



Massachusetts
Institute of
Technology

Emerging Markets and Evolving International Traffic Patterns Airline Industry Consortium Meeting

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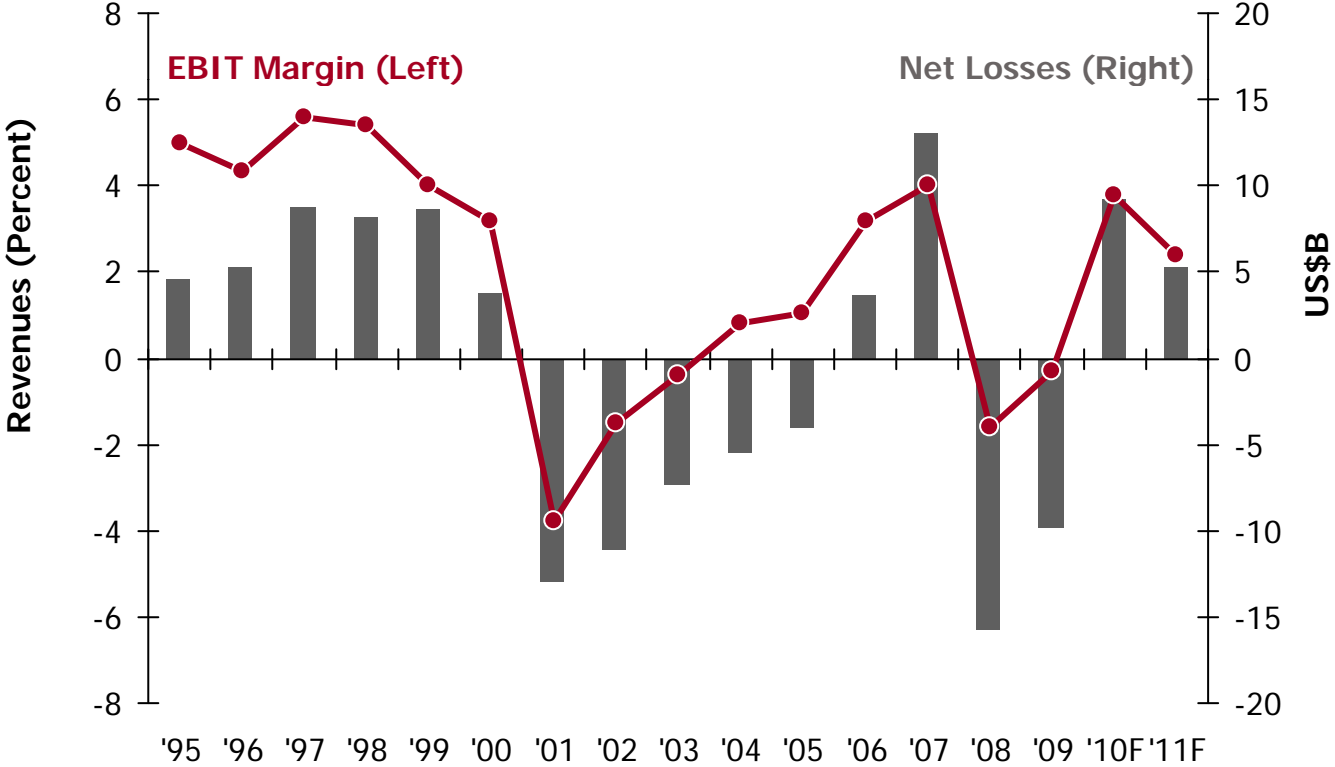
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What the Numbers Say



A Strong 2010, Weakness in 2011?

Global Commercial Airline Profitability

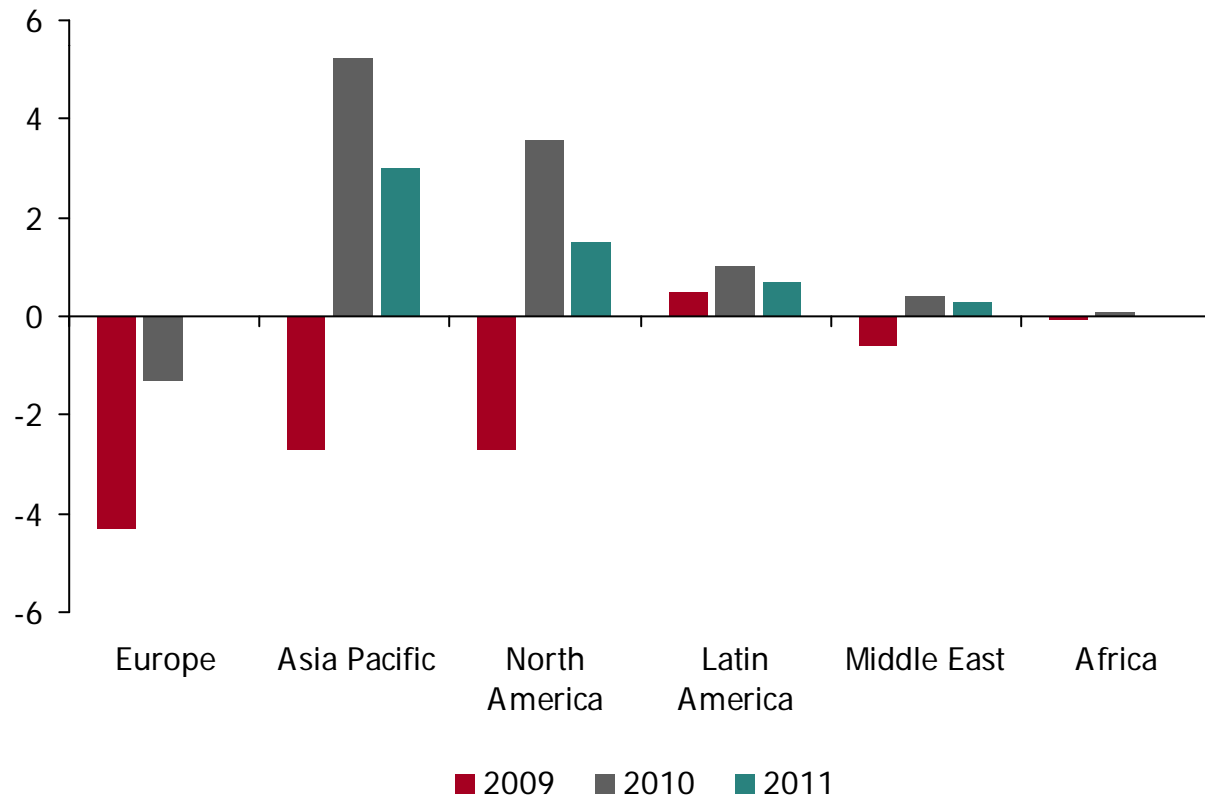


Source: IATA



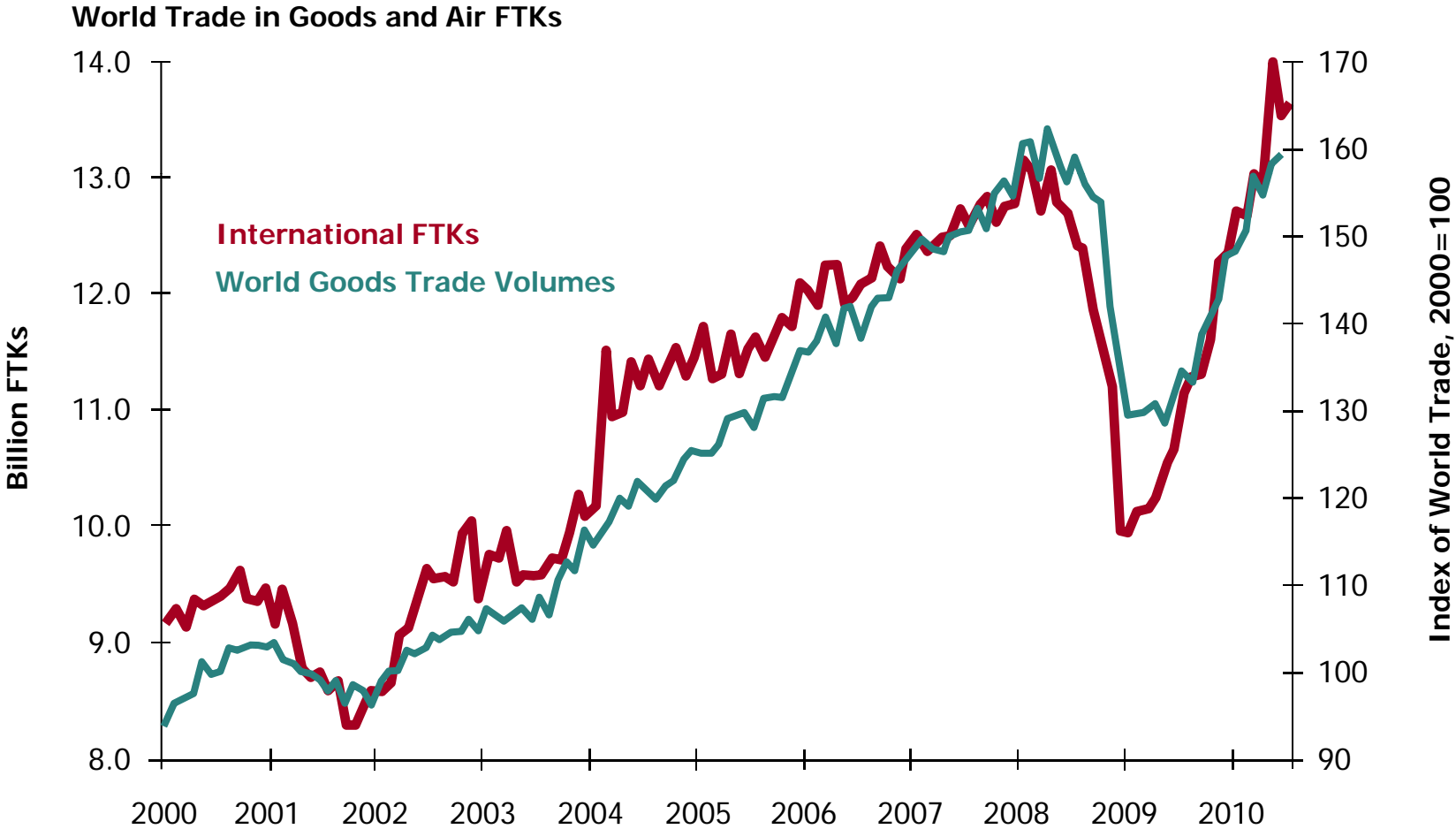
Europe Remains Weak; Asia Pacific Outperforming

Airline Net Profits by Region, US\$B





World Trade and Cargo Slowing but Still Above Trend

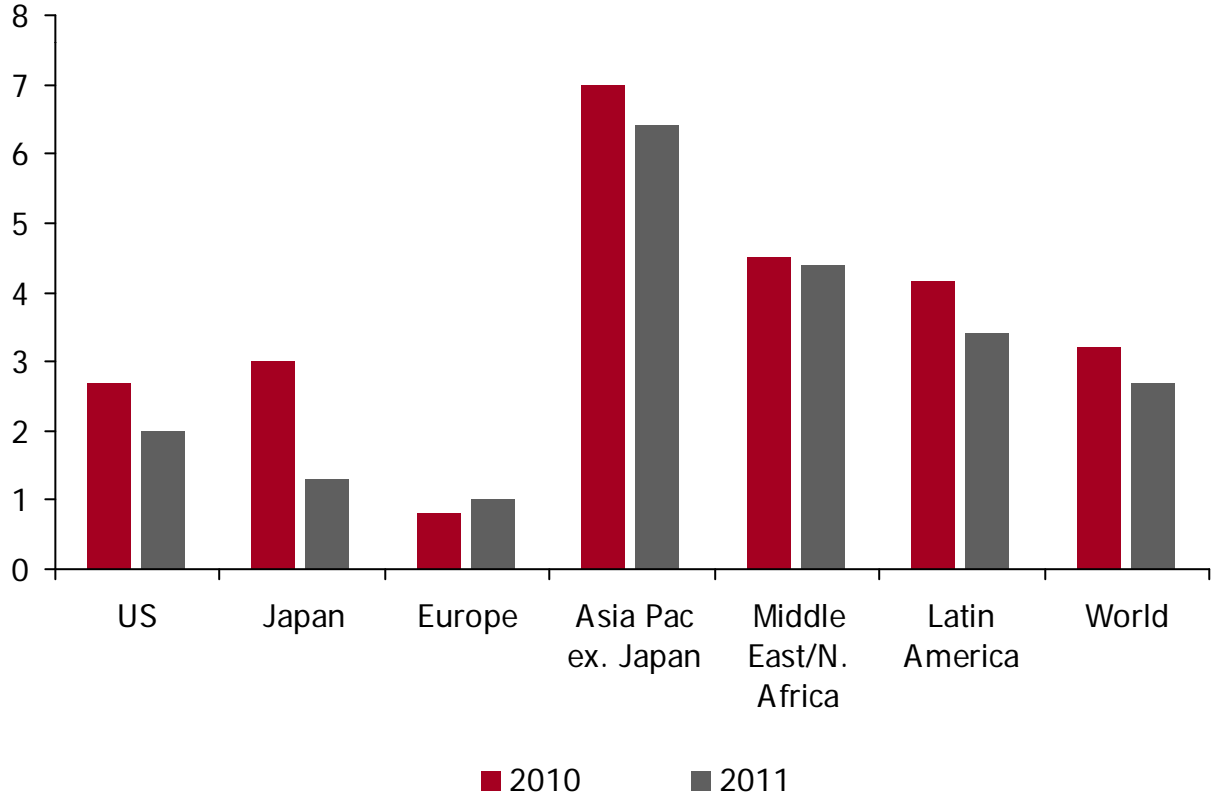


Source: IATA, Netherlands CPB



Emerging Economies Will Fare Better in 2011

Forecasts for GDP Growth

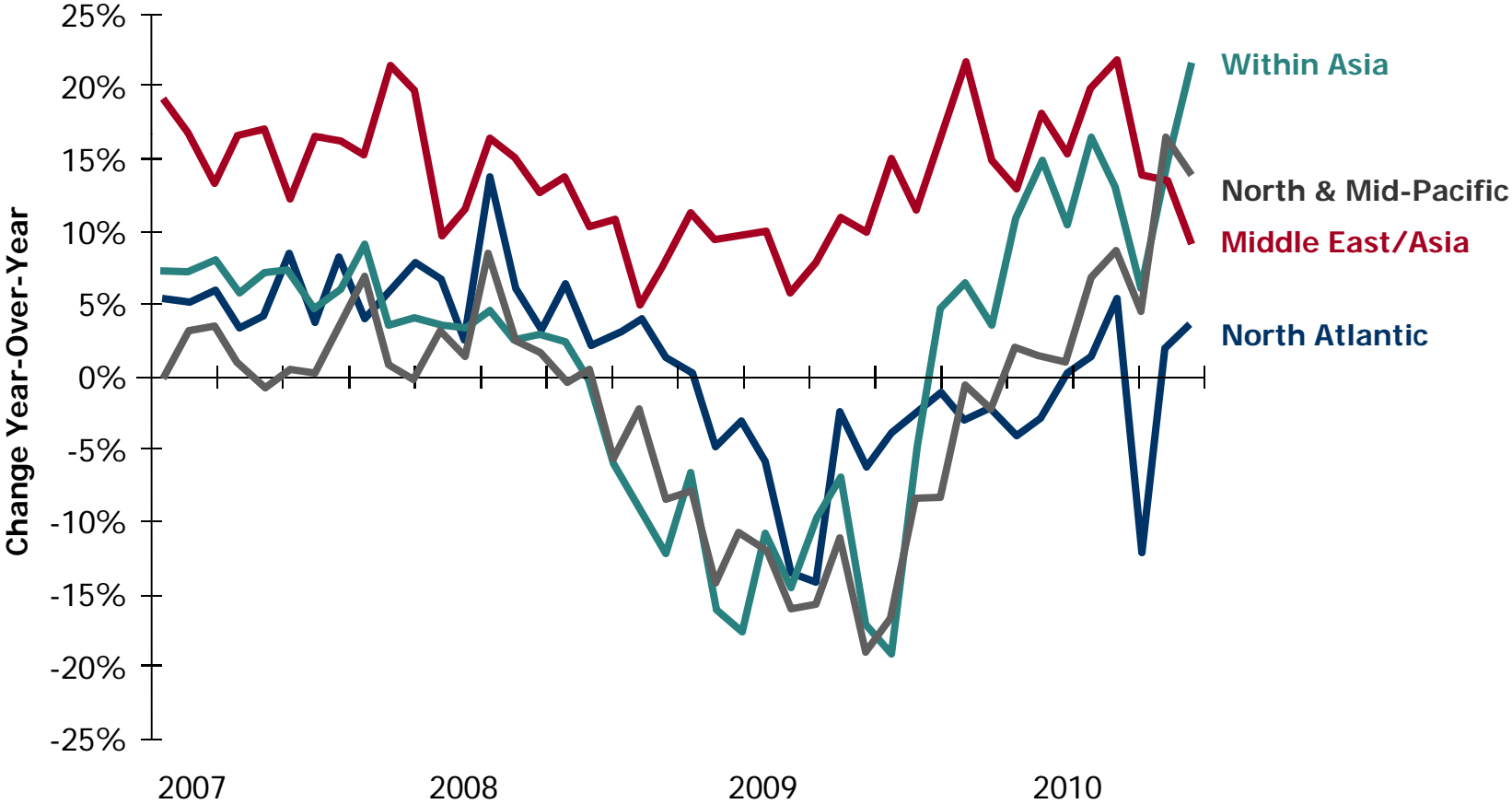


Source: IATA, EIU



Large Geographical Differences in Travel

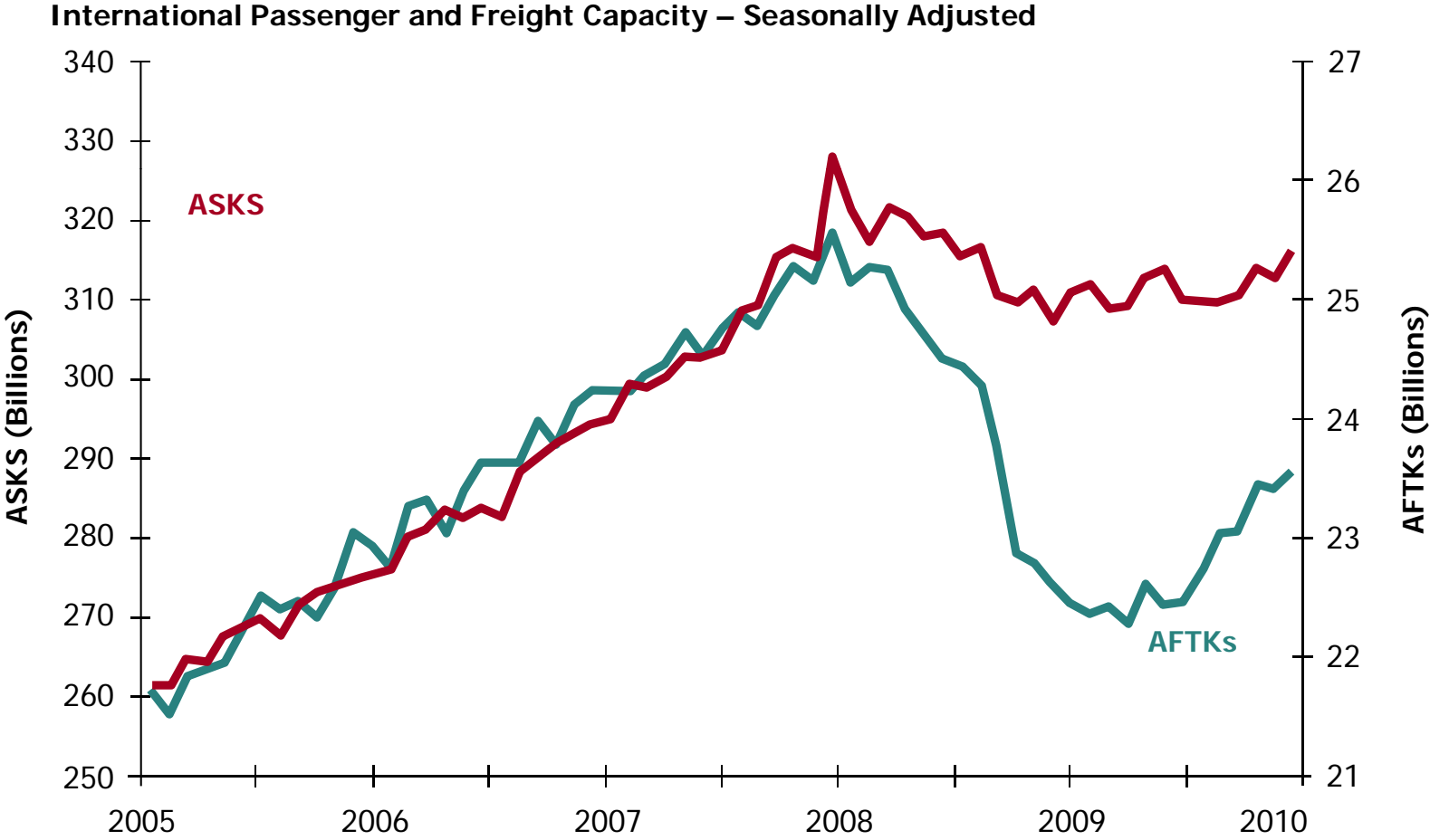
Growth in Passenger Numbers by Flight Segment



Source: IATA



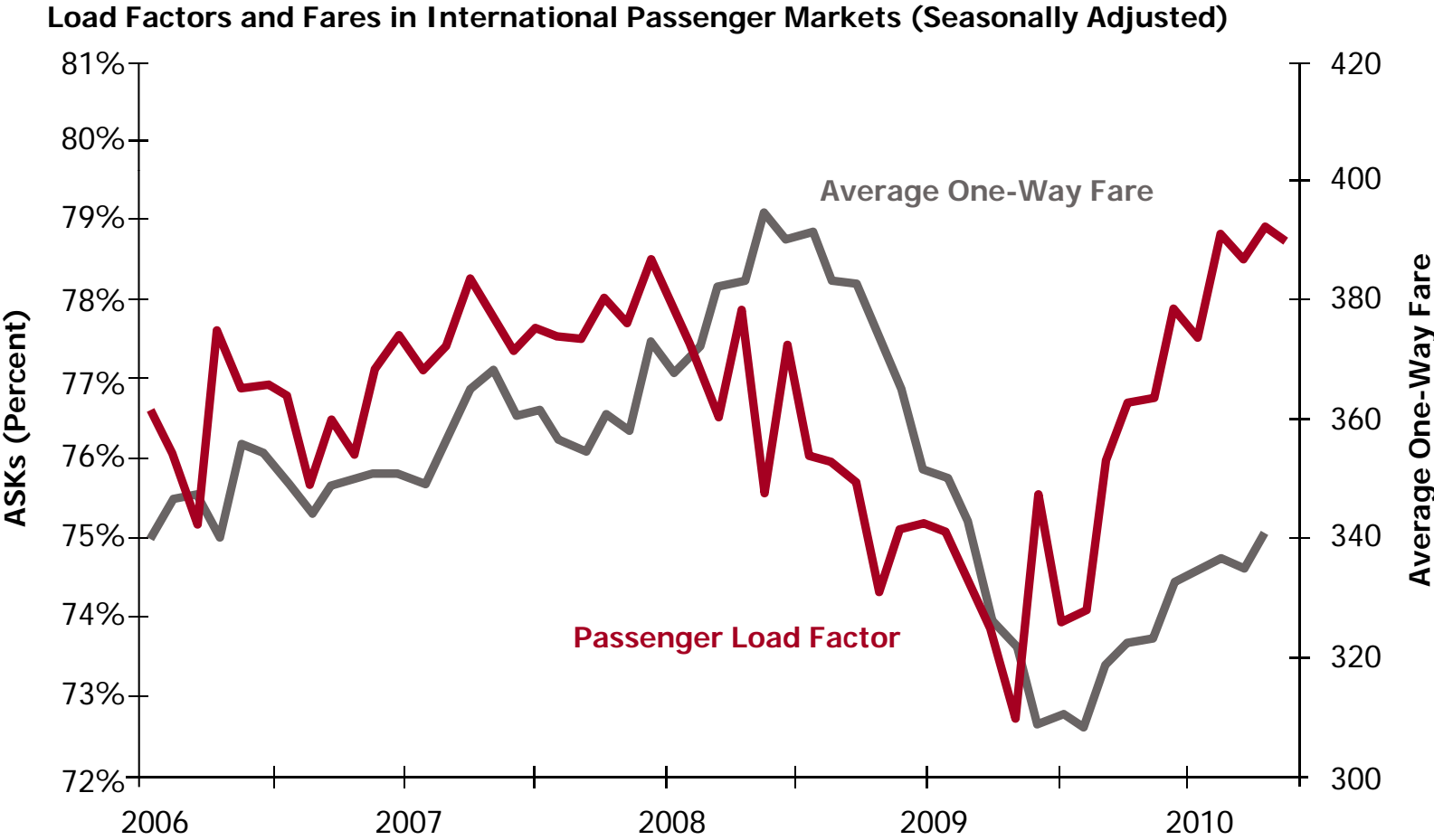
Capacity is Returning, but Less than Demand



Source: IATA



Tighter Capacity Is Helping to Lift Fares



Source: IATA



Air Travel Driven by Business Passengers

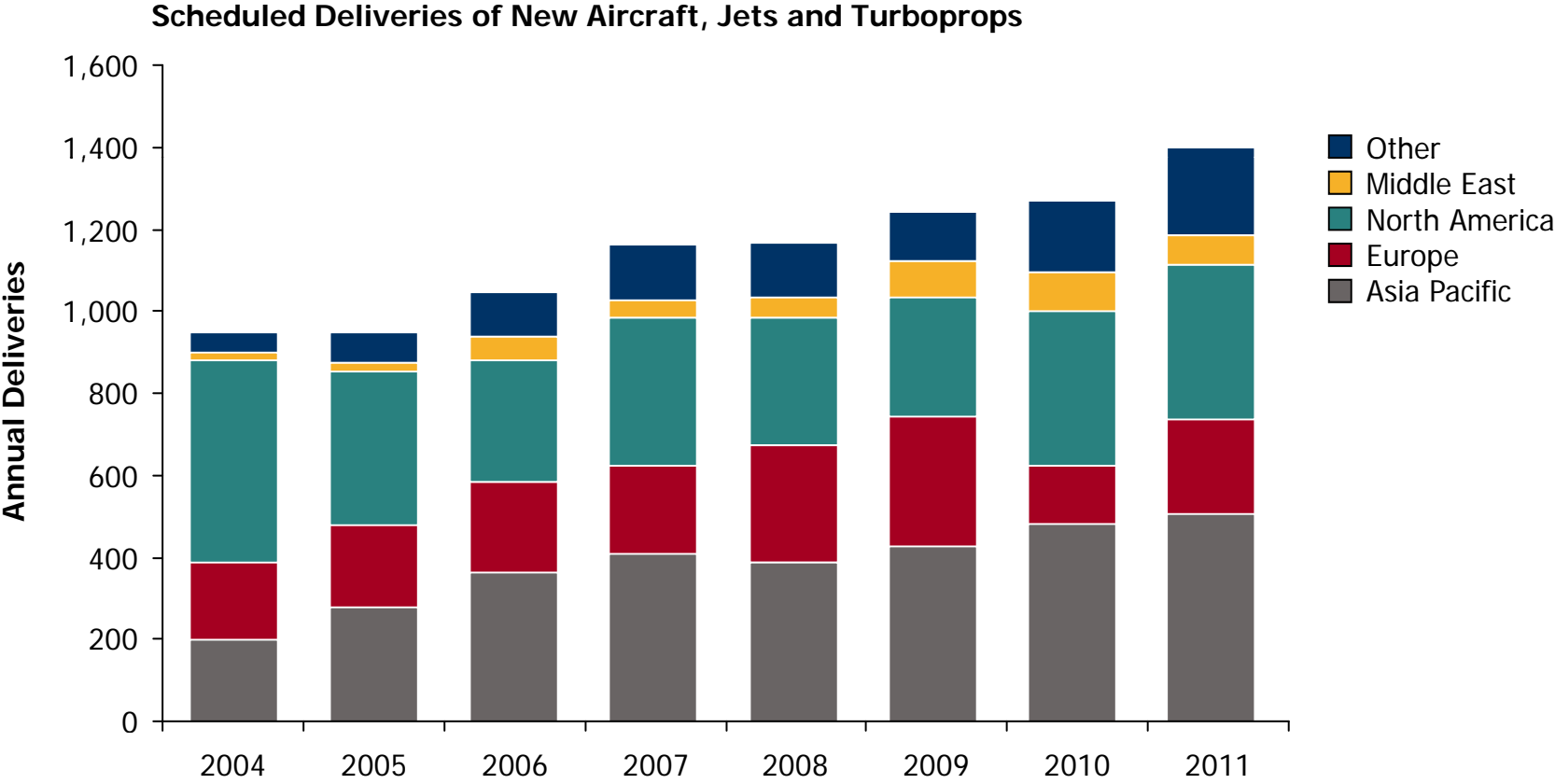
Premium Passengers and World Trade growth



Source: IATA



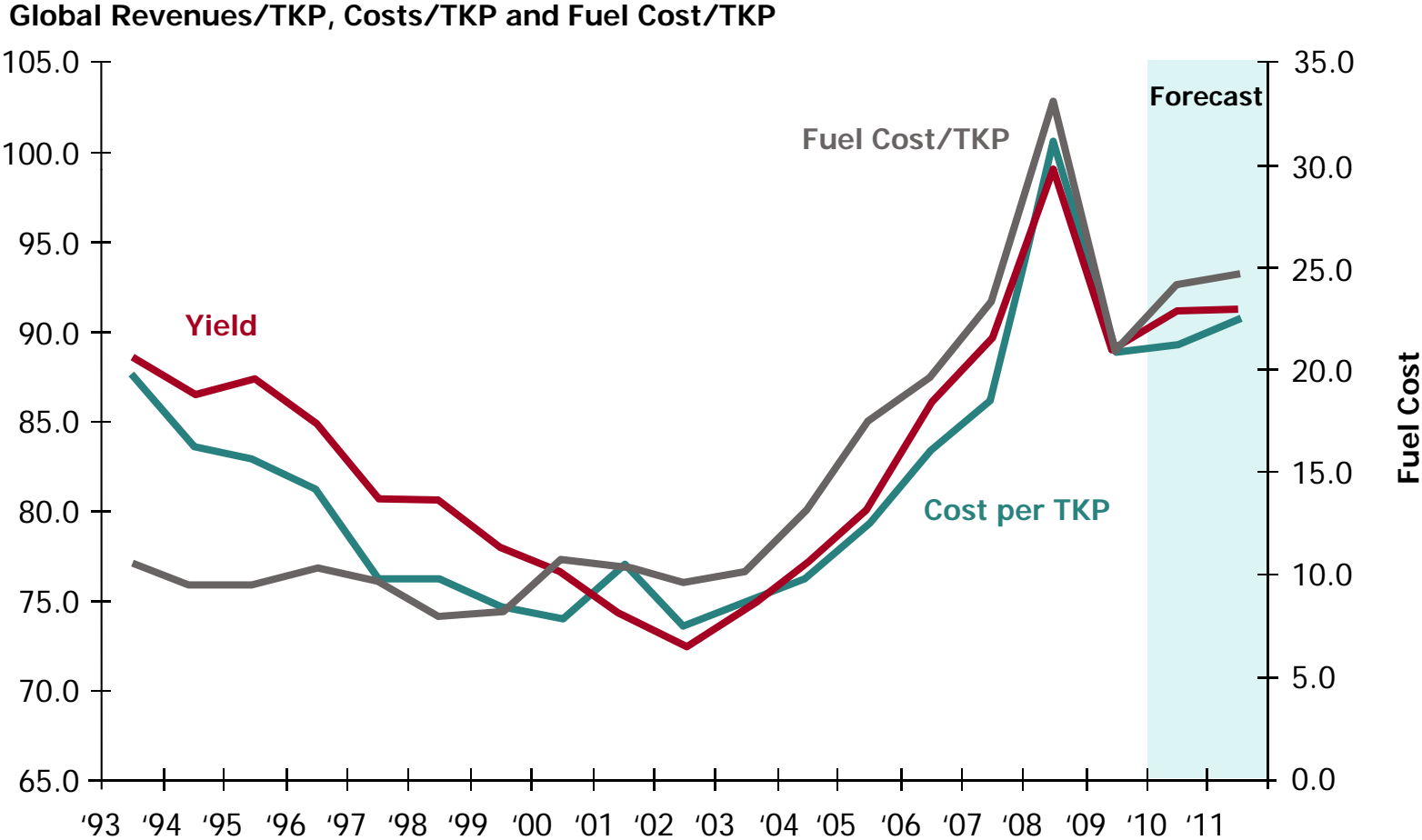
Delivery of New Capacity Set to Rise



Source: IATA, Ascend



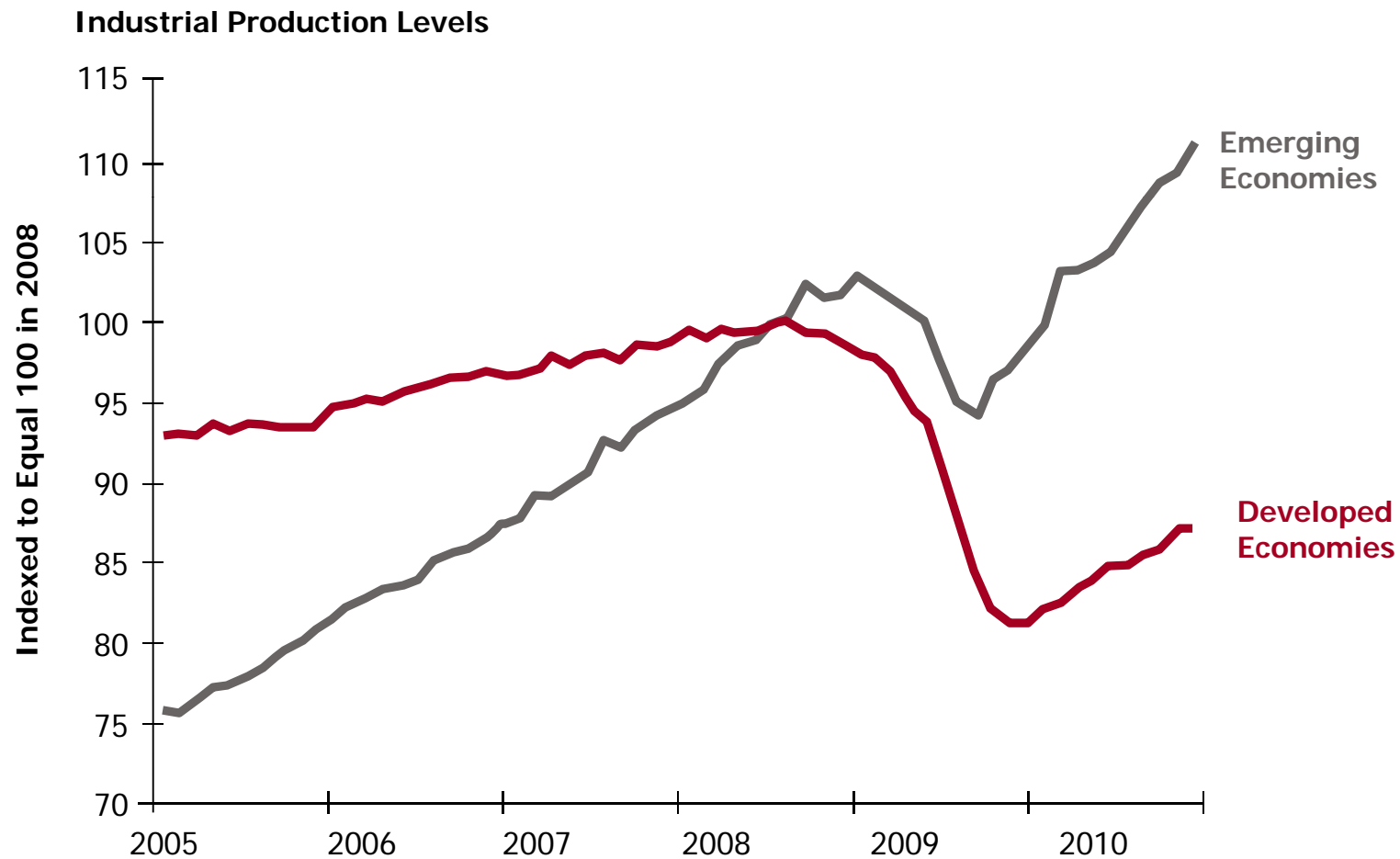
So Yield Gains Likely to Stall in 2011



Source: IATA, ICAO



It's All About the Emerging Economies



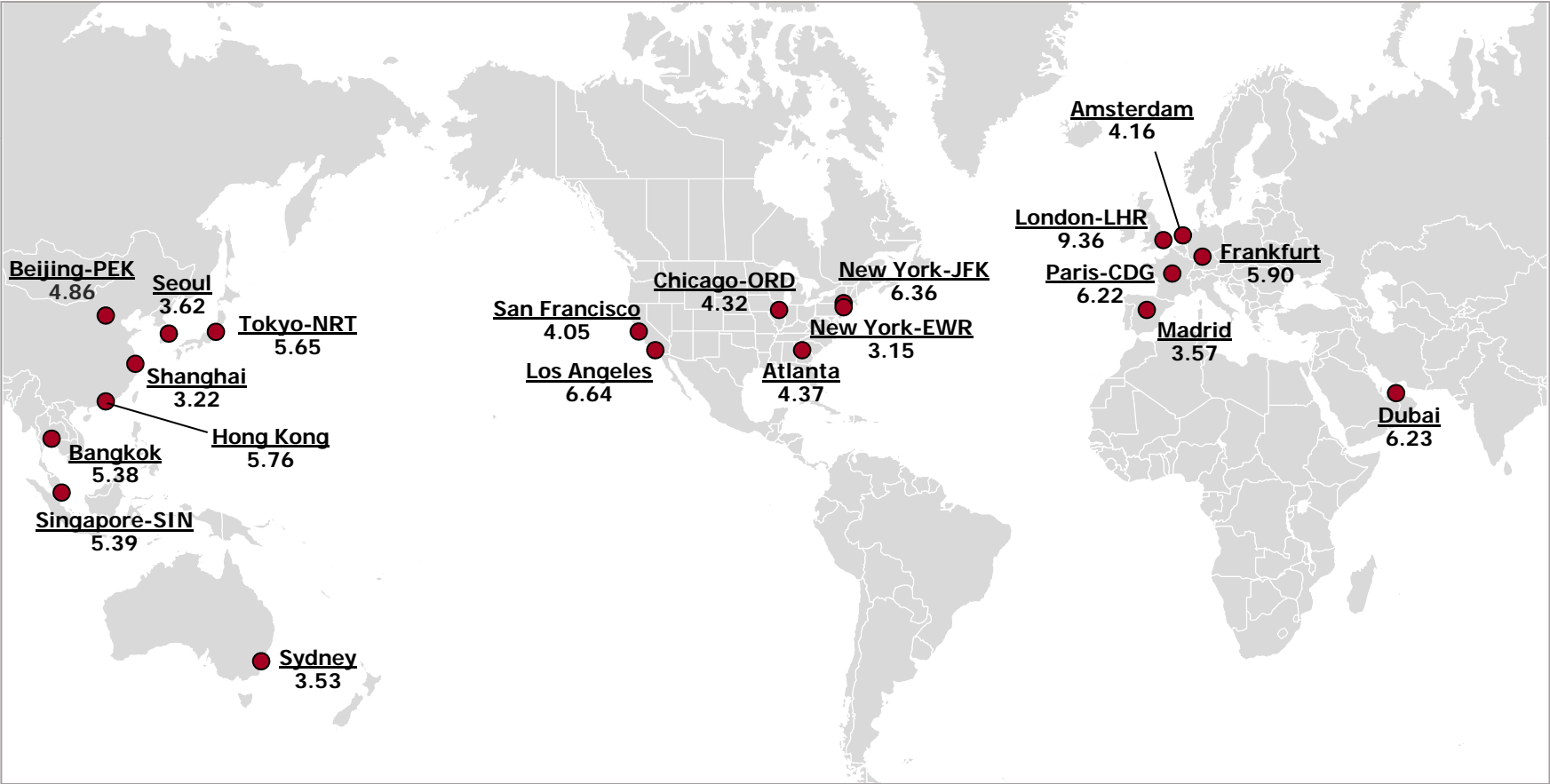


The airport “balance of power” is shifting in terms of airline seats

- Among top 100 global airports, 26 gained in relative position
 - Asia – 9; Middle East – 5; Europe – 5; South America – 4; North America – 2
 - Europe’s gaining airports can be found in highly concentrated LCC markets
- Among top 100 global airports, 29 lost in relative position
 - North America – 13; Asia – 9; Europe – 6
 - Of 9 airports losing in Asia, 5 can be found in Japan
- Big gainers in relative position
 - Doha, Bogota, Jakarta and Moscow
- Big losers in relative position
 - Dublin, Fukuoka and Sapporo



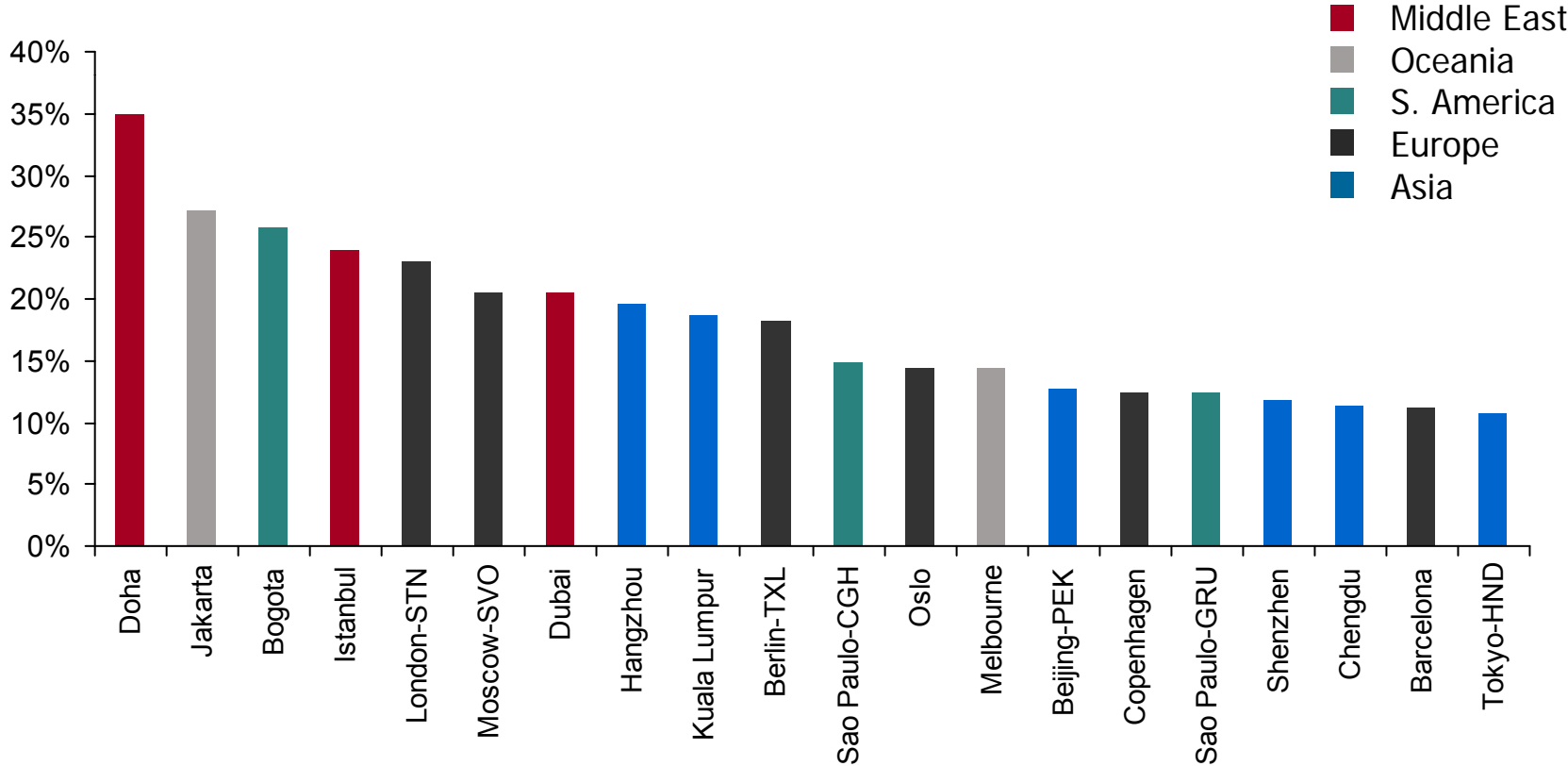
Top 20 Airports Ranked in Terms of Available Seat Miles Flown (ASMs in Billions) November 2010



Data Source: Oliver Wyman planestats.com

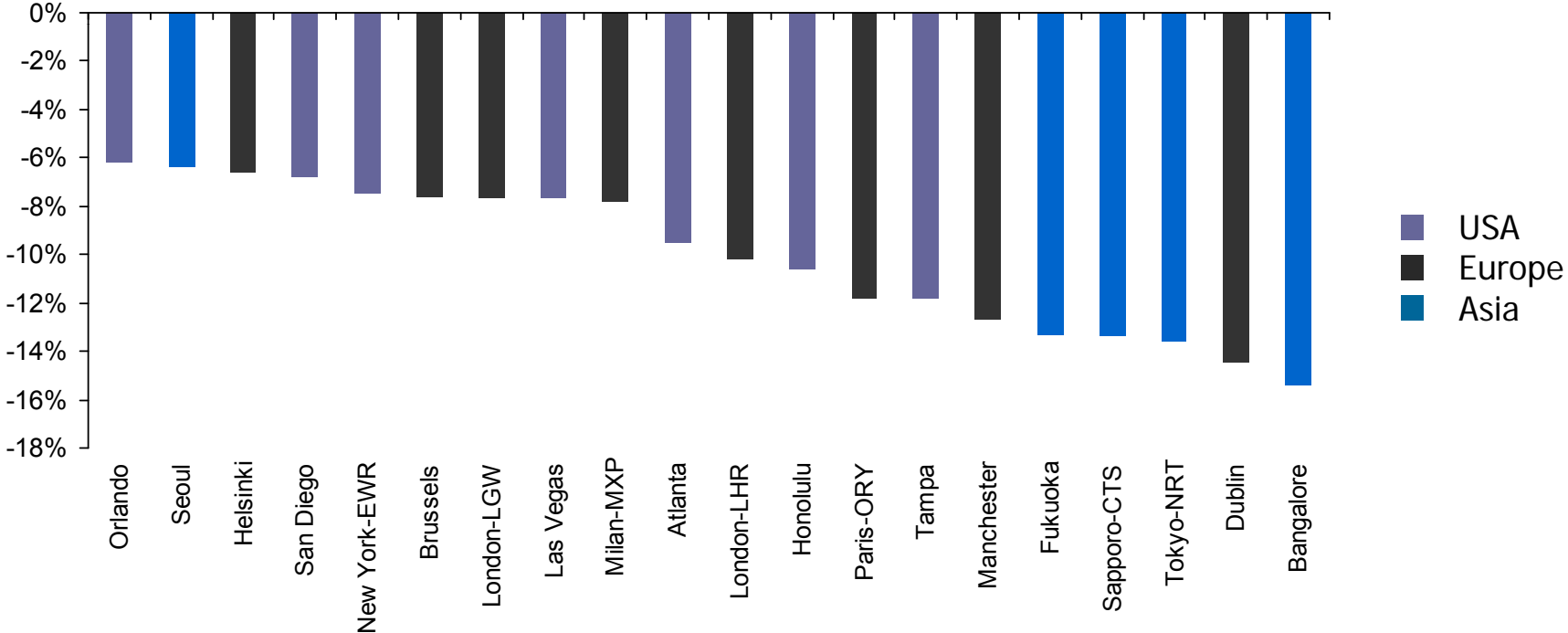


Top 20 of 100 Largest Airports in ASM Growth November 2010 v. November 2008





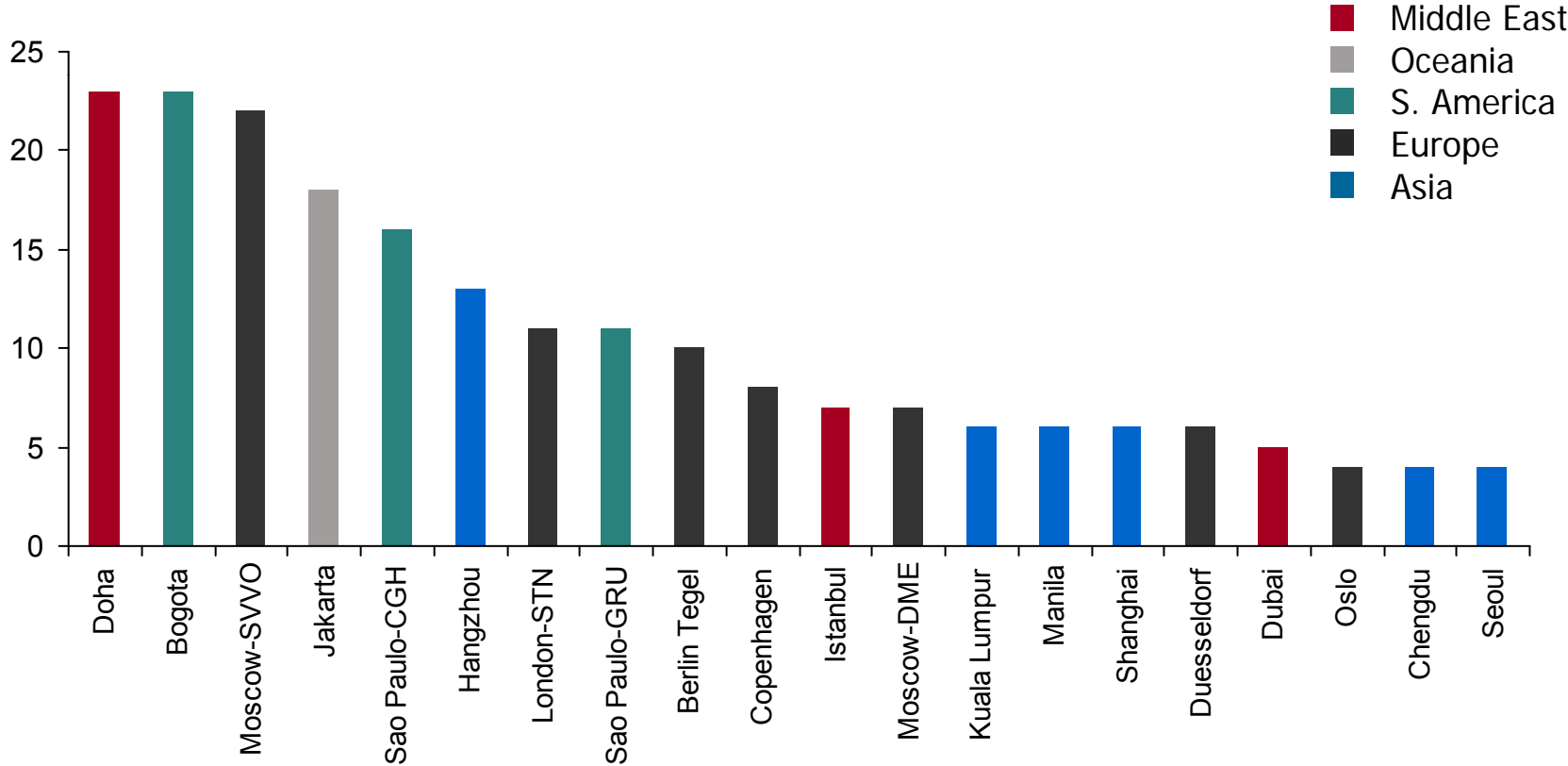
20 of 100 Largest Airports Experiencing Declining ASMs November 2010 v. November 2008



Data Source: Oliver Wyman planestats.com



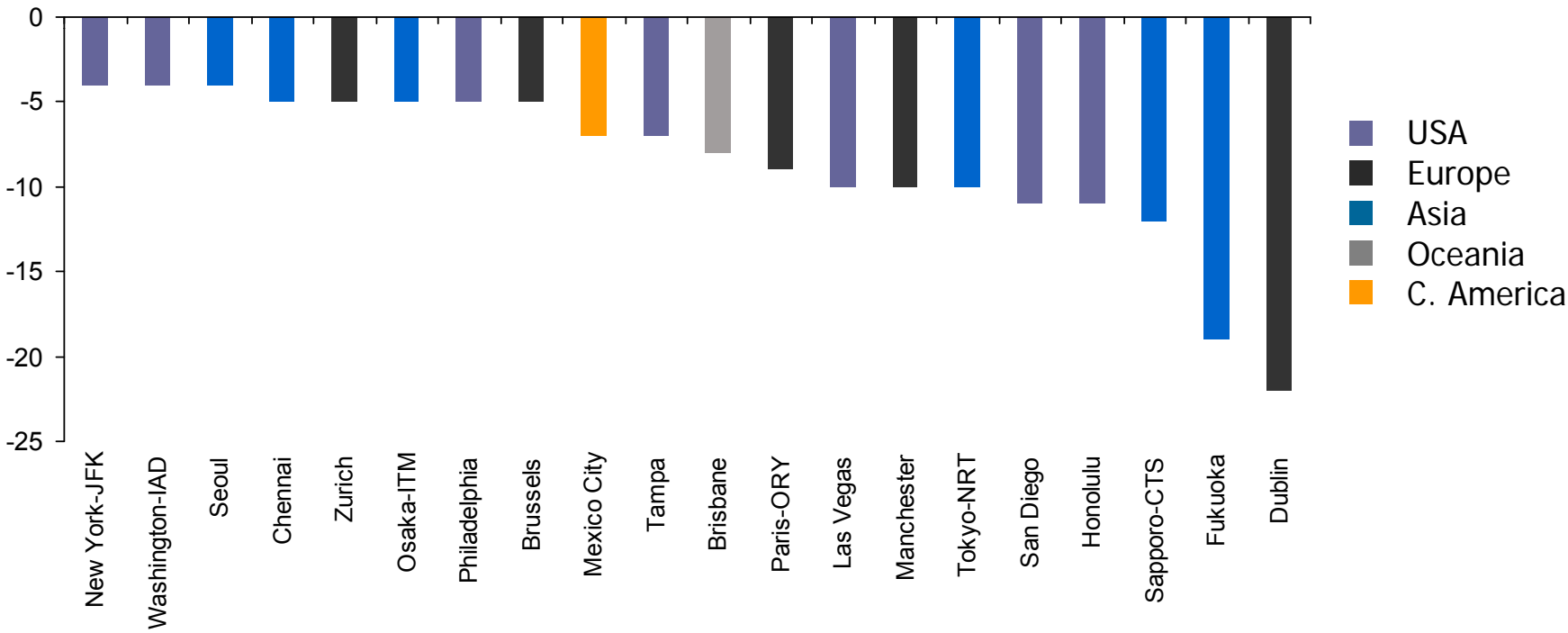
Top 20 of 100 Airports Gaining in Relative Position November 2010 v. November 2008



Data Source: Oliver Wyman planestats.com

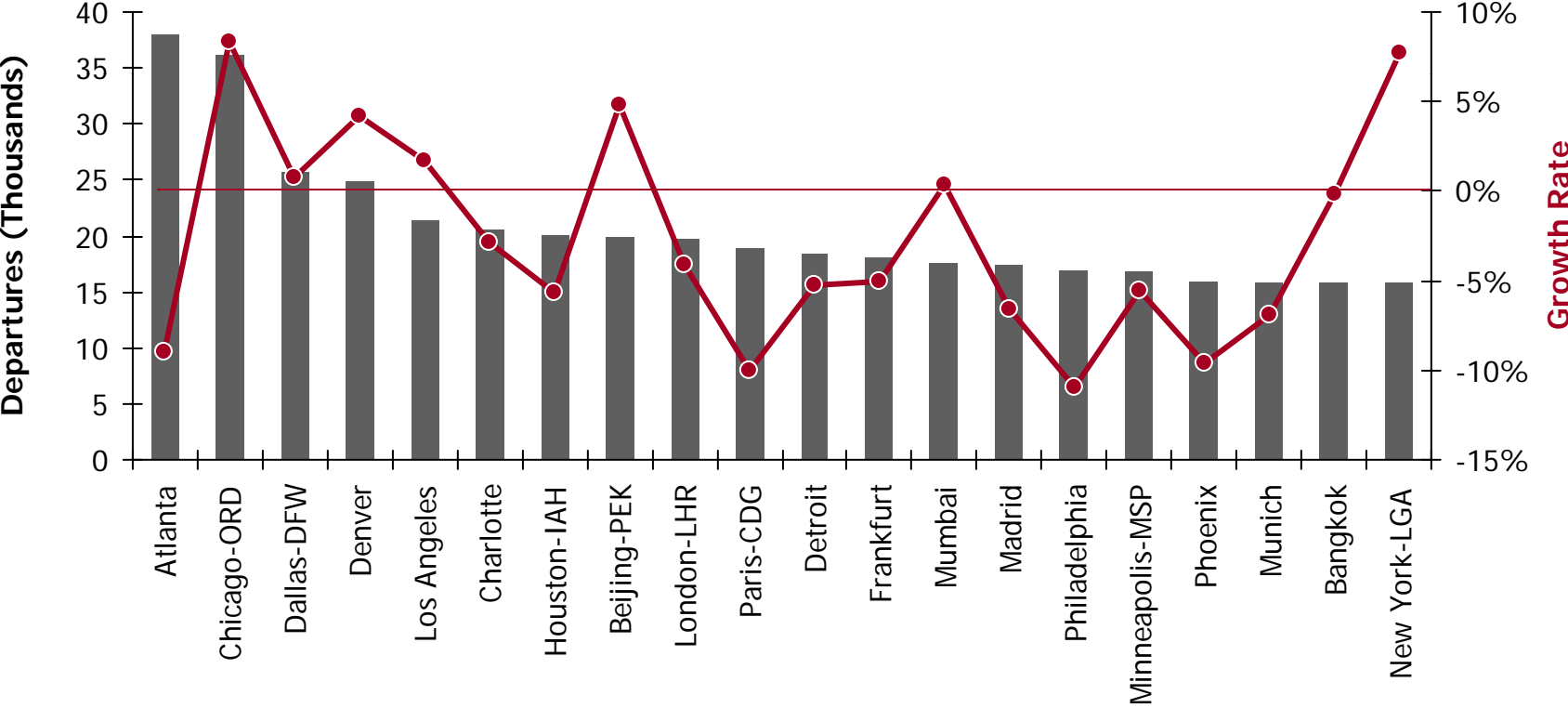


Top 20 of 100 Airports Losing Relative Position November 2010 v. November 2008





Top 20 Airports in Departures and Commensurate 2 Year Growth Rate November 2010 v. November 2008



Source: IATA



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Asia-Pacific Region



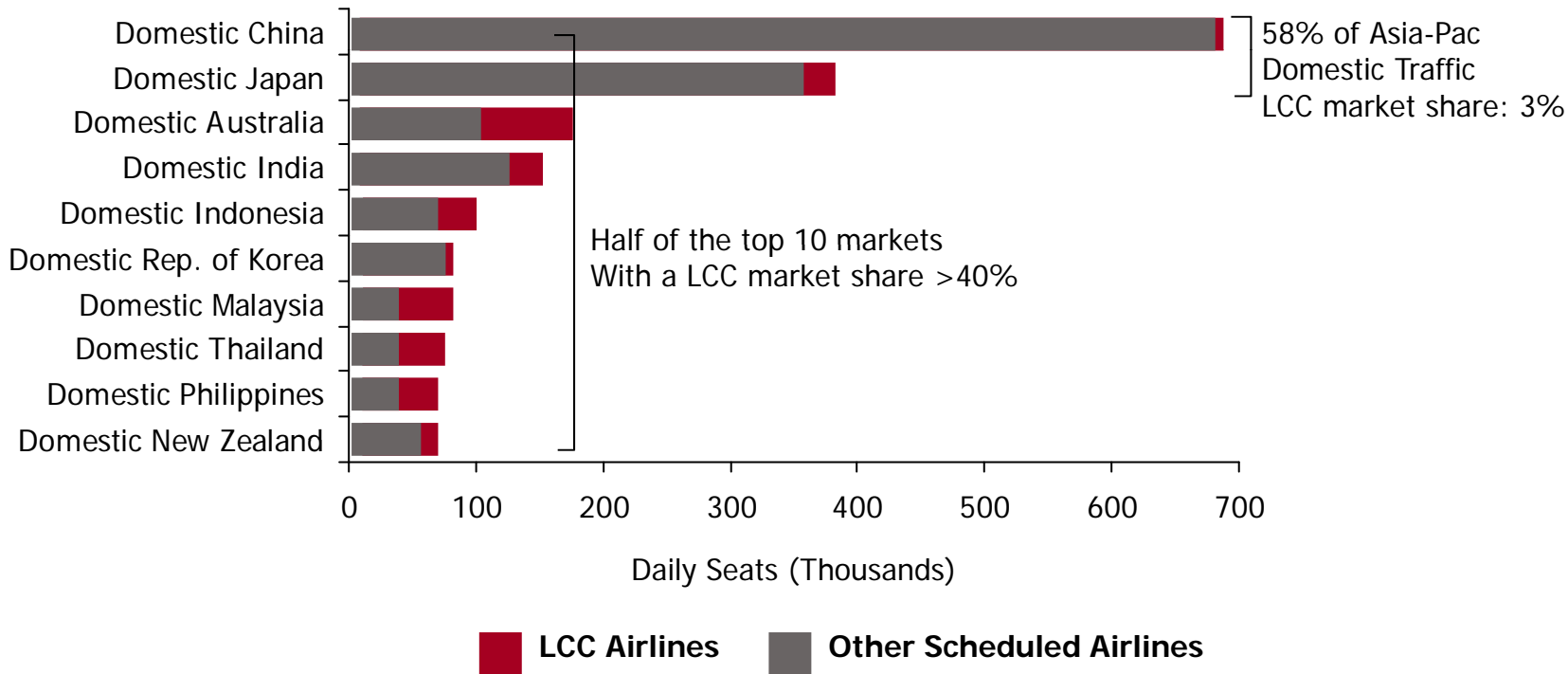
Asia Pacific Region

- Home to 8 of the Top 20 Airports in the world in terms of seats
- Balance of Power Shift is Underway
 - Less (Much Less?) about Japan and all about China
 - China's economy now bigger than Japan
 - Tokyo's gateway status to the region in decline
- LCC's in infancy stage, but promise to leave fingerprints on shape of the market
- With JAL in bankruptcy, will there be other legacy carriers in the region that succumb to the new market realities
- Southeast Asia promises to be a real battleground
- Aircraft technology will continue to permit the overfly of traditional points on the region's map



Domestic Asia Markets: 14% Market Share for LCCsand Growing

Top 10 Markets (95% of Total Domestic Traffic)



Source: Airbus, Ascend January 2009



Big Cities, Big Demand – Intra-Asia Demand Concentrated



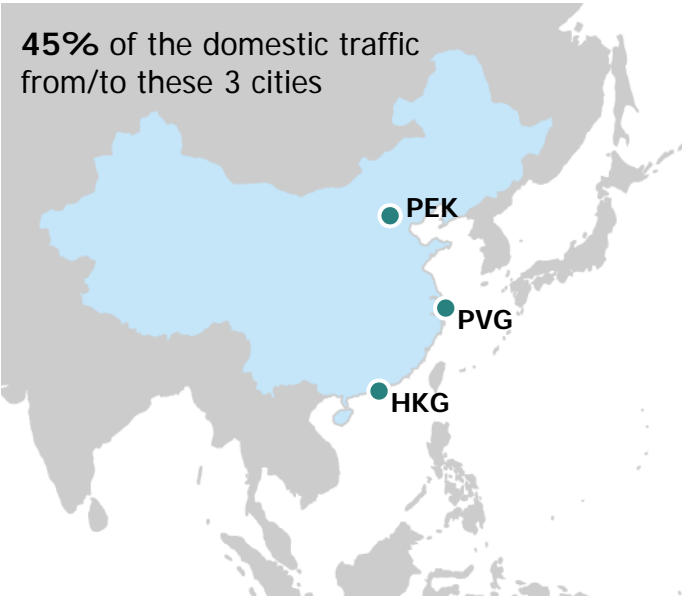
Travelers Between Asian Countries:

> **46%** want to travel between these cities only

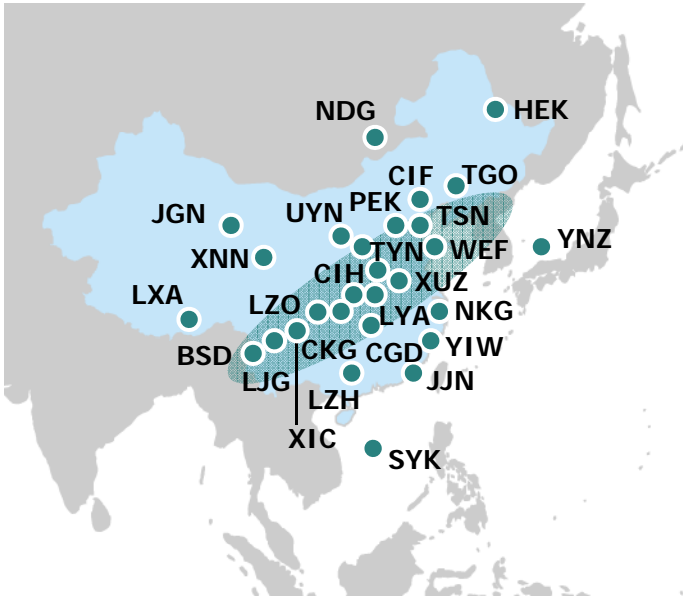
> **91%** want to travel from or to these cities



Domestic China: High Concentration and Fastest Growing Cities (Air Traffic)



High Concentration of Demand
Beijing, Shanghai and Hong Kong

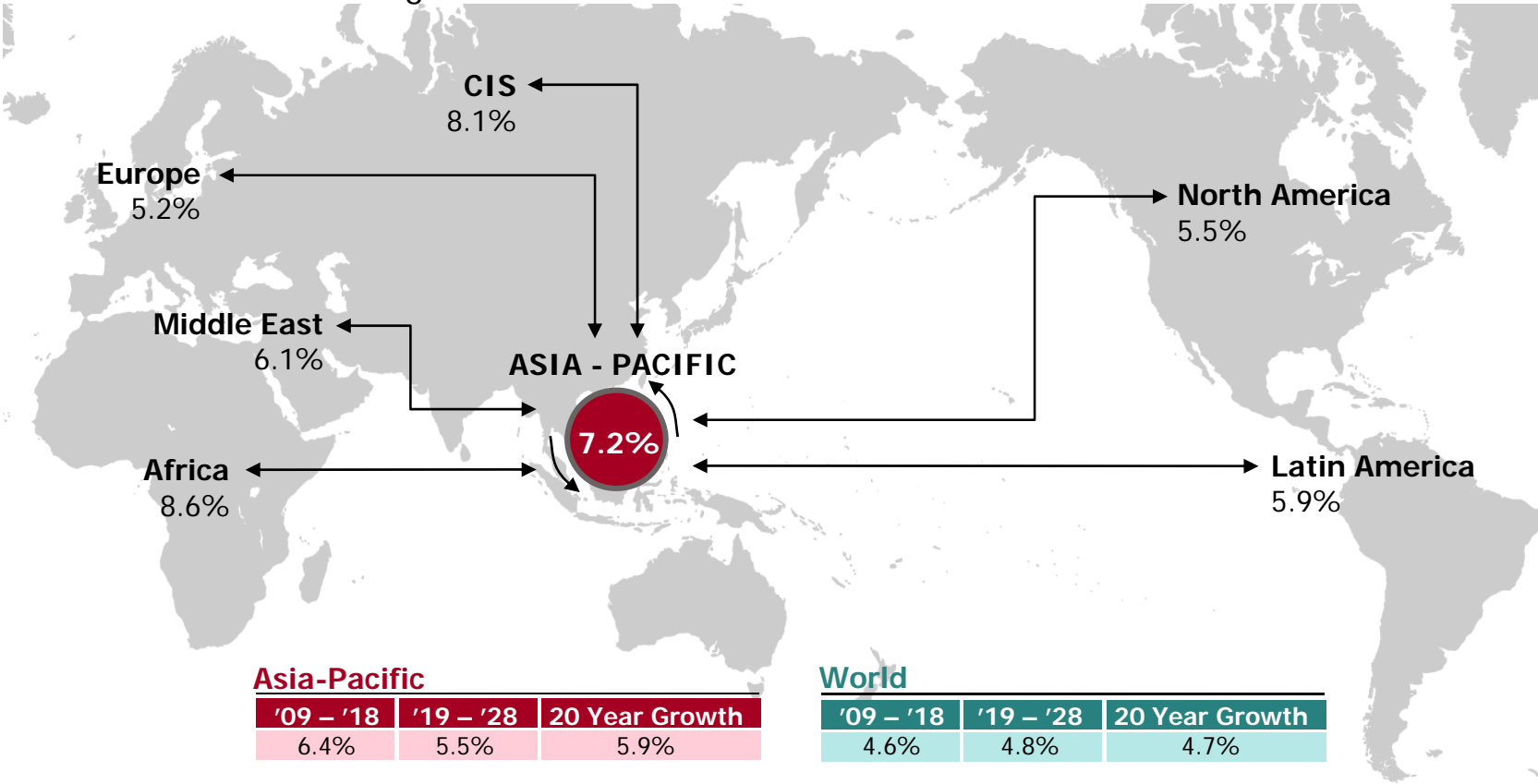


Fastest Growing Cities
Airport pairs expected to grow above average domestic traffic growth



Significant Growth Maintained in Asia-Pacific

RPK Growth: Annual Average 2009 - 2018



Source: Airbus



3

Middle East Region

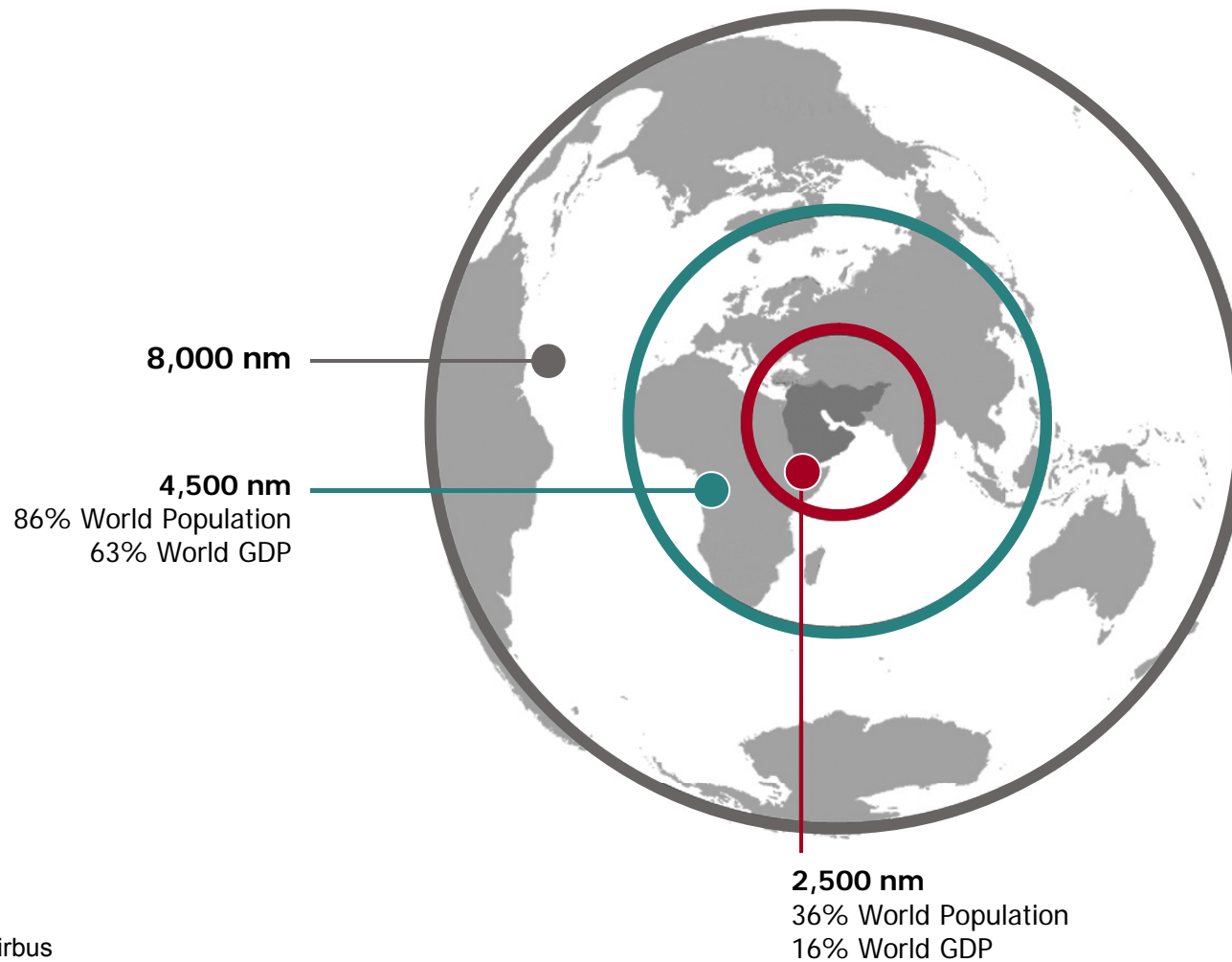


Middle East Region

- Much like the LCC's transformed the US domestic market, the competitive actions in the Middle East will disrupt global traffic flows for any number of European, North American and Southeast Asian carriers
- Region is highly dependent on negotiating new bilateral rights to further leverage network. Will they be successful?
- Big question is whether the region can support three carriers with similar network goals?
- Aggressive low cost expansion will also work to stimulate new demand in many new and emerging markets in various regions



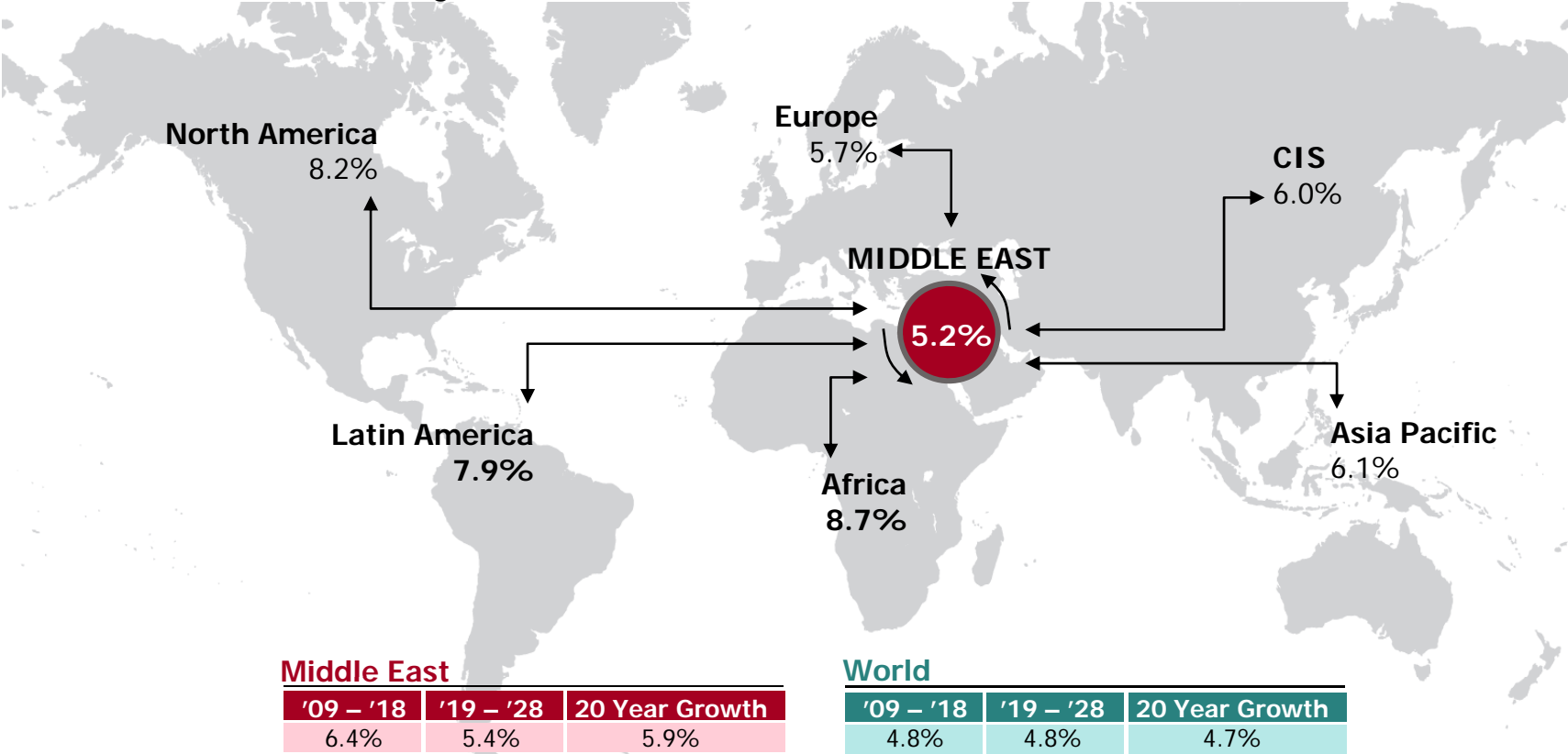
The Middle East Has a Geographical Advantage to Access the Emerging Market Traffic Flows





Middle East Will Sustain Very Strong Traffic Growth

RPK Growth: Annual Average 2009 - 2018



Source: Airbus



4

Latin American Region



Latin American Region

- A region in its infancy
 - No reported direct traffic to either Asia or the Middle East in 2000
 - Yet Middle East – Latin America traffic forecast to grow 7.9% over next 10 years
- 50 percent of the region's activity centered on Brazil and Mexico
 - Colombia emerging as an important aviation market
 - Avianca does strategic merger with TACA in 2009
 - Peru, Uruguay and Chile offer significant upside
- In one of the most interesting consolidation announcements in 2010, LAN announces a merger with Brazil's TAM
 - Another alliance fight brewing like in Japan?
- The Mexicana bankruptcy/liquidation should be of no surprise
- The low cost carriers in this region will also have a say in market's ultimate architecture
 - GOL and Azul in Brazil



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Commonwealth of Independent States



Commonwealth of Independent States

- Home to one of the world's fastest growing airports in terms of relative importance – Moscow
- Countries all below world average in terms of trips per capita
- Commodity driven economies represent risk
 - Export driven economy
 - As world emerges from recession, commodity price rise will be an important contributor to growth
- Growth areas to watch
 - North America and Asia



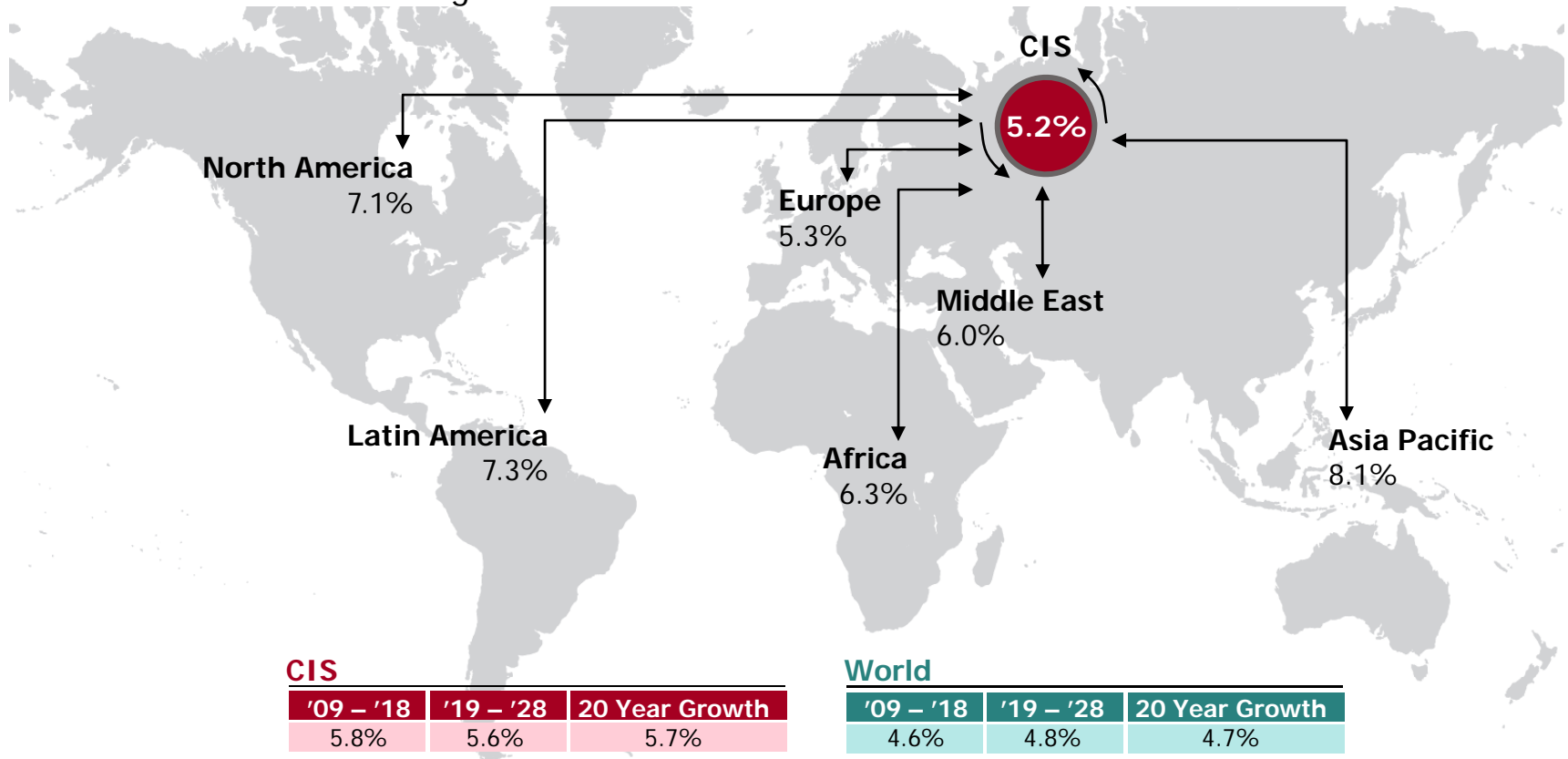
CIS Nations Spread Their Wings





CIS Air Traffic Will Grow Faster Than World Average

RPKs Growth: Annual Average 2009 - 2018





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Africa



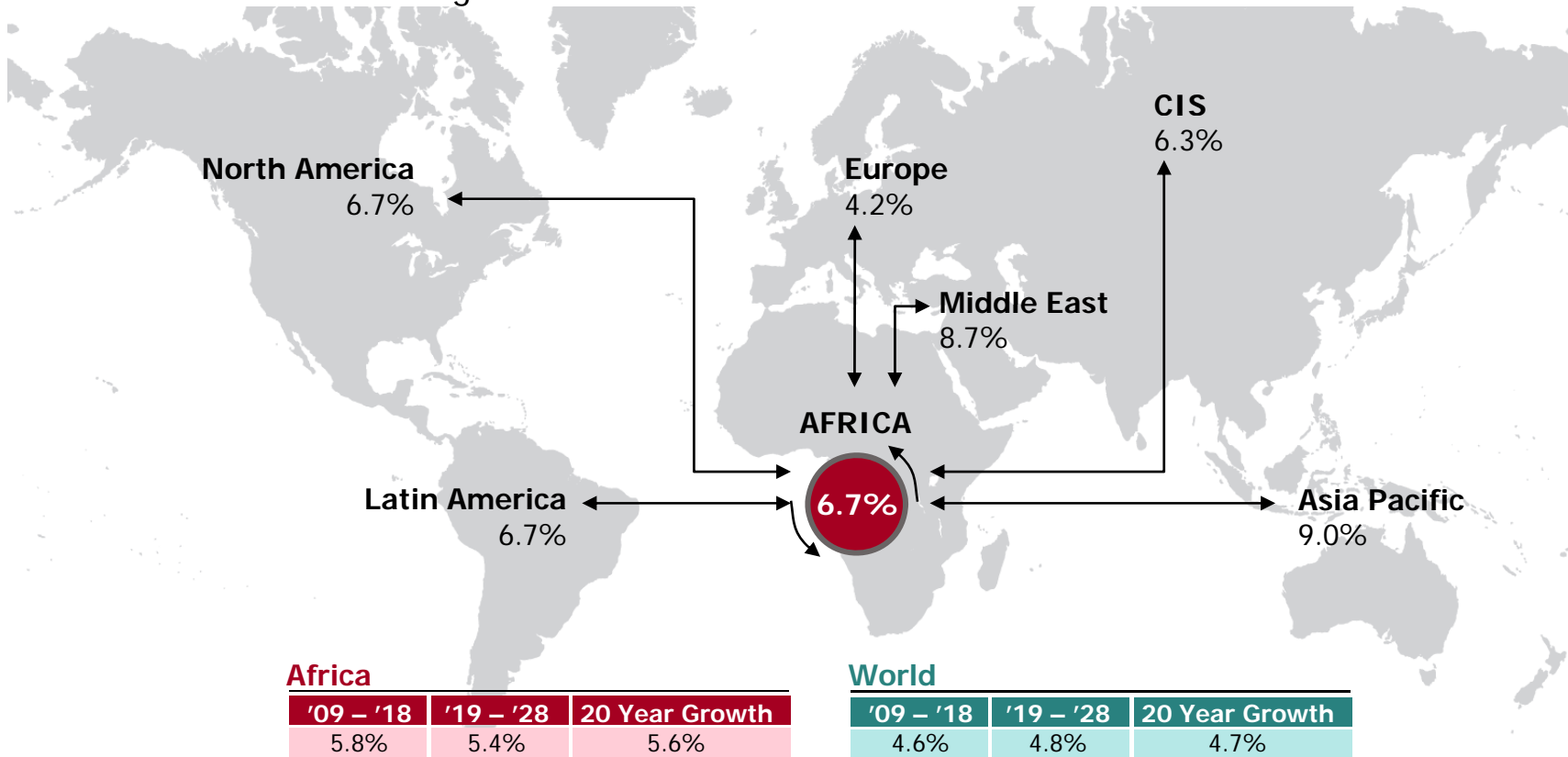
Africa

- China, India, Middle East and AFRICA – YES AFRICA - expected to lead the world recovery
- Second most populated continent after Asia
- Like the CIS, a commodity rich continent
 - As commodity prices rise So do prospects
- As political tensions wane, increases in tourism and trade
 - Considerable foreign investment in recent years
 - The addition of North American services to the continent is significant
- LCC presence in North Africa stimulating new demand
- African airlines have less than 50 percent of the continent's market



African Traffic to Grow Much Faster than World Average

RPKs Growth: Annual Average 2009 - 2018





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North America



North America

- Still home to the largest airports
 - Largest in terms of departures; smallest in terms of average seat size
 - Growth prospects reflect maturing of the market
 - Below average growth rates for worldwide traffic

- Growth will occur in the Asia Pacific, Middle East and CIS Regions
 - Regions where liberalization will lead to new opportunities

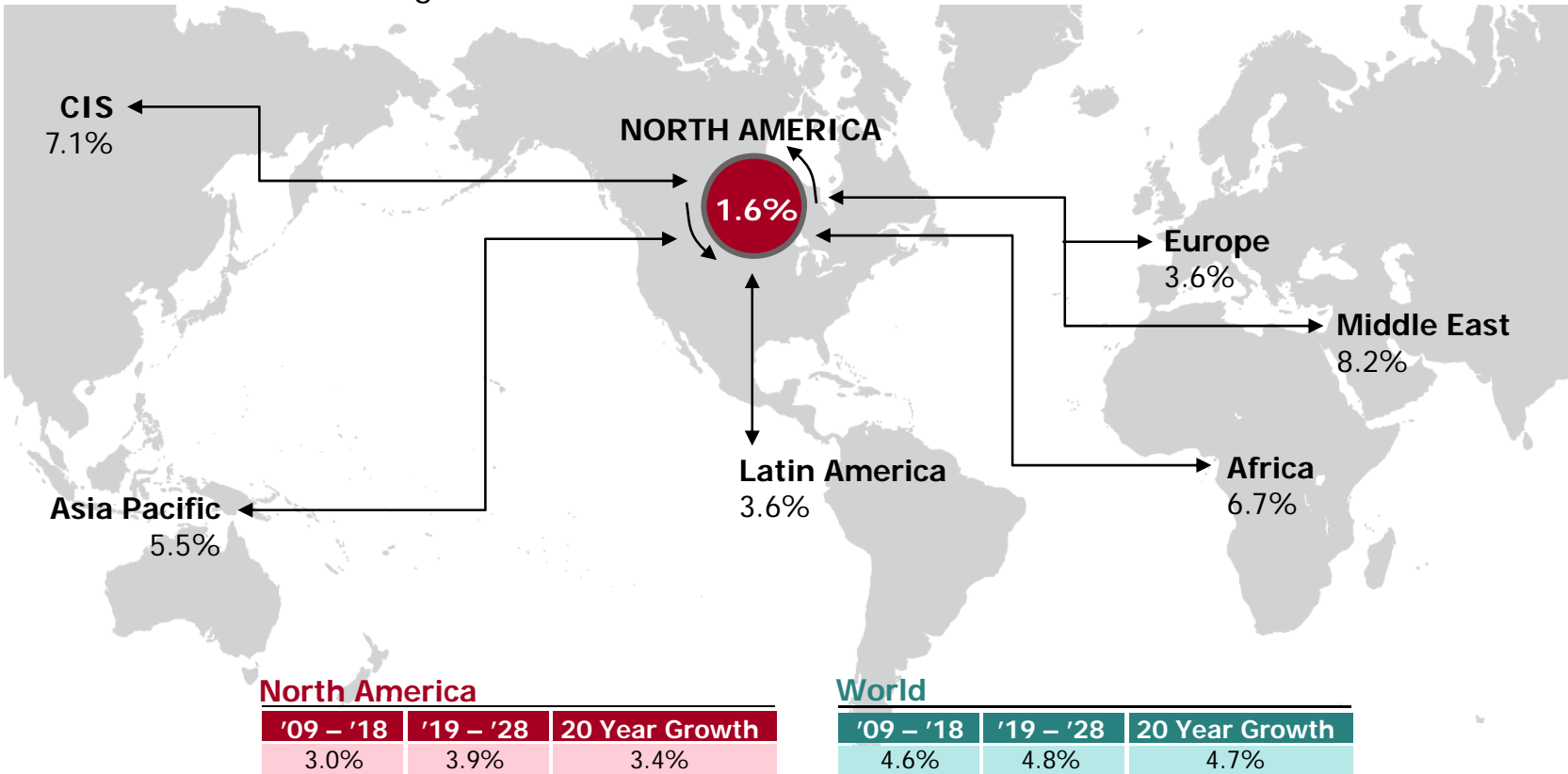
- Significant consolidation activity underway
 - Low cost carriers failing to find organic growth opportunities
 - Regional carriers combining
 - Need to alter business approach as 50-seat jets come off of lease



New Markets, New International Growth

North America

RPK Growth: Annual Average 2009 - 2018



Source: Airbus



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Europe

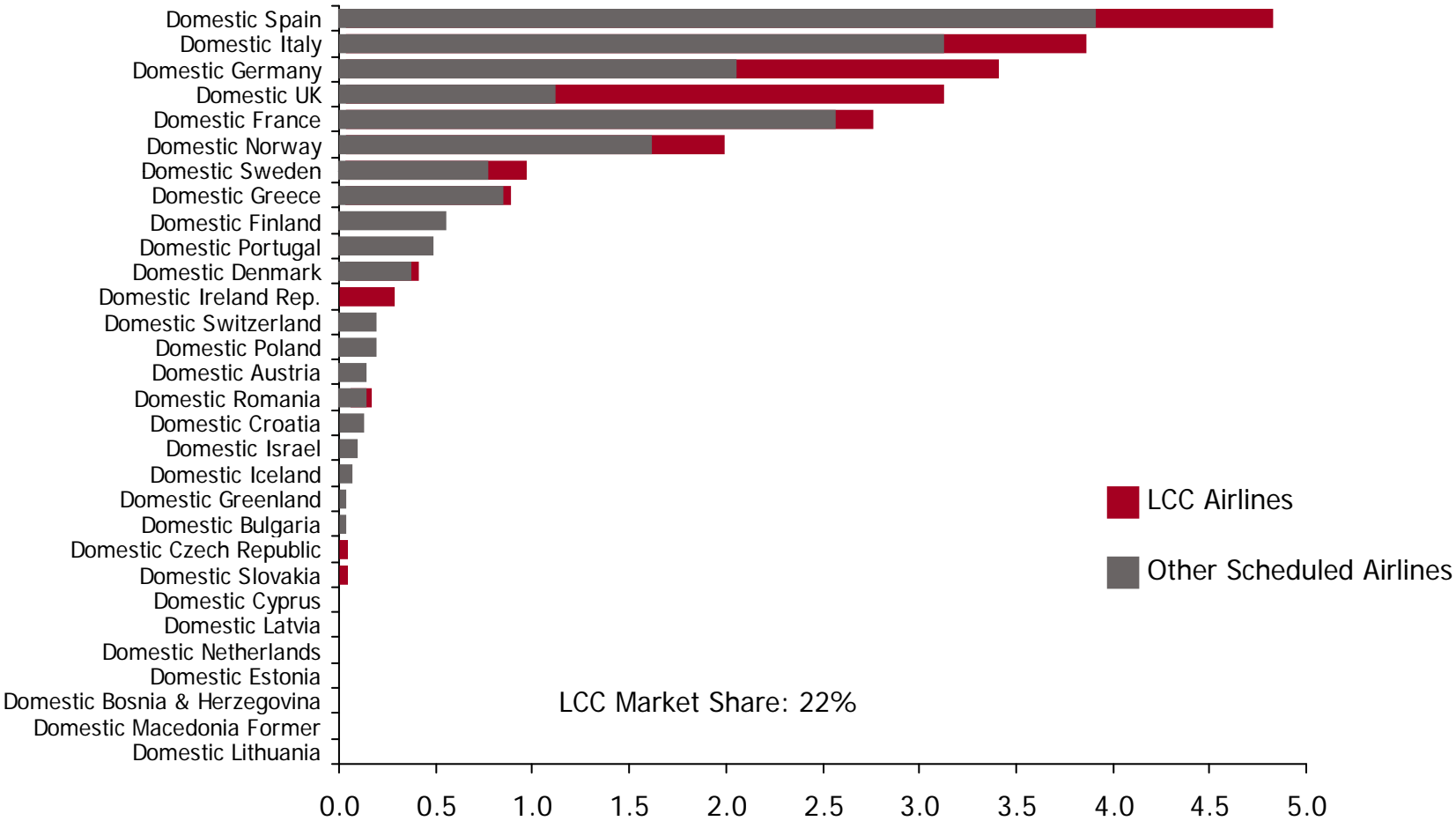


Europe

- More about Central Europe than Western Europe
 - Watch out for Turkey and its flag carrier, Turkish Airlines
- LCC's are prevalent and growing
- Most threatened by Middle East airline activity
- Consolidation activity – Building intra-continental market strength
 - Market still remains highly fragmented so more consolidation activity expected
- Will Middle East activity facilitate first global merger?



Domestic European LCC Operations Primarily Focused on a Small Number of Key Countries Today

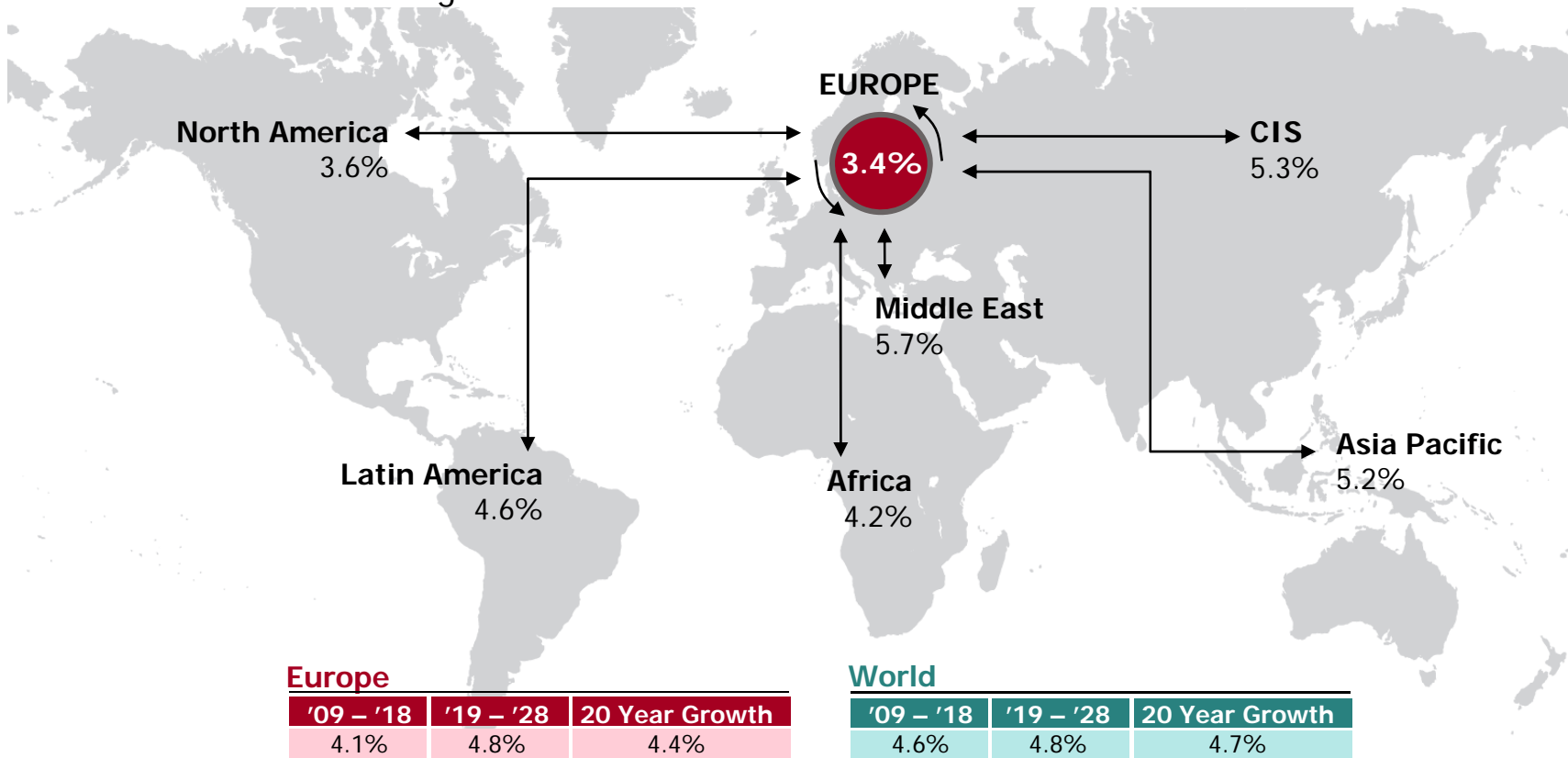


Source: Airbus, OAG, Scheduled seats (millions), Sept. 2006



Europe

RPK Growth: Annual Average 2009 - 2018





Concluding Thoughts

- Today, largest airport markets remain in North America and Europe
 - Least interesting in terms of growth opportunities
 - Mature carriers in the markets will face new and vigorous competition for global traffic flows
 - Consolidation on both continents are about building strength to grow internationally. Less about intra-continental markets.

- Trend is clearly to concentration around largest airport markets
 - Majority to be in the Asia Pacific region in 20 years
 - Asia Pacific region is forecast to be largest travel market in 20 years
 - Critical markets of tomorrow will enjoy one-stop access to virtually any point on the airline map

- Just as uneven describes the economic recovery, uneven will describe how the airline map is redrawn tomorrow