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Journal of Financial Intermediation 13 (2004) 414–435
Journal of Financial Intermediation
www.elsevier.com/locate/jfi

House prices, consumption, and monetary policy: a financial accelerator approach

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Received 1 August 2003

Available online 20 August 2004

Abstract

We consider a general equilibrium model with frictions in credit markets used by households. In our economy, houses provide housing services to consumers and serve as collateral to lower borrowing cost. We show that this amplifies and propagates the effect of monetary policy shocks on housing investment, house prices and consumption. We also consider the effect of a structural change in credit markets that lowers the transaction costs of additional borrowing against housing equity. We show that such a change would increase the effect of monetary policy shocks on consumption, but would decrease the effect on house prices and housing investment.

JEL classification: E32; E50; R21

Keywords: House prices; Credit frictions; Monetary policy; Financial accelerator; Consumption

1. Introduction

House prices in the United Kingdom, and more recently in the United States, have received a great deal of attention from policy-makers and economic commentators. It is often

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1042-9573/$ – see front matter
doi:10.1016/j.jfi.2004.06.003

assumed that if house prices are growing rapidly, consumption growth will be strong too. Recent minutes of the Monetary Policy Committee meetings in the United Kingdom stated: '... the continuing strength in house prices would tend to underpin consumption ...' (April 2001). Similarly, the Fed Chairman Alan Greenspan stated 'And thus far this year, consumer spending has indeed risen further, presumably assisted in part by a continued rapid growth in the market value of homes' (Greenspan, 2001).

The question that we address in this paper is: what impact do house prices have on consumption via their role as collateral for household borrowing? In 2001, the value of the housing represented more than 40% of total UK household wealth. While in principle any asset could be used as collateral, housing is by far the easiest asset to borrow against. Indeed, 80% of all household borrowing in the UK is secured on housing. To further justify our focus on housing as distinct from other assets, it is useful to consider why houses are different. Most consumers live in the houses they own and value directly the services provided by their home. So the benefit of an increase in house prices is directly offset by an increase in the opportunity cost of housing services. An increase in house prices does not generally shift the aggregate budget constraint outwards. Even if one considers finitely-lived households, the capital gain to a last-time seller of a house represents a redistribution away from a first-time buyer, so house price changes can redistribute wealth, but not increase it in aggregate. This contrasts with financial assets: an increase in, say, the value of future dividends on equities due to an increase in productivity shifts the aggregate budget constraint out and can therefore lead to an increase in aggregate consumption. So it is not obvious that there is a traditional 'wealth effect' from housing in the way that we think of a wealth effect arising from a change in the value of households' financial assets.

There are many reasons why house prices and consumption may move together. If consumers are optimistic about economic prospects, they are likely to increase their consumption of housing and non-housing goods alike. House prices are also correlated with the volume of housing transactions (e.g. see Stein, 1995). In turn, transactions seem to be correlated with consumption as people buy goods that are complimentary to housing, such as furniture, carpets and major appliances. House prices also affect the economy because, in the case in the United Kingdom, they enter directly into the retail price index via housing depreciation, which depends on the level of house prices. The focus of this paper is that house prices may also have a direct impact on consumption via credit market effects. Houses represent collateral for homeowners, and borrowing on a secured basis against ample housing collateral is generally cheaper than borrowing against little collateral or borrowing on an unsecured basis (via a personal loan or credit card). So an increase in house prices makes more collateral available to homeowners, which in turn may encourage them to borrow more, in the form of mortgage equity withdrawal (MEW), to finance desired levels of consumption and housing investment. The increase in house prices may be caused by a variety of shocks, including an unanticipated reduction in real interest rates, which will lower the rate at which future housing services are discounted.

In examining the link between house prices and consumption, we believe that credit frictions in the consumption/house purchase decision are important, and they play an important role in our analysis. Our motivation is based on three observations for the United Kingdom: