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Decomposing the Bid–Ask Spread of ETFs on the AMEX Before and After Decimalization

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This paper uses equal-weighted and volume- weighted effective spreads as proxies for bid–ask spread to observe the impact of adopting decimalization by AMEX on bid–ask spreads and spread components of the two exchange-traded funds (ETFs): DIA and QQQ. While the literature holds that the bid–ask spreads of ETFs are smaller than those of individual stocks, the work presented here finds that the bid–ask spreads of ETFs decline significantly after decimalization. The extent of this decline is greater for the QQQ with higher trading volume, implying that higher trading volume significantly reduces the spread. After decimalization, the order processing costs of both ETFs and all the inventory holding costs evaluated by option pricing theory also decline. Under ETFs have contained rich information, the values of adverse selection cost in ETF spread estimated by option approach are very close to zero, reflecting that the informed trading in ETF market is less, and have not showed obvious change around decimalization. The impact of inventory holding costs on the ETF spread weakens apparently in both samples after decimal quoting, the same as that of order processing costs for the QQQ sample with high trading volume.

Keywords: Bid–Ask Spreads, Order Processing Costs, Inventory Holding Costs, Adverse Selection Costs, Exchange-Traded Funds (ETFs)

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美國證券交易所採取小數報價對 ETFs 之買賣價差及其組成份之影響

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本文使用等權重平均價差爲買賣價差之代理變數，以觀察美國證券交易所 (American Stock Exchange, AMEX) 實施小數報價制度對 DIA 與 QQQ 兩種指數股票型基金 (Exchange Traded Funds, ETFs) 之買賣價差與其價差組成份的影響。儘管文獻已說明具有風險分散的 ETFs 價差是比個股小，然而我們發現 ETFs 價差在小數報價後仍有顯著降低；其中以交易量較高的 QQQ 價差下降幅度較高，呈現高交易量與低價差的連結關係。小數報價後，委託單處理成本與透過選擇權方法評估的存貨持有成本皆爲下跌的。在 ETFs 已擁有豐富的訊息內涵下，透過選擇權方法估計的逆選擇成本之值接近零，反應出 ETFs 市場的訊息交易是少的，且逆選擇成本在小數報價前後是無顯著不同的。小數報價後，所有樣本的存貨持有成本對 ETF 價差的影響是顯著減少的，而委託單處理成本在具有高交易量的 QQQ 樣本中表現出對價差的影響亦是減少的。

關鍵字：買賣價差、委託單處理成本、存貨持有成本、逆選擇成本、指數股票型基金 (ETFs)。

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