

# U.S. Metro Economies

Economic and Fiscal Implications  
for Metro Areas  
November 2007

## The Mortgage Crisis

Prepared for:

**The United States  
Conference of Mayors  
and The Council for  
the New American City**

Prepared by:



**THE UNITED STATES CONFERENCE OF MAYORS**



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## THE REAL ESTATE BUBBLE

The U.S. economy this decade experienced a dramatic real estate bubble – the inflation of both home values far in excess of historic norms and of reasonable estimates of the growth of fundamental determinants of home value. One salient feature of the bubble psychology was the expectation on the part of home-buyers of a continuation of this supra-normal trend in home price appreciation. This expectation fueled demand by first-time home-buyers fearful of being priced out of the market or of missing out on the phenomenal equity gains to be realized. It also fueled demand by existing home-owners, who could now realize enormous capital gains on previous home purchases and trade up in the market, or buy second, or vacation, homes. And it stoked the demand of investors, who could realize a quick profit by 'flipping' a home.

Another critical feature of the bubble was very favorable credit market conditions. Mortgage interest rates were low, decreasing the monthly re-payment amounts required to finance a home purchase and boosting affordability. In addition, as low long-term interest rates resulted in high valuations of existing assets, homes appeared more attractive as an investment. The financial market innovation of mortgage-backed securities also dramatically increased the secondary market for mortgages, injecting credit and encouraging the mortgage lenders to supply easy credit terms.

Each of these factors contributed to the explosive growth in 2004 and 2005 of sub-prime mortgages, and of exotic mortgage instruments which were sold to numerous buyers who otherwise would not have qualified for mortgage lending and whose ability to pay was crucially dependent upon the continuation of the bubble in home prices. The most notable of these were 2/28 adjustable rate mortgages under which buyers were qualified by the ability to pay, for the first two years of the mortgage, very low 'teaser' interest rates, but for which monthly payments would reset at much higher market rates two years later. It was the sharp increase in this lending in 2004 and 2005, with rate resets in 2006 and 2007, which has led to the mortgage mess in 2007. Suddenly, buyers who would not have qualified for mortgages at the reset rates have found themselves with a home they are unable to pay for or to sell. Moreover, with mortgages divided and resold in secondary bond markets there is often no mortgage-holder left with whom to renegotiate the payments. Foreclosures are the result.

It is important to note that the sub-prime mortgage and foreclosure crisis was not confined to metro areas where home prices had escalated rapidly. The ease of obtaining home lending credit had extended to slower growth regions, especially in the Midwest, where borrowers had long had difficulty meeting credit standards. Home purchases and the exploitation of home equity lines of credit became dramatically easier there as well. Indeed, foreclosure rates in 2006 skyrocketed first in Ohio, Michigan, and Indiana. Then California and Florida metro areas, among others, began to see escalating delinquencies and foreclosures as well.

Global Insight, along with most economists, realized early on that home prices could not keep appreciating at the rates experienced up until 2005. We also realized that the growing use of adjustable rate mortgages (ARMs) would create affordability problems as rates were reset. But then the perfect storm occurred. Home price appreciation ground to a halt, and home sales plummeted. This happened just as the ARM rate resets were beginning in large

numbers, dooming the finances of millions of buyers. Delinquencies and foreclosures began to mount. At the same time, the inventory of new and existing homes for sale escalated, putting further downward pressure on prices, and limiting the ability of those who needed to sell.

The final straw occurred in the summer of 2007, as institutional holders of mortgage-backed securities realized the risk in their portfolios. Credit dried up - for refinancing, for sub prime buyers, and also for jumbo mortgages which lacked the guarantees provided by Freddie Mac and Fannie Mae.

This report describes the economic implications of the recent mortgage credit crisis. The decline in home sales and in new home building started in 2006 and continued in 2007. Gross Domestic Product (GDP) growth was already slowed by the contraction in residential investment. Forecasts for 2008 had anticipated continued sluggish homebuilding, and further stress on household wealth from declining home prices and from resetting adjustable rate mortgages. In this report we also focus on the ongoing negative impacts of the credit crisis that exploded in August due to skyrocketing foreclosure rates and sub-prime mortgage defaults.

## **SUMMARY OF RESULTS**

The foreclosure crisis will have profound economic effects in 2008. U.S. GDP will be \$166 billion lower as a result, because new residential investment will be weaker, lowering spending and income across the construction industries, and because consumer spending is curtailed as homeowners respond to decreased home equity wealth. Both of these spending impacts have multiplier effects across the economy as lower incomes decrease demand for other goods and services. As a result, there will be 524,000 fewer jobs created across the country in 2008.

Homeowners will also see property values decline by \$1.2 trillion in 2008. The initial adjustment of over-heated home prices to the combination of weaker market demand and large inventories of homes for sale would have reduced values by \$676 billion in 2008. Now, due to the foreclosure and mortgage crisis, home values will decline further, by an additional \$519 billion. Foreclosures in 2008 will increase by at least 1.4 million. These homes represent a market value of \$316 billion.

State and local government revenue sources will be impacted as well. Local government property tax revenue had also been bolstered by rapidly escalating market values and assessment, but not only is the growth of this budget source reduced by the current contraction, there is also significant risk of downward pressure on taxable value when property values contract. In most states the growth of sales tax receipts will be significantly slowed by declines in construction-related purchases, by declines in the new furniture and fixtures spending usually coincident with home purchases, by the dearth of spending financed by home equity lines of credit, and by the pullback in general consumption by households who feel, and are made, less wealthy by the declines in homeowner equity, which represents the biggest part of most households' savings portfolio. Meanwhile, many state budgets have benefited in recent years by the increased receipt of transfer taxes imposed on real estate

transactions, which have now also declined sharply. We illustrate the magnitude of these impacts for selected states.

## **FORECLOSURES**

The continued downturn in the residential real estate market will further limit the resale opportunities of homeowners facing payment difficulties. Sales will continue to be negatively affected by the lack of credit available to prospective buyers. Home price declines will mean that the price they could get for the home is less than their outstanding mortgage balance. Homes already foreclosed on adversely affect sellers as well, adding to the inventory of homes competing for buyers, and their presence in neighborhoods negatively affects the perceived value of other homes nearby. Lastly, the credit markets have become less hospitable to re-financing. Adding to this stress will be reduced job opportunities as economic growth slows in late 2007 and into 2008. Such a lack of jobs and income historically leads directly to greater mortgage payment delinquency and subsequent foreclosure.

The peak years for the issuance of sub-prime and other adjustable rate mortgages were 2004 and 2005, and under the most common two-year reset terms, 2006 through 2008 will see the peak number of borrowers pushed into payment difficulty. Unless institutional arrangements are made to bring mortgage holders together with buyers, 2007 will see foreclosure activity accelerate. We forecast that home price declines across the U.S. will average 7% in 2008, ranging as high as 16% in California. There is a large risk of greater price declines. But even under our conservative forecast, foreclosure activity rises to 1.4 million homes, representing a property value of \$315.9 billion. Appendix Table A1 catalogs the distribution of this activity across the states.

Nearly all states have been affected in some way by the loosening of credit standards and the prevalence of adjustable rate mortgage (ARM) lending that occurred over the last several years. Those that have seen the largest increase in the number of both prime and sub-prime loans going into foreclosure are the areas that posted some of the highest growth during the boom years - Nevada, Arizona, California, and Florida - as well as those that have seen sluggish economic growth, Michigan being one example. During the boom the high growth states were the beneficiaries of significant population and economic growth. However, they were also the target for large numbers of investors and speculators, who were looking to make money from the rapidly appreciating value of homes. For instance, we estimate that in Arizona the number of loans in foreclosure (both prime and sub-prime) will increase by more than 60,500 in 2008, with the value of housing represented by those foreclosures measuring at least \$13.7 billion. Arizona will see an estimated decline in the total value of its housing of more than \$30 billion due to the fallout from the rise in foreclosed properties and the deceleration in the residential real estate market.

## **HOUSING**

New home building has already contracted sharply from its peak levels in 2005 and 2006, but there is no end yet in sight. In September this building activity sunk to its lowest level since 1993. We project that declines will continue until the second quarter of 2008, when the annual rate housing starts will be just 800,000, a drop of almost 20% from current levels. Starts will reach just 1.02 million units for the year, following levels of 1.81 million in

2006 and 1.35 million in 2007. Sales of existing homes will also continue to fall, by another 10% in 2008.

## **GDP AND GMP (GROSS METROPOLITAN PRODUCT)**

Employment growth is decelerating this year, although the deterioration has been gradual. Employers are becoming more cautious about hiring, which will weaken a key support for consumer spending. Payroll employment will slip to an average of 75,000 per month over the next six months. That is more than 100,000 fewer per month than the average gain in 2006.

Rising home prices were once the fuel that allowed consumer spending growth to outpace real income gains. With declining home prices in effect, consumer spending will fall short of income growth. In 2008, consumer spending will slip to 2.0% growth, well below a 3.1% gain in incomes. Auto sales, at 15.7 million units, almost a million fewer than in 2006, will have their worst year since 1998.

GDP is now projected to grow by just 1.9% in 2008, a full percentage point lower than would have been the case without the mortgage crisis. Table 1 shows the ten metros that will experience the largest losses in terms of real GMP growth during 2008 as a result of the mortgage crisis (a full list GMP losses for all 361 metros is shown in Appendix Table A2). While our forecast scenario does not project a recession, 128 metros are pushed into sluggish real GMP growth of less than 2% in 2008. Growth is cut by more than a third in 65 metros, and by more than a quarter in 143 metros.

Myrtle Beach, South Carolina is expected to suffer the most marked loss, growing 1.7 percentage points less than it would have in the absence of the mortgage crisis. This implies a loss of more than \$240 million dollars of nominal GMP. The most affected state will be California, however, with four of the metros on the top ten list. In Table 2 we order the metros by the magnitude of their GMP loss. The largest metro, New York, loses over \$10 billion in 2008 GMP, followed by Los Angeles (\$8.3 billion), Dallas (\$4.0 billion), Washington (\$4.0 billion), and Chicago (\$3.9 billion). The combined economic loss of the top ten exceeds \$45 billion.

**Table 1: Metros with Highest Rate of Loss of GMP Growth**

<b>Rank</b>	<b>2008</b>	<b>Revised Real GMP Growth, %</b>	<b>Loss in Real GMP Growth, %</b>	<b>Loss of GMP, Millions</b>
1	Myrtle Beach-Conway-North Myrtle Beach, SC	1.85	-1.70	-\$243
2	Merced, CA	0.73	-1.69	-\$276
3	Madera, CA	1.22	-1.62	-\$145
4	Sarasota-Bradenton-Venice, FL	2.88	-1.47	-\$646
5	Napa, CA	1.47	-1.45	-\$175
6	Manchester-Nashua, NH	2.15	-1.42	-\$405
7	Rapid City, SD	1.72	-1.37	-\$109
8	Salinas, CA	1.06	-1.33	-\$407
9	Bay City, MI	0.51	-1.31	-\$83
10	Mount Vernon-Anacortes, WA	1.79	-1.30	-\$105

**Table 2: Metros with Largest Loss of GMP**

<b>Rank</b>	<b>2008</b>	<b>Revised Real GMP Growth, %</b>	<b>Loss in Real GMP Growth, %</b>	<b>Loss of GMP, Millions</b>
1	New York-NorthernNew Jersey-Long Island,NY-NJ-PA	2.13	-0.65	-\$10,372
2	Los Angeles-Long Beach-Santa Ana, CA	1.67	-0.95	-\$8,302
3	Dallas-Fort Worth-Arlington, TX	3.26	-0.83	-\$4,022
4	Washington-Arlington-Alexandria, DC-VA-MD-WV	2.79	-0.60	-\$3,957
5	Chicago-Naperville-Joliet, IL-IN-WI	2.23	-0.56	-\$3,906
6	San Francisco-Oakland-Fremont, CA	1.88	-1.07	-\$3,607
7	Detroit-Warren-Livonia, MI	1.30	-0.97	-\$3,203
8	Boston-Cambridge-Quincy, MA-NH	2.16	-0.99	-\$3,022
9	Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	1.85	-0.63	-\$2,597
10	Riverside-San Bernardino-Ontario, CA	3.51	-1.05	-\$2,372

## STATE AND LOCAL GOVERNMENT FISCAL STRESS

In Table 3 we describe the direct fiscal impacts of the mortgage crisis for 10 states. The ten states represent a cross section of the U.S. The experience of most other states will be similar. For these ten, the aggregate loss in tax revenue equals \$6.6 billion. There are three direct channels through which state and local revenues will be impacted.

First, local property tax growth generated from rising real estate values will slow significantly, and indeed contract in many places.

Second, consumer spending on taxable goods will decline as households retrench in light of the wealth effect from decreased home equity expectations. The projected decline in home values in 2008 is \$1.2 trillion. Assuming a wealth effect of six cents on the dollar, consumer spending would be reduced by 0.6%, or \$72 billion. Moreover, as credit conditions tighten, homeowners are less likely to finance purchases through home equity loans or mortgage refinance. Net spending from home equity credit decreased to 5.5% of disposable income in the second quarter of 2007, from 7.9% a year earlier, and is certain to fall further.

Third, with the sharp contraction in home sales, state revenues from realty transfer fees will be diminished.

**Table 3: Fiscal Impact In Ten Select States**

	% Change in GSP Growth 2008	Housing Starts		Change in Tax Revenue, Millions		
		2005	2008	Property Tax (Potential)	Sales Tax	Transfer Tax
Arizona	-0.9	93.5	35.3	-\$158	-\$69	-
California	-1.1	194.0	94.3	-\$2,955	-\$994	-\$39
Florida	-1.0	272.8	90.7	-\$589	-\$148	-\$99
Georgia	-0.8	108.4	58.5	\$134	\$28	-\$3
Illinois	-0.6	63.5	34.8	-\$329	-\$22	-\$6
Massachusetts	-0.9	24.5	10.6	-\$223	-\$21	-\$34
Michigan	-0.9	47.2	11.5	-\$111	-\$12	-\$1
Minnesota	-0.2	38.8	17.0	-\$20	-\$3	-\$13
Nevada	-1.0	43.6	16.8	-\$49	-\$19	-\$8
New York	-0.6	48.1	29.3	-\$686	-\$97	-\$47

Property tax revenues are a function of various assessment and rate-setting practices at the local level. Most of the property tax adjustment takes place over a period of years. The losses in Table 3 should be interpreted as the potential tax loss at current rates. California metros will suffer the greatest potential losses in terms of tax revenues. Due to declining property values, property taxes in the state could ultimately decline by as much as \$2.96 billion. In addition, the state is expected to lose \$994 million in sales tax revenues due to weakening consumer spending next year, and \$39 million in transfer tax revenues because of declining home sales and prices. Although in some states, like Georgia, local property tax revenues will continue to rise, they will do so at a much more moderate pace than during the boom years.

## CONCLUSION

The real estate crisis of 2007 and 2008 will go down in the record books. In recent years, millions of Americans were introduced to a new breed of mortgage – a flexible loan with rate resets in what at the time seemed like the far off and rosy future. Instead, they now face a marketplace where home prices have cooled, home values are shaky, and their flexible loans have become financially unfeasible. The wave of foreclosures that has rippled across the U.S. has already battered some of our largest financial institutions, created ghost towns of once vibrant neighborhoods – and it's not over yet. Global Insight expects that 2008 will bring more foreclosures, slower growth of U.S. GDP, stresses for state and local government budgets, and curtailed consumer spending.

The good news is twofold. Federal, state, and local governments along with mortgage lenders have quickly recognized the fallacies inherent in much of the subprime lending situation. And the mortgage crisis is not going to bring the economy grinding to a halt. Indeed, we expect job growth in 2008 to be 0.85% and GDP growth to be 1.9%. In 2009, those figures will be 1.2% and 2.9%, respectively. In the end, the economy will not come off the rails, and we may actually have learned something.

The negative economic impacts cited in this report could also be significantly contained if mortgage holders, including holders of mortgage backed securities, and loan servicers could agree to new payment terms with families who have the ability to pay, but were placed in inappropriate mortgage products. Such actions will help to lessen the number of foreclosures thereby avoiding the further negative effects on local housing markets and on the broader economy.

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**Table A1: Foreclosures and Property Value, 2008**

	Number of Loans in Foreclosure		Value of Housing in Foreclosure (Millions)	Decline in Property Value (Millions)
	Sub-Prime	Prime		
United States	904,207	519,151	\$315,939	-\$1,195,017
Alabama	9,754	7,215	\$1,915	-
Alaska	927	542	\$346	-\$500
Arizona	43,579	16,988	\$13,673	-\$30,635
Arkansas	3,204	2,616	\$574	-
California	134,844	70,575	\$90,497	-\$630,666
Colorado	22,800	12,502	\$7,879	-\$7,491
Connecticut	10,724	3,664	\$4,070	-\$13,114
Delaware	2,669	1,151	\$881	-\$3,043
District of Columbia	1,346	880	\$888	-\$5,049
Florida	81,187	56,956	\$28,963	-\$79,735
Georgia	32,673	22,341	\$7,737	-
Hawaii	1,530	1,153	\$1,628	-\$16,035
Idaho	3,017	1,495	\$819	-
Illinois	37,464	19,205	\$11,135	-\$21,543
Indiana	22,397	15,210	\$4,352	-
Iowa	5,300	4,222	\$1,041	-
Kansas	4,506	3,725	\$903	-
Kentucky	8,611	5,207	\$1,473	-
Louisiana	7,565	7,053	\$1,733	-\$824
Maine	3,195	1,591	\$800	-\$3,897
Maryland	14,418	7,105	\$6,815	-\$63,028
Massachusetts	26,370	10,563	\$11,243	-\$25,879
Michigan	53,641	38,604	\$12,073	-\$8,642
Minnesota	23,468	13,000	\$6,890	-\$2,370
Mississippi	8,501	4,248	\$1,166	-
Missouri	19,647	10,348	\$3,757	-\$2,347
Montana	1,029	867	\$332	-\$845
Nebraska	3,089	2,249	\$603	-
Nevada	22,665	10,076	\$9,009	-\$10,072
New Hampshire	4,335	1,796	\$1,314	-\$9,582
New Jersey	19,613	13,023	\$11,025	-\$74,402
New Mexico	2,329	1,385	\$590	-\$4,542
New York	33,090	19,493	\$14,283	-\$63,084
North Carolina	18,785	12,878	\$4,303	-
North Dakota	286	449	\$77	-\$423
Ohio	34,876	27,939	\$7,866	-
Oklahoma	5,927	4,152	\$921	-\$4,008
Oregon	5,906	2,514	\$2,293	-\$17,778
Pennsylvania	21,930	13,419	\$5,840	-\$18,844
Rhode Island	4,782	1,741	\$1,745	-\$4,265
South Carolina	11,322	7,723	\$2,275	-

**Table A1: Foreclosures and Property Value, 2008**

	<b>Number of Loans in Foreclosure</b>	<b>Value of Housing in Foreclosure</b>	<b>Decline in Property Value</b>
South Dakota	775	653	\$151
Tennessee	22,971	9,615	\$4,117
Texas	53,837	20,992	\$7,870
Utah	4,720	1,831	\$1,539
Vermont	795	544	\$273
Virginia	17,291	10,206	\$6,285
Washington	12,507	6,241	\$5,525
West Virginia	1,703	2,272	\$372
Wisconsin	15,906	8,650	\$3,965
Wyoming	399	288	\$115
- no net decline			

**Table A2: Loss Due to Mortgage Crisis of Gross Metropolitan Product, 2008**

	Revised Real GMP Growth, %	Loss in Real GMP Growth, %	Loss of GMP, Millions
Abilene, TX	1.9	-0.7	-\$54.5
Akron, OH	2.2	-	-
Albany, GA	1.7	-0.5	-\$20.1
Albany-Schenectady-Troy, NY	2.2	-0.7	-\$670.5
Albuquerque, NM	2.3	-0.4	-\$164.0
Alexandria, LA	5.2	-	-
Allentown-Bethlehem-Easton, PA-NJ	2.3	-0.4	-\$203.0
Altoona, PA	1.2	-0.5	-\$41.2
Amarillo, TX	2.5	-0.5	-\$68.1
Ames, IA	1.3	-	-
Anchorage, AK	2.7	-0.7	-\$403.4
Anderson, IN	2.1	-	-
Anderson, SC	2.2	-0.4	-\$8.5
Ann Arbor, MI	1.8	-0.8	-\$244.8
Anniston-Oxford, AL	2.0	-0.6	-\$38.0
Appleton, WI	2.7	-	-
Asheville, NC	1.4	-0.3	-\$33.7
Athens-Clarke County, GA	1.8	-0.5	-\$5.5
Atlanta-Sandy Springs-Marietta, GA	3.0	-0.6	-\$954.0
Atlantic City, NJ	1.8	-0.7	-\$134.2
Auburn-Opelika, AL	2.1	-0.6	-\$39.4
Augusta-Richmond County, GA-SC	1.7	-0.9	-\$189.0
Austin-Round Rock, TX	3.7	-0.6	-\$633.9
Bakersfield, CA	2.2	-1.1	-\$527.8
Baltimore-Towson, MD	2.8	-0.8	-\$1,636.8
Bangor, ME	1.6	-1.0	-\$100.9
Barnstable Town, MA	2.1	-	-
Baton Rouge, LA	3.9	-	-
Battle Creek, MI	1.7	-1.0	-\$100.3
Bay City, MI	0.5	-1.3	-\$83.2
Beaumont-Port Arthur, TX	2.9	-0.3	-\$9.7
Bellingham, WA	2.7	-0.8	-\$96.1
Bend, OR	3.2	-0.6	-\$18.5
Billings, MT	1.6	-0.5	-\$19.8
Binghamton, NY	1.2	-0.4	-\$91.1
Birmingham-Hoover, AL	2.1	-0.6	-\$408.9
Bismarck, ND	2.7	-	-
Blacksburg-Christiansburg-Radford, VA	0.9	-0.6	-\$122.4

**Table A2: Loss Due to Mortgage Crisis of Gross Metropolitan Product, 2008**

	Revised Real GMP Growth, %	Loss in Real GMP Growth, %	Loss of GMP, Millions
Bloomington, IN	1.7	-	-
Bloomington-Normal, IL	3.3	-0.4	-\$45.2
Boise City-Nampa, ID	2.7	-0.7	-\$185.0
Boston-Cambridge-Quincy, MA-NH	2.2	-1.0	-\$3,021.7
Boulder, CO	2.0	-1.0	-\$288.6
Bowling Green, KY	1.9	-0.8	-\$61.8
Bremerton-Silverdale, WA	1.4	-1.1	-\$106.5
Bridgeport-Stamford-Norwalk, CT	2.4	-1.1	-\$873.6
Brownsville-Harlingen, TX	3.1	-0.4	-\$68.0
Brunswick, GA	1.8	-0.8	-\$35.9
Buffalo-Niagara Falls, NY	1.6	-0.7	-\$797.5
Burlington, NC	1.3	-0.5	-\$33.4
Burlington-South Burlington, VT	2.6	-0.7	-\$63.4
Canton-Massillon, OH	1.7	-0.4	-\$89.9
Cape Coral-Fort Myers, FL	3.0	-1.0	-\$272.0
Carson City, NV	1.1	-1.1	-\$49.7
Casper, WY	2.7	-0.6	-\$49.7
Cedar Rapids, IA	1.3	-0.5	-\$28.4
Champaign-Urbana, IL	1.8	-0.6	-\$100.6
Charleston, WV	2.1	-	-
Charleston-North Charleston, SC	2.4	-0.5	-\$122.2
Charlotte-Gastonia-Concord, NC-SC	4.0	-1.0	-\$1,210.4
Charlottesville, VA	2.7	-	-
Chattanooga, TN-GA	2.1	-0.5	-\$166.3
Cheyenne, WY	2.1	-	-
Chicago-Naperville-Joliet, IL-IN-WI	2.2	-0.6	-\$3,906.0
Chico, CA	1.8	-0.7	-\$79.1
Cincinnati-Middletown, OH-KY-IN	1.5	-0.5	-\$690.3
Clarksville, TN-KY	1.8	-0.8	\$13.7
Cleveland, TN	2.3	-0.5	-\$34.1
Cleveland-Elyria-Mentor, OH	1.6	-	-
Coeur d'Alene, ID	2.5	-	-
College Station-Bryan, TX	2.7	-0.6	-\$64.0
Colorado Springs, CO	2.0	-1.1	-\$421.9
Columbia, MO	2.5	-0.7	-\$50.7
Columbia, SC	2.2	-0.7	-\$275.1
Columbus, GA-AL	2.8	-0.6	\$31.6
Columbus, IN	2.8	-	-

**Table A2: Loss Due to Mortgage Crisis of Gross Metropolitan Product, 2008**

	Revised Real GMP Growth, %	Loss in Real GMP Growth, %	Loss of GMP, Millions
Columbus, OH	2.5	-	-
Corpus Christi, TX	2.7	-0.5	-\$61.8
Corvallis, OR	2.1	-0.9	-\$30.6
Cumberland, MD-WV	2.3	-0.9	-\$59.3
Dallas-Fort Worth-Arlington, TX	3.3	-0.8	-\$4,022.1
Dalton, GA	2.0	-0.9	-\$77.8
Danville, IL	1.6	-0.6	-\$34.6
Danville, VA	1.4	-0.6	-\$57.9
Davenport-Moline-Rock Island, IA-IL	1.7	-0.4	-\$88.1
Dayton, OH	1.4	-0.3	-\$183.9
Decatur, AL	2.2	-0.6	-\$38.8
Decatur, IL	1.6	-0.7	-\$58.4
Deltona-Daytona Beach-Ormond Beach, FL	2.6	-0.8	-\$153.6
Denver-Aurora, CO	2.2	-1.0	-\$1,888.4
Des Moines, IA	2.1	-1.0	-\$261.8
Detroit-Warren-Livonia, MI	1.3	-1.0	-\$3,202.7
Dothan, AL	2.2	-0.6	-\$50.8
Dover, DE	2.0	-0.5	-\$35.3
Dubuque, IA	0.9	-1.1	-\$82.0
Duluth, MN-WI	2.6	-	-
Durham, NC	2.3	-0.3	-\$97.6
Eau Claire, WI	2.8	-	-
El Centro, CA	2.1	-0.7	-\$66.1
El Paso, TX	3.9	-0.5	-\$133.5
Elizabethtown, KY	1.8	-0.4	\$6.5
Elkhart-Goshen, IN	2.8	-	-
Elmira, NY	1.5	-0.6	-\$46.5
Erie, PA	1.2	-0.7	-\$130.8
Eugene-Springfield, OR	2.2	-1.1	-\$184.9
Evansville, IN-KY	1.9	-	-
Fairbanks, AK	2.1	-1.1	-\$114.7
Fargo, ND-MN	2.1	-0.5	-\$85.0
Farmington, NM	3.6	-	-
Fayetteville, NC	2.0	-0.4	\$115.0
Fayetteville-Springdale-Rogers, AR-MO	3.5	-0.5	-\$92.4
Flagstaff, AZ	1.9	-1.0	-\$80.3
Flint, MI	1.1	-0.4	-\$75.6
Florence, SC	2.2	-0.6	-\$34.3

**Table A2: Loss Due to Mortgage Crisis of Gross Metropolitan Product, 2008**

	Revised Real GMP Growth, %	Loss in Real GMP Growth, %	Loss of GMP, Millions
Florence-Muscle Shoals, AL	1.9	-0.4	-\$31.2
Fond du Lac, WI	3.1	-	-
Fort Collins-Loveland, CO	2.5	-0.5	-\$68.2
Fort Smith, AR-OK	2.2	-0.3	-\$41.3
Fort Walton Beach-Crestview-Destin, FL	2.3	-0.8	-\$41.4
Fort Wayne, IN	2.0	-	-
Fresno, CA	1.7	-1.1	-\$716.3
Gadsden, AL	1.9	-0.7	-\$40.2
Gainesville, FL	2.2	-0.8	-\$111.9
Gainesville, GA	3.0	-	-
Glens Falls, NY	1.3	-1.0	-\$113.1
Goldsboro, NC	1.6	-	-
Grand Forks, ND-MN	1.9	-	-
Grand Junction, CO	3.0	-	-
Grand Rapids-Wyoming, MI	2.4	-1.0	-\$575.4
Great Falls, MT	0.5	-1.0	-\$50.1
Greeley, CO	2.6	-0.8	-\$94.6
Green Bay, WI	2.9	-	-
Greensboro-High Point, NC	2.1	-0.9	-\$449.6
Greenville, NC	2.0	-	-
Greenville, SC	2.3	-0.5	-\$153.8
Gulfport-Biloxi, MS	2.7	-0.4	\$19.7
Hagerstown-Martinsburg, MD-WV	2.5	-0.9	-\$175.8
Hanford-Corcoran, CA	1.7	-1.0	-\$75.4
Harrisburg-Carlisle, PA	1.6	-0.6	-\$291.1
Harrisonburg, VA	2.0	-	-
Hartford-West Hartford-East Hartford, CT	1.9	-1.0	-\$1,260.0
Hattiesburg, MS	1.7	-0.9	\$18.6
Hickory-Lenoir-Morganton, NC	0.8	-0.4	-\$56.6
Hinesville-Fort Stewart, GA	1.6	-0.4	\$86.2
Holland-Grand Haven, MI	2.2	-0.9	-\$127.4
Honolulu, HI	2.1	-	-
Hot Springs, AR	2.0	-0.6	-\$26.7
Houma-Bayou Cane-Thibodaux, LA	4.2	-	-
Houston-Sugar Land-Baytown, TX	3.7	-0.7	-\$2,315.1
Huntington-Ashland, WV-KY-OH	1.8	-	-
Huntsville, AL	3.0	-	-
Idaho Falls, ID	2.4	-0.3	-\$1.8

**Table A2: Loss Due to Mortgage Crisis of Gross Metropolitan Product, 2008**

	Revised Real GMP Growth, %	Loss in Real GMP Growth, %	Loss of GMP, Millions
Indianapolis, IN	2.6	-	-
Iowa City, IA	1.3	-0.5	-\$26.9
Ithaca, NY	1.6	-0.7	-\$87.5
Jackson, MI	1.5	-0.9	-\$79.7
Jackson, MS	2.8	-0.3	\$151.1
Jackson, TN	2.5	-0.7	-\$77.2
Jacksonville, FL	2.3	-0.9	-\$573.1
Jacksonville, NC	2.3	-0.4	\$144.4
Janesville, WI	3.3	-	-
Jefferson City, MO	1.6	-0.9	-\$73.2
Johnson City, TN	2.1	-0.4	-\$48.1
Johnstown, PA	1.2	-0.4	-\$34.2
Jonesboro, AR	2.5	-1.0	-\$65.0
Joplin, MO	2.2	-0.5	-\$25.1
Kalamazoo-Portage, MI	2.1	-0.4	-\$49.6
Kankakee-Bradley, IL	2.0	-0.6	-\$43.3
Kansas City, MO-KS	1.9	-0.7	-\$754.3
Kennewick-Richland-Pasco, WA	2.2	-1.1	-\$133.1
Killeen-Temple-Fort Hood, TX	1.6	-0.8	-\$12.1
Kingsport-Bristol-Bristol, TN-VA	2.0	-0.5	-\$109.9
Kingston, NY	3.1	-	-
Knoxville, TN	2.9	-0.6	-\$311.9
Kokomo, IN	2.2	-	-
La Crosse, WI-MN	3.1	-	-
Lafayette, IN	2.3	-	-
Lafayette, LA	6.1	-	-
Lake Charles, LA	5.8	-	-
Lakeland, FL	2.6	-1.0	-\$283.1
Lancaster, PA	1.7	-0.4	-\$136.3
Lansing-East Lansing, MI	1.5	-0.5	-\$168.2
Laredo, TX	2.9	-0.9	-\$133.9
Las Cruces, NM	2.6	-0.4	-\$64.0
Las Vegas-Paradise, NV	2.8	-0.9	-\$937.2
Lawrence, KS	1.8	-1.0	-\$66.3
Lawton, OK	2.8	-	-
Lebanon, PA	1.4	-0.4	-\$23.7
Lewiston, ID-WA	1.9	-0.9	-\$34.3
Lewiston-Auburn, ME	1.4	-0.9	-\$58.4

**Table A2: Loss Due to Mortgage Crisis of Gross Metropolitan Product, 2008**

	Revised Real GMP Growth, %	Loss in Real GMP Growth, %	Loss of GMP, Millions
Lexington-Fayette, KY	2.1	-0.5	-\$118.6
Lima, OH	0.9	-1.0	-\$100.9
Lincoln, NE	2.2	-	-
Little Rock-North Little Rock, AR	2.6	-0.5	-\$137.2
Logan, UT-ID	3.0	-	-
Longview, TX	2.6	-0.7	-\$98.9
Longview, WA	2.3	-0.7	-\$41.9
Los Angeles-Long Beach-Santa Ana, CA	1.7	-1.0	-\$8,301.8
Louisville, KY-IN	1.7	-0.6	-\$499.4
Lubbock, TX	2.4	-0.3	-\$31.4
Lynchburg, VA	2.4	-	-
Macon, GA	1.9	-0.8	-\$70.4
Madera, CA	1.2	-1.6	-\$144.5
Madison, WI	3.4	-	-
Manchester-Nashua, NH	2.2	-1.4	-\$405.3
Mansfield, OH	1.5	-	-
McAllen-Edinburg-Mission, TX	5.0	-	-
Medford, OR	2.6	-1.0	-\$89.6
Memphis, TN-MS-AR	2.3	-0.6	-\$482.0
Merced, CA	0.7	-1.7	-\$275.6
Miami-Fort Lauderdale-Miami Beach, FL	2.2	-0.8	-\$2,082.3
Michigan City-La Porte, IN	1.8	-	-
Midland, TX	3.3	-0.7	-\$34.0
Milwaukee-Waukesha-West Allis, WI	2.5	-	-
Minneapolis-St. Paul-Bloomington, MN-WI	3.3	-	-
Missoula, MT	2.5	-	-
Mobile, AL	2.5	-0.5	-\$129.6
Modesto, CA	1.7	-1.1	-\$348.8
Monroe, LA	3.3	-	-
Monroe, MI	2.2	-0.7	-\$38.9
Montgomery, AL	2.3	-0.4	-\$91.2
Morgantown, WV	2.0	-	-
Morristown, TN	2.3	-0.7	-\$65.8
Mount Vernon-Anacortes, WA	1.8	-1.3	-\$104.7
Muncie, IN	1.6	-	-
Muskegon-Norton Shores, MI	2.2	-0.5	-\$37.2
Myrtle Beach-Conway-North Myrtle Beach, SC	1.9	-1.7	-\$243.1
Napa, CA	1.5	-1.5	-\$174.6

**Table A2: Loss Due to Mortgage Crisis of Gross Metropolitan Product, 2008**

	Revised Real GMP Growth, %	Loss in Real GMP Growth, %	Loss of GMP, Millions
Naples-Marco Island, FL	3.5	-1.0	-\$128.1
Nashville-Davidson--Murfreesboro, TN	2.5	-0.7	-\$901.6
New Haven-Milford, CT	1.7	-0.5	-\$661.5
New Orleans-Metairie-Kenner, LA	11.0	-	-
New York-Northern New Jersey-Long Island, NY-	2.1	-0.6	-\$10,371.9
Niles-Benton Harbor, MI	3.0	-	-
Norwich-New London, CT	1.5	-	-
Ocala, FL	2.9	-1.1	-\$168.8
Ocean City, NJ	1.4	-0.9	-\$71.4
Odessa, TX	2.4	-1.2	-\$111.4
Ogden-Clearfield, UT	3.0	-0.5	-\$144.9
Oklahoma City, OK	2.3	-0.8	-\$573.7
Olympia, WA	2.2	-1.0	-\$139.5
Omaha-Council Bluffs, NE-IA	2.2	-	-
Orlando-Kissimmee, FL	3.5	-1.1	-\$1,433.5
Oshkosh-Neenah, WI	2.7	-	-
Owensboro, KY	2.2	-0.3	-\$13.7
Oxnard-Thousand Oaks-Ventura, CA	1.8	-1.2	-\$647.8
Palm Bay-Melbourne-Titusville, FL	2.2	-1.2	-\$348.8
Panama City-Lynn Haven, FL	1.9	-0.9	-\$71.0
Parkersburg-Marietta-Vienna, WV-OH	1.9	-	-
Pascagoula, MS	-0.6	-0.9	-\$11.5
Pensacola-Ferry Pass-Brent, FL	2.1	-0.9	-\$164.3
Peoria, IL	2.2	-0.5	-\$139.9
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	1.8	-0.6	-\$2,596.6
Phoenix-Mesa-Scottsdale, AZ	3.4	-0.9	-\$1,437.8
Pine Bluff, AR	1.1	-0.5	-\$17.1
Pittsburgh, PA	1.4	-0.6	-\$885.3
Pittsfield, MA	1.5	-	-
Pocatello, ID	2.1	-0.4	-\$9.6
Port St. Lucie-Fort Pierce, FL	3.6	-0.7	-\$96.2
Portland-South Portland-Biddeford, ME	1.5	-0.9	-\$275.1
Portland-Vancouver-Beaverton, OR-WA	2.2	-0.7	-\$303.4
Poughkeepsie-Newburgh-Middletown, NY	2.2	-0.7	-\$338.7
Prescott, AZ	3.2	-0.7	-\$38.5
Providence-New Bedford-Fall River, RI-MA	2.1	-0.4	-\$616.3
Provo-Orem, UT	4.1	-	-
Pueblo, CO	2.1	-	-

**Table A2: Loss Due to Mortgage Crisis of Gross Metropolitan Product, 2008**

	Revised Real GMP Growth, %	Loss in Real GMP Growth, %	Loss of GMP, Millions
Punta Gorda, FL	2.6	-1.0	-\$60.0
Racine, WI	2.3	-	-
Raleigh-Cary, NC	3.7	-0.8	-\$590.5
Rapid City, SD	1.7	-1.4	-\$108.9
Reading, PA	1.3	-0.6	-\$150.9
Redding, CA	1.4	-0.9	-\$96.7
Reno-Sparks, NV	1.5	-0.9	-\$204.3
Richmond, VA	2.9	-0.7	-\$1,019.3
Riverside-San Bernardino-Ontario, CA	3.5	-1.1	-\$2,372.5
Roanoke, VA	2.1	-	-
Rochester, MN	3.4	-	-
Rochester, NY	1.7	-0.6	-\$684.3
Rockford, IL	2.3	-0.8	-\$207.9
Rocky Mount, NC	1.8	-	-
Rome, GA	1.3	-1.1	-\$49.0
Sacramento--Arden-Arcade--Roseville, CA	1.7	-1.1	-\$1,729.1
Saginaw-Saginaw Township North, MI	0.8	-1.0	-\$141.3
Salem, OR	2.5	-0.9	-\$109.4
Salinas, CA	1.1	-1.3	-\$406.7
Salisbury, MD	2.9	-1.2	-\$110.9
Salt Lake City, UT	3.6	-	-
San Angelo, TX	1.8	-0.6	-\$27.5
San Antonio, TX	3.2	-0.7	-\$869.2
San Diego-Carlsbad-San Marcos, CA	2.1	-0.9	-\$1,574.1
San Francisco-Oakland-Fremont, CA	1.9	-1.1	-\$3,607.1
San Jose-Sunnyvale-Santa Clara, CA	2.0	-1.2	-\$1,830.7
San Luis Obispo-Paso Robles, CA	1.3	-1.3	-\$242.6
Sandusky, OH	1.8	-0.3	-\$11.8
Santa Barbara-Santa Maria, CA	1.2	-1.2	-\$370.6
Santa Cruz-Watsonville, CA	1.1	-1.2	-\$208.6
Santa Fe, NM	2.4	-	-
Santa Rosa-Petaluma, CA	1.7	-1.0	-\$307.7
Sarasota-Bradenton-Venice, FL	2.9	-1.5	-\$646.4
Savannah, GA	2.3	-0.4	\$38.1
Scranton--Wilkes-Barre, PA	1.7	-0.4	-\$117.3
Seattle-Tacoma-Bellevue, WA	3.0	-1.0	-\$1,863.7
Sheboygan, WI	2.6	-	-
Sherman-Denison, TX	2.4	-0.4	-\$17.7

**Table A2: Loss Due to Mortgage Crisis of Gross Metropolitan Product, 2008**

	Revised Real GMP Growth, %	Loss in Real GMP Growth, %	Loss of GMP, Millions
Shreveport-Bossier City, LA	4.3	-	-
Sioux City, IA-NE-SD	1.4	-0.7	-\$33.2
Sioux Falls, SD	2.8	-0.6	-\$44.6
South Bend-Mishawaka, IN-MI	1.7	-	-
Spartanburg, SC	1.6	-1.1	-\$176.8
Spokane, WA	2.1	-1.0	-\$270.6
Springfield, IL	2.0	-0.8	-\$141.1
Springfield, MA	2.0	-0.9	-\$490.0
Springfield, MO	2.8	-0.7	-\$147.2
Springfield, OH	1.9	-0.5	-\$40.8
St. Cloud, MN	3.1	-0.4	-\$94.5
St. George, UT	4.8	-	-
St. Joseph, MO-KS	2.0	-0.6	-\$35.4
St. Louis, MO-IL	1.8	-0.7	-\$1,089.3
State College, PA	2.0	-0.6	-\$47.4
Stockton, CA	1.6	-1.2	-\$530.8
Sumter, SC	1.4	-0.9	-\$53.3
Syracuse, NY	1.9	-0.7	-\$470.8
Tallahassee, FL	2.2	-0.7	-\$136.8
Tampa-St. Petersburg-Clearwater, FL	3.0	-0.9	-\$1,388.9
Terre Haute, IN	1.6	-	-
Texarkana, TX-Texarkana, AR	2.2	-	-
Toledo, OH	1.5	-0.4	-\$197.1
Topeka, KS	1.9	-	-
Trenton-Ewing, NJ	1.8	-0.6	-\$256.1
Tucson, AZ	2.8	-0.8	-\$342.6
Tulsa, OK	1.9	-0.7	-\$391.7
Tuscaloosa, AL	2.7	-0.5	-\$51.0
Tyler, TX	1.3	-0.6	-\$75.5
Utica-Rome, NY	1.8	-0.4	-\$93.0
Valdosta, GA	1.9	-0.9	-\$31.6
Vallejo-Fairfield, CA	1.7	-0.9	-\$185.4
Vero Beach, FL	3.0	-0.5	-\$7.8
Victoria, TX	3.1	-	-
Vineland-Millville-Bridgeton, NJ	1.4	-1.0	-\$126.2
Virginia Beach-Norfolk-Newport News, VA-NC	2.4	-0.5	-\$707.3
Visalia-Porterville, CA	1.6	-1.1	-\$320.8
Waco, TX	2.4	-0.3	-\$19.2

**Table A2: Loss Due to Mortgage Crisis of Gross Metropolitan Product, 2008**

	Revised Real GMP Growth, %	Loss in Real GMP Growth, %	Loss of GMP, Millions
Warner Robins, GA	3.4	-	-
Washington-Arlington-Alexandria, DC-VA-MD-WA	2.8	-0.6	-\$3,957.2
Waterloo-Cedar Falls, IA	0.5	-0.6	-\$37.4
Wausau, WI	2.6	-	-
Weirton-Steubenville, WV-OH	2.2	-	-
Wenatchee, WA	1.8	-0.8	-\$54.4
Wheeling, WV-OH	1.5	-	-
Wichita Falls, TX	1.8	-	-
Wichita, KS	2.1	-0.5	-\$138.1
Williamsport, PA	0.9	-0.7	-\$68.8
Wilmington, NC	2.5	-	-
Winchester, VA-WV	2.2	-	-
Winston-Salem, NC	2.7	-0.3	-\$72.0
Worcester, MA	2.0	-1.0	-\$719.9
Yakima, WA	1.9	-0.8	-\$127.6
York-Hanover, PA	1.9	-0.3	-\$68.0
Youngstown-Warren-Boardman, OH-PA	1.1	-0.4	-\$115.9
Yuba City, CA	1.3	-1.1	-\$96.7
Yuma, AZ	2.7	-1.1	-\$90.3

- no significant net decline

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