A Theory of Liquidity in Residential Real Estate Markets

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   A ''hot'' real estate market is one where prices are rising, average selling times are short, and the volume of transactions is higher than the norm. ''Cold'' markets have the opposite characteristics: prices are falling, liquidity is poor, and volume is low. This paper provides a theory to match these observed correlations. I show that liquidity can be good while prices are high because the opportunity cost of failing to complete a transaction is high for both buyers and sellers. I also show how state-varying liquidity depends on the absence of smoothly functioning rental markets.

1. INTRODUCTION

   Residential real estate markets go through ''hot'' and ''cold'' periods. In hot markets, prices tend to be rising and liquidity is good, meaning that sellers typically sell their houses after short marketing times. While prices are generally high in hot markets, the brief time that houses stay on the market suggests that prices could be even higher. The volume of sales is higher than average in a hot market. In cold markets, the situation is reversed. Prices tend to be declining, liquidity is poor, and the volume of sales is low relative to the norm.

   The fact that houses are illiquid assets is not a puzzle. Real estate markets are characterized by severe frictions that tend to hinder trade. The interesting puzzle to the economist is the fact that real estate liquidity varies so dramatically over time and different states of nature. State varying liquidity suggests that changes or shocks to the fundamental value of housing are not transmitted solely through market prices, but through market liquidity as well. In this paper I present a model that develops this point; state varying liquidity implies that house prices do not vary as much across states of nature as do buyers'

valuations of those houses. Moreover, we should not, in general, expect changes in fundamental values to be accompanied by equal changes in market prices.

In an interesting paper on the same subject, Stein [9] provides a model where shocks to housing values can so reduce homeowner equity that some agents are unable to afford the down payment on a new house. Thus, sales in the economy can be depressed due to down payment effects. While Stein does not formally model liquidity in his paper (the market clears in his model), he conjectures that in cold markets homeowners with low equity might demand less liquidity and price their houses high in order to ''fish'' for a down payment on the next house. This conjecture is supported empirically by Genesove and Mayer [4], who find that condominium sellers with low equity require longer marketing periods and collect relatively higher prices for their properties than do sellers with more equity.

Financial constraints undoubtedly play an important role in a seller's calculations, and Stein's paper shows how leverage can amplify a downturn. But it is unlikely that the easing of financial constraints can provide a complete explanation as to why markets heat up, particularly in cases when markets heat up to the point where liquidity becomes almost perfect.[2] Moreover, without observing the assets of house sellers, it is difficult to determine whether the relationship between time on the market and losses on home equity stems from a true down payment constraint or just simple loss aversion.

In this paper I develop a model to make three points. First, I show how house prices, liquidity, and sales volume depend simultaneously on the value of the housing service flow. Second, I show that financial constraints are not a necessary condition for residential real estate liquidity to vary over different states of the world. All agents in my model are financially unconstrained. Finally, I link state varying liquidity to the availability of rental alternatives. If sellers can rent out their unsold houses at fair rates that completely reflect the aggregate state of the economy, then state varying liquidity disappears. The fact that moral hazard and other contracting problems often discourage sellers from renting out their empty houses supports the assertion made here that hot and cold real estate markets are perfectly consistent with the optimal pricing and buying decisions of forward looking agents.

The model used here is a search-theoretic model where prices and liquidity are derived from the maximizing behavior of both buyers and sellers. Agents who live in houses consume housing services. Trade in houses takes place because individuals are vulnerable to idiosyncratic shocks that sever the match with their house. This might happen because of a change in household size or a

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[2] Real estate market liquidity in the San Francisco Bay area in the Fall of 1997 was extremely good. It was not unusual for houses to sell in 1−2 days after the original listing—often for prices above the original list price.