



**Current Challenges in Housing
and Home Loans:
*Complicating Factors and
the Implications for Policymakers***

**Eric S. Rosengren
President & Chief Executive Officer
Federal Reserve Bank of Boston**

***The New England Economic Partnership's
Spring Economic Outlook Conference
on Credit, Housing, and the Consequences for New England***

**Boston, Massachusetts
May 30, 2008**

As someone who is an ardent consumer of good economic analysis, I have often been the beneficiary of work done by the New England Economic Partnership. So it is certainly a pleasure to be with you today to participate in your discussion of current trends in the economy, and credit and housing matters.¹

Over the past year, the economy has been buffeted by a series of shocks including financial turmoil; an emergency acquisition of a major investment bank to avoid a sudden, disorderly failure²; falling national housing prices; and oil prices that have exceeded \$130 a barrel. Despite all these challenges, the U.S. unemployment rate is at 5 percent; the rise in prices of “core” consumer goods and services (Personal Consumption Expenditures) to a little above 2 percent, while unwelcome, has not been large compared with past episodes; and the economy has been growing, albeit at a much slower pace than we would prefer. These relatively benign outcomes to date are at least partly the result of recent monetary and fiscal policy actions taken to mitigate some of the problems facing the economy.

In keeping with the title of your conference – “*Crunched: Credit, Housing and the Consequences for New England*” – I am going to focus on the continued downside risk posed by falling asset prices, particularly in the housing sector. Residential investment (the housing component of GDP³) has declined for nine straight quarters, and in all likelihood will decline this quarter as well. This has been an unusually long period of continuous decline in the housing sector, and coupled with falling housing prices nationally, has complicated predictions of what will happen in the economy going forward.

I would like to begin by first looking at some of the macroeconomic issues related to the housing sector, and considering why – despite being a relatively small component of GDP – housing continues to be a source of such significant uncertainty in the economy.

Then secondly, I will discuss some of the varied and interesting research done recently at the Federal Reserve Bank of Boston by economists and analysts (including Prabal Chakrabarti, Chris Foote, Kristopher Gerardi, Lorenz Goette, Kai-Yan Lee, Adam Shapiro, and Paul Willen). This work highlights some striking differences, and some similarities, between the current housing problems and those experienced in New England in the early 1990s. In particular I will note the observation that foreclosures remained elevated well after their peak in the last downturn, and the finding that multi-family properties are playing a much more important role in the current housing downturn.

Thirdly, I am going to discuss why developing solutions to the current housing problems has not been easy, and why the housing sector, despite being sensitive to interest rates, remains very weak notwithstanding a significant amount of monetary stimulus in the form of Federal Funds rate reductions. In particular, I will highlight the important role of so-called “piggyback loans,” or second mortgages; the implications of homeowners having “negative home equity” as a result of falling house prices; and the complications created by the securitization of many mortgages.

Finally, I am going to briefly discuss some implications for policymakers in seeking to develop and implement responses to the problems posed by falling house prices and rising delinquencies and foreclosures.

I. Macroeconomic Implications of Housing Trends

Figure 1 highlights how precipitously single-family housing starts have declined since their peak. This is actually the largest peak-to-trough decline in housing starts to

occur in nearly 50 years. The decline is occurring in what would seem, in fact, to be a relatively benign economic environment, with U.S. unemployment at 5 percent and interest rates low by historical standards.

However, the reduction in credit availability generated by recent, significant disruptions in the securitization of mortgages has made it particularly difficult for borrowers seeking subprime⁴ and “jumbo” loans. What was likely to be a weak residential market has become a market characterized by major declines as builders seek to reduce their swelling housing inventories and as continuing price declines raise the costs of holding on to land or unsold homes.

These problems have begun to have an impact on some financial institutions that had taken outsized positions in construction loans, or whose business model was focused on the types of residential lending most impacted by the downturn. Of course, the dramatic decline in housing starts should expedite the process of reducing the inventories of unsold homes, and over time provide a basis for stabilizing the housing market – although with sales continuing to decline, the most recent readings show little or no progress in cutting inventories relative to sales.

A potential problem for financial institutions is the interaction between falling housing prices and homeowners’ home equity lines of credit (HELOCs⁵) and junior liens⁶ (home equity loans). As housing prices have risen over the course of this decade, products have proliferated that allow consumers to tap into the wealth created by home-price appreciation. As can be seen in Figure 2, home equity loans and HELOCs have expanded rapidly – together they now account for over \$700 billion of bank assets (which

accounts for about one-third of the \$2.1 trillion in one-to-four-family mortgages held by the nation's commercial and savings banks as of March 31, 2008).

Using home equity can be particularly attractive to consumers because of the tax advantages of borrowing with the home as collateral, the lower interest rate on mortgage loans relative to other forms of consumer debt, and the ability to expand the credit line during a period of rapid appreciation in home prices.

Despite the advantages to consumers, these products are potentially risky to lenders during periods of falling home prices. Most financial institutions will not take possession of homes when borrowers default on their home-equity loans (junior liens), because this would require them to assume the first mortgage. With falling housing prices, assuming the first mortgage is not an attractive option from the lender's perspective. An additional complication is that default will frequently not occur until the home equity line of credit has been fully utilized, as borrowers who are having difficulty making payments can tap their credit line again and again. Thus, credit problems may first appear as rising balances rather than a failure to make payments.

As Figure 3 illustrates, the delinquency rates (specifically, the share of loans 90 or more days past due or nonaccruing) on junior liens and home equity lines are rising quite rapidly. One should note that most banks were not lending to so-called subprime borrowers, but nonetheless, the delinquency rate on one-to-four family mortgages just surpassed the levels seen in the early 1990s⁷.

As noted earlier, the rapid rise in delinquencies for home equity lines and junior liens held at banks is occurring despite an unemployment rate of about 5 percent – so, should the unemployment rate rise and housing prices continue to fall, financial stresses

caused by the housing correction could well spread beyond the large banks involved in complex securitizations, and the smaller banks with sizeable portfolios of construction loans, to a larger set of financial institutions. Not surprisingly, in regions where housing prices are falling and delinquencies are rising, we are seeing that banks are beginning to reduce the lines of credit available to borrowers.

A second potential problem for banks is that other types of consumer debt can suffer “collateral damage” from the difficulties in the housing sector. Regions that have experienced falling house prices over the past year are also areas that are seeing some of the larger increases in delinquencies on consumer loans. Banks with significant consumer loan exposures are observing that consumer delinquencies are becoming elevated in regions most affected by housing problems.

To date, credit problems have been focused on large financial institutions, many of whom have shown the capacity to raise new capital. However, should the challenges in housing continue, problems could expand beyond securitized assets to have an impact on the nonsecuritized assets held by smaller banking institutions. It is possible that these institutions may not be able to tap additional capital quite as easily as larger institutions, and if so they may be forced to constrain other lending to address any losses. So I leave you with the cautionary note that while small and medium sized businesses have not generally experienced significant problems with credit availability to date, further deterioration in housing markets, if it occurs, could carry over and begin to impact lenders who serve such borrowers.

II. Length and Duration of Housing Downturns, and Other Recent Research from the Boston Fed

New England is no stranger to falling asset values. As you no doubt know, during the early 1990s, New England experienced a steep decline in housing prices. We at the Boston Fed think it may be useful to compare that experience to what we have experienced to date with falling housing prices, and we are pursuing a number of research avenues to do that.

A new research paper by Foote, Gerardi, Goette and Willen is one example⁸. The authors have, among other things, done extensive data analysis that allows us to compare the current situation to that earlier episode, using publicly available data from the Massachusetts Registry of Deeds compiled into a database by the Warren Group. I will say more about our researchers' findings in a moment.

Separately, we are launching today an interactive mapping feature for our website that tracks the rise in foreclosures and subprime activity, then and now (<http://www.bos.frb.org/subprimegraphics>). The next few slides will give you a rough sense of how it displays data -- although the site itself will show the year-by-year progressions, dynamically, and I am going to just show you static shots of given years for our purposes here today.

As you can see in Figure 4 and 5, Massachusetts moved quite rapidly from a situation of relatively limited foreclosures in 1990 to a period of very high foreclosures in 1992. The timing is interesting. By late 1989, Massachusetts house prices had begun to fall, but delinquencies and foreclosures did not really accelerate until there was also a significant weakening of the economy. In fact, the unemployment rate in Massachusetts,

which had declined to 3.1 percent in late 1987, peaked at 9.1 percent in the second half of 1991. Declining housing prices alone did not cause very elevated foreclosures; it was significantly compounded by an economic shock such as the loss of a job which disrupted the ability of many borrowers to make payments. As house prices fell, many homeowners who lost their jobs in the early-1990s recession could not sell their homes to pay off their mortgages because they owed more than their homes were worth. For unemployed homeowners with “negative equity,” foreclosure was often the only option.

The more recent period also points to the importance of falling house prices and negative equity in foreclosures. In the more recent period (shown in Figures 6 and 7), the foreclosure rate – which was not particularly elevated in 2005 – had become quite elevated by 2007 as house prices softened. This increase in foreclosures occurred even though the Massachusetts unemployment rate averaged 4.5 percent for the year.

Why are foreclosures so high today, given that the economic situation is so much better than it was during the early 1990s? Even in expansions, many homeowners undergo adverse life events – like a job loss, a divorce, a spike in medical expenses, or the like – that disrupt their ability to make mortgage payments. Of course, with regard to unemployment, such household-level disruptions are not as prevalent in expansions as they are in recessions. But when such a life event does occur, it can still precipitate a foreclosure if the homeowner has negative equity because of a fall in house prices.

Another reason for elevated foreclosures today concerns changes in the susceptibility of mortgages to economic shocks. In the late 1980s, many borrowers had made significant down payments and had good credit histories. But the recent ability of borrowers with weak credit histories and little or no down payments to purchase homes,

often with subprime loans (and sometimes with minimal income verification), means that a greater share of today's mortgages are a good bit more susceptible to the types of disruptive life events that precipitate foreclosure. These borrowers were fine when housing prices were rising because if needed, they had the ability to refinance or sell their homes and pay off (or more than pay off) their mortgages. In contrast, in the current environment of falling housing prices, borrowers who made small down-payments or have otherwise risky mortgages are now more likely to end up in foreclosure if they experience an adverse event that interrupts their ability to make mortgage payments.

So, in short, we have seen similar foreclosure numbers this time around without a technical recession, and with a more modest fall in home prices. Boston Fed researchers attribute that to the prevalence of riskier loans and higher combined loan-to-value ratios in general.

Figures 8 and 9 provide some background on the foreclosure experience by house type. Several interesting patterns are apparent. In the early 1990s, foreclosures rose rapidly for all types of homes as the economy deteriorated. While foreclosures *peaked* in 1992, they remained quite elevated through much of the decade, despite the eventual rebounding of the economy. In addition, that period's speculative fervor in New England real estate markets had a particularly large impact on the condo market, where a disproportionate share of the foreclosures occurred.

Today, problems appear most pronounced in the multifamily market. The two- and three-family houses that are prevalent in low- and moderate-income neighborhoods in Massachusetts have experienced very elevated foreclosure rates. Specifically, multi-

family units accounted for 28.4 percent of the foreclosures in 2006-2007, but have constituted only 10.8 percent of residential purchases since 1990⁹ (Figure 9).

The impact on particular communities can be seen in Figure 10,¹⁰ which shows foreclosure petitions by property type in given cities and towns in Massachusetts. In Boston, 47 percent of foreclosure petitions between January and August 2007 were multi-family properties. Many of the cities with high concentrations of low- and moderate-income borrowers have also seen particularly high rates of foreclosure petitions¹¹ on multi-family properties. Our researchers suggest that one explanation for the higher foreclosure rate on multi-family properties is found in higher combined loan to value (CLTV) ratios, which make them more vulnerable when prices are falling.¹²

States like Massachusetts and Rhode Island have a much larger concentration of multi-family homes than do many other regions of the country¹³. Streets with a large concentration of foreclosures in major New England cities frequently are dominated by multi-family units. Recently both Boston and Chelsea have begun programs to purchase foreclosed multi-family units, to try to prevent these properties from becoming vacant and slipping into disrepair, which would bring broader collateral problems for the affected neighborhoods.

Because many of these properties are investor owned – or the current owner occupies one of the units and has limited financial means to deploy should the property require major capital improvements – programs focused on owner-occupied single-family properties will not address these problems. One area that will need focus going forward involves strategies to prevent streets of foreclosed multi-unit properties from leading to broader sections of urban decay.

Several lessons from the historical comparison can be highlighted. First, should the economy worsen and suffer a period of significant job losses, the housing problem could become much more severe. Second, past episodes of elevated foreclosures lingered well after the peak in foreclosures had passed, indicating that the duration of today's situation may be longer than some are anticipating. Third, because the current problems have been concentrated in vulnerable low- and moderate-income areas with a prevalence of multi-unit properties, such multi-unit properties will be a more important public policy issue in the current situation.

III. Issues Complicating the Resolution of Housing Problems

As I have noted, a major change in the U.S. housing sector in recent years has been the emergence of the ability to buy homes with little or no down payment and the increased prevalence of such purchases. Many of these purchases are structured with a first loan that covers 80 percent of the value of the house and a second loan, sometimes called a "piggyback" loan, which is taken out at the same time as the first. The piggyback loan tends to be at a higher interest rate reflecting the greater risk of the loan, but the interest is tax deductible and allows the borrower to avoid purchasing private mortgage insurance (which lenders require if the borrower is paying less than 20 percent in down payment).

As can be seen in Figure 11, until recently, an increasing percentage of homes were being financed with these piggyback loans. In Massachusetts, piggyback loans were used with 26 percent of subprime mortgages in the second quarter of 2003 but that percentage increased to 65 percent of subprime mortgages in the third quarter of 2005.

Piggyback loans were about twice as prevalent for subprime borrowers as prime borrowers, and were particularly prevalent in multi-family purchases. In fact, 75 percent of subprime multi-family purchases in the third quarter of 2005 involved a piggyback loan.

At the time of purchase, subprime borrowers frequently used the same lender to acquire both the first loan and the piggyback loan. The complicating factor is that these loans were frequently then securitized, with the first mortgage and the piggyback loan often sold into separate portfolios of loans to be securitized. Thus, even while piggyback loans were becoming more abundant, many mortgage-backed securities contained no piggyback loans, implying that the borrower's loans were frequently packaged in separate securitizations.

The combination of piggyback loans, securitization, and legal complexities makes it much more difficult to modify loans, particularly if the first and second mortgages have been packaged into separate securitizations. Dealing with two different lenders or servicers, as well as different securitizations, can significantly complicate efforts to restructure loans. Also, loan servicing agreements are not identical and indeed include a variety of forms of authorization (of the servicer) to modify loans. Frequently the only leverage the owner of the piggyback loan can and does exercise with a distressed borrower is demanding compensation should the borrower seek to modify both loans.

In short, while a variety of programs and policies are being considered in order to improve the loan modification process for distressed borrowers and their lenders, a key consideration involves figuring out how to modify loans when the interests of the primary loan holder may be different than those of the holder of the piggyback loan.

A second complication involves targeting the modifications to the homeowners who really need them. We have seen that falling house prices tend to raise foreclosures by causing a negative equity situation which limits homeowners' options (e.g., to refinance or sell and pay off the loan) if their financial situation deteriorates.

The rising share of homeowners with negative equity in their house – meaning their home is now worth less than their loan(s) – might seem to suggest a large group for whom loan modifications would be a “slam dunk.” Principal write-downs to bring “underwater” mortgages above water may well be the appropriate solution for some troubled borrowers¹⁴, but lenders and loan servicers continue to be reluctant to provide modifications in a wholesale manner. Negative equity does not imply foreclosure with certainty – in fact, most people with negative equity situations continue to make their mortgage payments. Lenders and loan servicers who are aware of this fact may be reluctant to offer a modification if they believe that the homeowner has the capacity to continue making payments, no matter the hardship.

To “unpack” this a bit, I want to spend a moment looking at the history of negative-equity borrowers over the past two decades, drawing on a new working paper just produced by Boston Fed researchers¹⁵.

In the late 1980s, house-price declines in New England meant a large number of borrowers had negative equity in their house. The Registry of Deeds data allow us to study the historical relationship between negative equity and foreclosures for a limited set of borrowers – specifically, people who purchased homes in Massachusetts on or after January 1987, when the Warren Group data begin. Using these data to calculate a rough proxy for housing equity, Foote, Gerardi and Willen calculate that 100,288 of these post-

1987 purchasers, or 36 percent, were in a position of negative equity as of the fourth quarter of 1991 (a high fraction because January 1987 came just before the peak of the housing cycle).¹⁶ Yet of this negative-equity group, only 6,453 (or just 6.4 percent) defaulted on their mortgages within the following three years.

What about today? Using the same rough method to approximate home equity for the same subset of homeowners, the data imply that about 10 percent of post-1987 purchasers were in a position of negative equity as of the fourth quarter of 2007. Assuming that the unemployment rate and benchmark interest rate (the 6-month London Interbank Offered Rate or LIBOR) stay at their fourth-quarter 2007 levels, the statistical default model of Gerardi, Shapiro and Willen predicts that less than 10 percent of these homeowners with negative equity will default.

Continued declines in house prices, higher unemployment, and possibly a greater willingness to default on home mortgages might raise this estimate of future defaults. Even so, many lenders will not be inclined to make concessions unless borrowers clearly lack the ability to pay. This is one reason that workouts or distressed borrowers' mortgages continue to proceed loan by loan, rather than through wholesale changes in mortgage terms. Lenders want borrowers with the capacity to pay to continue to uphold their legal obligation to do so – and any wholesale change in mortgage terms could benefit borrowers that are still able to fulfill the original agreement. To avoid this problem, some policy proposals¹⁷ maintain the legal obligation for the full loan for the borrower, but involve significantly reduced payments in return for the lender sharing in any future appreciation of the house.

Another impediment to restructuring loans that have been packaged into securitizations involves the legal restrictions imposed on many securitization agreements¹⁸. These agreements allow the servicer to pass through payments by borrowers without incurring any tax liability, as long as certain conditions are met. One of the conditions is usually that modifications cannot be made to the loans unless the loan is either in default or default is reasonably foreseeable. This determination is generally made loan by loan, with wholesale modifications being interpreted by some servicers as possibly violating the service agreement and the legal framework used in many securitizations and thus potentially imposing tax liability.

Despite some promising proposals, these factors – the presence of piggyback loans, the desire of lenders to continue to get paid unless the borrower does not have the capacity to make payments, and the legal restrictions and tax-liability concerns surrounding securitization agreements – make any across-the-board modification of loan terms challenging.

As long as loan modifications are taking place on a loan-by-loan basis (a time-consuming and labor-intensive process), to significantly increase the number of loan modifications and avoid significant numbers of foreclosures, many servicers will need to quickly expand the pool of staff capable of making these evaluations.

IV. Implications for Policymakers

To reiterate, falling housing prices continue to be a significant source of downside risk to the economy. Previous periods of real estate problems have taken significant time to be worked out, with foreclosures remaining elevated well after their peak. The

current foreclosure problem has been exacerbated by the difficulties related to many of the problem loans being held in securities.

To help mitigate the current situation it is important for servicers to have the capacity and the incentive to make loan modifications where appropriate. A challenge continues to arise around getting borrowers and servicers together to determine if loan modifications are appropriate.

In addition, it is clear that servicers were not set up for the spate of elevated foreclosures we have already experienced, and further increases in foreclosures would certainly test the capacity of servicers to have sufficient staff with the expertise to make loan modification determinations. Nonetheless, I am hopeful that the many mortgage forums that are being organized around the country to try to get servicers and borrowers together to work with problem loans will help some borrowers.

The large number of multi-family dwellings entering foreclosure presents a serious challenge to cities. Already there are streets in some cities with a high concentration of foreclosed multi-family properties, putting at risk many of the socioeconomic advances made in the last decade in some of these neighborhoods. Cities, working together and with community organizations and state officials,¹⁹ will need to find ways to make sure these low- and moderate-income neighborhoods do not regress as a result of the current wave of foreclosures. One promising tactic is rigorous municipal-code enforcement that ensures foreclosed properties are maintained. Furthermore, servicers must have a process for maintaining foreclosed properties and they must do more to ensure that these properties do not remain vacant for long periods of time.

Finally, the legal structure for securitizations and mortgage-servicing agreements clearly did not foresee the widespread emergence of distressed borrowers, delinquencies, and foreclosures that are being experienced. Changes to servicing agreements and securitization structures that allow more flexibility during times of duress and also address servicers' liability concerns are necessary. Since different investors in a mortgage-backed security have different incentives, more clearly defining the governance of these securities would make it easier during difficult times to make modifications that are in the borrower's, servicer's, and investor's interests.

The extent of eventual housing problems is highly dependent on the outlook for the economy and the future path of housing prices. Fortunately, aggressive monetary and fiscal policy actions have been taken to help mitigate some of the downside risk. These policies will likely result in some pick up in economic activity in the second half of this year, which should help to stabilize the housing market.

NOTES:

¹ Of course, the views I express today are my own, not necessarily those of my colleagues on the Board of Governors or the Federal Open Market Committee (the FOMC).

² A comprehensive description of the Bear Stearns situation is available in "Actions by the New York Fed in Response to Liquidity Pressures in Financial Markets" – Testimony before the U.S. Senate Committee on Banking, Housing and Urban Affairs by Timothy F. Geithner, President and Chief Executive Officer of the Federal Reserve Bank of New York (April 3, 2008).

³ GDP is essentially the value of goods and services put in place during a time period, and residential investment is the housing component of GDP. "The main

indicator of the quantity of new housing supplied to the economy is the residential fixed investment series from the national income and product accounts. Residential investment is made up of new construction put in place, expenditures on maintenance and home improvement, equipment purchased for use in residential structures (e.g., washers and dryers purchased by landlords and rented out to tenants), and brokerage commissions.” (Source: “Residential Investment over the Real Estate Cycle” by John Krainer, in the Federal Reserve Bank of San Francisco’s Economic Letter #2006-15; June 30, 2006). “Brokers’ commissions...are part of the cost of acquiring a house and, therefore, a capital expenditure.” (Source: “National and Regional Housing Patterns” by Lynn Elaine Browne in the New England Economic Review, July/August 2000, published by the Federal Reserve Bank of Boston).

⁴ In essence “subprime” loans refer to mortgages that have a higher risk of default than prime loans, often because of the borrowers’ credit history. Certain lenders specialize in subprime loans, which carry higher interest rates reflecting the higher risk. Certain lenders, typically mortgage banks, may specialize in subprime loans. Banks, especially smaller community banks, generally do not make subprime loans, although a few large banking organizations are active through mortgage banking subsidiaries.

According to interagency guidance issued, in 2001, “The term ‘subprime’ refers to the credit characteristics of individual borrowers. Subprime borrowers typically have weakened credit histories that include payment delinquencies and possibly more severe problems such as charge-offs, judgments, and bankruptcies. They may also display reduced repayment capacity as measured by credit scores, debt-to-income ratios, or other criteria that may encompass borrowers with incomplete credit histories. Subprime loans are loans to borrowers displaying one or more of these characteristics at the time of origination or purchase. Such loans have a higher risk of default than loans to prime borrowers. Generally, subprime borrowers will display a range of credit risk characteristics that may include one or more of the following: Two or more 30-day delinquencies in the last 12 months, or one or more 60-day delinquencies in the last 24 months; Judgment, foreclosure, repossession, or charge-off in the prior 24 months; Bankruptcy in the last 5 years; Relatively high default probability as evidenced by, for example, a credit bureau risk score (FICO) of 660 or below (depending on the product/collateral), or other bureau or proprietary scores with an equivalent default probability likelihood; and/or Debt service-to-income ratio of 50 percent or greater, or otherwise limited ability to cover family living expenses after deducting total monthly debt-service requirements from monthly income.”

⁵ The amount outstanding of revolving, open-ended loans secured by 1-4 family residential properties and extended under lines of credit.

⁶ Closed-end loans secured by junior (i.e., other than first) liens on 1-4 family residential properties.

⁷ Delinquencies on first mortgage loans and junior liens were not reported separately by banks until 2002.

⁸ “Subprime Facts: What (we think) we know about the subprime crisis and what we don’t” by Christopher Foote, Lorenz Goette, Paul Willen, and Kristopher Gerardi (forthcoming).

⁹ During the earlier wave of foreclosures in 1991 and 1992, multi-family residences accounted for 20.4 percent of foreclosures.

¹⁰ From Kai-Yan Lee, forthcoming Boston Fed Public and Community Affairs Discussion Paper.

¹¹ Foreclosure petitions differ from foreclosure deeds.

¹² Also, investors make up 16 percent of subprime borrowers who purchased or refinanced multifamily structures, compared to only 2.3 percent of those who purchased single family homes and 6.3 percent of condos being financed by investors.

¹³ According to the 2000 Census of Housing, 9.1 percent of housing units were in 2- to 4-unit buildings Rhode Island has the most multi-family units (25.2%) while for Massachusetts had 23.0% multi-family units. A table that provides the composition of housing units by state can be found at <http://www.census.gov/hhes/www/housing/census/historic/units.html>

¹⁴ Federal Reserve Board Chairman Ben Bernanke is one of a number of policymakers urging lenders to consider principal writedowns, for example in speeches given on March 4 and May 5 (<http://www.federalreserve.gov/newsevents/speech/bernanke20080304a.htm> and <http://www.federalreserve.gov/newsevents/speech/Bernanke20080505a.htm>).

¹⁵ “Negative Equity and Foreclosure: Theory and Evidence” by Paul S. Willen, Kristopher Gerardi, and Chris Foote (forthcoming).

¹⁶ For this calculation, equity is estimated as the sum of initial equity at purchase (that is, the downpayment) plus an estimate of cumulative house price appreciation for that particular home. This estimate is a rough measure for two reasons. First, the data do not allow an estimate of the principal that has been paid down during the life of the mortgage. Second, there is no allowance for cash-out refinancing or other types of equity withdrawal. The first of these influences would cause the estimate of home equity to be too small, while the second would cause the equity estimate to be too large. It is unclear which factor is quantitatively more important.

¹⁷ Such as the proposed “Appreciating America” approach, which would have the following characteristics (see Refinance.com):

-
- The homeowner would refinance the outstanding mortgage(s) with an approved "Appreciating America Lender," in accordance with established FHA guidelines (i.e. with respect to loan to value and debt to income ratios).
 - The first mortgage would be set at some percentage of the current market value of the home (e.g., 85 percent) and would be insured by FHA.
 - A second mortgage would be formed to cover the difference between the original mortgage balance and the FHA-insured new mortgage, and would be held by the current mortgage servicer. Payments and interest (6 percent) on this new second mortgage would be deferred for five years or until the home is sold (whichever comes first).
 - To the extent that the value of the home at that point is greater than the FHA first mortgage amount, the homeowner would first receive an amount equal to all capital improvements made to the property since the Appreciating America Mortgage closed; then the homeowner would receive 30 percent of the appreciation, and the second mortgage holder would receive the lesser of 70 percent of the appreciation or the principal and accrued interest on the Appreciating America Second Mortgage. All appreciation in excess of the second mortgage balance including accrued interest would belong to the homeowner.

¹⁸ The legal vehicle used for securitized mortgages is a Real Estate Mortgage Investment Conduit (REMIC), which is a pass-through tax entity and investment vehicle that holds a pool of commercial and residential mortgages in trust and issues securities (often in multiple classes based on maturity and risk) that represent an undivided interest in those mortgages. Major issuers of REMICs include the Federal Home Loan Mortgage Company (Freddie Mac) and the Federal National Mortgage Association (Fannie Mae). REMICs are governed by the sections 860A through 860G of the Internal Revenue Code. In order to qualify as a REMIC, all of the interests must consist of one or more classes of regular interest and one (only one) class of residual interest.

An entity that initially qualifies as a REMIC may cease to qualify if a sufficiently large portion of its qualified mortgages are "significantly modified" and the modified obligations are not qualified mortgages. A qualified mortgage is usually treated as having been significantly modified if the change in terms would be treated as an exchange of obligations under section 1001 and its regulations. However, certain changes to the terms of an obligation are not considered significant modifications for this purpose, notwithstanding the fact that they may be significant modifications under section 1001 and § 1.1001-3. The four permitted modifications are (1) Changes in the terms of the obligation occasioned by default or a reasonably foreseeable default; (2) Assumption of the obligation; (3) Waiver of a due-on-sale clause or a due on encumbrance clause; and (4) Conversion of an interest rate by a mortgagor pursuant to the terms of a convertible mortgage.

As echoed in many Servicing Agreements, the most pertinent modification is one induced by either default or impending default. The problem lies in ascertaining with some certainty whether default is "reasonably foreseeable" and thus servicers have been reticent to go forward with modifications based on this shaky standard when the potential consequences are so dire.

¹⁹ In Massachusetts, two separate task forces organized by the Division of Banks and by community groups have been grappling with neighborhood stabilization. They have both brought together community groups, cities, quasi-governmental and state agencies.

Figure 1

Continuous Declines of Three Quarters or More in Single-Family Housing Starts

1959:Q2 - 2008:Q1

Dates	Number of Quarters	Cumulative Decline (%)
2006:Q2 - 2008:Q1	8	-58.4
1959:Q4 - 1960:Q4	5	-27.2
1969:Q1 - 1970:Q1	5	-25.0
1979:Q3 - 1980:Q2*	4	-46.6
1981:Q1 - 1981:Q4*	4	-44.7
1966:Q1 - 1966:Q4	4	-36.1
1990:Q2 - 1991:Q1	4	-33.5
1994:Q3 - 1995:Q2	4	-16.0
1973:Q2 - 1973:Q4*	3	-31.3
1974:Q3 - 1975:Q1*	3	-23.9
2000:Q1 - 2000:Q3	3	-10.9

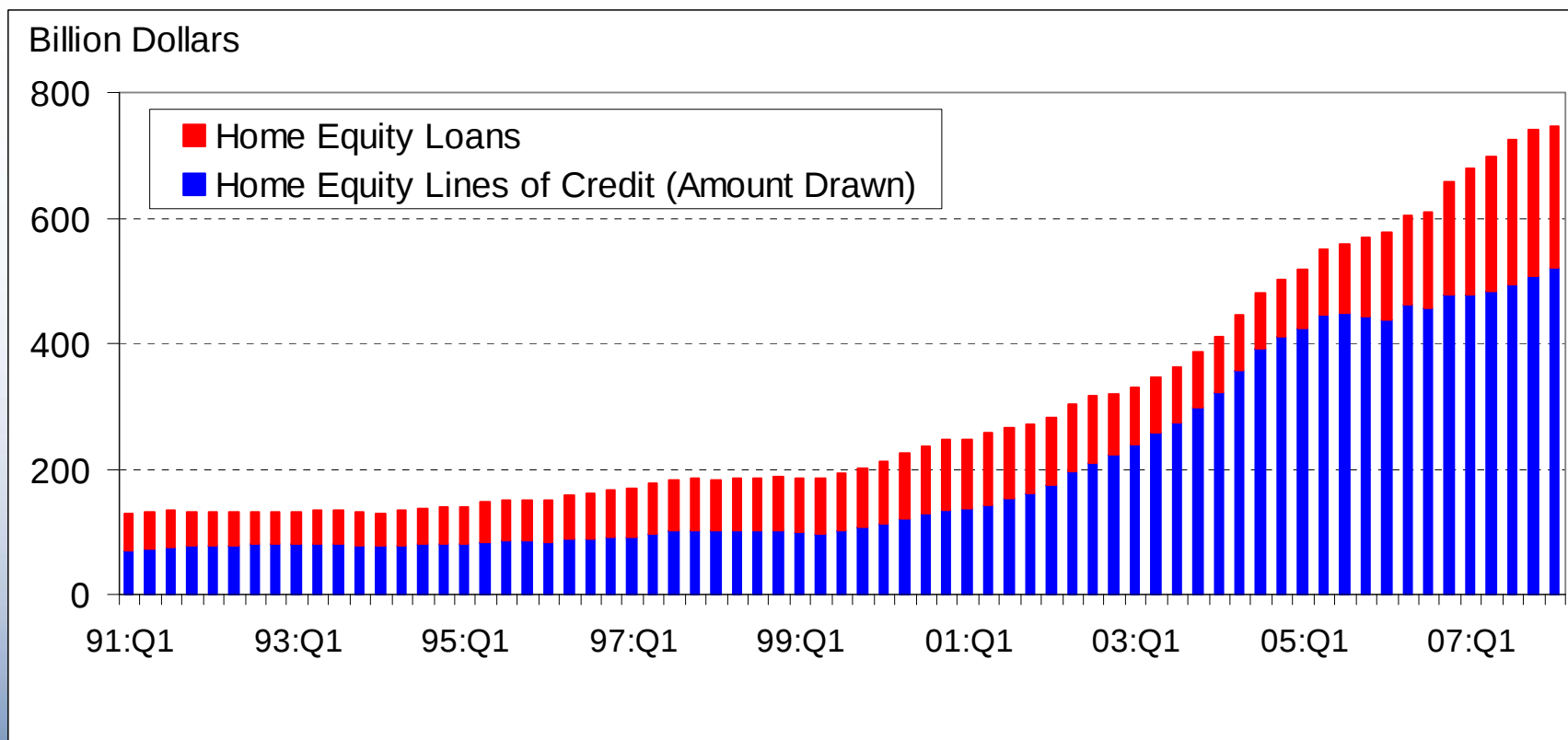
*Declines interrupted by just two quarters of growth in single-family housing starts.

Source: Census Bureau / Haver Analytics

Figure 2

Home Equity Lending at Commercial and Savings Banks

1991:Q1 - 2008:Q1

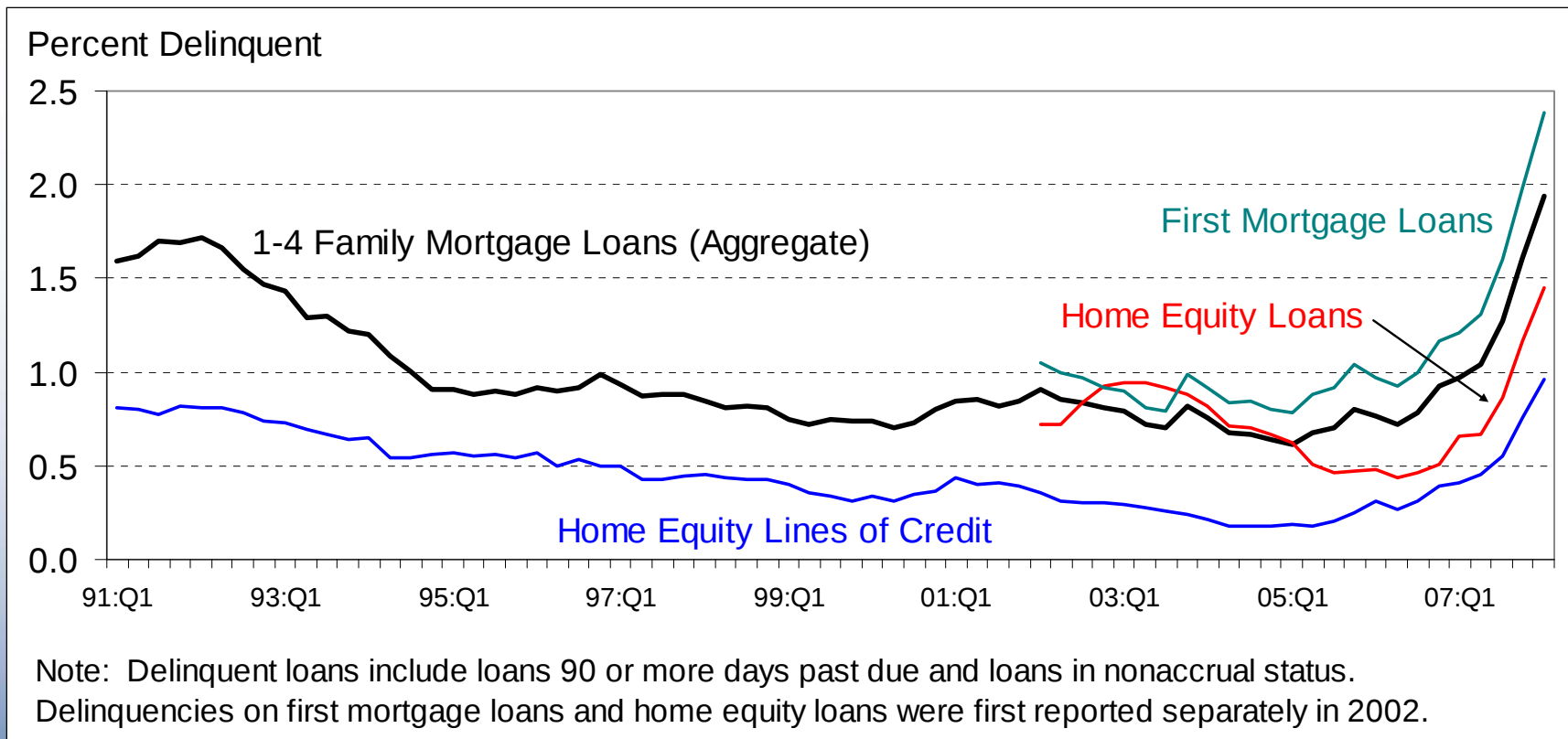


Source: Commercial and Savings Bank Call Reports

Figure 3

Delinquency Rates on 1-4 Family Mortgage Loans at Commercial and Savings Banks

1991:Q1 - 2008:Q1



Source: Commercial and Savings Bank Call Reports

Figure 4

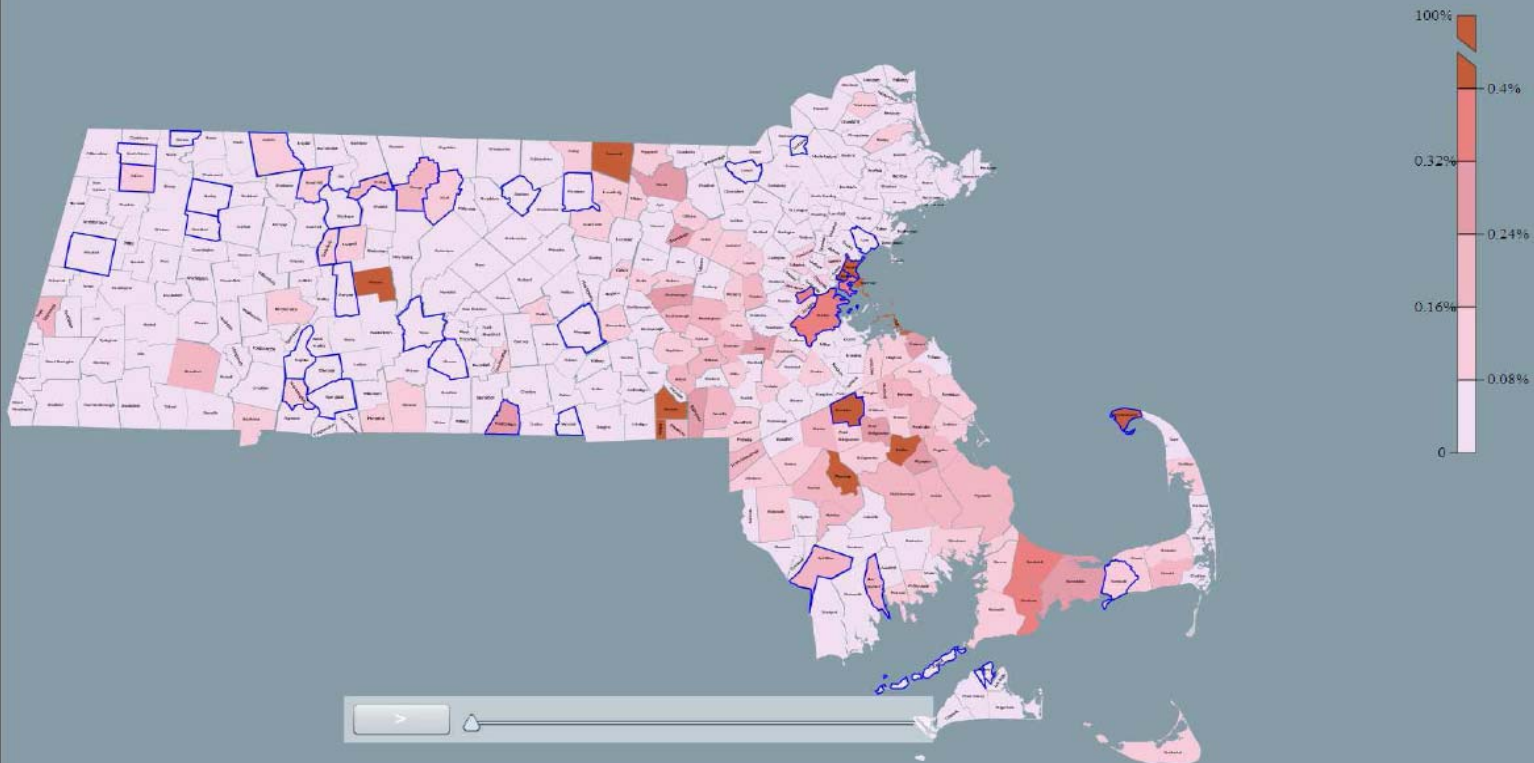
Foreclosure Rates in Massachusetts Cities and Towns: 1990–2007

KEY POINTS

- High foreclosure rates were widespread in the 1992-93 housing slump, and again today.
- Southeastern and central Massachusetts have tended to be hit hardest.



1990



Source: Raw data on foreclosures and house prices are from the Warren Group. Rates computed per residential housing unit (raw data are from the MA Dept. of Revenue). Median income data are from the 2000 U.S. Census.

Analysis: Kristopher Gerardi, Adam Hale Shapiro, and Paul S. Willen

Figure 5

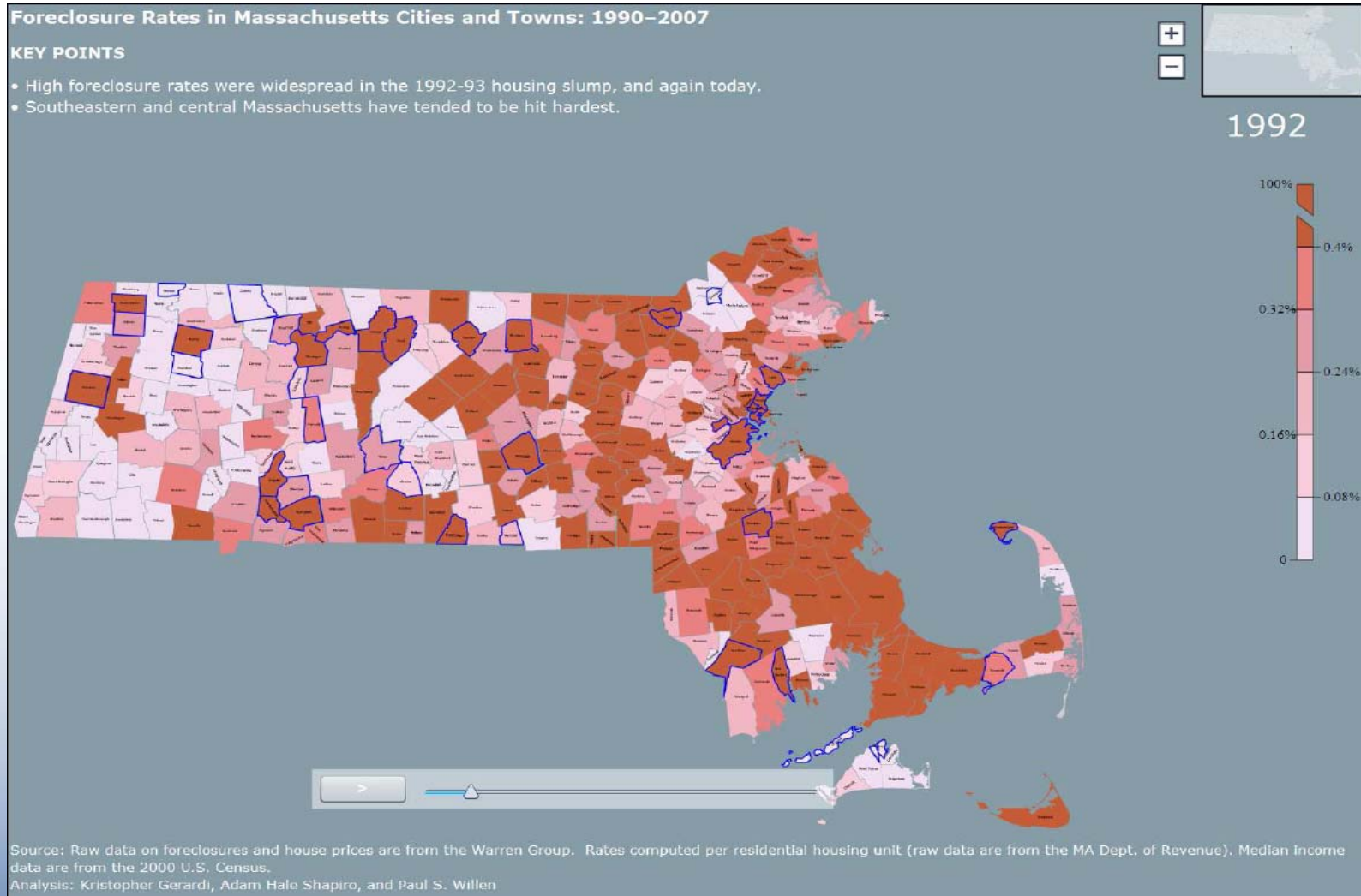


Figure 6

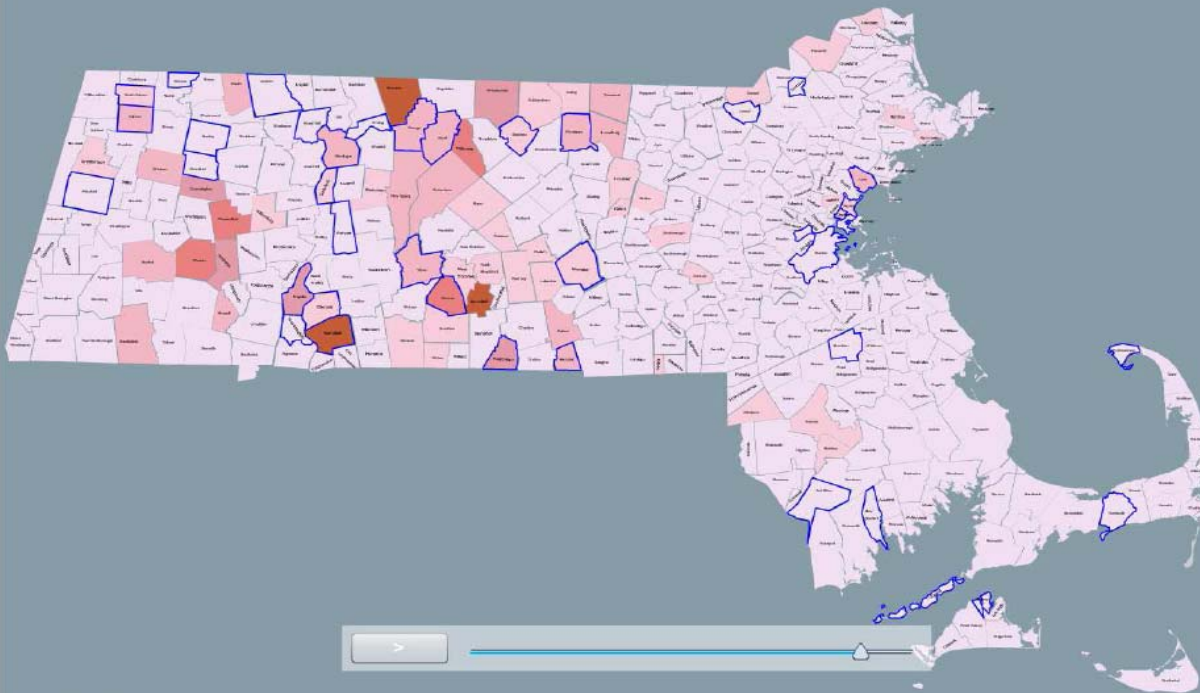
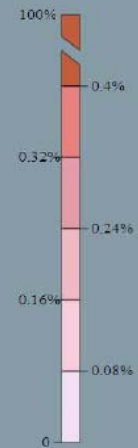
Foreclosure Rates in Massachusetts Cities and Towns: 1990–2007

KEY POINTS

- High foreclosure rates were widespread in the 1992-93 housing slump, and again today.
- Southeastern and central Massachusetts have tended to be hit hardest.



2005



Source: Raw data on foreclosures and house prices are from the Warren Group. Rates computed per residential housing unit (raw data are from the MA Dept. of Revenue). Median income data are from the 2000 U.S. Census.

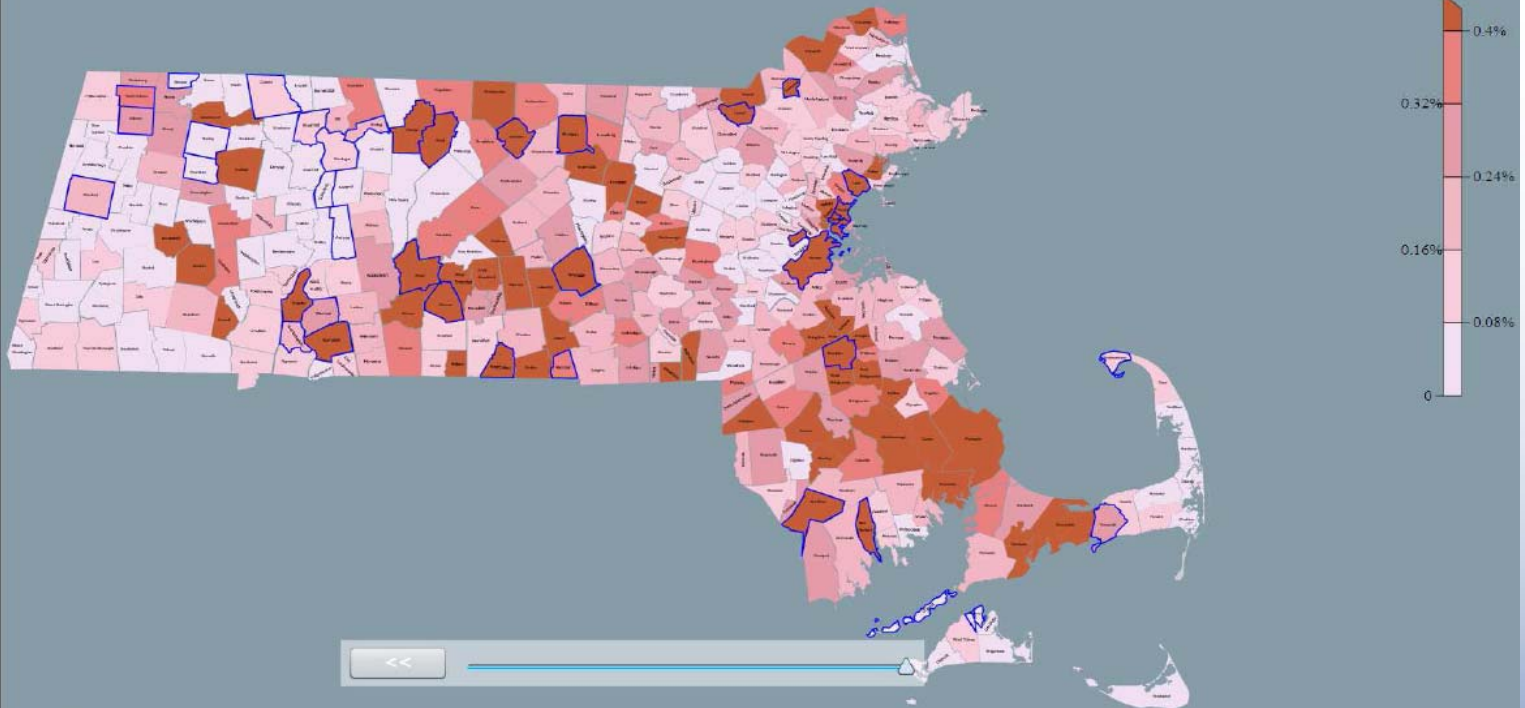
Analysis: Kristopher Gerardi, Adam Hale Shapiro, and Paul S. Willen

Figure 7

Foreclosure Rates in Massachusetts Cities and Towns: 1990–2007

KEY POINTS

- High foreclosure rates were widespread in the 1992–93 housing slump, and again today.
- Southeastern and central Massachusetts have tended to be hit hardest.

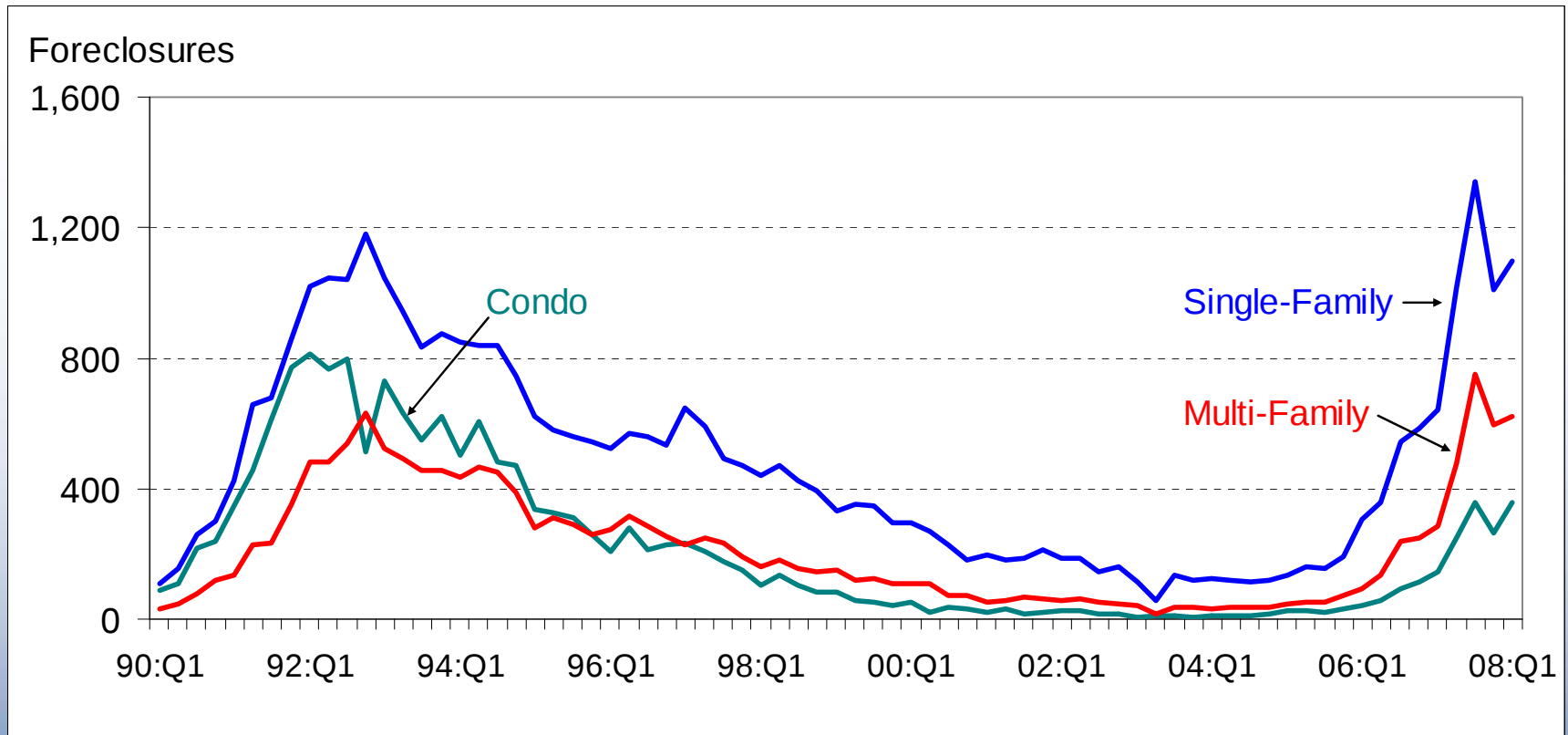


Source: Raw data on foreclosures and house prices are from the Warren Group. Rates computed per residential housing unit (raw data are from the MA Dept. of Revenue). Median Income data are from the 2000 U.S. Census.
Analysis: Kristopher Gerardi, Adam Hale Shapiro, and Paul S. Willen

Figure 8

Foreclosures in Massachusetts by House Type

1990:Q1 - 2008:Q1

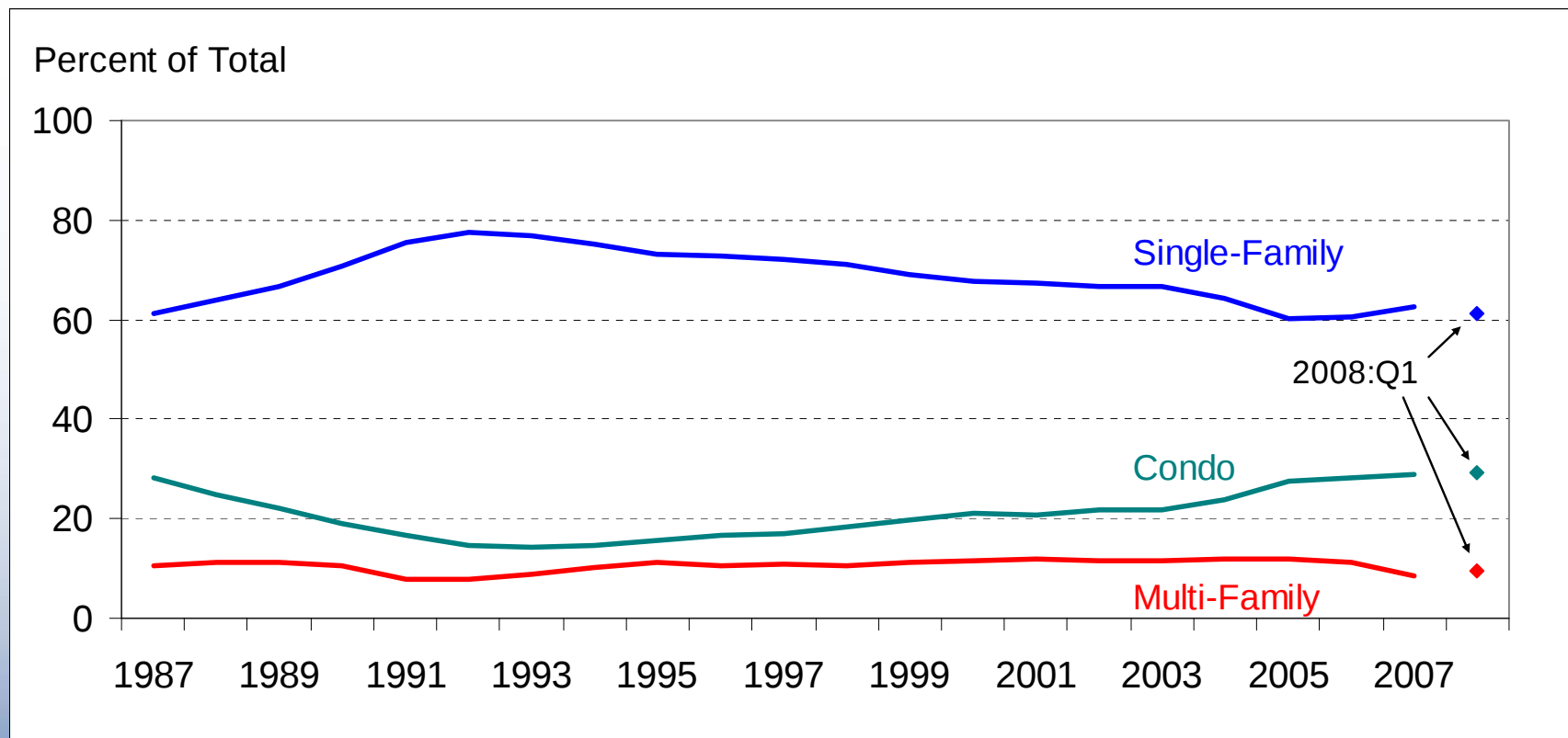


Source: The Warren Group

Figure 9

Massachusetts Home Purchases by House Type

1987 - 2008:Q1

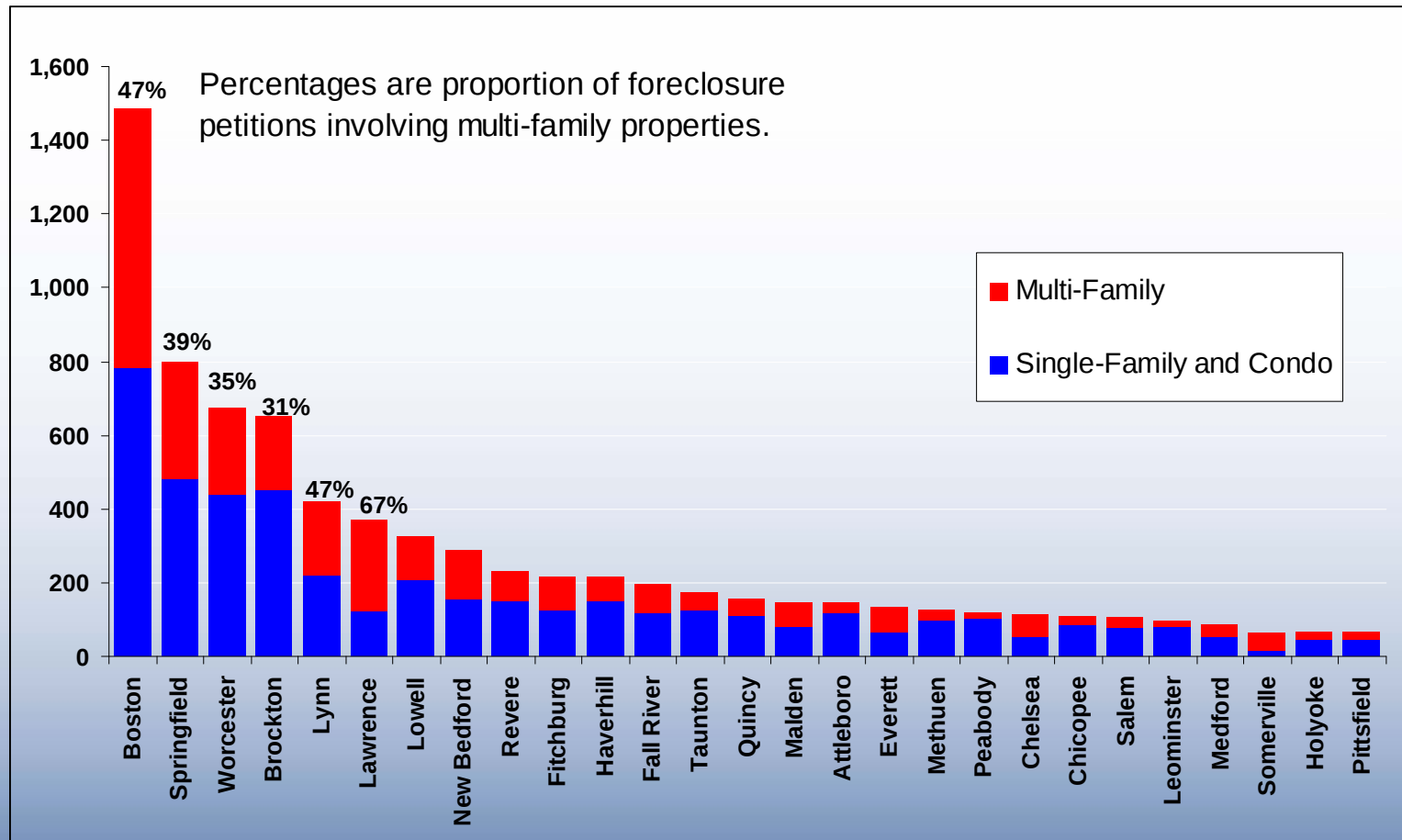


Source: The Warren Group

Figure 10

Foreclosure Petitions by Property Type

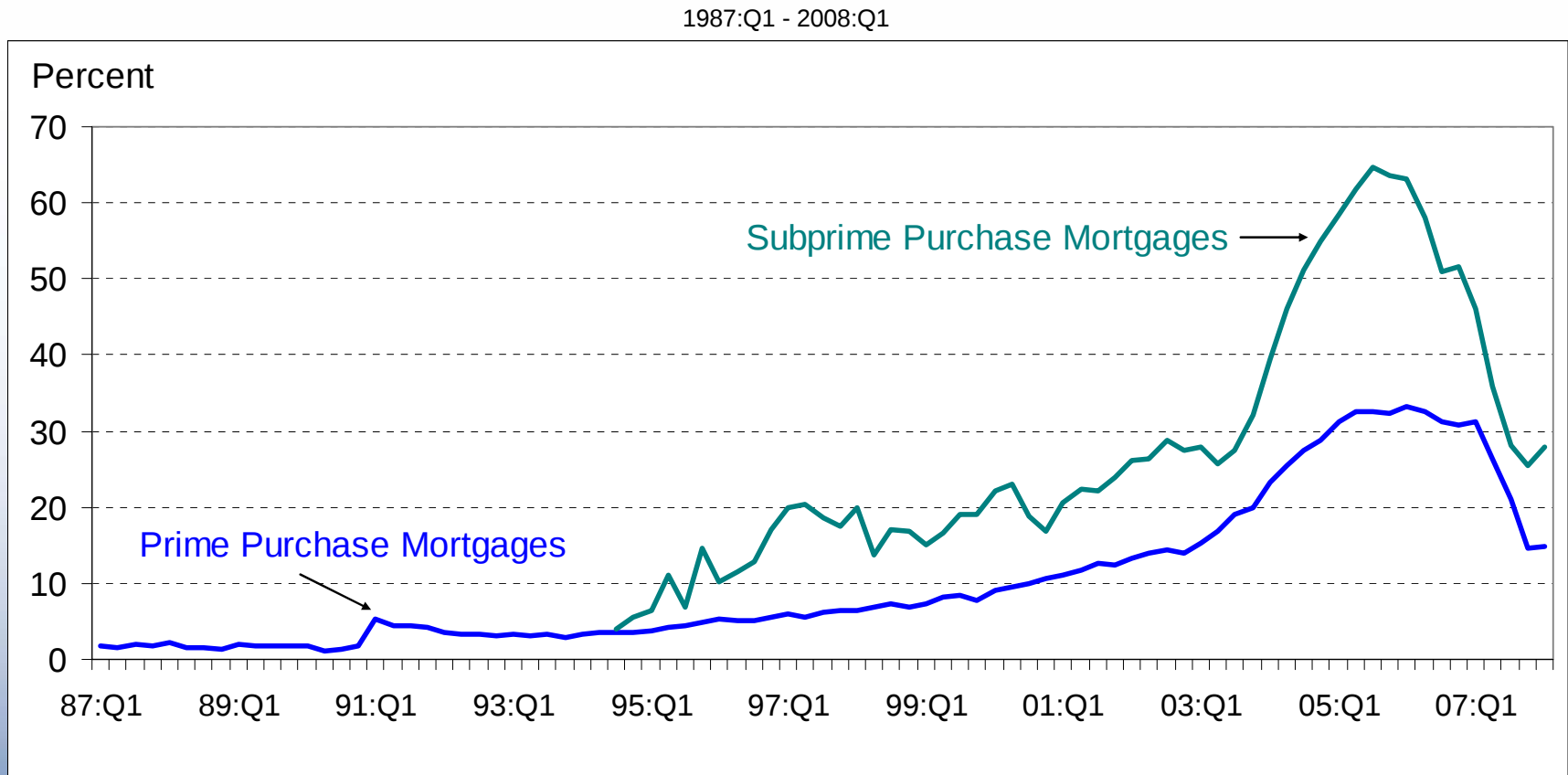
(Jan-Aug 2007, includes towns with 60+ foreclosure petitions in this period)



Source: The Warren Group

Figure 11

Percentage of Purchase Mortgages with Piggyback



Source: The Warren Group