New Ideas for Old REOs: A Disposition Framework for Marketing REOs for Rental Properties

Prabal Chakrabarti and Mariana Arcaya, Federal Reserve Bank of Boston

Introduction

In response to the continued influx of foreclosures into the housing inventory, the Obama Administration is soliciting policy makers and community developers for new strategies to put the foreclosed properties owned by housing agencies Fannie Mae and Freddie Mac back into productive use.[1] The administration specifically requested proposals for converting properties into rental units. We believe that if converting some units to rental ultimately becomes part of the approach, properties should be selected based on some basic criteria that follow both sound economic practice and public policy goals. The purpose of this article is to outline a framework for government-sponsored enterprises (GSEs) like Fannie Mae and Freddie Mac as well as private owners to identify which foreclosed properties would be most appropriate for rental and which would remain more appropriate for homeownership. We then demonstrate how such a disposition framework could be applied, using Massachusetts as an example.

Background

An unprecedented number of foreclosed properties has accumulated in the wake of the housing crisis. According to the Federal Reserve Board, as of August 2011, 500,000-600,000 of the 2 million vacant properties for sale in the United States are in banking parlance called "other Real Estate Owned" (REOs).[2] When concentrated, vacated properties make the neighborhood a less desirable place to live.[3] While not among the hardest-hit states, Massachusetts is not immune from this phenomenon. Since 2006, foreclosure rates have risen here as in the rest of the country. As of August 2011, according to Federal Reserve Bank of Boston analysis of registry data from the Warren Group, lenders owned 6,196 properties in Massachusetts. This figure is merely a point-in-time estimate, as foreclosures flow into the REO stock and REO sales flow out. A separate analysis conducted by the Massachusetts Housing Partnership finds as of October 1, 2011, a total of over 29,000 units in distress (a number that includes not just already-foreclosed properties, but also units for which a foreclosure petition has been filed or an auction has been scheduled). The rest of this brief will use the 6,196 properties as a baseline for REO counts, but one should realize they represent just a fraction of likely future REOs.

In principle, the post-foreclosure process is a straightforward market transaction. The seller prepares the property for sale, markets it, and accepts the best offer from a prospective buyer. Yet several factors complicate this seemingly simple process. In many cases, the government owns the property in default, having insured or guaranteed the original mortgage. These foreclosed properties may be in indeterminate condition, lie in disrepair, or have a questionable chain of title. Indeed, according to a literature review conducted by the Federal Reserve Bank of Atlanta, several empirical studies suggest that foreclosures trade at a discount compared with neighboring properties.[4] Neighbors may have strong preferences about the current state and future use of a property that affect their own housing values.[5] In the current underwriting climate, some would-be buyers may lack appropriate creditworthiness. Overall, there may be diminished expectations about a rise in future house prices and, hence, weak demand. The community or region may have use needs, such as for rental or more affordable housing, that may differ from previous uses. Sellers may find it difficult to price accurately in certain neighborhoods or may be willing to wait and hold rather than sell at current prices.

While the post-foreclosure process has made it difficult for homes to be resold as homeownership units, several aspects of the current housing market point to an increased demand for rental units. In a recent speech, Fed Governor Elizabeth Duke cited the strengthening demand for rental housing nationally.[6] In growing numbers, households are seeking rental housing because, for one thing, they face tighter mortgage conditions. Families who have gone through foreclosure often seek single-family rentals (See Federal Reserve Board research by Raven Molloy and Hui Shan[7]). Others rent for a period of time when they move to a new job, or perhaps after a job loss. Young adults often rent for years prior to becoming homeowners, and the impact of the recession may delay their ability to enter the market. The Federal Housing Finance Agency's recent focus on obtaining information from the private sector about how to convert REOs to rentals and the recent release of a white paper on housing policy by the Federal Reserve Board that discusses the conversation of REOs to rental[8] provide evidence of broad policy interest.

In Massachusetts, affordable housing is limited in quantity and by community. The share of Massachusetts housing units that are affordable dropped to 9.1% in 2011 from 9.3% in 2006.[9] The state is famously supply-constrained because of restrictive zoning and land-use policies.[10] It does allow state overrides of local exclusionary zoning, and while this had led to increased construction, many towns still have a limited supply of rental housing.[11] Statewide, much of the affordable-housing stock is concentrated in places that may have negative spillovers from the lack of a mixed-income resident population like poor schools or infrastructure. [12] While Massachusetts urban centers already offer a diversity of housing choices, the state's suburbs are dominated by homeowners in single-family homes that are unaffordable to those of low or moderate income. [13] One reason for the lack of affordable housing is the issue of "expiring-use subsidies." A study by the Community and Economic Development Assistance Corporation found that the end of the 40-year program offering low interest rates to developers in exchange for maintaining affordability, in combination with the end of other rent-subsidy contracts, could lead to the loss of over 14,700 units from peak levels by the end of 2012.[14]

While achieving a market-clearing transaction is still important for government-owned foreclosed properties, this article argues that designating some REOs as affordable rentals could be justified in both economic and policy terms. Government ownership, market uncertainty, and community needs make it advisable to apply a simple set of conditions that guide how to dispose of properties and how to determine appropriateness for rental. These considerations could be applied whether the property is owned by the government or a private lender, as they may coincide with the most valued use of the property. This article will describe a few simple rules by which disposition could occur, in particular as applied to government-owned properties, which serve the dual objectives of taxpayer return and public policy goals. However, as this analysis shows, even if sensible criteria are followed, the resulting number of properties that can be identified as appropriate for rental falls far short of solving the REO problem.

In this hypothetical Massachusetts case, we review the 6,196 REOs, demonstrating that a property's best and highest use depends on market and policy considerations. We use the Disposition Framework found in **Figure 1**. Given the request for information, we apply a framework to GSE-owned properties (though the framework could be applied to REOs in general) to determine whether properties meet a series of criteria that guide decision making.

In **Figure 1** below we outline how the framework could be used to determine which properties are suited for affordable rentals. In this particular case, only the left-most branch of the "decision tree" is fully described with property counts, but each branch can be followed along the framework in similar fashion. All property data and counts in this section come from the Boston Fed analysis of data, as described in the methodology.

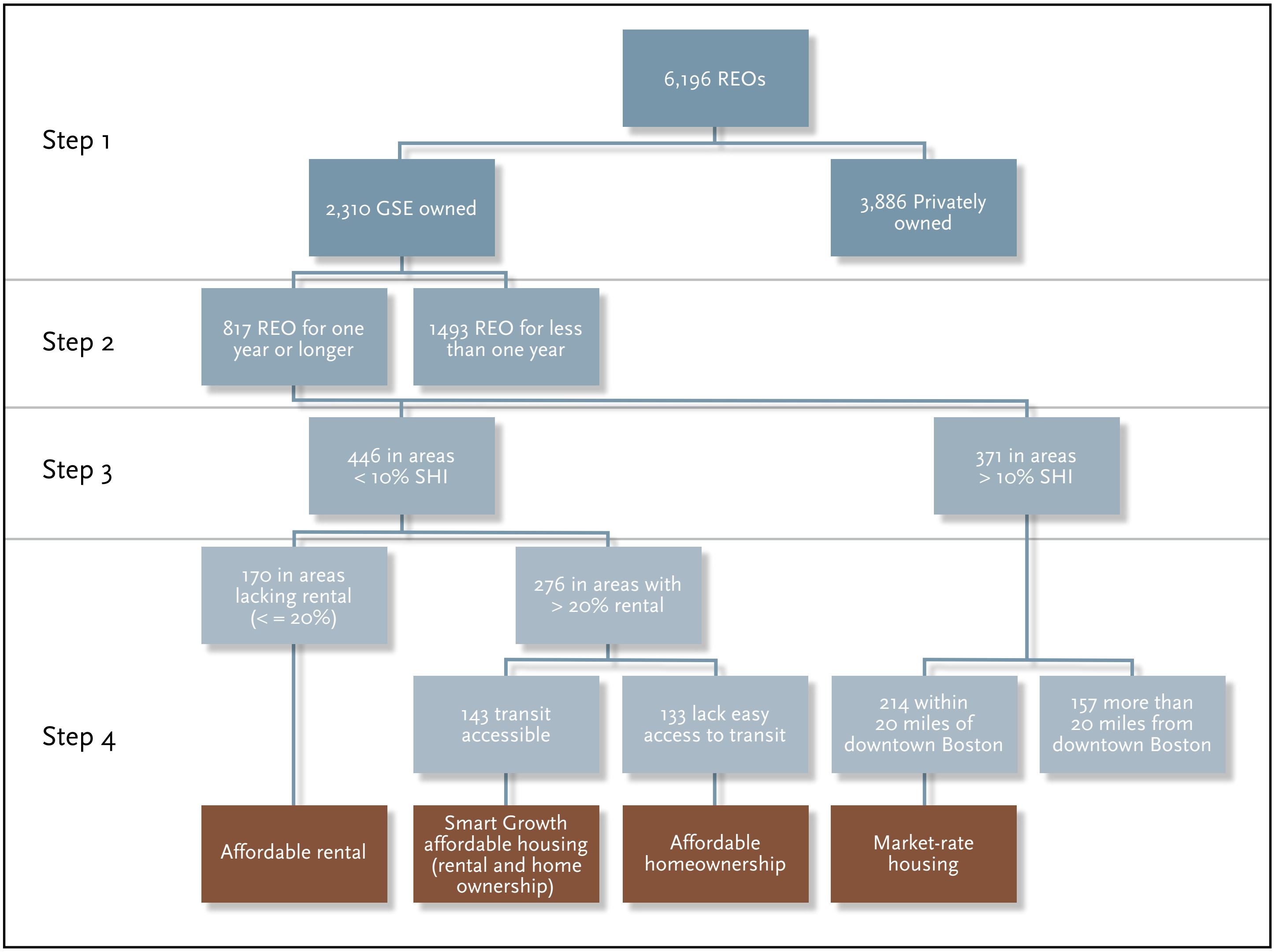
Step 1: Determine whether the REO is GSE-owned or privately owned.

Rationale: In July 2011 the Obama Administration issued a request for information to augment the current disposition practices for REOs held by government-sponsored entities (GSEs) Fannie Mae and Freddie Mac (as well as those held by the Federal Housing Authority).

Data: As of August 2011, in Massachusetts the GSEs owned 2,310 properties and private lenders owned 3,886.

Method: The Warren Group, a private Boston-based real estate research firm, collects public record foreclosure petitions and deeds filed with county and

Figure 1: Disposition Framework



Source: Federal Reserve Bank of Boston

city governments and posted in regional newspapers, as required by law. We identified REOs as properties that met the following conditions: the property had undergone foreclosure; a lender rather than an individual had taken ownership of the property; and no other real estate transactions had been recorded since. To identify GSE-owned REOs, we exported [imported?] a list of all lenders on record with the Warren Group and flagged those that were government-sponsored enterprises. This process allowed us to register multiple forms of abbreviations for these entities. Finally, we checked our current stock of REOs against this list.

Step 2: Assess risk of future market failure.

Rationale: Properties that have remained REOs for more than a year undergo steeper price discounts than those that remain REOs for a shorter time, possibly from the deterioration in value.[15] Consider as well that many REO properties may lie vacant for months or longer prior to foreclosure,[16] possibly exerting negative effects on neighbors and communities for longer periods of time.[17] An unknown number of these properties have also been listed for sale, and so though "tested" for homeownership markets, they did not appeal to prospective buyers. (However, other long-term REO properties may have title issues or other problems that prevent them from being transferred out of REO for any purpose, whether homeownership or rental. Some unknown number of properties could have covenants that prohibit rental.)

Data: 1,493 properties have been REO for less than a year, so a market-based resolution may still occur. However, this means 817 properties have been REO more than one year; a quarter of those have already been lender-owned for 417 days or longer.

Method: We calculated REO duration by subtracting the date the lender took ownership of the property from August 31, 2011, the date this REO inventory was updated. We know only the duration of REO ownership and do not have data on whether and for how long the property was listed for sale.

Step 3: Determine location of properties in relation to affordability need

Rationale: The Massachusetts Department of Housing and Community Development requires that at least 10% of each municipality's housing be affordable and registered in the state's subsidized-housing inventory (SHI). At present, 312 of 351 communities fail to meet this cutoff. There is considerable debate about whether this reflects resident opposition to density and affordable housing or else the lack of available, affordable land.

Data: Looking at the 6,196 REO properties in Massachusetts, over half (3,469) are located in communities that fail to meet the affordable housing goal. Looking solely at GSE-owned properties, which have public-policy goals in addition to return-on-investment goals, 446 REOs are located in Massachusetts towns that fail to meet affordable housing goals.

Method: We used the Department of Housing and Community Development's (DHCD's) Subsidized Housing Inventory, which reports what percentage of a municipality's housing units are affordable, to identify which communities failed to provide their "fair share" of affordable housing (i.e., 10% of units). We used Geographic Information System mapping and latitude/longitude information for each REO to determine whether it fell in a municipality that met its affordable housing requirement.

Step 4: Determine which areas also lack rental

Rationale: There are many reasons to anticipate increasing demand for rental housing in Massachusetts (even market-rate housing). According to data from Census 2010, 2.4% of Massachusetts rental housing is vacant and available for rent, compared with 3.1% for the nation. Tightened underwriting standards since the onset of the housing crisis make qualifying for homeownership more difficult. In addition, although demand for homeownership persists, expectations about future prices may induce more households to rent. Conversely, communities that have more than one-fifth of their housing units as rental, especially places that are already meeting affordability goals, may have other housing needs. Given the importance of a mixed-income population (i.e., avoiding the challenges created by the concentration of poverty), these places could benefit from market-rate rental or homeownership options that attract or retain more middle-income households. In terms of the demand for affordable rentals, the 2011 America's Rental Housing report from the Harvard Joint Center for Housing Studies showed that in Massachusetts, the share of renter households that are "severely burdened" — those that pay more than half of their income for rent and utilities — has risen over the past decade. From 2000 to 2009, the share of renter households that are severely burdened rose from 19.7% to 24.8% in metro Boston, from 20.1% to 24.2% in metro Springfield, and from 18.0% to 21.1% in metro Worcester.[18]

Data: 170 REO properties are in places where less than 20% of housing units are rentals and less than 10% of housing is affordable, have been on sale for over a year, and are owned by GSEs.

Method: We used the latest available American Community Survey data [date] to assess what proportion of each municipality's housing units are rental. We used Geographic Information Systems mapping to identify which REOs were located in towns with less than 20% rental housing.

This step progression through the framework would be undertaken for other properties that meet the alternative criteria. This would result in an additional quantity (beyond 170) of REO properties targeted for rental.

Additional Framework Considerations, Outcomes, and Concerns

Transit Accessibility and Proximity to Jobs

Other criteria on the framework include transit accessibility, which supports smart growth/transit-oriented development policies. The primary advantage of transit access is job access, but there are other benefits. Indeed, transit-oriented development — the creation of compact, pedestrian-friendly neighborhoods with mixed-use development that does not require an automobile — is drawing increased policy attention. For example, Massachusetts General Law Chapter 40R, the Smart Growth Zoning and Housing Production Act of 2004, offers Massachusetts municipalities financial incentives for creating compact residential and mixed-use zoning districts that are subject to local control over design. Currently, 33 municipalities have approved 40R districts and four additional municipalities have applications pending.

The redevelopment of transit-accessible REOs into affordable rentals could be combined with other planned development to form the basis of a Chapter 40R proposal to the Massachusetts Department of Community and Housing Development. REOs in other locations highly suitable for future applications for Smart Growth designation could include them as part of a Chapter 40R zoning district application. Beyond the potential for easier and less expensive redevelopment of properties that are located near transit, investing to put transit-accessible REOs back into productive use may reduce financial risk compared to investing in REOs located in sprawling neighborhoods. This is because transit availability can reduce commuting costs and/or keep them stable as gas prices rise. The Federal Reserve Bank of Atlanta found in 2009 that long commute times for drivers was a risk factor for REO accumulation in suburban areas. The author concluded that "It may be unwise to spend scarce resources attempting to redevelop residential patterns that may not be highly sustainable in the context of … higher long-term energy and transportation costs."[19]

Roughly half of all current REOs are transit-accessible (3,051), defined as being located within one quarter mile of services provided by the Massachusetts Bay Transportation Authority (MBTA) or Regional Transit Authorities. GSEs own 1,100 of these properties. In terms of proximity to jobs available in Boston, 2,135 REOs (whether transit-accessible or not) are within 20 miles of Boston.

Additional Paths to Affordable Rental Outcomes

Progression through the framework for other properties meeting the alternative criteria would result in an additional quantity (beyond 170) of REO properties targeted for rental. For example, there are areas that lack affordable housing options but nonetheless have over 20% rental, meaning they meet their rental burden. However, there may be additional capacity for affordable rental in those areas that are also transit-accessible, for the reasons stated above. These properties could be marketed for Smart Growth affordable rental.

Additional Paths to Market Rate Homeownership, Affordable Homeownership, and Smart Growth Homeownership Outcomes

According to this framework, the majority of properties would be designated for homeownership, and depending on economic and policy concerns, some of the REOs would be marketed as market-rate homeownership, others as affordable, and still others would be appropriate to be used to meet state policy goals for Smart Growth. The most valuable properties likely remain suitable for market rate homeownership. As of August 2011, 359 Massachusetts REOs had values over $400,000. These would almost certainly be best marketed as homeownership units.

If the lender determines that the highest economic use is homeownership, there are still policy considerations. REOs close to public transit might be marketed as Smart-Growth opportunities for homeownership, made affordable to more families through reduced automobile costs. Lower-value REOs may be marketed as affordable homeownership units, particularly in municipalities that do not meet their affordable-housing goals. If a GSE owns the REO, a case may be made to develop it as an affordable homeownership unit to meet public policy goals. This would result in a lower return to taxpayers, yet might make economic sense compared with the cost of developing new sources of affordable housing.

Roughly half of all current REOs are transit-accessible (3,051), defined as being located within one quarter mile of services provided by the Massachusetts Bay Transportation Authority (MBTA) or Regional Transit Authorities.

Additional Considerations in the Disposition Framework: Program Design and Proximity to Other Properties

The Obama Administration's request for information implicitly acknowledges the difficulty (and costs) involved in converting to rental where sites are scattered. From a property manager's perspective, such conditions make maintaining properties expensive. However, having studied working models internationally, such as Circle Housing's ownership of over 63,000 scattered properties in the United Kingdom,[20] the Housing Partnership Network has proposed acquiring and managing 25,000 units of single-family REOs owned by the Federal Housing Administration and GSEs.[21] Under the proposal, the organization would work in at least 25 metro areas, with properties developed as affordable rentals. A map of Massachusetts reveals clusters centered in

Figure 2: REO Densities

Municipality	Count
Boston	61
New Bedford	53
Lynn	46
Springfield	29
Revere	27
Brockton	25
Lowell	24
Haverhill	23
Lawrence	23
Gardner	20

Municipalities where you can locate 10 or more REOs within walking distance of each other (no two are more than 1 mile apart)

Source: Federal Reserve Bank of Boston

places like Boston (61 REOs), New Bedford (53), Lynn (46), and Springfield (29), where properties are within a one-mile radius of one another, demonstrating opportunity for similar schemes (See **Figure 2**). For a fuller discussion of program design considerations under a government-facilitated REO-to-rental effort, see a recent Federal Reserve Board white paper entitled *The U.S. Housing Market: Current Conditions and Policy Considerations.*[22]

Conclusion

The large number of GSE-owned REOs presents a unique opportunity to designate properties for use after foreclosure according to economic and policy concerns. For some properties, this would mean developing them as market-rate or affordable rental housing. Our analysis proposes using a series of criteria to determine which properties may be appropriate for rental.

Communities that offer a mix of housing options may be among the most readily adaptable to changing economic circumstances and demographic trends.[23] A diversity of property types, tenure choices, and affordability levels helps combat economic segregation and can provide the workforce housing needed for teachers, firefighters, and police.[24] Increased housing choices could also provide the Commonwealth's growing senior population with more "age in place" options. Workers would be able to relocate rapidly in response to employment conditions without the high costs associated with buying a single-family home. Although the impact of negative equity on housing mobility is hotly debated as a source of unemployment, allowing for future mobility might be important if regional or local economic conditions take divergent recession-recovery paths. Living in a rental apartment provides flexibility to a family that is downsizing because of foreclosure, unemployment, or underemployment[25].

According to multiple local analyses,[26] such as those conducted by the Metropolitan Area Planning Council and the Dukakis Center for Urban and Regional Policy at Northeastern University, the current housing crisis suggests a need to increase the availability of rental housing, especially affordable units. However, the relatively small number of rental properties as compared to the aggregate number of foreclosures shows that rental conversion is not the single solution to the foreclosure problem or the rental problem. Rather, it might be seen as a policy tool that can increase, however modestly, the supply of rental housing in underserved rental markets. In Massachusetts, this is especially the case in communities that lack such options.

Our framework for both private lenders and government policymakers can determine whether to position foreclosed properties for rental or for homeownership. While this analysis was conducted for Massachusetts, the framework may apply to other states with similar market characteristics and demand. These analytic techniques are not meant to dictate the use of any particular property but can inform policymakers and lenders who own properties about needs and opportunities to address those needs effectively to meet both market demands and policy concerns.

Prabal Chakrabarti *is Vice President and Director of Community Development and* **Mariana Arcaya** *is a graduate research fellow at the Federal Reserve Bank of Boston*

Endnotes

1 Federal Housing Finance Agency, Request for Information: Enterprise/FHA REO Asset Disposition, August 10, 2011. See http://www.fhfa.gov/webfiles/22366/RFIFinal081011.pdf

2 Remarks of FRB Governor Elizabeth A. Duke at the Federal Reserve Board Policy Forum: "The Housing Market Going Forward: Lessons Learned from the Recent Crisis", Washington, D.C. September 1,

2011. See http://www.federalreserve.gov/newsevents/speech/duke20110901a.htm

3 See Joice, Paul A. "Neighborhood Stabilization Program." *Cityscape: A Journal of Policy Development and Research* • Volume 13, Number 1 • 2011 135. See also Immergluck, D., and Smith G., "The Impact of Single-family Mortgage Foreclosures on Neighborhood Crime" *Housing Studies* Vol. 21, No. 6, 851–866, November 2006 U.S. Department of Housing and Urban Development • Office of Policy Development and Research. A series of articles that discuss the spillover impacts of foreclosures and attempts to stabilize neighborhoods is found in Chakrabarti, P., Lambert, M., and Petrus M., *REO and Vacant Properties: Strategies for Neighborhood Stabilization.* Published by Federal Reserve Banks of Boston and Cleveland and Federal Reserve Board. pp 59-60. See http://www.bostonfed.org/commdev/REO-and-vacant-properties/index.htm

4 See http://www.frbatlanta.org/documents/pubs/economicreview/er10no3_frame.pdf.

5 Or they may care more about other issues, such as crime. See accompanying article by Erin Graves.

6 Remarks of FRB Governor Elizabeth A. Duke at the Federal Reserve Board Policy Forum: "The Housing Market Going Forward: Lessons Learned from the Recent Crisis", Washington, D.C. September 1, 2011. See http://www.federalreserve.gov/newsevents/speech/duke20110901a.htm

7 Molloy, R. and Shan H., "The Post-Foreclosure Experience of U.S. Households", presented at the Policy Summit of the Federal Reserve Bank of Cleveland (June 2011). See http://www.clevelandfed.org/2011policysummit/papers/A2_Molloy.pdf

8 Federal Reserve Board staff, "The U.S. Housing Market: Current Conditions and Policy Considerations." Letter from Chairman Bernanke to U.S. Senate Committee on Banking, Housing and Urban Affairs, January 4, 2012. See http://www.federalreserve.gov/publications/other-reports/files/housing-white-paper-20120104.pdf

9 See "State falls short on affordable housing," http://articles.boston.com/2011-11-21/news/30425706_1_affordable-housing-advocates-units-at-below-market-prices/2

10 Schuetz, J. (2007) "No Renters in My Suburban Backyard: Land Use Regulation and the Rental Housing Market in Massachusetts," Working Paper 07-03, Furman Center for Real Estate and Urban Policy, p. 2

11 Koshgarian, L., Clayton-Matthews, A., Bernstein, C. (2010) *Economic Contributions of Housing Permitted through Chapter 40B: Economic and Employment Linkages in the Massachusetts Economy from 2000-2010*, UMASS Donahue Institute

12 See Browne, L., "Housing Policy and Poverty in Springfield" Federal Reserve Bank of Boston discussion paper, p6, February 2011. http://www.bostonfed.org/commdev/pcadp/2011/pcadp1101.pdf For a fuller discussion of concentrated poverty, see *The Enduring Challenge of Concentrated Poverty in America*, a joint project of the Community Affairs Offices of the Federal Reserve System and the Metropolitan Policy Program at the Brookings Institution at http://www.frbsf.org/cpreport/

13 Bluestone, B., and Billingham C., *Greater Boston Housing Report Card*. (October 2011) http://www.northeastern.edu/dukakiscenter/documents/2011_Housing_Report_Card.pdf

14 A previous federal program (called Section 236) through HUD-subsidized or -insured mortgages for developers under certain affordability restrictions for the term of the mortgage. So-called "expiring use" projects are those in which the restriction has been removed due to either prepayment of the mortgage or the end of the mortgage term. The Section program no longer offers new mortgages. The 14,700 figure also include loss of units under project based Section 8. See the CEDAC report at http://www.chapa.org/pdf/DatabaseendnotesFeb2011.pdf for further details.

15 Lee., K. "Examining REO Sales and Price Discounts in Massachusetts." *REO and Vacant Properties: Strategies for Neighborhood Stabilization*. Published by Federal Reserve Banks of Boston and Cleveland and Federal Reserve Board. pp 59-60. See http://www.bostonfed.org/commdev/REO-and-vacant-properties/index.htm

16 A Philadelphia Fed study finds that 20 months elapse from foreclosure initiation to completion. A Boston Fed study estimates this even higher. While the property may or may not be occupied during this time period, there is likely little incentive to invest in the property. See Cordell, L., and Shenoy, V. "The Cost of Delay."Federal Reserve Bank of Philadelphia. (2011) as cited in Gerardi, K., Lambie-Hanson, L. and Willen, P. "Do Borrower Rights Improve Borrower Outcomes? Evidence from the Foreclosure Process."

17 Lee., K. "Examining REO Sales and Price Discounts in Massachusetts." *REO and Vacant Properties: Strategies for Neighborhood Stabilization*. Published by Federal Reserve Banks of Boston and Cleveland and Federal Reserve Board. pp 59-60. See http://www.bostonfed.org/commdev/REO-and-vacant-properties/index.htm

18 Harvard Joint Center for Housing Studies, *America's Rental Housing: Meeting Challenges, Building on Opportunities*, 2010.

19 Immergluck, D., and Federal Reserve Bank of Atlanta. 2009. Intrametropolitan Patterns of Foreclosed Homes: Zip-Code-Level Distributions of Real-Estate-Owned (REO) Properties during the US Mortgage Crisis. Federal Reserve Bank of Atlanta, Community Affairs. Pg 28. See http://www.frbatlanta.org/filelegacydocs/dp_0109.pdf

20 See http://www.circle.org.uk/corporate/about.

21 See http://www.housingpartnership.net/news/network-news/article/?id=577.

22 Federal Reserve Board staff, "The U.S. Housing Market: Current Conditions and Policy Considerations." Letter from Chairman Bernanke to U.S. Senate Committee on Banking, Housing and Urban Affairs, January 4, 2012. See http://www.federalreserve.gov/publications/other-reports/files/housing-white-paper-20120104.pdf

23 Metropolitan Area Planning Council (MAPC), *State of Equity in Metro Boston*, Dec 13, 2011. http://www.regionalindicators.org/equity/housing/housing-affordability/

24 Metropolitan Area Planning Council (MAPC), *State of Equity in Metro Boston*, Dec 13, 2011. http://www.regionalindicators.org/equity/housing/housing-affordability/ / Also Bluestone, B., and Billingham C., *Greater Boston Housing Report Card*. (October 2011) http://www.northeastern.edu/dukakiscenter/documents/2011_Housing_Report_Card.pdf

25 As suggested by Bluestone, B., and Billingham C., *Greater Boston Housing Report Card*. (October 2011) page 8 and page 74. http://www.northeastern.edu/dukakiscenter/documents/2011_Housing_Report_Card.pdf

26 See Koshgarian, Lindsay. "Is Housing in Massachusetts More Affordable? (Only for the Lucky Few)." MassBenchmarks 12, no. 1 (2010): 12-18, cited in Metropolitan Area Planning Council (MAPC), *State of Equity in Metro Boston*, Dec 13, 2011. At http://www.regionalindicators.org/equity/housing/housing-affordability/. See also Bluestone, B., and Billingham C., Greater Boston Housing Report Card. (October 2011) http://www.northeastern.edu/dukakiscenter/documents/2011_Housing_Report_Card.pdf