

IATA ECONOMIC BRIEFING

INFRASTRUCTURE COSTS

JULY 2009

SUMMARY

- Historical data indicates that during recession periods infrastructure providers usually increase their prices while other prices are falling or slowing. During the 1991-3 economic recession, en-route costs, in nominal terms, rose by about 18% while the rate of consumer price inflation fell sharply.
- In 2001 total infrastructure costs (referred below as user charges) fell by -5.1%. This was an exceptional cyclical reduction due to cooperation along the supply chain following the 9/11 terrorist attack.
- If the experience of the early 90s economic downturn is repeated, the risk is that user charges may rise once more during the current recession.
- The latest data available shows total user charges, paid by airlines and their customers, was at least US\$ 54.2 billion in 2007, representing about 11% of total operating revenues. This estimation is based on figures published by ACI and ICAO and captures the total economic impact of user charges for airports and ANSPs infrastructure. This figure does not include US FAA payments.
- ACI report that aeronautical airport related revenues rose to US\$ 42.0 billion in 2007 from US\$ 38.0 billion in 2006. More than half (55.5%) of this aeronautical revenues was originating from passenger related charges, the rest being generated from aircraft related activities.
- In 2007, ACI reported that European airports account for 53.0% of airport aeronautical revenues but only 34.0% of global air passenger traffic.
- Airlines have made significant progress in achieving non-fuel cost efficiencies since 2001. However, user charges have not kept in step with other non-fuel costs. For the 3 main European network airlines, direct user cost payments per passenger have either increased, or decreased at a much slower rate.

Chart 1: En route costs Per Aircraft Departure and IMF CPI (covering 33 major developed economies)

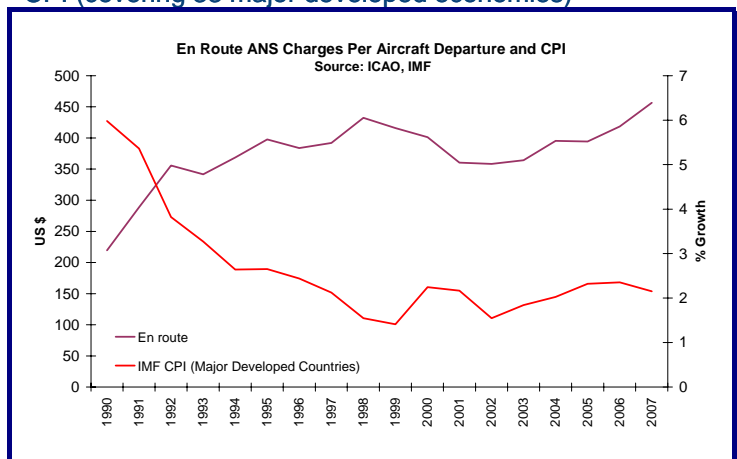
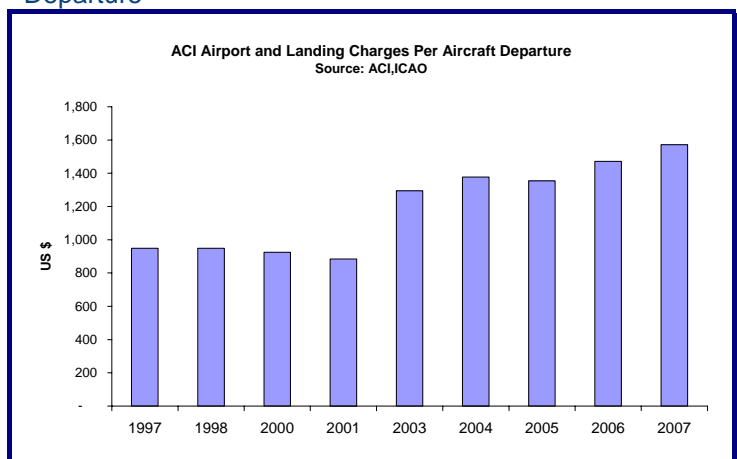


Chart 2: ACI Landing & Airport Charges Per Aircraft Departure



Note: data not available for 1999 and 2002

ICAO INFRASTRUCTURE COST DATA

- ICAO publishes annual cost data based on each airline's profit and loss (P&L) account. It identifies two main user charges categories namely landing and associated airport charges and route facilities charges (see annex for the definition of each category). These charges represent the direct payment made by airlines to airports and ANSPs and recorded in their P&L account.

- Total user charges directly levied on airlines were US\$ 32.2 billion in 2007, representing 6.6% of airline total operating costs. Since 2002, ICAO user charges grew by 61.9%, adding an extra cost of US\$ 12.3 billion to the airline industry.
- On the other side, ICAO direct user charges per airline passenger were almost stable since 1993 with an average of US\$ 13.2, the highest level was reached in 1998 with US\$ 14.2. This was only because a high proportion of airport charges were levied directly on the passengers rather than on airlines. The latest data published by ICAO showed that in 2007, it represented about US\$ 14.3 per passenger.
- Since 2005, the level of total ICAO user charges as a percentage of total airlines costs has increased from about 6% to 6.5%. Chart 4 below indicates that the landing and associated airport charges have been increasing at a higher pace than the other en-route charges. A part of the explanation is that ANSPs had made significant improvement by reducing en-route unit costs. According to Eurocontrol, European ANSPs reduced their en-route unit costs per kilometre by 2.8% in 2006. However, data recorded for 2007, showed that landing and associated airport charges combined with en-route route facility charges increased by 10.1% compared to 2006.

Chart 3: ICAO User Charges – 2007

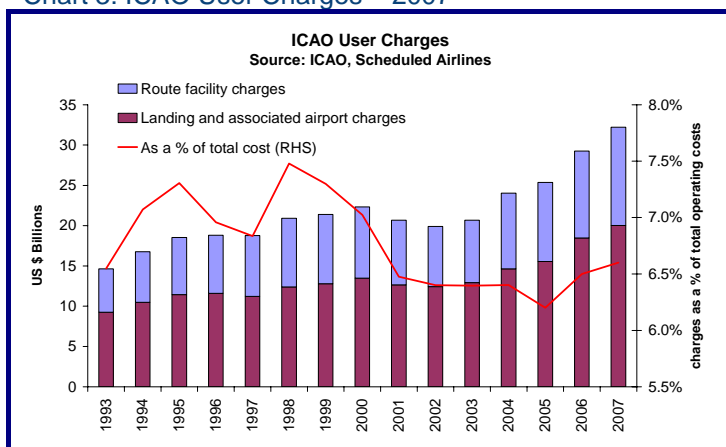
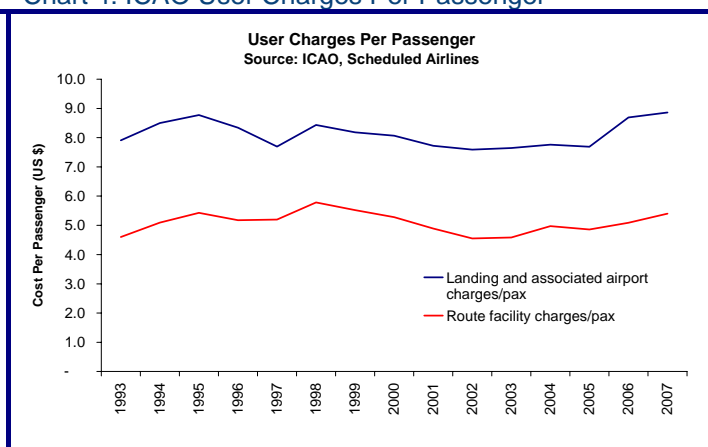


Chart 4: ICAO User Charges Per Passenger



- On a regional level, ICAO data shows that there is a wide difference in the proportion of user charges paid by airlines. For all regions, landing and airport charges plus route facilities charges represented in 2007 about 6.7% of the total user charges, up by 0.2% points compared to 2006.
- In 2007, direct user charges payments made by airlines from Europe and Africa/Middle East was more than 10%. By contrast, the less commercial structure of US airports (largely public owned with not-for-profit status) and the use of passenger ticket tax for FAA air navigation charges means that North American airlines pay direct user charges equivalent to only 3.0% of costs.

Chart 5: ICAO User Charges as a % of Total Operating Costs by Region (2006 and 2007)

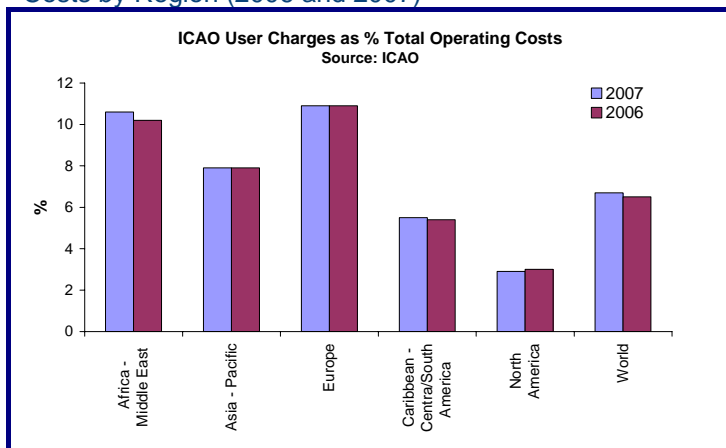
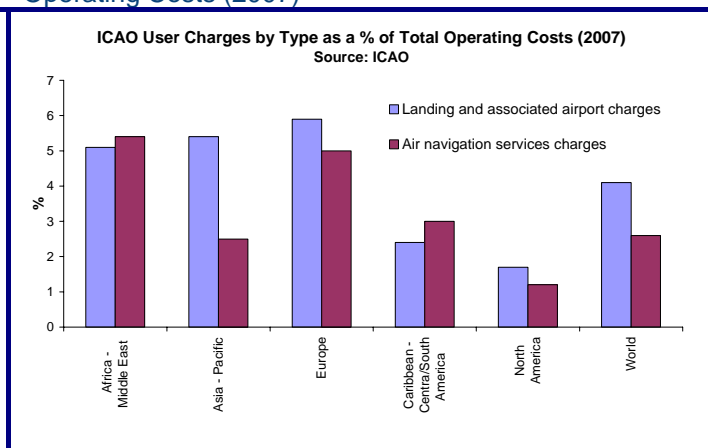


Chart 6: ICAO User Charges by Type as a % of Total Operating Costs (2007)



2008 user charges data by region not yet released by ICAO.

ACI AERONAUTICAL REVENUES

- By focusing on direct user charge payments, the ICAO figures underestimate the true economic level of charges for infrastructure use. Though it picks up airline financial payments, it misses the significant level of charges paid by airline passengers or cargo users (often made via airlines but not recorded in the P&L account). For a competitive industry such as airlines, the economic incidence of the charges includes those paid by airlines and those paid by users, as both are reflected in the total ticket price. The cost of air transport and the decision on whether or not to take an air journey (or to move freight by air) will depend on this total price, not individual components.
- The ACI airport economics survey 2008 report provides a useful estimation of the total user charges for airport infrastructure. The 2008 airport survey, which is based upon 2007 data¹ indicates that airport aeronautical revenues were US\$ 42 billion, representing a 10.6% increase comparing to 2006. The non aeronautical revenue, which is mainly composed by retail concession, car parking and property income/rent, represent US\$ 39.3 billion, up by 11.6%.
- It is the first year that ACI examines the two components of aeronautical charges to identify the contributions from airlines and passengers. The survey shows that more than half (55.5%) of aeronautical revenues originated from passengers (representing about US\$ 23.3 billion), the rest being generated from aircraft related charges (US\$ 18.7 billion). These figures show that ICAO underestimate total airport user charges by some US\$ 22.0 billion.
- Regional figures indicate that North America and Asia Pacific (respectively 50.5% and 47.5%) are the two regions with the highest aircraft operation related charges. On the other side, in Europe, airport revenues are mostly (57.0%) generated by passenger ticket taxes.
- During 2007, overall airport revenue was US\$ 85 billion, an increase of 16% compared to 2006. Europe accounts for about 40%, however this figure should take into account the currency fluctuation (appreciation of the Euro against the US dollar). In real terms, after adjusting this distortion, overall revenue increased by only 10.6%. The share between aeronautical and non aeronautical revenue remained stable compared to 2006 data with aeronautical revenue representing about 52% of overall earnings.
- In 2007, European airports revenues was about US\$ 19.3 billion, the highest result compared to the three other regions. European airports record also the highest aeronautical revenue per passenger (departing and arriving) with US\$ 16.3, almost twice as high as North American airports. In contrast Latin America and Caribbean airports record the lowest revenues with just US\$ 2.7 billion.

Chart 7: ACI Aeronautical Revenues by Region, 2007

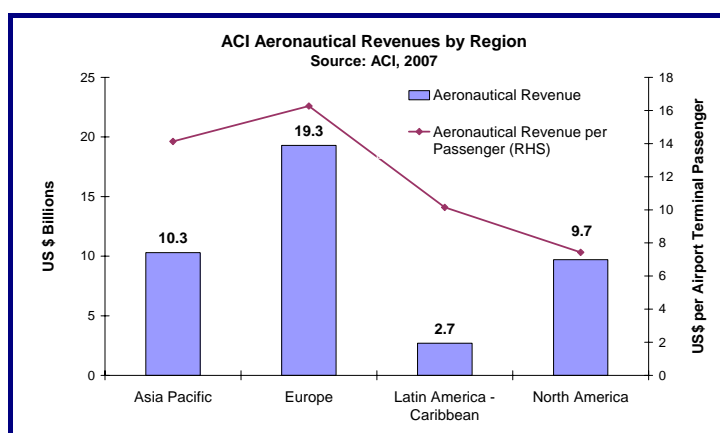
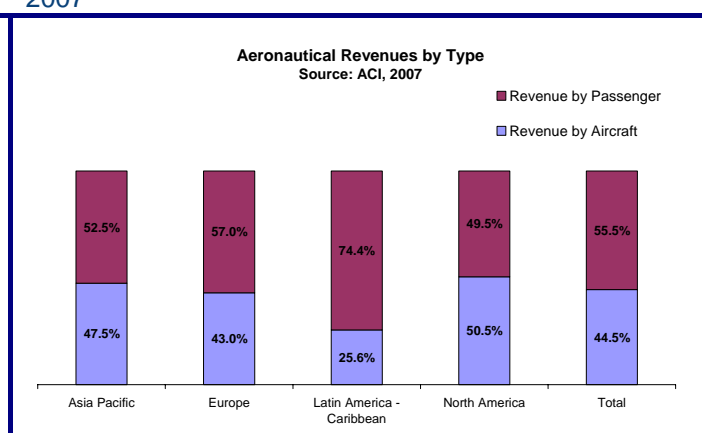


Chart 8: ACI Airport Aeronautical Revenues by Type, 2007



- Total ACI airport aeronautical revenues are higher than the ICAO “landing and associated airport charges” figures (see Chart 9, though note there is no data for 1999 and 2002). The ACI figures include payments made

¹ ACI reported that due statistically invalid samples, Africa and Middle East were not included in the 2008 report.

by passengers for aeronautical services. However, in some cases, aeronautical revenues also include some charges for groundhandling services undertaken by the airport itself that would be included within the separate “station expenses” cost category used by ICAO (see Appendix).

- ACI aeronautical revenues increased from US\$ 33.7 billion in 2005 to US\$ 42 billion in 2007. On a regional basis, European airports account for US\$ 4.5 billion of the US\$ 8.3 billion increase between 2001 and 2007, with a US\$ 3.1 billion increase for Asia Pacific airports and a US\$ 1.2 billion increase for North American airports.
- The sharp increase in aeronautical revenues at European airports since 2001 partly reflect Euro versus US\$ exchange rate movements but it will also reflect the additional security and other charges imposed on airlines and users over the period (as will the increases in other regions).

Chart 9: ACI Aeronautical Revenues

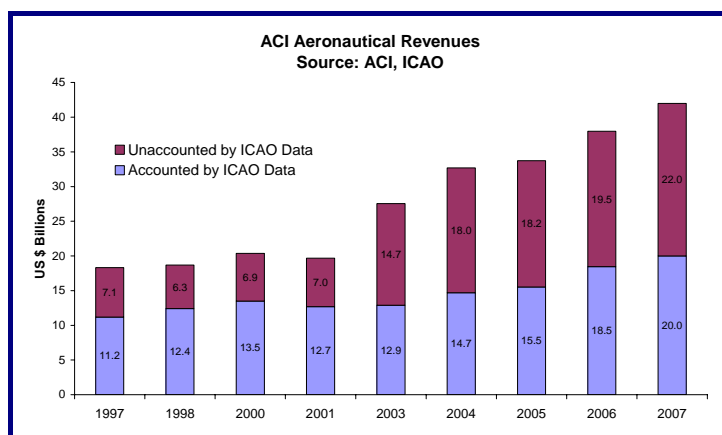
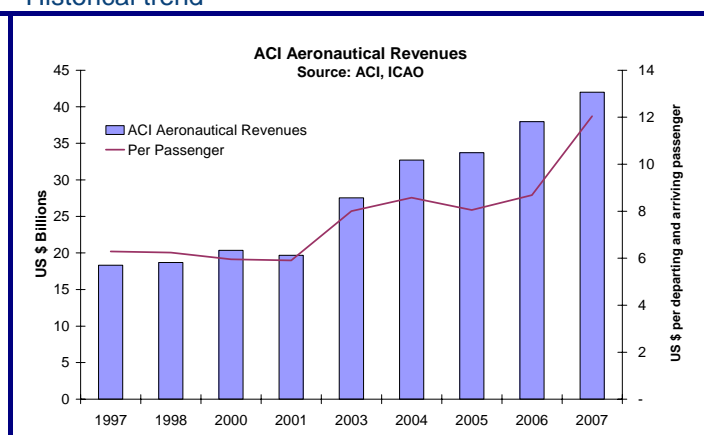


Chart 10: ACI Airport Aeronautical Revenues – Historical trend



ESTIMATE OF THE TOTAL USER COST OF INFRASTRUCTURE

- IATA estimates the total cost of infrastructure by adding ACI aeronautical revenues and ICAO air navigation route facility charges. In 2007, the total cost of infrastructure is estimated to be US\$ 54.2 billion, US\$ 5.4 billion higher than 2006.
- As discussed above, the ACI aeronautical revenues figure is used as a proxy of total airport user charges paid by airlines and their users. For air navigation charges, the ICAO direct payments is used as a base figure for the total amount. In reality, the revenues received by the various ANSPs are higher than US\$ 12.2 billion (though this may reflect some public sector contributions from general taxation).
- Total infrastructure charges paid by airlines are mainly composed of airport charges. In 2007, airport charges comprised about 77% of the total infrastructure user charge, representing about US\$ 38 billion. The remaining 23% was for the en-route service provision. These share figures have remained stable since 2003.
- The total infrastructure charges follow an increasing trend since 2001 adding an extra cost of US\$ 27 billion compared to 2007.

Chart 11: An estimate of Total Infrastructure Charges, excluding payments to the US FAA.

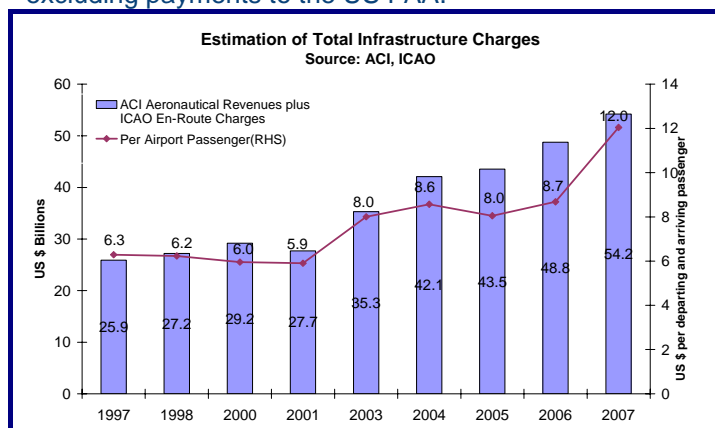
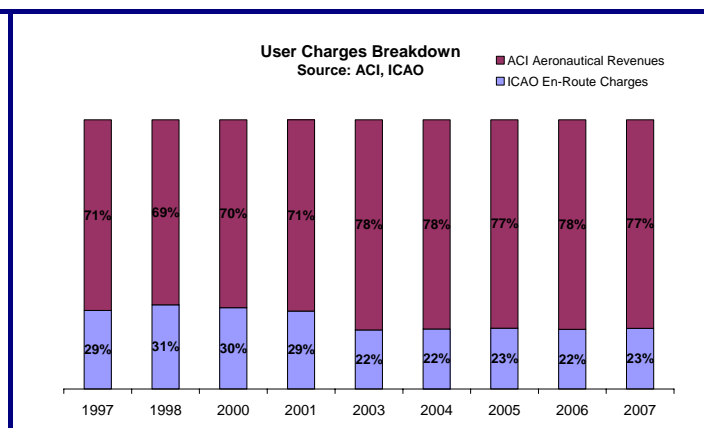


Chart 12: Total User Charges by Type 2007



AIRLINE COSTS

- Data from Air France-KLM, British Airways and Lufthansa, the three major European network airlines, show that user charges have increased as a percentage of non-fuel operating costs since 2001, respectively by 1.1% points, 0.3% points and 3.3 % points.
- Cost per passenger has been reduced since 2001 for BA (user charges per passenger by around 10% and non fuel operating cost by 18%), while increased by about 10% for AF probably due to the merge with KLM in 2004.

Chart 13: User Charges as a % of Non-Fuel Costs

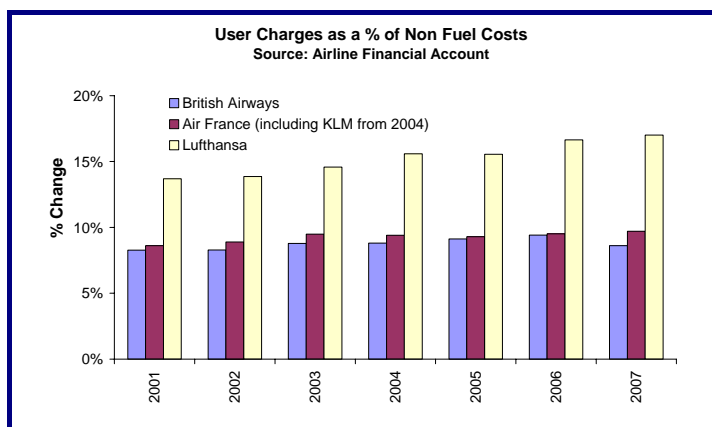
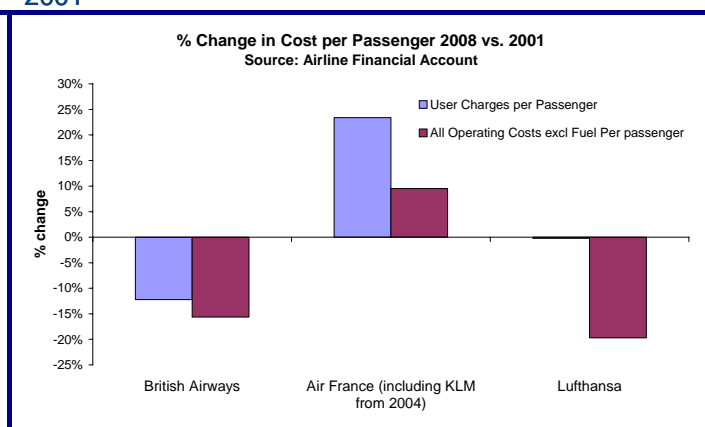


Chart 14: % Change in Cost per Passenger, 2008 vs 2001



AIRPORT AND AIRLINE RETURNS ON INVESTED CAPITAL

- Looking at infrastructure user charges it is also interesting to look at the volatility risk in returns faced by airlines and airports. Normally we would expect investors to accept high volatility – i.e. risk – in returns only if the average return over a long-period was relatively high.
- Previous research by IATA shows that over the last full business cycle (1996-2004), within the aviation industry, airlines have one of the highest degrees of volatility in returns between the “upturn” and “downturn” of an industry cycle – as well as the lowest average rate of return on invested capital across the cycle (see Chart 15).
- By contrast, airports and some service suppliers have seen relatively steady investor returns. This indicates a large degree of unregulated monopoly pricing power in these sectors (NB. There was not sufficient data on ANSPs to include in the study).
- The different structure of airports in different regions also impacts significantly on their returns on invested capital. In particular, the not-for-profit status of many US airports distorts and reduces overall returns for the sector. By contrast, European airports earn an average annual return on invested capital higher than their cost of capital. Returns were especially high during the “upturn” period (see Chart 16).

Chart 15: “Upturn” returns vs “Downturn” Returns by sector

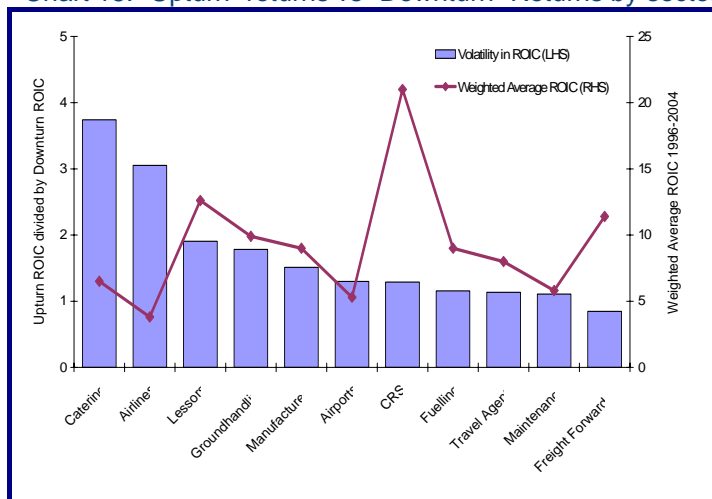
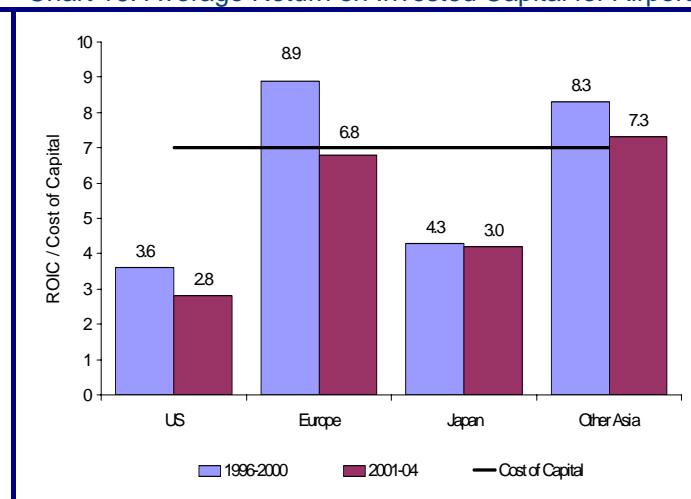


Chart 16: Average Return on Invested Capital for Airports



APPENDIX: ICAO COST DEFINITIONS

↗ Landing and Associated Airport Charges

Includes all charges and fees related to air traffic operations that are levied against the air carrier for services provided at the airport. These include landing charges; passenger and cargo fees; security, parking and hangar charges and related traffic operation charges, excluding fuel and oil throughput charges.

↗ Route Facility Charges (or Air Navigation Charges)

Includes fees levied against the air carrier for the provision of en-route facilities and services, including approach and aerodrome control charges. Where a single charge is levied for airport and air navigation services, the amount should be reported under airport charges, with a note to that effect.

↗ Station Expenses

Includes such items as: pay, allowances and expenses of all station staff engaged in handling and servicing aircraft and load, including flight supervisors, dispatchers and ground radio operators; station accommodation costs; maintenance and insurance of airport facilities, where separately assessed; representation and traffic handling fees charged by third parties for handling the air services of the air carrier; station store charges, including local duties on equipment, transportation, packing and materials, rental of stores, storekeepers' pay, allowance and expenses, etc. Maintenance expenditures for flight equipment at outstations that cannot be segregated for reporting are reported with a note to that effect.

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