Leasing as a Source of Financing by Major US Airlines – Hidden Debt and its Changes Over Time

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Abstract

This paper updates prior research on aircraft leasing and contrasts the findings of current data with prior results. Usage of leases by air carriers is a means to lessen the impact of financial obligations from fleet purchases. The study revisits two previous studies, one in 1969 and one in 1991, which analyzed the incidence of leases by major air carriers. The current study updates these past studies to consider air carriers current usage of leases. Additionally, since operating leases are not reflected in the balance sheets of airlines, operating lease information was capitalized using a present value of future operating lease payments. Then, financial debt burden ratios were computed to determine the impact from the capitalization of lease information.

The usage of operating leases increased significantly from the first study to the 1991 study, and this trend continues. The incidence of leasing, the classification of leases as operating, and the percentage of operating leases to total fleet have all increased for the majority of the airlines reviewed. When operating lease data were capitalized, debt ratios weakened, providing further evidence of deterioration in the financial health of air carriers.

Keywords: Leasing, Capital Leases, Operating Leases, Air carriers, Debt

Introduction

The airline industry has suffered recent financial distress. September 11th, SARS, and the general economy have reduced air travel. UAL is currently operating under Chapter 11 bankruptcy, US Airways recently emerged from a Chapter 11 bankruptcy filing, and financial indicators for most air carriers are in a decline. This paper looks at one indicator of financial health - debt to equity ratios - and considers the impact of leasing upon the reported financial burden of the airlines. This paper revisits two studies, one in the early 1970s (Gritta, 1974) and the other in the 1990s (Gritta, Lippman, and Chow, 1994) that investigated the use of aircraft leasing to lessen the impact that financial obligations have upon financial ratios. This study updates the prior studies' data to determine the continuing financial impact from characterizing aircraft purchases as leases.

Reporting of Leasing on the Financial Statements

Prior to 1976, the impact of most leases was not reflected in the financial statements of air carriers. Then, lease accounting followed Accounting Principles Board (APB) No. 5, Reporting of Leases in Financial Statements of Lessee. This pronouncement required capitalization of a lease only when the lease created a material equity interest in the property, e.g. when the noncancelable lease was, in substance, a purchase. Specific criteria outlined in APB No. 5 required lease capitalization when either the lease and renewal option term were greater than or equal to the useful economic life of the asset, or when a bargain purchase option was included in the lease. Firms were required to include footnote disclosure for lease commitments of material noncancelable leases (APB No. 5, 1964). In actuality, most leases were not recorded in the financial statements. Through structuring asset purchases as leases, firms could use leases as a means of off-balance sheet financing to avoid what many considered to be debt obligations. The non-recording of leases on the financial statements significantly affected the financial statements and ratios developed from them (Gritta, 1974; Nelson, 1963).

Currently, the reporting of leases on the financial statements is governed by Financial Accounting Standards Board (FASB) Statement of Financial Accounting Standards No. 13, Accounting for Leases. This statement, in effect since 1976, requires that firms classify leases as either operating or capital, dependent upon four criteria: the lease transfers ownership of the property to the lessee at the end of the lease term, the lease contains a bargain purchase option, the lease term is equal to 75% or more of the economic life of the leased asset, or the present value of the minimum lease payments at the beginning of the lease term equals or exceeds 90% of the fair value of the lease property (SFAS No. 13, 1976). If one of these conditions for capitalization is met, then the lease is characterized as a capital lease, and the leased asset and corresponding obligation are recorded on the balance sheet. If, instead, the lease is identified as an operating lease, then only the yearly lease payment is reflected as an expense on the income statement.

While the APB primarily considered material equity as the underlying motivation for capitalization of leases, the FASB considered whether the lease, in substance, transferred ownership risks and benefits. With the implementation of No. 13, it was hoped that firms' usage of off-balance sheet financing would diminish. However, since the criteria for capitalization include specified targets, lease terms can be structured to avoid capitalization, and some managers continued to classify as operating leases those leases which are, in substance, capital leases (Donegan and Sunder, 1989). When classified as operating leases, both assets and debt obligations are potentially understated.

Aircraft Leasing in the 1960s

The original lease study reviewed the large air carriers, now referred to as majors, and determined the effect from capitalizing lease obligations. Leases were identified as either operating or financial. Classification of leases as financial followed the classic definition as articulated by Vancil and Anthony (1963) who categorized leases as financial in nature if the lease term was approximately equal to the depreciable life of the airframe, if there were options to purchase and/or renew at the end of the initial term, if the aggregate rentals under the lease's initial term exceeded the then new purchase price of the aircraft, and if the leases were net leases.

The study found little ambiguity in the classification of aircraft leases, as the majority of the lease agreements were financial in nature. Only a few of the leases were categorized as operating (short term), and most of these leases met none of the financial lease criteria. But, regardless of whether a lease was identified as financial or operating, in practice most leased assets and their corresponding debt were not reflected on the balance sheet.

Since financial leases resemble, in substance, long-term debt finance, the original study determined the impact from constructive capitalization of financing lease data on total capital and debt ratios. It was assumed that cancelable operating leases did not have a significant impact upon the financial statements, so no capitalization of their data was deemed necessary. Data were obtained from 1969 filings with the Civil Aeronautics Board (CAB), which provided actual lease obligations. The study found that only 19% of the total fleet was leased, and of these only 13% were operating. The study reported that most leases were not reflected in the financial statements, and capitalization of lease information had a significant negative impact upon debt ratios, adding to the existing debt burdens of the companies.

Aircraft Leasing in the 1990s

The follow-up study used the carriers identified in the earlier study, and updated the data to consider lease usage in 1991. Subsequent to the original study, several carriers had ceased operations (Eastern and Braniff) or merged with other airlines (National, Western, and Northeast). The size of the sample for the follow-up study was increased by inclusion of new major carriers including Alaska Airlines, Southwest, US Air, and America West. Data were obtained from the financial statements as reported to the

Securities and Exchange Commission in 1991, since filings with lease information were no longer required by the CAB by that time.

The study found that the percentage of the fleet leased increased from 19% in the first study, to 54%, with 82% identified as operating, up from 13%. Clearly, a significant change in fleet financing had occurred, from straight debt to more leasing as a means of financing ownership, and the impact from the recording of these leases as operating leases resulted in a large understatement of financial debt burden ratios.

Aircraft Leasing in 2002

In this current study, we again considered the incidence and nature of leasing by the major carriers identified in past studies. The original study reviewed lease information for 11 airlines, and the updated study identified nine carriers with available lease information. Data for these airlines were similarly reviewed for the fiscal year ending 2002. Of the nine previously identified in 1991, two were operating under Chapter Eleven bankruptcy protection (UAL and US Airways) for the year 2002. TWA is privately held, and separate financial data are unavailable. Northwest, for which data previously were unavailable for the second study although available in the original study, has available information for 2002.

Table I reports the number and percentage of leased aircraft by carrier in 2002. Information from the prior study is included for comparison. Percentage of planes leased varied from a low of 25.9% reported by Southwest Airlines, to a high of 93.0% for America West. This is contrasted with the rates found in the second study, which ranged from a low of 44.2% to only 81.2%. Alaska and American Airlines had a decrease in the percentage of planes leased, Delta was essentially unchanged, while the remainder had increases. Southwest Airlines, with the lowest percentage of planes leased in 2002, did not have data available for the 1991 study.

More critical than percentage of fleet leased is the percentage of leases identified as operating leases, which avoid balance sheet classification. Table I classifies the number of leases as operating or capitalized leases, and Table II identifies the percentage of leases categorized as operating or capital, with information from the prior study included for comparison. Consistent with the prior updated study, most leases are structured as operating leases, a significant difference from the original study when operating leases were only 13% of all leases. The percentage of leases classified as operating ranged from 80.1% to 99.2%; in the updated study the percentage ranged from 78.8% to 100%, so no material increase was noted for air carriers as a whole. Operating lease percentage increased greatest for US Airways and Continental.

Because the percentage of leasing changed, as had the mix of operating/capital classifications, we looked at the percentage of planes identified as operating to total planes in the fleet. This might better determine the company's usage of leasing as off-balance sheet financing. The results are listed in Table II. Operating leases as a percentage of the total fleet ranged from 24.0% to a high of 93.0%. In contrast, the prior

study ranged from 37.8% to 81.2%. While the current study's range included a lower percentage, this carrier, Southwest, did not have available information for the prior study. Southwest is currently the most financially healthy of the airlines, having shown a profit the last few years when other airlines have incurred significant losses. Only American showed a decline in the usage of operating leases for its fleet.

Operating leases are not reflected in the balance sheets of the airlines, although the yearly future obligations of the leases are disclosed in the footnotes to the financial statements. We estimated the impact of these obligations on the balance sheet, by determining the present value of the noncancelable operating lease payments in a manner consistent with the prior 1991 study.[1] The operating lease disclosures reported in the financial footnotes include the yearly obligation for the next five years, and then a total of the remaining obligations. We assumed that the last reported yearly amount would continue into the future, allowing us to estimate the remaining life of the lease payments. These were then discounted to the present year assuming an appropriate interest rate.[2] The present values of the lease obligations were then included with the recorded long-term debt to compute the adjusted long-term debt obligations for each airline. These computed values are disclosed in Table III along with the long-term liabilities and equity for each air carrier.

Table IV presents the ratios of the airlines based, first, upon the reported financial statements and then assuming lease capitalization. Although the debt burden for the airlines is already quite high without lease capitalization, capitalization of operating leases increased the reported levels of the debt burden, particularly for the Debt/Equity ratio. In essence, the frailty of the airlines industry becomes even more evident with the capitalization of the operating airlines.

Conclusion

The purpose of this paper was to update prior research on aircraft leasing and contrast the findings of current data with prior results. In 1969, weaker carriers tended to lease a higher percentage of their aircraft, and these leases tended to be classified as finance leases. These leases were not reflected on the balance sheets of the air carriers. By 1991, the incidence of leasing had significantly increased for all carriers and many of these leases were classified as operating leases. In 2002, the incidence of leasing, the classification of leases as operating, and operating leases as a percentage of total fleet usage have all increased for the majority of the airlines. Capitalization of operating lease obligation weakens the debt ratios, evidence of further deterioration in the financial health of the air carriers.

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[1] For some airlines the lease payments disclosed in the financial statements were detailed separately for aircraft leases, and ground and other equipment leases; other airlines included both of these together as one number. Since the majority of air carriers do not separate out the lease payments by type of asset, we capitalized all operating lease payments.

[2] The 1969 and 1991 study used a 10% discount rate, and for consistency we used 10% for the current study. Today, interest rates are considerably less than in the early 90s. A lower rate would increase the amount of the obligation. This study's reported impact upon the financial statements from capitalizing operating leases is understated.

The prior study argued for disclosure of specific air carrier lease data. Certainly, the need still exists today. Short of specific data, however, capitalization of operating lease data can be determined using various assumptions about maturity and implied interest in the lease. Capitalization is necessary to produce a more accurate picture of the obligations of the air carriers. With the current economic climate, capitalization of leases is imperative to provide a more representative indication of the air carriers' financial burden.

Table I
Leased Aircraft

Carrier	Total Fleet	Operating Leases	Capital Leases	Planes Leased	% Leased 2002	% Leased 1990 (Per prior study)
Alaska	102	45	3	48	47.1%	79.0%
American	819	281	70	421	42.9%	61.6%
America West	143	132	1	133	93.0%	81.2%
Continental	636	453	9	462	72.6%	68.6%
Delta	831	313	45	358	43.1%	44.2%
Northwest	575	233	18	251	43.7%	n/a
Southwest	375	90	7	97	25.9%	n/a
UAL	567	241	59	300	63.3%	45.5%
US Airways	413	252	0	252	52.3%	47.3%

Table II
Lease Classification Percentages

Carrier	2002 % Leases Operating	1990 % Leases Operating	2002 % Fleet Operating	1990 % Fleet Operating
Alaska	93.8%	n/a	44.1%	n/a
American	80.1%	78.8%	34.3%	48.5%
America West	99.2%	100.0%	93.0%	81.2%
Continental	98.1%	84.3%	71.2%	57.8%
Delta	87.4%	90.0%	35.7%	39.8%
Northwest	92.8%	n/a	40.5%	n/a
Southwest	92.8%	n/a	24.0%	n/a
UAL	80.3%	85.1%	42.5%	38.7%
US Airways	95.6%	80.0%	58.4%	37.8%

Table III
Total Capital, Including Aircraft Leases
(in thousands)

Carrier	Long Term Liabilities	Capitalized Leases	Equity
Alaska	1,431,200	664,758	569,700
American	19,746,000	8,491,917	947,000
America West	859,941	2,012,205	68,178
Continental	7,047,000	9,645,374	767,000
Delta	17,372,000	7,473,171	893,000
Northwest	11,729,000	5,182,180	(2,262,000)
Southwest	3,098,305	1,483,456	4,421,617
UAL	22,146,000	12,093,198	(2,483,000)
US Airways	9,215,000	5,058,638	(4,921,000)

Table IV
Capitalization and Ratio Analysis

Carrier	Long Term Debt/Total Capital		Total Debt/Net Worth	
	Without Leases	With Leases	Without Leases	With Leases
Alaska	71.5%	79.5%	3.83	5.19
American	95.4%	96.8%	28.20	37.16
America West	92.7%	97.7%	20.11	49.62
Continental	89.9%	95.6%	13.00	25.58
Delta	95.0%	96.5%	26.68	35.05
Northwest	NMF	NMF	-6.87	-9.17
Southwest	41.2%	50.9%	1.02	1.36
UAL	NMF	NMF	-10.53	-15.4
US Airways	NMF	NMF	-2.33	-3.36

NMF – not meaningful figure

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