Credit Considerations:
How Companies Fail
E&P's Under Financial Stress

North American Power Credit Organization

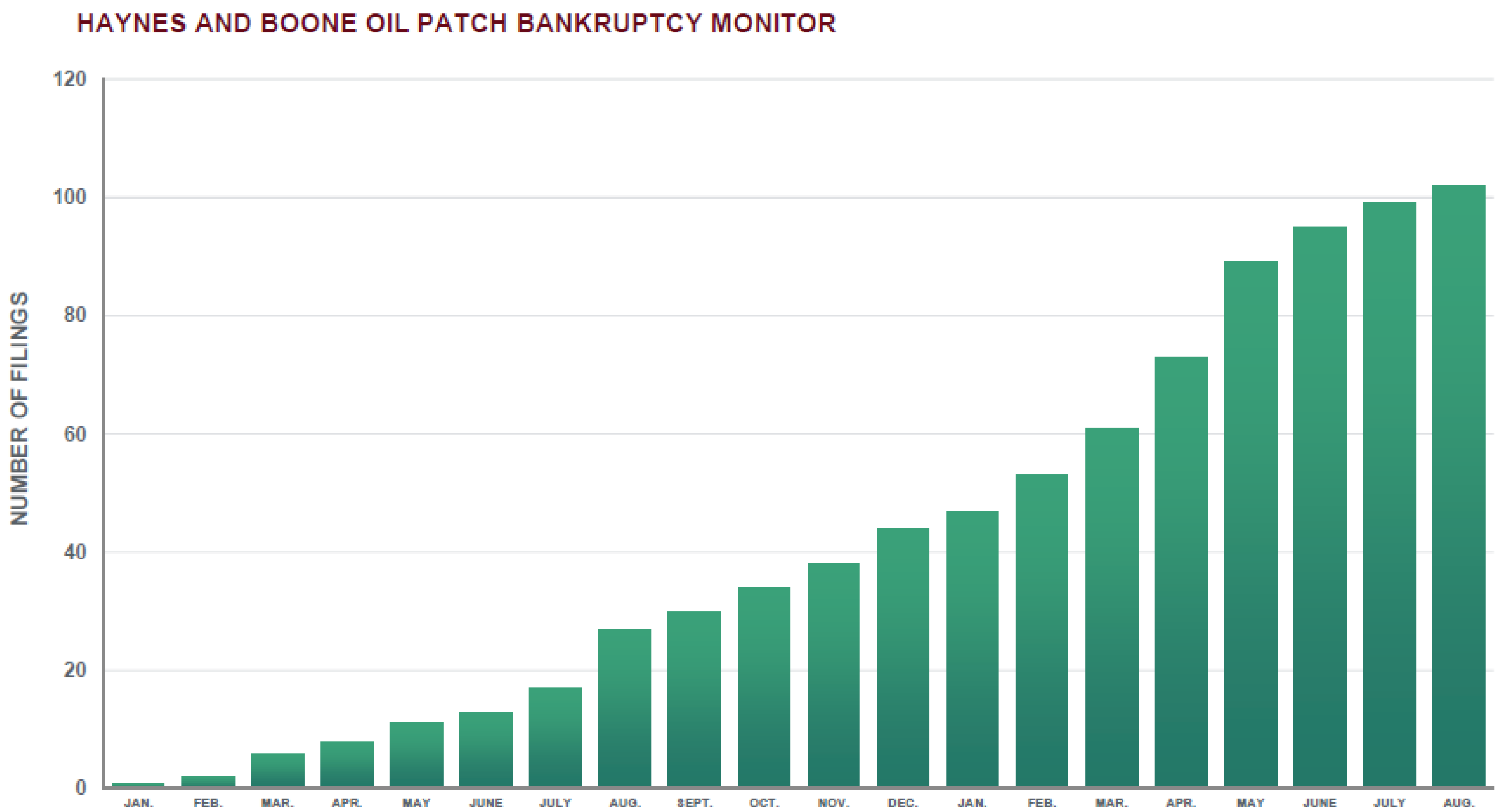
September 22, 2016

RMG Financial Consulting, Inc.
www.rmgfinancial.com

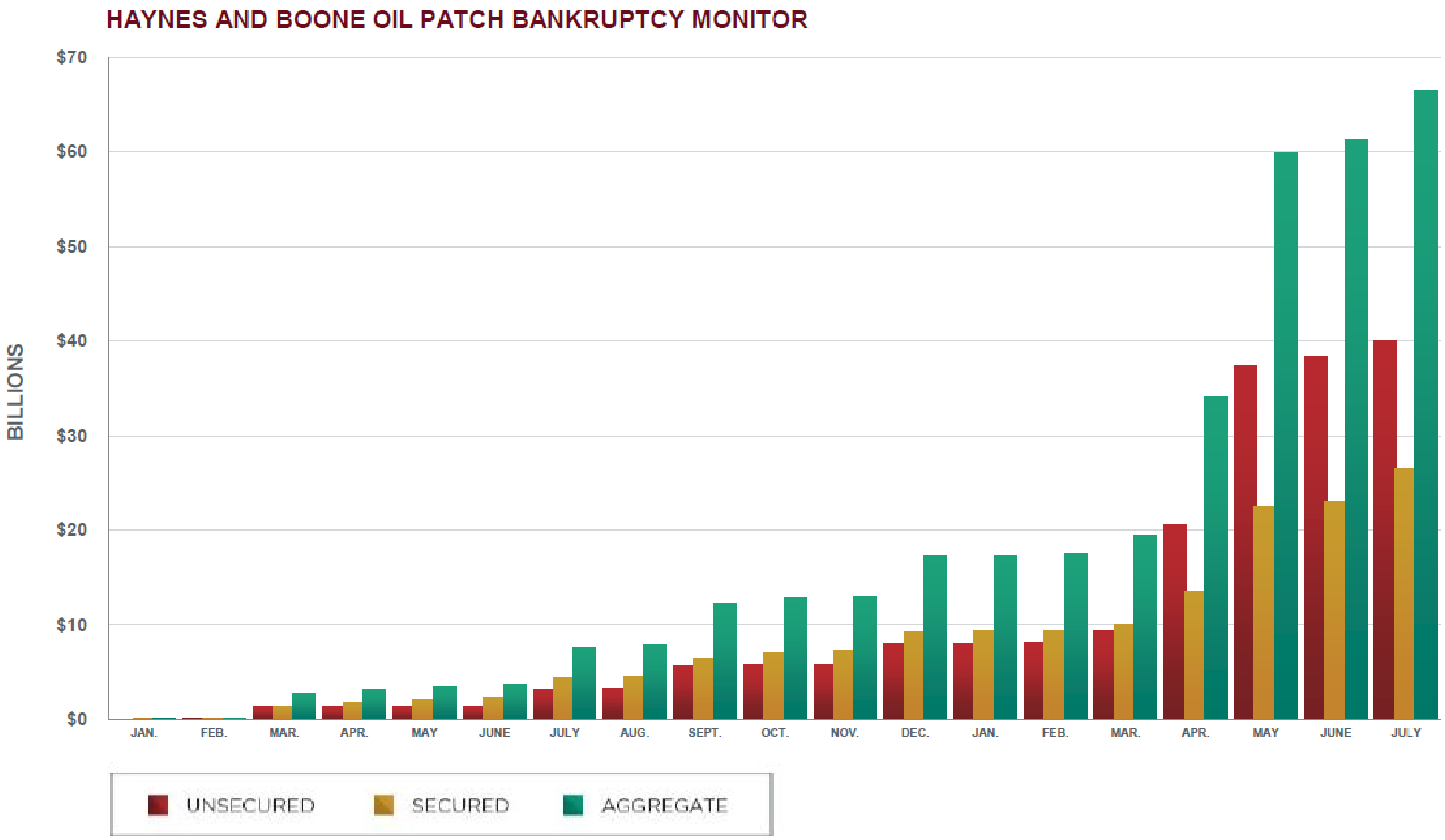
Tough Times for E&P's

- Depressed commodity prices = distressed counterparties.
- We've already seen over 100 oil and gas E&P bankruptcies since January 2015 – defaults on almost $68B of debt.
- We've already seen over 90 oil service providers file for bankruptcy since January 2015 – defaults of over $14B.
- Over 45 coal companies have filed bankruptcy since 2012.
- We've also seen spillover effects to banks, unsecured creditors and regional economies.

Tough Times for E&P's

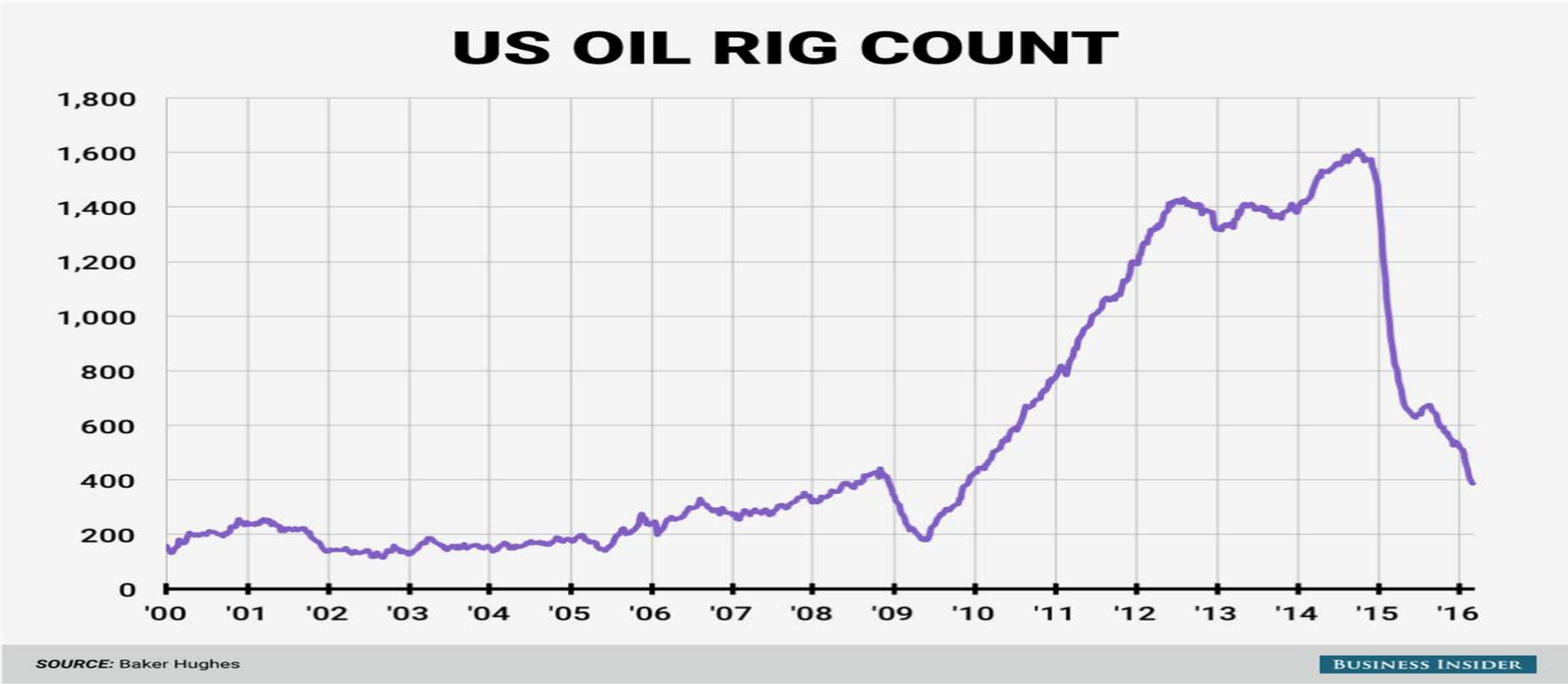


Tough Times for E&P's



What Were The Causes?

- Fracking took off after 2010.
- Banks began aggressively offering easy credit.
- Oil and Gas E&P's began ramping up their drilling into 2014.



What Were The Causes?

- U.S. E&P's became overleveraged to support production.
- U.S. oil production became a threat to OPEC producers.
- In mid-2014 the Saudis decided to let world oil prices fall by increasing production to drive US E&P's out of business.
- Oil prices collapsed but many E&P's hung on into 2015 by:
  - Cutting CapEx (cut back on rig count)
  - Cutting overhead costs
  - Having put on price hedges into 2015/16
  - Selling assets
  - Trying to raise additional (emergency) capital

What Were The Causes?

This is a story of the financial impacts of falling commodity prices on assets, equity, cash flow and liquidity:

- Revenues are impacted by lower commodity prices.
- Assets are re-valued (asset impairments).
- Equity is eroded through negative earnings and impairments.
- Company capital structures are negatively impacted.
- Operating cash flow declines.
- CapEx is reduced to prop up free cash flow.
- Lack of CapEx hurts productions (further hurting revenues).
- Borrowing base reductions occur due to asset impairments.
- Liquidity is impacted and companies run out of money.

How to Spot Distressed Credits

- Falling share price
- Ratings decline
- Increased EDF / CDS / bond spreads
- Erosion of revenues and earnings
- Asset impairments
- Eroding equity – possible solvency issues
- Increasing debt and leverage
- Declining (negative) cash flows
- Depletion of liquidity
- Drawdowns of existing credit facilities
- Borrowing base adjustments
- Increased collateral issuance

Falling Commodity Prices - Coal

Falling Commodity Prices - NatGas

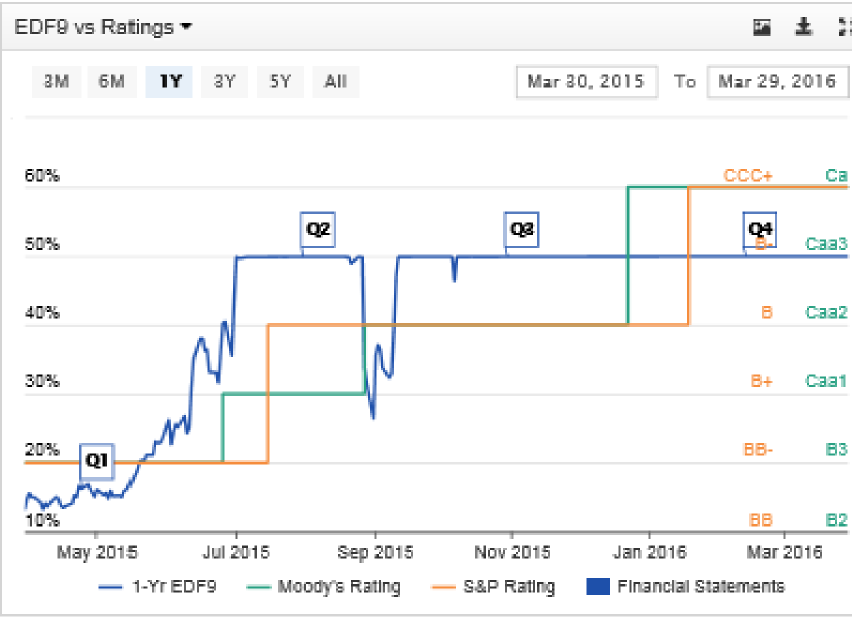
Falling Commodity Prices - Oil

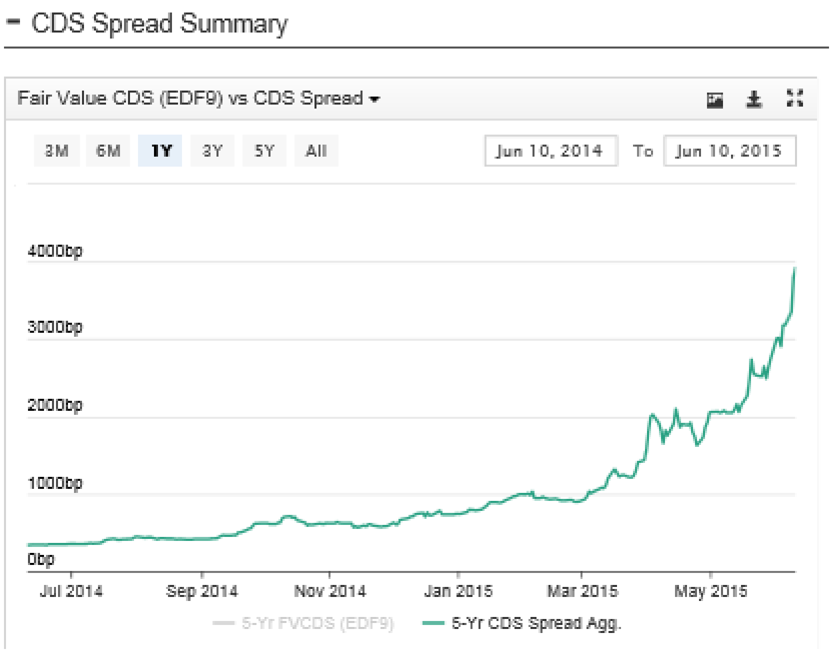
Falling Share Price

Example: Denbury Resources, Inc.

Increasing EDF and CDS

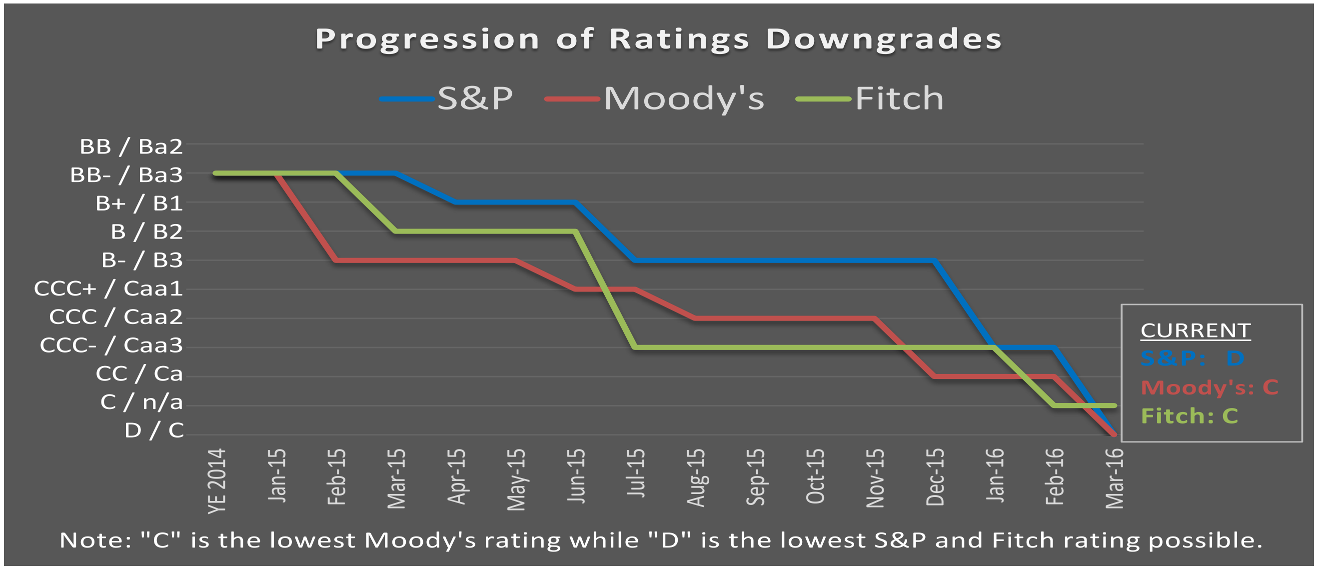
Example: Peabody Coal Company





Ratings Decline

Example: Peabody Coal



	YE 2014	Feb-15	Mar-15	Apr-15	Jun-15	Jul-15	Aug-15	Dec-15	Jan-16	Feb-16	Mar-16
S&P	BB-			B+ (04/23/15)		B- (07/15/15)			CCC- (01/16/16)		D (03/18/16)
Moody's	Ba3 (07/14/14)	B3 (02/27/15)			Caa1 (06/25/15)		Caa2 (08/27/15)	Ca (12/22/15)			C (03/24/16)
Fitch	BB-		B (03/02/15)			CCC- (07/27/15)				C (02/16/16)	C (AFFIRMED)

A Tale of Six Bankruptcies

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We'll take a look at six of the larger E&P's to file for bankruptcy:

Company	Total Debt*	Date Filed
Sandridge Energy	$8.3 Billion	5/16/2016
Linn Energy	$6.1 Billion	5/11/2016
Ultra Petroleum	$3.8 billion	4/29/2016
Halcon Resources	$3.2 Billion	7/27/2016
Midstates Petroleum	$2.1 billion	4/30/2019
Atlas Resources	$1.3 billion	7/27/2016
Total	$24.8 billion	

(*Note: Total of defaults on both secured and unsecured debt)

A Tale of Six Bankruptcies

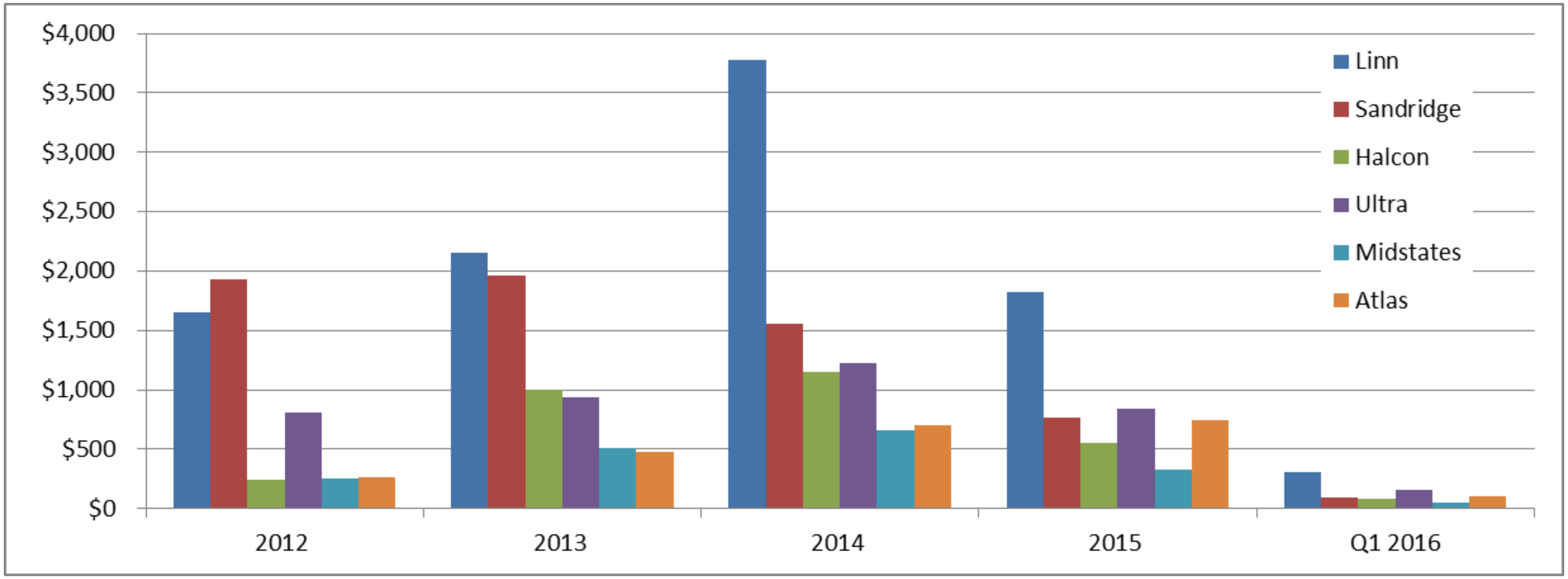
Who lost out?

- Shareholders
- Bondholders
- Banks
- Pipelines (LT Transport contracts were disallowed)
- Suppliers
- Traders
- Other unsecured creditors
- Employees
- Local/regional economies

Declining Revenues

- Falling commodity prices caused revenues to fall sharply into 2015.
- Higher cost wells became uneconomical.
- Rig counts (CapEx) fell sharply & impacted levels of production.
- Offset somewhat by price hedging into 2015 and beyond

Total Revenues ($ in 000's)

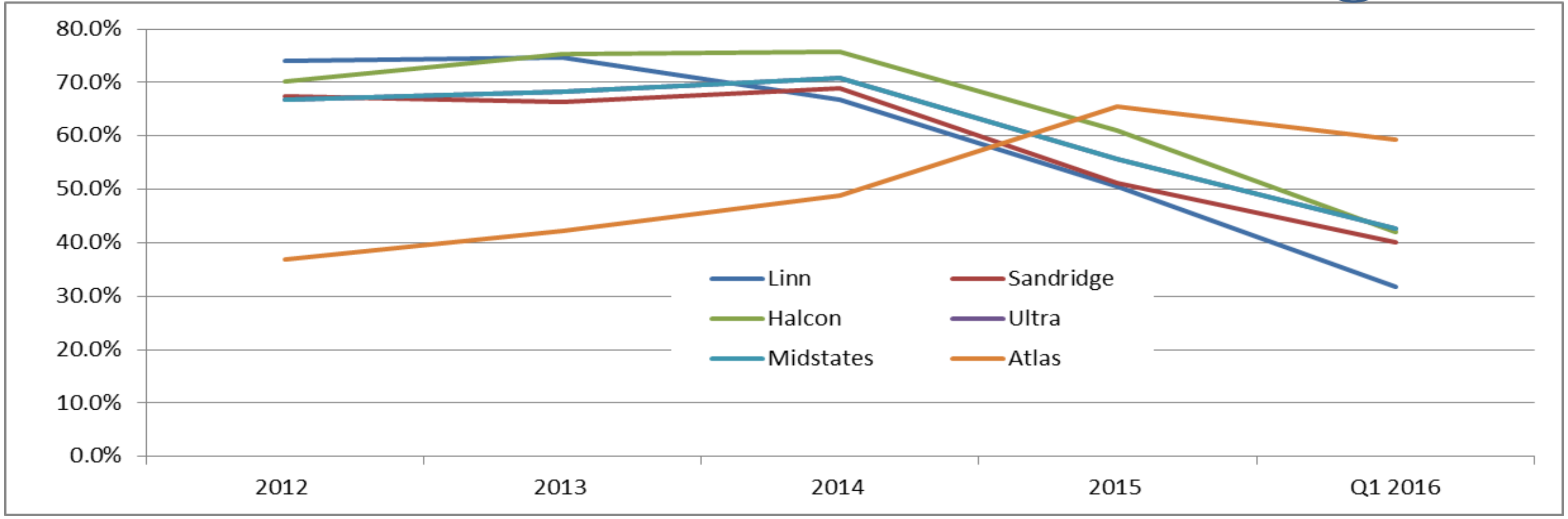


Declining Gross Margin

- As sales revenue fell, margins declined.
- Price hedges helped some companies keep the wolf at bay.

Hedging Gain (losses)	2102	2013	2014	2015	Q1 2016
Linn Energy	$125	$178	$1,206	$1,506	$110
Sandridge Energy	$241	($47)	$334	$73	$3
Halcon Resources	($6)	($31)	$518	$310	$19
Ultra Petroleum	$74	($47)	$82	$43	$0
Midstates Petroleum	($12)	($44)	$139	$41	$0
Atlas Resources	$0	$0	($3)	$267	$46

% Gross Margin



Eroding Cash Flow

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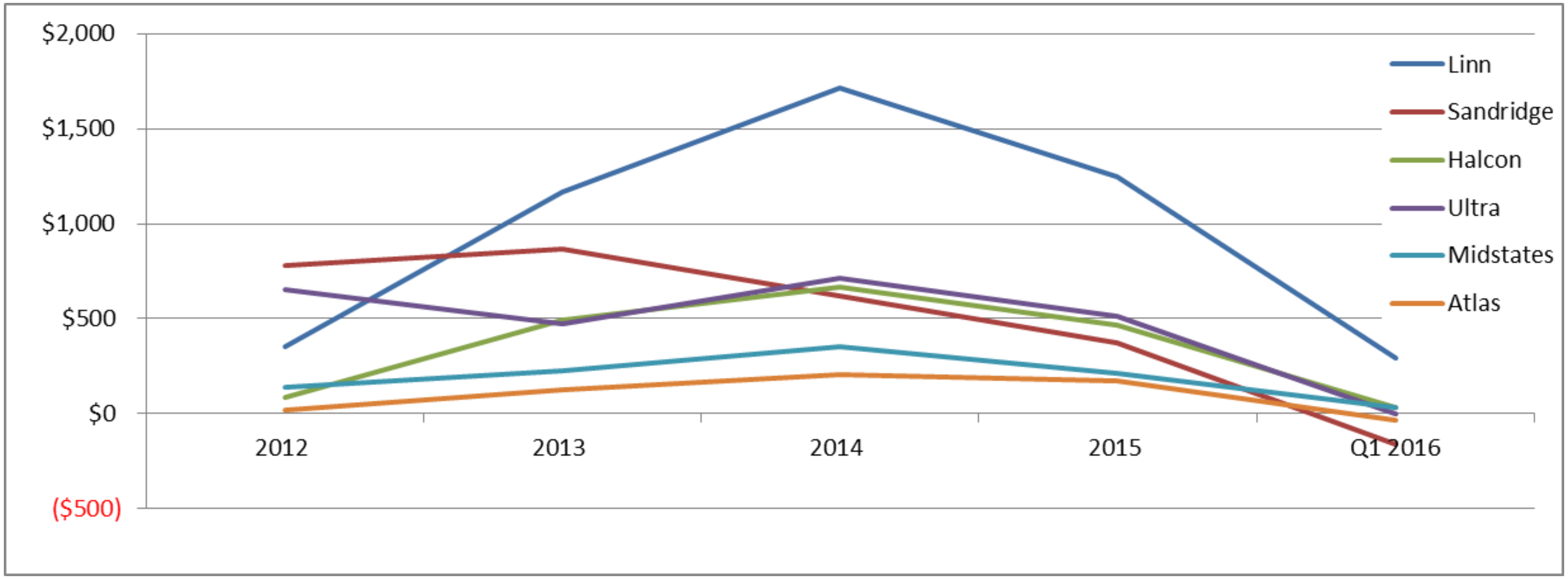
- E&P's generated significant CFO when prices were high.
- High levels of CFO funded CapEx, dividends and debt service.

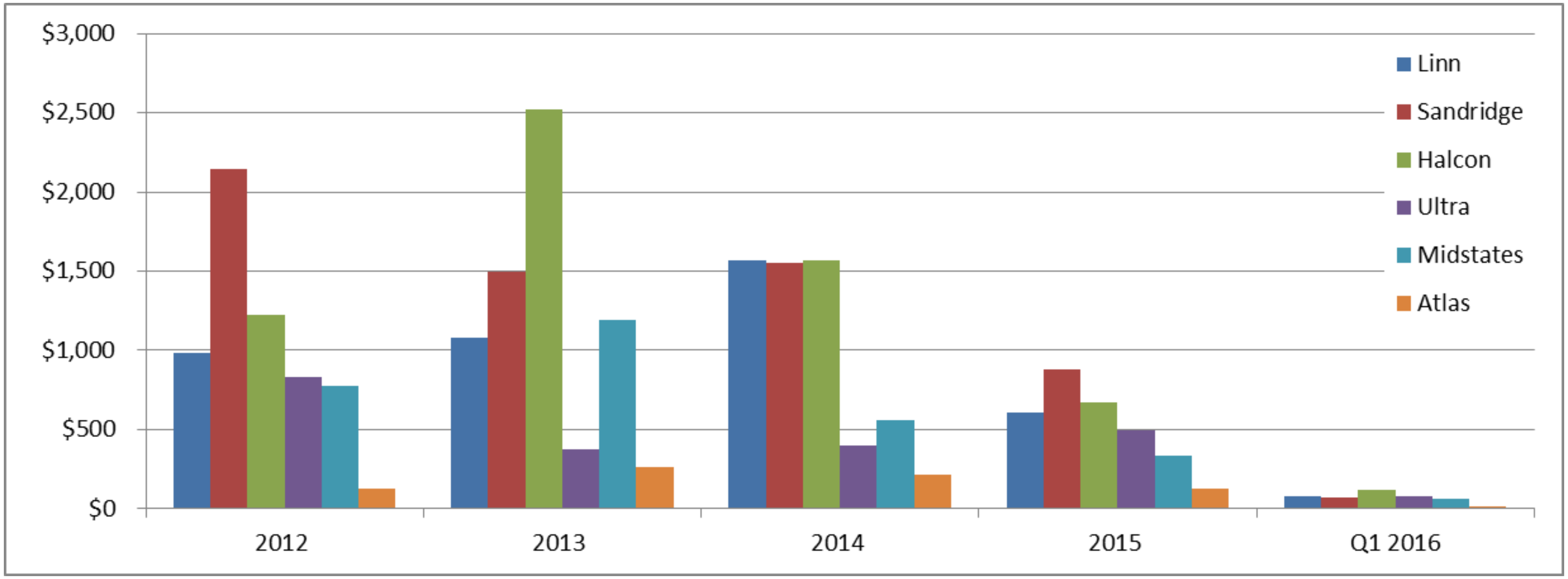
Cash Flow From Operations ("CFO"; $ in '000's)



Pull Back on CapEx

- When oil and natural gas prices fell in 2014, E&P's CFO declined.
- E&P's pulled back dramatically on CapEx (Rig counts).
- But falling production also impacted revenues into 2015/16.

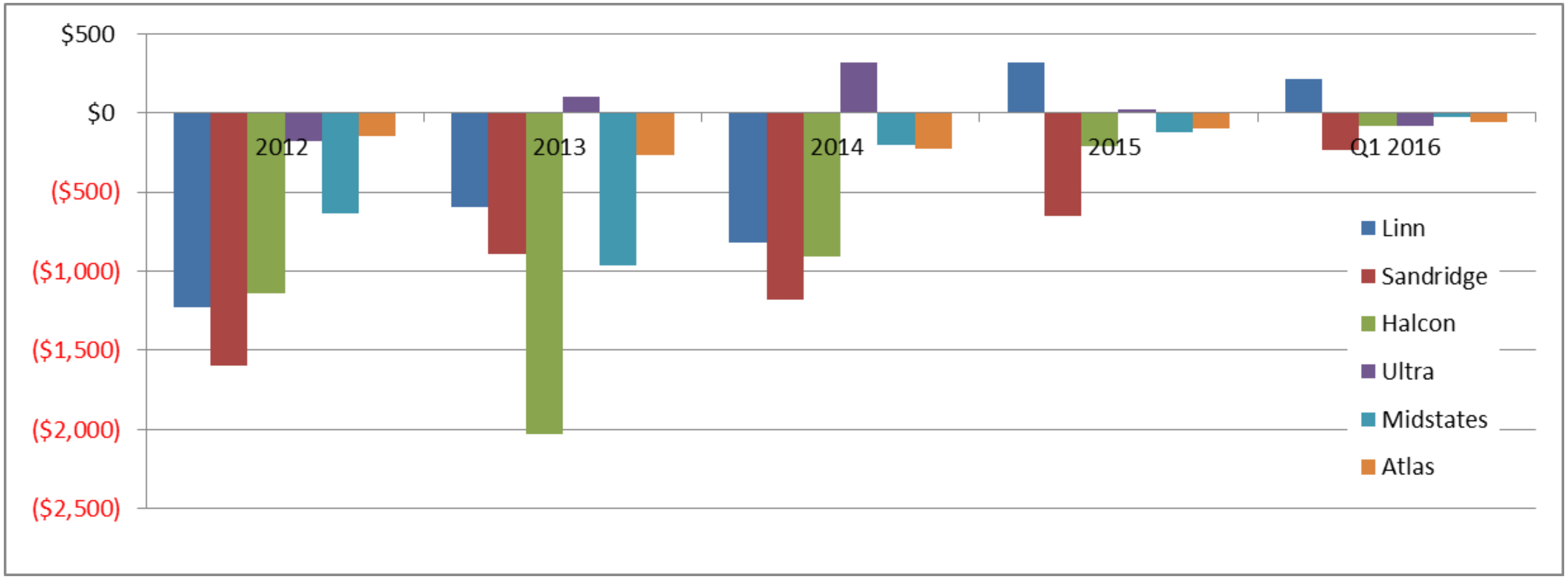
Capex ($ in '000's)



CapEx Effect on Free Cash Flow

- In spite of significant CFO, E&P’s were running negative FCF.
- Negative FCF was supported by additional borrowing.
- Pulling back on CapEx only served to limit the bleeding.

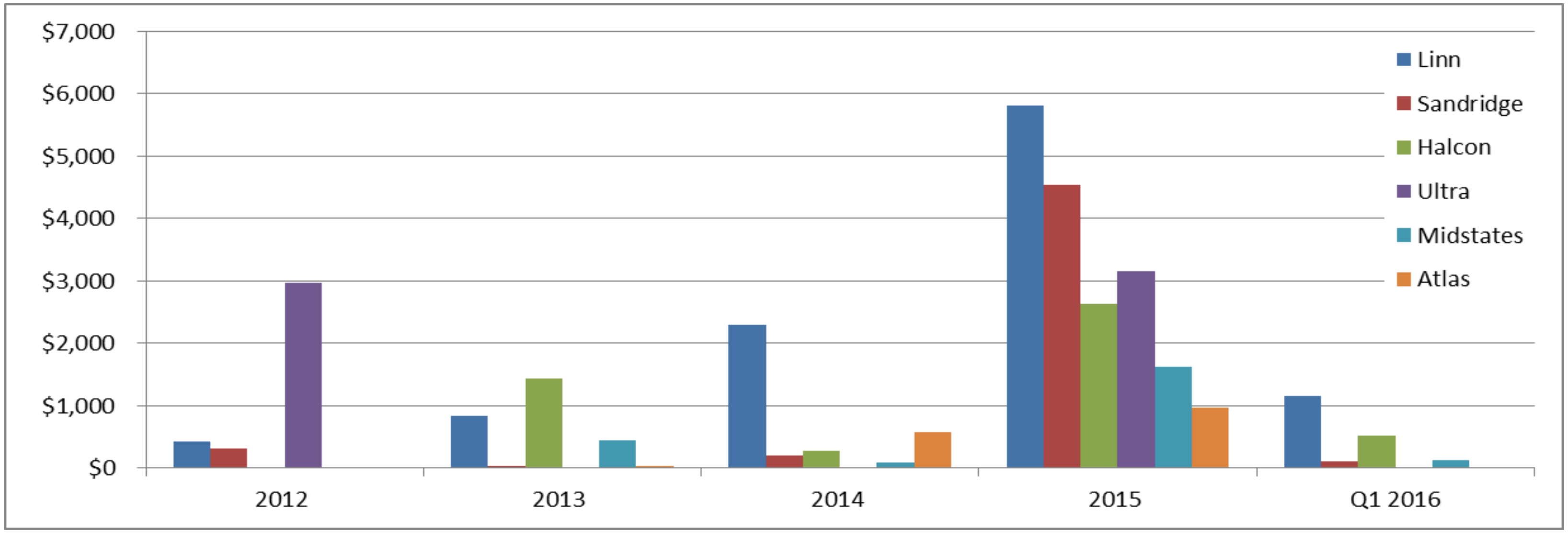
Free Cash Flow (“FCF”; $ in ‘000’s)



Asset Impairments

- In-ground reserves of oil and natural gas were valued based on a net present value of the expected cash flows from production (PV9/PV10).
- Depressed commodity prices triggered asset re-valuations.
- Most E&P's took significant asset impairment charges.

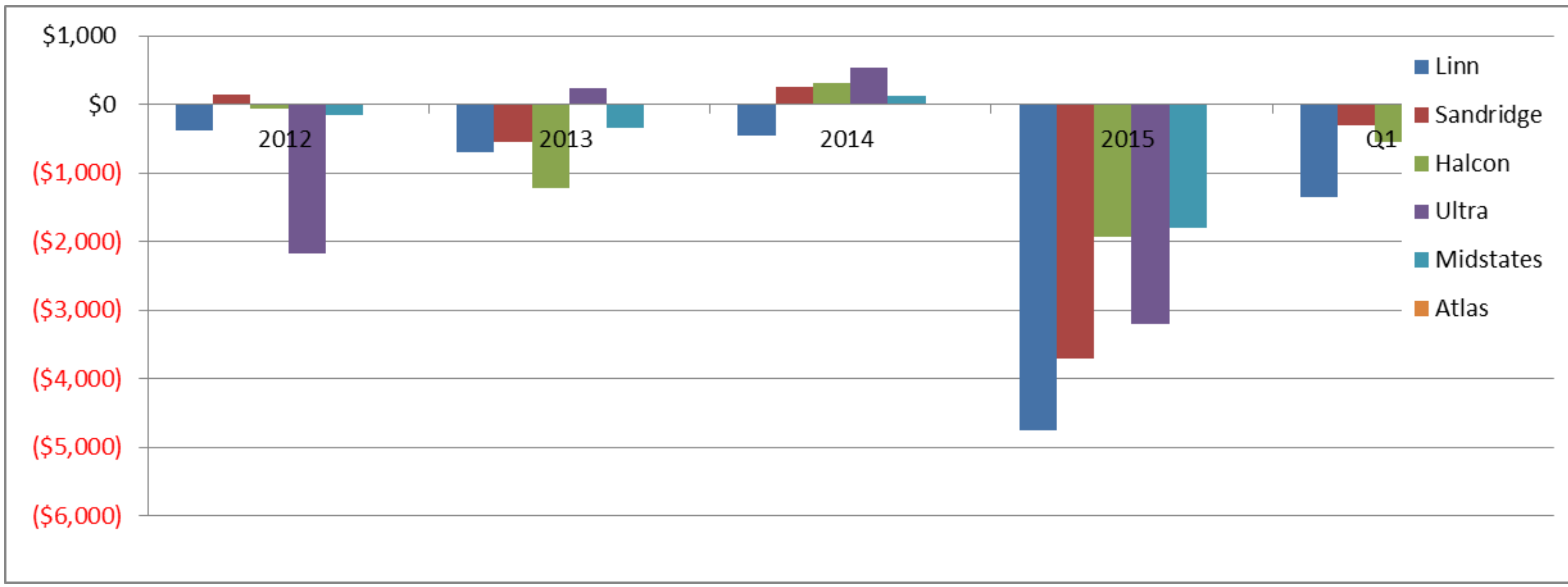
Asset Impairments ($ '000's)



Earnings Decline

- Declining revenues, declining margins, impairments and other charges significantly impacted earnings in 2015 and into 2016.

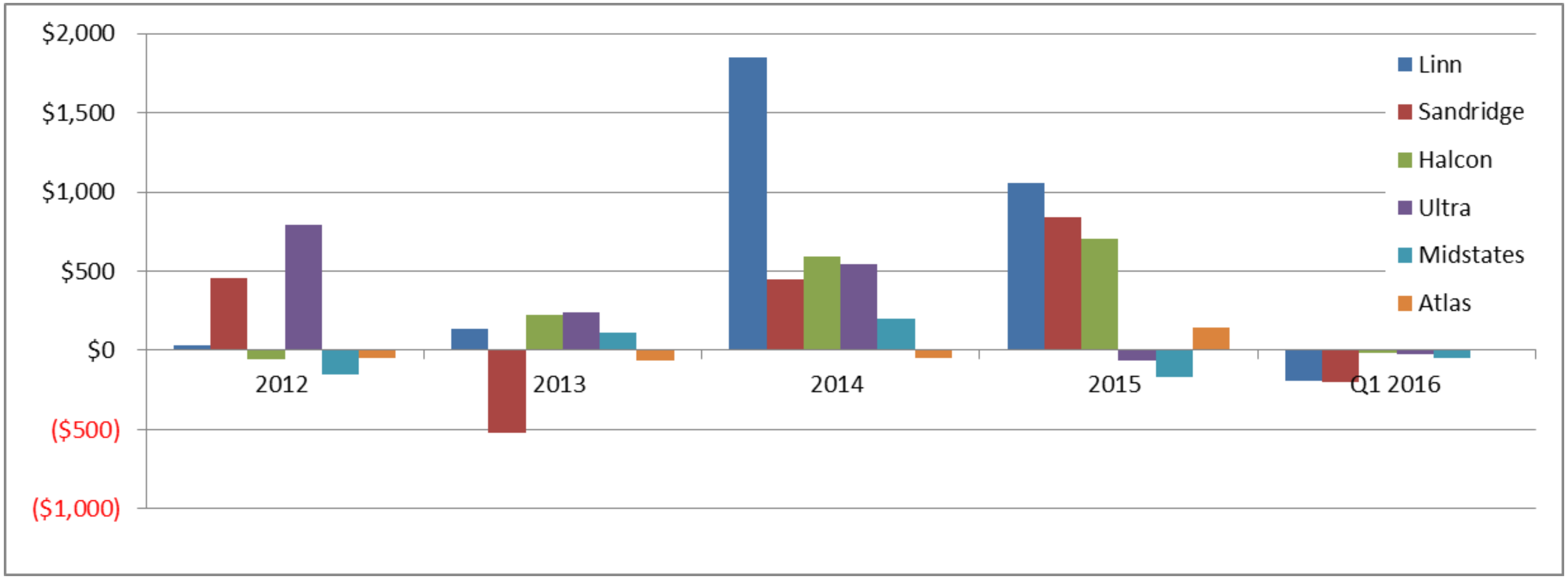
Net Income ($ ‘000’s)



Non-GAAP Reporting

- By year-end 2015 most companies began issuing management comments pointing to non-GAAP adjusted metrics to restate earnings and coverage measures.
- “We are not a distressed company.” “I am pleased with our Q1 results.”

Earnings adjusted for asset impairments ($ ‘000’s)

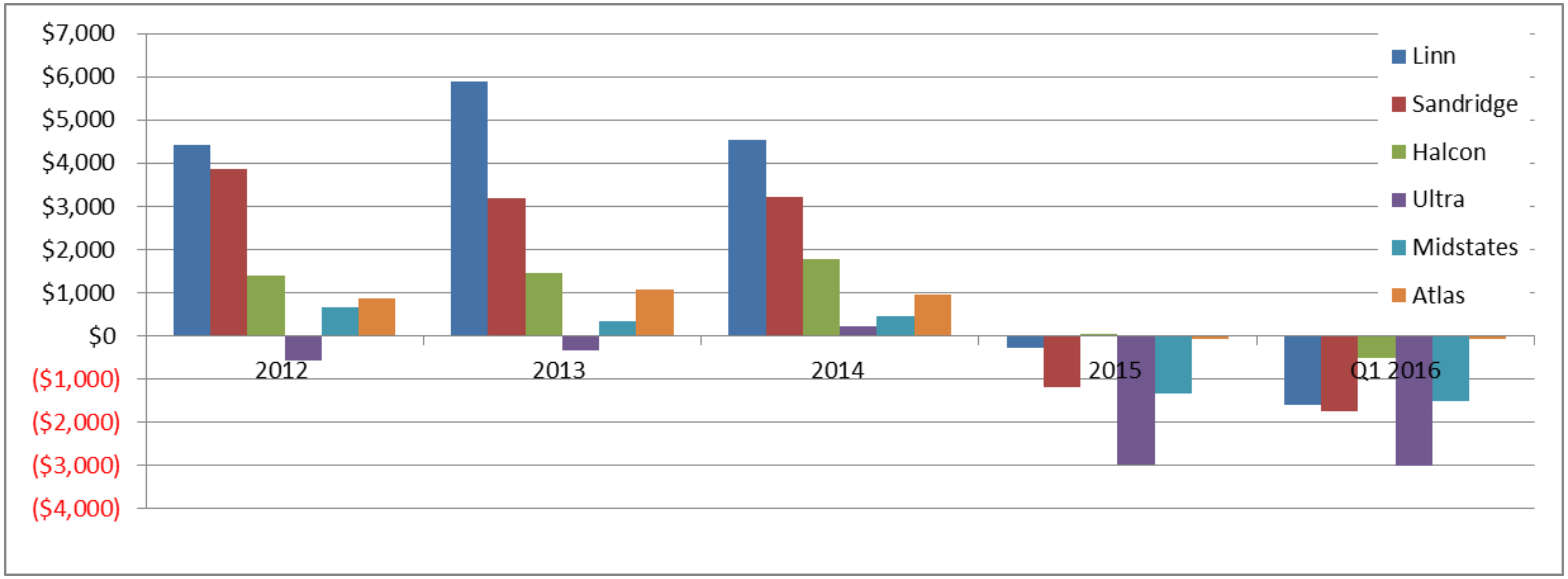


Equity Erosion

- But asset impairments took their toll on companies’ balance sheets by imposing significant reductions in assets and equity.

- This much decline in asset and equity valve impacted the companies’ ability to support their credit facilities and to access new capital.

Total Equity ($ ‘000’s)



Too Much Debt

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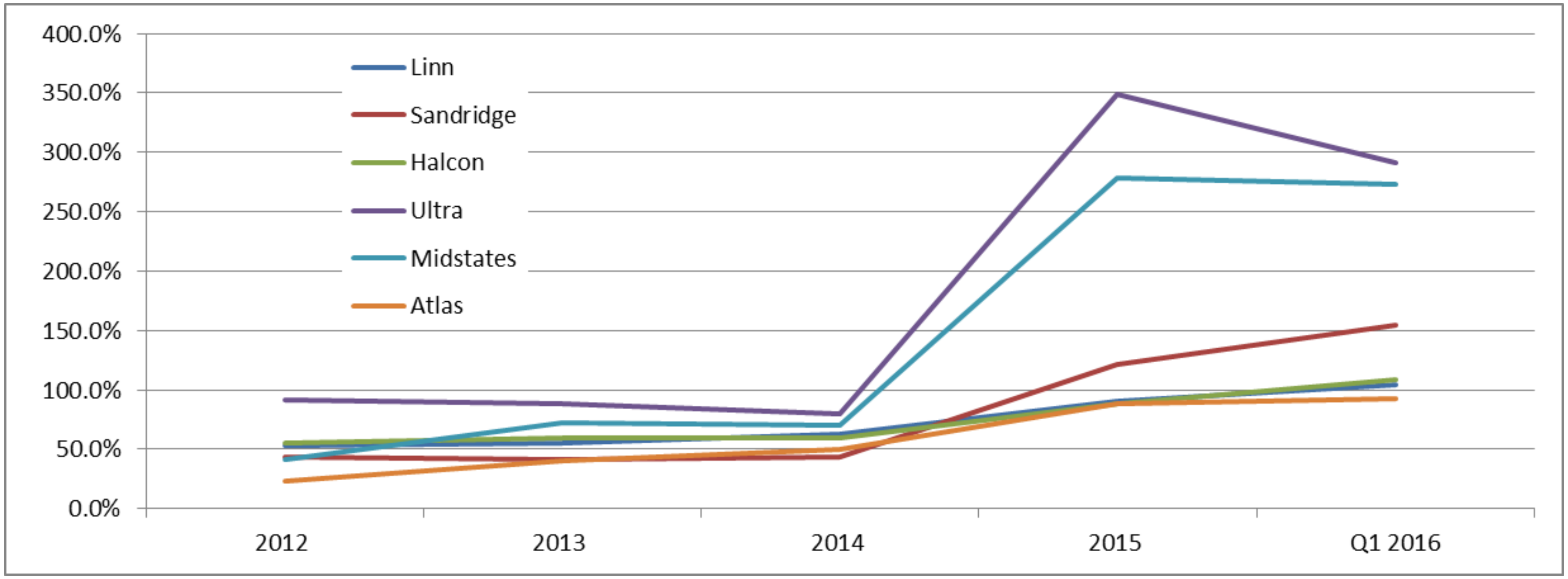
- Before the impairment charges debt/total capital was already running at levels of 50% to 90%.
- Assets were written down so far that for some companies levels of debt became > total assets.

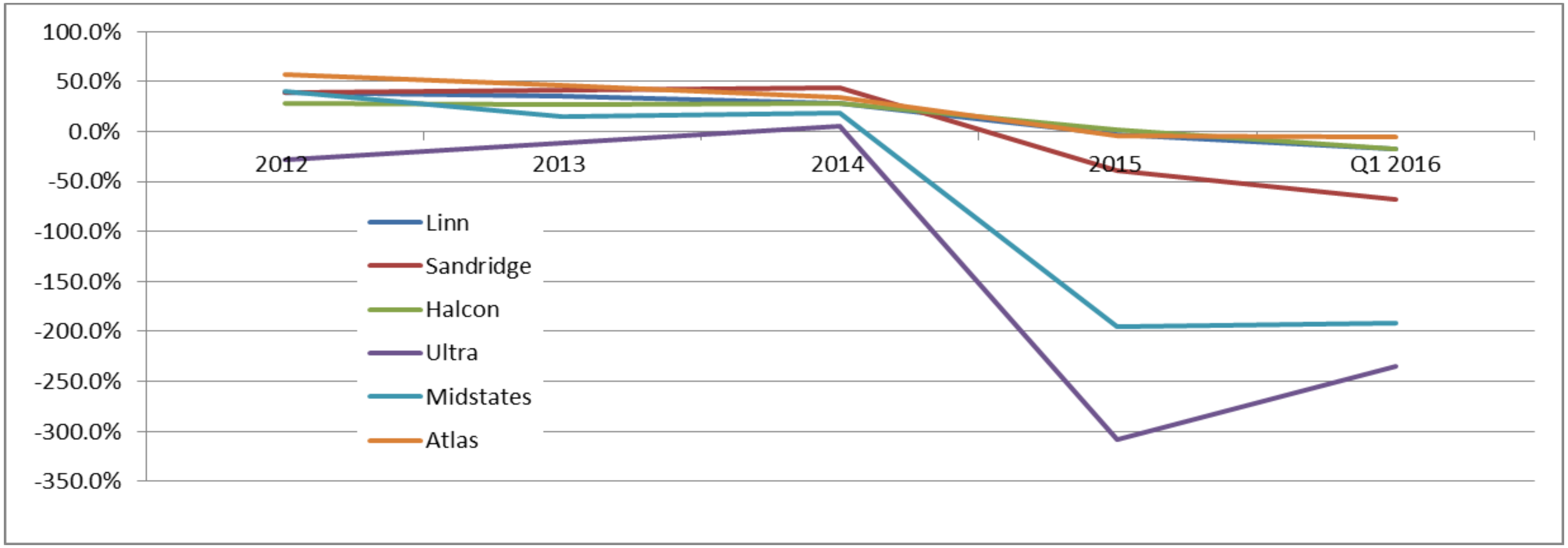
% Total Debt / Total Assets



Strained Capital Structure

- Impairment charges significantly affected capital structure.
- Asset write downs were so significant that some companies' equity was completely eliminated.
- As equity was eroded, there was little to support bond values.
- Some companies actually used cash for early retirement of LT bonds.

% Total Equity / Total Assets



Redetermination of Borrowing Base

- Credit facilities were secured by company assets.
- Asset value determined a company's borrowing base.
- Declining forward prices reduced PV9 Values (same reason for asset impairment charges).

Company	Original Faciltiy	Borrowing Base Prior to Filing	Amount Drawn	Amount Available
Linn Energy	$6,500	$4,500	$4,492	$8
Sandridge Energy	$1,000	$340	$499	($159)
Halcon Resources	$1,500	$700	$444	$256
Ultra Petroleum	$1,000	$1,000	$999	$1
Midstates Petroleum	$750	$252	$252	$0
Atlas Resources	$1,500	$530	$670	($140)

Depletion of Banking Facilities

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- Borrowing bases were reduced - some companies drew as much cash as possible

Linn Energy	YE 2013	YE 2014	YE 2015	Q1 2016
Borrowing Base	$5,700	$5,700	$4,500	$4,500
Drawn	$3,238	$3,999	$4,120	$4,492
Remaining	$2,462	$1,701	$380	$8
Cash	$52	$2	$2	$1,060
Total Liquidity	$2,514	$1,703	$382	$1,068

Midstates Petroleum	YE 2013	YE 2014	YE 2015	Q1 2016
Borrowing Base	$500	$525	$252	$252
Drawn	$401	$436	$3	$252
Remaining	$99	$89	$249	$0
Cash	$33	$12	$81	$301
Total Liquidity	$132	$101	$330	$301

Halcon Resources	YE 2013	YE 2014	YE 2015	Q1 2016	Q2 2016
Borrowing Base	$700	$1,050	$827	$700	$700
Drawn	$1	$558	$64	$162	$444
Remaining	$699	$492	$763	$538	$256
Cash	$3	$44	$8	$9	$7
Total Liquidity	$702	$536	$771	$547	$263

Ultra Petroleum	YE 2013	YE 2014	YE 2015	Q1 2016
Borrowing Base	$1,000	$1,000	$1,000	$1,000
Drawn	$460	$518	$630	$999
Remaining	$540	$482	$370	$1
Cash	$11	$9	$4	$281
Total Liquidity	$551	$491	$374	$282

Atlas Resources	YE 2013	YE 2014	YE 2015	Q1 2016	Q2 2016
Borrowing Base	$735	$900	$700	$700	$530
Drawn	$423	$700	$596	$676	$670
Remaining	$312	$200	$104	$24	($140)
Cash	$2	$15	$1	$19	$24
Total Liquidity	$314	$215	$105	$43	($116)

Sandridge Energy	YE 2013	YE 2014	YE 2015	Q1 2016
Borrowing Base	$775	$900	$500	$340
Drawn	$0	$0	$11	$499
Remaining	$775	$900	$489	($159)
Cash	$815	$181	$436	$694
Total Liquidity	$1,590	$1,081	$925	$535

It Always Boils Down to Liquidity

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Company		Reason for filing
Sandridge Energy	-	Violation of bank loan covenants.
Linn Energy	-	Filed on the day that their borrowing base was due to be reduced (underwater).
Ultra Petroleum	-	Broke bank loan covenants and failed to make principal and interest payments on bonds
Halcon Resources	-	Bondholders forced them into filing under a "Restructuring Support Agreement".
Midstates Petroleum	-	Borrowing base reduction put them underwater on their bank facility.
Atlas Resources	-	Creditors forced them to file.

Counterparty Evaluation

Counterparty evaluation is a key element of credit risk and pulls from all sources of available information:

Rating Agency Ratings

Market Indicators

- Share price movement / Declines in market cap
- Bond Spreads
- Credit Default Swap Rates (CDS)
- Estimated Default Frequencies (EDF)

Financial Due Diligence – Actually reading financial statements

Market News – keeping an ear to the ground

A Few Closing Thoughts

- Credit defaults, while infrequent, often come in clusters.
  - Energy traders Since inception
  - Merchant Energy 2001 - 2003
  - Banks 2008 – 2010
  - Oil Patch 2015 - 2016
- Know your counterparties.
- Start performing a higher level of due diligence.

Questions?