

**MIND THE GAAP: DETERMINANTS OF U.S. AIRLINE OPERATING CASH FLOWS**

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**ABSTRACT**

*The airline industry in the United States relies heavily on strong liquidity and solvency positions to fund an array of short and long-term variable and fixed costs ranging from cabin crew salaries to aircraft lease payments and debt service. Against the backdrop of these ongoing needs for cash is the ever-present risk of extraneous and expeditious demand shocks such as pandemics, terrorist incidents, and surging fuel costs. It is thus an imperative that airlines monitor their operating cash flows closely, especially when considering that many financial performance metrics are accrual-based and do not always paint a completely accurate picture of a firm's true cash position. This study hypothesized and investigated significant determinants of operating cash flows for publicly-traded US airlines and found a statistically significant relationship between airlines operating cash flows and their total assets, income from operations, and market capitalization; which account for a large proportion of the variance in operating cash flows. This study is imperative to helping airlines understand the major determinants of operating cash flows as they look to recover from the pandemic and increase cash flow as well as maintain robust liquidity and solvency positions to fund an array of variable and fixed costs.*

**Keywords:** Airlines, Operating Cash Flows, Accruals, Pandemic, Liquidity, Solvency

**1. INTRODUCTION**

The airline industry both in the U.S. and around the world has long been regarded as one of excitement and enchantment (Ovenden & Roberts, 2019). Air travel, and the realization of visiting all four corners of the globe represents a manifestation of man's technological achievement (Gössling & Peeters, 2007). Flight safety improvements over the last few decades have made air travel one of the safest modes of transportation available (Khan et al., 2018). The propagation of air travel globally due to surging demand has led to the creation and expansion of a multiplicity of flag and low-cost carriers in various regions of the world (Fageda et al., 2011). Such expansion and proliferation has led to the creation of complex airline business models with wide intra-model variance as the airline industry has evolved over time and created various alliances and low-cost subsidiaries (Lohmann & Koo, 2013).

More recent years have represented a turbulent time for the airline industry. Airlines across the globe have dealt with the ravaging and pervasive effects of the Covid-19 pandemic which obliterated demand for air travel and caused airlines to drastically scale back their operations and furlough large numbers of staff (Adrienne et al., 2020). Exacerbating this problem is the struggle airlines are now facing to hire back qualified staff (Zahraee et al., 2022). A further noteworthy supply side issue represents the unpredictable and widely-varying cost of jet fuel which is susceptible to sudden spikes (Manning, 2020) Furthermore, issues and disruptions pertaining to collective bargaining agreements and unionization in Europe are ongoing (Golden & Erne, 2022).

Such issues and risks are not purely constrained to the nonfinancial. The pandemic caused airlines to accumulate huge amounts of debt as they struggled to maintain liquidity and solvency to fund an array of variable and fixed costs such as debt service, lease payments on aircraft, and staff salaries that were unable to be furloughed (Bouwer et al., 2021). Furthermore, passage of leasing standards in both the U.S. and Europe have required airlines to capitalize their leased assets and corresponding liabilities, often representing a significant portion of their fleets, as "right-of-use" assets (Lyons, 2022) in order to provide increased transparency and depict a more accurate financial position than in prior years (Hunsader et al., 2022). Such standards have served to drastically and detrimentally alter airline balance sheets, with subsequent decreases in liquidity and solvency post inception (Ananthanarayanan et al., 2022).