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The dynamics of housing demand under a linked-exchange rate system

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ABSTRACT

A recovering economy, along with loose credit in the wake of the U.S. quantitative easing (QE) measures, has boosted Hong Kong's economic activities in the last couple of years. Nonetheless, it is not altogether positive, as Hong Kong, under the linked exchange rate system (to the U.S. dollar), essentially does not have its own monetary policy, and is thus highly susceptible not only to U.S. monetary policies but also to hot money from abroad. The latter helps create a more uncertain, and riskier, market environment. In response, investors' portfolio selections change, and financial institutions adjust the supply of loans which essentially determines consumption and investment behaviours, including housing demand. In light of such an intertwined nature between these markets, this paper, using a vector autoregression (VAR) model, examines the inter-relationships between housing transaction volume and a variety of factors, such as money supply, housing price, banks' loan-to-deposit ratio, stock market returns, and best lending rate. The findings reveal that all those factors do have a one-directional long-run relationship with transaction volume, and that shocks in property price contribute the most to the forecast errors of property transactions. Interestingly, housing transaction volume responds to shocks in money supply negatively, rather than positively as usually reported in western literature. The reason can be attributed to the fact that the supply of money in Hong Kong, due to the linked exchange rate, is primarily subjected to the influx of hot money; and that investors, in response, prefer the stock market for its liquidity and lower cost over the property market. Then, as stock price increases, so does housing demand (transaction volume) due to the wealth effect. Policy implications, with reference to such effect, are then discussed.

Introduction

Since the aftermath of the Asian Financial Crisis of the late 1990s followed by the outbreak of the SARS epidemic in 2003, Hong Kong's economy began to recuperate in 2004, and hence property prices rebounded from their lowest points in the last decade (Fig. 1). By year 2011, the price of housing already surpassed the record levels just before the Asian Financial Crisis took place. Nonetheless, it does not look as if an improved economy in itself is able to explain such upward price movement. As housing is regarded as both a consumption good and an investment good, changes in market fundamentals (and in demographic factors) are supposed to explain only the demand for housing as the former, but not as the latter which is much more volatile in nature. This can be reflected in terms of the volatility in the monthly housing transactions in Hong Kong since 2004 (Fig. 2). Rather, the demand for housing, as an investment option, is subjected to other factors.

One of those factors relates to money supply. As shown in Fig. 3, the supply of money (M3), on a year-on-year basis, had been consistently increasing since 2004 (Fig. 3), with the only exception being the period between late 2008 and early 2009, during which the U.S. subprime Crisis broke out. It should be worth noting that, when the stock market was at its peak levels around early 2008 (Fig. 4), the year-on-year increase in money supply happened to be at its highest as well. In light of such correlation, what makes Hong Kong's situation particularly unique is that, since 1983, the Hong Kong Dollar is pegged to the U.S. Dollar. Under this linked exchange rate system, Hong Kong essentially does not have an independent monetary policy, as neither can it control money supply (other than to maintain the stipulated exchange rate of 1USD = 7.8HKD) nor adjust interest rates in response to market conditions. Instead, it is highly susceptible to monetary policy changes in the U.S.

One might ask the following question: Without the capacity to control money supply and interest rates, where does this

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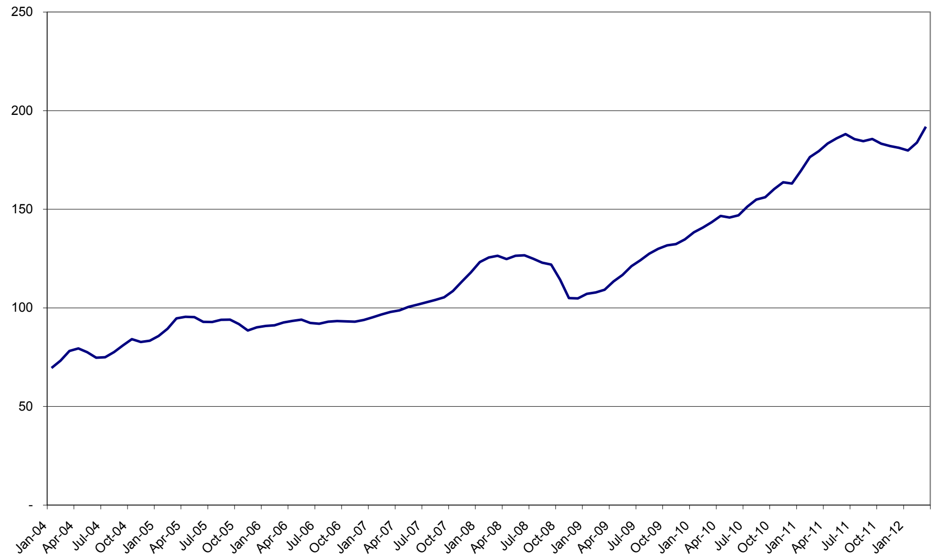

Fig. 1. Property price index (1999 = 100).
Source: Rating & Valuation Department.

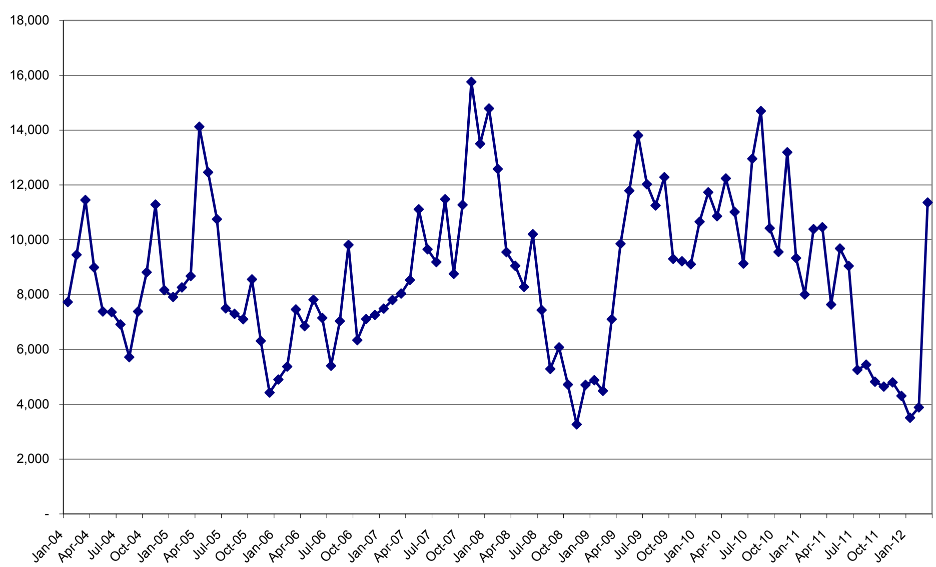

Fig. 2. Amount of housing transactions in Hong Kong, Jan 2004–Mar 2012.
Source: Land Registry.

continuous (new) supply of money come from? A major source of new money supply is through hot money from Mainland China or from other foreign nations (such as the U.S.).[1] The incoming capital either enters the stock and/or property markets, or the banking system. For the former, it offers shocks to stock prices and property prices, which might trigger the rebalancing (or re-arranging) of investment portfolios. For the latter, it improves the liquidity situation of financial institutions, and loans become more readily available which encourages further spending and investment. However, as hot money could flow very quickly in and out of the financial system, financial institutions need to constantly adjust the supply of loans in order to keep their liquidity situations manageable.[2] Within the context of housing market, such practices give rise to a seemingly very fluctuating mortgage market in Hong Kong since 2004 despite relatively stable loan-to-deposit (LTD) ratios (Fig. 5). Taking the borrowers' budget constraints into account, the availability of mortgage loans directly dictates the demand for housing (and hence housing price), while indirectly influencing the demand for consumptions and for other forms of investment such as stocks and bonds. However, without the means of controlling the

[1] For instance, the different stages of Quantitative Easing introduced by the U.S. Federal Reserve in response to the Subprime Crisis and the depression that followed, as well as the various economic stimulus packages introduced by the Chinese Central Government.

[2] In fact, Hong Kong Monetary Authority does not permit a retail bank to have an LTD ratio higher than 100%.