



The UK housing market and the monetary policy transmission mechanism: An SVAR approach

Adam Elbourne

Netherlands Bureau for Economic Policy Analysis (CPB), P.O. Box 80510, 2508GM The Hague, The Netherlands

Received 12 April 2005

Available online 25 September 2007

Abstract

I estimate an eight variable structural vector autoregression (SVAR) model of the UK economy based upon that of Kim and Roubini [Kim, S., Roubini, N., 2000. Exchange rate anomalies in the industrial countries: a solution with a structural VAR approach. *J. Monet. Econ.* 45(3), 561–586] for the purpose of investigating the role of the housing market in the transmission of monetary policy. Retail sales fall by just under 0.4% following a temporary positive 100 basis points shock to short-term domestic interest rates; inflation is also lowered. House prices fall by 0.75%. House price shocks increase consumption, the price level and interest rates. Combining the central estimates for interest rate and house price shocks suggests that house price movements can explain about one-seventh of the fall in consumption following an interest rate shock. A counterfactual simulation comes to a similar figure.

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JEL classifications: E44; E52; R21

Keywords: Monetary policy; House prices; Structural VAR

1. Introduction

The level of household consumption spending depends on many factors: wealth, (lifetime) income and the real interest rate are among the most important. Whilst there has been a lot of discussion of the wealth effects due to the large gains and subsequent fall

E-mail address: a.c.elbourne@cpb.nl

of stock markets in the last ten years (for an international study see IMF, 2002; or, for the US, Ludvigson and Steindel, 1999), there has been less discussion of the wealth effects of gains in the housing market. The UK has seen very rapid house price growth over recent years: prices rose by over 15% in 2003, over 25% in 2002, and over 10% in 2001 according to the Halifax House Price Index. In 1995 total household wealth in the UK was £3134 billion, 35% of which was real estate (Banks and Smith, 2000) and only 9% was in the form of direct stock holdings. The relative amount of household wealth held in real estate suggests more attention should be devoted to the wealth effects caused by rising house prices. All in all, when the rapid house price growth of the last ten years is coupled with the fact that housing wealth is levered through mortgages, the effects of house price growth on net wealth are potentially large. For the US, Maki and Palumbo (2001) find that the propensity to consume out of household net wealth is between 3% and 5%, which has had substantial effects on the US economy. Case et al. (2005) also find that housing wealth is more important than stock market across a number of developed economies.

As with other assets, house prices are affected by changes in interest rates. If house prices are influenced by interest rates and consumption depends on housing wealth, there is a channel of monetary policy transmission through house prices. This paper estimates the proportion of changes in consumption and prices that can be attributed to changes in housing wealth. That is, the paper attempts to set an upper bound on the overall importance of housing wealth and housing market related credit imperfections in the UK monetary transmission mechanism. In the empirical part of this paper I employ a two-stage approach: firstly estimating the response of house prices to an interest rate shock, and then estimating the response of consumption to a house price shock. Under the assumption that consumption reacts in the same way to changes in housing wealth regardless of the cause of the change in house prices, the estimates of the two responses can be combined to give an estimate of the proportion of the consumption response to interest rates that can be attributed to changes in housing wealth. The two-stage approach has an advantage over other approaches whereby a different model is estimated for each element of the transmission mechanism. I find that changes in house prices following a monetary shock account for about 15% of changes in consumption and also contribute to price changes. I also estimate a counterfactual simulation which leads to a similar value.

The remainder of the paper is organized as follows. Section 2 provides a brief overview of the literature on monetary policy and the housing market. Section 3 gives a description of the data. Section 4 details the structural vector autoregression (SVAR) model used to investigate the role played by house prices. Section 5 discusses the results. Section 6 concludes.

2. The housing market and monetary policy

Fig. 1 shows a simplified schematic of the monetary transmission mechanism through the housing market. As Maclennan et al. (2000) note,¹ there are both direct and indirect ways in which monetary policy may be transmitted through the housing market. The main *direct effect* is an income or cash flow effect: when the interest rate rises, the interest burden of any outstanding debt rises and after-housing-costs disposable income falls. How this

¹ See also HM Treasury (2003).

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