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Headwinds & Opportunities

San Diego March 24, 2014

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VP Technical Services

Headwinds and Opportunities

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OEM Strategies
Capture and Control

Re-Fleet & Retirements
Surplus &Obsolete Parts

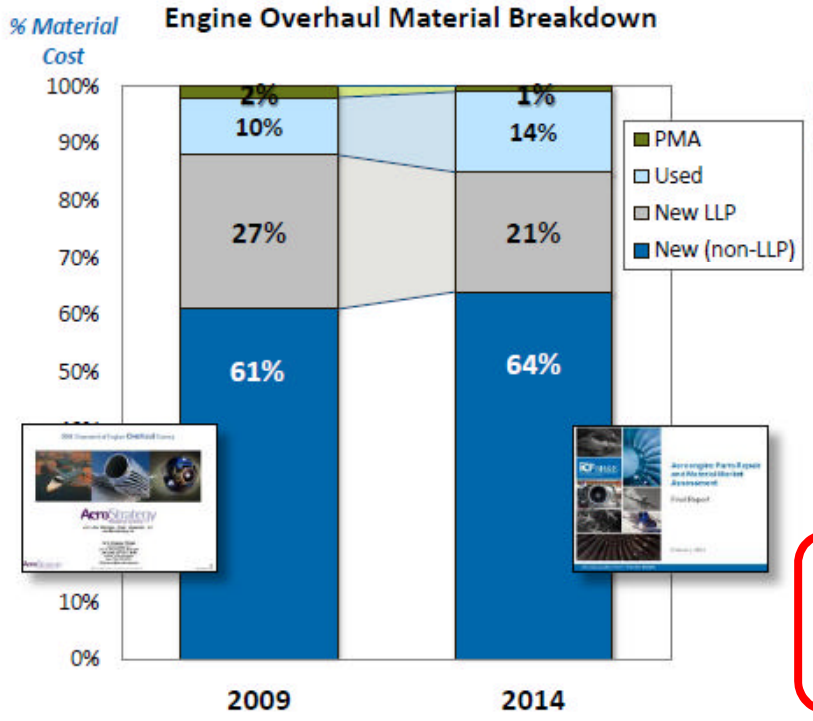
Fuel & Financing
Deferred Retirements?

Airline Profitability
Brand Focus
Focus on Savings?

OEM Material Strategies

ENGINE MRO INDUSTRY DYNAMICS

ICF recently performed a global engine parts repair assessment to quantify impact of recent trends in *engine overhaul material* usage



Source: ICF. Includes in-house engine parts repair

Highlights

- Use of surplus for engine overhaul increased by 4%
- Use of new LLPs down 6% as new gen engines enter fleet
- 3% growth in non-LLP related new parts can be attributed to the OEM engine MRO market share growth
- Engine OEM material strategies resulted in a significant reduction in PMA usage

New
Current
Sunset

© ICF International 2015

OEM Maintenance Capture

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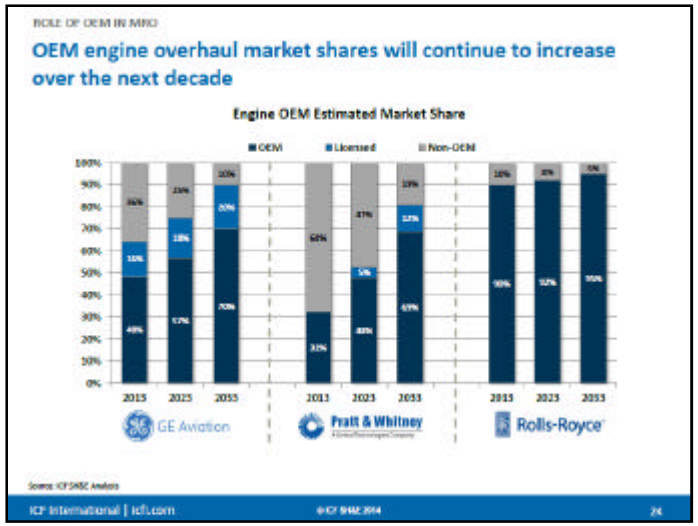

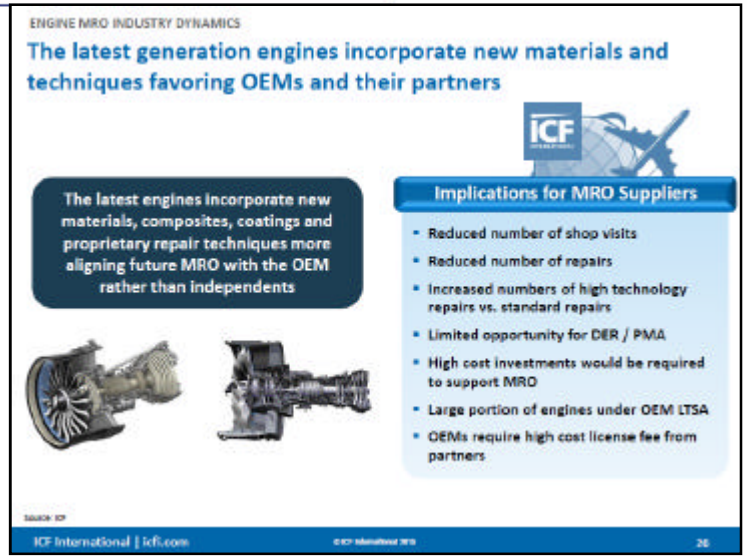

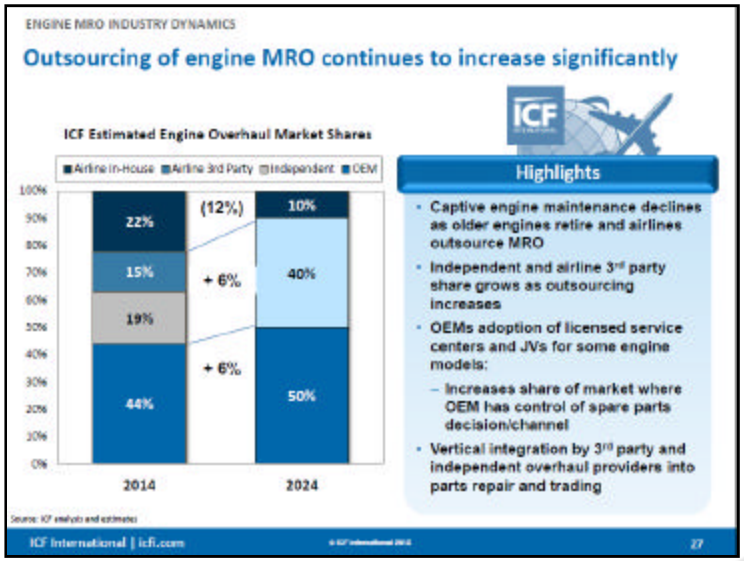

New

Current

Sunset

Re-Fleet & Retirements

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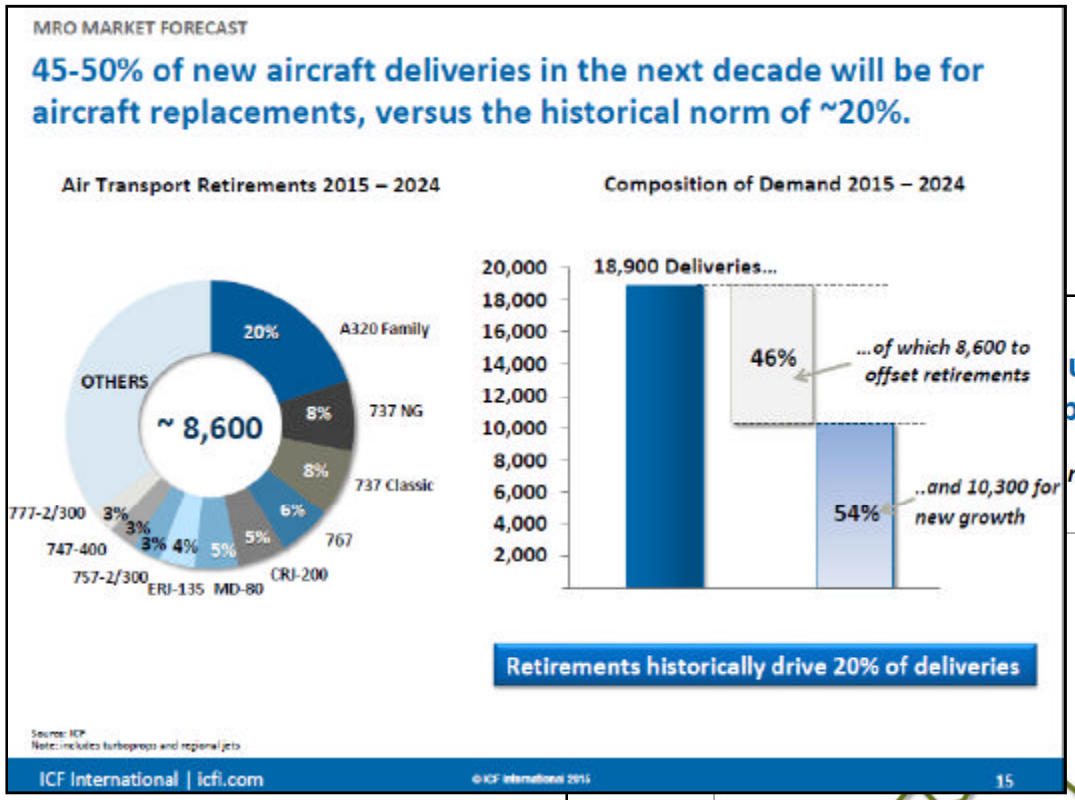
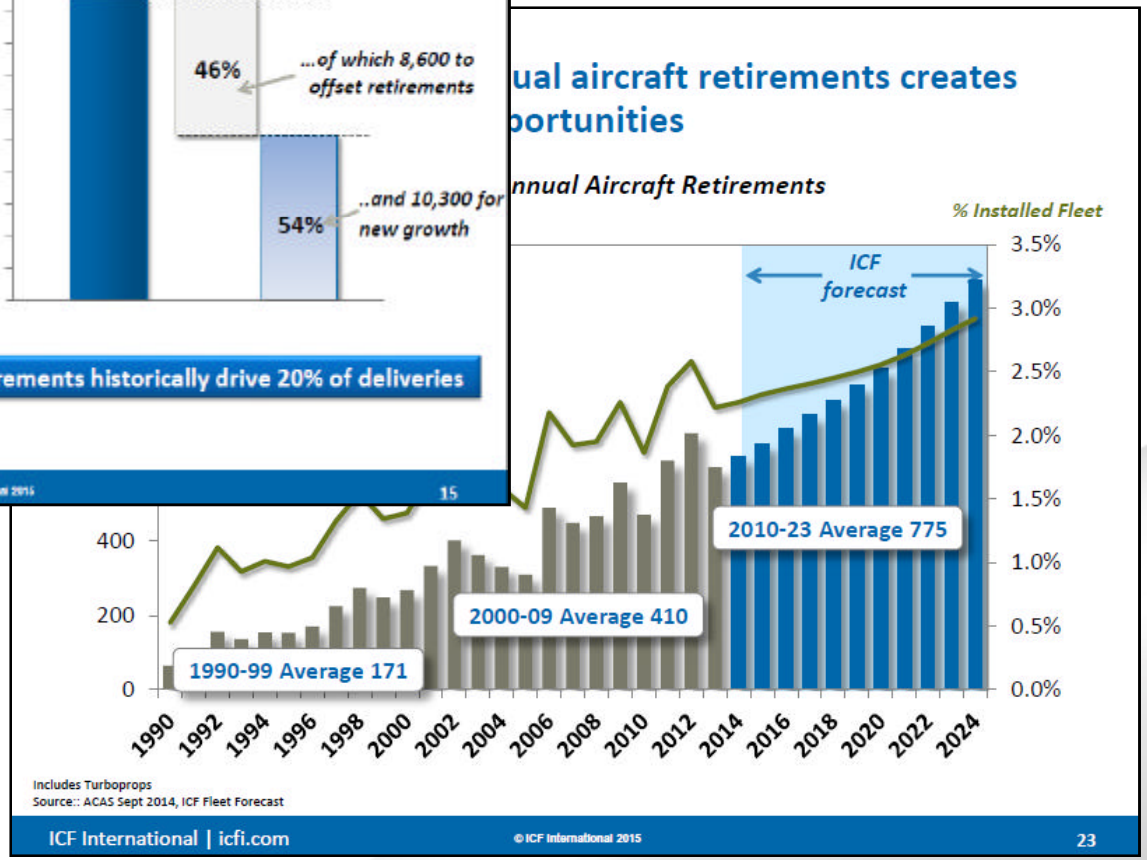


46% Offset
54% Growth



Re-Fleet & Retirements

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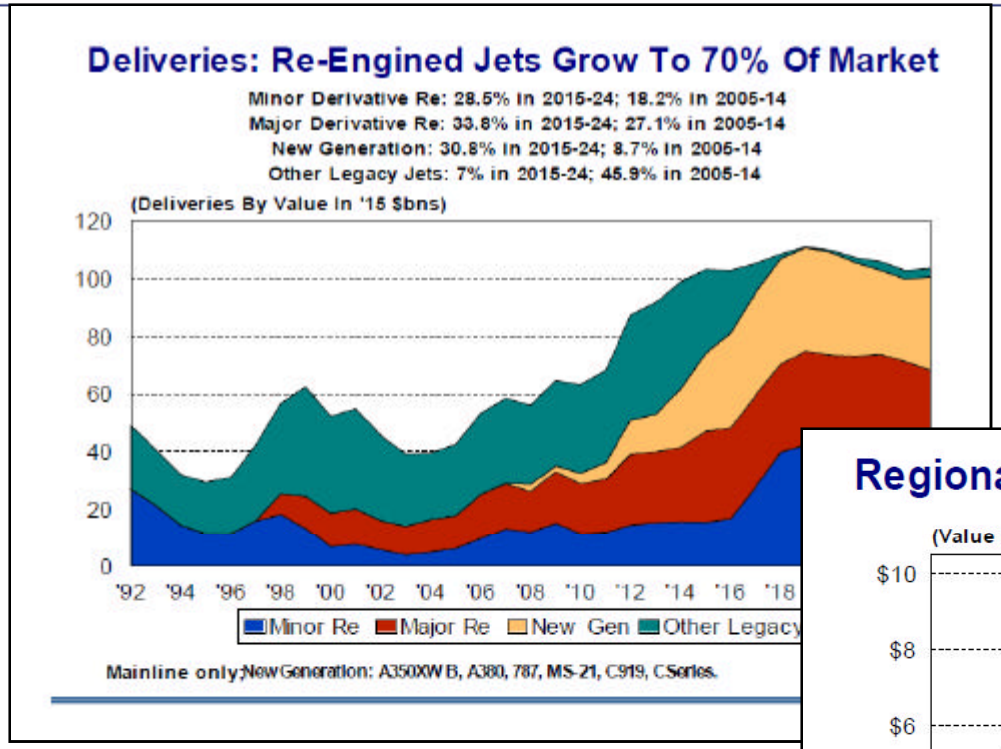
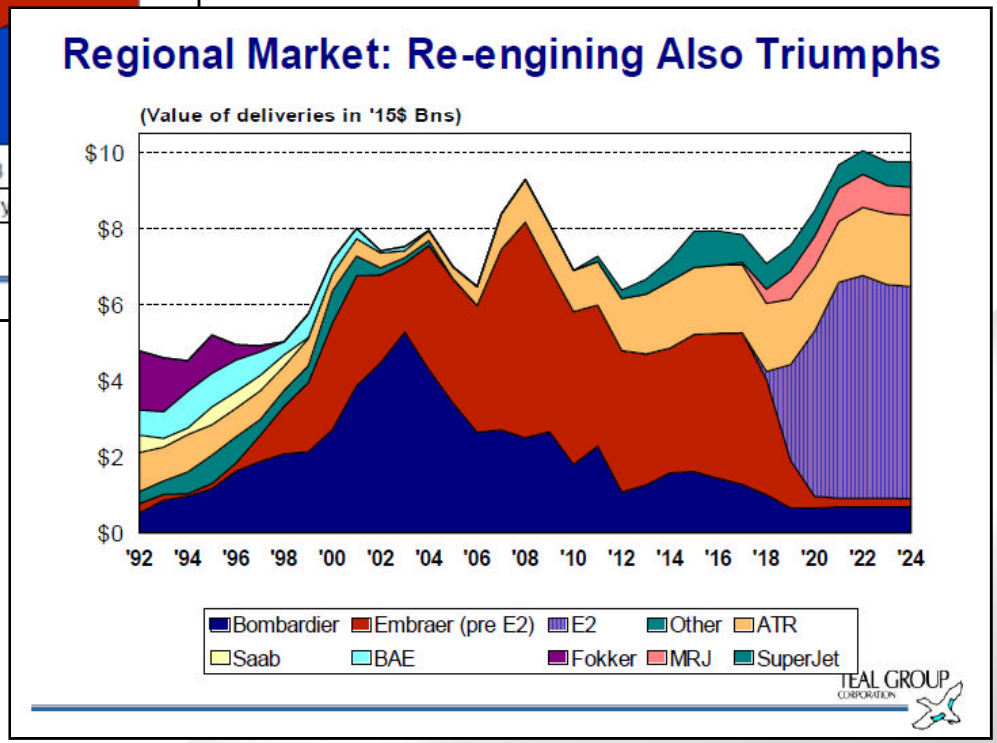


Drivers

High Fuel Costs

Low Capital Costs



Effects

Large Surplus Pools

Early Obsolescence

Maintenance Holiday!

Maintenance Holidays

- Less Maintenance
- Less Spares
- More Surplus

Holidays?

- Less MRO
- More Surplus
- Early Obsolescence
- New Development.. On What?

Funding and Financing

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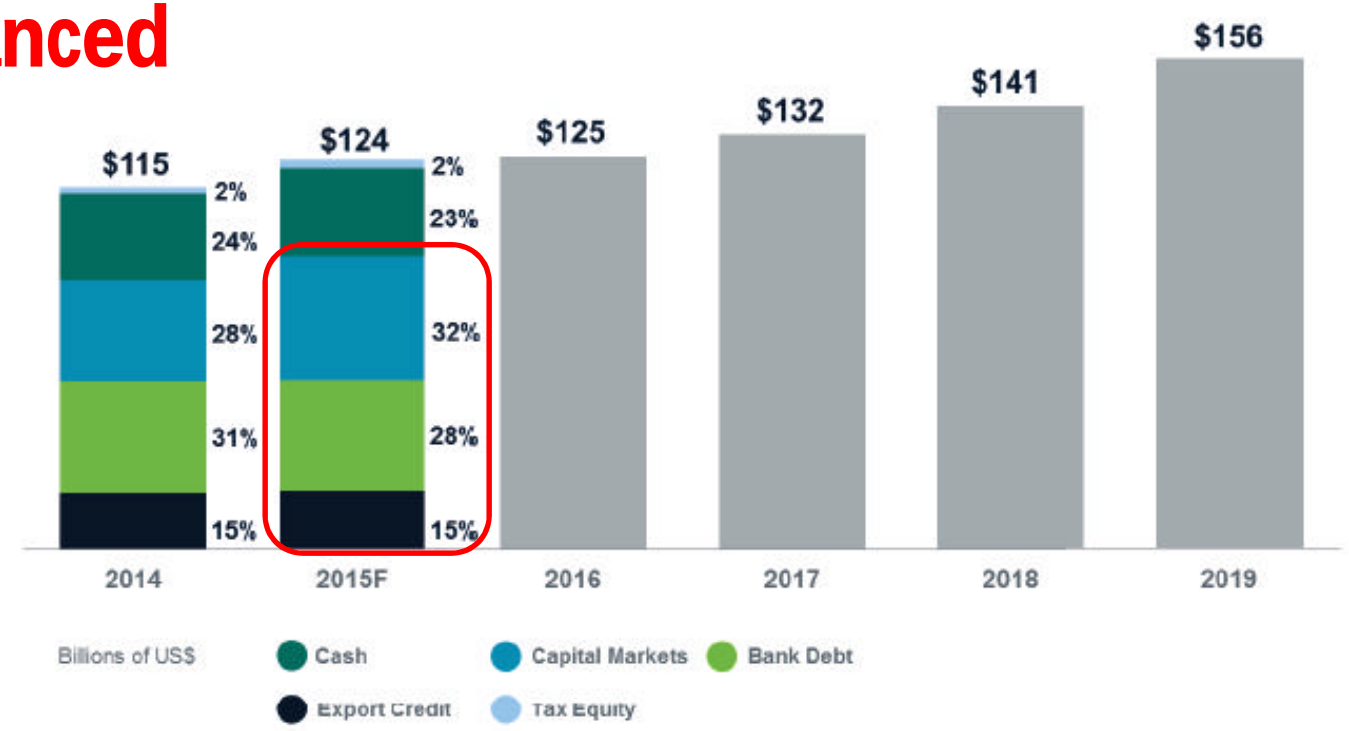
AVIATION CAPITAL GROUP

Growing delivery finance requirements

Financing forecast for global commercial airplane deliveries in 2015

75% Financed



Cost of Money

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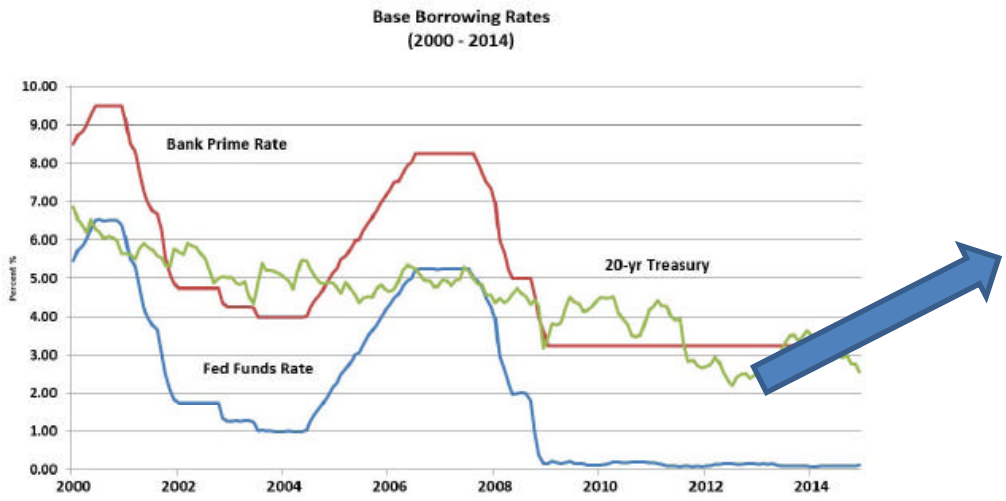
External Valuation Factors

Borrowing Rates

PB&W

Source: St. Louis Fed



Rates at all time lows

- Artificially low due to government intervention
- Worldwide trend – low interest rates
- May potentially lead to future valuation adjustments if rates rise quickly

Philpott Ball & Warner, LLC is a member firm FINRA/SIPC

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Rising Rates

It's not a question of "Will"

But when? and how much?

Fuel… Still Biggest

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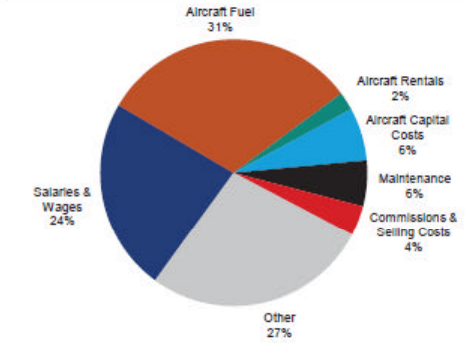
Aircraft fuel is largest operating cost

Bank of America Merrill Lynch

- Aircraft fuel remains the largest operating expense for US airlines

2014 Major US Airlines Operating Costs



Source: BofA Merrill Lynch Global Research, company reports

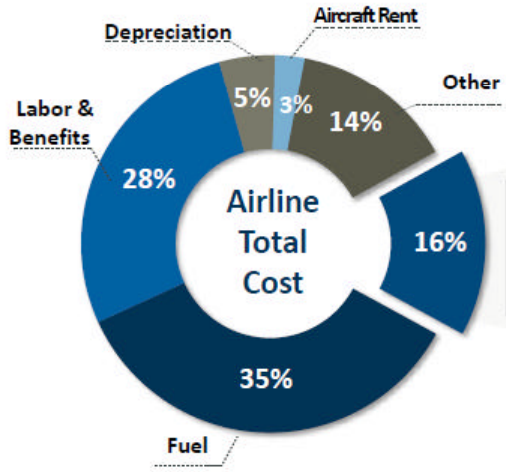
Note: Aircraft capital costs include net interest expense and depreciation. Other costs include outsourced costs to regional airlines, professional fees, insurance, food costs, etc.

Maintenance Still the most Controllable

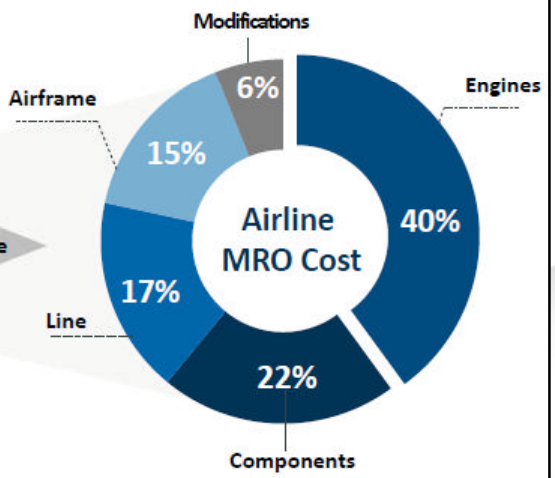
MRO MARKET FORECAST

Maintenance costs typically range between *15%-18%* of an airline's operating cost structure

Typical Airline Cost Breakdown



Typical Airline's MRO Cost Breakdown



Maintenance

Annual airline maintenance spend as a % of total cost will fluctuate year-to-year based on timing of major visits (e.g. airframe heavy checks & engine overhauls), fleet age, size, mix and perhaps most importantly the price of fuel

Source: ICF, Form 41

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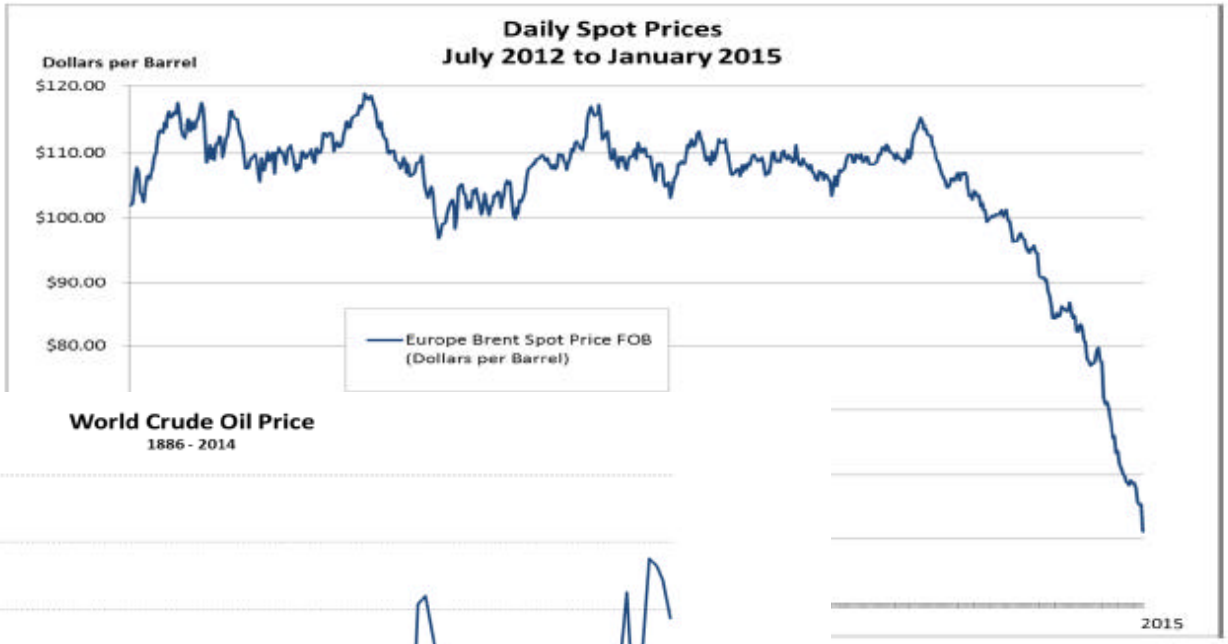
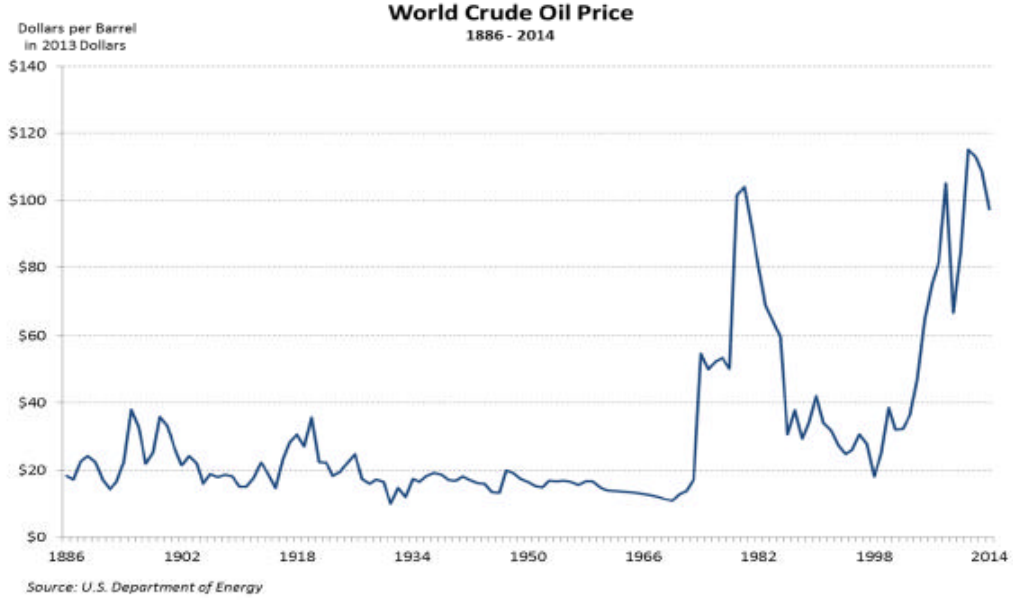
Oil Prices? Where will they Go?





Deferred Retirements?
Extended Leases?

Fleet Plans at $100 /bbl

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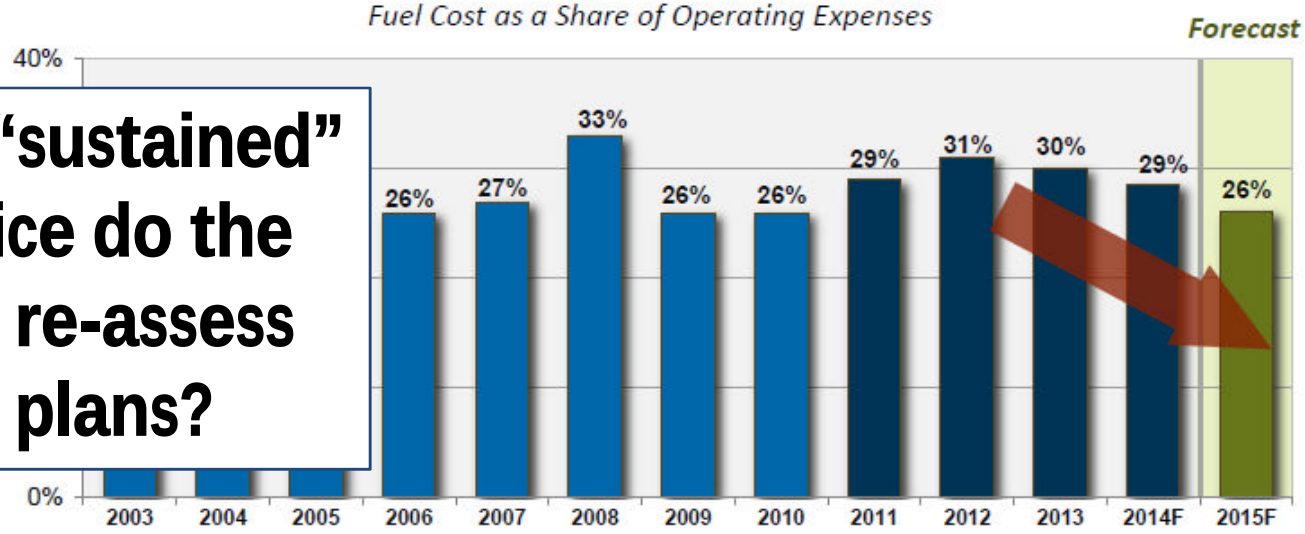
AVIATION INDUSTRY HEALTH & GROWTH INDICATORS

Most airlines' growth plans assume oil pricing of around $100/bbl, having proved *stable over the past decade…*

Evolution of Fuel Cost as a Share of Operating Expenses

Fuel Cost as a Share of Operating Expenses



At what "sustained" Fuel Price do the airlines re-assess fleet plans?

…resulting in plans for accelerated fleet replacement, and therefore record OEM backlogs…

Source: IATA Airline Industry Economic Report, December 2014

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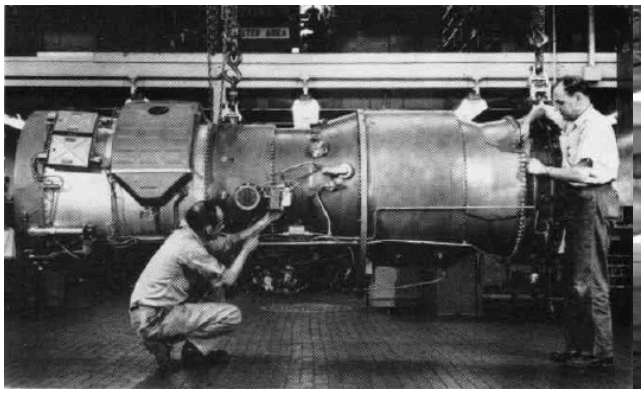
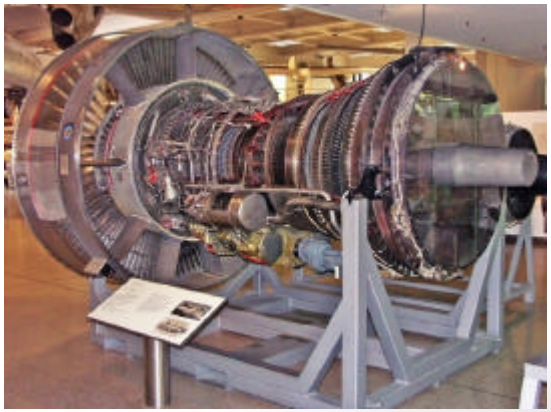
50+ years of **HEICO PMA**

1960s to 1990s JT4A and JT3D



1980s to 2000s JT8D and JT9D



2000+ Compressor Blades to Toilet Seats
Nose Cowls to Elevator Hinges
and everything in-between

HEICO PMA and DER Parts are Found Everywhere

Fuselage/Interiors

- In Flight Entertainment
- Lavatories
- Seat Parts
- Tray Tables
- Galleys
- Overhead Bins

Cockpit/Avionics

- INUs, IRUs
- Display Units
- DGAs
- Instruments
- Autopilots
- Radomes
- Nose Cowls
- Battery Packs
- Cockpit Paper

Landing Gear

- Wheels and Brakes
- Landing Gear

Engines Parts

- Fuel Pumps
- Nozzles
- Gears
- Shafts
- Bearings
- Starters
- Rings & Spacers
- Expendables

Engines Supported:

- CFM56
- CF6
- CF34
- PW2000
- PW4000
- V2500
- JT8D
- JT9D
- LM2500/5000/6000

Wing

- Flight Controls
- Actuation Systems
- Guides

Components

- Electro-Mechanical
- Hydraulic Pumps
- ACMs, CSD/IDG
- Batteries
- APUs

Engines

- Combustion Chambers
- Blades & Vanes
- Fan Exit Guide Vanes
- Shrouds (single crystal & equiax)
- Thrust Reversers
- Acoustic Panels
- Pneumatic/Bleed/Anti Ice Valves
- Heat Shields
- Insulation Blankets

Profitability A New Era?

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AVIATION INDUSTRY HEALTH & GROWTH INDICATORS

Driven by a combination of capacity discipline, airline consolidation, and lower fuel costs, the airline industry has *sustained profitability*...

Source: IATA Central Forecast Dec 2014

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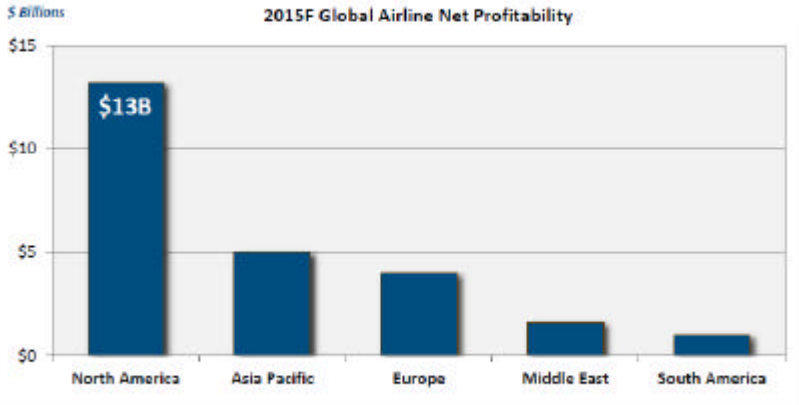
<u>US Profitability...</u>

Brand Focus

Focus on Savings?

AVIATION INDUSTRY HEALTH & GROWTH INDICATORS

...and over 50% of that profit is expected to be generated by North American airlines



Source: IATA Central Forecast Dec 2014

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On a 757 Aircraft, passenger comments

"I like flying this airline... They buy new planes."

Opportunities and Challenges

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- Re-fleeting Drives
  - Maintenance Holidays
  - Surplus Competition
  - Early Obsolescence
- Are you Positioned
  - Restart after the Holiday?
  - Manage the Exit
  - Manage the re-Entry
  - Follow the “Up Change” (new Fleet)
- Do you Have?
  - Stamina
  - Breadth
  - Flexibility
  - Vision
  - Critical Mass

Humble Beginnings to Brave New Ventures

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1980s

A dramatic increase in demand for the JT8 Combustor in the mid-to-late 1980s fueled HEICO's growth as the world's premier non-OEM, FAA-approved aircraft replacement parts manufacturer. Since then, HEICO has shipped over 56 million parts.

Today

HEICO rises beyond the limits of Earth, reaching Mars with critical components operating on NASA's Curiosity.

Rover's Mission: Detect the chemical building blocks of life