Innovative Finance in the UAL – DIA Agreement

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1. INTRODUCTION

This paper explores the innovative finance involved in the 1991 Airport Use and Facilities Lease Agreement between United Airlines (UAL) and the City and County of Denver ("City") for the new Denver International Airport (DIA). The UAL-DIA agreement is similar to many others in that it uses a “compensatory” methodology to establish terminal rental rates and a “cost center residual cost” methodology to determine landing fees. However, the DIA-UAL Airport Use and Facilities Lease Agreement is particularly different from traditional airport use agreements due to the inclusion of a clause limiting UAL’s cost per enplaned revenue passenger (CPE) to $20 in 1990 dollars each calendar year. In the event UAL’s CPE exceeds, or is projected to exceed $20, the City must promptly take measures to reduce immediately UAL’s CPE to $20 (or below) per enplaned revenue passenger. UAL, which constitutes around 70% of airline rental revenue for DIA (Moody’s, 2003), also has the option to terminate the agreement in part or its entirety after 30 days notice if this event occurs.

United’s CPE at DIA has never reached the $20 threshold, however, this case is an interesting one to study to learn what motivations and events transpired leading to the inclusion of this clause in the DIA agreement. Several lessons relating to the airport decision-making, forecasting, and planning processes can be drawn from this research.

1.1. MOTIVATION

This research topic was selected to gain insight into the details within and behind the inclusion of the clause limiting United’s rentals, rates, fees, and charges at Denver International Airport. If invoked, the clause could potentially have huge implications for both parties and in
turn affect several other airlines, the traveling public, the City and County of Denver, and the DIA bondholders.

Long-run airport forecasting is ultimately based upon the fallible opinion of experts (de Neufville & Odoni, 2003) and is therefore susceptible to a substantial amount of risk and uncertainty. Such a clause included in a contract mitigates risk for United while increasing the financial risks borne by the City. While no general-obligation bonds were issued for DIA, why the City would assume this non-traditional risk is a question that must be asked. This paper attempts explain why the City was willing to include this clause in the agreement and why United asked for it at DIA as opposed to other airports.

The majority of this paper is a case study describing the events and circumstances leading up to the opening of DIA in 1995 and the financial state of the airport shortly thereafter. Later sections describe current financial issues pertaining to DIA and the financial well-being of the airport. The UAL 2002 Chapter 11 bankruptcy filing is also examined to determine what, if any, are its effects on the DIA-UAL user agreement.

2. **BACKGROUND**

2.1. **AIRPORT FINANCE BASICS**

Airports tend to be quasi-monopolistic and are therefore subject to government regulation. In the United States, airport user charges are regulated by requiring all prices to be cost-related. A large portion of airport revenue is derived from nonaeronautical user charges, which the importance of has been growing in recent years. Non-aeronautical user charges are also supported by the ICAO, who has stated that non-aeronautical charges “should be developed
to the maximum possible,” (Odoni, 2004). The two primary approaches for determining user charges in the United States are referred to as “compensatory” and “residual” methodologies.

In the compensatory methodology, the airport charges airlines amounts such that cost of the facilities and services used by the airlines is recovered in full. Residual systems, however, only require airlines to pay the difference between the total revenue target and the revenues from all nonaeronautical and other sources (de Neufville & Odoni, 2003, p.242). Under the residual system, airlines sign long-term use agreements and agree to share some of the debt responsibility with the airport. The airlines assume no debt-servicing risk if the compensatory methodology is used. Airports that rely heavily on one or two airlines generally prefer the residual methodology because there are large financial risks if one of the airlines significantly reduces its service to the airport, while busy airports with no dominant carriers prefer a compensatory system.

Payments made from the airlines to the airport are typically stated in terms of an airline’s cost per enplaned revenue passenger, or CPE. The CPE is calculated by dividing the sum of the airline’s total rentals, fees, and charges by the number of enplaned revenue passengers at the airport for any fiscal year. The CPE is quite important to the airlines because it is a signal of the profitability of its operations at an airport. Airlines with lower CPEs are happier tenants and airport operators strive to reduce the CPE for airlines (while still covering costs) because the airlines are their principal customers and lower CPEs can attract growth to the airport.

Airports are financed from a variety of sources, with the principle ones in the United States being federal grants, local operating surpluses, special-purpose user taxes, loans from commercial banks, revenue bonds, and general-obligation bonds. Federal grants are typically applied for from the Federal Aviation Administration (FAA) and some of the busiest airports are able to provide some financing with their local operating surpluses. The main special purpose
user tax in the United States is the Passenger Facility User Charge, or PFC, which allows airports to impose an additional charge of $3.00 or $4.50 per enplanement for the first two enplanements per one-way trip.\(^1\) Commercial bank loans also provide short- and medium-term loans to airports, although the interest rate is higher than other sources so they are used less frequently for municipal purposes.

Revenue bonds are issued by a government authority for which principal and interest payments are made from revenue earned by a specific government-owned enterprise (Estes, 1981). They enjoy tax-exempt status and are secured against the airport’s earning power if it is viewed as strong or may require the airlines to secure part of the debt and assume part of the risk; a residual cost methodology is used in the latter case. The debt service coverage ratio (DSCR) is a key factor in determining the level of risk for the bonds and consequently the interest rate the bonds will receive. The DSCR is the ratio of net airport revenues divided by the debt service requirements for a particular year—higher DSCRs have lower interest rates. The number and quality of long- and short-term airport use agreements an airport has secured with airlines is also another very important factor in revenue bond financing. Obviously, more and stronger agreements will raise the ratings of the bonds. Airport revenue bonds are regarded as quite safe, as there have been no defaults in the past 50 years (Odoni, 2004).

General-obligation bonds are similar to revenue bonds except there is one important difference—general-obligation bonds are secured by the issuer’s pledge of its full faith, credit, and taxing power. These bonds are issued by government entities and subject the issuer to more risk than revenue bonds, although the interest rate may be lower. There is also a limit to the total

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\(^1\) The FAA must authorize the use and amount of a PFC charge.
amount of debt a local or regional government in the United States may secure through general-obligation bonds, which is another reason why general-obligation bonds are not used exclusively.

Bonds are rated by credit agencies, such as Moody’s, Standard and Poor’s (S&P), and Fitch, who characterize the risk of holding a particular bond. The bond-rating agencies have different measures of risk assessment, but AAA-rated bonds are regarded as the safest investments and anything below BBB for S&P and Baa for Moody’s is regarded as junk. Junk bonds are held frequently by institutional investors and command much higher yields (averaging between four to six percentage points above comparable U.S. Treasury Bonds) to compensate for the high risk of default. Rivas (cited in de Neufville & Odoni, 2003) has composed a list of the factors used by credit agencies to assess the financial risk of airport projects, which is shown in Box 1. Airports obviously wish to obtain high credit rating for their bonds because the interest savings from receiving an interest rate of 6.5 percent versus 7.0 percent are substantial, thus greatly affecting the financial viability of projects.
Box 1: Airport Finance Rating Criteria

- Market strength (geographic location; regional economic characteristics, such as demographics, disposable income, etc.; origin/destination versus hub)
- Air traffic characteristics (air traffic forecast, range and market share of airlines at the airport; strength and commitment of these airlines to the airport)
- Physical infrastructure (utilization of existing facilities; need for new facilities; control of the gates by airport operator)
- Management and operations (cost recovery method and its adequacy to meet the airport’s needs; contractual terms in airline agreements, concession contracts, etc.)
- Financing (existing debt burden; share of debt secured by general revenues, PFC, airlines; cash reserves)
- General context (political climate; environmental concerns and disputes)

2.2. *DIA*

Denver International Airport (DIA) is the nation’s seventh busiest airport with nearly 18 million passenger enplanements in calendar year 2003 (FAA, 2004). It is about 53 square miles with room for 12 runways and virtually limitless capacity expansion for the foreseeable future. There are 90 full-service jet gates and 55 commuter aircraft positions, three airside concourses, a landside terminal, and five runways. A sixth runway is scheduled to open in the near future. Figure 2, located in the Appendix, shows the airport configuration. The airport is owned by the City and County of Denver and managed and operated by the city’s Department of Aviation.

United’s second largest hub is DIA, where it represents 60 percent of total enplanements and the majority of the 45 percent connecting enplanements. Non-United enplanements increased to 40 percent of the total in 2003, up from 31 percent in 2000 (Moody’s, 2004). Airlines such as JetBlue, AirTran, Mesa, Alaska, Spirit, Horizon, and United’s low-cost
subsidiary TED have been increasing their presence at DIA in recent years, exemplifying the growing market for lower-cost airlines services.

The original 1988 cost estimate for DIA was $1.7 billion, but the final cost was $4.9 billion (Flynn, cited in Dempsey, et al, p.21). One contribution to the cost overruns at DIA was the automated baggage system. It was originally designed to distribute all baggage automatically between check-in, the aircraft, and pick-up, but problems with the system resulted in a 16 month delay costing about $500 million (de Neufville, 1995).

As we will see in later sections, the higher-than-expected cost of DIA and the lower-than-expected passenger demand made for a relatively high airline cost per enplaned passenger, which United may have suspected when they requested the CPE limitation clause in their 1991 user lease agreement with DIA.

3. EVENTS PRECEDING THE UAL-DIA AGREEMENT

Stapleton International Airport was the major commercial airport for the Denver region preceding the new Denver International. By the late 1970s, it was believed that Stapleton needed another expansion, in part due to forecasts of increasing demand and Stapleton’s ability to only use two of the four runways during inclement weather because of separation requirements. Stapleton was only 7 miles from downtown Denver and residential developments had grown to within close proximity of the airport, prompting numerous noise complaints and lawsuits from nearby residents. One design option to increase capacity was to acquire land from the adjacent U.S. Army Rocky Mountain Arsenal, which was severely contaminated and had been shut down, but there was considerable opposition to further expansion at Stapleton from residents and Adams County. Stapleton was frequently experiencing delays that had network effects across
the country, which is part of the reasoning why the FAA supported both ideas of expansion at Stapleton or the construction of a new airport facility.

Federico Peña was elected Mayor of Denver in June 1983 and conducted several studies to further examine the feasibility and benefits of constructing a new airport. In September 1986, the Colorado Forum produced an economic study saying 21,000 direct jobs and 140,000 indirect jobs were attributed to Stapleton. The study also estimated that a new airport would generate another 90,000 new jobs, would require 10,000 construction workers to build, and would generate $8.2 billion annually in business revenue by 2010 and $206 million in state and local taxes (Albin, cited in Dempsey, et al, p.15). The Greater Denver Chamber of Commerce was largely supportive of DIA, and produced an economic study saying Dallas/Fort Worth and Atlanta gained $5.5 billion and $7 billion in regional activity, respectively, from their hub airports (Dempsey, et al, p.94). The same study also said these cities developed positive business relationships with overseas companies as a result of their airports.

After intense discussions with Adams County, Peña cancelled plans for expansion at Stapleton and argued Denver should focus on building a new facility (Dempsey, et al, p.89). Peña ultimately made the decision to build DIA. The original reasons given for the need of the new airport were that (1) it was not possible to expand Stapleton, and (2) Stapleton was a bottleneck in the national airway system. The FAA especially supported this later statement. Later public discussions and messages focused on the projected economic benefits of the new airport when the City was trying to “sell” the project to the citizens. It is also widely believed that the Mayor and the business community felt direct international connections would create

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2 Adams County was opposed to the idea of expanding Stapleton, in part because the County had its own plans for the land that would be used for Stapleton expansion.
substantial economic benefits for the region and were necessary for the city to gain stature. Denver even tried to sell the airport to the public by saying it was halfway between Osaka and Munich, which is a fallacy in reality, in an attempt to persuade them that DIA would become a major international air service hub and the local economy would benefit tremendously (Dempsey, et al, 1997, p.160). Denver had been trying hard to reinstitute direct international service to Europe but had little success during the 1990s (Dempsey, et al, 1997, p.163). Tourism—especially winter tourism—is related to a large number of jobs in the state and the new airport was believed to increase the amount of tourism dollars flowing into the local economy. One study (Regional Task Force, cited in Dempsey, et al, 1997, p.159) suggested one in every 10 jobs in the state was airport related.

On the other side of the argument, the airlines were against a new airport and wished to explore capacity expansion solutions at Stapleton instead. Of the three major airlines traditionally dominating the Denver region—Frontier, Continental, and United—only a bloodied Continental and United remained after turf wars fighting for a dominant position in the Denver origin/destination (O/D) market during the late 1980s. After Frontier effectively left the Denver market, airline ticket prices at the airport rose by 17.6 percent in 1987 and by 39.2 percent in 1988 (Dempsey, et al, 1997, p.64). A duopoly had emerged at Denver, where United and Continental were attempting to recover losses incurred during their battle to force Frontier out. It is only logical that these airlines would be against a newer and larger airport for two important reasons. First, a newer airport would have significant capital costs, which the airlines would ultimately pay for, and the last thing the airlines wanted was to incur additional expenses when they were already having financial difficulties. The second reason is related to the size of the new airport; additional capacity presents opportunities for new carriers to enter the market,
which would challenge the status quo and force the existing carriers to participate in predatory pricing behavior.

The airlines wished to keep Stapleton and its low cost per enplaned revenue passenger. Stapleton’s CPE in 1989, $5.74, was significantly lower than the projected 1995 CPE of $13.63 for DIA (Dempsey, et al, 1997, p.207). The city argued the figure for the new airport was in-line with what the CPE would become for other major airports after they finished their large development projects, although the airlines were not convinced the new airfield was in their best interest.

Passenger enplanements at Denver had started to decline in the late 1980s and the airline were so hostile to the idea of a new airport that they flatly stated a new airport was not needed and stopped paying some of their taxes (Dempsey, et al, p.14). An economic recession in Colorado (related to the collapse of the energy market) was in part responsible for this decline, and was contributed to by Continental taking some of their aircraft away from Denver to establish a hub at Cleveland.

An agreement was reached between the City and County of Denver and Adams County to allow the City and County of Denver to annex land and begin construction on the new airport in September 1989. Despite opposition from the airlines, the City believed Denver was such a strategic location that the airlines would have to concede and eventually use the new airport facility, and other airlines would jump at the opportunity to take their positions in the event United or Continental did not (Dempsey, et al, 1997, p.17). The City knew O’Hare—United’s largest hub—was becoming congested and other potential hub sites for United had little appear.
Continental signed the first agreement in March 1990, leasing 30 gates for five years. As a negotiations bonus, the financially-troubled Continental received the closest concourse and a pedestrian walkway from the main terminal.

United might have been able to kill the airport project by refusing to sign an agreement for the new airport, but they were pressured by then-Secretary of Transportation Sam Skinner to sign a lease at the new airport and recognized the constraints facing them at O’Hare (Dempsey, et al, 1997, p.114). United drew out negotiating with the City until June 1991, when it finally signed a lease for 45 gates. Reaching this agreement with United had costs for the City, as United was able to get numerous large concessions in the process. The City gave United design changes and concessions totaling $204 million (Dempsey, et al, 1997, p.18), a fully-automated high-speed baggage system, and a clause limiting United’s cost per enplaned passenger (CPE) to $20 in 1990 dollars.

3.1. **UAL-DIA AGREEMENT**

The CPE at Stapleton was $5.74 in 1989, which was comparable to many other airports at that time (Dempsey, et al, 1997, p.202). The 1995 projection of $13.63 most likely concerned United, who believed the costs were underestimated and the traffic projections were overstated. Many of the events and points discussed in the previous sections contributed to this feeling by United, who wished to create a fortress hub in Denver but was worried the airlines could be stuck with paying for the costly project. The solution for this concern was a clause in the original UAL-DIA User and Lease Agreement effectively limiting United’s cost per enplaned revenue passenger to $20 in 1990 dollars.

According to the agreement, in the event UAL’s CPE exceeds, or is projected to exceed $20.00, the City must promptly take measures to reduce immediately UAL’s CPE to $20.00 (or
below) per enplaned revenue passenger. The $20.00 is a 1990 value, which is indexed according to inflation for the Denver-Boulder Metropolitan Area with the values from the U.S. Bureau of Labor and Statistics. The CPE is calculated as follows:

\[
CPE = \frac{\text{United's Total Rentals, Fees, and charges}}{\text{MAX(United's Enplaned Revenue Passengers, 6 million)}}
\]

UAL, which constitutes around 70% of airline rental revenue for DIA (Moody’s 2003, p.2), also has the option to terminate the agreement in part or its entirety after 30 days notice if this event occurs. This obviously gives DIA tremendous incentive to keep the CPE from reaching this level. United’s CPE at DIA has never reached the $20 threshold, however, a lot can still be learned from this case that can be applied to future scenarios.

3.2. **DEMAND FORECASTS**

Demand forecasts for DIA played an important role in the financing and political process of the airport. These traffic forecasts were used extensively to justify the need for a new airport.

As late as 1987, the FAA was still predicting Denver would have the second busiest airport in the nation by the year 2000, and City consultants were predicting DIA would soon be serving 100 million passengers annually (Kowalski, cited in Dempsey, et al, 1997, p.18). After a few years of declining traffic in Denver during the late 1980s, Mayor Peña finally decided to scale back the original plans of 120 gates to 94, and then pared that number down to 85. These announcements created nervousness in the finance community, eventually resulting in the bond ratings dropped to BBB- by Standard and Poor’s (Flynn, cited in Dempsey, et al, 1997, p.18).
As one can see when comparing the DIA traffic forecasts to actual values, these numbers are quite different. Figure 1 depicts the actual enplaned passenger activity for the Denver airport system since 1990. Recent historical and forecasted Denver airport traffic details can be found in Table 1 located in the Appendix.

![Historical Enplaned Passenger Activity](image)

Figure 1: Historical Denver enplaned passenger activity (source: City and County of Denver Department of Aviation, 2004)

4. **POST-DIA OPENING**

Several low-cost airlines entered the Denver market after DIA was opened in February 1995, although they have accused United of engaging in various types of predatory conduct
It is believed United flooded new entrants’ routes with excess capacity, matched discount fares only on flights in close proximity, paid travel agents commission overrides to steer business to United, engaged in computer reservation system bias against flights that connected with the low-cost entrants, and has more or less refused to code-share or offer joint fares with carriers other than those flying turboprop aircraft. United managed to effectively push Continental out of the Denver market (although Continental was having its own problems without pressure from United) and develop a “fortress hub”, in which they have systematically raised fares to Denver from all points in which no other airline competition exists (Dempsey, et al, 1997, p.163). Fares were raised in part due to a lack of sufficient competition, resulting in less economic benefits for local businesses and industries. Local residents are stuck with higher ticket prices and some winter tourists are lost to nearby Salt Lake City. Aspen experienced a dramatic decrease in its skiing volume after Continental pulled out of Denver (only using three of the gates in their concourse), and air service to the rest of the state has suffered (Dempsey, et al, 1997, p.164).

5. **CURRENT FINANCIAL ISSUES AT DIA**

In 2003, there were 18.8 million enplanements at DIA and the airline cost per enplaned revenue passenger was $14.48. The debt service coverage ratio was 1.63x and the senior and total revenue bond debt outstanding was $3.98 billion and 4.1 billion, respectively. Denver’s per passenger debt levels are just about the highest in the country, with $196 per enplaned passenger and nearly $356 per O&D enplaned passenger (Moody’s, 2004). DIA’s high debt load accounts for relatively high airline costs per enplaned revenue passenger.
Analysis performed by Standard and Poor’s Rating Services (2003) indicate DIA could withstand a UAL liquidation scenario and meet the senior-lien requirement of 1.25x; however, the result of this scenario would be the airline cost per enplaned passenger growing to $29.44 by 2007. That study did not include any mitigating revenue enhancement actions beyond a 6% reduction in the 2003 budget, but it illustrates the tight financial condition the airport would find itself in if this event were to occur. The forecasted application of gross revenues to the various airport accounts are shown in Figure 3. Bond ratings would likely be downgraded if United were to liquidate.

Despite these less-than-stellar figures, DIA’s financial position has remained relatively stable in recent years. Under the current agreements, airlines receive 75 percent of the excess revenues through 2005 and a 50 percent credit thereafter (Moody’s, 2004), allowing the airport to accumulate some discretionary funds. The recent increase of the passenger facility charge to $4.50 has also generated additional revenue that can be used for projects such as the capital improvement program.

5.1.  

**EFFECTS OF UAL’S CHAPTER 11 FILING**

UAL filed for Chapter 11 bankruptcy protection on December 9, 2002. In November 2003, a stipulation order where United reaffirmed its lease with Denver International Airport until 2025 was filed in the United States Bankruptcy courts under Case No. B-48191. The following is a summary of the main points of the stipulation order:

1. DIA agrees to reduce the leasehold of United by approximately 162,000 square feet of Terminal Complex space.
2. DIA will reduce costs in order to lower the rentals, fees, and charges paid by United and most other airlines.
3. DIA will design and construct capital projects (e.g., the Concourse B commuter jet facility and the Concourse A west side expansion project) for United and Frontier Airlines.

4. DIA will increase gate use, install common-use terminal equipment at United’s preferentially assigned gates, and reassign facilities from United to Frontier on a temporary basis for certain facilities and on a permanent basis for other facilities.

These stipulations generally create net costs to the City and will be paid for with a recent increase of the PFC to $4.50, refunding outstanding bonds, and a portion of the City’s share of net revenues. This means the stipulated order will come at the expense of putting more money into the capital investment program, pressure the City to reduce costs at the airport, and create higher taxes for traveling passengers. Additionally, the effect of reducing the leasehold of United and declaring this space “unusable” has an increasing effect on the average terminal complex rental rates, which comes at the expense of other airlines. To answer one of the questions posed in this research project, the Chapter 11 filing and the stipulated order did not have any effect on the terms of the CPE limiting clause, although the stipulation terms have effects on the value of the CPE.

6. SUMMARY AND LESSONS LEARNED

Former Mayor Peña was quoted in Rocky Mountain News (1995) as saying the following:

*I strongly believe that five, 10, 15, 20 years from now, people will look at the airport, will look at the land that was annexed, will look at the redevelopment opportunities of Stapleton and say this is one of the best investments and economic decisions for the city that was made, many many years ago.*
It has since been ten years, and whether the former Mayor was correct with this statement is open to interpretation. As is the case in the airport industry, there is considerable uncertainty in long-term forecasting and we do not yet know if unexpected events will occur in upcoming years (or months) that will deem the Denver International Airport project a success or financial failure. A UAL liquidation—although not expected—would place severe financial constraints on the airport. Denver travelers have only gained three direct international flights when they were promised many, and one of these was flights only lured to DIA with the City’s illegal promise to pay the airline’s landing fees for three years (Rocky Mountain News, 2004).3 Travelers have also been forced to pay higher domestic ticket prices since there has been a lack of competition and the airport is so expensive. United ticket prices rose $40 shortly after the move to DIA (Dempsey, et al, 1997, p.511), which was added to the fare increases already seen after Continental started reducing frequencies at Denver.

DIA is a major contribution to the United States air system because it’s efficiency and tremendous capacity can accommodate future growth that many other congested and urbanized airports will never be able to do. With today’s lengthy and difficult process of airport expansion that is full of public opposition, it is amazing Denver was able to construct a new airport, let alone one so large. However, one must wonder whether this airport would have been built if the true financial costs, traffic levels, and economic benefits were understood before the project began. The huge difference between the forecasted and actual traffic levels and costs exemplifies the tremendous uncertainty involved with airport planning, and the DIA case shows that a region cannot merely “build it and they will come.” DIA may attract a lot of traffic in the future, but this has not occurred to date.

3 Federal regulations prohibit airlines from providing direct subsidies to airlines.
The innovative clause in the UAL-DIA Airport Use and Facilities Lease Agreement is an important model for other airlines and airports to consider. If an airport is desperate to attract additional traffic, they may consider providing the clause to potential new airlines concerned with the cost of operations at the facility. Taken from a different prospective, low-cost airlines may wish to request such a clause if they are worried about the cost per enplaned revenue passenger increasing and want more than verbal reassurances from airport officials. The Chapter 11 filing of UAL in 2002 did not have any effects on this clause of the agreement, although post-bankruptcy liquidation analysis shows that DIA could have a substantial increase in their cost per enplaned revenue passenger if this scenario occurs.
7. REFERENCES


Rocky Mountain News (2004) City leaders to meet on airline deal: Closed-door session will address illegal pact with Lufthansa. August 17.


Figure 2: DIA Configuration (source: FAA Benchmarks, 2004)
Table 1: DIA Historical and Forecasted Enplaned Passenger Traffic (source: City and County of Denver Department of Aviation, 2004)

### AIRLINE TRAFFIC FORECASTS

**Denver International Airport**

1999-2010

The forecasts presented in this table were prepared using the information and assumptions given in the accompanying text. Inevitably, some of the assumptions used to develop the forecasts will not be realized and unanticipated events and circumstances may occur. Therefore, there are likely to be differences between the forecast and actual results, and those differences may be material.

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<th>2001</th>
<th>2002</th>
<th>2003</th>
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<td>13,339,074</td>
<td>12,946,642</td>
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<td>18,946,109</td>
<td>17,829,264</td>
<td>15,760,879</td>
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<td>(6.9%)</td>
<td>(1.2%)</td>
<td>5.2%</td>
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<tr>
<td>Originating passengers</td>
<td>10,483,267</td>
<td>10,979,642</td>
<td>10,280,209</td>
<td>9,644,278</td>
<td>10,265,470</td>
<td></td>
<td>11,208,400</td>
<td>11,335,900</td>
</tr>
<tr>
<td>Connecting passengers</td>
<td>8,542,942</td>
<td>6,413,264</td>
<td>7,797,000</td>
<td>8,185,286</td>
<td>8,495,409</td>
<td></td>
<td>9,509,600</td>
<td>9,610,100</td>
</tr>
<tr>
<td>Percent originating</td>
<td>55.1%</td>
<td>56.6%</td>
<td>56.8%</td>
<td>54.1%</td>
<td>54.7%</td>
<td></td>
<td>54.1%</td>
<td>54.1%</td>
</tr>
<tr>
<td>Percent connecting</td>
<td>44.9%</td>
<td>43.4%</td>
<td>43.2%</td>
<td>45.9%</td>
<td>45.3%</td>
<td></td>
<td>45.9%</td>
<td>45.9%</td>
</tr>
<tr>
<td><strong>Landed weight (1,000-lb units)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Passenger airlines</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>United Airlines</td>
<td>18,102,981</td>
<td>17,610,372</td>
<td>15,521,041</td>
<td>14,482,786</td>
<td>13,173,161</td>
<td>11,786,000</td>
<td>11,850,000</td>
<td>12,133,000</td>
</tr>
<tr>
<td>Ted</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1,434,000</td>
<td>1,490,000</td>
</tr>
<tr>
<td>United Express</td>
<td>2,123,541</td>
<td>2,250,242</td>
<td>2,301,359</td>
<td>2,337,944</td>
<td>2,335,717</td>
<td></td>
<td>2,350,000</td>
<td>2,365,000</td>
</tr>
<tr>
<td>Subtotal United Airlines Group</td>
<td>20,226,522</td>
<td>19,860,614</td>
<td>17,812,399</td>
<td>16,820,730</td>
<td>15,514,878</td>
<td></td>
<td>15,180,000</td>
<td>15,642,000</td>
</tr>
<tr>
<td>Frontier Airlines (a)</td>
<td>1,532,967</td>
<td>1,955,631</td>
<td>2,204,110</td>
<td>3,046,580</td>
<td>3,811,164</td>
<td></td>
<td>4,730,000</td>
<td>4,811,000</td>
</tr>
<tr>
<td>Other</td>
<td>5,263,882</td>
<td>6,138,263</td>
<td>6,268,555</td>
<td>6,960,142</td>
<td>6,662,560</td>
<td></td>
<td>7,513,000</td>
<td>7,531,000</td>
</tr>
<tr>
<td>Total passenger airlines</td>
<td>27,423,361</td>
<td>27,950,043</td>
<td>26,185,984</td>
<td>25,474,092</td>
<td>25,700,602</td>
<td></td>
<td>26,093,000</td>
<td>26,144,000</td>
</tr>
<tr>
<td><strong>Annual percent increase (decrease)</strong></td>
<td>-</td>
<td>1.6%</td>
<td>(6.7%)</td>
<td>0.8%</td>
<td>(3.0%)</td>
<td></td>
<td>9.2%</td>
<td>0.3%</td>
</tr>
</tbody>
</table>

(a) Includes Frontier JetExpress.

Sources: Historical: Airport management records.
Estimated and forecast: Leigh Fisher Associates, September 2004. Data for 2004 were estimated on the basis of 6 months of actual data.
Figure 3: Structure of DIA Funds and Accounts and Application of Revenues Under the General Bond Ordinance (source: City and County of Denver Department of Aviation, 2004)