

UNIVERSITI TEKNOLOGI MARA

**THE EFFECT OF OIL PRICE RISK
EXPOSURE AND HEDGING
TO ASIA-PACIFIC AIRLINE FIRMS
STOCK RETURNS: EVIDENCE
FROM STATIC AND QUANTILE
PANEL REGRESSIONS**

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ABSTRACT

Airline equity has been a popular part of investors and fund managers' investment portfolio due to significant important of the industry to trade and financial markets. In this context, oil price risk has been acknowledged as a crucial risk factor to an airline equity portfolio. In this regard, the industry needs alternative hedging mechanism as a risk management in portfolio equity investment to guard them against constant volatility in the global oil markets. The research investigates this issue in the context of hedging-stock returns research landscape with two components. First, this research examines the effect of oil price risk exposure to the Asia-Pacific airlines firm stock returns. Second, this research investigates the role of different futures hedging instruments, namely own commodity hedging (oil futures) and cross-commodity hedging (gold futures, and VIX futures) and the effect of net hedging benefits by employing them on oil price risk exposure to Asia-Pacific airline firms' stock returns using the hedging-stock pricing model. This research examines 22 listed Asia-Pacific airline firms' stock returns behaviour with monthly frequency data from 2010 to 2019. A complementary analysis approach using the fixed effect panel and quantile regressions are used to analyse the research model. The findings confirm the negative effects of oil price risk and the benefits of hedging oil price risk on airline stock returns, and the superiority of gold futures over oil futures and VIX futures as effective hedging instruments. In investment practice, the result suggests that pairing of gold futures-airline stock produce an effective hedge in all market conditions (i.e., higher, median, lower oil price performances). The present research contributes to the extension of body of knowledge related to oil price-stock returns-hedging research and draw new insights on ways to manage the effect of oil price risk on airline stock returns through cross-commodities hedging instruments and analysis in quantiles perspectives to account for asymmetries that would be valuable to inform theory, practice, as well as policy.

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CHAPTER 1

INTRODUCTION

1.1 Motivation

The airline industry is a sub-sector of the airline industry which provides services for cargo, domestic and international passenger travel and is vital to global trade, economic, and social developments. The prospects of the industry remain optimistic. In global prospects, the airline industry is creating \$3.5 trillion in economic impacts, providing 87.7 million employments, contributing 4.1% to GDP, and is projected to grow 3% annually (ATAG, 2020). The airline industry's survival is very challenging in today's chaotic environmental conditions due to multifaceted risks (economic fundamental, natural, social, and geopolitical risks) that disrupt business operations and profitability (IATA, 2022; KPMG, 2022; Oliver Wyman, 2022). These issues signify concerns to investors. Focusing on economic risk, rising costs due to uncertainties in oil prices and interest rates have been acknowledged by industry experts as a significant challenge for airline firms (KPMG, 2022). Globally, oil price fluctuations have been a constant challenge to the survival of firms in oil-dependent industries, including the airline industry, which represents, on average, 30-50% of the total operational cost (Merkert and Swidan, 2019). Practically, oil price impacts airline firms' operation and profitability, thus an important fundamental factor for stock returns.

Asia-Pacific is an important market for airlines' stock investments since this region is the largest market segment in the global airline industry, with 37% of global passengers' traffic. This market segment provides 46.37 million jobs and contributes \$944 billion to GDP (ATAG, 2020). Hence, scoping this region is strategically important. Recapping the issue of concern, fuel is an essential operational cost item that accounts for 30-50% of the airline firm's total cost (IATA, 2022). Since oil prices are a permanent cost component in the airline business, continuous uncertainties in the international oil markets cause volatility in earnings and stock returns. In historical observation (2010:01 – 2022:06), as illustrated in Figure 1, crude oil spot price dropped to a 20-year low below \$20 a barrel in April 2020 due to decreased demand during the COVID-19 pandemic. However, crude oil prices increased steadily in February 2022