

# CurveAlpha

The Oil & Gas Volatility Exposure Experts

*Same Data, Different Insights*

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THE BIG OPPORTUNITY

# THE ENTIRE INDUSTRY IS MISPRICING ASSETS

How to take advantage of this

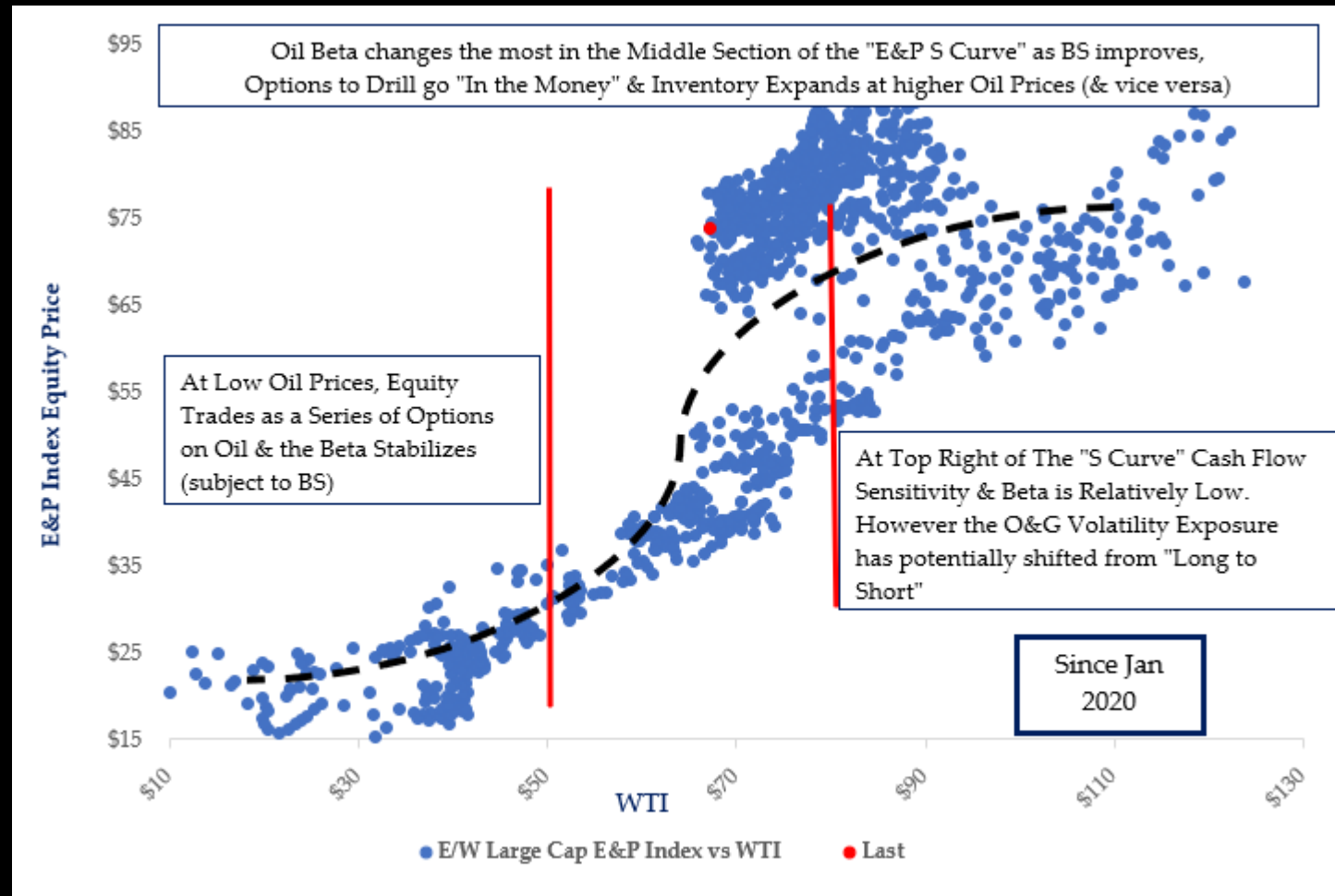
**THE E&P VOLATILITY EXPOSURE  
IS MOST IGNORED &  
MISUNDERSTOOD  
COMPONENT OF VALUATION**

# Why Worry about Where you are on the S-Curve?

The Transition from O&G Optionality to Cashflow Stability is not Linear or Constant & Varies by E&P Asset

The same FCF Yield, EV/EBITDA, P/NAV, DCF or ROCE is likely to have a very different Volatility Exposure or Volatility Adjusted Valuation

## Large Cap E&P Index Price vs WTI "The E&P S-Curve"



# **Why & When Traditional & Options Based E&P Valuations Diverge**

**O&G Volatility can cause very significant E&P Valuation Error**

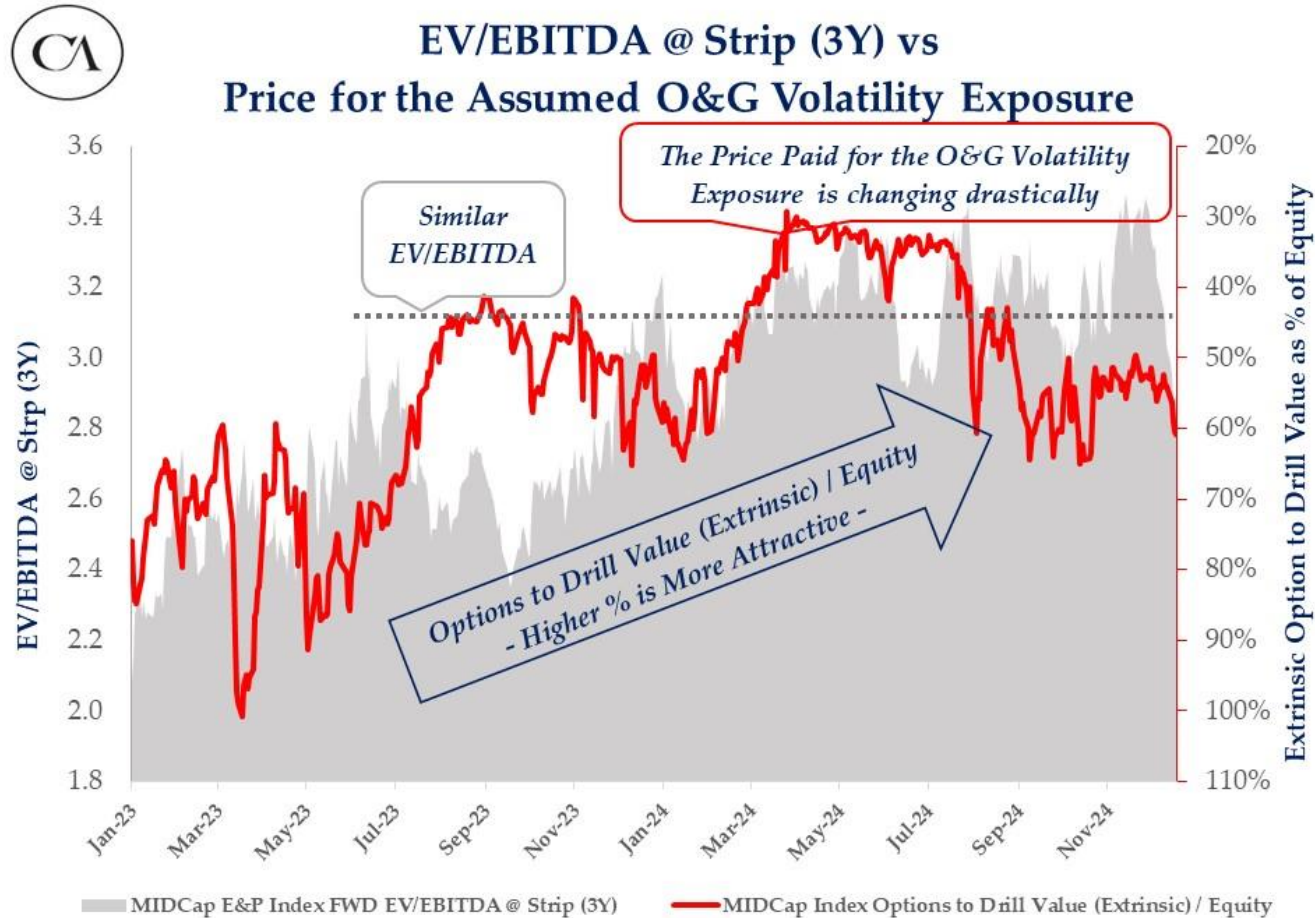
**Similar FCF Yield, DCF or EV/EBITDA can have a very different  
O&G Volatility Profile or Price Paid for such**

**The E&P Volatility Profile is Dynamic & isn't Homogeneous**



# O&G Volatility Tends to be High

Yet the Industry Buys & Sells Assets using “Zero Volatility” Valuation Metrics



## Ignoring Probable O&G Volatility Causes

- E&P Valuation Error
- Poor Pricing, Timing & Payment Vehicle in E&P M&A
- Inefficient O&G Wagers causes High O&G Price Dependency
- Attractively Priced O&G Volatility Wagers cause Outperformance vs O&G Strip (3Y) & vice versa

# ALL STRATEGIC E&P TRANSACTIONS CONTAIN EMBEDDED O&G VOLATILITY BETS

Bet when the odds are in your favor

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Traditional Valuation doesn't give you the odds

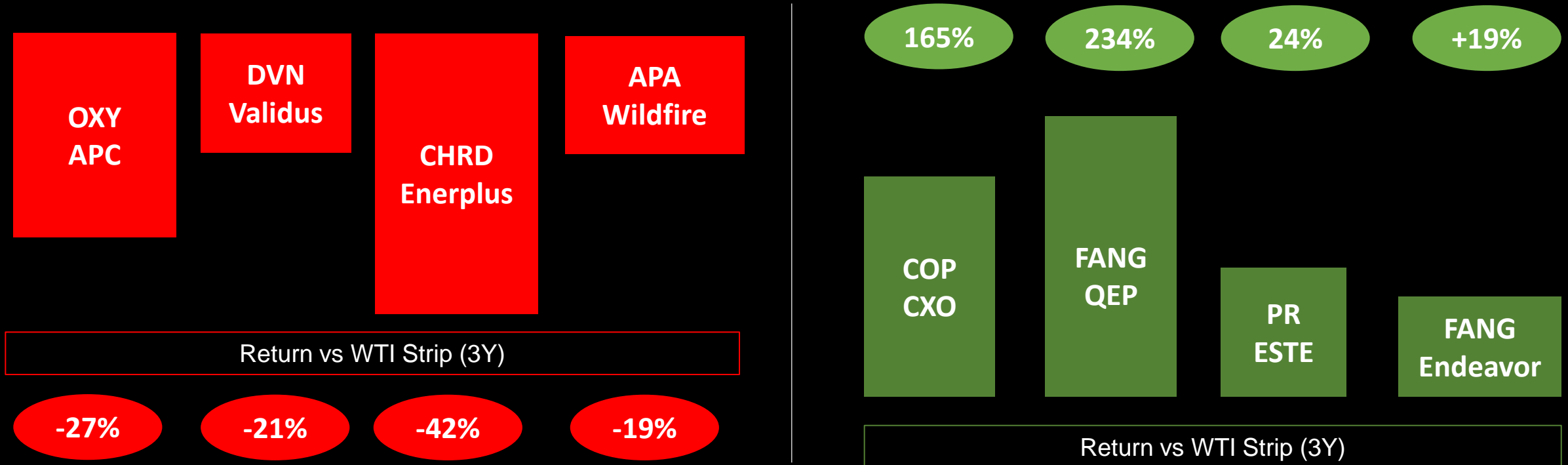
Traditional analysis assumes that the risk / reward is symmetric  
and never changes, which we know isn't true

**A large component of Buying & Selling O&G Assets is to forecast O&G Prices**

**Failing to Outperform  
the O&G Curve  
means you are not doing your Job**



# EXAMPLES OF M&A THAT'S NOT ACCRETIVE FROM VOLATILITY PRICING PERSPECTIVE



**M&A Buyers or Sellers can significantly underperform the O&G Strip (3Y) after mispricing the assumed O&G Volatility Exposure**

# Want to Consistently Outperform the WTI Curve?

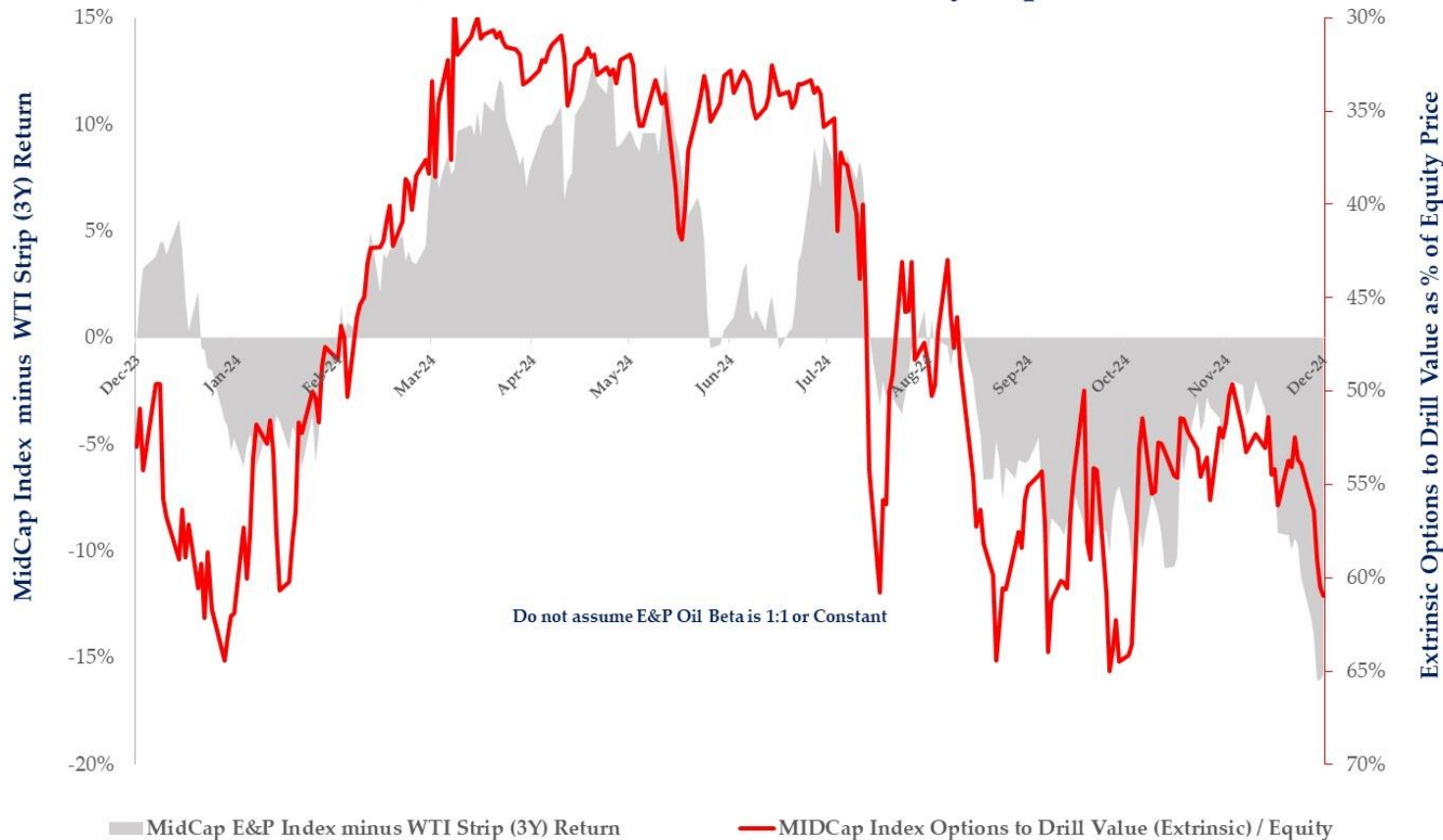
Price the O&G Asymmetry of Strategic & Tactical Decisions



12 Month MidCap Index Return minus WTI Strip (3Y)

vs

Price Paid for the Assumed O&G Volatility Exposure



*The Correlation between  
the Price Paid for the Assumed  
O&G Volatility Exposure  
&  
Performance vs the WTI Strip (3Y)  
is Extremely High*

THE PROOF

**IN 75% OF M&A DEALS  
ONE SIDE WINS OR LOSES BIG**

**THE PRICE PAID FOR THE ASSUMED  
VOLATILITY EXPOSURE CORRELATES  
WITH PERFORMANCE VS THE O&G CURVE**

***THE PRICE PAID FOR THE VOLATILITY WAGER  
IS OFTEN WORTH > THAN THE CHANGE IN O&G PRICE***

# **We help You Make Better Decisions**

We systematically quantify the 4 important decisions that you must make

**IDENTIFY ASSETS**

THAT ARE MOST LIKELY TO OUTPERFORM O&G

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**THE RIGHT PRICE**

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**WHEN TO BUY OR SELL**

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**HOW TO PAY**

# Why O&G Producers Hire CurveAlpha

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1. Can't afford not to know when Traditional & Options Based Valuation Metrics Diverge
2. Understand & Quantify the Embedded O&G Volatility Wager of a Strategic Transaction
3. Focus on Transactions that are Accretive on Both Per Share & Volatility Adjusted Valuation Basis
4. Identify O&G Wagers with Good Odds & Risk with Poor Odds
5. Importance of Outperforming the Underlying O&G Curve
6. No Black Box. Well Established Options Pricing Methodology using your own Well Data
7. Scenario Analysis made Easy & Understandable
8. 1-Day Volatility "Boot Camp" or M&A Case Studies for C-Suite & Board