

Airline/Airport Offtake & Utilization

Will flight tickets surge?



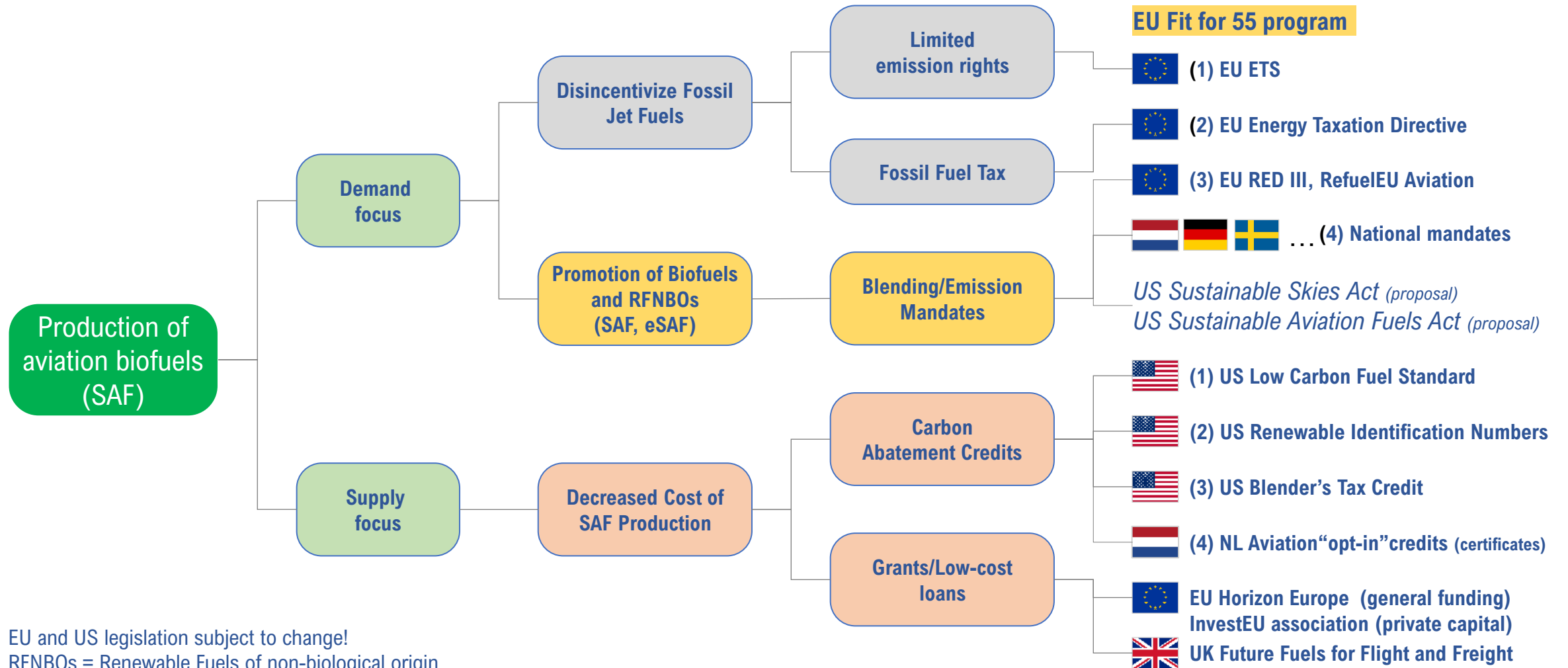
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Principal approaches from fossil jet to SAF



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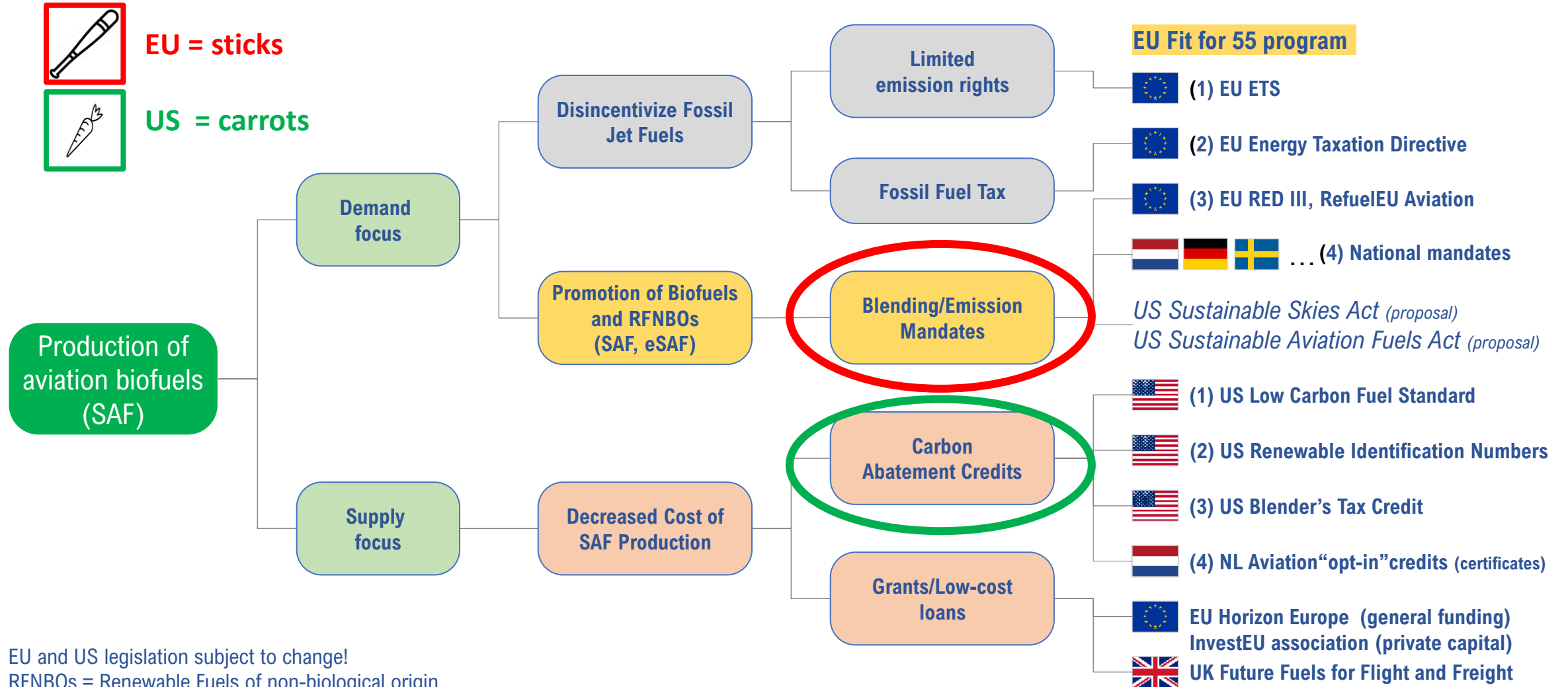


EU and US legislation subject to change!
RFNBOs = Renewable Fuels of non-biological origin

Principal approaches from fossil jet to SAF



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US Price Parity JET A-1 and HEFA



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US airlines benefit from various subsidies granted. The price premium for SAF is mainly covered by subsidies and enable substitution of JET A-1 by SAF without harming profitability and ticket prices. But: Funding is guaranteed until 2027 only.

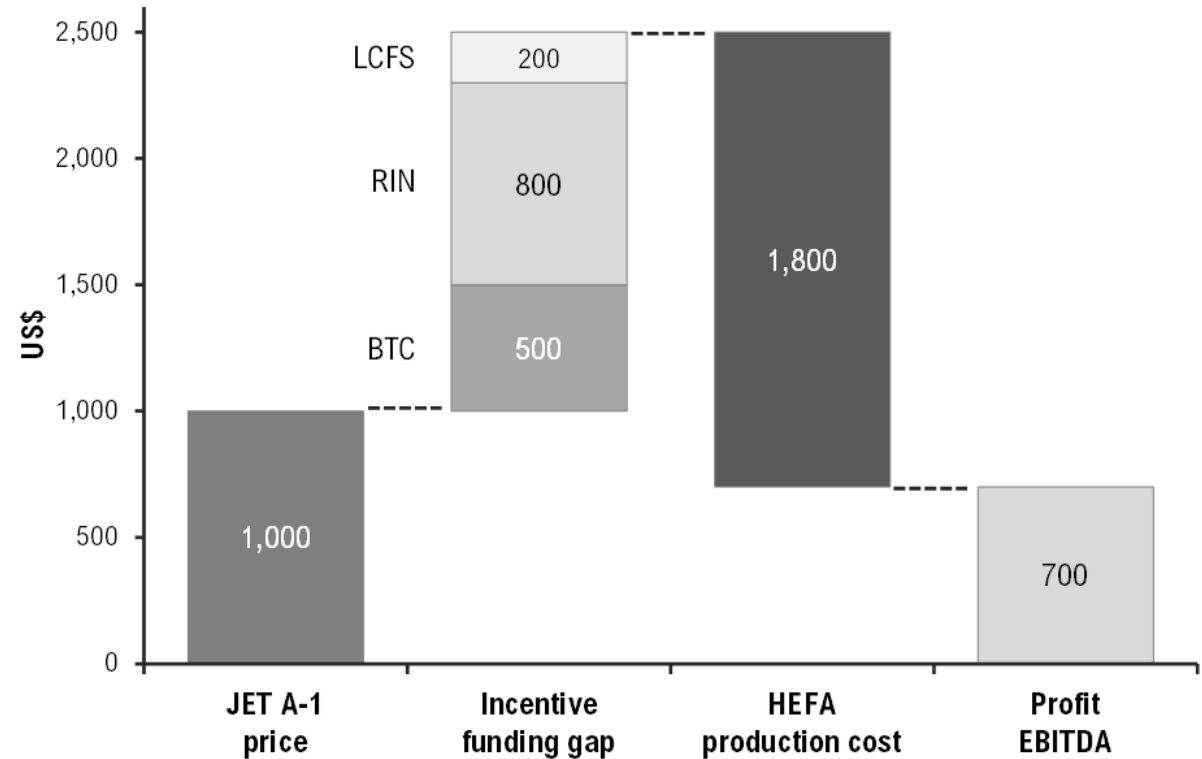
All prices in USD per US gallon. Chart shows prices in USD per ton

BTC = Blenders Tax Credit
1.50 USD/USG at 65-70% GHG reduction

RIN = Renewable Identification Number
at 2.50 USD/USG as D4 equivalent

LCFS = Low Carbon Fuel Standard
at 0.6 USD/USG with 65 USD t/CO2 an 70% CI reduction

JET A-1 price = 3.00 USD/USG (WTI)



EU Price Imparity JET A-1 and HEFA



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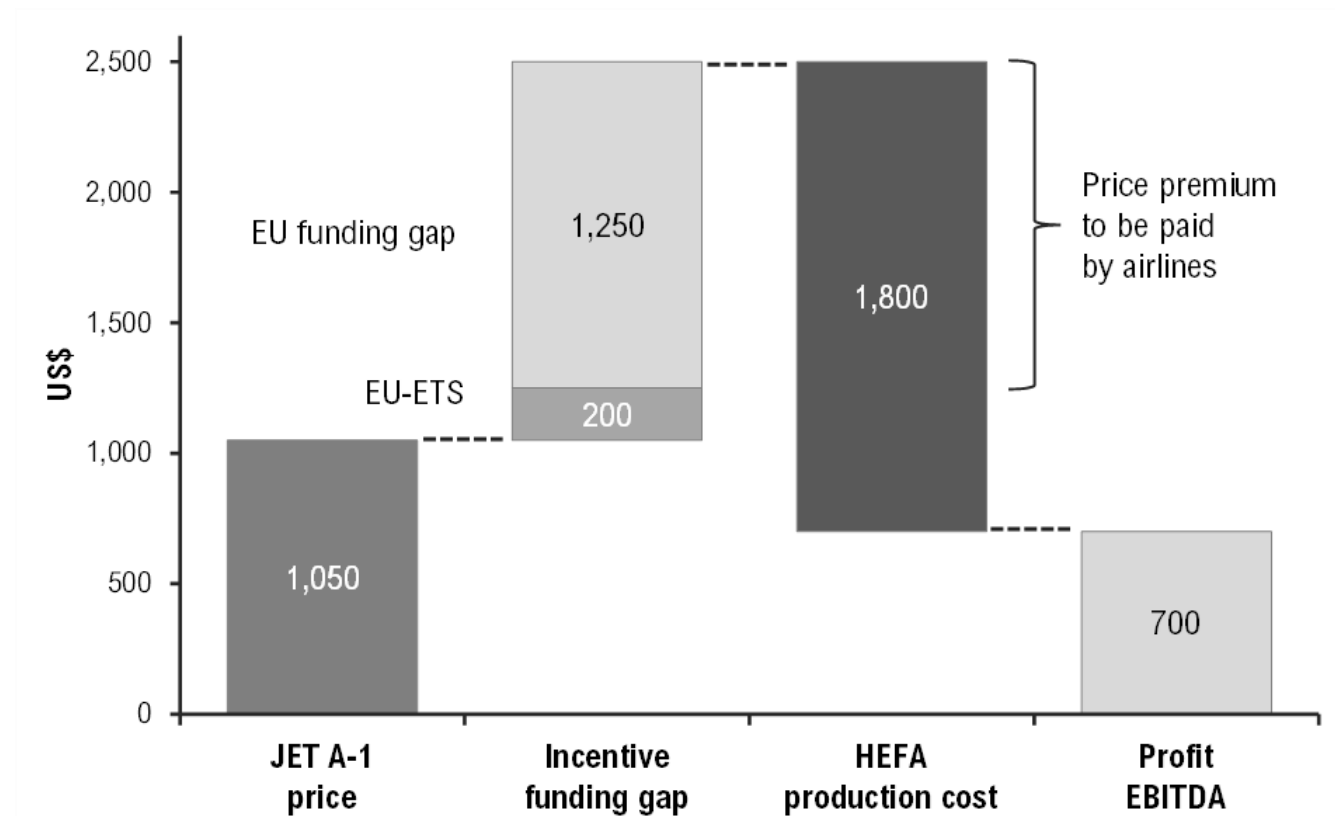
EU airlines are faced with a substantial price increase when using SAF as a synthetic blending component (SBC).

The price premium for SAF is partly reduced by use of SAF certificates in the European Emission Trade Scheme (ETS) substituting the purchase of CO₂ certificates for intra-european flights.

But:

SAF used requires EU-certification of feedstocks and production output.

JET A-1 price = 3.00 USD/USG (WTI). Chart prices in USD per ton.



Net profit of global airlines 2006-2021 and forecast 2022/2023



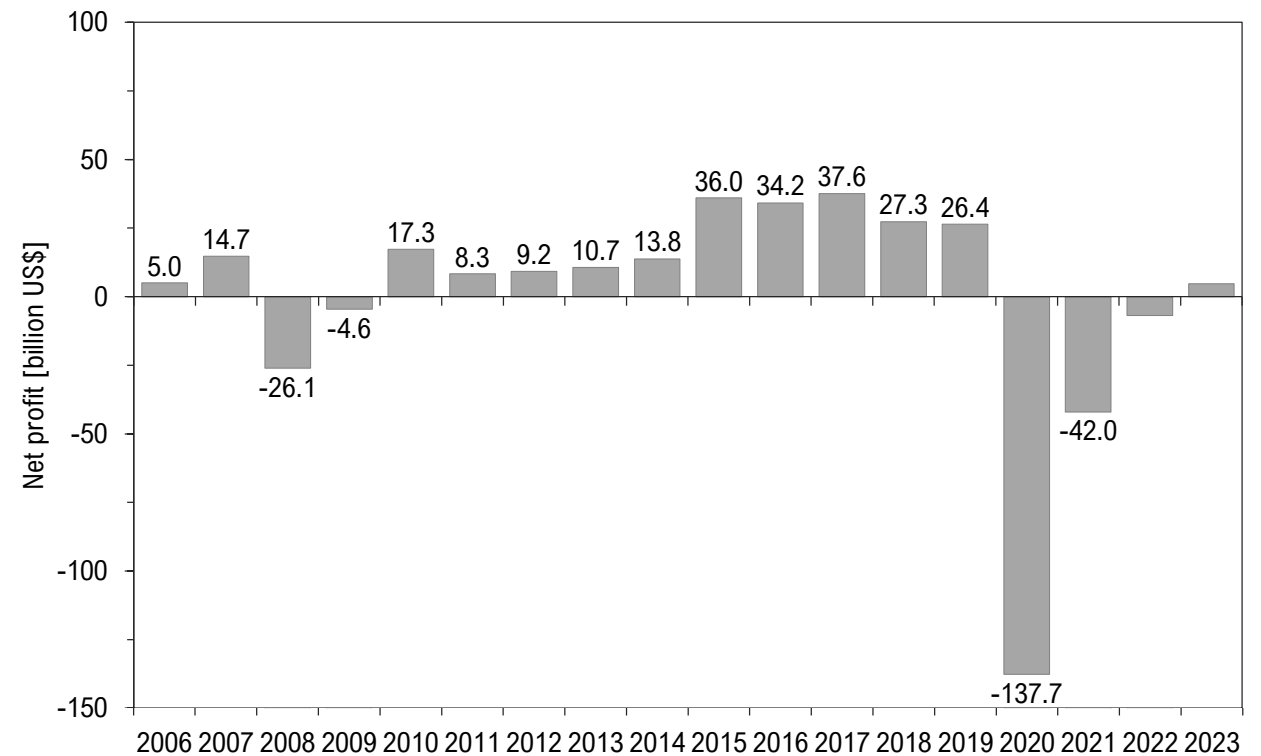
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Net profit of commercial airlines 2006 – 2021 including forecast 2022, 2023 in billion USD.

Overall, profitability of airlines is small when compared to other sectors with similar investment levels, operating risks and volatile consumer markets.

Source:

Statista (2023) based on IATA, ICAO and S&P Global Platts



Airline cost calculation



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- Airlines use contribution margin accounting as common methodology for cost calculations of their flight operations.
- Level 1 covers all direct costs (variable costs) associated with the operation of the aircraft, i.e. crews, landing fees, fuel, catering as well as as depreciation and maintenance reserve of the aircraft.
- Jet fuel amounts to 30% of the aircraft operating cost.
- Any major increase of aircraft operating cost will be reflected in the ticket pricing model.

Airline ticket pricing



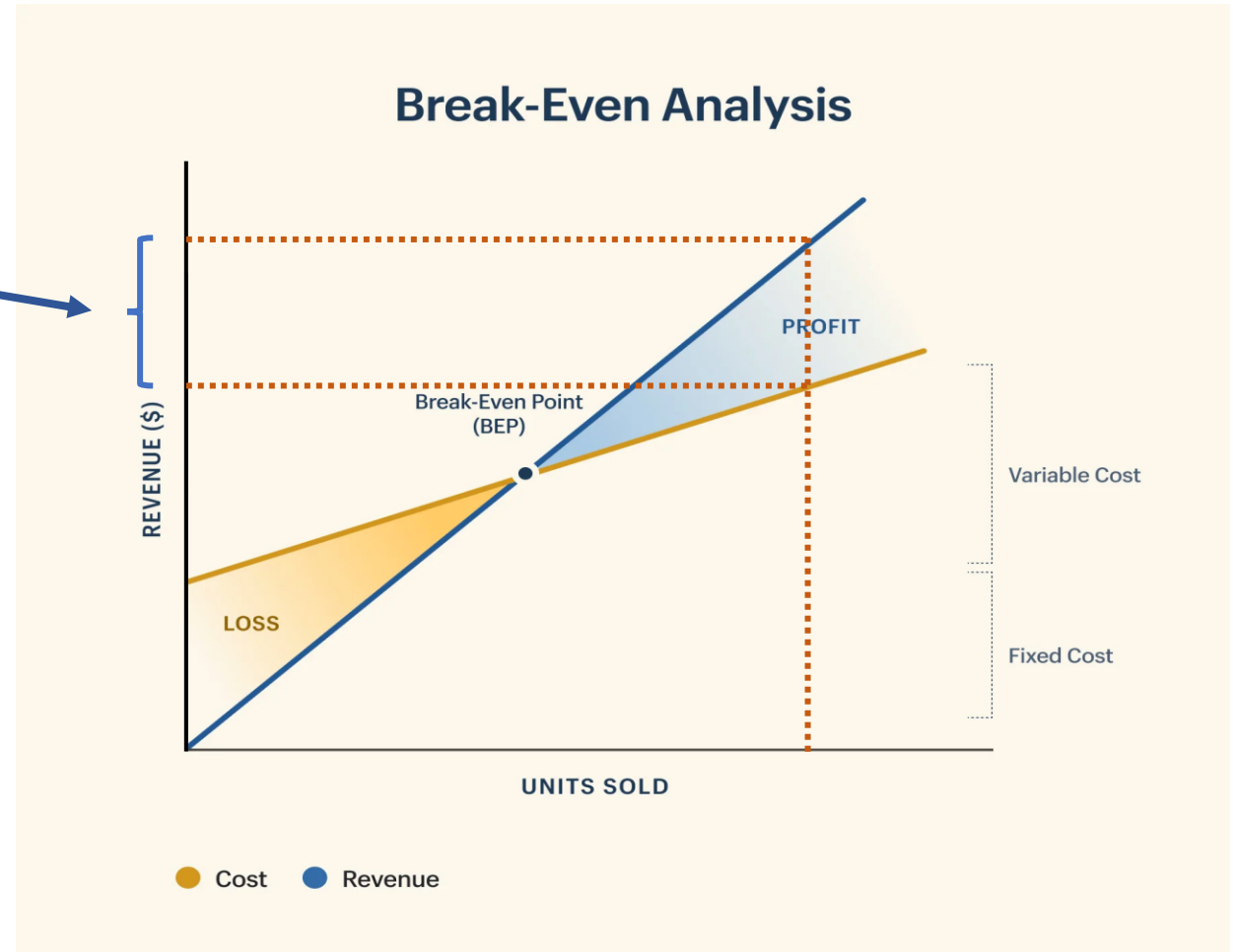
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- Price is an expression of value and not an expression of cost!
- Skimming of the consumer surplus is a must for profit maximizing.
- A ticket price reflects the entire O&D route with all flight segments.
- Ticket prices are influenced by
 - operating cost of aircraft,
 - competitive situation in comparison to other airlines operating the same O&D route,
 - profitability requirements and
 - passenger demand and price resilience (= change of operator and/or travel behaviour)



Will flight tickets surge?

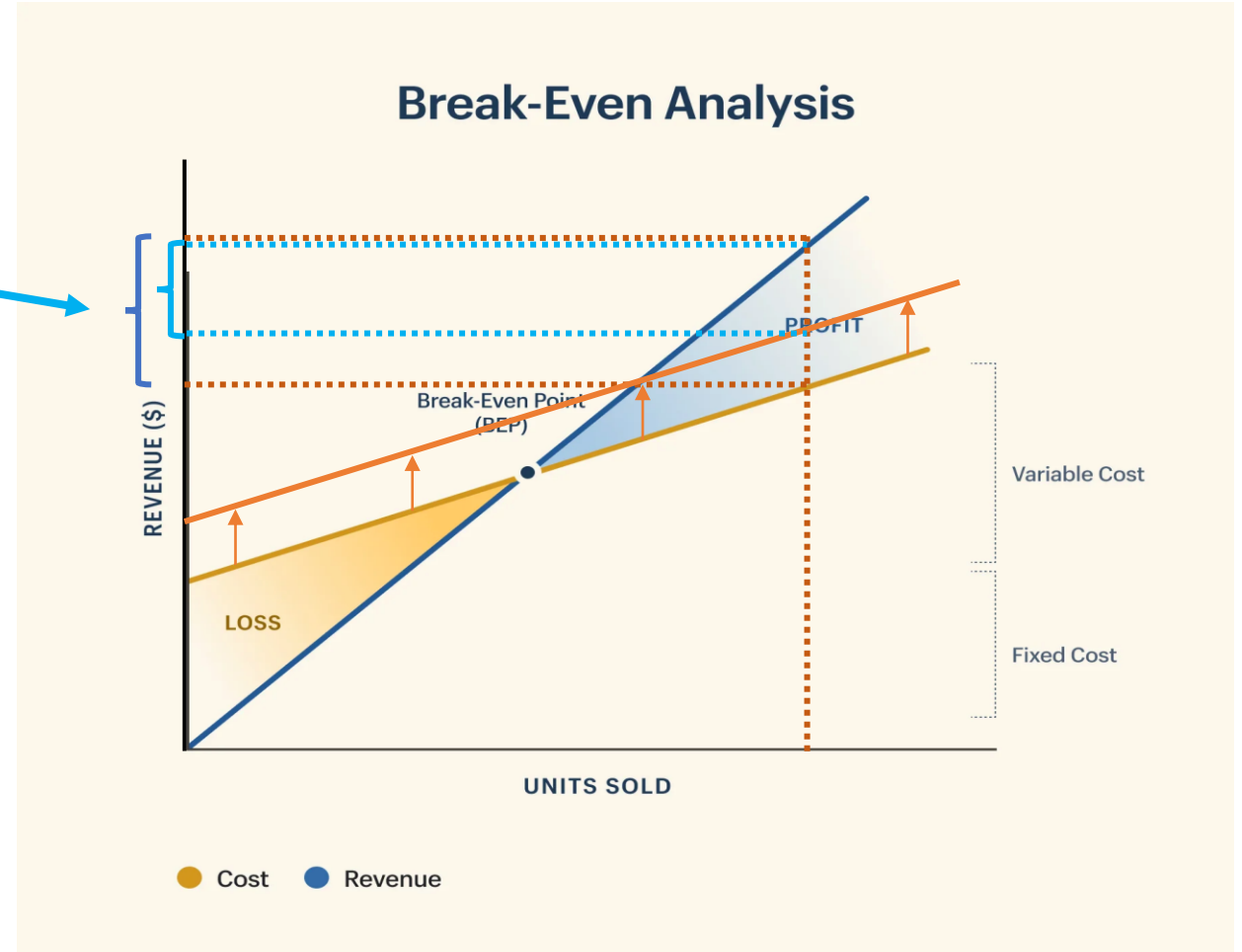
- A given point-to-point route with a dedicated demand leads to a profitable revenue level and profit margin.
- A cost increase leads to a parallel shift of the cost curve.
- The route profitability suffers.
- A price increase may stabilize the revenues but reduce demand.





Will flight tickets surge?

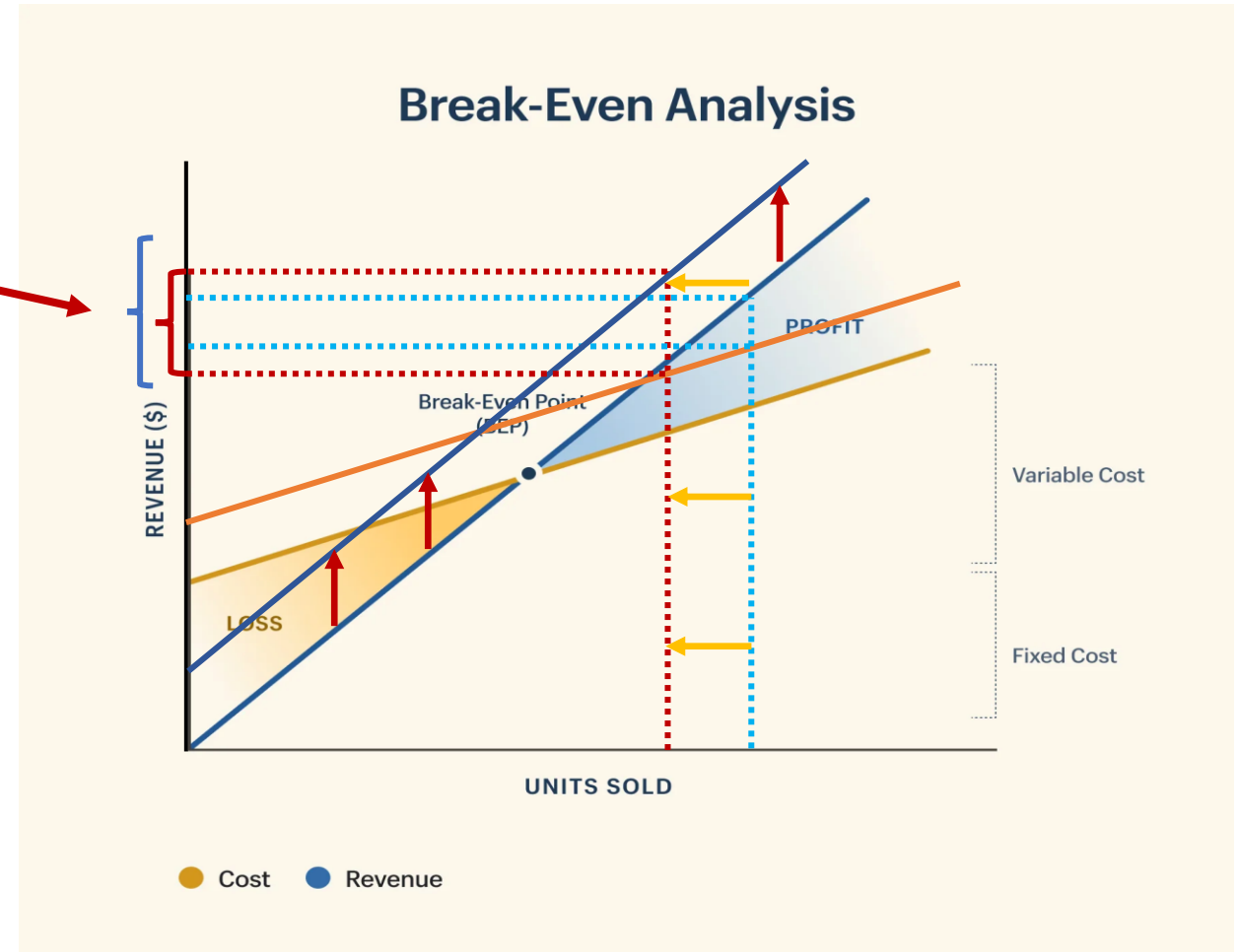
- The cost increase \uparrow reduces the profitability due to a smaller profit margin. {
- Demand is not affected as long as the ticket price remains unchanged.





Will flight tickets surge? YES!

- Higher ticket prices ↑ will partly compensate for the profit reduction. {
- Higher ticket prices will have a negative impact on demand.
- Overall: Airlines will adjust the ticket price to the extent of maximizing revenues as a function of demand volume and price.





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Thank you for your attention!

More information may be taken from the following books:
(CRC Press/Taylor&Francis; Routledge)

