The Effects of Revaluating the Yuan on Stock Markets

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ABSTRACT

This paper investigates the pricing behavior of Standard & Poor's 500 index (S&P 500) and Shanghai Stock Exchange index (SSE) before and after July 21, 2005 when China officially stopped pegging the value of Chinese currency (the Yuan to the US dollar). It focuses on differential effects of the below-par revaluation on the S&P 500 and the SSE Composite indexes. This study finds that temporarily positive effects after the revaluation announcement appeared more significant for the SSE index than for the S&P 500 index. The intent of this paper is: (1) to investigate the pros and cons of the 2005 revaluation of the Yuan; (2) to draw implications for the efficiency of stock markets of both countries.

INTRODUCTION

China announced on July 21, 2005 that it would no longer peg its currency to the US dollar but instead let it float in a narrow band against a basket of unspecified foreign currencies (later revealed that the basket included the US Dollar, the Yen, the Korean Won and the Euro). This study premises that changes of exchange rates affect performance of stock markets particularly in the case of revaluation of a currency whose country has an important trading relationship. The exchange rate change after the revaluation announcement coincided with general uptrend of both S&P 500 and SSE up to late 2007 (but both markets collapsed later). During the post-revaluation period, the SSE experienced a dramatic rise and fall while the S&P 500 had similar trend.

The Yuan revaluation was not meaningful per se. For example, Peter S. Goodman reported that Zhong Wei, a finance expert at Beijing Normal University, referring to the 2005 Yuan revaluation announcement, suggested as follows: "This is a cautious move. This is more like a political stance than real currency reform (The Washington Post, July 22, 2005)." Robert Mundell argued that U.S. government and International Monetary Fund should not have forced China to revaluate its currency because it would harm the poorer parts of the Chinese economy (http://economistsview.typepad.com/economistsview/2006/06/robert_mundell_.html, 2006).

DATA AND RESEARCH DESIGN

This study collected exchange rates of Yuan/USD from the Federal Reserve Statistical Release. And data for S&P 500 and SSE were provided by Commodity Systems, Inc. The pre-revaluation and the post-revaluation periods cover three years before and after July 21, 2005, when China officially revalued the Yuan. For investigative purposes, this study uses July 21, 2005, as the benchmark date to distinguish between pre-revaluation period of the Yuan (July 19, 2002 through July 21, 2005) and post-revaluation period of the Yuan (July 21, 2005 through July 21, 2008). Because the pros and cons of revaluation of the Yuan are a mixture of political and economic factors, this study is based on a qualitative, observationally descriptive, design to see effects of the revaluation on the stock markets.

FINDINGS

As token, partial, revaluation of the Yuan progressed, there were sharp rises and collapses of the stock markets. The sequence of events would have been a result of multiple factors. This paper contends that the partial revaluation was one of the significant factors of the events. It finds that for the 3-year period before July 21, 2005, S&P 500 was performing better than SSE, but for the 3-year period after July 21, 2005, SSE performed sharply better than S&P 500, even though SSE experienced dramatic collapse later. The Yuan's chronic undervaluation throughout six years of the sample periods was conspicuous: 56% undervaluation in July 2002, 61% in July 2005, and 49% in July 2008. The undervaluation measures compared to the implied purchasing power parities were based on the Big Mac Indexes (published by www.economist.com). So, during the pre-revaluation period, there was 5% additional undervaluation against USD; however, during the post-revaluation period, there was 12% smaller undervaluation against USD.

The Yuan was pegged to USD at 8.28 Yuan/USD (or 0.1208 USD/Yuan) for the entire 3-year period before July 21, 2005, but it was revaluated by 21.36% during the 3-year period after July 21, 2005. SSE declined by 40.5% for the 3-year period before July 21, 2005, it rose by 180.36% during the 3-year period after July 21, 2005, but it collapsed afterward. S&P 500 rose by 44.74% for the entire 3-year period prior to July 21, 2005, it rose only 2.69% during the 3-year period after July 21, 2005, but it crashed later.

IMPLICATIONS

In retrospect, considering that the Yuan revaluation since July 21, 2005 has been coincided with the fact that both US and Chinese stock markets experienced dramatic increases of market risk, it is questionable if the less-than-half-measure revaluation since 2005 was wise. It is conceivable that a full, effective, revaluation to the equilibrium level would enhance the efficiency of stock markets of both countries.

This study investigates effects of yield spread changes on performance of growth and value stocks for the period 2005-2007. Comparing performance of growth and value stocks during the sample period has empirical significance since yield spread changes during the sample period were historically dramatic. This study finds some link between yield spread changes and performance of different styles of investing, which suggests that yield spread changes could be timely signals for selecting growth vs. value stocks.