

# On the Use of Auctions as a Disposition Strategy for RTC Real Estate Assets: A Policy Perspective

Kerry D. Vandell  
*University of Wisconsin—Madison*

Timothy J. Riddiough  
*University of Cincinnati*

## *Abstract*

A sound strategy for real estate asset disposition is of paramount importance to the Resolution Trust Corporation (RTC) in its efforts to maximize costs resulting from the savings and loan bailout. A popular current approach to this problem is to employ expeditious sales structures such as auctions. Although auctions clearly speed up the disposition process, it is unclear whether they maximize net revenues. This paper analyzes the potential of auction structures to maximize sales revenue when such structures are applied to RTC commercial and residential real estate assets.

Absent political constraints, we conclude that auctions are usually inferior to traditional listing and broker sales channels. For the commercial real estate sector, this conclusion is based on the prominence of information-acquisition costs, on market thinness on the buyer side, and on continued uncertainty regarding local economic recovery. Our conclusion for the residential real estate sector is based on the degree of property concentrations and the apparent inferiority of auctions for residential properties in weak markets. A recognition of short-term political reality bolsters the case for auction approaches; however, the RTC should clearly stop promoting an image that it wishes to “sell, sell, sell.”

## **Introduction**

From its inception, the Resolution Trust Corporation (RTC) has been forced to grapple with conflicting mandates and objectives with respect to real estate asset disposition. In particular, a primary goal of the RTC is to dispose of real estate assets “expeditiously” at prices at or near market value and without undue impact on local markets (see RTC 1989). Implicit in this statement are three potentially conflicting ideals: (1) maximizing sales revenue, (2) minimizing time in inventory (or, equivalently, minimizing holding-period costs), and (3) minimizing disruption to local economies when disposing of the assets.

Because the markets for commercial and residential real estate assets experience supply inelasticities and informational

inefficiencies, emphasizing any one of the above goals may necessarily constrain the RTC's ability to satisfy its remaining objectives. For example, conventional wisdom recently has emphasized the need to sell real estate as quickly as possible at whatever prices the market will bear. Because real estate sales in the United States are primarily completed through broker channels under a market search mentality and because the pool of buyers is relatively thin for distressed properties to begin with, maximizing net sales revenue (in a present-value sense) generally takes some time. Moreover, some have expressed concern that quick disposition could border on asset dumping and produce a new round of defaults as local real estate prices spiral downward to absorb the supply of inventory.<sup>1</sup>

Although there were initial fears of asset dumping that would destroy weak real estate markets, this fear was soon erased by zealous and complex oversight that resulted in a cautious and problematic approach to asset disposition. For example, the RTC attempted to mount an ascending-bid, property-by-property (English) auction three times in 1990—the last attempt being the infamous November 15, 1990, auction—only to cancel each time. Although causes for the failures were many, a *Wall Street Journal* article (September 12, 1990) suggested that last-minute changes to the auction structure, significant due diligence costs, lack of financing provided by the RTC, and a general lack of information created enough uncertainty to reduce the potential bidder pool and lower bids below reservation values. Based on this and other experiences, a separate *Wall Street Journal* article (March 28, 1991) reported that, out of 2,000 real estate investors surveyed in January 1991, “not a single one expressed satisfaction after dealing with the RTC and 65 percent said they never would again” (p. 1).

Since early 1991, however, disposition philosophy and procedure have changed dramatically. Primarily employing a sealed-bid, bulk-sale auction approach, the RTC has been able to package and sell several billion dollars' worth of troubled real estate—a recent deal being a \$1.1 billion package of bad loans sold (at 48 percent of

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<sup>1</sup> Besides the implicit assumption of short-run supply inelasticities, this scenario assumes that RTC assets were previously withdrawn from the market supply and have reentered as vacant properties. Surely, this is not always the case, as many commercial properties remain at least partially occupied, with vacant space actively marketed during the RTC ownership interim. In our opinion, the dangers of quick asset sales lie more with residential properties, as most of these properties become vacant shortly after the loans on them default. See Vandell and Riddiough (1991) for more on this topic and on the relative abilities of commercial versus residential markets to absorb the RTC inventory successfully.

book value) to GE Capital Corporation and the Robert Bass Group. Jeffrey Rutishauser of GE Capital sums up the current operating environment as follows: “They’ve [the RTC] said, ‘Let’s forget about what this was worth five years ago.’ . . . Their philosophy has changed to sell, sell, sell” (*Wall Street Journal*, October 3, 1991, p. 1). Thomas Horton, the RTC’s deputy director of asset sales, adds, “We think the best thing in the world is if someone makes money off us. Smart money follows smart money” (*Wall Street Journal*, October 3, 1991). Thus, the RTC’s “Jekyll and Hyde” approach to real estate asset disposition can be characterized as moving from a cautious and overly bureaucratic asset-by-asset marketing approach to an aggressive, predominantly prepackaged auction format.

In view of the recent turn of events regarding philosophy and operational style, this article speculates on the ultimate potential success of a sell-fast strategy for RTC real estate asset disposition. We define success as a balance between the three aforementioned RTC disposition objectives—maximizing sales revenue, minimizing holding costs, and minimizing local market disruption—with especial interest in the first objective. In addition, we try to factor in, however imprecisely, short-term political realities. For example, we suspect the primary impetus behind the RTC’s current philosophy is a legislative push for the RTC to be “self-financing,” without an additional need for high-profile working capital appropriations (see *Wall Street Journal*, October 9, 1991, and November 29, 1991). This necessarily constrains holding periods and increases marginal holding costs as compared with cases in which political considerations are exogenous.

To make a determination regarding economic viability of the RTC’s sell-fast strategy, we analyze and interpret the performance of auction sales structures both theoretically and empirically. Furthermore, we compare and contrast sell-fast (auction) strategies with traditional “go-slow” (broker channel) strategies to clarify important issues. And assuming that an auction format is a workable disposition channel, we speculate on which auction structures might work best for commercial versus residential properties.

## **Auction forms and structures**

The overriding purpose of this article is to discuss auctions as a viable disposition strategy for RTC-owned commercial and residential real estate assets. In conducting our analysis, we use some of the major results culled from the academic auction literature. Many of these results are very powerful and can be generalized into

the real estate auction arena; hence, before we discuss RTC disposition issues, we briefly review some distinguishing auction structures and characteristics that underlie most of the theoretical and empirical interpretations used in our analysis.

### *Auction types*

Three basic auction forms exist with which the RTC can structure its property sales: the English, the Dutch, and the sealed bid.<sup>2</sup> Although each is fundamentally different in the way bids are received and information is generated, Vickrey (1961) demonstrates that all three forms result in equivalent expected net revenues for the seller under specialized circumstances that include risk neutrality and bidder's value estimates being independently and identically distributed. However, when bidders exhibit risk aversion, for example, equivalence results break down and a particular auction structure may dominate from the seller's standpoint. Before proceeding to strategic considerations, we outline the three basic auction structures below.

The English auction structure uses an ascending-bid format, in which accepted bids are typically increased at some increment,  $e$ , until no other bids are offered. If the high bid exceeds the seller's reservation price (the lowest price at which the seller will part with the asset), the high bidder "wins" the auction. The high bid,  $b_1$ , is a function of the second highest bid,  $b_2$ , because the higher bidder need only bid  $b_2 + e$  (assuming  $b_1 > b_2 + e$ ) to obtain the desired auction item. If the high bidder values the object at  $v_1$  and if one assumes no entry fees, information-gathering costs, or other fictitious, the high bidder generates an expected net profit of  $v_1 - (b_2 + e)$ . Meanwhile, the seller would like to structure the auction to maximize  $b_1$ , which, in turn, depends on (among other things) the degree of the other bidders' risk aversion, the seller's reserve price, and the number of interested bidders. Sotheby's and Christie's, as well as most other auction houses, use the ascending-bid English auction structure.

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<sup>2</sup> One can distinguish between first-price and second-price sealed-bid auctions. A second-price sealed-bid auction results in the highest bidder paying the second highest bid rather than his own high bid. Although theoretically equivalent to other auction types under specialized circumstances (see Vickrey 1961), empirical and experimental results indicate the superiority of first-price over second-price auctions in terms of maximizing net seller revenue (see, for example, Cox and Isaac 1984). Hence, second-price auctions are omitted from further discussion with first-price sealed-bid auctions referred to simply as sealed-bid auctions.

In contrast, a Dutch auction uses a descending–ask price format, in which a sufficiently high beginning ask price is stated and gradually lowered until a high bidder indicates a willingness to pay the current price and captures the item. The most important feature about the Dutch auction as compared with the English auction is the lack of information generated through the bidding process. The opportunity for participants to observe other bids (or absence of bids) in the English auction is valuable to potential bidders and can affect the ultimate revenue obtained by the seller. Alternatively, a Dutch auction conveys no information to potential buyers except that the item has failed to sell at an asking price in excess of  $b_1$ . This may explain why English auctions are so popular: many experts feel the information generated through the ascending-bid process propels bids to higher levels than would otherwise be attained.<sup>3</sup>

A third auction form is the sealed-bid auction commonly used to distribute government contracts. In this case, a seller solicits a single bid from each potential buyer and awards the object(s) under consideration to the high bidder at the high bid price. Note that, both theoretically and empirically, Dutch and sealed-bid auction structures perform similarly in terms of buyer bid strategies and expected net revenue to the seller. This is because, for both auction types, the high bidder must pay his bid price without being able to observe any other bids. Consequently, bidders operate strategically by trying to anticipate the next highest bid and trading off the possibility of losing the item by “shading” their bid downward against the greater subsequent probability of winning the item by paying a higher price. In contrast, bidders in an English auction do not operate strategically in the above sense. They bid until the ask price is above their personal valuation of the item, and the high bidder keeps going until the penultimate bidder drops out at a value below  $v_1$ .

Over the course of its short life, the RTC has attempted all three auction strategies, albeit in modified forms. It began by conducting slow Dutch auctions, in which asking prices started at high levels and, because buyers initially showed little or no interest, were gradually lowered to and below the original 95 percent appraisal barrier. Then it tried video hookup English auctions for selected commercial

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<sup>3</sup> This concept has been formalized and labeled *affiliated* information and bid formation. The idea is that bid levels can be positively correlated (affiliated) with other bids so that English auction participants may revise their value estimates based on others’ observed bidding behavior. See Milgrom and Weber (1982) for more on this concept.

properties, which failed because of a lack of interest, information, and clarity of structure. Sealed-bid auctions are now the current vogue as the RTC must balance revenue maximization with the realities of political economic constraints. Which auction structure, if any, is best suited for commercial and residential real estate disposition is addressed further on.

### *Auction sales versus traditional broker channels*

Auctions have been used relatively little in the United States as a traditional means of selling real estate; they have instead been restricted primarily to the disposition of assets taken as a result of foreclosure or bankruptcy. Although we were unable to locate specific figures, several experts agreed that, until very recently, auction sales represented less than 1 percent of nonagricultural real estate sales in the United States. A more typical marketing channel has been for the seller to list a property with a broker or realtor so that potential buyers may more easily search the market. For sellers who try to maximize net sales revenue using traditional marketing approaches, a dynamic element is introduced in the process with respect to reserve price setting and motivating the broker.<sup>4</sup> That is, the optimizing seller will constantly adjust his or her reserve price based on the density of bids received over time, the amounts of the offers, the effort put forth by the broker, and the degree of time pressure in which the property must sell.

Indeed, a primary distinction between an auction sales structure and the traditional broker channels is the amount of time the property is officially on the market. In an English or sealed-bid auction, the bidding process is compressed into a matter of minutes, so the seller merely accepts the high bid while also knowing the level of all losing offers. Traditional sales channels, on the other hand, require potentially long marketing times with bids arriving one at a time. In this case, the seller must analyze the marginal holding and opportunity costs of waiting for future offers versus accepting the current offer. Obviously, given the current political and operating environment, the RTC views holding costs as being prohibitively high and feels it should not be speculating on future market recovery. Hence, it prefers either to auction the properties or sell to the early bidders.

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<sup>4</sup> See Geltner, Kluger, and Miller (1991) for a dynamic search model that incorporates agency problems into optimal reserve price setting.

Lusht (1991) has studied realized seller revenues for both residential auctions and broker-listed property sales in Australia. In that country, where auctions are commonly used to market properties, Lusht reports that “auctions tend to be used to sell high quality, relatively unique properties, and to be used during periods of high demand and rapidly rising prices” (p. 5). Exactly the opposite situation exists for most RTC properties, which tend to be of lower quality, have few redeemable characteristics, and which are located in markets where prices are stagnant at best. Given that these findings are applicable to domestic real estate market behavior—and we believe they are, given the degree of symmetry between homeownership rates and housing quality, financing, and institutions found in Australia and the United States—Lusht’s evidence suggests that auctions may not be an optimal disposition method for RTC real estate assets. Consequently, policies emphasizing expedient disposition channels require even closer scrutiny, especially when contrasted with the stated RTC mandate of maximizing disposition revenue.

Why auctions continue to be the preferred disposition mechanism in private sector distress sales poses an interesting and relevant question to our analysis. There appear to be several plausible reasons why the distressed-property auction route has been taken. First, depository institutions are limited by statute to a short holding period on foreclosed assets with accompanying large increases to loss reserves for nonperforming loans. Hence, the choice of an auction is influenced by the need for regulatory expediency. Second, until very recently, default and foreclosure on real estate was a relatively rare event. Institutions again favored expediency, with lower loan recovery expectations as a tradeoff for savings generated from not having to maintain in-house property management and disposition staff expertise.

However, the RTC’s situation is quite different in several respects from that just described. Most important, the sheer magnitude of its disposition problem and the fiscal impacts that will result from its ability to minimize taxpayer losses suggest that the RTC’s disposition choice must be carefully studied. As of January 22, 1992, there were 44,679 real estate properties under RTC supervision with a mortgage book value of \$17.2 billion.<sup>5</sup> And, as we have noted previously (Vandell and Riddiough 1991), acquired thrift assets are expected to exceed 10 percent of total thrift assets, a figure approaching that observed in the Great Depression. Clearly, it is in our government’s best interest to invest sufficient resources so that

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<sup>5</sup> This information was obtained from the RTC reading room on January 22, 1992.

the impact of value-maximizing solutions on real estate disposition can be analyzed objectively before operational choices are constrained based on political factors.

### *Bidder valuation behavior*

Critical to the interpretation of theoretical and empirical auction results is delineating how bidders form their value estimates of auctioned items. In most situations, one of two extreme cases is assumed: independent private-value or common-value bid formation. It is important to distinguish between these two value formation types because, depending on the type of item being auctioned, one auction structure may dominate another based purely on bidder valuation behavior.

Assuming the one extreme of independent private-value bidding behavior, individual bidders form value estimates completely independently of other bidders' values, even when other bids can be observed (as they can in an English auction). If all bid estimates can be modeled as coming from the same underlying probability distribution, Vickrey's (1961) famous equivalence result, which shows that expected seller revenue is equivalent regardless of auction type, can be derived. Nondurable consumer goods (those typically in abundant supply and never auctioned) are usually cited as items that come closest to the independent private-value characterization.

Assuming the other extreme of common-value bidding behavior, there is one common value for the auctioned item but no bidder knows with certainty what that value is. Information is therefore important in helping bidders zero in on the correct asset value. For example, unwelcome ex post facto information to the winner of a common-value, sealed-bid auction is that his or her bid is the highest value estimate of the entire bidder pool. Because some uncertainty exists as to the exact value of the auctioned asset, the winning bidder immediately revises his or her estimate downward because all other participants have lower bid functions and presumably lower value estimates than the winner. This tendency for the winner to overbid in situations where uncertainty exists as to the value of the auctioned item is known as the "winner's curse," and it is well documented in the auction literature (see, e.g., Milgrom 1985; Kagel and Levin 1986; Giliberto and Varaiya 1989). Obviously, a seller would like to do whatever possible to minimize bidder attempts to recognize and compensate for this phenomenon.

In reality, real estate exhibits some combination of these two extreme value formation behaviors. Residential real estate more closely approaches a private-values setting than does commercial property because of the consumption-goods aspect to housing. Alternatively, income-producing property is better thought of as approximating common-value assumptions because of both the uncertainty in estimating the present value of future cash flows and the large role that information gathering plays in the investment decision. Interestingly, experience has shown that private-value-type items, such as wine and art, are more often sold under an English auction structure, whereas common-value-type assets, such as government contracts, are more often sold through sealed bids. This suggests that residential real estate is perhaps better suited to English auctions whereas commercial properties are best sold through sealed bids—facts the RTC has recently come to appreciate through trial and error.

## **Issues in the disposition of commercial real estate**

In this section, we analyze and speculate on the potential success of auctions in meeting RTC commercial real estate disposition objectives. To address this issue, we consider information-gathering and bid-preparation costs, financing availability and risk sharing, and the effects of the winner's curse on RTC revenues. We then attempt to determine whether auctions will work for commercial properties and what sales mechanism structure should be used.

### *Information-gathering and bid-preparation costs*

Acquisition of commercial real estate property typically requires the incursion of nontrivial information-gathering and bid-preparation costs. These costs can include financial feasibility studies, appraisals, engineering and environmental reports, market analyses, and so on. In general, these costs are at a minimum in the tens of thousands of dollars, commonly a significant percentage of asset value. And in localities that are experiencing disequilibrium market conditions, where large uncertainty exists as to future conditions, or where properties are somewhat atypical in terms of design or location—in short, in many of the locations and properties included in the RTC inventory—information gathering assumes even greater importance than is normally the case.

Assuming bidders operate independently of one another, each must gather information beyond what is publicly available, little of which has been effectively generated by the RTC or is without cost.<sup>6</sup> This implies a large amount of duplicated effort on the part of potential bidders to the ultimate detriment of expected seller revenue because potential buyers must reduce their bids beyond out-of-pocket expenses to compensate for the probability of losing the asset. For example, suppose a bidder values a property at \$1,000,000, has zero expected gain from the transaction, incurs \$25,000 in bid-preparation costs, and estimates a probability of winning the auction at 10 percent. A rational, risk-neutral buyer would then bid only \$750,000 for the property (not \$975,000) to reflect the fact that, on average, he or she would have to incur \$250,000 in deadweight costs for every property “won.”<sup>7</sup>

Contrast this situation to what typically occurs with sequential-bid, commercial real estate transactions. Before committing to large bid-preparation expenses, potential buyers many times “option” a property for a specified length of time to evaluate its merits further. Option cost is justified by the ability to eliminate competition (at least temporarily), thus bringing the conditional probability of winning to one. In this case, buyers will increase their bids if the marginal gain from reducing the probability of losing the bid exceeds the sunk cost of the option. From the previous example, a bidder was willing to pay \$750,000 with a 10 percent chance of winning the item. Should that bidder be able to purchase an option for \$50,000 and increase his or her conditional probability of winning to one, he or she would be willing to pay up to \$925,000 for the property—an increase of \$225,000 in seller revenue (including the option purchase price) from the sales process.

In our opinion, the presence of significant deadweight bid-preparation costs is a major reason for the failure of RTC English auction attempts in 1990. Because RTC commercial properties are usually marginal assets in weak or recovering real estate markets, feasibility and market analysis is critical to buyers forming reliable value estimates. By sending mixed signals, the RTC has generated little relevant information and has created uncertainty in the market as to its disposition strategy and operational style. This has

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<sup>6</sup> Much has been written about the RTC’s failure to generate accurate and standardized information (e.g., *Wall Street Journal*, September 12, 1990). Recent experience suggests information generation is improving, at least with respect to standardization.

<sup>7</sup> See Samuelson (1985), French and McCormick (1984), and Hausch and Li (1991) for more on how bid-preparation costs affect auction prices.

made information costly indeed. The effect has been to reduce auction participation to lower levels than necessary because of high bid-preparation costs, low perceived win chances, and a large amount of (net) value estimate uncertainty.

Besides gathering as much public information as feasible and making it available to all potential buyers in a standardized format and at a reasonable cost, the RTC might try the following information cost-reduction solution. David Shulman, in his *Wall Street Journal* editorial (March 23, 1990), suggests that the RTC locate auctions in one city at a time so potential buyers can seriously focus on a market to understand its workings better:

The city-by-city auction would economize on information costs, because real estate analysis focuses on the prospects of local economies. Each city would be placed under a microscope by market participants, and data on rents, vacancy rates and historic land prices could be readily assembled.

This would also broaden the bidder pool, make for more competition among bidders, and reduce the possibility of collusion due to only close-knit local buyers participating in the auction process. Recent RTC bulk-sale auctions have approached Shulman's ideal by grouping similar properties from one or two geographic areas; however, there remain problems with the depth of the bidder pool and the possibility of collusion (see *Wall Street Journal*, July 17, 1991).

### *Financing availability and risk sharing*

A lack of available commercial debt financing—even on sound projects—is often documented in today's lending environment. Not surprisingly, then, it is almost impossible to obtain nonseller financing on RTC properties that have the cloud of a mortgage default hanging overhead. Consequently, many observers have argued the need for the RTC to make financing available to buyers as a component of the overall disposition strategy. In response to these urgings, the RTC Oversight Board authorized RTC seller financing for up to \$7 billion in December 1990. In addition, down-payment levels were reduced to 15 percent of value on some property classes, and participation loan arrangements were allowed and encouraged.

These are critical changes, considering the uncertain and illiquid real estate market environment in which the RTC is functioning.

The financing policy change now allows potential buyers to overcome capital constraint problems and, just as important, shift a portion of the investment risk back to the RTC. Auction theory is clear on the subject of risk shifting. In an environment in which buyers are averse to risk and sellers are approximately risk neutral (as often should be the case with government agencies), risk shifting from buyer to seller is mutually beneficial in a Pareto optimal sense.<sup>8</sup> In other words, marginal reductions in risk are quite valuable to risk-averse buyers who, in turn, are willing to adjust bid prices upward accordingly. These marginal upward adjustments more than offset the additional risk shifted back to the seller, and, on average, the RTC is ultimately a net winner.

To see this, consider an 80 percent loan-to-value, no recourse, equity participation loan in which the RTC shares a certain percentage of gains on the eventual property sale. By participating in sale profits, the RTC has obtained a call option on property price movements, which in return requires an interest rate reduction for the buyer. This rate reduction, coupled with the borrower's option to put the property back to the lender (default) if property values sour, reduces investor project downside potential (value-estimate uncertainty) and thereby increases project value.

Although financing plans may generate some future losses and subsequent controversy owing to the existence of embedded mortgage options and asymmetric buyer information, seller financing availability may be the only policy in which many properties sell at anywhere near market value. Indeed, a wait-and-see policy by the RTC stalls any risk shifting at all from seller to buyer, so that a conditional payment policy can often be viewed as a risk-reduction program. And given the nontrivial credit constraint problems that currently exist, as well as the fact that mortgage rates are currently quite low, the RTC can address risk shifting, capital availability, and affordability issues in one policy move.

Interestingly, the RTC has recently implemented a dual bulk-sale auction plan in which bids are solicited on both a cash-only and a financed basis. The RTC then has the choice of awarding the properties to either sealed-bid winner. On a recent bulk sale to Maxxam's, the RTC chose to be paid \$130.1 million in cash rather than \$180.1 million for properties financed at the 85 percent level (see *Wall Street Journal*, July 8, 1991). Although details of the financing and put-back arrangements are not known to us, a

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<sup>8</sup> An exception to this rule occurs when moral hazard problems are present; see McAfee and McMillan (1987) for additional background.

28 percent price reduction to eliminate default and moral hazard risks seems excessive. Again, we suspect that self-financing considerations were at the root of this decision, but it clearly appears sub-optimal from a risk-neutral, revenue maximization standpoint.

### *The winner's curse*

Risk and uncertainty can have diametric effects on disposition prices in a (common-value) commercial real estate auction setting. On one hand, risk is the enemy of price. Increases in systematic risk mean reduced demand for affected investments and therefore a lower price. As previously noted, much of the RTC inventory (and distressed property in general) is situated in localities in which large value run-ups were experienced in the 1980s, followed by substantial price drops, and in which a relatively large amount of uncertainty exists as to future economic recovery and performance. Unfortunately, the RTC can do little to affect depressed economies, so uncertainty is exogenous in this case.

In another sense, value uncertainty can be advantageous to sellers if it produces outlying bids on the high side. Variance of bids on common-value assets can be the result of asymmetric information or simply bidder inexperience and overoptimism. As already noted, this phenomenon of overbidding when the value of an auctioned item is uncertain has been labeled the winner's curse. The winner's curse may explain the prevalence of sealed-bid structures for common-value-like items. Because the English auction bidding process itself generates information regarding price, many sellers wish to suppress this (and perhaps other) information source(s) by taking sealed bids and hoping that partial buyer ignorance will produce excessively high bids.

Indeed, the presence of the winner's curse has been documented in numerous non-real estate empirical settings; see, for example, Capen, Clapp, and Campbell (1971) on petroleum leases; Mead, Moseidjord, and Sorenson (1984) on drainage leases; and Giliberto and Varaiya (1989) on bank sales. By analogy, because commercial real estate is an investment (rather than a consumption) good that requires estimation of uncertain future cash flows, a sealed-bid auction structure presents itself as a way to extract increased seller revenue. Unfortunately for the RTC, however, anecdotal evidence suggests that few real estate participants currently exhibit tendencies to overestimate market values in a biased fashion for distressed properties (see, e.g., *Wall Street Journal*, March 28, 1991, and

July 30, 1991). Moreover, potential buyers require more information—not less—to reduce uncertainty and compensate for high information-gathering costs. Hence, it appears that systematic risk effects currently dominate biased bidding effects to create a winner’s “blessing” in the sense that bids are biased downward to compensate for excess property-value uncertainty. As Milgrom and Weber (1982) note when considering the winner’s curse—and this seems particularly applicable to many of today’s real estate markets—

the cases of *reduced* average willingness to pay [from partial resolution of uncertainty] can only arise when the range of possible wealth outcomes from the auction is large . . . and when the unresolved uncertainty is substantial. (p. 1117)

Subsequently, we conclude that, in all likelihood, the winner’s curse does not operate in current RTC commercial real estate markets to render sealed-bid auctions ineffective in extracting excess rents from overbidding. Any hopes the RTC may pin on bidders not accounting for the winner’s curse are currently in vain; most market participants are quite aware of the phenomenon and compensate for its anticipated effects.

*Summary: Will auctions work with commercial properties?*

To date, RTC auctions of commercial real estate have either failed in an English auction setting or been criticized for allowing properties to go cheaply when bulk sales were made through sealed bids<sup>9</sup> (see *Wall Street Journal*, July 8, 1991, and October 3, 1991). Nonetheless, the consensus is still that property sales should proceed as quickly as possible, with auctions being a viable and perhaps preferable marketing tool.

Our analysis suggests that, although the RTC should not hold properties back in anticipation of future market recovery, traditional broker channels are preferable to auctions when maximizing net sales proceeds is a preeminent RTC objective. We base our conclusion primarily on the prominence of bid-preparation costs in

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<sup>9</sup> We recently learned that the Federal Deposit Insurance Corporation has succeeded in conducting a video hookup English auction of 184 properties (see *New York Times*, January 12, 1992). Although the auction was conducted, its success in maximizing sales revenue remains doubtful. Evidence of one resort, which sold for \$695,000 based on a mortgage book value of \$8 million, suggests that taxpayers might have been better off if the auction had indeed failed.

commercial real estate and on the superiority of traditional purchase options in increasing expected seller revenue. Furthermore, although the RTC has moved in the right direction with its seller financing program, these benefits are conferrable in a variety of sales distribution situations, not just through auctions. And finally we have argued that, although a sealed-bid auction format might be advantageous in a normal market situation owing to winner's curse benefits, markets are currently such that pessimism and fear dominate to suppress the overbidding tendencies that typically result from overoptimism.

Of course, political and economic realities are often noncongruent. Marginal "losses" resulting from inferior disposition methods can never be accurately quantified because alternative courses of action are never realized. Similarly, the consequences of suboptimal economic policy are obtuse and not immediately felt. In addition, budget appropriations are high-profile policy acts that draw unwanted attention to those who participate in the political process. In the short term, then, good politics suggest encouraging the RTC to be "self-financing" in the sense of generating speedy sales (at potentially highly discounted values) to supply needed working capital. Given this scenario, bulk sealed-bid property auction sales are probably a satisfying solution to the disposition problem. Although "package deals" are seldom optimal mechanisms for generating sales revenue, they can introduce economies of scale with bid-preparation costs, reduce holding periods for less desirable properties, and generate short-term capital for operations.

## **Issues in the disposition of residential real estate**

Of the approximately 45,000 real estate properties held by the RTC as of January 22, 1992, roughly 37,000 are developed residential properties or raw land targeted for residential development. Thus, although commercial properties are a significant proportion of the RTC inventory based on dollar value, residential properties are far more numerous. These large quantities, combined with the facts that distressed residential properties tend to be geographically concentrated and that residential markets are relatively inefficient, raise several new policy issues with respect to auctions and property disposition.<sup>10</sup> This section attempts to address these issues in determining the viability of auction disposition mechanisms for RTC properties.

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<sup>10</sup> For evidence on inefficiencies in residential housing markets, see Case and Shiller (1989, 1990).

*Concentration issues*

When analyzing the Dallas, Texas, residential market, Gau (1991) cites the degree of geographic concentration of RTC inventory. Not only does the RTC own 3,542 undeveloped residential lots in the Dallas/Fort Worth market [15.5 percent of total lots in that metropolitan statistical area (MSA)], but it also owns 22.5 percent of all properties on the east side of Dallas as well as 26.5 percent of all lots in North Arlington! We used geographic mapping to illustrate similar concentrations in Dallas for not only residential lots but also single-family residences, condominiums, and duplexes (Vandell and Riddiough 1991). And further analyses indicate that most affected residential areas either are newer subdivisions that have never quite reached a critical ownership/occupancy level and have subsequently stagnated, or are older working-class neighborhoods that have suffered greatly from local economic dislocation (unemployment in particular).

In one sense, the degree of residential property concentration makes an auction disposition process simpler. Concentration and relative homogeneity of properties in particular neighborhoods relieve potential buyers of extensive search and analysis costs that can significantly lower their bids. In addition, many of these properties qualify as affordable housing units in which favorable marketing and financing policy guidelines apply to enhance their appeal to buyers. It is well known from auction theory and practice that (in most cases) the greater the potential buyer pool, the greater the competition between bidders and the larger the expected seller revenue. A large quantity of similarly located and designed properties with preferential financing available typically attracts a number of buyers whose interests range across more than just one property.

Indeed, as a workable sales mechanism, English auctions have shown moderate success. The Federal Housing Administration, the Department of Housing and Urban Development, and some private lenders have successfully conducted (and continue to advocate) ascending-bid auctions for residential properties concentrated throughout the Southwest. On the negative side, however, Gau, Quan, and Sternberg (1990) analyze an actual ascending-bid auction for undeveloped residential lots in Texas and find that auctioned lots sell at a significant discount as compared with those sold through negotiated sales. Thus, although it appears that auctions

can be used to reduce RTC holding costs on residential properties, it is not clear whether they are a value-maximizing alternative.

From another angle, however, property concentrations may be quite dangerous when one considers the effects of disposition on local economies. As we concluded when analyzing RTC dispositions on local housing and real estate markets,

The RTC inventory, current and expected, is highly concentrated among affordable housing units in newer middle-income or lower middle-income suburban subdivisions. If these units are aggressively marketed, price discounted, and offered favorable, perhaps subsidized financing as announced, they could be unloaded quickly but at a considerable cost. The cost could extend beyond the direct costs of the financing subsidies and price discounts; it could adversely affect the fragile stability of such neighborhoods, already in a precarious situation because of the marginal equity of existing owners. Perceived drops in values and changed social character of the neighborhood as lower income households enter the market could cause a high proportion of the less tenacious owners to abandon their units. It is doubtful that the intent of the federal government is to promote the availability of affordable housing through the promotion of neighborhood instability and decline. Yet there is considerable potential for just such a scenario to unfold if the RTC's announced affordable-housing strategy is implemented (Vandell and Riddiough 1991, p. 87).<sup>11</sup>

If an auction disposition policy clearly increased *the totality* of RTC revenues net of holding costs, property concentration concerns might assume less importance. However, in addition to immediate sales revenue considerations, after-market effects of disposition on surrounding property values and the possibility of stimulating further defaults must also be analyzed. Given these after-market risks, we are skeptical of expedient disposition methods with residential properties, even when political constraints are properly considered. Publicity surrounding stories of neighborhood decline and destabilization may actually be more damaging than the assumption of a role in RTC budget appropriations.<sup>12</sup>

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<sup>11</sup> For subsequent evidence in Phoenix, Arizona, see the *Wall Street Journal*, March 28, 1991.

<sup>12</sup> Again, see the *Wall Street Journal*, March 28, 1991, for a specific example of adverse publicity surrounding neighborhood destabilization.

*Evidence on residential property auctions in Australia*

Only recently have researchers begun looking empirically at the effectiveness of real estate auctions as sales tools. This is an important step because real estate typically elicits complex, behaviorally influenced bidding that does not fit assumptions needed to generate simplified theoretical model results. As previously noted, for example, residential real estate fits neither independent private-value nor common-value bid formation because housing has components of both a consumption good and an investment good and because value formation is affiliated with other observed bidder value estimates.

An important initial empirical auction paper (Lusht 1991) compares residential property prices brought by auction with those brought by negotiated sale. Lusht's study is based on data gathered from Melbourne, Australia—a market in which auctions are a generally accepted marketing tool. In his study, Lusht examines properties sold through auction, sold either before or after the scheduled auction, or sold through buyer search/broker channels. By controlling for differences in property specific amenities, time on market, degree of market interest in the property, and degree of seller "impatience," Lusht determines whether auctions or negotiated sales bring higher average sales prices.

Lusht's (1991) findings are as follows:

A comparison of house prices brought by English auctions versus private negotiations produced evidence that the pricing mechanism matters, and that the price maximizing choice is a function of level of market interest.

A sample of 309 houses sold from January 1, 1988 through March 31, 1989 in a submarket of Melbourne, Australia, houses expected to generate at least normal levels of interest and listed for sale by auction and sold either before or at auction brought a statistically significant price premium over houses listed and sold privately, and over houses that were listed for sale by auction, unsold at auction, and sold privately later. For houses expected to generate below normal levels of market interest, private listings and sales brought higher prices than did auctions. (p. 18)

In addition, the data suggest that sellers who are judged to be patient extract prices that are 6 percent higher, on average, than those obtained by less patient sellers. These findings cause Lusht to speculate, "Given these results, one questions the rationale of

sellers of normal interest properties who choose private listings, and of sellers of below normal interest properties who choose auction listings.”

In general, given the many similarities between Australian and U.S. housing markets *except* Australia’s common use of auctions (see Lusht 1991), we concur with Lusht’s findings and conclusions as they may apply to the RTC situation in the United States. From a profit-maximization standpoint—and even ignoring potential long-term after-market effects—one must question the wisdom of conducting auctions on relatively low-interest properties in which the RTC has clearly signaled to the market its impatience with the disposition process. Perhaps the clearest conclusion to be drawn from this analysis is that the RTC (and its supervisory bodies) should adopt and communicate a policy of property disposition patience, thereby dampening its “fire sale” image. Again, we do not advocate a wait-and-see attitude in the sense of speculating on future market recovery, but only suggest that the RTC conduct a thorough and patient marketing analysis before selling its inventory.

### *Summary: Reconciling competing goals*

Housing policy has long been a concern of the federal government, and the issue of what to do with the huge volume of defaulted RTC residential properties presents a new and interesting challenge. The RTC’s low-income housing program is an outgrowth of this policy concern although the program’s accomplishments to date have been subject to criticism (see *New York Times*, June 26, 1991). And beyond low-income housing objectives, a bigger concern is how best to dispose of the entire inventory of residential properties while reconciling competing goals.

The answers are far from crystal clear to us, but two recommendations emerge from our analyses. First, the RTC should consider the long-range consequences of the methods and speed at which property disposition proceeds. RTC inventory concentrations are such that property sales can change the character and viability of affected neighborhoods for many years into the future. Second, evidence from Lusht (1991) demonstrates that seller impatience is detrimental to realized seller revenue and that low-interest properties may realize higher revenues when listed and sold through broker channels as opposed to being auctioned. This suggests that the RTC, both publicly and privately, should back off from a sell-fast

stance and exhibit patience in evaluating purchase offers and sales structures. In other words, our analysis suggests that traditional broker channels seem an appropriate disposition choice for residential real estate assets.

Again, if short-term political considerations carry the day, a policy of varied disposition channels is perhaps a reasonable solution to reconciling goals. A proper mixture of low-income, broker, and English auction sales addresses policy concerns with respect to revenue generation, equitable distribution of inventory, and holding-cost minimization.

### **Summary of policy implications and conclusion**

This article sought to scrutinize current RTC real estate disposition methods. We have done this by analyzing auction sales structures through a review of pertinent theoretical and experimental results, available empirical evidence, and anecdotal newspaper accounts. In the process, we have distinguished between commercial and residential real estate assets. This distinction is necessary, given the unique characteristics of each asset market. For example, although commercial mortgage markets are relatively efficient informationally at a macro level, acquisition of property-specific information can be quite costly.<sup>13</sup> Exactly the opposite situation exists in the residential market. Therefore, although we arrive at similar conclusions regarding the attractiveness of auction sales methods for RTC properties, the mode of analysis required to reach these conclusions is quite different.

Subsequently, given this dichotomy between real estate asset types, our analysis suggests the following with respect to an expedient mode of disposition for RTC commercial and residential real estate assets:

#### *Commercial real estate*

- Costly information acquisition is a severe detriment to auction sales revenues. Large bulk-property sales located in particular MSAs alleviate the information-gathering problem to some extent—but at what price? The large sealed-bid, bulk-auction

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<sup>13</sup> See Vandell and Riddiough (1991) for a more detailed discussion on the relative efficiencies of the commercial market and its ability to absorb RTC inventory.

sales to date have realized less than 50 cents on book-value dollar, a number that does not reflect that similar, nondistressed loans would sell for a premium in today's low-interest rate environment. This compares with depository institutions that typically recover between 60 and 80 percent of mortgage book value on foreclosed assets (see Riddiough, Thompson, and Vandell 1991; Barnes, Vandell, and Sondergeld 1992).

- Risk sharing between buyer and seller (the RTC) should be encouraged through prudent financing structures that include seller financing and participation loan structures. This point requires emphasis because evidence from a recent large bulk sale suggests that the RTC may be overcompensating for perceived default risk and information asymmetries that exist with commercial properties to the detriment of net long-term sales revenues.

### *Residential real estate*

- The RTC should carefully analyze residential property concentrations before developing disposition strategies. Because of supply inelasticities and market inefficiencies, the potential exists for rapid disposition in certain concentrated submarkets to result in adverse after-market effects that might include subsequent rounds of default and disgruntled property owners.
- Evidence from property sales in Australia suggests that auctions are inferior to traditional broker channels for weak properties in weak markets. Moreover, patient sellers are rewarded with significantly higher sales prices than impatient sellers. As current RTC marketing strategy and property inventory fit the weak property, weak market, and impatience criteria, we conclude that an auction disposition strategy is, in all likelihood, suboptimal from a revenue maximization standpoint.

Without question, the RTC must consider issues other than the unconstrained maximization of net sales revenues from real estate asset disposition. Short-term federal budget constraints, the specter of impropriety, and complex and overbureaucratic oversight are but a few of the important variables that must be factored into the disposition equation. To the extent that auctions positively address these issues in ways that other disposition methods do not,

the sell-fast approach is better justified. With political realities in mind, we put forth the following policy recommendations:

- Back off from a publicly proclaimed operational philosophy of “sell, sell, sell.” Theory and practice clearly demonstrate that seller impatience and short disposition time frames in thin markets are detrimental to long-run revenues. Adopt a policy of managed urgency, in which high holding costs are explicitly recognized but are balanced against the benefits of waiting for potentially higher bids. Hence, we recommend that the RTC opt for a higher percentage of traditional broker channel sales as compared with English and sealed-bid auction structures.
- Conduct smaller bulk-sale, sealed-bid auctions for commercial properties located in selected MSAs. To date, bulk sales have been in the \$500+ million range, a situation that severely limits the size of the bidder pool and thereby reduces competition and increases the possibility of insider dealings and collusion. And as the better properties are skimmed off in earlier auctions, there will not be the critical mass of properties available to conduct successful, large-scale bulk sales in the future. Therefore, the RTC should already begin lowering its disposition rate expectations.
- Only auction undeveloped land, residential lots, or developed residential properties if potentially low prices do not adversely affect adjoining property value. There is an abundance of anecdotal evidence that RTC sales have undercut prices paid by existing adjoining property owner. Undercutting seems not only economically dangerous but also politically risky, as affected voters and local media respond to the “adverse influence” of the federal government.

In closing, we emphasize the need to recognize the sad fact that the federal government is in the real estate business for the long term. It might as well become good at it.

## Authors

Kerry D. Vandell is professor and chairman of the Department of Real Estate and Urban Land Economics, University of Wisconsin—Madison. Timothy J. Riddiough is assistant professor of finance and real estate at the University of Cincinnati.

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