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Institutional Research Group: Energy Research Overview

As of November 1, 2018

With a firm-wide specialization in the Energy Industry, we have committed significant research resources to the analysis of multiple sub-sectors and asset classes within the industry. We analyze specific securities, event-driven opportunities and industry trends via three groups: Equity and Industry Research, Capital Structure Analysis and Desk Analysis.

Imperial Capital's research is differentiated by its integrated approach across an issuer's entire capital structure. In contrast to the traditional fixed income and equity model, our emphasis is on relative values throughout the capital structure within industries where we have deep expertise. We provide proprietary investment analyses in fixed income, convertibles, and busted convertibles, equity and preferred stock including:

- Bank Debt
- Investment Grade Debt/Hybrid Capital Securities
- High Yield Debt
- Distressed Debt
- Convertible Securities
- Preferred Stock
- Common Stock
- Litigation, Trade, and Liquidation Claims

Energy Industry Research Analysts

Capital Structure Desk Analysis

- Kurt M. Hoffman—*Energy: Distressed/Special Situations*

Capital Structure Analysis

- Matthew Farwell, CFA—*Energy: Exploration & Production, Coal, Independent Power Producers*

Emerging Markets Desk Analysis

- Eriko Miyazaki-Ross—*Energy: Emerging Markets*

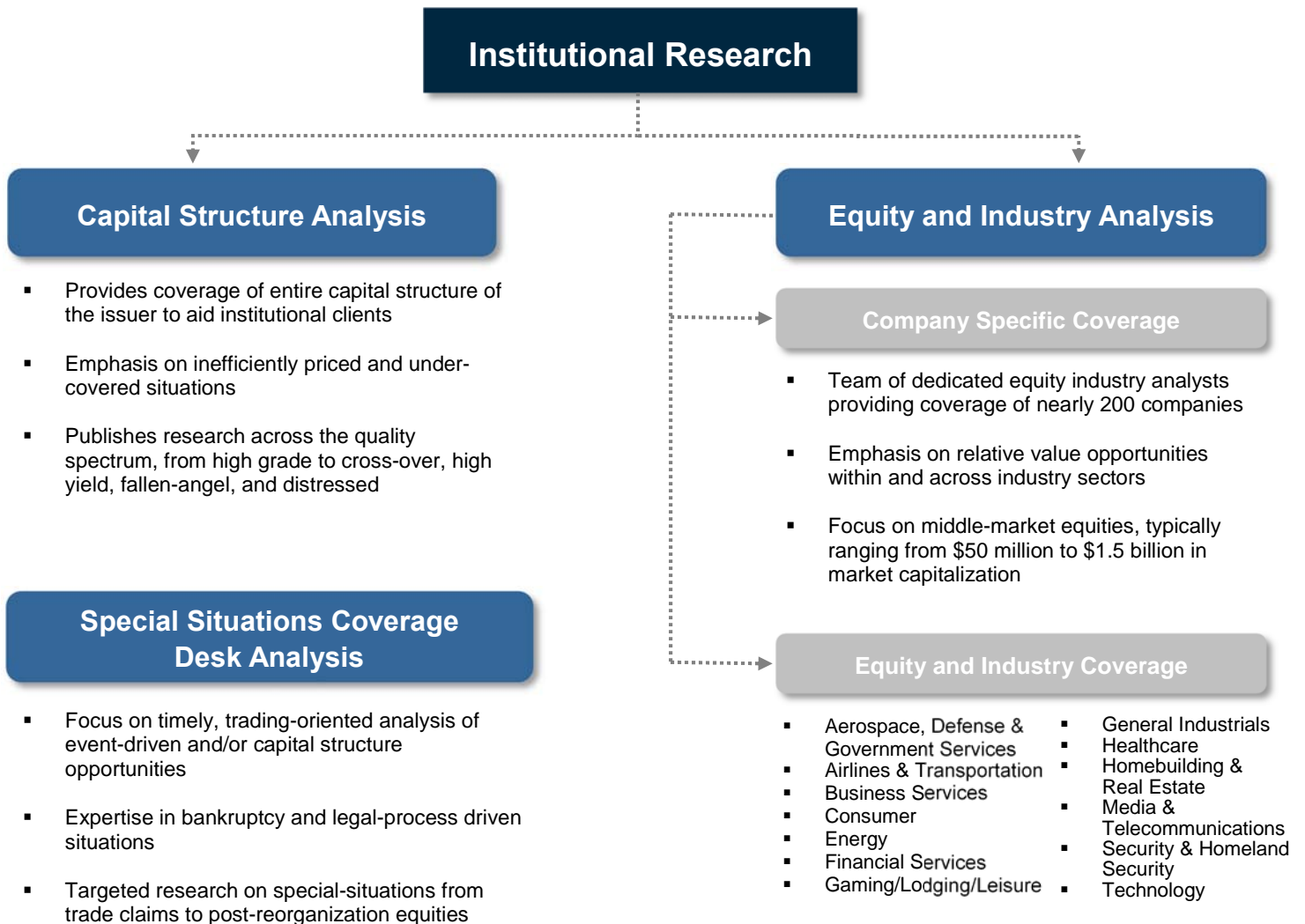
Equity and Industry Analysis

- Irene Haas—*Energy: Exploration & Production*
- Jason Wangler—*Energy: Exploration & Production; Energy Services*



What Differentiates Our Research?

- Our unique, integrated approach across the entire capital structure
 - Focus on relative values throughout the capital structure
 - Deep industry expertise
 - Proprietary investment analysis in: Bank Debt, Investment Grade Debt, High Yield Debt, Distressed Debt, Convertible Securities, Preferred and Common Stock, Litigation, Trade and Liquidation Claims
- “Buy-side” approach: Identify investment opportunities that are out-of-favor, off-the-run, overlooked, or misunderstood
- Extensive experience analyzing complex capital structures, bankruptcies, restructurings, and special situations





Energy Industry Coverage

Coal, Independent Power Producers, and Energy Services

39 Companies

Matthew Farwell, CFA
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- Alliance Resource Partners
- Alpha Natural Resources Inc.
- Arch Coal Corporation
- Armstrong Energy, Inc.
- Aventine Renewable Energy
- CGG
- Cloud Peak Energy
- CONSOL Energy
- Corral Petroleum Holdings (PREEM)
- Dynegy, Inc.
- Edison Mission Holdings
- Energy Future Holdings Corp.
- Entegra Power Group, LLC
- FirstEnergy Solutions
- Foresight Energy, LLC
- GenOn Energy, Inc.
- Green Plains Renewable Energy
- Homer City Generation L.P.
- InterGen N.V.
- James River Coal Corporation
- K+S
- Marathon Petroleum Corp.
- Murray Energy
- New World Resources N.V.
- NRG Energy
- Patriot Coal Corporation
- Peabody Energy Corporation
- Renewable Energy Group, Inc.
- Rockpoint Gas Storage
- Rowan Companies plc
- Seitel, Inc.
- Suncoke Coal Corporation
- Valero Energy Corporation
- Viridian
- Walter Energy
- Warrior Met Coal
- Welltec
- Westmoreland Coal
- Xinergy Corporation

Emerging Markets Desk Analysis

12 Companies

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- Danagas
- DNO SA
- Frontera Energy
- Genel
- Geopark
- Gran Tierra Energy
- Odebrecht Oil & Gas
- Offshore Drilling Holding
- Petrobras
- Seadrill Ltd.
- Seadrill Partners
- Topaz Marine

Energy, Exploration & Production

23 Companies

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- Amplify Energy Corp.
- Ascent Resources Utica Hldgs
- Athabasca Oil Corporation
- Bristow Group
- California Resources
- Canbriam Energy
- Chaparral Energy
- Denbury Resources
- DNO
- Eclipse Resources
- Enquest plc
- EP Energy
- Gulf Keystone
- Jupiter Resources
- Kosmos
- MEG Energy Corp.
- Oasis Petroleum
- Rex Energy Corp.
- Seven Energy International
- Silverbow Resources
- Tapstone Energy
- Tullow Resources
- Ultra Petroleum



Energy, Exploration & Production (Equities)

20 Companies

Irene Haas
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- Alta Mesa Resources, Inc.
- Approach Resources, Inc.
- Bonanza Creek Energy, Inc.
- Callon Petroleum Company
- Centennial Resource Development
- Cimarex Energy Company
- Energen Corporation
- Energy XXI Gulf Coast
- EOG Resources
- Extraction Oil & Gas
- Jagged Peak Energy
- Magnolia Oil & Gas
- Matador Resources Company
- Noble Energy, Inc.
- Parsley Energy, Inc.
- PDC Energy, Inc.
- Pioneer Natural Resources Company
- SRC Energy, Inc.
- WildHorse Resource Development
- WPX Energy, Inc.

Energy, Exploration & Production (Equities)

18 Companies

Jason Wangler
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(713) 892-5603

- California Resources Corp.
- Chaparral Energy, Inc.
- Chesapeake Energy Corp.
- Continental Resources, Inc.
- Denbury Resources, Inc.
- Diamondback Energy, Inc.
- Earthstone Energy, Inc.
- Frontera Energy Corp.
- Gastar Exploration, Inc.
- Gulfport Energy Corp.
- Halcón Resources Corp.
- HighPoint Resources
- Kimbell Royalty Partners, LP
- Northern Oil & Gas, Inc.
- Resolute Energy Corp.
- Ring Energy, Inc.
- Viper Energy Partners LP
- Whiting Petroleum

Energy, Exploration & Production and Oilfield Services (Capital Structure)

6 Companies

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- Archrock, Inc.
- Covey Park Energy Holdings LLC
- FTS International, Inc.
- Indigo Natural Resources LLC
- PetroQuest

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- Legacy Reserves LP

Offshore Drilling

6 Companies

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- Bibby Offshore
- Bluewater
- North Atlantic Drilling Ltd.
- Pacific Drilling S.A.
- Shelf Drilling Holdings, Ltd.
- W&T Offshore

Oilfield Services

3 Companies

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- KCA Deutag
- Petroleum Geo-Services
- Weatherford International



Oilfield Services (Equities)

6 Companies

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- Eco-Stim Energy Solutions, Inc.
- Mammoth Energy Services, Inc.
- Natural Gas Services Group, Inc.
- Pioneer Energy Services Corp.
- Solaris Oilfield Infrastructure, Inc.
- Superior Drilling Products, Inc.

Special Situations/Event-Driven

21 Companies

Kurt M. Hoffman (Desk Analysis)
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- Baker Hughes Incorporated
- Blueknight Energy Partners
- C&J Energy Services
- Cobalt International
- Crestwood Midstream
- Dynagas LNG Partners
- Forbes Energy Services
- GeoKinetics Inc.
- Gulfmark Resources
- Hornbeck Offshore
- Linn Energy
- Marathon Oil
- MPLX LP
- Permian Tank & Manufacturing
- Petroplus Holdings AG
- SAExploration
- Samson Oil & Gas
- Seacore Marine
- Stallion Oilfield Services
- Tidewater Inc.
- Vantage Drilling



Energy Industry Biographies

Edward P. Mally, CFA
Managing Director
New York

- Ed Mally is Managing Director and Head of Imperial Capital's Institutional Research Group.
- Mr. Mally is responsible for the development and management of the firm's fixed income and equity research efforts, focusing on full capital structure analysis. Based in Imperial Capital's New York office, Mr. Mally has over 28 years of experience in high yield, distressed, and equity research and investing across a wide range of industries, including autos and auto suppliers, chemicals, healthcare, restaurants, general industrials, natural resources, metals and mining, electric power, and consumer products. Prior to joining Imperial Capital in April 2008, Mr. Mally was Director of Research at LM Isis Capital Partners. From 2002 to 2008, he served as Head of Research for Murray Capital Management, a distressed debt hedge fund, where he managed the research department and was responsible for proprietary analysis, portfolio investment selection, and was actively engaged in the management of high yield, and equity investments, and the restructuring of distressed investments. Prior to his tenure at Murray Capital, Mr. Mally was a Managing Director with the Leveraged Finance Group of CIBC World Markets, serving from 1995 to 2002 as Director of Distressed and High Yield Research and as a member of CIBC's High Yield Operating Committee. Mr. Mally previously worked as Director of High Yield Research at Citicorp Securities from 1994 to 1995 and he began his career in fixed income research at Salomon Brothers Inc. in 1986.
- Mr. Mally received his B.S. degree in economics, with a concentration in finance, from the University of Pennsylvania's Wharton School, and his M.B.A. in finance from Columbia University. He was named to the Institutional Investor All-America Research Team – second and third teams, and runner-up. Mr. Mally holds the Chartered Financial Analyst (CFA) designation from the CFA Institute, and currently serves on the Board of Overseers of the University of Pennsylvania Libraries.

Kurt Hoffman
Managing Director
Florida

- Kurt Hoffman is Managing Director, Institutional Research Group and a member of Imperial Capital's Desk Analysis Group. Mr. Hoffman has significant expertise in bankruptcy and legal-process situations. Prior to joining Imperial Capital, Mr. Hoffman was an Associate with Davis Polk & Wardwell LLC, a law firm specializing in capital markets, credit, insolvency, and restructuring. Prior to this, Mr. Hoffman was a Senior Accountant with KPMG.
- Mr. Hoffman earned a J.D. from Washington University and a B.S. in accounting from St. Louis University.

Matthew Farwell, CFA
Managing Director
Los Angeles

- Matt Farwell is a Managing Director in the Institutional Research Group and a member of Imperial Capital's Desk Analysis Group. Mr. Farwell has covered Clean and Traditional Energy since 2004. Prior to joining Imperial Capital, Mr. Farwell worked for Credit Suisse and Connective Capital Management. He spent the first six years of his career working in consulting and high-tech companies focused on the energy and utilities industries.
- Mr. Farwell earned his B.A. in economics and international relations from Tufts University and holds the Chartered Financial Analyst (CFA) designation from the CFA Institute.



Imperial Capital[®]

Irene Haas
Managing Director
Houston

- Irene Haas is a Managing Director in the Institutional Research Group. With over 13 years of experience as a Senior Research Analyst in the E&P sector, Ms. Haas most recently served as a Managing Director for Wunderlich. Ms. Haas also served as a Managing Director with Canaccord Genuity and founded the company's Energy Team in Houston in 2006. Additionally, Ms. Haas spent eight years covering E&P names at Sanders Morris Harris after a stint at Morgan Stanley. Prior to her career on the sell side, she worked as an exploration geophysicist at ExxonMobil for 13 years, prospecting for oil and gas in Offshore Alaska, Offshore Gulf of Mexico, Central and North Africa, and Central America. She was named to the "Institutional Investor Home Run Hitter 2005" list for her recommendation on Burlington Resources.
- Ms. Haas has a BA in geology from Rice University, a MS in marine geophysics from the University of Delaware and

Jason Wangler
Managing Director
Houston

- Jason Wangler is a Managing Director in the Institutional Research Group. With over 10 years of experience as a Senior Research Analyst in the E&P and Oilfield Services sectors, Mr. Wangler most recently served as a Managing Director and Senior Research Analyst with Wunderlich, covering the E&P and OFS sectors of the energy space. Prior to this, Mr. Wangler worked on the research teams of SunTrust Robinson Humphrey and Dahlman Rose & Company, as well as Netherland, Sewell, & Associates, Inc. as a petroleum analyst. Mr. Wangler was recognized by the Wall Street Journal as a "Best on the Street" analyst in 2010 and has been a guest commentator on CNBC.
- Mr. Wangler has a BS degree in finance from the University of Nevada and an MS in finance from the Bauer School of Business at the University of Houston.

Eriko Miyazaki-Ross
Senior Vice President
London

- Eriko Miyazaki-Ross is a Senior Vice President and lead Desk Analysis for the Emerging Markets Corporate Group. Ms. Miyazaki-Ross has more than 10 years of industry experience, most recently as a senior publishing analyst in the Latin American Corporate Credit Research Group at Barclays in New York. She was also a High Yield Corporate Research Analyst at Barclays in London, covering a multitude of sectors.
- Ms. Miyazaki-Ross earned a B.Sc. in economics from The London School of Economics and Political Science and is fluent in Spanish.

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