



The objective of fuel hedging

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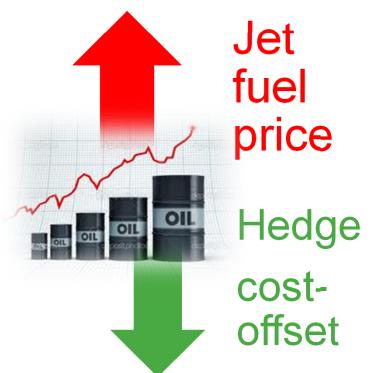
Hedging – WFS Definition

'Contractual investment to reduce the risk of adverse price movements in jet cost, by establishing a known future cost now'

Airline X - Consumer Hedge:

• 'Short' jet, need to buy

• So agree a price now for future jet expenditure



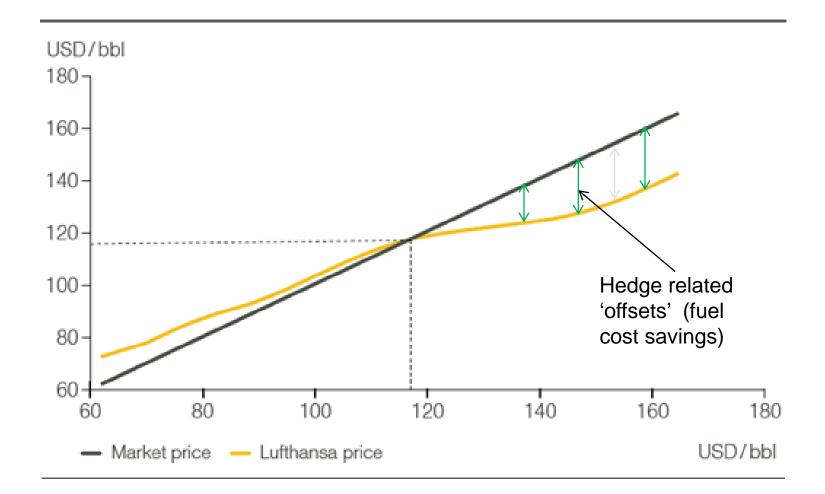
Corporates that energy hedge?

Airlines Factories Goods manufacturers **Beverage manufacturers Power producers** Shipping **Hauliers** Agricultural **Oil refineries Oil suppliers Oil producers**

Government bodies -Hospitals/trains/buses/military Miners Importers Oil service companies Water companies Wind farms Ferries Paper manufacturers



Lufthansa Financial Report 2013 - Their jet hedging program impact:



Jet fuel hedging objectives?

Primary:

Cost controldefend future jet fuel budgetStabilising marginseat sale/fixed income, then fix jet fuel
cost

Secondary:

Reduce future financial strain

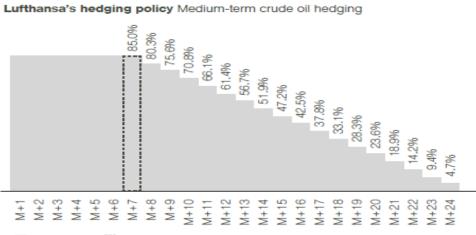
Forecasting budget

Understanding 'basis-risk' (any price variation between hedge and physical jet cost)

A Consumer Jet Hedge

Examples:

Scheduled Airline – often proportionally fix future fuel costs in sloping % tranche



Brent-collar E Hedge (average Brent price consists of 18 individual prices)

Charter Airline - sells a tranche of flights/seats so hedges majority of associated jet consumption <u>at time</u> of tranche seat sale

Physical and Financial hedge choices....

Physical Fuel Hedging

- Also known as "embedded" products – integrated into physical supply contracts
- Includes:
 - 1. <u>Fixed Forward Prices</u> (FFP);
 - 2. <u>Flexible Supply</u> <u>Contracts;</u>
 - 3. Capped Supply
 - 4. <u>Alternate Price</u> <u>Formulae</u> (APF)
- Easy to administer
- Effective future cost known
- Generally suitable for ratable monthly volumes

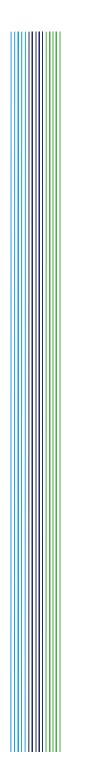
Financial Derivatives

- Also known as "paper" hedges
- Separate from physical supply contracts
- Includes
 - 1. <u>Swaps</u>,
 - 2. Caps/Collars;
 - 3. <u>Basis swaps</u>
- Financial settlement of derivatives offsets price movements on physical fuel
- Basis risks
- 'Margin call' sensitivity & accounting considerations
- Regulatory considerations

Hedging Tools – quick comparison

	Price Certainty Liquidity			e Certainty
	Crude Swap (financial)	Jet Swap (financial)	Multi- Airport APF (physical)	Multi- Airport FFP (physical)
Financial only	2 nd choice	1 st choice	$\mathbf{\times}$	$\mathbf{\times}$
Combination	2 nd choice	1 st choice	1 st choice	1 st choice
Physical only	$\mathbf{\times}$	\succ	$\mathbf{\times}$	Only choice

Available Open Credit



Summary

Need for prudent jet fuel hedging, ideally controlling jet price, is an airline fact of life

Tools are varied, combinations will likely be needed

Hedging policy ideally aligns corporate budget goals with corporate limitations

Ideally simple hedging should provide a future paid price or maximum paid price for jet fuel, ideally avoiding non-jet index/commodity eg brent.

About WFS...

Offers physical tailored hedging and financial too

Own in-house derivative trading systems

26th September - Supply + Risk management Seminar London.

•	2012 Revenue	\$38.9 billion
•	Market capitalization	\$3 billion
•	Stock symbol	NYSE: INT
•	Fortune 500 Ranking*	74
•	Global headquarters	Miami, Florida, USA
•	Founded	1984
•	Number of employees**	2,500

All figures, except employee count, are as of 12/31/12 * Source: Fortune 500 Ranking Issue Date May 6, 2013 ** As of February 2013

