American Finance Association

GNMA Passthrough Securities: Discussion
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Source: *The Journal of Finance*, Vol. 36, No. 2, Papers and Proceedings of the Thirty Ninth Annual Meeting American Finance Association, Denver, September 5-7, 1980 (May, 1981), pp. 484-486
Published by: Blackwell Publishing for the American Finance Association
Stable URL: http://www.jstor.org/stable/2327033
Accessed: 27/11/2009 08:26

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DISCUSSION

DAVID F. SEIDERS*: Most of the literature on the GNMA futures market has been descriptive, and the "success" of the market too often has been measured solely in terms of the volume of activity. Professor Figlewski should be commended for addressing a question with important economic content. Indeed, the effect of GNMA futures markets on the stability of GNMA prices in the cash market can have significant consequences for the volume of residential mortgage and housing activity. Less stable spot prices for GNMAs, for example, could make these securities less attractive to investors, and higher average levels of yields on GNMAs—as well as on federally underwritten residential mortgages—could result.

The Figlewski paper concludes that the GNMA futures market has had a destabilizing effect on spot prices for GNMAs, even though competitive conditions prevail and price manipulation is not a factor. This conclusion is striking since such an effect had not been identified in previous studies of various commodity markets or in a prior study of the GNMA market. Moreover, the recent Treasury/Federal Reserve study of Treasury futures markets did not view destabilization of spot prices for Treasury securities to be a serious concern, at least under competitive market conditions.

Two arguments for destabilization appear to be intertwined in this paper, and it is useful to scrutinize them separately. One of the arguments, commonly offered in the context of competitive markets, runs as follows: futures markets encourage speculation by reducing the costs involved; speculators drive futures prices to levels out of line from market fundamentals; the swings in futures prices are

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transmitted to spot prices via arbitrage. Central to this argument is the condition that speculators attracted to the futures market forecast prices poorly because they do not understand the fundamental determinants of prices for the underlying commodity. A number of analysts have pointed out that this type of destabilizing effect cannot persist for long since poorly informed speculators cannot survive for long. It may also be noted that speculators in GNMA futures are likely to be relatively well informed to begin with, compared with speculators in other markets, since they have ready access to information on interest rate expectations held by traders in the cash market. Expected short-term rates are embedded in the Treasury yield curve in the spot market. Moreover, spreads among prices prevailing in the over-the-counter forward market for GNMAs reflect not only current long/short rate spreads but also expectations about future movements in GNMA yields.

Elements of a second argument, tailored to GNMAs, also appear in the discussion: relatively small institutions, with relatively inadequate information, had stayed out of the GNMA cash market because securities dealers would not enter into unmargined forward contracts with them; the availability of futures market hedges has attracted such institutions into the markets for GNMAs; hedging activities by these poorly informed institutions destablize futures prices and the aberrations are transmitted to spot market prices via arbitrage. This line of reasoning also is hard to accept. Routine hedging, of course, does not require any forecasts of future price movements and the hedging institution will be as well off whether prices rise, fall, or remain unchanged (abstracting from basis variation). And any "unwarranted" pressures on futures prices associated with such hedging should quickly be eliminated by the speculators who understand the market fundamentals and take note of available information. Beyond these considerations, it is not clear that the availability of futures hedges has, in fact, attracted substantial numbers of smaller institutions into the GNMA markets. For GNMA issuers (primarily mortgage companies), FNMA has been available as a relatively inexpensive source of "put" options for FHA/VA mortgages; these options have permitted potential GNMA issuers of all sizes to hedge against interest rate increases during the period of mortgage inventory accumulation and to benefit from rate declines. On the investor side, the need to hedge ordinarily is much less crucial than for GNMA issuers, and it seems clear that smaller investors generally have been deterred by the costs and complications of GNMA futures trading as well as by the realization that the futures hedge may not be perfect.

Other arguments that might be advanced to support the destabilization conclusion (not proposed by Figlewski) also appear inappropriate to GNMAs. There certainly is no evidence that growth of the GNMA futures market has resulted in any thinness in cash market. And despite the fact that GNMAs are not really a homogeneous commodity, because of imperfections in the technique used to convert various coupons to "equivalent" amounts of GNMA 8s, the deliverable supply of GNMAs available through cash marketing channels apparently has been sufficient to prevent speculators from manipulating prices through market "corner" or "squeeze" activities. Finally, limit price moves in the futures market,

which could impact upon cash prices, have been rare—at least prior to last October 6.

Because of the difficulty involved in rationalizing destabilizing effects, the conclusion of the Figlewski paper must be viewed with considerable skepticism. Of course, it still might be contended that this remains an empirical issue, and appeal possibly could be made to Kaldor's suggestion—offered back in 1940—that destabilizing speculation might persist in futures markets if a small group of professional speculators were able to prey upon a constantly changing group of rank amateurs.

In any case, the empirical support offered in the Figlewski paper for the destabilization conclusion is not convincing. It is clear that factors producing volatility in interest rates generally—such as actual or expected shifts in monetary policy—as well as changes in the size and liquidity of the cash market for GNMAs, should be recognized in any serious effort to identify the net effect of GNMA futures markets on spot market prices. However, in attempting to build a model to explain the short-run volatility of GNMA spot prices, the author was rather unsuccessful in his attempts to account for fluctuations in general financial market conditions. In fact, he eventually excluded volatility measures constructed for Treasury and agency bonds, noting that some investment characteristics of GNMAs—such as their uncertain lives and cash flow patterns—really make these securities different from bonds. This is true, of course, but after the variables for the bonds were dropped no attempt was made to account either for general interest rate volatility or for differential movements in GNMA yields associated with the peculiarities of the instrument. Thus what was purported to be a major feature of the models somehow got lost in the shuffle of variables.

Partly because of this development, the positive correlations found between the measure of volatility for GNMA spot prices and the futures market variables simply do not provide convincing evidence of causation running from futures to cash markets. Indeed, the major hypotheses for destabilization run in terms of the existence or non-existence of futures markets and do not necessarily suggest that the effects should increase with the size of the markets; on the other hand, it is clear that the degree of price variability in cash markets is the phenomenon that provokes futures market activity. Finally, a strong positive correlation between changes in GNMA spot and futures prices ordinarily would be expected on the basis of the so-called axiom of "parallelism" which specifies that spot and futures prices ordinarily move in the same direction. This relationship reflects arbitrage activities and suggests nothing about direction of causation.

DISCUSSION

ANTHONY J. CURLEY*: Dunn and McConnell have constructed an interesting and a potentially valuable application of the options model for pricing mortgages and mortgage-backed securities. The relevance of their model has yet to be tested—with respect to both term structure and prepayment patterns—and its

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