

# **Presentation to ASA**

Washington D.C.  
June 16, 2014  
Adam Pilarski, AVITAS, Inc.

## Subjects Covered

- **Future/Horoscope**
- **Can we predict anything in aviation?**
- **Present situation**
- **Rashomon or is there a bubble?**
- **Uncertainties**

# Future/Horoscope

Happy New Year of the Green Horse

马年快乐！



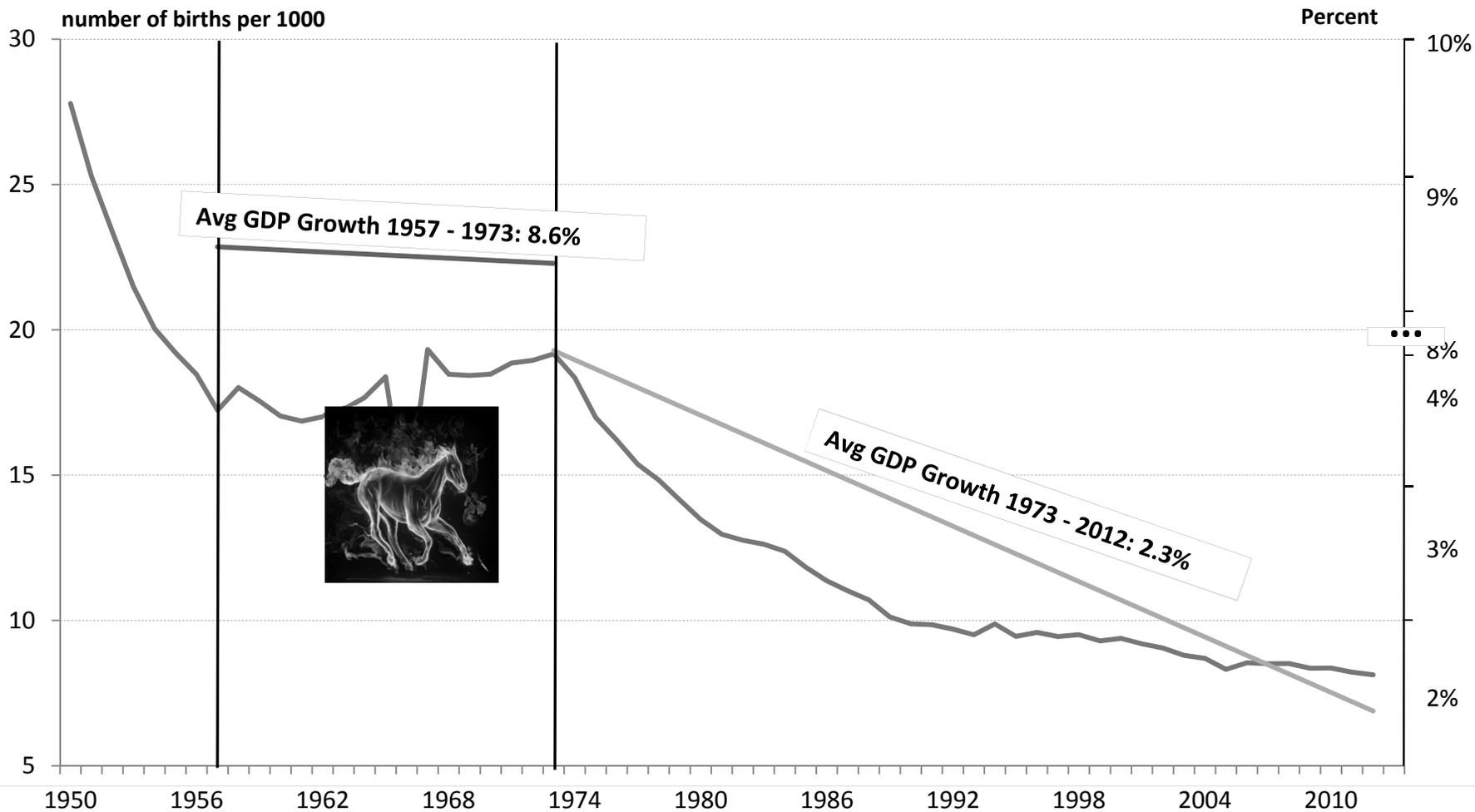
YEAR OF THE HORSE

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# Happy New Year of the Green Horse

- **The Wood Horse year is a time of fast victories, unexpected adventure, and surprising romance. It is an excellent year for travel.**
- **Under Horse's strong influence there is no middle ground. (The time for middle ground diplomacy and planning was last year in Water Snake 2013). Anticipate extremes in stock markets, fluctuation of prices and general chaos in all things financial. There will be wars, battles and skirmishes all over the world.**
- **Middle class economies are developing with emerging markets in many places including Egypt, Turkey, Brazil and India. But there will also be protests for fair development, even wars. Peace can be restored in Wood Sheep year 2015 but Wood Horse 2014 will be a wild ride as the world changes, and changes fast.**

## Birth Rate of Japan and Trend of GDP Growth, 1950 - 2012

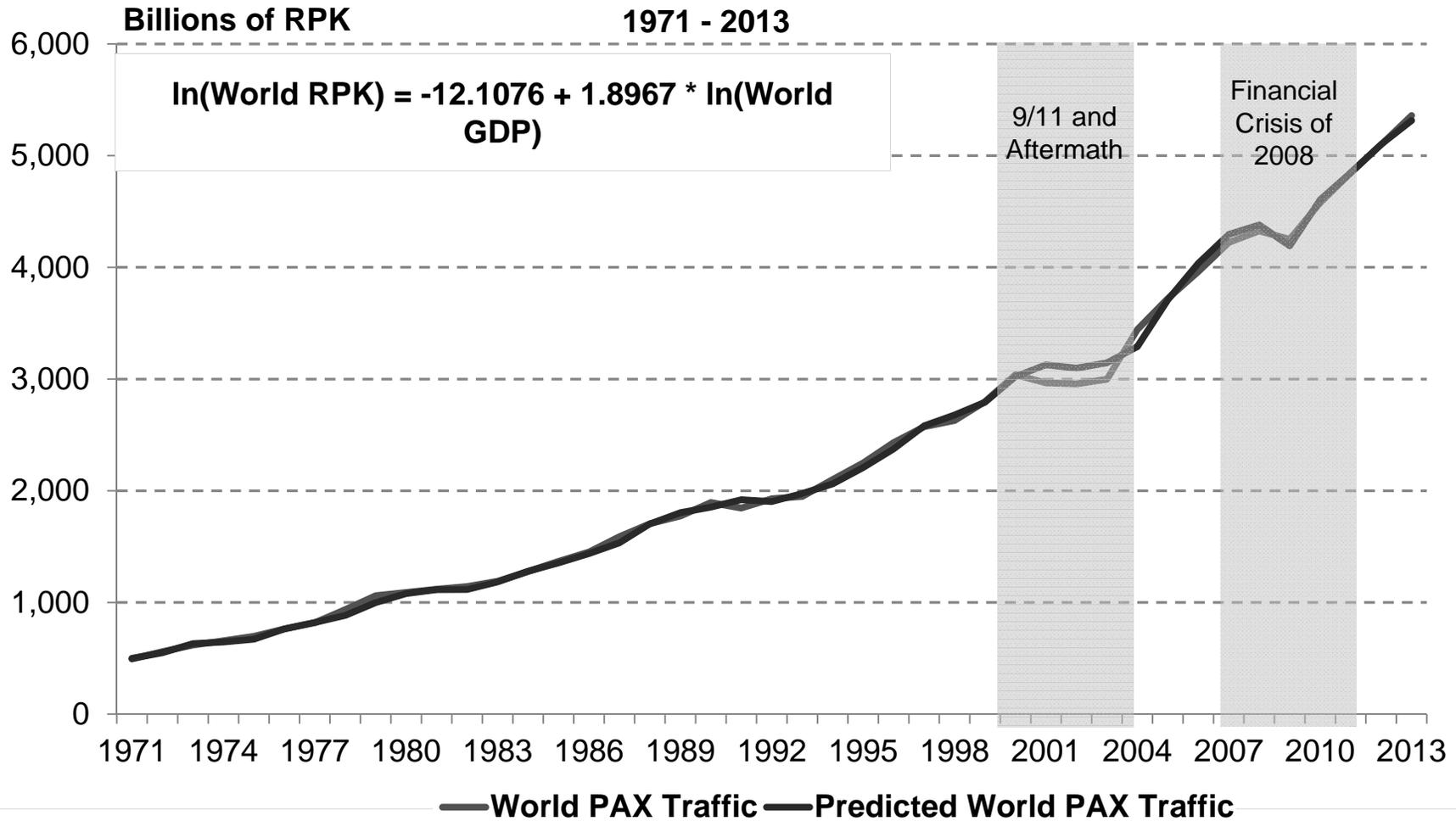


Source: Ministry of Health, Labour and Welfare of Japan.

# Can we predict anything in Aviation?

- **Causalities quite stable, predictability still good**
- **Unpredictable events (by definition!) cannot be predicted**
- **Their consequences, though, can**

# World Passenger Air Traffic and Economy, History and Model Prediction



Source: ICAO for history and AVITAS estimates.

# Examples Of Predictable Change

- **Rise of Asian Aviation**
- **Japan's Role In World Economy**
- **Terrorism**

# Rise Of Asian Aviation

- **Predictions in 1980**
  - Reasons
  - GDP growth
  - Geography (Islands, etc.)
  - Size
  - Ethnic ties
  - Migration

# Japan's Role In World Economy

**From WWII to Invincible**

**Back to the Future II, Rising Sun**

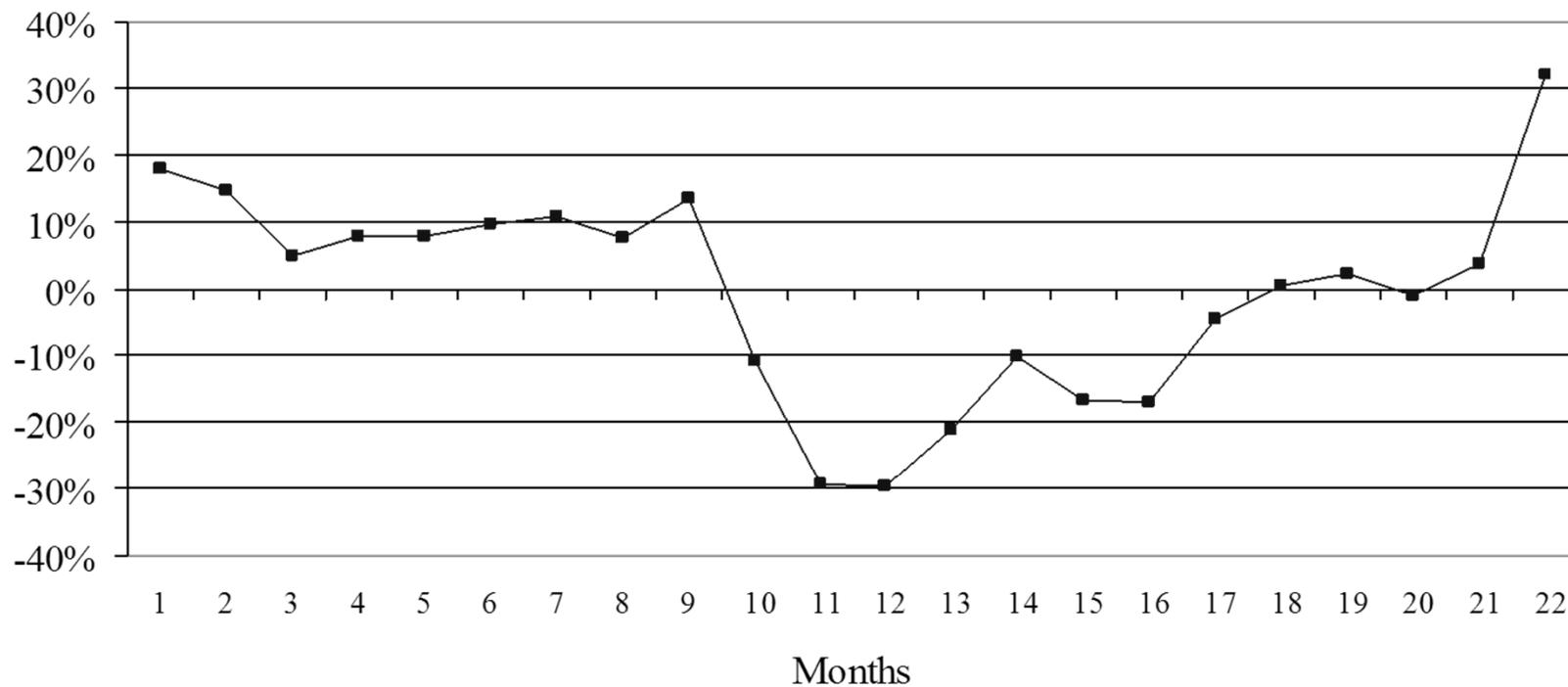
**Importance of Demographics**

# **Terrorist Impact**

# North Atlantic Monthly RPM Growth

(Data Source: ATA)

RPM Growth

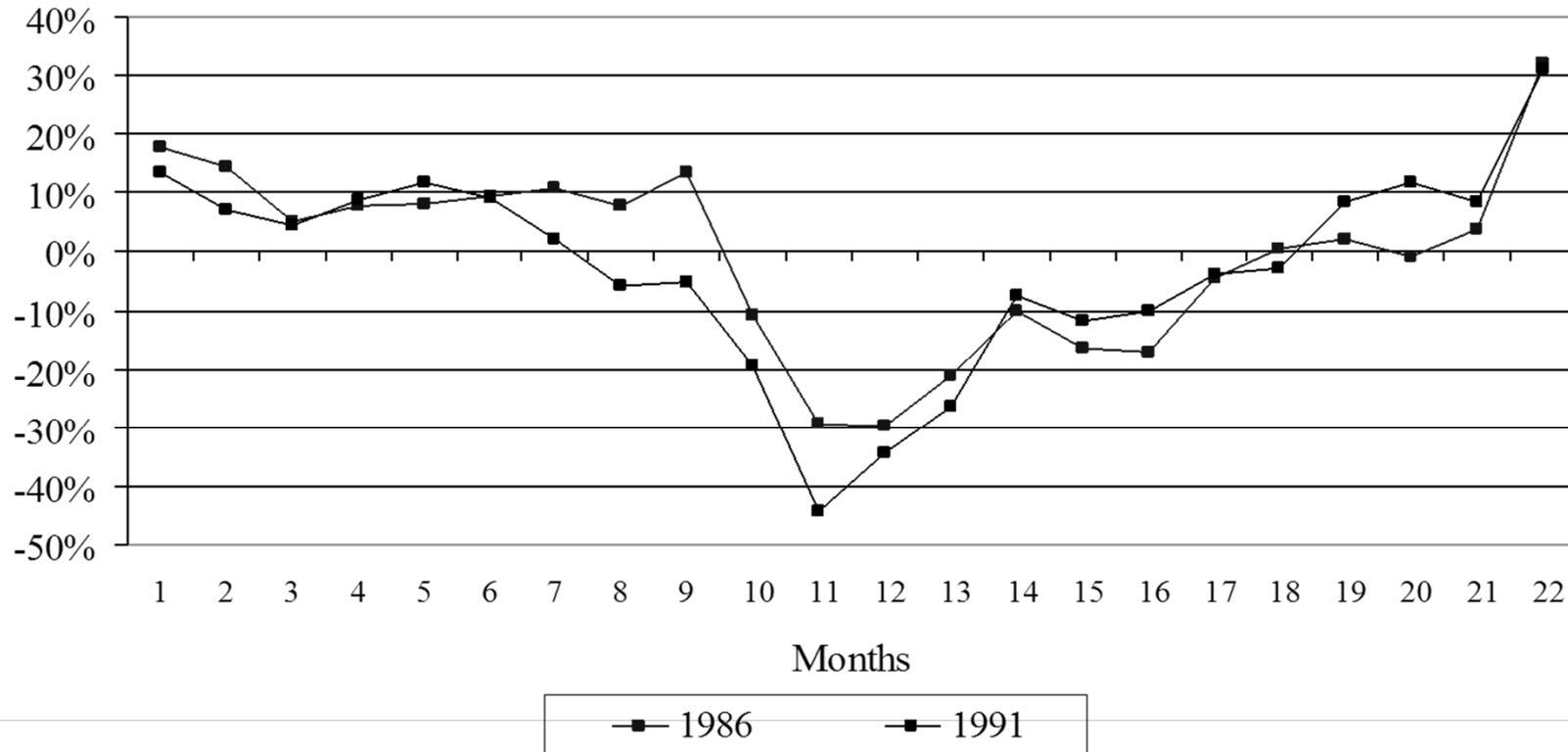


■ 1986

# North Atlantic Monthly RPM Growth

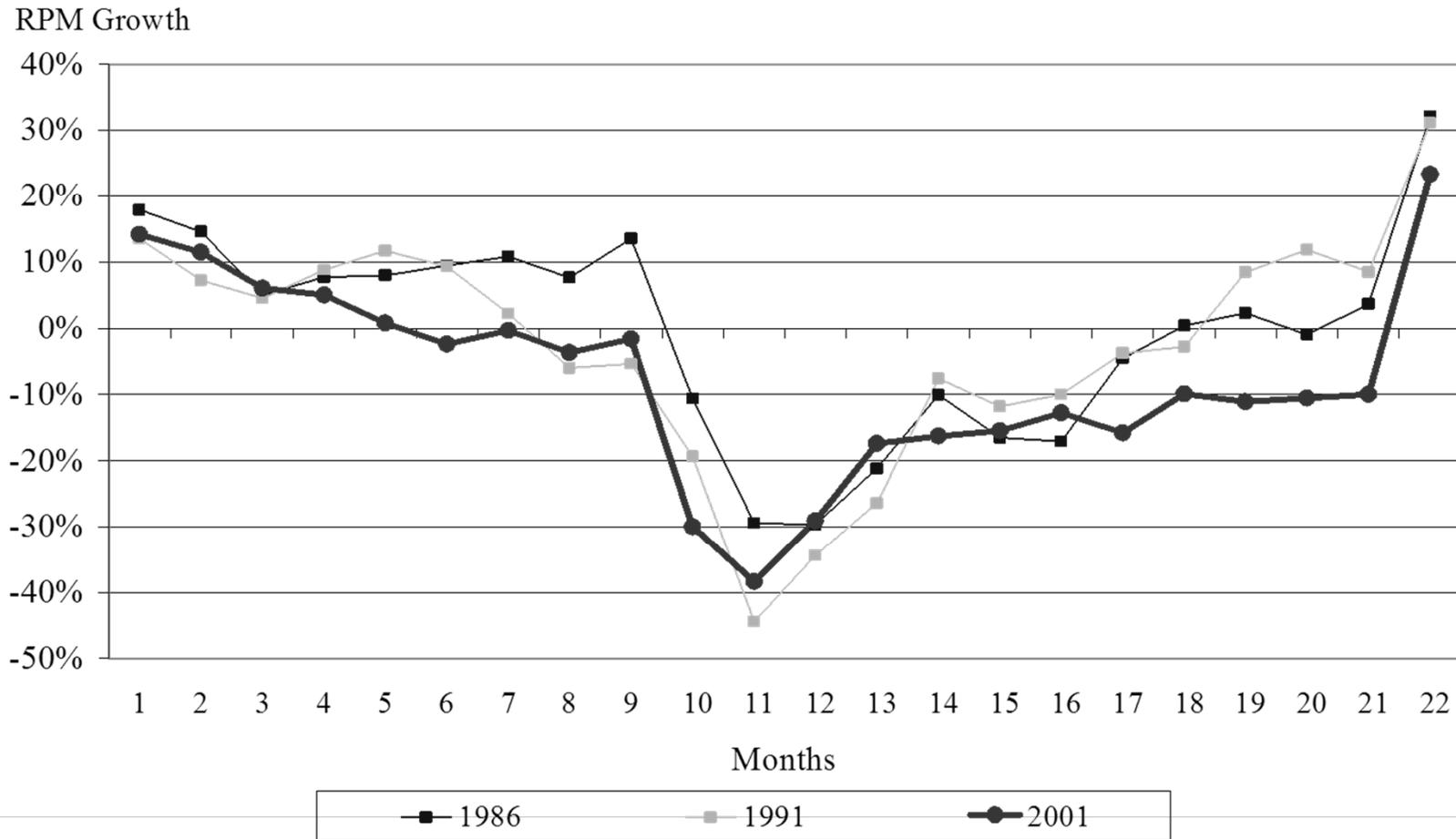
(Data Source: ATA)

RPM Growth



# North Atlantic Monthly RPM Growth

(Data Source: ATA)



# Present Situation

## ■ **Economy**

- US, Europe doing better
- BRICS no longer engine of growth
- China has problems, Russia causes them

# Present Situation

## ■ **Airlines**

- Finally profitable
- Capacity growth restrictions, high load factors
- High but stable oil prices

**Rashomon or is there a bubble?**

***“When you run an airline, for reasons which are both economic reasons and prestige, you want a new kit, so you order an aircraft. And if your neighbor orders aircraft, so you order aircraft.”***

***“I wouldn’t call it irrational exuberance but clearly everybody in Asia is ordering more aircraft more than they really need”***

**Bertrand Grabowski, 2/9/2014**

## Things are wonderful

- Airlines finally profitable
- Low interest rates → Money looks for investment opportunities
- Fuel prices stable

## Hence

- Huge orders
- Huge deliveries
- Huge backlog

## Hence

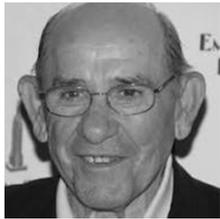
- Talk of serious production ramp-up by both Airbus and Boeing

EVERYTHING  
IS  
AWESOME

AVITAS®

## AND WHY NOT?

*“Nobody goes there any more, it’s too crowded”*



**Yogi Berra**  
**Famous American Philosopher**

## FACT

**Given existing orders a production ramp-up is justified**

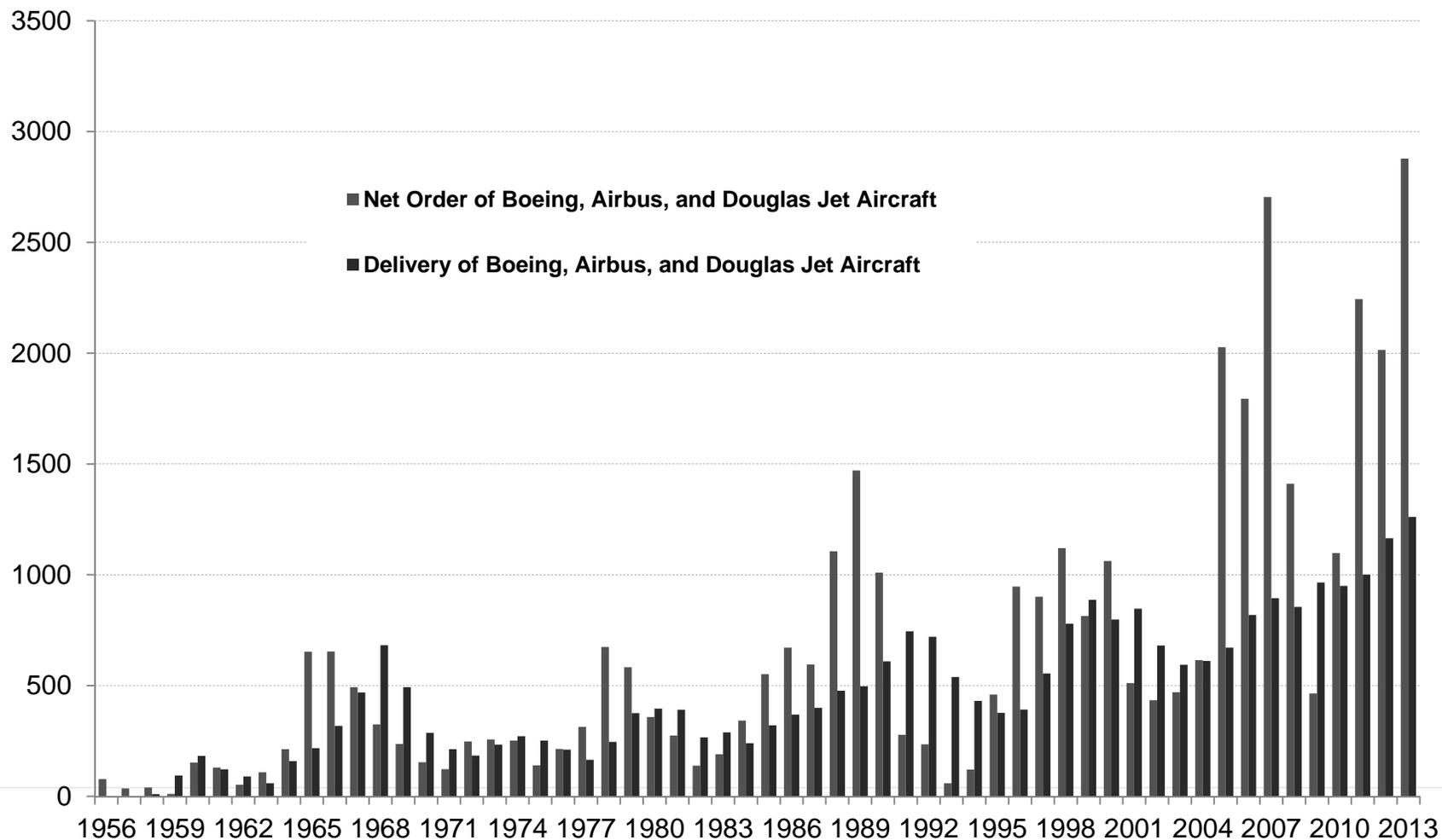
## **BIG QUESTION**

**Are the orders justified by existing demand?**

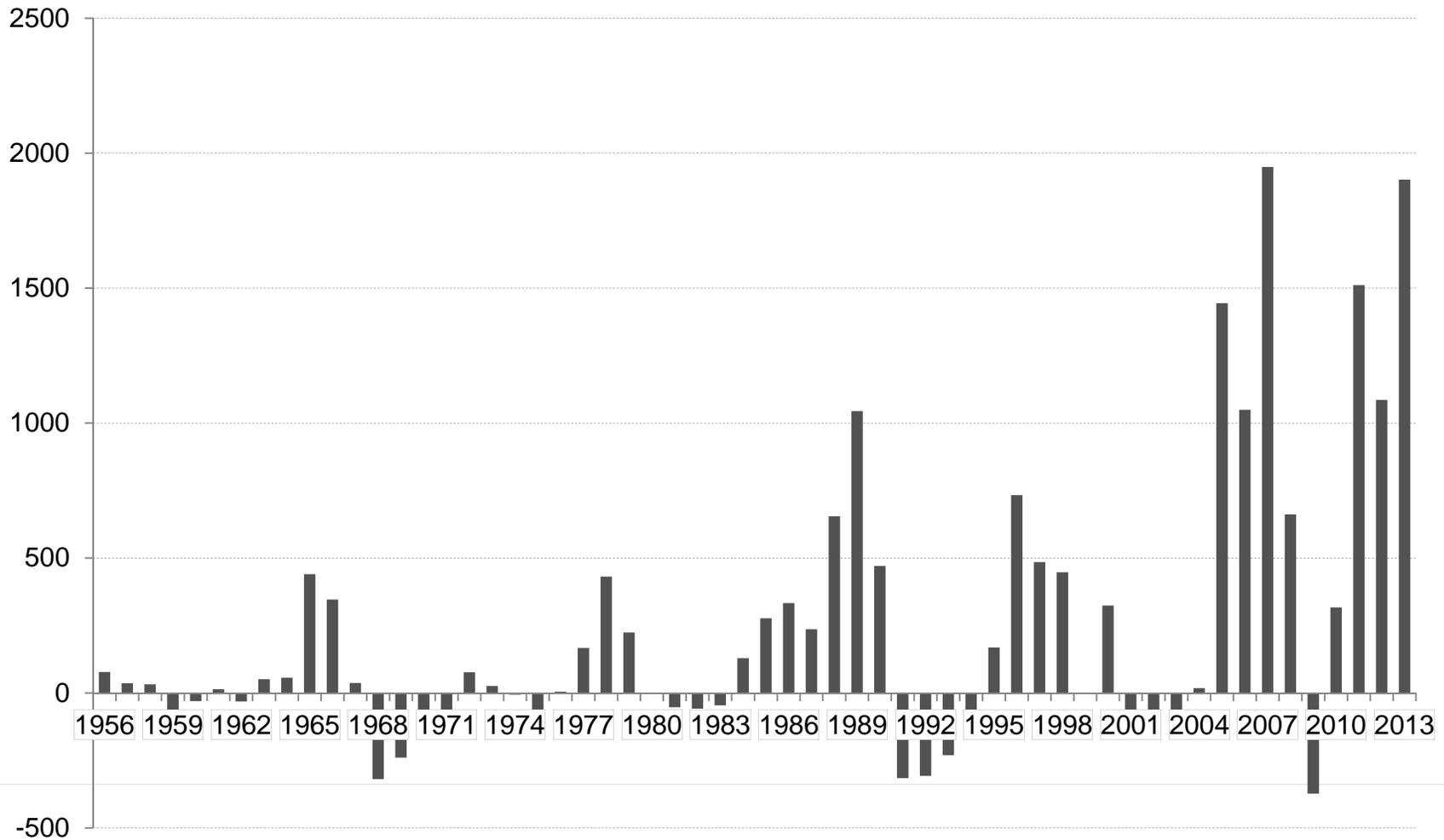
**High oil prices and more stringent environmental rules cloud issue**

**If not enough demand we may be facing double counting of orders**

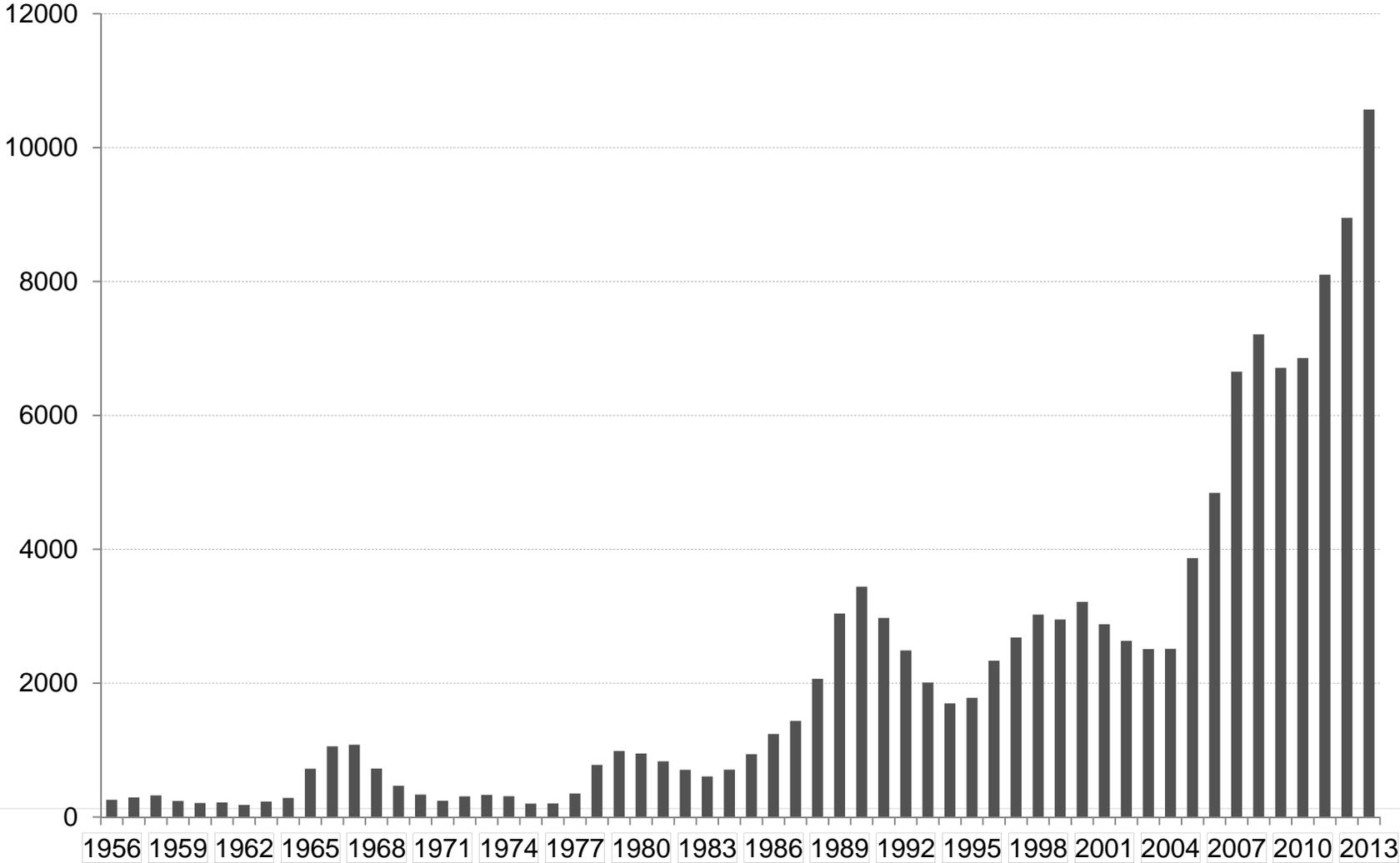
## Net Orders and Deliveries, Boeing, Airbus, and Douglas Jet Aircraft



## Orders minus Deliveries, Boeing, Airbus, and Douglas Jet Aircraft



# Backlog, Boeing, Airbus, and Douglas Jet Aircraft



- **Example of bubble**

- Double counting in 1980's
  - Leasing companies and airlines

**Manifestation of bubble could be**

**FRICTIONS**

# Middle East

# EEQ Traffic

## Percent of World

<b>2003</b>	<b>1.4%</b>
<b>2013</b>	<b>5.1%</b>
<b>2023</b>	<b>8.9%*</b>

**\*Based on orders**

# **LCC vs Legacies**

## Asia / Aircraft

	LCC	Legacy
<b>In Service</b>	1,000	4,800
<b>Orders</b>	1,500+	1,500+

## Europe / Aircraft

	<b>LCC</b>	<b>Legacy</b>
<b>In Service</b>	1,000	4,000
<b>Orders</b>	700	1,200
<b>With Turkey</b>	1,000	

## EEQ / Aircraft

<b>In Service</b>	400
<b>Orders</b>	600

## North America / Aircraft

<b>In Service</b>	6,700
<b>Orders</b>	2,000

# Frictions

- **EEQ – Europe, Canada, India**
- **LCC – Legacy**
  - LH-THY
  - Norwegian

# U.S. Business Cycle

<b>Post WW II Cycles (Months of expansion)</b>			
<b>1933-37</b>	<b>50</b>	<b>1961-69</b>	<b>106</b>
<b>1938-45</b>	<b>80</b>	<b>1970-73</b>	<b>36</b>
<b>1945-48</b>	<b>37</b>	<b>1975-80</b>	<b>58</b>
<b>1949-53</b>	<b>45</b>	<b>1980-81</b>	<b>12</b>
<b>1954-57</b>	<b>39</b>	<b>1982-90</b>	<b>92</b>
<b>1958-60</b>	<b>24</b>	<b>1991-2001</b>	<b>120</b>
		<b>2001-2007</b>	<b>73</b>

**Present Expansion So Far**

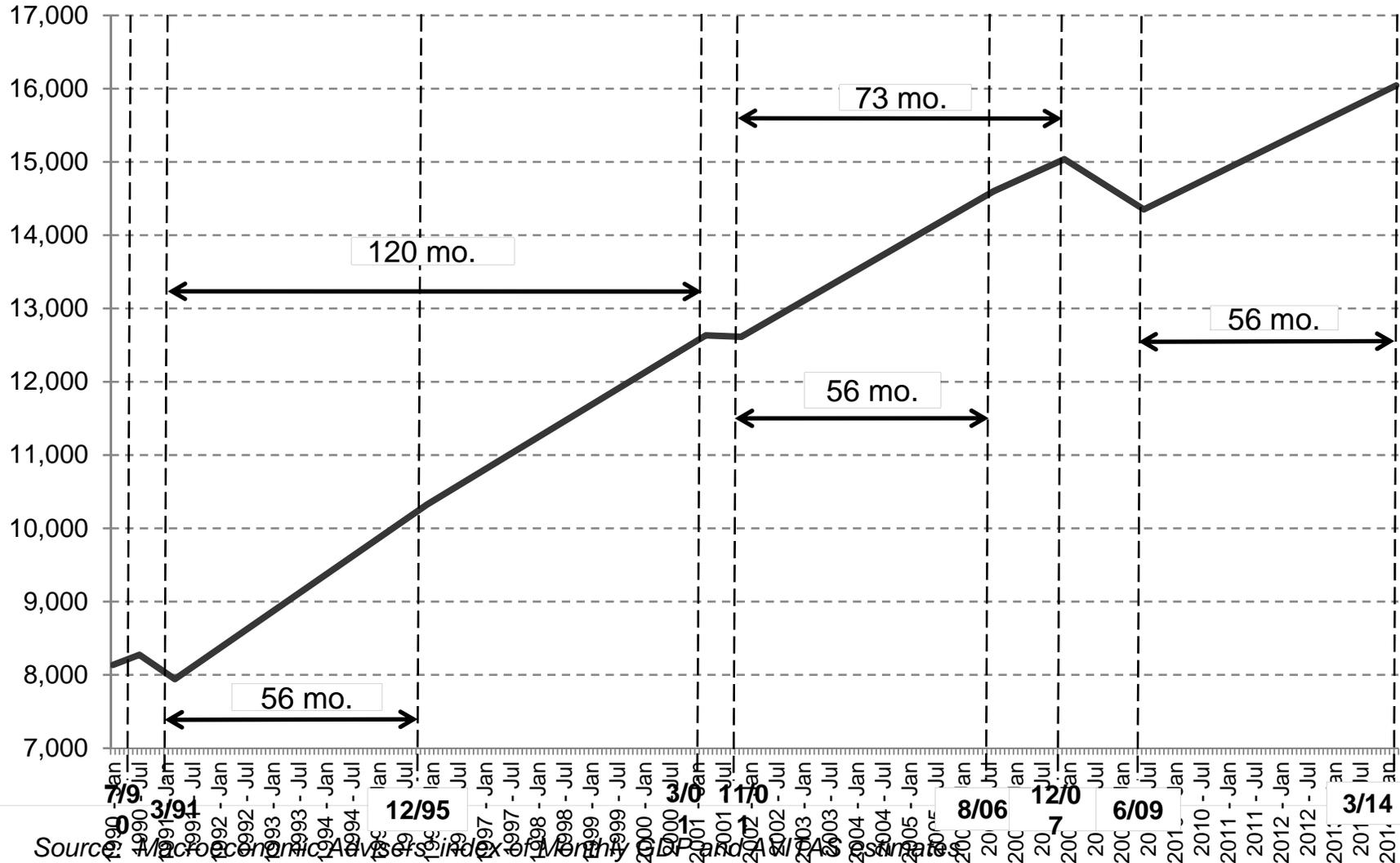
**56 Months**

**Average post WW II**

**58 Months**

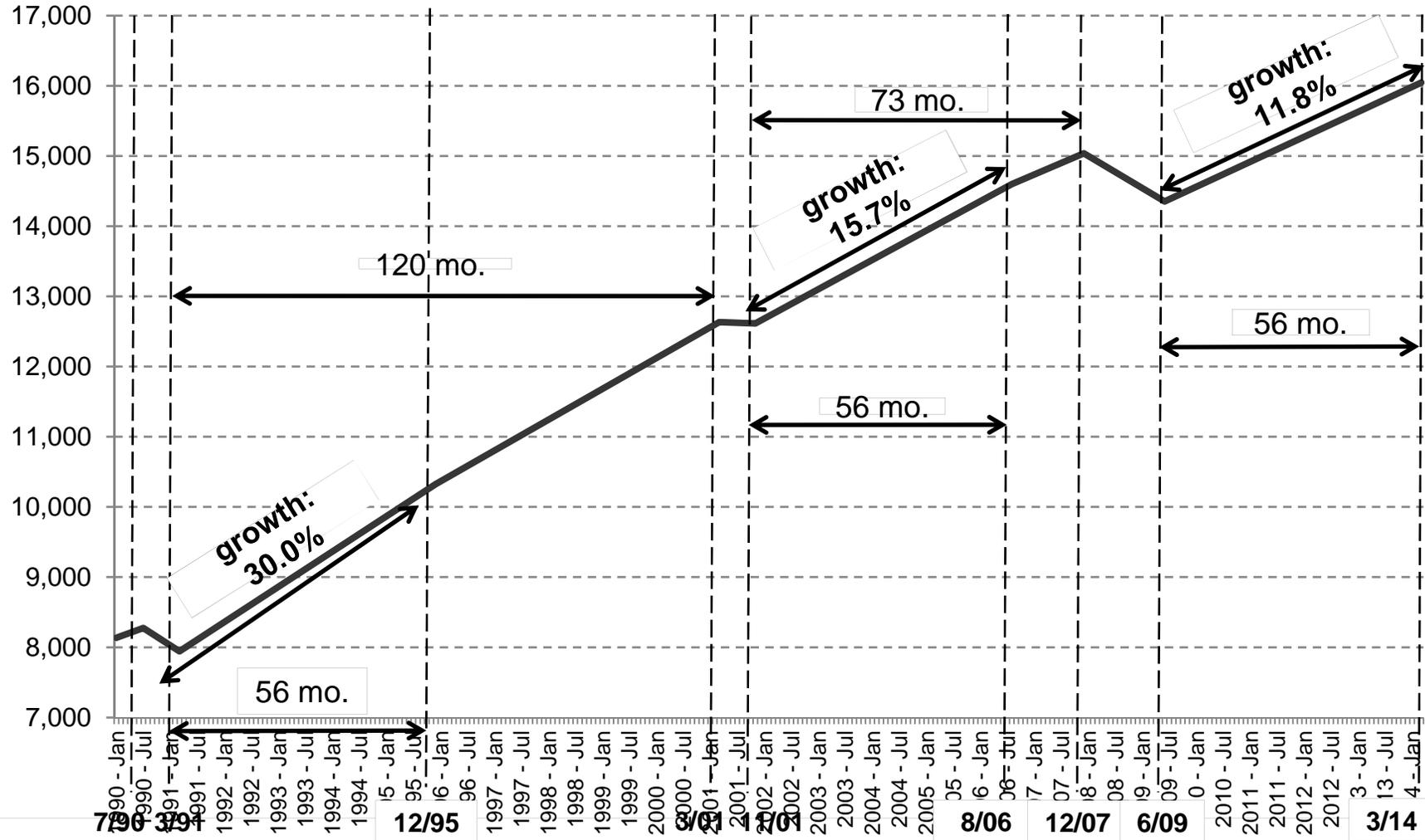
# US Monthly GDP

## U.S. Monthly GDP



Source: Macroeconomic Advisers, Index of Monthly GDP

## U.S. Monthly GDP



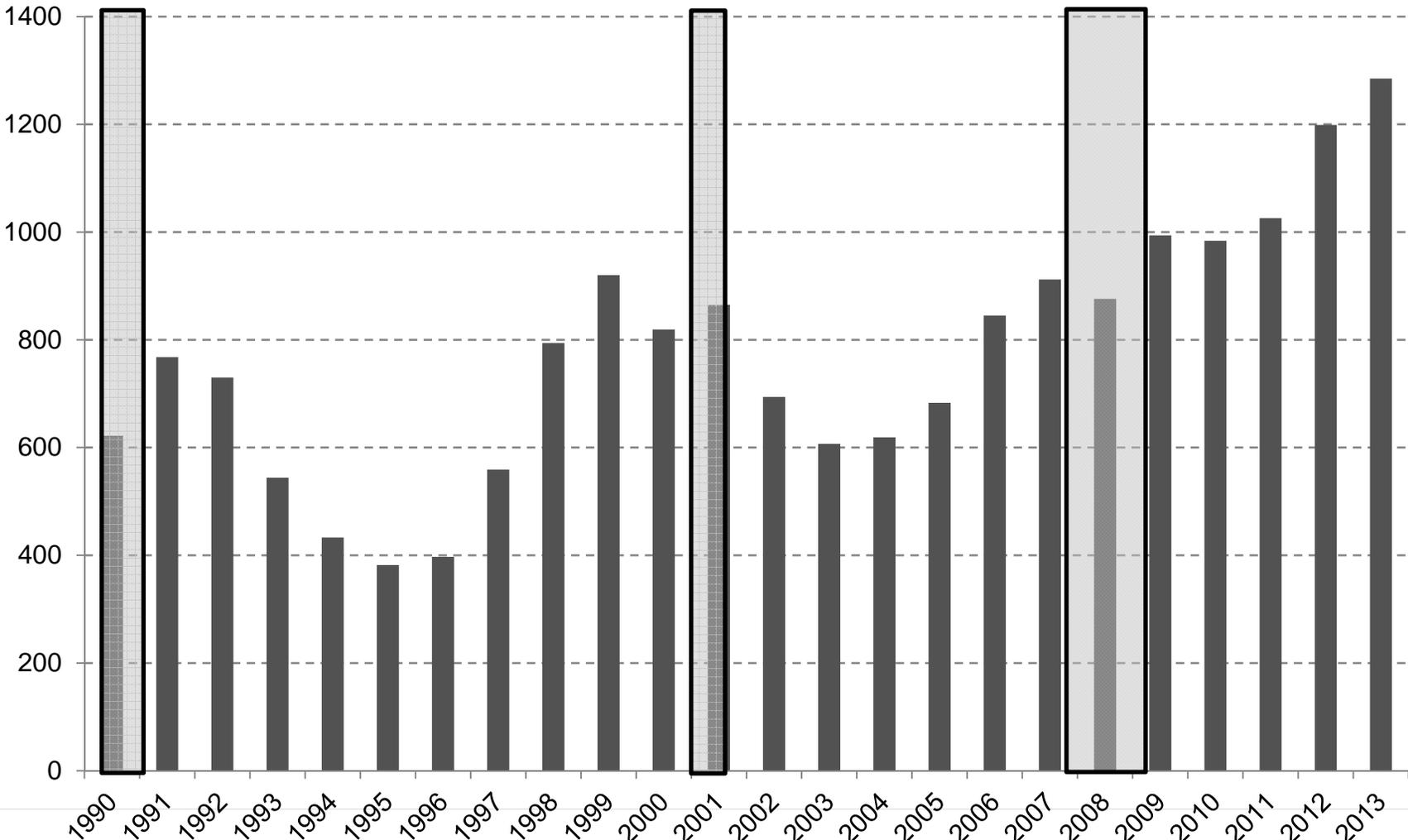
Source: Macroeconomic Advisers' index of Monthly GDP and AVITAS estimates.

<b>US GDP / Traffic Statistics Last 3 cycles (annual growth)</b>			
	<b>1991-1995</b>	<b>2001-2006</b>	<b>2009-Now</b>
<b>GDP</b>	<b>5.8%</b>	<b>3.2%</b>	<b>2.4%</b>
<b>RPM</b>	<b>4.5%</b>	<b>9.6%</b>	<b>1.3%</b>

<b>Same for whole cycle</b>			
	<b>1991-2001</b>	<b>2001-2007</b>	<b>2009-Now</b>
<b>GDP</b>	<b>4.6%</b>	<b>2.9%</b>	<b>2.4%</b>
<b>RPM</b>	<b>4.6%</b>	<b>5.1%</b>	<b>1.3%</b>

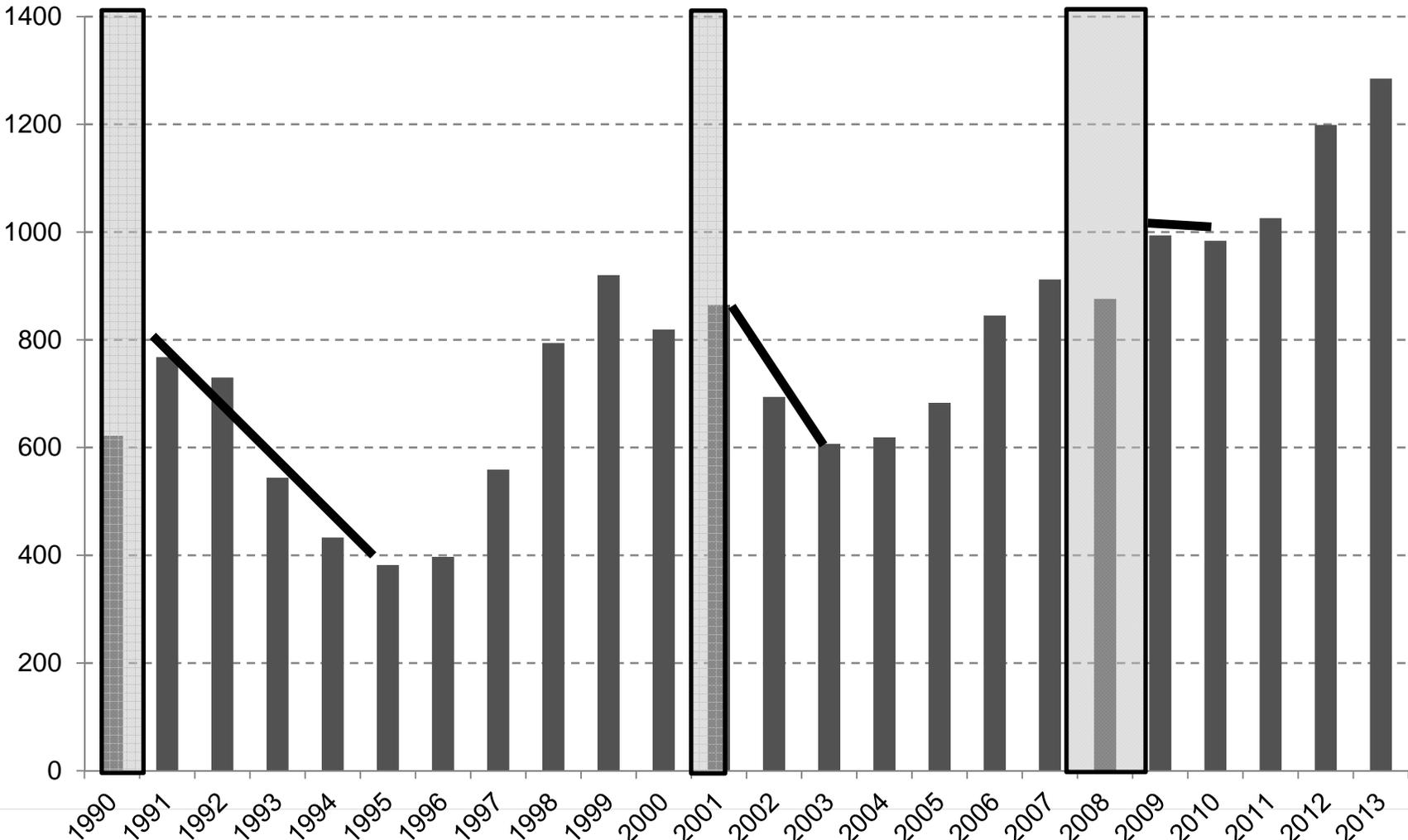
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<b>RPM</b>	<b>4.5%</b>	<b>9.6%</b>	<b>1.3%</b>
<b>Deliveries</b>	<b>-2.0%</b>	<b>-3.9%</b>	<b>5.3%</b>

# Boeing and Airbus Delivery



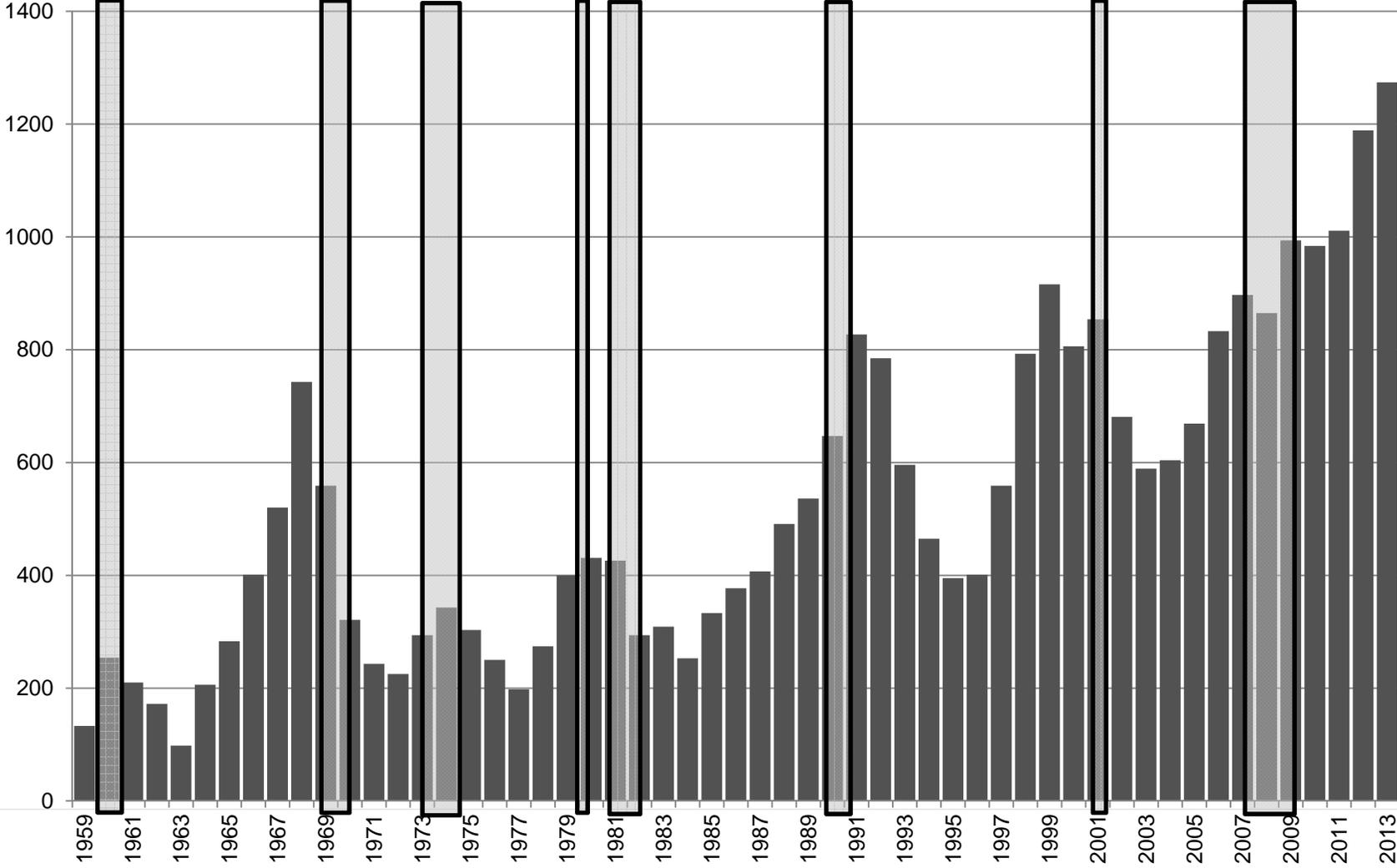
Source: Aviation Week

# Boeing and Airbus Delivery

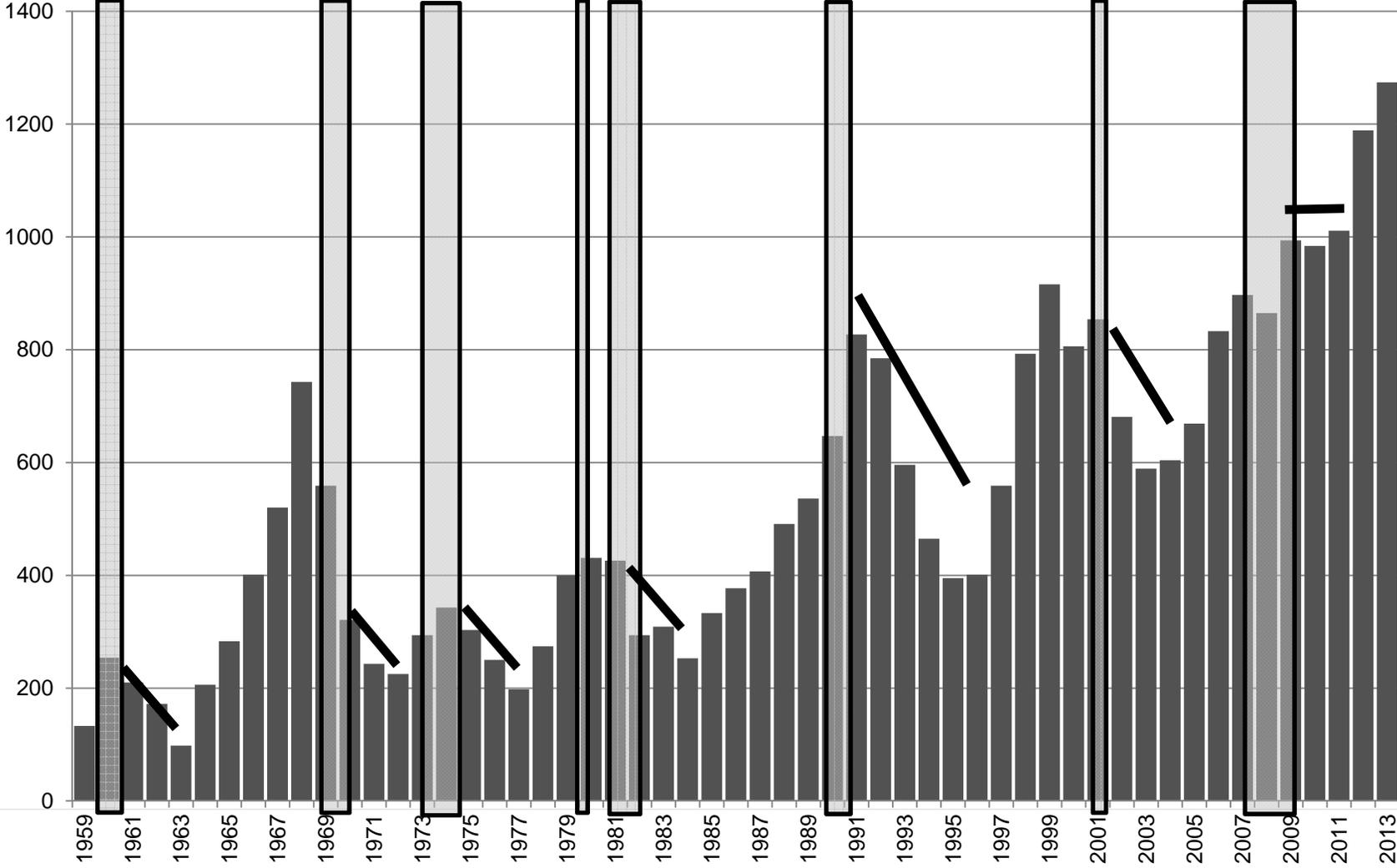


Source: Aviation Week

# Deliveries



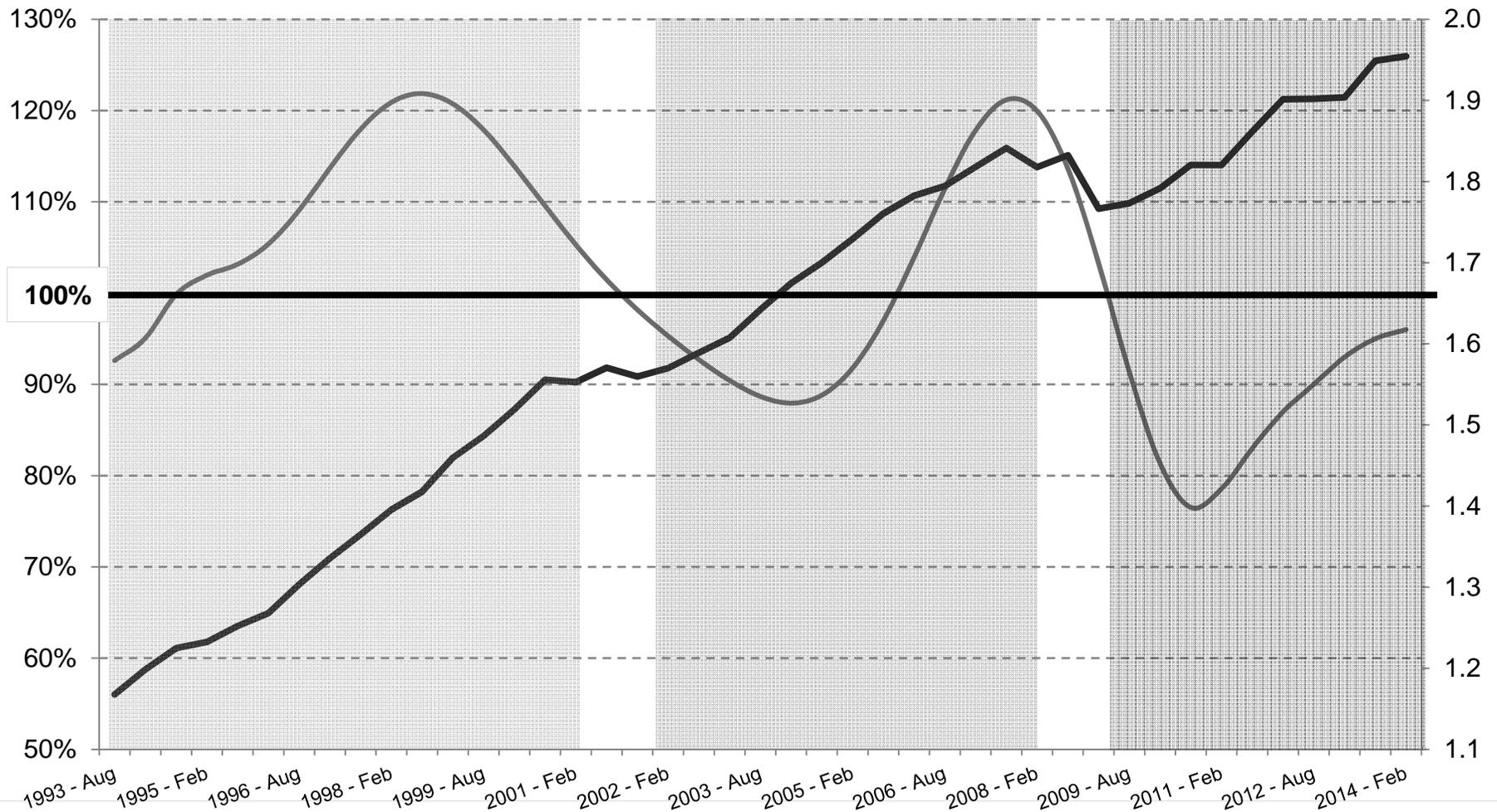
# Deliveries



Another way of looking at reality

Manufacturers vs. Financiers

## Aircraft Value and Economic Cycle



Source: AVITAS's BlueBook of Jet Aircraft Values and Macroeconomic Advisers' index of Monthly GDP.

- **Could existing orders and deliveries be rational?**

- **YES**

- Depends on oil prices
- *“It’s all about the fuel, man”*

**Mike Miller, AVITAS**

# Uncertainties



- **Russia's new politics**

- Anschluss?
- Panem et circenses

- **China**

- **Oil Prices**

## Summary

- **Order/production bubble could be real**
- **Oil less relevant in the future**
- **Relatively weak recovery so far**
  - AVITAS forecast another three years expansion
  - Manufacturers: Everything is awesome
  - Financiers: Not yet
- **Very different “bubble” reality in RJ market**
- **Uncertainties remain big part of equation**