



Airfinance EVENTS

14th Annual **European Airfinance Conference Dublin**



Adam Pilarski, AVITAS, Inc.

Pilarski Says.....Drink!

AVITAS[®]



Airfinance EVENTS

14th Annual **European Airfinance Conference Dublin**

Céad mile fáilte go dti Eirinn, ar dtir iontach.

Welcome to wonderful Ireland

AVITAS[®]



Airfinance EVENTS

14th Annual **European Airfinance Conference Dublin**

*Athbhliain nua an dragún faoi mhaise
daoibh.*

Happy New Year of the Dragon

AVITAS[®]



Airfinance EVENTS

14th Annual **European Airfinance Conference Dublin**

Gaeilge nua aimseartha.

Modern Gaelic

AVITAS[®]



Airfinance EVENTS

14th Annual **European Airfinance Conference Dublin**

新年快乐

Happy New Year



AVITAS[®]



Airfinance EVENTS

14th Annual **European Airfinance Conference Dublin**

This Year



Last Year



AVITAS[®]



Airfinance EVENTS

14th Annual **European Airfinance Conference Dublin**

What to Expect This Year?

AVITAS[®]

14th Annual **European Airfinance Conference Dublin**

Last Year

■ Dramatic Events

- Airbus – Neo
- Boeing – Max
- Embraer strategy unveiled
- PW/Leap-X
- IAE Future





14th Annual **European Airfinance Conference Dublin**

This Year

■ **Aviation – Nothing Super Exciting**

- How Many 787 Produced?
- Flight of CSeries?
- Progress in definition of Neo, Max, A350





14th Annual European Airfinance Conference Dublin

Potential Negatives/Risks

- Oil
 - Iran
 - Upheaval in Middle East
- Economy
 - Europe Recession
 - ◆ What if Greece leaves Euro?
 - China Slowdown
- Traffic
 - The Curious Case of Freight Traffic



Airfinance EVENTS

14th Annual **European Airfinance Conference Dublin**

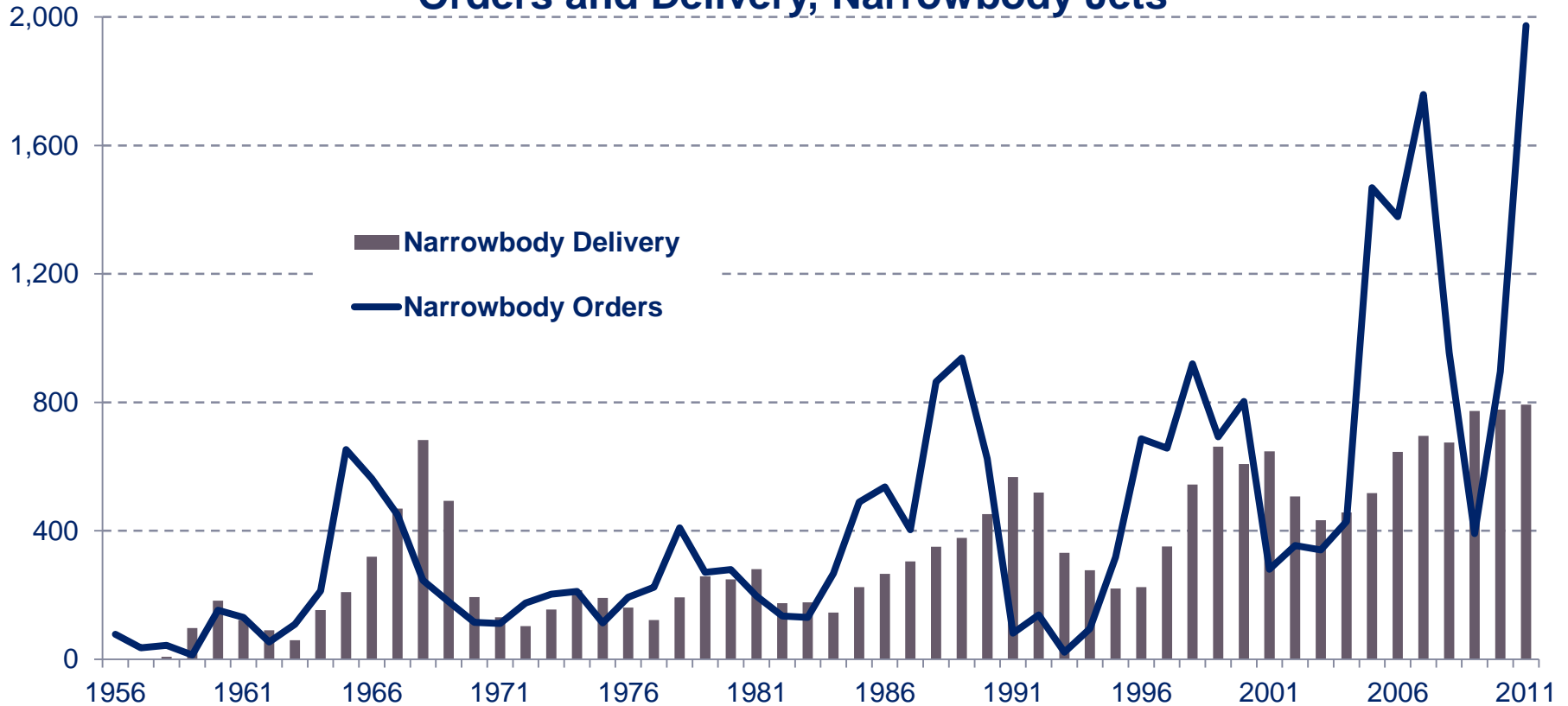
The Case of Over-ordering Aircraft

AVITAS[®]



14th Annual European Airfinance Conference Dublin

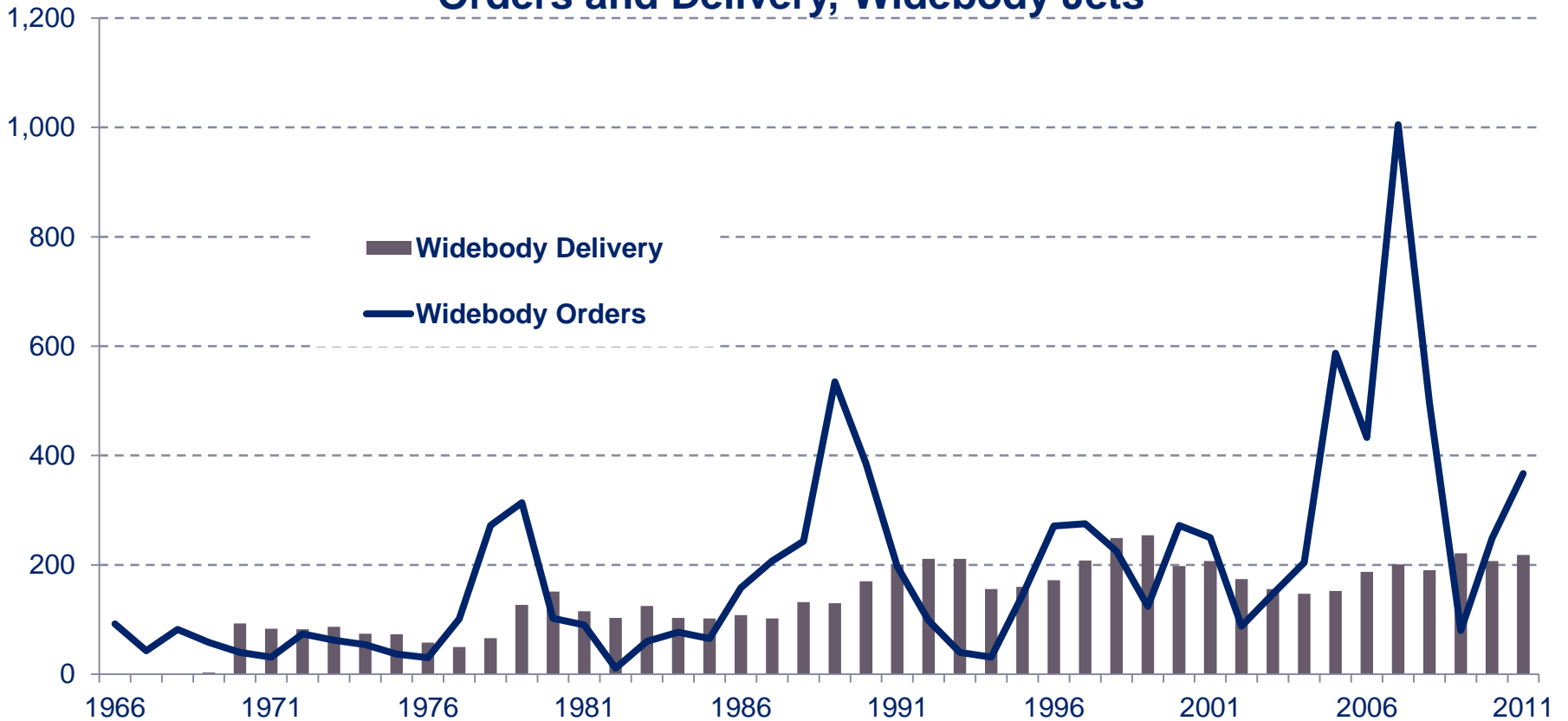
Orders and Delivery, Narrowbody Jets





14th Annual European Airfinance Conference Dublin

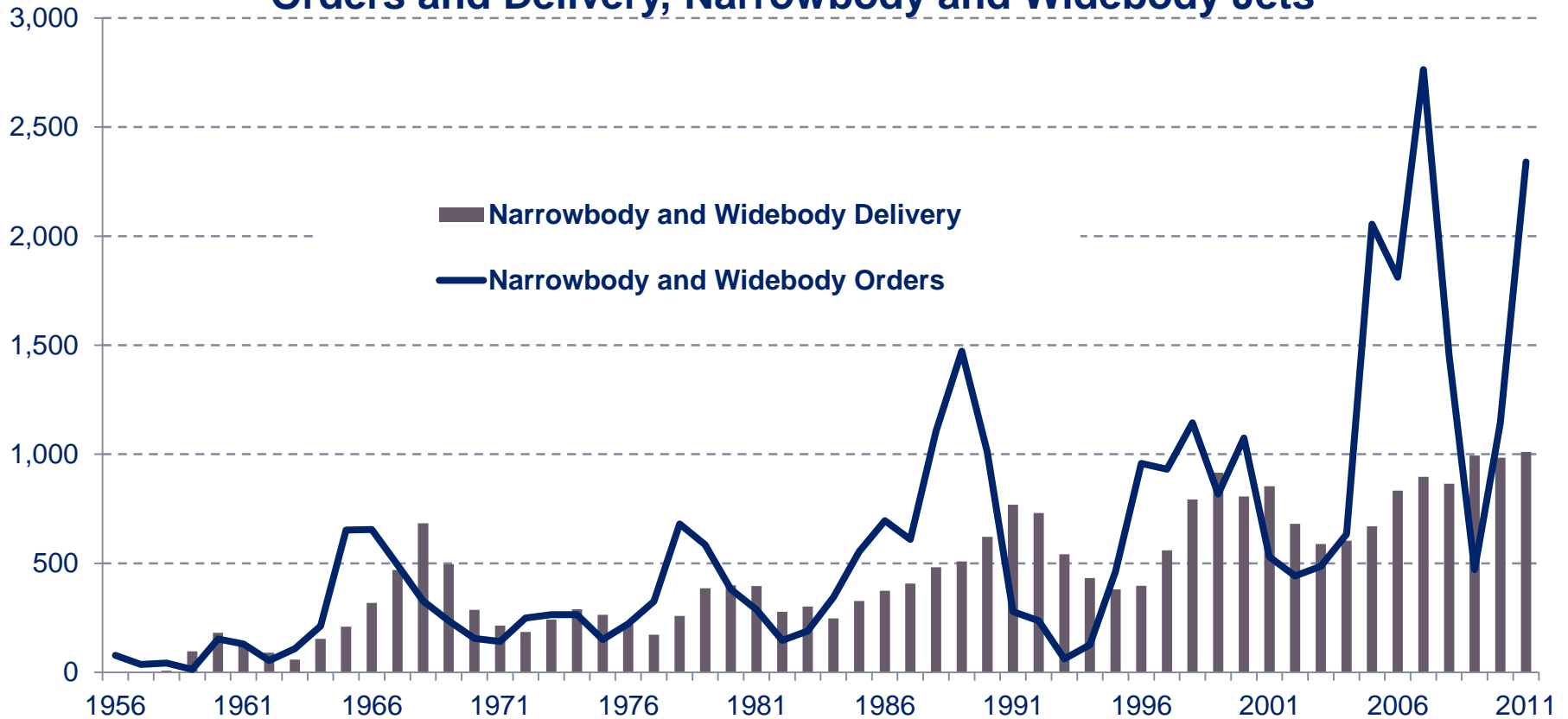
Orders and Delivery, Widebody Jets





14th Annual European Airfinance Conference Dublin

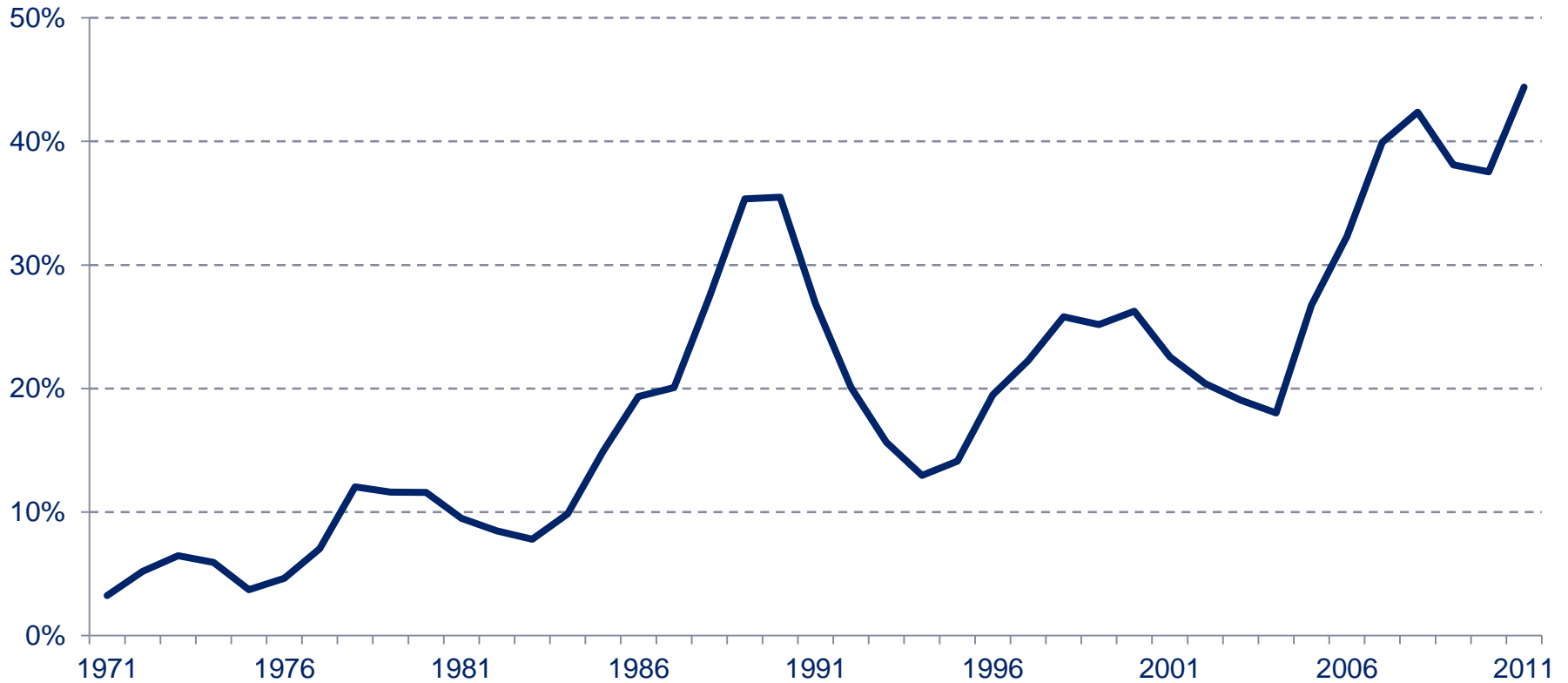
Orders and Delivery, Narrowbody and Widebody Jets





14th Annual **European Airfinance Conference Dublin**

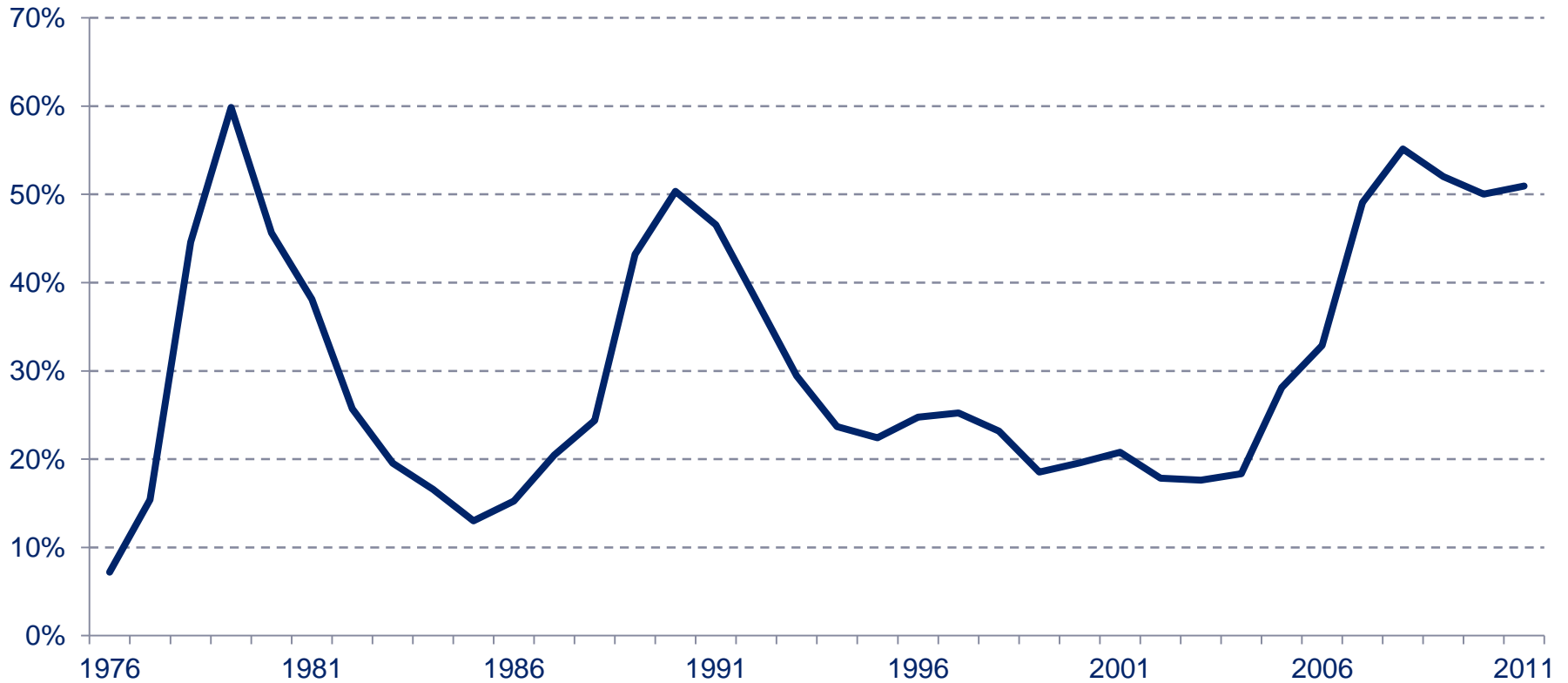
Backlog as Percentage of Active Fleet, Narrowbody Jets





14th Annual **European Airfinance Conference Dublin**

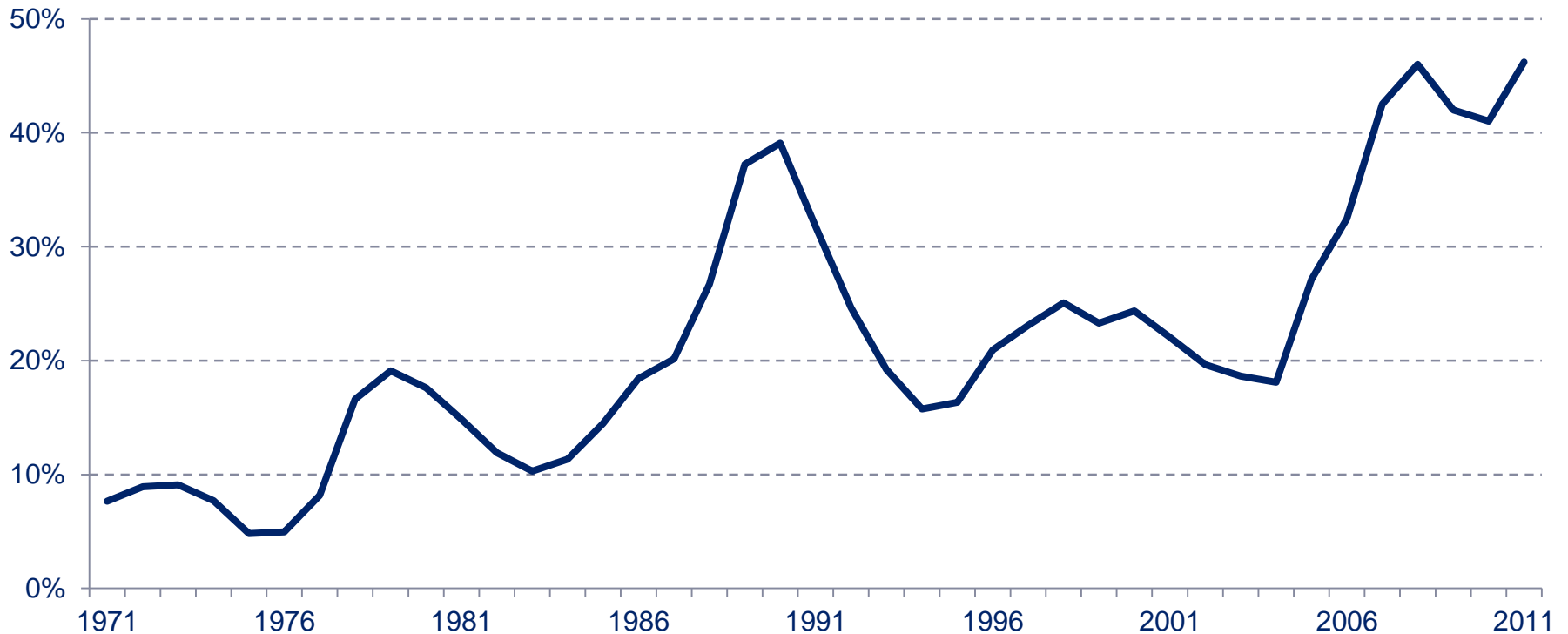
Backlog as Percentage of Active Fleet, Widebody Jets





14th Annual **European Airfinance Conference Dublin**

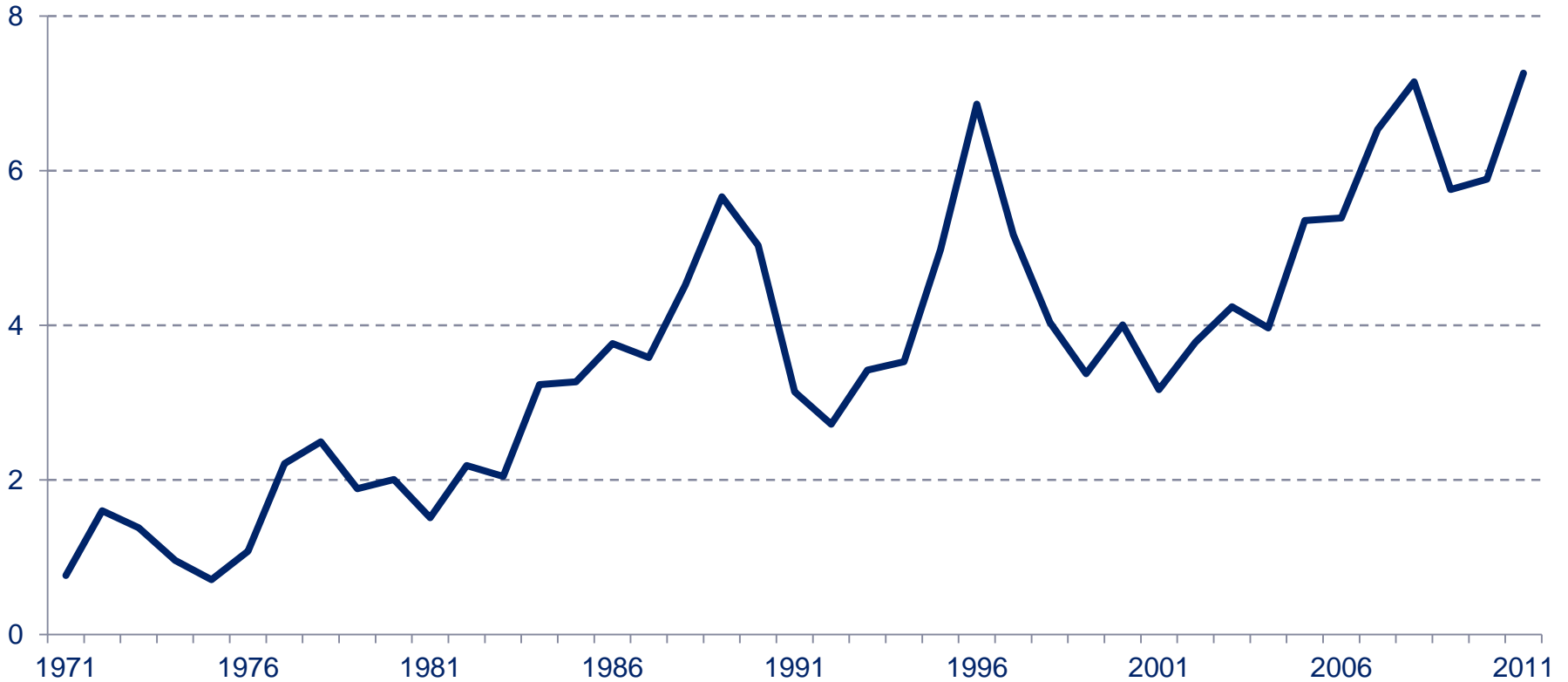
Backlog as Percentage of Active Fleet, Narrowbody and Widebody Jets





14th Annual European Airfinance Conference Dublin

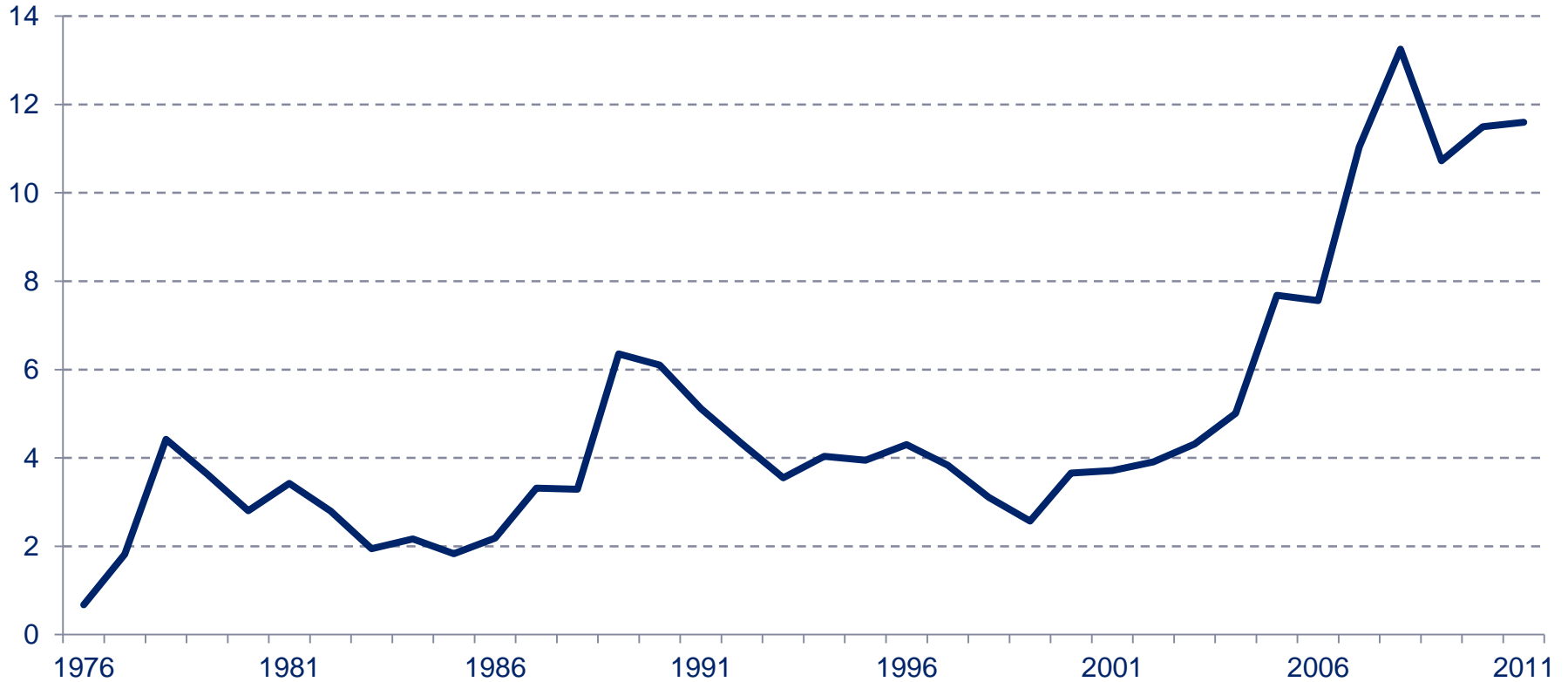
Backlog as Multiples of Annual Production, Narrowbody Jets





14th Annual **European Airfinance Conference Dublin**

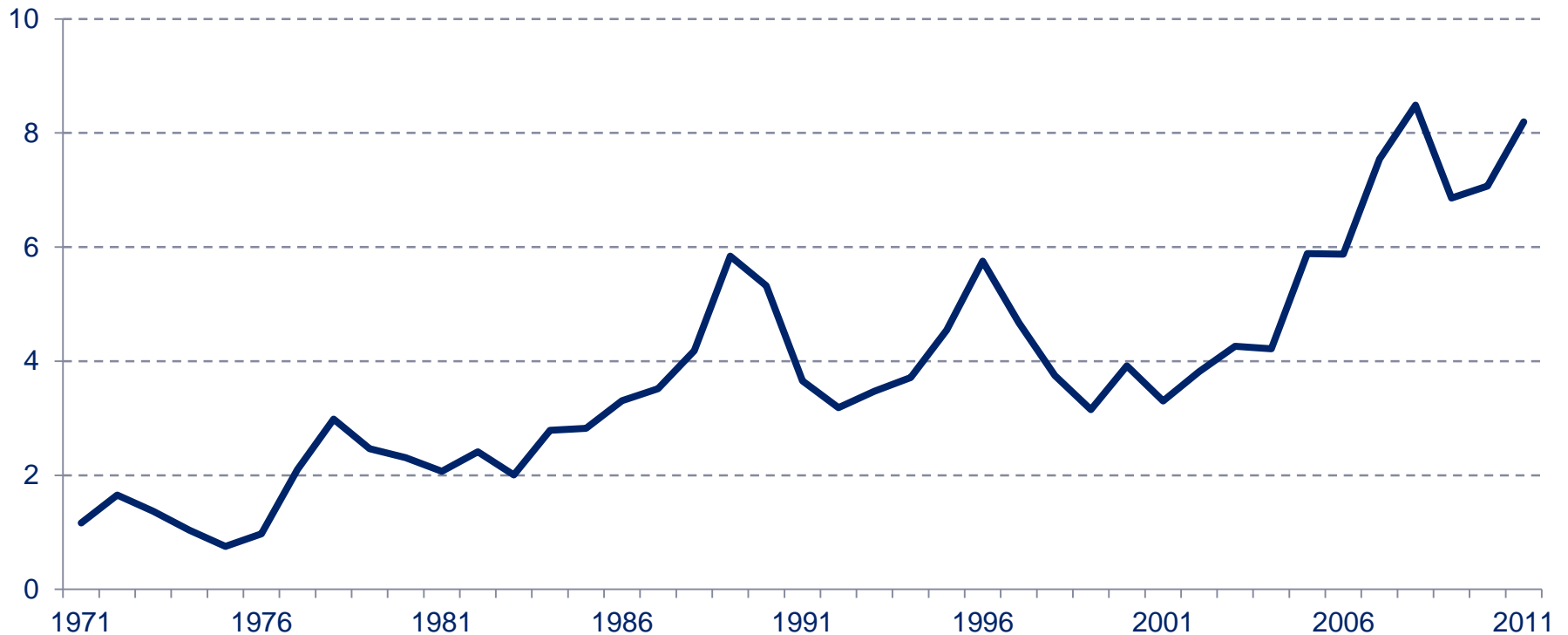
Backlog as Multiples of Annual Production, Widebody Jets





14th Annual **European Airfinance Conference Dublin**

Backlog as Multiples of Annual Production, Narrowbody and Widebody Jets





14th Annual **European Airfinance Conference Dublin**

- Are these reasonable orders?
- Back of envelope calculations re production



Airfinance EVENTS

14th Annual **European Airfinance Conference Dublin**

Narrowbody aircraft
(next 20 years)

AVITAS[®]



Airfinance EVENTS

14th Annual **European Airfinance Conference Dublin**

Forecasts (2011-2030)

| | |
|---------|--------------|
| Airbus | 19165 |
| Boeing | <u>23370</u> |
| Average | 21267.5 |

AVITAS[®]



14th Annual **European Airfinance Conference Dublin**

Production (monthly)

**Airbus
(Excluding China)**

42 aircraft in 2012

Boeing

42 aircraft in 2014



14th Annual **European Airfinance Conference Dublin**

Production

- Both plan much higher production
- Assume 12 months Boeing, 11.5 months Airbus
- Historical growth in production for last 20 years of 2.5% annually



Airfinance EVENTS

14th Annual **European Airfinance Conference Dublin**

And the number is.....

23,757

AVITAS[®]



14th Annual **European Airfinance Conference Dublin**

Or

- Close to Boeing forecast
- 2489.5 over average forecast



14th Annual **European Airfinance Conference Dublin**

And what about ?

- C Series
- C919
- MS21



Ed Greenslet forecast of CSeries/C919/MS21

3785

Total “Excess”

$$3785 + 2489.5 = 6274.5$$



Airfinance EVENTS

14th Annual **European Airfinance Conference Dublin**

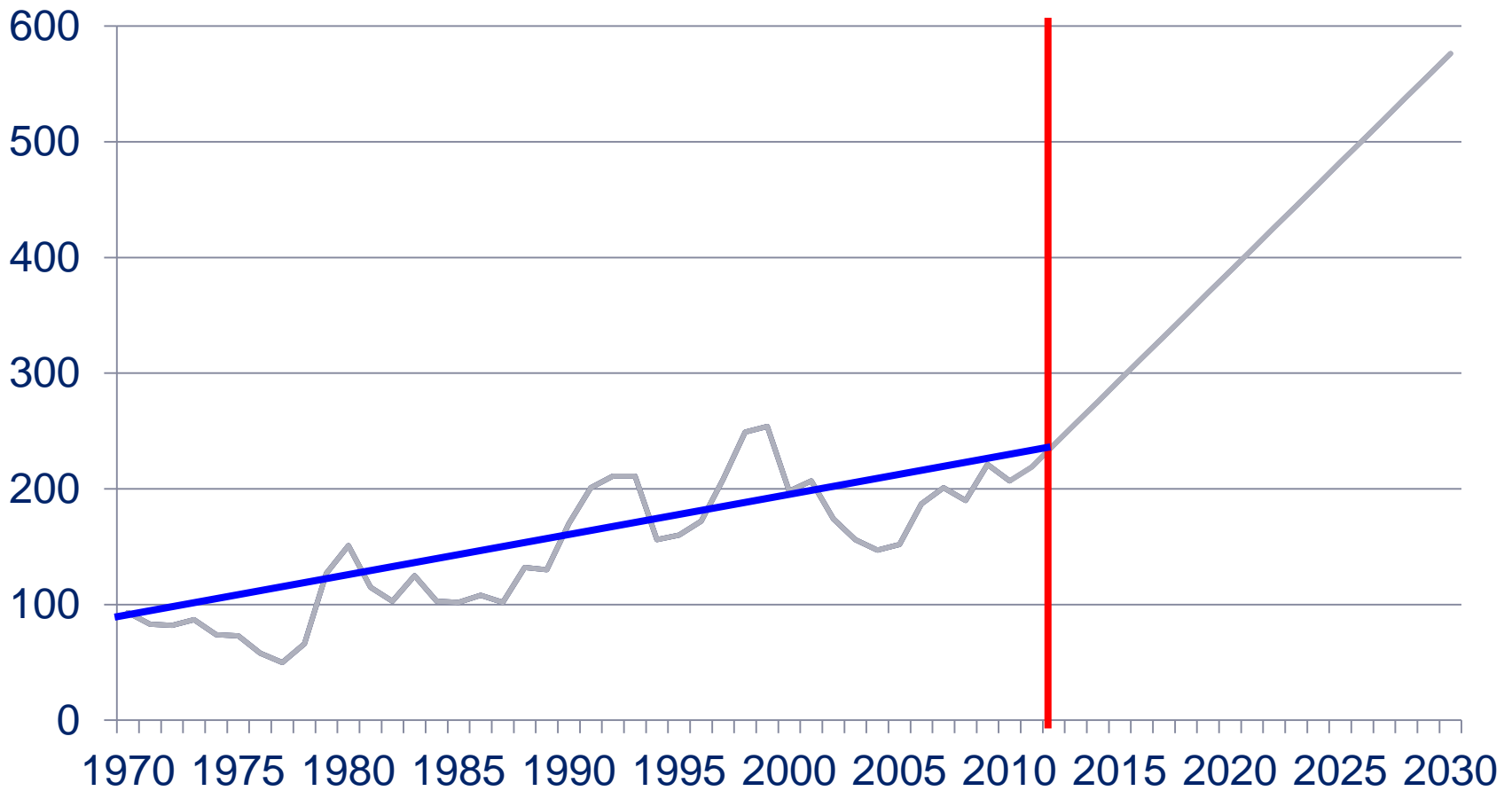
Widebody aircraft
(next 20 years)

AVITAS®



14th Annual **European Airfinance Conference Dublin**

Widebody Delivery, History and Forecast





Airfinance EVENTS

14th Annual **European Airfinance Conference Dublin**

Forecasts (2011-2030)

| | |
|---------|-------------|
| Airbus | 7756 |
| Boeing | <u>8150</u> |
| Average | 7953 |

AVITAS[®]



14th Annual **European Airfinance Conference Dublin**

Production

- Existing level
- Historical growth in production for last 20 years of 1% annually



Airfinance EVENTS

14th Annual **European Airfinance Conference Dublin**

And the number is.....

4800

AVITAS[®]



Airfinance EVENTS

14th Annual **European Airfinance Conference Dublin**

Use narrowbody average of 2.5% annually

5569

AVITAS[®]



Airfinance EVENTS

14th Annual **European Airfinance Conference Dublin**

7953

And the annual growth is

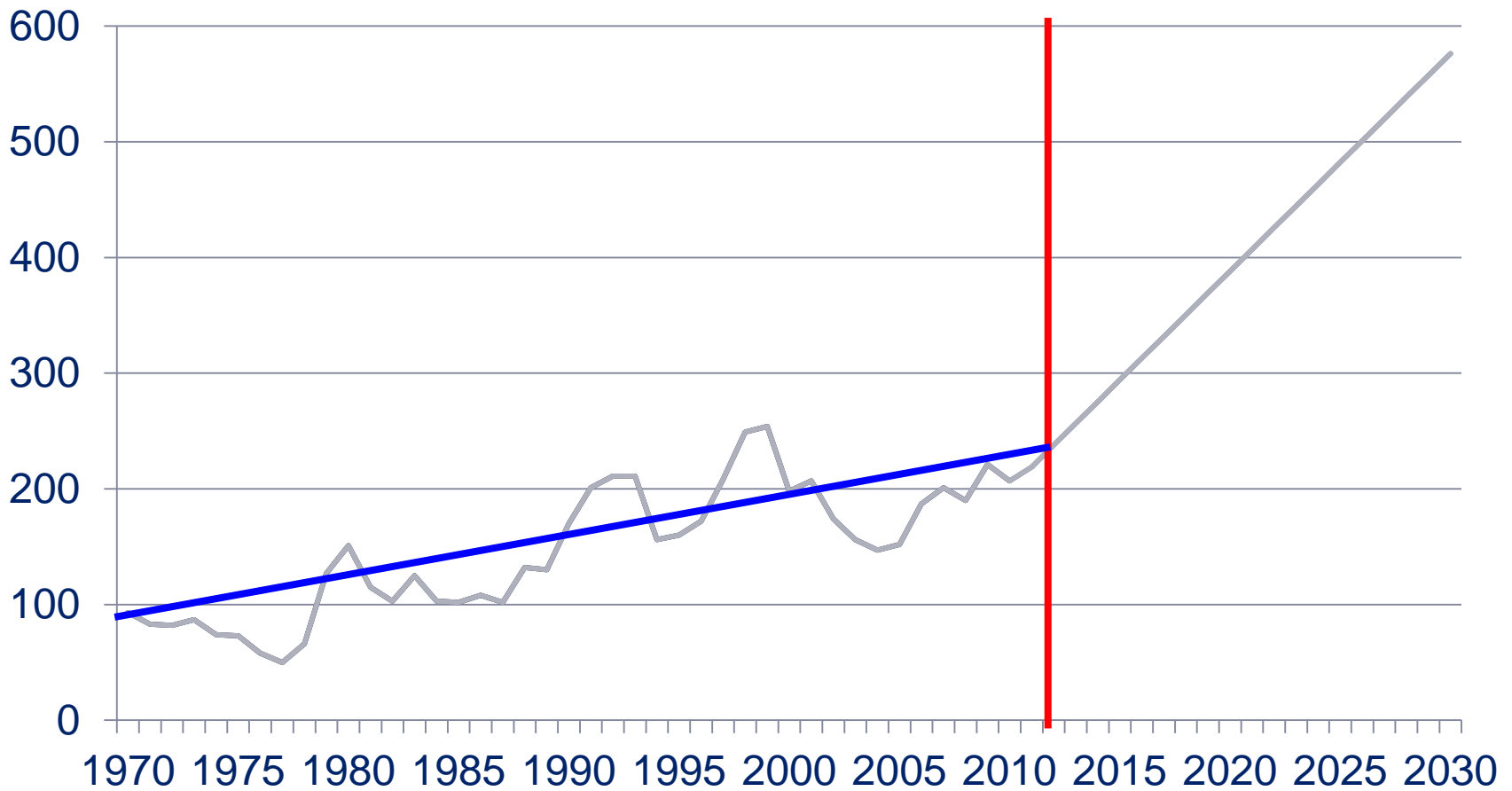
5.9%

AVITAS[®]



14th Annual European Airfinance Conference Dublin

Widebody Delivery, History and Forecast





Airfinance EVENTS

14th Annual **European Airfinance Conference Dublin**

But 7953 assumes 17 aircraft/month each

AVITAS[®]



14th Annual **European Airfinance Conference Dublin**

Possible Outcomes

- Orders will decline
- Production will grow at much higher rates than before



14th Annual **European Airfinance Conference Dublin**

Possible Bubble Bursters

- Significant world recession
- Sky-high oil prices
- Middle East collapse
- Funding problems
- Mayans were right – world ends



14th Annual **European Airfinance Conference Dublin**

Alternative Scenarios

- Higher retirements
 - New products
 - Environmental concerns
- Shorter economic life
- Continuing high oil prices



Airfinance EVENTS

14th Annual **European Airfinance Conference Dublin**

Retirements

AVITAS[®]



14th Annual **European Airfinance Conference Dublin**

Narrowbody (2011-2030) Forecasts

| | |
|---------|-------------|
| Airbus | 7877 |
| Boeing | <u>7720</u> |
| Average | 7799 |



Airfinance EVENTS

14th Annual **European Airfinance Conference Dublin**

Actual retirements in last 20 years

3928

AVITAS[®]



Airfinance EVENTS

14th Annual **European Airfinance Conference Dublin**

Parked aircraft

AVITAS[®]



Airfinance EVENTS

14th Annual **European Airfinance Conference Dublin**

Actual retirements in last 20 years
plus Δ parked fleet

4573

AVITAS[®]



14th Annual **European Airfinance Conference Dublin**

As percent of fleet

Last 20 years 2.05%

Plus Δ parked 2.38%

Next 20 years 2.00%

AVITAS[®]



14th Annual **European Airfinance Conference Dublin**

Widebody (2011-2030) Forecasts

| | |
|---------|-------------|
| Airbus | 2622 |
| Boeing | <u>2850</u> |
| Average | 2736 |



14th Annual **European Airfinance Conference Dublin**

Actual retirements in last 20 years

1233

plus Δ parked fleet

1442

AVITAS[®]



14th Annual **European Airfinance Conference Dublin**

As percent of fleet

Last 20 years 1.62%

Plus Δ parked 1.9%

Next 20 years 1.8%

AVITAS[®]



14th Annual **European Airfinance Conference Dublin**

Conclusion

- Over-ordering a fact (according to Adam)
- If production follows, potentially overproduction with negative impact on values
- Alternative scenario possible with larger retirements
- My belief is bubble will burst or deflate, helping values
- For values please talk to Doug Kelly, a good Irish boy

AVITAS[®]



Airfinance EVENTS

14th Annual **European Airfinance Conference Dublin**

Other Irish/Drinking Issues

AVITAS[®]



Airfinance EVENTS

14th Annual **European Airfinance Conference Dublin**

BBC NEWS

MAGAZINE

5 December 2011 Last updated at 19:00 ET

Why are so many airline bosses Irish?

'There must be something in the water - or the Guinness, because there's certainly a very special Irish connection with aviation. The global aviation business is crowded - though not, I think, overcrowded - with Irish aviation executives like Willie Walsh, Dermot Mannion, Michael O'Leary and Conor McCarthy.'

Alan Joyce, Qantas

AVITAS[®]

14th Annual **European Airfinance Conference Dublin**

Another version of Modern Gaelic

"Lataj jak orzeł, ląduj jak Wrona..."

... "Fly like an eagle, land like a Crow"

- Cptn Wrona, 54, saved the lives of 231 passengers
- President announces state decoration for national hero
- 'I'd happily fly the same plane again,' says Wrona





14th Annual **European Airfinance Conference Dublin**

**'Plane romp' Guinness heiress is
CLEARED. . . because she wasn't
drunk over Britain**





- Drunk woman teacher, 25, who groped Virgin steward spared jail after claiming she 'thought it was her boyfriend'

- **Katherine Goldberg drank 'a pint of whisky' on the plane before the alleged incident took place**
- **'I would be wrong to impose a lifetime punishment preventing you working in a profession where you have talent', says judge**





14th Annual **European Airfinance Conference Dublin**

In Summary

Ar deireach laethanta deachair in Eirinn ach bionn leigheas ag an Guinness ar gach drochscéal.

Tough times in Ireland, but nothing that a pint of Guinness can't overcome



Airfinance EVENTS

14th Annual European Airfinance Conference Dublin

