

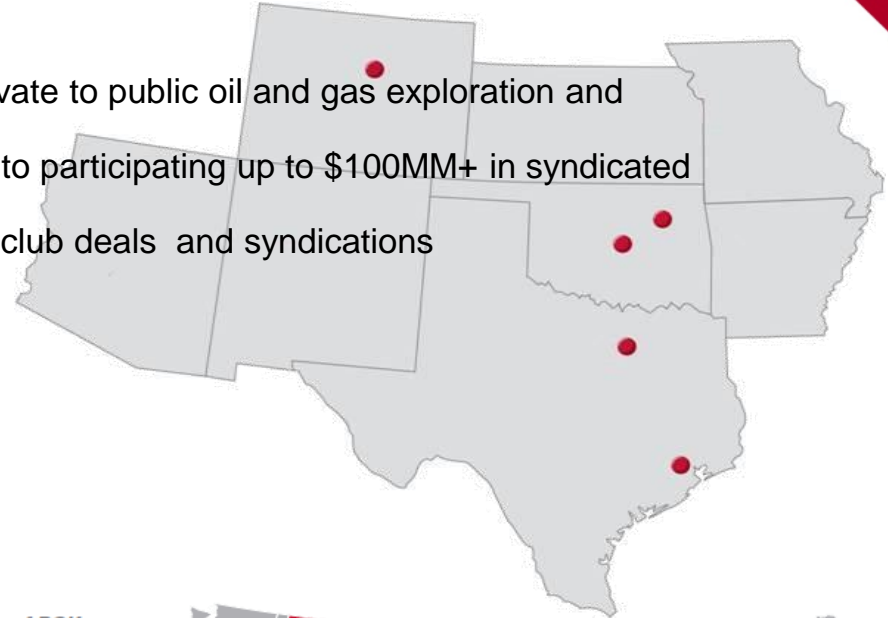
BOK Financial: Commodity Hedging

Energy Hedging / A Trader's View

Energy Finance

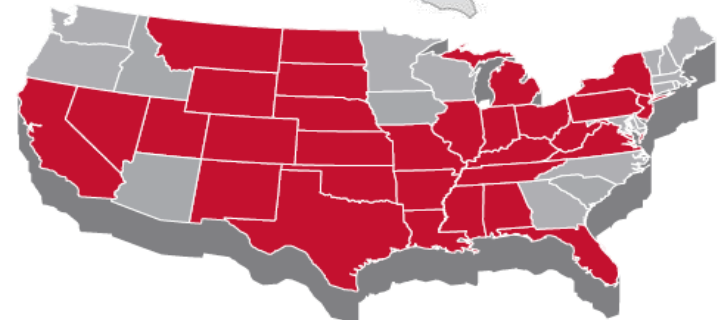
Overview and expertise

- **Offices in Dallas, Denver, Houston, Oklahoma City and Tulsa**
- **100+ years in Energy Banking**
- **Energy related commitments exceeding \$5B**
- Traditional secured reserve-based lending for small private to public oil and gas exploration and production companies
 - Transactions ranging from \$1MM single bank deals to participating up to \$100MM+ in syndicated transactions that are over \$1B
 - Bank of Oklahoma has history of leading / agenting club deals and syndications
- 300+ Relationships
- Highly experienced team members
 - 20 Bankers / Account Managers
 - 9 Petroleum Engineers
 - 5 Engineering Techs



From the Midcontinent, Texas and the Gulf Coast, to the Rockies, California and Appalachia, BOKF bankers focus primarily on serving the privately held and mid-cap independent segment of the energy market.

■ Location of BOK
Financial Energy
Customers' Assets



Energy Finance

Public company experience across the continental United States



Energy Finance

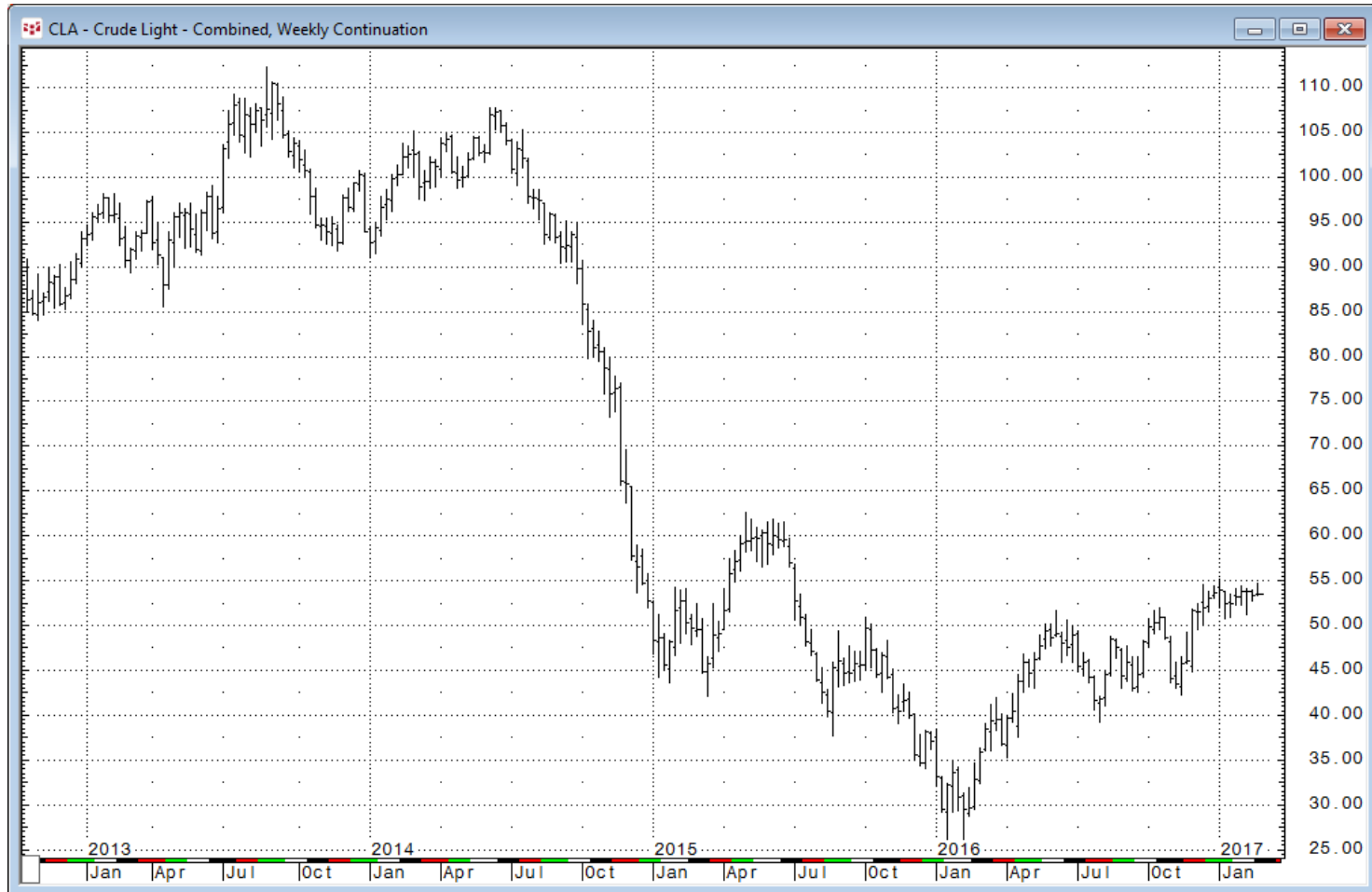
Unaffiliated equity sponsor partners



Market Past and Present

WTI Crude Oil: Weekly

Prices – past and present



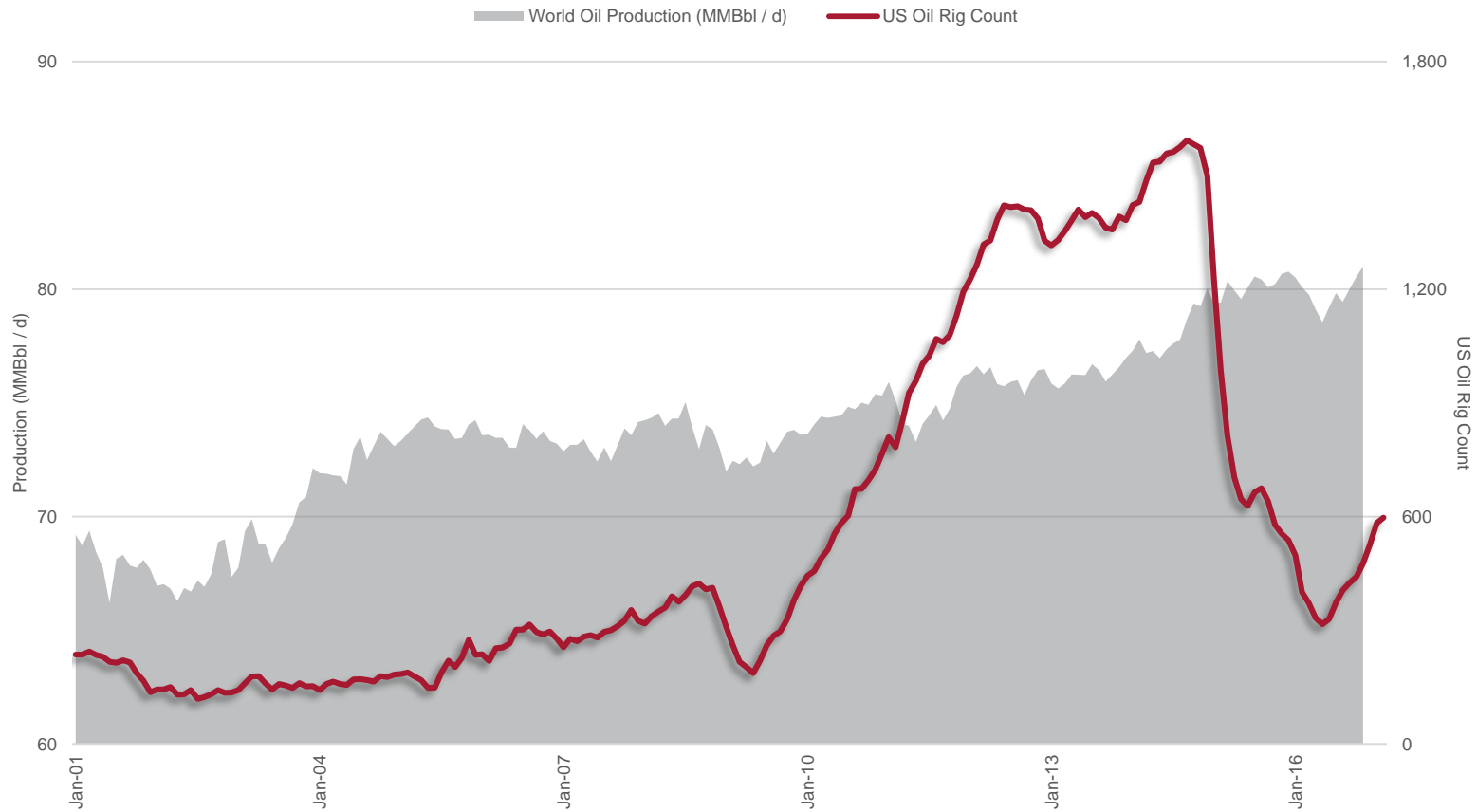
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World Oil Production and US Rig Count

Rig count response to production

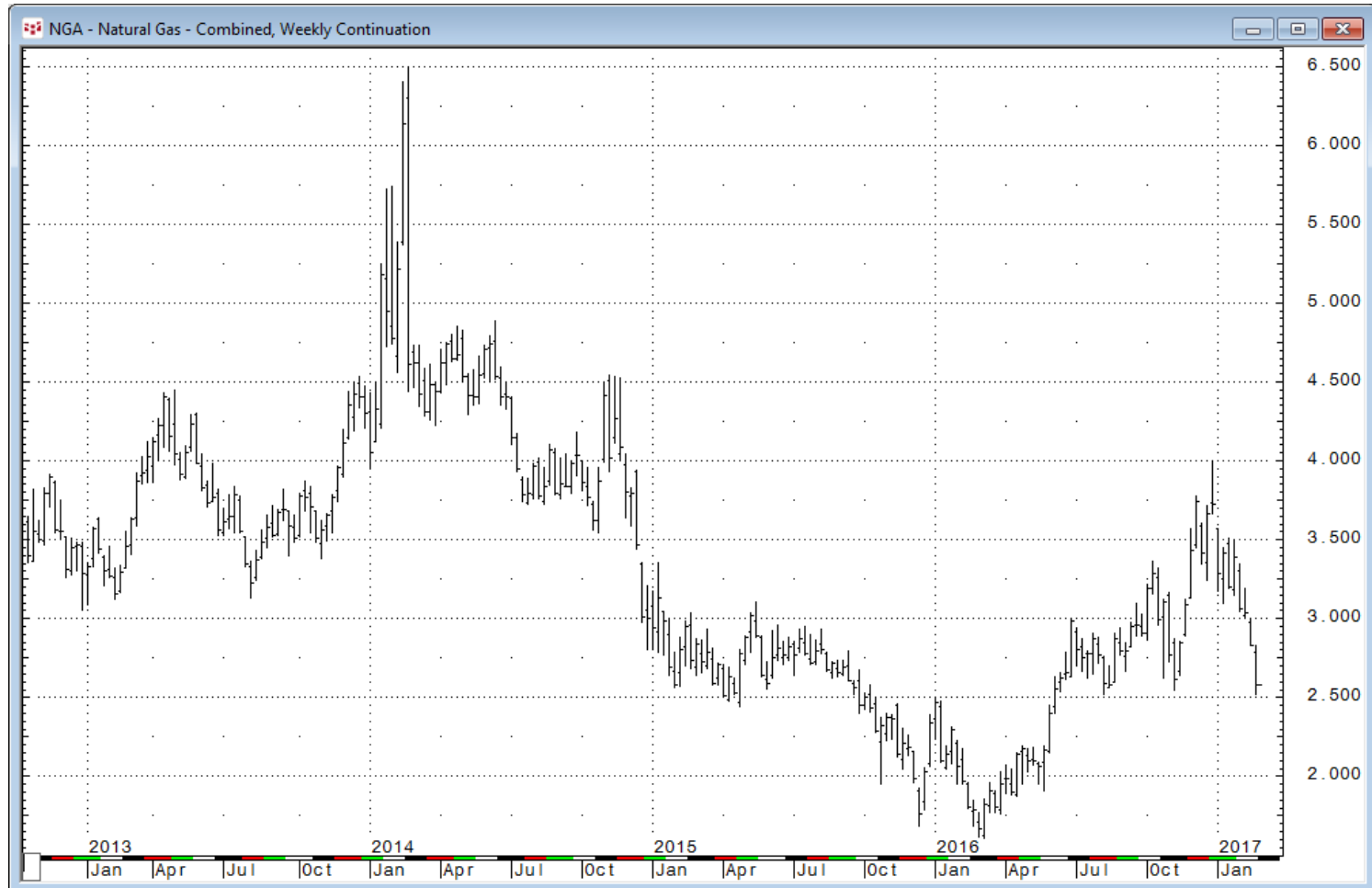


Sources: Bloomberg, Department of Energy (DOE) International Petroleum Monthly, and Baker Hughes.



Henry Hub Natural Gas: Weekly

Prices – past and present



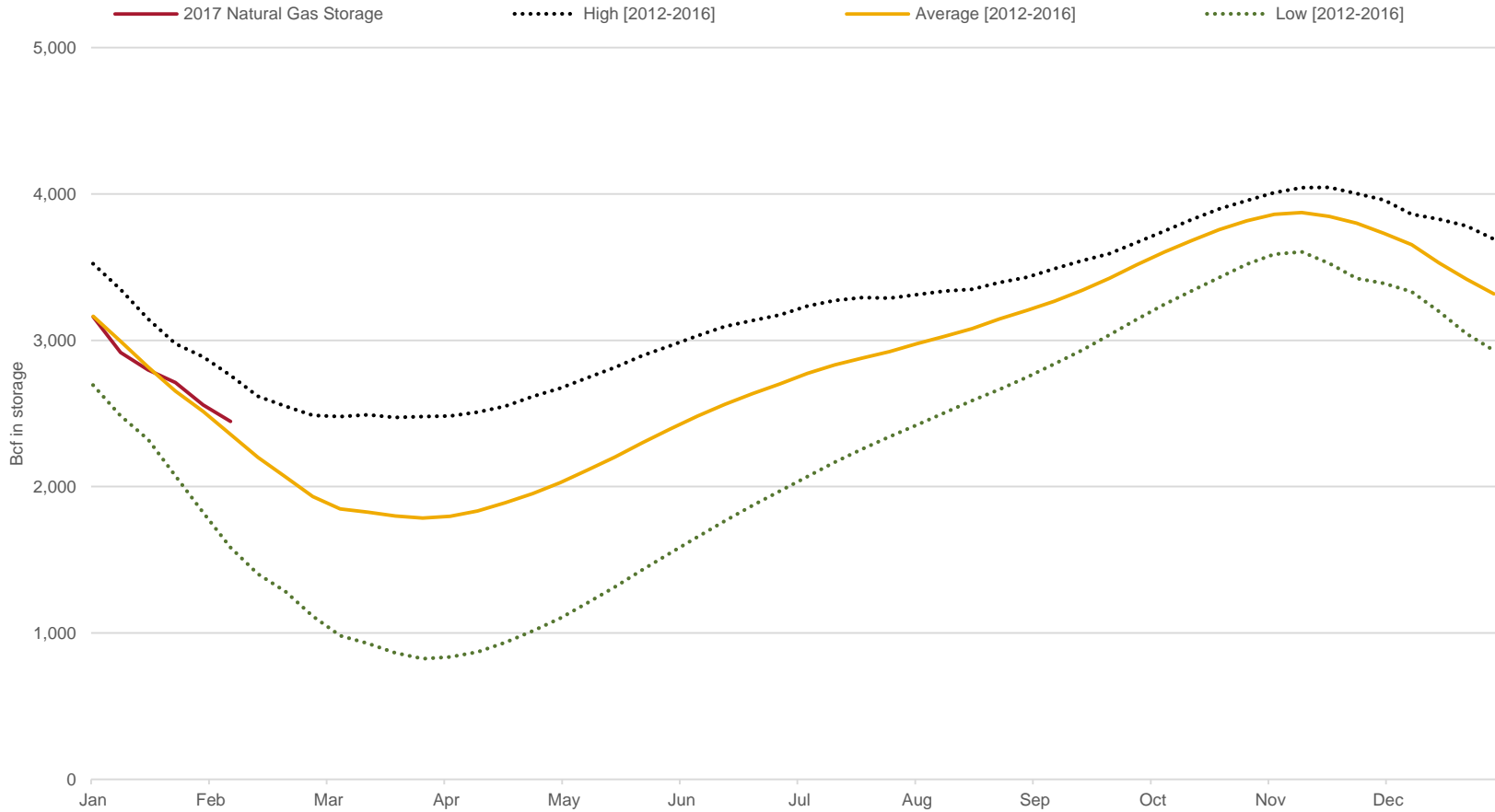
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US Natural Gas in Storage

A look at supply

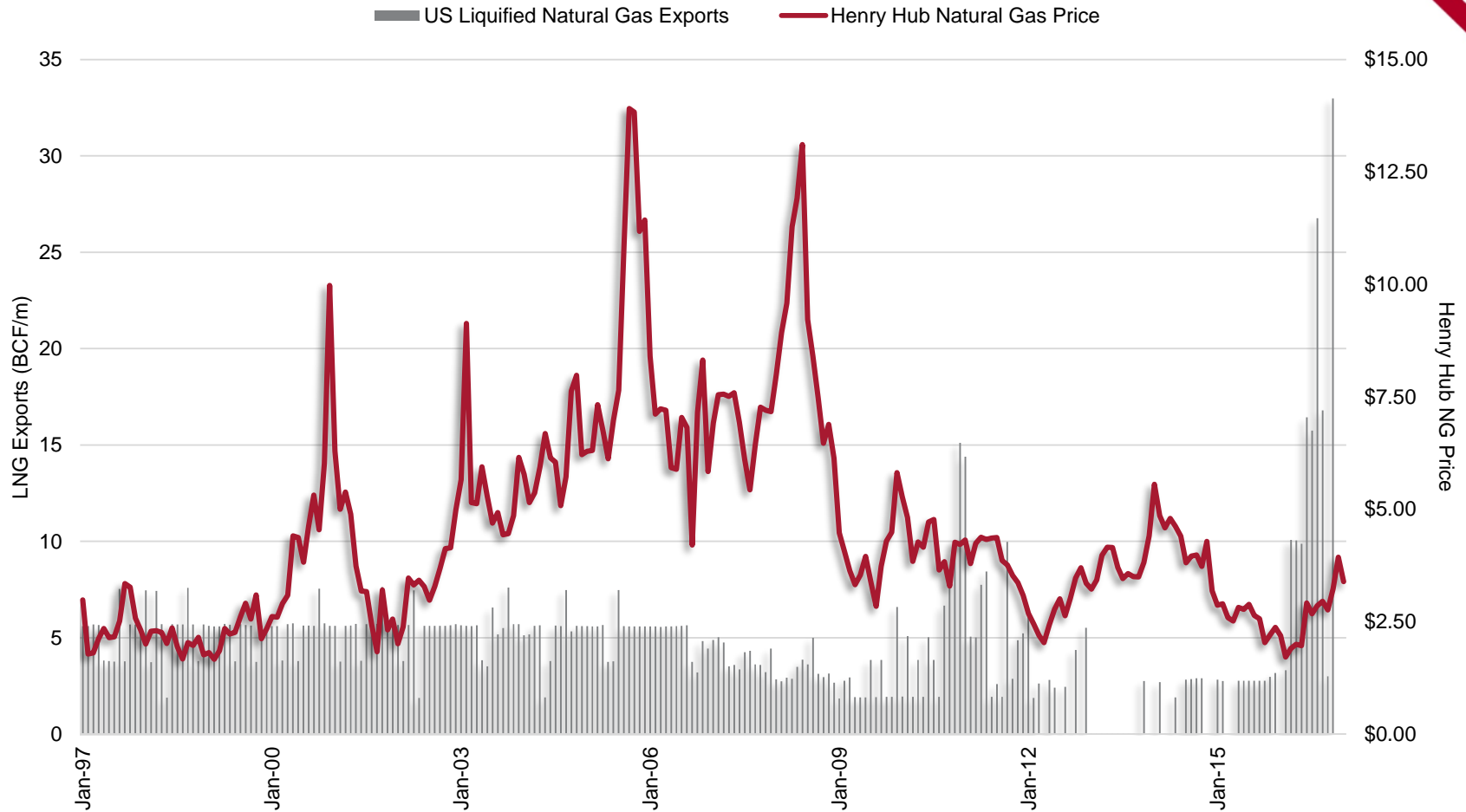


Source: Energy Information Administration (EIA).



US LNG Exports and Henry Hub Natural Gas Price

New demand possibilities



Source: Department of Energy (DOE).



Market Forecasting

WTI Crude Oil: Seasonality

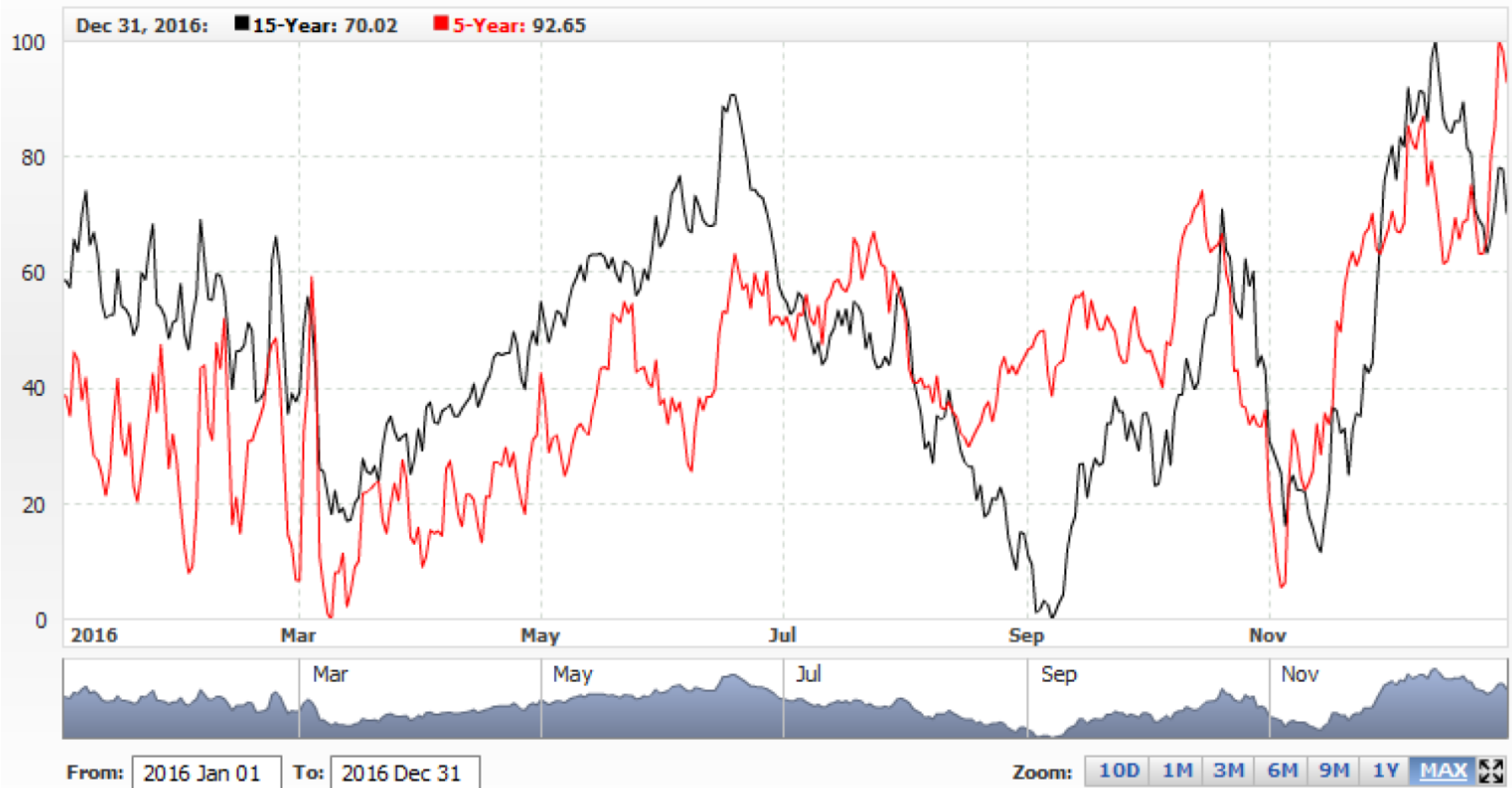
Timing a hedge



Source: Moore Research Center, Inc.

Henry Hub Natural Gas: Seasonality

Timing a hedge



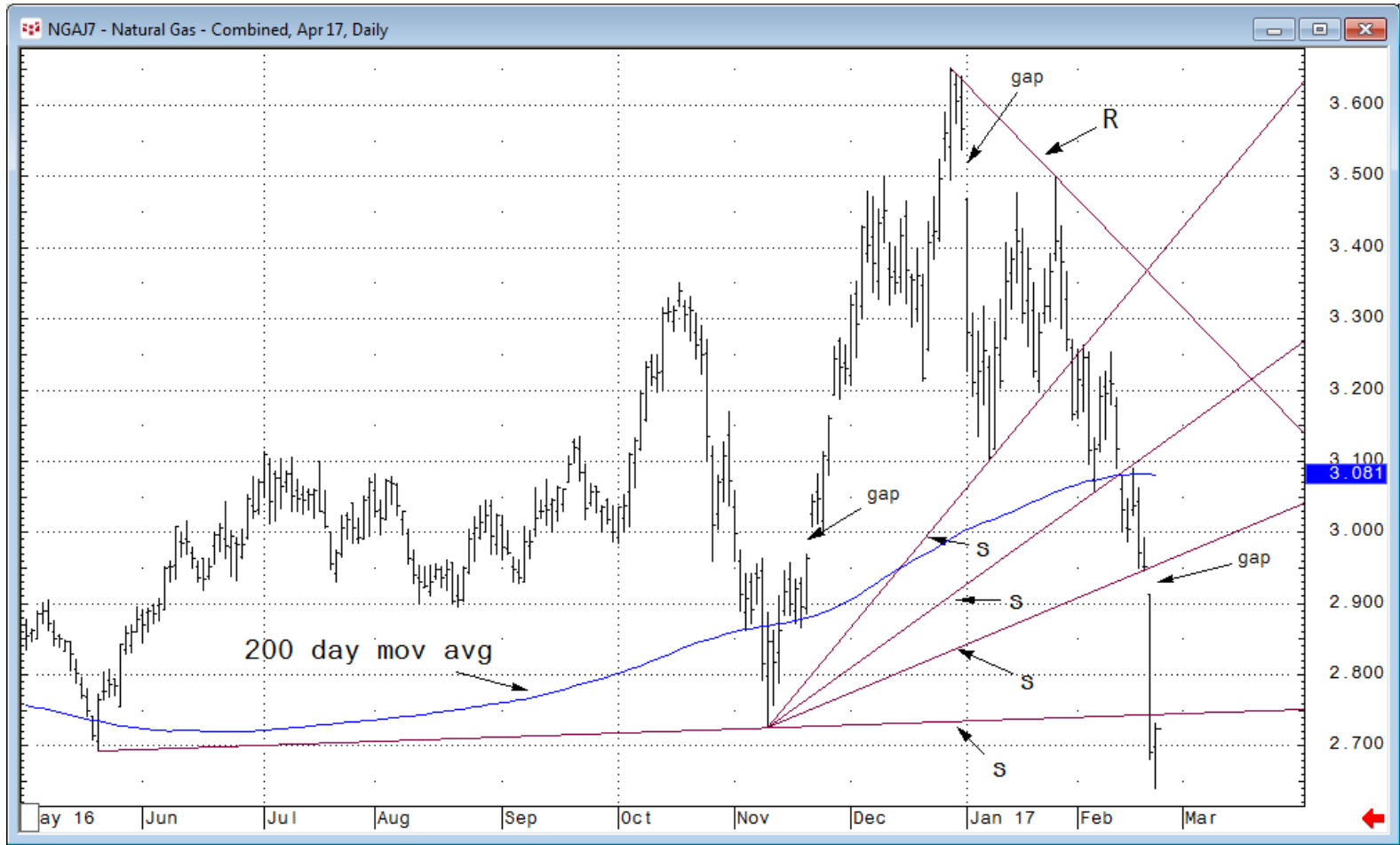
WTI Crude Oil: Trend

Technically discerning a price direction



Henry Hub Natural Gas: Trend

Technically discerning a price direction



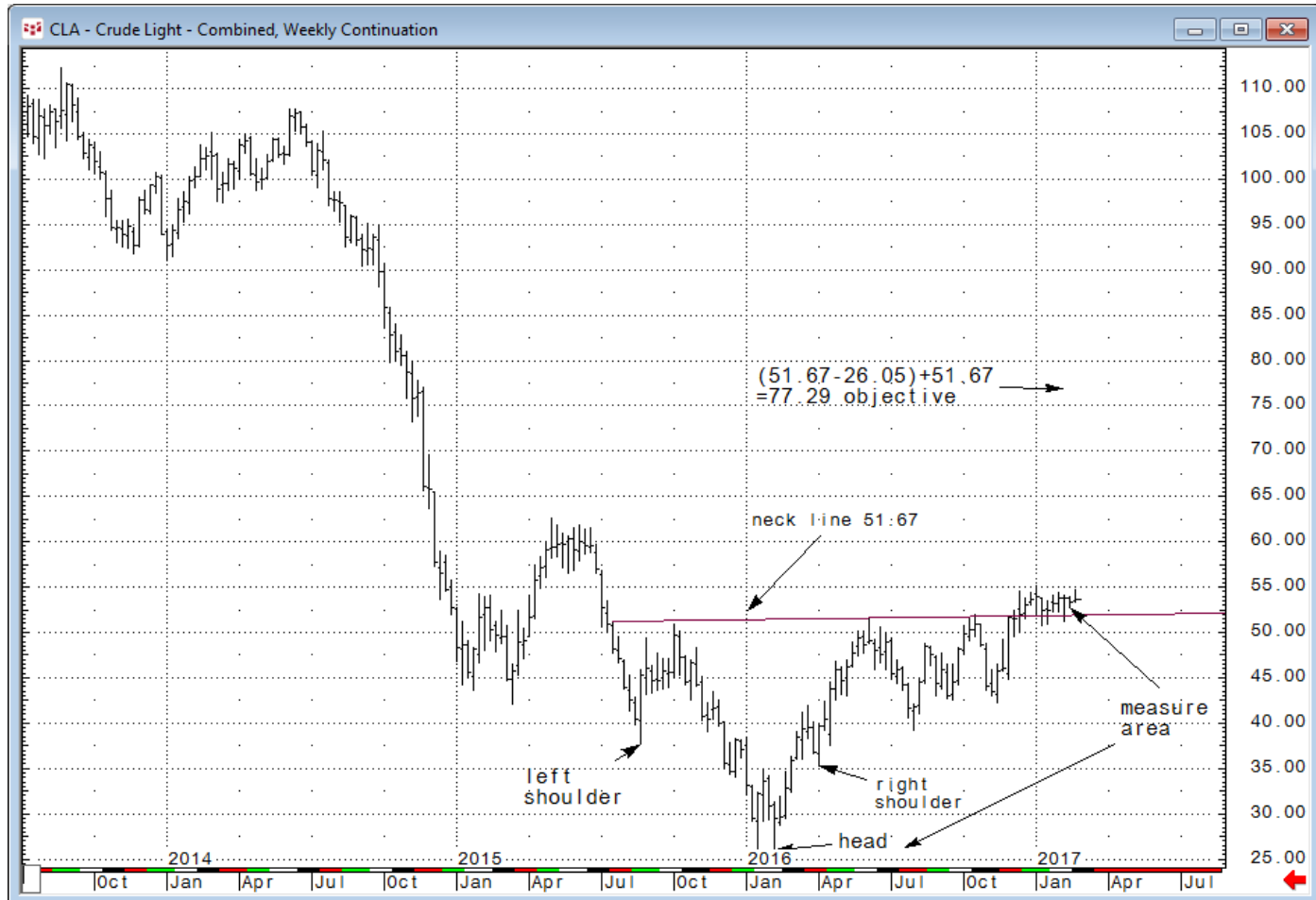
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WTI Crude Oil: Weekly

Longer term price direction



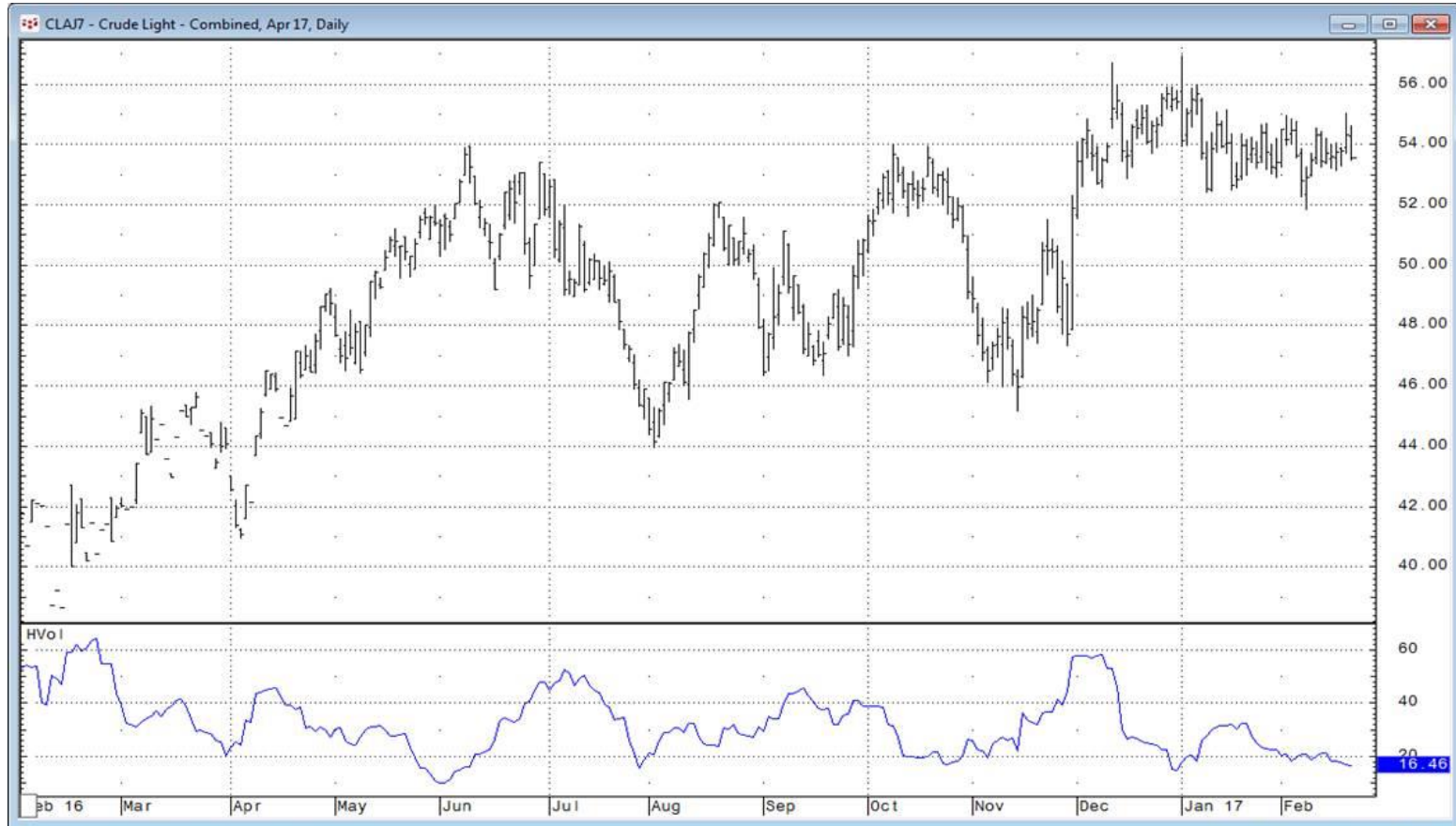
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WTI Crude Oil: Volatility

Overpriced / Underpriced option valuation



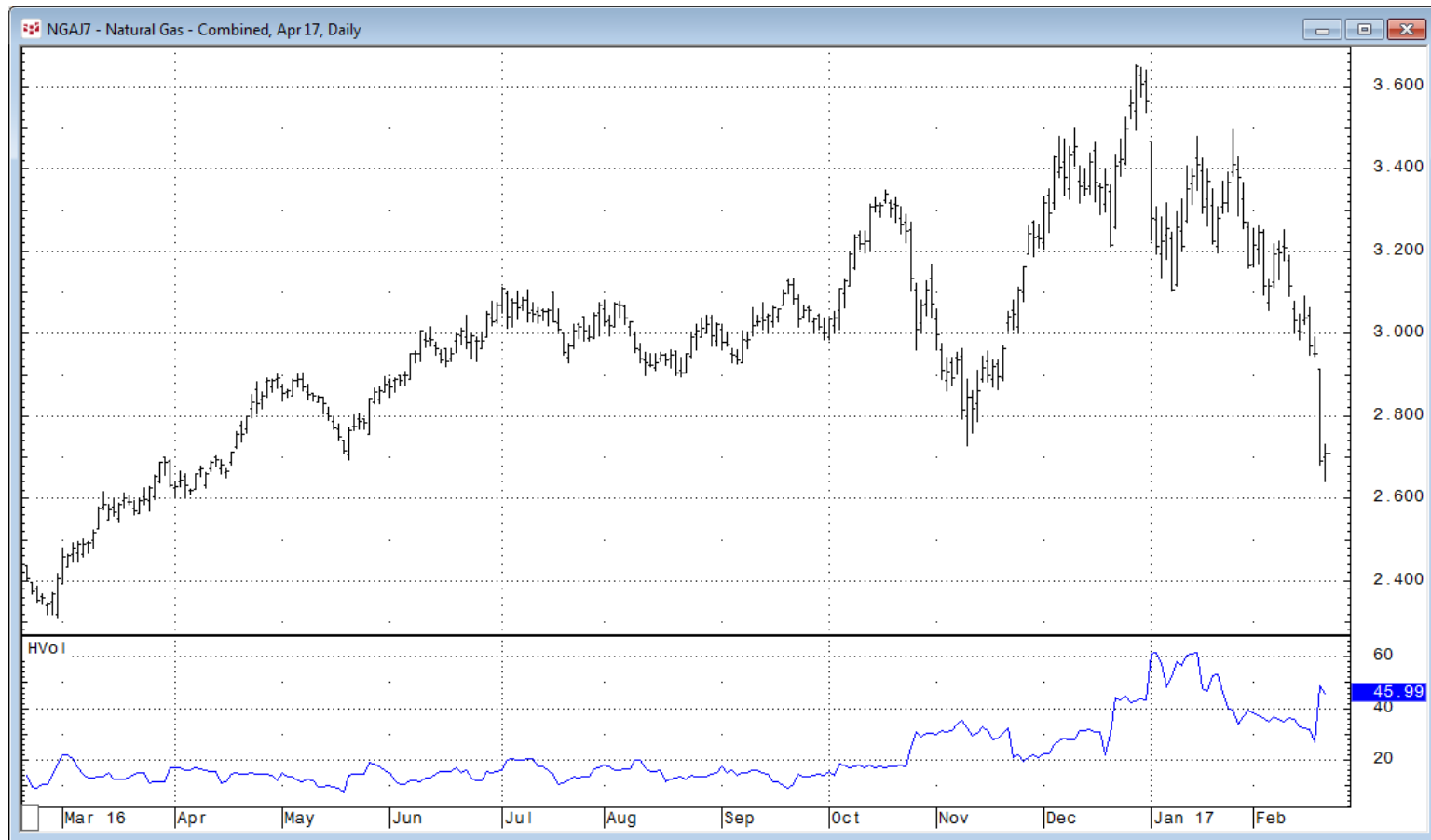
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Henry Hub Natural Gas: Volatility

Overpriced / Underpriced option valuation



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Market Psychology and Need

- **Psychology** says rig count, funds or OPEC have to move the market higher (these facts are already in the market)
- **Market Need:** Where are the producer's breakeven/profit levels?
- Utilize producer's need of the market, don't let the market psych you out of the business



Price Discovery Best Practices

Price Discovery Best Practices

What to do and what not to do

- **DO:**
 - Use major industry market makers
 - Always ask for both sides of the market (bid and ask)
 - Be aware of market volatility – it is one of the three primary drivers of valuations (high volatility collars, low outright)

- **DON'T:**
 - Trade bullet expirations or knockouts – these tailored products often have extremely high mark-ups
 - Calendar average versus NYMEX look-alike settlements – if the premium is over 30c per barrel, use calendar average, otherwise, use NYMEX look-alike settlement
 - Using outside consultants, especially for the small producer, adds unnecessary expense – paying a dime to save a nickel



Bank v. Non-Bank Hedge Providers

Bank v. Non-Bank Hedge Providers

The Bank's interest is aligned with the client, providing the best overall hedging experience

- Bank has a parallel interest with the loan customer – both benefit from a strong financial position (no over-trading, no high sales pitch to maneuver in and out of the market)
- Bank takes no market exposure/risk – maintains a balanced trade book
- Bank takes limited counterparty risk; the client's credit exposure is limited to the bank itself
- Bank stands in front of clearing firm
- Bank welcomes smaller producers
- Bank provides \$0 requirements for both initial and maintenance margin – allows producers to concentrate on core business
- Bank matches settlements with production – when a hedge position is liquidated or expires, the payment terms can be matched to the cash flows of the producer's physical production



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