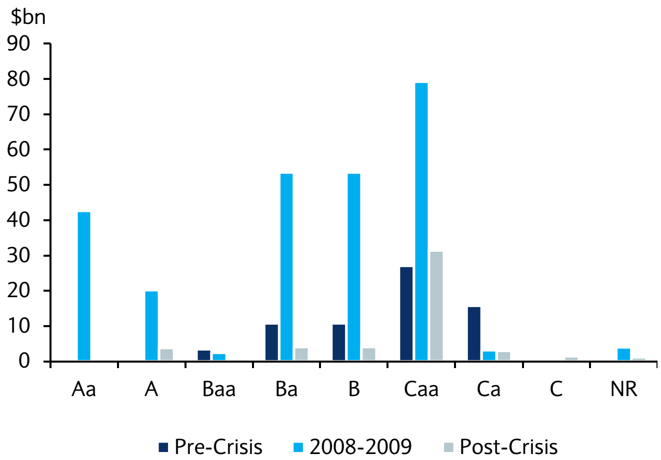
However, there are limitations to a maturity-focused perspective when assessing default risk. First, as the evolution of the post-crisis maturity profile has shown, issuers manage their refinancing needs proactively, specifically to avoid the possibility of losing market access at an inopportune moment. And second, history suggests that the inability to make a principal payment when it comes due is usually not the ultimate default trigger. Figure 4 provides a 10-year default distribution by triggering event, broken down into three distinct periods: pre-crisis (2003-07), financial crisis and recession (2008-09), and post-crisis recovery (2010-12). The pre- and post-crisis periods are similar, with missed principal causing roughly 3% of triggers. That said, a more prevalent cause of default occurs when companies run out of cash and miss interest payments. This officially accounts for 20% of triggers, but many bankruptcy filings, which account for 45-50% of triggers, occur strategically in advance of interest payments, masking the root cause of default.

Figure 4: Distribution of Defaults by Trigger (2003-12)



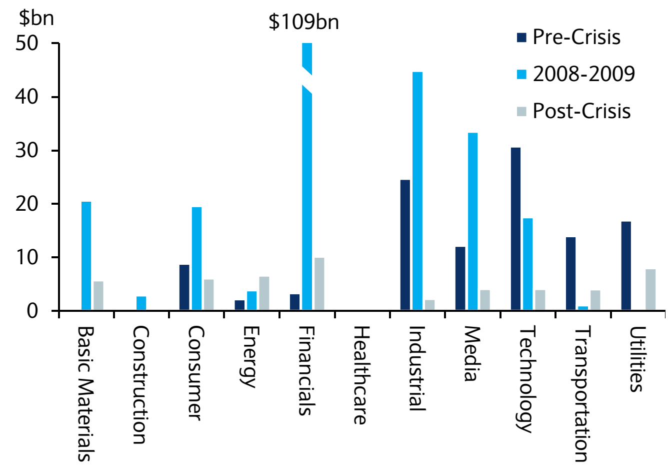
Source: Moody's, Barclays Research

Figure 5: Default Amounts by Moody's Rating One Year Prior



Note: 2003-12. Source: Moody's, Barclays Research

Figure 6: Default Amounts by Industry



Note: 2003-12. Source: Moody's, Barclays Research

From a credit ratings perspective, the distribution of defaults is predictably concentrated at the lower end of the quality spectrum when ratings at the time of default are considered. However, as Figure 5 shows, the distribution one year prior to the default event is less uniform. This was certainly true during the crisis and recessionary period (2008-09), when more than $50bn each in Ba and B rated credits found themselves in default one year later. Although the distribution has shifted as default rates have fallen post-crisis, there has still been more than $12bn in defaults during the past three years that were rated single-B or higher one year prior. With revenue growth slowing, investors should be cognizant that there is still some actual default risk in the higher rated portions of the market.

Ratings aside, the industry concentration of default events has also shifted over time. After being dominated by telecom in the early 2000s and financials during 2008/09, the past three years have seen increased defaults from the energy and utility sectors (Figure 6). Given the current state of natural gas prices, the recent slump in oil, and the number (and size) of distressed credits in these sectors, we believe that default amounts in both of these sectors are likely to rise in the years ahead. On a more positive note, we find it interesting that despite the massive and protracted downturn in housing, default events in the construction sector were mild and look to remain so given the nascent recovery in home prices and building activity. Meanwhile, healthcare has continued to live up to its defensive reputation, with negligible defaults thus far despite some structural changes to the industry due to the Affordable Care Act.

As we turn to our default rate forecasts, we note that recovery rates are the other key factor in evaluating the expected losses to the asset class. In aggregate, recovery rates are negatively correlated with the default rate, amplifying losses at the peak of the default cycle and making them less acute in low default periods. Given our 3.5% default expectation for 2013 and the relationship between defaults and recoveries, we believe the aggregate unsecured recovery rate will be 40-50%. That said, the recovery rate can vary significantly at the single-issuer level, depending largely on asset coverage and subordination.

Default Outlook for 2013

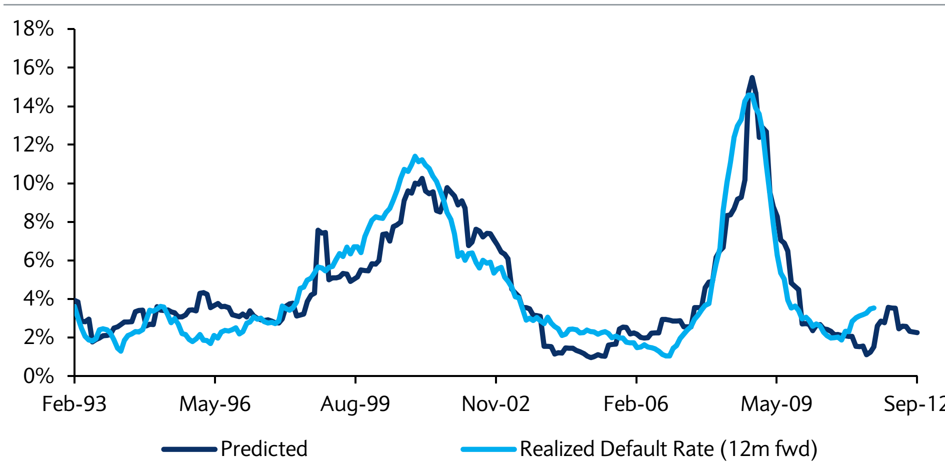
As in prior years, we take a three-pronged approach to forecasting the default rate for the coming year, which leads us to a 2013 default rate of 3.5%. Our multi-faceted approach allows us to consider the problem from different angles while reducing our reliance on any one model, giving us more confidence in the end result. Specifically, we combine the following three models, described in further detail below:

- A macroeconomic model based on the Fed's senior loan officer survey of lending standards and bond price distribution data;
- A ratings migration model, which relies on the correlation between recent rating-action trends and forward default rates; and
- A bottom-up analysis of at-risk and distressed credits in the high yield market.

Macro Model

Defaults are not generally caused by a failure to pay maturing debt, as shown in *Maturity and Default: A Long-Distance Relationship*. Instead, issuers are more likely to default when they run out of cash or foresee insolvency in the near future. That said, to the extent that issuers have access to the primary market, they can borrow to meet their near-term obligations and potentially reduce their interest expense, forestalling bankruptcy in the process. Thus, while maturities may not matter directly, the relative openness of primary markets does. That makes the Fed's senior loan officer opinion survey, which includes forward-looking expectations of lending standards, an especially useful barometer of expected defaults. Indeed, the correlation between net tightening in lending standards and the 12-month forward default rate is 0.91.

Figure 7: Macro Model – Realized versus Predicted Default Rate



Source: Federal Reserve Board, Moody's, Barclays Research

None of other macroeconomic variables we have examined – including the delinquency rate, charge-off rate, GDP growth, Treasury curves, VIX, ISM manufacturing, and net C&I demand – are nearly as powerful as predictors of the future default rate, and none are statistically useful once lending standards are taken into account. However, the model does benefit from a simple factor derived from the distribution of high yield bond prices. First and foremost, adding the percentage of the U.S. High Yield Index trading below $70 allows us to incorporate a market-based signal for distress, which is clearly relevant when forecasting defaults. The second benefit of using this factor in our model is that the Moody's default rate includes distressed exchanges, which are increasingly useful to issuers – and, thus, more likely – the cheaper their debt trades. As Figure 4 shows, distressed exchanges have historically accounted for a significant fraction of the default rate.

Figure 8: Default Forecasts under Best-/Worst-case Scenarios for Macro Model Factors

	C&I Net Tightening	% below $70	Default Rate Forecast
Best Case	-20.0%	1.0%	1.2%
Base Case	-9.5%	2.8%	2.3%
Worst Case	15.0%	10.0%	5.0%

Source: Barclays Research

Given the most current survey of lending standards (-9.5% net tightening) and with 2.8% of the cash index trading under $70, our macro model predicts a trailing twelve-month default rate of 2.3% at the end of September 2013, which would be down 1.3% from current levels. As Figure 8 shows, the macro model predicts low-to-average default rates under a significant range of assumptions with respect to the lending environment and the price of high yield bonds. This supports our view that default risk should remain relatively benign in 2013.

Bottom-Up Analysis of High Yield Credits

As we did last year, we focus our bottom-up approach on the constituents of the HYCDX and LCDX indices, with the intent of identifying issuers that could potentially face a default event over the next few years. With the introduction of a rules-based approach to CDX constituency changes, the indices are intended to more closely represent their respective cash markets, in both quality and industry distribution, and thus can serve as a reasonable sample set for estimating a market-wide default rate. In particular, we focus on the on-the-run series, as older series now suffer from survivorship bias, with constituencies that have been culled thanks to the removal of previously defaulted credits. HYCDX and LCDX currently have 32 credits in common, giving us a total of 168 index constituents in the sample set. We augment this analysis with a review of a few dozen of the larger credits in the U.S. High Yield Index that are not represented in the CDX indices, bringing the total number of credits to nearly 200, which we believe is a sufficiently large sample to provide a good read on the market as a whole.

After a review of the business risks, balance sheets, projected funding needs, and market access of this group of credits, our bottom-up approach produces an issuer-weighted 2013 speculative grade default forecast of 3-4% (Figure 9). This is consistent with the level of defaults observed in 2012 and remains somewhat below the long-run high yield market average of 4.5-5.0%. Our model currently projects similar issuer default rates in 2014 and 2015. As has been the case throughout the high yield market's history, we would generally expect default rates to remain below their long-run average until the next recession arrives, at which point they are likely to spike materially. Given the difficulty of predicting recession timing, we have higher confidence in the nearer-term forecasts.

Breaking down the speculative grade market into its bond and loan components, we currently expect the trajectory for bond and loan issuer default rates to be similar over the next several years, although loan issuers are starting from a slightly lower default rate today and will probably see a slightly lower rate in 2013 as well. This should change in 2014 as the last stubborn remnants of the once-formidable loan maturity wall force a few issuers into some form of restructuring, closing the gap between loan and bond issuer default rates that has existed for the past 18 months.

Figure 9: Speculative-Grade Bottom-Up Default Forecast

	2013	2014	2015
Issuer-Weighted	3-4%	↔	↔
Par-Weighted	4-5%	↓	↔

Source: Barclays Research

As Figure 9 also shows, we expect the par-weighted default rate, which has trailed the issuer-weighted default rate since mid-2010, to exceed it by the end of 2013. This is driven to a large extent by the potential for some kind of restructuring event at Energy Future Competitive Holdings (TXU), which we believe could face a liquidity crunch in late 2013. The precise timing of this event remains unknown, however, as the company's cash flows are subject to several factors that are difficult to forecast, including average summer temperatures in the company's service area, as well as the level and volatility of natural gas prices over the course of the year. Should these factors resolve in a way that favors TXU's cash flows, it may have sufficient liquidity to carry it through 2013, delaying any resolution until 2014. This would have only a minimal effect on our 2013 issuer-weighted forecast, but with more than $31bn in affected debt (including bonds and loans), it would make a 2% difference in the par-weighted default rate relative to a total speculative grade universe that is approximately $1.6trn in size. Assuming that our forecast holds and resolution occurs in late 2013, we would expect the par-weighted default rate to drop somewhat in 2014, to a level more in line with our 3-4% issuer-weighted forecast.

Categories of Default Risk

Beyond our specific forecasts, another useful outcome from the bottom-up exercise is that it unearths patterns and concentrated areas of risk. In particular, several key categories of default risk emerge, each with distinct drivers and associated industry concentrations. Note that in many of the following cases, we do not explicitly anticipate a default event in 2013, or even in the years that follow. The key point is that these factors have created pockets of above-average risk within the high yield market and are worth considering on an ongoing basis until the situations are resolved.

- ***Business models in secular decline:*** The most striking example of this driver is within the paper/packaging/print media value chain. In the post-crisis period, the accelerating replacement of paper-based communication with electronic substitutes has contributed to defaults (or distressed exchanges, which are counted as defaults by the ratings agencies) at Houghton Mifflin Harcourt, NewPage, Catalyst Paper, Nebraska Book Company, Vertis, Reader's Digest, and Idearc, among others. Despite the restructuring that has already taken place across this industry, a number of challenges and risks remain. Dex One and Supermedia are attempting to merge while amending their credit facility, but holdout creditors could prevent a successful consummation without an interim stop in bankruptcy. Meanwhile, companies such as RR Donnelley, Cenveo, Verso Paper, McClatchy, and Cengage face top-line deterioration and negative operating leverage that appear unlikely to abate. A somewhat less obvious example of secular changes affecting an industry comes from retail, where shifting consumer tastes increasingly favor the ends of the industry barbell (mass market discounters and boutiques) at the expense of the middle ground (general goods retail), creating significant challenges for the likes of RadioShack, Sears Holdings, and Office Depot, among others. Hale Holden recently launched coverage of the retail sector with an Underweight rating; see his *Initiation Report* for details.

- ***Overleveraged pre-crisis LBOs failing to grow into their capital structures:*** At the height of the pre-crisis LBO boom, valuations were full and leverage was high, resulting in balance sheets that required robust EBITDA growth in order to reach sustainability. The ensuing recession exposed some such projections as overly optimistic, leaving behind large, highly leveraged credits with challenged capital structures. In some cases, such as the aforementioned TXU, time appears to be growing short, while credits such as Caesars Entertainment, Clear Channel, and First Data Corp have largely been successful in pushing out 2013/14 maturities to buy some breathing room.

- ***Liquidity crunch in highly cyclical businesses:*** Industry-specific challenges continue to play a role, particularly where cyclicality has been combined with high leverage. In the power industry, TXU is joined by Edison Mission Energy (EIX), which admitted on its 3Q12 earnings call that it lacks the ability to repay its June 2013 bond maturity under current projections and may even miss an interest payment due later this month. In the metals sector, AK Steel (AKS) continues to bleed liquidity despite two announced price increases in the past month and is likely to require further access to capital markets in the near term to avoid a liquidity squeeze by the end of next year. Finally, high yield technology credits are feeling the effects of the global slowdown in capital spending, including Advanced Micro Devices (AMD), Alcatel-Lucent (ALUFP), and Avaya (AVYA). While none of these tech names appear to be at imminent risk in 2013, all are worth watching over the longer term if the slowdown persists or deepens.

- ***Regulatory/litigation risk:*** The risk that regulatory intervention and/or litigation will force a default is most acute in the monoline sector. Radian (RDN) is expected to approach the 25x risk-to-capital regulatory threshold in 2013, while MGIC Investment Corp. already exceeds it. The convex nature of this ratio is such that the number can move higher quickly as capital erodes, potentially forcing regulators to intervene. Meanwhile, MBIA Insurance Corp is the subject of ongoing litigation regarding its February 2009 restructuring, which included the separation of the company into two entities. Regulation also continues to affect high yield healthcare credits, including Radiation Therapy Services (RTSX), which is experiencing top-line pressure as a result of Medicare reimbursement rate cuts, as well as lower volume due to an increasing preference for alternative treatment methods. Finally, tighter standards regarding federal student loan guarantees and inquiries into recruiter compensation practices have forced for-profit education credits to ratchet down admissions, hampering recovery efforts at Education Management (EDMC).

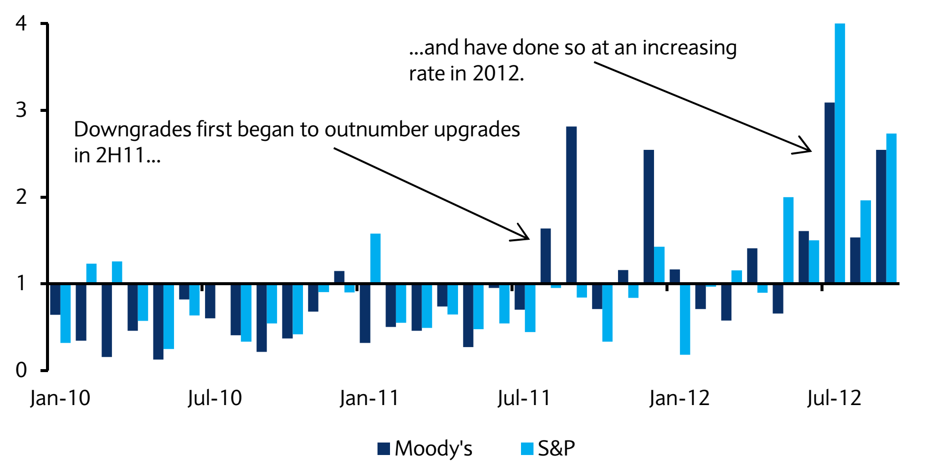
Ratings Migration Model

As we did in last year's default outlook, we augment our top-down and bottom-up models with an approach that leverages the work done by the major credit ratings agencies. To quickly summarize last year's article, we found that aggregate ratings migration patterns have historically had a reasonably strong predictive relationship with default rates trends, particularly over a four- to six-month horizon. While the predictive power of the ratings-based approach is somewhat lower over a 12- to 14-month horizon, it is still useful as a supplement to our other methods. After testing various regression models last year, we found that the most predictive approach combines y/y trends in the rate of upgrades (reflecting the presence or absence of momentum in the broader economy) with shorter-term (three- or six-month) changes in the rate of downgrades at lower quality levels (reflecting the downward spiral that typically precedes a default event). Updating these models with another year of historical data does not appear to have materially affected their fit, so we reuse them here.

Recent rating migration trends suggest that the high yield default rate is likely to rise from current levels in 2013. As Figure 10 shows, the downgrade-to-upgrade ratio was generally less than one during 2010 and 1H11, as the post-crisis economic recovery, combined with newfound management conservatism, led to improved credit metrics for a majority of high yield issuers. In the second half of 2011, downgrades began to outnumber upgrades at times as slowing economic momentum driven by the European sovereign debt crisis began to affect issuer fundamentals. As a result, the ratings migration model predicted that the default rate would rise in 2012, and it has, from 1.9% at the end of 2011 to 3.5% currently, according to Moody's. The ratio of downgrades to upgrades has continued to rise in 2012, particularly over the past several months as high yield corporate issuers have begun to face top-line pressure for the first time since the 2008/09 recession. As a result, our ratings migration model now pegs the 2013 default rate at 4.0-4.5%.

Clearly, this figure is higher than that produced by both the top-down macro and bottom-up fundamentals-driven models, so it is worth noting the potential limitations of this approach. Most important, a ratings-based model does not explicitly incorporate the positive effects of a wide-open primary market, in which even lower quality issuers seem to be having little trouble refinancing upcoming maturities. It also does not reflect the fact that the Fed is likely to actively stimulate the market for much (if not all) of 2013, which obviously was not the case during most of the historical period on which the regression results were based. In addition to its published credit ratings, Moody's Investor Services also maintains a Liquidity Stress Index, which as of mid-October was at a historically low level of 3.5%. The index reflects the percentage of companies that carry Moody's lowest liquidity rating (SGL-4) and, thus, suggests that balance sheets are relatively healthy and primary markets remain accessible to lower quality credits. These circumstances temper our faith in the ratings-driven approach in the present environment and lead us to align our forecast more closely with the other two models. Investors should be aware, however, that if market conditions deteriorate (because of a discontinuation of Fed support or other factors), credit rating migration trends suggest that defaults would likely rise.

Figure 10: Ratio of Downgraded to Upgraded Bonds



Source: Moody's, S&P, Barclays Research

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