Spring 2016 Redetermination Season Takeaways

Everyone was expecting the Spring 2016 Borrowing Base Redetermination Season (or "SBBRS") to be painful. WTI and Henry Hub price benchmarks relevant to asset valuation and RBL collateralization were down 47.1% and 40.7% respectively in the wake of the pricing collapse, which commenced in earnest in late 2014 and dragged through all of last year before bottoming (we hope!) this past February. And sure enough, banks did not disappoint, taking a fairly aggressive red pen to borrowing bases across most of the industry. Among the 71 publicly traded and reporting companies we sampled for this report, industry-wide base reductions of 21.5% were more than three times as severe as Fall season cuts, which clocked in at an average 6%. The damage was even more severe in terms of actual net liquidity, which fell by $9.7 billion through the season, or roughly 4.5x the Fall season's $2.2 billion net reduction to US upstream liquidity. Those negatives aside, industry average reductions were still solidly more moderate than our initial projections for near-30% cuts across the industry, and also modestly better than our 25% revised projection.

Borrowing Base changes: Industry-wide

Sector	Percent Impact	Net Borrowing Base Change ($M)
All Producers	-21.5%	-9704.3

Source: ECRG, Company SEC Filings

As should be expected, mid-cap firms (which accounted for 21% of reporting companies' season-to-date) proved to be the most resilient, meeting our revised expectations for no change with a meager 1.4% segment average borrowing base reduction, giving up just $425 million in net liquidity. The group had exhibited strength last year with a near-7% average base increase during the Fall season, and we had originally been looking for a 5% reduction for the group this time around. However, an early reported 10% base increase for Marathon Oil made us skittish regarding that call, and we subsequently modified it to zero change with the release of our Q4 Corporate Debt Review.

Borrowing Base changes: Mid-cap

Sector	Percent Impact	Net Borrowing Base Change ($M)
All Producers	-1.4%	-425.0
Oil-Levered Producers	-5.0%	-550.0
Gas-Levered Producers	-1.3%	-175.0
Mixed Producers	3.3%	300.0

Source: ECRG, Company SEC Filings

Stepping a rung down the corporate solvency ladder, small cap firms struggled with an average 20.3% borrowing base reduction during the Spring review. Cuts were roughly 4x that of the Fall cycle on a percentage basis (compared to just 5% average reductions late last year), and with generally larger facilities than the microcap group, small-caps accounted for about 60% of total lost net liquidity during the SBBRS at more than $5.7 billion in capital access carved from the group's flanks. We'd been looking for average small-cap base reductions of around 15% during the SBBRS, so that projection held up fairly well. We believe we were off a bit due to banks' apparent willingness to take more from the segment because of an awareness that most of the group's members simply had more to give than smaller peers. It is also noteworthy that there was quite a bit of play around the group average. Four small-cap firms (Eclipse, Sanchez, Callon and California Resources) saw no reduction, while others such as WPX, EP Energy and SM Energy took cuts near 40%.

Borrowing Base changes: Small-cap

Sector	Percent Impact	Net Borrowing Base Change ($M)
All Producers	-20.3%	-5743.3
Oil-Levered Producers	-19.5%	-2813.3
Gas-Levered Producers	-14.4%	-845.0
Mixed Producers	-30.0%	-2085.0

Source: ECRG, Company SEC Filings

Again not surprisingly, microcap firms fared the worst of the lot, with borrowing bases cut an average 32.3% this Spring. That said, on a relative basis microcap RBL liquidity made out better than many (and certainly better than we) expected. The group's reductions were a little more than twice as severe as the Fall cycle's ~14% average cuts on a percentage basis, although in real dollar terms they were significantly worse, accounting for a net $3.5 billion segment liquidity reduction compared to less than $800 million reduced in the Fall. At least some of this latter effect may be explained by a larger number of companies appearing within the microcap group this Spring than in the Fall, in turn a function of company share price pressures and a reshuffling of companies of greater means into the microcap data set. This same dynamic may also have helped lead to a smaller overall reduction than the 45% we were projecting. That said, there were clearly fundamental factors at play as well, with banks in some instances taking great effort to avoid pushing firms into insolvency. Examples include staggered or delayed cuts pending asset sales (Resolute, Gastar, Mid-Con Energy Partners, Yuma), reductions to perfectly match outstanding balances (Penn Virginia), and aggressive negotiation by upstreamers who drew down borrowing bases in full ahead of redetermination for improved bargaining power (Stone Energy). This latter approach was reportedly particularly stinging for banks, and has resulted in a wave of "anti-cash hoarding" provisions in RBLs throughout the industry.

Borrowing Base changes: Microcap

Sector	Percent Impact	Net Borrowing Base Change ($M)
All Producers	-32.3%	-3536.0
Oil-Levered Producers	-28.9%	-1053.0
Gas-Levered Producers	-30.9%	-1818.3
Mixed Producers	-46.4%	-664.7

Source: ECRG, Company SEC Filings

Trends by Focus

Parsing the data in other ways, we observe that oil-levered firms (which accounted for over 40% of the 1H16 sample) saw trends roughly in-line with the broader industry, with a 22.3% average borrowing base reduction compared to 21.5% for the industry. Meanwhile natural gas firms (also over 40% of the group) outperformed the industry with average 17.8% borrowing base reductions supported by a large subset of generally well-positioned Marcellus operators. Conversely, mixed producers (the remaining ~17%) struggled. Despite a few strong performers including Marathon, Parsley and PDC, mixed operators still averaged 28.5% borrowing base reductions with half of the group seeing cuts from 40% to nearly 60%.

Borrowing Base changes: Industry-wide

Sector	Percent Impact	Net Borrowing Base Change ($M)
Oil-Levered Producers	-22.3%	-4416.3
Gas-Levered Producers	-17.8%	-2838.3
Mixed Producers	-28.5%	-2449.7

Source: ECRG, Company SEC Filings

Looking to regional performance, a few parts of the country really stood out. Marcellus/Utica operator borrowing bases fell just 11% (again compared to 21.5% nationwide) with only Rex, Cabot and Carbon Natural Gas (totaling just 30% of the group) seeing any reduction at all, and with Rice beating its FBBRS 15% ($100 million) borrowing base increase with an even more impressive 17% ($125 million) liquidity boost. Permian players also performed pretty well, with a peer-beating 17% average cut to borrowing bases. Four of the region's ten firms reporting to date saw no reduction, and three more took haircuts of less than 20%. Both the Marcellus/Utica and Permian feature some of the best economics in the country, so their relative outperformance makes sense. The Rockies also held up reasonably well. Although local operators saw 25% cuts on average, all three reporting firms (Resolute, Abraxas and Vanguard) are microcaps, which again saw industry average reductions of nearly 33%. As such, the group still managed to outperform peers in its own way.

Meanwhile on the low end of comps, Gulf of Mexico operators saw their borrowing bases fall an average 30%, nearly 50% worse than the industry. That said, the bulk of the group is comprised of microcap firms, several of which are under the gun from regulators and facing supplemental bonding requirements in the face of drastic equity deterioration. The Mid-Con also struggled with an average 28% borrowing base reduction, as did the Williston and Diversified groups which saw 26% average cuts.

Smaller Diversifieds are for the most part upstream MLPs, which have been under particular pressure since the price collapse because of yield-driven value propositions and distributions which have been slashed pretty dramatically.

Borrowing Base changes: Aggregated by Region

Region	Percent Impact	Net Borrowing Base Change ($M)
Ark-La-Tex	-24.6%	-349.7
Diversified	-26.0%	-540.0
DJ	-22.4%	-325.0
Eagle Ford	-19.5%	-2102.0
GOM	-29.7%	-1021.8
Gulf Coast	-34.0%	-550.0
Marc/Utica	-11.3%	-249.5
Mid-Con	-27.8%	-448.9
Permian	-17.0%	-1085.0
Rockies	-25.0%	-530.0
Williston	-26.0%	-2502.4

Source: ECRG, Company SEC Filings

More Deterioration To Come, But Declines Likely Slowing

Looking toward the Fall 2016 redetermination season, while we expect more pain to come, we believe the damage will be more restrained than what was witnessed this past Spring. Banks have already absorbed the regulator-mandated asset valuation decline shock from 2015, and are not required to drop values any lower. That said, oil prices appear to have stalled in the $45-$50/bbl range, with apparent potential to move lower as of this writing. This is still uneconomic for many, suggesting there should be at least some additional repercussions. Meanwhile on the gas side, Henry Hub has seen one heck of a rebound over the past month or so, but it did so from otherwise quite abysmal 1H16 prices. So far this year following SEC reserve reporting standards, WTI is down another 21.1% vs. 2015 calculations while Henry Hub is down another 13.7%. However there could be some improvement by the time Fall rolls around, and even if not, again, banks are not required to do intra-year valuations using government standards, instead having flexibility and discretion while continuing to rely on the 2015 numbers.

Lenders generally do not want to force insolvencies for multiple reasons, so a softer touch may apply toward the lower end of the spectrum.

As such, strongly positioned mid-cap firms seem likely to resume their liquidity march higher, and we expect an average 2% increase to borrowing limits in the Fall cycle. Small-Cap reductions seem likely to continue, but at a more subdued rate than in 1H16 at around 10%, for the reasons set forth above in discussing broader industry dynamics. Microcaps should experience a similar effect, with reductions slipping from nearly a third in 1H16 to about 12.5% in 2H16. The situation for the latter group is still fairly dire. But with more microcap firms close to being tapped out, their assessments appear to have increased potential for lender leniency, and we expect to see more bases cut precisely to match outstanding balances. Finally, some firms will smell borrowing base deficiencies in the wind and opt to preemptively file bankruptcy, which would remove them from the sample of reporting companies. As such, 12.5% microcap base reductions could, if anything, be biased slightly to the high side.

On the whole, we expect industry-wide average reductions of around 9% in during the Fall 2016 season, less than half of 1H16's 21.5% average reductions but still worse than 1H15's 6% cuts. Mid-Cap firms should have less impact on the broader average than they did this past cycle, as several larger firms' facilities are assessed only once a year, in the Spring. Meanwhile, small-caps should see increased weighting as equities have recovered, pulling some firms out of the microcap category. Microcap influence should moderate for the same reason, further exacerbated by the fact that many of the firms which have filed bankruptcy over the past several months were microcaps.

1H 2016 Borrowing Base Redeterminations – Full company list

Company	Date	Cap Size	Prod. Category	Region	% Change	Dollar Value ($MM)
Anadarko Petroleum	2/1/16	Large	Gas	DJ	0%	0.00
Gulfport Energy	2/18/16	Mid	Gas	Marc/Utica	0%	0.00
Oasis Petroleum	2/23/16	Small	Oil	Williston	-25%	-375.00
Freeport-McMoran	2/26/16	Mid	Oil	GOM	-13%	-500.00
Eclipse Resources	3/2/16	Small	Gas	Marc/Utica	0%	0.00
Marathon Oil	3/8/16	Mid	Mixed	Eagle Ford	10%	300.00
Clayton Williams	3/9/16	Micro	Oil	Permian	-78%	-350.00
Gastar Exploration	3/9/16	Micro	Gas	Mid-Con	-50%	-100.00
Rex Energy	3/15/16	Micro	Gas	Marc/Utica	-46%	-160.00
Energy XXI	3/15/16	Micro	Oil	GOM	-24%	-122.30
Halcon Resources	3/17/16	Micro	Oil	Williston	-15%	-127.40
Range Resources	3/17/16	Mid	Gas	Marc/Utica	0%	0.00
WPX Energy	3/18/16	Small	Mixed	Williston	-41%	-725.00
Sanchez Energy	3/21/16	Small	Gas	Eagle Ford	0%	0.00
Whiting Energy	3/25/16	Small	Oil	Williston	-29%	-1,000.00
W&T Offshore	3/28/16	Micro	Mixed	GOM	-57%	-200.00
Resolute Energy	3/29/16	Micro	Oil	Rockies	-28%	-40.00
Sandridge Energy	3/30/16	Micro	Gas	Mid-Con	-32%	-160.00
Yuma Energy	3/30/16	Micro	Mixed	Ark-La-Tex	-43%	-15.00
Tengasco, Inc.	3/30/16	Micro	Oil	Mid-Con	-59%	-4.60
Goodrich Petroleum	3/30/16	Micro	Mixed	Ark-La-Tex	-46%	-34.70
Baytex Energy	3/31/16	Small	Oil	Eagle Ford	-29%	-238.26
EV Energy Partners	4/1/16	Micro	Gas	Diversified	-28%	-175.00
Nighthawk Energy	4/1/16	Micro	Oil	DJ	-43%	-10.00
Unit Corp.	4/8/16	Small	Gas	Mid-Con	-14%	-75.00
Callon Petroleum	4/11/16	Small	Oil	Permian	0%	0.00
Chesapeake Energy	4/11/16	Mid	Gas	Marc/Utica	0%	0.00
Bill Barrett	4/11/16	Small	Oil	DJ	-11%	-40.00
Memorial Resource Development	4/11/16	Mid	Gas	Ark-La-Tex	0%	0.00
SM Energy	4/13/16	Small	Gas	Eagle Ford	-38%	-750.00
Memorial Production Partners	4/14/16	Micro	Gas	Ark-La-Tex	-21%	-250.00
Antero Resources	4/14/16	Mid	Gas	Marc/Utica	0%	0.00
Energen Resources	4/14/16	Small	Oil	Permian	-25%	-350.00

Company	Date	Cap Size	Prod. Category	Region	% Change	Dollar Value ($MM)
Lucas Energy	4/15/16	Micro	Oil	Eagle Ford	-25%	-0.60
Denbury Resources	4/19/16	Small	Oil	Gulf Coast	-34%	-550.00
Abraxas Petroleum	4/21/16	Micro	Oil	Rockies	-21%	-35.00
Consol Energy	4/26/16	Mid	Gas	Marc/Utica	0%	0.00
Cabot Oil & Gas	4/29/16	Mid	Gas	Marc/Utica	-11%	-200.00
Penn Virginia	4/29/16	Micro	Oil	Eagle Ford	-54%	-148.10
RSP Permian	5/2/16	Mid	Oil	Permian	0%	0.00
Viper Energy Partners	5/2/16	Small	Oil	Permian	-13%	-25.00
Exco Resources	5/3/16	Micro	Gas	Ark-La-Tex	-13%	-50.00
Diamondback Resources	5/3/16	Mid	Oil	Permian	-7%	-50.00
Matador Resources	5/4/16	Small	Mixed	Eagle Ford	-20%	-75.00
Carrizo Oil & Gas	5/4/16	Small	Oil	Eagle Ford	-12%	-85.00
Legacy Reserves LP	5/4/16	Micro	Gas	Diversified	-34%	-95.00
Triangle Petroleum	5/4/16	Micro	Oil	Williston	-36%	-125.00
Concho Resources	5/4/16	Mid	Oil	Permian	0%	0.00
Approach Resources	5/4/16	Micro	Gas	Permian	-28%	-125.00
Parsley Energy	5/4/16	Mid	Mixed	Permian	0%	0.00
EP Energy	5/4/16	Small	Mixed	Eagle Ford	-40%	-1,100.00
Laredo Petroleum	5/4/16	Small	Mixed	Permian	-19%	-185.00
California Resources Corp.	5/5/16	Small	Oil	California	0%	0.00
Contango Oil & Gas	5/9/16	Micro	Gas	GOM	-26%	-50.00
Black Stone Minerals LP	5/10/16	Mid	Gas	Diversified	-18%	-100.00
Northern Oil & Gas	5/10/16	Small	Oil	Williston	-36%	-150.00
BNK Petroleum	5/10/16	Micro	Oil	Mid-Con	0%	0.00
Rice Energy	5/16/16	Mid	Gas	Marc/Utica	17%	125.00
PDC Energy	5/18/16	Mid	Mixed	DJ	0%	0.00
Carbon Natural Gas Co.	5/23/16	Micro	Gas	Marc/Utica	-73%	-14.50
Bonanza Creek Energy	5/23/16	Micro	Mixed	DJ	-58%	-275.00
Earthstone Energy	5/24/16	Micro	Oil	Eagle Ford	-6%	-5.00
Sundance Energy Australia	5/25/16	Micro	Oil	Eagle Ford	0%	0.00
Vanguard Natural Resources	5/26/16	Micro	Gas	Rockies	-26%	-455.00
Mid-Con Energy Partners LP	6/2/16	Micro	Oil	Mid-Con	-45%	-85.00
Sanchez Production Partners	6/6/16	Micro	Gas	Mid-Con	-2%	-4.30
Panhandle Oil & Gas	6/7/16	Small	Gas	Mid-Con	-20%	-20.00
Stone Energy	6/14/16	Micro	Mixed	GOM	-28%	-140.00

Company	Date	Cap Size	Prod. Category	Region	% Change	Dollar Value ($MM)
Atlas Resource Partners	6/14/16	Micro	Gas	Diversified	-24%	-170.00
PetroQuest Energy	6/21/16	Micro	Gas	GOM	-30%	-9.50
Samson Oil & Gas	6/30/16	Micro	Oil	Williston	0%	0.00

Source: ECRG, Company SEC Filings

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