MOODY'S
INVESTORS SERVICE

SECTOR IN-DEPTH
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TABLE OF CONTENTS

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Corporate Defaults and Recoveries - US

Distressed Exchanges Remain Frequent Thanks to Oil and Gas, PE Firms

» **Increased use of distressed exchanges (DEs), one of the hallmarks of the Great Recession default cycle, has continued unabated as a percentage of total defaults and remains at a similar level to that of the recession.** Through the end of October, DEs accounted for 43.8% of 2015 US non-financial defaults that we tracked and 44.3% of defaults in 2009-10, the heart of the recession default cycle. Their use was far more limited in the past, accounting for approximately 15% of defaults between 1988 and 2007.

» **The North American oil and gas industry is the current poster child for distressed exchanges.** With the prices of oil and natural gas showing few signs of recovery, exploration & production (E&P) companies are looking to shore up their weak balance sheets and debt investors are jockeying for priority in case of a default.

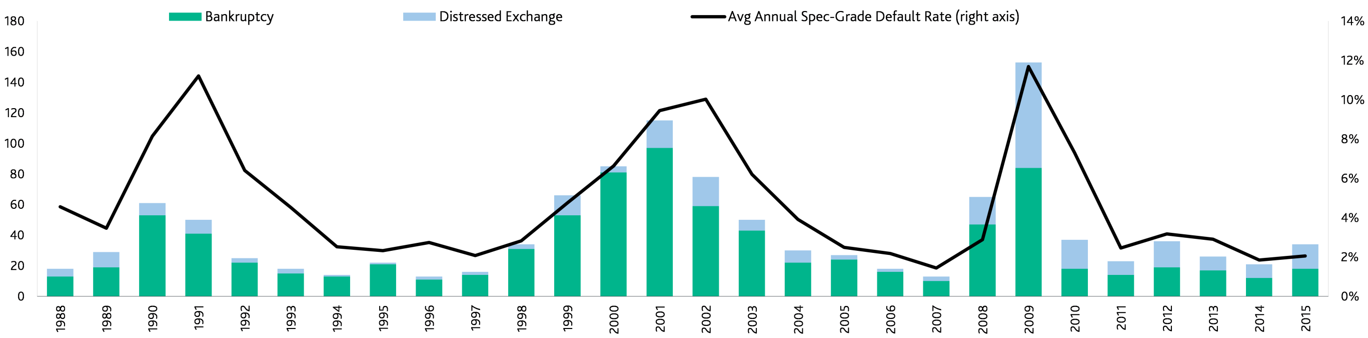
» **Large private-equity (PE) firms often use distressed exchanges as a restructuring tool.** Companies acquired in leveraged buyouts (LBOs) are far more likely to default via a distressed exchange than non-LBOs, and this is especially true of those backed by the largest PE firms. More than one third of the defaults in our database where a top PE sponsor was present were distressed exchanges, three times more than the number completed by companies with smaller PE sponsors and 2.4 times more than the number completed by non-LBOs.

» **Distressed exchanges produce better recoveries for debt holders than filing bankruptcy – unless, of course, there is a second default.** DEs allow a distressed company to avoid the uncertainty and expense of bankruptcy or push it off until markets improve, and our research shows that, on average, every tranche of debt does better in a first-time DE than in a first-time bankruptcy. However, if the exchange does not solve the company's balance-sheet issues and it re-defaults, creditor recoveries plunge.

Distressed Exchanges Remain in Vogue After the Credit Crisis

Distressed exchanges have become much more prevalent in the mix of default events (see Exhibit 1). They surged along with other default types in 2009 and have since remained a meaningful share of total defaults. Through the end of October 2015, DEs represented 21 of 48 US corporate defaults, or 43.8%, compared with an average of about 22% of total US defaults from 1988 through October 31. Under our definition, a DE occurs when a company, facing immediate or growing liquidity pressures and an untenable debt structure, offers creditors new or restructured debt, or a new package of securities, cash or assets, that amount to a diminished financial obligation relative to the original obligation. The issuer proposes the exchange in an effort to reduce the strain of an over-leveraged balance sheet and to avoid a more costly and disruptive bankruptcy filing.

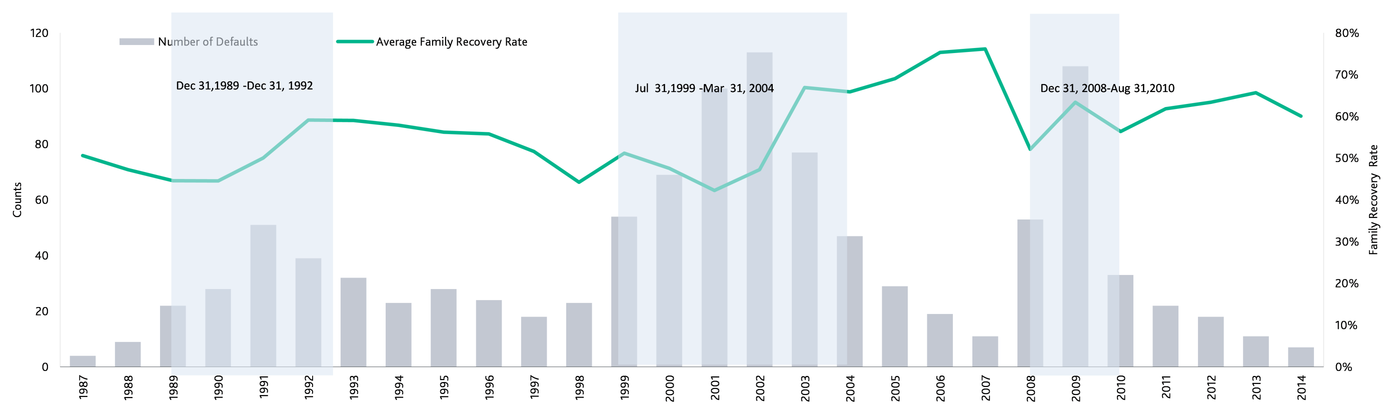
Exhibit 1
Percentage of DEs Grew Over Time, Surged During Credit Crisis



Source: Moody's Investors Service

Unsurprisingly, the largest numbers of DEs occurred during default cycles, both in absolute numbers and as a percentage of all defaults. Our prior report, [Firm-Wide Recoveries Don't Bounce Back after Great Recession](), showed recoveries are negatively correlated with the default cycle (see Exhibit 2). Conceptually, DEs are intended to buy time to avoid or delay bankruptcy, until improvement in either the company's operating conditions or the industry or macro environment make one unnecessary. In the best case, they can help over-leveraged firms reduce debt just enough to stay solvent and avoid bankruptcy. But, they can also preserve value simply by pushing off a bankruptcy from the depths of a default cycle to a more benign environment.

Exhibit 2
Average Family Recovery Rates Are Negatively Correlated With the Default Cycles



Average family recovery rates are displayed by year of default.

Source: Moody's Ultimate Recovery Database

Oil and Gas Sector Malaise Has Creditors Looking to Trade Up for Priority

The E&P sector has seen a surge of distressed exchanges, with creditors now willing to swap principal to improve their payment-priority position in the midst of a protracted slump in commodity prices. In most instances, creditors have been swapping senior unsecured debt for smaller amounts of secured debt, with second or third liens.

The primary motivation behind the current oil and gas DEs is not only debt reduction, but also an exchange of senior unsecured debt for smaller amounts of secured debt. If successful, this lessens the probability of default for the issuer, in addition to possibly decreasing the loss given default (LGD) for the new debt versus the exchanged instrument. We say possibly since this will only work if the new security ranks higher in repayment priority. If the only improvement is that the new debt is secured by a second or third lien — versus being unsecured — but remains at the same relative rank on the balance sheet, then the improvement in ultimate recovery is negligible. As our prior report, Still Second Rate: LGD assessments point to low recoveries for defaulted second liens, showed, of 153 corporate defaults in which there was defaulted second-lien debt in the capital structure, the average second-lien recovery was only 5.7 percentage points better than the average recovery of similarly positioned senior unsecured debt. Collateral value can deteriorate by the time a company defaults, weakening recovery if other protections, such as sufficient debt cushion, are not present.

The current spate of E&P distressed exchanges offers an interesting example of behavior when an entire industry segment is under stress (see Exhibit 3.) In this case, the cause is the sharp drop in oil prices. Several E&P companies raised cash in early 2015 through the issuance of equity, unsecured debt and even secured debt in the case of stressed speculative-grade issuers, with that cash going to fund operations, capital expenditures and wait out the downturn — if not to buy back debt in some instances. Lower commodity prices reduce companies' borrowing bases, since asset values are based on discounted cash flow analysis, which banks use to determine revolver borrowing base availability, usually every six months. As commodity hedges roll off and as commodity prices continue to stay low, we expect reductions in borrowing bases of high-yield E&P companies. If that happens, recovery prospects for new secured-debt tranches that replaced unsecured debt in distressed exchanges might improve, since there would be less senior-secured debt above. Other factors are important as well: This improvement may, however, be offset by the negative impact of the reserve-based loan (RBL) reduction on the company's liquidity and by the reduction in debt cushion as a result of the exchange.

Two thirds of the defaults in the US oil and gas sector this year were distressed exchanges where unsecured debt below an RBL facility was affected. Historically, unsecured-debt facilities have had poor recovery rates, while second-lien debt tranches' ultimate recoveries were not significantly better than those of their unsecured counterparts since both types were in the same position in the debt structure. Hence, distressed exchanges involving the exchange of unsecured debt for second- or third-lien secured debt at least raise the holders' position in the balance sheet, but the recovery prospects for the new secured debt might only be improved if the amount of debt above is reduced, while a meaningful amount of debt cushion remains below the new debt tranche should a company file for a bankruptcy protection. (For a fuller explanation of the DE trend in oil and gas, see page 8.)

Exhibit 3

North American E&P Distressed Exchanges, January-October 2015

Date of Distressed Exchange	Company	Details
Apr-15	Venoco, Inc.	Distressed exchange of approximately $194 million senior unsecured notes for $150 million second lien notes
Apr-Sep 2015	Halcon Resources Corporation	Distress exchange of approximately $227 million senior unsecured notes for Halcon common equity; exchange of $1.57 billion of its existing senior unsecured notes for $1.02 billion senior secured third lien notes due 2022
May-15	Midstates Petroleum Company Inc.	Distressed exchange of approximately $659 million senior unsecured notes for approximately $524 million third lien notes
May-15	Warren Resources, Inc.	Distressed exchange of approximately $70 million senior unsecured notes for approximately $47 million first lien term loan
Jun-15	American Energy - Woodford, LLC	Distressed exchange of approximately $340 million senior unsecured notes for approximately $238 million second lien notes
Jul-15	Lightstream Resources Ltd	Distressed exchange of $465 million senior unsecured notes for approximately $395 million second lien notes
Aug-15	SandRidge Energy, Inc.	Distressed exchange of $250 million of existing senior unsecured notes for $94.5 million of cash at an average price of 38% of par and another exchange of $275 million of unsecured notes into convertible notes
Sep-15	Goodrich Petroleum Corporation	Distressed exchanges of its senior unsecured debt : both $158.2 million senior notes due 2019 for $75 million of new second lien notes due 2018 and $55 million of unrated convertible notes due 2032 for $27.5 million of new convertible notes due 2032
Sep-15	Energy XXI Gulf Coast	EXXI's repurchase of$425 million of unsecured debt at a discount to par is a distressed exchange for its senior unsecured debt
Oct-15	EXCO Resources Inc	Distressed exchange of $577 million of its existing unsecured notes for $291 of new second lien debt

Source: Moody's Investors Service

Large Private-Equity Firms Use Distressed Exchanges as a Restructuring Tool

A review of default behavior among leveraged buyout companies sheds light on PE firms' preference for distressed exchanges as a restructuring tool. We looked at 230 defaulted LBOs in Moody's Ultimate Recovery Database, which included 76 transactions from top PE sponsors,[1] and found that LBOs are more likely to default via a distressed exchange or a prepackaged bankruptcy than non-LBOs. This is especially true of LBOs backed by top PE firms. More than one third of top PE LBO defaults in our database were DEs, as shown in Exhibit 4. That is three times more than the number executed by companies with a smaller PE sponsor or defaulted companies that had not undergone an LBO. In fact, an overwhelming majority of the non-LBOs filed for a regular bankruptcy protection (in 65% of all observations) or almost twice as often as the top 14's sponsored companies.

DEs usually allow private-equity firms to retain some control in their companies, while regular bankruptcies usually do not. With private-equity firms more active in the debt markets, the use of DEs has also become more accepted and widespread.

Exhibit 4

Top Private-Equity Firms Employ DEs More Often than the Rest

Distribution of defaults in Ultimate Recovery Database (PE vs. non-PE)

	Bankruptcy	Distressed Exchange	Prepack
All LBOs	44%	19%	37%
Top 14 PE	33%	34%	33%
Smaller PE firms	50%	11%	39%
Non-LBOs	65%	14%	21%

Source: Moody's Ultimate Recovery Database

Barring a Second Default, Distressed Exchanges Offer the Best Recoveries

A historically high percentage of distressed exchanges were a hallmark of the Great Recession default cycle.[2] During that period, both LBOs and non-LBOs employed distressed exchanges and prepackaged bankruptcies at a rate higher than the historical average. As Exhibit 5 shows, overall, companies that completed DEs recovered more at the family-level than those that filed for bankruptcy.

Exhibit 5

Average Family-Level Recovery Rates Are Highest for DEs

Moody's Default Cycles	Bankruptcy	Distressed Exchange	Prepack	Cycle Average
Cycle (Dec31,1989-Dec 31, 1992)	43%	74%	60%	50%
Cycle (Jul 31, 1999-Mar 31, 2004)	48%	64%	50%	50%
Recession (Dec 31, 2008-Aug 31, 2010)	59%	80%	51%	62%
Post-Recession	57%	73%	59%	62%
Outside Cycle	53%	73%	56%	57%
Total Average	50.2%	72.0%	54.2%	54.5%

Source: Moody's Ultimate Recovery Database

Distressed exchanges also produce higher recoveries at the instrument level (see Exhibit 6). The debt issues most affected by these exchanges are unsecured and subordinated bonds. First-lien secured bank debt tranches are rarely affected, with an average historical recovery rate of 98% (instruments that do not default/are not part of a distressed exchange are allocated a 100% recovery in Moody's Ultimate Recovery Database). On average, every tranche of debt does better in a distressed exchange than in a bankruptcy.

Exhibit 6

Every Debt Class Does Better When a Company Does a Distressed Exchange Instead of a Bankruptcy

Distressed Exchanges in URD (1987-2014)	Historical Average Recovery Rate
First-lien bank debt	98%
Subordinated Bank Debt	84%
Senior Secured Bonds	82%
Senior Unsecured Bonds	75%
Subordinated Bonds	65%
Family Level Recovery	**72%**
Bankruptcies in URD (1987-2014)	**Historical Average Recovery Rate**
First-lien bank debt	82%
Subordinated Bank Debt	51%
Senior Secured Bonds	61%
Senior Unsecured Bonds	42%
Subordinated Bonds	20%
Family Level Recovery	**50%**

Source: Moody's Ultimate Recovery Database

However, a distressed exchange may be followed by another, or an eventual bankruptcy filing, if the initial swap does not address the company's issues and if it remains under credit and or liquidity stress. Historically, 17.8% of companies that we track re-defaulted. Of these re-defaults, the percentage of companies that executed a distressed exchange and then subsequently filed for bankruptcy is approximately 28%.

If we look at companies that re-defaulted after the Great Recession default cycle, 42% of those were bankruptcies preceded by a distressed exchange at any point in time between 1999 and the first half of 2015 (see Exhibit 7). A significantly higher share than the historical figure of 28% that occurred from 1988 to October 2015, the 42% of post Great Recession re-defaults that started as distressed exchanges subsequently entered bankruptcy.

Exhibit 7

Post-Crisis Re-defaults Are Mainly Bankruptcies

	Sample Size	% of total
Bankruptcy preceded by DE	18	42%
Bankruptcy Preceded by Bankruptcy	16	37%
DE preceded by DE	8	19%
DE preceded by Bankruptcy	1	2%
Total re-defaults	43	

Source: Moody's Investors Service

Interestingly, if we only review companies that defaulted at least once during the Great Recession default cycle and again after it, we counted 13 repeat defaults, eight of these (or 62%) were bankruptcies preceded by a distressed exchange (see Exhibit 8). Perhaps this will give us insights into possible default behavior in the next default cycle.

Exhibit 8

Bankruptcies Are Majority of Repeat Defaults Following Great Recession Cycle Defaults

	Initial Default	Subsequent Default	
	Great Recession Default Cycle (Dec 31, 2008- Aug 31, 2010)	Post-Crisis Cycle (Sep 1, 2010- Sep 30, 2015)	
	DE	DE	Bankruptcy
2009	9	2	6
2010	4	3	2

Source: Moody's Investors Service

Stay at the buffet, or man the lifeboats?

To see if the originally exchanged debt might have fared better had a company simply declared bankruptcy — instead of consummating a distressed exchange first and then suffering a subsequent bankruptcy — we examined 20 defaulted issuers in the Ultimate Recovery Database that had senior unsecured and subordinated bonds affected in the first round of distressed exchanges, and then were also part of a subsequent bankruptcy filing. Those were compared with recovery rates of similarly positioned unsecured and subordinated debt instruments that went through a bankruptcy only once. The debt creditors benefited more from a one–time default, whether it was a distressed exchange or a bankruptcy, but certainly realized higher recoveries in the case of distressed exchanges (see Exhibit 9). However, when a company started off fixing its problems with a distressed exchange and subsequently filed for a bankruptcy protection, its senior unsecured and subordinated bonds, on average, realized much worse recoveries.

Exhibit 9

Second Time Is Not a Charm for Creditors

	The most impacted in DEs debt types		Similarly- Positioned Debt	
	First- time DE	DE--> BK	First -time Bankruptcy	
Debt Type	Average Recovery Rate		Debt Type	Average Recovery Rate
Senior Unsecured Bonds	55%	18%	Senior Unsecured Bonds	42%
Subordinated Bonds	38%	13%	Subordinated Bonds	19%

This sample includes debt tranches that are usually impacted in a distressed exchange. Similarly positioned debt instruments mean similar types of debt in an a liability structure of unrelated issuers that filed for bankruptcy, with a similar percentage of debt cushion below it.

Source: Moody's Ultimate Recovery Database

Notable advantages for creditors and companies

Another way to study whether attempted distressed exchanges "worked" is to look at changes in companies' Probability of Default Ratings (PDRs) and/or Corporate Family Ratings (CFRs) right after these defaults. We examined 112 distressed exchanges that were completed between 2009 and 2013. The results are mixed – for 39% of the reviewed distressed exchanges, future default risk was reduced and the PDRs and/or CFRs were upgraded. In 34% of the cases, the PDRs and CFRs were affirmed, meaning that for these high-risk issuers, the distressed exchange did not have a material impact on default risk. For 27% of the issuers, the distressed exchange failed to halt an already dire situation and the PDRs and CFRs for these issuers were subsequently downgraded (see Exhibit 10).

Exhibit 10

What Happens to PDRs/CFRs After a Distressed Exchange

Distressed Exchanges (2009-2013)

	Sample Size	% of total
PDR/CFR downgraded in conjunction with DE	30	27%
PDR/CFR upgraded	44	39%
Neutral (both ratings were affirmed)	38	34%

The observation horizon of the ratings was limited to the three months after a distressed exchange

Source: Moody's Investors Service

Potential Benefits All Around

While most analyses of the benefits of distressed exchanges focus on the advantages for the company swapping its debt, there are really three distinct constituencies involved, each of which benefits in some way.

As discussed previously, the company can improve its CFR and PDR and substantially reduce the cost and uncertainty related to bankruptcy, while maintaining control of the business, which is especially important to private-equity owners. If a distressed exchange is successful, then the overall firm-wide LGD is substantially reduced, which can prove helpful in maintaining relationships with the senior-secured creditors.

The non-affected debt may benefit from a reduced probability of default, along with that of the company. While the most-senior debt may have increased LGD if there is less of a debt cushion following the distressed exchange, that can be offset by lowering the default probability.

The affected debt incurs a loss as a result of the exchange but often a lower loss than the average loss experienced via bankruptcy. In the case of recent oil and gas exchanges, the debt is also moving higher on the balance sheet. This might improve its LGD in a subsequent default. Owning the new higher priority debt may serve as a hedge against a potential downgrade due to a diminished RBL. A lower rating could be offset by the improved LGD as the new securities received in the exchange would have less debt above them and the same debt cushion.

Oil & Gas Sector Produces a Distressed Exchange Gusher

by Amol Joshi, CFA

VP-Senior Analyst

Several factors are increasing the number of distressed debt exchanges in the North American oil and gas sector, which have surged in 2015. In 2013-14, we did not record a single distressed exchange in this sector, while during the first three quarters of 2015 there were nine.

Lower oil and natural gas prices have directly affected cash flows and credit profiles for lower-rated E&P companies, while indirectly affecting other energy companies such as drillers and oilfield service providers — due to significantly reduced drilling and completion activity. Weak commodity prices reduce revenue for E&P companies, translating to lower cash flow mitigated somewhat as they adjust their cost structures. The crude oil price collapse, falling by more than half from its mid-2014 level, led to a deterioration in cash flows that worsened the inherently limited financial flexibility of speculative-grade E&P companies with weak credit profiles. It further reduced their liquidity, especially for highly levered companies with most of their assets encumbered by their revolving credit facilities.

Meanwhile, lower commodity prices reduce E&P companies' borrowing bases since banks use asset values, based on discounted cash flow analysis, to determine borrowing-base availability, usually every six months. E&P companies with unhedged production volumes leave themselves entirely exposed to low commodity prices, and risk significant borrowing-base reductions. Rather than take over the E&P assets themselves, banks generally give E&P companies some time to improve their liquidity, but will take action if necessary.

Companies can improve liquidity by selling assets or issuing more equity or debt. Since commodity prices are low and the outlook for recovery uncertain, companies are more likely to raise capital by issuing securities. But as cash-flow projections deteriorate, equity prices fall, causing greater potential dilution, and unsecured bond prices contract leading to unattractively high yields.

The inability of companies to issue unsecured debt can generate a market for secured note issuance at relatively lower yields — especially for companies with significant amounts of existing unsecured notes, which provide a debt cushion in case of default to the new secured-note investors given their priority position in the capital structure. Banks may also sometimes prefer new debt as long as it ranks below the bank debt. This new debt, often second lien, serves to reduce the banks' first-lien exposure, since the issuing company can use some of the second-lien proceeds to reduce its first-lien revolver.

Finally, companies can also attempt distressed debt exchanges to correct unsustainable capital structures or alleviate liquidity pressures, and try to survive a stretch of low commodity prices, but might do so at the bondholders' expense. Under distressed conditions, a company's unsecured bonds can trade down to pennies on the dollar, causing bond yields to skyrocket. These higher yields can tempt a company to exchange its unsecured bonds, generally at a discount to par, for equity or new secured notes at relatively improved yields, thereby lowering interest and principal payments.

Stressed companies increasingly have only limited access to capital markets at reasonable yields, and distressed exchanges have helped some issuers reduce their debt burdens. Investors who have purchased debt already trading at a discount have more motivation to participate in distressed exchanges, while original investors may view such exchanges as a chance to improve their recovery prospects. Balance sheets of speculative-grade E&P companies tend to be comprised of secured bank facilities senior to unsecured debt. As we have noted previously, such secured bank facilities generally have strong recoveries in default. The outperformance of E&Ps' secured bank debt stresses the importance of a debt's relative position in the liability structure of a defaulted issuer, with the secured bank debt having first claim on the company's assets and the debt cushion provided by junior secured debt and by unsecured bonds bearing the brunt of the losses. As asset values of E&P companies shrink with commodity prices, unsecured debt holders could also view distressed exchanges as a means to improve their recovery prospects prior to a potential payment default.

Stressed speculative-grade companies raised cash even by issuing secured debt in early 2015 as oil prices had plummeted. Some of this cash has been utilized to fund operating expenses,capital expenditures and could be used to buy back existing debt at a discount, or to provide liquidity if borrowing bases were to be reduced in the future. At this point, we have not seen many reductions of borrowing bases but anticipate possible reductions in the future.

To date, almost all of the distressed exchanges (listed in Exhibit 3) have involved exchanging existing unsecured debt for new secured debt. Debt exchanges are one of the most effective ways for a distressed company to significantly reduce its debt and to improve its capital structure. Some companies have conducted multiple distressed exchanges opportunistically, while others have launched formal exchange offers to fix their untenable capital structures in one fell swoop. Although debt exchanges clearly alleviate debt interest and principal burdens, it remains to be seen if such transactions are enough to allow companies to survive if commodity prices do not materially rise.

The ultimate success of distressed exchanges will depend on the quantum of reduction in debt and interest expense, duration of the downturn in commodity prices, as well as whether companies are able to sufficiently adjust cost structures to mitigate their loss of revenue due to low commodity prices, and whether liquidity can be adequately maintained as asset values deteriorate and capital markets access remains limited.

Moody's Related Research

Sector-in-Depths:

- Moody's B3 Negative and Lower Corporate Ratings List: Oil & Gas Downgrades Continue to Fuel an Expanding List , October 2015
- US Corporate Defaults and Recoveries: What May Happen in the Next Default Cycle Given Falling Credit Quality , August 2015
- North American Exploration And Production Industry: Distressed Debt Exchanges Rising in North American Oil and Gas Sector , July 2015
- US Corporate Default and Recoveries: Firm-Wide Recoveries Don't Bounce Back after Great Recession , January 2015
- US Corporate Default and Recoveries: When LBO companies Default, Recoveries are Close to Average, July 2014
- US Private Equity-Tracking the Largest Sponsors: Defaults Contained in the Recession But Downgrades Continue Long After , July 2014
- Loss Given Default: Still Second Rate: LGD assessments point to low recoveries for defaulted second liens, January 2014

To access any of these reports, click on the entry above. Note that these references are current as of the date of publication of this report and that more recent reports may be available. All research may not be available to all clients.

Endnotes

1 In 2008 and in 2014, we examined companies that were financed during 2004-07 and were owned by PE sponsors. We then ranked the PE firms by the amount of their Moody's-rated debt. These 14 firms were the largest and there was a substantial drop-off in the rated debt for next largest sponsor. As a result, we limited our analysis to the top 14 largest firms. Please view Defaults Contained in the Recession but Downgrades Continue Long After

2 For purposes of this study, a default cycle is defined as the period beginning when the US speculative-grade default rate crosses above the historical average for the period 1988 – August 30, 2015 and ending when it drops back below the historical average.

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