TESTING FOR THE DAY-OF-THE-WEEK EFFECT IN THE EURO TO U.S. DOLLAR EXCHANGE RATES

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ABSTRACT

Foreign exchange rates are critical for the smooth functioning of the global economy, international trade, and investment activities. The day-of-week effect on foreign exchange rates can be important for economists, portfolio managers, and investors. This paper examines the day-of-week effect based on the Euro and U.S. dollar pair using ARMA(1, 1), ARCH(1), and GARCH(1, 1) models.

Keywords: *Day-of-the-Week Effect, ARMA, ARCH, GARCH*

1. INTRODUCTION

There is a large body of literature on the day-of-the-week (DOW) effect in the stock markets. To list just a few, the DOW effect in United States' stock market has been studied by Cross (1973), French (1980), Gibbons and Hess (1981), Keim and Stambaugh (1984), Rogalski (1984), Lakonishok and Schmidt (1988), and Berument and Kiymaz (2001); U. K. market, Jaffe and Westerfield (1985), and Gregoriou and Tsitianis (2002); stock markets in Australia, Canada, and Japan, Jaffe and Westerfield (1985); Manila Mining Index, McGowan, Yener, and Johnson (1989); Shanghai and Shenzhen Securities Exchanges, Mookerjee and Yu (1999); Russian stock market, McGowan and Ibrihim; Kuwait stock exchange, Al-Loughani and Chappell (2001); Hungarian and Polish stock exchanges, Poshakwale and Murinde (2001); Athens Stock Exchange, Mille, Markellos, and Harizanis (2000); Medellin Stock Exchange, Curci and Brown (2001).

The studies listed above have found that the DOW effects persist in the stock markets in both developed countries such as the U.S., Japan, U.K., and Australia and in emerging markets in countries such as Hungary, Poland, Greece, and China.

Numerous studies have also explored the DOW effect in the foreign exchange markets. French and Roll (1986), Aggarwal and Rivoli (1989), Ariel (1990), Fatemi, Corhay, and Tourani-Rad (1995), Oral (2012), and Kumar (2016) reported evidence of the DOW effect in the foreign exchange markets. However, Rogalski (1984), Levich and Thomas (1993), Gencay (1998), and Kumar and Lee (2006) have found little or no evidence of such effects.

Han, Kling, and Sell (1999) found strong day-of-the-week effects for both the Deutsche mark and Japanese yen, mild effects for the British pound, and no effects for the Canadian dollar. Yamori and Kurihara (2004) found that the DOW effect existed in the 1980s for some, not all, currencies. They also found that the DOW effect disappeared for almost all currencies in the 1990s. The findings of these studies mentioned above indicate that the DOW effects have varied over time and across different currency pairs.

The DOW effect on foreign exchange rates can be important for economists, portfolio managers, and investors. This paper examines the DOW-effect based on the Euro and U.S. dollar pair for few investigations of the DOW effect have been done based on this pair.