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# The Impact of Major External Events on the Financial Strength of Lambert St. Louis International Airport (1999-2013)

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SECOND submission - with revisions included - of my Master of Public Administration research paper as requested.

Thanks,

Tyler

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THE IMPACT OF MAJOR EXTERNAL EVENTS ON THE FINANCIAL STRENGTH OF  
LAMBERT ST. LOUIS INTERNATIONAL AIRPORT  
(1999-2013)

By

Tyler V. Fox

B.S., Southern Illinois University, 2009

A Research Paper  
Submitted in Partial Fulfillment of the Requirements for the  
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A Research Paper Submitted in Partial  
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## AN ABSTRACT OF THE RESEARCH PAPER OF

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TITLE: THE IMPACT OF MAJOR EXTERNAL EVENTS ON THE FINANCIAL STRENGTH OF LAMBERT ST. LOUIS INTERNATIONAL AIRPORT

MAJOR PROFESSOR: Dr. David A. NewMyer

Airport financial management and meeting airport break-even need are essential to securing airport financial strength. Airports face challenges during events such as September 11<sup>th</sup>, which have the potential to impact their ability to generate reliable airline related revenue and maintain airport financial strength. Research is conducted through a literature review of a case study of Lambert St. Louis International Airport, books, scholarly articles, Government Accountability Office (GAO) documents, and Federal Aviation Administration (FAA) documents in order to describe basic airport financial management, airport sources of revenue, and airport revenues related to airline operations. The discussion focuses specifically on whether or not September 11<sup>th</sup>, the economic recessions from March-November 2001 and December 2007-June 2009, and reductions in American Airlines' hub service in 2003 and 2009 affected the financial strength of Lambert by examining Lambert's Operations, Revenue, AIP Funding, and Passenger Facility Charges from 1999-2013.

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## CHAPTER 1 - INTRODUCTION

Airport financial prosperity requires a well-balanced airport financial management strategy. Executing the strategy is critical when it comes to meeting the airport's break-even need and securing the airport's financial strength in terms of credit ratings. Break-even need is the amount of revenue an airport requires on an annual basis produced by user charges, lease rentals, and concessions in order to pay for airport expenditures such as capital investments and operational costs (Young & Wells, 2011). According to the American Association of Airport Executives (AAAE, 2011), "Airports are highly complex organizations to manage. An airport is the agent of public service, a business, a community resource, and an essential stakeholder to commerce" (AAAE, 2011, p. 9). Airport managers use financial management methodologies to maintain this balance in airport financial accounting practices, especially when managing contracts and revenue calculations related to the airlines that serve their airport.

These methodologies are tailored to meet the specific needs of a specific airport. The rights and responsibilities of the airport and the airlines are outlined in a contract known across the aviation industry as an airport use agreement (Young & Wells, 2011). Airport managers often make adjustments to their financial management methodology when there are fluctuations in the revenues the airport depends upon as part of their use agreements (Young & Wells, 2011). These methodologies provide airport managers with an effective way of managing the financial resources available to them for their particular airport's operations, maintenance, and improvements (Young & Wells, 2011). Often times, airports are able to generate their own revenue, which provides enough for operations and maintenance (O&M) expenses such as salaries

and utilities, but when an improvement project such as terminal expansion or runway construction may become necessary, capital improvement expenses are incurred. At that point in time, supplemental funding from federal, state, local resources and airlines is often needed (Young & Wells, 2011). With all of this fiscal responsibility, it is clear that an airport must be run as diligently as possible.

## CHAPTER 2 – STATEMENT OF PURPOSE

The purpose of this research is to describe basic airport financial management, airport sources of revenue, and fluctuations in airport revenues related to airline operations. Specifically, it provides a case study of Lambert St. Louis International Airport to discuss whether or not September 11<sup>th</sup>, the economic recessions from March - November 2001 and from December 2007 – June 2009, and the 2003 and 2009 reductions in American Airlines' hub service at Lambert affected the airport's financial strength. Airline operation fluctuations, and related revenue fluctuations were being watched by credit rating agencies as the airport was trying to complete its 2005 runway project. These fluctuations will also be discussed with regard to the effect on the airport's financial strength.

## CHAPTER 3 - METHODOLOGY

### Research Question

Have major external events (September 11<sup>th</sup>, the economic recessions from March – November 2001 and from December 2007 – June 2009, or the 2003 and 2009 reductions in American Airlines' hub service at Lambert) affected the financial strength of Lambert St. Louis International Airport? According to the United States Government Accountability Office (U.S. GAO), "A good indicator of airports' financial strength is the number and scale of underlying bond ratings provided by bond-rating agencies" (United States Government Accountability Office, 2007, p. 14).

In order to answer the research questions, this study begins with a literature review of books, scholarly articles, Government Accountability Office (GAO) documents, and Federal Aviation Administration (FAA) documents in order to provide a basic understanding of airport financial management and to identify main sources of airport revenue. Next, information will be provided from the case study of Lambert that discusses the effects of September 11<sup>th</sup>, the economic recessions from March – November 2001 and December 2007 – June 2009, and the 2003 and 2009 American Airlines' reductions of hub service had on the airport. Finally, data will be plotted from the FAA to show Lambert's airline operations numbers compared to national operations numbers, as well as Lambert's airport revenues, Airport Improvement Program (AIP) funding, and Passenger Facility Charges (PFC's) from 1999 - 2013 in line graphs. These graphs provide a visual representation to analyze the fluctuations of those variables as a result of the events of September 11<sup>th</sup>, the economic recessions, and the 2003 and 2009 reductions in American Airlines' hub service at Lambert.

## CHAPTER 4 – LITERATURE REVIEW

### Airport Financial Management

Airport financial management is a complex topic, and many factors must be considered. “Most U.S. airports are operated as independent, not-for-profit entities with oversight by a politically-appointed authority, or as self-sustaining enterprise funds of a governmental entity such as a county, city, or state government” (Airport Cooperative Research Program, 2007, p. 6) This is a proprietary function of government which means to act as a private enterprise (AAAE, 2011). “Airport finance is a multilayered partnership among several levels of government as well as between the public and private sectors” (Kaps, 2000, p. 263.) Working in this partnership to ensure an airport has sufficient revenue to meet break-even need can be a challenge as federal, state, and local budgets fluctuate. “One of the constraints in the public sector is the fund structure. Public budgeting is based on ‘funds’- that is, separate accounts for separate purposes” (Rubin, 2010, p. 24.) This can make it difficult for airport managers as airport revenues must at least break even with expenditures, but exceeding the expenditures is even better.

Airport expenses can be broken into two broad categories which are: operation and maintenance (O&M) costs and capital improvement expenses (Young & Wells, 2011). The O&M costs are those that occur regularly and are required to keep the airport running smoothly while maintaining the present level of operations at the airport. The O&M costs consist of expenses such as utilities, airport employee salaries, and the acquisition of supplies ranging from something as costly as airfield lights to the minute cost of something such as paper clips (Young & Wells, 2011).

On the other hand, capital improvement expenses are considered the largest expenses for an airport. Capital improvement at an airport consists of large scale projects that carry a heavy financial burden. This can include the acquisition of new land, construction projects such as the expansion of terminal buildings or the extension of runways as previously mentioned, and even updating firefighting facilities and procurement of new fire fighting vehicles (Young & Wells, 2011). Most often, airports are able to pay their own O&M costs, and then exhaust all non-local avenues of funding such as the AIP funding, PFCs and any other federal, state, and local grants for improvement projects, and then as a last source of funding, issue debt instruments such as bonds to pay for the remainder of the projects from the proceeds of those bonds (Kaps, 2000). Fortunately for airport managers, federal, state, or local funding is often available and used to subsidize the majority of the costs of the capital improvement expenses.

## **Federal Financial Resources**

### **National Airport Capital Needs**

After World War II, air travel in the United States became very popular, resulting in a significant increase in demand on the nation's airports. Continuity of airports to support commercial air travel became a necessity, and the concept of a system of airports was born and combined with the federal funding to support those airports (Young & Wells, 2011). The ideology first began in 1946 with the Federal Airport Act, and the first official national plan was developed for the system of airports across the United States. It was called the National Airport Plan (NAP), and it directed how federal funds would be allocated to the airports included (Young & Wells, 2011).

Subsequently, the NAP was required annually by law, which meant that there were multiple updates, leading up to the National Airport System Plan (NASP), established in 1970 (Young & Wells, 2011).

The NASP was established by the Airport and Airways Development Act of 1970, that provided a more detailed approach to determining airport eligibility for federal funding, and it categorized airports in order to determine their eligibility for funding according to the number of annual enplanements (the number of passengers boarding aircraft) and the type of services provided at each airport (Young & Wells, 2011). Also, as an integral part of the Airport and Airways Development Act of 1970, the Airport and Airway Trust Fund was established, that accrues funds by means of charging user fees, attaching taxes to fuel, and by generation of other miscellaneous revenues. The trust was designed to provide funding specifically for the maintenance and improvements of the nation's air transportation system (FAA AIP Sponsor Guide-100. Airports Division Central Region, 2013).

If the airport enplaned 2,500 passengers or more per year, then it was considered a "commercial service airport", but if the enplanements fell short of 2,500, then the airport was considered a "general aviation airport" (GA) airport (Young & Wells, 2011). The FAA went as far as breaking the commercial service airports up into subcategories according to the most prevalent type of services provided at the facilities, which identified them as "air carrier" airports or "commuter" airports under the commercial service airport umbrella. By the end of the NASP in 1982, a total of 780 commercial service airports (635 air carrier + 145 commuter) and 2,423 GA airports were included in the plan (Young & Wells, 2011). The Nation's air transportation

system was growing by leaps and bounds, and a new national plan of airports became necessary in order to keep up with the growth.

With the passage of the Airport and Airway Trust Act of 1982, the NASP was superseded by the National Plan of Integrated Airport Systems (NPIAS), which became effective by 1984 (Young & Wells, 2011). According to the FAA, the NPIAS is a report, which is required to be filed every two years with Congress and the public, and it provides a comprehensive list of airports included in the national system and provides information about their eligibility for federal funding and the amounts available over a 5 year period (Federal Aviation Administration, 2014). In order to accommodate the growth of the airport system and to appropriately reallocate the federal funds to airport needs, the NPIAS re-classified the airport system into four main categories: 1) primary airports, 2) commercial service airports, 3) GA airports, and 4) reliever airports (Young & Wells, 2011). As of the 2014 NPIAS, 3,345 (3,331 existing and 14 proposed) public use airports in the nation are included in the NPIAS because they play an important role in the infrastructure, and meet the FAA's criteria to be included in the plan (Federal Aviation Administration, 2014).

Commercial service airports are included, and they handle the nation's scheduled air carrier service, and "the goal of commercial service airports, of course, is to provide for the safe and efficient movement of passengers and cargo between population centers through the nation's aviation system" (Young & Wells, 2011, p. 12). Primary airports are those commercial service airports which accommodate 10,000 passengers or more on an annual basis, but some primary airports receive many more enplanements than others. To account for this, the FAA subcategorized the primary

airports as large hubs, medium hubs, small hubs, and nonhubs based upon enplanement counts (Young & Wells, 2011).

Airports that accommodate less than 2,500 passengers per year are the nation's GA and reliever airports. Many, but not all, non-commercial service airports are also included in the NPIAS because they provide the facilities needed for miscellaneous aeronautical operations such as flight training and they also help to relieve congestion at the busiest commercial service airports. Reliever airports are located less than 50 miles from primary airports (Young & Wells, 2011). Waukegan National Airport is a reliever airport, located 35 miles north of Chicago, which absorbs traffic from Chicago O'Hare International Airport. (Waukegan Airport, 2015).

The 2015–2019 NPIAS reflects the FAA's need for total capital expenditure in the next five years as \$33.5 billion (Federal Aviation Administration, 2014). The airports included in the NPIAS will be those which receive funding through the Airport Improvement Program (AIP). Airports must be part of the NPIAS in order to receive AIP funds (Federal Aviation Administration, 2014).

### **AIP Funding**

The AIP is a federal government grant program, which contributes to the improvements of airport facilities within the Nation's airport system, and provides financial assistance to airports for the purposes of planning, development, capacity enhancement, and noise compatibility programs which the airports cannot afford within their own financial structure (Young & Wells, 2011). A limit has been set on the types of projects which are eligible for this funding, and in the FAA's AIP Sponsor Guide, a list of examples is presented which includes projects that do not qualify for AIP such as

landscaping, artwork, parking facilities, airport operational costs such as salaries, or exclusive use areas such as Fixed Base Operator (FBO) areas within the airport apron (Federal Aviation Administration, 2013). “Because the demand for AIP funds exceeds the availability, the FAA bases distribution of limited AIP funds on current national priorities and objectives. Projects that rate a high priority will receive higher consideration for funding over those projects with lower priority ratings” (Federal Aviation Administration, 2013, p. 100-2). According to the last re-authorization from the FAA at the end of June 2013, eligible primary airports can be provided with federal funds for 75 percent of the costs of a project (one exception - 80 percent for noise program implementation), but the remaining 20 or 25 percent must come from state and local funds, bond issues, or airport revenues (FAA AIP Sponsor Guide-100. Airports Division Central Region, 2013). “Funds granted to airports by the AIP are provided in three different funding categories: entitlement, set-aside, and discretionary funds” (Young & Wells, 2011, p. 342).

In a nutshell, of the three types of funds, entitlement funds are the largest, accounting for about 50 percent of all AIP funds distributed and these are appropriated based on the number of passenger enplanements the airport has per year (Young & Wells, 2011). Next, the “set-side funds are available to any eligible airport sponsor and are allocated according to congressionally mandated requirements for a number of different set-aside subcategories” (Young & Wells, 2011, p. 343.) Congress allocates the set-aside funds based upon specific needs of specific areas in the nation, and the areas with the most need will benefit first (Young & Wells, 2011). And last, but not least, the discretionary funds are granted by the FAA in order to accomplish the goals

of Congress such as improving safety, increasing security, and increasing the capacity capabilities of an airport. These funds are distributed to projects which are the highest priority to complete (Federal Aviation Administration, 2013).

The federal government issues federal letters of intent (LOI) as a statement in writing, which promulgates the FAA's intent to provide federal funding for approved airport projects (Young & Wells, 2011). "Projects are prioritized according to their function: 1) airport safety and security; 2) preservation of existing infrastructure; 3) aid compliance with governmental standards (e.g., noise migration); 4) upgrade of service; 5) increase in airport system capacity" (Young & Wells, 2011, pg. 345). A LOI is not always a dependable source of revenue as it is not a promise from the FAA that they will definitely provide the funds. If Congress cuts the federal budget, or an airport fails to meet their projected level of enplanements, then the AIP discretionary funding may be cut. For this reason, airport managers should not fully depend on an LOI that they receive, however, LOI's can provide a basis for airports to borrow funds or issue bonds (Young & Wells, 2011).

For many years, the AIP funding was enough to sustain the Nation's airport system, but that began to change in the late 1980's as the need for growth continued. As the federal dollars were stretched more and more, shortages in funding became more and more prevalent, and the need for additional funding became quite obvious. As a result, Congress passed the Aviation Safety and Capacity Expansion Act of 1990, which gave publicly owned airports the right to charge fees for passengers boarding aircraft (enplaned passengers), called Passenger Facility Charges (PFCs) (Young & Wells, 2011). Enplaned passengers are defined as "the total number of revenue

passengers boarding aircraft, including originating, stopover, and transfer passengers, in scheduled and nonscheduled services” (Young & Wells, 2011, p. 532).

### **Passenger Facility Charges**

Passenger Facility Charges were developed under Federal Aviation Regulation (FAR) Part 158 as a supplementary form of capital for financing airport development when shortages in traditional funding through the AIP occurred (Young & Wells, 2011). Airport sponsors (public agencies that control a commercial service airports) must apply to the FAA, be approved for, and impose PFC’s in accordance with FAR Part 158 as applicable to specific airport type, projects, and need (Federal Aviation Administration, 2014). According to the FAA, “No public agency may impose a PFC under this part unless authorized by the Administrator” (Federal Aviation Administration, 2014, pg. 6). In FAR Part 158, it states that the dollar amounts which can be charged include \$1.00, \$2.00, or \$3.00 for projects which “(1) preserve or enhance safety, security, or capacity of the national air transportation system; (2) reduce noise or mitigate noise impacts resulting from an airport; or (3) furnish opportunities for enhanced competition between or among air carriers” (Federal Aviation Administration, 2014, p. 9). Also, a \$4.00 or \$4.50 PFC can be assessed if a project meets the same requirements outlined above as well as “if the project will make significant contribution to improving air safety and security, increasing competition among air carriers, reducing current or anticipated congestion, or reducing the impact of aviation noise on people living near the airport” (Federal Aviation Administration, 2014, p. 11).

Projects which are financed with PFC’s are required to be included in the airport’s latest airport layout plan, which already contains an FAA approval for that

particular project (Federal Aviation Administration, 2014). PFC's can be very useful sources of revenue for airport sponsors and can even be used to support a bond issue. "PFC revenue can finance the entire allowable cost of a project or can be used to pay debt service or related expenses for bonds issued to fund an eligible project. A PFC is considered local revenue and may be used to meet the non-federal share of projects funded under the AIP" (Young & Wells, 2011, p. 344.) Airport management must specify the projects, and these projects must be part of the airport's FAA approved Airport Master Plan or Airport Improvement Plan in order to be funded before issuing the PFC's, and the PFC's must be used with caution. There is a possibility that the revenue generated from PFC's can be unstable at times due to lower than projected enplanements, if an airline files for bankruptcy, or if an airline shifts operations away from that airport and fails to fulfill its financial obligations (Young & Wells, 2011).

### **State / Local Funding / Bonds**

State grants are offered by state departments of transportation. These grants are typically allowed to fund approximately 90 percent of a project at an airport in the state of domicile and the airport sponsor is left with the remaining debt obligation. This state grant funding is typically derived from a general tax base as well as highway tolls, automobile registrations, fuel taxes, and other miscellaneous fees (Young & Wells, 2011).

After airport sponsors exhaust their federal, state, and local funding, their largest source of airport financing reverts to bond financing as PFCs and AIP funding is simply not enough to subsidize all airport capital needs (Kaps, 2000). According to the FAA, more than \$18 billion in bonds were issued in the year 2011 (FAA National Plan of

Integrated Airport Systems 2013-2017, 2012). The bonds that are most commonly used by airport sponsors include: general obligation bonds (GOB), general airport revenue bonds (GARB), and special facilities bonds (Young & Wells, 2011).

GOB's are issued by the municipality that owns and operates the airport and the debt is secured by the full faith and credit of citizens of the community via taxation (Kaps, 2000). "General obligation bonds are the responsibility of the citizenry of a particular locality to repay the amount borrowed" (Kaps, 2000, p. 256).

GARB's are an additional type of bond issue that airports may utilize to fund projects. This type of bond differs from the GOB as the debt obligation under a GARB rests solely upon the airport sponsor, and is not backed by any additional subsidy such as taxes from the general public in the taxing district (Kaps, 2000).

Special Facility Bonds, also known as Self-Liquidating General Obligation Bonds, are backed by the citizenry just as GOBs are, however, there is a difference in repayment methods. The repayment of a Special Facility Bond is accomplished through the use of revenue from the indebted facility (Kaps, 2000). One of the most familiar, general examples of this is a toll road. When cars drive over the newly constructed roadway they must pay a toll. After years of toll collection (revenue) from use of that roadway, the debt is repaid in full. The same practice is utilized at airports for new runways, terminal buildings, etc. When airlines land on the new runway, there is a landing fee instated and those revenues from the landing fees help to pay back the debt the airport sponsor incurred as a result of constructing that new runway (Kaps, 2000).

## **Airport Use Agreements and Financial Management Methodology**

Official documentation is needed in order to identify exactly what a commercial service airport is financially responsible for and what the air carriers are financially responsible for. A contract commonly referred to as an Airport Use Agreement is drawn up, and this describes the terms and conditions as well as the rights and responsibilities of the air carriers' use of the airport (Wells & Young, 2004). Many of the items in this agreement include: leases for the use of the airfield, leases of terminal facilities, the calculations for the rates that the airport will charge the air carrier and even an outline of the air carriers' privileges or rights when financial decisions are being made for development projects at the airport (Wells & Young, 2004).

As previously mentioned, airport managers employ financial management methodologies in order to manage the revenues derived from these airport use agreements and to adhere to airport financial accounting practices. Either the residual or compensatory financial management methodology can be employed, or a combination of the two. There is no legal requirement stating that airport sponsors must use a certain methodology, but these methods are a great way for airport sponsors to control how revenues will be generated and utilized to ensure an airport meets its break-even need (Kaps, 2000).

### **Residual Financial Management Method**

The residual financial management method is often used at many of the larger commercial service airports. This method allows for one or more airlines that provide service to the airport to assume a large portion of the airport's financial risk via the airport use agreement (Wells & Young, 2004). The financial risks placed upon the air

carrier include making up the difference for any deficit that the airport may find itself in after exhausting all other revenue streams such as automobile parking, terminal concessions, and any other identified revenue streams (Wells & Young, 2004).

Inception of the residual method occurred back in the 1950's with the city of Chicago's O'Hare Field making an agreement with United Airlines for a period of 50 years. The agreement stated that the airport would generate all of the revenue that it possibly could from all of its other airport users, but whatever airport expenditures exceeded their revenues for the year would be paid by United Airlines (Wells & Young, 2004). This agreement basically served as an insurance policy for the airport, and if the airport spent more than it was supposed to, then United Airlines would pay the tab to make sure that the airport met its break-even need. Airports using the residual method are guaranteed to break-even.

Long-term agreements were used quite frequently before the Airline Deregulation Act of 1978. Air carriers were flying specifically planned routes and using preferred airports as a central location, or "hub" as defined by the air carriers, for transferring passengers known as the "hub and spoke" system (Young & Wells, 2011). After deregulation, the air carriers were competing, and many were less likely to stay at one airport for a long period of time. Deregulation made it easy for the air carriers to enter and exit the airport market (AAAE, 2011). This made the residual method less likely to be used because these residual agreements depended on the financial stability of the air carriers, and in a deregulated environment, they were no longer financially stable (AAAE, 2011).

Following deregulation, there has been a trend among airport managers in diversifying their revenues. After this started taking place, many airports have switched to another financial management practice called the compensatory financial management method. Some airports even use a combination or hybrid of the two methodologies because airport revenues are all about how costs are defined in the agreements (AAAE, 2011).

### **Compensatory Financial Management Method**

The compensatory financial management method became the most commonly used approach, post deregulation, because airports could no longer count on airlines to provide dependable revenues under the residual methodology. Airport managers started gaining interest in the use of the compensatory method because it allows for more flexibility and control, with shorter terms on leases and use agreements (AAAE, 2011). Under the compensatory agreement between air carriers and the airport, the airport assumes the financial risks of operations and not the air carrier (Wells & Young, 2004). The airport is responsible for making sure that their expenditures do not exceed their revenues (AAAE, 2011). The air carriers are not responsible for ensuring that the airport meets its debt service requirements and break-even need for the year, as the residual methodology did. The air carriers are held responsible for paying their rent for the use of space at the facility, and may also be charged landing fees for the use of the facility as a part of the total compensatory package (Wells & Young, 2004).

Ultimately, airport sponsors are responsible for ensuring the airport continues to operate smoothly, and financial planning is one of the biggest factors to consider, especially when dealing with several variables that can come into play when dealing

with public budgeting and the volatility of the aviation industry. Airlines are merging and changing their hubs, and according to the ACRP, “with costs of construction increasing, airlines filing for bankruptcy, and periodic economic downturns affecting the industry, airport operators find themselves continually looking for additional revenue sources to fund capital projects and sustain operations” (Airport Cooperative Research Program, 2007, p. 24). This is exactly the position that Lambert St. Louis International Airport found itself in, especially after TWA went bankrupt and American Airlines assumed TWA’s responsibilities under the airport use agreement set to expire in December 2005. American formed AMR Sub Corporation to fulfill the obligations of the use agreement until expiration, but shortly after forming AMR Sub, decided to reduce their St. Louis hub operation in 2003 and reduced the amount of service offered from over 400 flights per day to 200 with 50-60 of those flights conducted via American mainline as part of their “turnaround plan” as they focused their efforts on growing their hub operations in Chicago and Dallas/Fort Worth. And in 2009, American went a step further, closing their hub at Lambert.

## CHAPTER 5 - CASE STUDY OF LAMBERT ST. LOUIS INTERNATIONAL AIRPORT

The City of St. Louis, Missouri owns and operates the Lambert St. Louis International Airport as a self-sufficient enterprise fund (John F. Brown Airport Management Associates, 2003). According to the AAAE, “An airport operated completely by a municipality, such as a city or county, means that the airport is a division or department of the city or county” (AAAE, 2011, p. 17.) There are both advantages and disadvantages to this type of ownership. According to AAAE, “the advantage of an airport being municipally owned is that the airport administration has access to the resources of other city or county departments. These resources may exceed what the airport’s administration could justify if it operated on a stand-alone basis” (AAAE, 2011, p. 19.) “The disadvantage of a municipally owned airport is that in times of financial constraints, the airport is often viewed as a liability or suffers corresponding budget reductions or personnel restrictions (such as mandatory furlough days) as other departments in the local government. Airports are also competing for the same attention and leadership consideration as other departments or divisions with the municipal government” (AAAE, 2011, p. 19.)

Lambert St. Louis International Airport’s finances are separate from that of the City of St. Louis itself. Even so, the Airport Authority saw itself through some interesting times as airline operations fluctuated as a result of external factors, which had an affect on main sources of revenue. Lambert was in the process of completing a new runway project which the FAA had filed its Record of Decision in 1998 allowing the project to begin under Phase I of the Airport Development Program (\$1.1 billion), with projected completion in 2006 (John F. Brown Airport Management Associates, 2003). During the

project, several factors worked against them including September 11<sup>th</sup>, the economic recessions, and American Airlines' reduction of service as well as the expiration their airport use agreement in 2005 with American Airlines (originally TWA). As a result of those factors, Lambert dealt with its biggest concern, fluctuating airline operations which impacted airline revenues, AIP Funding, and PFCs. According to the airport consultant, funding for the new runway was supposed to come mainly from GARBs, PFC revenues for the purpose of backing bonds and pay-as-you-go revenues, and AIP grants (John F. Brown Airport Management Associates, 2003).

Unfortunately for Lambert, the USGAO's way of determining an airports' financial strength was by the number and scale of underlying bond ratings provided by bond-rating agencies (United States Government Accountability Office, 2007, p. 14). Lambert's PFCs were fluctuating and the credit rating agencies such as Fitch, Moody's Investors Service, and Standard and Poor's use PFCs to evaluate passenger traffic (enplanements) and airport financial strength and credit. According to the airport consultant, Fitch and Moody's placed Lambert on their negative watch list right after September 11<sup>th</sup> because they were concerned about the reduced amount of enplanements which also meant reduced PFC revenue (John F. Brown Airport Management Associates, 2003). The consultant went on to say "A downgrade to STL's credit rating could affect the City's ability to access the bond market for more GARBs to complete the funding of the runway program in light of potential shortfall in PFC PAYGO funding for the project" (John F. Brown Airport Management Associates, 2003, p. 40). Lambert's credit was already under review by the credit rating agencies following September 11, 2001, when, immediately following American's announcement to reduce

service in 2003, all three credit rating agencies dropped the Lambert's credit rating, and placed the airport on their watch lists for further negative action in the future (John F. Brown Airport Management Associates, 2003).

This hit the airport when it needed its financial strength the most as the runway project was not supposed to be completed until 2006. The airport management had to handle the impact of each external factor the best way they could. After September 11<sup>th</sup> Lambert's airport management conducted a reassessment of the five-year capital needs of the airport. The decision was made to only move forward with projects which were considered essential to the safe operation of the airport or that would allow for more revenue generation such as long-term parking facilities or construction of additional space for concessionaires (John F. Brown Airport Management Associates, 2003). The airport management also took steps such as refinancing bonds to take advantage of lower interest rates and deferred around \$76 million in project costs in their Capital Improvement Program (CIP) until 2004 or later. The National Bureau of Economic Research officially named March, 2001 to November, 2001 as well as December, 2007 to June, 2009 as recession periods (National Bureau of Economic Research, 2011). The latter was considered to be the greatest recession in length, with a total of 18 months, since World War II (National Bureau of Economic Research, 2011).

Lambert had an airport use agreement with Trans World Airlines (TWA) which became effective on August 1, 1965 and the carrier was Lambert's primary hub carrier for many years (John F. Brown Airport Management Associates, 2003). TWA filed for bankruptcy three separate times within nine years and sought protection under the

Chapter 11 U.S. Bankruptcy Code in January of 1992, again in June of 1995, and the final time in January of 2001 (John F. Brown Airport Management Associates, 2003). In the third round, TWA sold all of its assets to American Airlines, and through this absorption of assets as well as other contracts and agreements with St. Louis, American formed AMR Sub Corporation named in order to operate as a “transitional airline” which gave it the ability to assume the remainder of TWA’s airport use agreement with Lambert which was set to expire on December 31, 2005. The airport had a compensatory rate collection practice and an antiquated airline use agreement in place (John F. Brown Airport Management Associates, 2003).

AMR Sub Corporation started operating as the transitional airline on April 10, 2001, and by July 16, 2003 American Airlines decided to reduce the amount of service they offered out of the St. Louis hub because they wanted to focus on building stronger hub operations in Chicago and Dallas/Fort Worth. According to the airport consultant, American (originally TWA) had a total of 473 daily departures from Lambert which accounted for approximately 78 percent of all enplaned passengers at Lambert since the 1990’s (John F. Brown Airport Management Associates, 2003). American initially started with a 20% cutback in the number of flights they would be offering, and by November of 2003 the airline had cut service down by 50% (John F. Brown Airport Management Associates, 2003). Not only that, but of the flights remaining at St. Louis, the airport consultant estimated the total number of connecting passengers would decline over 70 percent due to American’s reduction of mainline service and enplanements because of the use of smaller regional airline aircraft. The consultant went on to say that, “if American does not restore service levels or if another airline

does not establish a major hub operation at STL, it is likely that substantial amounts of terminal space will remain unleased after 2005” (John F. Brown Airport Management Associates, 2003, p. 39.) This was detrimental to Lambert’s financial situation as the Authority was dependent upon that revenue.

In this time period, Lambert found itself in the middle of a new runway project which was designed to allow dual independent aircraft arrivals during poor weather conditions, and improve airport efficiency with a cost projected to be \$1.1 billion (John F. Brown Airport Management Associates, 2003). The airport was dependent upon revenue from the airlines using their facility to pay for this project, and they were relying especially hard on American Airlines to pay their debt service payments on GARBs, PFC-supported GARBs, PFC pay-as-you-go revenues (PAYGO), and other internally generated revenues (John F. Brown Airport Management Associates, 2003).

According to the ACRP, Lambert “has compensatory rate-making for its airline terminals and residual rate-setting for its landing fees” (Airport Cooperative Research Program, 2009, p. 9.) As previously stated, “under the residual method, the financial risk is transferred to the airlines in return for a negotiated limit on an airport’s profits” (AAAE, 2011, p. 72.) But, if the airline, American Airlines in this case, was not providing the projected amount of service (landings and enplaned passengers) to Lambert, then there was obviously going to be a reduction in the amount of revenue generated by the airline.

In FY 2002, the revenue generated from American and TWA amounted to 69 percent of the overall revenue from the airlines at Lambert, and 45 percent of the total operating revenue for the airport overall (John F. Brown Airport Management

Associates, 2003). This meant that there was going to be less airline revenue as a result of fewer PFCs being collected and less terminal space being occupied, and this meant the Authority was going to have difficulty paying the debt service on their GARBs (John F. Brown Airport Management Associates, 2003). In 2003, the City of St. Louis estimated their total PFC revenue needed to pay debt service on their PFC eligible debt paid toward bond principal to be about \$20 million per year. Also, in 2003, they estimated their total PFC revenue to be around \$53 million (John F. Brown Airport Management Associates, 2003).

At the time the case study was conducted, the airport consultant said “the debt service for the new runway will become payable from airport revenues after the existing use agreements expire, placing further pressure on airline unit costs at that time, especially the landing fee rate, which would become one of the highest in the nation” (John F. Brown Airport Management Associates, 2003). Subsequent to the December 31, 2005 expiration of the airport use agreement with AMR Sub Corporation, Lambert had to make adjustments to their revenue structure because the costs associated with the operations of the new runway entered the airline rate base (John F. Brown Airport Management Associates, 2003). Lambert’s airport management had to diversify their revenues accordingly, meaning that adjustments to other forms of revenue such as landing fees and terminal use fees accrued from all airlines using the airport would have to make up for the deficit (John F. Brown Airport Management Associates, 2003). It also helped that the FAA provided Lambert with a LOI, stating that it would provide 141.4 million under the AIP and the FAA also approved Lambert’s use of \$900 million in PFC revenue to fund the runway project (John F. Brown Airport Management

Associates, 2003).

## CHAPTER 6 - FINDINGS

In a perfect world, meeting break-even need and achieving airport financial prosperity are the goals of every airport manager. As previously discussed, many factors play a critical role in achieving those goals. One of the most important factors is/are the airport use agreement(s) that the airport has in place with airlines offering service at that airport. Airline derived revenue contributes significantly not only toward the costs of operating and maintaining the airport, but also with improvements such as building a new runway like at Lambert St. Louis International Airport. However, in reality, both controllable factors such as runway projects, as well as uncontrollable factors such as economic recessions can have an impact on airport finances as discussed in the case study of Lambert St. Louis International Airport. Airport managers must make adjustments to their financial management methodology in order to maintain airport financial strength in both good times and bad. These methodologies provide airport managers with an effective way to manage financial resources available to their airport (Young & Wells, 2011). The case study of Lambert St. Louis International Airport provided excellent examples of controllable and uncontrollable factors, or external events, which had the potential to affect airport revenue related to airline operations at Lambert such as PFC's.

Those events facilitated the subsequent discussion of Lambert St. Louis International Airport's Operation Numbers, Revenue, AIP Funding, and PFC's, and are examined to see if any fluctuations in these variables could be linked to external events including September 11<sup>th</sup>, the economic recession from March to November 2003, the economic recession from December 2007 to June 2009, and the reductions in

American Airlines' hub service in 2003 and 2009. This data is examined and discussed with the goal of finding answers to the following research questions regarding whether or not the major external events had an effect on the financial strength of Lambert St. Louis International Airport from 1999-2013.

September 11th

Did September 11<sup>th</sup> affect the Operations at Lambert St. Louis International Airport?

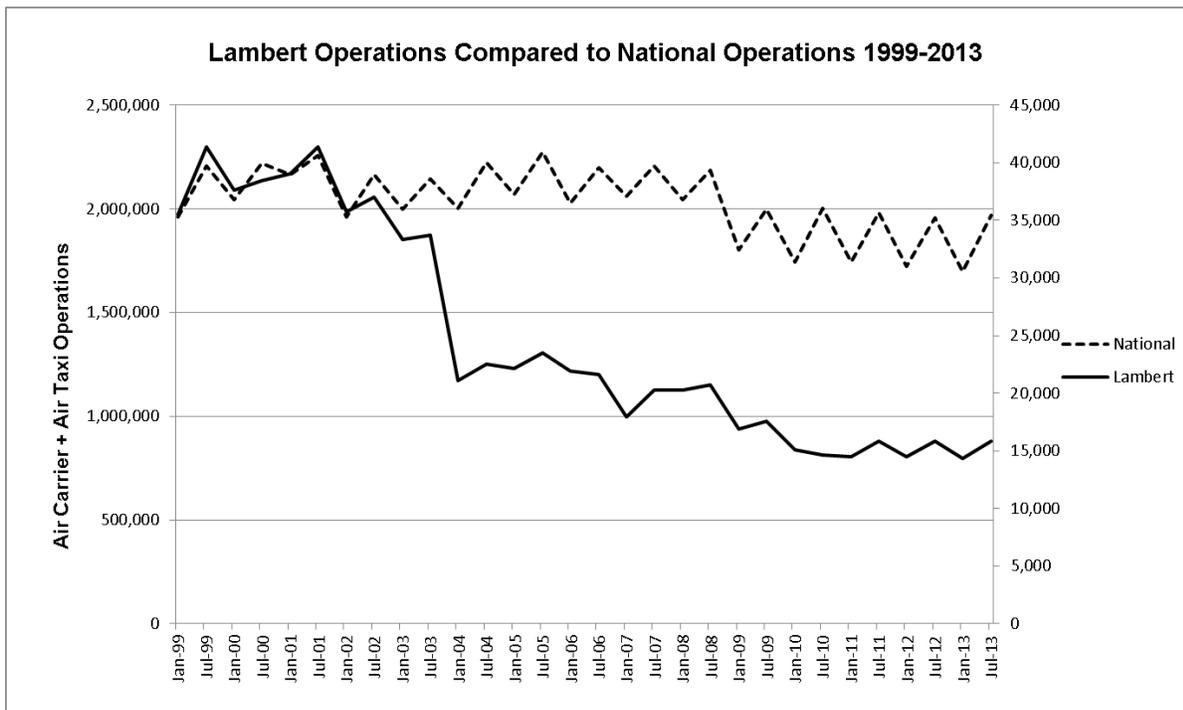


Figure 1-A. Lambert Operations

Source: FAA

Yes, the number of operations at Lambert were clearly affected by September 11<sup>th</sup>. In fact, the number of operations at Lambert as well as the number of operations nationally both dropped significantly in 2001 as a result of the tragedy. However, the number of operations do not provide sufficient information to conclude that the fluctuations in operations as a result of September 11<sup>th</sup> affected the financial strength of Lambert.

## Did September 11<sup>th</sup> affect the Revenue generated at Lambert St. Louis International Airport?

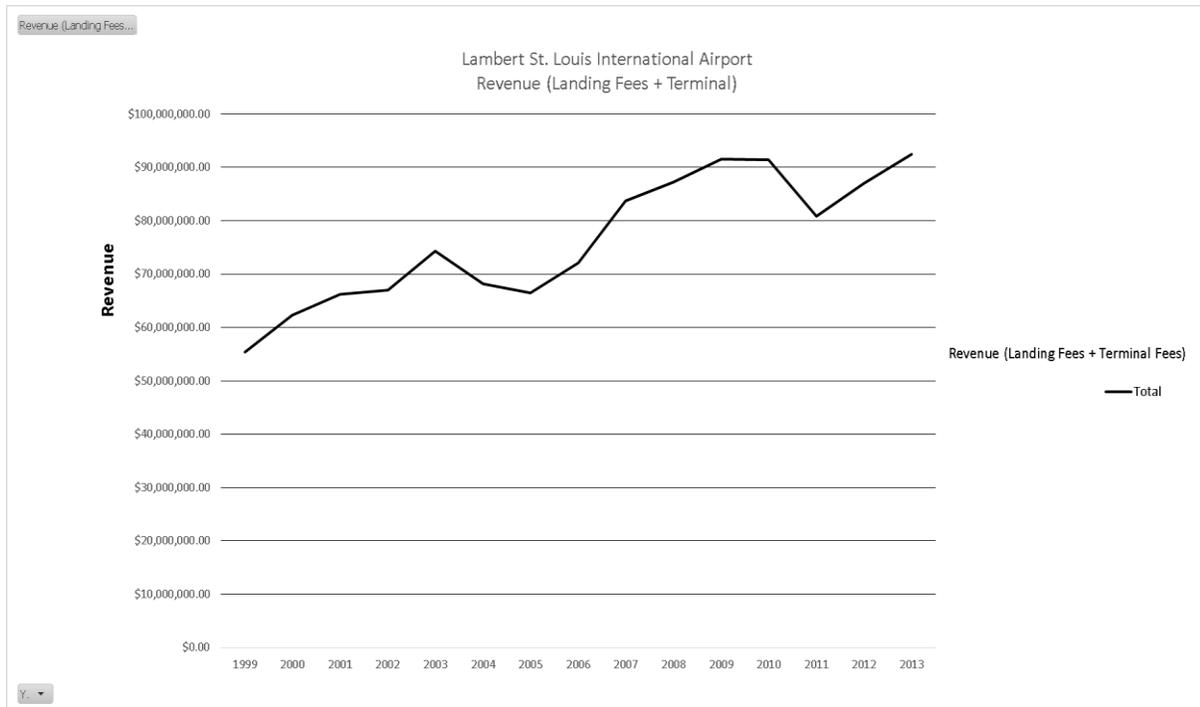


Figure 2-A. Lambert Revenue

Source: FAA

September 11<sup>th</sup> did not cause fluctuations in the revenue generated at Lambert. The revenues did not increase quite as much as in previous years, but a gradual increase in revenue still existed between the years 2001 and 2002. Furthermore, the amount of revenue generated does not provide sufficient information to conclude that fluctuations, or the lack thereof, in revenue as a result of September 11<sup>th</sup> affected the financial strength of Lambert.

## Did September 11<sup>th</sup> affect the AIP Funding at Lambert St. Louis International Airport?

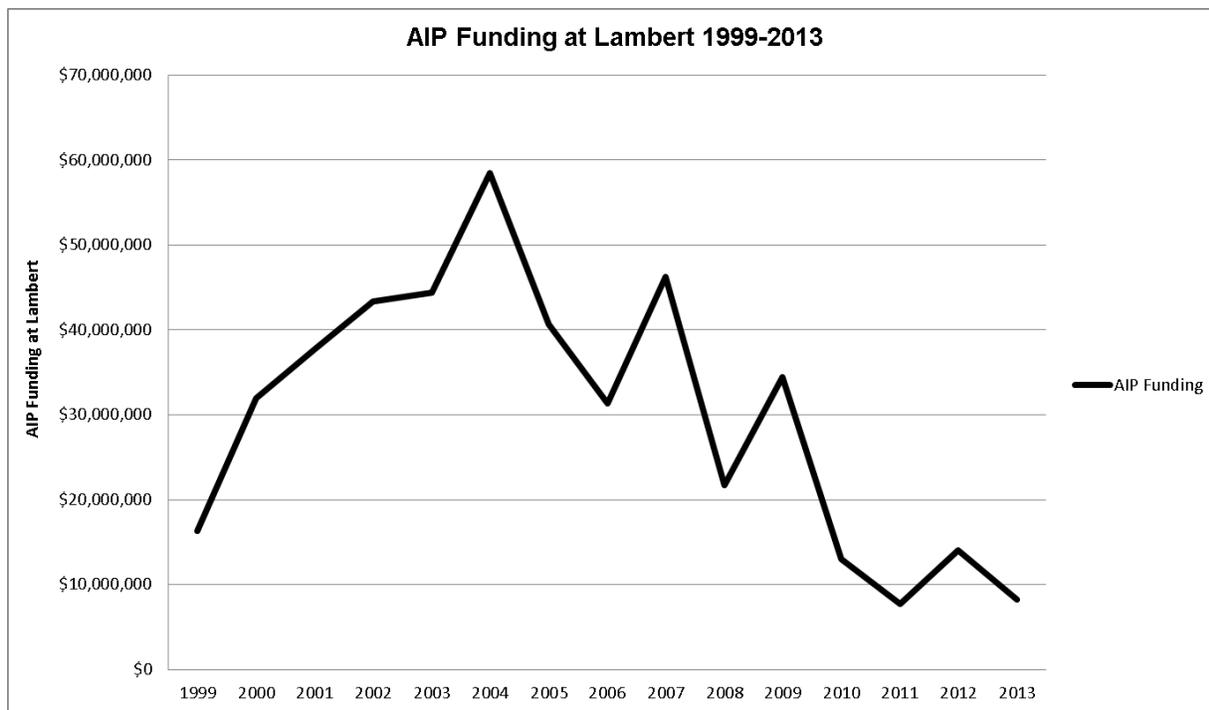


Figure 3-A. Lambert AIP Funding

Source: FAA

September 11<sup>th</sup> did not affect the AIP Funding for Lambert. A steady increase in the funding appears to have existed from 2001 to 2002, almost leveling off in 2003.

It appears that the runway project was the governing force when it came to the amount of AIP funding awards at Lambert. The year 2003 was the peak year for funding the runway project, and this graph makes that very clear. Then there is a steady downward trend until 2006 as a result of the funding tapering off after completion of the runway project. Furthermore, the amount of AIP Funding does not provide sufficient information to conclude that fluctuations, or the lack thereof, in AIP Funding as a result of September 11<sup>th</sup> affected the financial strength of Lambert.

## Did September 11<sup>th</sup> affect the PFC Funding at Lambert St. Louis

### International Airport?

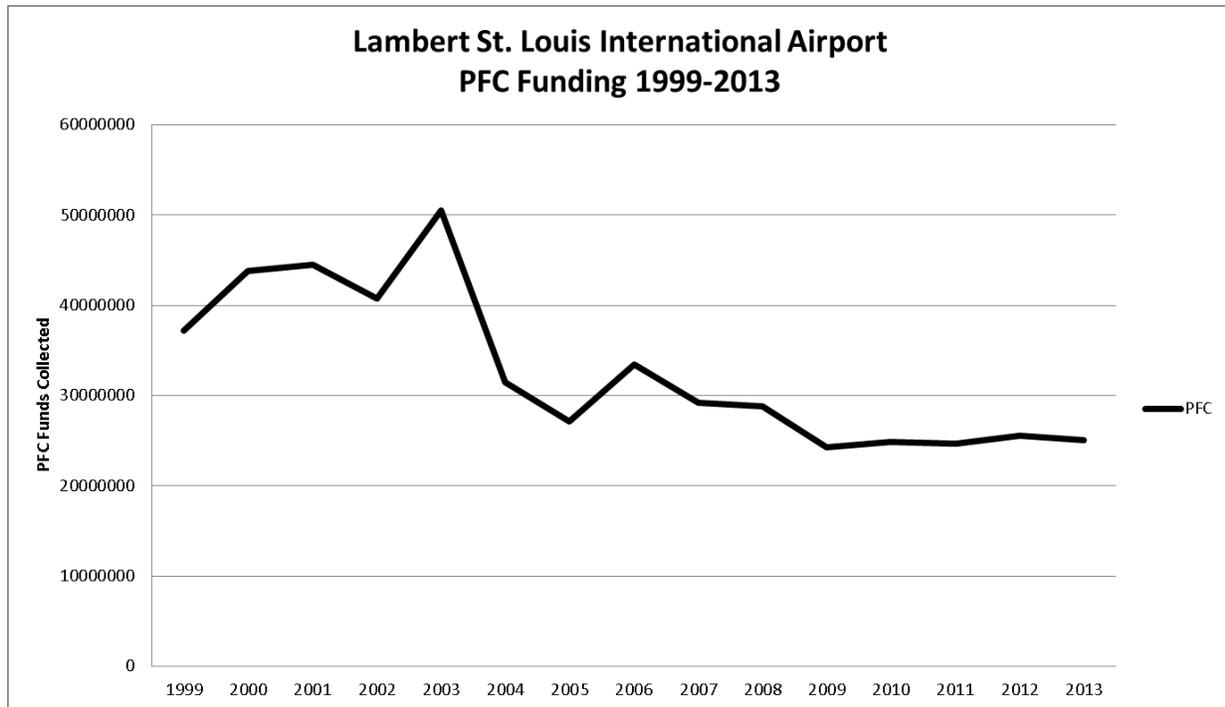


Figure 4-A. Lambert PFC Funding

Source: FAA

September 11<sup>th</sup> did have a short-lived affect on the number of PFC's collected at Lambert. And, as previously stated in the research, bond rating agencies Fitch and Moody's both placed Lambert on their negative watch list right after September 11<sup>th</sup> for fear of a reduced amount of passenger enplanements (John F. Brown Airport Management Associates, 2003).

## Economic Recession from March to November 2001

### Did the Economic Recession from March to November 2001 affect the Operations at Lambert St. Louis International Airport?

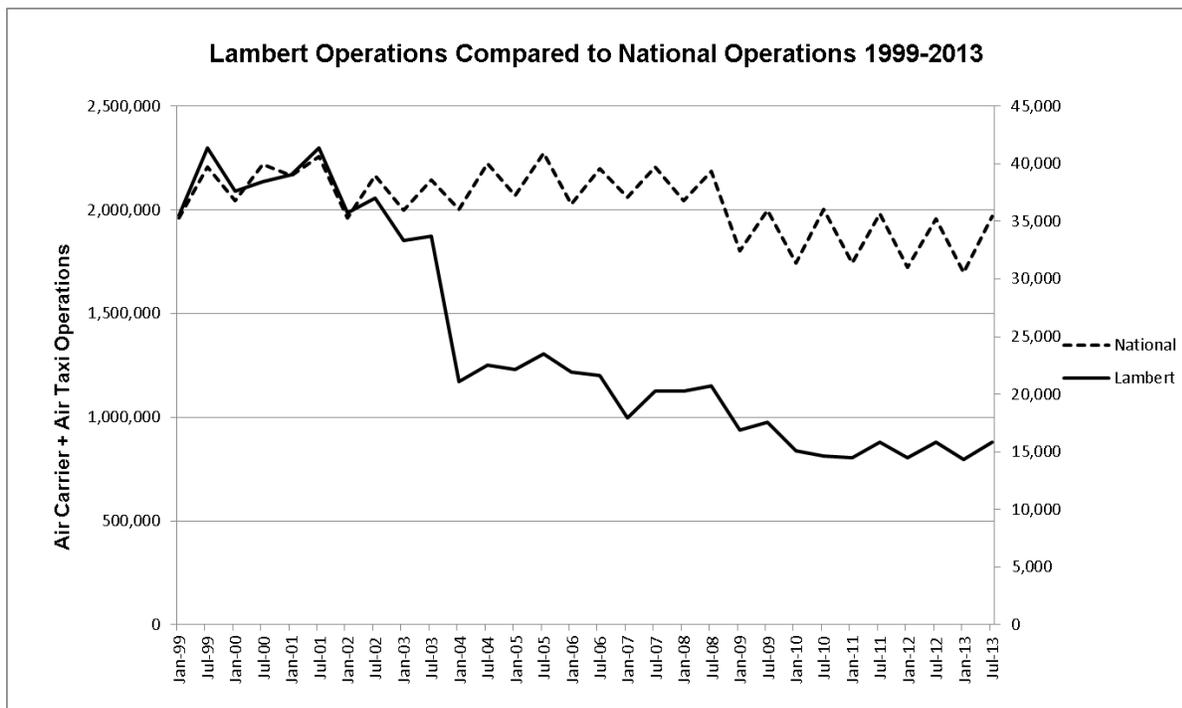


Figure 1-B. Lambert Operations

Source: FAA

Based upon this data, and the previously presented research, it is unclear whether or not the economic recession itself had a negative impact on the operation numbers at Lambert during the last half of 2001, or if it was as a result of September 11<sup>th</sup>, or a combination of the two events. Furthermore, the number of operations do not provide sufficient information to conclude that the fluctuations in operations as a result of the Economic Recession from March to November 2001 affected the financial strength of Lambert.

## Did the Economic Recession from March to November 2001 affect the Revenue at Lambert St. Louis International Airport?

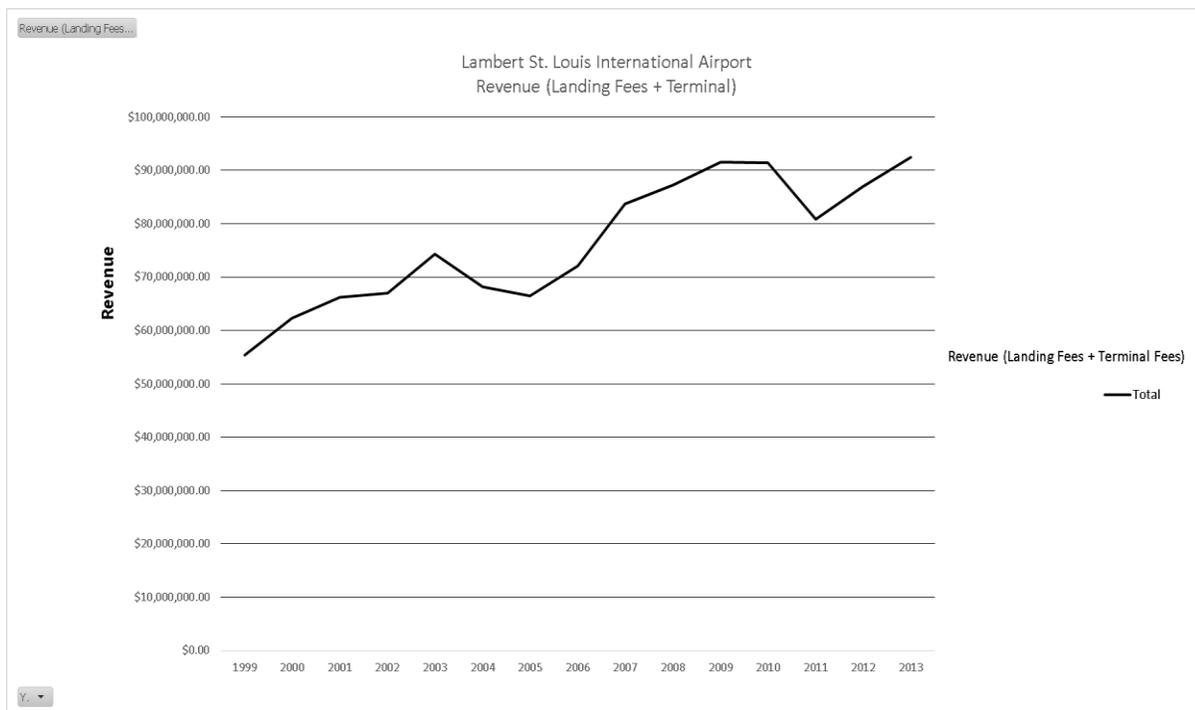


Figure 2-B. Lambert Revenue

Source: FAA

The economic recession in 2001 may be the reason why revenues appear to have almost flattened out from 2001 to 2002 with only a gradual increase that existed, but it is unclear whether or not the economic recession itself had a negative impact on the revenue at Lambert during the last half of 2001, or if it was as a result of September 11<sup>th</sup>, or a combination of the two events. Furthermore, the amount of revenue generated does not provide sufficient information to conclude that fluctuations in revenue as a result of the Economic Recession from March to November 2001 affected the financial strength of Lambert.

## Did the Economic Recession from March to November 2001 affect the AIP Funding at Lambert St. Louis International Airport?

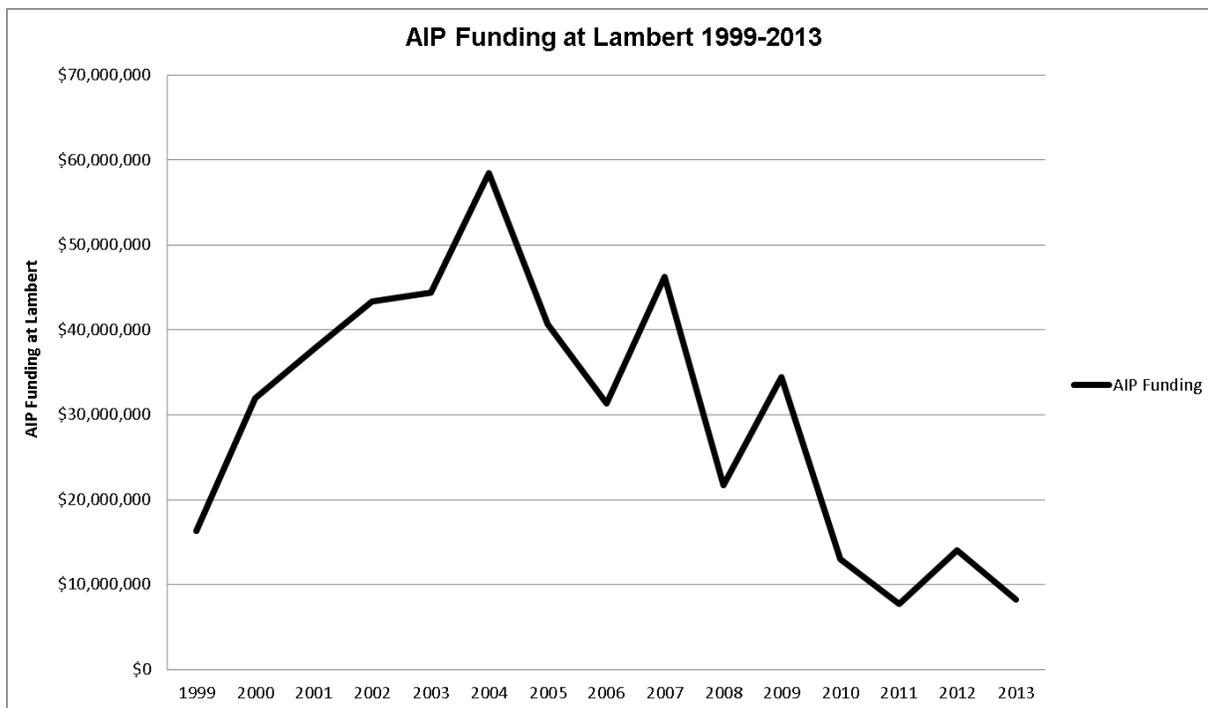


Figure 3-B. Lambert AIP Funding

Source: FAA

No, the economic recession of 2001 does not seem to have affected AIP funding for Lambert. A slight increase in funding seems to have existed.

Once again, it appears that the runway project was the governing force when it came to the amount of AIP funding awards at Lambert. The year 2003 was the peak year for funding the runway project, and this graph makes that very clear. Then there is a steady downward trend until 2006 as a result of the funding tapering off after completion of the runway project. Furthermore, the amount of AIP Funding does not provide sufficient information to conclude that fluctuations, or the lack thereof, in AIP Funding as a result of the Economic Recession from March to November 2001 affected the financial strength of Lambert.

**Did the Economic Recession from March to November 2001 affect the PFC  
Funding at Lambert St. Louis International Airport?**



Figure 4-B. Lambert PFC Funding

Source: FAA

Yes, based on this data, the economic recession of 2001 appears to have had an affect on the number of PFC's collected at Lambert, but, again, it is more likely that the drop in the number of operations can be attributed to September 11<sup>th</sup>, or a combination of the two events.

## Economic Recession from December 2007 to June 2009

### Did the Economic Recession from December 2007 to June 2009 affect the Operations at Lambert St. Louis International Airport?

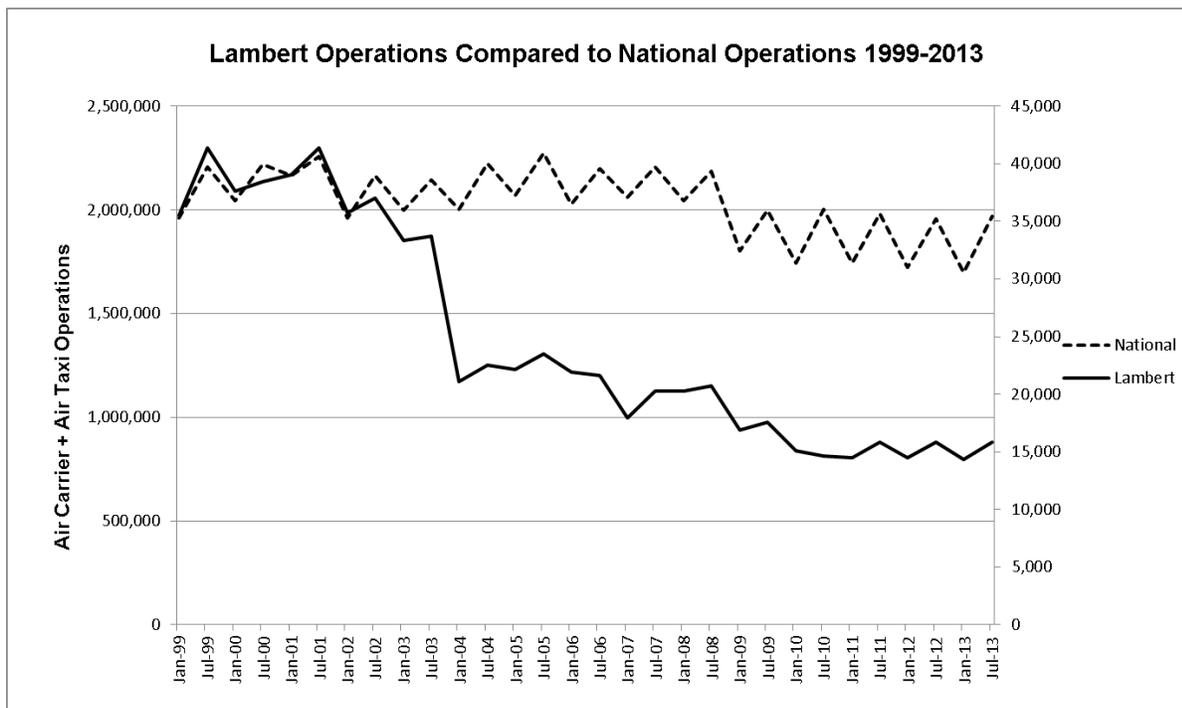


Figure 1-C. Lambert Operations

Source: FAA

Based on this data, the economic recession from December 2007 to June 2009 did not affect the number operations that took place at Lambert. This economic recession occurred around the same time that American Airlines was reducing operations and closing their hub at Lambert. However, no drop in Lambert operation numbers existed for the period of December 2007 to June 2009. Also, according to the research previously presented, the consistency of operations for the period of December 2007 to June 2009 was most likely attributed to AirTran Airways' new presence at Lambert, with operations that started in May of 2007. According to Lambert St. Louis International Airport, AirTran served more than 197,000 passengers

out of a total of 15.38 million passengers (boardings and arrivals) by the end of 2007 (Lambert St. Louis International Airport, 2008). Furthermore, the number of operations do not provide sufficient information to conclude that the fluctuations, or lack thereof, in operations as a result of the Economic Recession from December 2007 to June 2009 affected the financial strength of Lambert.

## Did the Economic Recession from December 2007 to June 2009 affect the Revenue at Lambert St. Louis International Airport?

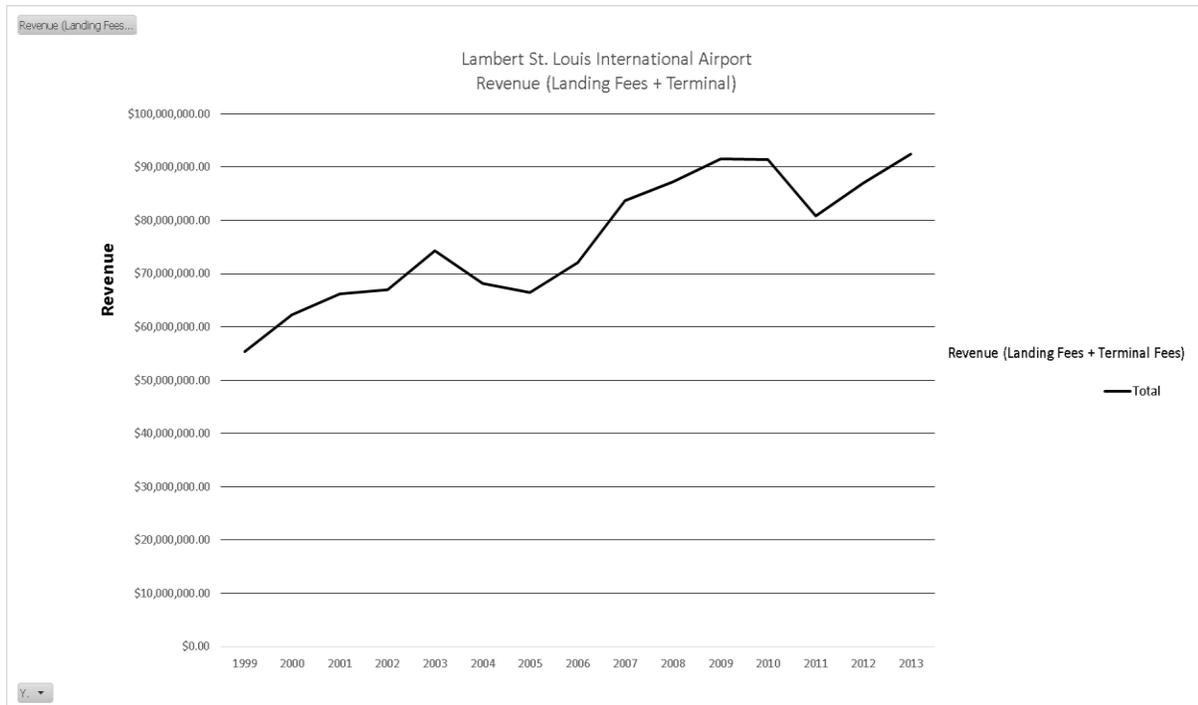


Figure 2-C. Lambert Revenue

Source: FAA

Yes, during the economic recession of 2007 to 2009, it appears that there was a decline in revenues from 2007 to 2008, followed by another steady revenue increase from 2008 to 2009, with no sustained affect on revenue at Lambert. After the 2005 expiration of the airline lease agreement, a debt stabilization fund was established, and was funded incrementally from 2007 – 2011 from unused revenue fund money (Standard & Poors, 2006). Also, most likely, Air Tran’s presence and expansion of operations impacted this. According to Lambert St. Louis International Airport’s Director at that time, Richard Hrabko, in a media release on February 10, 2009, “Our passengers have really embraced AirTran Airways in the last two years because of its service and fares.” (Lambert St. Louis International Airport). Furthermore, the amount

of revenue generated does not provide sufficient information to conclude that fluctuations in revenue as a result of the Economic Recession from December 2007 to June 2009 affected the financial strength of Lambert.

## Did the Economic Recession from December 2007 to June 2009 affect the AIP Funding at Lambert St. Louis International Airport?

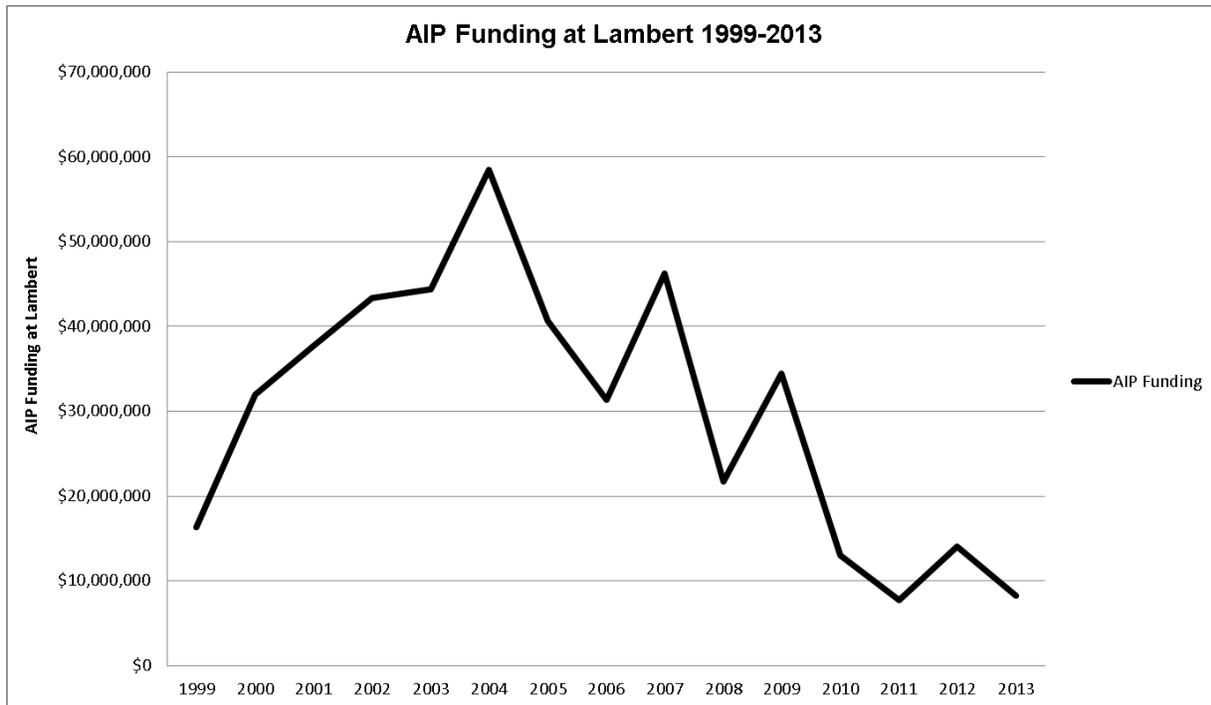


Figure 3-C. Lambert AIP Funding

Source: FAA

By looking at this data by itself, it appears that the economic recession from 2007 to 2009 affected the AIP Funding at Lambert. But the data is misleading, as the runway project was the governing force when it came to the amount of AIP funding awards at Lambert. The year 2003 was the peak year for funding the runway project, and this graph makes that very clear. Then there is a steady downward trend until 2006 as a result of the funding tapering off after completion of the runway project followed by an increase from 2008 to 2009. This data alone is inconclusive, and it appears that projects affected AIP Funding more than the economic recession. Furthermore, the amount of AIP Funding does not provide sufficient information to conclude that fluctuations, or the lack thereof, in AIP Funding as a result of the Economic Recession

from December 2007 to June 2009 affected the financial strength of Lambert.

**Did the Economic Recession from December 2007 to June 2009 affect the PFC Funding at Lambert St. Louis International Airport?**

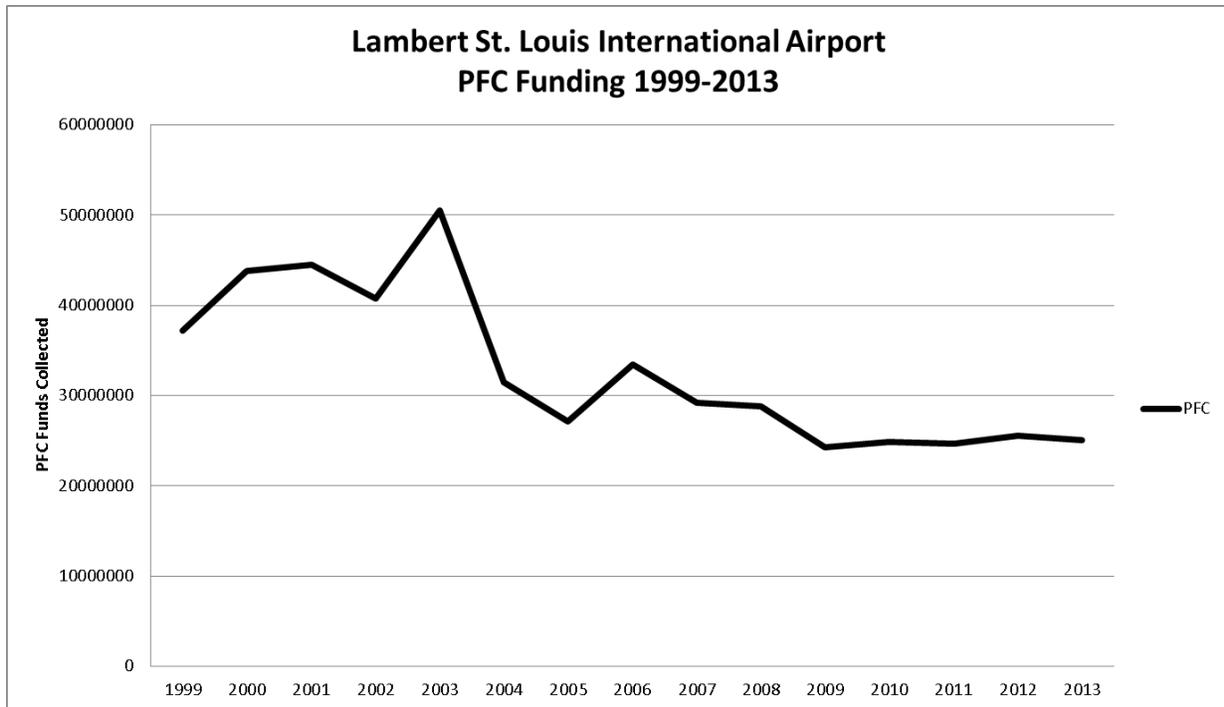


Figure 4-C. Lambert PFC Funding

Source: FAA

According to this data, yes, the economic recession from 2007 to 2009 did affect the number of PFC's collected at Lambert. There appears to be a very slight decline in collections from 2007 to 2008, almost leveling off, but from 2008 to 2009 there was a decline in PFC collection at Lambert followed by another leveling out all the way to 2013.

## 2003 Reduction in American Airlines' Hub Service

### Did the 2003 reduction in American Airlines' hub service affect the Operations at Lambert St. Louis International Airport?

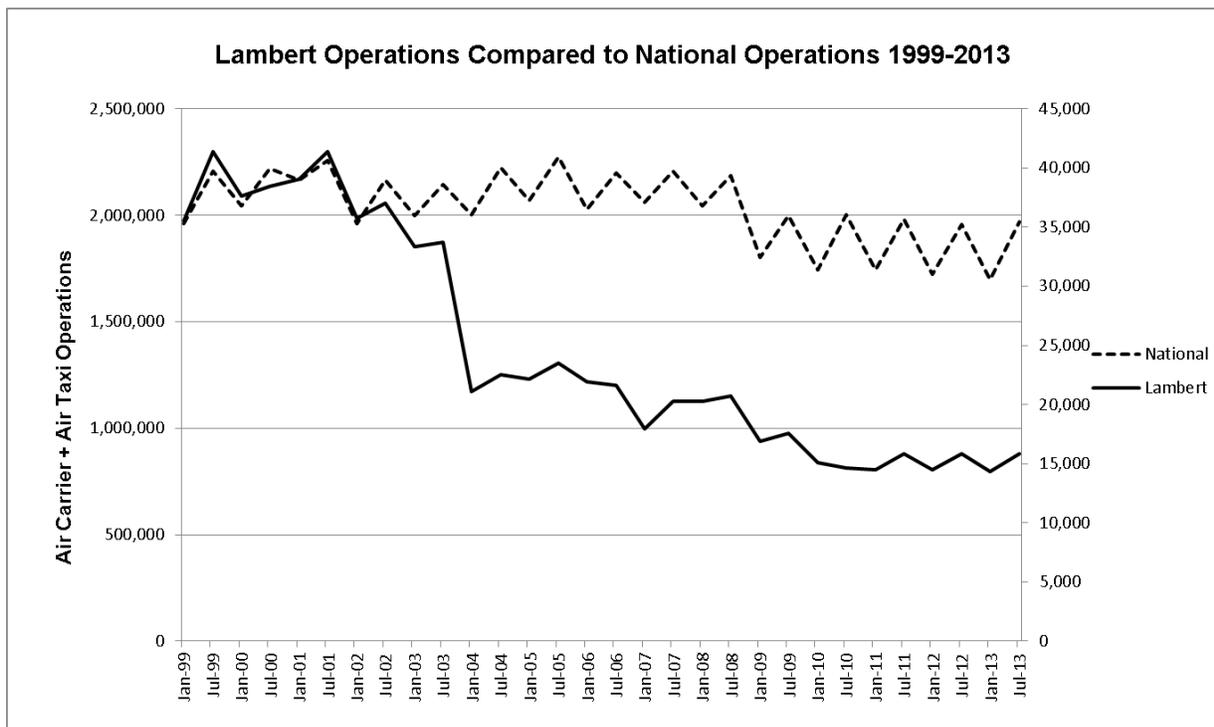


Figure 1-D. Lambert Operations

Source: FAA

The drop in Lambert operation numbers in 2003 indicates that American Airlines' reduction in service was responsible. This drop in operations is supported by the research previously presented, because, American Airlines announced the reduction of hub service in July of 2003, which became effective in November 2003. The data shows that Lambert was only involved as the national operation numbers did not seem to change nearly as drastically as Lambert's. Furthermore, the number of operations do not provide sufficient information to conclude that the fluctuations, or lack thereof, in operations as a result of the reduction in American Airlines' hub service affected the

financial strength of Lambert.

## Did the 2003 reduction in American Airlines' hub service affect the Revenue at Lambert St. Louis International Airport?

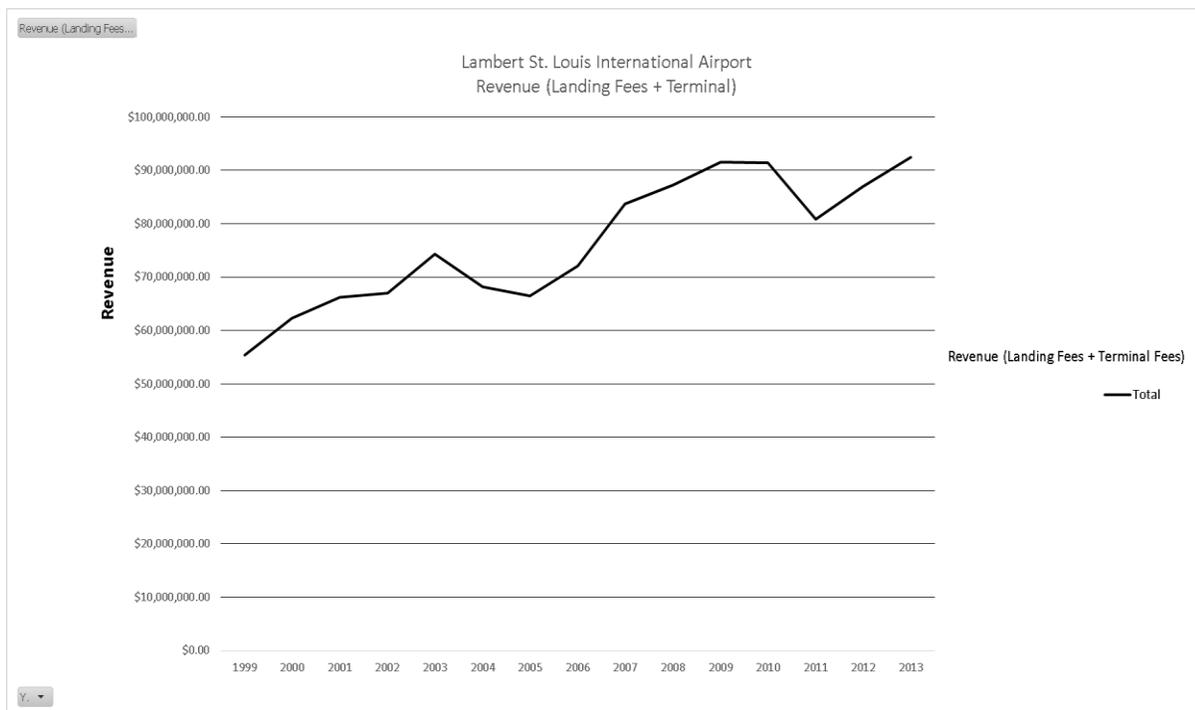


Figure 2-D. Lambert Revenue

Source: FAA

The 2003 reduction of American Airlines' service did not have a sustained affect the revenue at Lambert. The peak of AIP funding awards (see figure 3) hit the airport in 2003 as the revenues spiked, however, after that, the American Airlines' reduction in service commencing in 2003 shows that there was a significant drop in revenues for the STL with an approximate 18 percent drop in revenue by the year 2005. From 2005 on, based on the sharp increase in revenues depicted in this data, and based upon the research previously presented, the airport management made adjustments to Lambert's landing fee calculations. According to Standard and Poors, after the 2005 expiration of the airline lease agreement, "the airport has been able to raise landing fees to offset lower activity levels to better cover expenses" (Standard & Poors, 2006). Standard and

Poors went on to say that the airport was well managed, and “even though the airport experienced a steep decline in total enplanements following American Airlines’ dehubbing, it did not sustain a material drop in revenues” (Standard & Poors, 2006). In 2005, following the expiration of the airport use agreement with American Airlines, it appears that the airport management made some adjustments to their airline revenue calculations, and this could be the reason for the steady increase in revenue from 2005 to 2007. Furthermore, the amount of revenue generated does not provide sufficient information to conclude that fluctuations in revenue as a result of the 2003 reduction in American Airlines’ hub service affected the financial strength of Lambert.

**Did the 2003 reduction in American Airlines' hub service affect the AIP Funding at Lambert St. Louis International Airport?**

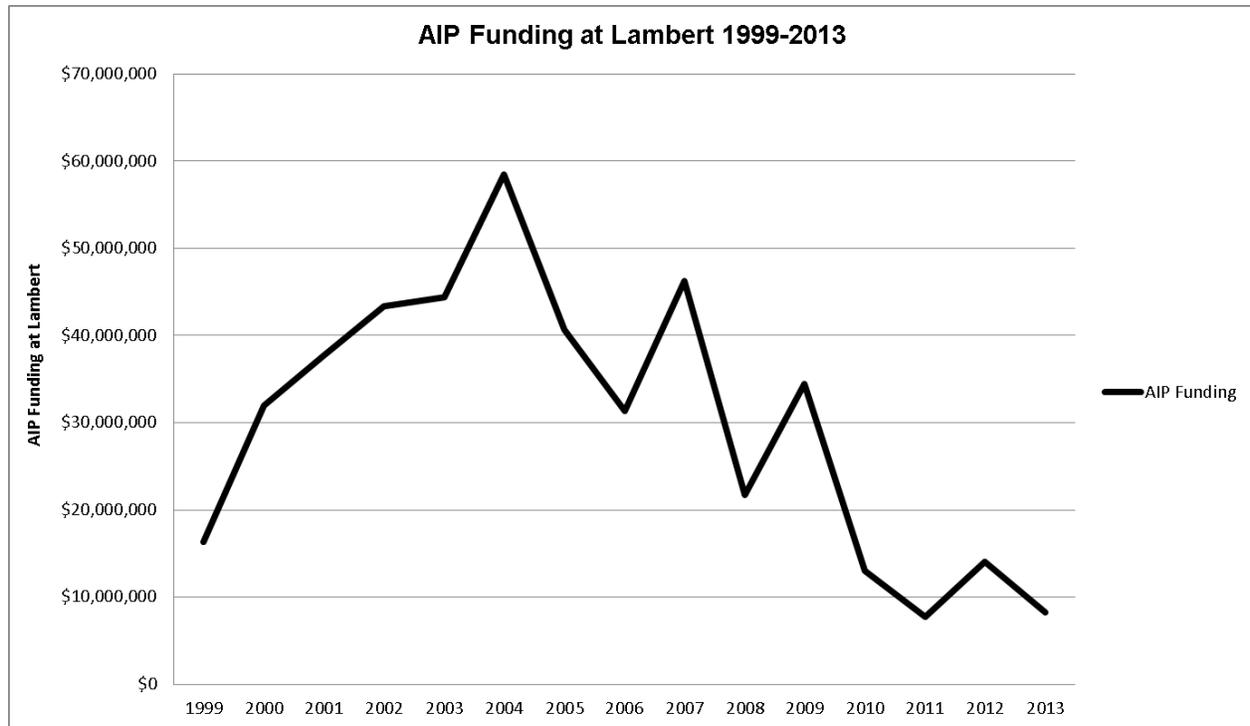


Figure 3-D. Lambert AIP Funding

Source: FAA

The American reduction of service in the year 2003 does not appear to affect the AIP funding in this graph, but, once again, this graph is not a true indication and is a false reading of AIP funding. The AIP funding for the new runway just happened to be at its peak between 2003 and 2004 and this skewed the data because of the lag in funding awards. This line is a steady downward trend after 2003. Furthermore, the amount of AIP Funding does not provide sufficient information to conclude that fluctuations, or the lack thereof, in AIP Funding as a result of the 2003 reduction in American Airlines' hub service affected the financial strength of Lambert.

**Did the 2003 reduction in American Airlines' hub service affect the PFC  
Funding at Lambert St. Louis International Airport?**

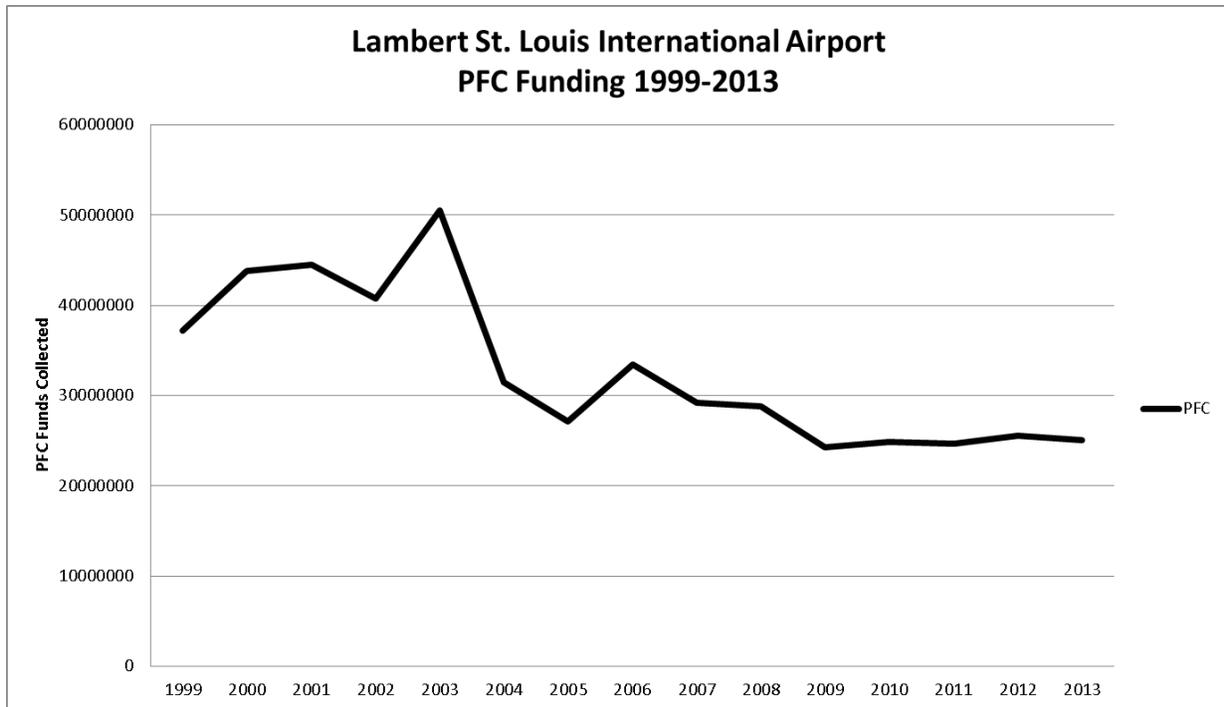


Figure 4-D. Lambert PFC Funding

Source: FAA

Yes, the amount of PFC's collected at Lambert decreased significantly as a result of American Airline's reduction in service in 2003. This was particularly true between the years of 2003 to 2005. The PFC's collected dropped from \$50,525,583 in 2003 down to \$27,164,387 in 2005 (author's percentage change calculations). That's a drop of nearly 50%. This data, even though a general overview, proves that the credit rating agencies had a right to be concerned.

## 2009 Reduction in American Airlines' Hub Service

### Did the 2009 reduction in American Airlines' hub service affect the Operations at Lambert St. Louis International Airport?

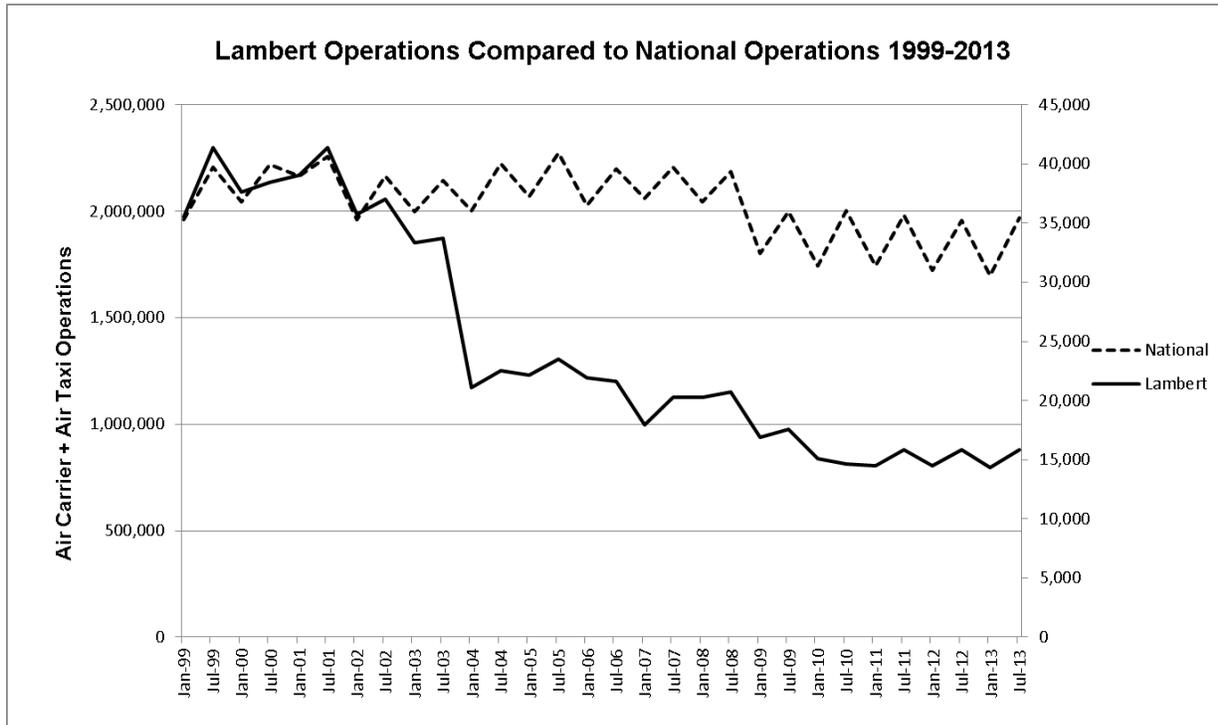


Figure 1-E. Lambert Operations

Source: FAA

Yes, the 2009 reductions in American Airlines' hub service did cause a drop in the operations at Lambert, and lasted until the beginning of 2011. In the 2004-2010 period, American Airlines had a 200 flight per day hub in operation for the vast majority of the period, however, after September 2009, American Airlines cut the number of flights down from 200 per day to about 40 per day. Furthermore, the number of operations do not provide sufficient information to conclude that the fluctuations, or lack thereof, in operations as a result of the reduction in American Airlines' hub service affected the financial strength of Lambert.

## Did the 2009 reduction in American Airlines' hub service affect the Revenue at Lambert St. Louis International Airport?

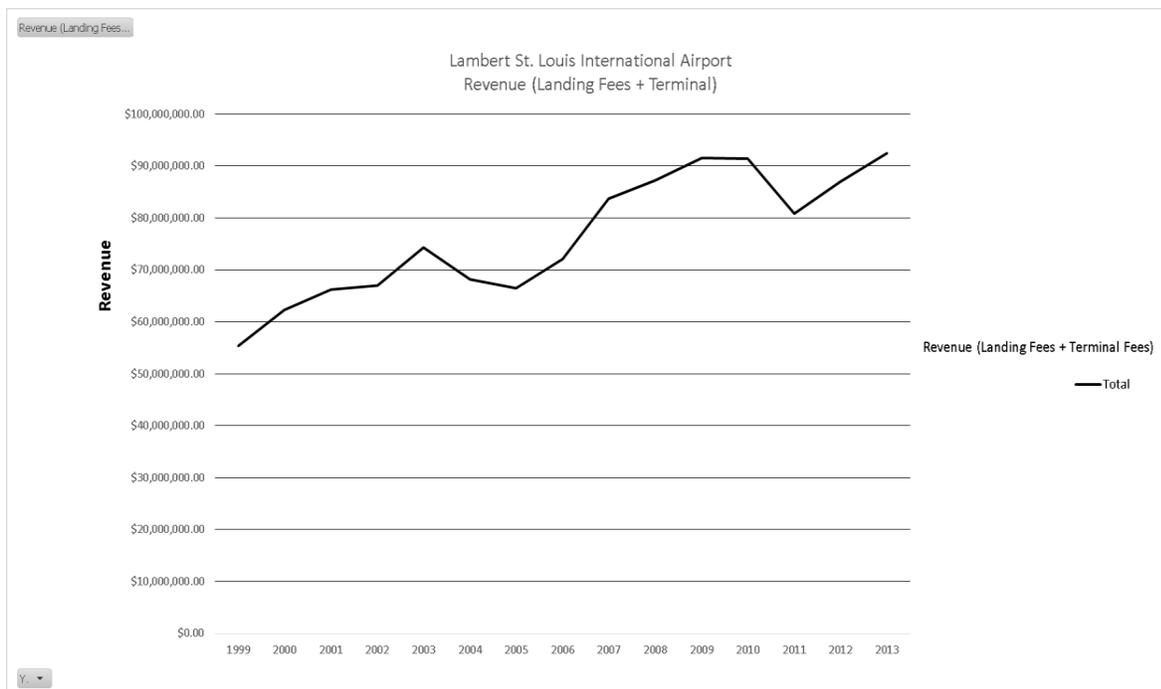


Figure 2-E. Lambert Revenue

Source: FAA

Based on this data, the 2009 reduction in American Airlines' hub service did not affect revenue at Lambert. There may be a possible explanation for this though. Subsequent to the 2003 reduction in American Airlines' hub service at Lambert, Standard and Poors said that "the airport has been able to raise landing fees to offset lower activity levels to better cover expenses" going on to say that the airport was well managed, and "even though the airport experienced a steep decline in passenger enplanements following American Airlines' dehubbing, it did not sustain a material drop in revenues" (Standard & Poors, 2006). And, according to Standard and Poors, after the 2005 expiration of the airline use agreement, a debt stabilization fund was established at Lambert, and was funded incrementally from 2007 to 2011 from unused

revenue fund money (Standard & Poors, 2006). The debt stabilization fund appears to be the reason why the 2009 reduction in American Airlines' hub service does not appear to have had an affect on revenue numbers at Lambert, at least until after 2010. Furthermore, the amount of revenue generated does not provide sufficient information to conclude that fluctuations in revenue as a result of the 2009 reduction in American Airlines' hub service affected the financial strength of Lambert.

**Did the 2009 reduction in American Airlines' hub service affect the AIP  
Funding at Lambert St. Louis International Airport?**

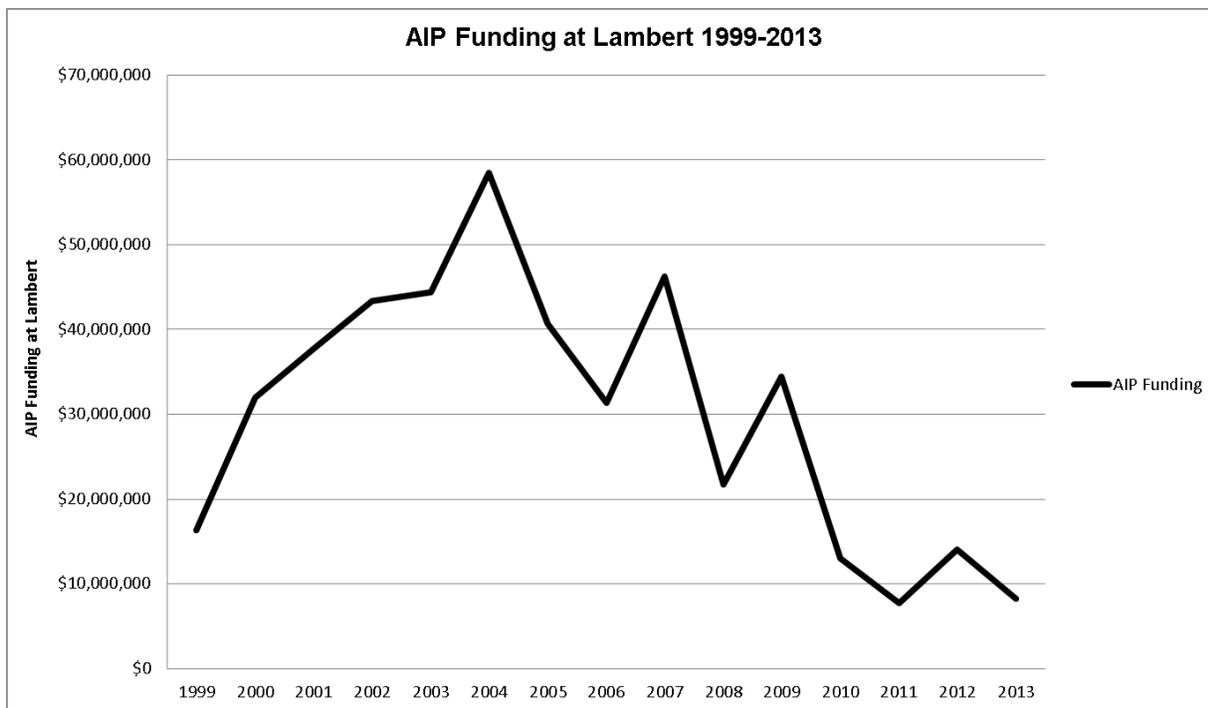


Figure 3-E. Lambert AIP Funding

Source: FAA

No, the 2009 reduction in American Airlines' hub service did not affect AIP funding. Again, projects are the governing force for AIP funding awards at Lambert, and this graph is not a true indication of AIP funding fluctuations. The AIP funding for the new runway just happened to be at its peak between 2003 and 2004 and this skewed the data because of the lag in funding awards. This line is a steady downward trend after 2003. Furthermore, the amount of AIP Funding does not provide sufficient information to conclude that fluctuations, or the lack thereof, in AIP Funding as a result of the 2009 reduction in American Airlines' hub service affected the financial strength of Lambert.

**Did the 2009 reduction in American Airlines' hub service affect the PFC  
Funding at Lambert St. Louis International Airport?**



Figure 4-E. Lambert PFC Funding

Source: FAA

Based on this data, no, the amount of PFC's collected at Lambert were not affected by the American Airlines' reduction in hub service in 2009. The numbers remain fairly consistent from 2009 forward, with a slight increase until 2012.

## CHAPTER 7 - CONCLUSION

Securing an airports financial strength means having a well-balanced airport financial management strategy in place in order to ensure an airport meets break-even need during good times and bad. Airport sources of revenue, especially revenue related to airlines must be managed with care at all times. Just as the events previously described in the case study of Lambert St. Louis International Airport, this was especially true for Lambert as the major external events including September 11<sup>th</sup>, the economic recession from March – November 2001, the economic recession from December 2007 – June 2009, and the 2003 and 2009 reductions in American Airlines' hub service at Lambert all caused fluctuations in the Operations, Revenue, AIP Funding, and PFC Funding from 1999-2013 at Lambert. All of it had the potential to interfere with Lambert's financial strength during the time they were trying to complete their new runway project.

As described in the findings, the analysis performed and the answers to the research questions failed prove that fluctuations in the variables actually affected the financial strength of Lambert. Overall, the data provided inconclusive results, with all variables except for PFC's rendered completely irrelevant. For example, September 11<sup>th</sup> may have caused fluctuations in the number of Operations that occurred at Lambert, however, those fluctuations in Operations did not necessarily result in an effect on the financial strength of Lambert. No proof exists. The research did, however, reveal that PFC's are very important! As described earlier in the literature review, the bond-rating agencies such as Fitch, Moody's Investor Service, and Standard and Poor's use PFC's in order to evaluate passenger traffic (enplanements) and airport

financial strength and credit. And the Government Accountability Office (GAO) backed this by saying “A good indicator of airports’ financial strength is the number and scale of underlying bond ratings provided by bond-rating agencies” (United States Government Accountability Office, 2007, p. 14). Further research is highly recommended on PFC’s and bond ratings and their respective effects on airport financial strength.

It can be assumed that the financial actions taken by Lambert such as refinancing their bonds, creating the debt stabilization fund, and making adjustments to their landing fees, for example, helped the airport to maintain its financial strength from 1999-2013. In fact, on June 23, 2011 Lambert’s credit rating was changed by Moody’s Investor Service from a Baa1 (negative outlook) to Baa1 (stable outlook), and Standard and Poor’s rated Lambert at A- (negative outlook) which was even higher than Moody’s (Lambert St. Louis International Airport, 2011). And two years later, things improved even more. As of May of 2013, Moody’s improved Lambert’s rating from Baa1 (stable outlook) to A3 (stable outlook), and Standard and Poor’s also improved their rating from A- (negative outlook) to A- (stable outlook) (Lambert St. Louis International Airport, 2013). According to Lambert’s newsroom, “This is the first time in more than a decade that both Moody’s and Standard and Poor’s ratings for the airport have both been in the single ‘A’ category” (Lambert St. Louis International Airport, 2013). Based upon these credit ratings, and this research, it is safe to conclude that Lambert St. Louis International Airport was able to survive the volatility of the major external events from 1999-2013 well, and has indeed maintained its financial strength.

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