

The magazine for mortgage market professionals

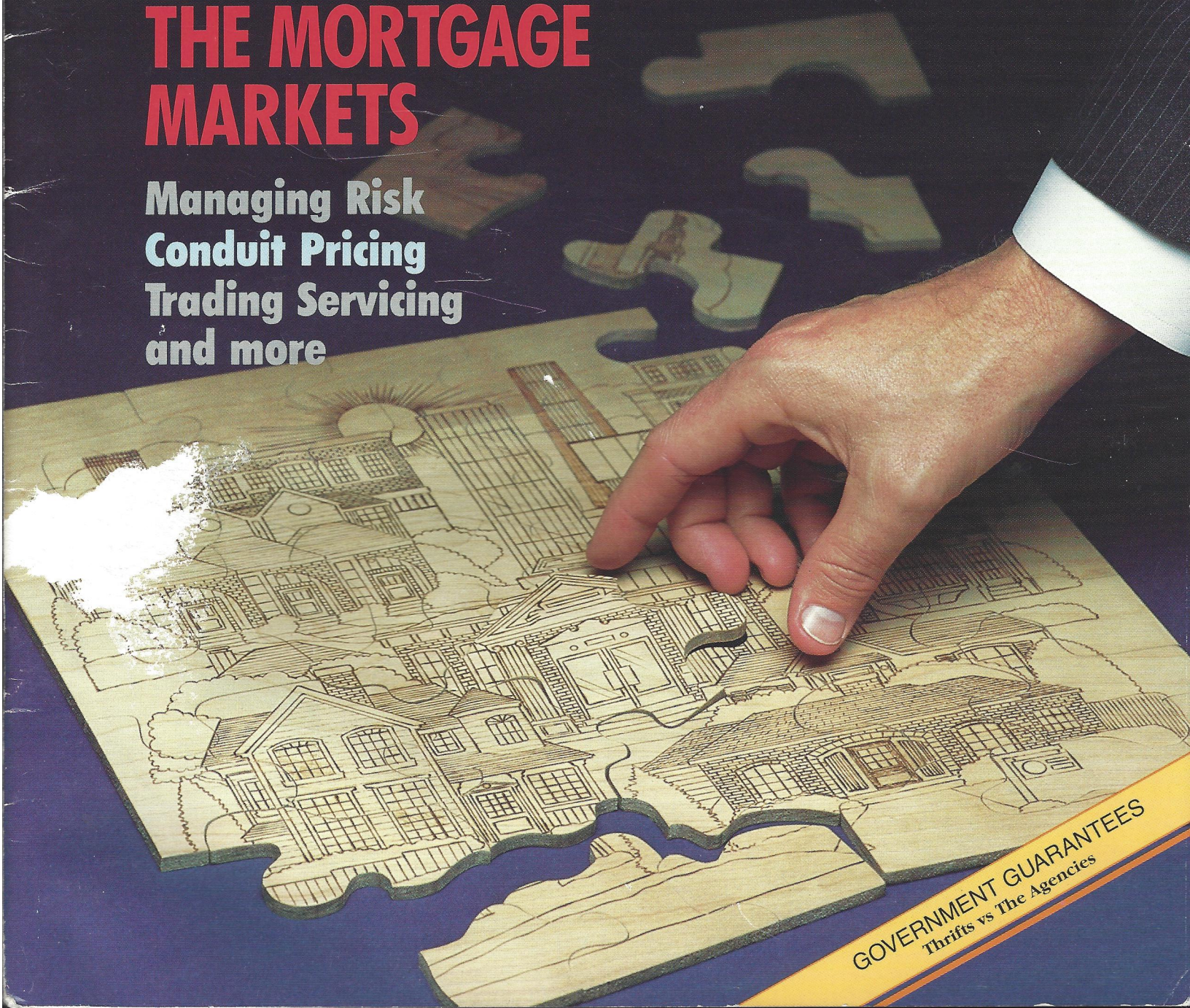
SECONDARY MORTGAGE MARKETS

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UNPUZZLING THE MORTGAGE MARKETS

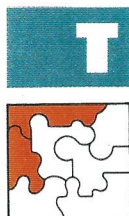
Managing Risk
Conduit Pricing
Trading Servicing
and more



GOVERNMENT GUARANTEES
Thriffs vs The Agencies

Fine Tuning Secondary

Trading servicing is a large and growing sector in housing finance. Investors in servicing portfolios need to know what to look for in their transactions to profit. by Larry Kirschner



The rule-of-thumb used to be simple: a servicing portfolio ordinarily traded at 1 percent of the note amount, regardless of its characteristics and imputed value. But volatile interest rates have caused buyers and sellers of loan servicing to reevaluate their pricing methods. Sophisticated techniques for evaluating servicing and tremendous increases in trading volume have influenced the market, with more than \$100 billion of servicing alone — an amount roughly equal to the total amount of Freddie Mac, Fannie Mae, and Ginnie Mae securities originated during the same period — trading in 1985.

The combination of sophistication and volume opens windows of opportunity for buyers and sellers in the servicing marketplace. But, as with any window, there is an adjacent ledge. Volatile interest rates over the past few years have caused some casualties. Buyers purchased portfolios with loans that prepaid before they could amortize the purchase price. Others grossly overpaid for portfolios because they did not fully understand the packages they were purchasing. On the other side of the transaction, sellers sold packages — often at unreasonably low prices — that were better left in their portfolios.

Why Trade Servicing?

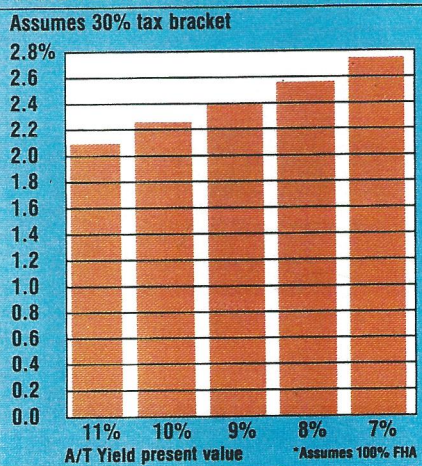
With these encroaching risks, why do institutions trade servicing? Because they value loan servicing differently according to their varying internal structures and outlooks for future interest rates.

The most common reason for selling is the desire to recognize income. Once an institution sells the servicing, it books the revenue as immediate income rather than

as income over the life of the servicing. This seems to cause higher trading volume at quarter- and year-end when it wants to bolster income statements.

Selling servicing also allows an institution to raise cash quickly because servicing is a fairly liquid asset. A typical transaction will take only 60 to 90 days to complete, and with computer listings and brokers available, some deals close in as short as two weeks. Mortgage investors must approve the buyer before a seller can commit

Figure 1
How Changes In Required Yield Affect the Present Value*



to the sale, and the federal and federally sponsored agencies as well as the major private conduits have special approval procedures that require substantial documentation. Finding a buyer with existing approval will expedite the sale.

A company also may decide to sell only those segments of its servicing portfolio that it is ill-equipped to handle. For example, a seller with neither the staff nor the system to service FHA and VA loans may sell its Ginnie Mae servicing and concentrate on the type of servicing that it performs more efficiently.

Buyers purchase loan servicing in the secondary market primarily for its high

yield. But the yield is not risk-free, so the risk/reward factor should be considered. Recently, falling rates have caused prepayments to surpass expectations and have cut income earned on impound or escrow balances (the nomenclature varies by state). These balances are significant because they include all the property taxes, mortgage insurance premiums, and fire and hazard insurance premiums which servicers accumulate in no- or low-interest bearing accounts to use as compensating balances.

Buyers also purchase servicing to exploit their strengths. A buyer that identifies a niche in servicing government loans, for instance, might purchase additional Ginnie Mae servicing to function at full capacity. Alternatively, lenders concentrating on a small geographic region or a certain product type can diversify their exposure by purchasing servicing derived from other markets. In particular, regional pockets of economic depression are compelling many lenders to look for servicing packages outside of the farm and energy sectors.

Another benefit comes from ancillary income derived from crossover selling. Although this income will generally be too small to substantially affect the valuation of a portfolio, a shrewd servicer can act as an asset manager by developing a highly valued mailing list from the servicing portfolio. It can promote its other products, such as seconds or home equity loans, automobile and other consumer loans, or mortgage life insurance, to potential customers that are proven creditworthy homeowners. The servicer can also rent the list to other interested marketers, for example, credit card issuers or financial advisors.

What to Look For

No matter what drives buyers or sellers to trade servicing, they must investigate and evaluate the portfolio thoroughly before sealing any deal. Each institution values a

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Servicing

package differently, setting different priorities, but all must collect substantive data to value a portfolio of loan servicing accurately.

Factors vital for any valuation are: the weighted average servicing fee, weighted average loan interest rate, weighted average original maturity, weighted average loan age, weighted average loan size, number of loans, number of investors, average escrow or impound balances, types of advances that must be made (if any), rate that must be paid to the borrowers on impound balances, late fee provisions, types of loans (fixed or variable, conventional or government, and so on), float from principal and interest (amount and time), geographic diversification or con-

Buyers and sellers can calculate to their hearts' content, but the value they derive will not necessarily equal the market value.

centration, amount of foreclosure exposure, and delinquency and foreclosure history.

Besides these facts and calculable figures, traders must make assumptions in their valuation of loan servicing, and these include: the future rate of prepayments, interest rate to discount the cash flows, delinquency and foreclosure projections, future growth rate for servicing costs, future growth rate for impound and escrow balances, future interest rate earned on escrow and impound balances, collection rate of late fees, estimated cost of conversion of the portfolio, and method for amortizing the purchase price for tax purposes.

Costs and Desired Yield

Buyers and sellers must accurately estimate and control administrative expenses, such as staffing, overhead and supplies, collection, and processing. Otherwise, servicing



can take a large bite out of revenue, even with the extra income from late charges and other penalties.

The desired yield is one of the most important objectives both buyers and sellers use to value loan servicing. For example, a buyer requiring an 11 percent net yield (assuming a 30 percent tax rate) on the portfolio would calculate the value to be 2.11 percent. At the same time, another buyer wanting to achieve an 8 percent net yield would place the value at 2.56 percent of principal (see figure 1). If the market price for this package were 2.15 percent of principal, the second buyer would be able to purchase this portfolio for less than he thinks it is worth, but the first buyer would have to pay more than he values it.

The seller, too, should always calculate the value of a given portfolio before deciding to sell it, comparing the yield of the servicing in question to the potential yield of the proceeds from the sale.

Future Prepayments

Two important and inextricably linked assumptions that analysts make to determine the value of loan servicing are future prepayments and future interest rates. Firms specializing in mortgage-backed securities (MBSs) have researched this area extensively, and the same concepts analysts apply to MBS prepayments work equally well with loan servicing. To project future patterns of prepayments, analysts reference historical prepayments on the loans (or similar loans) in the offering, compiling them by interest rate and geographic breakdown. They keep in mind that cer-

tain regions of the country seem consistently to prepay faster than others, and that loans with higher interest rates prepay faster than those with lower rates.

But the relationship between prepayments and interest rates is nonlinear. For example, a 14 percent Ginnie Mae may prepay 50 percent faster than a 12 percent Ginnie Mae, but a 16 percent Ginnie Mae will not necessarily prepay 50 percent faster than a 14 percent Ginnie Mae. Portfolios with mixtures of loans having high and low interest rates should be stratified by interest rate, then valued using a faster prepayment assumption for the high-rate loans than for the low-rate loans.

Prepayment rates are integral to present value, with higher prepayment rates usually implying a lower present value for a given portfolio. Figure 2 uses a sensitivity analysis to portray this relationship graphically. A portfolio having a present value of 2.25 percent, assuming a future prepayment speed equal to 100 percent of FHA, would be worth only 1.74 percent if the prepayment rate doubles. A portfolio with a prepayment rate of 100 percent FHA expected to yield 10 percent net after tax (using a 30 percent tax rate), would only yield 5.55 percent if the prepayments doubled.

Market Price and Calculated Price

Buyers and sellers can calculate to their hearts' content, but the value they derive will not necessarily equal the market value. The market price is the actual price upon which an independent buyer and seller

agree to execute a trade. The calculated value, or more accurately, the calculated present value, is obtained by discounting (at either a single, long-term discount rate, or properly, a sequence of variable, short-term discount rates) all expected cash flows (less expected expenses) over the life of

the portfolio to establish a value in today's dollars. Although this calculation can be done by hand, computer programs perform more efficiently (see "The Right Program").

Still, the market price and calculated present value rarely jibe, but the problem

is more likely in the assumptions analysts depend on to arrive at present value than in the calculation. In other words, forecasts of future rates of prepayments, impound earnings, and delinquency rates will not be precise, making it impossible to accurately predict what will happen.

The Right Program

Software packages for loan servicing evaluation are available for personal computer users. They have become essential to technically evaluating servicing. However, as with any computer tool, alternative packages have varying degrees of capability and sophistication. All programs utilize the same basic data, such as average loan size, servicing fees, number of loans, and loan interest rates. However, there are many other factors that are equally important and helpful. Overall, the programs that allow the user to enter unlimited combinations of assumptions require a solid understanding of the elements of loan servicing, but they provide a more accurate assessment of value than programs that are not flexible. Described below are many features and capabilities the potential user will want to consider.

Varying tax rates and yields: A company may find it necessary to project a zero percent tax bracket for two years and then move into the 30 percent tax bracket for the remainder of the investment. The investor might also target a 10 percent yield for the first five years and an 8 percent yield thereafter. Packages that permit this flexibility permit analysis of the effect of future tax changes along with reinvestment projections that change with anticipated business cycles.

Amortization of the purchase price: This can be addressed several different ways: none, straight line, over positive cash flow periods, sum of the years digits, and over a declining balance over a designated time.

Types of servicing: The model should allow the user to analyze various types of servicing. Obscure servicing exists that can be a very attractive investment when purchased at discounts from the levels of traditional servicing trades. The software being considered should allow variable rate servicing percentages to be entered along with changing dollar amounts (that is, per loan per year).

Cash flow amortization periods: Balloon payments cause amortization periods to be

longer than the original maturity of the servicing and need to be addressed.

Advances: The program should allow for different types of principal and interest advances: none, interest only, and both principal and interest. The most common way to consider these costs is to enter a percentage that is related to the impound earnings. For example, if the assumption for an impound earning rate is 9 percent with a cost of funds of 12 percent, the percentage for the cost of advances would be 3 percent. As the impound earning adjusts, so does the cost of advances.

Ancillary income: Income not generated by service fees or impounds should be accounted for.

Property tax and insurance impounds: This figure should be a current figure and must be allowed to reflect expected growth rates.

Principal and interest float: Principal and interest float and the earnings from late fees need to be projected.

Interest on escrow: Some states require the servicer to pay the borrower interest on escrow balances. This expense needs to be in the program. The program must allow for the value of impounds utilized as compensating balances.

Servicing costs: Servicing costs should be allowed to change as loans age. Some servicers project that a new loan that costs \$57 per year to service will cost only \$50 per year to service after it has been on the books for three years. This cost should then be related to future inflation.

Future prepayments: Future prepayments should be one of the most intense areas of concentration in the program. Loans should be allowed to prepay many different ways. Although FHA and VA loans can be expressed as a percentage of actual FHA/VA experience as published by HUD, recent interest rate volatility has created the need for more precise methods. The most accepted of these new methods are Single Monthly Mortality (SMM), Constant Prepayment (CPP) and Constant Prepayment Rate (CPR). SMM is a measure

of the proportion of outstanding loans that is expected to terminate each month. CPR and CPP are similar to SMM, but express prepayments on an annual versus a monthly basis. The model should allow for several SMM, CPP, or CPR inputs because it may be necessary to project 10 percent CPP for the first 24 months, 12 percent CPP from the 25th to the 65th month, and 5 percent CPP thereafter. The newest measure for projecting prepayments is the Public Securities Association Standard Prepayment Model (PSA). PSA is becoming widely accepted, with some market participants expecting it to replace FHA, CPR, SMM, and CPP. PSA should be included in the model to allow for this possibility.

Foreclosure costs: Costs associated with foreclosures are very important and should be projected with much care. Obviously, VA "no bids" will have different liability for the servicer than agency servicing without recourse.

Impound earnings: The interest rate used for earnings on impounds must be flexible enough to allow for numerous inputs for different periods of time. For example, the user may want to assume 7 percent earnings for the next three years and 10 percent thereafter.

Delinquency and foreclosure projections: Delinquency and foreclosure projections should be allowed to change as loans age. A new loan is more likely to become delinquent or go into foreclosure than an old one.

Remaining life and duration: Along with the present value, the model should calculate the expected remaining life and duration of the portfolio.

Sensitivity analysis: The model should be able to report how changes in assumptions affect the yield and the present value. If a portfolio yields 10 percent at an assumed 10 percent prepayment (CPP), the analyst may want to calculate the yield if the prepayments increase to 12 percent (CPP).

Hedging

Volatile interest rates (particularly in lower-rate scenarios) are increasing the element of risk for buyers of servicing. This interest rate risk can be reduced by hedging.

A good hedge works because the value of the hedge moves inversely to servicing income. As interest rates fall, prepayments increase. The subsequent loss of anticipated income from a purchased portfolio can be offset with a gain in the financial futures markets. Conversely, as interest rates rise, the financial futures markets decline, and this loss can be offset by the servicing portfolio, which will produce a greater-than-expected income stream because prepayments will be slower, and earnings greater, than anticipated on im-pound and escrow balances.

One hedging strategy is to simultaneously purchase servicing and zero-coupon bonds in similar increments. When interest rates fall, the zero-coupon bonds will appreciate in value as a compensation for the loss of income from prepayments in the servicing portfolio. When interest rates rise, the runoff of the portfolio should slow, producing more income than projected to compensate for the decreased value of the zero-coupon bonds, which the investor can then hold until they mature at the face value. The investor experiences more upside than downside risk with this hedge.

Investors should also be aware of the

dangers in hedging. For example, if interest rates rise slowly and prepayments increase on the package being hedged, the investor would lose both servicing and hedging income. On the other hand, falling interest rates may cause prepayments to be greater than anticipated, but the complementary hedge might not rise in value, leaving the investor to face a dangerous loss.

Hedge ratios are also very important. Buying a \$1,000,000 Treasury bond futures contract probably will not hedge an investment of \$1,000,000 for a loan servicing portfolio. The futures will not move exactly with the prepayments of the servicing. To determine a proper hedging ratio, an investor must consider the anticipated interest rate volatility over a given time horizon. Only after defining this horizon can the investor calculate the size of an instrument necessary to protect the investor's exposure.

Role of the Broker

Because transactions are becoming more complex, brokers are playing bigger and broader roles in the marketplace. The broker acts as the intermediary in a transaction, locating appropriate bidders and helping buyers and sellers make wise financial choices within the range of market value. Finding a knowledgeable broker who is familiar with all of the aspects of a servicing sale transaction can ensure that

Many servicers advocate developing a servicing security similar to a mortgage-backed bond.

the buyer and seller identify a fair market value.

A seller should use only one broker to market a package to prevent it from being overexposed in the marketplace. Most buyers agree that if more than one person shows them a package, their interest (and sometimes their assessment) wanes. An overly-marketed package suggests that the seller is desperate to get rid of it, creating the illusion of surplus servicing on the market. Because market prices are dictated by supply and demand, the appearance of an oversupply can lead to a real increase in supply as fearful investors, trying to jump the gun on a perceived price slide, dump their portfolios and actually cause prices to fall.

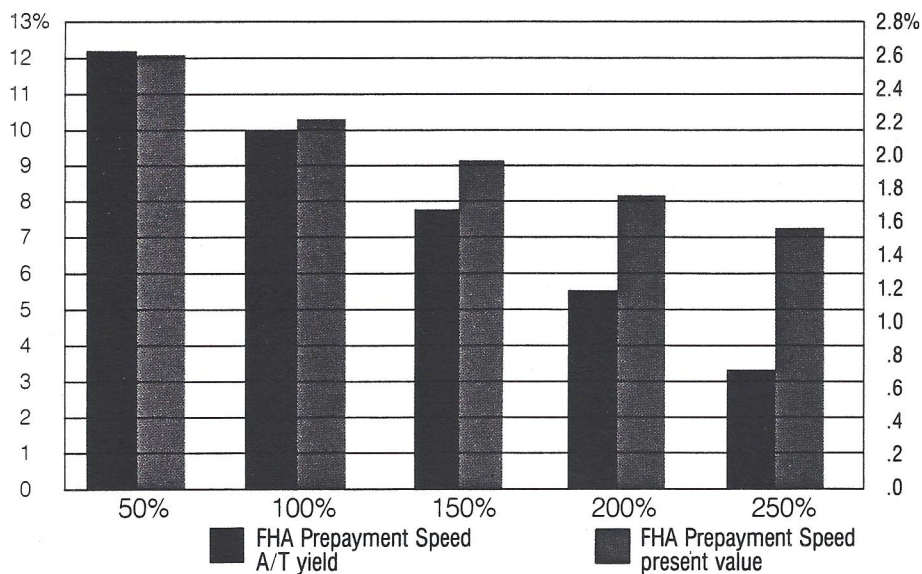
A broker must maintain client confidentiality by showing the seller's portfolio discreetly, often anonymously. Sellers should be certain that brokers they select do not show their packages to other brokers or randomly mail packages without first contacting potential bidders. Similarly, buyers want to deal only with sellers and brokers that have packages suited to their buying guidelines. A buyer of fixed-rate, geographically concentrated servicing should not have to waste time reviewing a package of nationwide ARMs. Because the name of a reputable firm does not always ensure a broker's competency, buyers and sellers should get to know their brokers personally, evaluating each on the individual's merits.

A knowledgeable broker can help a seller see the hidden worm in the juiciest bid. In a recent transaction, a seller accepted an offer that was 75 basis points higher than the rest of the bids. The seller should have been leery of this huge price differential, but greed was more powerful than prudence. When the buyer realized the true market value several weeks later, it backed out of the contract before finalizing the deal. The seller had to remarket the package and ended up losing the competitive bids that had been submitted earlier.

(continued on p.12)

Figure 2 How Changes In FHA Prepayment Rates Affect the A/T Yield and Present Value*

Assumes 30% tax bracket



Recent Developments

Many consumer advocates are voicing concern about the effect on the borrower of transferring loan servicing. Some highly publicized problems have included new servicers not paying property taxes, mishandled escrow accounts, and borrowers pushed from delinquency into default because they were unable to identify or contact their current servicer. In response, some state legislatures are itching to enact protective legislation that would restrict servicers in a given state. This could reduce the number of buyers and bidders of servicing and limit competition, possibly depressing prices. Borrowers, too, would ultimately suffer from the diminished competition as lenders pull out of restrictive states in favor of more profitable markets. Uniform legislation that would require equal measures from all states would be more effective.

These problems amplify the need for innovative action in the servicing sector. Many servicers advocate developing a servicing security similar to a mortgage-backed bond. One possible structure, resembling a mortgage-backed security, would allow the cash flow and liabilities associated with servicing to be sold through a subservicing arrangement. The seller would become the subservicer, for a prearranged fee (for instance, 10 basis points), enabling it to retain relationships with its client.

This security creates several risks for the buyer. If the seller is unable to fulfill its obligations, where would the servicing go? Can the subservicer service over the life of the security for the fee the contract calls for? Can the seller handle foreclosures? Will the subservicer somehow be responsible for the foreclosures?

The industry is also striving to improve hedging strategies, hoping to give servicers a more precise tool for protecting them against risk from interest rates. The servicing marketplace will continue to change in the near future, with innovations having a significant impact on the participants. As trading loan servicing becomes more and more sophisticated and market-driven, some institutions will suffer, but those that can meet the challenges of the marketplace swiftly and prudently can buy and sell servicing packages profitably. SMM