Is small beautiful? Size effects of volatility spillovers for firm performance and exchange rates in tourism

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This paper examines the size effects of volatility spillovers for firm performance and exchange rates with asymmetry in the Taiwan tourism industry. The analysis is based on two conditional multivariate models, BEKK–AGARCH and VARMA–AGARCH, in the volatility specification. Daily data from 1 July 2008 to 29 June 2012 for 999 firms are used, which covers the Global Financial Crisis. The empirical findings indicate that there are size effects on volatility spillovers from the exchange rate to firm performance. Specifically, the risk for firm size has different effects from the three leading tourism sources to Taiwan, namely USA, Japan, and China. Furthermore, all the return series reveal quite high volatility spillovers (at over 60%) with a one-period lag. The empirical results show a negative correlation between exchange rate returns and stock returns. However, the asymmetric effect of the shock is ambiguous, owing to conflicts in the significance and signs of the asymmetry effect in the two estimated multivariate GARCH models. The empirical findings provide financial managers with a better understanding of

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1. Introduction

Taiwan, just across the straits from mainland China, is the only island bisected by the Tropic of Cancer in East-Asia. Rich in tourism resources, Formosa, or “Beautiful Island”, is how the Portuguese viewed Taiwan when they sighted the untouched green island in the 16th Century. The majority of people in Taiwan widely speak Minnan (the Southern Chinese dialect) as many Taiwanese trace their lineage from the southern part of China. Two of the most popular foreign languages in Taiwan are Japanese and English, due to the Japanese occupation of Taiwan during 1895–1945, and the English curriculum for high school students.

From 2008 to 2011, approximately 5 million inbound tourists visited Taiwan annually. With close links in cultural exchange, bilateral trade and economic development, the leading inbound arrival sources to Taiwan are China, Japan, and USA, which account for over half (averaging nearly 54%) of inbound tourist arrivals annually during 2008–2011. In 2011, the growth of inbound visitors from these three leading tourist arrival sources was 9.41%, 19.87%, and 4.27% from China, Japan and the USA, respectively, as compared with the previous year.

The travel and tourism (T&T) sector, as a driver of economic growth, can stimulate GDP growth through jobs and enterprise creation, and provide significant foreign exchange revenues. The Government of Taiwan takes the tourism industry seriously, especially as the Global Financial Crisis of 2008–2009 severely cut Taiwan’s exports. In May 2009, the government proposed that the tourism industry is a core and bellwether industry among the six key emerging industries, namely biotechnology, green energy, high-end (high-quality) agriculture, medicine and health care, and cultural and creation industry, as the role of the tourism industry is to connect the six key emerging industries (for further details, see Tourism Bureau, Taiwan, 2011 tourism policies and the six emerging industries, respectively, http://admin.taiwan.net.tw/public/public_en.aspx?no=6#T2011, http://www.cepd.gov.tw/encontent/m1.aspx?sNo=0011826).

A series of major investments in the tourism industry are expected to expand the tourism sector significantly, such as an amendment to the “Best of Taiwan Tourism Development Plan” in April 2009. The plan is intended to create about US$2195 million in tourism revenues, add 437 thousand jobs, attract about US$833 million in private investment, and bring at least 10 major international hotel chains to Taiwan from 2009 through to 2013. Moreover, the government approved a constitutional amendment to Tourism Policies in 2012, containing implementations of the “Project Vanguard for Excellence in Tourism (2009–2014)”, the “Medium-term Plan for Construction of Major Tourist Sites (2012–2015)”, and the “2012–2013 Tourism Promotional Focus” under the principles of sustainability, quality, amity, life, and diversity. These principles involve the advancement of balanced development of regional economies and tourism, and optimization of the lives of local residents and the quality of travel (http://admin.taiwan.net.tw/public/public_en.aspx?no=6). Above all, the Government of Taiwan regards the promotion of the tourism industry is high on the agenda.

The number of visitor arrivals exceeded 6 million in 2011, according to the Tourism Bureau in Taiwan. Visitor expenditures in Taiwan also experienced a rapid growth of 26.91% over the previous year. Historically, from 1991 to 2011, the visitor expenditure growth rate in Taiwan averaged 10.32%, reaching an all-time high of 27.92% in 2010, and a record low of –6.44% in 1997, excluding the 2002–2004 years of SARS in Asia. For the period 2008–2010, the growth in annual visitor expenditures in Taiwan was 13.85% in 2008, 14.82% in 2009, and 27.92% in 2010.

However, as the result of the Global Financial Crisis in 2009–2009, a still ongoing economic downturn, the economic uncertainty with high unemployment in Europe, Japan, and the USA has had adverse effects on the inbound tourism demand to Taiwan. Furthermore, in 2012, a series of new currency trading events occurred, such as direct trading of the Chinese Yuan against the Japanese Yen (on 1 June 2012), without using the U.S. dollar as an intermediate currency, other direct trade planning
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