Regional Outlook

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Regional Perspectives

◆ ***Region's Economic Conditions***—**The current recession is less severe than the downturn during the early 1990s; however, certain information technology industries have been affected more negatively by the recent weakness. Thus far, the housing sector has remained robust, but areas that recently experienced significant price appreciation may falter, especially if the recession continues.** *See page 3.*

◆ ***Rising Concentrations in Long-Term Assets Are Elevating the Interest Rate Risk Profiles of the Region's Savings Institutions***—**Asset maturities continue to lengthen while liabilities remain short. Optionality is becoming a key funding issue, and measuring and projecting the sensitivity of nonmaturity deposits or retail CDs to rising rates will prove difficult. As a result, interest rate risk measurement and management are becoming more complex.** *See page 4.*

By the Boston Region Staff

In Focus This Quarter

◆ ***Housing Market Has Held Up Well in This Recession, but Some Issues Raise Concern***—**Recent trends in mortgage underwriting are of particular interest, as an estimated $2 trillion in mortgage debt, approximately one-third of the total outstanding, was underwritten during 2001. Nonconstruction residential mortgages traditionally have represented one of the better-performing loan classes during prior downturns. The level of credit risk, however, may be higher this time around because the mortgage lending business has changed since the last downturn. This article examines these changes, including increased involvement by insured institutions in the higher-risk subprime credit market, the acceptance of higher initial leverage on home purchases, and greater use of automated underwriting and collateral valuation processes, which have not been recession-tested.**

◆ **Home price softening could have an adverse effect on residential construction and development (C&D) and mortgage portfolios. In the aggregate, the level of risk appears modest. However, insured institutions with significant C&D loan exposures in markets that experienced ongoing residential construction during 2001, despite slowing local economies, are at higher risk. Weakening home prices could hurt loan quality in selected markets. The San Francisco Bay area stands out as a place to watch in this regard.** *See page 9.*

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Regional Perspectives

- **Home price appreciation continued throughout the Region during 2001, but moderated in some areas with higher-priced homes.**

- **Long-term asset concentrations have grown significantly among the Region's savings institutions, heightening exposure to rising interest rates.**

- **Liability duration has not kept pace with the lengthening of assets; in response, institutions are relying more on managing core deposit costs as a way to mitigate interest rate risk during a rising rate environment.**

Region's Economic Conditions

Nation and New England Fall into Recession in 2001

The New England economy slowed along with that of the nation through 2001; the ten-year economic expansion, the longest on record, ended in the first quarter. According to ***Economy.com,*** **Connecticut** and **New Hampshire** were in a recession, and the rest of the New England states were close to a recession as of year-end 2001. The six states in the Boston Region reported unemployment rates below the national average as of December; however, rates have been rising since first-quarter 2001. Unemployment rates in **Massachusetts, Maine,** and New Hampshire have risen more than 1.5 percentage points from record lows at the beginning of the year. Personal bankruptcy filings in the Region also continued to trend higher through third-quarter 2001.[1]

The current economic environment in the Region differs from the recession of the early 1990s, when cyclical weakness was compounded by a downsizing defense industry and overbuilt commercial real estate sector. The current recession reflects a cyclical downturn, although certain white-collar industries, such as software and telecommunications, have been affected more significantly. A recent study conducted by ***Northeastern University*** reported that layoff announcements in Massachusetts have been concentrated among information technology (IT) companies, such as Cisco Systems, EMC, and Lucent Technologies.[2] In fact, unemployment claims in the third quarter were rising three to five times faster in areas with concentrations in IT employment.

[1] The number of year-to-date filings through third-quarter 2001 was 12 percent higher than one year ago.

[2] *Boston Globe,* "State job losses soar; those who rode tech boom are hit hardest," December 20, 2001.

Housing Market Pushes On

The Region's housing market is cooling but remains a faint bright spot in the economy. Growth in existing home sales in the Region was weak through third-quarter 2001 compared with the nation, but remained positive. New home construction (measured by building permit issuance) slowed in the Region through 2001, following strong gains in the late 1990s. **Vermont** was the only state in the Region with an increase in new home construction over the past 12 months.

Despite the softening economy, home price appreciation continued in metropolitan areas throughout the Region in 2001, suggesting that the weakness in sales was not due to a softening in demand. According to data reported for 14 of the Region's metropolitan markets from the ***Office of Federal Housing Enterprise Oversight (OFHEO),*** only **Hartford,** Connecticut, experienced an increase in home prices that was slightly *less* than the national average of 8.3 percent through third-quarter 2001. In fact, half the Region's metropolitan areas reported double-digit increases in home prices over the period, following robust gains in 2000. The strongest appreciation occurred in the areas surrounding greater **Boston**—including **Lawrence, Lowell,** and **Worcester,** Massachusetts, and **Manchester,** New Hampshire—which have lagged Boston in the past.

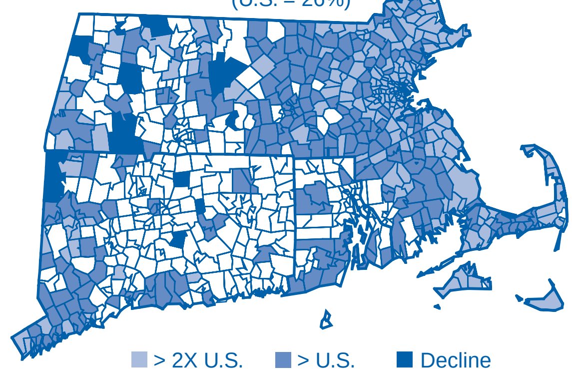
The Slowing Economy Has Affected Home Prices in Certain Towns

While aggregate home prices in the Region's metropolitan areas continued to rise, certain pockets began to experience weakening conditions following years of gain. Town-level data provided by **The Warren Group**[3] for southern New England[4] show that urban areas that prospered most during the late 1990s boom witnessed the largest gains in median home prices (see Map 1). At the same time, several towns in rural areas, such as western Massachusetts and northwestern Connecticut, experienced modest growth from 1995 to 2000. Through October 2001, however, price appreciation moderated in some areas that experienced rapid price appreciation over the past five years. Specifically, many towns in southwestern Connecticut and eastern Massachusetts—areas where employment is concentrated in finance or technology—showed little or no growth in median prices year-to-date through October 2001, while some registered declines in median prices compared with 2000. Some of the larger towns include **Greenwich** and **Westport,** Connecticut, and **North Reading** and **Swampscott,** Massachusetts.

Moreover, anecdotal evidence suggests that prices of high-end homes in several towns have increased only moderately or even declined. Because the current downturn has affected the Region's IT sector disproportionately, it has led to some price weakness in the market for high-end properties concentrated in these areas. This situation differs from the previous recession, when the market for starter homes and condominiums suffered more as manufacturing and other blue-collar industries bore the brunt of the downturn. As noted in the ***In Focus*** article, the Northeast is prone to volatile home prices and has experienced declines in affordability over the past five years; however, the fundamentals of the current housing market are stronger than during the previous recession. Residential real estate markets in the Boston Region have seen little speculative building, and there is a limited inventory of unsold homes. However, should the economic downturn continue for some time, softening in housing prices could become widespread.

Map 1

Most Pronounced Home Price Gains during Late-1990s Tended to Be in Urban Areas with IT/Finance Clusters and Vacation/Retirement Areas



* Data reported at town level are mapped by ZIP code. Only towns with at least ten sales transactions in both 1995 and 2000 were examined.
Source: The Warren Group

[3] The Warren Group is a Boston-based publishing and information services firm serving professionals in real estate, banking, and commerce.

[4] Data are available for Massachusetts, Connecticut, and Rhode Island.

Rising Concentrations in Long-Term Assets Are Elevating the Interest Rate Risk Profiles of the Region's Savings Institutions

The volume of long-term assets held by the Region's insured institutions has increased steadily since the mid-1990s. While growth moderated following the refinancing boom of 1998, concentration levels are again on the rise as a result of a resurgence of refinancing activity in 2001. For many of the Region's insured institutions, the growing concentration of investment in long-term assets may be creating significant exposure to future increases in interest rates. This concern was addressed in the ***Boston Regional Outlook,*** Second Quarter 2000, and remains relevant today. This article evaluates recent trends and factors that are contributing to this growing exposure, as well as trends related to the funding side of the balance sheet that may complicate interest rate risk management. The rising exposure is particularly pronounced among the Region's small savings institutions (total assets less than $1 billion). This article focuses on those institutions, which comprise nearly two-thirds of the Region's insured institutions; however, many of the trends noted for these institutions are present in large savings banks and commercial banks as well, albeit to a lesser degree.

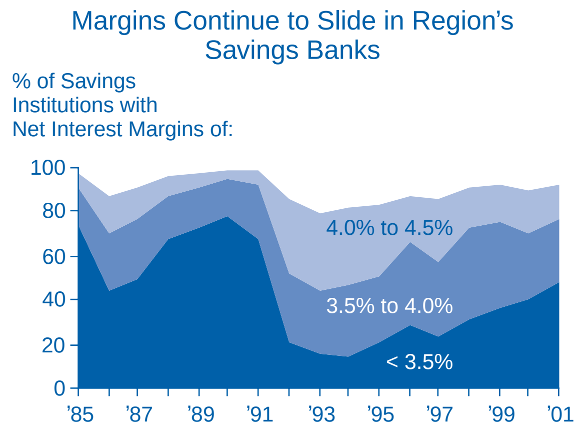
Eroding Net Interest Margins Spur Investment in Longer-Term Assets

It appears that a major contributing factor to the growing concentration in long-term assets is the persistent decline in net interest margins (NIMs) that has eroded earnings steadily over the past few years. For example, the median NIM for the Region's savings institutions dropped 58 basis points from its 1993 peak to 3.54 percent for the nine months ending September 2001. In 1994, only 15 percent of savings institutions reported a NIM of less than 3.5 percent (see Chart 1); that percentage had steadily increased to 48 percent by September 30, 2001.

It is interesting to note that during the last significant Fed easing in the early 1990s, savings bank NIMs improved considerably. Two deposit-related factors contributed to this improvement. Between 1992 and 1993, institutions departed from the previous industry practice of paying a fixed rate on savings and negotiable order of withdrawal (NOW) accounts. This change caused a significant one-time drop in funding costs. In addition, and perhaps more significant, the pricing mentality in New England changed as the banking crisis unwound. Between 1988 and 1990, the median deposit cost for the Region's banks was approximately 60 basis points above the median for the rest of the country. By 1993, the median was 7 basis points below the median for the rest of the country.

The ratcheting down of rates on savings and NOW accounts, combined with the unwinding of the competitive premium for deposits in the Region, provided a shot in the arm for savings and commercial banks alike.

CHART 1



Source: Bank and Thrift Call Reports

These greatly improved margins allowed institutions to maintain a largely variable-rate asset mix, as there was no need to buffer margins by emphasizing higher-yielding fixed-rate assets. Despite a significant refinancing wave during the early 1990s, the Region's median ratio of long-term assets to earning assets remained fairly low and stable throughout the period.

Unfortunately, in the current low rate environment, circumstances are vastly different. Nonmaturity deposit costs have been maintained at low levels since they were driven down in 1993. In fact, in that year, the federal funds rate averaged 3.02 percent and the median cost of savings deposits (including money market deposit accounts) for the Region's banks was 2.87 percent. In 2000, the federal funds rate averaged 6.24 percent and the median cost of savings accounts was only 2.89 percent; thus, these accounts had far less room to respond to the decline in interest rates than was the case in the early 1990s. Also, for the first nine months of 2001, the median deposit cost in the Region was 55 basis points *below* the median for the rest of the country. Thus, the Region's insured institutions may find it difficult to boost margins by lowering offered rates, particularly on certificates of deposit, without risking deposit flight.

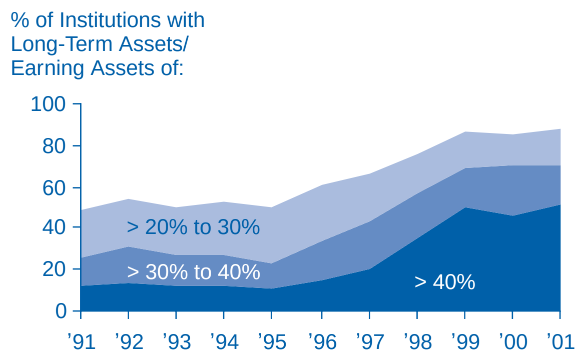
As a result, many institutions are holding higher-yielding, long-term, fixed-rate assets in an effort to keep margins from falling further. The current interest rate environment (steep yield curve) has created an even greater incentive to retain longer-term assets, as the reinvestment opportunities on the short end of the curve provide significantly lower returns than those that can be had by retaining long-term, fixed-rate, mortgage-related assets. These efforts to protect the current earnings stream may place longer-term earnings at risk if interest rate risk management practices are not implemented to contain exposure to rising interest rates. Only 10 percent of savings institutions reported that long-term assets exceeded 40 percent of earning assets in 1995 (see Chart 2, next page). As of September 30, 2001, more than half reported a similar concentration level, a clear indication of the extent to which asset duration has increased among the Region's savings institutions.

Banks Experience a New Refinancing Wave

The record level of refinancing that occurred in fourth-quarter 2001 (see Chart 3, next page) will likely result in higher long-term asset concentration levels in the

CHART 2

Long-Term Asset Concentrations Continue to Rise in Savings Banks



Source: Bank Call Reports

short term. As shown in the chart, nationally, only about 20 percent of the dollar volume of new loans applied for in 2001 were adjustable-rate mortgages (ARMs).

A recent increase in the loan amount for qualifying, conforming loans may extend the refinancing wave into 2002 even without further rate cuts and may spur a large group of borrowers to refinance. The previous conforming limit of $275,000 was raised in January 2002, to $300,700. ***Fannie Mae*** and ***Freddie Mac*** estimate that, nationwide, 120,000 jumbo mortgages will refinance as a result of the increased limit.[5] This increase in the jumbo limit is expected to be a factor in the Boston Region, particularly in portions of Massachusetts and Connecticut, where home prices are among the highest in the country.

Borrower preference for fixed-rate loans continues to erode the ARM portfolios of small savings banks.[6] In 1997, the median percentage of ARMs to total residential first mortgages for these institutions was 64 percent. By September 2001, that percentage had fallen to 41 percent. While comparable data are not reported for thrifts, the median percentage of ARMs to total mortgage-related assets (including passthrough mortgage-backed securities) fell from 60 percent in September 1996 to 36 percent by September 2001. Residential loans make up the largest share of earning assets for small savings banks, and the significant shift from adjustable- to fixed-rate loans has contributed to the asset extension reflected in Chart 2. Borrower preference for fixed-rate loans has resulted in a significant lengthening of nonresidential portfolios as well.

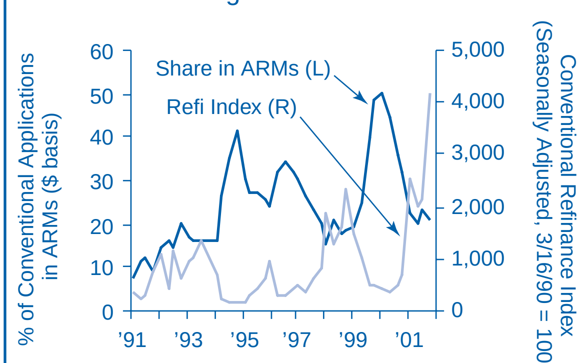
The tremendous volume of refinancing activity over the past few years has been dominated by fixed-rate origination. Institutions have been faced with the decision either to book the long-term loans or sell them and reinvest the proceeds in shorter-duration investments, which would put downward pressure on earnings. Rather than hold the loans in portfolios that were becoming heavily concentrated in fixed-rate loans, many institutions securitized the loans and retained them as securities to bolster asset yields. The decision to hold these assets has contributed to the rising concentration in long-term assets. As of September 30, 2001, the median percentage of mortgage passthrough securities that mature or reprice in five years or more was 88 percent for small savings institutions, compared with 43 percent in 1997. In addition, the median percentage of all other debt securities with a comparable repricing horizon increased from 7 percent to 20 percent over the same period, suggesting that the securities portfolios are not being managed actively to mitigate the rising interest rate risk in the loan portfolios.

Liabilities Come Up Short

While the balance sheets of insured institutions have shifted toward longer-term assets, the liability side consists of relatively short-term instruments. Seventy-five percent of time deposits in the Region's savings institutions mature or reprice in one year or less. This percentage has risen over the past few years, as customers have become less willing to invest in longer-term instruments,

CHART 3

Share of Adjustable-Rate Mortgages Decreased as Refinancing Wave Took Hold in 2001



Source: Mortgage Bankers Association of America

[5] "Few See Rerun Soon of GSEs' Cap Hike," *American Banker,* December 10, 2001.

[6] Call Filers only—excludes savings and loans (thrifts).

particularly when yield spreads (over U.S. Treasuries) offered by shorter-term instruments have become more favorable than those for longer-term instruments.

Savings institutions have tried to increase the duration of liabilities by extending the maturity of borrowings. As of September 30, 2001, 51 percent of all other borrowings were reported to mature or reprice in three years or more, an increase from 14 percent in 1997. However, this lengthening of maturities may not be reducing exposure to higher interest rates. Longer-term borrowings may contain options that allow the issuer to call the advances when interest rates rise. The Federal Home Loan Bank (FHLB) of Boston is the primary source of term borrowings for the Region's savings institutions. The ***FHLB's 2000 Annual Report*** indicates that, as of year-end 2000, approximately 63 percent of outstanding advances with a remaining maturity of three years or more could be redeemed early (at the FHLB's option), with most callable within one year. This suggests that a high percentage of the longer-maturity borrowings reported on Call Reports are, in effect, short-maturity liabilities in the event of a rising rate environment and do little to offset the rising interest rate risk that may accompany increased long-term asset concentrations.

Another area in which option risk may be rising is in certificates of deposit (CDs). In the current interest rate environment, new CDs are being written at historically low interest rates; therefore, existing prepayment penalties may not be sufficient to deter customers from redeeming CDs in a rising rate environment. A modest increase in rates may be all that is necessary to negate the penalty and trigger a redemption. An evaluation of prepayment penalties may be worthwhile in light of the low rates being paid on new CDs.

As noted in our previous article on interest rate risk, there appears to be little change in the maturity structure of on-balance-sheet liabilities to offset the continued growth of long-term assets. From an off-balance-sheet perspective, 7 percent of small savings institutions continue to report some use of interest rate derivatives (primarily interest rate swaps and options). This percentage has stayed fairly constant since long-term asset concentration levels began to rise in the mid-1990s.

While rising interest rate risk can be mitigated through active management of securities portfolios, extension of funding sources, or off-balance-sheet mechanisms (such as interest rate swaps), these options come at a cost that could pressure already deteriorating margins. However, it will be very difficult to correct existing imbalances through the normal course of business in a reasonably short time. Prepayment rates on the long-term assets booked over the past few years are likely to be modest and, in a rising rate environment, are likely to slow considerably. The ability to control funding costs when interest rates rise is paramount, but it may prove difficult. As mentioned previously, CDs may offer only a limited means of holding down rates because of the already low prevailing rate environment in the Region relative to the rest of the country and the higher level of competition for this type of funding.

Nonmaturity deposits are a significant portion of interest-bearing liabilities. Rates paid on these deposits historically have not been as volatile as those paid on borrowings and time deposits, particularly in a rising rate environment. However, in such an environment, institutions that lag the market are more likely to lose balances as funds move into better-yielding instruments, either within the institution or elsewhere. Under either scenario, costs to the institution rise. Clearly, sensitivity exists to interest rate movements, no matter what pricing philosophy an institution adopts. The question is how much sensitivity? Customer behavior is difficult to predict, and an overreliance on management of core deposit costs to mitigate interest rate risk may prove problematic for some institutions.

Conclusion

Clearly, interest rate risk is rising among the Region's savings institutions. Asset maturities continue to lengthen, while liabilities remain short. Optionality is becoming a key funding issue, and measuring and projecting the sensitivity of nonmaturity deposits or retail CDs to rising rates will prove difficult. As a result, interest rate risk measurement and management are becoming increasingly complex.

As mentioned in the ***Boston Regional Outlook,*** Second Quarter 2000, interest rate risk management must ensure that an institution can weather conditions that can *reasonably* be expected to occur. A sharp rise in short-term rates of up to 400 basis points has not been particularly uncommon in the past; on the basis of the current level of short-term rates, the possibility of a significant rise should not be underestimated. A modest rise in long-term rates at the same time would dampen prepayment speeds on long-term assets significantly. In such a scenario, many institutions likely would suffer further margin erosion—some significantly. Steps certainly can be taken to mitigate some of the risk; however, there will be a trade-off between short-term profits and long-term earnings stability. Now is a good time for institutions to take action. When the rate cycle begins to turn, risk reduction strategies may be much more difficult to implement.

By the Boston Region Staff

Housing Market Has Held Up Well in This Recession, but Some Issues Raise Concern

Trends in housing markets are important performance drivers for many FDIC-insured institutions. The health of residential markets can affect the credit quality of residential mortgage loans, home equity loans, and loans to finance residential construction and is linked indirectly to the performance of other types of consumer and small-business debt. Further, an estimated $2 trillion in mortgage debt, approximately one-third of the mortgage market, was underwritten during 2001, with 56 percent of this activity in refinancing transactions.[1] This activity makes recent trends in underwriting of particular interest. An ancillary issue for many mortgage lenders, interest rate risk, is not addressed in this article.[2]

The U.S. economy entered a recession in March 2001, and the question arises as to how consumer creditworthiness, housing values, and recent mortgage-lending practices will fare during this downturn. Developments contributing to increased credit risk include higher consumer debt burdens, looser mortgage loan underwriting standards, and the emergence of subprime mortgage lending as a significant line of business for some banks. Mitigating this risk has been the steady appreciation of home prices, which have shown signs of softening in some markets but not to the extent seen at a comparable stage in previous recessions.

Home price weakness may be more pronounced in 2002 as the effects of the recession take hold, but in the authors' judgment, systemic weakness in home prices is unlikely, absent a deep and long recession. Adverse mortgage lending trends are not expected to threaten the capital or earnings of the vast majority of insured institutions. Nonconstruction residential mortgages, even during the most pronounced periods of stress in the 1980s and early 1990s, remained the best-performing loan class, especially for lenders specializing in residential real estate; and, historically, these mortgages have been one of the lowest credit-risk loan types for all manner of insured institutions.[3]

That said, however, there *are* pockets of risk for insured institutions. There is evidence that borrowers with weak credit may be experiencing greater repayment difficulties, elevating the risks faced by subprime mortgage lenders. Further, a slump in residential real estate markets could be especially detrimental to insured institutions with significant exposures to housing construction because projects might not sell at projected asking prices or as quickly as anticipated. Finally, in specific markets where housing prices may have achieved unsustainable levels, some increase in housing-related credit quality problems can be expected, and in this regard, the San Francisco Bay area stands out as a place to watch.

The Recession Thus Far Has Had a Minimal Impact on Mortgage Delinquencies at Insured Institutions

Despite three quarters of recession, most housing indicators remained quite healthy this past year relative to trends seen in past recessions. For example, new and existing home sales both set records during the year, while new home construction failed to decline, an occurrence not seen in the past six recessions. Another indicator, year-over-year growth in existing home prices—as measured by either the ***Office of Federal Housing Enterprise Oversight (OFHEO)*** repeat sales price index or the ***National Association of Realtors (NAR)*** median single-family price statistic—showed deceleration but remained well above trends seen at similar points in past recessions. This behavior partly reflected the early robustness of household income in the face of recession and relatively low fixed mortgage rates during 2001, which helped to counter some of the

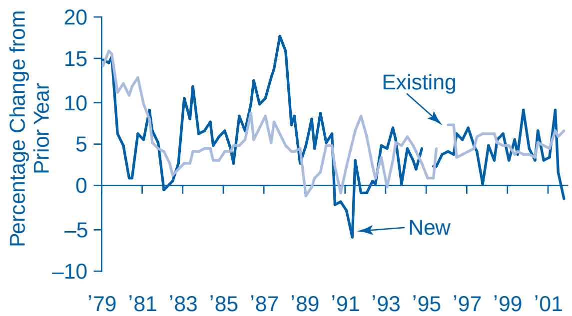
[1] Mortgage Market Forecast, www.mbaa.org/marketdata/forecasts/, January 2002.

[2] For a discussion of this issue, see "Regional Perspectives," Boston and Chicago Regions, *Regional Outlook,* First Quarter 2002.

[3] See "Region's Insured Institutions Exhibit Lower Risk Profile than the Nation's, Appendix: Risk-Weighting Methodology," Table A in Boston Region, *Regional Outlook,* First-Quarter 2000.

Chart 1

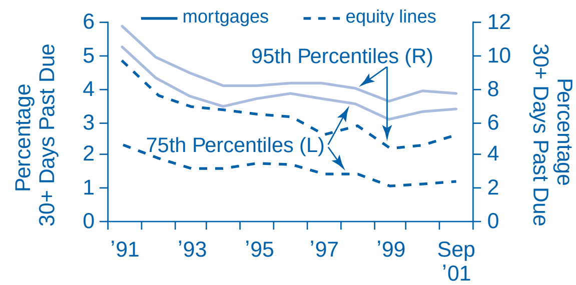
Although the Much Larger Market for Existing Homes Has Held Up, New Home Prices Are Under Pressure



Sources: Census (new), National Association of Realtors (Existing)

Chart 2

Through September 2001, Mortgage-Related Delinquencies Remained Modest



NOTE: Sample consists of banks with at least $1 million in equity lines or mortgages that are also at least 5 percent of bank's Tier 1 capital.
Source: Bank and Thrift Call Reports

initial adverse effects of the recession on housing demand.

One sign of potential weakness appeared late in 2001 in the modest year-over-year decline in median prices of new single-family homes (see Chart 1). Because existing home sales outnumber new home sales roughly fivefold, price trends in the latter are generally not predictive of prices for the much larger existing home market.[4] However, as discussed later in this article, adverse pricing trends in the new home segment do raise concerns for residential developers and insured institutions that finance residential construction.

The steady increase in prices of existing homes depicted in Chart 1 masks considerable regional variation. As detailed later in this article, home price growth began to weaken in 2001 in a number of metropolitan statistical areas (MSAs). While there is no clear common denominator among the markets in which this occurred, a number of these markets had both extremely rapid home price growth in the recent past and significant slowdowns in employment growth or outright contractions in employment last year.

Credit quality indicators for insured institutions' mortgage loans have shown only preliminary signs of weakness thus far. Through the first nine months of 2001, insured institutions showed negligible advances in median past-due ratios for mortgages and equity lines of credit, although continued strong mortgage origination activity in 2001 may have masked (in the aggregate) developing credit problems for more seasoned mortgage loans. For institutions that held at least $1 million in residential mortgages or home equity lines of credit *and* whose exposures comprised at least 5 percent of Tier 1 capital, some modest deterioration is evident in the worst-performing mortgages and home equity lines since 1999, as seen in Chart 2.[5] Even if this recession lingers, worsens, or both, residential mortgage lending (nonconstruction and development-related) likely poses only modest risk to most insured institutions' earnings and capital, since it has held up better in prior recessions than other loan types.

What Are the Risks Facing Housing Lenders in 2002 and Beyond?

In an environment of significantly slower economic growth than prevailed during the 1990s, can the strength of housing prices and the relatively benign credit quality environment for housing lenders be expected to continue? The answer will depend on the interplay of economic conditions and lenders' risk profiles. In the remainder of this article, we discuss the gradual increase in the risk profile for insured mortgage lenders that appears to have occurred during the

[4] Existing home prices are also more reflective than new home prices of trends in broader economic indicators, such as aggregate per capita personal income.

[5] It is interesting to examine the (adverse) tail of the credit quality distribution when looking at residential mortgage trends, as average and median past-due ratios move little and are typically very low—thus, only the highest 25th and 5th percentiles of past-due ratios are presented in Chart 2.

1990s, as well as some cyclical risks to their performance that may exist as the recession plays out.

Evolving Lending Practices Have Increased the Risk Profile for Mortgage Lenders

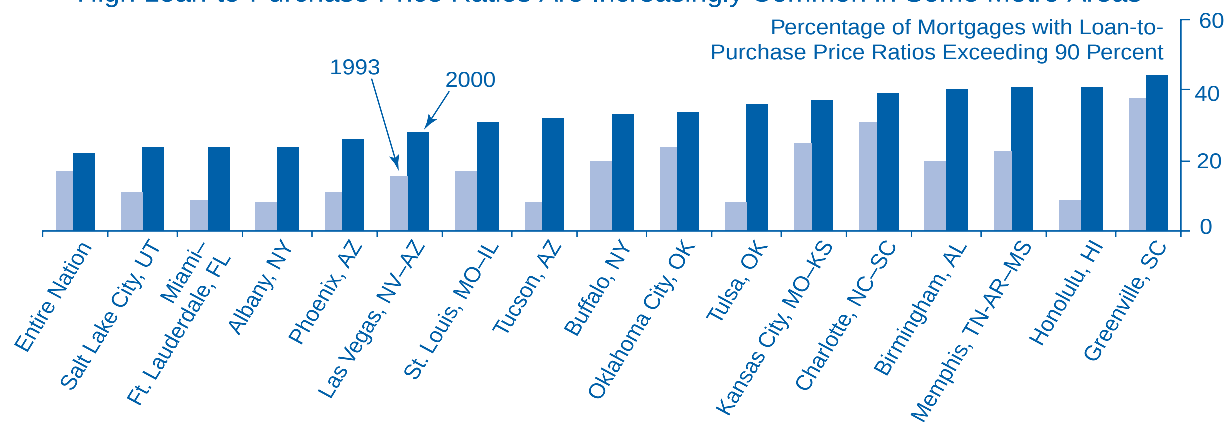
Although history suggests that residential mortgage defaults will be relatively low even in a recession, changes in the mortgage market since the 1990–1991 recession could affect mortgage performance during the present downturn. Many underwriting changes over the past decade have been driven in part by the growing importance of the secondary market for mortgage debt, and of Fannie Mae and Freddie Mac in particular. In 1980, federal and related agencies had direct or indirect interests in approximately 17 percent of all mortgage debt.[6] By 2000, their share of the mortgage market had increased to roughly 41 percent. Insured bank and thrift mortgage exposures grew over the same period, but, as a share of direct mortgage debt, bank and thrift mortgage holdings decreased from 59 to 35 percent. These trends notwithstanding, insured institutions still provide substantial funding, directly or indirectly, to the housing market: as of September 30, 2001, 1 to 4 family mortgage loans and mortgage-backed securities held by insured institutions aggregated $2.3 trillion, up 37 percent from five years earlier.

Although an active secondary mortgage market has broadened homeownership, improved mortgage loan liquidity, and allowed insured institutions to allay credit risk, it has also heightened market competition and transformed the lending process. In presecondary market days, lenders largely had to retain originated mortgages in their own portfolios. Consequently, only lenders with ready funding sources (such as banks, thrifts, and insurance and finance companies) were able to compete in the mortgage markets. The advent of the secondary market enlarged the pool of available funding and permitted both insured institutions and other originators to transfer their mortgage business readily into entities such as mortgage pools and trusts. Consequently, many new players, including on-line and brick-and-mortar mortgage brokers, have entered the mortgage origination market.

The resulting robust mortgage loan competition, combined with Internet-based consumer research tools, has led to considerable commodification of the mortgage market. Rather than competing on the basis of traditional relationships, lenders' market shares are increasingly driven by price. For smaller savings institutions that focus heavily on residential mortgage underwriting, this issue has likely elevated business risk. Heightened competition has caused some loosening of mortgage underwriting standards and pushed lenders to use technology to expedite and streamline the underwriting process. Consequently, credit-scoring mechanisms and automated valuation techniques currently in place have not been tested through a full credit cycle. Because pricing competition has pressured margins, some mortgage lenders have pursued subprime or high loan-to-value (HLTV) mortgages. The ability of insured institutions to mitigate subprime losses through an economic downturn is untested to a large extent as well—finance companies dominated the high-risk mortgage market in past recessions.

CHART 3

High Loan-to-Purchase Price Ratios Are Increasingly Common in Some Metro Areas



Source: Federal Housing Finance Board

[6] These interests include residential, commercial, and farm real estate debts held directly by, or held in mortgage pools or trusts issued by, federal and related agencies. Source: Table 1186, Statistical Abstract of the United States: 2001, page 733.

In general, mortgage underwriting standards have loosened industrywide over the past decade. For instance, lenders have increasingly accepted higher loan-to-purchase price (LTPP) ratios for purchase money mortgages.[7] According to the ***Federal Housing Finance Board,*** LTPP ratios are high and have risen in several metropolitan areas over the past seven years (see Chart 3). Between 1993 and 2000, the **Honolulu, Tulsa,** and **Tucson** markets exhibited the largest increases in mortgages with LTPP ratios exceeding 90 percent.

Although lenders often mitigate the risk of loss associated with low downpayments by requiring private mortgage insurance (PMI), recently the mortgage industry has allowed borrowers to avoid purchasing PMI. In particular, "piggyback" financing has made homeownership increasingly possible for households that cannot afford the traditional 20 percent down payment or do not wish to pay for PMI. With piggyback financing, the borrower often arranges a conforming 80 percent LTPP first mortgage and finances a portion of the remaining 20 percent with a concurrent second mortgage on the property (e.g., "80-10-10"). This type of transaction has become popular because interest paid on the (albeit more expensive) second mortgage is tax-deductible, whereas PMI premiums are not. Thus, piggyback financing is probably most attractive to individuals in higher-cost/tax areas or higher tax brackets, such as those in the **Northeast** and **California.** This trend effectively shifts the first loss position on all low down payment loans to the lender that retains the junior position. These institutions are, of course, compensated for some of this risk with the higher interest rates charged on the piggyback portion of these mortgages.

Competitive factors have prompted the industry to enhance underwriting automation. As part of the push, credit scoring has become a routine part of the credit analysis process, and, increasingly, lenders are using automated valuation models (AVMs) to determine collateral coverage. However, credit scoring and collateral valuation models have been in popular use only since the 1990–1991 recession; consequently, their predictive ability in a downturn is uncertain. Although some have touted AVMs as the answer to appraisal fraud, the ability of statistical models to simulate the qualitative judgments considered critical to traditional appraisals is unknown. Paper appraisals reportedly continue to dominate the industry; however, recently, the two largest government-sponsored enterprises have begun accepting AVMs in lieu of standard appraisals for loans under $275,000.[8] For lenders that specialize in HLTV mortgages, there is less room for error with AVMs.

Cyclical Weakness Is Already Apparent in Subprime Mortgage Lending

Historically, certain insured institutions have made mortgage loans with narrow collateral margins or to borrowers with limited or blemished credit histories. However, significant entry by FDIC-insured institutions into mortgage lending to borrowers with weak or marginal credit, *as a targeted line of business,* generally has occurred only since the early 1990s. These "subprime" mortgages are neither defined nor reported on Bank Call Reports. As a result, gauging the extent of bank involvement in subprime lending at any point in time is difficult. However, the FDIC estimates that fewer than 1 percent of all insured institutions have significant subprime residential mortgage exposures. Nevertheless, according to some measures, subprime mortgages as a share of total mortgage originations peaked at 13 percent in early 2000, before moderating somewhat during the first three quarters of last year.[9] Thus, a much larger number of institutions probably have some limited involvement in subprime mortgage lending. A survey by the ***Minneapolis Federal Reserve Bank*** found that 29 percent of banks in the **Minneapolis District** offered loans to low-credit quality consumer borrowers in 1999.[10]

Subprime mortgage loan performance appears to have deteriorated notably during 2001. One source of support for this observation comes from delinquency trends on Federal Housing Agency (FHA)-insured mortgages, which are often granted to first-time homebuyers with troubled credit histories and borrowers with low down payments. The ***Mortgage Bankers Association*** reports that while the national delinquency rate on conventional mortgages rose 58 basis points in the year ending third-quarter 2001, the delinquency rate on FHA mortgages shot up by 234 basis points, to 11.4 percent (see Chart 4). This growing gap between

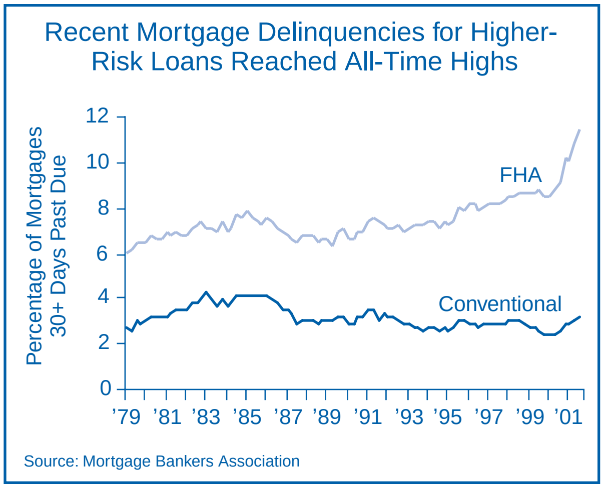
[7] Purchase money mortgages are loans extended solely for the initial purchase of a home. Statistics on loan-to-value ratios for supplemental home equity loans/lines (e.g., piggyback or "80-10-10" financing), as well as refinanced mortgages, are not readily available.

[8] "Automated Appraisals Require Caution by Lenders," *American Banker,* October 10, 2001.

[9] Based on dollar volumes, data from Inside Mortgage Finance Publications, Bethesda, MD.

[10] Ron Feldman and Jason Schmidt, "Why All Concerns About Subprime Lending Are Not Created Equal," *Fedgazette,* Minneapolis Federal Reserve, July 1999.

CHART 4



delinquency rates on conventional and government-insured mortgages suggests that marginal and subprime borrowers are facing growing repayment difficulties.

A database of more than 6.5 million subprime loans tracked by ***Loan Performance Corporation*** (formerly *Mortgage Information Corporation*) reported similar trends. The nationwide third quarter 2001 ratio of seriously delinquent subprime mortgages was 7.3 percent, up from 5.5 percent one year earlier.[11] Moreover, subprime delinquencies significantly exceeded those found among prime mortgages, as just under 0.5 percent of conventional prime mortgages were seriously delinquent.[12] Also of possible concern are vintage data trends, which show how pools of primary and junior-lien subprime mortgages perform over time. Mortgages originated in 2000 are performing poorly in relation to previous years' vintages.[13] This simply could reflect the impact of the current recession. Alternatively, ***Loan Performance Corporation*** analysts have suggested that the 2001 refinancing boom might have created some adverse selection in mortgage pools originated during the relatively higher interest rate environment of late 1999 and early 2000.[14] Because higher-coupon and variable-rate loans comprised a significant share of mortgage originations during that period, overall prepayment rates on the 2000 vintage might have been unusually high during 2001. Consequently, the best-quality loans in the 2000 pool might have refinanced, leaving loans of lesser credit quality behind and elevating the residual delinquency experience in that pool.

Given these trends, an important issue for subprime lenders is their ability to anticipate and plan for the impact of an economic slump on their operations. Some institutions clearly adopt subprime lending as part of an overall business strategy, setting up monitoring and collection departments geared to dealing with such loans. Among large, national lenders, for example, one institution that makes 5 to 10 percent of its loans to subprime borrowers recently provided additional resources to its loan services and default management departments. This action followed a period when one-third of its increase in nonperforming single-family mortgage loans was associated with loans to subprime borrowers.[15]

C&D Lending Risks May Be Elevated in MSAs with Potential Supply/Demand Imbalances

Historically, lending to finance housing construction is riskier than mortgage lending on existing structures. Insured institutions report construction and development (C&D) lending in a single category that includes both commercial and residential construction. While it is thus impossible to ascertain from quarterly call reports the extent of bank involvement in financing housing construction, anecdotal evidence suggests that, although smaller insured institutions engage to some degree in commercial property development, their C&D lending largely finances single-family construction. If markets with an oversupply of housing see weaker economic performance, insured institutions engaged in financing residential real estate development may be at risk. This could result in an increase in C&D loan delinquencies, losses, and other-real-estate-owned (OREO).

Demand for housing can be affected by two distinct trends: secular, or longer term; and cyclical, or shorter term. Over the long term, demographic trends, such as population growth rates and concentrations of households by age cohort, can affect overall demand for housing, as well as the types of homes demanded. Demand in local housing markets also can be affected by more cyclical factors such as recent changes in economic

[11] *The Market Pulse,* Loan Performance Corporation (formerly Mortgage Information Corporation), Winter 2001 and Fall 2001.
[12] *The Market Pulse,* Loan Performance Corporation, Fall 2001.
[13] Per Loan Performance Corporation delinquency data, subprime primary mortgages originated in 2000 displayed higher delinquency ratios for their age compared with similarly seasoned subprime loans originated in 1996, 1997, 1998, or 1999. Moody's second-quarter 2001 *Home Equity Index Update* found the same to be true of subprime home equity loans.
[14] "Another Look at the 2000 Book," *The Market Pulse,* Loan Performance Corporation (formerly Mortgage Information Corporation), Winter 2001.

[15] Calmetta Coleman, "Default Worries on Home Loans Escalate as Lenders Report Delinquency," *Wall Street Journal,* October 29, 2001.

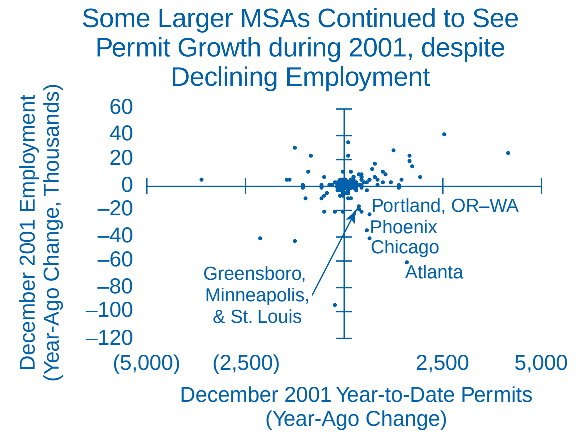
conditions, including interest rates. New supply of homes in local housing markets is produced in response to perceived or estimated future demand. Correct interpretation of market and economic signals is critical to the success of builders in metropolitan areas; however, this activity is complicated by the lags associated with developing, permitting, and constructing properties. The effect of overestimating future demand could be multiplied if several builders inaccurately gauge changes in demand. Consequently, a construction market with numerous smaller developers, such as **Atlanta,** may see amplified swings in construction activity and may experience excess supply during certain periods.

Although conceptually straightforward, measuring the balance between housing demand and supply is challenging, particularly at lower geographic levels. Shortcomings in data availability, quality, and timeliness can limit the effectiveness of this type of analysis. As already mentioned, some insight about current housing market conditions in specific metropolitan areas may be gained by analyzing both secular and cyclical trends. However, given the onset of recession last year, the role of cyclical factors is of prime concern at this time.

To measure the cyclical aspect of the relationship between a market's supply and demand, some analysts rely heavily on the concept of employment-driven demand.[16] Such analysis involves tracking a demand/supply ratio based on employment growth and permit issuance. Areas where permitting activity continues to accelerate while employment levels decrease may produce an increasing imbalance in the local housing market.[17]

Using a simplified version of employment-driven demand, we identified a number of metropolitan areas as being at risk for a rising imbalance in their housing markets (see Chart 5), the largest of which are **Chicago, Greensboro (NC), Minneapolis, Phoenix, Portland (OR-WA), St. Louis,** and, most notably, Atlanta. These markets are displaying signs that residential

CHART 5



Sources: Bureau of Labor Statistics, U.S. Census Bureau (Haver Analytics)

construction activity may not be responding in kind to local economies that have started to contract during this recession. Further, Phoenix, Portland, and Atlanta were identified previously as banking markets exhibiting elevated risk profiles.[18]

Chart 6 displays the level (y axis) and trend (x axis) in C&D lending exposures for the top 25 MSAs by median C&D concentration as a share of assets.[19] It is apparent that some markets identified in Chart 5 as having significant banking exposure to C&D lending also may have a cyclical imbalance in home building. Atlanta, for example, demonstrates one of the highest exposures, with a ratio of median C&D to total assets of 17 percent in third-quarter 2001, a roughly 100-basis-point increase from year-end 2000. In other words, while employment-driven demand has softened in the metropolitan area, single-family construction activity has continued, and community bank lenders may have increased their level of residential financing commitments.

Cyclical Risks May Be Developing with Respect to Home Prices

Popular comparisons have been made recently between the healthy run-up in housing prices during

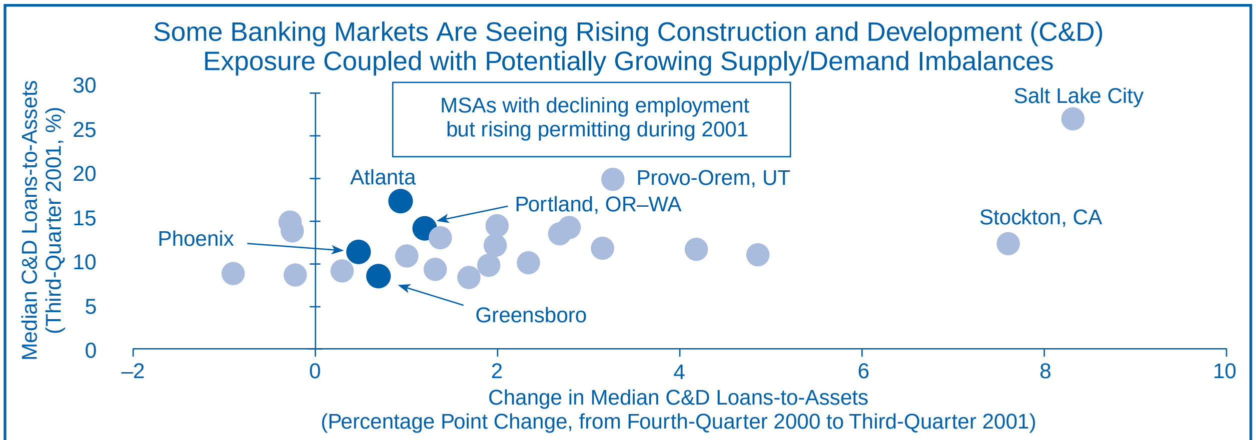
[16] For example, see www.myersgroup.com.

[17] This approach, although more reflective of recent economic events than perhaps more secular measures, is not without its drawbacks. For example, employment data from the Bureau of Labor Statistics' establishment survey are frequently revised, and, consequently, employment-driven demand may need to be reexamined.

[18] See "In Focus This Quarter," *Regional Outlook*, Fourth-Quarter 2001.

[19] We considered only MSAs that had at least six locally headquartered community banks that engaged in C&D lending activity and then charted the top 25 MSAs ranked by September 2001 median C&D/assets.

CHART 6



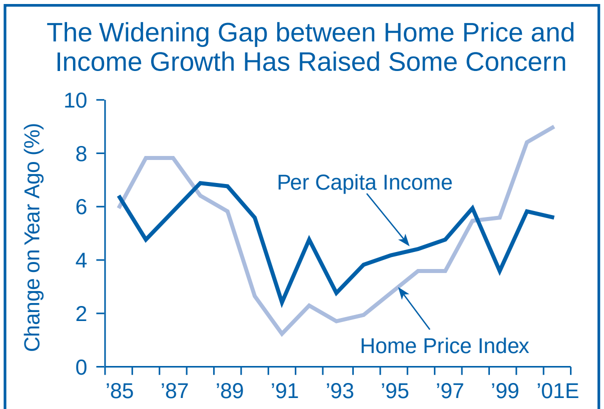
Sources: Bank Call Reports, Bureau of Labor Statistics, U.S. Census Bureau (Haver Analytics)

the past several years and the technology stock-fed speculative "bubble" in equity prices that persisted through early 2000. The subsequent bursting of this bubble and the resulting economic distress have raised concerns of a sequel featuring housing prices.

According to the OFHEO repeat sales price index, there has never been an instance of outright declines in aggregate U.S. existing home prices.[20] However, home prices do exhibit strong cyclical tendencies, with the rate of appreciation slowing during national recessions. In addition, there have been some decidedly negative episodes during the past few decades in various metropolitan markets. At the national level, existing-home price growth historically has followed trends in population-adjusted personal income growth,[21] and some have pointed to a growing imbalance between the two as a sign that home prices may weaken as the effects of the recession take hold (see Chart 7).

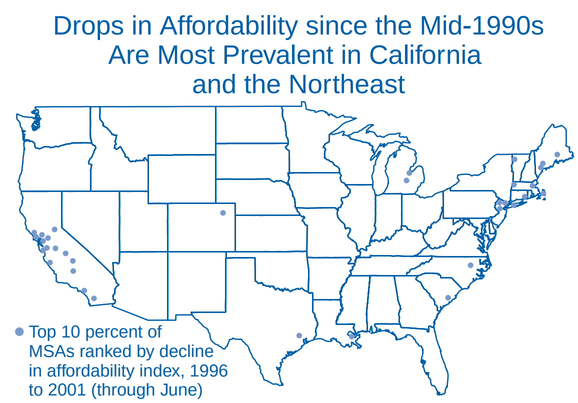
Given that home price bubbles have occurred in the past, most notably in **Texas,** California, and the Northeast during the 1980s, and that their ultimate deflation

CHART 7



Note: E=estimate
Sources: OFHEO, U.S. Census Bureau

MAP 1



NOTE: Anchorage, AK, is included, but not shown.
Source: Economy.com

[20] According to the National Association of Realtors' U.S. median price, a few episodes of price declines (on a quarterly, year-ago basis) are present in the time series—specifically first- and second-quarter 1989; fourth-quarter 1990; and first-quarter 1993—only the 1990 episode occurred during a recession. Also, as shown in Chart 1, U.S. median *new* home prices have experienced meaningful declines.
[21] This relationship is generally true at the metropolitan level as well.

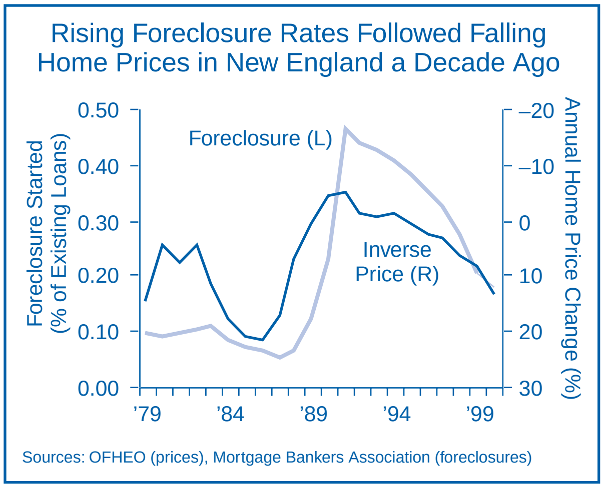
resulted in significant negative fallout for these areas' economies and insured institutions, it is useful to look at these historical examples as a potential "worst-case" scenario (with very low probability) for residential real estate markets during the current recession. It is unlikely that significant, systemic risks from home price bubbles have arisen yet for residential lenders. Of course, this situation could change if the current recession deepens or is protracted, or if growth during the subsequent recovery is anemic. Further, national trends can obscure dramatic variations in local markets, and a handful of MSAs today are coming off several years of rapid home price growth and falling affordability. These markets, and the residential lenders targeting them, may be more at risk as local economic growth falters.

Map 1 shows markets that have seen the most significant reductions in affordability (sharp price gains) during the past several years. Not surprisingly, many of them—namely larger cities in California and the Northeast—are those that historically have seen the biggest swings in prices and a penchant for speculative excess.

In markets with rapidly declining affordability, credit risk arises from the increasing likelihood that new borrowers will commit a greater share of household financial resources to meet monthly payments. Credit problems could become more readily apparent given any subsequent disruptions to employment or income in these markets—especially among households with limited wealth or that require multiple job holders to meet mortgage payments. These risks may be amplified by the increased underwriting of HLTV and subprime mortgages during the past decade.

Disruptions to aggregate household liquidity from lost employment or decreased income can result in rising mortgage *delinquencies*. With respect to *foreclosures,* however, some research has suggested that the decline in prices relative to the balance owed on the mortgage (rising loan-to-value ratio) is the most significant factor.[22] Even in instances of prolonged job/income loss, owners with positive equity are likely able to sell their

CHART 8



Sources: OFHEO (prices), Mortgage Bankers Association (foreclosures)

homes profitably, thus avoiding foreclosure. Chart 8 shows the strong relationship between declining home prices and increasing foreclosure rates in **New England** a decade ago (the chart plots the inverse price change in order to emphasize the relationship).[23]

The data available through late 2001 were mixed with respect to home resale price trends at the MSA level. On the one hand, while existing home prices as measured by the OFHEO home price index showed no markets with year-over-year price declines in fourth-quarter 2001, NAR's median resale price metric did show about a dozen markets with year-over-year declines, none exceeding four percent. A *deceleration* in year-over-year home price growth was evident for many markets (and the nation) using either measure. It should be noted that the OFHEO data do not include sales of high-priced homes and are less influenced by changes in the mix of homes sold than are average and median prices;[24] this issue is more meaningful in the nation's most expensive markets, such as MSAs in the

[22] For instance, "Mortgage Default Risk and Real Estate Prices: The Use of Index-Based Futures and Options in Real Estate," Case, Shiller, & Weiss, NBER Working Paper #5078, NBER, April 1995, finds this to be the case, while citing past work that identified the link between rising LTVs and foreclosure rates.

[23] In states where dominant metro areas have seen large price declines in past years, such as Massachusetts, this relationship is more pronounced than in larger states or the nation as a whole. For example, the two-decade correlation between foreclosures started and price change is –78 percent in Massachusetts versus roughly –60 percent in both California and the nation.

[24] Data are obtained from aggregating repeat sales or refinancings of the same properties over time and using statistical methods to calculate an overall rate of home price appreciation for each market. Sampled properties are confined to those whose mortgages are "conventional" and do not exceed a conforming loan limit (set at $275,000 in 2001) required for securitization through Fannie Mae and Freddie Mac. For more information, see www.ofheo.gov/house/.

Table 1

As Recession Evolved, Home Price Appreciation Waned through 2001 ...Further Deceleration in Growth (or Declines) May Be Possible in 2002

MSAs Ranked by Deceleration in Home Price Index from 1Q01 to 4Q01	Annual Percent Changes						
	OFHEO Home Price Index					Nonfarm Employment	
	1998–2000	1Q01	2Q01	3Q01	4Q01	1998–2000	2001
United States	**6.3**	**9.6**	**9.1**	**8.8**	**6.9**	**2.4**	**0.3**
San Jose CA PMSA	17.7	24.4	16.9	8.4	0.6	3.4	–0.4
Santa Cruz-Watsonville CA PMSA	16.8	25.7	17.3	11.9	5.9	N/A	N/A
San Francisco CA PMSA	16.5	19.4	13.9	9.1	3.5	3.3	1.3
Salinas CA MSA	13.7	24.3	22.4	19.0	9.4	3.3	0.9
Santa Rosa CA PMSA	14.8	22.7	19.6	13.6	8.6	4.1	1.6
Oakland CA PMSA	14.7	22.3	18.0	14.1	8.2	3.4	2.0
Austin-San Marcos TX MSA	9.4	15.2	12.1	7.7	5.0	5.9	2.1
Merced CA MSA	6.4	24.6	21.8	17.3	15.7	N/A	N/A
Jamestown NY MSA	4.9	9.9	0.8	7.4	1.6	N/A	N/A
Stockton-Lodi CA MSA	9.0	22.8	25.2	20.6	14.9	3.7	3.0
Wheeling WV-OH MSA	4.1	10.8	7.7	11.7	3.7	1.1	–0.5
Goldsboro NC MSA	4.0	7.9	3.2	1.6	0.9	N/A	N/A
Cumberland MD-WV MSA	2.7	8.6	8.4	8.1	1.8	N/A	N/A
Lewiston-Auburn ME NECMA	4.2	14.0	8.6	10.1	7.1	4.4	–0.4
Bangor ME NECMA	3.7	13.2	7.4	9.3	6.5	N/A	N/A
Fargo-Moorhead ND-MN MSA	4.0	11.1	6.5	5.4	4.6	2.1	–0.3
Barnstable-Yarmouth MA NECMA	12.8	17.6	14.5	14.6	12.5	3.9	1.3
Pine Bluff AR MSA	2.2	6.6	9.7	5.0	0.3	0.8	–1.7
Dubuque IA MSA	3.9	8.8	6.0	6.9	2.5	1.1	–0.6
Boulder-Longmont CO PMSA	10.9	14.6	11.7	11.7	8.3	5.1	3.2
Denver CO PMSA	11.1	13.7	11.8	10.9	7.9	3.8	2.3
Utica-Rome NY MSA	3.5	14.6	9.5	8.4	9.1	2.4	0.1
Vallejo-Fairfield-Napa CA PMSA	11.8	20.0	19.1	16.6	14.7	4.7	2.8
Bryan-College Station TX MSA	4.8	11.1	2.1	5.6	5.8	4.0	0.7
San Diego CA MSA	11.8	15.6	13.8	12.9	10.4	4.3	2.7
San Luis Obispo-Atascadero-Paso Robles CA MSA	11.4	19.2	18.0	17.8	14.2	N/A	N/A
Tucson AZ MSA	3.3	8.6	8.0	6.8	3.6	3.5	0.8
Jersey City NJ PMSA	8.0	11.1	17.6	13.7	6.2	2.1	2.7
Clarksville-Hopkinsville TN-KY MSA	3.3	9.1	4.2	6.5	4.2	N/A	N/A
Rapid City SD MSA	6.2	8.9	9.3	7.7	4.1	3.1	0.1
La Crosse WI-MN MSA	5.7	7.4	5.8	5.1	2.6	2.3	1.0
St. Cloud MN MSA	6.9	10.4	8.5	9.4	5.7	3.8	1.4

Sources: Office of Federal Housing Enterprise Oversight (OFHEO), Bureau of Labor Statistics

San Francisco Bay Area[25] and parts of the Northeast, since prices for high-end homes (typically financed by jumbo mortgages) may be more volatile over the economic cycle.

Table 1 lists markets whose 2001 deceleration in home price growth was in the top 10 percent of the more than 300 metro areas for which the OFHEO statistic is available. The table also provides (where available) each MSA's recent employment trend as an indicator of overall economic conditions. These markets may yet see even more pronounced deceleration in home price growth or even declines in home prices this year (as may others not shown). This possibility will be determined for the most part by the performance of each market's local economy.

The metro areas in the table are ordered by the magnitude of their deceleration in home price growth over the initial quarters of this recession. As a result, the marked deceleration in year-over-year price growth in the recently overheated San Francisco Bay Area puts many of its MSAs near the top of the list. In the table, **San Jose**, **San Francisco, Oakland, Denver,** and **San Diego** also previously were identified as banking markets with elevated risk profiles.[26] For some of the smaller MSAs in Table 1 with more volatile appreciation rates, such as **Utica** and **Fargo,** comparisons of recent price trends are more appropriate using the 1998–2000 average as a benchmark, as these markets experienced pronounced spikes in year-ago price growth during first-quarter 2001.

It is hard to generalize about which markets will see the most pronounced home price weakness as the recession continues. However, certain markets have shown a tendency in the past to be driven to a greater degree by speculative, rather than fundamental, factors. These markets are more likely to see significant downward corrections in price when economic activity falls for a prolonged period or by a sufficient magnitude. One study from the mid-1990s found, in comparing 14 cities in the **Northeast** and **West** with 16 inland cities, that while both groups tended to respond similarly to local and national economic forces (fundamental, or "equilibrium," price drivers), prices in the former group tended to be influenced to a greater degree by speculative, or "disequilibrium," variables, including recent trends in price appreciation.[27] Cities along the nation's coasts also have tended to see the most significant price swings over the past 20 years.

History also provides some insights into the nature and extent of any price declines in markets where economic conditions deteriorate. A study of two significant examples, Boston and Los Angeles in the 1980s and early 1990s, concluded that declines differed by property type (i.e., condos versus single-family) and price class (i.e., high-end versus entry-level).[28] This dispersion in price declines arose from differing rates of appreciation (properties that experienced the greatest inflation during the boom saw the largest deflation) and from the nature of each city's economic decline, which differed according to concentrations of job losses by industry and wage type, underlying demographic factors, and housing supply trends.

Looking at recent developments, it seems that the greatest near-term risk of a significant downward adjustment in housing prices is in the San Francisco Bay area. In recent years, this area witnessed double-digit home price appreciation that exceeded growth in per capita income by a wide margin. A recent analysis from the ***University of California-Berkeley's Haas School of Business*** forecast that prices in the Bay Area housing market will decline by 15 percent overall (and by 30 percent for luxury homes) by the time the local economy's recession ends late this year.[29] Meanwhile, the larger MSAs in **Southern California** have not seen as significant a disparity between home price appreciation and personal income growth during this cycle as during the 1980s. Also in contrast to the 1980s, New England (and the Northeast generally) has seen little speculative purchase or construction activity in recent years, which should help to mitigate any price weakness through the current recession in these markets.[30]

[25] As considered here, this includes the following MSAs: San Jose, Santa Cruz-Watsonville, San Francisco, Santa Rosa, Oakland, Salinas, and Vallejo-Fairfield-Napa.
[26] See "In Focus This Quarter," *Regional Outlook,* Fourth Quarter 2001.
[27] Jesse M. Abraham and Patric H. Hendershott, "Bubbles in Metropolitan Housing Markets," Working Paper #4774, NBER, June 1994.
[28] Karl E. Case and Robert J. Shiller, "A Decade of Boom and Bust in the Prices of Single-Family Homes: Boston and Los Angeles, 1983 to 1993," *New England Economic Review,* March/April 1994.
[29] David Goll, "Bay Area Housing Market Will Remain Slow," *East Bay Business Times,* January 23, 2002.
[30] "Regional Perspectives," Boston Region, *Regional Outlook,* First Quarter 2002.

Conclusion

Home prices are holding up in most markets, and, generally, permanent residential mortgages have fared well in prior recessions. However, history might understate credit risks for insured institutions during this cycle because the mortgage lending business has changed since the last recession. Chief among these changes are robust mortgage market competition, which has contributed to narrower collateral margins; increased reliance on underwriting automation; and expanded involvement in the subprime credit market. In addition, residential C&D lenders in certain markets might be particularly vulnerable, since C&D credits typically undergo higher loss rates and some areas are experiencing continued construction despite a cyclical slowdown (as measured by employment trends). Permanent mortgage lenders in certain areas, such as the San Francisco Bay area, could also face higher loss rates and foreclosures going forward, as the current economic weakness places downward pressure on home prices and dampens the ability of households to meet mortgage payments.

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