Congressional Oversight Panel

September 16, 2010

Metrics for the Troubled Asset Relief Program

Excerpted from the Congressional Oversight Panel's September 2010 report, "Assessing the TARP on the Eve of Its Expiration."

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TARP Metrics

Assessing the TARP in the context of both the broad U.S. economy and specific economic sectors is a difficult but important task.[252] The purposes of the law that established the TARP include ensuring that the law's authorities are used in a matter that "promotes jobs and economic growth," "preserves homeownership," and "protects home values, college funds, retirement accounts, and life savings…."[253] Thus, while its primary goal was financial stability, the TARP was also intended to have a positive effect on the economy more generally. The passage of the American Recovery and Reinvestment Act of 2009 (ARRA) and the actions of the Federal Reserve at the time of the financial crisis were also designed to spur economic recovery.[254]

It is impossible to attribute changes in the economic climate solely to the TARP without data that isolate the TARP's effect. Changes in key economic and industry-specific metrics over time show only potential correlation, not causation. Further, any present assessment is necessarily limited to currently available data, and more time and analysis will be necessary before more definitive determinations of the TARP's effect can be made. It has, however, been two years since the acute crisis, and an assessment of the broader economy is therefore a useful standpoint from which to review the TARP. Analysis of these metrics provides insight into economic conditions at the height of the financial crisis and since the implementation of the TARP.

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[252] The GAO noted the difficulty of measuring TARP's impact on the economy while identifying key metrics that may be suggestive of TARP's economic impact in a previous report that stated, "TARP's activities could improve market confidence in banks that choose to participate and have beneficial effects on credit markets, but several factors will complicate efforts to measure any impact. If TARP is having its intended effect, a number of developments might be observed in credit and other markets over time, such as reduced risk spreads, declining borrowing costs, and increased lending. However, several factors will make isolating and measuring the impact of TARP challenging, including simultaneous changes in economic conditions, changes in monetary and fiscal policy, and other programs introduced by the Treasury, the Federal Reserve, FDIC, and FHFA to support banks, credit markets, and other struggling institutions. As a result, any improvement in capital markets cannot be attributed solely to TARP nor will a slow recovery necessarily reflect its failure because of the effects of market forces and economic conditions outside of the control of TARP. Nevertheless, we have preliminarily identified some indicators that may be suggestive of TARP's impact over time. These indicators include measures of the perception of risk in interbank lending, consumer lending, corporate debt markets, and the overall economy. We have also identified a number of other indicators that we are also monitoring and may include in future reports." U.S. Government Accountability Office, *Troubled Asset Relief Program: Additional Actions Needed to Better Integrity, Accountability, and Transparency*, at 46 (Dec. 2008) (GAO-09-161) (online at www.gao.gov/new.items/d09161.pdf).

[253] 12 U.S.C. § 5201.

[254] Recovery.gov, *About: The Recovery Act* (online at www.recovery.gov/About/Pages/The_Act.aspx) (accessed Sept. 14, 2010); Board of Governors of the Federal Reserve System, *Monetary Policy Report to the Congress*, at 2 (Feb. 24, 2009) (online at www.federalreserve.gov/monetarypolicy/files/20090224_mprfullreport.pdf).

a. Macroeconomic Indicators

Real GDP is the total value of goods and services produced within the United States and is considered to be a comprehensive measure of the performance of the U.S. economy.[255]

As shown in Figure 11 below, real GDP increased steadily from 1991 to 2007, remained flat year-over-year from 2007 to 2008, and decreased in 2009.[256] Personal consumption expenditures drove year-over-year increases in GDP from 2000 to 2007. During the height of the economic crisis in 2008 and 2009, however, decreasing gross private domestic investments (specifically, lower fixed investment and private inventories), resulted in a reduction in real GDP.[257] This trend has reversed in recent quarters, as increases in gross private domestic investments have driven the three percent increase in real GDP from the second quarter of 2009 to the second quarter of 2010.[258]

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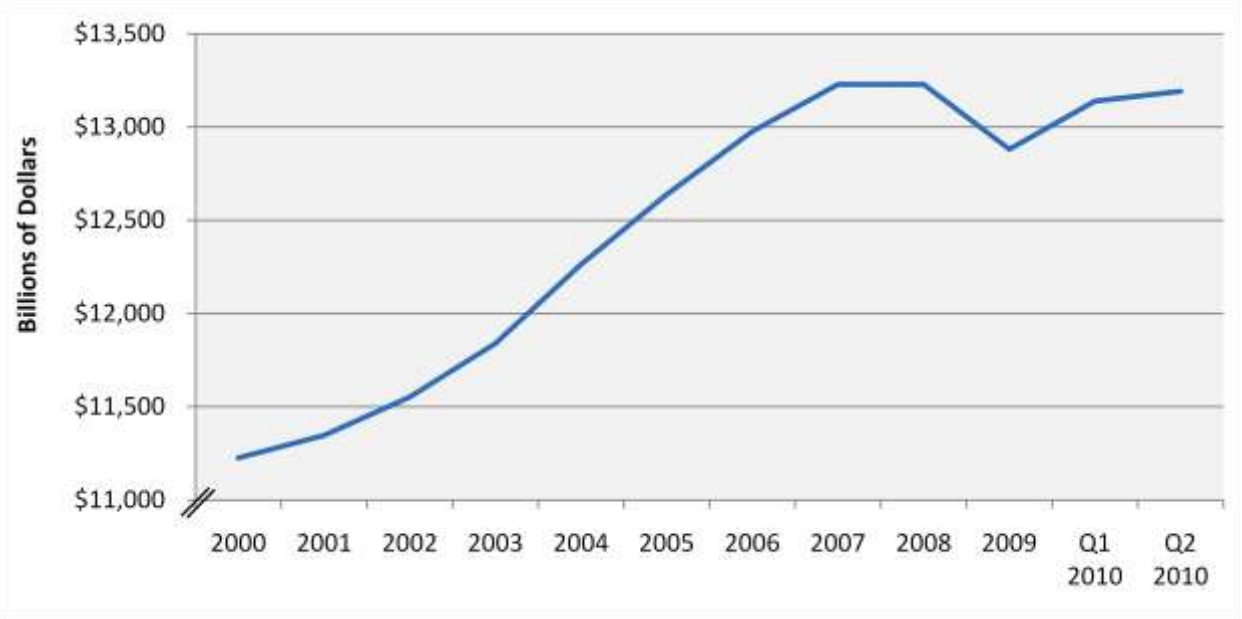
[255] Bureau of Economic Analysis, *Concepts and Methods of the U.S. National Income and Product Accounts, at 2-13* (Oct. 2009) (online at www.bea.gov/national/pdf/NIPAhandbookch1-4.pdf) (accessed Sept. 14, 2010).

[256] Bureau of Economic Analysis, *Table 1.1.6.: Real Gross Domestic Product, Chained Dollars* (online at www.bea.gov/national/nipaweb/TableView.asp?SelectedTable=6&Freq=Qtr&FirstYear=2008&LastYear=2010) (hereinafter "Bureau of Economic Analysis, Table 1.1.6.") (accessed Sept. 8, 2010). Until the year-over-year decrease from 2007 to 2008, nominal GDP had not decreased on an annual basis since 1949. Bureau of Economic Analysis, *Table 1.1.5.: Gross Domestic Product* (online at www.bea.gov/national/nipaweb/TableView.asp?SelectedTable=5&Freq=Qtr&FirstYear=2008&LastYear=2010) (accessed Aug. 18, 2010).

[257] "Personal consumption expenditures" include the purchases of services and both durable and nondurable goods. "Gross private domestic investment" includes nonresidential structures and equipment and software, residential investment, and changes in private inventories. Bureau of Economic Analysis, *Table 1.1.2.: Contributions to Percent Change in Real Gross Domestic Product* (online at www.bea.gov/national/nipaweb/TableView.asp?SelectedTable=2&FirstYear=2009&LastYear=2010&Freq=Qtr) (accessed Aug. 18, 2010); Bureau of Economic Analysis, *Table 1.1.1.: Percent Change From Preceding Period in Real Gross Domestic Product* (online at www.bea.gov/national/nipaweb/TableView.asp?SelectedTable=1&ViewSeries=NO&Java=no&Request3Place=N&3Place=N&FromView=YES&Freq=Qtr&FirstYear=2010&LastYear=2010&3Place=N&Update=Update&JavaBox=no) (hereinafter "Bureau of Economic Analysis, Table 1.1.1.") (accessed Aug. 18, 2010).

[258] Bureau of Economic Analysis, *Table 1.1.2.: Contributions to Percent Change in Real Gross Domestic Product* (online at www.bea.gov/national/nipaweb/TableView.asp?SelectedTable=2&ViewSeries=NO&Java=no&Request3Place=N&3Place=N&FromView=YES&Freq=Qtr&FirstYear=2008&LastYear=2010&3Place=N&Update=Update&JavaBox=no) (accessed Sept. 7, 2010); Bureau of Economic Analysis, *Table 1.1.6.: Real Gross Domestic Product, Chained Dollars* (online at www.bea.gov/national/nipaweb/TableView.asp?SelectedTable=6&ViewSeries=NO&Java=no&Request3Place=N&3Place=N&FromView=YES&Freq=Qtr&FirstYear=2000&LastYear=2010&3Place=N&Update=Update&JavaBox=no) (accessed Sept. 7, 2010).

Figure 11: Real GDP[259]



The rate of real GDP growth quarter-over-quarter peaked at five percent in the fourth quarter of 2009 and has decreased during 2010. Real GDP increased at rates of 3.7 and 1.6 percent in the first and second quarters of 2010, respectively.[260] These growth rates were also impacted by the 2010 U.S. Census. The Economics and Statistics Administration within the U.S. Department of Commerce estimated that the spending associated with the 2010 Census would peak in the second quarter of 2010 and could boost annualized nominal and real GDP growth by 0.1 percentage point in the first quarter of 2010 and 0.2 percentage point in the second quarter of 2010.[261] As the boost from the Census is a one-time occurrence, continuing increases in private investment and personal consumption expenditures as well as in exports will be needed to sustain the resumption of growth that has occurred in the U.S. economy over the past year.

The unemployment rate has reached levels not seen since the recession of the early 1980s. As seen in Figure 12 below, the unemployment rate has increased since 2007 to a height of 10 percent in the fourth quarter of 2009 and is currently 9.5 percent. The combined rate of unemployment plus underemployment has exhibited a similar trend, jumping from 8.8 percent at the end of 2007 to the July 2010 rate of 16.5 percent, implying an increasing number of part-time

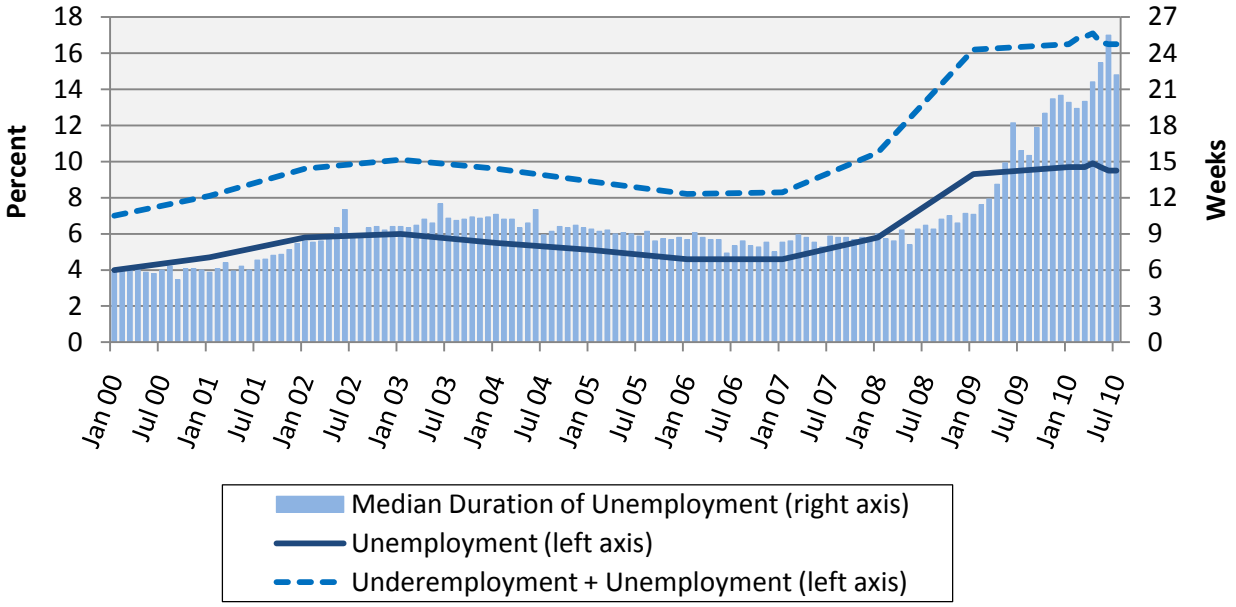
[259] Bureau of Economic Analysis, Table 1.1.6., *supra* note 256.

[260] Bureau of Economic Analysis, Table 1.1.1., *supra* note 257.

[261] Economics and Statistics Administration, U.S. Department of Commerce, *The Impact of the 2010 Census Operations on Jobs and Economic Growth,* at 8 (online at www.esa.doc.gov/02182010.pdf).

workers who could be working full-time.[262] It is important to note that the rate of unemployment plus underemployment does not include people who have stopped actively looking for work altogether. The median duration of unemployment has increased from six weeks in early 2000 to the current median duration of 20 weeks, the highest level since tracking began on this data, and much of that increase occurred during 2009.[263]

Figure 12: Unemployment, Underemployment, and Median Duration of Unemployment (January 2000-July 2010)[264]



[262] A person is classified as unemployed if he/she does not have a job, has actively looked for work in the prior four weeks, and is currently available for work. People are considered employed if they did any work for pay or profit during the employment survey week. Bureau of Labor Statistics, *How the Government Measures Unemployment* (online at www.bls.gov/cps/cps_htgm.htm#unemployed) (accessed Aug. 19, 2010). Underemployment includes part-time workers and is defined based on two types: time-related underemployment and inadequate employment situations. Time-related underemployed individuals are those who are both willing and available to work additional hours and have worked fewer hours than a threshold of "sufficient" hours (with the number of hours deemed "sufficient" set by public policy). The other type of underemployment involves individuals in inadequate employment situations, meaning they were willing to change their current employment situation and wanted to do so due to inadequate use of their skill set, inadequate income, or excessive work hours. International Labour Organization, *Underemployment: Current Guidelines* (online at www.ilo.org/global/What_we_do/Statistics/topics/Underemployment/guidelines/lang--en/index.htm) (accessed Aug. 19, 2010).

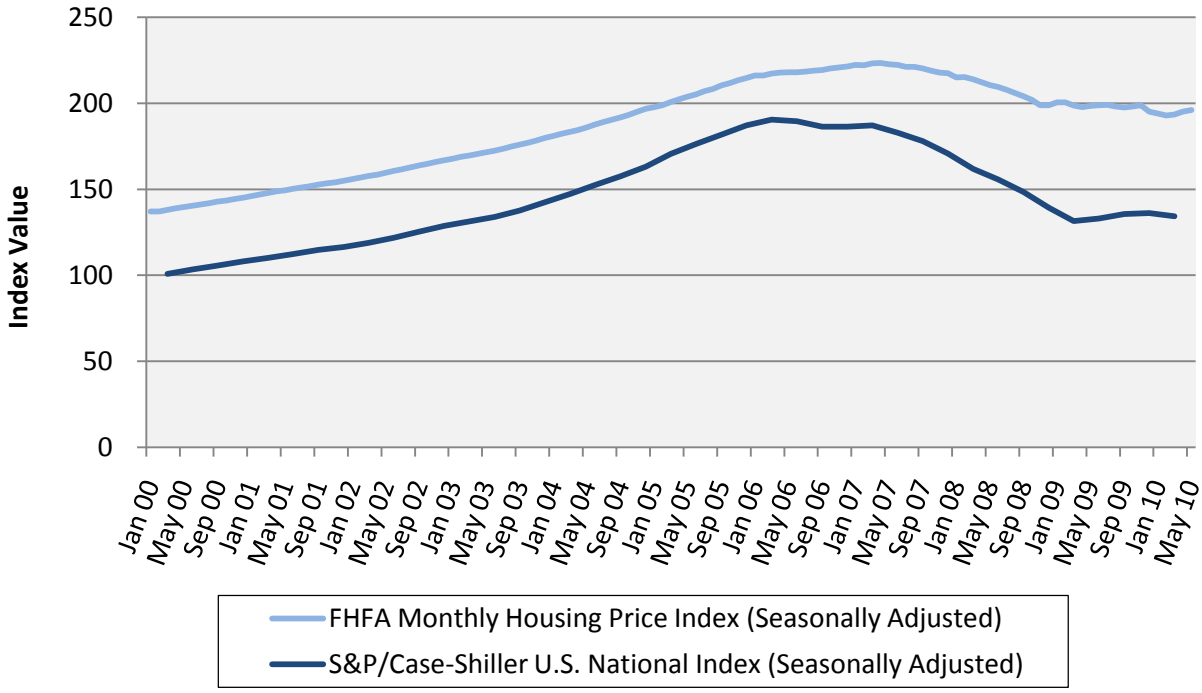
[263] Bureau of Labor Statistics, *Databases, Tables & Calculators by Subject:* (online at data.bls.gov/PDQ/servlet/SurveyOutputServlet) (accessed Sept. 7, 2010).

[264] While the Bureau of Labor Statistics (BLS) does not have a distinct metric for "underemployment," the U-6 category of Table A-15 "Alternative Measures of Labor Underutilization" is used here as a proxy. BLS defines this measure as: "Total unemployed, plus all persons marginally attached to the labor force, plus total employed part time for economic reasons, as a percent of the civilian labor force plus all persons marginally attached to the labor force." United States Department of Labor, *International Comparisons of Annual Labor Force Statistics* (online at www.bls.gov/webapps/legacy/cpsatab15.htm) (accessed Sept. 13, 2010).

b. Housing Real Estate Sector Performance Metrics

The Case-Shiller composite index (Case-Shiller) and Federal Housing Finance Agency's House Price Index (HPI) are important measures of home price trends.

Figure 13: Case-Shiller National Index and FHFA HPI (January 2000-May 2010)[265]

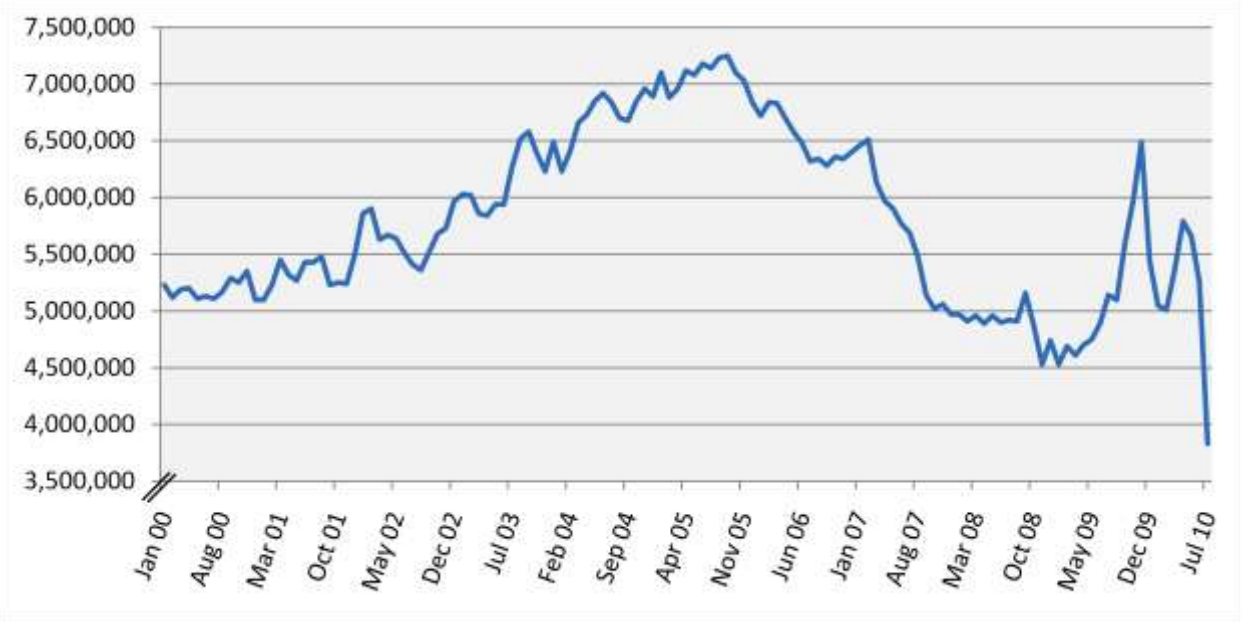


As shown in Figure 13 above, Case-Shiller displayed a sharper increase and subsequent drop in housing prices compared to that seen in the HPI. Case-Shiller increased 105 percent from January 2000 to April 2006, then fell 32 percent to its trough of May 2009. HPI increased 63 percent from January 2000 to April 2007 and then fell only 14 percent to February 2010. HPI includes only conventional mortgages, and thus excludes the subprime and other problem loans that ignited the housing crisis, and it therefore did not show the same degree of appreciation and

[265] Federal Housing Finance Agency, *Purchase Only Indexes: U.S. and Census Division (Seasonally Adjusted and Unadjusted): January 1991-Latest Month* (online at www.fhfa.gov/Default.aspx?Page=87) (accessed Aug. 30, 2010); Standard & Poor's, *S&P/Case-Shiller Home Price Indices: U.S. National Values* (online at www.standardandpoors.com/indices/sp-case-shiller-home-price-indices/en/us/?indexId=spusa-cashpidff--p-us----) (accessed Aug. 30, 2010). Case-Shiller was normalized at 100 in January 2000, as the U.S. Census count of single-family housing units for metro areas in 2000 was used as a base for weights and aggregate values. This creates the initial gap at the January 2000 starting point for the two indexes in the figure.

depreciation seen in Case-Shiller. Case-Shiller also appears to have picked up on the bursting of the bubble more quickly.[266]

Figure 14: Existing-Home Sales (Jan. 2000-July 2010)[267]



As noted in Figure 14 above, existing-home sales declined 37 percent from September 2005 to November 2008, spiked significantly during 2009, and dropped to their lowest point in more than a decade in July 2010. The tax credits for first-time home buyers and repeat home buyers, beginning in January 2009 and November 2009, respectively, correlate with sales spikes seen during those periods. As both tax credits were extinguished on April 30, 2010, existing-home sales have dropped to 3.8 million, the lowest level since the total existing-home sales

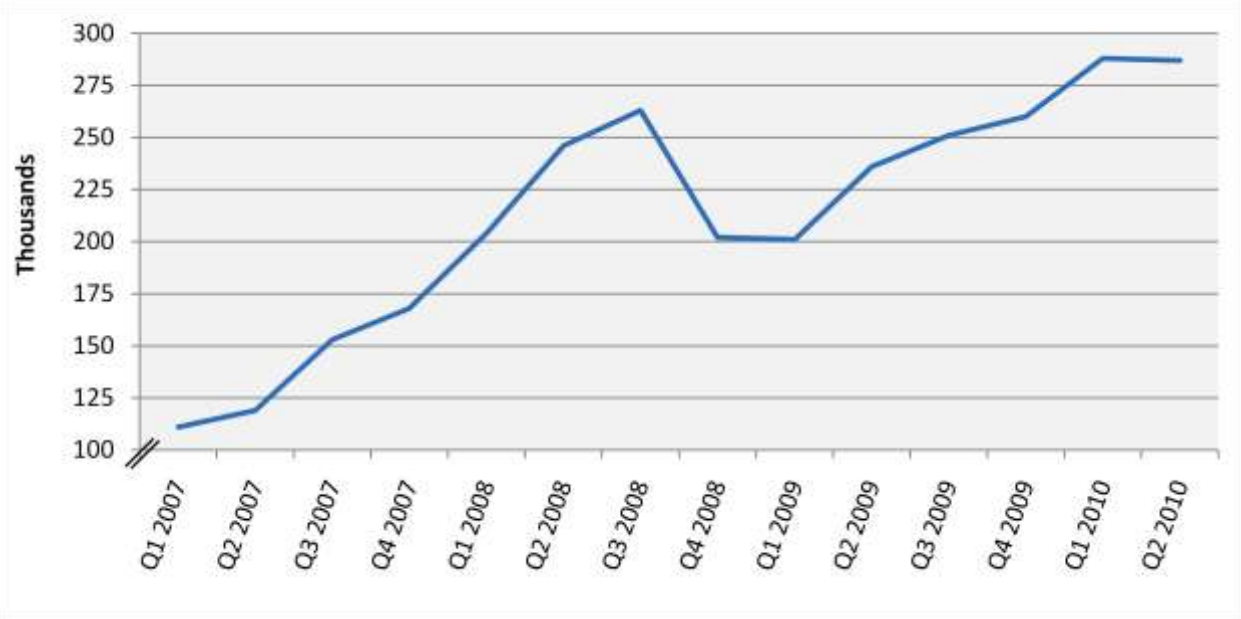
[266] Several additional differences exist between Case-Shiller and HPI. Both utilize repeat sales of homes (both exclude first time sales, therefore first-time constructions/new homes are excluded), but HPI includes refinancing valuations. HPI includes only conforming, conventional mortgages (FRE/FNMA), while Case-Shiller includes all mortgages (including foreclosures). Case-Shiller uses arithmetic weighting, so it is similar to an average price, and thus, higher valued homes have greater influence on the average. HPI uses geometric weighting, so it is more similar to a median price. Case-Shiller excludes 13 states, whereas the national HPI includes all states. Standard & Poor's, *S&P/Case-Shiller Home Price Indices: Real Estate Indices* (online at www.standardandpoors.com/servlet/BlobServer?blobheadername3=MDT-Type&blobcol=urldata&blobtable=MungoBlobs&blobheadervalue2=inline%3B+filename%3DFactsheet_SP_Case-Shiller_Home_Price_Indices.pdf&blobheadername2=Content-Disposition&blobheadervalue1=application%2Fpdf&blobkey=id&blobheadername1=content-type&blobwhere=1243728978235&blobheadervalue3=UTF-8) (accessed Sept. 14, 2010); Federal Housing Finance Agency, *About HPI* (online at www.fhfa.gov/Default.aspx?Page=81) (accessed Aug. 25, 2010).

[267] Existing-home sales are completed transactions that include single-family, townhomes, condominiums, and co-ops. Data obtained from National Association of Realtors.

series launched in 1999. Lower sales have increased the glut of housing inventory. As of July 2010, the total housing inventory represents a 12.5 month supply at the current sales pace, an increase from the 8.9 month supply as of June 2010.[268]

Housing sales are sensitive to interest rates, as borrowing costs directly impact the cost of home ownership. Generally, lower long-term interest rates generate higher value in house prices, and lower mortgage rates encourage more home purchases and refinancings. Long-term interest rates, specifically 30- and 10-year Treasury yields, increased significantly from the late 1970s to early 1980s and have gradually decreased since then. Similarly, fixed-rate, 30-year conventional mortgage rates peaked at 18.45 percent in October 1981 and have subsequently trended downward, with rates at an all-time low of 4.43 percent as of August 2010.[269]

Figure 15: Foreclosure Completions (2007-Q2 2010)[270]



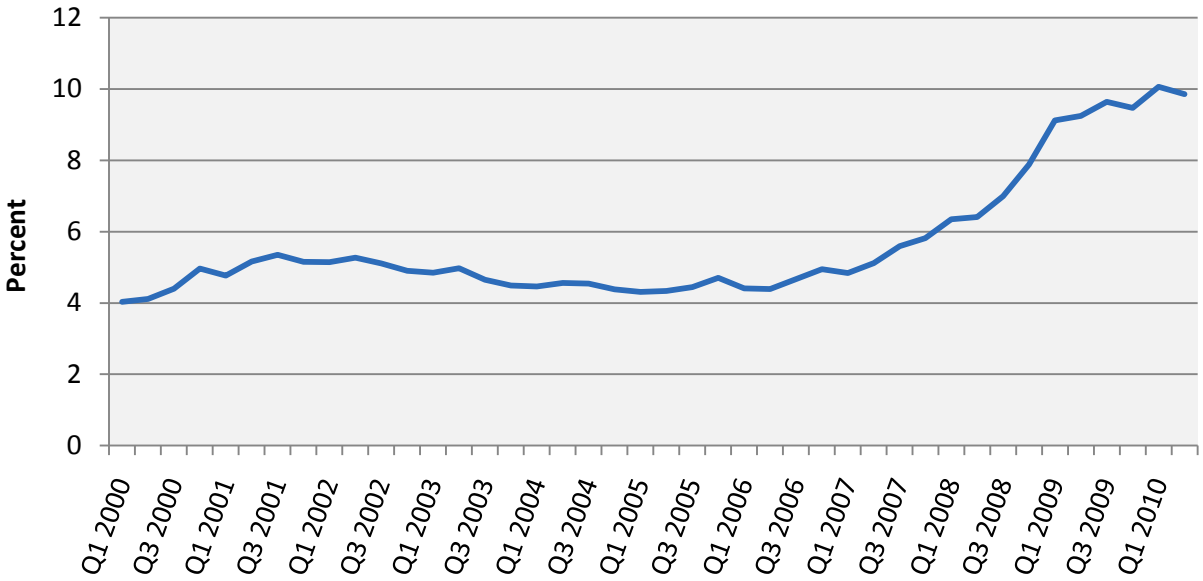
[268] National Association of Realtors, *July Existing-Home Sales Fall as Expected but Prices Rise* (Aug. 24, 2010) (online at www.realtor.org/press_room/news_releases/2010/08/ehs_fall).

[269] Board of Governors of the Federal Reserve System, *Data Download Program: Selected Interest Rates (H.15)* (online at www.federalreserve.gov/datadownload/) (hereinafter "Federal Reserve Selected Interest Rates (H.15)") (accessed Sept. 8, 2010).

[270] HOPE NOW, *Mortgage Loss and Mitigation Statistics, Industry Extrapolations (Quarterly from Q1-2007 to Q1-2009)* (online at www.hopenow.com/industry-data/HOPE%20NOW%20National%20Data%20July07%20to%20April09.pdf) (hereinafter "HOPE NOW Statistics (July 2007 to Apr. 2009)") (accessed Sept. 14, 2010); HOPE NOW Statistics (Dec. 2008 to July 2010), *supra* note 202.

Monthly foreclosure completions have increased from approximately 111,000 in the first quarter of 2007 to approximately 287,000 in the second quarter of 2010. Foreclosure completions in the second quarter of 2010 decreased by only 1,000 following four quarters of increasing foreclosures.[271]

Figure 16: Delinquency Rates for Single Family Residential Mortgages (2000-Second Quarter 2010)[272]



As seen in Figure 16, despite three million foreclosures since the first quarter of 2007,[273] single family real estate delinquencies have continued to increase. Housing prices will continue to be influenced by the supply of homes on the market, which in turn is a function of the overall foreclosure and default rates.

In its February 2010 report, the Panel highlighted the struggling commercial real estate (CRE) market, which has continued to experience decreased demand. Between 2010 and 2014, approximately $1.4 trillion in CRE loans will reach maturity. Losses on these loans for commercial banks alone could total $200 billion to $300 billion for 2011 and beyond.[274]

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[271] HOPE NOW Statistics (July 2007 to Apr. 2009), *supra* note 270; HOPE NOW Statistics (Dec. 2008 to July 2010), *supra* note 202.

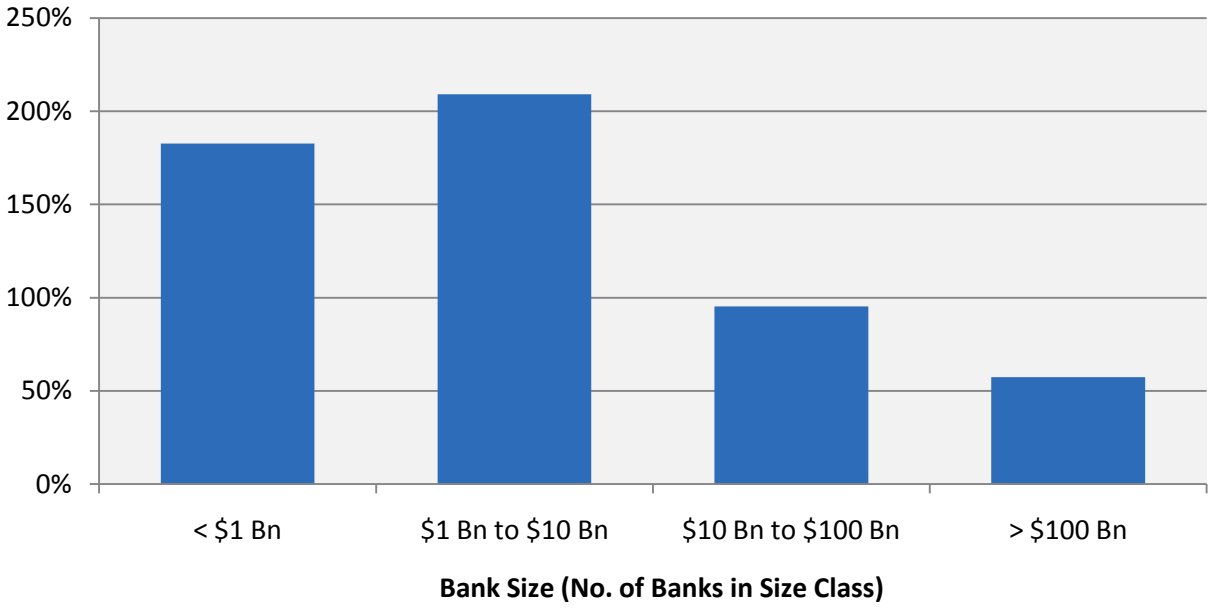
[272] Delinquency rate is seasonally-adjusted and includes the total number of loans that are 30, 60, and 90 days past due. It does not include loans that are in foreclosure. Bloomberg Data Service (accessed Aug. 26, 2010).

[273] HOPE NOW Statistics (July 2007 to Apr. 2009), *supra* note 270; HOPE NOW Statistics (Dec. 2008 to July 2010), *supra* note 202.

[274] February 2010 Oversight Report, *supra* note 28, at 2, 38, 102.

As illustrated by Figure 17, the burden of these losses will fall disproportionately on small and mid-size banks that do almost half of the nation's small business lending.[275] In recent months, however, small banks have been attempting to remove CRE loans from their balance sheet. For example, in the second quarter of 2010 alone, small banks cut their outstanding balance of construction and land loans, one type of CRE loan, by 10 percent.[276]

Figure 17: Commercial Real Estate Exposure as a Percentage of Total Risk-based Capital[277]



Since the Panel's February report, the amount of outstanding CRE loans at commercial banks has decreased slightly. Their holdings decreased by $26 billion, or 2 percent in the fourth quarter of 2009,[278] and by $19 billion, or 1.3 percent, in the first quarter of 2010, due in part to repayments and write-offs from foreclosures.[279] Commercial banks' total holdings, however, still remain at almost $1.5 trillion.[280]

[275] February 2010 Oversight Report, *supra* note 28, at 42.

[276] Foresight Analytics data provided to Panel staff (Aug. 24, 2010).

[277] Data from Foresight Analytics, LLC. This data does not include owner-occupied properties.

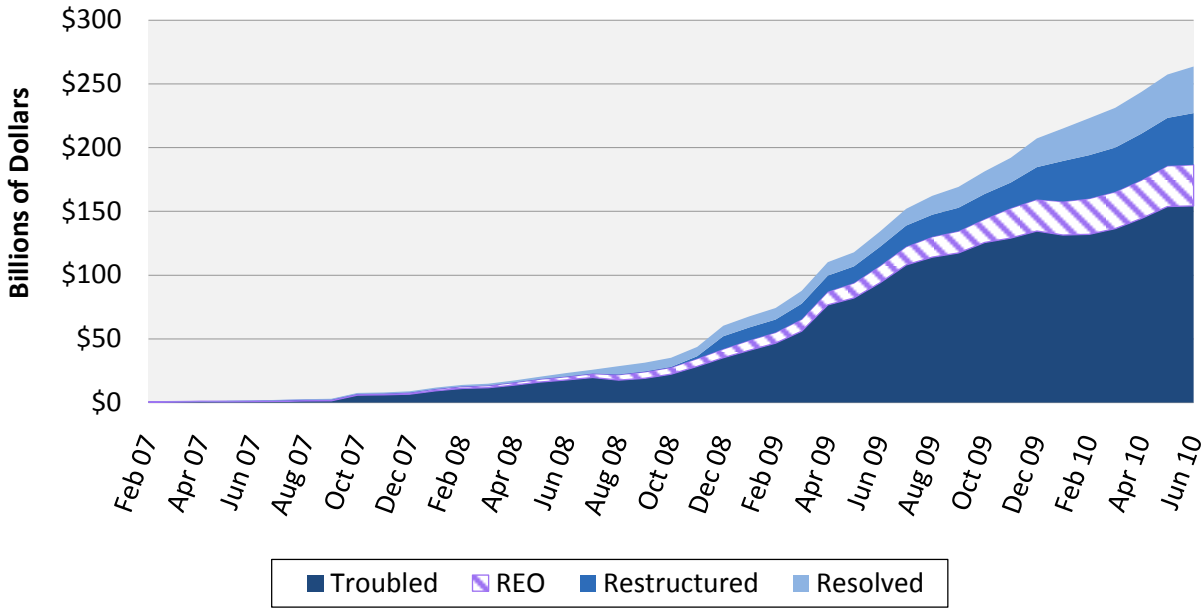
[278] Mortgage Bankers Association, *Commercial Real Estate/Multifamily Finance Quarterly Data Book: Q4 2009*, at 51 (Mar. 2010) (online at www.mbaa.org/files/Research/DataBooks/4Q09QuarterlyDataBook.pdf).

[279] Mortgage Bankers Association, *Commercial Real Estate/Multifamily Finance Quarterly Data Book:Q1 2010*, at 48 (May 2010) (online at www.mbaa.org/files/Research/DataBooks/1Q10QuarterlyDataBook.pdf) (hereinafter "CRE/Multifamily Finance Quarterly Data Book: Q1 2010").

[280] *Id*. at 48.

The number of distressed CRE properties has continued to grow.[281] The total value of troubled properties has increased to $154 billion, and another $32 billion worth of CRE has been repossessed by the lender through foreclosure.[282]

Figure 18: Total Outstanding Distressed CRE[283]



Recently, however, the rate at which properties are becoming distressed has slowed. In June 2010, only $6.3 billion worth of CRE fell into distress, the smallest one-month increase since October 2008. In the first half of 2010, an additional $56.8 billion of CRE loans became distressed, down 24 percent from the same period last year. At the same time, the rate and total value of restructurings and resolutions of CRE loans has increased. In the first half of 2010, $15.2 billion worth of CRE loans were restructured, up 205 percent from the same period last

[281] Distressed properties are those that are either troubled or REO. For definitions of these terms, *see* footnote 283, *infra*.

[282] Real Capital Analytics, *Fresh Evidence of Lenders Moving to Resolve Trouble* (July 29, 2010) (hereinafter "Fresh Evidence of Lenders Moving to Resolve Trouble").

[283] Data from Real Capital Analytics. Troubled properties are those where there is a default, bankruptcy, or foreclosure pending, or some kind of lender forbearance or other restructuring. REO stands for Real Estate Owned properties. REO properties are those that have been repossessed by the lender via foreclosure. Restructured properties are those where ownership or debt terms have changed but no long term solution to the cause of distress has been reached. Resolved properties are those that have moved out of distress. Real Capital Analytics, *Troubled Assets Radar: Methodology*, at 1 (Apr. 5, 2010) (online at www.rcanalytics.com/troubled-assets-methodology.pdf).

year. The $14 billion of CRE loans resolved in the first half of 2010 is 272 percent higher than the same period last year.[284]

Returns on CRE properties have recently begun to rebound.[285] Vacancy rates remain high, however, meaning that many properties continue to produce no revenue and have little value even if foreclosed.[286] Although the rate of properties becoming distressed has slowed, a glut of such properties remains in the market.

c. Financial Sector Performance Metrics

The crisis that peaked in the fall of 2008 was centered in the financial sector. Numerous metrics, including credit spreads, loan delinquency rates, measures of financial market activity, and bank failures, shed light on the sector's health.

Credit spreads, which measure the differences in bond yields, serve as a good proxy for market perceptions of risk. The LIBOR-OIS spread provides insight into market participants' confidence in their counterparties' abilities to repay their obligations; as the spread increases, market participants are more concerned about potential default risk.[287] Former Federal Reserve Chairman Alan Greenspan has noted, for example, that the LIBOR-OIS spread served as a "barometer of fears of bank insolvency."[288] The TED spread, the difference between LIBOR and short-term Treasury bill interest rates, is another indicator of perceived credit risk, with a higher spread indicating that market participants are unwilling to hold investments other than safe Treasury bills. LIBOR is an average of interbank borrowing rates at large banks, and its movement was closely correlated to the disbursement of TARP funds to the largest U.S. banks in October 2008.[289]

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[284] Fresh Evidence of Lenders Moving to Resolve Trouble, *supra* note 282.

[285] CRE Finance Council Compendium of Statistics, *supra* note 244, at 25.

[286] PIMCO, *PIMCO U.S. Commercial Real Estate Project* (July 2010) (online at www.pimco.com/Pages/USCommercialRealEstateProjectJune2010.aspx); CRE/Multifamily Finance Quarterly Data Book: Q1 2010, *supra* note 279, at 27; CRE Finance Council Compendium of Statistics, *supra* note 244, at 24.

[287] The LIBOR-OIS spread shows the difference between the London Interbank Offering Rate (LIBOR), which is the rate at which banks are willing to lend to one another for a specified loan term, and the Overnight Indexed Swaps rate (OIS), which is the rate on a derivative contract on the overnight rate, measuring the cost of extremely short-term borrowing by financial institutions. Federal Reserve Bank of St. Louis, *What the Libor-OIS Spread Says* (May 11, 2009) (online at research.stlouisfed.org/publications/es/09/ES0924.pdf).

[288] *Id*.

[289] LIBOR is calculated from the interbank borrowing rates of 16 contributor panel banks, with the top four and bottom four of the rates discarded. The middle eight rates are then used to calculate an average, which becomes the day's LIBOR rate. The contributor panel banks are selected by the Foreign Exchange and Money Markets committee on the basis of scale of activity in the London market and perceived expertise in the currency concerned. British Bankers' Association, *Understanding BBA LIBOR: a briefing by the British Bankers' Association,* at 1 (May 27, 2010) (online at www.bbalibor.com/news-releases/understanding-bba-libor) (accessed Sept. 14, 2010); British

Figure 19: 3-Month LIBOR-OIS Spread[290]

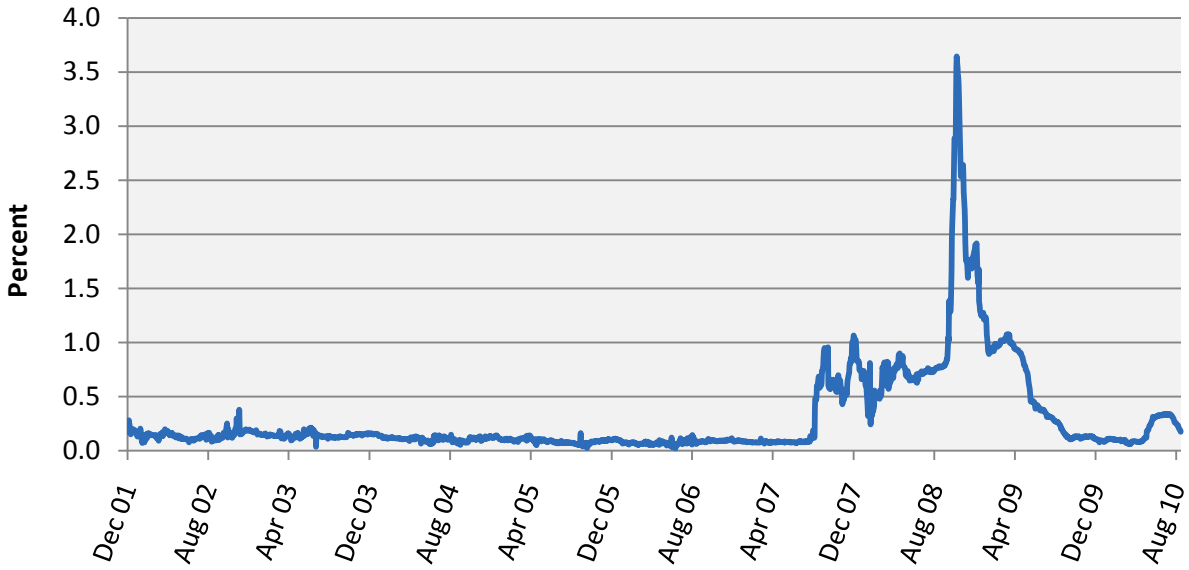
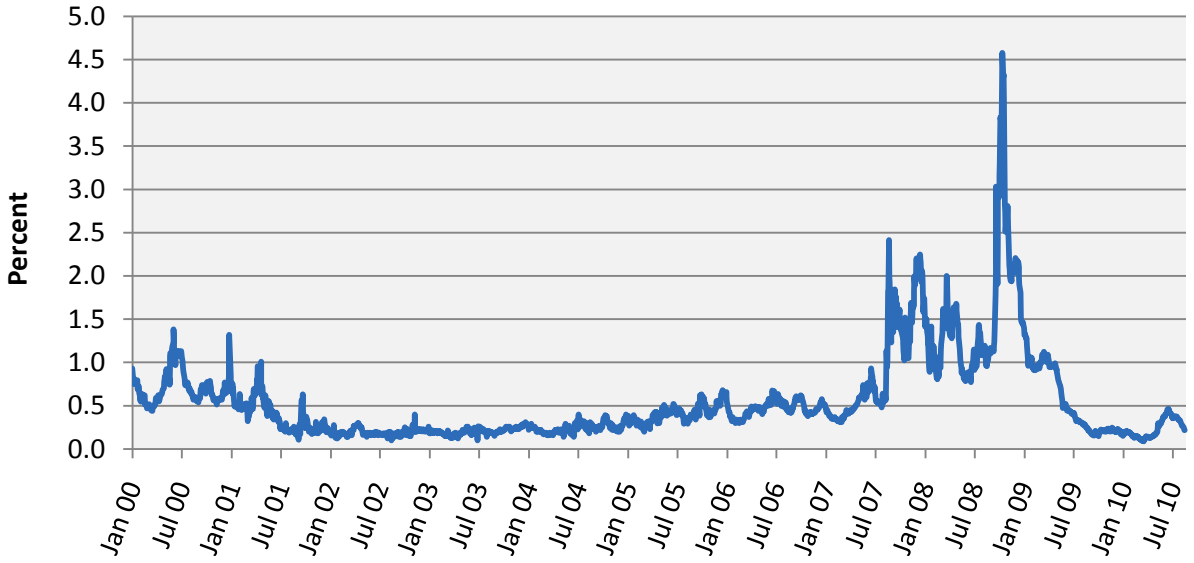


Figure 20: TED Spread between 3-Month LIBOR and 3-Month Treasury Bill Yields[291]



Bankers' Association, *BBA LIBOR Panels* (June 10, 2010) (online at www.bbalibor.com/news-releases/bba-libor-panels1).

[290] Bloomberg Financial.

[291] Bloomberg Financial.

Both spreads declined significantly from October 2008 to early 2009 and have generally leveled off and returned to rates maintained throughout the first half of the decade. The leveling trends imply increased confidence in the credit risk of counterparties that is correlated with, but not necessarily a consequence of, the government's assistance.[292] The slight uptick seen in both the 3-Month LIBOR-OIS and TED spreads in 2010 mirrors the market uncertainty regarding the European financial crisis.

Delinquency rates are currently at a ten-year high across all loan types. For loans secured by real estate, both single-family residential and commercial, delinquency rates have increased the most dramatically since 2006, despite three million foreclosures since 2007.[293] While commercial real estate loan delinquencies have leveled off a bit in recent quarters, those for single-family real estate loans continue trending upward. Conversely, delinquency rates on consumer[294] and credit card loans have decreased 0.67 and 1.74 percentage points, respectively, from the second quarter of 2009 to the second quarter of 2010.

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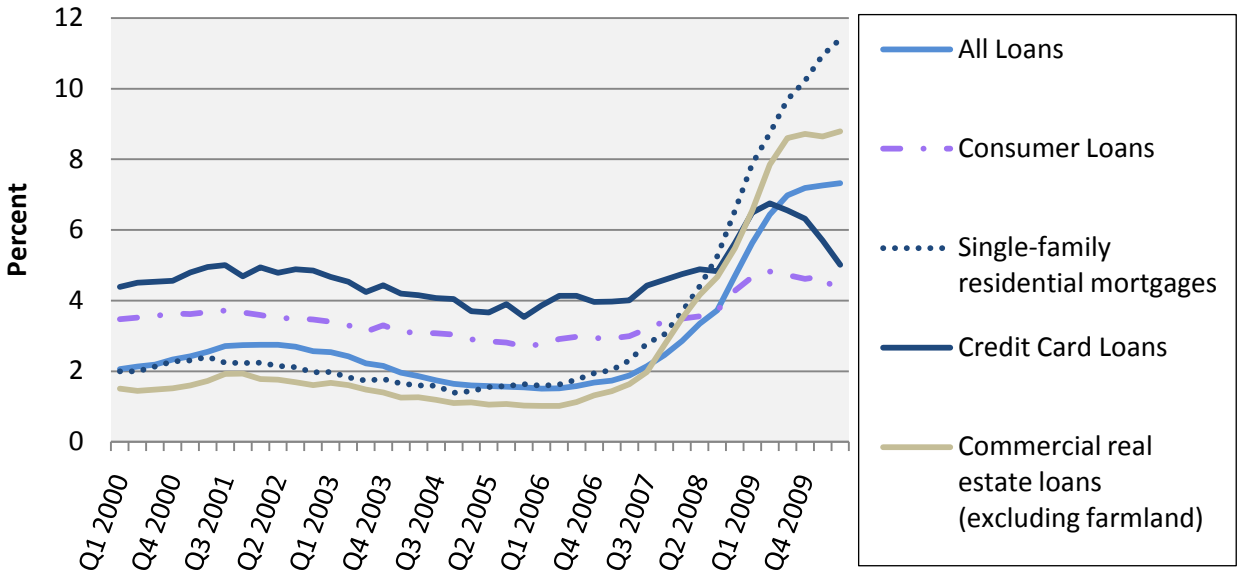
[292] The Federal Reserve introduced the Term Auction Facility (TAF) as a means for banks to borrow from the Federal Reserve without using the discount window, with the specific purpose of providing liquidity directly to financial institutions to improve money market functioning and drive down the spread on term lending relative to overnight loans. Various studies have been performed to determine TAF's effect on credit spreads, with differing outcomes. In their analysis of the Federal Reserve's policy responses to the jump in interest rate spreads, John Taylor and John Williams found that increased counterparty risk contributed to the increase in interest rate spreads but that the government's policy responses, specifically the TAF, did not have a significant impact on spread reduction. Taylor and Williams used a no-arbitrage model of the term structure of interest rates, building in expectations of future short-term rates and risk factors drawn from derivative securities markets before and after the financial crisis, to test the hypothesis that the spread should be related to expectations of future overnight rates and to counterparty risk with no impact from liquidity demands. Their results showed this hypothesis to be true, although it also highlighted the need for formal treatment of liquidity effects in future research, and has implications on future policy decisions in times of widening interest rate spreads. *See* John B. Taylor and John C. Williams, *A Black Swan in the Money Market*, American Economic Journal: Macroeconomics, Vol. 1, No. 1 (Jan. 2009) (hereinafter "A Black Swan in the Money Market"). On the other hand, Jens Christensen, Jose Lopez, and Glenn Rudebusch used a six-factor arbitrage free model of U.S. Treasury yields, financial corporate bond yields, and term interbank rates to assess the effect of central bank liquidity facilities on LIBOR. Their model allowed them to account for fluctuations in the term structure of credit and liquidity risk. They found that the TAF and other liquidity facilities did impact interbank lending rates and that, through their testing of a counterfactual scenario with no central bank liquidity facilities, without the liquidity facilities, the three-month LIBOR rate (and thus, credit spreads) would have been higher. *See* Jens Christensen, Jose Lopez, and Glenn Rudebusch, *Do Central Bank Liquidity Facilities Affect Interbank Lending Rates?*, Federal Reserve Bank of San Francisco Working Paper, No. 2009-13 (June 2009) (online at www.frbsf.org/publications/economics/papers/2009/wp09-13bk.pdf). Other academic researchers have also looked into the effect of TAF on LIBOR using similar methods to Taylor-Williams with slight variations and have also found that TAF had a significant impact. *See* James McAndrews, Asani Sarkar, and Zhenyu Wang, *The Effect of the Term Auction Facility on the London Inter-bank Offered Rate*, Federal Reserve Bank of New York Staff Report, No. 335 (July 2008) (online at www.newyorkfed.org/research/staff_reports/sr335.pdf).

[293] HOPE NOW Statistics (July 2007 to Apr. 2009), *supra* note 270; HOPE NOW Statistics (Dec. 2008 to July 2010), *supra* note 202.

[294] Consumer loans includes most short- and intermediate-term loans extended to individuals, excluding loans secured by real estate. Loans for automobiles, mobile homes, education, boats, trailers, and vacations are included in this category, although for the purposes of Figure 21, the Federal Reserve's category of "other consumer

Figure 21: Delinquency Rates by Loan Type (2000-Second Quarter of 2010)[295]



These data suggest that loans secured by real estate continue to comprise the bulk of problem loans at financial institutions. The overall increase in delinquency rates highlights the continuing strain that financial institutions face through losses and write-offs on their loan portfolios.[296] As noted in the Panel's August 2009 report, valuing the exact amount of troubled assets remaining is very difficult due to the lack of an agreed-upon definition of "troubled asset," the need to rely upon future projections of losses, and the fact that it is difficult to assemble the information required for valuation from publically-available data. The inability to value these troubled assets, in turn, makes it difficult to assess fully the health of the financial sector.[297]

Mortgage-backed securities have been the source of significant losses to financial institutions. As shown in Figure 22, non-agency mortgage-backed securities, meaning those not

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loans" is excluded. Board of Governors of the Federal Reserve System, *Federal Reserve Statistical Release: G19 Consumer Credit* (Aug. 6, 2010) (online at www.federalreserve.gov/releases/g19/Current/) (accessed Sept. 2, 2010).

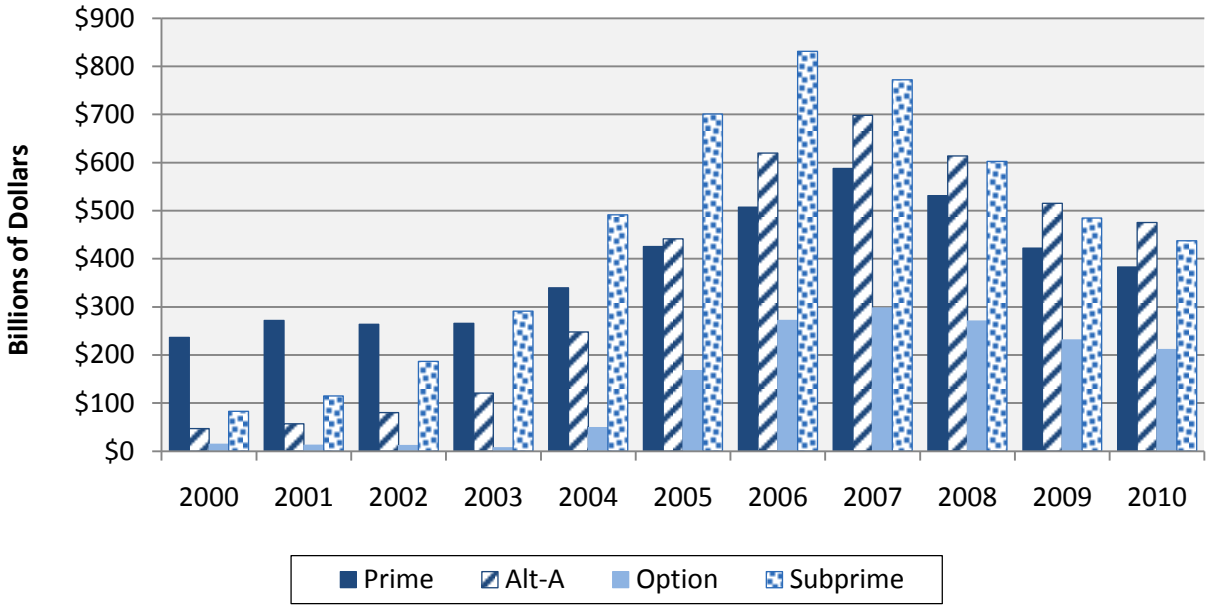
[295] For the purposes of this graph and related text, delinquent loans and leases are those past due 30 days or more and still accruing interest as well as those in nonaccrual status. Board of Governors of the Federal Reserve System, *Data Download Program: Delinquency Rates/All Banks* (online at www.federalreserve.gov/datadownload/Choose.aspx?rel=CHGDEL) (accessed Aug. 20, 2010).

[296] According to the most recent senior loan officer survey conducted by Federal Reserve, a fraction of respondents from large banks noted their lending standards and terms have eased on prime residential mortgage loans and consumer loans (other than credit card). As standards ease and credit becomes more available, changes in delinquency rates will continue to be an important metric. July 2010 Senior Loan Officer Opinion Survey, *supra* note 29, at 3-4.

[297] August 2009 Oversight Report, *supra* note 6.

secured by one of the government sponsored enterprises (GSEs), reached a height of $2.4 trillion outstanding in 2007, and then fell 36 percent to $1.5 trillion outstanding in 2010. This reflects both lower demand, as the appetite for these securities has fallen dramatically, and lower supply, as fewer non-agency loans are being underwritten and securitized. Figure 22 also suggests that the volume of troubled real-estate assets held by financial institutions has correspondingly decreased.

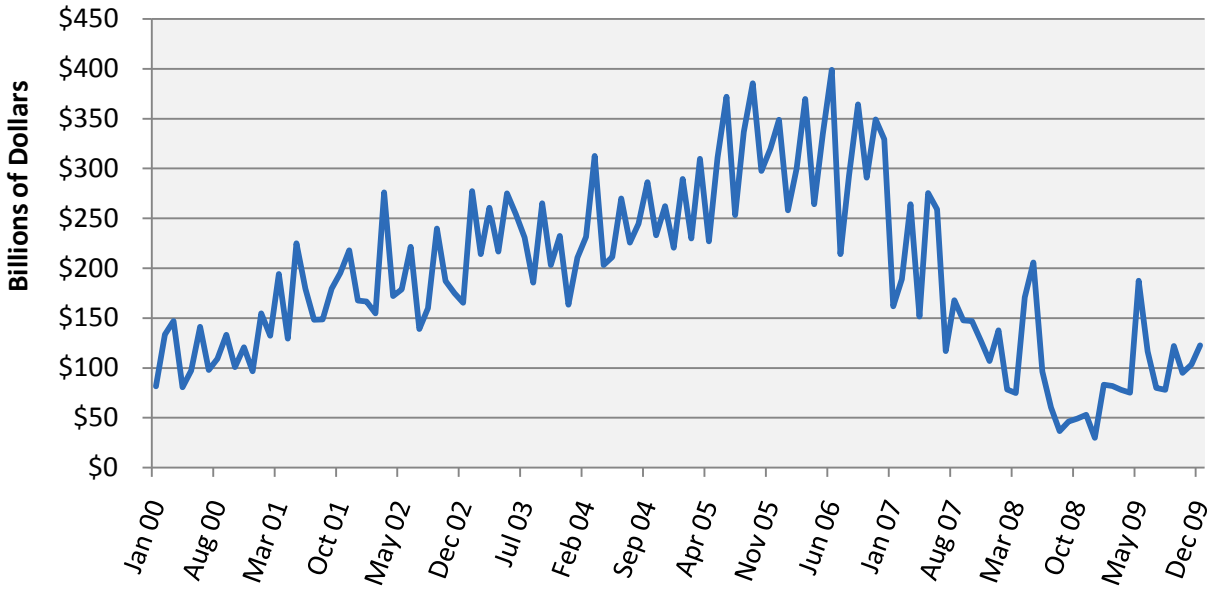
Figure 22: Mortgage-Backed Securities Outstanding, by Sector[298]



Total underwritings per month, as shown in Figure 23 below, reflect both the debt and equity raised by corporations in the public markets. While extremely volatile, underwritings have generally been on an upward swing since 2008. Notably, initial public offerings have increased from a low of 11 deals in 2008 to 26 in 2009, which suggests an increasing appetite for risk in the public markets. The successful completion of these deals represents increased demand in public markets for new issues of debt and equity, thereby reflecting a more efficient allocation of funds from investor to borrower in the capital markets.

[298] JPMorgan, MBS Strategy.

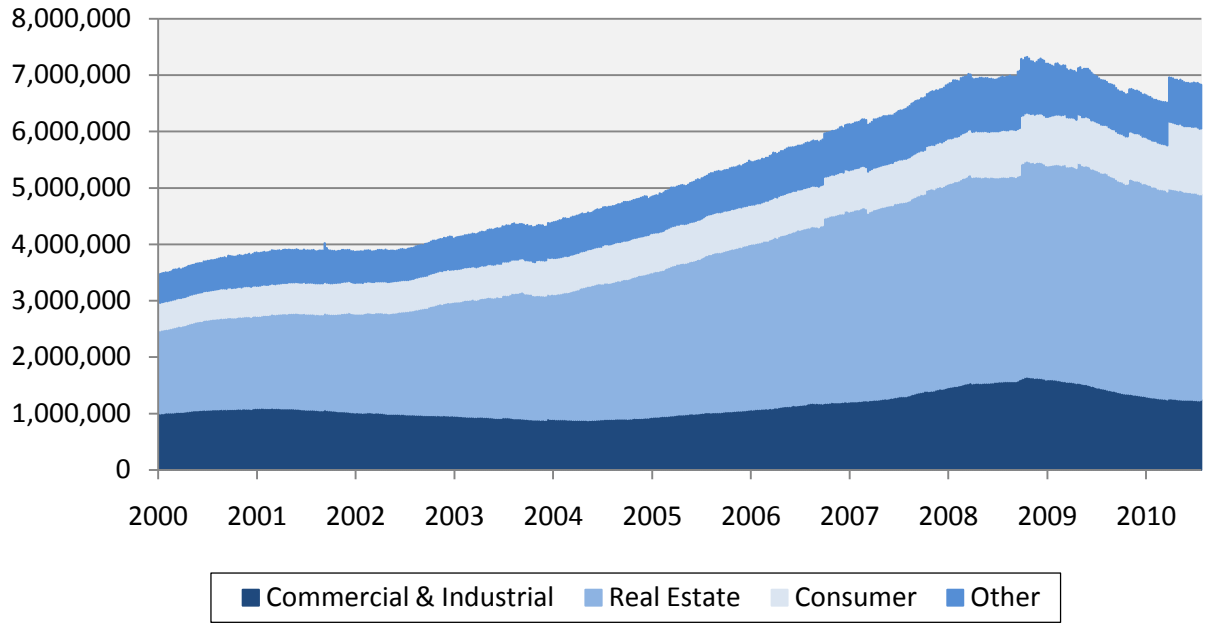
Figure 23: Total Underwritings per Month (Debt and Equity)[299]



Total loans at commercial banks increased from $3.5 trillion in January 2000 to a height of $7.3 trillion in October 2008, an increase of 111 percent. While outstanding loans decreased during the financial crisis, they jumped to nearly $7.0 billion in March, and the current trend suggests that they have begun to level off. Real estate loans drove the sharp increase in total loans from 2000 to 2008, although they have decreased slightly in recent years. Consumer loans also increased to a lesser magnitude and, despite a slight dip in late 2009, have grown to their highest level of the decade. Commercial and industrial (C&I) loans dropped by 25 percent since 2006 and have since not returned to earlier levels. As the data include both new and previously issued loans, they do not provide much detail to improve our understanding of bank lending activity.

[299] Securities Industry and Financial Markets Association, *U.S. Key Stats* (Instrument: U.S. Corporate Issuance, "Total Underwritings") (online at www.sifma.org/uploadedFiles/Research/Statistics/SIFMA_USKeyStats.xls) (accessed Sept. 14, 2010). Monthly data prior to January 2009 was provided by SIFMA staff in response to Panel request.

Figure 24: Total Commercial Bank Loans, by Type, Seasonally Adjusted[300]

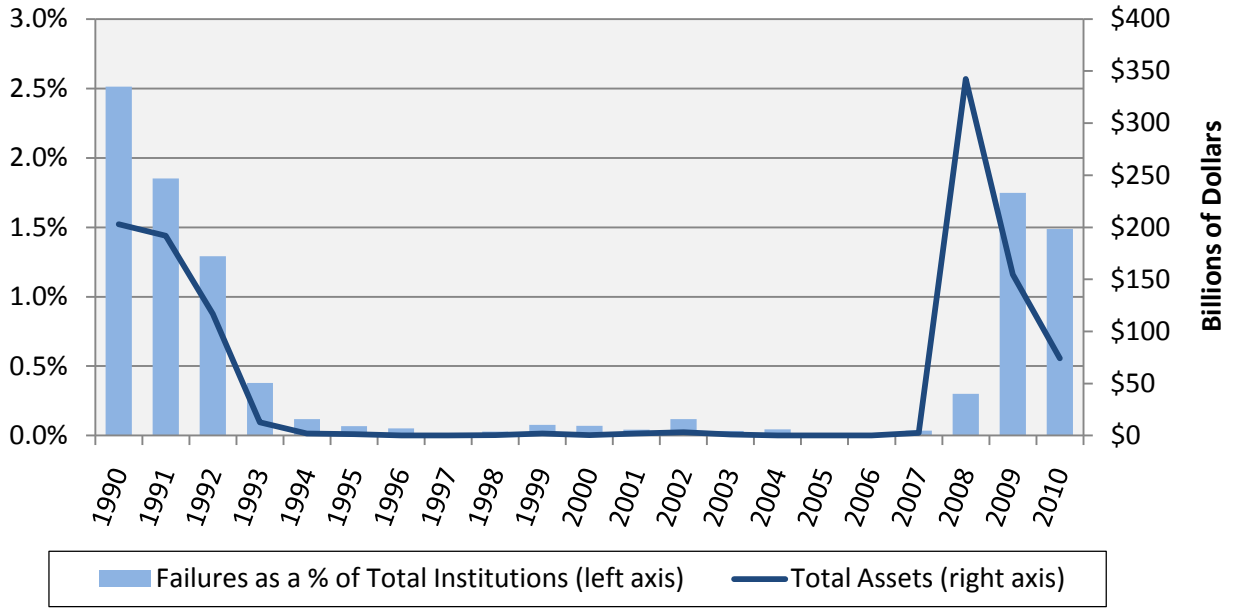


Since 2007, bank failures have increased dramatically after almost two decades at very low failure rates. It is helpful to view annual bank failures as a percentage of total banks in order to understand the relative impact of the failures on the financial sector. As noted in Figure 25 below, bank failures as a percentage of total banks have not reached the levels seen in the early 1990s, but they have dramatically increased from the 16-year span prior to 2009, when there were a negligible number of failures. The number of failures from January-July 2010 has nearly reached the level for all of 2009.[301]

[300] Board of Governors of the Federal Reserve System, *Data Download Program:H.8 Assets and Liabilities of Commercial Banks in the United States: All Commercial Banks, SA* (online at www.federalreserve.gov/datadownload/Choose.aspx?rel=H.8) (accessed Aug. 30, 2010).

[301] July 2010 Oversight Report, *supra* note 23, at 91-93.

Figure 25: Bank Failures as a Percentage of Total Banks and Bank Failures by Total Assets (1990-2010)[302]



As noted in Figure 25 above, in recent years, the number of failed banks has increased, while the total assets of failed banks have decreased. The disparity between the number of and total assets of failed banks in 2008 is driven primarily by the failure of Washington Mutual Bank, which held $307 billion in assets. The composition of failing institutions in 2009 and 2010, however, is small and medium-sized banks; while they are failing in high numbers, their aggregate total assets are relatively modest. In fact, although the number of failed banks in 2010 as of August 20, 2010, is 84 percent of that in all of 2009, the total assets of failed banks as of the same date are only 48 percent of the total assets of failed banks in 2009. This suggests that the average size of failed banks has decreased.

As was discussed in the Panel's July 2010 report, these small and medium-sized banks have greater exposures to commercial real estate loans, especially those of lower credit quality, due to larger banks' ability to often provide better loan terms and attract borrowers with greater credit quality. In an economic cycle in which retail businesses face slumping sales and

[302] The 2010 year-to-date percentage of bank failures includes failures through July. The total number of FDIC-insured institutions as of March 31, 2010 is 7,932 commercial banks and savings institutions. As of August 20, 2010, there have been 118 failed institutions. Federal Deposit Insurance Corporation, *Failures and Assistance Transactions* (online at www2.fdic.gov/hsob/SelectRpt.asp?EntryTyp=30) (accessed Aug. 25, 2010). Asset totals adjusted for deflation into 2005 dollars using the GDP implicit price deflator. The quarterly values were averaged into a yearly value. U.S. Department of Commerce, Bureau of Economic Analysis, *Gross Domestic Product: Implicit Price Deflator* (online at research.stlouisfed.org/fred2/data/GDPDEF.txt) (accessed Sept. 14, 2010).

construction projects are put on hold, smaller institutions have suffered from higher commercial real estate delinquencies.