Journal of International Money and Finance 28 (2009) 920–940

Contents lists available at ScienceDirect

Journal of International Money and Finance

journal homepage: www.elsevier.com/locate/jimf

International interest rates and US monetary policy announcements: Evidence from Hong Kong and Singapore

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JEL classification:
E43
E44
E52
F31
G13

Keywords:
Monetary policy
Interest rate futures
Term structure of interest rates

A B S T R A C T

This paper investigates the responses of market interest rates to US monetary policy announcements for the US and two emerging economies, Hong Kong and Singapore which are similar on many respects but have experienced opposite exchange rate regimes in the last twenty years. Our results, based on market expectations extracted from federal fund futures rates, document that FOMC announcements significantly affect the term structure of interest rate in the US and both Asian countries. Further, international interest rate differentials around FOMC meeting dates tend to be negative for short maturities with the impact gradually dissipating as bond maturity increases. Finally, for the case of Singapore, we find that domestic interest rates react to both external and domestic monetary policy announcements with a magnitude that is larger over the full bond maturity spectrum for domestic announcements. These results are robust to time-varying futures risk premia and alternative measures of interest rates expectations.

1. Introduction

In recent years a great deal of attention has been paid to understand the relationship between monetary policy and market interest rates. A common finding of this literature is that unanticipated changes in the US Federal Reserve target rate causes US bond yields to move substantially (see, *inter*

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0261-5606/$ – see front matter
doi:10.1016/j.jimonfin.2008.10.002

alia, Cook and Hahn, 1989; Kuttner, 2001; Cochrane and Piazzesi, 2002; Piazzesi, forthcoming; Gürkaynak et al., 2005a and the reference therein). A separate literature has also investigated how macroeconomic news, including monetary policy announcements, are incorporated into bond prices. Using high-frequency data, many studies have documented that macroeconomic announcements significantly affect the dynamics of bond prices around the time of the announcements (Fleming and Remolona, 1997, 1999; Balduzzi et al., 2001; Green, 2004; Fleming and Piazzesi, 2006 and the references therein). A common aspect of these papers is that they have all focused on the US market. Surprisingly, little attention has been paid to understand the relationship between US monetary policy actions and international market interest rates. In internationally integrated financial markets, interest rates co-move to a larger extent and Federal Open Market Committee (FOMC) announcements[1] are likely to affect the dynamics of market interest rates not only in the US but also in other countries. Further, the magnitude of this response is likely to be affected by the fact that many currencies, especially of emerging economies, are linked to the US dollar by different exchange rate arrangements. The present paper fills this gap in that we investigate the responses of market interest rates to US monetary policy announcements for the US and two emerging economies, namely Hong Kong SAR (Hong Kong henceforth) and Singapore. The analysis of these two emerging economies' interest rate markets is novel in this literature. In fact, after Edwards and Khan (1985) who initially introduced a framework to analyze the determination of interest rates in developing countries with an application to Singapore, only few papers have investigated the responses of international market interest rates to FOMC announcements.[2] Most of these contributions essentially focused on a sample of developed economies (Becker et al., 1995; Faust et al., 2003; Ehrmann and Fratzscher, 2002b, 2005) or on a single emerging economy (Robitaille and Roush, 2006). The choice of these interest rate markets is particularly appealing in this context for a number of reasons. Hong Kong and Singapore are two very similar small open economies from the Far East region. Both are comparable in terms of size, openness, geography and they both are premier financial centers with developed financial markets. Both economies share a tradition of *laissez-faire* economic policies and, politically, their past as British colonies has affected their legal structures. However, one major difference between these two economies is their exchange rate policy. In fact, since October 1983, the date when Hong Kong has adopted a fixed exchange rate arrangement, the two economies experience opposite exchange rate regimes (see, *inter alia*, Latter, 1993; Cheung, 1998; Tsang and Ma, 2002; Cheung and Yuen, 2002; and the references therein). Thus, Hong Kong and Singapore provide us with an ideal setting to test, from a new perspective, the familiar 'impossible trinity' textbook proposition, i.e. financially open countries face a trade-off between fixed exchange rate regime on the one hand, and the ability to set their interest rates independently, on the other hand.

This paper contributes to the literature on several respects. First, we investigate the response of the term structure of interest rates to FOMC announcements by using market-based proxies for expectations obtained from short-term interest rate futures prices. Second, we extend previous studies to explore the role of FOMC announcements on the dynamics of the term structure of international interest rate differentials rather than focusing exclusively on the response of market interest rates in each country in isolation. Third, we disentangle the different impact of external (i.e. US) and domestic monetary policy announcements on the dynamics of emerging economies' market interest rates.

Our results with regards to the three questions addressed in the paper are as follows. First, we find that FOMC announcements do affect market expectations about the future path of short-term interest rates which, in turn, substantially influence the behavior of the term structure of interest rates in the US and in both Asian countries. At first glance, when all FOMC announcements are taken into account, the prediction of the 'impossible trinity' proposition seems to be validated. Hong Kong and Singapore

[1] The term 'announcements' is used to denote any official communication provided at the end of each FOMC meeting. This may involve potential changes (or no changes) in the monetary policy target rate. We label 'surprises' monetary policy moves which are not anticipated by the market. In this paper we use throughout monetary policy announcements in a broad sense, since we employ in our empirical investigation the full set of FOMC announcements over the sample period, whose content may or may not have been anticipated by the market.

[2] Notable exceptions are represented by Clare and Courtney (2001), Melvin et al. (2004), Faust et al. (2003), Ehrmann and Fratzscher (2002a,b, 2005), Robitaille and Roush (2006).