

IMPACT OF UKRAINE WAR ON THE CASH FLOW TRANSACTION RISKS OF MULTINATIONAL CORPORATIONS OPERATING IN DEVELOPED MARKETS

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ABSTRACT

Because multinational corporations (MNCs) conduct their transactions in multiple currencies, they are, necessarily, exposed to exchange rate risk. To effectively manage this risk, they may utilize a range of techniques, including options, forward or futures markets, and money market hedges. It is well-known there are different dimensions of exchange rate risk, including economic, translation, and transaction risks. This study focuses exclusively on transaction exposure, which is the risk incurred when net foreign cash inflows (receivables) or outflows (payables) are converted to, or from, U.S. dollars (respectively). Specifically, this study examines the ongoing cash flow exposure resulting from transactions conducted in the currencies of seven specific developed countries. It is important to recognize that managing transaction risk is a short-term (i.e., daily) task as these transactions occur every day. By contrast, the other two dimensions of exchange rate risk are generally evaluated on an annual (or quarterly) basis. Accordingly, the management of economic exposure must consider all factors that impact cash flows far into the future. Concerning translation exposure, when an MNC reports its overall financial condition, it must consolidate each foreign subsidiary's financial statements with the parent's financial statements to create a single consolidated balance sheet and a single consolidated income statement for the entire MNC. Although translation exposure represents a significant concern for an MNC, it does not affect cash flows. While all three dimensions of exchange risk are important, the main focus of this study is solely on day-to-day transaction exposure. To assess the impact of transaction risk, we employed the "modified" Value-at-Risk (MVaR) model to estimate and compare the maximum likely one-period (i.e., one-day) loss for the six months immediately preceding the start of the Ukraine war with the maximum likely one-period loss for the six months following the start of this conflict. These predicted losses are then compared with the actual, ex-post results based on the realized currency movements. The motivation for this study is to determine the extent of the transaction exposure MNCs face when conducting business across major currencies. In addition, we hope to provide practical, data-based information useful to MNCs in deciding whether or not to employ hedges to mitigate transaction risk. This study is important because it demonstrates how unanticipated disruptions to trade and commerce, such as the Ukraine war, have important implications for the successful management of businesses operating across countries and currencies.

Keywords: *transaction risk, modified value-at-risk, developed economies, foreign exchange risk*

1. INTRODUCTION

Firms that engage in international business ventures across the globe in a variety of ways are multinational corporations. While their engagement in the international arena exposes them to exchange rate risk, including transaction exposure, whether or not they should hedge this risk depends on the specific circumstances. Depending on the expected costs and benefits of hedging, MNCs may be better off hedging their foreign currency positions. There exist several tools that can be used to mitigate and/or eliminate the ongoing exposure of cash flow transaction risk. However, there may also be circumstances where maintaining an open position in a particular currency or portfolio of currencies (i.e., not hedging) is justified. Since most MNCs operate across multiple currencies, transaction exposure is generally associated with their total foreign currency portfolio. This portfolio risk is, in part, a function of the net