The economics of airline industry consolidation

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Why sudden, radical consolidation? --biggest structural change in history

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

- **How did this major change in industry structure occur? Why suddenly? Why now?**
- **How will the reduced number of airlines impact consumers and industry efficiency going forward?**

Any consolidation analysis implies a model of airline competition and growth

- **What drives <u>long-term</u> aggregate industry growth and profitability?**
  - Is long-term growth pattern changing?
  - Is consolidation driven by underlying cost or demand drivers?
- **How does (should) airline industry competition work, and how does competition drive long-term industry growth?**
  - What pieces needed to drive capital allocation and growth?
  - Does competition work best on laissez-faire basis? What antitrust oversight is needed?
- **How will recent reductions in the number of airlines affect competition and future industry efficiency and growth?**

Two major arguments

Global industry shifts driven by artificially reduced Atlantic competition

- **Domestic US consolidation driven by Intercontinental shifts**
- **Intercontinental consolidation wholly anti-competitive**
- **Consolidation impossible without willful disregard for consumer welfare and antitrust law**

Consolidation will likely damage long-run industry efficiency

- **Consolidation does not address causes of weak profitability**
- **No recent merger justified by legitimate scale/scope synergies or recent changes in underlying costs or market demand**
- **Counter-revolution against liberal, market-based competition: not "market forces" but a major subversion of market forces**
- **Consolidation will undermine future growth by reducing pressure for ongoing innovation and productivity, and worsening capital allocation within the industry**

My perspective on consolidation

Consolidation via Alliance Antitrust Immunity

- **Developed original NW/KL alliance network**
- **Also managed from European (SR/SN) side**
- **Shut down multiple unprofitable alliances**

Consolidation via Merger

- **Direct experience with economic plans, results**
- **Direct experience with true Cross-Border mergers**

Active involvement with current consolidation

- **Multiple bankruptcy cases, including UA, AA**
- **Congressional and DOT testimony**
- **recent Transportation Law Journal article**

IC consolidation strictly North Atlantic; First (mid 90s) phase was pro-consumer

Original mid-90s ATI did create Consumer Benefits

- Thousands of markets got online service, discount fares for the first time

original alliance benefits
KL-NW (92) and SR-DL (95):
fully exhausted by 1999

- Alliance connections totally displaced traditional interline connections
- Consumer benefits only on North Atlantic markets; not pursued elsewhere

Original Collusive Alliances—still robust competition

	1991	1993	1995	1997	1999	2001
Concentration-total North Atlantic market (55 million annual pax)						
top 3 share	35%	42%	42%	45%	47%	47%
number of US-EU competitors with minimum departure share of 2%						
	15	15	13	13	11	11

Post 2004 phase: no consumer benefits; permanent Cartel created

Two separate "consolidation" processes

Total North Atlantic	1991		2001		2012
Concentration-top 3	51%	mostly market forces	47%	Totally Artificial Consolidation	97%
# Competitors (>2%)	15		11		3

- All market exits since 93 totally artificial—big carriers petitioned government to reduce competition

26 competitors merged into a permanent Cartel

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

the North Atlantic Cartel

LH-led Collusive Alliance

AF-led Collusive Alliance

BA-led Collusive Alliance

assumes last 3 airlines (US,VS,EI) unable to survive as small indepedents and join Cartel groups after approval of BA/AA

Air France/KLM merger triggered consolidation to permanent Cartel

- **AF/KL claimed massive synergies not found in any previous merger—despite no brand or operations integration**
- **AF/KL merger converted competitive USA-Continental Europe market to a permanent duopoly, and eliminated the main source of price competition in EU-intercontinental markets**
- **Other Atlantic competitors forced to either join Cartel or die**

2002 vibrant, profitable competition, even with 4 Collusive Alliances

DL/ATL	20%	AF/CDG+AZ
UA/IAD	21%	LH/FRA+SK
	14%	BA/LHR
AA/ORD	14%	SR/ZRH
NW/DTW	9%	KL/AMS
CO/EWR	7%	
US/PHL	5%	
	3%	VS/LHR

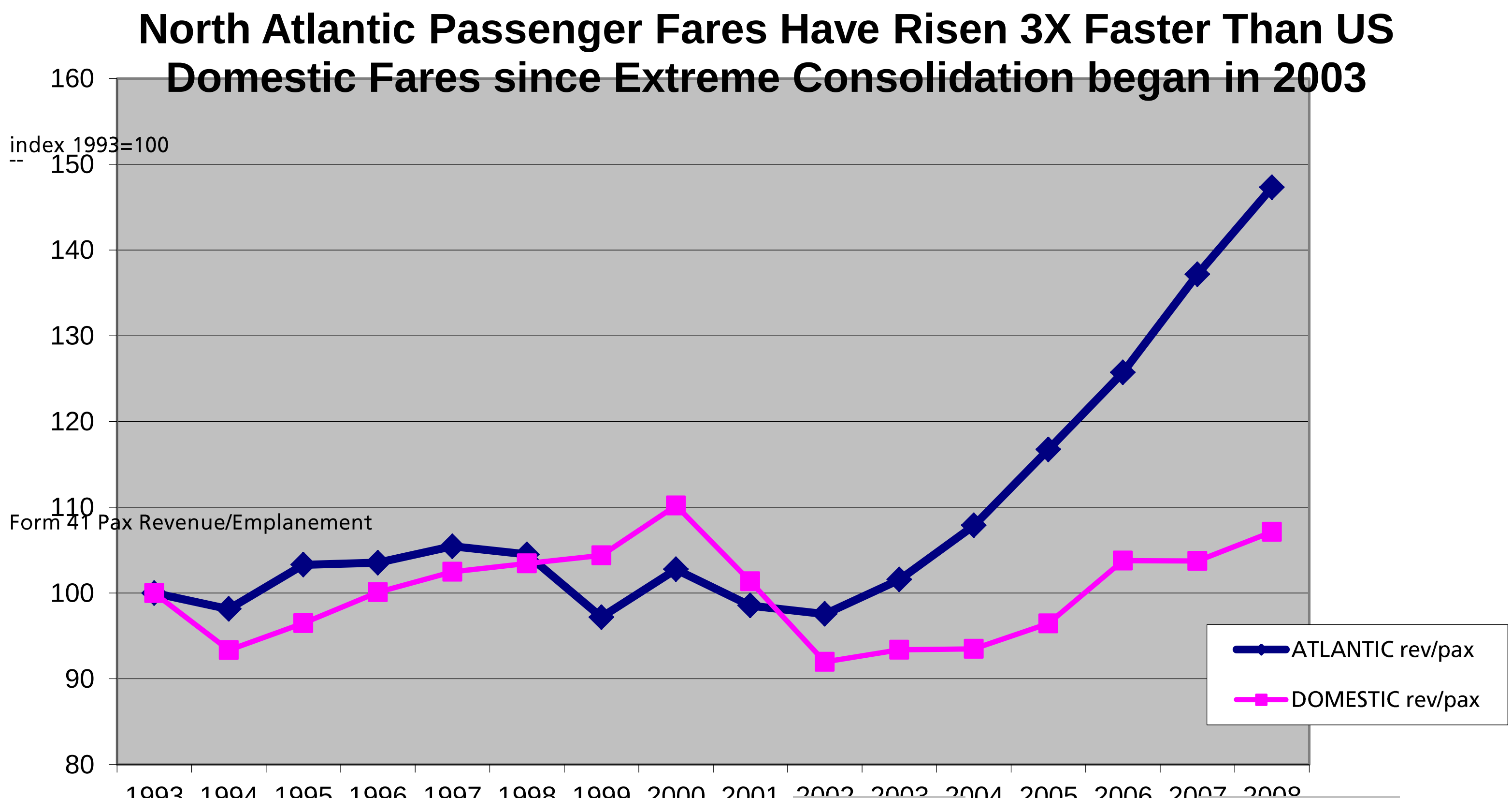
2005 create permanent Continental Europe Duopoly

DL/ATL NW/DTW	29%	AF/CDG+AZ KL/AMS
UA/IAD US/PHL	27%	LH/FRA+SK SR/ZRH
	11%	BA/LHR
AA/ORD	11%	
CO/EWR	10%	
	4%	VS/LHR

2012 create permanent 3 player Atlantic Cartel

DL/ATL NW/DTW	31%	AF/CDG+AZ KL/AMS
UA/IAD US/PHL CO/EWR	42%	LH/FRA+SK SR/ZRH
AA/ORD	24%	BA/LHR

Post-2004 Consolidation has created huge anti-competitive market power



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Atlantic consolidation meant only 3 of 6 domestic Legacy carriers could survive

Domestic consolidation inevitable after KLM/Air France merger

- **EU, US DOT clearly signaled desire to consolidate all 26 competitors into the 3 Collusive Alliance groups**
- **KL/AF destroyed entire corporate value of NW, and forced DL merger**
- **CO could not survive, but had leverage for better merger terms**
- **AA acquisition is only way US can preserve some corporate value**
- **Legacy mergers provided cover for SWA-Airtran merger**
- **None of domestic mergers justified by network or operating synergies—solely driven by Atlantic consolidation and pricing power**

Consolidation hugely distorts domestic competition & efficiency

- **Pricing--pure wealth transfer from consumers to UA/LH and DL/AF**
- **Distorts domestic competition (Delta vs Airtran at ATL)**
- **Assets moving from more efficient to less efficient companies**
- **Survival/success determined by regulators, not consumer/investors**

Goal is 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

26 trans-Atlantic carriers

LH-led Collusive Alliance

AF-led Collusive Alliance

BA-led Collusive Alliance

26 trans-Pacific carriers

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**

Biggest shift in industry history in less than 10 years----three key drivers

#1-EU shift from liberal to "managed" competition purely anti-competitive 2003 KL/AF merger

- **2001/2--Brussels policy shift, proactively drives consolidation, to favor "National Champions" (LH/AF), weaken LCCs; subsidize weak (AZ, OS, OA, LX)**
- **2003/4--KL/AF merger: establishes Cartel; forces USA consolidation**
  - totally different merger rules for AF, FR
- **2004/8—EU-US Open Skies delayed 4 years—wanted more mergers**

#2—staged sequence of follow-on ATI/mergers; DOT willingness to disobey law, use fraudulent evidence

#3—huge "Consolidation is Inevitable" PR campaign

All ATI Consumer Benefits findings based on willful DOT regulatory fraud

"Double Marginalization"—ATI automatically reduces fares 15-25%
--sole basis of $90 million annual Oneworld consumer benefits claim

- **Falsely claims that physical barriers force interline carriers to always set fares $200-300 higher than online/ATI connecting fares**
- **Falsely claims that ATI always and automatically cut connecting fares $200-300 regardless of market/competitive conditions**
  - "Double Marginalization" violates laws of supply and demand
- **False "rule" that reducing competition <u>always</u> reduces prices designed to nullify both the law and rules of evidence**
  - Every ATI application automatically justified; no need for case-specific evidence
- **False claims fabricated by one UAL consultant in one paper; DOT claims "rule" justified by multiple, independent researchers**
  - based on regression of 1990s data that is totally unrelated to the pricing claim
- **No evidence of <u>any</u> pricing benefits from any ATI grant since 90s**
  - No actual consumer pricing evidence submitted in any recent ATI case
  - DOT uses fraudulent "rule" as basis for rejecting evidence of higher prices

"Industry Consolidation movement"-- successful misinformation/PR campaign

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
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
Alliances create FF and other consumer benefits	Branded alliance benefits falsely attributed to Collusive Alliances

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

First major argument

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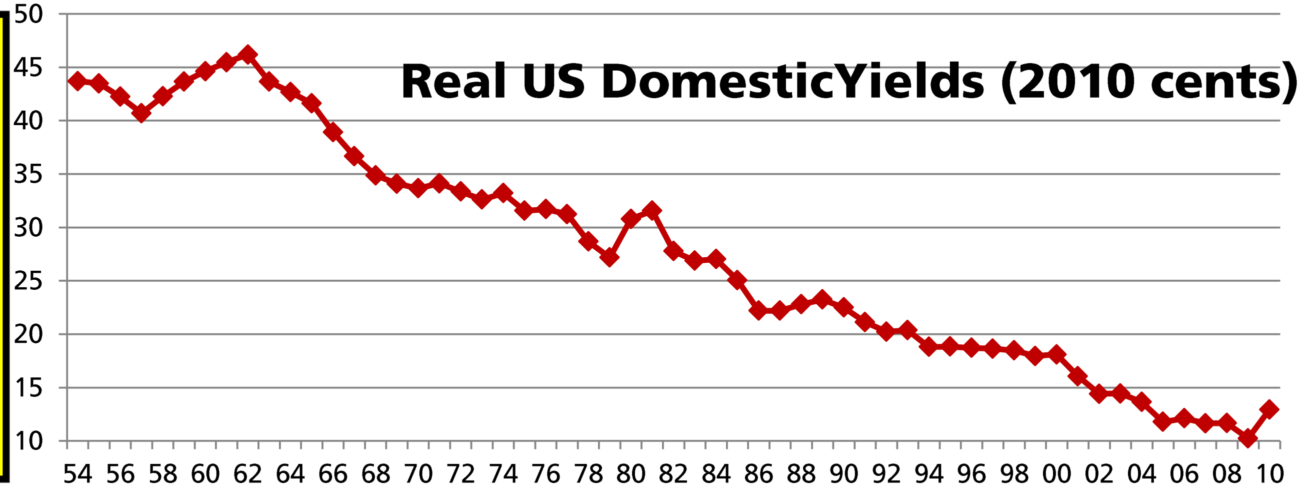
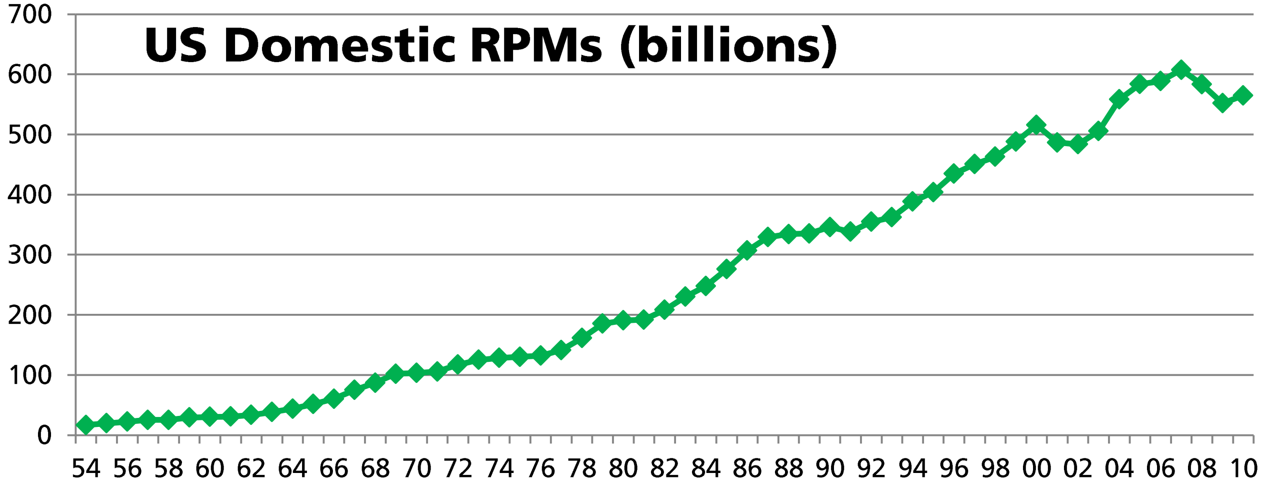
Consolidation will likely damage long-run industry efficiency

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

Innovation→ Lower Fares
60s/70s—technology
80s/90s—network/ business models
00s--maturity? negative fuel impact



Fares aren't falling; limited future growth
90s—growth despite stable fares
00s—stable/rising fares stifle growth

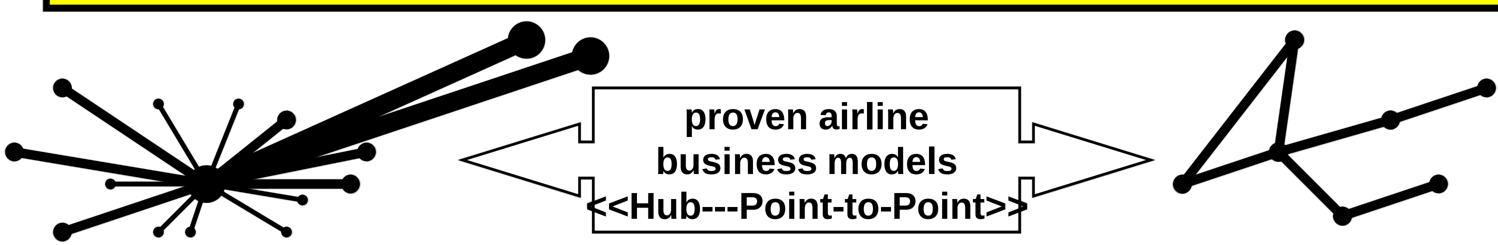


Deregulation driven innovations—critical to growth, but now exhausted

One-time process of aligning networks/business models to local markets and operating economics

- **80s—US hub development—before deregulation true hubs limited to ORD, ATL, DFW, DEN, SFO**
  - Hub expansion went way too far, only 10-12 big Legacy hubs sustainable
- **90s—Business model evolution (LCCs in USA, Europe)—before deregulation all airlines forced to follow Legacy model**
- **90s—Collusive North Atlantic alliances—workaround to provide better service/lower fares in "2-stop" O&D markets**

Network/business model development now fully mature



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

Outside of developing economies, golden age of industry growth is over

Slower growth, not decline—innovation remains critical

- **Magnitude of one-time jet/deregulation driven productivity bursts will likely never be seen again**
- **But aviation isn't fully mature or facing decline, since demand for trade and travel will continue to grow**
- **Some sectors will decline, but no "natural trend to airline consolidation"**

But growth dynamics poorly understood, especially in America

- **Dynamic growth seen as birthright, magical process**
  - Industry folk belief that demand growth automatically follows GDP growth, instead of being driven by price (and productivity)

Liberal competition drives structural growth, improved capital allocation

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

Lower Fares
customer value

Structural Growth

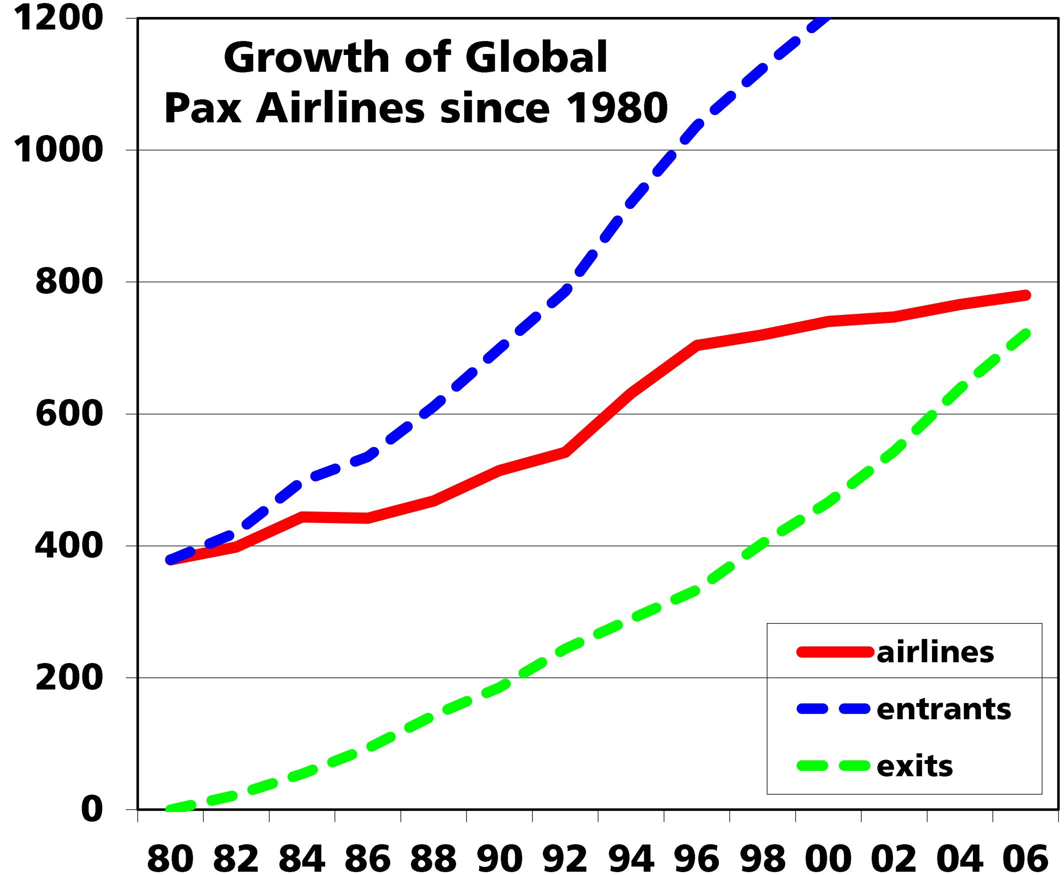
Pressure to continuously improve capital allocation

HIGHLY LIBERAL MARKET COMPETITION	
Pricing/market entry freedom	No labor market distortions
Independent capital markets	Limited ownership barriers
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

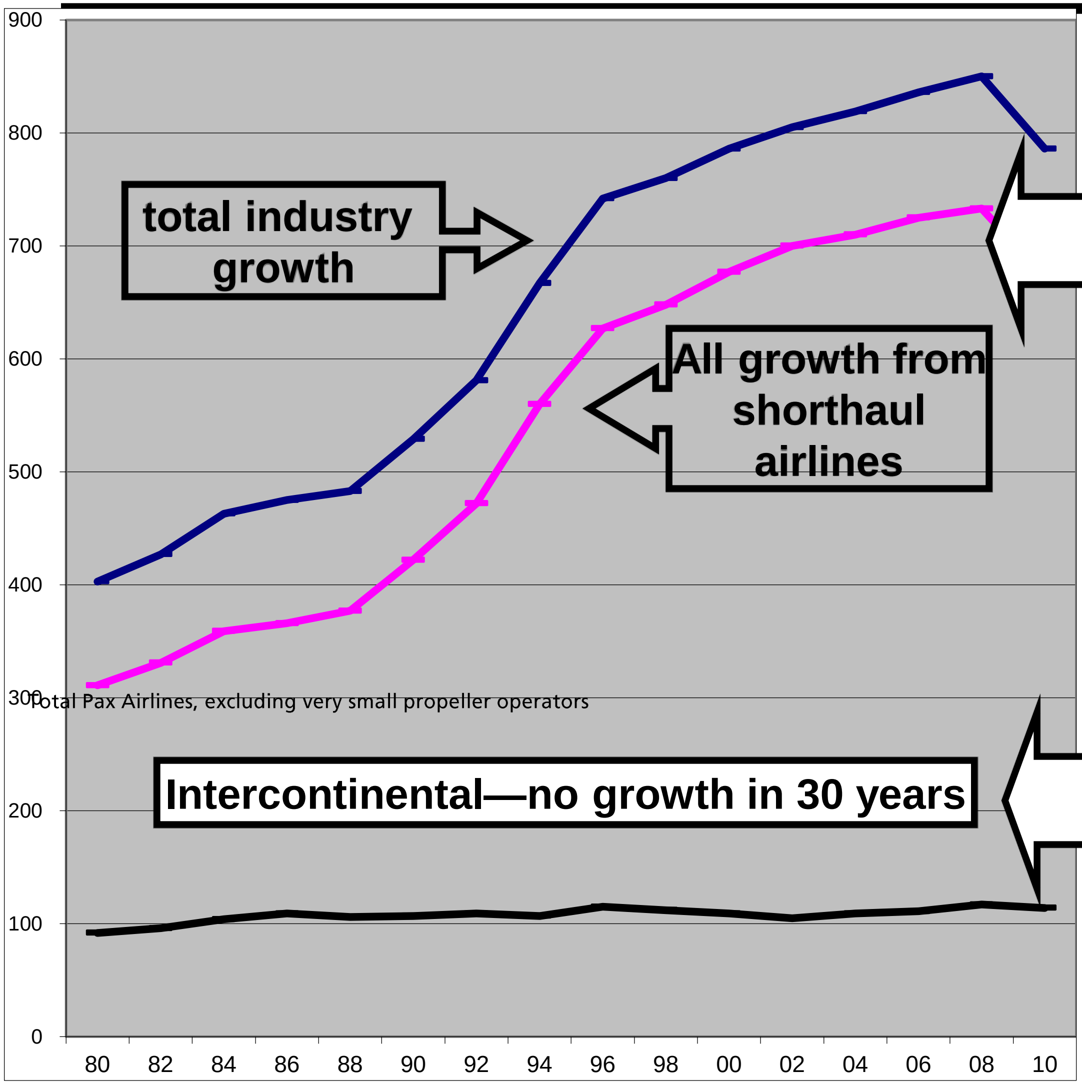
Airline "competitive churn" critical to capital allocation and industry growth

- **Competitive "churn"--active entry <u>and</u> exit—reallocation of capital from weak to strong**
- **Critical to eliminate "Barriers to exit"--if weak carriers don't exit, strong incumbents and new entrants can't grow**



Excludes third level airlines with less than 10 aircraft

But Intercontinental sector has always been competitively stagnant



Strong, dynamic industry growth last 30 years driven by vibrant competition in shorthaul sector *(domestic/regional airlines)*

--no evidence of industry consolidation trend

--global aviation is not mature and in decline

Intercontinental sector: zero growth in 30 years due to huge entry barriers (both political, economic)

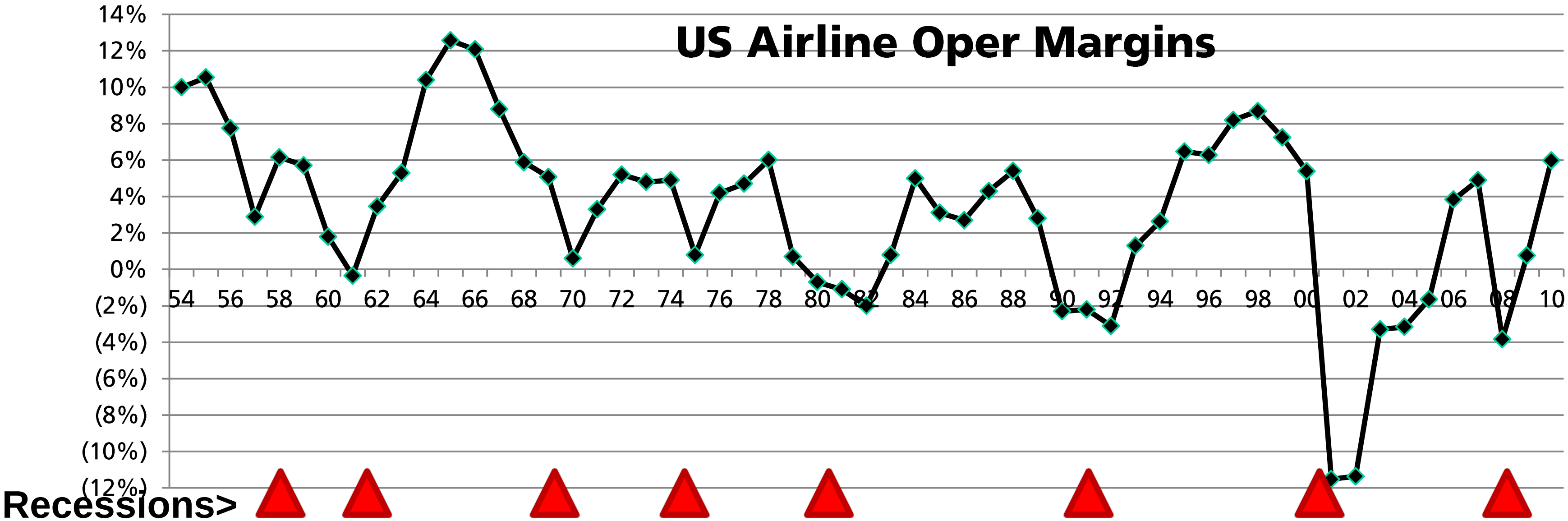
Intercon: conditions to let the market decide "how many airlines" don't exist

LIBERAL COMPETITIVE CONDITIONS CAREFULLY ENGINEERED IN MOST DOMESTIC/SHORTHAUL MARKETS	**BUT TRULY LIBERAL CONDITIONS NEVER ESTABLISHED IN INTERCONTINENTAL MARKETS**
Pricing/market entry freedom	Pricing/market entry freedom
Access to capital markets	Access to capital markets
No artificial competitive barriers	~~No artificial competitive barriers~~
Transparent financial reporting	~~Transparent financial reporting~~
Open corporate control market	~~Open corporate control market~~
Strong antitrust rules, enforcement	~~Strong antitrust rules, enforcement~~
Efficient bankruptcy process	~~Efficient bankruptcy process~~
No political barriers to exit— no carriers "Too Big To Fail"	~~No political barriers to exit— no carriers "Too Big To Fail"~~
Objective: Maximum consumer/efficiency gains economy-wide (not interests of specific companies/employees)	~~Objective: Maximum consumer/efficiency gains economy-wide (not interests of specific companies/employees)~~

Consumers, investors decide "how many airlines"

Governments, entrenched incumbents decide "how many airlines"

US airline profits historically weak, very sensitive to supply/demand shifts



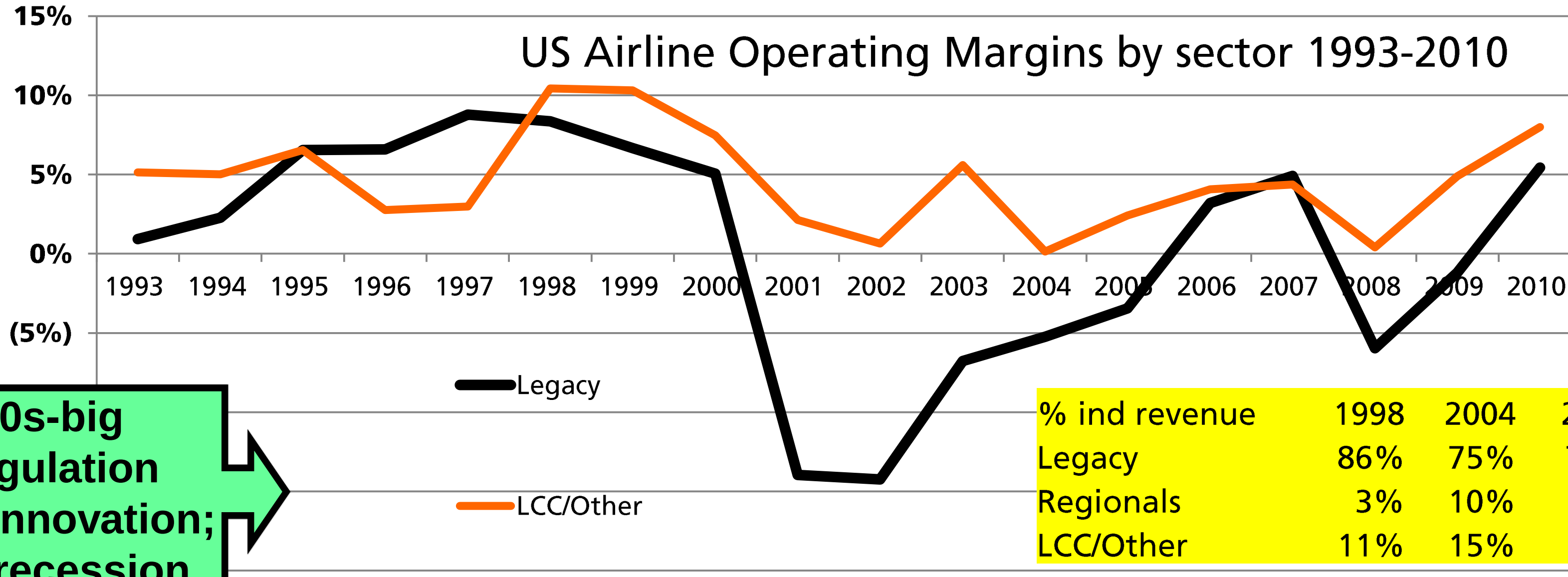
Strong profits get undermined

- **60s aircraft driven boom; went way too far**
- **90s capacity discipline abandoned (dot-com era)**

3 big collapses: overcapacity+ recession

- **80s: deregulation entry boom hits recession**
- **90s: hub boom/national expansion hits recession**
- **00: dot-com boom hits recession**

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



% ind revenue	1998	2004	2010
Legacy	86%	75%	72%
Regionals	3%	10%	9%
LCC/Other	11%	15%	19%

1980s-big deregulation driven innovation; 90/92 recession

Mid 90s profits tight capacity Price discipline Atlantic alliances

DotCom late 90s mad growth rush: allows LCCs to expand

2000-2004 Huge Collapse overcapacity + recession

2004-2008 Financial Bubble but weak profits; fuel prices spike

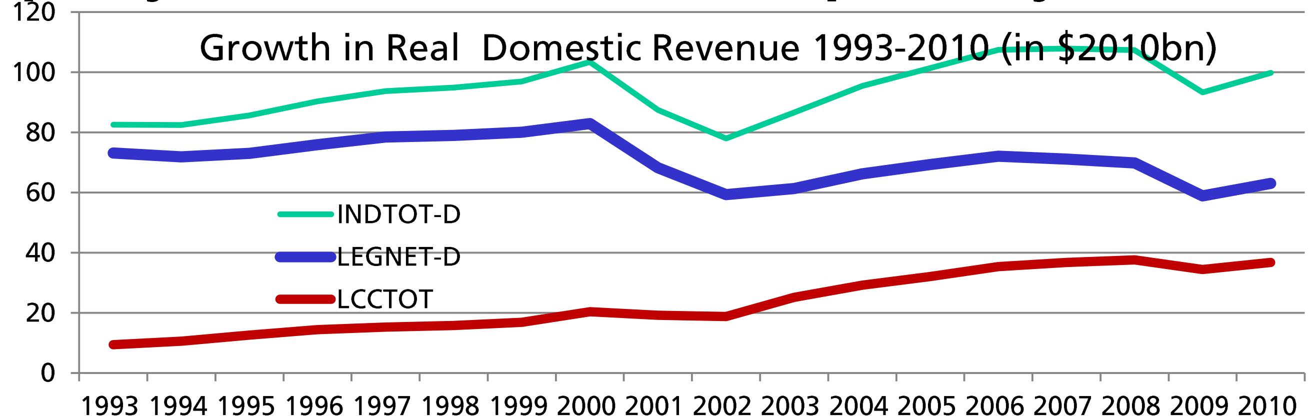
2009-? Great Recession but capacity discipline returns

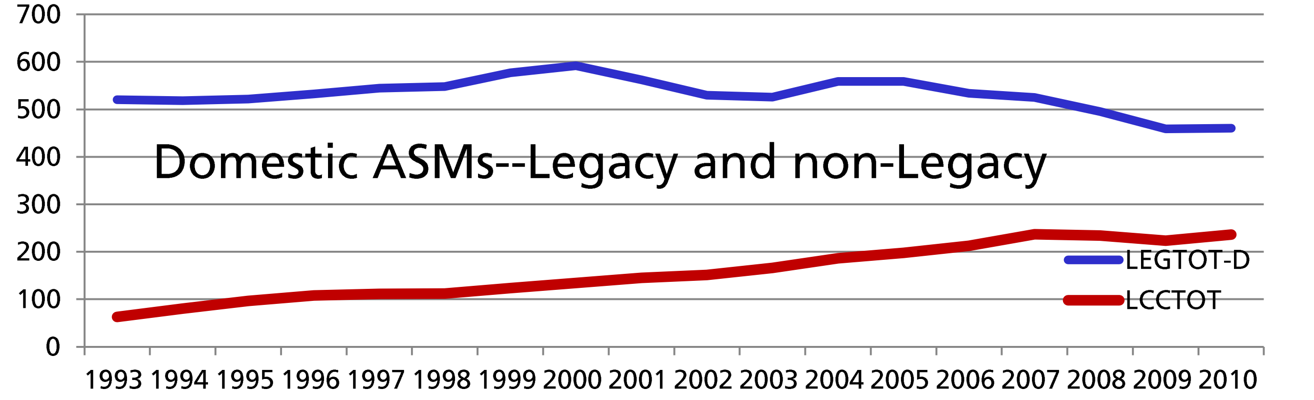
- **$36 billion in Legacy losses 2001-2009**
- **Legacy sector more volatile/cyclical than LCCs**

Source: DOT Form 41 data

Losses since 90s due to persistent Legacy domestic overcapacity

- **Legacy share of domestic revenue base down 30-35%**
- **But capacity cuts too little/too late; depressed yields for everyone**





Overcapacity—fleet hasn't recovered cost of capital since the 90s --problem is too many planes/ASMs—not too many airlines

Source: BLS CPI deflator applied to DOT Form 41 data

Why haven't "market forces" solved the overcapacity/capital misallocation?

Bankruptcy distortions created bigger "barriers to exit"

- **United, Delta bankruptcies focused on protecting incumbent managers, not creditors; failed to cut unsustainable fleet capital—LCC's expanded but Legacy shakeout never happened**

Distortions from Atlantic anti-competitive pricing power

- **Subsidies for domestic capacity/market share**

No possibility of new entry, no meaningful capital market discipline

- **No new, at-risk Legacy investment—just vendor/DIP financing**
- **No recent consolidation driven by capital markets**

Reduced competitive pressure, so failed approaches persist

- **Huge barriers to management innovation, fresh thinking**
- **Legacies ignore ROIC, competitive advantage, long-term growth drivers, basic supply/demand dynamics**

"Scope/scale synergies" have never justified mergers (except BK cases)

Hub City Synergy
but all 20 years ago

82—CO/TI	✖
86—TW/OZ	✓
86—NW/RC	✓
87—BA/BR	✓
89—AF/UT/IT	✓

Bankruptcy cases
gains from restructuring

05—LH/LX	✓
05—US/HP	✓

"Scope+Scale Synergy" Mergers
All failed—few synergies, huge costs

79—PA/NA	✖	88—CO/EA	✖
85—PE/FL	✖	88—US/PI	✖
86—AA/OC	✖	98—SR/SN	✖
87—DL/WA	✖	98—KL/AZ	✖
87—CO/PE	✖	00—AA/TW	✖
87—US/PS	✖	00—UA/US	✖

Recent mergers (KL-AF, DL-NW, UA-CO) claimed efficiencies not found in <u>any</u> previous merger
--and provided no evidence to support synergy claims

Recent domestic mergers justified by anti-competitive pricing, not efficiencies

source	DL-NW	CO-UA
Merger cost estimates	**~$2.0bn** + stock swap	**~$2.0bn** + stock swap
Fix non-merger issues	**+** weak DL ch.11 savings	**++** UA management
Anti-competitive impacts	**++++++** Acquire NW at no cost; Secure Europe duopoly: Atlantic pricing power; leapfrog AA	**++++++** EWR hub for Star and Eastern US dominance; Atlantic pricing power; leapfrog AA
Restructuring gains	none	none
Merger (scale/scope) Synergies	**++** Hub-to-hub links ATL-DTW-MSP short-term fleet swaps	**++** Hub-to-hub links ORD-IAH-EWR short-term fleet swaps
Dissynergies	**x** Raise NW labor costs	**x** Raise UA labor costs

- **No public evidence of legitimate, sizeable synergies**
- **Overhead savings limited by recent chapter 11 cuts**
- **No mergers would have occurred without pricing power created by Atlantic consolidation**
- **"Synergy" is now politically correct term for "anti-competitive pricing power"**

Counter-revolution against liberal international airline competition

	90s: Global Liberalization	Today: Intercon Cartelization
Who determines number of competitors?	Consumers, investors in the open marketplace	Governments, entrenched incumbents via private "backroom" discussions
Capital flows, efficiency gains	From less-efficient to more-efficient	More-efficient at mercy of less-efficient (but Too Big To Fail)
Legal/regulatory objective	consumer welfare, long-term industry efficiency, "level-playing field"	Protect/enrich a handful of private companies, especially "national champions"
Legal/regulatory approach	Neutral umpire enforcing transparent rules using objective data/evidence	Undermine law/precedent with fraudulent evidence; opaque rules applied arbitrarily
Role of "Open Skies"	Facilitate new entry, reduce cross-border and artificial barriers	Facilitate reduced competition and regulatory arbitrage; increased protection of weak;
Driver of airline success	Efficiency, service quality, network strength	Ability to capture regulators; control of alliance access

Counter-revolution against the drivers of capital allocation and growth

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

→ **Lower Fares** customer value → **Structural Growth**

Pressure to continuously improve capital allocation

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Looking forward given tomorrow's highly illiberal environment

Continuing, artificial consolidation
--many moves unthinkable 10 years ago

- **reducing trans-Pacific from 26 to 3 competitors**
- **BA acquiring BMI; only 4 carriers for entire USA**
- **crude Canadian/German anti-EK protectionism**

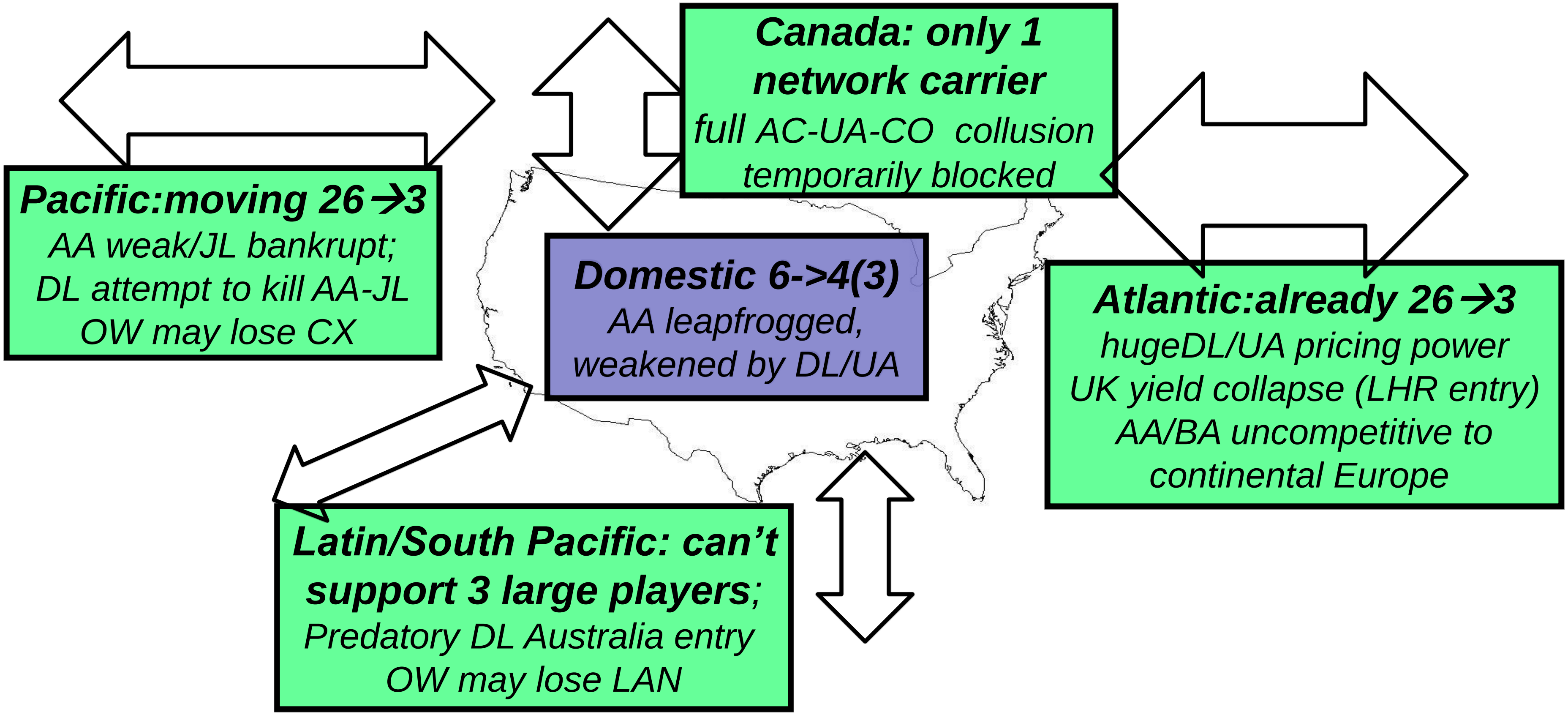
Wealth transfers within industry replace real growth
--based on artificial power, not superior productivity

- **Megacarriers squeeze small alliance members and domestic LCCs**
- **Wealth transfers from labor to capital**

growth of cross-border regulatory arbitrage
threatens financial/consumer/safety protections

- **UAL IAD-MAD precedent; Qantas offshoring; Tiger safety lapses**
- **"remove barriers to cross-border capital flows" means "further protect politically powerful incumbents from market forces"**

"3 alliance world" inherently unstable; proactive push for 2 alliance hegemony



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