Did airline consolidation improve industry efficiency?

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Evanston, 22 May 2014

Radical consolidation since 2004; what impact on industry efficiency?

Total Domestic USA	1991	1999	2005	2013
Concentration-top 4	67%	63%	58%	87%
# Competitors (>4%)	8	8	8	4
Total North Atlantic	**1991**	**1999**	**2005**	**2013**
Concentration-top 3	35%	47%	47%	97%
# Competitors (>2%)	15	11	9	3
Total US-Japan/Korea		**1999**	**2005**	**2013**
Concentration-top 3		52%	60%	91%
# Competitors (>4%)		9	7	3

- Long-term industry efficiency maximizes both consumer welfare, value of aviation to society
- No one has analyzed impact of competition on efficiency
- Industry efficiency: cannot evaluated with simple metrics
- Analytical framework focused on capital allocation

My perspective on airline competition and industry structure

Airline Responses to Deregulation and Liberalization

- Post-deregulation shakeout, 90s profit recovery
- European/Asian liberalization

Consolidation via Alliance Antitrust Immunity

- Developed original NW/KL alliance network
- Shut down multiple unprofitable alliances

Bankruptcy Restructuring

- PE, NW, HP, SR, SN, UA, US, HA, TZ, AA

Industry consolidation in the last decade

- Direct experience including cross-border mergers
- Congressional and DOT testimony
- Transportation Law Journal article on ATI

Long-term gains in industry efficiency requires ongoing capital reallocation

Dynamic <u>capital reallocation</u> to uses with higher long-term returns

- Within industry—is capital moving from less efficient to more efficient uses?
- Between industries--are airlines a better/worse use of society's capital?

better resource allocations from carrier focus on <u>competitive advantage</u>

productivity gains from ongoing <u>innovations</u>

no distortions from sustainable <u>anti-competitive market power(ACMP)</u>?

No distortions from <u>extractive wealth transfers</u>

<u>Political/legal framework</u>: support/hinder efficient capital reallocation?

Airline competition & industry structure: three major phases

50s-60s-70s: Cartel of government sanctioned franchises → ***80s-90s liberalization; mostly domestic*** → ***government sanctioned consolidation of international competitors***

EU: IATA, bilaterals	80s	single "domestic" market privativation liberal pricing/scheduling some Open Skies (90s)	2004	KL-AF merger
US: CAB (+IATA)	1978	open entry (end franchises) liberal pricing/scheduling allow bankruptcy/failures some Open Skies (90s)	2005	ATI (Atlantic) then mergers
Asia: IATA, bilaterals	80s	development driven growth some domestic liberalization		

Political/legal framework: 6 categories; two major dilemmas

SIX MAJOR CATEGORIES	Designed to protect efficiency via
SAFETY REGULATION	Mitigating catastrophic risk
CORPORATE LAW	Efficient, reliable contract/investment rules
BANKRUPTCY LAW	Protect, efficiently reallocate capital
LABOR LAW	Efficient labor markets, social welfare funds
CONSUMER/COMPETITION LAW	Consumers, competing companies
PRICING/ENTRY REGULATION	Consumers, competing companies

National laws, international markets

- All aviation companies/rules strictly tied to nationality since 1944 Chicago Convention
  - cross-border rules risks regulatory arbitrage/breakdown

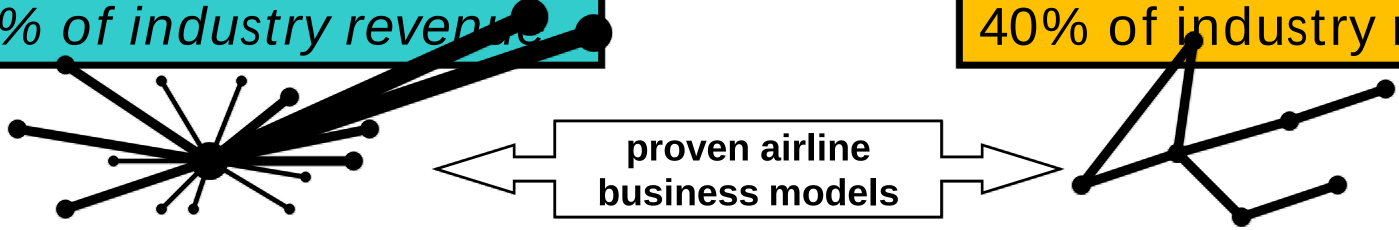
Powerful incumbents vs consumers, efficiency

- All laws protect long-term industry/public interest over short-term interests of individual companies

Intercon/Shorthaul: different economics, two separate business models

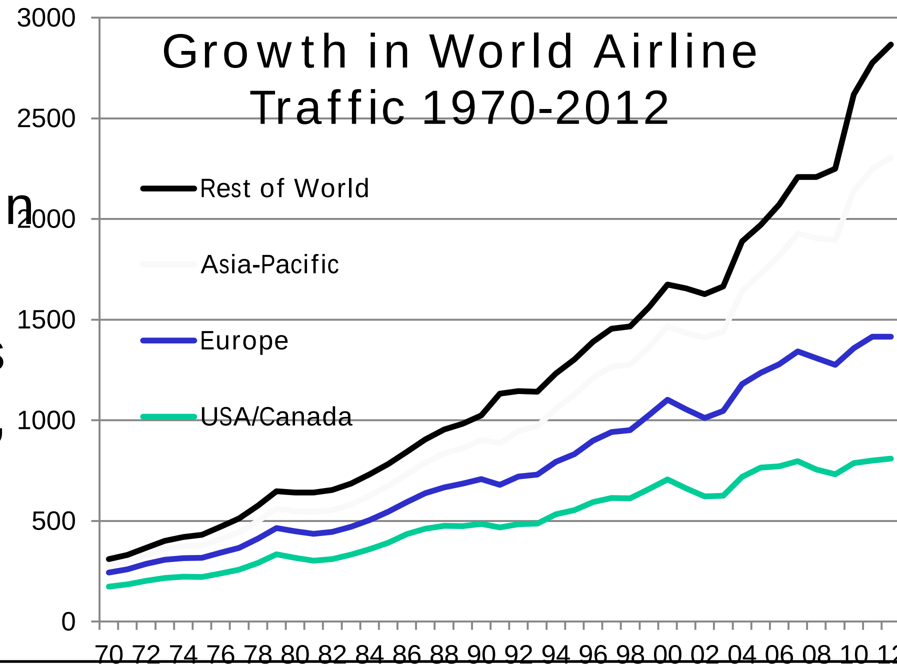
Intercontinental sector:
60% of industry revenue

shorthaul sector—
40% of industry revenue

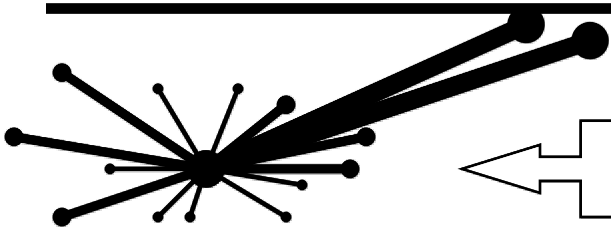


Intercontinental Megahubs		USA Domestic (mix big hubs/LCC)		Most non-US LCC shorthaul (no hubs)	Ultra-LCC+ charters

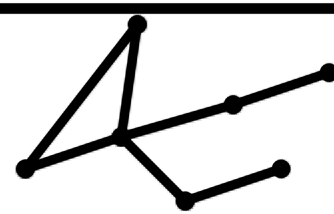
- Totally separate, except USA
- Future growth strictly Intercon
  - but less growth ex-USA
- Bigger Intercon entry barriers (incumbent political strength, hub/network scale)



Intercon: always competitively stagnant, now rapidly consolidating



proven airline business models



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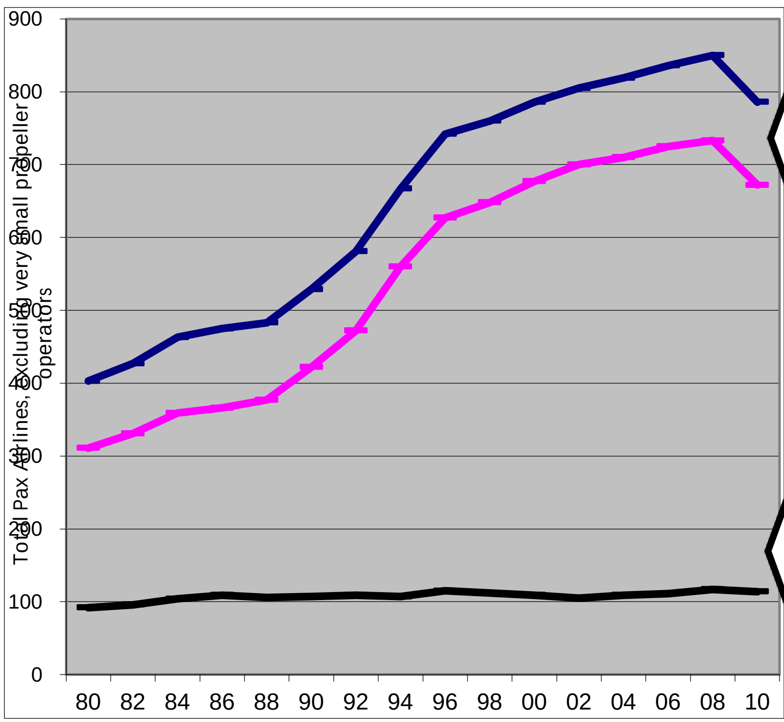
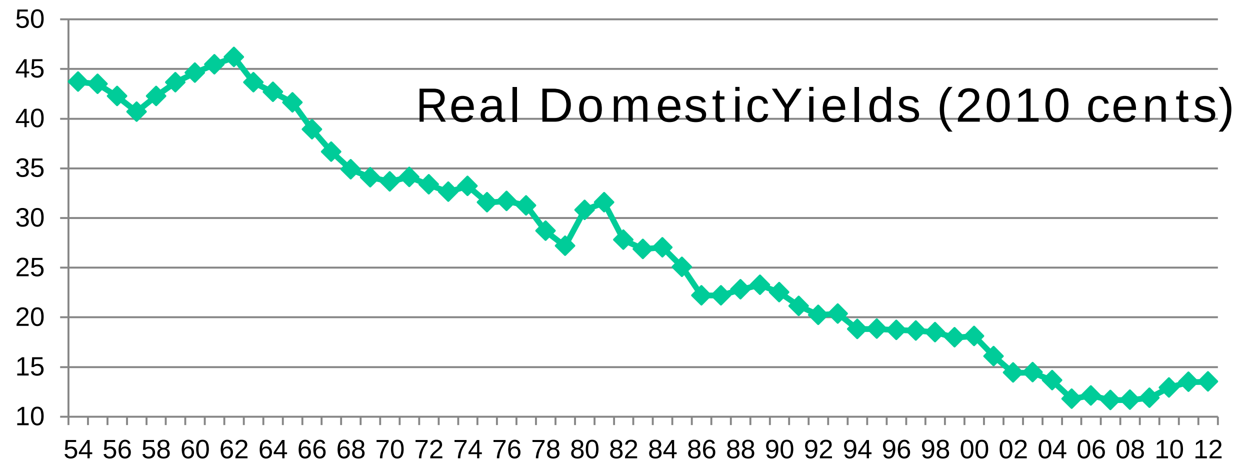


shorthaul sector—
Vibrant, dynamic--accounts for 100% of industry-wide competitive growth during "liberalization" era

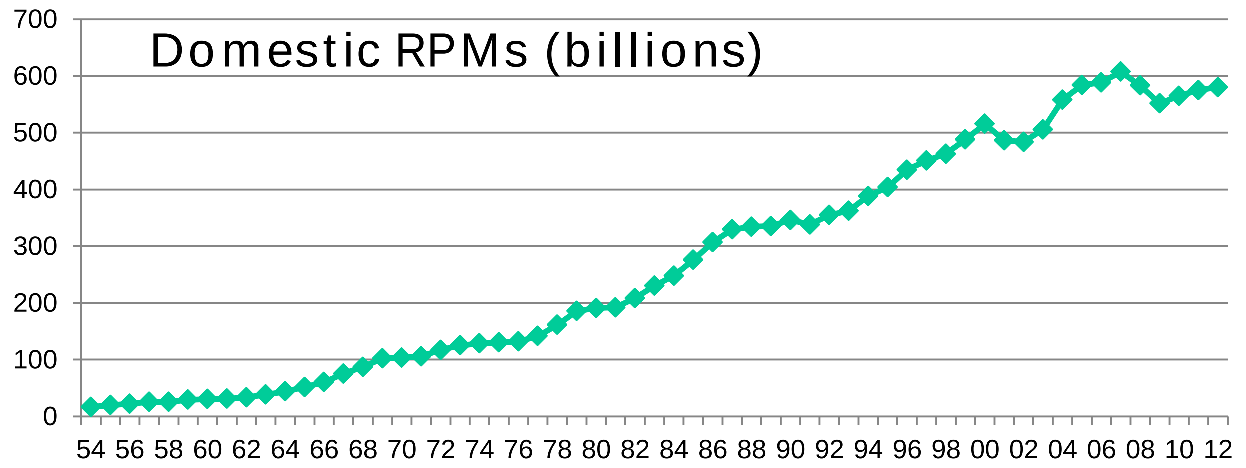
Intercontinental sector:
zero growth in 30 years due to huge entry barriers (political, economic)—entire focus of consolidation since 04

Innovation→Productivity→Lower fares→ Demand growth→Scale→Entry/growth

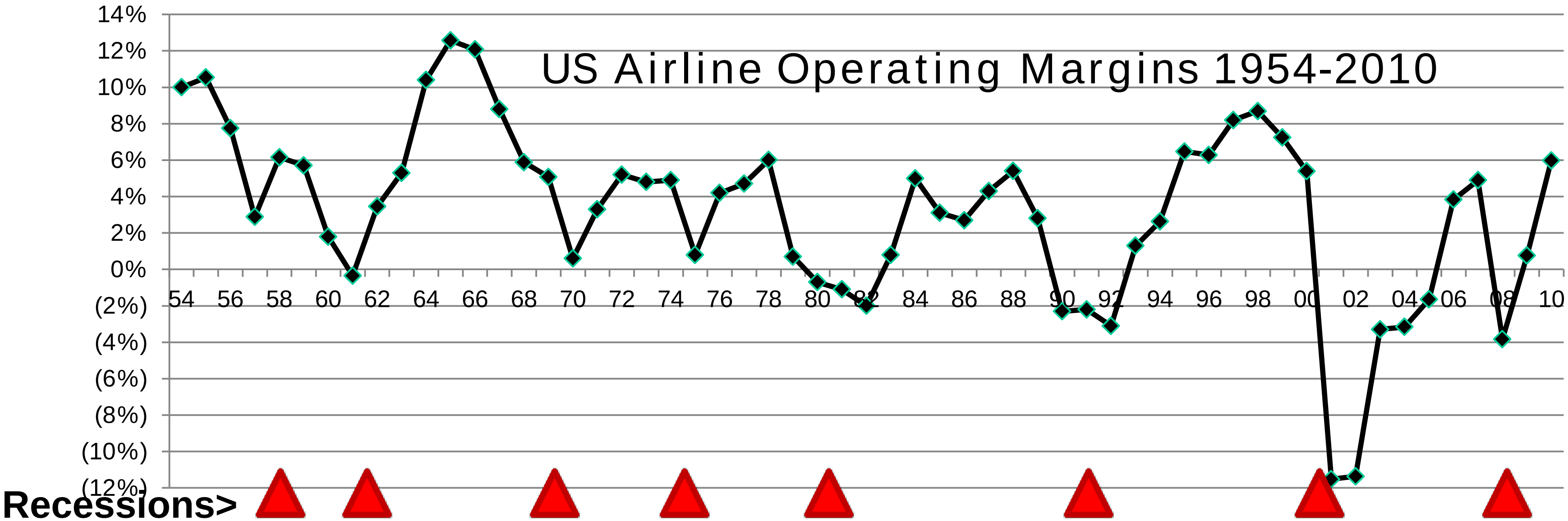
2 waves of Innovation reduced prices
60s/70s—aircraft technology
80s/90s—network/ business models/ IT systems



But innovation driven growth ended 10 years ago
90s—artificial (dot-com)growth
00s—stable/rising fares stifle growth



Despite growth, historic US profits weak, as airlines ignored supply/demand shifts



Management undermines profits

- Prices very sensitive to capacity supplied
  - fleet expansion/market share battles creates overcapacity
- Demand very sensitive to short-term cyclical shifts

Limited full-cycle capacity discipline

- Capacity discipline drove mid-90s profit recovery
  - late 80s hub expansion liquidated; no new capacity added
- Wreckless dot-com expansion bankrupts Legacies
- Capacity discipline mitigated 08 Recession impact

Did US deregulation improve industry efficiency?

Clear evidence:
improved
<u>capital allocation</u>

- Capital moving from weak to strong; entry opportunities brought in new capital
- Strong link between financial performance and service/operating improvements

Clear evidence:
stronger focus on
<u>competitive advantage</u>
ongoing <u>innovation</u>
no <u>wealth transfers</u>
no <u>ACMP</u> created
<u>political/legal</u> changes
weakened incumbents

- Network focus on competitive advantage
- Stronger business model differentiation
- Innovation: network, revenue, IT
- Weak GDP, labor makes problems worse
- Competition shifted wages to market rates
- Profits up, service way up, fares down
- Political/legal changes reduced protections for lazy/mediocre managers

Competition critical to innovation and improved capital allocation

Innovation and Productivity
Information technology
Aircraft technology
Airline Business Models
Supply Chain Efficiency

→ **Lower Fares**
customer value

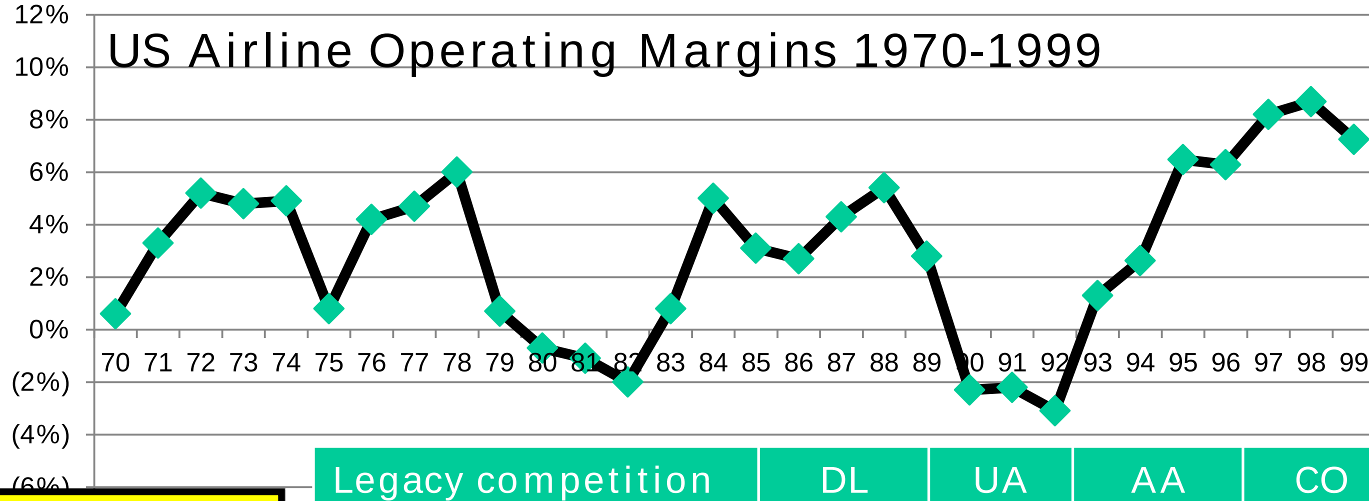
→ **Structural Growth**

Pressure to continuously improve capital allocation

HIGHLY LIBERAL MARKET COMPETITION/REGULATION	
Pricing/market entry freedom	Collective bargaining rights
Strict financial reporting rules	Independent capital markets
No artificial competitive barriers	Efficient bankruptcy process
Open corporate control market	No political barriers to exit

REQUIRES PUBLIC POLICY FOCUSED ON	
	Let Markets pick winners, how many airlines (not governments)
	Maximum Gains Economy-Wide (not individual companies)
	Maximum Benefits for overall (not specific) Consumers/Investors

US Aviation in the 90s—strongly profitable, highly competitive



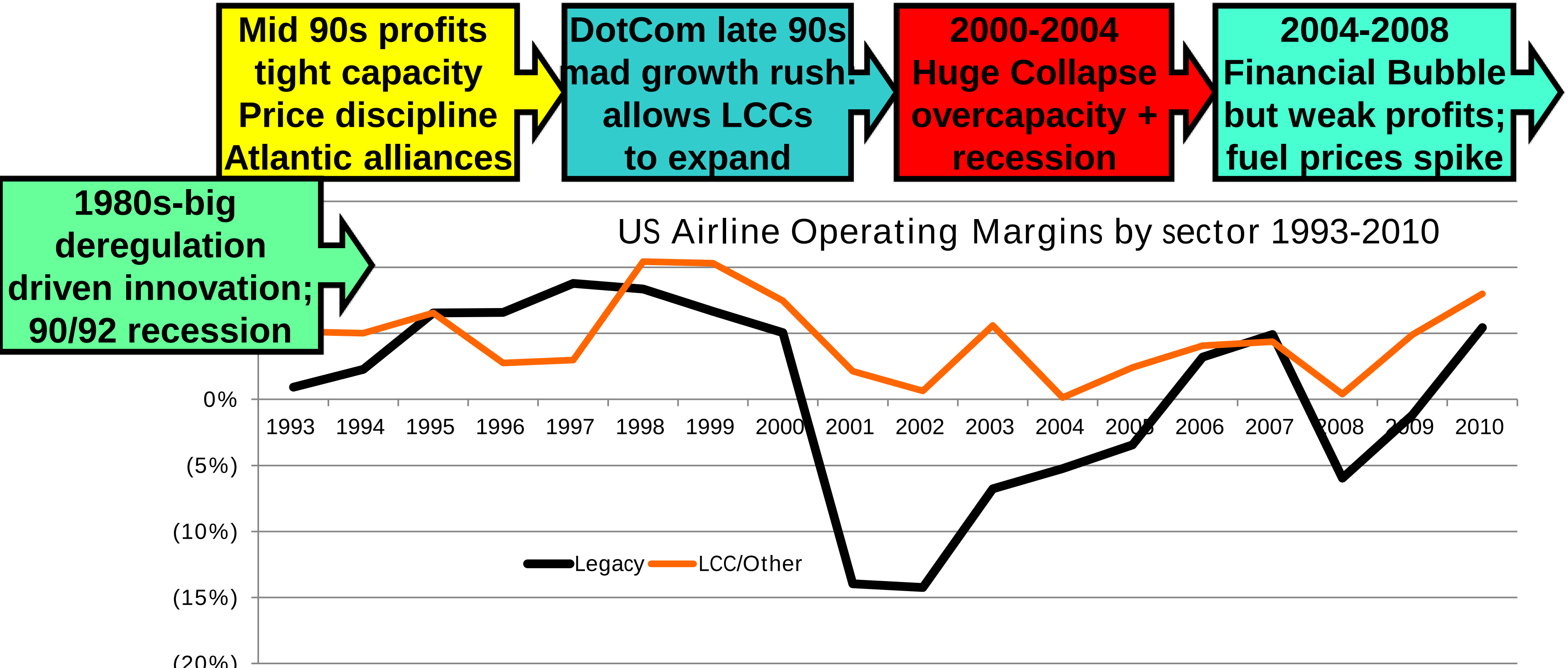
Markets fully competitive

Legacy competition	DL	UA	AA	CO	NW	US+HP
2004 market share	16%	15%	19%	12%	10%	10%
Strong Megahubs	ATL	ORD	DFW MIA	EWR IAH	MSP DTW	PHL CLT
International--Strong	Atl	Atl	Lat	Atl	Atl	
--Middling		Pac	Atl		Pac	Atl

Big Innovation-Atlantic Alliances (KL-NW)

- KL-NW (92) SR-SN-DL (95) LH-SK-UA (97)
- Big network/pricing gains-fixed IATA-era problems
- Huge consumer gains/profit improvements while North Atlantic remained highly competitive

Profitable mid-90s US industry equation destroyed by Legacy mismanagement

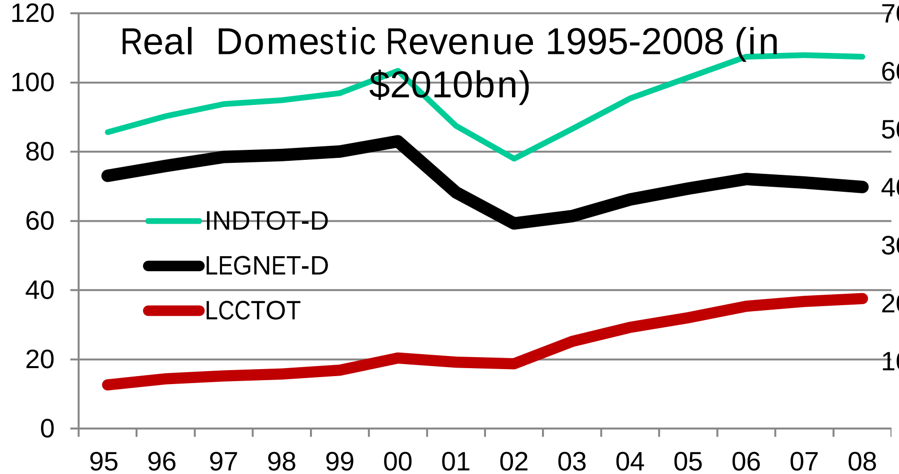


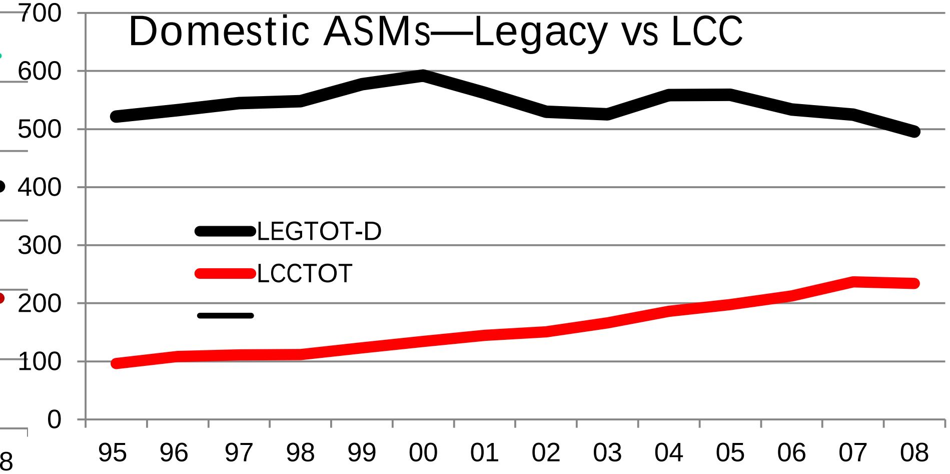
- Legacies had ignored supply/demand, competitive advantage, ROC
- Big, unsustainable pay raises granted during dot-com peak
- Dot-com bust biggest in airline history; $36 bn in Legacy losses 2001-09

Source: DOT Form 41 data

Legacy response—**wasn't our fault**--but we demand full control and big payouts

- Legacy revenue way down, but no capacity cuts/ profit recovery until 2007 (despite chapter 11 opportunity to shed capital)

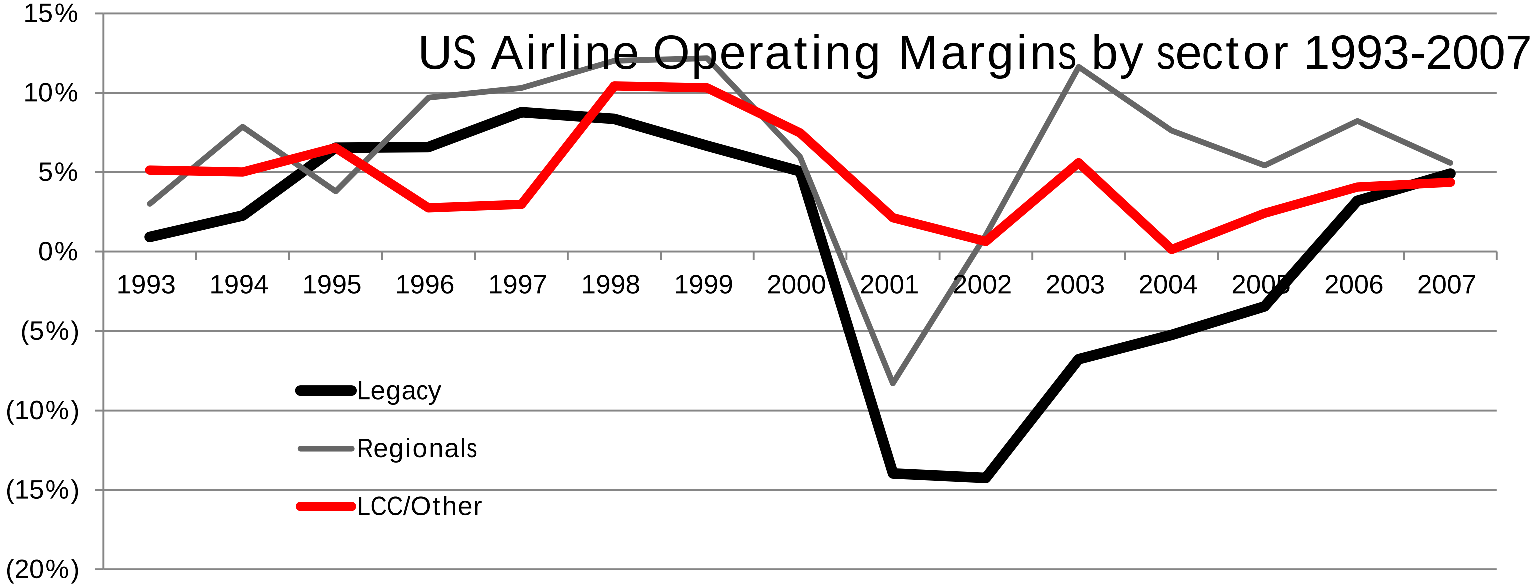




- Management not to blame—it was Osama bin Laden (and labor)
- UA/DL/NW/US filed chapter 11 but refused opportunity to shed uneconomic capital or fix unprofitable strategies
- Blocked all competitive bids to maintain personal control
- Tilton team got 15% of UA despite indefensible plan

Source: BLS CPI deflator applied to DOT Form 41 data

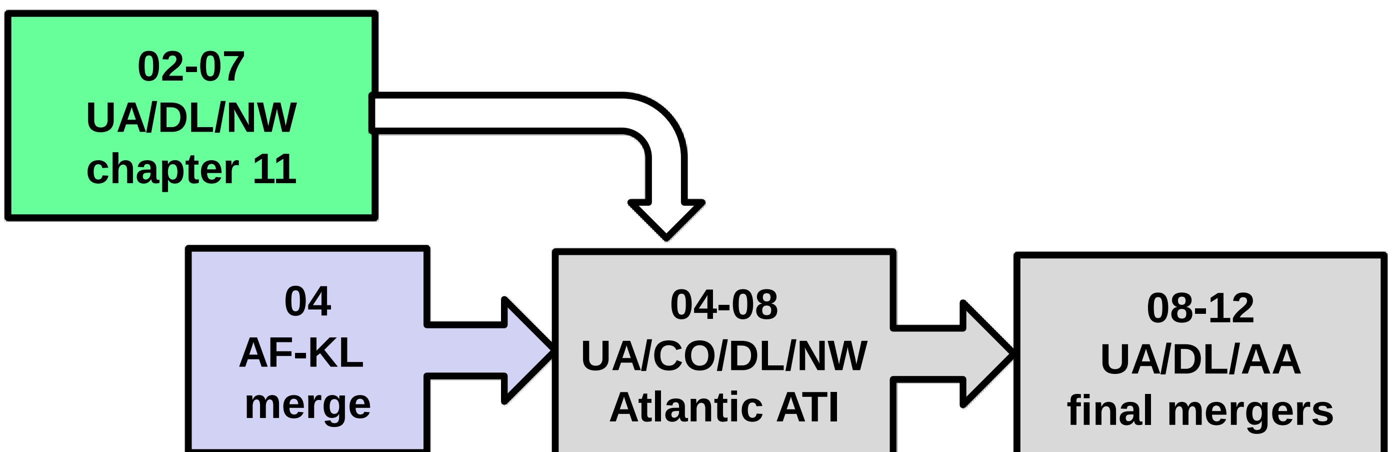
Overcapacity depressed industry earnings; led to demand for industry consolidation



- Draconian labor cuts did not produce promised profits
- Excess capacity depressed RASM, profits industry wide despite economic recovery; LCCs gained 10 points of market share
- **"Industry consolidation" PR campaign begins 2004**

Intercon Consolidation triggered in Europe; critical changes in America

- **"Industry Consolidation" movement strictly Intercontinental**
- 2002--EU aviation policy shifted from liberal competition to governmentally sanctioned LH/AF duopoly
- 2004 AF/KL merger eliminated meaningful price competition in EU-intercontinental markets; North Atlantic, other Intercon routes to Europe now permanently limited to 3 franchises
  - but still 6 Legacy network carriers in US operating on the North Atlantic
- United led PR drive and orchestrated sequence of DOT ATI cases and follow on US mergers (DL first, then UA, then AA)



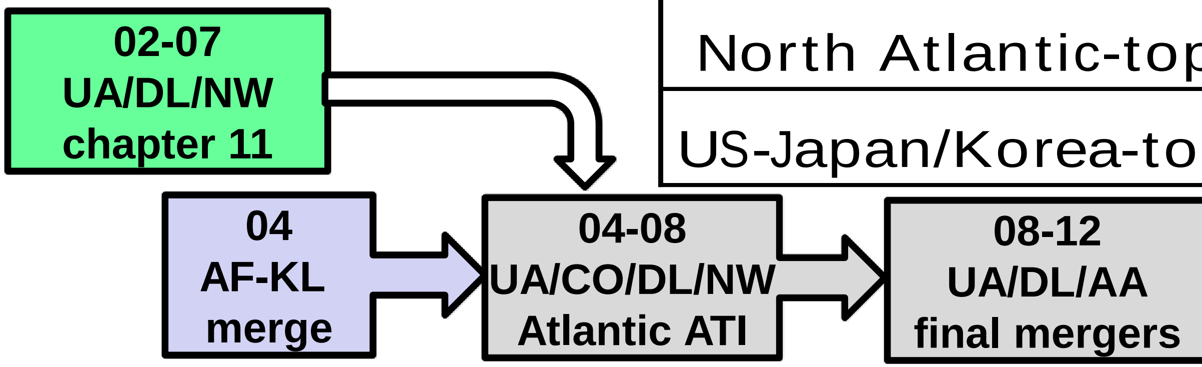
"Industry Consolidation" propaganda/PR campaign led by United's Glenn Tilton

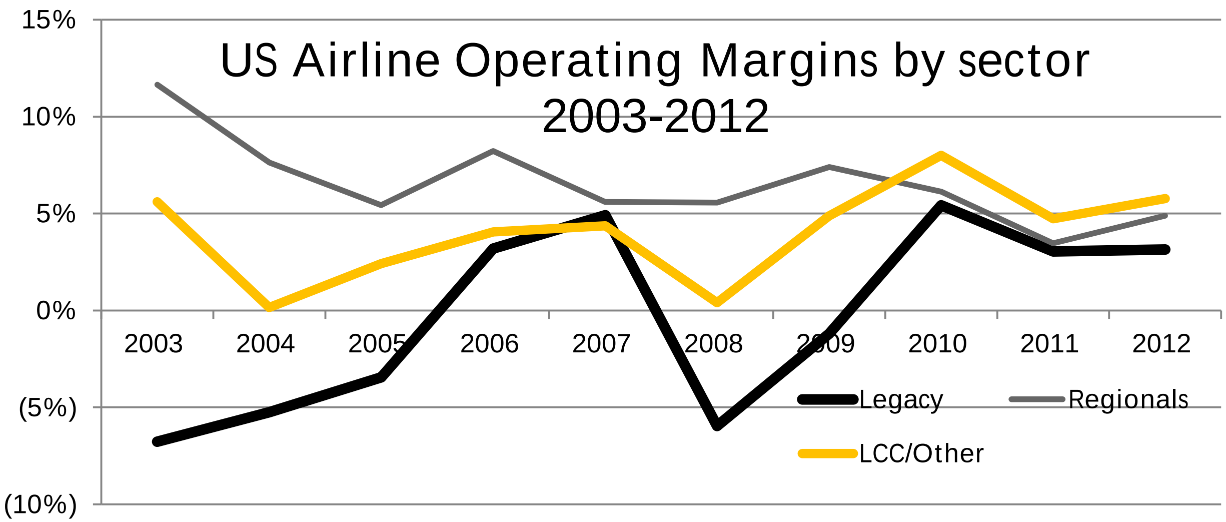
Inevitable trend towards industry consolidation	Industry growing for decades "Trend" just biggest Atlantic carriers
Industry consolidation driven by market forces	All from government actions; Capital markets not interested
Consolidation OK—lots of competition remains	shorthaul competitive; Intercon always stagnant/getting and worse
Alliances create FF and other consumer benefits	Branded alliance benefits falsely attributed to Collusive Alliances
Consolidation justified by big scale/scope synergies	No previous merger found synergies; United isn't too small to compete
ATI always drives lower consumer fares	No verifiable evidence of any consumer benefits since 1999

There has been no independent (regulatory, media, academic) scrutiny of these "Industry Consolidation" claims

Did post 2004 consolidation improve industry efficiency?

Concentration	2005	2013
USA Domestic-top 4	58%	87%
North Atlantic-top 3	47%	97%
US-Japan/Korea-top 3	60%	91%





- Profits return, but simple **metrics can't** measure efficiency impact

Changes after 2004 strictly driven by **political/legal factors, not "market"**

	before 2004	after 2004
Bankruptcy Courts	CO (86,93) HP (94) EA (91) TW (93,95,01) FL (86) HA (93)	UA (06) DL(07) NW (07) HA (04) US (05) AA (13)
DOT--Antitrust—Alliance ATI	KL-NW (92) SR-SN-DL (95) (to AF 01) LH-SK-UA (97)	merge DL/NW (04-08) CO, AC into UA (05-08) AA-BA-IB (10) US-Japan (10) DL-VA(11) DL-VS (13)
DOJ--Antitrust—Mergers	TI/CO(82) PE/FL(85) TW/OZ (86) NW/RC(86) AA/OC(86) CO/PE(87) DL/WA(87) CO/EA(87) US/PI(88)	*KL-AF (04)* DL-NW (08) UA-CO (10) WN-FL (10) AA-US (12)

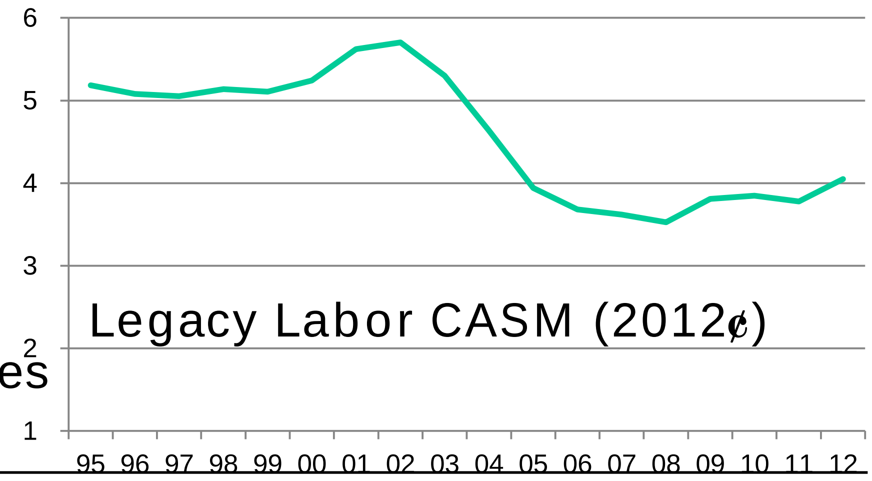
- pre-04: political/legal process secondary to market competition
  - implement innovations (some good, some failed)
  - reallocate (or fix) capital that couldn't compete
- after 2004: political/legal process drove marketplace and all changes in industry structure

Post-04 Legacy reorganization violated key bankruptcy law principles

	1980-2003	after 2004
ch 11 cases	CO (86,93) HP (94) EA (91) TW (93,95,01) FL (86) HA (93)	UA (06) DL(07) NW (07) HA (04) US (05) AA (13)
focus	legal mandate-Protect Creditors --independent plan scrutiny --encourage competitive bids --new at-risk capital investment Strict "Required for Survival" rule for imposing new contracts	Give Incumbent Managers full ownership and control of assets --block competitive bids (CO for UA, US for DL) Automatic labor cramdowns to lowest rates in industry

Results:

- Massive wealth transfers, limited capital reallocation, not long-term efficiency improvements
- Labor—ticking time bomb
- Competitive distortions: imbalances between carriers, overcapacity



Intercon consolidation impossible without **DOT's refusal to obey antitrust laws**

	1980-2003	after 2004
ATI cases	KL-NW (92) SR-SN-DL (95) (to AF 01) LH-SK-UA (97)	merge DL/NW groups (04-08) CO/AC into UA (05-08) AA-BA-IB (10) US-Japan (10) DL-VA(11) DL-VS (13)
focus	Strict criteria for granting ATI --applicant evidence of large public benefits (prices/service) --evidence markets fully contestable, no risk of anti-competitive market power	No applicant evidence of benefits No DOT market power analysis (pricing, entry barriers)—just asserted no consumer risks if 3 airlines in market Willful DOT fraud to evade public benefits test—claimed fares <u>always</u> fall whenever competition is reduced

Results:

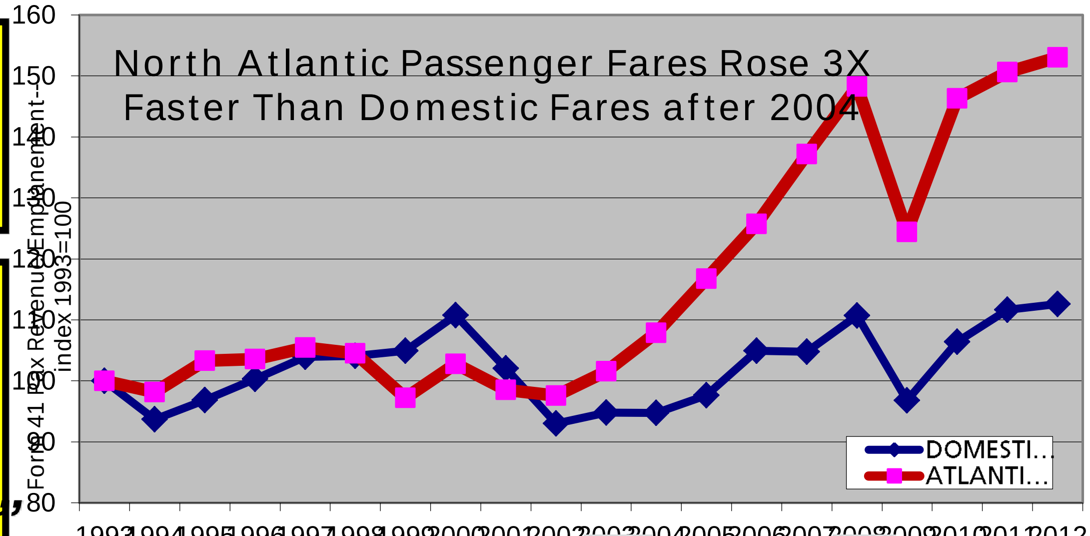
- Forced further rounds of consolidation (planned, orchestrated process)
  - Skyteam ATI made it impossible to refuse Star, Oneworld requests
  - DL/UA/AA control of ATI made it impossible to deny DL/UA/AA controlled mergers
- Created several categories of anti-competitive market power

DOT's ATI grants created 3 types of anti-competitive market power

1. profits from artificial pricing power in uncontestable markets

2. Rent-extraction and destruction of airline corporate value when alliance "franchises" given control of Intercontinental markets

3. Incumbent "too big to fail" political power



North Atlantic	1991	2001	2011
Concentration-top 3	51%	47%	98%

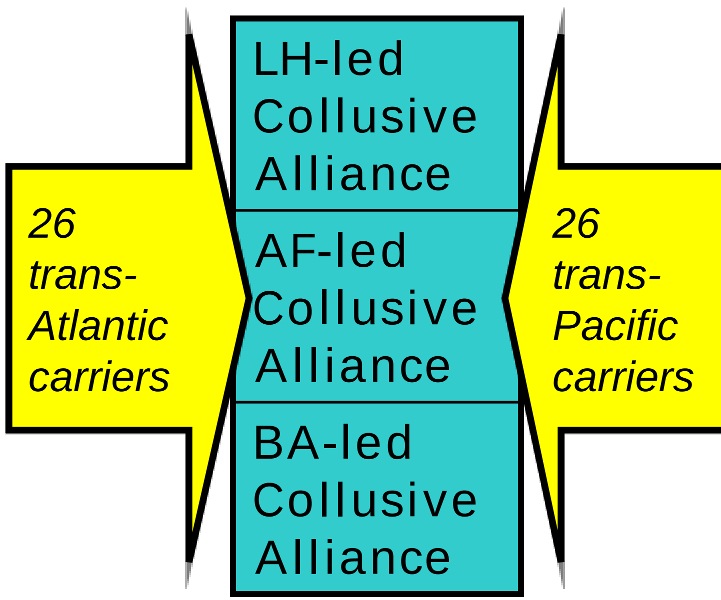
- ATI destroyed corporate value of NW/CO/US
- Capital reallocated from more efficient airlines to less efficient airlines
- Return to 50s/60s: franchises, incumbents
  - but without protections of multiple competitors

Atlantic ATI was first step to Cartelization of Intercontinental aviation worldwide

Pacific:
Sham US-Japan "Open Skies"

- **Unlike original 90s "Open Skies" designed to** massively reduce competition, facilitate subsidies, slot rules and other distortions

Delta	Air France
Northwest	KLM
United	Lufthansa
Continental	British Air
USAirways	Iberia
American	Brussels
TWA	Air Canada
Finnair	Aer Lingus
Austrian	Virgin
SAS	TAP
Alitalia	CSA
Swiss	Turkish
LOT	BMI



Delta	Singapore
Northwest	Thai
United	Malaysian
Continental	JAL
American	ANA
Hawaiian	Korean
Cathay Pac	Asiana
Air China	China
China East	EVA
China South	Qantas
Hainan	Air NZ
Air Canada	V Australia
Philippines	Air Pacific

worldwide:
artificial market power is key

- Cartel using its control of longhaul access to the huge EU/US markets
- Cartel working to block any new competition

Domestic mergers—allocating capital from strong to weak

	1980-2003	after 2004
merger cases	TI/CO(82) PE/FL(85) TW/OZ (86) NW/RC(86) AA/OC(86) CO/PE(87) DL/WA(87) CO/EA(87) US/PI(88)	*KL-AF (04)* DL-NW (08) UA-CO (10) WN-FL (10) AA-US (12)
	Every 80s merger failed except for combinations at a single hub No mergers attempted 88-01 as no evidence of economic returns (costs/risks outweighed synergies) Post dot com efforts also failed	Mergers based on solidifying ATI gains (anti-competitive market power); no evidence of synergies DL got NW assets for nothing No DOJ antitrust analysis

- Locks-in Legacy control of political/legal process
- **Creation of "too big to fail airlines"**
- Completes gutting of consumer/antitrust protections
- Creates inevitable cost/efficiency problem by restoring union negotiating leverage (eliminated by competition in 80s/90s)

Having rubber-stamped Legacy mergers, no basis for DOJ to oppose SWA/Airtran

Highly anti-competitive

- Merger eliminated competitor with lower costs and lower pricing; No material network synergies
- Facilitates higher SWA prices under Legacy umbrella
- **Reduces ability of LCC sector to "discipline" Legacies**
- Having just approved 3 mergers eliminating more efficient competitors, no basis for DOJ opposition

Claimed SWA synergies proven false

- Systems, international routes, fleet, ATL hub
  - Collapse of Airtran ATL huge windfall for Delta
  - Liquidated two-thirds of Airtran fleet at a loss
- Airtran labor jumped to higher SWA rates
- 4+ years to integrate 32 Airtran 737s into SWA

Merger outlook?

- Will long-term gains from eliminating competition justify high purchase/implementation costs?

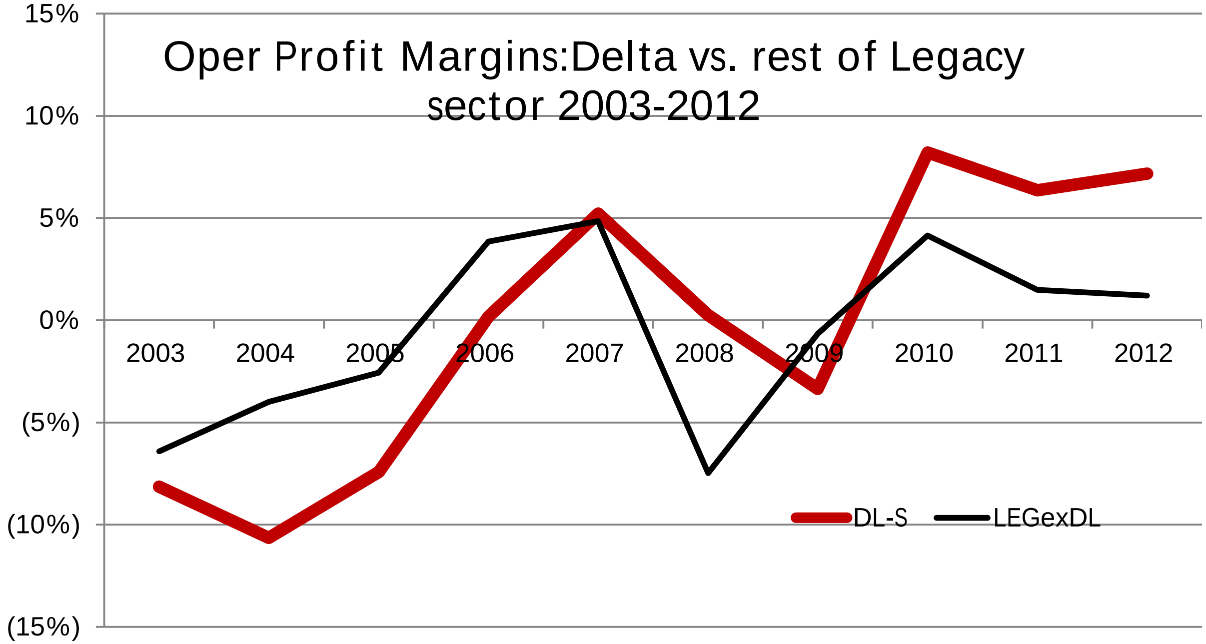
AMR's bankruptcy/merger illustrates major consolidation process flaws

- Delta/United merger distortions left AA financially weaker
  - AA BK triggered by RASM loss after DL/UA became 50% larger after mergers
- 2011 AA Bankruptcy plan followed exact UA/DL template
  - UA Template: Management not to blame/gets exclusive control and get big piece of new equity/huge liquidity but entitled to maximum labor cramdown
  - No new capital, overcapacity not addressed, but $28 billion in new planes
  - DL Template: in order to shortchange creditors AA plan falsely claimed standalone was best--real plan was post-emergence merger using ACMP over US
- **AMR plan collapsed in 3 months; couldn't block alternatives**
  - USAirways knew ACMP doomed them; bid on DL in 06; wanted to bid for AA
  - PBGC wouldn't accept $9bn taxpayer liability; unions wouldn't accept failed management and plan based on Oligopoly profits but Liquidation wages;
- 2 year delay illustrates why bankruptcy no longer boosts efficiency
  - Lawyers on both sides blocked competitive bid in order to maximize labor cramdowns and payouts to incumbent managers; paid themselves $400 m
  - Lack of scrutiny/bidding hurt creditors, massively suboptimized AA, and opened door for DOJ lawsuit—huge gift to Delta and United

DOJ attacked the only airline merger **that wasn't anti**-competitive

- AA-US created no anti-competitive market power and mitigated some short-term artificial distortions from UA,DL mergers
- DOJ absurdly claimed US-AA was first and only airline merger to **threaten consumer, but didn't explain differences or provide evidence**
  - Claimed reduction in competition would lead to price fixing; didn't explain how, or why previous mergers hadn't created similar risks
- DOJ claims not based on any analysis of pricing, competitive economics or market contestability; ignored international markets
  - Just inside-the-beltway concerns about DCA pricing (despite slot swap history)
- AA/US: weak DOJ case would not win, but settled when DOJ shielded **from explaining "methodology" and conflict with previous cases**
- DOJ case hurt consumers, distorted competition; big gift to Delta
  - DOJ suit blocks AA capital allocations that would maximize competitiveness; sustains Delta's artificial scale advantage longer;
  - AA/US loses its half of the slot swap but Delta gets to keep theirs
- Illustrates that traditional antitrust rules can no longer protect consumer interests or industry efficiency

What explains Delta's rapid shift from industry laggard to profit leadership?



	95-01	02-06	07-12
DL RASM gap	(10-12%)	(2%)+3%	+5-7%
DL% Legacy rev	17-19%	17-19%	32-33%

Delta's gains strictly due to market distortions caused by consolidation

	Delta	United
ACMP-- Atlantic	biggest pool of Atlantic profits	UA—could not collude with CO until 2009
ACMP— Assets strong to weak	paid NW shareholders nothing for network assets or merger benefits—NW already optimized for merger	paid CO shareholders (~$1.5bn) for assets, merger benefits despite unfavorable CO contracts (RJs)
Competitive Distortions 2007-2010	Exploited artificial share advantage (32-20%)—major corporate share shift; profits funded overcapacity, product	Merger after economic crisis; less product funding, more workforce conflict
Competitive Distortions 2010-2013	Labor contracts still based on risk of liquidation (plus ability to break NW unions) WN much weaker at ATL DOJ delays, weakens AA/US	UA unions demand share of merger gains; slowdowns and IT issues hurt revenues

Delta-Alaska battle illustrates impact of anti-competitive market power

Alaska more efficient, better run

- Strongest operating margin (16%), ROC
- **More profitable without any of Delta's advantages** (ATL hub, huge scale, International Cartel position)
- Profitable strategy: strict alliance neutrality

DL@SEA: no competitive advantage,ROC

- **Int'l hubs always weak; feed 2000 miles from SEA**
- NW/AS feed added no capacity; respected neutrality
- US flag Pacific weakening

ACMP critical to Delta plan

- Use Cartel profits to distort competition, pursue uneconomical market share
- Use market power to force AS to abandon profitable strategy without paying AS shareholders

Delta knows DOT won't do anything

- **DOT won't admit any efficiency/consumer harms from** consolidation process it is responsible for
- DOT said no need for more than 3 competitors

Did consolidation since 2004 improve long-run industry efficiency?

Clear evidence:
<u>capital misallocation</u>

- Capital moving from strong to weak; entry barriers blocking new capital
- Major disconnect: profits/growth vs customer service/operating efficiency
- Distortions from international franchises; artificial consolidation process

Clear evidence:
less focus on
<u>competitive advantage</u>
less <u>innovation</u>
more <u>extractive</u>
<u>wealth transfers</u>
more <u>ACMP</u>
<u>political/legal</u> changes
<u>entrenched incumbents</u>

- Return of market share strategies
- No legitimate merger synergies
- No competitive pressure to innovate; wealth transfers, pricing power much easier
- Weak GDP, labor makes problems worse
- High pricing means zero/negative growth
- Political/legal changes have disabled ability **of "market forces" to fix industry problems**