Out of the Ordinary®



Dealing with Oil

The Challenge for Consumers

The ERA General Assembly: October 2017

Callum Macpherson

Investec Commodities

The Problem

The cost of buying 100,000 tonnes of jet fuel Summary Statistics

140,000,000 \$137m High 120,000,000 \$11m Low 100,000,000 \$55m Ave Volatility 32% 80,000,000 **USD** Cost 60,000,000 40,000,000 20,000,000 0 Dec-12 Apr-12 Dec-96 Aug-97 Aug-99 Dec-98 Aug-11 Dec-10 Apr-10 Dec-08 Dec-08 Aug-07 Dec-06 Aug-07 Dec-06 Aug-05 Dec-04 Apr-04 Apr-02 Aug-01 Apr-14 Aug-13 Aug-15 Dec-14 Apr-16 Dec-16 Apr-98 Apr-00 Aug-17

Source: Investec, Bloomberg, Platts

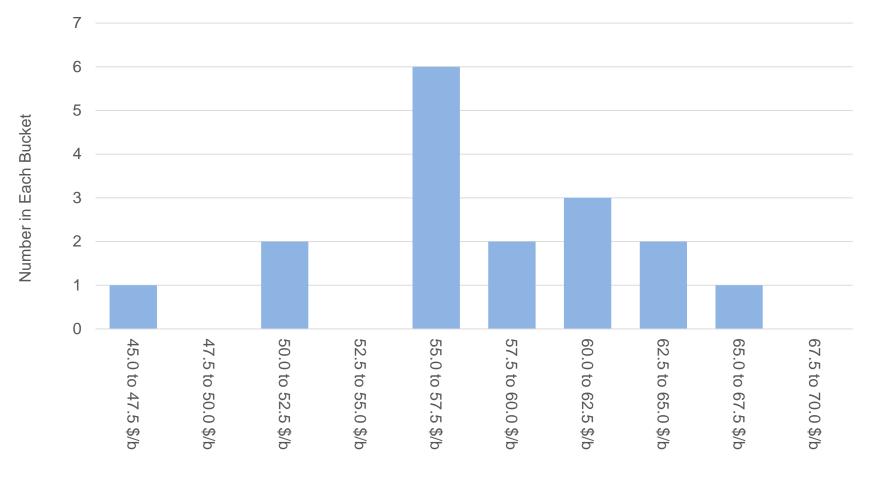




The Difficulties of Forecasting

Forecasts Predict that Brent Stays Where it Is

The distribution of forecasts for Brent in Q4-18

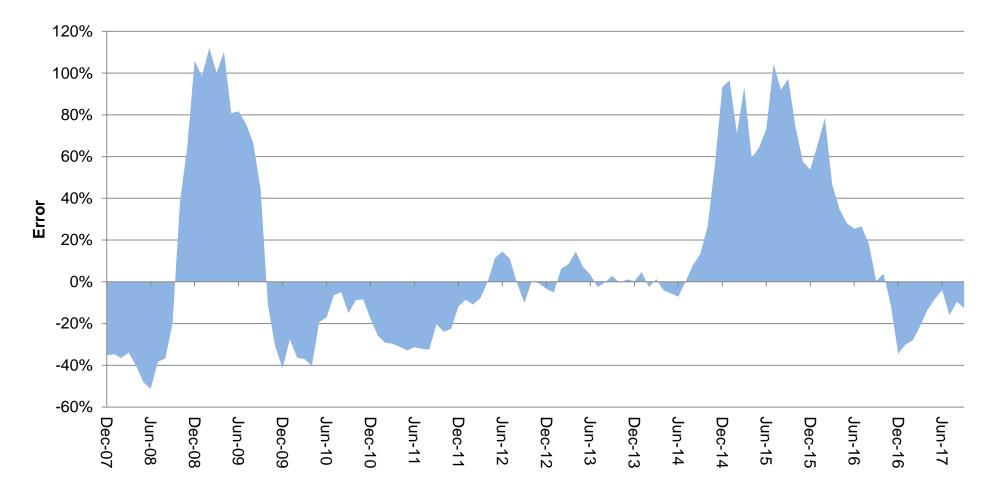


Source: Investec, Bloomberg



The Challenge of Forecasting

The error in 1yr analyst Brent consensus forecasts



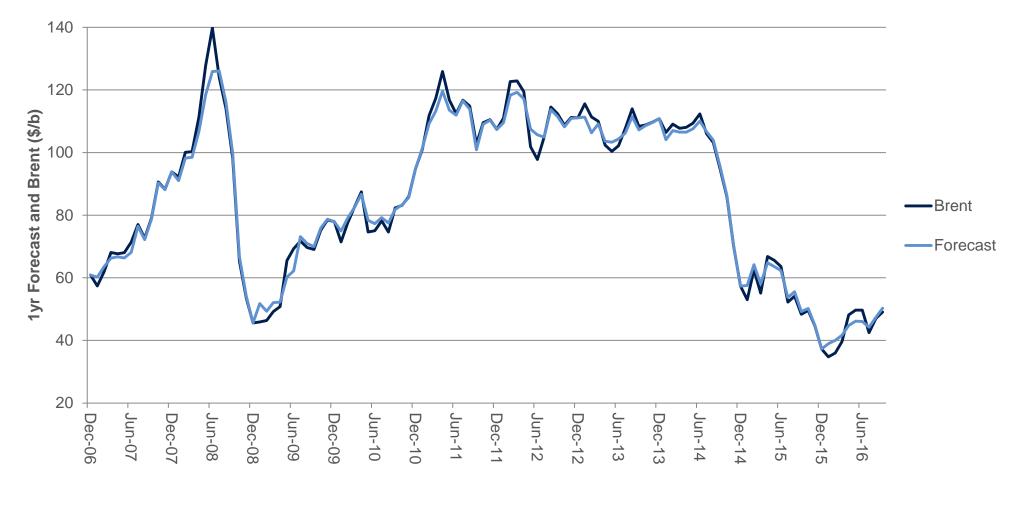
Source: Investec, Bloomberg



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Forecasts Assume The Current Price is Right

1yr Brent forecasts and the price of Brent at the time of forecast



Source: Investec, Bloomberg

⁽⁺⁾ Investec

OPEC Production is a Matter of Opinion?

OPEC Production in October 2016

	OPEC Member Submission (kb/d)	OPEC Estimate (kb/d)	Difference (kb/d)	IEA Estimate (kb/d)
Algeria	1,171	1,088	83	1,120
Angola	1,507	1,586	-79	1,520
Ecuador	542	549	-7	560
Gabon	NA	202	NA	200
Indonesia	NA	722	NA	740
Iran	3,920	3,690	230	3,720
Iraq	4,776	4,561	215	4,590
Kuwait	3,000	2,838	162	2,930
Libya	NA	528	NA	510
Nigeria	1,476	1,628	-152	1,570
Qatar	639	646	-7	620
Saudi Arabia	10,625	10,532	93	10,550
UAE	3,188	3,007	181	3,080
Venezuela	2,316	2,067	249	2,120
		33,644	968	33,830

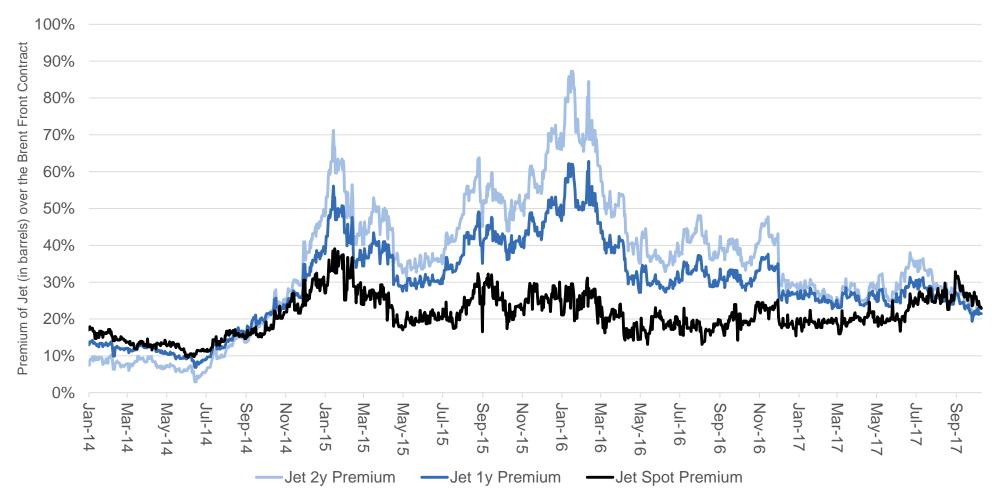
Source: IEA, OPEC, Investec



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The Brent Front Contract Can Be Misleading

Jet prices do not always track the Brent front contract

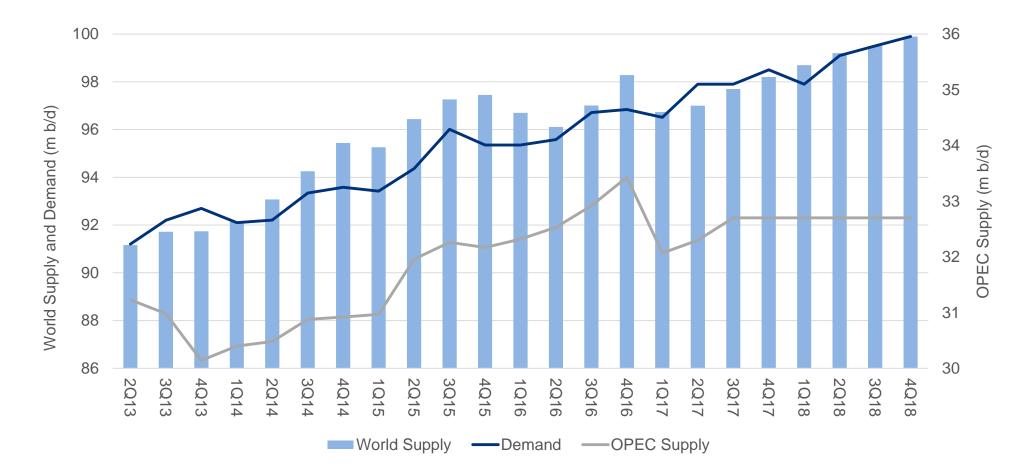


Source: Investec, Bloomberg, Platts

Where Do We Stand in the Cycle?

The Market is Rebalancing

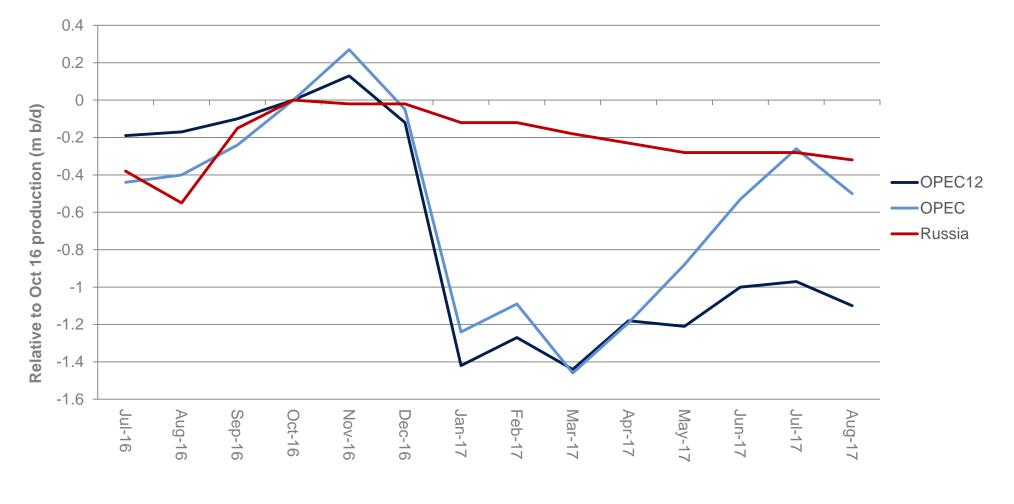
IEA supply and demand figures, with projections from 4Q17





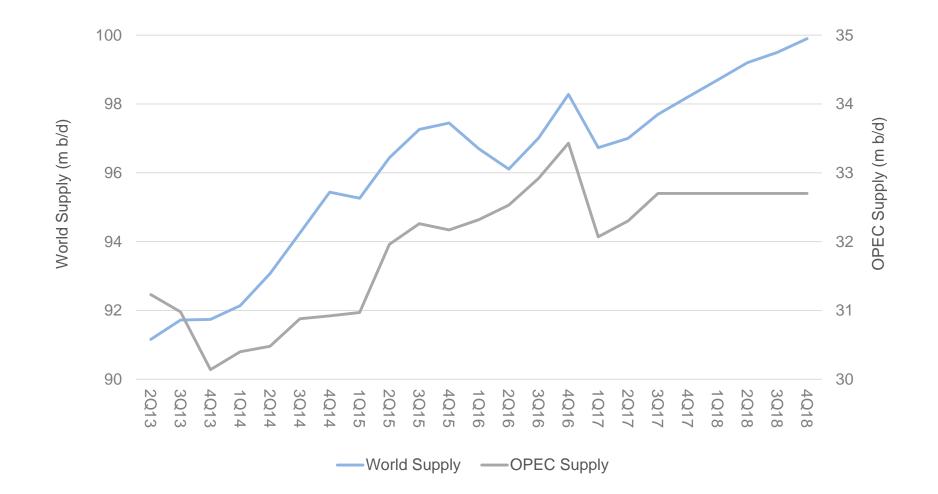
OPEC/Russia: Appearances can be Deceptive

Changes in production relative to Oct 16 Reference Point

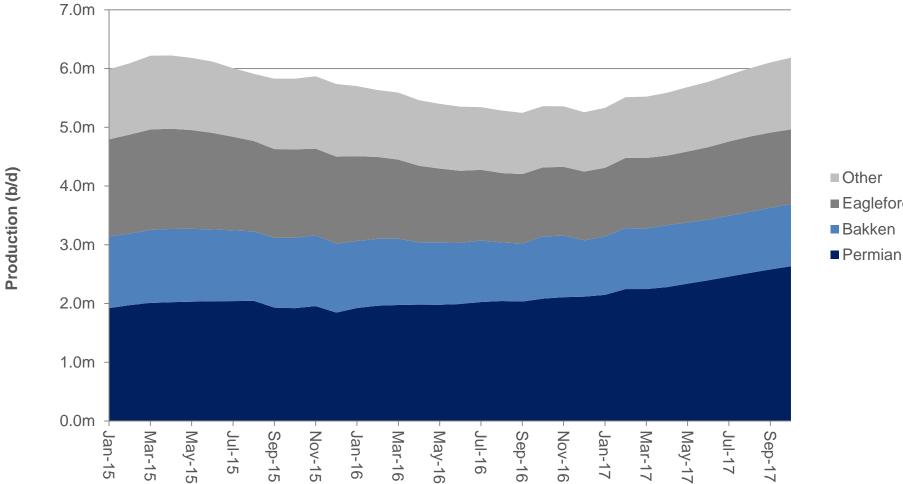


Source: IEA, Investec

World Supply Has Grown Significantly



US Shale Production is Back to the 2015 Highs

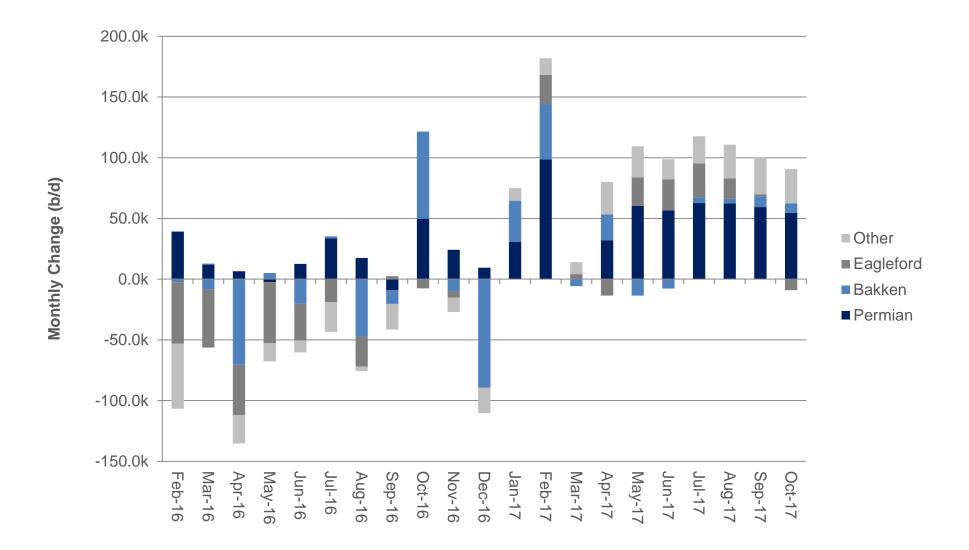


Eagleford

Source: Investec, Bloomberg, EIA

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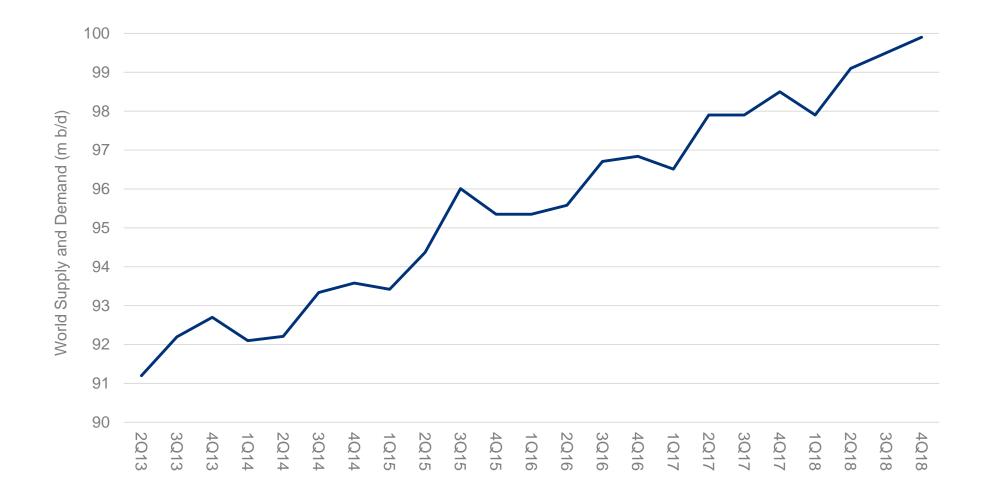
Shale Production Growth has been Slowing...



Source: Investec, Bloomberg, EIA



Demand Is the Key



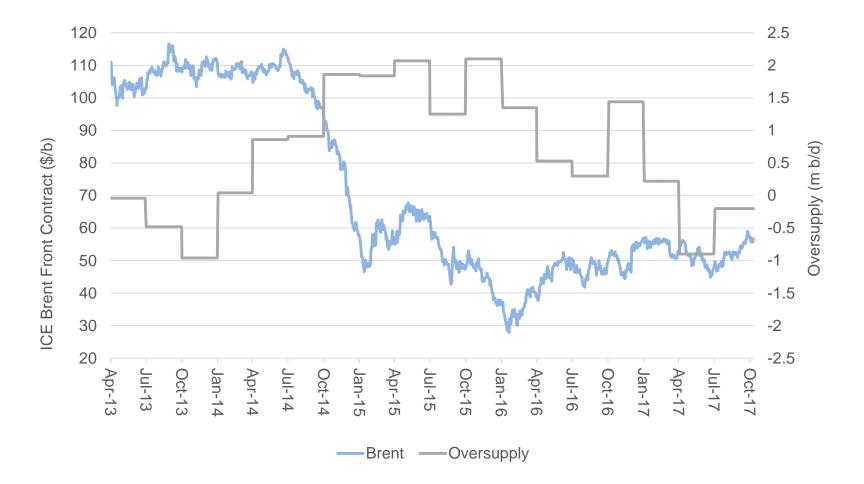
Source: IEA, Investec

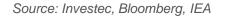


Other Market Influences

Do Fundamentals Drive The Market?

The oversupply (supply – demand) and the price of Brent

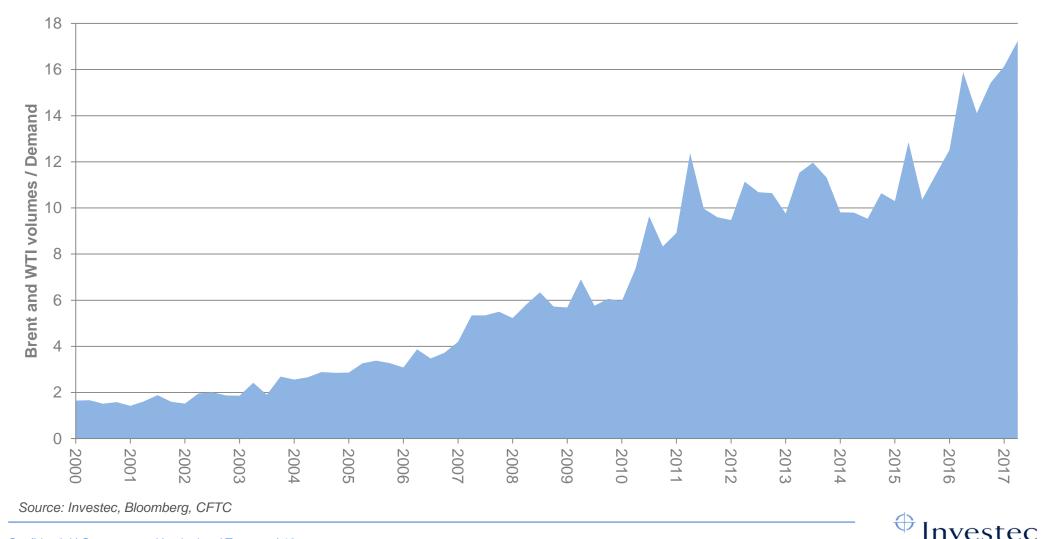






Futures Trading has Grown Massively

Brent and WTI futures trading volumes relative to physical demand

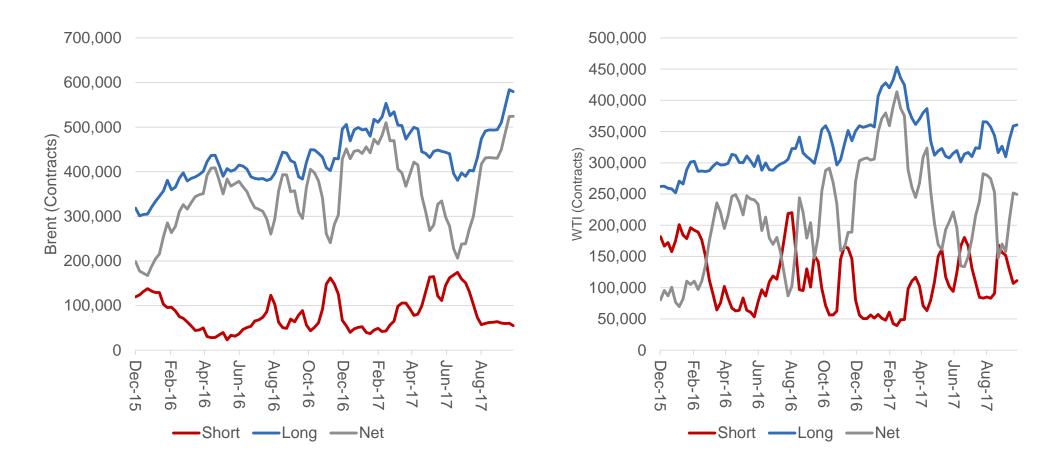


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Speculators Have Substantial Bullish Bets

Brent Speculative Positions

US (WTI) Speculative Positions



Source: Investec, Bloomberg, CFTC



How To Protect Budgets

Hedging Is a Common Solution

Some examples of Hedging Programmes from public data, collated by Bloomberg

Ryanair

Fiscal year to March 2018

- 2Q 91% at 494 \$/MT
- 3Q 90% at 476 \$/MT
- 4Q 90% at 491 \$/MT
- FY 90% at 493 \$/MT

Fiscal year to March 2019

- 1Q 50% at 492 \$/MT
- 2Q 40% at 475 \$/MT

IAG

2017

- 3Q 94% hedged
- 4Q 79% hedged

2018

- 1Q 62%
- 2Q 47%
- 3Q 37%
- 4Q 29%

Easy Jet

Fiscal year to Sep 2017

• FY 85% at 611 \$/MT

Fiscal year to Sep 2018

• FY 71% at 514 \$/MT

Lufthansa

2017

- 3Q 78% at 541 \$/MT
- 4Q 77% at 546 \$/MT



Source: Bloomberg

Gambling Or Risk Management?

We can't foresee the future. Hedging provides certainty

- Doing nothing is not riskless
- A layered approach reduces the risk of hedging at the "wrong time"
- Hedging can help to smooth out price fluctuations
- Hedges give you time to adjust to market shifts
- The policy should fit the airline
- Consistency is key
- Document the hedge policy



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